



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 3, 2023 – 11:56 PM EDT

PDB ID : 4V41  
Title : E. COLI (LAC Z) BETA-GALACTOSIDASE (NCS CONSTRAINED MONOMER-MONOCLINIC)  
Authors : Juers, D.H.; Jacobson, R.H.; Wigley, D.; Zhang, X.J.; Huber, R.E.; Tronrud, D.E.; Matthews, B.W.  
Deposited on : 2000-06-07  
Resolution : 2.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35.1  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35.1

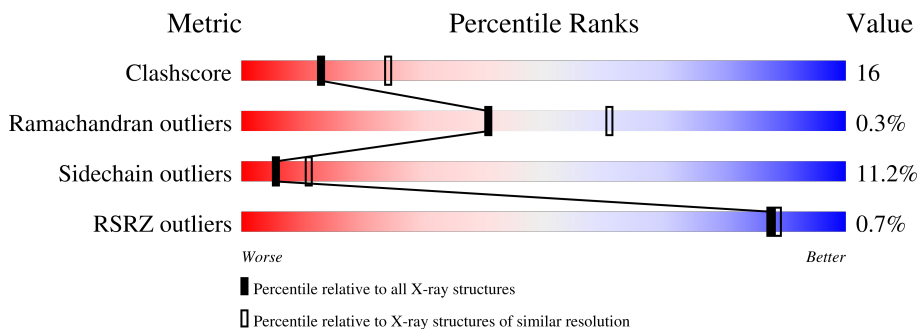
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.












| Metric                | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|--------------------------|--|
| Clashscore            | 141614                   | 5346 (2.50-2.50)                                   |
| Ramachandran outliers | 138981                   | 5231 (2.50-2.50)                                   |
| Sidechain outliers    | 138945                   | 5233 (2.50-2.50)                                   |
| RSRZ outliers         | 127900                   | 4559 (2.50-2.50)                                   |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | A     | 1023   | 59% 30% 9% .     |
| 1   | B     | 1023   | 58% 31% 9% .     |
| 1   | C     | 1023   | 57% 31% 9% .     |
| 1   | D     | 1023   | 58% 30% 9% .     |
| 1   | E     | 1023   | 58% 30% 9% .     |
| 1   | F     | 1023   | 58% 31% 9% .     |
| 1   | G     | 1023   | 58% 31% 9% .     |

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| Mol | Chain | Length | Quality of chain  |
|-----|-------|--------|---|
| 1   | H     | 1023   |  58% 31% 9% . |
| 1   | I     | 1023   |  58% 31% 9% . |
| 1   | J     | 1023   |  58% 31% 9% . |
| 1   | K     | 1023   |  58% 31% 9% . |
| 1   | L     | 1023   |  58% 31% 9% . |
| 1   | M     | 1023   |  59% 30% 9% . |
| 1   | N     | 1023   |  58% 30% 9% . |
| 1   | O     | 1023   |  58% 31% 9% . |
| 1   | P     | 1023   |  58% 31% 9% . |

## 2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 138704 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called BETA-GALACTOSIDASE.

| Mol | Chain | Residues | Atoms |      |      |      |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|----|---------|---------|-------|
|     |       |          | Total | C    | N    | O    | S  |         |         |       |
| 1   | A     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | B     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | C     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | D     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | E     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | F     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | G     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | H     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | I     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | J     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | K     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | L     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | M     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | N     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | O     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |
| 1   | P     | 1021     | 8232  | 5201 | 1462 | 1528 | 41 | 0       | 5       | 0     |

There are 48 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment          | Reference  |
|-------|---------|----------|--------|------------------|------------|
| A     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| A     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| A     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| B     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| B     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| B     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| C     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| C     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| C     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| D     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| D     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| D     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| E     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| E     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| E     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| F     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| F     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| F     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| G     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| G     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| G     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| H     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| H     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| H     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| I     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| I     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| I     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| J     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| J     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| J     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| K     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| K     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| K     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| L     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| L     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| L     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| M     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| M     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| M     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| N     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| N     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| N     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |

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| Chain | Residue | Modelled | Actual | Comment          | Reference  |
|-------|---------|----------|--------|------------------|------------|
| O     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| O     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| O     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| P     | 748     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| P     | 914     | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |
| P     | 1021    | CME      | CYS    | MODIFIED RESIDUE | UNP P00722 |

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms           | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 2   | A     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | B     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | C     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | D     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | E     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | F     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | G     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | H     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | I     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | J     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | K     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | L     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | M     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | N     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | O     | 2        | Total Mg<br>2 2 | 0       | 0       |
| 2   | P     | 2        | Total Mg<br>2 2 | 0       | 0       |

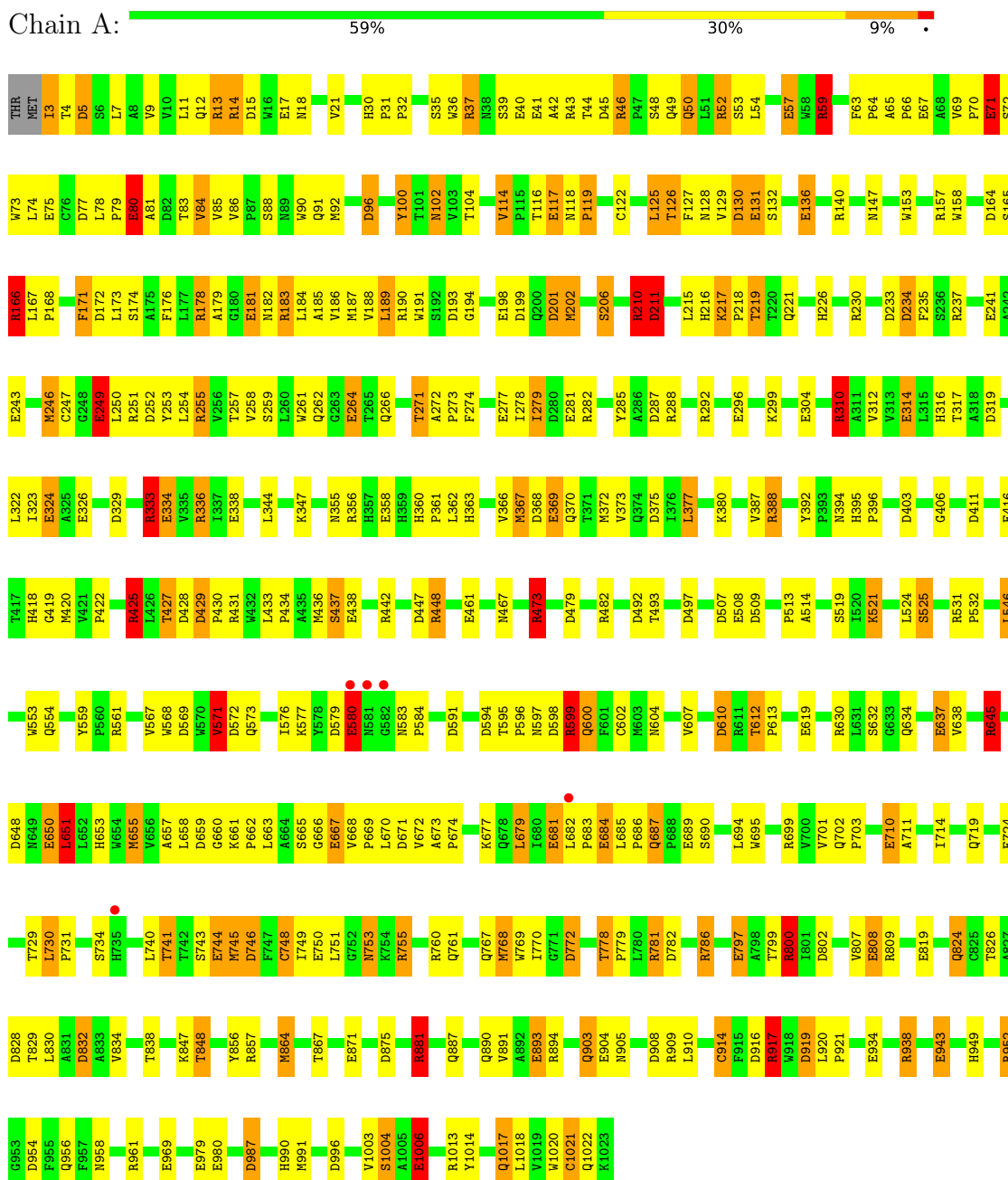
- Molecule 3 is water.

| Mol | Chain | Residues | Atoms              | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 3   | A     | 434      | Total O<br>434 434 | 0       | 0       |
| 3   | B     | 436      | Total O<br>436 436 | 0       | 0       |
| 3   | C     | 433      | Total O<br>433 433 | 0       | 0       |
| 3   | D     | 437      | Total O<br>437 437 | 0       | 0       |
| 3   | E     | 435      | Total O<br>435 435 | 0       | 0       |
| 3   | F     | 436      | Total O<br>436 436 | 0       | 0       |
| 3   | G     | 434      | Total O<br>434 434 | 0       | 0       |
| 3   | H     | 435      | Total O<br>435 435 | 0       | 0       |
| 3   | I     | 434      | Total O<br>434 434 | 0       | 0       |
| 3   | J     | 436      | Total O<br>436 436 | 0       | 0       |
| 3   | K     | 435      | Total O<br>435 435 | 0       | 0       |
| 3   | L     | 435      | Total O<br>435 435 | 0       | 0       |
| 3   | M     | 434      | Total O<br>434 434 | 0       | 0       |
| 3   | N     | 436      | Total O<br>436 436 | 0       | 0       |
| 3   | O     | 433      | Total O<br>433 433 | 0       | 0       |
| 3   | P     | 437      | Total O<br>437 437 | 0       | 0       |

### 3 Residue-property plots

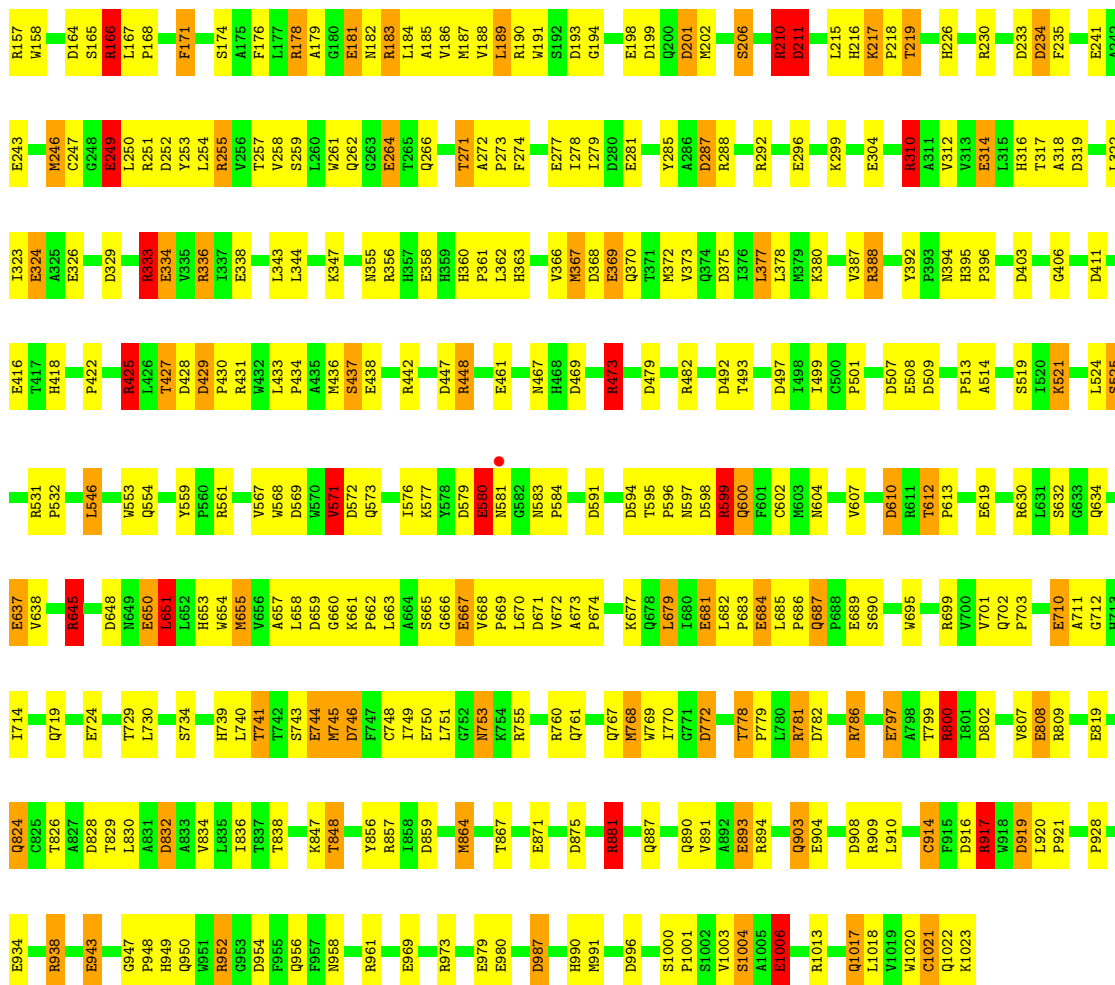
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

#### • Molecule 1: BETA-GALACTOSIDASE

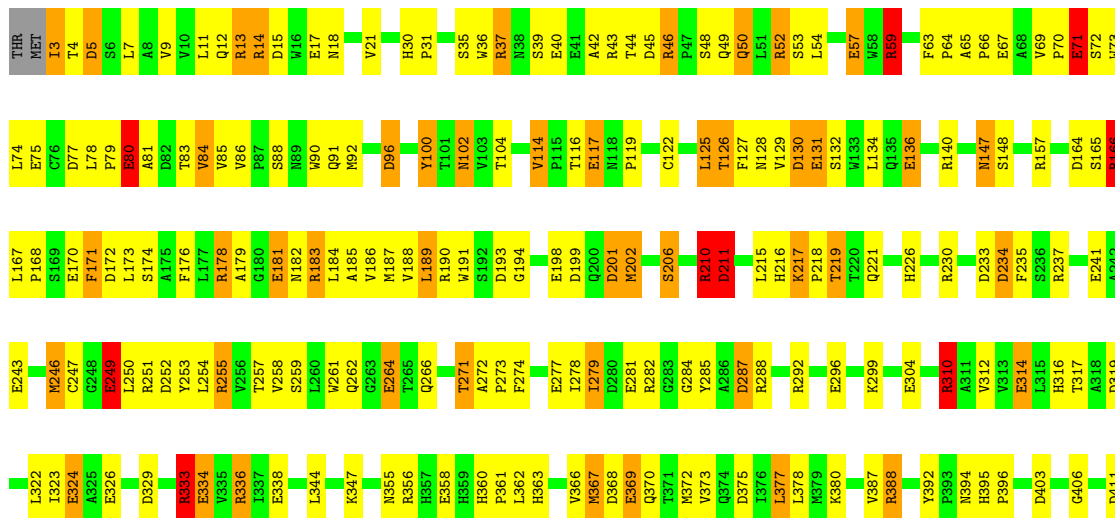




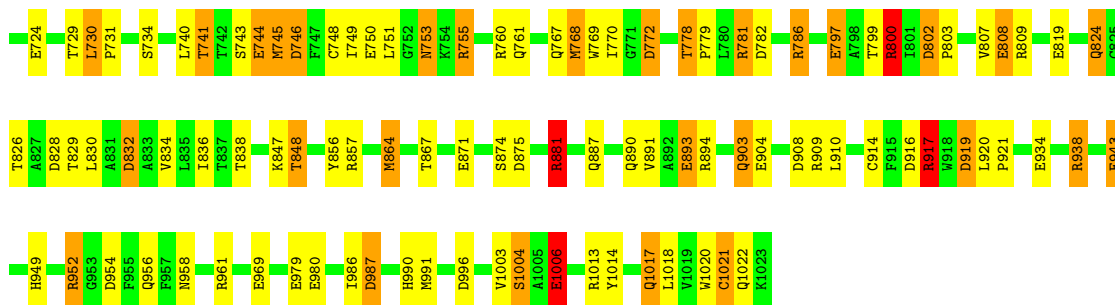




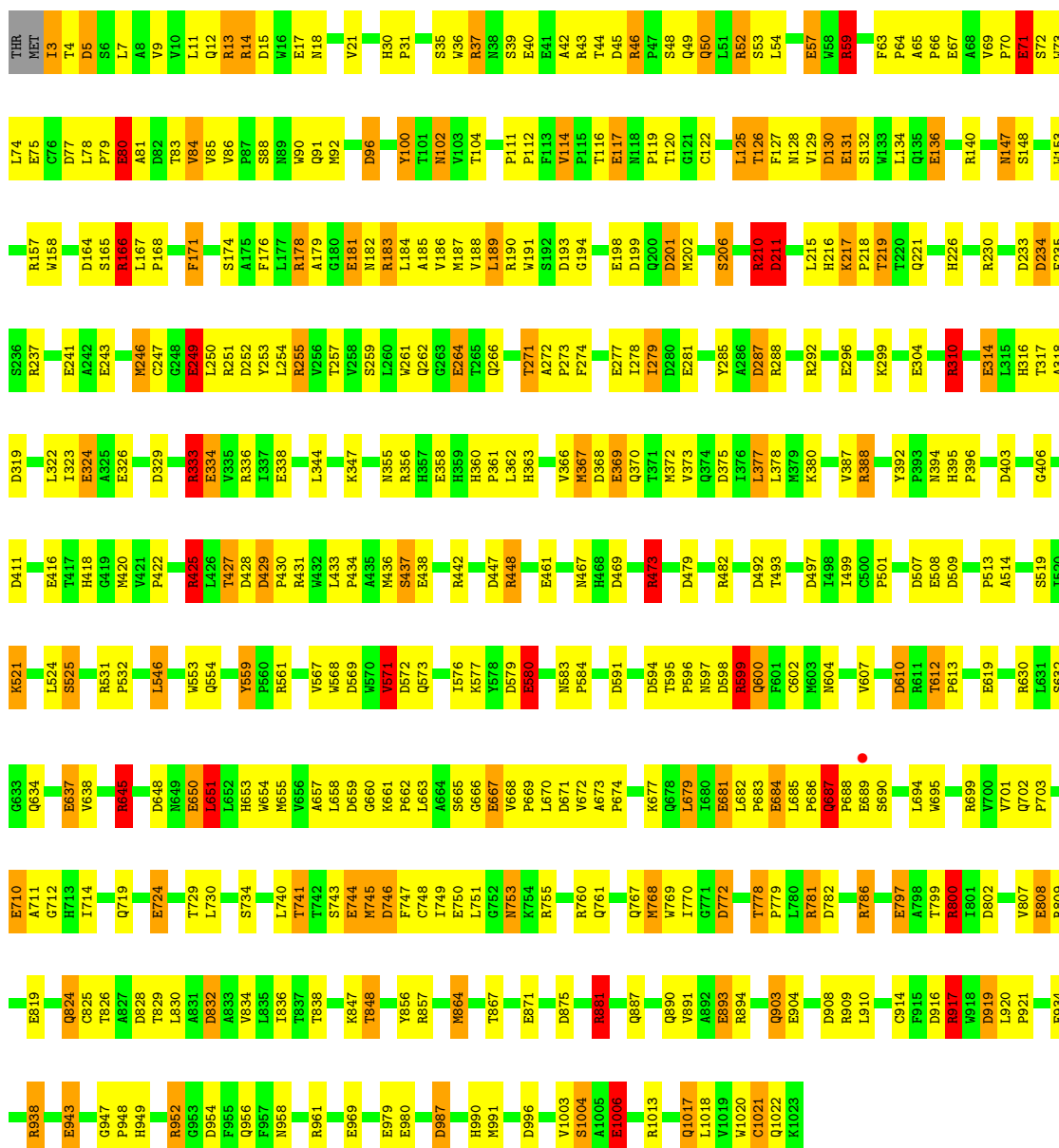
• Molecule 1: BETA-GALACTOSIDASE







• Molecule 1: BETA-GALACTOSIDASE



• Molecule 1: BETA-GALACTOSIDASE

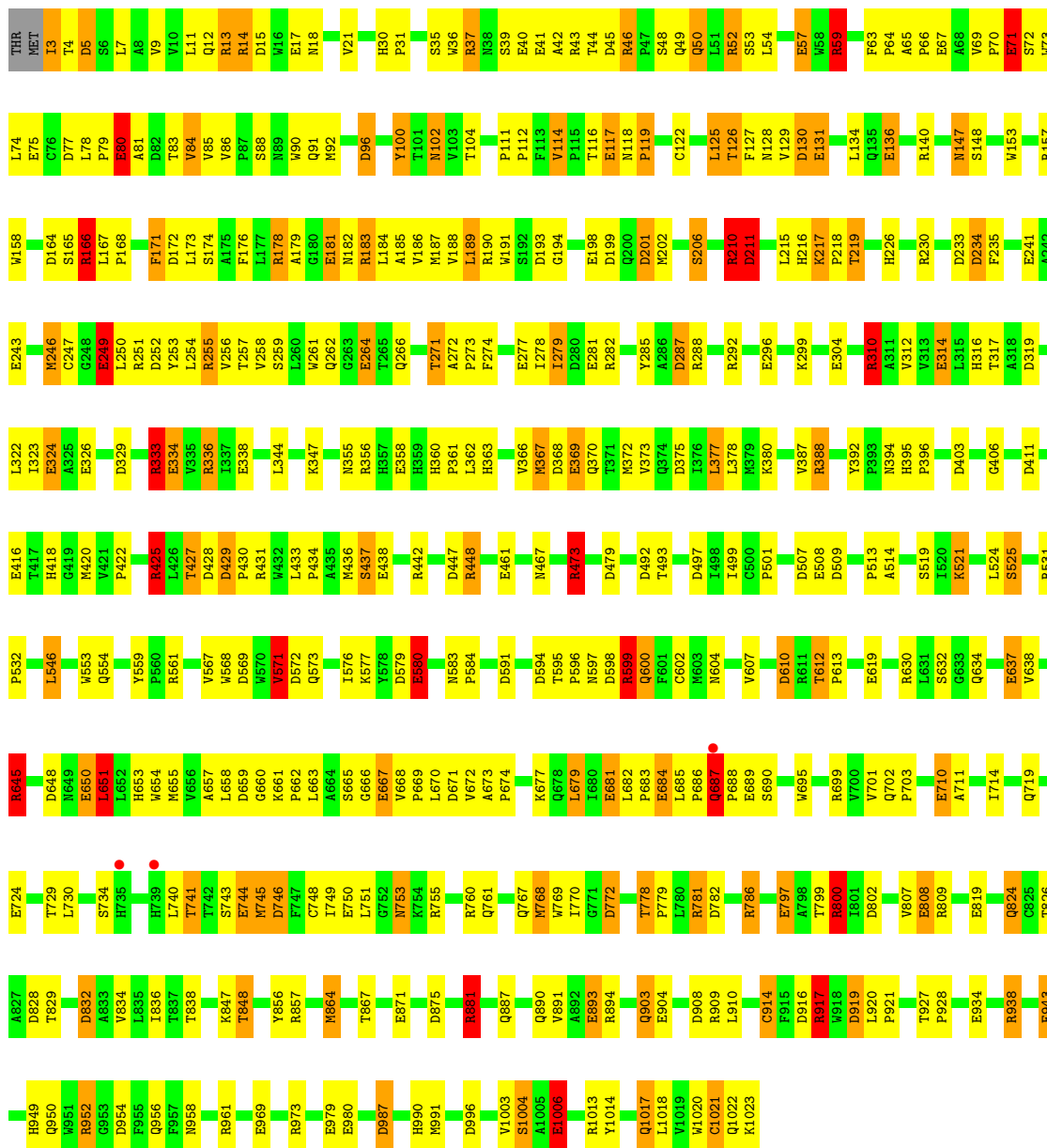




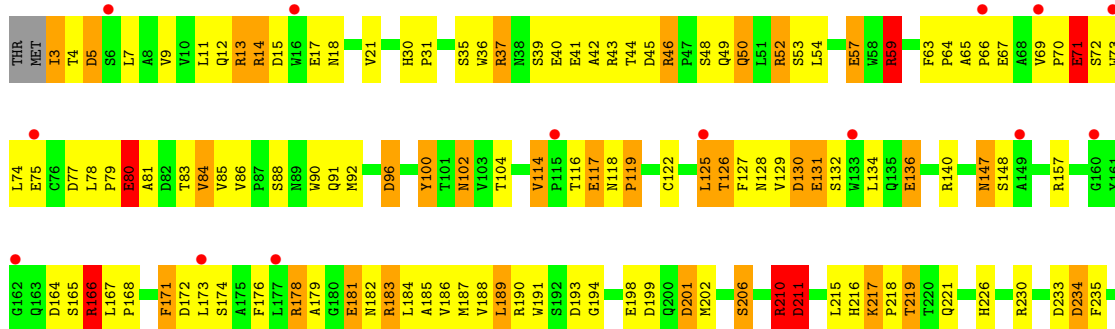


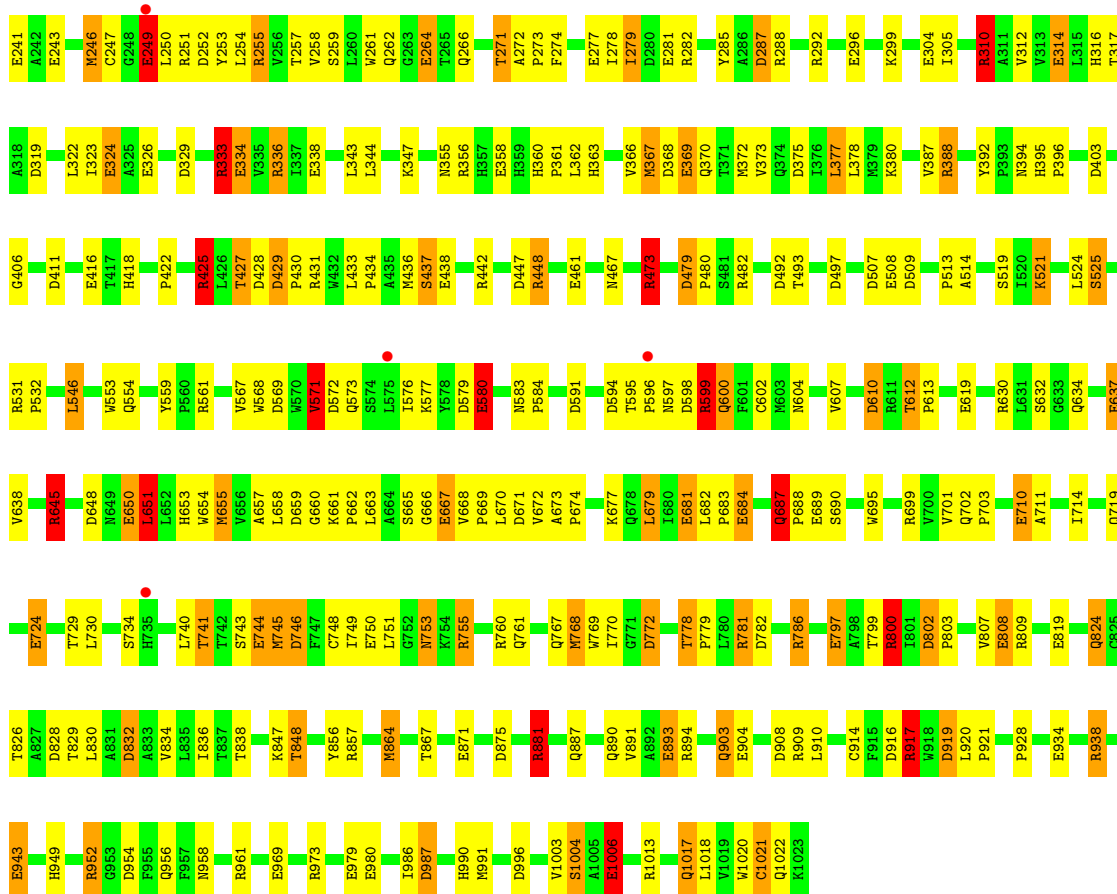




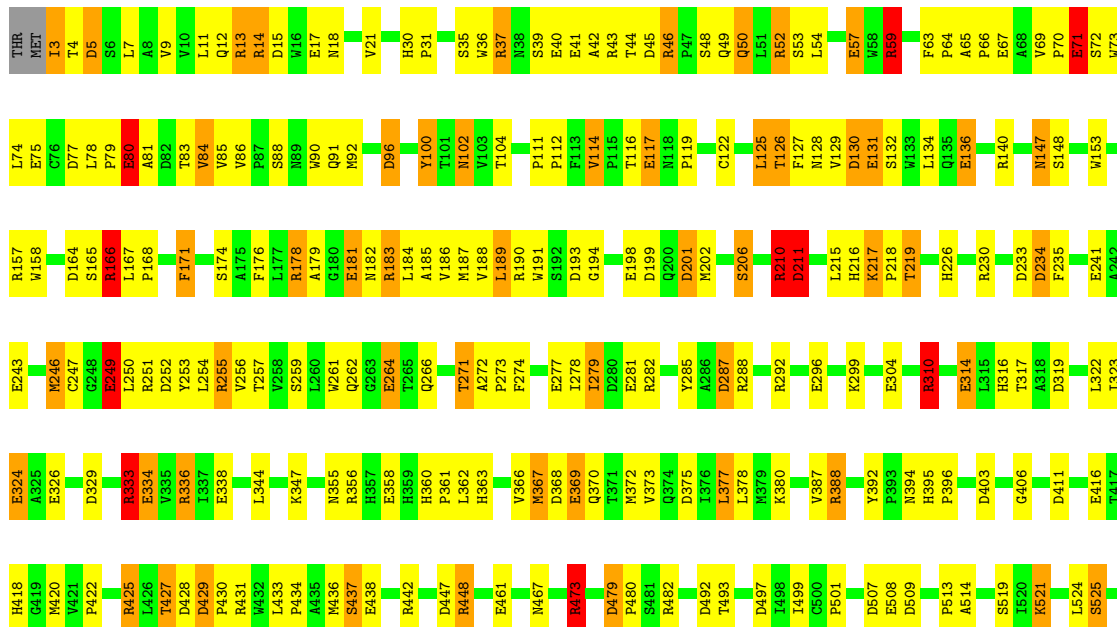


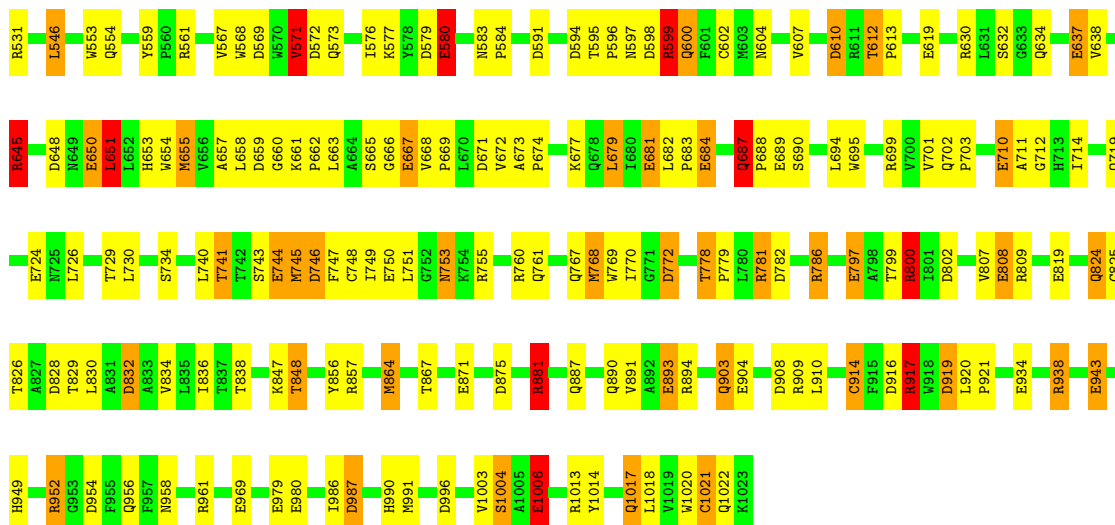
● Molecule 1: BETA-GALACTOSIDASE



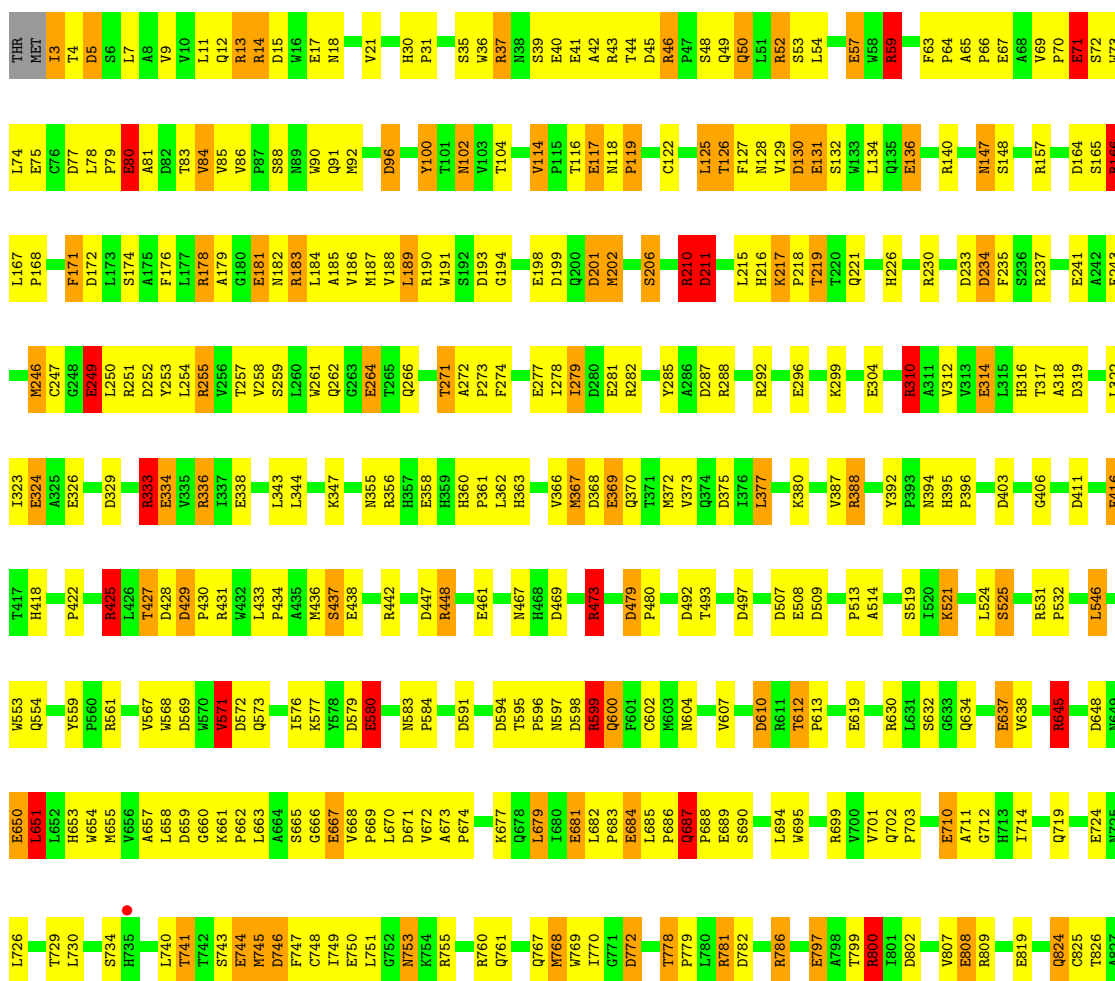


• Molecule 1: BETA-GALACTOSIDASE





● Molecule 1: BETA-GALACTOSIDASE





|      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| D987 | H990 | H991 | D996 | V1003 | S1004 | A1005 | E1006 | R1013 | Y1014 | Q1017 | L1018 | V1019 | H1020 | C1021 | Q1022 | K1023 |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

## 4 Data and refinement statistics i

| Property  | Value   | Source           |
|---|---|------------------|
| Space group   | P 1 21 1  | Depositor        |
| Cell constants<br>a, b, c, $\alpha$ , $\beta$ , $\gamma$                | 107.90Å 207.50Å 509.90Å<br>90.00° 94.70° 90.00°             | Depositor        |
| Resolution (Å)  | (Not available) – 2.50<br>92.62 – 2.00                      | Depositor<br>EDS |
| % Data completeness<br>(in resolution range)                            | 71.0 ((Not available)-2.50)<br>39.3 (92.62-2.00)            | Depositor<br>EDS |
| $R_{merge}$   | 0.07  | Depositor        |
| $R_{sym}$   | (Not available)   | Depositor        |
| $\langle I/\sigma(I) \rangle$ <sup>1</sup>                              | 2.07 (at 2.00Å)   | Xtrriage         |
| Refinement program  | TNT   | Depositor        |
| R, $R_{free}$   | 0.199 , 0.207<br>0.185 , (Not available)                    | Depositor<br>DCC |
| $R_{free}$ test set   | 1680 reflections (0.28%)                                    | wwPDB-VP         |
| Wilson B-factor (Å <sup>2</sup> )                                       | 27.6  | Xtrriage         |
| Anisotropy  | 0.197   | Xtrriage         |
| Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> ) | 0.29 , 100.0  | EDS              |
| L-test for twinning <sup>2</sup>  | $\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.30$ | Xtrriage         |
| Estimated twinning fraction   | 0.009 for h,-k,-h-l   | Xtrriage         |
| $F_o, F_c$ correlation  | 0.94  | EDS              |
| Total number of atoms   | 138704  | wwPDB-VP         |
| Average B, all atoms (Å <sup>2</sup> )                                  | 35.0  | wwPDB-VP         |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.98% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: CME, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths |                   | Bond angles |                    |
|-----|-------|--------------|-------------------|-------------|--------------------|
|     |       | RMSZ         | # $ Z  > 5$       | RMSZ        | # $ Z  > 5$        |
| 1   | A     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | B     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | C     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | D     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | E     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | F     | 1.23         | 55/8472 (0.6%)    | 1.69        | 186/11553 (1.6%)   |
| 1   | G     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | H     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | I     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | J     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | K     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | L     | 1.23         | 56/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | M     | 1.23         | 56/8472 (0.7%)    | 1.69        | 189/11553 (1.6%)   |
| 1   | N     | 1.23         | 56/8472 (0.7%)    | 1.69        | 187/11553 (1.6%)   |
| 1   | O     | 1.23         | 57/8472 (0.7%)    | 1.69        | 188/11553 (1.6%)   |
| 1   | P     | 1.23         | 56/8472 (0.7%)    | 1.69        | 187/11553 (1.6%)   |
| All | All   | 1.23         | 896/135552 (0.7%) | 1.69        | 3010/184848 (1.6%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | A     | 2                   | 0                   |
| 1   | B     | 2                   | 0                   |
| 1   | C     | 2                   | 0                   |
| 1   | D     | 2                   | 0                   |
| 1   | E     | 2                   | 0                   |
| 1   | F     | 2                   | 0                   |
| 1   | G     | 2                   | 0                   |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | H     | 2                   | 0                   |
| 1   | I     | 2                   | 0                   |
| 1   | J     | 2                   | 0                   |
| 1   | K     | 2                   | 0                   |
| 1   | L     | 2                   | 0                   |
| 1   | M     | 2                   | 0                   |
| 1   | N     | 2                   | 0                   |
| 1   | O     | 2                   | 0                   |
| 1   | P     | 2                   | 0                   |
| All | All   | 32                  | 0                   |

All (896) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | C     | 249 | GLU  | CD-OE2 | 12.04 | 1.38        | 1.25     |
| 1   | O     | 249 | GLU  | CD-OE2 | 12.03 | 1.38        | 1.25     |
| 1   | H     | 249 | GLU  | CD-OE2 | 12.01 | 1.38        | 1.25     |
| 1   | J     | 249 | GLU  | CD-OE2 | 12.01 | 1.38        | 1.25     |
| 1   | P     | 249 | GLU  | CD-OE2 | 12.01 | 1.38        | 1.25     |
| 1   | I     | 249 | GLU  | CD-OE2 | 12.00 | 1.38        | 1.25     |
| 1   | B     | 249 | GLU  | CD-OE2 | 11.99 | 1.38        | 1.25     |
| 1   | F     | 249 | GLU  | CD-OE2 | 11.99 | 1.38        | 1.25     |
| 1   | D     | 249 | GLU  | CD-OE2 | 11.98 | 1.38        | 1.25     |
| 1   | A     | 249 | GLU  | CD-OE2 | 11.97 | 1.38        | 1.25     |
| 1   | N     | 249 | GLU  | CD-OE2 | 11.96 | 1.38        | 1.25     |
| 1   | K     | 249 | GLU  | CD-OE2 | 11.95 | 1.38        | 1.25     |
| 1   | E     | 249 | GLU  | CD-OE2 | 11.93 | 1.38        | 1.25     |
| 1   | M     | 249 | GLU  | CD-OE2 | 11.93 | 1.38        | 1.25     |
| 1   | L     | 249 | GLU  | CD-OE2 | 11.92 | 1.38        | 1.25     |
| 1   | G     | 249 | GLU  | CD-OE2 | 11.92 | 1.38        | 1.25     |
| 1   | M     | 744 | GLU  | CD-OE2 | 11.53 | 1.38        | 1.25     |
| 1   | L     | 744 | GLU  | CD-OE2 | 11.52 | 1.38        | 1.25     |
| 1   | K     | 744 | GLU  | CD-OE2 | 11.50 | 1.38        | 1.25     |
| 1   | H     | 744 | GLU  | CD-OE2 | 11.48 | 1.38        | 1.25     |
| 1   | J     | 744 | GLU  | CD-OE2 | 11.47 | 1.38        | 1.25     |
| 1   | C     | 744 | GLU  | CD-OE2 | 11.47 | 1.38        | 1.25     |
| 1   | B     | 744 | GLU  | CD-OE2 | 11.46 | 1.38        | 1.25     |
| 1   | G     | 744 | GLU  | CD-OE2 | 11.46 | 1.38        | 1.25     |
| 1   | D     | 744 | GLU  | CD-OE2 | 11.45 | 1.38        | 1.25     |
| 1   | A     | 744 | GLU  | CD-OE2 | 11.45 | 1.38        | 1.25     |
| 1   | E     | 744 | GLU  | CD-OE2 | 11.45 | 1.38        | 1.25     |
| 1   | P     | 744 | GLU  | CD-OE2 | 11.43 | 1.38        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | F     | 744 | GLU  | CD-OE2 | 11.43 | 1.38        | 1.25     |
| 1   | O     | 744 | GLU  | CD-OE2 | 11.40 | 1.38        | 1.25     |
| 1   | N     | 744 | GLU  | CD-OE2 | 11.38 | 1.38        | 1.25     |
| 1   | I     | 744 | GLU  | CD-OE2 | 11.37 | 1.38        | 1.25     |
| 1   | N     | 689 | GLU  | CD-OE2 | 10.61 | 1.37        | 1.25     |
| 1   | F     | 689 | GLU  | CD-OE2 | 10.59 | 1.37        | 1.25     |
| 1   | C     | 689 | GLU  | CD-OE2 | 10.58 | 1.37        | 1.25     |
| 1   | B     | 689 | GLU  | CD-OE2 | 10.54 | 1.37        | 1.25     |
| 1   | A     | 689 | GLU  | CD-OE2 | 10.53 | 1.37        | 1.25     |
| 1   | P     | 689 | GLU  | CD-OE2 | 10.53 | 1.37        | 1.25     |
| 1   | E     | 689 | GLU  | CD-OE2 | 10.52 | 1.37        | 1.25     |
| 1   | D     | 689 | GLU  | CD-OE2 | 10.52 | 1.37        | 1.25     |
| 1   | L     | 689 | GLU  | CD-OE2 | 10.51 | 1.37        | 1.25     |
| 1   | J     | 689 | GLU  | CD-OE2 | 10.50 | 1.37        | 1.25     |
| 1   | O     | 689 | GLU  | CD-OE2 | 10.50 | 1.37        | 1.25     |
| 1   | M     | 689 | GLU  | CD-OE2 | 10.50 | 1.37        | 1.25     |
| 1   | I     | 689 | GLU  | CD-OE2 | 10.49 | 1.37        | 1.25     |
| 1   | H     | 689 | GLU  | CD-OE2 | 10.49 | 1.37        | 1.25     |
| 1   | K     | 689 | GLU  | CD-OE2 | 10.49 | 1.37        | 1.25     |
| 1   | G     | 689 | GLU  | CD-OE2 | 10.48 | 1.37        | 1.25     |
| 1   | I     | 819 | GLU  | CD-OE2 | 10.44 | 1.37        | 1.25     |
| 1   | G     | 819 | GLU  | CD-OE2 | 10.42 | 1.37        | 1.25     |
| 1   | H     | 819 | GLU  | CD-OE2 | 10.41 | 1.37        | 1.25     |
| 1   | M     | 819 | GLU  | CD-OE2 | 10.41 | 1.37        | 1.25     |
| 1   | E     | 819 | GLU  | CD-OE2 | 10.41 | 1.37        | 1.25     |
| 1   | C     | 819 | GLU  | CD-OE2 | 10.40 | 1.37        | 1.25     |
| 1   | L     | 819 | GLU  | CD-OE2 | 10.39 | 1.37        | 1.25     |
| 1   | O     | 819 | GLU  | CD-OE2 | 10.39 | 1.37        | 1.25     |
| 1   | A     | 819 | GLU  | CD-OE2 | 10.39 | 1.37        | 1.25     |
| 1   | K     | 819 | GLU  | CD-OE2 | 10.38 | 1.37        | 1.25     |
| 1   | N     | 819 | GLU  | CD-OE2 | 10.38 | 1.37        | 1.25     |
| 1   | D     | 819 | GLU  | CD-OE2 | 10.37 | 1.37        | 1.25     |
| 1   | B     | 819 | GLU  | CD-OE2 | 10.37 | 1.37        | 1.25     |
| 1   | F     | 819 | GLU  | CD-OE2 | 10.34 | 1.37        | 1.25     |
| 1   | P     | 819 | GLU  | CD-OE2 | 10.33 | 1.37        | 1.25     |
| 1   | J     | 819 | GLU  | CD-OE2 | 10.32 | 1.37        | 1.25     |
| 1   | G     | 75  | GLU  | CD-OE2 | 10.18 | 1.36        | 1.25     |
| 1   | L     | 75  | GLU  | CD-OE2 | 10.18 | 1.36        | 1.25     |
| 1   | J     | 75  | GLU  | CD-OE2 | 10.18 | 1.36        | 1.25     |
| 1   | O     | 75  | GLU  | CD-OE2 | 10.18 | 1.36        | 1.25     |
| 1   | M     | 75  | GLU  | CD-OE2 | 10.17 | 1.36        | 1.25     |
| 1   | I     | 75  | GLU  | CD-OE2 | 10.15 | 1.36        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | B     | 75  | GLU  | CD-OE2 | 10.15 | 1.36        | 1.25     |
| 1   | C     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | E     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | A     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | F     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | N     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | D     | 75  | GLU  | CD-OE2 | 10.14 | 1.36        | 1.25     |
| 1   | H     | 75  | GLU  | CD-OE2 | 10.10 | 1.36        | 1.25     |
| 1   | P     | 75  | GLU  | CD-OE2 | 10.10 | 1.36        | 1.25     |
| 1   | K     | 75  | GLU  | CD-OE2 | 10.09 | 1.36        | 1.25     |
| 1   | F     | 580 | GLU  | CD-OE2 | 9.81  | 1.36        | 1.25     |
| 1   | D     | 580 | GLU  | CD-OE2 | 9.79  | 1.36        | 1.25     |
| 1   | C     | 580 | GLU  | CD-OE2 | 9.78  | 1.36        | 1.25     |
| 1   | I     | 580 | GLU  | CD-OE2 | 9.76  | 1.36        | 1.25     |
| 1   | B     | 580 | GLU  | CD-OE2 | 9.75  | 1.36        | 1.25     |
| 1   | M     | 580 | GLU  | CD-OE2 | 9.75  | 1.36        | 1.25     |
| 1   | L     | 580 | GLU  | CD-OE2 | 9.74  | 1.36        | 1.25     |
| 1   | E     | 580 | GLU  | CD-OE2 | 9.74  | 1.36        | 1.25     |
| 1   | A     | 580 | GLU  | CD-OE2 | 9.73  | 1.36        | 1.25     |
| 1   | N     | 580 | GLU  | CD-OE2 | 9.72  | 1.36        | 1.25     |
| 1   | G     | 580 | GLU  | CD-OE2 | 9.72  | 1.36        | 1.25     |
| 1   | O     | 580 | GLU  | CD-OE2 | 9.71  | 1.36        | 1.25     |
| 1   | K     | 580 | GLU  | CD-OE2 | 9.71  | 1.36        | 1.25     |
| 1   | H     | 580 | GLU  | CD-OE2 | 9.70  | 1.36        | 1.25     |
| 1   | J     | 580 | GLU  | CD-OE2 | 9.70  | 1.36        | 1.25     |
| 1   | P     | 580 | GLU  | CD-OE2 | 9.70  | 1.36        | 1.25     |
| 1   | I     | 131 | GLU  | CD-OE2 | 9.58  | 1.36        | 1.25     |
| 1   | C     | 131 | GLU  | CD-OE2 | 9.58  | 1.36        | 1.25     |
| 1   | H     | 131 | GLU  | CD-OE2 | 9.57  | 1.36        | 1.25     |
| 1   | E     | 131 | GLU  | CD-OE2 | 9.54  | 1.36        | 1.25     |
| 1   | P     | 131 | GLU  | CD-OE2 | 9.54  | 1.36        | 1.25     |
| 1   | G     | 131 | GLU  | CD-OE2 | 9.53  | 1.36        | 1.25     |
| 1   | A     | 131 | GLU  | CD-OE2 | 9.52  | 1.36        | 1.25     |
| 1   | F     | 131 | GLU  | CD-OE2 | 9.50  | 1.36        | 1.25     |
| 1   | B     | 131 | GLU  | CD-OE2 | 9.50  | 1.36        | 1.25     |
| 1   | J     | 131 | GLU  | CD-OE2 | 9.50  | 1.36        | 1.25     |
| 1   | K     | 131 | GLU  | CD-OE2 | 9.50  | 1.36        | 1.25     |
| 1   | D     | 131 | GLU  | CD-OE2 | 9.49  | 1.36        | 1.25     |
| 1   | O     | 131 | GLU  | CD-OE2 | 9.48  | 1.36        | 1.25     |
| 1   | M     | 131 | GLU  | CD-OE2 | 9.48  | 1.36        | 1.25     |
| 1   | N     | 131 | GLU  | CD-OE2 | 9.47  | 1.36        | 1.25     |
| 1   | L     | 131 | GLU  | CD-OE2 | 9.46  | 1.36        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | N     | 980 | GLU  | CD-OE2 | 9.37 | 1.35        | 1.25     |
| 1   | G     | 980 | GLU  | CD-OE2 | 9.37 | 1.35        | 1.25     |
| 1   | M     | 980 | GLU  | CD-OE2 | 9.36 | 1.35        | 1.25     |
| 1   | B     | 980 | GLU  | CD-OE2 | 9.35 | 1.35        | 1.25     |
| 1   | E     | 980 | GLU  | CD-OE2 | 9.32 | 1.35        | 1.25     |
| 1   | D     | 980 | GLU  | CD-OE2 | 9.32 | 1.35        | 1.25     |
| 1   | F     | 980 | GLU  | CD-OE2 | 9.31 | 1.35        | 1.25     |
| 1   | A     | 980 | GLU  | CD-OE2 | 9.31 | 1.35        | 1.25     |
| 1   | O     | 980 | GLU  | CD-OE2 | 9.29 | 1.35        | 1.25     |
| 1   | H     | 980 | GLU  | CD-OE2 | 9.28 | 1.35        | 1.25     |
| 1   | L     | 980 | GLU  | CD-OE2 | 9.27 | 1.35        | 1.25     |
| 1   | I     | 980 | GLU  | CD-OE2 | 9.27 | 1.35        | 1.25     |
| 1   | J     | 980 | GLU  | CD-OE2 | 9.27 | 1.35        | 1.25     |
| 1   | D     | 684 | GLU  | CD-OE2 | 9.26 | 1.35        | 1.25     |
| 1   | C     | 980 | GLU  | CD-OE2 | 9.25 | 1.35        | 1.25     |
| 1   | K     | 980 | GLU  | CD-OE2 | 9.24 | 1.35        | 1.25     |
| 1   | P     | 980 | GLU  | CD-OE2 | 9.22 | 1.35        | 1.25     |
| 1   | G     | 684 | GLU  | CD-OE2 | 9.20 | 1.35        | 1.25     |
| 1   | O     | 684 | GLU  | CD-OE2 | 9.20 | 1.35        | 1.25     |
| 1   | K     | 684 | GLU  | CD-OE2 | 9.19 | 1.35        | 1.25     |
| 1   | M     | 684 | GLU  | CD-OE2 | 9.19 | 1.35        | 1.25     |
| 1   | P     | 684 | GLU  | CD-OE2 | 9.19 | 1.35        | 1.25     |
| 1   | F     | 684 | GLU  | CD-OE2 | 9.19 | 1.35        | 1.25     |
| 1   | A     | 684 | GLU  | CD-OE2 | 9.19 | 1.35        | 1.25     |
| 1   | N     | 684 | GLU  | CD-OE2 | 9.18 | 1.35        | 1.25     |
| 1   | L     | 684 | GLU  | CD-OE2 | 9.17 | 1.35        | 1.25     |
| 1   | C     | 684 | GLU  | CD-OE2 | 9.16 | 1.35        | 1.25     |
| 1   | B     | 684 | GLU  | CD-OE2 | 9.16 | 1.35        | 1.25     |
| 1   | I     | 684 | GLU  | CD-OE2 | 9.15 | 1.35        | 1.25     |
| 1   | H     | 684 | GLU  | CD-OE2 | 9.15 | 1.35        | 1.25     |
| 1   | E     | 684 | GLU  | CD-OE2 | 9.13 | 1.35        | 1.25     |
| 1   | J     | 684 | GLU  | CD-OE2 | 9.12 | 1.35        | 1.25     |
| 1   | M     | 296 | GLU  | CD-OE2 | 9.06 | 1.35        | 1.25     |
| 1   | N     | 296 | GLU  | CD-OE2 | 9.04 | 1.35        | 1.25     |
| 1   | H     | 296 | GLU  | CD-OE2 | 9.03 | 1.35        | 1.25     |
| 1   | O     | 296 | GLU  | CD-OE2 | 9.03 | 1.35        | 1.25     |
| 1   | B     | 296 | GLU  | CD-OE2 | 9.02 | 1.35        | 1.25     |
| 1   | G     | 296 | GLU  | CD-OE2 | 9.02 | 1.35        | 1.25     |
| 1   | A     | 296 | GLU  | CD-OE2 | 9.02 | 1.35        | 1.25     |
| 1   | E     | 296 | GLU  | CD-OE2 | 9.02 | 1.35        | 1.25     |
| 1   | C     | 296 | GLU  | CD-OE2 | 9.02 | 1.35        | 1.25     |
| 1   | F     | 296 | GLU  | CD-OE2 | 9.01 | 1.35        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | C     | 181 | GLU  | CD-OE2 | 9.01 | 1.35        | 1.25     |
| 1   | L     | 296 | GLU  | CD-OE2 | 9.01 | 1.35        | 1.25     |
| 1   | D     | 181 | GLU  | CD-OE2 | 9.00 | 1.35        | 1.25     |
| 1   | J     | 296 | GLU  | CD-OE2 | 9.00 | 1.35        | 1.25     |
| 1   | K     | 296 | GLU  | CD-OE2 | 9.00 | 1.35        | 1.25     |
| 1   | I     | 296 | GLU  | CD-OE2 | 8.99 | 1.35        | 1.25     |
| 1   | H     | 181 | GLU  | CD-OE2 | 8.99 | 1.35        | 1.25     |
| 1   | D     | 296 | GLU  | CD-OE2 | 8.99 | 1.35        | 1.25     |
| 1   | I     | 181 | GLU  | CD-OE2 | 8.98 | 1.35        | 1.25     |
| 1   | N     | 181 | GLU  | CD-OE2 | 8.98 | 1.35        | 1.25     |
| 1   | P     | 296 | GLU  | CD-OE2 | 8.98 | 1.35        | 1.25     |
| 1   | J     | 181 | GLU  | CD-OE2 | 8.97 | 1.35        | 1.25     |
| 1   | A     | 181 | GLU  | CD-OE2 | 8.96 | 1.35        | 1.25     |
| 1   | K     | 181 | GLU  | CD-OE2 | 8.95 | 1.35        | 1.25     |
| 1   | G     | 181 | GLU  | CD-OE2 | 8.94 | 1.35        | 1.25     |
| 1   | B     | 181 | GLU  | CD-OE2 | 8.93 | 1.35        | 1.25     |
| 1   | M     | 181 | GLU  | CD-OE2 | 8.93 | 1.35        | 1.25     |
| 1   | O     | 181 | GLU  | CD-OE2 | 8.93 | 1.35        | 1.25     |
| 1   | E     | 181 | GLU  | CD-OE2 | 8.92 | 1.35        | 1.25     |
| 1   | F     | 181 | GLU  | CD-OE2 | 8.92 | 1.35        | 1.25     |
| 1   | L     | 181 | GLU  | CD-OE2 | 8.92 | 1.35        | 1.25     |
| 1   | G     | 136 | GLU  | CD-OE2 | 8.91 | 1.35        | 1.25     |
| 1   | L     | 136 | GLU  | CD-OE2 | 8.90 | 1.35        | 1.25     |
| 1   | O     | 136 | GLU  | CD-OE2 | 8.89 | 1.35        | 1.25     |
| 1   | P     | 181 | GLU  | CD-OE2 | 8.88 | 1.35        | 1.25     |
| 1   | K     | 136 | GLU  | CD-OE2 | 8.87 | 1.35        | 1.25     |
| 1   | B     | 136 | GLU  | CD-OE2 | 8.85 | 1.35        | 1.25     |
| 1   | E     | 136 | GLU  | CD-OE2 | 8.85 | 1.35        | 1.25     |
| 1   | D     | 136 | GLU  | CD-OE2 | 8.85 | 1.35        | 1.25     |
| 1   | F     | 136 | GLU  | CD-OE2 | 8.83 | 1.35        | 1.25     |
| 1   | A     | 136 | GLU  | CD-OE2 | 8.83 | 1.35        | 1.25     |
| 1   | C     | 136 | GLU  | CD-OE2 | 8.82 | 1.35        | 1.25     |
| 1   | P     | 136 | GLU  | CD-OE2 | 8.81 | 1.35        | 1.25     |
| 1   | J     | 136 | GLU  | CD-OE2 | 8.81 | 1.35        | 1.25     |
| 1   | I     | 136 | GLU  | CD-OE2 | 8.80 | 1.35        | 1.25     |
| 1   | H     | 136 | GLU  | CD-OE2 | 8.79 | 1.35        | 1.25     |
| 1   | N     | 136 | GLU  | CD-OE2 | 8.78 | 1.35        | 1.25     |
| 1   | E     | 710 | GLU  | CD-OE2 | 8.75 | 1.35        | 1.25     |
| 1   | N     | 710 | GLU  | CD-OE2 | 8.74 | 1.35        | 1.25     |
| 1   | M     | 136 | GLU  | CD-OE2 | 8.74 | 1.35        | 1.25     |
| 1   | P     | 710 | GLU  | CD-OE2 | 8.73 | 1.35        | 1.25     |
| 1   | F     | 710 | GLU  | CD-OE2 | 8.72 | 1.35        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | H     | 710 | GLU  | CD-OE2 | 8.71 | 1.35        | 1.25     |
| 1   | O     | 710 | GLU  | CD-OE2 | 8.70 | 1.35        | 1.25     |
| 1   | L     | 710 | GLU  | CD-OE2 | 8.70 | 1.35        | 1.25     |
| 1   | J     | 710 | GLU  | CD-OE2 | 8.70 | 1.35        | 1.25     |
| 1   | M     | 710 | GLU  | CD-OE2 | 8.70 | 1.35        | 1.25     |
| 1   | G     | 710 | GLU  | CD-OE2 | 8.69 | 1.35        | 1.25     |
| 1   | I     | 710 | GLU  | CD-OE2 | 8.69 | 1.35        | 1.25     |
| 1   | A     | 710 | GLU  | CD-OE2 | 8.68 | 1.35        | 1.25     |
| 1   | K     | 710 | GLU  | CD-OE2 | 8.66 | 1.35        | 1.25     |
| 1   | D     | 710 | GLU  | CD-OE2 | 8.66 | 1.35        | 1.25     |
| 1   | C     | 710 | GLU  | CD-OE2 | 8.65 | 1.35        | 1.25     |
| 1   | B     | 710 | GLU  | CD-OE2 | 8.62 | 1.35        | 1.25     |
| 1   | H     | 264 | GLU  | CD-OE2 | 8.60 | 1.35        | 1.25     |
| 1   | N     | 264 | GLU  | CD-OE2 | 8.58 | 1.35        | 1.25     |
| 1   | K     | 264 | GLU  | CD-OE2 | 8.57 | 1.35        | 1.25     |
| 1   | G     | 264 | GLU  | CD-OE2 | 8.57 | 1.35        | 1.25     |
| 1   | C     | 264 | GLU  | CD-OE2 | 8.57 | 1.35        | 1.25     |
| 1   | O     | 264 | GLU  | CD-OE2 | 8.57 | 1.35        | 1.25     |
| 1   | J     | 264 | GLU  | CD-OE2 | 8.56 | 1.35        | 1.25     |
| 1   | D     | 264 | GLU  | CD-OE2 | 8.55 | 1.35        | 1.25     |
| 1   | P     | 264 | GLU  | CD-OE2 | 8.54 | 1.35        | 1.25     |
| 1   | M     | 264 | GLU  | CD-OE2 | 8.53 | 1.35        | 1.25     |
| 1   | B     | 264 | GLU  | CD-OE2 | 8.52 | 1.35        | 1.25     |
| 1   | A     | 264 | GLU  | CD-OE2 | 8.52 | 1.35        | 1.25     |
| 1   | L     | 264 | GLU  | CD-OE2 | 8.51 | 1.35        | 1.25     |
| 1   | I     | 264 | GLU  | CD-OE2 | 8.50 | 1.34        | 1.25     |
| 1   | E     | 264 | GLU  | CD-OE2 | 8.50 | 1.34        | 1.25     |
| 1   | F     | 264 | GLU  | CD-OE2 | 8.49 | 1.34        | 1.25     |
| 1   | M     | 797 | GLU  | CD-OE2 | 8.44 | 1.34        | 1.25     |
| 1   | J     | 797 | GLU  | CD-OE2 | 8.44 | 1.34        | 1.25     |
| 1   | N     | 797 | GLU  | CD-OE2 | 8.42 | 1.34        | 1.25     |
| 1   | C     | 277 | GLU  | CD-OE2 | 8.42 | 1.34        | 1.25     |
| 1   | F     | 797 | GLU  | CD-OE2 | 8.41 | 1.34        | 1.25     |
| 1   | G     | 797 | GLU  | CD-OE2 | 8.41 | 1.34        | 1.25     |
| 1   | I     | 277 | GLU  | CD-OE2 | 8.41 | 1.34        | 1.25     |
| 1   | A     | 797 | GLU  | CD-OE2 | 8.40 | 1.34        | 1.25     |
| 1   | O     | 797 | GLU  | CD-OE2 | 8.40 | 1.34        | 1.25     |
| 1   | H     | 797 | GLU  | CD-OE2 | 8.39 | 1.34        | 1.25     |
| 1   | B     | 797 | GLU  | CD-OE2 | 8.39 | 1.34        | 1.25     |
| 1   | I     | 797 | GLU  | CD-OE2 | 8.39 | 1.34        | 1.25     |
| 1   | O     | 508 | GLU  | CD-OE2 | 8.39 | 1.34        | 1.25     |
| 1   | P     | 797 | GLU  | CD-OE2 | 8.39 | 1.34        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | K     | 797 | GLU  | CD-OE2 | 8.38 | 1.34        | 1.25     |
| 1   | E     | 797 | GLU  | CD-OE2 | 8.38 | 1.34        | 1.25     |
| 1   | F     | 277 | GLU  | CD-OE2 | 8.36 | 1.34        | 1.25     |
| 1   | A     | 277 | GLU  | CD-OE2 | 8.36 | 1.34        | 1.25     |
| 1   | E     | 508 | GLU  | CD-OE2 | 8.36 | 1.34        | 1.25     |
| 1   | M     | 277 | GLU  | CD-OE2 | 8.35 | 1.34        | 1.25     |
| 1   | O     | 277 | GLU  | CD-OE2 | 8.35 | 1.34        | 1.25     |
| 1   | L     | 797 | GLU  | CD-OE2 | 8.34 | 1.34        | 1.25     |
| 1   | J     | 277 | GLU  | CD-OE2 | 8.34 | 1.34        | 1.25     |
| 1   | C     | 508 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | I     | 508 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | D     | 797 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | C     | 797 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | E     | 277 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | G     | 508 | GLU  | CD-OE2 | 8.33 | 1.34        | 1.25     |
| 1   | H     | 508 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | B     | 508 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | D     | 508 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | N     | 277 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | D     | 277 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | J     | 508 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | M     | 508 | GLU  | CD-OE2 | 8.32 | 1.34        | 1.25     |
| 1   | L     | 508 | GLU  | CD-OE2 | 8.31 | 1.34        | 1.25     |
| 1   | P     | 277 | GLU  | CD-OE2 | 8.31 | 1.34        | 1.25     |
| 1   | K     | 277 | GLU  | CD-OE2 | 8.31 | 1.34        | 1.25     |
| 1   | G     | 277 | GLU  | CD-OE2 | 8.31 | 1.34        | 1.25     |
| 1   | K     | 508 | GLU  | CD-OE2 | 8.30 | 1.34        | 1.25     |
| 1   | F     | 508 | GLU  | CD-OE2 | 8.29 | 1.34        | 1.25     |
| 1   | H     | 277 | GLU  | CD-OE2 | 8.30 | 1.34        | 1.25     |
| 1   | L     | 277 | GLU  | CD-OE2 | 8.29 | 1.34        | 1.25     |
| 1   | N     | 508 | GLU  | CD-OE2 | 8.29 | 1.34        | 1.25     |
| 1   | B     | 277 | GLU  | CD-OE2 | 8.27 | 1.34        | 1.25     |
| 1   | A     | 508 | GLU  | CD-OE2 | 8.26 | 1.34        | 1.25     |
| 1   | P     | 508 | GLU  | CD-OE2 | 8.24 | 1.34        | 1.25     |
| 1   | G     | 724 | GLU  | CD-OE2 | 8.02 | 1.34        | 1.25     |
| 1   | I     | 724 | GLU  | CD-OE2 | 7.99 | 1.34        | 1.25     |
| 1   | J     | 724 | GLU  | CD-OE2 | 7.98 | 1.34        | 1.25     |
| 1   | K     | 724 | GLU  | CD-OE2 | 7.98 | 1.34        | 1.25     |
| 1   | M     | 724 | GLU  | CD-OE2 | 7.98 | 1.34        | 1.25     |
| 1   | E     | 724 | GLU  | CD-OE2 | 7.97 | 1.34        | 1.25     |
| 1   | O     | 724 | GLU  | CD-OE2 | 7.96 | 1.34        | 1.25     |
| 1   | C     | 724 | GLU  | CD-OE2 | 7.96 | 1.34        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | F     | 724 | GLU  | CD-OE2 | 7.95 | 1.34        | 1.25     |
| 1   | A     | 724 | GLU  | CD-OE2 | 7.95 | 1.34        | 1.25     |
| 1   | N     | 724 | GLU  | CD-OE2 | 7.94 | 1.34        | 1.25     |
| 1   | D     | 893 | GLU  | CD-OE2 | 7.94 | 1.34        | 1.25     |
| 1   | B     | 724 | GLU  | CD-OE2 | 7.93 | 1.34        | 1.25     |
| 1   | L     | 724 | GLU  | CD-OE2 | 7.93 | 1.34        | 1.25     |
| 1   | H     | 724 | GLU  | CD-OE2 | 7.92 | 1.34        | 1.25     |
| 1   | P     | 724 | GLU  | CD-OE2 | 7.91 | 1.34        | 1.25     |
| 1   | D     | 724 | GLU  | CD-OE2 | 7.91 | 1.34        | 1.25     |
| 1   | C     | 893 | GLU  | CD-OE2 | 7.89 | 1.34        | 1.25     |
| 1   | E     | 893 | GLU  | CD-OE2 | 7.88 | 1.34        | 1.25     |
| 1   | I     | 893 | GLU  | CD-OE2 | 7.88 | 1.34        | 1.25     |
| 1   | N     | 893 | GLU  | CD-OE2 | 7.88 | 1.34        | 1.25     |
| 1   | J     | 893 | GLU  | CD-OE2 | 7.87 | 1.34        | 1.25     |
| 1   | P     | 893 | GLU  | CD-OE2 | 7.87 | 1.34        | 1.25     |
| 1   | G     | 893 | GLU  | CD-OE2 | 7.87 | 1.34        | 1.25     |
| 1   | A     | 893 | GLU  | CD-OE2 | 7.83 | 1.34        | 1.25     |
| 1   | B     | 893 | GLU  | CD-OE2 | 7.82 | 1.34        | 1.25     |
| 1   | H     | 893 | GLU  | CD-OE2 | 7.82 | 1.34        | 1.25     |
| 1   | F     | 893 | GLU  | CD-OE2 | 7.79 | 1.34        | 1.25     |
| 1   | M     | 893 | GLU  | CD-OE2 | 7.78 | 1.34        | 1.25     |
| 1   | K     | 893 | GLU  | CD-OE2 | 7.78 | 1.34        | 1.25     |
| 1   | L     | 893 | GLU  | CD-OE2 | 7.77 | 1.34        | 1.25     |
| 1   | O     | 893 | GLU  | CD-OE2 | 7.76 | 1.34        | 1.25     |
| 1   | L     | 438 | GLU  | CD-OE2 | 7.58 | 1.33        | 1.25     |
| 1   | O     | 438 | GLU  | CD-OE2 | 7.58 | 1.33        | 1.25     |
| 1   | N     | 438 | GLU  | CD-OE2 | 7.55 | 1.33        | 1.25     |
| 1   | H     | 438 | GLU  | CD-OE2 | 7.55 | 1.33        | 1.25     |
| 1   | I     | 438 | GLU  | CD-OE2 | 7.54 | 1.33        | 1.25     |
| 1   | J     | 438 | GLU  | CD-OE2 | 7.53 | 1.33        | 1.25     |
| 1   | C     | 438 | GLU  | CD-OE2 | 7.53 | 1.33        | 1.25     |
| 1   | A     | 438 | GLU  | CD-OE2 | 7.52 | 1.33        | 1.25     |
| 1   | F     | 438 | GLU  | CD-OE2 | 7.51 | 1.33        | 1.25     |
| 1   | E     | 438 | GLU  | CD-OE2 | 7.51 | 1.33        | 1.25     |
| 1   | G     | 438 | GLU  | CD-OE2 | 7.51 | 1.33        | 1.25     |
| 1   | D     | 438 | GLU  | CD-OE2 | 7.50 | 1.33        | 1.25     |
| 1   | K     | 438 | GLU  | CD-OE2 | 7.49 | 1.33        | 1.25     |
| 1   | M     | 438 | GLU  | CD-OE2 | 7.49 | 1.33        | 1.25     |
| 1   | B     | 438 | GLU  | CD-OE2 | 7.48 | 1.33        | 1.25     |
| 1   | O     | 80  | GLU  | CD-OE2 | 7.47 | 1.33        | 1.25     |
| 1   | H     | 80  | GLU  | CD-OE2 | 7.46 | 1.33        | 1.25     |
| 1   | K     | 40  | GLU  | CD-OE2 | 7.46 | 1.33        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | P     | 438 | GLU  | CD-OE2 | 7.46 | 1.33        | 1.25     |
| 1   | I     | 40  | GLU  | CD-OE2 | 7.45 | 1.33        | 1.25     |
| 1   | C     | 80  | GLU  | CD-OE2 | 7.45 | 1.33        | 1.25     |
| 1   | J     | 80  | GLU  | CD-OE2 | 7.45 | 1.33        | 1.25     |
| 1   | B     | 80  | GLU  | CD-OE2 | 7.45 | 1.33        | 1.25     |
| 1   | M     | 80  | GLU  | CD-OE2 | 7.45 | 1.33        | 1.25     |
| 1   | C     | 40  | GLU  | CD-OE2 | 7.44 | 1.33        | 1.25     |
| 1   | D     | 40  | GLU  | CD-OE2 | 7.43 | 1.33        | 1.25     |
| 1   | B     | 40  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | E     | 80  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | J     | 40  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | A     | 80  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | M     | 40  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | F     | 40  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | N     | 80  | GLU  | CD-OE2 | 7.42 | 1.33        | 1.25     |
| 1   | I     | 80  | GLU  | CD-OE2 | 7.41 | 1.33        | 1.25     |
| 1   | L     | 80  | GLU  | CD-OE2 | 7.40 | 1.33        | 1.25     |
| 1   | P     | 40  | GLU  | CD-OE2 | 7.40 | 1.33        | 1.25     |
| 1   | P     | 80  | GLU  | CD-OE2 | 7.40 | 1.33        | 1.25     |
| 1   | A     | 40  | GLU  | CD-OE2 | 7.40 | 1.33        | 1.25     |
| 1   | G     | 40  | GLU  | CD-OE2 | 7.39 | 1.33        | 1.25     |
| 1   | H     | 40  | GLU  | CD-OE2 | 7.39 | 1.33        | 1.25     |
| 1   | K     | 80  | GLU  | CD-OE2 | 7.39 | 1.33        | 1.25     |
| 1   | N     | 40  | GLU  | CD-OE2 | 7.39 | 1.33        | 1.25     |
| 1   | O     | 40  | GLU  | CD-OE2 | 7.39 | 1.33        | 1.25     |
| 1   | L     | 40  | GLU  | CD-OE2 | 7.38 | 1.33        | 1.25     |
| 1   | G     | 80  | GLU  | CD-OE2 | 7.36 | 1.33        | 1.25     |
| 1   | E     | 40  | GLU  | CD-OE2 | 7.35 | 1.33        | 1.25     |
| 1   | D     | 80  | GLU  | CD-OE2 | 7.35 | 1.33        | 1.25     |
| 1   | B     | 808 | GLU  | CD-OE2 | 7.34 | 1.33        | 1.25     |
| 1   | F     | 808 | GLU  | CD-OE2 | 7.33 | 1.33        | 1.25     |
| 1   | F     | 80  | GLU  | CD-OE2 | 7.33 | 1.33        | 1.25     |
| 1   | E     | 117 | GLU  | CD-OE2 | 7.32 | 1.33        | 1.25     |
| 1   | D     | 117 | GLU  | CD-OE2 | 7.32 | 1.33        | 1.25     |
| 1   | D     | 969 | GLU  | CD-OE2 | 7.32 | 1.33        | 1.25     |
| 1   | C     | 969 | GLU  | CD-OE2 | 7.31 | 1.33        | 1.25     |
| 1   | M     | 808 | GLU  | CD-OE2 | 7.31 | 1.33        | 1.25     |
| 1   | I     | 969 | GLU  | CD-OE2 | 7.30 | 1.33        | 1.25     |
| 1   | L     | 808 | GLU  | CD-OE2 | 7.30 | 1.33        | 1.25     |
| 1   | P     | 969 | GLU  | CD-OE2 | 7.30 | 1.33        | 1.25     |
| 1   | N     | 808 | GLU  | CD-OE2 | 7.29 | 1.33        | 1.25     |
| 1   | J     | 808 | GLU  | CD-OE2 | 7.29 | 1.33        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | F     | 117 | GLU  | CD-OE2 | 7.28 | 1.33        | 1.25     |
| 1   | G     | 969 | GLU  | CD-OE2 | 7.28 | 1.33        | 1.25     |
| 1   | A     | 969 | GLU  | CD-OE2 | 7.28 | 1.33        | 1.25     |
| 1   | J     | 117 | GLU  | CD-OE2 | 7.27 | 1.33        | 1.25     |
| 1   | A     | 808 | GLU  | CD-OE2 | 7.27 | 1.33        | 1.25     |
| 1   | K     | 969 | GLU  | CD-OE2 | 7.27 | 1.33        | 1.25     |
| 1   | H     | 808 | GLU  | CD-OE2 | 7.27 | 1.33        | 1.25     |
| 1   | O     | 808 | GLU  | CD-OE2 | 7.26 | 1.33        | 1.25     |
| 1   | E     | 808 | GLU  | CD-OE2 | 7.26 | 1.33        | 1.25     |
| 1   | J     | 969 | GLU  | CD-OE2 | 7.26 | 1.33        | 1.25     |
| 1   | K     | 808 | GLU  | CD-OE2 | 7.26 | 1.33        | 1.25     |
| 1   | L     | 969 | GLU  | CD-OE2 | 7.26 | 1.33        | 1.25     |
| 1   | H     | 117 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | O     | 969 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | H     | 969 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | M     | 969 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | I     | 808 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | N     | 969 | GLU  | CD-OE2 | 7.25 | 1.33        | 1.25     |
| 1   | F     | 969 | GLU  | CD-OE2 | 7.24 | 1.33        | 1.25     |
| 1   | B     | 969 | GLU  | CD-OE2 | 7.24 | 1.33        | 1.25     |
| 1   | M     | 117 | GLU  | CD-OE2 | 7.23 | 1.33        | 1.25     |
| 1   | D     | 808 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | E     | 969 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | I     | 117 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | A     | 117 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | N     | 117 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | B     | 117 | GLU  | CD-OE2 | 7.22 | 1.33        | 1.25     |
| 1   | C     | 117 | GLU  | CD-OE2 | 7.21 | 1.33        | 1.25     |
| 1   | C     | 808 | GLU  | CD-OE2 | 7.21 | 1.33        | 1.25     |
| 1   | K     | 117 | GLU  | CD-OE2 | 7.21 | 1.33        | 1.25     |
| 1   | P     | 808 | GLU  | CD-OE2 | 7.20 | 1.33        | 1.25     |
| 1   | G     | 808 | GLU  | CD-OE2 | 7.19 | 1.33        | 1.25     |
| 1   | P     | 117 | GLU  | CD-OE2 | 7.19 | 1.33        | 1.25     |
| 1   | O     | 117 | GLU  | CD-OE2 | 7.19 | 1.33        | 1.25     |
| 1   | L     | 117 | GLU  | CD-OE2 | 7.18 | 1.33        | 1.25     |
| 1   | G     | 117 | GLU  | CD-OE2 | 7.18 | 1.33        | 1.25     |
| 1   | K     | 57  | GLU  | CD-OE2 | 7.16 | 1.33        | 1.25     |
| 1   | D     | 57  | GLU  | CD-OE2 | 7.10 | 1.33        | 1.25     |
| 1   | E     | 57  | GLU  | CD-OE2 | 7.10 | 1.33        | 1.25     |
| 1   | I     | 57  | GLU  | CD-OE2 | 7.10 | 1.33        | 1.25     |
| 1   | F     | 57  | GLU  | CD-OE2 | 7.10 | 1.33        | 1.25     |
| 1   | G     | 57  | GLU  | CD-OE2 | 7.10 | 1.33        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | P     | 57  | GLU  | CD-OE2 | 7.09 | 1.33        | 1.25     |
| 1   | M     | 57  | GLU  | CD-OE2 | 7.09 | 1.33        | 1.25     |
| 1   | O     | 57  | GLU  | CD-OE2 | 7.09 | 1.33        | 1.25     |
| 1   | J     | 57  | GLU  | CD-OE2 | 7.08 | 1.33        | 1.25     |
| 1   | C     | 57  | GLU  | CD-OE2 | 7.08 | 1.33        | 1.25     |
| 1   | N     | 57  | GLU  | CD-OE2 | 7.06 | 1.33        | 1.25     |
| 1   | B     | 57  | GLU  | CD-OE2 | 7.06 | 1.33        | 1.25     |
| 1   | L     | 57  | GLU  | CD-OE2 | 7.03 | 1.33        | 1.25     |
| 1   | N     | 637 | GLU  | CD-OE2 | 7.01 | 1.33        | 1.25     |
| 1   | H     | 57  | GLU  | CD-OE2 | 7.00 | 1.33        | 1.25     |
| 1   | A     | 57  | GLU  | CD-OE2 | 7.00 | 1.33        | 1.25     |
| 1   | H     | 637 | GLU  | CD-OE2 | 6.99 | 1.33        | 1.25     |
| 1   | O     | 637 | GLU  | CD-OE2 | 6.99 | 1.33        | 1.25     |
| 1   | F     | 637 | GLU  | CD-OE2 | 6.99 | 1.33        | 1.25     |
| 1   | G     | 637 | GLU  | CD-OE2 | 6.98 | 1.33        | 1.25     |
| 1   | I     | 637 | GLU  | CD-OE2 | 6.97 | 1.33        | 1.25     |
| 1   | P     | 637 | GLU  | CD-OE2 | 6.97 | 1.33        | 1.25     |
| 1   | M     | 637 | GLU  | CD-OE2 | 6.96 | 1.33        | 1.25     |
| 1   | C     | 369 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | A     | 637 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | J     | 637 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | B     | 314 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | D     | 637 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | G     | 314 | GLU  | CD-OE2 | 6.95 | 1.33        | 1.25     |
| 1   | K     | 314 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | B     | 637 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | K     | 637 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | C     | 637 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | J     | 369 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | L     | 637 | GLU  | CD-OE2 | 6.94 | 1.33        | 1.25     |
| 1   | D     | 369 | GLU  | CD-OE2 | 6.93 | 1.33        | 1.25     |
| 1   | E     | 369 | GLU  | CD-OE2 | 6.93 | 1.33        | 1.25     |
| 1   | D     | 314 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | F     | 369 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | C     | 314 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | I     | 314 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | L     | 314 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | O     | 369 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | P     | 369 | GLU  | CD-OE2 | 6.92 | 1.33        | 1.25     |
| 1   | A     | 314 | GLU  | CD-OE2 | 6.91 | 1.33        | 1.25     |
| 1   | A     | 369 | GLU  | CD-OE2 | 6.91 | 1.33        | 1.25     |
| 1   | E     | 637 | GLU  | CD-OE2 | 6.91 | 1.33        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | F     | 314 | GLU  | CD-OE2 | 6.91 | 1.33        | 1.25     |
| 1   | H     | 369 | GLU  | CD-OE2 | 6.91 | 1.33        | 1.25     |
| 1   | H     | 650 | GLU  | CD-OE2 | 6.90 | 1.33        | 1.25     |
| 1   | N     | 369 | GLU  | CD-OE2 | 6.90 | 1.33        | 1.25     |
| 1   | E     | 650 | GLU  | CD-OE2 | 6.90 | 1.33        | 1.25     |
| 1   | O     | 314 | GLU  | CD-OE2 | 6.90 | 1.33        | 1.25     |
| 1   | G     | 369 | GLU  | CD-OE2 | 6.90 | 1.33        | 1.25     |
| 1   | I     | 369 | GLU  | CD-OE2 | 6.89 | 1.33        | 1.25     |
| 1   | N     | 314 | GLU  | CD-OE2 | 6.89 | 1.33        | 1.25     |
| 1   | P     | 314 | GLU  | CD-OE2 | 6.89 | 1.33        | 1.25     |
| 1   | J     | 650 | GLU  | CD-OE2 | 6.89 | 1.33        | 1.25     |
| 1   | D     | 650 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | E     | 314 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | P     | 650 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | M     | 681 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | C     | 650 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | I     | 681 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | P     | 681 | GLU  | CD-OE2 | 6.88 | 1.33        | 1.25     |
| 1   | K     | 369 | GLU  | CD-OE2 | 6.87 | 1.33        | 1.25     |
| 1   | M     | 369 | GLU  | CD-OE2 | 6.87 | 1.33        | 1.25     |
| 1   | B     | 650 | GLU  | CD-OE2 | 6.87 | 1.33        | 1.25     |
| 1   | C     | 681 | GLU  | CD-OE2 | 6.87 | 1.33        | 1.25     |
| 1   | K     | 650 | GLU  | CD-OE2 | 6.86 | 1.33        | 1.25     |
| 1   | M     | 314 | GLU  | CD-OE2 | 6.86 | 1.33        | 1.25     |
| 1   | B     | 369 | GLU  | CD-OE2 | 6.86 | 1.33        | 1.25     |
| 1   | L     | 369 | GLU  | CD-OE2 | 6.86 | 1.33        | 1.25     |
| 1   | H     | 314 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | J     | 314 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | J     | 681 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | O     | 681 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | E     | 241 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | E     | 681 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | G     | 650 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | F     | 650 | GLU  | CD-OE2 | 6.85 | 1.33        | 1.25     |
| 1   | A     | 650 | GLU  | CD-OE2 | 6.84 | 1.33        | 1.25     |
| 1   | N     | 650 | GLU  | CD-OE2 | 6.84 | 1.33        | 1.25     |
| 1   | G     | 241 | GLU  | CD-OE2 | 6.84 | 1.33        | 1.25     |
| 1   | N     | 681 | GLU  | CD-OE2 | 6.84 | 1.33        | 1.25     |
| 1   | B     | 681 | GLU  | CD-OE2 | 6.84 | 1.33        | 1.25     |
| 1   | G     | 681 | GLU  | CD-OE2 | 6.83 | 1.33        | 1.25     |
| 1   | L     | 650 | GLU  | CD-OE2 | 6.83 | 1.33        | 1.25     |
| 1   | O     | 650 | GLU  | CD-OE2 | 6.83 | 1.33        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | F     | 681 | GLU  | CD-OE2 | 6.83 | 1.33        | 1.25     |
| 1   | M     | 650 | GLU  | CD-OE2 | 6.83 | 1.33        | 1.25     |
| 1   | A     | 681 | GLU  | CD-OE2 | 6.82 | 1.33        | 1.25     |
| 1   | I     | 650 | GLU  | CD-OE2 | 6.82 | 1.33        | 1.25     |
| 1   | D     | 681 | GLU  | CD-OE2 | 6.81 | 1.33        | 1.25     |
| 1   | O     | 241 | GLU  | CD-OE2 | 6.81 | 1.33        | 1.25     |
| 1   | K     | 241 | GLU  | CD-OE2 | 6.80 | 1.33        | 1.25     |
| 1   | H     | 241 | GLU  | CD-OE2 | 6.80 | 1.33        | 1.25     |
| 1   | H     | 681 | GLU  | CD-OE2 | 6.80 | 1.33        | 1.25     |
| 1   | L     | 241 | GLU  | CD-OE2 | 6.79 | 1.33        | 1.25     |
| 1   | A     | 241 | GLU  | CD-OE2 | 6.79 | 1.33        | 1.25     |
| 1   | I     | 241 | GLU  | CD-OE2 | 6.78 | 1.33        | 1.25     |
| 1   | D     | 241 | GLU  | CD-OE2 | 6.78 | 1.33        | 1.25     |
| 1   | F     | 241 | GLU  | CD-OE2 | 6.77 | 1.33        | 1.25     |
| 1   | L     | 681 | GLU  | CD-OE2 | 6.77 | 1.33        | 1.25     |
| 1   | B     | 67  | GLU  | CD-OE2 | 6.77 | 1.33        | 1.25     |
| 1   | P     | 241 | GLU  | CD-OE2 | 6.77 | 1.33        | 1.25     |
| 1   | K     | 681 | GLU  | CD-OE2 | 6.76 | 1.33        | 1.25     |
| 1   | M     | 241 | GLU  | CD-OE2 | 6.75 | 1.33        | 1.25     |
| 1   | M     | 67  | GLU  | CD-OE2 | 6.75 | 1.33        | 1.25     |
| 1   | N     | 241 | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | P     | 67  | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | I     | 67  | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | J     | 241 | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | B     | 241 | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | E     | 67  | GLU  | CD-OE2 | 6.73 | 1.33        | 1.25     |
| 1   | C     | 241 | GLU  | CD-OE2 | 6.72 | 1.33        | 1.25     |
| 1   | G     | 67  | GLU  | CD-OE2 | 6.71 | 1.33        | 1.25     |
| 1   | A     | 67  | GLU  | CD-OE2 | 6.71 | 1.33        | 1.25     |
| 1   | F     | 67  | GLU  | CD-OE2 | 6.70 | 1.33        | 1.25     |
| 1   | O     | 67  | GLU  | CD-OE2 | 6.69 | 1.33        | 1.25     |
| 1   | C     | 67  | GLU  | CD-OE2 | 6.68 | 1.33        | 1.25     |
| 1   | H     | 67  | GLU  | CD-OE2 | 6.68 | 1.32        | 1.25     |
| 1   | L     | 67  | GLU  | CD-OE2 | 6.68 | 1.33        | 1.25     |
| 1   | D     | 67  | GLU  | CD-OE2 | 6.67 | 1.32        | 1.25     |
| 1   | N     | 67  | GLU  | CD-OE2 | 6.66 | 1.32        | 1.25     |
| 1   | K     | 67  | GLU  | CD-OE2 | 6.66 | 1.32        | 1.25     |
| 1   | J     | 67  | GLU  | CD-OE2 | 6.64 | 1.32        | 1.25     |
| 1   | O     | 243 | GLU  | CD-OE2 | 6.62 | 1.32        | 1.25     |
| 1   | P     | 243 | GLU  | CD-OE2 | 6.59 | 1.32        | 1.25     |
| 1   | G     | 667 | GLU  | CD-OE2 | 6.58 | 1.32        | 1.25     |
| 1   | K     | 667 | GLU  | CD-OE2 | 6.58 | 1.32        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | L     | 667 | GLU  | CD-OE2 | 6.58 | 1.32        | 1.25     |
| 1   | N     | 243 | GLU  | CD-OE2 | 6.58 | 1.32        | 1.25     |
| 1   | D     | 943 | GLU  | CD-OE2 | 6.58 | 1.32        | 1.25     |
| 1   | M     | 243 | GLU  | CD-OE2 | 6.57 | 1.32        | 1.25     |
| 1   | N     | 943 | GLU  | CD-OE2 | 6.56 | 1.32        | 1.25     |
| 1   | A     | 667 | GLU  | CD-OE2 | 6.55 | 1.32        | 1.25     |
| 1   | B     | 943 | GLU  | CD-OE2 | 6.55 | 1.32        | 1.25     |
| 1   | K     | 943 | GLU  | CD-OE2 | 6.55 | 1.32        | 1.25     |
| 1   | B     | 243 | GLU  | CD-OE2 | 6.55 | 1.32        | 1.25     |
| 1   | F     | 667 | GLU  | CD-OE2 | 6.55 | 1.32        | 1.25     |
| 1   | C     | 667 | GLU  | CD-OE2 | 6.54 | 1.32        | 1.25     |
| 1   | A     | 243 | GLU  | CD-OE2 | 6.54 | 1.32        | 1.25     |
| 1   | C     | 243 | GLU  | CD-OE2 | 6.54 | 1.32        | 1.25     |
| 1   | I     | 243 | GLU  | CD-OE2 | 6.54 | 1.32        | 1.25     |
| 1   | D     | 243 | GLU  | CD-OE2 | 6.52 | 1.32        | 1.25     |
| 1   | J     | 243 | GLU  | CD-OE2 | 6.52 | 1.32        | 1.25     |
| 1   | H     | 243 | GLU  | CD-OE2 | 6.51 | 1.32        | 1.25     |
| 1   | K     | 243 | GLU  | CD-OE2 | 6.51 | 1.32        | 1.25     |
| 1   | J     | 943 | GLU  | CD-OE2 | 6.51 | 1.32        | 1.25     |
| 1   | P     | 667 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | C     | 943 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | O     | 943 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | A     | 943 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | H     | 667 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | H     | 943 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | L     | 243 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | L     | 943 | GLU  | CD-OE2 | 6.50 | 1.32        | 1.25     |
| 1   | F     | 943 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | P     | 943 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | J     | 667 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | E     | 943 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | M     | 667 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | N     | 667 | GLU  | CD-OE2 | 6.49 | 1.32        | 1.25     |
| 1   | M     | 943 | GLU  | CD-OE2 | 6.48 | 1.32        | 1.25     |
| 1   | E     | 243 | GLU  | CD-OE2 | 6.48 | 1.32        | 1.25     |
| 1   | F     | 243 | GLU  | CD-OE2 | 6.48 | 1.32        | 1.25     |
| 1   | O     | 667 | GLU  | CD-OE2 | 6.47 | 1.32        | 1.25     |
| 1   | D     | 667 | GLU  | CD-OE2 | 6.47 | 1.32        | 1.25     |
| 1   | G     | 243 | GLU  | CD-OE2 | 6.46 | 1.32        | 1.25     |
| 1   | B     | 667 | GLU  | CD-OE2 | 6.45 | 1.32        | 1.25     |
| 1   | E     | 667 | GLU  | CD-OE2 | 6.45 | 1.32        | 1.25     |
| 1   | I     | 943 | GLU  | CD-OE2 | 6.44 | 1.32        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | I     | 667 | GLU  | CD-OE2 | 6.43 | 1.32        | 1.25     |
| 1   | G     | 943 | GLU  | CD-OE2 | 6.43 | 1.32        | 1.25     |
| 1   | K     | 358 | GLU  | CD-OE2 | 6.42 | 1.32        | 1.25     |
| 1   | C     | 358 | GLU  | CD-OE2 | 6.42 | 1.32        | 1.25     |
| 1   | O     | 358 | GLU  | CD-OE2 | 6.40 | 1.32        | 1.25     |
| 1   | B     | 358 | GLU  | CD-OE2 | 6.40 | 1.32        | 1.25     |
| 1   | G     | 358 | GLU  | CD-OE2 | 6.39 | 1.32        | 1.25     |
| 1   | J     | 358 | GLU  | CD-OE2 | 6.39 | 1.32        | 1.25     |
| 1   | F     | 358 | GLU  | CD-OE2 | 6.39 | 1.32        | 1.25     |
| 1   | N     | 358 | GLU  | CD-OE2 | 6.38 | 1.32        | 1.25     |
| 1   | H     | 358 | GLU  | CD-OE2 | 6.37 | 1.32        | 1.25     |
| 1   | L     | 358 | GLU  | CD-OE2 | 6.35 | 1.32        | 1.25     |
| 1   | D     | 358 | GLU  | CD-OE2 | 6.35 | 1.32        | 1.25     |
| 1   | A     | 358 | GLU  | CD-OE2 | 6.35 | 1.32        | 1.25     |
| 1   | E     | 358 | GLU  | CD-OE2 | 6.35 | 1.32        | 1.25     |
| 1   | I     | 358 | GLU  | CD-OE2 | 6.34 | 1.32        | 1.25     |
| 1   | M     | 358 | GLU  | CD-OE2 | 6.34 | 1.32        | 1.25     |
| 1   | P     | 358 | GLU  | CD-OE2 | 6.32 | 1.32        | 1.25     |
| 1   | B     | 904 | GLU  | CD-OE2 | 6.09 | 1.32        | 1.25     |
| 1   | F     | 904 | GLU  | CD-OE2 | 6.08 | 1.32        | 1.25     |
| 1   | H     | 904 | GLU  | CD-OE2 | 6.08 | 1.32        | 1.25     |
| 1   | E     | 904 | GLU  | CD-OE2 | 6.07 | 1.32        | 1.25     |
| 1   | J     | 904 | GLU  | CD-OE2 | 6.07 | 1.32        | 1.25     |
| 1   | K     | 904 | GLU  | CD-OE2 | 6.06 | 1.32        | 1.25     |
| 1   | C     | 904 | GLU  | CD-OE2 | 6.05 | 1.32        | 1.25     |
| 1   | N     | 904 | GLU  | CD-OE2 | 6.05 | 1.32        | 1.25     |
| 1   | L     | 281 | GLU  | CD-OE2 | 6.05 | 1.32        | 1.25     |
| 1   | I     | 281 | GLU  | CD-OE2 | 6.04 | 1.32        | 1.25     |
| 1   | O     | 904 | GLU  | CD-OE2 | 6.04 | 1.32        | 1.25     |
| 1   | G     | 281 | GLU  | CD-OE2 | 6.04 | 1.32        | 1.25     |
| 1   | L     | 338 | GLU  | CD-OE2 | 6.04 | 1.32        | 1.25     |
| 1   | I     | 904 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | O     | 281 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | C     | 338 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | L     | 904 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | E     | 281 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | K     | 338 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | M     | 904 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | N     | 338 | GLU  | CD-OE2 | 6.03 | 1.32        | 1.25     |
| 1   | D     | 281 | GLU  | CD-OE2 | 6.02 | 1.32        | 1.25     |
| 1   | A     | 281 | GLU  | CD-OE2 | 6.02 | 1.32        | 1.25     |
| 1   | P     | 904 | GLU  | CD-OE2 | 6.02 | 1.32        | 1.25     |

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| Mol | Chain | Res  | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|------|-------------|----------|
| 1   | D     | 904  | GLU  | CD-OE2 | 6.01 | 1.32        | 1.25     |
| 1   | H     | 281  | GLU  | CD-OE2 | 6.01 | 1.32        | 1.25     |
| 1   | P     | 281  | GLU  | CD-OE2 | 6.01 | 1.32        | 1.25     |
| 1   | C     | 281  | GLU  | CD-OE2 | 6.00 | 1.32        | 1.25     |
| 1   | J     | 281  | GLU  | CD-OE2 | 6.00 | 1.32        | 1.25     |
| 1   | E     | 1006 | GLU  | CD-OE2 | 6.00 | 1.32        | 1.25     |
| 1   | B     | 338  | GLU  | CD-OE2 | 6.00 | 1.32        | 1.25     |
| 1   | M     | 338  | GLU  | CD-OE2 | 5.99 | 1.32        | 1.25     |
| 1   | F     | 338  | GLU  | CD-OE2 | 5.99 | 1.32        | 1.25     |
| 1   | B     | 1006 | GLU  | CD-OE2 | 5.99 | 1.32        | 1.25     |
| 1   | K     | 281  | GLU  | CD-OE2 | 5.98 | 1.32        | 1.25     |
| 1   | F     | 281  | GLU  | CD-OE2 | 5.98 | 1.32        | 1.25     |
| 1   | A     | 338  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | A     | 904  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | H     | 338  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | O     | 338  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | D     | 338  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | G     | 904  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | O     | 1006 | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | G     | 338  | GLU  | CD-OE2 | 5.97 | 1.32        | 1.25     |
| 1   | M     | 281  | GLU  | CD-OE2 | 5.96 | 1.32        | 1.25     |
| 1   | P     | 1006 | GLU  | CD-OE2 | 5.96 | 1.32        | 1.25     |
| 1   | F     | 1006 | GLU  | CD-OE2 | 5.96 | 1.32        | 1.25     |
| 1   | N     | 281  | GLU  | CD-OE2 | 5.96 | 1.32        | 1.25     |
| 1   | B     | 281  | GLU  | CD-OE2 | 5.95 | 1.32        | 1.25     |
| 1   | I     | 338  | GLU  | CD-OE2 | 5.95 | 1.32        | 1.25     |
| 1   | P     | 338  | GLU  | CD-OE2 | 5.95 | 1.32        | 1.25     |
| 1   | D     | 1006 | GLU  | CD-OE2 | 5.94 | 1.32        | 1.25     |
| 1   | J     | 1006 | GLU  | CD-OE2 | 5.94 | 1.32        | 1.25     |
| 1   | L     | 1006 | GLU  | CD-OE2 | 5.94 | 1.32        | 1.25     |
| 1   | C     | 1006 | GLU  | CD-OE2 | 5.93 | 1.32        | 1.25     |
| 1   | J     | 338  | GLU  | CD-OE2 | 5.93 | 1.32        | 1.25     |
| 1   | N     | 1006 | GLU  | CD-OE2 | 5.93 | 1.32        | 1.25     |
| 1   | A     | 1006 | GLU  | CD-OE2 | 5.92 | 1.32        | 1.25     |
| 1   | I     | 1006 | GLU  | CD-OE2 | 5.92 | 1.32        | 1.25     |
| 1   | E     | 338  | GLU  | CD-OE2 | 5.91 | 1.32        | 1.25     |
| 1   | K     | 1006 | GLU  | CD-OE2 | 5.89 | 1.32        | 1.25     |
| 1   | M     | 1006 | GLU  | CD-OE2 | 5.89 | 1.32        | 1.25     |
| 1   | H     | 1006 | GLU  | CD-OE2 | 5.88 | 1.32        | 1.25     |
| 1   | G     | 1006 | GLU  | CD-OE2 | 5.87 | 1.32        | 1.25     |
| 1   | K     | 871  | GLU  | CD-OE2 | 5.87 | 1.32        | 1.25     |
| 1   | N     | 871  | GLU  | CD-OE2 | 5.87 | 1.32        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | O     | 871 | GLU  | CD-OE2 | 5.86  | 1.32        | 1.25     |
| 1   | I     | 871 | GLU  | CD-OE2 | 5.84  | 1.32        | 1.25     |
| 1   | L     | 871 | GLU  | CD-OE2 | 5.84  | 1.32        | 1.25     |
| 1   | J     | 871 | GLU  | CD-OE2 | 5.83  | 1.32        | 1.25     |
| 1   | E     | 871 | GLU  | CD-OE2 | 5.83  | 1.32        | 1.25     |
| 1   | G     | 871 | GLU  | CD-OE2 | 5.83  | 1.32        | 1.25     |
| 1   | B     | 871 | GLU  | CD-OE2 | 5.83  | 1.32        | 1.25     |
| 1   | A     | 871 | GLU  | CD-OE2 | 5.83  | 1.32        | 1.25     |
| 1   | O     | 525 | SER  | CB-OG  | 5.82  | 1.49        | 1.42     |
| 1   | P     | 871 | GLU  | CD-OE2 | 5.82  | 1.32        | 1.25     |
| 1   | E     | 525 | SER  | CB-OG  | 5.81  | 1.49        | 1.42     |
| 1   | D     | 871 | GLU  | CD-OE2 | 5.80  | 1.32        | 1.25     |
| 1   | F     | 871 | GLU  | CD-OE2 | 5.80  | 1.32        | 1.25     |
| 1   | H     | 525 | SER  | CB-OG  | 5.80  | 1.49        | 1.42     |
| 1   | C     | 871 | GLU  | CD-OE2 | 5.80  | 1.32        | 1.25     |
| 1   | N     | 525 | SER  | CB-OG  | 5.80  | 1.49        | 1.42     |
| 1   | B     | 525 | SER  | CB-OG  | 5.79  | 1.49        | 1.42     |
| 1   | C     | 525 | SER  | CB-OG  | 5.79  | 1.49        | 1.42     |
| 1   | I     | 334 | GLU  | CD-OE2 | 5.78  | 1.32        | 1.25     |
| 1   | K     | 525 | SER  | CB-OG  | 5.78  | 1.49        | 1.42     |
| 1   | H     | 871 | GLU  | CD-OE2 | 5.78  | 1.32        | 1.25     |
| 1   | M     | 871 | GLU  | CD-OE2 | 5.78  | 1.32        | 1.25     |
| 1   | P     | 334 | GLU  | CD-OE2 | 5.78  | 1.32        | 1.25     |
| 1   | L     | 525 | SER  | CB-OG  | 5.78  | 1.49        | 1.42     |
| 1   | N     | 334 | GLU  | CD-OE2 | 5.76  | 1.31        | 1.25     |
| 1   | G     | 334 | GLU  | CD-OE2 | 5.76  | 1.31        | 1.25     |
| 1   | B     | 304 | GLU  | CD-OE1 | -5.76 | 1.19        | 1.25     |
| 1   | G     | 525 | SER  | CB-OG  | 5.76  | 1.49        | 1.42     |
| 1   | B     | 334 | GLU  | CD-OE2 | 5.76  | 1.31        | 1.25     |
| 1   | I     | 525 | SER  | CB-OG  | 5.76  | 1.49        | 1.42     |
| 1   | L     | 334 | GLU  | CD-OE2 | 5.76  | 1.31        | 1.25     |
| 1   | F     | 525 | SER  | CB-OG  | 5.75  | 1.49        | 1.42     |
| 1   | J     | 334 | GLU  | CD-OE2 | 5.75  | 1.31        | 1.25     |
| 1   | A     | 525 | SER  | CB-OG  | 5.74  | 1.49        | 1.42     |
| 1   | D     | 334 | GLU  | CD-OE2 | 5.74  | 1.31        | 1.25     |
| 1   | C     | 334 | GLU  | CD-OE2 | 5.74  | 1.31        | 1.25     |
| 1   | D     | 525 | SER  | CB-OG  | 5.74  | 1.49        | 1.42     |
| 1   | P     | 525 | SER  | CB-OG  | 5.73  | 1.49        | 1.42     |
| 1   | J     | 525 | SER  | CB-OG  | 5.73  | 1.49        | 1.42     |
| 1   | M     | 304 | GLU  | CD-OE1 | -5.72 | 1.19        | 1.25     |
| 1   | A     | 334 | GLU  | CD-OE2 | 5.72  | 1.31        | 1.25     |
| 1   | F     | 334 | GLU  | CD-OE2 | 5.72  | 1.31        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | E     | 304 | GLU  | CD-OE1 | -5.72 | 1.19        | 1.25     |
| 1   | K     | 334 | GLU  | CD-OE2 | 5.71  | 1.31        | 1.25     |
| 1   | M     | 525 | SER  | CB-OG  | 5.71  | 1.49        | 1.42     |
| 1   | M     | 334 | GLU  | CD-OE2 | 5.71  | 1.31        | 1.25     |
| 1   | P     | 304 | GLU  | CD-OE1 | -5.70 | 1.19        | 1.25     |
| 1   | E     | 334 | GLU  | CD-OE2 | 5.70  | 1.31        | 1.25     |
| 1   | H     | 334 | GLU  | CD-OE2 | 5.70  | 1.31        | 1.25     |
| 1   | A     | 304 | GLU  | CD-OE1 | -5.69 | 1.19        | 1.25     |
| 1   | C     | 304 | GLU  | CD-OE1 | -5.68 | 1.19        | 1.25     |
| 1   | O     | 334 | GLU  | CD-OE2 | 5.68  | 1.31        | 1.25     |
| 1   | K     | 304 | GLU  | CD-OE1 | -5.68 | 1.19        | 1.25     |
| 1   | O     | 304 | GLU  | CD-OE1 | -5.67 | 1.19        | 1.25     |
| 1   | G     | 304 | GLU  | CD-OE1 | -5.67 | 1.19        | 1.25     |
| 1   | J     | 304 | GLU  | CD-OE1 | -5.67 | 1.19        | 1.25     |
| 1   | D     | 304 | GLU  | CD-OE1 | -5.66 | 1.19        | 1.25     |
| 1   | I     | 304 | GLU  | CD-OE1 | -5.66 | 1.19        | 1.25     |
| 1   | N     | 304 | GLU  | CD-OE1 | -5.65 | 1.19        | 1.25     |
| 1   | E     | 619 | GLU  | CD-OE2 | 5.64  | 1.31        | 1.25     |
| 1   | F     | 304 | GLU  | CD-OE1 | -5.63 | 1.19        | 1.25     |
| 1   | F     | 461 | GLU  | CD-OE2 | 5.61  | 1.31        | 1.25     |
| 1   | L     | 304 | GLU  | CD-OE1 | -5.61 | 1.19        | 1.25     |
| 1   | F     | 619 | GLU  | CD-OE2 | 5.61  | 1.31        | 1.25     |
| 1   | H     | 304 | GLU  | CD-OE1 | -5.60 | 1.19        | 1.25     |
| 1   | C     | 461 | GLU  | CD-OE2 | 5.59  | 1.31        | 1.25     |
| 1   | A     | 461 | GLU  | CD-OE2 | 5.58  | 1.31        | 1.25     |
| 1   | G     | 619 | GLU  | CD-OE2 | 5.58  | 1.31        | 1.25     |
| 1   | P     | 461 | GLU  | CD-OE2 | 5.58  | 1.31        | 1.25     |
| 1   | C     | 619 | GLU  | CD-OE2 | 5.57  | 1.31        | 1.25     |
| 1   | E     | 461 | GLU  | CD-OE2 | 5.57  | 1.31        | 1.25     |
| 1   | G     | 461 | GLU  | CD-OE2 | 5.57  | 1.31        | 1.25     |
| 1   | H     | 461 | GLU  | CD-OE2 | 5.57  | 1.31        | 1.25     |
| 1   | J     | 619 | GLU  | CD-OE2 | 5.57  | 1.31        | 1.25     |
| 1   | N     | 461 | GLU  | CD-OE2 | 5.56  | 1.31        | 1.25     |
| 1   | I     | 619 | GLU  | CD-OE2 | 5.56  | 1.31        | 1.25     |
| 1   | N     | 619 | GLU  | CD-OE2 | 5.56  | 1.31        | 1.25     |
| 1   | O     | 619 | GLU  | CD-OE2 | 5.56  | 1.31        | 1.25     |
| 1   | B     | 461 | GLU  | CD-OE2 | 5.56  | 1.31        | 1.25     |
| 1   | I     | 461 | GLU  | CD-OE2 | 5.55  | 1.31        | 1.25     |
| 1   | A     | 619 | GLU  | CD-OE2 | 5.55  | 1.31        | 1.25     |
| 1   | M     | 461 | GLU  | CD-OE2 | 5.55  | 1.31        | 1.25     |
| 1   | K     | 461 | GLU  | CD-OE2 | 5.54  | 1.31        | 1.25     |
| 1   | L     | 461 | GLU  | CD-OE2 | 5.54  | 1.31        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | L     | 619 | GLU  | CD-OE2 | 5.54 | 1.31        | 1.25     |
| 1   | K     | 619 | GLU  | CD-OE2 | 5.54 | 1.31        | 1.25     |
| 1   | D     | 461 | GLU  | CD-OE2 | 5.53 | 1.31        | 1.25     |
| 1   | D     | 619 | GLU  | CD-OE2 | 5.53 | 1.31        | 1.25     |
| 1   | J     | 461 | GLU  | CD-OE2 | 5.53 | 1.31        | 1.25     |
| 1   | M     | 619 | GLU  | CD-OE2 | 5.52 | 1.31        | 1.25     |
| 1   | O     | 461 | GLU  | CD-OE2 | 5.52 | 1.31        | 1.25     |
| 1   | B     | 619 | GLU  | CD-OE2 | 5.52 | 1.31        | 1.25     |
| 1   | H     | 619 | GLU  | CD-OE2 | 5.51 | 1.31        | 1.25     |
| 1   | P     | 619 | GLU  | CD-OE2 | 5.50 | 1.31        | 1.25     |
| 1   | C     | 324 | GLU  | CD-OE2 | 5.49 | 1.31        | 1.25     |
| 1   | G     | 324 | GLU  | CD-OE2 | 5.47 | 1.31        | 1.25     |
| 1   | J     | 934 | GLU  | CD-OE2 | 5.47 | 1.31        | 1.25     |
| 1   | P     | 324 | GLU  | CD-OE2 | 5.47 | 1.31        | 1.25     |
| 1   | O     | 324 | GLU  | CD-OE2 | 5.46 | 1.31        | 1.25     |
| 1   | K     | 934 | GLU  | CD-OE2 | 5.45 | 1.31        | 1.25     |
| 1   | H     | 324 | GLU  | CD-OE2 | 5.45 | 1.31        | 1.25     |
| 1   | A     | 934 | GLU  | CD-OE2 | 5.44 | 1.31        | 1.25     |
| 1   | I     | 324 | GLU  | CD-OE2 | 5.44 | 1.31        | 1.25     |
| 1   | N     | 324 | GLU  | CD-OE2 | 5.44 | 1.31        | 1.25     |
| 1   | D     | 934 | GLU  | CD-OE2 | 5.44 | 1.31        | 1.25     |
| 1   | A     | 324 | GLU  | CD-OE2 | 5.43 | 1.31        | 1.25     |
| 1   | J     | 324 | GLU  | CD-OE2 | 5.42 | 1.31        | 1.25     |
| 1   | F     | 324 | GLU  | CD-OE2 | 5.42 | 1.31        | 1.25     |
| 1   | G     | 934 | GLU  | CD-OE2 | 5.41 | 1.31        | 1.25     |
| 1   | D     | 324 | GLU  | CD-OE2 | 5.41 | 1.31        | 1.25     |
| 1   | C     | 979 | GLU  | CD-OE2 | 5.41 | 1.31        | 1.25     |
| 1   | N     | 979 | GLU  | CD-OE2 | 5.41 | 1.31        | 1.25     |
| 1   | E     | 324 | GLU  | CD-OE2 | 5.40 | 1.31        | 1.25     |
| 1   | E     | 934 | GLU  | CD-OE2 | 5.40 | 1.31        | 1.25     |
| 1   | L     | 934 | GLU  | CD-OE2 | 5.40 | 1.31        | 1.25     |
| 1   | B     | 934 | GLU  | CD-OE2 | 5.39 | 1.31        | 1.25     |
| 1   | O     | 934 | GLU  | CD-OE2 | 5.39 | 1.31        | 1.25     |
| 1   | K     | 324 | GLU  | CD-OE2 | 5.39 | 1.31        | 1.25     |
| 1   | I     | 934 | GLU  | CD-OE2 | 5.39 | 1.31        | 1.25     |
| 1   | I     | 979 | GLU  | CD-OE2 | 5.39 | 1.31        | 1.25     |
| 1   | K     | 979 | GLU  | CD-OE2 | 5.38 | 1.31        | 1.25     |
| 1   | B     | 324 | GLU  | CD-OE2 | 5.38 | 1.31        | 1.25     |
| 1   | M     | 934 | GLU  | CD-OE2 | 5.38 | 1.31        | 1.25     |
| 1   | L     | 324 | GLU  | CD-OE2 | 5.38 | 1.31        | 1.25     |
| 1   | N     | 934 | GLU  | CD-OE2 | 5.37 | 1.31        | 1.25     |
| 1   | M     | 324 | GLU  | CD-OE2 | 5.37 | 1.31        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | H     | 934 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | P     | 934 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | A     | 979 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | O     | 979 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | B     | 979 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | M     | 979 | GLU  | CD-OE2 | 5.35 | 1.31        | 1.25     |
| 1   | C     | 934 | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | F     | 934 | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | D     | 979 | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | P     | 979 | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | E     | 71  | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | H     | 979 | GLU  | CD-OE2 | 5.34 | 1.31        | 1.25     |
| 1   | L     | 979 | GLU  | CD-OE2 | 5.33 | 1.31        | 1.25     |
| 1   | G     | 979 | GLU  | CD-OE2 | 5.33 | 1.31        | 1.25     |
| 1   | J     | 979 | GLU  | CD-OE2 | 5.33 | 1.31        | 1.25     |
| 1   | B     | 71  | GLU  | CD-OE2 | 5.32 | 1.31        | 1.25     |
| 1   | E     | 979 | GLU  | CD-OE2 | 5.32 | 1.31        | 1.25     |
| 1   | A     | 71  | GLU  | CD-OE2 | 5.30 | 1.31        | 1.25     |
| 1   | D     | 71  | GLU  | CD-OE2 | 5.29 | 1.31        | 1.25     |
| 1   | C     | 71  | GLU  | CD-OE2 | 5.28 | 1.31        | 1.25     |
| 1   | K     | 71  | GLU  | CD-OE2 | 5.28 | 1.31        | 1.25     |
| 1   | F     | 979 | GLU  | CD-OE2 | 5.27 | 1.31        | 1.25     |
| 1   | M     | 71  | GLU  | CD-OE2 | 5.25 | 1.31        | 1.25     |
| 1   | I     | 71  | GLU  | CD-OE2 | 5.24 | 1.31        | 1.25     |
| 1   | G     | 750 | GLU  | CD-OE2 | 5.22 | 1.31        | 1.25     |
| 1   | G     | 71  | GLU  | CD-OE2 | 5.22 | 1.31        | 1.25     |
| 1   | P     | 71  | GLU  | CD-OE2 | 5.22 | 1.31        | 1.25     |
| 1   | H     | 71  | GLU  | CD-OE2 | 5.21 | 1.31        | 1.25     |
| 1   | I     | 750 | GLU  | CD-OE2 | 5.21 | 1.31        | 1.25     |
| 1   | F     | 71  | GLU  | CD-OE2 | 5.21 | 1.31        | 1.25     |
| 1   | H     | 750 | GLU  | CD-OE2 | 5.20 | 1.31        | 1.25     |
| 1   | L     | 71  | GLU  | CD-OE2 | 5.20 | 1.31        | 1.25     |
| 1   | E     | 750 | GLU  | CD-OE2 | 5.20 | 1.31        | 1.25     |
| 1   | L     | 750 | GLU  | CD-OE2 | 5.20 | 1.31        | 1.25     |
| 1   | O     | 71  | GLU  | CD-OE2 | 5.20 | 1.31        | 1.25     |
| 1   | J     | 71  | GLU  | CD-OE2 | 5.18 | 1.31        | 1.25     |
| 1   | N     | 71  | GLU  | CD-OE2 | 5.18 | 1.31        | 1.25     |
| 1   | F     | 750 | GLU  | CD-OE2 | 5.17 | 1.31        | 1.25     |
| 1   | J     | 750 | GLU  | CD-OE2 | 5.17 | 1.31        | 1.25     |
| 1   | P     | 750 | GLU  | CD-OE2 | 5.17 | 1.31        | 1.25     |
| 1   | A     | 750 | GLU  | CD-OE2 | 5.17 | 1.31        | 1.25     |
| 1   | K     | 750 | GLU  | CD-OE2 | 5.15 | 1.31        | 1.25     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | N     | 750 | GLU  | CD-OE2 | 5.15 | 1.31        | 1.25     |
| 1   | M     | 750 | GLU  | CD-OE2 | 5.14 | 1.31        | 1.25     |
| 1   | C     | 750 | GLU  | CD-OE2 | 5.13 | 1.31        | 1.25     |
| 1   | B     | 750 | GLU  | CD-OE2 | 5.12 | 1.31        | 1.25     |
| 1   | D     | 750 | GLU  | CD-OE2 | 5.12 | 1.31        | 1.25     |
| 1   | B     | 17  | GLU  | CD-OE2 | 5.12 | 1.31        | 1.25     |
| 1   | O     | 750 | GLU  | CD-OE2 | 5.12 | 1.31        | 1.25     |
| 1   | C     | 800 | ARG  | NE-CZ  | 5.11 | 1.39        | 1.33     |
| 1   | C     | 17  | GLU  | CD-OE2 | 5.11 | 1.31        | 1.25     |
| 1   | B     | 800 | ARG  | NE-CZ  | 5.11 | 1.39        | 1.33     |
| 1   | P     | 17  | GLU  | CD-OE2 | 5.11 | 1.31        | 1.25     |
| 1   | A     | 800 | ARG  | CZ-NH1 | 5.10 | 1.39        | 1.33     |
| 1   | K     | 800 | ARG  | CZ-NH1 | 5.10 | 1.39        | 1.33     |
| 1   | O     | 800 | ARG  | NE-CZ  | 5.10 | 1.39        | 1.33     |
| 1   | I     | 41  | GLU  | CD-OE2 | 5.10 | 1.31        | 1.25     |
| 1   | J     | 17  | GLU  | CD-OE2 | 5.10 | 1.31        | 1.25     |
| 1   | F     | 800 | ARG  | CZ-NH1 | 5.10 | 1.39        | 1.33     |
| 1   | G     | 800 | ARG  | CZ-NH1 | 5.09 | 1.39        | 1.33     |
| 1   | N     | 800 | ARG  | CZ-NH1 | 5.09 | 1.39        | 1.33     |
| 1   | I     | 800 | ARG  | NE-CZ  | 5.09 | 1.39        | 1.33     |
| 1   | N     | 17  | GLU  | CD-OE2 | 5.09 | 1.31        | 1.25     |
| 1   | G     | 17  | GLU  | CD-OE2 | 5.09 | 1.31        | 1.25     |
| 1   | I     | 17  | GLU  | CD-OE2 | 5.09 | 1.31        | 1.25     |
| 1   | K     | 17  | GLU  | CD-OE2 | 5.09 | 1.31        | 1.25     |
| 1   | F     | 17  | GLU  | CD-OE2 | 5.08 | 1.31        | 1.25     |
| 1   | E     | 800 | ARG  | CZ-NH1 | 5.08 | 1.39        | 1.33     |
| 1   | L     | 800 | ARG  | NE-CZ  | 5.08 | 1.39        | 1.33     |
| 1   | H     | 17  | GLU  | CD-OE2 | 5.08 | 1.31        | 1.25     |
| 1   | P     | 41  | GLU  | CD-OE2 | 5.08 | 1.31        | 1.25     |
| 1   | P     | 800 | ARG  | CZ-NH1 | 5.08 | 1.39        | 1.33     |
| 1   | D     | 17  | GLU  | CD-OE2 | 5.08 | 1.31        | 1.25     |
| 1   | A     | 800 | ARG  | NE-CZ  | 5.08 | 1.39        | 1.33     |
| 1   | E     | 17  | GLU  | CD-OE2 | 5.08 | 1.31        | 1.25     |
| 1   | G     | 800 | ARG  | NE-CZ  | 5.07 | 1.39        | 1.33     |
| 1   | A     | 17  | GLU  | CD-OE2 | 5.07 | 1.31        | 1.25     |
| 1   | H     | 800 | ARG  | NE-CZ  | 5.07 | 1.39        | 1.33     |
| 1   | N     | 800 | ARG  | NE-CZ  | 5.07 | 1.39        | 1.33     |
| 1   | B     | 800 | ARG  | CZ-NH1 | 5.07 | 1.39        | 1.33     |
| 1   | J     | 800 | ARG  | NE-CZ  | 5.07 | 1.39        | 1.33     |
| 1   | L     | 17  | GLU  | CD-OE2 | 5.07 | 1.31        | 1.25     |
| 1   | O     | 17  | GLU  | CD-OE2 | 5.07 | 1.31        | 1.25     |
| 1   | C     | 800 | ARG  | CZ-NH1 | 5.06 | 1.39        | 1.33     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | M     | 41  | GLU  | CD-OE2 | 5.06 | 1.31        | 1.25     |
| 1   | D     | 800 | ARG  | NE-CZ  | 5.06 | 1.39        | 1.33     |
| 1   | M     | 17  | GLU  | CD-OE2 | 5.06 | 1.31        | 1.25     |
| 1   | I     | 800 | ARG  | CZ-NH1 | 5.06 | 1.39        | 1.33     |
| 1   | C     | 41  | GLU  | CD-OE2 | 5.06 | 1.31        | 1.25     |
| 1   | B     | 41  | GLU  | CD-OE2 | 5.05 | 1.31        | 1.25     |
| 1   | M     | 800 | ARG  | NE-CZ  | 5.05 | 1.39        | 1.33     |
| 1   | E     | 41  | GLU  | CD-OE2 | 5.05 | 1.31        | 1.25     |
| 1   | K     | 41  | GLU  | CD-OE2 | 5.05 | 1.31        | 1.25     |
| 1   | M     | 800 | ARG  | CZ-NH1 | 5.05 | 1.39        | 1.33     |
| 1   | P     | 800 | ARG  | NE-CZ  | 5.05 | 1.39        | 1.33     |
| 1   | D     | 800 | ARG  | CZ-NH1 | 5.04 | 1.39        | 1.33     |
| 1   | O     | 41  | GLU  | CD-OE2 | 5.04 | 1.31        | 1.25     |
| 1   | O     | 800 | ARG  | CZ-NH1 | 5.04 | 1.39        | 1.33     |
| 1   | J     | 800 | ARG  | CZ-NH1 | 5.04 | 1.39        | 1.33     |
| 1   | L     | 41  | GLU  | CD-OE2 | 5.04 | 1.31        | 1.25     |
| 1   | A     | 41  | GLU  | CD-OE2 | 5.03 | 1.31        | 1.25     |
| 1   | F     | 800 | ARG  | NE-CZ  | 5.03 | 1.39        | 1.33     |
| 1   | H     | 41  | GLU  | CD-OE2 | 5.03 | 1.31        | 1.25     |
| 1   | N     | 41  | GLU  | CD-OE2 | 5.03 | 1.31        | 1.25     |
| 1   | D     | 170 | GLU  | CD-OE2 | 5.02 | 1.31        | 1.25     |
| 1   | H     | 170 | GLU  | CD-OE2 | 5.02 | 1.31        | 1.25     |
| 1   | K     | 800 | ARG  | NE-CZ  | 5.02 | 1.39        | 1.33     |
| 1   | L     | 800 | ARG  | CZ-NH1 | 5.01 | 1.39        | 1.33     |
| 1   | G     | 41  | GLU  | CD-OE2 | 5.01 | 1.31        | 1.25     |
| 1   | E     | 800 | ARG  | NE-CZ  | 5.01 | 1.39        | 1.33     |
| 1   | O     | 416 | GLU  | CD-OE2 | 5.00 | 1.31        | 1.25     |
| 1   | J     | 41  | GLU  | CD-OE2 | 5.00 | 1.31        | 1.25     |

All (3010) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | I     | 210 | ARG  | NE-CZ-NH1 | 18.08 | 129.34      | 120.30   |
| 1   | L     | 210 | ARG  | NE-CZ-NH1 | 18.07 | 129.34      | 120.30   |
| 1   | J     | 210 | ARG  | NE-CZ-NH1 | 18.07 | 129.33      | 120.30   |
| 1   | M     | 210 | ARG  | NE-CZ-NH1 | 18.03 | 129.31      | 120.30   |
| 1   | G     | 210 | ARG  | NE-CZ-NH1 | 18.01 | 129.30      | 120.30   |
| 1   | P     | 210 | ARG  | NE-CZ-NH1 | 18.01 | 129.30      | 120.30   |
| 1   | D     | 210 | ARG  | NE-CZ-NH1 | 18.00 | 129.30      | 120.30   |
| 1   | A     | 210 | ARG  | NE-CZ-NH1 | 17.99 | 129.30      | 120.30   |
| 1   | H     | 210 | ARG  | NE-CZ-NH1 | 17.98 | 129.29      | 120.30   |
| 1   | C     | 210 | ARG  | NE-CZ-NH1 | 17.98 | 129.29      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1   | E     | 210 | ARG  | NE-CZ-NH1 | 17.98  | 129.29      | 120.30   |
| 1   | F     | 210 | ARG  | NE-CZ-NH1 | 17.94  | 129.27      | 120.30   |
| 1   | N     | 210 | ARG  | NE-CZ-NH1 | 17.92  | 129.26      | 120.30   |
| 1   | K     | 210 | ARG  | NE-CZ-NH1 | 17.91  | 129.26      | 120.30   |
| 1   | O     | 210 | ARG  | NE-CZ-NH1 | 17.91  | 129.25      | 120.30   |
| 1   | B     | 210 | ARG  | NE-CZ-NH1 | 17.89  | 129.25      | 120.30   |
| 1   | C     | 448 | ARG  | NE-CZ-NH2 | -16.64 | 111.98      | 120.30   |
| 1   | G     | 448 | ARG  | NE-CZ-NH2 | -16.60 | 112.00      | 120.30   |
| 1   | D     | 448 | ARG  | NE-CZ-NH2 | -16.58 | 112.01      | 120.30   |
| 1   | L     | 448 | ARG  | NE-CZ-NH2 | -16.57 | 112.01      | 120.30   |
| 1   | H     | 448 | ARG  | NE-CZ-NH2 | -16.57 | 112.02      | 120.30   |
| 1   | N     | 448 | ARG  | NE-CZ-NH2 | -16.55 | 112.02      | 120.30   |
| 1   | I     | 448 | ARG  | NE-CZ-NH2 | -16.55 | 112.03      | 120.30   |
| 1   | A     | 448 | ARG  | NE-CZ-NH2 | -16.54 | 112.03      | 120.30   |
| 1   | F     | 448 | ARG  | NE-CZ-NH2 | -16.54 | 112.03      | 120.30   |
| 1   | B     | 448 | ARG  | NE-CZ-NH2 | -16.53 | 112.03      | 120.30   |
| 1   | K     | 448 | ARG  | NE-CZ-NH2 | -16.53 | 112.03      | 120.30   |
| 1   | M     | 448 | ARG  | NE-CZ-NH2 | -16.52 | 112.04      | 120.30   |
| 1   | E     | 448 | ARG  | NE-CZ-NH2 | -16.52 | 112.04      | 120.30   |
| 1   | O     | 448 | ARG  | NE-CZ-NH2 | -16.50 | 112.05      | 120.30   |
| 1   | J     | 448 | ARG  | NE-CZ-NH2 | -16.49 | 112.05      | 120.30   |
| 1   | P     | 448 | ARG  | NE-CZ-NH2 | -16.49 | 112.06      | 120.30   |
| 1   | H     | 881 | ARG  | NE-CZ-NH2 | -16.26 | 112.17      | 120.30   |
| 1   | J     | 881 | ARG  | NE-CZ-NH2 | -16.25 | 112.17      | 120.30   |
| 1   | K     | 881 | ARG  | NE-CZ-NH2 | -16.25 | 112.17      | 120.30   |
| 1   | L     | 881 | ARG  | NE-CZ-NH2 | -16.22 | 112.19      | 120.30   |
| 1   | C     | 881 | ARG  | NE-CZ-NH2 | -16.21 | 112.19      | 120.30   |
| 1   | N     | 881 | ARG  | NE-CZ-NH2 | -16.20 | 112.20      | 120.30   |
| 1   | P     | 881 | ARG  | NE-CZ-NH2 | -16.20 | 112.20      | 120.30   |
| 1   | F     | 881 | ARG  | NE-CZ-NH2 | -16.20 | 112.20      | 120.30   |
| 1   | G     | 881 | ARG  | NE-CZ-NH2 | -16.20 | 112.20      | 120.30   |
| 1   | B     | 881 | ARG  | NE-CZ-NH2 | -16.19 | 112.20      | 120.30   |
| 1   | E     | 881 | ARG  | NE-CZ-NH2 | -16.17 | 112.21      | 120.30   |
| 1   | A     | 881 | ARG  | NE-CZ-NH2 | -16.16 | 112.22      | 120.30   |
| 1   | M     | 881 | ARG  | NE-CZ-NH2 | -16.15 | 112.22      | 120.30   |
| 1   | I     | 881 | ARG  | NE-CZ-NH2 | -16.12 | 112.24      | 120.30   |
| 1   | D     | 881 | ARG  | NE-CZ-NH2 | -16.12 | 112.24      | 120.30   |
| 1   | O     | 881 | ARG  | NE-CZ-NH2 | -16.11 | 112.24      | 120.30   |
| 1   | E     | 938 | ARG  | NE-CZ-NH2 | -15.54 | 112.53      | 120.30   |
| 1   | A     | 938 | ARG  | NE-CZ-NH2 | -15.53 | 112.53      | 120.30   |
| 1   | M     | 938 | ARG  | NE-CZ-NH2 | -15.53 | 112.53      | 120.30   |
| 1   | F     | 938 | ARG  | NE-CZ-NH2 | -15.50 | 112.55      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1   | D     | 938 | ARG  | NE-CZ-NH2 | -15.50 | 112.55      | 120.30   |
| 1   | I     | 938 | ARG  | NE-CZ-NH2 | -15.49 | 112.55      | 120.30   |
| 1   | O     | 938 | ARG  | NE-CZ-NH2 | -15.49 | 112.56      | 120.30   |
| 1   | C     | 881 | ARG  | NE-CZ-NH1 | 15.48  | 128.04      | 120.30   |
| 1   | J     | 938 | ARG  | NE-CZ-NH2 | -15.46 | 112.57      | 120.30   |
| 1   | G     | 881 | ARG  | NE-CZ-NH1 | 15.45  | 128.03      | 120.30   |
| 1   | H     | 938 | ARG  | NE-CZ-NH2 | -15.45 | 112.58      | 120.30   |
| 1   | G     | 938 | ARG  | NE-CZ-NH2 | -15.44 | 112.58      | 120.30   |
| 1   | C     | 938 | ARG  | NE-CZ-NH2 | -15.44 | 112.58      | 120.30   |
| 1   | F     | 881 | ARG  | NE-CZ-NH1 | 15.44  | 128.02      | 120.30   |
| 1   | N     | 881 | ARG  | NE-CZ-NH1 | 15.44  | 128.02      | 120.30   |
| 1   | P     | 938 | ARG  | NE-CZ-NH2 | -15.44 | 112.58      | 120.30   |
| 1   | K     | 938 | ARG  | NE-CZ-NH2 | -15.42 | 112.59      | 120.30   |
| 1   | N     | 938 | ARG  | NE-CZ-NH2 | -15.42 | 112.59      | 120.30   |
| 1   | L     | 881 | ARG  | NE-CZ-NH1 | 15.40  | 128.00      | 120.30   |
| 1   | B     | 881 | ARG  | NE-CZ-NH1 | 15.40  | 128.00      | 120.30   |
| 1   | H     | 881 | ARG  | NE-CZ-NH1 | 15.39  | 128.00      | 120.30   |
| 1   | M     | 881 | ARG  | NE-CZ-NH1 | 15.39  | 127.99      | 120.30   |
| 1   | B     | 938 | ARG  | NE-CZ-NH2 | -15.38 | 112.61      | 120.30   |
| 1   | O     | 881 | ARG  | NE-CZ-NH1 | 15.38  | 127.99      | 120.30   |
| 1   | J     | 881 | ARG  | NE-CZ-NH1 | 15.38  | 127.99      | 120.30   |
| 1   | K     | 881 | ARG  | NE-CZ-NH1 | 15.35  | 127.98      | 120.30   |
| 1   | A     | 881 | ARG  | NE-CZ-NH1 | 15.34  | 127.97      | 120.30   |
| 1   | L     | 938 | ARG  | NE-CZ-NH2 | -15.34 | 112.63      | 120.30   |
| 1   | E     | 881 | ARG  | NE-CZ-NH1 | 15.33  | 127.96      | 120.30   |
| 1   | P     | 881 | ARG  | NE-CZ-NH1 | 15.28  | 127.94      | 120.30   |
| 1   | I     | 881 | ARG  | NE-CZ-NH1 | 15.24  | 127.92      | 120.30   |
| 1   | D     | 881 | ARG  | NE-CZ-NH1 | 15.20  | 127.90      | 120.30   |
| 1   | C     | 210 | ARG  | NE-CZ-NH2 | -14.78 | 112.91      | 120.30   |
| 1   | D     | 210 | ARG  | NE-CZ-NH2 | -14.77 | 112.91      | 120.30   |
| 1   | J     | 210 | ARG  | NE-CZ-NH2 | -14.77 | 112.92      | 120.30   |
| 1   | A     | 210 | ARG  | NE-CZ-NH2 | -14.76 | 112.92      | 120.30   |
| 1   | P     | 210 | ARG  | NE-CZ-NH2 | -14.74 | 112.93      | 120.30   |
| 1   | H     | 210 | ARG  | NE-CZ-NH2 | -14.74 | 112.93      | 120.30   |
| 1   | G     | 210 | ARG  | NE-CZ-NH2 | -14.73 | 112.94      | 120.30   |
| 1   | E     | 210 | ARG  | NE-CZ-NH2 | -14.72 | 112.94      | 120.30   |
| 1   | B     | 210 | ARG  | NE-CZ-NH2 | -14.69 | 112.95      | 120.30   |
| 1   | O     | 210 | ARG  | NE-CZ-NH2 | -14.68 | 112.96      | 120.30   |
| 1   | M     | 210 | ARG  | NE-CZ-NH2 | -14.68 | 112.96      | 120.30   |
| 1   | L     | 166 | ARG  | NE-CZ-NH1 | 14.68  | 127.64      | 120.30   |
| 1   | L     | 210 | ARG  | NE-CZ-NH2 | -14.68 | 112.96      | 120.30   |
| 1   | O     | 166 | ARG  | NE-CZ-NH1 | 14.67  | 127.63      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1   | I     | 166 | ARG  | NE-CZ-NH1 | 14.66  | 127.63      | 120.30   |
| 1   | N     | 210 | ARG  | NE-CZ-NH2 | -14.66 | 112.97      | 120.30   |
| 1   | I     | 210 | ARG  | NE-CZ-NH2 | -14.65 | 112.98      | 120.30   |
| 1   | K     | 210 | ARG  | NE-CZ-NH2 | -14.62 | 112.99      | 120.30   |
| 1   | D     | 166 | ARG  | NE-CZ-NH1 | 14.62  | 127.61      | 120.30   |
| 1   | F     | 210 | ARG  | NE-CZ-NH2 | -14.61 | 113.00      | 120.30   |
| 1   | C     | 166 | ARG  | NE-CZ-NH1 | 14.60  | 127.60      | 120.30   |
| 1   | E     | 166 | ARG  | NE-CZ-NH1 | 14.60  | 127.60      | 120.30   |
| 1   | K     | 166 | ARG  | NE-CZ-NH1 | 14.60  | 127.60      | 120.30   |
| 1   | J     | 166 | ARG  | NE-CZ-NH1 | 14.59  | 127.59      | 120.30   |
| 1   | M     | 166 | ARG  | NE-CZ-NH1 | 14.59  | 127.59      | 120.30   |
| 1   | A     | 166 | ARG  | NE-CZ-NH1 | 14.58  | 127.59      | 120.30   |
| 1   | N     | 166 | ARG  | NE-CZ-NH1 | 14.58  | 127.59      | 120.30   |
| 1   | G     | 166 | ARG  | NE-CZ-NH1 | 14.56  | 127.58      | 120.30   |
| 1   | H     | 166 | ARG  | NE-CZ-NH1 | 14.56  | 127.58      | 120.30   |
| 1   | F     | 166 | ARG  | NE-CZ-NH1 | 14.54  | 127.57      | 120.30   |
| 1   | B     | 166 | ARG  | NE-CZ-NH1 | 14.53  | 127.56      | 120.30   |
| 1   | P     | 166 | ARG  | NE-CZ-NH1 | 14.53  | 127.56      | 120.30   |
| 1   | D     | 938 | ARG  | NE-CZ-NH1 | 13.60  | 127.10      | 120.30   |
| 1   | E     | 938 | ARG  | NE-CZ-NH1 | 13.57  | 127.08      | 120.30   |
| 1   | F     | 938 | ARG  | NE-CZ-NH1 | 13.55  | 127.08      | 120.30   |
| 1   | B     | 938 | ARG  | NE-CZ-NH1 | 13.54  | 127.07      | 120.30   |
| 1   | M     | 938 | ARG  | NE-CZ-NH1 | 13.53  | 127.07      | 120.30   |
| 1   | I     | 938 | ARG  | NE-CZ-NH1 | 13.52  | 127.06      | 120.30   |
| 1   | O     | 938 | ARG  | NE-CZ-NH1 | 13.51  | 127.06      | 120.30   |
| 1   | H     | 938 | ARG  | NE-CZ-NH1 | 13.51  | 127.05      | 120.30   |
| 1   | C     | 938 | ARG  | NE-CZ-NH1 | 13.51  | 127.05      | 120.30   |
| 1   | P     | 938 | ARG  | NE-CZ-NH1 | 13.49  | 127.05      | 120.30   |
| 1   | A     | 938 | ARG  | NE-CZ-NH1 | 13.49  | 127.04      | 120.30   |
| 1   | K     | 938 | ARG  | NE-CZ-NH1 | 13.48  | 127.04      | 120.30   |
| 1   | G     | 938 | ARG  | NE-CZ-NH1 | 13.46  | 127.03      | 120.30   |
| 1   | N     | 938 | ARG  | NE-CZ-NH1 | 13.45  | 127.02      | 120.30   |
| 1   | L     | 938 | ARG  | NE-CZ-NH1 | 13.44  | 127.02      | 120.30   |
| 1   | J     | 938 | ARG  | NE-CZ-NH1 | 13.43  | 127.02      | 120.30   |
| 1   | D     | 746 | ASP  | CB-CG-OD2 | -12.36 | 107.17      | 118.30   |
| 1   | E     | 746 | ASP  | CB-CG-OD2 | -12.35 | 107.19      | 118.30   |
| 1   | J     | 746 | ASP  | CB-CG-OD2 | -12.34 | 107.19      | 118.30   |
| 1   | L     | 746 | ASP  | CB-CG-OD2 | -12.34 | 107.19      | 118.30   |
| 1   | G     | 746 | ASP  | CB-CG-OD2 | -12.33 | 107.20      | 118.30   |
| 1   | I     | 746 | ASP  | CB-CG-OD2 | -12.33 | 107.21      | 118.30   |
| 1   | H     | 746 | ASP  | CB-CG-OD2 | -12.32 | 107.21      | 118.30   |
| 1   | M     | 746 | ASP  | CB-CG-OD2 | -12.31 | 107.22      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|--------|-------------|----------|
| 1   | C     | 746  | ASP  | CB-CG-OD2 | -12.31 | 107.22      | 118.30   |
| 1   | N     | 746  | ASP  | CB-CG-OD2 | -12.31 | 107.22      | 118.30   |
| 1   | P     | 746  | ASP  | CB-CG-OD2 | -12.31 | 107.22      | 118.30   |
| 1   | A     | 746  | ASP  | CB-CG-OD2 | -12.30 | 107.23      | 118.30   |
| 1   | B     | 746  | ASP  | CB-CG-OD2 | -12.29 | 107.24      | 118.30   |
| 1   | K     | 746  | ASP  | CB-CG-OD2 | -12.29 | 107.24      | 118.30   |
| 1   | O     | 746  | ASP  | CB-CG-OD2 | -12.28 | 107.25      | 118.30   |
| 1   | F     | 746  | ASP  | CB-CG-OD2 | -12.27 | 107.26      | 118.30   |
| 1   | H     | 809  | ARG  | NE-CZ-NH1 | 11.03  | 125.81      | 120.30   |
| 1   | N     | 809  | ARG  | NE-CZ-NH1 | 10.98  | 125.79      | 120.30   |
| 1   | A     | 809  | ARG  | NE-CZ-NH1 | 10.97  | 125.78      | 120.30   |
| 1   | I     | 809  | ARG  | NE-CZ-NH1 | 10.96  | 125.78      | 120.30   |
| 1   | J     | 809  | ARG  | NE-CZ-NH1 | 10.95  | 125.78      | 120.30   |
| 1   | P     | 809  | ARG  | NE-CZ-NH1 | 10.95  | 125.78      | 120.30   |
| 1   | C     | 809  | ARG  | NE-CZ-NH1 | 10.94  | 125.77      | 120.30   |
| 1   | K     | 809  | ARG  | NE-CZ-NH1 | 10.94  | 125.77      | 120.30   |
| 1   | O     | 809  | ARG  | NE-CZ-NH1 | 10.94  | 125.77      | 120.30   |
| 1   | L     | 809  | ARG  | NE-CZ-NH1 | 10.93  | 125.77      | 120.30   |
| 1   | D     | 809  | ARG  | NE-CZ-NH1 | 10.92  | 125.76      | 120.30   |
| 1   | F     | 809  | ARG  | NE-CZ-NH1 | 10.92  | 125.76      | 120.30   |
| 1   | M     | 809  | ARG  | NE-CZ-NH1 | 10.89  | 125.75      | 120.30   |
| 1   | E     | 809  | ARG  | NE-CZ-NH1 | 10.88  | 125.74      | 120.30   |
| 1   | G     | 809  | ARG  | NE-CZ-NH1 | 10.87  | 125.73      | 120.30   |
| 1   | B     | 809  | ARG  | NE-CZ-NH1 | 10.84  | 125.72      | 120.30   |
| 1   | I     | 473  | ARG  | NE-CZ-NH1 | 10.06  | 125.33      | 120.30   |
| 1   | N     | 473  | ARG  | NE-CZ-NH1 | 10.05  | 125.33      | 120.30   |
| 1   | D     | 473  | ARG  | NE-CZ-NH1 | 10.05  | 125.33      | 120.30   |
| 1   | J     | 473  | ARG  | NE-CZ-NH1 | 10.04  | 125.32      | 120.30   |
| 1   | G     | 473  | ARG  | NE-CZ-NH1 | 10.04  | 125.32      | 120.30   |
| 1   | P     | 473  | ARG  | NE-CZ-NH1 | 10.03  | 125.31      | 120.30   |
| 1   | A     | 473  | ARG  | NE-CZ-NH1 | 10.02  | 125.31      | 120.30   |
| 1   | B     | 473  | ARG  | NE-CZ-NH1 | 10.01  | 125.31      | 120.30   |
| 1   | M     | 473  | ARG  | NE-CZ-NH1 | 10.00  | 125.30      | 120.30   |
| 1   | E     | 473  | ARG  | NE-CZ-NH1 | 10.00  | 125.30      | 120.30   |
| 1   | L     | 473  | ARG  | NE-CZ-NH1 | 9.99   | 125.30      | 120.30   |
| 1   | H     | 473  | ARG  | NE-CZ-NH1 | 9.99   | 125.30      | 120.30   |
| 1   | D     | 645  | ARG  | NE-CZ-NH1 | 9.98   | 125.29      | 120.30   |
| 1   | H     | 645  | ARG  | NE-CZ-NH1 | 9.98   | 125.29      | 120.30   |
| 1   | M     | 645  | ARG  | NE-CZ-NH1 | 9.96   | 125.28      | 120.30   |
| 1   | C     | 473  | ARG  | NE-CZ-NH1 | 9.95   | 125.28      | 120.30   |
| 1   | D     | 1018 | LEU  | CB-CA-C   | -9.94  | 91.31       | 110.20   |
| 1   | K     | 1018 | LEU  | CB-CA-C   | -9.94  | 91.31       | 110.20   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | E     | 1018 | LEU  | CB-CA-C   | -9.93 | 91.33       | 110.20   |
| 1   | C     | 1018 | LEU  | CB-CA-C   | -9.93 | 91.34       | 110.20   |
| 1   | L     | 1018 | LEU  | CB-CA-C   | -9.93 | 91.34       | 110.20   |
| 1   | A     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | F     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | O     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | P     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | B     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | H     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | M     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.35       | 110.20   |
| 1   | F     | 473  | ARG  | NE-CZ-NH1 | 9.92  | 125.26      | 120.30   |
| 1   | G     | 1018 | LEU  | CB-CA-C   | -9.92 | 91.36       | 110.20   |
| 1   | O     | 473  | ARG  | NE-CZ-NH1 | 9.92  | 125.26      | 120.30   |
| 1   | I     | 1018 | LEU  | CB-CA-C   | -9.91 | 91.37       | 110.20   |
| 1   | K     | 473  | ARG  | NE-CZ-NH1 | 9.91  | 125.26      | 120.30   |
| 1   | J     | 1018 | LEU  | CB-CA-C   | -9.91 | 91.37       | 110.20   |
| 1   | E     | 645  | ARG  | NE-CZ-NH1 | 9.89  | 125.25      | 120.30   |
| 1   | N     | 1018 | LEU  | CB-CA-C   | -9.89 | 91.41       | 110.20   |
| 1   | G     | 645  | ARG  | NE-CZ-NH1 | 9.89  | 125.24      | 120.30   |
| 1   | I     | 645  | ARG  | NE-CZ-NH1 | 9.88  | 125.24      | 120.30   |
| 1   | N     | 645  | ARG  | NE-CZ-NH1 | 9.88  | 125.24      | 120.30   |
| 1   | A     | 645  | ARG  | NE-CZ-NH1 | 9.88  | 125.24      | 120.30   |
| 1   | O     | 645  | ARG  | NE-CZ-NH1 | 9.87  | 125.23      | 120.30   |
| 1   | K     | 645  | ARG  | NE-CZ-NH1 | 9.87  | 125.23      | 120.30   |
| 1   | C     | 645  | ARG  | NE-CZ-NH1 | 9.85  | 125.22      | 120.30   |
| 1   | J     | 645  | ARG  | NE-CZ-NH1 | 9.84  | 125.22      | 120.30   |
| 1   | P     | 645  | ARG  | NE-CZ-NH1 | 9.82  | 125.21      | 120.30   |
| 1   | E     | 447  | ASP  | CB-CG-OD2 | -9.80 | 109.48      | 118.30   |
| 1   | L     | 645  | ARG  | NE-CZ-NH1 | 9.79  | 125.20      | 120.30   |
| 1   | F     | 645  | ARG  | NE-CZ-NH1 | 9.79  | 125.19      | 120.30   |
| 1   | P     | 447  | ASP  | CB-CG-OD2 | -9.78 | 109.50      | 118.30   |
| 1   | G     | 447  | ASP  | CB-CG-OD2 | -9.77 | 109.51      | 118.30   |
| 1   | N     | 233  | ASP  | CB-CG-OD1 | 9.77  | 127.09      | 118.30   |
| 1   | G     | 233  | ASP  | CB-CG-OD1 | 9.77  | 127.09      | 118.30   |
| 1   | E     | 233  | ASP  | CB-CG-OD1 | 9.76  | 127.09      | 118.30   |
| 1   | O     | 233  | ASP  | CB-CG-OD1 | 9.76  | 127.09      | 118.30   |
| 1   | D     | 447  | ASP  | CB-CG-OD2 | -9.76 | 109.52      | 118.30   |
| 1   | J     | 447  | ASP  | CB-CG-OD2 | -9.76 | 109.52      | 118.30   |
| 1   | B     | 233  | ASP  | CB-CG-OD1 | 9.76  | 127.08      | 118.30   |
| 1   | M     | 233  | ASP  | CB-CG-OD1 | 9.75  | 127.08      | 118.30   |
| 1   | A     | 447  | ASP  | CB-CG-OD2 | -9.75 | 109.53      | 118.30   |
| 1   | F     | 233  | ASP  | CB-CG-OD1 | 9.75  | 127.07      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 233 | ASP  | CB-CG-OD1 | 9.75  | 127.07      | 118.30   |
| 1   | B     | 645 | ARG  | NE-CZ-NH1 | 9.74  | 125.17      | 120.30   |
| 1   | M     | 447 | ASP  | CB-CG-OD2 | -9.74 | 109.53      | 118.30   |
| 1   | O     | 447 | ASP  | CB-CG-OD2 | -9.74 | 109.53      | 118.30   |
| 1   | C     | 233 | ASP  | CB-CG-OD1 | 9.73  | 127.06      | 118.30   |
| 1   | L     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.54      | 118.30   |
| 1   | H     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.54      | 118.30   |
| 1   | N     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.54      | 118.30   |
| 1   | B     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.54      | 118.30   |
| 1   | F     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.54      | 118.30   |
| 1   | K     | 233 | ASP  | CB-CG-OD1 | 9.73  | 127.06      | 118.30   |
| 1   | C     | 447 | ASP  | CB-CG-OD2 | -9.73 | 109.55      | 118.30   |
| 1   | J     | 233 | ASP  | CB-CG-OD1 | 9.73  | 127.06      | 118.30   |
| 1   | D     | 781 | ARG  | NE-CZ-NH2 | -9.72 | 115.44      | 120.30   |
| 1   | H     | 233 | ASP  | CB-CG-OD1 | 9.72  | 127.05      | 118.30   |
| 1   | I     | 447 | ASP  | CB-CG-OD2 | -9.72 | 109.55      | 118.30   |
| 1   | L     | 781 | ARG  | NE-CZ-NH2 | -9.72 | 115.44      | 120.30   |
| 1   | K     | 447 | ASP  | CB-CG-OD2 | -9.72 | 109.55      | 118.30   |
| 1   | P     | 781 | ARG  | NE-CZ-NH2 | -9.72 | 115.44      | 120.30   |
| 1   | G     | 781 | ARG  | NE-CZ-NH2 | -9.71 | 115.44      | 120.30   |
| 1   | P     | 233 | ASP  | CB-CG-OD1 | 9.71  | 127.04      | 118.30   |
| 1   | B     | 781 | ARG  | NE-CZ-NH2 | -9.71 | 115.45      | 120.30   |
| 1   | D     | 233 | ASP  | CB-CG-OD1 | 9.71  | 127.03      | 118.30   |
| 1   | I     | 233 | ASP  | CB-CG-OD1 | 9.71  | 127.03      | 118.30   |
| 1   | A     | 233 | ASP  | CB-CG-OD1 | 9.68  | 127.01      | 118.30   |
| 1   | E     | 431 | ARG  | NE-CZ-NH1 | 9.68  | 125.14      | 120.30   |
| 1   | K     | 199 | ASP  | CB-CG-OD2 | -9.68 | 109.59      | 118.30   |
| 1   | K     | 431 | ARG  | NE-CZ-NH1 | 9.68  | 125.14      | 120.30   |
| 1   | L     | 199 | ASP  | CB-CG-OD2 | -9.67 | 109.59      | 118.30   |
| 1   | P     | 199 | ASP  | CB-CG-OD2 | -9.66 | 109.60      | 118.30   |
| 1   | I     | 199 | ASP  | CB-CG-OD2 | -9.65 | 109.61      | 118.30   |
| 1   | J     | 199 | ASP  | CB-CG-OD2 | -9.65 | 109.61      | 118.30   |
| 1   | A     | 781 | ARG  | NE-CZ-NH2 | -9.64 | 115.48      | 120.30   |
| 1   | D     | 199 | ASP  | CB-CG-OD2 | -9.64 | 109.62      | 118.30   |
| 1   | D     | 431 | ARG  | NE-CZ-NH1 | 9.64  | 125.12      | 120.30   |
| 1   | A     | 199 | ASP  | CB-CG-OD2 | -9.64 | 109.63      | 118.30   |
| 1   | O     | 199 | ASP  | CB-CG-OD2 | -9.64 | 109.63      | 118.30   |
| 1   | C     | 781 | ARG  | NE-CZ-NH2 | -9.63 | 115.48      | 120.30   |
| 1   | K     | 781 | ARG  | NE-CZ-NH2 | -9.63 | 115.48      | 120.30   |
| 1   | H     | 199 | ASP  | CB-CG-OD2 | -9.63 | 109.63      | 118.30   |
| 1   | M     | 781 | ARG  | NE-CZ-NH2 | -9.63 | 115.48      | 120.30   |
| 1   | B     | 199 | ASP  | CB-CG-OD2 | -9.62 | 109.64      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | C     | 199 | ASP  | CB-CG-OD2 | -9.62 | 109.64      | 118.30   |
| 1   | G     | 199 | ASP  | CB-CG-OD2 | -9.62 | 109.64      | 118.30   |
| 1   | N     | 199 | ASP  | CB-CG-OD2 | -9.62 | 109.64      | 118.30   |
| 1   | H     | 781 | ARG  | NE-CZ-NH2 | -9.62 | 115.49      | 120.30   |
| 1   | P     | 431 | ARG  | NE-CZ-NH1 | 9.62  | 125.11      | 120.30   |
| 1   | F     | 199 | ASP  | CB-CG-OD2 | -9.61 | 109.65      | 118.30   |
| 1   | M     | 199 | ASP  | CB-CG-OD2 | -9.61 | 109.65      | 118.30   |
| 1   | E     | 199 | ASP  | CB-CG-OD2 | -9.61 | 109.65      | 118.30   |
| 1   | J     | 431 | ARG  | NE-CZ-NH1 | 9.60  | 125.10      | 120.30   |
| 1   | I     | 431 | ARG  | NE-CZ-NH1 | 9.60  | 125.10      | 120.30   |
| 1   | F     | 781 | ARG  | NE-CZ-NH2 | -9.59 | 115.51      | 120.30   |
| 1   | I     | 781 | ARG  | NE-CZ-NH2 | -9.58 | 115.51      | 120.30   |
| 1   | F     | 431 | ARG  | NE-CZ-NH1 | 9.58  | 125.09      | 120.30   |
| 1   | M     | 431 | ARG  | NE-CZ-NH1 | 9.58  | 125.09      | 120.30   |
| 1   | N     | 781 | ARG  | NE-CZ-NH2 | -9.58 | 115.51      | 120.30   |
| 1   | A     | 431 | ARG  | NE-CZ-NH1 | 9.57  | 125.09      | 120.30   |
| 1   | J     | 781 | ARG  | NE-CZ-NH2 | -9.57 | 115.52      | 120.30   |
| 1   | O     | 431 | ARG  | NE-CZ-NH1 | 9.57  | 125.08      | 120.30   |
| 1   | B     | 431 | ARG  | NE-CZ-NH1 | 9.56  | 125.08      | 120.30   |
| 1   | H     | 431 | ARG  | NE-CZ-NH1 | 9.56  | 125.08      | 120.30   |
| 1   | O     | 781 | ARG  | NE-CZ-NH2 | -9.56 | 115.52      | 120.30   |
| 1   | E     | 781 | ARG  | NE-CZ-NH2 | -9.55 | 115.53      | 120.30   |
| 1   | L     | 431 | ARG  | NE-CZ-NH1 | 9.53  | 125.07      | 120.30   |
| 1   | N     | 431 | ARG  | NE-CZ-NH1 | 9.53  | 125.06      | 120.30   |
| 1   | C     | 431 | ARG  | NE-CZ-NH1 | 9.51  | 125.06      | 120.30   |
| 1   | G     | 431 | ARG  | NE-CZ-NH1 | 9.50  | 125.05      | 120.30   |
| 1   | M     | 809 | ARG  | NE-CZ-NH2 | -9.49 | 115.55      | 120.30   |
| 1   | K     | 13  | ARG  | NE-CZ-NH1 | 9.49  | 125.04      | 120.30   |
| 1   | C     | 809 | ARG  | NE-CZ-NH2 | -9.46 | 115.57      | 120.30   |
| 1   | N     | 809 | ARG  | NE-CZ-NH2 | -9.46 | 115.57      | 120.30   |
| 1   | P     | 809 | ARG  | NE-CZ-NH2 | -9.45 | 115.57      | 120.30   |
| 1   | F     | 809 | ARG  | NE-CZ-NH2 | -9.45 | 115.58      | 120.30   |
| 1   | H     | 809 | ARG  | NE-CZ-NH2 | -9.44 | 115.58      | 120.30   |
| 1   | A     | 809 | ARG  | NE-CZ-NH2 | -9.43 | 115.58      | 120.30   |
| 1   | M     | 13  | ARG  | NE-CZ-NH1 | 9.43  | 125.02      | 120.30   |
| 1   | L     | 809 | ARG  | NE-CZ-NH2 | -9.43 | 115.59      | 120.30   |
| 1   | F     | 13  | ARG  | NE-CZ-NH1 | 9.42  | 125.01      | 120.30   |
| 1   | G     | 809 | ARG  | NE-CZ-NH2 | -9.42 | 115.59      | 120.30   |
| 1   | O     | 13  | ARG  | NE-CZ-NH1 | 9.41  | 125.01      | 120.30   |
| 1   | O     | 809 | ARG  | NE-CZ-NH2 | -9.41 | 115.59      | 120.30   |
| 1   | I     | 13  | ARG  | NE-CZ-NH1 | 9.41  | 125.00      | 120.30   |
| 1   | I     | 809 | ARG  | NE-CZ-NH2 | -9.41 | 115.60      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | P     | 13  | ARG  | NE-CZ-NH1 | 9.40  | 125.00      | 120.30   |
| 1   | J     | 809 | ARG  | NE-CZ-NH2 | -9.39 | 115.61      | 120.30   |
| 1   | H     | 13  | ARG  | NE-CZ-NH1 | 9.39  | 124.99      | 120.30   |
| 1   | K     | 809 | ARG  | NE-CZ-NH2 | -9.38 | 115.61      | 120.30   |
| 1   | A     | 13  | ARG  | NE-CZ-NH1 | 9.37  | 124.98      | 120.30   |
| 1   | L     | 13  | ARG  | NE-CZ-NH1 | 9.36  | 124.98      | 120.30   |
| 1   | E     | 809 | ARG  | NE-CZ-NH2 | -9.36 | 115.62      | 120.30   |
| 1   | D     | 809 | ARG  | NE-CZ-NH2 | -9.36 | 115.62      | 120.30   |
| 1   | B     | 809 | ARG  | NE-CZ-NH2 | -9.35 | 115.62      | 120.30   |
| 1   | J     | 13  | ARG  | NE-CZ-NH1 | 9.35  | 124.98      | 120.30   |
| 1   | G     | 13  | ARG  | NE-CZ-NH1 | 9.35  | 124.97      | 120.30   |
| 1   | B     | 13  | ARG  | NE-CZ-NH1 | 9.33  | 124.97      | 120.30   |
| 1   | N     | 13  | ARG  | NE-CZ-NH1 | 9.33  | 124.97      | 120.30   |
| 1   | C     | 13  | ARG  | NE-CZ-NH1 | 9.31  | 124.95      | 120.30   |
| 1   | D     | 13  | ARG  | NE-CZ-NH1 | 9.30  | 124.95      | 120.30   |
| 1   | E     | 13  | ARG  | NE-CZ-NH1 | 9.29  | 124.94      | 120.30   |
| 1   | O     | 509 | ASP  | CB-CG-OD2 | -9.19 | 110.03      | 118.30   |
| 1   | H     | 509 | ASP  | CB-CG-OD2 | -9.18 | 110.04      | 118.30   |
| 1   | G     | 509 | ASP  | CB-CG-OD2 | -9.17 | 110.05      | 118.30   |
| 1   | P     | 509 | ASP  | CB-CG-OD2 | -9.16 | 110.06      | 118.30   |
| 1   | N     | 509 | ASP  | CB-CG-OD2 | -9.15 | 110.07      | 118.30   |
| 1   | B     | 509 | ASP  | CB-CG-OD2 | -9.14 | 110.08      | 118.30   |
| 1   | A     | 509 | ASP  | CB-CG-OD2 | -9.13 | 110.08      | 118.30   |
| 1   | K     | 509 | ASP  | CB-CG-OD2 | -9.13 | 110.08      | 118.30   |
| 1   | F     | 509 | ASP  | CB-CG-OD2 | -9.13 | 110.08      | 118.30   |
| 1   | L     | 509 | ASP  | CB-CG-OD2 | -9.12 | 110.09      | 118.30   |
| 1   | J     | 509 | ASP  | CB-CG-OD2 | -9.12 | 110.09      | 118.30   |
| 1   | M     | 509 | ASP  | CB-CG-OD2 | -9.12 | 110.09      | 118.30   |
| 1   | B     | 429 | ASP  | CB-CG-OD2 | -9.12 | 110.09      | 118.30   |
| 1   | J     | 429 | ASP  | CB-CG-OD2 | -9.11 | 110.10      | 118.30   |
| 1   | E     | 509 | ASP  | CB-CG-OD2 | -9.11 | 110.10      | 118.30   |
| 1   | O     | 429 | ASP  | CB-CG-OD2 | -9.11 | 110.11      | 118.30   |
| 1   | D     | 509 | ASP  | CB-CG-OD2 | -9.10 | 110.11      | 118.30   |
| 1   | N     | 429 | ASP  | CB-CG-OD2 | -9.10 | 110.11      | 118.30   |
| 1   | C     | 429 | ASP  | CB-CG-OD2 | -9.10 | 110.11      | 118.30   |
| 1   | C     | 509 | ASP  | CB-CG-OD2 | -9.09 | 110.12      | 118.30   |
| 1   | I     | 509 | ASP  | CB-CG-OD2 | -9.09 | 110.12      | 118.30   |
| 1   | A     | 429 | ASP  | CB-CG-OD2 | -9.09 | 110.12      | 118.30   |
| 1   | F     | 429 | ASP  | CB-CG-OD2 | -9.08 | 110.12      | 118.30   |
| 1   | K     | 429 | ASP  | CB-CG-OD2 | -9.08 | 110.12      | 118.30   |
| 1   | D     | 429 | ASP  | CB-CG-OD2 | -9.08 | 110.13      | 118.30   |
| 1   | L     | 429 | ASP  | CB-CG-OD2 | -9.07 | 110.13      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | M     | 429 | ASP  | CB-CG-OD2 | -9.07 | 110.14      | 118.30   |
| 1   | E     | 429 | ASP  | CB-CG-OD2 | -9.07 | 110.14      | 118.30   |
| 1   | I     | 429 | ASP  | CB-CG-OD2 | -9.07 | 110.14      | 118.30   |
| 1   | G     | 429 | ASP  | CB-CG-OD2 | -9.05 | 110.16      | 118.30   |
| 1   | H     | 429 | ASP  | CB-CG-OD2 | -9.04 | 110.17      | 118.30   |
| 1   | P     | 429 | ASP  | CB-CG-OD2 | -9.01 | 110.19      | 118.30   |
| 1   | B     | 473 | ARG  | NE-CZ-NH2 | -8.94 | 115.83      | 120.30   |
| 1   | K     | 473 | ARG  | NE-CZ-NH2 | -8.91 | 115.84      | 120.30   |
| 1   | K     | 287 | ASP  | CB-CG-OD2 | -8.89 | 110.30      | 118.30   |
| 1   | N     | 287 | ASP  | CB-CG-OD2 | -8.89 | 110.30      | 118.30   |
| 1   | M     | 473 | ARG  | NE-CZ-NH2 | -8.89 | 115.86      | 120.30   |
| 1   | I     | 287 | ASP  | CB-CG-OD2 | -8.89 | 110.30      | 118.30   |
| 1   | D     | 473 | ARG  | NE-CZ-NH2 | -8.88 | 115.86      | 120.30   |
| 1   | H     | 287 | ASP  | CB-CG-OD2 | -8.89 | 110.30      | 118.30   |
| 1   | D     | 287 | ASP  | CB-CG-OD2 | -8.87 | 110.32      | 118.30   |
| 1   | C     | 287 | ASP  | CB-CG-OD2 | -8.87 | 110.32      | 118.30   |
| 1   | A     | 287 | ASP  | CB-CG-OD2 | -8.86 | 110.33      | 118.30   |
| 1   | A     | 473 | ARG  | NE-CZ-NH2 | -8.86 | 115.87      | 120.30   |
| 1   | J     | 287 | ASP  | CB-CG-OD2 | -8.86 | 110.33      | 118.30   |
| 1   | E     | 287 | ASP  | CB-CG-OD2 | -8.85 | 110.33      | 118.30   |
| 1   | C     | 473 | ARG  | NE-CZ-NH2 | -8.85 | 115.87      | 120.30   |
| 1   | I     | 473 | ARG  | NE-CZ-NH2 | -8.85 | 115.87      | 120.30   |
| 1   | B     | 287 | ASP  | CB-CG-OD2 | -8.85 | 110.34      | 118.30   |
| 1   | J     | 473 | ARG  | NE-CZ-NH2 | -8.85 | 115.88      | 120.30   |
| 1   | L     | 473 | ARG  | NE-CZ-NH2 | -8.85 | 115.88      | 120.30   |
| 1   | H     | 473 | ARG  | NE-CZ-NH2 | -8.84 | 115.88      | 120.30   |
| 1   | P     | 287 | ASP  | CB-CG-OD2 | -8.84 | 110.34      | 118.30   |
| 1   | L     | 287 | ASP  | CB-CG-OD2 | -8.84 | 110.34      | 118.30   |
| 1   | G     | 287 | ASP  | CB-CG-OD2 | -8.84 | 110.35      | 118.30   |
| 1   | O     | 473 | ARG  | NE-CZ-NH2 | -8.84 | 115.88      | 120.30   |
| 1   | F     | 287 | ASP  | CB-CG-OD2 | -8.82 | 110.36      | 118.30   |
| 1   | O     | 287 | ASP  | CB-CG-OD2 | -8.82 | 110.36      | 118.30   |
| 1   | P     | 473 | ARG  | NE-CZ-NH2 | -8.82 | 115.89      | 120.30   |
| 1   | M     | 287 | ASP  | CB-CG-OD2 | -8.82 | 110.36      | 118.30   |
| 1   | G     | 473 | ARG  | NE-CZ-NH2 | -8.81 | 115.90      | 120.30   |
| 1   | E     | 473 | ARG  | NE-CZ-NH2 | -8.76 | 115.92      | 120.30   |
| 1   | N     | 473 | ARG  | NE-CZ-NH2 | -8.74 | 115.93      | 120.30   |
| 1   | F     | 52  | ARG  | NE-CZ-NH2 | -8.73 | 115.93      | 120.30   |
| 1   | K     | 210 | ARG  | CD-NE-CZ  | 8.72  | 135.81      | 123.60   |
| 1   | L     | 210 | ARG  | CD-NE-CZ  | 8.72  | 135.81      | 123.60   |
| 1   | I     | 210 | ARG  | CD-NE-CZ  | 8.72  | 135.80      | 123.60   |
| 1   | H     | 210 | ARG  | CD-NE-CZ  | 8.71  | 135.80      | 123.60   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | O     | 210 | ARG  | CD-NE-CZ  | 8.71  | 135.79      | 123.60   |
| 1   | N     | 210 | ARG  | CD-NE-CZ  | 8.71  | 135.79      | 123.60   |
| 1   | C     | 210 | ARG  | CD-NE-CZ  | 8.70  | 135.78      | 123.60   |
| 1   | F     | 210 | ARG  | CD-NE-CZ  | 8.70  | 135.78      | 123.60   |
| 1   | F     | 473 | ARG  | NE-CZ-NH2 | -8.70 | 115.95      | 120.30   |
| 1   | A     | 210 | ARG  | CD-NE-CZ  | 8.70  | 135.78      | 123.60   |
| 1   | B     | 210 | ARG  | CD-NE-CZ  | 8.70  | 135.77      | 123.60   |
| 1   | O     | 52  | ARG  | NE-CZ-NH2 | -8.70 | 115.95      | 120.30   |
| 1   | P     | 210 | ARG  | CD-NE-CZ  | 8.70  | 135.77      | 123.60   |
| 1   | D     | 210 | ARG  | CD-NE-CZ  | 8.69  | 135.77      | 123.60   |
| 1   | G     | 210 | ARG  | CD-NE-CZ  | 8.69  | 135.76      | 123.60   |
| 1   | E     | 210 | ARG  | CD-NE-CZ  | 8.68  | 135.76      | 123.60   |
| 1   | J     | 210 | ARG  | CD-NE-CZ  | 8.68  | 135.75      | 123.60   |
| 1   | M     | 210 | ARG  | CD-NE-CZ  | 8.68  | 135.76      | 123.60   |
| 1   | I     | 52  | ARG  | NE-CZ-NH2 | -8.67 | 115.97      | 120.30   |
| 1   | B     | 52  | ARG  | NE-CZ-NH2 | -8.66 | 115.97      | 120.30   |
| 1   | N     | 52  | ARG  | NE-CZ-NH2 | -8.63 | 115.98      | 120.30   |
| 1   | P     | 52  | ARG  | NE-CZ-NH2 | -8.63 | 115.99      | 120.30   |
| 1   | E     | 52  | ARG  | NE-CZ-NH2 | -8.60 | 116.00      | 120.30   |
| 1   | H     | 52  | ARG  | NE-CZ-NH2 | -8.60 | 116.00      | 120.30   |
| 1   | D     | 52  | ARG  | NE-CZ-NH2 | -8.59 | 116.00      | 120.30   |
| 1   | J     | 52  | ARG  | NE-CZ-NH2 | -8.59 | 116.00      | 120.30   |
| 1   | A     | 52  | ARG  | NE-CZ-NH2 | -8.59 | 116.01      | 120.30   |
| 1   | B     | 448 | ARG  | NE-CZ-NH1 | 8.59  | 124.59      | 120.30   |
| 1   | K     | 368 | ASP  | CB-CG-OD2 | -8.58 | 110.58      | 118.30   |
| 1   | O     | 368 | ASP  | CB-CG-OD2 | -8.58 | 110.58      | 118.30   |
| 1   | G     | 52  | ARG  | NE-CZ-NH2 | -8.57 | 116.01      | 120.30   |
| 1   | E     | 368 | ASP  | CB-CG-OD2 | -8.57 | 110.59      | 118.30   |
| 1   | O     | 429 | ASP  | CB-CG-OD1 | 8.57  | 126.01      | 118.30   |
| 1   | J     | 368 | ASP  | CB-CG-OD2 | -8.56 | 110.59      | 118.30   |
| 1   | L     | 52  | ARG  | NE-CZ-NH2 | -8.56 | 116.02      | 120.30   |
| 1   | M     | 368 | ASP  | CB-CG-OD2 | -8.56 | 110.59      | 118.30   |
| 1   | D     | 429 | ASP  | CB-CG-OD1 | 8.56  | 126.00      | 118.30   |
| 1   | F     | 429 | ASP  | CB-CG-OD1 | 8.55  | 126.00      | 118.30   |
| 1   | K     | 429 | ASP  | CB-CG-OD1 | 8.55  | 126.00      | 118.30   |
| 1   | K     | 52  | ARG  | NE-CZ-NH2 | -8.55 | 116.03      | 120.30   |
| 1   | P     | 368 | ASP  | CB-CG-OD2 | -8.55 | 110.61      | 118.30   |
| 1   | C     | 368 | ASP  | CB-CG-OD2 | -8.55 | 110.61      | 118.30   |
| 1   | H     | 368 | ASP  | CB-CG-OD2 | -8.54 | 110.61      | 118.30   |
| 1   | M     | 429 | ASP  | CB-CG-OD1 | 8.55  | 125.99      | 118.30   |
| 1   | N     | 429 | ASP  | CB-CG-OD1 | 8.55  | 125.99      | 118.30   |
| 1   | J     | 429 | ASP  | CB-CG-OD1 | 8.54  | 125.99      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | N     | 448 | ARG  | NE-CZ-NH1 | 8.54  | 124.57      | 120.30   |
| 1   | C     | 52  | ARG  | NE-CZ-NH2 | -8.54 | 116.03      | 120.30   |
| 1   | L     | 368 | ASP  | CB-CG-OD2 | -8.54 | 110.62      | 118.30   |
| 1   | C     | 429 | ASP  | CB-CG-OD1 | 8.53  | 125.98      | 118.30   |
| 1   | E     | 429 | ASP  | CB-CG-OD1 | 8.54  | 125.98      | 118.30   |
| 1   | H     | 448 | ARG  | NE-CZ-NH1 | 8.53  | 124.57      | 120.30   |
| 1   | A     | 368 | ASP  | CB-CG-OD2 | -8.53 | 110.62      | 118.30   |
| 1   | I     | 368 | ASP  | CB-CG-OD2 | -8.53 | 110.62      | 118.30   |
| 1   | A     | 429 | ASP  | CB-CG-OD1 | 8.53  | 125.97      | 118.30   |
| 1   | I     | 429 | ASP  | CB-CG-OD1 | 8.53  | 125.97      | 118.30   |
| 1   | G     | 448 | ARG  | NE-CZ-NH1 | 8.52  | 124.56      | 120.30   |
| 1   | B     | 368 | ASP  | CB-CG-OD2 | -8.52 | 110.63      | 118.30   |
| 1   | I     | 448 | ARG  | NE-CZ-NH1 | 8.52  | 124.56      | 120.30   |
| 1   | D     | 368 | ASP  | CB-CG-OD2 | -8.52 | 110.64      | 118.30   |
| 1   | F     | 368 | ASP  | CB-CG-OD2 | -8.51 | 110.64      | 118.30   |
| 1   | K     | 448 | ARG  | NE-CZ-NH1 | 8.51  | 124.56      | 120.30   |
| 1   | P     | 448 | ARG  | NE-CZ-NH1 | 8.51  | 124.56      | 120.30   |
| 1   | D     | 448 | ARG  | NE-CZ-NH1 | 8.51  | 124.56      | 120.30   |
| 1   | G     | 429 | ASP  | CB-CG-OD1 | 8.51  | 125.96      | 118.30   |
| 1   | H     | 429 | ASP  | CB-CG-OD1 | 8.51  | 125.96      | 118.30   |
| 1   | M     | 52  | ARG  | NE-CZ-NH2 | -8.51 | 116.05      | 120.30   |
| 1   | B     | 429 | ASP  | CB-CG-OD1 | 8.51  | 125.95      | 118.30   |
| 1   | G     | 368 | ASP  | CB-CG-OD2 | -8.51 | 110.65      | 118.30   |
| 1   | A     | 448 | ARG  | NE-CZ-NH1 | 8.50  | 124.55      | 120.30   |
| 1   | N     | 368 | ASP  | CB-CG-OD2 | -8.50 | 110.65      | 118.30   |
| 1   | P     | 571 | VAL  | CB-CA-C   | -8.49 | 95.27       | 111.40   |
| 1   | F     | 448 | ARG  | NE-CZ-NH1 | 8.49  | 124.55      | 120.30   |
| 1   | L     | 571 | VAL  | CB-CA-C   | -8.49 | 95.27       | 111.40   |
| 1   | O     | 448 | ARG  | NE-CZ-NH1 | 8.49  | 124.54      | 120.30   |
| 1   | P     | 429 | ASP  | CB-CG-OD1 | 8.49  | 125.94      | 118.30   |
| 1   | F     | 571 | VAL  | CB-CA-C   | -8.48 | 95.28       | 111.40   |
| 1   | E     | 448 | ARG  | NE-CZ-NH1 | 8.48  | 124.54      | 120.30   |
| 1   | E     | 571 | VAL  | CB-CA-C   | -8.48 | 95.28       | 111.40   |
| 1   | L     | 429 | ASP  | CB-CG-OD1 | 8.48  | 125.93      | 118.30   |
| 1   | M     | 571 | VAL  | CB-CA-C   | -8.48 | 95.29       | 111.40   |
| 1   | C     | 571 | VAL  | CB-CA-C   | -8.48 | 95.30       | 111.40   |
| 1   | A     | 571 | VAL  | CB-CA-C   | -8.47 | 95.30       | 111.40   |
| 1   | C     | 448 | ARG  | NE-CZ-NH1 | 8.47  | 124.54      | 120.30   |
| 1   | O     | 571 | VAL  | CB-CA-C   | -8.47 | 95.30       | 111.40   |
| 1   | H     | 571 | VAL  | CB-CA-C   | -8.47 | 95.31       | 111.40   |
| 1   | J     | 448 | ARG  | NE-CZ-NH1 | 8.47  | 124.53      | 120.30   |
| 1   | K     | 571 | VAL  | CB-CA-C   | -8.47 | 95.31       | 111.40   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | G     | 571 | VAL  | CB-CA-C   | -8.47 | 95.31       | 111.40   |
| 1   | L     | 448 | ARG  | NE-CZ-NH1 | 8.47  | 124.53      | 120.30   |
| 1   | I     | 571 | VAL  | CB-CA-C   | -8.46 | 95.32       | 111.40   |
| 1   | N     | 5   | ASP  | CB-CG-OD2 | -8.46 | 110.68      | 118.30   |
| 1   | B     | 571 | VAL  | CB-CA-C   | -8.46 | 95.32       | 111.40   |
| 1   | D     | 571 | VAL  | CB-CA-C   | -8.46 | 95.32       | 111.40   |
| 1   | N     | 571 | VAL  | CB-CA-C   | -8.45 | 95.35       | 111.40   |
| 1   | J     | 571 | VAL  | CB-CA-C   | -8.45 | 95.35       | 111.40   |
| 1   | M     | 448 | ARG  | NE-CZ-NH1 | 8.43  | 124.51      | 120.30   |
| 1   | F     | 5   | ASP  | CB-CG-OD2 | -8.41 | 110.73      | 118.30   |
| 1   | F     | 13  | ARG  | NE-CZ-NH2 | -8.40 | 116.10      | 120.30   |
| 1   | K     | 5   | ASP  | CB-CG-OD2 | -8.40 | 110.74      | 118.30   |
| 1   | D     | 5   | ASP  | CB-CG-OD2 | -8.39 | 110.75      | 118.30   |
| 1   | O     | 5   | ASP  | CB-CG-OD2 | -8.39 | 110.75      | 118.30   |
| 1   | A     | 5   | ASP  | CB-CG-OD2 | -8.38 | 110.76      | 118.30   |
| 1   | I     | 13  | ARG  | NE-CZ-NH2 | -8.38 | 116.11      | 120.30   |
| 1   | P     | 5   | ASP  | CB-CG-OD2 | -8.38 | 110.76      | 118.30   |
| 1   | J     | 5   | ASP  | CB-CG-OD2 | -8.37 | 110.77      | 118.30   |
| 1   | B     | 5   | ASP  | CB-CG-OD2 | -8.37 | 110.77      | 118.30   |
| 1   | H     | 5   | ASP  | CB-CG-OD2 | -8.36 | 110.77      | 118.30   |
| 1   | M     | 13  | ARG  | NE-CZ-NH2 | -8.35 | 116.12      | 120.30   |
| 1   | G     | 5   | ASP  | CB-CG-OD2 | -8.35 | 110.78      | 118.30   |
| 1   | M     | 5   | ASP  | CB-CG-OD2 | -8.35 | 110.78      | 118.30   |
| 1   | G     | 13  | ARG  | NE-CZ-NH2 | -8.35 | 116.12      | 120.30   |
| 1   | L     | 5   | ASP  | CB-CG-OD2 | -8.35 | 110.79      | 118.30   |
| 1   | C     | 5   | ASP  | CB-CG-OD2 | -8.33 | 110.80      | 118.30   |
| 1   | E     | 13  | ARG  | NE-CZ-NH2 | -8.33 | 116.14      | 120.30   |
| 1   | G     | 428 | ASP  | CB-CG-OD2 | -8.33 | 110.80      | 118.30   |
| 1   | J     | 428 | ASP  | CB-CG-OD2 | -8.33 | 110.80      | 118.30   |
| 1   | J     | 13  | ARG  | NE-CZ-NH2 | -8.32 | 116.14      | 120.30   |
| 1   | I     | 5   | ASP  | CB-CG-OD2 | -8.31 | 110.82      | 118.30   |
| 1   | E     | 5   | ASP  | CB-CG-OD2 | -8.31 | 110.82      | 118.30   |
| 1   | N     | 428 | ASP  | CB-CG-OD2 | -8.30 | 110.83      | 118.30   |
| 1   | A     | 13  | ARG  | NE-CZ-NH2 | -8.29 | 116.15      | 120.30   |
| 1   | H     | 13  | ARG  | NE-CZ-NH2 | -8.29 | 116.15      | 120.30   |
| 1   | B     | 13  | ARG  | NE-CZ-NH2 | -8.29 | 116.16      | 120.30   |
| 1   | K     | 428 | ASP  | CB-CG-OD2 | -8.29 | 110.84      | 118.30   |
| 1   | H     | 428 | ASP  | CB-CG-OD2 | -8.28 | 110.84      | 118.30   |
| 1   | L     | 428 | ASP  | CB-CG-OD2 | -8.28 | 110.85      | 118.30   |
| 1   | E     | 428 | ASP  | CB-CG-OD2 | -8.28 | 110.85      | 118.30   |
| 1   | C     | 428 | ASP  | CB-CG-OD2 | -8.28 | 110.85      | 118.30   |
| 1   | K     | 13  | ARG  | NE-CZ-NH2 | -8.28 | 116.16      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | O     | 13  | ARG  | NE-CZ-NH2 | -8.28 | 116.16      | 120.30   |
| 1   | A     | 428 | ASP  | CB-CG-OD2 | -8.28 | 110.85      | 118.30   |
| 1   | B     | 428 | ASP  | CB-CG-OD2 | -8.27 | 110.85      | 118.30   |
| 1   | C     | 13  | ARG  | NE-CZ-NH2 | -8.27 | 116.16      | 120.30   |
| 1   | O     | 428 | ASP  | CB-CG-OD2 | -8.27 | 110.85      | 118.30   |
| 1   | M     | 428 | ASP  | CB-CG-OD2 | -8.27 | 110.86      | 118.30   |
| 1   | P     | 428 | ASP  | CB-CG-OD2 | -8.27 | 110.86      | 118.30   |
| 1   | D     | 13  | ARG  | NE-CZ-NH2 | -8.26 | 116.17      | 120.30   |
| 1   | F     | 428 | ASP  | CB-CG-OD2 | -8.26 | 110.87      | 118.30   |
| 1   | I     | 428 | ASP  | CB-CG-OD2 | -8.25 | 110.88      | 118.30   |
| 1   | L     | 13  | ARG  | NE-CZ-NH2 | -8.25 | 116.18      | 120.30   |
| 1   | P     | 13  | ARG  | NE-CZ-NH2 | -8.25 | 116.18      | 120.30   |
| 1   | D     | 428 | ASP  | CB-CG-OD2 | -8.24 | 110.88      | 118.30   |
| 1   | N     | 13  | ARG  | NE-CZ-NH2 | -8.20 | 116.20      | 120.30   |
| 1   | D     | 329 | ASP  | CB-CG-OD2 | -8.18 | 110.94      | 118.30   |
| 1   | E     | 329 | ASP  | CB-CG-OD2 | -8.18 | 110.94      | 118.30   |
| 1   | H     | 329 | ASP  | CB-CG-OD2 | -8.15 | 110.97      | 118.30   |
| 1   | L     | 329 | ASP  | CB-CG-OD2 | -8.14 | 110.97      | 118.30   |
| 1   | F     | 329 | ASP  | CB-CG-OD2 | -8.13 | 110.98      | 118.30   |
| 1   | J     | 329 | ASP  | CB-CG-OD2 | -8.12 | 110.99      | 118.30   |
| 1   | A     | 329 | ASP  | CB-CG-OD2 | -8.11 | 111.00      | 118.30   |
| 1   | N     | 329 | ASP  | CB-CG-OD2 | -8.11 | 111.00      | 118.30   |
| 1   | B     | 329 | ASP  | CB-CG-OD2 | -8.10 | 111.01      | 118.30   |
| 1   | P     | 329 | ASP  | CB-CG-OD2 | -8.10 | 111.01      | 118.30   |
| 1   | K     | 329 | ASP  | CB-CG-OD2 | -8.10 | 111.01      | 118.30   |
| 1   | G     | 329 | ASP  | CB-CG-OD2 | -8.08 | 111.03      | 118.30   |
| 1   | M     | 329 | ASP  | CB-CG-OD2 | -8.08 | 111.03      | 118.30   |
| 1   | I     | 329 | ASP  | CB-CG-OD2 | -8.08 | 111.03      | 118.30   |
| 1   | C     | 329 | ASP  | CB-CG-OD2 | -8.07 | 111.03      | 118.30   |
| 1   | O     | 329 | ASP  | CB-CG-OD2 | -8.07 | 111.04      | 118.30   |
| 1   | E     | 130 | ASP  | CB-CG-OD1 | 7.96  | 125.46      | 118.30   |
| 1   | G     | 130 | ASP  | CB-CG-OD1 | 7.94  | 125.44      | 118.30   |
| 1   | A     | 130 | ASP  | CB-CG-OD1 | 7.93  | 125.44      | 118.30   |
| 1   | M     | 130 | ASP  | CB-CG-OD1 | 7.93  | 125.44      | 118.30   |
| 1   | H     | 130 | ASP  | CB-CG-OD1 | 7.91  | 125.42      | 118.30   |
| 1   | B     | 130 | ASP  | CB-CG-OD1 | 7.91  | 125.42      | 118.30   |
| 1   | D     | 130 | ASP  | CB-CG-OD1 | 7.90  | 125.41      | 118.30   |
| 1   | N     | 130 | ASP  | CB-CG-OD1 | 7.90  | 125.41      | 118.30   |
| 1   | I     | 130 | ASP  | CB-CG-OD1 | 7.89  | 125.40      | 118.30   |
| 1   | H     | 916 | ASP  | CB-CG-OD1 | 7.89  | 125.40      | 118.30   |
| 1   | L     | 916 | ASP  | CB-CG-OD1 | 7.88  | 125.39      | 118.30   |
| 1   | O     | 130 | ASP  | CB-CG-OD1 | 7.88  | 125.39      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | F     | 130 | ASP  | CB-CG-OD1 | 7.88  | 125.39      | 118.30   |
| 1   | P     | 130 | ASP  | CB-CG-OD1 | 7.88  | 125.39      | 118.30   |
| 1   | C     | 130 | ASP  | CB-CG-OD1 | 7.87  | 125.39      | 118.30   |
| 1   | F     | 916 | ASP  | CB-CG-OD1 | 7.87  | 125.38      | 118.30   |
| 1   | M     | 916 | ASP  | CB-CG-OD1 | 7.87  | 125.38      | 118.30   |
| 1   | N     | 916 | ASP  | CB-CG-OD1 | 7.87  | 125.38      | 118.30   |
| 1   | K     | 916 | ASP  | CB-CG-OD1 | 7.86  | 125.38      | 118.30   |
| 1   | C     | 916 | ASP  | CB-CG-OD1 | 7.86  | 125.37      | 118.30   |
| 1   | D     | 916 | ASP  | CB-CG-OD1 | 7.86  | 125.37      | 118.30   |
| 1   | L     | 130 | ASP  | CB-CG-OD1 | 7.85  | 125.37      | 118.30   |
| 1   | P     | 916 | ASP  | CB-CG-OD1 | 7.84  | 125.36      | 118.30   |
| 1   | A     | 916 | ASP  | CB-CG-OD1 | 7.84  | 125.36      | 118.30   |
| 1   | O     | 916 | ASP  | CB-CG-OD1 | 7.84  | 125.36      | 118.30   |
| 1   | B     | 916 | ASP  | CB-CG-OD1 | 7.84  | 125.35      | 118.30   |
| 1   | G     | 916 | ASP  | CB-CG-OD1 | 7.84  | 125.35      | 118.30   |
| 1   | K     | 130 | ASP  | CB-CG-OD1 | 7.83  | 125.35      | 118.30   |
| 1   | J     | 130 | ASP  | CB-CG-OD1 | 7.83  | 125.34      | 118.30   |
| 1   | O     | 659 | ASP  | CB-CG-OD2 | -7.82 | 111.26      | 118.30   |
| 1   | E     | 659 | ASP  | CB-CG-OD2 | -7.81 | 111.27      | 118.30   |
| 1   | F     | 659 | ASP  | CB-CG-OD2 | -7.81 | 111.27      | 118.30   |
| 1   | D     | 659 | ASP  | CB-CG-OD2 | -7.81 | 111.27      | 118.30   |
| 1   | P     | 659 | ASP  | CB-CG-OD2 | -7.81 | 111.27      | 118.30   |
| 1   | J     | 659 | ASP  | CB-CG-OD2 | -7.80 | 111.28      | 118.30   |
| 1   | N     | 659 | ASP  | CB-CG-OD2 | -7.80 | 111.28      | 118.30   |
| 1   | I     | 916 | ASP  | CB-CG-OD1 | 7.79  | 125.32      | 118.30   |
| 1   | E     | 916 | ASP  | CB-CG-OD1 | 7.79  | 125.31      | 118.30   |
| 1   | I     | 659 | ASP  | CB-CG-OD2 | -7.79 | 111.29      | 118.30   |
| 1   | L     | 659 | ASP  | CB-CG-OD2 | -7.79 | 111.29      | 118.30   |
| 1   | J     | 916 | ASP  | CB-CG-OD1 | 7.79  | 125.31      | 118.30   |
| 1   | B     | 659 | ASP  | CB-CG-OD2 | -7.78 | 111.30      | 118.30   |
| 1   | K     | 659 | ASP  | CB-CG-OD2 | -7.78 | 111.30      | 118.30   |
| 1   | M     | 659 | ASP  | CB-CG-OD2 | -7.78 | 111.30      | 118.30   |
| 1   | C     | 659 | ASP  | CB-CG-OD2 | -7.77 | 111.31      | 118.30   |
| 1   | A     | 659 | ASP  | CB-CG-OD2 | -7.76 | 111.31      | 118.30   |
| 1   | H     | 659 | ASP  | CB-CG-OD2 | -7.76 | 111.31      | 118.30   |
| 1   | G     | 659 | ASP  | CB-CG-OD2 | -7.72 | 111.35      | 118.30   |
| 1   | C     | 442 | ARG  | NE-CZ-NH2 | -7.64 | 116.48      | 120.30   |
| 1   | F     | 442 | ARG  | NE-CZ-NH2 | -7.63 | 116.48      | 120.30   |
| 1   | G     | 442 | ARG  | NE-CZ-NH2 | -7.62 | 116.49      | 120.30   |
| 1   | I     | 442 | ARG  | NE-CZ-NH2 | -7.62 | 116.49      | 120.30   |
| 1   | K     | 442 | ARG  | NE-CZ-NH2 | -7.62 | 116.49      | 120.30   |
| 1   | H     | 442 | ARG  | NE-CZ-NH2 | -7.61 | 116.49      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | D     | 442 | ARG  | NE-CZ-NH2 | -7.60 | 116.50      | 120.30   |
| 1   | I     | 356 | ARG  | NE-CZ-NH1 | 7.60  | 124.10      | 120.30   |
| 1   | J     | 442 | ARG  | NE-CZ-NH2 | -7.60 | 116.50      | 120.30   |
| 1   | P     | 442 | ARG  | NE-CZ-NH2 | -7.60 | 116.50      | 120.30   |
| 1   | E     | 442 | ARG  | NE-CZ-NH2 | -7.58 | 116.51      | 120.30   |
| 1   | O     | 442 | ARG  | NE-CZ-NH2 | -7.58 | 116.51      | 120.30   |
| 1   | B     | 442 | ARG  | NE-CZ-NH2 | -7.57 | 116.51      | 120.30   |
| 1   | E     | 447 | ASP  | CB-CG-OD1 | 7.57  | 125.11      | 118.30   |
| 1   | J     | 447 | ASP  | CB-CG-OD1 | 7.56  | 125.11      | 118.30   |
| 1   | B     | 447 | ASP  | CB-CG-OD1 | 7.56  | 125.10      | 118.30   |
| 1   | A     | 442 | ARG  | NE-CZ-NH2 | -7.55 | 116.52      | 120.30   |
| 1   | B     | 356 | ARG  | NE-CZ-NH1 | 7.55  | 124.08      | 120.30   |
| 1   | C     | 447 | ASP  | CB-CG-OD1 | 7.55  | 125.10      | 118.30   |
| 1   | H     | 447 | ASP  | CB-CG-OD1 | 7.55  | 125.09      | 118.30   |
| 1   | D     | 447 | ASP  | CB-CG-OD1 | 7.54  | 125.09      | 118.30   |
| 1   | J     | 356 | ARG  | NE-CZ-NH1 | 7.54  | 124.07      | 120.30   |
| 1   | L     | 442 | ARG  | NE-CZ-NH2 | -7.54 | 116.53      | 120.30   |
| 1   | A     | 447 | ASP  | CB-CG-OD1 | 7.54  | 125.08      | 118.30   |
| 1   | N     | 442 | ARG  | NE-CZ-NH2 | -7.53 | 116.53      | 120.30   |
| 1   | G     | 447 | ASP  | CB-CG-OD1 | 7.53  | 125.08      | 118.30   |
| 1   | N     | 447 | ASP  | CB-CG-OD1 | 7.53  | 125.08      | 118.30   |
| 1   | G     | 356 | ARG  | NE-CZ-NH1 | 7.52  | 124.06      | 120.30   |
| 1   | O     | 447 | ASP  | CB-CG-OD1 | 7.52  | 125.06      | 118.30   |
| 1   | D     | 249 | GLU  | N-CA-CB   | 7.52  | 124.13      | 110.60   |
| 1   | K     | 249 | GLU  | N-CA-CB   | 7.52  | 124.13      | 110.60   |
| 1   | A     | 249 | GLU  | N-CA-CB   | 7.51  | 124.12      | 110.60   |
| 1   | E     | 249 | GLU  | N-CA-CB   | 7.51  | 124.13      | 110.60   |
| 1   | F     | 447 | ASP  | CB-CG-OD1 | 7.51  | 125.06      | 118.30   |
| 1   | M     | 447 | ASP  | CB-CG-OD1 | 7.51  | 125.06      | 118.30   |
| 1   | B     | 249 | GLU  | N-CA-CB   | 7.51  | 124.11      | 110.60   |
| 1   | F     | 249 | GLU  | N-CA-CB   | 7.51  | 124.11      | 110.60   |
| 1   | I     | 447 | ASP  | CB-CG-OD1 | 7.51  | 125.06      | 118.30   |
| 1   | O     | 249 | GLU  | N-CA-CB   | 7.51  | 124.11      | 110.60   |
| 1   | O     | 356 | ARG  | NE-CZ-NH1 | 7.51  | 124.05      | 120.30   |
| 1   | G     | 249 | GLU  | N-CA-CB   | 7.50  | 124.10      | 110.60   |
| 1   | P     | 447 | ASP  | CB-CG-OD1 | 7.50  | 125.05      | 118.30   |
| 1   | L     | 447 | ASP  | CB-CG-OD1 | 7.50  | 125.05      | 118.30   |
| 1   | K     | 447 | ASP  | CB-CG-OD1 | 7.50  | 125.05      | 118.30   |
| 1   | N     | 249 | GLU  | N-CA-CB   | 7.50  | 124.09      | 110.60   |
| 1   | F     | 356 | ARG  | NE-CZ-NH1 | 7.49  | 124.05      | 120.30   |
| 1   | L     | 249 | GLU  | N-CA-CB   | 7.49  | 124.08      | 110.60   |
| 1   | C     | 249 | GLU  | N-CA-CB   | 7.49  | 124.08      | 110.60   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | P     | 249 | GLU  | N-CA-CB   | 7.49  | 124.08      | 110.60   |
| 1   | M     | 249 | GLU  | N-CA-CB   | 7.49  | 124.08      | 110.60   |
| 1   | N     | 356 | ARG  | NE-CZ-NH1 | 7.49  | 124.04      | 120.30   |
| 1   | M     | 442 | ARG  | NE-CZ-NH2 | -7.48 | 116.56      | 120.30   |
| 1   | E     | 356 | ARG  | NE-CZ-NH1 | 7.48  | 124.04      | 120.30   |
| 1   | L     | 356 | ARG  | NE-CZ-NH1 | 7.48  | 124.04      | 120.30   |
| 1   | H     | 249 | GLU  | N-CA-CB   | 7.48  | 124.06      | 110.60   |
| 1   | A     | 356 | ARG  | NE-CZ-NH1 | 7.48  | 124.04      | 120.30   |
| 1   | I     | 249 | GLU  | N-CA-CB   | 7.48  | 124.06      | 110.60   |
| 1   | M     | 356 | ARG  | NE-CZ-NH1 | 7.47  | 124.04      | 120.30   |
| 1   | J     | 249 | GLU  | N-CA-CB   | 7.47  | 124.04      | 110.60   |
| 1   | K     | 431 | ARG  | NE-CZ-NH2 | -7.45 | 116.57      | 120.30   |
| 1   | K     | 356 | ARG  | NE-CZ-NH1 | 7.45  | 124.03      | 120.30   |
| 1   | P     | 356 | ARG  | NE-CZ-NH1 | 7.45  | 124.02      | 120.30   |
| 1   | H     | 356 | ARG  | NE-CZ-NH1 | 7.45  | 124.02      | 120.30   |
| 1   | C     | 356 | ARG  | NE-CZ-NH1 | 7.44  | 124.02      | 120.30   |
| 1   | D     | 356 | ARG  | NE-CZ-NH1 | 7.43  | 124.02      | 120.30   |
| 1   | J     | 431 | ARG  | NE-CZ-NH2 | -7.41 | 116.59      | 120.30   |
| 1   | D     | 431 | ARG  | NE-CZ-NH2 | -7.41 | 116.60      | 120.30   |
| 1   | B     | 431 | ARG  | NE-CZ-NH2 | -7.39 | 116.60      | 120.30   |
| 1   | F     | 431 | ARG  | NE-CZ-NH2 | -7.38 | 116.61      | 120.30   |
| 1   | O     | 531 | ARG  | NE-CZ-NH1 | 7.38  | 123.99      | 120.30   |
| 1   | G     | 431 | ARG  | NE-CZ-NH2 | -7.37 | 116.62      | 120.30   |
| 1   | A     | 431 | ARG  | NE-CZ-NH2 | -7.36 | 116.62      | 120.30   |
| 1   | I     | 431 | ARG  | NE-CZ-NH2 | -7.36 | 116.62      | 120.30   |
| 1   | O     | 431 | ARG  | NE-CZ-NH2 | -7.36 | 116.62      | 120.30   |
| 1   | H     | 431 | ARG  | NE-CZ-NH2 | -7.34 | 116.63      | 120.30   |
| 1   | P     | 431 | ARG  | NE-CZ-NH2 | -7.33 | 116.64      | 120.30   |
| 1   | E     | 431 | ARG  | NE-CZ-NH2 | -7.32 | 116.64      | 120.30   |
| 1   | C     | 431 | ARG  | NE-CZ-NH2 | -7.31 | 116.64      | 120.30   |
| 1   | I     | 292 | ARG  | NE-CZ-NH1 | 7.31  | 123.96      | 120.30   |
| 1   | D     | 292 | ARG  | NE-CZ-NH1 | 7.31  | 123.95      | 120.30   |
| 1   | H     | 292 | ARG  | NE-CZ-NH1 | 7.30  | 123.95      | 120.30   |
| 1   | I     | 531 | ARG  | NE-CZ-NH1 | 7.29  | 123.95      | 120.30   |
| 1   | N     | 431 | ARG  | NE-CZ-NH2 | -7.29 | 116.65      | 120.30   |
| 1   | J     | 531 | ARG  | NE-CZ-NH1 | 7.29  | 123.94      | 120.30   |
| 1   | L     | 938 | ARG  | CD-NE-CZ  | 7.29  | 133.80      | 123.60   |
| 1   | F     | 292 | ARG  | NE-CZ-NH1 | 7.28  | 123.94      | 120.30   |
| 1   | M     | 431 | ARG  | NE-CZ-NH2 | -7.28 | 116.66      | 120.30   |
| 1   | B     | 938 | ARG  | CD-NE-CZ  | 7.28  | 133.79      | 123.60   |
| 1   | L     | 431 | ARG  | NE-CZ-NH2 | -7.28 | 116.66      | 120.30   |
| 1   | A     | 832 | ASP  | CB-CG-OD2 | -7.28 | 111.75      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | K     | 938 | ARG  | CD-NE-CZ  | 7.28  | 133.79      | 123.60   |
| 1   | P     | 531 | ARG  | NE-CZ-NH1 | 7.28  | 123.94      | 120.30   |
| 1   | C     | 292 | ARG  | NE-CZ-NH1 | 7.27  | 123.94      | 120.30   |
| 1   | N     | 938 | ARG  | CD-NE-CZ  | 7.27  | 133.78      | 123.60   |
| 1   | A     | 938 | ARG  | CD-NE-CZ  | 7.26  | 133.77      | 123.60   |
| 1   | C     | 938 | ARG  | CD-NE-CZ  | 7.26  | 133.77      | 123.60   |
| 1   | L     | 531 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | D     | 531 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | G     | 938 | ARG  | CD-NE-CZ  | 7.26  | 133.76      | 123.60   |
| 1   | M     | 531 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | N     | 292 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | B     | 292 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | B     | 531 | ARG  | NE-CZ-NH1 | 7.26  | 123.93      | 120.30   |
| 1   | M     | 832 | ASP  | CB-CG-OD2 | -7.26 | 111.77      | 118.30   |
| 1   | C     | 531 | ARG  | NE-CZ-NH1 | 7.25  | 123.93      | 120.30   |
| 1   | A     | 292 | ARG  | NE-CZ-NH1 | 7.25  | 123.93      | 120.30   |
| 1   | K     | 292 | ARG  | NE-CZ-NH1 | 7.25  | 123.93      | 120.30   |
| 1   | E     | 292 | ARG  | NE-CZ-NH1 | 7.25  | 123.92      | 120.30   |
| 1   | J     | 938 | ARG  | CD-NE-CZ  | 7.25  | 133.75      | 123.60   |
| 1   | P     | 938 | ARG  | CD-NE-CZ  | 7.25  | 133.75      | 123.60   |
| 1   | E     | 531 | ARG  | NE-CZ-NH1 | 7.25  | 123.92      | 120.30   |
| 1   | O     | 938 | ARG  | CD-NE-CZ  | 7.25  | 133.75      | 123.60   |
| 1   | G     | 832 | ASP  | CB-CG-OD2 | -7.24 | 111.78      | 118.30   |
| 1   | A     | 531 | ARG  | NE-CZ-NH1 | 7.24  | 123.92      | 120.30   |
| 1   | E     | 938 | ARG  | CD-NE-CZ  | 7.24  | 133.74      | 123.60   |
| 1   | M     | 292 | ARG  | NE-CZ-NH1 | 7.24  | 123.92      | 120.30   |
| 1   | F     | 832 | ASP  | CB-CG-OD2 | -7.24 | 111.79      | 118.30   |
| 1   | M     | 938 | ARG  | CD-NE-CZ  | 7.24  | 133.74      | 123.60   |
| 1   | N     | 832 | ASP  | CB-CG-OD2 | -7.24 | 111.79      | 118.30   |
| 1   | D     | 938 | ARG  | CD-NE-CZ  | 7.23  | 133.72      | 123.60   |
| 1   | F     | 531 | ARG  | NE-CZ-NH1 | 7.23  | 123.92      | 120.30   |
| 1   | H     | 938 | ARG  | CD-NE-CZ  | 7.23  | 133.72      | 123.60   |
| 1   | I     | 938 | ARG  | CD-NE-CZ  | 7.23  | 133.73      | 123.60   |
| 1   | K     | 832 | ASP  | CB-CG-OD2 | -7.23 | 111.79      | 118.30   |
| 1   | P     | 52  | ARG  | NE-CZ-NH1 | 7.23  | 123.92      | 120.30   |
| 1   | F     | 938 | ARG  | CD-NE-CZ  | 7.23  | 133.72      | 123.60   |
| 1   | M     | 233 | ASP  | CB-CG-OD2 | -7.23 | 111.79      | 118.30   |
| 1   | P     | 832 | ASP  | CB-CG-OD2 | -7.23 | 111.79      | 118.30   |
| 1   | C     | 832 | ASP  | CB-CG-OD2 | -7.23 | 111.80      | 118.30   |
| 1   | H     | 832 | ASP  | CB-CG-OD2 | -7.22 | 111.80      | 118.30   |
| 1   | J     | 832 | ASP  | CB-CG-OD2 | -7.22 | 111.80      | 118.30   |
| 1   | L     | 832 | ASP  | CB-CG-OD2 | -7.22 | 111.80      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | B     | 832 | ASP  | CB-CG-OD2 | -7.22 | 111.81      | 118.30   |
| 1   | G     | 233 | ASP  | CB-CG-OD2 | -7.22 | 111.81      | 118.30   |
| 1   | I     | 832 | ASP  | CB-CG-OD2 | -7.22 | 111.81      | 118.30   |
| 1   | O     | 292 | ARG  | NE-CZ-NH1 | 7.21  | 123.91      | 120.30   |
| 1   | O     | 832 | ASP  | CB-CG-OD2 | -7.21 | 111.81      | 118.30   |
| 1   | J     | 292 | ARG  | NE-CZ-NH1 | 7.21  | 123.90      | 120.30   |
| 1   | L     | 292 | ARG  | NE-CZ-NH1 | 7.20  | 123.90      | 120.30   |
| 1   | H     | 199 | ASP  | CB-CG-OD1 | 7.20  | 124.78      | 118.30   |
| 1   | G     | 531 | ARG  | NE-CZ-NH1 | 7.19  | 123.90      | 120.30   |
| 1   | L     | 233 | ASP  | CB-CG-OD2 | -7.19 | 111.83      | 118.30   |
| 1   | I     | 233 | ASP  | CB-CG-OD2 | -7.19 | 111.83      | 118.30   |
| 1   | D     | 52  | ARG  | NE-CZ-NH1 | 7.18  | 123.89      | 120.30   |
| 1   | D     | 832 | ASP  | CB-CG-OD2 | -7.18 | 111.84      | 118.30   |
| 1   | E     | 233 | ASP  | CB-CG-OD2 | -7.18 | 111.84      | 118.30   |
| 1   | P     | 292 | ARG  | NE-CZ-NH1 | 7.18  | 123.89      | 120.30   |
| 1   | E     | 832 | ASP  | CB-CG-OD2 | -7.18 | 111.84      | 118.30   |
| 1   | J     | 233 | ASP  | CB-CG-OD2 | -7.18 | 111.84      | 118.30   |
| 1   | K     | 199 | ASP  | CB-CG-OD1 | 7.18  | 124.76      | 118.30   |
| 1   | F     | 52  | ARG  | NE-CZ-NH1 | 7.17  | 123.89      | 120.30   |
| 1   | O     | 233 | ASP  | CB-CG-OD2 | -7.17 | 111.84      | 118.30   |
| 1   | N     | 233 | ASP  | CB-CG-OD2 | -7.17 | 111.84      | 118.30   |
| 1   | H     | 52  | ARG  | NE-CZ-NH1 | 7.17  | 123.88      | 120.30   |
| 1   | I     | 199 | ASP  | CB-CG-OD1 | 7.17  | 124.75      | 118.30   |
| 1   | N     | 531 | ARG  | NE-CZ-NH1 | 7.17  | 123.88      | 120.30   |
| 1   | H     | 531 | ARG  | NE-CZ-NH1 | 7.16  | 123.88      | 120.30   |
| 1   | P     | 233 | ASP  | CB-CG-OD2 | -7.16 | 111.85      | 118.30   |
| 1   | P     | 909 | ARG  | NE-CZ-NH2 | -7.16 | 116.72      | 120.30   |
| 1   | E     | 199 | ASP  | CB-CG-OD1 | 7.16  | 124.75      | 118.30   |
| 1   | J     | 909 | ARG  | NE-CZ-NH2 | -7.16 | 116.72      | 120.30   |
| 1   | L     | 909 | ARG  | NE-CZ-NH2 | -7.15 | 116.72      | 120.30   |
| 1   | C     | 233 | ASP  | CB-CG-OD2 | -7.15 | 111.86      | 118.30   |
| 1   | G     | 292 | ARG  | NE-CZ-NH1 | 7.15  | 123.88      | 120.30   |
| 1   | D     | 233 | ASP  | CB-CG-OD2 | -7.15 | 111.87      | 118.30   |
| 1   | M     | 199 | ASP  | CB-CG-OD1 | 7.15  | 124.73      | 118.30   |
| 1   | F     | 233 | ASP  | CB-CG-OD2 | -7.15 | 111.87      | 118.30   |
| 1   | I     | 52  | ARG  | NE-CZ-NH1 | 7.15  | 123.87      | 120.30   |
| 1   | D     | 199 | ASP  | CB-CG-OD1 | 7.14  | 124.73      | 118.30   |
| 1   | K     | 193 | ASP  | CB-CG-OD1 | 7.14  | 124.73      | 118.30   |
| 1   | B     | 199 | ASP  | CB-CG-OD1 | 7.14  | 124.73      | 118.30   |
| 1   | B     | 233 | ASP  | CB-CG-OD2 | -7.14 | 111.87      | 118.30   |
| 1   | M     | 52  | ARG  | NE-CZ-NH1 | 7.14  | 123.87      | 120.30   |
| 1   | O     | 52  | ARG  | NE-CZ-NH1 | 7.14  | 123.87      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | F     | 909 | ARG  | NE-CZ-NH2 | -7.14 | 116.73      | 120.30   |
| 1   | C     | 193 | ASP  | CB-CG-OD1 | 7.14  | 124.73      | 118.30   |
| 1   | D     | 193 | ASP  | CB-CG-OD1 | 7.14  | 124.72      | 118.30   |
| 1   | D     | 909 | ARG  | NE-CZ-NH2 | -7.14 | 116.73      | 120.30   |
| 1   | G     | 909 | ARG  | NE-CZ-NH2 | -7.13 | 116.73      | 120.30   |
| 1   | K     | 909 | ARG  | NE-CZ-NH2 | -7.13 | 116.73      | 120.30   |
| 1   | O     | 199 | ASP  | CB-CG-OD1 | 7.13  | 124.72      | 118.30   |
| 1   | A     | 52  | ARG  | NE-CZ-NH1 | 7.13  | 123.87      | 120.30   |
| 1   | K     | 233 | ASP  | CB-CG-OD2 | -7.13 | 111.88      | 118.30   |
| 1   | A     | 199 | ASP  | CB-CG-OD1 | 7.13  | 124.72      | 118.30   |
| 1   | P     | 199 | ASP  | CB-CG-OD1 | 7.13  | 124.72      | 118.30   |
| 1   | K     | 287 | ASP  | CB-CG-OD1 | 7.12  | 124.71      | 118.30   |
| 1   | C     | 199 | ASP  | CB-CG-OD1 | 7.12  | 124.71      | 118.30   |
| 1   | C     | 52  | ARG  | NE-CZ-NH1 | 7.12  | 123.86      | 120.30   |
| 1   | G     | 52  | ARG  | NE-CZ-NH1 | 7.12  | 123.86      | 120.30   |
| 1   | H     | 233 | ASP  | CB-CG-OD2 | -7.12 | 111.89      | 118.30   |
| 1   | J     | 52  | ARG  | NE-CZ-NH1 | 7.12  | 123.86      | 120.30   |
| 1   | A     | 233 | ASP  | CB-CG-OD2 | -7.12 | 111.89      | 118.30   |
| 1   | C     | 909 | ARG  | NE-CZ-NH2 | -7.12 | 116.74      | 120.30   |
| 1   | E     | 52  | ARG  | NE-CZ-NH1 | 7.12  | 123.86      | 120.30   |
| 1   | J     | 199 | ASP  | CB-CG-OD1 | 7.12  | 124.71      | 118.30   |
| 1   | L     | 52  | ARG  | NE-CZ-NH1 | 7.11  | 123.86      | 120.30   |
| 1   | L     | 199 | ASP  | CB-CG-OD1 | 7.11  | 124.70      | 118.30   |
| 1   | A     | 909 | ARG  | NE-CZ-NH2 | -7.11 | 116.75      | 120.30   |
| 1   | G     | 193 | ASP  | CB-CG-OD1 | 7.11  | 124.70      | 118.30   |
| 1   | G     | 199 | ASP  | CB-CG-OD1 | 7.11  | 124.70      | 118.30   |
| 1   | J     | 193 | ASP  | CB-CG-OD1 | 7.11  | 124.70      | 118.30   |
| 1   | I     | 193 | ASP  | CB-CG-OD1 | 7.10  | 124.69      | 118.30   |
| 1   | N     | 199 | ASP  | CB-CG-OD1 | 7.10  | 124.69      | 118.30   |
| 1   | O     | 572 | ASP  | CB-CG-OD2 | -7.09 | 111.92      | 118.30   |
| 1   | O     | 909 | ARG  | NE-CZ-NH2 | -7.09 | 116.75      | 120.30   |
| 1   | B     | 287 | ASP  | CB-CG-OD1 | 7.09  | 124.68      | 118.30   |
| 1   | K     | 52  | ARG  | NE-CZ-NH1 | 7.09  | 123.84      | 120.30   |
| 1   | L     | 193 | ASP  | CB-CG-OD1 | 7.09  | 124.68      | 118.30   |
| 1   | P     | 193 | ASP  | CB-CG-OD1 | 7.09  | 124.68      | 118.30   |
| 1   | P     | 287 | ASP  | CB-CG-OD1 | 7.09  | 124.68      | 118.30   |
| 1   | A     | 193 | ASP  | CB-CG-OD1 | 7.09  | 124.68      | 118.30   |
| 1   | G     | 572 | ASP  | CB-CG-OD2 | -7.09 | 111.92      | 118.30   |
| 1   | K     | 531 | ARG  | NE-CZ-NH1 | 7.08  | 123.84      | 120.30   |
| 1   | C     | 572 | ASP  | CB-CG-OD2 | -7.08 | 111.93      | 118.30   |
| 1   | F     | 199 | ASP  | CB-CG-OD1 | 7.08  | 124.68      | 118.30   |
| 1   | D     | 572 | ASP  | CB-CG-OD2 | -7.08 | 111.93      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | H     | 287 | ASP  | CB-CG-OD1 | 7.08  | 124.67      | 118.30   |
| 1   | I     | 287 | ASP  | CB-CG-OD1 | 7.08  | 124.67      | 118.30   |
| 1   | O     | 193 | ASP  | CB-CG-OD1 | 7.08  | 124.67      | 118.30   |
| 1   | M     | 572 | ASP  | CB-CG-OD2 | -7.08 | 111.93      | 118.30   |
| 1   | N     | 193 | ASP  | CB-CG-OD1 | 7.08  | 124.67      | 118.30   |
| 1   | N     | 52  | ARG  | NE-CZ-NH1 | 7.08  | 123.84      | 120.30   |
| 1   | C     | 287 | ASP  | CB-CG-OD1 | 7.08  | 124.67      | 118.30   |
| 1   | H     | 572 | ASP  | CB-CG-OD2 | -7.07 | 111.93      | 118.30   |
| 1   | F     | 442 | ARG  | NE-CZ-NH1 | 7.07  | 123.84      | 120.30   |
| 1   | A     | 287 | ASP  | CB-CG-OD1 | 7.07  | 124.66      | 118.30   |
| 1   | H     | 193 | ASP  | CB-CG-OD1 | 7.07  | 124.66      | 118.30   |
| 1   | F     | 287 | ASP  | CB-CG-OD1 | 7.07  | 124.66      | 118.30   |
| 1   | B     | 572 | ASP  | CB-CG-OD2 | -7.07 | 111.94      | 118.30   |
| 1   | N     | 287 | ASP  | CB-CG-OD1 | 7.07  | 124.66      | 118.30   |
| 1   | O     | 287 | ASP  | CB-CG-OD1 | 7.07  | 124.66      | 118.30   |
| 1   | E     | 572 | ASP  | CB-CG-OD2 | -7.06 | 111.94      | 118.30   |
| 1   | M     | 909 | ARG  | NE-CZ-NH2 | -7.06 | 116.77      | 120.30   |
| 1   | D     | 287 | ASP  | CB-CG-OD1 | 7.06  | 124.65      | 118.30   |
| 1   | B     | 193 | ASP  | CB-CG-OD1 | 7.06  | 124.65      | 118.30   |
| 1   | B     | 909 | ARG  | NE-CZ-NH2 | -7.06 | 116.77      | 120.30   |
| 1   | F     | 193 | ASP  | CB-CG-OD1 | 7.06  | 124.65      | 118.30   |
| 1   | A     | 572 | ASP  | CB-CG-OD2 | -7.05 | 111.95      | 118.30   |
| 1   | F     | 572 | ASP  | CB-CG-OD2 | -7.05 | 111.95      | 118.30   |
| 1   | N     | 572 | ASP  | CB-CG-OD2 | -7.05 | 111.95      | 118.30   |
| 1   | B     | 52  | ARG  | NE-CZ-NH1 | 7.05  | 123.83      | 120.30   |
| 1   | J     | 287 | ASP  | CB-CG-OD1 | 7.05  | 124.65      | 118.30   |
| 1   | J     | 442 | ARG  | NE-CZ-NH1 | 7.05  | 123.83      | 120.30   |
| 1   | N     | 909 | ARG  | NE-CZ-NH2 | -7.05 | 116.78      | 120.30   |
| 1   | P     | 572 | ASP  | CB-CG-OD2 | -7.05 | 111.95      | 118.30   |
| 1   | E     | 909 | ARG  | NE-CZ-NH2 | -7.04 | 116.78      | 120.30   |
| 1   | M     | 287 | ASP  | CB-CG-OD1 | 7.04  | 124.64      | 118.30   |
| 1   | G     | 287 | ASP  | CB-CG-OD1 | 7.04  | 124.64      | 118.30   |
| 1   | E     | 193 | ASP  | CB-CG-OD1 | 7.04  | 124.63      | 118.30   |
| 1   | I     | 442 | ARG  | NE-CZ-NH1 | 7.04  | 123.82      | 120.30   |
| 1   | H     | 909 | ARG  | NE-CZ-NH2 | -7.03 | 116.78      | 120.30   |
| 1   | M     | 193 | ASP  | CB-CG-OD1 | 7.03  | 124.63      | 118.30   |
| 1   | I     | 572 | ASP  | CB-CG-OD2 | -7.03 | 111.97      | 118.30   |
| 1   | L     | 572 | ASP  | CB-CG-OD2 | -7.03 | 111.97      | 118.30   |
| 1   | D     | 442 | ARG  | NE-CZ-NH1 | 7.03  | 123.81      | 120.30   |
| 1   | L     | 287 | ASP  | CB-CG-OD1 | 7.03  | 124.62      | 118.30   |
| 1   | J     | 572 | ASP  | CB-CG-OD2 | -7.02 | 111.98      | 118.30   |
| 1   | P     | 769 | TRP  | CB-CA-C   | -7.02 | 96.36       | 110.40   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | B     | 769 | TRP  | CB-CA-C   | -7.02 | 96.36       | 110.40   |
| 1   | B     | 786 | ARG  | NE-CZ-NH1 | 7.02  | 123.81      | 120.30   |
| 1   | I     | 909 | ARG  | NE-CZ-NH2 | -7.01 | 116.79      | 120.30   |
| 1   | I     | 769 | TRP  | CB-CA-C   | -7.01 | 96.37       | 110.40   |
| 1   | A     | 769 | TRP  | CB-CA-C   | -7.01 | 96.38       | 110.40   |
| 1   | J     | 769 | TRP  | CB-CA-C   | -7.01 | 96.38       | 110.40   |
| 1   | K     | 572 | ASP  | CB-CG-OD2 | -7.01 | 111.99      | 118.30   |
| 1   | B     | 442 | ARG  | NE-CZ-NH1 | 7.01  | 123.81      | 120.30   |
| 1   | H     | 442 | ARG  | NE-CZ-NH1 | 7.01  | 123.80      | 120.30   |
| 1   | O     | 769 | TRP  | CB-CA-C   | -7.00 | 96.39       | 110.40   |
| 1   | E     | 769 | TRP  | CB-CA-C   | -7.00 | 96.40       | 110.40   |
| 1   | G     | 769 | TRP  | CB-CA-C   | -7.00 | 96.40       | 110.40   |
| 1   | G     | 442 | ARG  | NE-CZ-NH1 | 7.00  | 123.80      | 120.30   |
| 1   | K     | 769 | TRP  | CB-CA-C   | -7.00 | 96.40       | 110.40   |
| 1   | P     | 786 | ARG  | NE-CZ-NH1 | 7.00  | 123.80      | 120.30   |
| 1   | D     | 769 | TRP  | CB-CA-C   | -6.99 | 96.42       | 110.40   |
| 1   | E     | 287 | ASP  | CB-CG-OD1 | 6.99  | 124.59      | 118.30   |
| 1   | L     | 769 | TRP  | CB-CA-C   | -6.99 | 96.41       | 110.40   |
| 1   | N     | 769 | TRP  | CB-CA-C   | -6.99 | 96.41       | 110.40   |
| 1   | N     | 786 | ARG  | NE-CZ-NH1 | 6.99  | 123.80      | 120.30   |
| 1   | C     | 769 | TRP  | CB-CA-C   | -6.99 | 96.42       | 110.40   |
| 1   | F     | 769 | TRP  | CB-CA-C   | -6.99 | 96.42       | 110.40   |
| 1   | H     | 769 | TRP  | CB-CA-C   | -6.99 | 96.42       | 110.40   |
| 1   | M     | 769 | TRP  | CB-CA-C   | -6.99 | 96.42       | 110.40   |
| 1   | K     | 442 | ARG  | NE-CZ-NH1 | 6.98  | 123.79      | 120.30   |
| 1   | C     | 442 | ARG  | NE-CZ-NH1 | 6.98  | 123.79      | 120.30   |
| 1   | M     | 442 | ARG  | NE-CZ-NH1 | 6.98  | 123.79      | 120.30   |
| 1   | L     | 442 | ARG  | NE-CZ-NH1 | 6.96  | 123.78      | 120.30   |
| 1   | A     | 442 | ARG  | NE-CZ-NH1 | 6.96  | 123.78      | 120.30   |
| 1   | N     | 442 | ARG  | NE-CZ-NH1 | 6.96  | 123.78      | 120.30   |
| 1   | O     | 442 | ARG  | NE-CZ-NH1 | 6.95  | 123.77      | 120.30   |
| 1   | G     | 746 | ASP  | CB-CG-OD1 | 6.94  | 124.55      | 118.30   |
| 1   | P     | 442 | ARG  | NE-CZ-NH1 | 6.94  | 123.77      | 120.30   |
| 1   | J     | 648 | ASP  | CB-CG-OD2 | -6.93 | 112.06      | 118.30   |
| 1   | D     | 645 | ARG  | NE-CZ-NH2 | -6.93 | 116.83      | 120.30   |
| 1   | F     | 648 | ASP  | CB-CG-OD2 | -6.93 | 112.06      | 118.30   |
| 1   | A     | 786 | ARG  | NE-CZ-NH1 | 6.93  | 123.76      | 120.30   |
| 1   | L     | 746 | ASP  | CB-CG-OD1 | 6.93  | 124.53      | 118.30   |
| 1   | C     | 786 | ARG  | NE-CZ-NH1 | 6.92  | 123.76      | 120.30   |
| 1   | K     | 166 | ARG  | N-CA-CB   | 6.92  | 123.06      | 110.60   |
| 1   | D     | 746 | ASP  | CB-CG-OD1 | 6.92  | 124.53      | 118.30   |
| 1   | I     | 746 | ASP  | CB-CG-OD1 | 6.92  | 124.53      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | E     | 166  | ARG  | N-CA-CB   | 6.92  | 123.05      | 110.60   |
| 1   | E     | 648  | ASP  | CB-CG-OD2 | -6.92 | 112.08      | 118.30   |
| 1   | B     | 648  | ASP  | CB-CG-OD2 | -6.92 | 112.08      | 118.30   |
| 1   | I     | 786  | ARG  | NE-CZ-NH1 | 6.92  | 123.76      | 120.30   |
| 1   | J     | 166  | ARG  | N-CA-CB   | 6.91  | 123.05      | 110.60   |
| 1   | K     | 746  | ASP  | CB-CG-OD1 | 6.91  | 124.52      | 118.30   |
| 1   | N     | 746  | ASP  | CB-CG-OD1 | 6.91  | 124.52      | 118.30   |
| 1   | C     | 166  | ARG  | N-CA-CB   | 6.91  | 123.04      | 110.60   |
| 1   | G     | 166  | ARG  | N-CA-CB   | 6.91  | 123.04      | 110.60   |
| 1   | L     | 648  | ASP  | CB-CG-OD2 | -6.91 | 112.08      | 118.30   |
| 1   | L     | 166  | ARG  | N-CA-CB   | 6.91  | 123.04      | 110.60   |
| 1   | N     | 166  | ARG  | N-CA-CB   | 6.91  | 123.03      | 110.60   |
| 1   | E     | 442  | ARG  | NE-CZ-NH1 | 6.91  | 123.75      | 120.30   |
| 1   | E     | 746  | ASP  | CB-CG-OD1 | 6.91  | 124.52      | 118.30   |
| 1   | N     | 1004 | SER  | N-CA-CB   | 6.91  | 120.86      | 110.50   |
| 1   | A     | 648  | ASP  | CB-CG-OD2 | -6.90 | 112.09      | 118.30   |
| 1   | L     | 1004 | SER  | N-CA-CB   | 6.90  | 120.86      | 110.50   |
| 1   | I     | 166  | ARG  | N-CA-CB   | 6.90  | 123.03      | 110.60   |
| 1   | O     | 166  | ARG  | N-CA-CB   | 6.90  | 123.03      | 110.60   |
| 1   | A     | 166  | ARG  | N-CA-CB   | 6.90  | 123.02      | 110.60   |
| 1   | H     | 746  | ASP  | CB-CG-OD1 | 6.90  | 124.51      | 118.30   |
| 1   | P     | 166  | ARG  | N-CA-CB   | 6.90  | 123.02      | 110.60   |
| 1   | C     | 561  | ARG  | NE-CZ-NH1 | 6.90  | 123.75      | 120.30   |
| 1   | E     | 687  | GLN  | C-N-CD    | -6.90 | 105.42      | 120.60   |
| 1   | E     | 786  | ARG  | NE-CZ-NH1 | 6.90  | 123.75      | 120.30   |
| 1   | I     | 648  | ASP  | CB-CG-OD2 | -6.90 | 112.09      | 118.30   |
| 1   | J     | 786  | ARG  | NE-CZ-NH1 | 6.90  | 123.75      | 120.30   |
| 1   | O     | 648  | ASP  | CB-CG-OD2 | -6.90 | 112.09      | 118.30   |
| 1   | C     | 687  | GLN  | C-N-CD    | -6.90 | 105.43      | 120.60   |
| 1   | K     | 561  | ARG  | NE-CZ-NH1 | 6.90  | 123.75      | 120.30   |
| 1   | A     | 746  | ASP  | CB-CG-OD1 | 6.89  | 124.50      | 118.30   |
| 1   | D     | 687  | GLN  | C-N-CD    | -6.89 | 105.43      | 120.60   |
| 1   | C     | 1004 | SER  | N-CA-CB   | 6.89  | 120.84      | 110.50   |
| 1   | F     | 561  | ARG  | NE-CZ-NH1 | 6.89  | 123.75      | 120.30   |
| 1   | M     | 687  | GLN  | C-N-CD    | -6.89 | 105.44      | 120.60   |
| 1   | M     | 786  | ARG  | NE-CZ-NH1 | 6.89  | 123.75      | 120.30   |
| 1   | B     | 166  | ARG  | N-CA-CB   | 6.89  | 123.00      | 110.60   |
| 1   | F     | 1004 | SER  | N-CA-CB   | 6.89  | 120.84      | 110.50   |
| 1   | M     | 645  | ARG  | NE-CZ-NH2 | -6.89 | 116.86      | 120.30   |
| 1   | M     | 746  | ASP  | CB-CG-OD1 | 6.89  | 124.50      | 118.30   |
| 1   | F     | 746  | ASP  | CB-CG-OD1 | 6.89  | 124.50      | 118.30   |
| 1   | P     | 687  | GLN  | C-N-CD    | -6.89 | 105.45      | 120.60   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | A     | 645  | ARG  | NE-CZ-NH2 | -6.89 | 116.86      | 120.30   |
| 1   | C     | 648  | ASP  | CB-CG-OD2 | -6.89 | 112.10      | 118.30   |
| 1   | C     | 746  | ASP  | CB-CG-OD1 | 6.89  | 124.50      | 118.30   |
| 1   | F     | 687  | GLN  | C-N-CD    | -6.89 | 105.45      | 120.60   |
| 1   | G     | 687  | GLN  | C-N-CD    | -6.89 | 105.45      | 120.60   |
| 1   | H     | 166  | ARG  | N-CA-CB   | 6.89  | 123.00      | 110.60   |
| 1   | H     | 1004 | SER  | N-CA-CB   | 6.89  | 120.83      | 110.50   |
| 1   | P     | 648  | ASP  | CB-CG-OD2 | -6.89 | 112.10      | 118.30   |
| 1   | P     | 746  | ASP  | CB-CG-OD1 | 6.89  | 124.50      | 118.30   |
| 1   | H     | 648  | ASP  | CB-CG-OD2 | -6.88 | 112.11      | 118.30   |
| 1   | M     | 648  | ASP  | CB-CG-OD2 | -6.88 | 112.10      | 118.30   |
| 1   | A     | 1004 | SER  | N-CA-CB   | 6.88  | 120.82      | 110.50   |
| 1   | F     | 166  | ARG  | N-CA-CB   | 6.88  | 122.99      | 110.60   |
| 1   | A     | 687  | GLN  | C-N-CD    | -6.88 | 105.46      | 120.60   |
| 1   | D     | 561  | ARG  | NE-CZ-NH1 | 6.88  | 123.74      | 120.30   |
| 1   | J     | 1004 | SER  | N-CA-CB   | 6.88  | 120.82      | 110.50   |
| 1   | L     | 561  | ARG  | NE-CZ-NH1 | 6.88  | 123.74      | 120.30   |
| 1   | M     | 1004 | SER  | N-CA-CB   | 6.88  | 120.82      | 110.50   |
| 1   | O     | 1004 | SER  | N-CA-CB   | 6.88  | 120.82      | 110.50   |
| 1   | N     | 5    | ASP  | CB-CG-OD1 | 6.88  | 124.49      | 118.30   |
| 1   | C     | 828  | ASP  | CB-CG-OD2 | -6.88 | 112.11      | 118.30   |
| 1   | F     | 786  | ARG  | NE-CZ-NH1 | 6.88  | 123.74      | 120.30   |
| 1   | H     | 368  | ASP  | CB-CG-OD1 | 6.88  | 124.49      | 118.30   |
| 1   | J     | 746  | ASP  | CB-CG-OD1 | 6.88  | 124.49      | 118.30   |
| 1   | G     | 786  | ARG  | NE-CZ-NH1 | 6.88  | 123.74      | 120.30   |
| 1   | M     | 166  | ARG  | N-CA-CB   | 6.88  | 122.97      | 110.60   |
| 1   | N     | 687  | GLN  | C-N-CD    | -6.88 | 105.47      | 120.60   |
| 1   | P     | 1004 | SER  | N-CA-CB   | 6.88  | 120.81      | 110.50   |
| 1   | B     | 746  | ASP  | CB-CG-OD1 | 6.87  | 124.49      | 118.30   |
| 1   | F     | 645  | ARG  | NE-CZ-NH2 | -6.87 | 116.86      | 120.30   |
| 1   | J     | 687  | GLN  | C-N-CD    | -6.87 | 105.48      | 120.60   |
| 1   | K     | 786  | ARG  | NE-CZ-NH1 | 6.87  | 123.74      | 120.30   |
| 1   | L     | 687  | GLN  | C-N-CD    | -6.87 | 105.48      | 120.60   |
| 1   | O     | 687  | GLN  | C-N-CD    | -6.87 | 105.48      | 120.60   |
| 1   | B     | 1004 | SER  | N-CA-CB   | 6.87  | 120.81      | 110.50   |
| 1   | D     | 648  | ASP  | CB-CG-OD2 | -6.87 | 112.12      | 118.30   |
| 1   | E     | 1004 | SER  | N-CA-CB   | 6.87  | 120.81      | 110.50   |
| 1   | H     | 687  | GLN  | C-N-CD    | -6.87 | 105.48      | 120.60   |
| 1   | I     | 687  | GLN  | C-N-CD    | -6.87 | 105.49      | 120.60   |
| 1   | N     | 648  | ASP  | CB-CG-OD2 | -6.87 | 112.12      | 118.30   |
| 1   | D     | 166  | ARG  | N-CA-CB   | 6.87  | 122.96      | 110.60   |
| 1   | G     | 648  | ASP  | CB-CG-OD2 | -6.87 | 112.12      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | O     | 746  | ASP  | CB-CG-OD1 | 6.87  | 124.48      | 118.30   |
| 1   | O     | 786  | ARG  | NE-CZ-NH1 | 6.87  | 123.73      | 120.30   |
| 1   | D     | 786  | ARG  | NE-CZ-NH1 | 6.86  | 123.73      | 120.30   |
| 1   | K     | 1004 | SER  | N-CA-CB   | 6.86  | 120.80      | 110.50   |
| 1   | B     | 687  | GLN  | C-N-CD    | -6.86 | 105.50      | 120.60   |
| 1   | I     | 1004 | SER  | N-CA-CB   | 6.86  | 120.79      | 110.50   |
| 1   | O     | 5    | ASP  | CB-CG-OD1 | 6.86  | 124.48      | 118.30   |
| 1   | D     | 1004 | SER  | N-CA-CB   | 6.86  | 120.79      | 110.50   |
| 1   | G     | 1004 | SER  | N-CA-CB   | 6.86  | 120.79      | 110.50   |
| 1   | K     | 687  | GLN  | C-N-CD    | -6.86 | 105.51      | 120.60   |
| 1   | B     | 5    | ASP  | CB-CG-OD1 | 6.86  | 124.47      | 118.30   |
| 1   | K     | 648  | ASP  | CB-CG-OD2 | -6.86 | 112.13      | 118.30   |
| 1   | A     | 561  | ARG  | NE-CZ-NH1 | 6.85  | 123.73      | 120.30   |
| 1   | F     | 5    | ASP  | CB-CG-OD1 | 6.85  | 124.47      | 118.30   |
| 1   | I     | 828  | ASP  | CB-CG-OD2 | -6.85 | 112.13      | 118.30   |
| 1   | H     | 786  | ARG  | NE-CZ-NH1 | 6.85  | 123.72      | 120.30   |
| 1   | M     | 368  | ASP  | CB-CG-OD1 | 6.85  | 124.46      | 118.30   |
| 1   | A     | 5    | ASP  | CB-CG-OD1 | 6.85  | 124.46      | 118.30   |
| 1   | C     | 368  | ASP  | CB-CG-OD1 | 6.84  | 124.46      | 118.30   |
| 1   | E     | 561  | ARG  | NE-CZ-NH1 | 6.84  | 123.72      | 120.30   |
| 1   | K     | 5    | ASP  | CB-CG-OD1 | 6.84  | 124.46      | 118.30   |
| 1   | L     | 786  | ARG  | NE-CZ-NH1 | 6.84  | 123.72      | 120.30   |
| 1   | N     | 828  | ASP  | CB-CG-OD2 | -6.84 | 112.14      | 118.30   |
| 1   | G     | 5    | ASP  | CB-CG-OD1 | 6.84  | 124.45      | 118.30   |
| 1   | H     | 329  | ASP  | CB-CG-OD1 | 6.84  | 124.46      | 118.30   |
| 1   | L     | 5    | ASP  | CB-CG-OD1 | 6.84  | 124.46      | 118.30   |
| 1   | H     | 5    | ASP  | CB-CG-OD1 | 6.84  | 124.45      | 118.30   |
| 1   | G     | 561  | ARG  | NE-CZ-NH1 | 6.84  | 123.72      | 120.30   |
| 1   | H     | 645  | ARG  | NE-CZ-NH2 | -6.84 | 116.88      | 120.30   |
| 1   | H     | 828  | ASP  | CB-CG-OD2 | -6.84 | 112.15      | 118.30   |
| 1   | M     | 5    | ASP  | CB-CG-OD1 | 6.84  | 124.45      | 118.30   |
| 1   | O     | 828  | ASP  | CB-CG-OD2 | -6.83 | 112.15      | 118.30   |
| 1   | G     | 828  | ASP  | CB-CG-OD2 | -6.83 | 112.15      | 118.30   |
| 1   | B     | 211  | ASP  | CB-CG-OD1 | 6.83  | 124.45      | 118.30   |
| 1   | C     | 645  | ARG  | NE-CZ-NH2 | -6.83 | 116.89      | 120.30   |
| 1   | O     | 561  | ARG  | NE-CZ-NH1 | 6.83  | 123.71      | 120.30   |
| 1   | P     | 5    | ASP  | CB-CG-OD1 | 6.83  | 124.44      | 118.30   |
| 1   | A     | 368  | ASP  | CB-CG-OD1 | 6.83  | 124.44      | 118.30   |
| 1   | I     | 5    | ASP  | CB-CG-OD1 | 6.83  | 124.44      | 118.30   |
| 1   | P     | 828  | ASP  | CB-CG-OD2 | -6.83 | 112.16      | 118.30   |
| 1   | E     | 828  | ASP  | CB-CG-OD2 | -6.82 | 112.16      | 118.30   |
| 1   | M     | 828  | ASP  | CB-CG-OD2 | -6.82 | 112.16      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | C     | 5   | ASP  | CB-CG-OD1 | 6.82  | 124.44      | 118.30   |
| 1   | L     | 368 | ASP  | CB-CG-OD1 | 6.82  | 124.44      | 118.30   |
| 1   | N     | 561 | ARG  | NE-CZ-NH1 | 6.82  | 123.71      | 120.30   |
| 1   | O     | 645 | ARG  | NE-CZ-NH2 | -6.82 | 116.89      | 120.30   |
| 1   | J     | 329 | ASP  | CB-CG-OD1 | 6.82  | 124.44      | 118.30   |
| 1   | D     | 5   | ASP  | CB-CG-OD1 | 6.82  | 124.44      | 118.30   |
| 1   | F     | 828 | ASP  | CB-CG-OD2 | -6.82 | 112.17      | 118.30   |
| 1   | K     | 610 | ASP  | CB-CG-OD2 | -6.82 | 112.16      | 118.30   |
| 1   | L     | 828 | ASP  | CB-CG-OD2 | -6.82 | 112.17      | 118.30   |
| 1   | O     | 492 | ASP  | CB-CG-OD2 | -6.81 | 112.17      | 118.30   |
| 1   | D     | 368 | ASP  | CB-CG-OD1 | 6.81  | 124.43      | 118.30   |
| 1   | O     | 610 | ASP  | CB-CG-OD2 | -6.81 | 112.17      | 118.30   |
| 1   | I     | 561 | ARG  | NE-CZ-NH1 | 6.81  | 123.71      | 120.30   |
| 1   | A     | 828 | ASP  | CB-CG-OD2 | -6.81 | 112.17      | 118.30   |
| 1   | F     | 368 | ASP  | CB-CG-OD1 | 6.81  | 124.43      | 118.30   |
| 1   | E     | 5   | ASP  | CB-CG-OD1 | 6.81  | 124.42      | 118.30   |
| 1   | L     | 329 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | L     | 610 | ASP  | CB-CG-OD2 | -6.80 | 112.18      | 118.30   |
| 1   | P     | 211 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | P     | 645 | ARG  | NE-CZ-NH2 | -6.80 | 116.90      | 120.30   |
| 1   | J     | 561 | ARG  | NE-CZ-NH1 | 6.80  | 123.70      | 120.30   |
| 1   | E     | 645 | ARG  | NE-CZ-NH2 | -6.80 | 116.90      | 120.30   |
| 1   | H     | 610 | ASP  | CB-CG-OD2 | -6.80 | 112.18      | 118.30   |
| 1   | K     | 329 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | M     | 610 | ASP  | CB-CG-OD2 | -6.80 | 112.18      | 118.30   |
| 1   | N     | 329 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | D     | 45  | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | G     | 610 | ASP  | CB-CG-OD2 | -6.80 | 112.18      | 118.30   |
| 1   | J     | 828 | ASP  | CB-CG-OD2 | -6.80 | 112.18      | 118.30   |
| 1   | B     | 368 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | F     | 329 | ASP  | CB-CG-OD1 | 6.80  | 124.42      | 118.30   |
| 1   | H     | 561 | ARG  | NE-CZ-NH1 | 6.80  | 123.70      | 120.30   |
| 1   | L     | 645 | ARG  | NE-CZ-NH2 | -6.80 | 116.90      | 120.30   |
| 1   | B     | 645 | ARG  | NE-CZ-NH2 | -6.79 | 116.90      | 120.30   |
| 1   | E     | 329 | ASP  | CB-CG-OD1 | 6.79  | 124.42      | 118.30   |
| 1   | P     | 329 | ASP  | CB-CG-OD1 | 6.79  | 124.42      | 118.30   |
| 1   | C     | 610 | ASP  | CB-CG-OD2 | -6.79 | 112.19      | 118.30   |
| 1   | G     | 368 | ASP  | CB-CG-OD1 | 6.79  | 124.41      | 118.30   |
| 1   | P     | 368 | ASP  | CB-CG-OD1 | 6.79  | 124.42      | 118.30   |
| 1   | P     | 561 | ARG  | NE-CZ-NH1 | 6.79  | 123.70      | 120.30   |
| 1   | D     | 211 | ASP  | CB-CG-OD1 | 6.79  | 124.41      | 118.30   |
| 1   | I     | 610 | ASP  | CB-CG-OD2 | -6.79 | 112.19      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | I     | 645 | ARG  | NE-CZ-NH2 | -6.79 | 116.90      | 120.30   |
| 1   | A     | 329 | ASP  | CB-CG-OD1 | 6.79  | 124.41      | 118.30   |
| 1   | O     | 329 | ASP  | CB-CG-OD1 | 6.79  | 124.41      | 118.30   |
| 1   | K     | 368 | ASP  | CB-CG-OD1 | 6.79  | 124.41      | 118.30   |
| 1   | N     | 645 | ARG  | NE-CZ-NH2 | -6.79 | 116.91      | 120.30   |
| 1   | B     | 561 | ARG  | NE-CZ-NH1 | 6.78  | 123.69      | 120.30   |
| 1   | B     | 828 | ASP  | CB-CG-OD2 | -6.78 | 112.20      | 118.30   |
| 1   | D     | 329 | ASP  | CB-CG-OD1 | 6.78  | 124.41      | 118.30   |
| 1   | D     | 610 | ASP  | CB-CG-OD2 | -6.78 | 112.19      | 118.30   |
| 1   | I     | 368 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | J     | 211 | ASP  | CB-CG-OD1 | 6.78  | 124.41      | 118.30   |
| 1   | O     | 368 | ASP  | CB-CG-OD1 | 6.78  | 124.41      | 118.30   |
| 1   | P     | 610 | ASP  | CB-CG-OD2 | -6.78 | 112.19      | 118.30   |
| 1   | K     | 211 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | K     | 828 | ASP  | CB-CG-OD2 | -6.78 | 112.20      | 118.30   |
| 1   | A     | 211 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | F     | 211 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | N     | 610 | ASP  | CB-CG-OD2 | -6.78 | 112.20      | 118.30   |
| 1   | M     | 329 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | E     | 368 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | F     | 610 | ASP  | CB-CG-OD2 | -6.78 | 112.20      | 118.30   |
| 1   | G     | 645 | ARG  | NE-CZ-NH2 | -6.78 | 116.91      | 120.30   |
| 1   | J     | 5   | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | J     | 368 | ASP  | CB-CG-OD1 | 6.78  | 124.40      | 118.30   |
| 1   | N     | 425 | ARG  | NE-CZ-NH1 | 6.78  | 123.69      | 120.30   |
| 1   | M     | 561 | ARG  | NE-CZ-NH1 | 6.77  | 123.69      | 120.30   |
| 1   | O     | 211 | ASP  | CB-CG-OD1 | 6.77  | 124.40      | 118.30   |
| 1   | C     | 211 | ASP  | CB-CG-OD1 | 6.77  | 124.39      | 118.30   |
| 1   | D     | 828 | ASP  | CB-CG-OD2 | -6.77 | 112.21      | 118.30   |
| 1   | A     | 610 | ASP  | CB-CG-OD2 | -6.77 | 112.21      | 118.30   |
| 1   | N     | 368 | ASP  | CB-CG-OD1 | 6.77  | 124.39      | 118.30   |
| 1   | B     | 610 | ASP  | CB-CG-OD2 | -6.77 | 112.21      | 118.30   |
| 1   | I     | 211 | ASP  | CB-CG-OD1 | 6.77  | 124.39      | 118.30   |
| 1   | D     | 492 | ASP  | CB-CG-OD2 | -6.76 | 112.21      | 118.30   |
| 1   | E     | 492 | ASP  | CB-CG-OD2 | -6.76 | 112.21      | 118.30   |
| 1   | L     | 45  | ASP  | CB-CG-OD1 | 6.76  | 124.39      | 118.30   |
| 1   | C     | 45  | ASP  | CB-CG-OD1 | 6.76  | 124.39      | 118.30   |
| 1   | K     | 645 | ARG  | NE-CZ-NH2 | -6.76 | 116.92      | 120.30   |
| 1   | B     | 329 | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | C     | 329 | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | F     | 45  | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | K     | 492 | ASP  | CB-CG-OD2 | -6.76 | 112.22      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | N     | 211 | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | G     | 329 | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | L     | 492 | ASP  | CB-CG-OD2 | -6.76 | 112.22      | 118.30   |
| 1   | N     | 492 | ASP  | CB-CG-OD2 | -6.76 | 112.22      | 118.30   |
| 1   | G     | 211 | ASP  | CB-CG-OD1 | 6.76  | 124.38      | 118.30   |
| 1   | J     | 610 | ASP  | CB-CG-OD2 | -6.75 | 112.22      | 118.30   |
| 1   | C     | 492 | ASP  | CB-CG-OD2 | -6.75 | 112.22      | 118.30   |
| 1   | E     | 211 | ASP  | CB-CG-OD1 | 6.75  | 124.37      | 118.30   |
| 1   | P     | 492 | ASP  | CB-CG-OD2 | -6.75 | 112.23      | 118.30   |
| 1   | A     | 492 | ASP  | CB-CG-OD2 | -6.75 | 112.23      | 118.30   |
| 1   | E     | 59  | ARG  | NE-CZ-NH1 | 6.74  | 123.67      | 120.30   |
| 1   | E     | 610 | ASP  | CB-CG-OD2 | -6.74 | 112.23      | 118.30   |
| 1   | O     | 45  | ASP  | CB-CG-OD1 | 6.74  | 124.36      | 118.30   |
| 1   | H     | 211 | ASP  | CB-CG-OD1 | 6.74  | 124.36      | 118.30   |
| 1   | I     | 45  | ASP  | CB-CG-OD1 | 6.74  | 124.36      | 118.30   |
| 1   | I     | 329 | ASP  | CB-CG-OD1 | 6.74  | 124.36      | 118.30   |
| 1   | N     | 45  | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | D     | 411 | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | M     | 211 | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | A     | 45  | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | B     | 45  | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | G     | 45  | ASP  | CB-CG-OD1 | 6.73  | 124.36      | 118.30   |
| 1   | G     | 492 | ASP  | CB-CG-OD2 | -6.73 | 112.25      | 118.30   |
| 1   | J     | 645 | ARG  | NE-CZ-NH2 | -6.73 | 116.94      | 120.30   |
| 1   | J     | 492 | ASP  | CB-CG-OD2 | -6.72 | 112.25      | 118.30   |
| 1   | B     | 492 | ASP  | CB-CG-OD2 | -6.72 | 112.25      | 118.30   |
| 1   | E     | 45  | ASP  | CB-CG-OD1 | 6.72  | 124.35      | 118.30   |
| 1   | F     | 492 | ASP  | CB-CG-OD2 | -6.72 | 112.25      | 118.30   |
| 1   | M     | 492 | ASP  | CB-CG-OD2 | -6.71 | 112.26      | 118.30   |
| 1   | I     | 492 | ASP  | CB-CG-OD2 | -6.71 | 112.26      | 118.30   |
| 1   | K     | 45  | ASP  | CB-CG-OD1 | 6.71  | 124.34      | 118.30   |
| 1   | A     | 425 | ARG  | NE-CZ-NH1 | 6.71  | 123.65      | 120.30   |
| 1   | P     | 45  | ASP  | CB-CG-OD1 | 6.70  | 124.33      | 118.30   |
| 1   | E     | 425 | ARG  | NE-CZ-NH1 | 6.70  | 123.65      | 120.30   |
| 1   | H     | 45  | ASP  | CB-CG-OD1 | 6.70  | 124.33      | 118.30   |
| 1   | M     | 425 | ARG  | NE-CZ-NH1 | 6.70  | 123.65      | 120.30   |
| 1   | M     | 45  | ASP  | CB-CG-OD1 | 6.70  | 124.33      | 118.30   |
| 1   | J     | 45  | ASP  | CB-CG-OD1 | 6.70  | 124.33      | 118.30   |
| 1   | L     | 211 | ASP  | CB-CG-OD1 | 6.70  | 124.33      | 118.30   |
| 1   | L     | 425 | ARG  | NE-CZ-NH1 | 6.70  | 123.65      | 120.30   |
| 1   | H     | 425 | ARG  | NE-CZ-NH1 | 6.69  | 123.64      | 120.30   |
| 1   | H     | 492 | ASP  | CB-CG-OD2 | -6.69 | 112.28      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|------|-------------|----------|
| 1   | N     | 59  | ARG  | NE-CZ-NH1 | 6.68 | 123.64      | 120.30   |
| 1   | M     | 59  | ARG  | NE-CZ-NH1 | 6.67 | 123.64      | 120.30   |
| 1   | G     | 59  | ARG  | NE-CZ-NH1 | 6.67 | 123.64      | 120.30   |
| 1   | I     | 425 | ARG  | NE-CZ-NH1 | 6.67 | 123.64      | 120.30   |
| 1   | K     | 425 | ARG  | NE-CZ-NH1 | 6.67 | 123.64      | 120.30   |
| 1   | C     | 411 | ASP  | CB-CG-OD1 | 6.67 | 124.30      | 118.30   |
| 1   | M     | 411 | ASP  | CB-CG-OD1 | 6.67 | 124.30      | 118.30   |
| 1   | B     | 411 | ASP  | CB-CG-OD1 | 6.67 | 124.30      | 118.30   |
| 1   | H     | 411 | ASP  | CB-CG-OD1 | 6.66 | 124.30      | 118.30   |
| 1   | I     | 411 | ASP  | CB-CG-OD1 | 6.66 | 124.30      | 118.30   |
| 1   | D     | 425 | ARG  | NE-CZ-NH1 | 6.66 | 123.63      | 120.30   |
| 1   | L     | 411 | ASP  | CB-CG-OD1 | 6.65 | 124.29      | 118.30   |
| 1   | A     | 411 | ASP  | CB-CG-OD1 | 6.65 | 124.29      | 118.30   |
| 1   | O     | 411 | ASP  | CB-CG-OD1 | 6.65 | 124.29      | 118.30   |
| 1   | E     | 411 | ASP  | CB-CG-OD1 | 6.65 | 124.29      | 118.30   |
| 1   | L     | 59  | ARG  | NE-CZ-NH1 | 6.65 | 123.62      | 120.30   |
| 1   | K     | 411 | ASP  | CB-CG-OD1 | 6.64 | 124.28      | 118.30   |
| 1   | N     | 411 | ASP  | CB-CG-OD1 | 6.64 | 124.28      | 118.30   |
| 1   | O     | 59  | ARG  | NE-CZ-NH1 | 6.64 | 123.62      | 120.30   |
| 1   | B     | 59  | ARG  | NE-CZ-NH1 | 6.63 | 123.62      | 120.30   |
| 1   | D     | 59  | ARG  | NE-CZ-NH1 | 6.63 | 123.62      | 120.30   |
| 1   | O     | 425 | ARG  | NE-CZ-NH1 | 6.63 | 123.62      | 120.30   |
| 1   | F     | 411 | ASP  | CB-CG-OD1 | 6.63 | 124.27      | 118.30   |
| 1   | A     | 59  | ARG  | NE-CZ-NH1 | 6.63 | 123.61      | 120.30   |
| 1   | B     | 425 | ARG  | NE-CZ-NH1 | 6.63 | 123.61      | 120.30   |
| 1   | J     | 59  | ARG  | NE-CZ-NH1 | 6.62 | 123.61      | 120.30   |
| 1   | G     | 425 | ARG  | NE-CZ-NH1 | 6.62 | 123.61      | 120.30   |
| 1   | H     | 59  | ARG  | NE-CZ-NH1 | 6.62 | 123.61      | 120.30   |
| 1   | P     | 411 | ASP  | CB-CG-OD1 | 6.61 | 124.25      | 118.30   |
| 1   | F     | 59  | ARG  | NE-CZ-NH1 | 6.61 | 123.60      | 120.30   |
| 1   | C     | 59  | ARG  | NE-CZ-NH1 | 6.60 | 123.60      | 120.30   |
| 1   | J     | 425 | ARG  | NE-CZ-NH1 | 6.60 | 123.60      | 120.30   |
| 1   | C     | 425 | ARG  | NE-CZ-NH1 | 6.60 | 123.60      | 120.30   |
| 1   | E     | 954 | ASP  | CB-CG-OD1 | 6.60 | 124.24      | 118.30   |
| 1   | K     | 59  | ARG  | NE-CZ-NH1 | 6.60 | 123.60      | 120.30   |
| 1   | J     | 411 | ASP  | CB-CG-OD1 | 6.59 | 124.23      | 118.30   |
| 1   | H     | 954 | ASP  | CB-CG-OD1 | 6.58 | 124.23      | 118.30   |
| 1   | I     | 59  | ARG  | NE-CZ-NH1 | 6.58 | 123.59      | 120.30   |
| 1   | G     | 411 | ASP  | CB-CG-OD1 | 6.58 | 124.22      | 118.30   |
| 1   | F     | 425 | ARG  | NE-CZ-NH1 | 6.57 | 123.58      | 120.30   |
| 1   | M     | 954 | ASP  | CB-CG-OD1 | 6.57 | 124.21      | 118.30   |
| 1   | P     | 954 | ASP  | CB-CG-OD1 | 6.56 | 124.21      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | G     | 954 | ASP  | CB-CG-OD1 | 6.56  | 124.20      | 118.30   |
| 1   | P     | 425 | ARG  | NE-CZ-NH1 | 6.56  | 123.58      | 120.30   |
| 1   | B     | 252 | ASP  | CB-CG-OD2 | -6.55 | 112.41      | 118.30   |
| 1   | A     | 252 | ASP  | CB-CG-OD2 | -6.54 | 112.42      | 118.30   |
| 1   | J     | 252 | ASP  | CB-CG-OD2 | -6.54 | 112.42      | 118.30   |
| 1   | D     | 954 | ASP  | CB-CG-OD1 | 6.54  | 124.18      | 118.30   |
| 1   | A     | 954 | ASP  | CB-CG-OD1 | 6.53  | 124.18      | 118.30   |
| 1   | I     | 252 | ASP  | CB-CG-OD2 | -6.53 | 112.42      | 118.30   |
| 1   | P     | 59  | ARG  | NE-CZ-NH1 | 6.53  | 123.57      | 120.30   |
| 1   | F     | 252 | ASP  | CB-CG-OD2 | -6.53 | 112.42      | 118.30   |
| 1   | E     | 130 | ASP  | CB-CG-OD2 | -6.53 | 112.42      | 118.30   |
| 1   | H     | 509 | ASP  | CB-CG-OD1 | 6.53  | 124.17      | 118.30   |
| 1   | B     | 130 | ASP  | CB-CG-OD2 | -6.52 | 112.43      | 118.30   |
| 1   | O     | 509 | ASP  | CB-CG-OD1 | 6.52  | 124.17      | 118.30   |
| 1   | K     | 509 | ASP  | CB-CG-OD1 | 6.52  | 124.17      | 118.30   |
| 1   | O     | 252 | ASP  | CB-CG-OD2 | -6.52 | 112.43      | 118.30   |
| 1   | K     | 954 | ASP  | CB-CG-OD1 | 6.52  | 124.16      | 118.30   |
| 1   | C     | 130 | ASP  | CB-CG-OD2 | -6.51 | 112.44      | 118.30   |
| 1   | I     | 954 | ASP  | CB-CG-OD1 | 6.51  | 124.16      | 118.30   |
| 1   | N     | 252 | ASP  | CB-CG-OD2 | -6.51 | 112.44      | 118.30   |
| 1   | L     | 252 | ASP  | CB-CG-OD2 | -6.51 | 112.44      | 118.30   |
| 1   | E     | 252 | ASP  | CB-CG-OD2 | -6.50 | 112.44      | 118.30   |
| 1   | B     | 954 | ASP  | CB-CG-OD1 | 6.50  | 124.15      | 118.30   |
| 1   | L     | 509 | ASP  | CB-CG-OD1 | 6.50  | 124.15      | 118.30   |
| 1   | M     | 130 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | O     | 130 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | F     | 954 | ASP  | CB-CG-OD1 | 6.50  | 124.15      | 118.30   |
| 1   | J     | 509 | ASP  | CB-CG-OD1 | 6.50  | 124.15      | 118.30   |
| 1   | D     | 130 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | G     | 130 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | D     | 252 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | N     | 509 | ASP  | CB-CG-OD1 | 6.50  | 124.15      | 118.30   |
| 1   | P     | 252 | ASP  | CB-CG-OD2 | -6.50 | 112.45      | 118.30   |
| 1   | K     | 252 | ASP  | CB-CG-OD2 | -6.49 | 112.46      | 118.30   |
| 1   | E     | 367 | MET  | CG-SD-CE  | -6.49 | 89.81       | 100.20   |
| 1   | N     | 954 | ASP  | CB-CG-OD1 | 6.49  | 124.14      | 118.30   |
| 1   | B     | 367 | MET  | CG-SD-CE  | -6.49 | 89.81       | 100.20   |
| 1   | F     | 367 | MET  | CG-SD-CE  | -6.49 | 89.82       | 100.20   |
| 1   | D     | 509 | ASP  | CB-CG-OD1 | 6.49  | 124.14      | 118.30   |
| 1   | H     | 367 | MET  | CG-SD-CE  | -6.49 | 89.82       | 100.20   |
| 1   | I     | 509 | ASP  | CB-CG-OD1 | 6.49  | 124.14      | 118.30   |
| 1   | J     | 130 | ASP  | CB-CG-OD2 | -6.49 | 112.46      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | K     | 367 | MET  | CG-SD-CE  | -6.49 | 89.82       | 100.20   |
| 1   | F     | 130 | ASP  | CB-CG-OD2 | -6.48 | 112.47      | 118.30   |
| 1   | J     | 954 | ASP  | CB-CG-OD1 | 6.48  | 124.13      | 118.30   |
| 1   | C     | 509 | ASP  | CB-CG-OD1 | 6.48  | 124.13      | 118.30   |
| 1   | D     | 367 | MET  | CG-SD-CE  | -6.48 | 89.83       | 100.20   |
| 1   | H     | 130 | ASP  | CB-CG-OD2 | -6.48 | 112.47      | 118.30   |
| 1   | A     | 509 | ASP  | CB-CG-OD1 | 6.48  | 124.13      | 118.30   |
| 1   | C     | 252 | ASP  | CB-CG-OD2 | -6.48 | 112.47      | 118.30   |
| 1   | L     | 954 | ASP  | CB-CG-OD1 | 6.48  | 124.13      | 118.30   |
| 1   | P     | 367 | MET  | CG-SD-CE  | -6.48 | 89.84       | 100.20   |
| 1   | G     | 252 | ASP  | CB-CG-OD2 | -6.48 | 112.47      | 118.30   |
| 1   | M     | 252 | ASP  | CB-CG-OD2 | -6.48 | 112.47      | 118.30   |
| 1   | A     | 367 | MET  | CG-SD-CE  | -6.47 | 89.84       | 100.20   |
| 1   | J     | 367 | MET  | CG-SD-CE  | -6.47 | 89.84       | 100.20   |
| 1   | O     | 367 | MET  | CG-SD-CE  | -6.47 | 89.84       | 100.20   |
| 1   | B     | 509 | ASP  | CB-CG-OD1 | 6.47  | 124.13      | 118.30   |
| 1   | C     | 367 | MET  | CG-SD-CE  | -6.47 | 89.84       | 100.20   |
| 1   | H     | 252 | ASP  | CB-CG-OD2 | -6.47 | 112.47      | 118.30   |
| 1   | L     | 367 | MET  | CG-SD-CE  | -6.47 | 89.84       | 100.20   |
| 1   | C     | 954 | ASP  | CB-CG-OD1 | 6.47  | 124.12      | 118.30   |
| 1   | F     | 509 | ASP  | CB-CG-OD1 | 6.47  | 124.12      | 118.30   |
| 1   | L     | 130 | ASP  | CB-CG-OD2 | -6.47 | 112.48      | 118.30   |
| 1   | M     | 509 | ASP  | CB-CG-OD1 | 6.47  | 124.12      | 118.30   |
| 1   | N     | 367 | MET  | CG-SD-CE  | -6.47 | 89.85       | 100.20   |
| 1   | I     | 367 | MET  | CG-SD-CE  | -6.47 | 89.85       | 100.20   |
| 1   | G     | 509 | ASP  | CB-CG-OD1 | 6.47  | 124.12      | 118.30   |
| 1   | N     | 130 | ASP  | CB-CG-OD2 | -6.47 | 112.48      | 118.30   |
| 1   | P     | 130 | ASP  | CB-CG-OD2 | -6.47 | 112.48      | 118.30   |
| 1   | A     | 130 | ASP  | CB-CG-OD2 | -6.46 | 112.48      | 118.30   |
| 1   | I     | 130 | ASP  | CB-CG-OD2 | -6.46 | 112.48      | 118.30   |
| 1   | G     | 367 | MET  | CG-SD-CE  | -6.46 | 89.86       | 100.20   |
| 1   | M     | 367 | MET  | CG-SD-CE  | -6.46 | 89.86       | 100.20   |
| 1   | K     | 130 | ASP  | CB-CG-OD2 | -6.45 | 112.49      | 118.30   |
| 1   | P     | 509 | ASP  | CB-CG-OD1 | 6.45  | 124.10      | 118.30   |
| 1   | O     | 954 | ASP  | CB-CG-OD1 | 6.44  | 124.10      | 118.30   |
| 1   | E     | 509 | ASP  | CB-CG-OD1 | 6.43  | 124.09      | 118.30   |
| 1   | D     | 15  | ASP  | CB-CG-OD2 | -6.40 | 112.54      | 118.30   |
| 1   | K     | 15  | ASP  | CB-CG-OD2 | -6.40 | 112.54      | 118.30   |
| 1   | J     | 15  | ASP  | CB-CG-OD2 | -6.39 | 112.55      | 118.30   |
| 1   | D     | 938 | ARG  | N-CA-CB   | 6.38  | 122.09      | 110.60   |
| 1   | N     | 938 | ARG  | N-CA-CB   | 6.38  | 122.08      | 110.60   |
| 1   | L     | 15  | ASP  | CB-CG-OD2 | -6.38 | 112.56      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 46  | ARG  | CA-CB-CG  | -6.38 | 99.37       | 113.40   |
| 1   | I     | 46  | ARG  | CA-CB-CG  | -6.37 | 99.38       | 113.40   |
| 1   | M     | 938 | ARG  | N-CA-CB   | 6.37  | 122.07      | 110.60   |
| 1   | O     | 46  | ARG  | CA-CB-CG  | -6.37 | 99.39       | 113.40   |
| 1   | M     | 46  | ARG  | CA-CB-CG  | -6.37 | 99.39       | 113.40   |
| 1   | E     | 938 | ARG  | N-CA-CB   | 6.37  | 122.06      | 110.60   |
| 1   | I     | 938 | ARG  | N-CA-CB   | 6.37  | 122.06      | 110.60   |
| 1   | H     | 46  | ARG  | CA-CB-CG  | -6.36 | 99.40       | 113.40   |
| 1   | H     | 15  | ASP  | CB-CG-OD2 | -6.36 | 112.57      | 118.30   |
| 1   | E     | 219 | THR  | CA-CB-CG2 | -6.36 | 103.50      | 112.40   |
| 1   | G     | 46  | ARG  | CA-CB-CG  | -6.36 | 99.41       | 113.40   |
| 1   | G     | 938 | ARG  | N-CA-CB   | 6.36  | 122.05      | 110.60   |
| 1   | B     | 46  | ARG  | CA-CB-CG  | -6.36 | 99.41       | 113.40   |
| 1   | H     | 938 | ARG  | N-CA-CB   | 6.36  | 122.04      | 110.60   |
| 1   | K     | 938 | ARG  | N-CA-CB   | 6.36  | 122.05      | 110.60   |
| 1   | O     | 938 | ARG  | N-CA-CB   | 6.36  | 122.05      | 110.60   |
| 1   | C     | 938 | ARG  | N-CA-CB   | 6.36  | 122.04      | 110.60   |
| 1   | J     | 938 | ARG  | N-CA-CB   | 6.36  | 122.04      | 110.60   |
| 1   | A     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.42       | 113.40   |
| 1   | P     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.43       | 113.40   |
| 1   | E     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.43       | 113.40   |
| 1   | J     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.43       | 113.40   |
| 1   | C     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.43       | 113.40   |
| 1   | F     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.44       | 113.40   |
| 1   | F     | 938 | ARG  | N-CA-CB   | 6.35  | 122.02      | 110.60   |
| 1   | N     | 46  | ARG  | CA-CB-CG  | -6.35 | 99.44       | 113.40   |
| 1   | A     | 938 | ARG  | N-CA-CB   | 6.35  | 122.02      | 110.60   |
| 1   | B     | 938 | ARG  | N-CA-CB   | 6.35  | 122.02      | 110.60   |
| 1   | C     | 15  | ASP  | CB-CG-OD2 | -6.34 | 112.59      | 118.30   |
| 1   | G     | 802 | ASP  | CB-CG-OD2 | -6.34 | 112.59      | 118.30   |
| 1   | L     | 938 | ARG  | N-CA-CB   | 6.34  | 122.01      | 110.60   |
| 1   | O     | 15  | ASP  | CB-CG-OD2 | -6.34 | 112.59      | 118.30   |
| 1   | D     | 46  | ARG  | CA-CB-CG  | -6.34 | 99.45       | 113.40   |
| 1   | E     | 15  | ASP  | CB-CG-OD2 | -6.34 | 112.60      | 118.30   |
| 1   | P     | 938 | ARG  | N-CA-CB   | 6.34  | 122.00      | 110.60   |
| 1   | F     | 15  | ASP  | CB-CG-OD2 | -6.33 | 112.60      | 118.30   |
| 1   | J     | 219 | THR  | CA-CB-CG2 | -6.33 | 103.54      | 112.40   |
| 1   | K     | 219 | THR  | CA-CB-CG2 | -6.33 | 103.54      | 112.40   |
| 1   | A     | 15  | ASP  | CB-CG-OD2 | -6.33 | 112.60      | 118.30   |
| 1   | I     | 591 | ASP  | CB-CG-OD2 | -6.33 | 112.61      | 118.30   |
| 1   | K     | 46  | ARG  | CA-CB-CG  | -6.33 | 99.48       | 113.40   |
| 1   | P     | 15  | ASP  | CB-CG-OD2 | -6.33 | 112.61      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | M     | 15  | ASP  | CB-CG-OD2 | -6.32 | 112.61      | 118.30   |
| 1   | M     | 659 | ASP  | CB-CG-OD1 | 6.32  | 123.99      | 118.30   |
| 1   | B     | 15  | ASP  | CB-CG-OD2 | -6.32 | 112.61      | 118.30   |
| 1   | G     | 219 | THR  | CA-CB-CG2 | -6.32 | 103.55      | 112.40   |
| 1   | H     | 219 | THR  | CA-CB-CG2 | -6.32 | 103.55      | 112.40   |
| 1   | F     | 219 | THR  | CA-CB-CG2 | -6.32 | 103.56      | 112.40   |
| 1   | L     | 219 | THR  | CA-CB-CG2 | -6.32 | 103.55      | 112.40   |
| 1   | N     | 802 | ASP  | CB-CG-OD2 | -6.32 | 112.61      | 118.30   |
| 1   | A     | 219 | THR  | CA-CB-CG2 | -6.32 | 103.56      | 112.40   |
| 1   | P     | 428 | ASP  | CB-CG-OD1 | 6.31  | 123.98      | 118.30   |
| 1   | J     | 802 | ASP  | CB-CG-OD2 | -6.31 | 112.62      | 118.30   |
| 1   | E     | 428 | ASP  | CB-CG-OD1 | 6.31  | 123.98      | 118.30   |
| 1   | G     | 15  | ASP  | CB-CG-OD2 | -6.31 | 112.62      | 118.30   |
| 1   | O     | 591 | ASP  | CB-CG-OD2 | -6.31 | 112.62      | 118.30   |
| 1   | D     | 219 | THR  | CA-CB-CG2 | -6.31 | 103.57      | 112.40   |
| 1   | B     | 591 | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | I     | 15  | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | J     | 659 | ASP  | CB-CG-OD1 | 6.30  | 123.97      | 118.30   |
| 1   | O     | 428 | ASP  | CB-CG-OD1 | 6.30  | 123.97      | 118.30   |
| 1   | F     | 802 | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | G     | 591 | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | M     | 219 | THR  | CA-CB-CG2 | -6.30 | 103.58      | 112.40   |
| 1   | O     | 917 | ARG  | NE-CZ-NH2 | -6.30 | 117.15      | 120.30   |
| 1   | I     | 219 | THR  | CA-CB-CG2 | -6.30 | 103.58      | 112.40   |
| 1   | P     | 219 | THR  | CA-CB-CG2 | -6.30 | 103.58      | 112.40   |
| 1   | B     | 219 | THR  | CA-CB-CG2 | -6.30 | 103.58      | 112.40   |
| 1   | M     | 802 | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | N     | 15  | ASP  | CB-CG-OD2 | -6.30 | 112.63      | 118.30   |
| 1   | O     | 659 | ASP  | CB-CG-OD1 | 6.30  | 123.97      | 118.30   |
| 1   | C     | 219 | THR  | CA-CB-CG2 | -6.29 | 103.59      | 112.40   |
| 1   | N     | 219 | THR  | CA-CB-CG2 | -6.29 | 103.59      | 112.40   |
| 1   | E     | 802 | ASP  | CB-CG-OD2 | -6.29 | 112.64      | 118.30   |
| 1   | O     | 219 | THR  | CA-CB-CG2 | -6.29 | 103.60      | 112.40   |
| 1   | D     | 659 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |
| 1   | E     | 659 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |
| 1   | H     | 802 | ASP  | CB-CG-OD2 | -6.28 | 112.64      | 118.30   |
| 1   | A     | 802 | ASP  | CB-CG-OD2 | -6.28 | 112.65      | 118.30   |
| 1   | G     | 917 | ARG  | NE-CZ-NH2 | -6.28 | 117.16      | 120.30   |
| 1   | M     | 591 | ASP  | CB-CG-OD2 | -6.28 | 112.65      | 118.30   |
| 1   | P     | 659 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |
| 1   | P     | 802 | ASP  | CB-CG-OD2 | -6.28 | 112.65      | 118.30   |
| 1   | F     | 659 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | I     | 802 | ASP  | CB-CG-OD2 | -6.28 | 112.65      | 118.30   |
| 1   | J     | 428 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |
| 1   | K     | 428 | ASP  | CB-CG-OD1 | 6.28  | 123.95      | 118.30   |
| 1   | K     | 591 | ASP  | CB-CG-OD2 | -6.28 | 112.65      | 118.30   |
| 1   | H     | 591 | ASP  | CB-CG-OD2 | -6.27 | 112.66      | 118.30   |
| 1   | K     | 802 | ASP  | CB-CG-OD2 | -6.27 | 112.66      | 118.30   |
| 1   | N     | 428 | ASP  | CB-CG-OD1 | 6.27  | 123.94      | 118.30   |
| 1   | O     | 802 | ASP  | CB-CG-OD2 | -6.27 | 112.66      | 118.30   |
| 1   | A     | 591 | ASP  | CB-CG-OD2 | -6.27 | 112.66      | 118.30   |
| 1   | D     | 428 | ASP  | CB-CG-OD1 | 6.27  | 123.94      | 118.30   |
| 1   | G     | 428 | ASP  | CB-CG-OD1 | 6.27  | 123.94      | 118.30   |
| 1   | K     | 659 | ASP  | CB-CG-OD1 | 6.27  | 123.94      | 118.30   |
| 1   | I     | 659 | ASP  | CB-CG-OD1 | 6.27  | 123.94      | 118.30   |
| 1   | C     | 802 | ASP  | CB-CG-OD2 | -6.26 | 112.66      | 118.30   |
| 1   | F     | 591 | ASP  | CB-CG-OD2 | -6.26 | 112.66      | 118.30   |
| 1   | A     | 428 | ASP  | CB-CG-OD1 | 6.26  | 123.94      | 118.30   |
| 1   | L     | 428 | ASP  | CB-CG-OD1 | 6.26  | 123.94      | 118.30   |
| 1   | L     | 802 | ASP  | CB-CG-OD2 | -6.26 | 112.66      | 118.30   |
| 1   | N     | 591 | ASP  | CB-CG-OD2 | -6.26 | 112.67      | 118.30   |
| 1   | D     | 917 | ARG  | NE-CZ-NH2 | -6.26 | 117.17      | 120.30   |
| 1   | J     | 591 | ASP  | CB-CG-OD2 | -6.26 | 112.67      | 118.30   |
| 1   | P     | 591 | ASP  | CB-CG-OD2 | -6.26 | 112.67      | 118.30   |
| 1   | C     | 591 | ASP  | CB-CG-OD2 | -6.26 | 112.67      | 118.30   |
| 1   | F     | 428 | ASP  | CB-CG-OD1 | 6.26  | 123.93      | 118.30   |
| 1   | C     | 428 | ASP  | CB-CG-OD1 | 6.25  | 123.93      | 118.30   |
| 1   | C     | 659 | ASP  | CB-CG-OD1 | 6.25  | 123.93      | 118.30   |
| 1   | N     | 917 | ARG  | NE-CZ-NH2 | -6.25 | 117.17      | 120.30   |
| 1   | B     | 428 | ASP  | CB-CG-OD1 | 6.25  | 123.93      | 118.30   |
| 1   | B     | 659 | ASP  | CB-CG-OD1 | 6.25  | 123.93      | 118.30   |
| 1   | H     | 428 | ASP  | CB-CG-OD1 | 6.25  | 123.92      | 118.30   |
| 1   | B     | 802 | ASP  | CB-CG-OD2 | -6.25 | 112.68      | 118.30   |
| 1   | L     | 591 | ASP  | CB-CG-OD2 | -6.25 | 112.68      | 118.30   |
| 1   | D     | 802 | ASP  | CB-CG-OD2 | -6.25 | 112.68      | 118.30   |
| 1   | B     | 917 | ARG  | NE-CZ-NH2 | -6.24 | 117.18      | 120.30   |
| 1   | N     | 659 | ASP  | CB-CG-OD1 | 6.24  | 123.92      | 118.30   |
| 1   | G     | 17  | GLU  | N-CA-CB   | 6.24  | 121.83      | 110.60   |
| 1   | F     | 917 | ARG  | NE-CZ-NH2 | -6.24 | 117.18      | 120.30   |
| 1   | G     | 659 | ASP  | CB-CG-OD1 | 6.24  | 123.91      | 118.30   |
| 1   | H     | 659 | ASP  | CB-CG-OD1 | 6.24  | 123.91      | 118.30   |
| 1   | I     | 428 | ASP  | CB-CG-OD1 | 6.23  | 123.91      | 118.30   |
| 1   | M     | 428 | ASP  | CB-CG-OD1 | 6.23  | 123.91      | 118.30   |
| 1   | I     | 917 | ARG  | NE-CZ-NH2 | -6.23 | 117.18      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | D     | 591 | ASP  | CB-CG-OD2 | -6.23 | 112.69      | 118.30   |
| 1   | O     | 96  | ASP  | CB-CG-OD2 | -6.23 | 112.69      | 118.30   |
| 1   | L     | 659 | ASP  | CB-CG-OD1 | 6.23  | 123.90      | 118.30   |
| 1   | A     | 917 | ARG  | NE-CZ-NH2 | -6.22 | 117.19      | 120.30   |
| 1   | H     | 17  | GLU  | N-CA-CB   | 6.22  | 121.79      | 110.60   |
| 1   | K     | 96  | ASP  | CB-CG-OD2 | -6.22 | 112.71      | 118.30   |
| 1   | A     | 659 | ASP  | CB-CG-OD1 | 6.21  | 123.89      | 118.30   |
| 1   | D     | 17  | GLU  | N-CA-CB   | 6.21  | 121.78      | 110.60   |
| 1   | K     | 17  | GLU  | N-CA-CB   | 6.21  | 121.78      | 110.60   |
| 1   | E     | 917 | ARG  | NE-CZ-NH2 | -6.21 | 117.19      | 120.30   |
| 1   | F     | 17  | GLU  | N-CA-CB   | 6.21  | 121.78      | 110.60   |
| 1   | B     | 17  | GLU  | N-CA-CB   | 6.21  | 121.78      | 110.60   |
| 1   | E     | 591 | ASP  | CB-CG-OD2 | -6.21 | 112.71      | 118.30   |
| 1   | O     | 17  | GLU  | N-CA-CB   | 6.21  | 121.77      | 110.60   |
| 1   | P     | 17  | GLU  | N-CA-CB   | 6.21  | 121.77      | 110.60   |
| 1   | M     | 17  | GLU  | N-CA-CB   | 6.21  | 121.77      | 110.60   |
| 1   | A     | 17  | GLU  | N-CA-CB   | 6.20  | 121.77      | 110.60   |
| 1   | J     | 17  | GLU  | N-CA-CB   | 6.20  | 121.77      | 110.60   |
| 1   | L     | 96  | ASP  | CB-CG-OD2 | -6.20 | 112.72      | 118.30   |
| 1   | P     | 96  | ASP  | CB-CG-OD2 | -6.20 | 112.72      | 118.30   |
| 1   | L     | 17  | GLU  | N-CA-CB   | 6.20  | 121.76      | 110.60   |
| 1   | N     | 17  | GLU  | N-CA-CB   | 6.20  | 121.76      | 110.60   |
| 1   | J     | 917 | ARG  | NE-CZ-NH2 | -6.20 | 117.20      | 120.30   |
| 1   | C     | 17  | GLU  | N-CA-CB   | 6.20  | 121.75      | 110.60   |
| 1   | H     | 96  | ASP  | CB-CG-OD2 | -6.20 | 112.72      | 118.30   |
| 1   | H     | 917 | ARG  | NE-CZ-NH2 | -6.20 | 117.20      | 120.30   |
| 1   | I     | 17  | GLU  | N-CA-CB   | 6.19  | 121.75      | 110.60   |
| 1   | B     | 96  | ASP  | CB-CG-OD2 | -6.19 | 112.73      | 118.30   |
| 1   | G     | 96  | ASP  | CB-CG-OD2 | -6.18 | 112.74      | 118.30   |
| 1   | D     | 96  | ASP  | CB-CG-OD2 | -6.18 | 112.74      | 118.30   |
| 1   | E     | 17  | GLU  | N-CA-CB   | 6.18  | 121.72      | 110.60   |
| 1   | A     | 96  | ASP  | CB-CG-OD2 | -6.17 | 112.74      | 118.30   |
| 1   | E     | 96  | ASP  | CB-CG-OD2 | -6.17 | 112.75      | 118.30   |
| 1   | L     | 411 | ASP  | CB-CG-OD2 | -6.17 | 112.75      | 118.30   |
| 1   | D     | 411 | ASP  | CB-CG-OD2 | -6.17 | 112.75      | 118.30   |
| 1   | J     | 96  | ASP  | CB-CG-OD2 | -6.17 | 112.75      | 118.30   |
| 1   | I     | 96  | ASP  | CB-CG-OD2 | -6.17 | 112.75      | 118.30   |
| 1   | K     | 917 | ARG  | NE-CZ-NH2 | -6.17 | 117.22      | 120.30   |
| 1   | M     | 917 | ARG  | NE-CZ-NH2 | -6.17 | 117.22      | 120.30   |
| 1   | H     | 411 | ASP  | CB-CG-OD2 | -6.16 | 112.76      | 118.30   |
| 1   | I     | 772 | ASP  | CB-CG-OD1 | 6.16  | 123.84      | 118.30   |
| 1   | C     | 917 | ARG  | NE-CZ-NH2 | -6.16 | 117.22      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 917 | ARG  | NE-CZ-NH2 | -6.15 | 117.22      | 120.30   |
| 1   | N     | 411 | ASP  | CB-CG-OD2 | -6.15 | 112.76      | 118.30   |
| 1   | M     | 411 | ASP  | CB-CG-OD2 | -6.15 | 112.76      | 118.30   |
| 1   | P     | 772 | ASP  | CB-CG-OD1 | 6.15  | 123.84      | 118.30   |
| 1   | C     | 96  | ASP  | CB-CG-OD2 | -6.15 | 112.77      | 118.30   |
| 1   | N     | 96  | ASP  | CB-CG-OD2 | -6.15 | 112.77      | 118.30   |
| 1   | F     | 411 | ASP  | CB-CG-OD2 | -6.15 | 112.77      | 118.30   |
| 1   | M     | 96  | ASP  | CB-CG-OD2 | -6.15 | 112.77      | 118.30   |
| 1   | O     | 772 | ASP  | CB-CG-OD1 | 6.14  | 123.83      | 118.30   |
| 1   | B     | 411 | ASP  | CB-CG-OD2 | -6.14 | 112.77      | 118.30   |
| 1   | E     | 411 | ASP  | CB-CG-OD2 | -6.14 | 112.77      | 118.30   |
| 1   | J     | 411 | ASP  | CB-CG-OD2 | -6.14 | 112.77      | 118.30   |
| 1   | P     | 211 | ASP  | CB-CG-OD2 | -6.13 | 112.78      | 118.30   |
| 1   | O     | 411 | ASP  | CB-CG-OD2 | -6.13 | 112.78      | 118.30   |
| 1   | A     | 411 | ASP  | CB-CG-OD2 | -6.13 | 112.78      | 118.30   |
| 1   | P     | 917 | ARG  | NE-CZ-NH2 | -6.13 | 117.24      | 120.30   |
| 1   | C     | 411 | ASP  | CB-CG-OD2 | -6.13 | 112.78      | 118.30   |
| 1   | F     | 211 | ASP  | CB-CG-OD2 | -6.13 | 112.79      | 118.30   |
| 1   | N     | 772 | ASP  | CB-CG-OD1 | 6.13  | 123.81      | 118.30   |
| 1   | M     | 772 | ASP  | CB-CG-OD1 | 6.12  | 123.81      | 118.30   |
| 1   | A     | 772 | ASP  | CB-CG-OD1 | 6.12  | 123.80      | 118.30   |
| 1   | F     | 772 | ASP  | CB-CG-OD1 | 6.12  | 123.80      | 118.30   |
| 1   | I     | 411 | ASP  | CB-CG-OD2 | -6.12 | 112.80      | 118.30   |
| 1   | F     | 96  | ASP  | CB-CG-OD2 | -6.11 | 112.80      | 118.30   |
| 1   | J     | 772 | ASP  | CB-CG-OD1 | 6.11  | 123.80      | 118.30   |
| 1   | C     | 211 | ASP  | CB-CG-OD2 | -6.11 | 112.80      | 118.30   |
| 1   | C     | 772 | ASP  | CB-CG-OD1 | 6.11  | 123.80      | 118.30   |
| 1   | O     | 211 | ASP  | CB-CG-OD2 | -6.11 | 112.81      | 118.30   |
| 1   | B     | 211 | ASP  | CB-CG-OD2 | -6.10 | 112.81      | 118.30   |
| 1   | D     | 909 | ARG  | NE-CZ-NH1 | 6.10  | 123.35      | 120.30   |
| 1   | F     | 909 | ARG  | NE-CZ-NH1 | 6.10  | 123.35      | 120.30   |
| 1   | G     | 772 | ASP  | CB-CG-OD1 | 6.10  | 123.79      | 118.30   |
| 1   | K     | 411 | ASP  | CB-CG-OD2 | -6.10 | 112.81      | 118.30   |
| 1   | N     | 987 | ASP  | CB-CG-OD1 | 6.10  | 123.79      | 118.30   |
| 1   | P     | 411 | ASP  | CB-CG-OD2 | -6.09 | 112.82      | 118.30   |
| 1   | A     | 909 | ARG  | NE-CZ-NH1 | 6.09  | 123.34      | 120.30   |
| 1   | C     | 909 | ARG  | NE-CZ-NH1 | 6.09  | 123.34      | 120.30   |
| 1   | J     | 211 | ASP  | CB-CG-OD2 | -6.09 | 112.82      | 118.30   |
| 1   | K     | 211 | ASP  | CB-CG-OD2 | -6.09 | 112.82      | 118.30   |
| 1   | N     | 909 | ARG  | NE-CZ-NH1 | 6.09  | 123.34      | 120.30   |
| 1   | J     | 909 | ARG  | NE-CZ-NH1 | 6.09  | 123.34      | 120.30   |
| 1   | E     | 211 | ASP  | CB-CG-OD2 | -6.09 | 112.82      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | L     | 909  | ARG  | NE-CZ-NH1 | 6.08  | 123.34      | 120.30   |
| 1   | A     | 211  | ASP  | CB-CG-OD2 | -6.08 | 112.83      | 118.30   |
| 1   | K     | 909  | ARG  | NE-CZ-NH1 | 6.08  | 123.34      | 120.30   |
| 1   | G     | 211  | ASP  | CB-CG-OD2 | -6.08 | 112.83      | 118.30   |
| 1   | E     | 772  | ASP  | CB-CG-OD1 | 6.08  | 123.77      | 118.30   |
| 1   | H     | 211  | ASP  | CB-CG-OD2 | -6.08 | 112.83      | 118.30   |
| 1   | H     | 772  | ASP  | CB-CG-OD1 | 6.07  | 123.77      | 118.30   |
| 1   | E     | 987  | ASP  | CB-CG-OD1 | 6.07  | 123.76      | 118.30   |
| 1   | D     | 211  | ASP  | CB-CG-OD2 | -6.07 | 112.84      | 118.30   |
| 1   | F     | 179  | ALA  | N-CA-CB   | 6.07  | 118.60      | 110.10   |
| 1   | G     | 411  | ASP  | CB-CG-OD2 | -6.07 | 112.84      | 118.30   |
| 1   | A     | 987  | ASP  | CB-CG-OD1 | 6.07  | 123.76      | 118.30   |
| 1   | M     | 987  | ASP  | CB-CG-OD1 | 6.07  | 123.76      | 118.30   |
| 1   | I     | 909  | ARG  | NE-CZ-NH1 | 6.07  | 123.33      | 120.30   |
| 1   | K     | 772  | ASP  | CB-CG-OD1 | 6.07  | 123.76      | 118.30   |
| 1   | J     | 987  | ASP  | CB-CG-OD1 | 6.06  | 123.76      | 118.30   |
| 1   | C     | 292  | ARG  | NE-CZ-NH2 | -6.06 | 117.27      | 120.30   |
| 1   | D     | 772  | ASP  | CB-CG-OD1 | 6.06  | 123.76      | 118.30   |
| 1   | O     | 987  | ASP  | CB-CG-OD1 | 6.06  | 123.75      | 118.30   |
| 1   | H     | 292  | ARG  | NE-CZ-NH2 | -6.06 | 117.27      | 120.30   |
| 1   | G     | 909  | ARG  | NE-CZ-NH1 | 6.05  | 123.33      | 120.30   |
| 1   | I     | 292  | ARG  | NE-CZ-NH2 | -6.05 | 117.27      | 120.30   |
| 1   | K     | 987  | ASP  | CB-CG-OD1 | 6.05  | 123.75      | 118.30   |
| 1   | M     | 179  | ALA  | N-CA-CB   | 6.05  | 118.58      | 110.10   |
| 1   | O     | 1006 | GLU  | CG-CD-OE2 | -6.05 | 106.19      | 118.30   |
| 1   | B     | 772  | ASP  | CB-CG-OD1 | 6.05  | 123.75      | 118.30   |
| 1   | J     | 179  | ALA  | N-CA-CB   | 6.05  | 118.57      | 110.10   |
| 1   | O     | 179  | ALA  | N-CA-CB   | 6.05  | 118.57      | 110.10   |
| 1   | D     | 987  | ASP  | CB-CG-OD1 | 6.05  | 123.74      | 118.30   |
| 1   | N     | 211  | ASP  | CB-CG-OD2 | -6.05 | 112.86      | 118.30   |
| 1   | G     | 292  | ARG  | NE-CZ-NH2 | -6.05 | 117.28      | 120.30   |
| 1   | L     | 987  | ASP  | CB-CG-OD1 | 6.05  | 123.74      | 118.30   |
| 1   | C     | 987  | ASP  | CB-CG-OD1 | 6.05  | 123.74      | 118.30   |
| 1   | E     | 1006 | GLU  | CG-CD-OE2 | -6.05 | 106.21      | 118.30   |
| 1   | G     | 179  | ALA  | N-CA-CB   | 6.05  | 118.56      | 110.10   |
| 1   | J     | 1006 | GLU  | CG-CD-OE2 | -6.05 | 106.20      | 118.30   |
| 1   | K     | 179  | ALA  | N-CA-CB   | 6.05  | 118.56      | 110.10   |
| 1   | P     | 987  | ASP  | CB-CG-OD1 | 6.05  | 123.74      | 118.30   |
| 1   | B     | 1006 | GLU  | CG-CD-OE2 | -6.04 | 106.21      | 118.30   |
| 1   | B     | 987  | ASP  | CB-CG-OD1 | 6.04  | 123.74      | 118.30   |
| 1   | K     | 1018 | LEU  | CB-CG-CD2 | -6.04 | 100.73      | 111.00   |
| 1   | L     | 211  | ASP  | CB-CG-OD2 | -6.04 | 112.86      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | L     | 292  | ARG  | NE-CZ-NH2 | -6.04 | 117.28      | 120.30   |
| 1   | P     | 909  | ARG  | NE-CZ-NH1 | 6.04  | 123.32      | 120.30   |
| 1   | P     | 1006 | GLU  | CG-CD-OE2 | -6.04 | 106.21      | 118.30   |
| 1   | H     | 987  | ASP  | CB-CG-OD1 | 6.04  | 123.74      | 118.30   |
| 1   | L     | 179  | ALA  | N-CA-CB   | 6.04  | 118.56      | 110.10   |
| 1   | I     | 211  | ASP  | CB-CG-OD2 | -6.04 | 112.86      | 118.30   |
| 1   | A     | 179  | ALA  | N-CA-CB   | 6.04  | 118.55      | 110.10   |
| 1   | E     | 179  | ALA  | N-CA-CB   | 6.04  | 118.55      | 110.10   |
| 1   | E     | 292  | ARG  | NE-CZ-NH2 | -6.04 | 117.28      | 120.30   |
| 1   | A     | 292  | ARG  | NE-CZ-NH2 | -6.04 | 117.28      | 120.30   |
| 1   | F     | 1006 | GLU  | CG-CD-OE2 | -6.04 | 106.23      | 118.30   |
| 1   | A     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.23      | 118.30   |
| 1   | G     | 1018 | LEU  | CB-CG-CD2 | -6.03 | 100.74      | 111.00   |
| 1   | L     | 772  | ASP  | CB-CG-OD1 | 6.03  | 123.73      | 118.30   |
| 1   | P     | 1018 | LEU  | CB-CG-CD2 | -6.03 | 100.75      | 111.00   |
| 1   | M     | 211  | ASP  | CB-CG-OD2 | -6.03 | 112.87      | 118.30   |
| 1   | D     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.24      | 118.30   |
| 1   | G     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.24      | 118.30   |
| 1   | H     | 179  | ALA  | N-CA-CB   | 6.03  | 118.54      | 110.10   |
| 1   | I     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.25      | 118.30   |
| 1   | M     | 909  | ARG  | NE-CZ-NH1 | 6.03  | 123.31      | 120.30   |
| 1   | N     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.25      | 118.30   |
| 1   | N     | 1018 | LEU  | CB-CG-CD2 | -6.03 | 100.75      | 111.00   |
| 1   | C     | 1006 | GLU  | CG-CD-OE2 | -6.03 | 106.25      | 118.30   |
| 1   | C     | 1018 | LEU  | CB-CG-CD2 | -6.03 | 100.76      | 111.00   |
| 1   | I     | 987  | ASP  | CB-CG-OD1 | 6.03  | 123.72      | 118.30   |
| 1   | B     | 909  | ARG  | NE-CZ-NH1 | 6.02  | 123.31      | 120.30   |
| 1   | C     | 179  | ALA  | N-CA-CB   | 6.02  | 118.53      | 110.10   |
| 1   | E     | 1018 | LEU  | CB-CG-CD2 | -6.02 | 100.76      | 111.00   |
| 1   | G     | 987  | ASP  | CB-CG-OD1 | 6.02  | 123.72      | 118.30   |
| 1   | K     | 1006 | GLU  | CG-CD-OE2 | -6.02 | 106.25      | 118.30   |
| 1   | L     | 1018 | LEU  | CB-CG-CD2 | -6.02 | 100.77      | 111.00   |
| 1   | A     | 1018 | LEU  | CB-CG-CD2 | -6.02 | 100.77      | 111.00   |
| 1   | D     | 1018 | LEU  | CB-CG-CD2 | -6.02 | 100.77      | 111.00   |
| 1   | F     | 987  | ASP  | CB-CG-OD1 | 6.02  | 123.72      | 118.30   |
| 1   | N     | 179  | ALA  | N-CA-CB   | 6.02  | 118.53      | 110.10   |
| 1   | F     | 292  | ARG  | NE-CZ-NH2 | -6.02 | 117.29      | 120.30   |
| 1   | L     | 1006 | GLU  | CG-CD-OE2 | -6.02 | 106.27      | 118.30   |
| 1   | B     | 179  | ALA  | N-CA-CB   | 6.02  | 118.52      | 110.10   |
| 1   | J     | 1018 | LEU  | CB-CG-CD2 | -6.01 | 100.77      | 111.00   |
| 1   | M     | 1018 | LEU  | CB-CG-CD2 | -6.01 | 100.78      | 111.00   |
| 1   | D     | 179  | ALA  | N-CA-CB   | 6.01  | 118.51      | 110.10   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | F     | 1018 | LEU  | CB-CG-CD2 | -6.01 | 100.78      | 111.00   |
| 1   | H     | 1006 | GLU  | CG-CD-OE2 | -6.01 | 106.28      | 118.30   |
| 1   | O     | 1018 | LEU  | CB-CG-CD2 | -6.01 | 100.78      | 111.00   |
| 1   | I     | 1018 | LEU  | CB-CG-CD2 | -6.01 | 100.79      | 111.00   |
| 1   | K     | 292  | ARG  | NE-CZ-NH2 | -6.01 | 117.30      | 120.30   |
| 1   | M     | 1006 | GLU  | CG-CD-OE2 | -6.01 | 106.29      | 118.30   |
| 1   | M     | 292  | ARG  | NE-CZ-NH2 | -6.00 | 117.30      | 120.30   |
| 1   | I     | 179  | ALA  | N-CA-CB   | 6.00  | 118.50      | 110.10   |
| 1   | B     | 1018 | LEU  | CB-CG-CD2 | -6.00 | 100.80      | 111.00   |
| 1   | H     | 1018 | LEU  | CB-CG-CD2 | -6.00 | 100.80      | 111.00   |
| 1   | P     | 179  | ALA  | N-CA-CB   | 5.99  | 118.49      | 110.10   |
| 1   | L     | 800  | ARG  | NE-CZ-NH2 | -5.99 | 117.31      | 120.30   |
| 1   | O     | 333  | ARG  | NE-CZ-NH1 | 5.99  | 123.30      | 120.30   |
| 1   | J     | 292  | ARG  | NE-CZ-NH2 | -5.98 | 117.31      | 120.30   |
| 1   | D     | 919  | ASP  | CB-CG-OD1 | 5.98  | 123.68      | 118.30   |
| 1   | E     | 909  | ARG  | NE-CZ-NH1 | 5.97  | 123.29      | 120.30   |
| 1   | J     | 919  | ASP  | CB-CG-OD1 | 5.97  | 123.67      | 118.30   |
| 1   | E     | 648  | ASP  | CB-CG-OD1 | 5.97  | 123.67      | 118.30   |
| 1   | D     | 292  | ARG  | NE-CZ-NH2 | -5.97 | 117.32      | 120.30   |
| 1   | N     | 333  | ARG  | NE-CZ-NH1 | 5.97  | 123.28      | 120.30   |
| 1   | M     | 1013 | ARG  | NE-CZ-NH2 | -5.96 | 117.32      | 120.30   |
| 1   | H     | 909  | ARG  | NE-CZ-NH1 | 5.96  | 123.28      | 120.30   |
| 1   | C     | 234  | ASP  | CB-CG-OD2 | -5.96 | 112.94      | 118.30   |
| 1   | C     | 958  | ASN  | N-CA-CB   | 5.96  | 121.33      | 110.60   |
| 1   | N     | 292  | ARG  | NE-CZ-NH2 | -5.96 | 117.32      | 120.30   |
| 1   | A     | 919  | ASP  | CB-CG-OD1 | 5.96  | 123.66      | 118.30   |
| 1   | C     | 919  | ASP  | CB-CG-OD1 | 5.96  | 123.66      | 118.30   |
| 1   | E     | 919  | ASP  | CB-CG-OD1 | 5.96  | 123.66      | 118.30   |
| 1   | O     | 909  | ARG  | NE-CZ-NH1 | 5.95  | 123.28      | 120.30   |
| 1   | G     | 255  | ARG  | NE-CZ-NH1 | 5.95  | 123.28      | 120.30   |
| 1   | P     | 919  | ASP  | CB-CG-OD1 | 5.95  | 123.66      | 118.30   |
| 1   | F     | 648  | ASP  | CB-CG-OD1 | 5.95  | 123.66      | 118.30   |
| 1   | B     | 234  | ASP  | CB-CG-OD2 | -5.95 | 112.95      | 118.30   |
| 1   | N     | 1013 | ARG  | NE-CZ-NH2 | -5.95 | 117.33      | 120.30   |
| 1   | O     | 255  | ARG  | NE-CZ-NH1 | 5.95  | 123.28      | 120.30   |
| 1   | E     | 958  | ASN  | N-CA-CB   | 5.95  | 121.30      | 110.60   |
| 1   | I     | 919  | ASP  | CB-CG-OD1 | 5.95  | 123.65      | 118.30   |
| 1   | F     | 919  | ASP  | CB-CG-OD1 | 5.95  | 123.65      | 118.30   |
| 1   | I     | 255  | ARG  | NE-CZ-NH1 | 5.95  | 123.27      | 120.30   |
| 1   | I     | 800  | ARG  | NE-CZ-NH2 | -5.95 | 117.33      | 120.30   |
| 1   | K     | 919  | ASP  | CB-CG-OD1 | 5.95  | 123.65      | 118.30   |
| 1   | G     | 1013 | ARG  | NE-CZ-NH2 | -5.94 | 117.33      | 120.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | M     | 648  | ASP  | CB-CG-OD1 | 5.94  | 123.65      | 118.30   |
| 1   | D     | 45   | ASP  | CB-CG-OD2 | -5.94 | 112.95      | 118.30   |
| 1   | C     | 333  | ARG  | NE-CZ-NH1 | 5.94  | 123.27      | 120.30   |
| 1   | L     | 648  | ASP  | CB-CG-OD1 | 5.94  | 123.64      | 118.30   |
| 1   | N     | 919  | ASP  | CB-CG-OD1 | 5.94  | 123.64      | 118.30   |
| 1   | A     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | I     | 648  | ASP  | CB-CG-OD1 | 5.93  | 123.64      | 118.30   |
| 1   | P     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | B     | 919  | ASP  | CB-CG-OD1 | 5.93  | 123.64      | 118.30   |
| 1   | B     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | N     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | O     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | F     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | G     | 958  | ASN  | N-CA-CB   | 5.93  | 121.28      | 110.60   |
| 1   | D     | 1013 | ARG  | NE-CZ-NH2 | -5.93 | 117.34      | 120.30   |
| 1   | L     | 919  | ASP  | CB-CG-OD1 | 5.93  | 123.64      | 118.30   |
| 1   | M     | 333  | ARG  | NE-CZ-NH1 | 5.93  | 123.26      | 120.30   |
| 1   | J     | 648  | ASP  | CB-CG-OD1 | 5.93  | 123.64      | 118.30   |
| 1   | M     | 919  | ASP  | CB-CG-OD1 | 5.93  | 123.63      | 118.30   |
| 1   | G     | 45   | ASP  | CB-CG-OD2 | -5.92 | 112.97      | 118.30   |
| 1   | H     | 958  | ASN  | N-CA-CB   | 5.92  | 121.26      | 110.60   |
| 1   | F     | 234  | ASP  | CB-CG-OD2 | -5.92 | 112.97      | 118.30   |
| 1   | O     | 234  | ASP  | CB-CG-OD2 | -5.92 | 112.97      | 118.30   |
| 1   | F     | 45   | ASP  | CB-CG-OD2 | -5.92 | 112.97      | 118.30   |
| 1   | L     | 958  | ASN  | N-CA-CB   | 5.92  | 121.26      | 110.60   |
| 1   | H     | 919  | ASP  | CB-CG-OD1 | 5.92  | 123.63      | 118.30   |
| 1   | A     | 648  | ASP  | CB-CG-OD1 | 5.92  | 123.63      | 118.30   |
| 1   | E     | 1013 | ARG  | NE-CZ-NH2 | -5.92 | 117.34      | 120.30   |
| 1   | F     | 333  | ARG  | NE-CZ-NH1 | 5.92  | 123.26      | 120.30   |
| 1   | G     | 919  | ASP  | CB-CG-OD1 | 5.92  | 123.63      | 118.30   |
| 1   | I     | 958  | ASN  | N-CA-CB   | 5.92  | 121.25      | 110.60   |
| 1   | K     | 958  | ASN  | N-CA-CB   | 5.92  | 121.25      | 110.60   |
| 1   | P     | 255  | ARG  | NE-CZ-NH1 | 5.92  | 123.26      | 120.30   |
| 1   | D     | 958  | ASN  | N-CA-CB   | 5.92  | 121.25      | 110.60   |
| 1   | H     | 648  | ASP  | CB-CG-OD1 | 5.92  | 123.62      | 118.30   |
| 1   | A     | 234  | ASP  | CB-CG-OD2 | -5.92 | 112.98      | 118.30   |
| 1   | J     | 45   | ASP  | CB-CG-OD2 | -5.92 | 112.98      | 118.30   |
| 1   | J     | 958  | ASN  | N-CA-CB   | 5.91  | 121.25      | 110.60   |
| 1   | O     | 648  | ASP  | CB-CG-OD1 | 5.91  | 123.62      | 118.30   |
| 1   | P     | 292  | ARG  | NE-CZ-NH2 | -5.91 | 117.34      | 120.30   |
| 1   | O     | 800  | ARG  | NE-CZ-NH2 | -5.91 | 117.34      | 120.30   |
| 1   | B     | 45   | ASP  | CB-CG-OD2 | -5.91 | 112.98      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | C     | 648  | ASP  | CB-CG-OD1 | 5.91  | 123.62      | 118.30   |
| 1   | K     | 234  | ASP  | CB-CG-OD2 | -5.91 | 112.98      | 118.30   |
| 1   | L     | 255  | ARG  | NE-CZ-NH1 | 5.91  | 123.25      | 120.30   |
| 1   | K     | 648  | ASP  | CB-CG-OD1 | 5.91  | 123.62      | 118.30   |
| 1   | B     | 292  | ARG  | NE-CZ-NH2 | -5.90 | 117.35      | 120.30   |
| 1   | B     | 648  | ASP  | CB-CG-OD1 | 5.90  | 123.61      | 118.30   |
| 1   | M     | 958  | ASN  | N-CA-CB   | 5.90  | 121.22      | 110.60   |
| 1   | F     | 255  | ARG  | NE-CZ-NH1 | 5.90  | 123.25      | 120.30   |
| 1   | J     | 255  | ARG  | NE-CZ-NH1 | 5.90  | 123.25      | 120.30   |
| 1   | K     | 800  | ARG  | NE-CZ-NH2 | -5.90 | 117.35      | 120.30   |
| 1   | L     | 45   | ASP  | CB-CG-OD2 | -5.90 | 112.99      | 118.30   |
| 1   | O     | 45   | ASP  | CB-CG-OD2 | -5.90 | 112.99      | 118.30   |
| 1   | C     | 800  | ARG  | NE-CZ-NH2 | -5.90 | 117.35      | 120.30   |
| 1   | G     | 234  | ASP  | CB-CG-OD2 | -5.90 | 112.99      | 118.30   |
| 1   | N     | 648  | ASP  | CB-CG-OD1 | 5.90  | 123.61      | 118.30   |
| 1   | B     | 255  | ARG  | NE-CZ-NH1 | 5.90  | 123.25      | 120.30   |
| 1   | E     | 45   | ASP  | CB-CG-OD2 | -5.90 | 112.99      | 118.30   |
| 1   | A     | 45   | ASP  | CB-CG-OD2 | -5.89 | 113.00      | 118.30   |
| 1   | P     | 234  | ASP  | CB-CG-OD2 | -5.89 | 113.00      | 118.30   |
| 1   | D     | 648  | ASP  | CB-CG-OD1 | 5.89  | 123.60      | 118.30   |
| 1   | C     | 45   | ASP  | CB-CG-OD2 | -5.89 | 113.00      | 118.30   |
| 1   | H     | 800  | ARG  | NE-CZ-NH2 | -5.89 | 117.36      | 120.30   |
| 1   | B     | 1013 | ARG  | NE-CZ-NH2 | -5.89 | 117.36      | 120.30   |
| 1   | H     | 1013 | ARG  | NE-CZ-NH2 | -5.89 | 117.36      | 120.30   |
| 1   | P     | 45   | ASP  | CB-CG-OD2 | -5.89 | 113.00      | 118.30   |
| 1   | P     | 333  | ARG  | NE-CZ-NH1 | 5.88  | 123.24      | 120.30   |
| 1   | P     | 648  | ASP  | CB-CG-OD1 | 5.88  | 123.59      | 118.30   |
| 1   | H     | 234  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | L     | 234  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | P     | 800  | ARG  | NE-CZ-NH2 | -5.88 | 117.36      | 120.30   |
| 1   | G     | 648  | ASP  | CB-CG-OD1 | 5.88  | 123.59      | 118.30   |
| 1   | K     | 333  | ARG  | NE-CZ-NH1 | 5.88  | 123.24      | 120.30   |
| 1   | N     | 234  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | B     | 800  | ARG  | NE-CZ-NH2 | -5.88 | 117.36      | 120.30   |
| 1   | D     | 800  | ARG  | NE-CZ-NH2 | -5.88 | 117.36      | 120.30   |
| 1   | L     | 1013 | ARG  | NE-CZ-NH2 | -5.88 | 117.36      | 120.30   |
| 1   | M     | 875  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | E     | 234  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | M     | 234  | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | N     | 45   | ASP  | CB-CG-OD2 | -5.88 | 113.01      | 118.30   |
| 1   | O     | 919  | ASP  | CB-CG-OD1 | 5.88  | 123.59      | 118.30   |
| 1   | B     | 333  | ARG  | NE-CZ-NH1 | 5.88  | 123.24      | 120.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | D     | 559  | TYR  | CB-CG-CD1 | 5.88  | 124.53      | 121.00   |
| 1   | K     | 45   | ASP  | CB-CG-OD2 | -5.87 | 113.01      | 118.30   |
| 1   | M     | 255  | ARG  | NE-CZ-NH1 | 5.87  | 123.23      | 120.30   |
| 1   | A     | 1013 | ARG  | NE-CZ-NH2 | -5.87 | 117.37      | 120.30   |
| 1   | D     | 255  | ARG  | NE-CZ-NH1 | 5.87  | 123.23      | 120.30   |
| 1   | I     | 45   | ASP  | CB-CG-OD2 | -5.87 | 113.02      | 118.30   |
| 1   | J     | 234  | ASP  | CB-CG-OD2 | -5.87 | 113.02      | 118.30   |
| 1   | A     | 333  | ARG  | NE-CZ-NH1 | 5.87  | 123.23      | 120.30   |
| 1   | J     | 800  | ARG  | NE-CZ-NH2 | -5.87 | 117.37      | 120.30   |
| 1   | D     | 333  | ARG  | NE-CZ-NH1 | 5.86  | 123.23      | 120.30   |
| 1   | H     | 333  | ARG  | NE-CZ-NH1 | 5.86  | 123.23      | 120.30   |
| 1   | D     | 234  | ASP  | CB-CG-OD2 | -5.86 | 113.03      | 118.30   |
| 1   | C     | 1013 | ARG  | NE-CZ-NH2 | -5.86 | 117.37      | 120.30   |
| 1   | G     | 46   | ARG  | NE-CZ-NH1 | 5.86  | 123.23      | 120.30   |
| 1   | H     | 206  | SER  | N-CA-CB   | 5.86  | 119.29      | 110.50   |
| 1   | M     | 45   | ASP  | CB-CG-OD2 | -5.86 | 113.03      | 118.30   |
| 1   | O     | 292  | ARG  | NE-CZ-NH2 | -5.86 | 117.37      | 120.30   |
| 1   | F     | 1013 | ARG  | NE-CZ-NH2 | -5.86 | 117.37      | 120.30   |
| 1   | G     | 875  | ASP  | CB-CG-OD2 | -5.86 | 113.03      | 118.30   |
| 1   | M     | 206  | SER  | N-CA-CB   | 5.85  | 119.27      | 110.50   |
| 1   | L     | 333  | ARG  | NE-CZ-NH1 | 5.85  | 123.22      | 120.30   |
| 1   | E     | 333  | ARG  | NE-CZ-NH1 | 5.85  | 123.22      | 120.30   |
| 1   | N     | 206  | SER  | N-CA-CB   | 5.85  | 119.27      | 110.50   |
| 1   | E     | 255  | ARG  | NE-CZ-NH1 | 5.84  | 123.22      | 120.30   |
| 1   | F     | 206  | SER  | N-CA-CB   | 5.84  | 119.27      | 110.50   |
| 1   | B     | 206  | SER  | N-CA-CB   | 5.84  | 119.26      | 110.50   |
| 1   | K     | 206  | SER  | N-CA-CB   | 5.84  | 119.26      | 110.50   |
| 1   | N     | 800  | ARG  | NE-CZ-NH2 | -5.84 | 117.38      | 120.30   |
| 1   | C     | 206  | SER  | N-CA-CB   | 5.84  | 119.26      | 110.50   |
| 1   | D     | 875  | ASP  | CB-CG-OD2 | -5.84 | 113.05      | 118.30   |
| 1   | O     | 559  | TYR  | CB-CG-CD1 | 5.84  | 124.50      | 121.00   |
| 1   | P     | 206  | SER  | N-CA-CB   | 5.84  | 119.26      | 110.50   |
| 1   | E     | 875  | ASP  | CB-CG-OD2 | -5.84 | 113.05      | 118.30   |
| 1   | G     | 800  | ARG  | NE-CZ-NH2 | -5.84 | 117.38      | 120.30   |
| 1   | I     | 234  | ASP  | CB-CG-OD2 | -5.84 | 113.05      | 118.30   |
| 1   | I     | 333  | ARG  | NE-CZ-NH1 | 5.84  | 123.22      | 120.30   |
| 1   | J     | 206  | SER  | N-CA-CB   | 5.84  | 119.26      | 110.50   |
| 1   | A     | 255  | ARG  | NE-CZ-NH1 | 5.83  | 123.22      | 120.30   |
| 1   | J     | 333  | ARG  | NE-CZ-NH1 | 5.83  | 123.22      | 120.30   |
| 1   | K     | 255  | ARG  | NE-CZ-NH1 | 5.83  | 123.22      | 120.30   |
| 1   | A     | 206  | SER  | N-CA-CB   | 5.83  | 119.25      | 110.50   |
| 1   | L     | 875  | ASP  | CB-CG-OD2 | -5.83 | 113.05      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1   | G     | 126  | THR  | CA-CB-CG2  | -5.83 | 104.24      | 112.40   |
| 1   | H     | 255  | ARG  | NE-CZ-NH1  | 5.83  | 123.21      | 120.30   |
| 1   | O     | 206  | SER  | N-CA-CB    | 5.83  | 119.24      | 110.50   |
| 1   | F     | 800  | ARG  | NE-CZ-NH2  | -5.83 | 117.39      | 120.30   |
| 1   | H     | 45   | ASP  | CB-CG-OD2  | -5.83 | 113.06      | 118.30   |
| 1   | A     | 875  | ASP  | CB-CG-OD2  | -5.83 | 113.06      | 118.30   |
| 1   | C     | 255  | ARG  | NE-CZ-NH1  | 5.83  | 123.21      | 120.30   |
| 1   | K     | 1013 | ARG  | NE-CZ-NH2  | -5.83 | 117.39      | 120.30   |
| 1   | P     | 1013 | ARG  | NE-CZ-NH2  | -5.83 | 117.39      | 120.30   |
| 1   | E     | 800  | ARG  | NE-CZ-NH2  | -5.82 | 117.39      | 120.30   |
| 1   | L     | 559  | TYR  | CB-CG-CD1  | 5.82  | 124.50      | 121.00   |
| 1   | B     | 387  | VAL  | CG1-CB-CG2 | -5.82 | 101.58      | 110.90   |
| 1   | F     | 875  | ASP  | CB-CG-OD2  | -5.82 | 113.06      | 118.30   |
| 1   | P     | 875  | ASP  | CB-CG-OD2  | -5.82 | 113.06      | 118.30   |
| 1   | D     | 46   | ARG  | NE-CZ-NH1  | 5.82  | 123.21      | 120.30   |
| 1   | D     | 206  | SER  | N-CA-CB    | 5.82  | 119.23      | 110.50   |
| 1   | I     | 206  | SER  | N-CA-CB    | 5.82  | 119.22      | 110.50   |
| 1   | M     | 800  | ARG  | NE-CZ-NH2  | -5.82 | 117.39      | 120.30   |
| 1   | H     | 126  | THR  | CA-CB-CG2  | -5.81 | 104.26      | 112.40   |
| 1   | L     | 206  | SER  | N-CA-CB    | 5.81  | 119.22      | 110.50   |
| 1   | E     | 46   | ARG  | NE-CZ-NH1  | 5.81  | 123.21      | 120.30   |
| 1   | C     | 387  | VAL  | CG1-CB-CG2 | -5.81 | 101.61      | 110.90   |
| 1   | D     | 387  | VAL  | CG1-CB-CG2 | -5.81 | 101.60      | 110.90   |
| 1   | E     | 206  | SER  | N-CA-CB    | 5.81  | 119.22      | 110.50   |
| 1   | G     | 206  | SER  | N-CA-CB    | 5.81  | 119.22      | 110.50   |
| 1   | K     | 387  | VAL  | CG1-CB-CG2 | -5.81 | 101.61      | 110.90   |
| 1   | M     | 387  | VAL  | CG1-CB-CG2 | -5.81 | 101.61      | 110.90   |
| 1   | N     | 255  | ARG  | NE-CZ-NH1  | 5.81  | 123.20      | 120.30   |
| 1   | B     | 126  | THR  | CA-CB-CG2  | -5.81 | 104.27      | 112.40   |
| 1   | H     | 875  | ASP  | CB-CG-OD2  | -5.80 | 113.08      | 118.30   |
| 1   | F     | 387  | VAL  | CG1-CB-CG2 | -5.80 | 101.62      | 110.90   |
| 1   | J     | 46   | ARG  | NE-CZ-NH1  | 5.80  | 123.20      | 120.30   |
| 1   | L     | 126  | THR  | CA-CB-CG2  | -5.80 | 104.28      | 112.40   |
| 1   | J     | 1013 | ARG  | NE-CZ-NH2  | -5.80 | 117.40      | 120.30   |
| 1   | O     | 1013 | ARG  | NE-CZ-NH2  | -5.80 | 117.40      | 120.30   |
| 1   | B     | 46   | ARG  | NE-CZ-NH1  | 5.80  | 123.20      | 120.30   |
| 1   | C     | 46   | ARG  | NE-CZ-NH1  | 5.80  | 123.20      | 120.30   |
| 1   | N     | 875  | ASP  | CB-CG-OD2  | -5.80 | 113.08      | 118.30   |
| 1   | O     | 679  | LEU  | CA-CB-CG   | -5.80 | 101.97      | 115.30   |
| 1   | G     | 679  | LEU  | CA-CB-CG   | -5.80 | 101.97      | 115.30   |
| 1   | I     | 1013 | ARG  | NE-CZ-NH2  | -5.80 | 117.40      | 120.30   |
| 1   | M     | 126  | THR  | CA-CB-CG2  | -5.80 | 104.28      | 112.40   |

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| Mol | Chain | Res  | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1   | N     | 679  | LEU  | CA-CB-CG   | -5.80 | 101.97      | 115.30   |
| 1   | B     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.97      | 115.30   |
| 1   | B     | 875  | ASP  | CB-CG-OD2  | -5.79 | 113.08      | 118.30   |
| 1   | D     | 126  | THR  | CA-CB-CG2  | -5.79 | 104.29      | 112.40   |
| 1   | I     | 387  | VAL  | CG1-CB-CG2 | -5.79 | 101.63      | 110.90   |
| 1   | K     | 671  | ASP  | CB-CG-OD2  | -5.79 | 113.09      | 118.30   |
| 1   | A     | 800  | ARG  | NE-CZ-NH2  | -5.79 | 117.40      | 120.30   |
| 1   | C     | 166  | ARG  | NE-CZ-NH2  | -5.79 | 117.41      | 120.30   |
| 1   | H     | 1006 | GLU  | CB-CA-C    | -5.79 | 98.82       | 110.40   |
| 1   | I     | 559  | TYR  | CB-CG-CD1  | 5.79  | 124.47      | 121.00   |
| 1   | I     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.98      | 115.30   |
| 1   | E     | 559  | TYR  | CB-CG-CD1  | 5.79  | 124.47      | 121.00   |
| 1   | E     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.98      | 115.30   |
| 1   | J     | 166  | ARG  | NE-CZ-NH2  | -5.79 | 117.41      | 120.30   |
| 1   | B     | 166  | ARG  | NE-CZ-NH2  | -5.79 | 117.41      | 120.30   |
| 1   | I     | 126  | THR  | CA-CB-CG2  | -5.79 | 104.30      | 112.40   |
| 1   | J     | 126  | THR  | CA-CB-CG2  | -5.79 | 104.30      | 112.40   |
| 1   | M     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.99      | 115.30   |
| 1   | O     | 387  | VAL  | CG1-CB-CG2 | -5.79 | 101.64      | 110.90   |
| 1   | P     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.98      | 115.30   |
| 1   | F     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.99      | 115.30   |
| 1   | J     | 387  | VAL  | CG1-CB-CG2 | -5.79 | 101.64      | 110.90   |
| 1   | K     | 875  | ASP  | CB-CG-OD2  | -5.79 | 113.09      | 118.30   |
| 1   | A     | 559  | TYR  | CB-CG-CD1  | 5.79  | 124.47      | 121.00   |
| 1   | A     | 679  | LEU  | CA-CB-CG   | -5.79 | 101.99      | 115.30   |
| 1   | E     | 492  | ASP  | CB-CG-OD1  | 5.79  | 123.51      | 118.30   |
| 1   | E     | 1006 | GLU  | CB-CA-C    | -5.79 | 98.83       | 110.40   |
| 1   | A     | 126  | THR  | CA-CB-CG2  | -5.78 | 104.30      | 112.40   |
| 1   | C     | 679  | LEU  | CA-CB-CG   | -5.78 | 102.00      | 115.30   |
| 1   | K     | 126  | THR  | CA-CB-CG2  | -5.78 | 104.30      | 112.40   |
| 1   | D     | 166  | ARG  | NE-CZ-NH2  | -5.78 | 117.41      | 120.30   |
| 1   | J     | 679  | LEU  | CA-CB-CG   | -5.78 | 102.00      | 115.30   |
| 1   | J     | 875  | ASP  | CB-CG-OD2  | -5.78 | 113.10      | 118.30   |
| 1   | A     | 387  | VAL  | CG1-CB-CG2 | -5.78 | 101.65      | 110.90   |
| 1   | D     | 679  | LEU  | CA-CB-CG   | -5.78 | 102.00      | 115.30   |
| 1   | L     | 497  | ASP  | CB-CG-OD1  | 5.78  | 123.50      | 118.30   |
| 1   | L     | 671  | ASP  | CB-CG-OD2  | -5.78 | 113.10      | 118.30   |
| 1   | M     | 492  | ASP  | CB-CG-OD1  | 5.78  | 123.50      | 118.30   |
| 1   | O     | 126  | THR  | CA-CB-CG2  | -5.78 | 104.31      | 112.40   |
| 1   | C     | 875  | ASP  | CB-CG-OD2  | -5.78 | 113.10      | 118.30   |
| 1   | E     | 126  | THR  | CA-CB-CG2  | -5.78 | 104.31      | 112.40   |
| 1   | H     | 679  | LEU  | CA-CB-CG   | -5.78 | 102.01      | 115.30   |

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| Mol | Chain | Res  | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1   | K     | 679  | LEU  | CA-CB-CG   | -5.78 | 102.01      | 115.30   |
| 1   | N     | 559  | TYR  | CB-CG-CD1  | 5.78  | 124.47      | 121.00   |
| 1   | P     | 387  | VAL  | CG1-CB-CG2 | -5.78 | 101.66      | 110.90   |
| 1   | N     | 569  | ASP  | CB-CG-OD2  | -5.77 | 113.10      | 118.30   |
| 1   | O     | 875  | ASP  | CB-CG-OD2  | -5.77 | 113.10      | 118.30   |
| 1   | G     | 387  | VAL  | CG1-CB-CG2 | -5.77 | 101.67      | 110.90   |
| 1   | L     | 387  | VAL  | CG1-CB-CG2 | -5.77 | 101.67      | 110.90   |
| 1   | M     | 166  | ARG  | NE-CZ-NH2  | -5.77 | 117.41      | 120.30   |
| 1   | N     | 126  | THR  | CA-CB-CG2  | -5.77 | 104.32      | 112.40   |
| 1   | H     | 375  | ASP  | CB-CG-OD1  | 5.77  | 123.49      | 118.30   |
| 1   | M     | 388  | ARG  | NE-CZ-NH1  | 5.77  | 123.19      | 120.30   |
| 1   | B     | 497  | ASP  | CB-CG-OD1  | 5.77  | 123.49      | 118.30   |
| 1   | E     | 387  | VAL  | CG1-CB-CG2 | -5.77 | 101.67      | 110.90   |
| 1   | F     | 559  | TYR  | CB-CG-CD1  | 5.77  | 124.46      | 121.00   |
| 1   | F     | 671  | ASP  | CB-CG-OD2  | -5.77 | 113.11      | 118.30   |
| 1   | G     | 1006 | GLU  | CB-CA-C    | -5.77 | 98.86       | 110.40   |
| 1   | M     | 1006 | GLU  | CB-CA-C    | -5.77 | 98.86       | 110.40   |
| 1   | P     | 126  | THR  | CA-CB-CG2  | -5.77 | 104.32      | 112.40   |
| 1   | L     | 1006 | GLU  | CB-CA-C    | -5.77 | 98.86       | 110.40   |
| 1   | P     | 1006 | GLU  | CB-CA-C    | -5.77 | 98.86       | 110.40   |
| 1   | A     | 1006 | GLU  | CB-CA-C    | -5.77 | 98.87       | 110.40   |
| 1   | C     | 126  | THR  | CA-CB-CG2  | -5.77 | 104.33      | 112.40   |
| 1   | F     | 126  | THR  | CA-CB-CG2  | -5.77 | 104.33      | 112.40   |
| 1   | B     | 1006 | GLU  | CB-CA-C    | -5.76 | 98.87       | 110.40   |
| 1   | C     | 559  | TYR  | CB-CG-CD1  | 5.76  | 124.46      | 121.00   |
| 1   | D     | 569  | ASP  | CB-CG-OD2  | -5.76 | 113.11      | 118.30   |
| 1   | D     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.11      | 118.30   |
| 1   | H     | 569  | ASP  | CB-CG-OD2  | -5.76 | 113.11      | 118.30   |
| 1   | L     | 679  | LEU  | CA-CB-CG   | -5.76 | 102.04      | 115.30   |
| 1   | N     | 497  | ASP  | CB-CG-OD1  | 5.76  | 123.49      | 118.30   |
| 1   | G     | 333  | ARG  | NE-CZ-NH1  | 5.76  | 123.18      | 120.30   |
| 1   | J     | 559  | TYR  | CB-CG-CD1  | 5.76  | 124.46      | 121.00   |
| 1   | G     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.11      | 118.30   |
| 1   | H     | 559  | TYR  | CB-CG-CD1  | 5.76  | 124.46      | 121.00   |
| 1   | I     | 1006 | GLU  | CB-CA-C    | -5.76 | 98.88       | 110.40   |
| 1   | J     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.11      | 118.30   |
| 1   | M     | 559  | TYR  | CB-CG-CD1  | 5.76  | 124.46      | 121.00   |
| 1   | N     | 1006 | GLU  | CB-CA-C    | -5.76 | 98.88       | 110.40   |
| 1   | A     | 46   | ARG  | NE-CZ-NH1  | 5.76  | 123.18      | 120.30   |
| 1   | C     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.12      | 118.30   |
| 1   | C     | 1006 | GLU  | CB-CA-C    | -5.76 | 98.88       | 110.40   |
| 1   | G     | 492  | ASP  | CB-CG-OD1  | 5.76  | 123.48      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1   | H     | 387  | VAL  | CG1-CB-CG2 | -5.76 | 101.69      | 110.90   |
| 1   | N     | 387  | VAL  | CG1-CB-CG2 | -5.76 | 101.68      | 110.90   |
| 1   | P     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.12      | 118.30   |
| 1   | K     | 492  | ASP  | CB-CG-OD1  | 5.76  | 123.48      | 118.30   |
| 1   | N     | 166  | ARG  | NE-CZ-NH2  | -5.76 | 117.42      | 120.30   |
| 1   | K     | 1006 | GLU  | CB-CA-C    | -5.76 | 98.89       | 110.40   |
| 1   | L     | 166  | ARG  | NE-CZ-NH2  | -5.76 | 117.42      | 120.30   |
| 1   | N     | 671  | ASP  | CB-CG-OD2  | -5.76 | 113.12      | 118.30   |
| 1   | A     | 671  | ASP  | CB-CG-OD2  | -5.75 | 113.12      | 118.30   |
| 1   | J     | 388  | ARG  | NE-CZ-NH1  | 5.75  | 123.18      | 120.30   |
| 1   | D     | 1006 | GLU  | CB-CA-C    | -5.75 | 98.90       | 110.40   |
| 1   | I     | 594  | ASP  | CB-CG-OD2  | -5.75 | 113.12      | 118.30   |
| 1   | I     | 875  | ASP  | CB-CG-OD2  | -5.75 | 113.12      | 118.30   |
| 1   | J     | 1006 | GLU  | CB-CA-C    | -5.75 | 98.90       | 110.40   |
| 1   | O     | 166  | ARG  | NE-CZ-NH2  | -5.75 | 117.42      | 120.30   |
| 1   | F     | 1006 | GLU  | CB-CA-C    | -5.75 | 98.90       | 110.40   |
| 1   | K     | 166  | ARG  | NE-CZ-NH2  | -5.75 | 117.42      | 120.30   |
| 1   | B     | 559  | TYR  | CB-CG-CD1  | 5.75  | 124.45      | 121.00   |
| 1   | K     | 594  | ASP  | CB-CG-OD2  | -5.75 | 113.13      | 118.30   |
| 1   | L     | 492  | ASP  | CB-CG-OD1  | 5.75  | 123.47      | 118.30   |
| 1   | O     | 497  | ASP  | CB-CG-OD1  | 5.75  | 123.47      | 118.30   |
| 1   | O     | 1006 | GLU  | CB-CA-C    | -5.75 | 98.91       | 110.40   |
| 1   | I     | 166  | ARG  | NE-CZ-NH2  | -5.75 | 117.43      | 120.30   |
| 1   | I     | 497  | ASP  | CB-CG-OD1  | 5.75  | 123.47      | 118.30   |
| 1   | J     | 497  | ASP  | CB-CG-OD1  | 5.75  | 123.47      | 118.30   |
| 1   | P     | 497  | ASP  | CB-CG-OD1  | 5.75  | 123.47      | 118.30   |
| 1   | H     | 671  | ASP  | CB-CG-OD2  | -5.75 | 113.13      | 118.30   |
| 1   | P     | 559  | TYR  | CB-CG-CD1  | 5.75  | 124.45      | 121.00   |
| 1   | A     | 497  | ASP  | CB-CG-OD1  | 5.74  | 123.47      | 118.30   |
| 1   | N     | 492  | ASP  | CB-CG-OD1  | 5.74  | 123.47      | 118.30   |
| 1   | H     | 46   | ARG  | NE-CZ-NH1  | 5.74  | 123.17      | 120.30   |
| 1   | P     | 594  | ASP  | CB-CG-OD2  | -5.74 | 113.14      | 118.30   |
| 1   | F     | 594  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | I     | 671  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | J     | 569  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | N     | 388  | ARG  | NE-CZ-NH1  | 5.73  | 123.17      | 120.30   |
| 1   | A     | 166  | ARG  | NE-CZ-NH2  | -5.73 | 117.43      | 120.30   |
| 1   | A     | 569  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | B     | 671  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | O     | 492  | ASP  | CB-CG-OD1  | 5.73  | 123.46      | 118.30   |
| 1   | O     | 671  | ASP  | CB-CG-OD2  | -5.73 | 113.14      | 118.30   |
| 1   | C     | 388  | ARG  | NE-CZ-NH1  | 5.73  | 123.17      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | D     | 492 | ASP  | CB-CG-OD1 | 5.73  | 123.46      | 118.30   |
| 1   | M     | 671 | ASP  | CB-CG-OD2 | -5.73 | 113.14      | 118.30   |
| 1   | K     | 388 | ARG  | NE-CZ-NH1 | 5.73  | 123.17      | 120.30   |
| 1   | O     | 594 | ASP  | CB-CG-OD2 | -5.73 | 113.14      | 118.30   |
| 1   | E     | 497 | ASP  | CB-CG-OD1 | 5.73  | 123.45      | 118.30   |
| 1   | F     | 46  | ARG  | NE-CZ-NH1 | 5.73  | 123.16      | 120.30   |
| 1   | H     | 166 | ARG  | NE-CZ-NH2 | -5.73 | 117.44      | 120.30   |
| 1   | L     | 569 | ASP  | CB-CG-OD2 | -5.73 | 113.14      | 118.30   |
| 1   | M     | 497 | ASP  | CB-CG-OD1 | 5.73  | 123.45      | 118.30   |
| 1   | P     | 46  | ARG  | NE-CZ-NH1 | 5.73  | 123.16      | 120.30   |
| 1   | A     | 492 | ASP  | CB-CG-OD1 | 5.73  | 123.45      | 118.30   |
| 1   | C     | 497 | ASP  | CB-CG-OD1 | 5.73  | 123.45      | 118.30   |
| 1   | K     | 559 | TYR  | CB-CG-CD1 | 5.73  | 124.44      | 121.00   |
| 1   | A     | 594 | ASP  | CB-CG-OD2 | -5.72 | 113.15      | 118.30   |
| 1   | D     | 497 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | H     | 594 | ASP  | CB-CG-OD2 | -5.72 | 113.15      | 118.30   |
| 1   | I     | 46  | ARG  | NE-CZ-NH1 | 5.72  | 123.16      | 120.30   |
| 1   | I     | 388 | ARG  | NE-CZ-NH1 | 5.72  | 123.16      | 120.30   |
| 1   | K     | 569 | ASP  | CB-CG-OD2 | -5.72 | 113.15      | 118.30   |
| 1   | H     | 388 | ARG  | NE-CZ-NH1 | 5.72  | 123.16      | 120.30   |
| 1   | O     | 388 | ARG  | NE-CZ-NH1 | 5.72  | 123.16      | 120.30   |
| 1   | O     | 610 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | E     | 594 | ASP  | CB-CG-OD2 | -5.72 | 113.15      | 118.30   |
| 1   | F     | 497 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | G     | 559 | TYR  | CB-CG-CD1 | 5.72  | 124.43      | 121.00   |
| 1   | H     | 492 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | B     | 375 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | G     | 497 | ASP  | CB-CG-OD1 | 5.72  | 123.45      | 118.30   |
| 1   | H     | 186 | VAL  | CA-CB-CG1 | -5.72 | 102.32      | 110.90   |
| 1   | B     | 492 | ASP  | CB-CG-OD1 | 5.72  | 123.44      | 118.30   |
| 1   | C     | 186 | VAL  | CA-CB-CG1 | -5.72 | 102.32      | 110.90   |
| 1   | C     | 569 | ASP  | CB-CG-OD2 | -5.72 | 113.16      | 118.30   |
| 1   | K     | 497 | ASP  | CB-CG-OD1 | 5.72  | 123.44      | 118.30   |
| 1   | E     | 186 | VAL  | CA-CB-CG1 | -5.71 | 102.33      | 110.90   |
| 1   | I     | 492 | ASP  | CB-CG-OD1 | 5.71  | 123.44      | 118.30   |
| 1   | I     | 772 | ASP  | CB-CG-OD2 | -5.71 | 113.16      | 118.30   |
| 1   | M     | 375 | ASP  | CB-CG-OD1 | 5.71  | 123.44      | 118.30   |
| 1   | P     | 569 | ASP  | CB-CG-OD2 | -5.71 | 113.16      | 118.30   |
| 1   | N     | 186 | VAL  | CA-CB-CG1 | -5.71 | 102.33      | 110.90   |
| 1   | P     | 375 | ASP  | CB-CG-OD1 | 5.71  | 123.44      | 118.30   |
| 1   | A     | 388 | ARG  | NE-CZ-NH1 | 5.71  | 123.15      | 120.30   |
| 1   | E     | 671 | ASP  | CB-CG-OD2 | -5.71 | 113.16      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | G     | 186 | VAL  | CA-CB-CG1 | -5.71 | 102.34      | 110.90   |
| 1   | N     | 594 | ASP  | CB-CG-OD2 | -5.71 | 113.16      | 118.30   |
| 1   | G     | 388 | ARG  | NE-CZ-NH1 | 5.71  | 123.15      | 120.30   |
| 1   | B     | 569 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | C     | 375 | ASP  | CB-CG-OD1 | 5.70  | 123.43      | 118.30   |
| 1   | G     | 594 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | I     | 569 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | J     | 594 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | M     | 569 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | B     | 186 | VAL  | CA-CB-CG1 | -5.70 | 102.35      | 110.90   |
| 1   | F     | 166 | ARG  | NE-CZ-NH2 | -5.70 | 117.45      | 120.30   |
| 1   | J     | 553 | TRP  | CA-CB-CG  | -5.70 | 102.87      | 113.70   |
| 1   | K     | 186 | VAL  | CA-CB-CG1 | -5.70 | 102.35      | 110.90   |
| 1   | K     | 375 | ASP  | CB-CG-OD1 | 5.70  | 123.43      | 118.30   |
| 1   | A     | 375 | ASP  | CB-CG-OD1 | 5.70  | 123.43      | 118.30   |
| 1   | D     | 594 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | C     | 553 | TRP  | CA-CB-CG  | -5.70 | 102.87      | 113.70   |
| 1   | C     | 594 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | D     | 186 | VAL  | CA-CB-CG1 | -5.70 | 102.35      | 110.90   |
| 1   | E     | 166 | ARG  | NE-CZ-NH2 | -5.70 | 117.45      | 120.30   |
| 1   | F     | 569 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | N     | 46  | ARG  | NE-CZ-NH1 | 5.70  | 123.15      | 120.30   |
| 1   | B     | 553 | TRP  | CA-CB-CG  | -5.70 | 102.88      | 113.70   |
| 1   | C     | 492 | ASP  | CB-CG-OD1 | 5.70  | 123.43      | 118.30   |
| 1   | D     | 388 | ARG  | NE-CZ-NH1 | 5.70  | 123.15      | 120.30   |
| 1   | H     | 497 | ASP  | CB-CG-OD1 | 5.70  | 123.43      | 118.30   |
| 1   | I     | 186 | VAL  | CA-CB-CG1 | -5.70 | 102.36      | 110.90   |
| 1   | M     | 594 | ASP  | CB-CG-OD2 | -5.70 | 113.17      | 118.30   |
| 1   | O     | 46  | ARG  | NE-CZ-NH1 | 5.69  | 123.15      | 120.30   |
| 1   | P     | 492 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | B     | 594 | ASP  | CB-CG-OD2 | -5.69 | 113.18      | 118.30   |
| 1   | E     | 375 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | E     | 553 | TRP  | CA-CB-CG  | -5.69 | 102.88      | 113.70   |
| 1   | I     | 375 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | N     | 772 | ASP  | CB-CG-OD2 | -5.69 | 113.18      | 118.30   |
| 1   | J     | 186 | VAL  | CA-CB-CG1 | -5.69 | 102.36      | 110.90   |
| 1   | A     | 186 | VAL  | CA-CB-CG1 | -5.69 | 102.37      | 110.90   |
| 1   | D     | 375 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | F     | 186 | VAL  | CA-CB-CG1 | -5.69 | 102.37      | 110.90   |
| 1   | F     | 375 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | F     | 772 | ASP  | CB-CG-OD2 | -5.69 | 113.18      | 118.30   |
| 1   | N     | 610 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | P     | 772 | ASP  | CB-CG-OD2 | -5.69 | 113.18      | 118.30   |
| 1   | M     | 46  | ARG  | NE-CZ-NH1 | 5.69  | 123.14      | 120.30   |
| 1   | O     | 375 | ASP  | CB-CG-OD1 | 5.69  | 123.42      | 118.30   |
| 1   | G     | 569 | ASP  | CB-CG-OD2 | -5.68 | 113.18      | 118.30   |
| 1   | I     | 553 | TRP  | CA-CB-CG  | -5.68 | 102.90      | 113.70   |
| 1   | K     | 46  | ARG  | NE-CZ-NH1 | 5.68  | 123.14      | 120.30   |
| 1   | L     | 46  | ARG  | NE-CZ-NH1 | 5.68  | 123.14      | 120.30   |
| 1   | L     | 186 | VAL  | CA-CB-CG1 | -5.68 | 102.37      | 110.90   |
| 1   | L     | 375 | ASP  | CB-CG-OD1 | 5.68  | 123.42      | 118.30   |
| 1   | L     | 610 | ASP  | CB-CG-OD1 | 5.68  | 123.42      | 118.30   |
| 1   | M     | 186 | VAL  | CA-CB-CG1 | -5.68 | 102.37      | 110.90   |
| 1   | C     | 772 | ASP  | CB-CG-OD2 | -5.68 | 113.19      | 118.30   |
| 1   | E     | 388 | ARG  | NE-CZ-NH1 | 5.68  | 123.14      | 120.30   |
| 1   | D     | 553 | TRP  | CA-CB-CG  | -5.68 | 102.91      | 113.70   |
| 1   | E     | 569 | ASP  | CB-CG-OD2 | -5.68 | 113.19      | 118.30   |
| 1   | G     | 375 | ASP  | CB-CG-OD1 | 5.68  | 123.41      | 118.30   |
| 1   | F     | 492 | ASP  | CB-CG-OD1 | 5.68  | 123.41      | 118.30   |
| 1   | K     | 553 | TRP  | CA-CB-CG  | -5.68 | 102.91      | 113.70   |
| 1   | P     | 553 | TRP  | CA-CB-CG  | -5.68 | 102.92      | 113.70   |
| 1   | A     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.92      | 113.70   |
| 1   | M     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.92      | 113.70   |
| 1   | N     | 375 | ASP  | CB-CG-OD1 | 5.67  | 123.41      | 118.30   |
| 1   | A     | 772 | ASP  | CB-CG-OD2 | -5.67 | 113.19      | 118.30   |
| 1   | M     | 772 | ASP  | CB-CG-OD2 | -5.67 | 113.19      | 118.30   |
| 1   | P     | 961 | ARG  | NE-CZ-NH1 | 5.67  | 123.14      | 120.30   |
| 1   | F     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.92      | 113.70   |
| 1   | L     | 594 | ASP  | CB-CG-OD2 | -5.67 | 113.20      | 118.30   |
| 1   | O     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.92      | 113.70   |
| 1   | N     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.93      | 113.70   |
| 1   | O     | 569 | ASP  | CB-CG-OD2 | -5.67 | 113.20      | 118.30   |
| 1   | H     | 553 | TRP  | CA-CB-CG  | -5.67 | 102.93      | 113.70   |
| 1   | J     | 375 | ASP  | CB-CG-OD1 | 5.67  | 123.40      | 118.30   |
| 1   | L     | 388 | ARG  | NE-CZ-NH1 | 5.67  | 123.13      | 120.30   |
| 1   | P     | 388 | ARG  | NE-CZ-NH1 | 5.67  | 123.14      | 120.30   |
| 1   | O     | 186 | VAL  | CA-CB-CG1 | -5.67 | 102.40      | 110.90   |
| 1   | P     | 186 | VAL  | CA-CB-CG1 | -5.67 | 102.40      | 110.90   |
| 1   | K     | 96  | ASP  | N-CA-CB   | 5.67  | 120.80      | 110.60   |
| 1   | L     | 553 | TRP  | CA-CB-CG  | -5.66 | 102.94      | 113.70   |
| 1   | F     | 96  | ASP  | N-CA-CB   | 5.66  | 120.79      | 110.60   |
| 1   | B     | 388 | ARG  | NE-CZ-NH1 | 5.66  | 123.13      | 120.30   |
| 1   | G     | 166 | ARG  | NE-CZ-NH2 | -5.66 | 117.47      | 120.30   |
| 1   | G     | 610 | ASP  | CB-CG-OD1 | 5.66  | 123.39      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | J     | 492 | ASP  | CB-CG-OD1 | 5.66  | 123.39      | 118.30   |
| 1   | E     | 610 | ASP  | CB-CG-OD1 | 5.66  | 123.39      | 118.30   |
| 1   | J     | 772 | ASP  | CB-CG-OD2 | -5.66 | 113.21      | 118.30   |
| 1   | O     | 772 | ASP  | CB-CG-OD2 | -5.66 | 113.21      | 118.30   |
| 1   | F     | 388 | ARG  | NE-CZ-NH1 | 5.65  | 123.13      | 120.30   |
| 1   | G     | 553 | TRP  | CA-CB-CG  | -5.65 | 102.96      | 113.70   |
| 1   | J     | 96  | ASP  | N-CA-CB   | 5.65  | 120.77      | 110.60   |
| 1   | E     | 772 | ASP  | CB-CG-OD2 | -5.65 | 113.21      | 118.30   |
| 1   | L     | 96  | ASP  | N-CA-CB   | 5.65  | 120.77      | 110.60   |
| 1   | C     | 15  | ASP  | CB-CG-OD1 | 5.65  | 123.38      | 118.30   |
| 1   | H     | 96  | ASP  | N-CA-CB   | 5.65  | 120.76      | 110.60   |
| 1   | I     | 610 | ASP  | CB-CG-OD1 | 5.65  | 123.38      | 118.30   |
| 1   | C     | 96  | ASP  | N-CA-CB   | 5.64  | 120.76      | 110.60   |
| 1   | H     | 772 | ASP  | CB-CG-OD2 | -5.64 | 113.22      | 118.30   |
| 1   | M     | 610 | ASP  | CB-CG-OD1 | 5.64  | 123.38      | 118.30   |
| 1   | P     | 166 | ARG  | NE-CZ-NH2 | -5.64 | 117.48      | 120.30   |
| 1   | D     | 201 | ASP  | CB-CG-OD2 | -5.64 | 113.22      | 118.30   |
| 1   | D     | 610 | ASP  | CB-CG-OD1 | 5.64  | 123.38      | 118.30   |
| 1   | P     | 610 | ASP  | CB-CG-OD1 | 5.64  | 123.38      | 118.30   |
| 1   | C     | 201 | ASP  | CB-CG-OD2 | -5.64 | 113.22      | 118.30   |
| 1   | D     | 772 | ASP  | CB-CG-OD2 | -5.64 | 113.22      | 118.30   |
| 1   | G     | 96  | ASP  | N-CA-CB   | 5.64  | 120.75      | 110.60   |
| 1   | K     | 610 | ASP  | CB-CG-OD1 | 5.64  | 123.38      | 118.30   |
| 1   | K     | 800 | ARG  | NE-CZ-NH1 | 5.64  | 123.12      | 120.30   |
| 1   | O     | 800 | ARG  | NE-CZ-NH1 | 5.64  | 123.12      | 120.30   |
| 1   | P     | 201 | ASP  | CB-CG-OD2 | -5.64 | 113.22      | 118.30   |
| 1   | D     | 96  | ASP  | N-CA-CB   | 5.64  | 120.75      | 110.60   |
| 1   | L     | 15  | ASP  | CB-CG-OD1 | 5.64  | 123.37      | 118.30   |
| 1   | A     | 96  | ASP  | N-CA-CB   | 5.64  | 120.75      | 110.60   |
| 1   | B     | 96  | ASP  | N-CA-CB   | 5.64  | 120.75      | 110.60   |
| 1   | E     | 201 | ASP  | CB-CG-OD2 | -5.64 | 113.23      | 118.30   |
| 1   | H     | 961 | ARG  | NE-CZ-NH1 | 5.64  | 123.12      | 120.30   |
| 1   | P     | 980 | GLU  | C-N-CA    | -5.64 | 110.46      | 122.30   |
| 1   | B     | 772 | ASP  | CB-CG-OD2 | -5.63 | 113.23      | 118.30   |
| 1   | I     | 800 | ARG  | NE-CZ-NH1 | 5.63  | 123.12      | 120.30   |
| 1   | L     | 772 | ASP  | CB-CG-OD2 | -5.63 | 113.23      | 118.30   |
| 1   | P     | 96  | ASP  | N-CA-CB   | 5.63  | 120.74      | 110.60   |
| 1   | A     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.37      | 118.30   |
| 1   | C     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.37      | 118.30   |
| 1   | F     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.37      | 118.30   |
| 1   | G     | 961 | ARG  | NE-CZ-NH1 | 5.63  | 123.12      | 120.30   |
| 1   | J     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.37      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | K     | 772 | ASP  | CB-CG-OD2 | -5.63 | 113.23      | 118.30   |
| 1   | M     | 96  | ASP  | N-CA-CB   | 5.63  | 120.74      | 110.60   |
| 1   | N     | 961 | ARG  | NE-CZ-NH1 | 5.63  | 123.12      | 120.30   |
| 1   | G     | 15  | ASP  | CB-CG-OD1 | 5.63  | 123.37      | 118.30   |
| 1   | E     | 96  | ASP  | N-CA-CB   | 5.63  | 120.73      | 110.60   |
| 1   | G     | 772 | ASP  | CB-CG-OD2 | -5.63 | 113.23      | 118.30   |
| 1   | K     | 201 | ASP  | CB-CG-OD2 | -5.63 | 113.23      | 118.30   |
| 1   | B     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.36      | 118.30   |
| 1   | E     | 800 | ARG  | NE-CZ-NH1 | 5.63  | 123.11      | 120.30   |
| 1   | H     | 610 | ASP  | CB-CG-OD1 | 5.63  | 123.36      | 118.30   |
| 1   | N     | 96  | ASP  | N-CA-CB   | 5.63  | 120.73      | 110.60   |
| 1   | O     | 980 | GLU  | C-N-CA    | -5.63 | 110.48      | 122.30   |
| 1   | E     | 15  | ASP  | CB-CG-OD1 | 5.62  | 123.36      | 118.30   |
| 1   | I     | 96  | ASP  | N-CA-CB   | 5.62  | 120.73      | 110.60   |
| 1   | I     | 980 | GLU  | C-N-CA    | -5.62 | 110.49      | 122.30   |
| 1   | H     | 980 | GLU  | C-N-CA    | -5.62 | 110.50      | 122.30   |
| 1   | J     | 980 | GLU  | C-N-CA    | -5.62 | 110.49      | 122.30   |
| 1   | O     | 96  | ASP  | N-CA-CB   | 5.62  | 120.72      | 110.60   |
| 1   | F     | 201 | ASP  | CB-CG-OD2 | -5.62 | 113.24      | 118.30   |
| 1   | K     | 980 | GLU  | C-N-CA    | -5.62 | 110.50      | 122.30   |
| 1   | N     | 980 | GLU  | C-N-CA    | -5.62 | 110.50      | 122.30   |
| 1   | E     | 980 | GLU  | C-N-CA    | -5.62 | 110.51      | 122.30   |
| 1   | M     | 980 | GLU  | C-N-CA    | -5.62 | 110.51      | 122.30   |
| 1   | A     | 980 | GLU  | C-N-CA    | -5.61 | 110.51      | 122.30   |
| 1   | D     | 800 | ARG  | NE-CZ-NH1 | 5.61  | 123.11      | 120.30   |
| 1   | I     | 201 | ASP  | CB-CG-OD2 | -5.61 | 113.25      | 118.30   |
| 1   | P     | 800 | ARG  | NE-CZ-NH1 | 5.61  | 123.11      | 120.30   |
| 1   | L     | 980 | GLU  | C-N-CA    | -5.61 | 110.52      | 122.30   |
| 1   | N     | 425 | ARG  | NE-CZ-NH2 | -5.61 | 117.50      | 120.30   |
| 1   | B     | 980 | GLU  | C-N-CA    | -5.61 | 110.53      | 122.30   |
| 1   | C     | 980 | GLU  | C-N-CA    | -5.61 | 110.53      | 122.30   |
| 1   | F     | 980 | GLU  | C-N-CA    | -5.61 | 110.53      | 122.30   |
| 1   | G     | 980 | GLU  | C-N-CA    | -5.61 | 110.53      | 122.30   |
| 1   | H     | 15  | ASP  | CB-CG-OD1 | 5.61  | 123.34      | 118.30   |
| 1   | A     | 201 | ASP  | CB-CG-OD2 | -5.60 | 113.26      | 118.30   |
| 1   | D     | 980 | GLU  | C-N-CA    | -5.60 | 110.53      | 122.30   |
| 1   | J     | 599 | ARG  | NE-CZ-NH2 | 5.60  | 123.10      | 120.30   |
| 1   | L     | 201 | ASP  | CB-CG-OD2 | -5.60 | 113.26      | 118.30   |
| 1   | L     | 800 | ARG  | NE-CZ-NH1 | 5.60  | 123.10      | 120.30   |
| 1   | O     | 961 | ARG  | NE-CZ-NH1 | 5.60  | 123.10      | 120.30   |
| 1   | H     | 201 | ASP  | CB-CG-OD2 | -5.59 | 113.27      | 118.30   |
| 1   | N     | 201 | ASP  | CB-CG-OD2 | -5.59 | 113.27      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | I     | 961    | ARG  | NE-CZ-NH1 | 5.59  | 123.09      | 120.30   |
| 1   | B     | 800    | ARG  | NE-CZ-NH1 | 5.59  | 123.09      | 120.30   |
| 1   | C     | 800    | ARG  | NE-CZ-NH1 | 5.58  | 123.09      | 120.30   |
| 1   | F     | 961    | ARG  | NE-CZ-NH1 | 5.58  | 123.09      | 120.30   |
| 1   | J     | 961    | ARG  | NE-CZ-NH1 | 5.58  | 123.09      | 120.30   |
| 1   | M     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.33      | 118.30   |
| 1   | A     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.32      | 118.30   |
| 1   | B     | 201    | ASP  | CB-CG-OD2 | -5.58 | 113.28      | 118.30   |
| 1   | H     | 800    | ARG  | NE-CZ-NH1 | 5.58  | 123.09      | 120.30   |
| 1   | I     | 938    | ARG  | CG-CD-NE  | -5.58 | 100.08      | 111.80   |
| 1   | O     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.32      | 118.30   |
| 1   | D     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.32      | 118.30   |
| 1   | F     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.32      | 118.30   |
| 1   | K     | 15     | ASP  | CB-CG-OD1 | 5.58  | 123.32      | 118.30   |
| 1   | A     | 961    | ARG  | NE-CZ-NH1 | 5.58  | 123.09      | 120.30   |
| 1   | G     | 201    | ASP  | CB-CG-OD2 | -5.58 | 113.28      | 118.30   |
| 1   | J     | 201    | ASP  | CB-CG-OD2 | -5.57 | 113.28      | 118.30   |
| 1   | O     | 938    | ARG  | CG-CD-NE  | -5.57 | 100.10      | 111.80   |
| 1   | H     | 938    | ARG  | CG-CD-NE  | -5.57 | 100.10      | 111.80   |
| 1   | M     | 201    | ASP  | CB-CG-OD2 | -5.57 | 113.29      | 118.30   |
| 1   | B     | 479    | ASP  | CB-CG-OD2 | -5.57 | 113.29      | 118.30   |
| 1   | E     | 954    | ASP  | CB-CG-OD2 | -5.57 | 113.29      | 118.30   |
| 1   | I     | 15     | ASP  | CB-CG-OD1 | 5.57  | 123.31      | 118.30   |
| 1   | J     | 938    | ARG  | CG-CD-NE  | -5.57 | 100.11      | 111.80   |
| 1   | D     | 938    | ARG  | CG-CD-NE  | -5.57 | 100.11      | 111.80   |
| 1   | E     | 938    | ARG  | CG-CD-NE  | -5.57 | 100.11      | 111.80   |
| 1   | N     | 15     | ASP  | CB-CG-OD1 | 5.57  | 123.31      | 118.30   |
| 1   | G     | 938    | ARG  | CG-CD-NE  | -5.56 | 100.12      | 111.80   |
| 1   | H     | 594    | ASP  | CB-CG-OD1 | 5.56  | 123.30      | 118.30   |
| 1   | K     | 961    | ARG  | NE-CZ-NH1 | 5.56  | 123.08      | 120.30   |
| 1   | M     | 938    | ARG  | CG-CD-NE  | -5.56 | 100.13      | 111.80   |
| 1   | A     | 938    | ARG  | CG-CD-NE  | -5.56 | 100.13      | 111.80   |
| 1   | J     | 15     | ASP  | CB-CG-OD1 | 5.56  | 123.30      | 118.30   |
| 1   | E     | 961    | ARG  | NE-CZ-NH1 | 5.55  | 123.08      | 120.30   |
| 1   | F     | 938    | ARG  | CG-CD-NE  | -5.55 | 100.13      | 111.80   |
| 1   | L     | 938    | ARG  | CG-CD-NE  | -5.55 | 100.13      | 111.80   |
| 1   | N     | 938    | ARG  | CG-CD-NE  | -5.55 | 100.14      | 111.80   |
| 1   | B     | 15     | ASP  | CB-CG-OD1 | 5.55  | 123.30      | 118.30   |
| 1   | H     | 699[A] | ARG  | NE-CZ-NH1 | 5.55  | 123.08      | 120.30   |
| 1   | H     | 699[B] | ARG  | NE-CZ-NH1 | 5.55  | 123.08      | 120.30   |
| 1   | I     | 479    | ASP  | CB-CG-OD2 | -5.55 | 113.30      | 118.30   |
| 1   | F     | 800    | ARG  | NE-CZ-NH1 | 5.55  | 123.08      | 120.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | K     | 938    | ARG  | CG-CD-NE  | -5.55 | 100.15      | 111.80   |
| 1   | K     | 699[A] | ARG  | NE-CZ-NH1 | 5.55  | 123.07      | 120.30   |
| 1   | K     | 699[B] | ARG  | NE-CZ-NH1 | 5.55  | 123.07      | 120.30   |
| 1   | P     | 599    | ARG  | NE-CZ-NH2 | 5.55  | 123.07      | 120.30   |
| 1   | P     | 938    | ARG  | CG-CD-NE  | -5.55 | 100.15      | 111.80   |
| 1   | D     | 425    | ARG  | NE-CZ-NH2 | -5.54 | 117.53      | 120.30   |
| 1   | B     | 599    | ARG  | NE-CZ-NH2 | 5.54  | 123.07      | 120.30   |
| 1   | C     | 699[A] | ARG  | NE-CZ-NH1 | 5.54  | 123.07      | 120.30   |
| 1   | C     | 699[B] | ARG  | NE-CZ-NH1 | 5.54  | 123.07      | 120.30   |
| 1   | C     | 938    | ARG  | CG-CD-NE  | -5.54 | 100.16      | 111.80   |
| 1   | I     | 599    | ARG  | NE-CZ-NH2 | 5.54  | 123.07      | 120.30   |
| 1   | J     | 425    | ARG  | NE-CZ-NH2 | -5.54 | 117.53      | 120.30   |
| 1   | M     | 800    | ARG  | NE-CZ-NH1 | 5.54  | 123.07      | 120.30   |
| 1   | N     | 800    | ARG  | NE-CZ-NH1 | 5.54  | 123.07      | 120.30   |
| 1   | O     | 201    | ASP  | CB-CG-OD2 | -5.54 | 113.31      | 118.30   |
| 1   | B     | 938    | ARG  | CG-CD-NE  | -5.54 | 100.17      | 111.80   |
| 1   | K     | 594    | ASP  | CB-CG-OD1 | 5.54  | 123.28      | 118.30   |
| 1   | G     | 599    | ARG  | NE-CZ-NH2 | 5.54  | 123.07      | 120.30   |
| 1   | H     | 599    | ARG  | NE-CZ-NH2 | 5.54  | 123.07      | 120.30   |
| 1   | J     | 800    | ARG  | NE-CZ-NH1 | 5.53  | 123.07      | 120.30   |
| 1   | M     | 961    | ARG  | NE-CZ-NH1 | 5.53  | 123.07      | 120.30   |
| 1   | D     | 271    | THR  | CA-CB-CG2 | -5.53 | 104.66      | 112.40   |
| 1   | H     | 954    | ASP  | CB-CG-OD2 | -5.53 | 113.33      | 118.30   |
| 1   | I     | 271    | THR  | CA-CB-CG2 | -5.53 | 104.67      | 112.40   |
| 1   | P     | 594    | ASP  | CB-CG-OD1 | 5.53  | 123.27      | 118.30   |
| 1   | D     | 954    | ASP  | CB-CG-OD2 | -5.52 | 113.33      | 118.30   |
| 1   | J     | 594    | ASP  | CB-CG-OD1 | 5.52  | 123.27      | 118.30   |
| 1   | N     | 594    | ASP  | CB-CG-OD1 | 5.52  | 123.27      | 118.30   |
| 1   | O     | 271    | THR  | CA-CB-CG2 | -5.52 | 104.67      | 112.40   |
| 1   | P     | 15     | ASP  | CB-CG-OD1 | 5.52  | 123.27      | 118.30   |
| 1   | L     | 425    | ARG  | NE-CZ-NH2 | -5.52 | 117.54      | 120.30   |
| 1   | E     | 479    | ASP  | CB-CG-OD2 | -5.52 | 113.33      | 118.30   |
| 1   | B     | 100    | TYR  | N-CA-CB   | 5.52  | 120.53      | 110.60   |
| 1   | C     | 954    | ASP  | CB-CG-OD2 | -5.52 | 113.33      | 118.30   |
| 1   | O     | 100    | TYR  | N-CA-CB   | 5.52  | 120.53      | 110.60   |
| 1   | F     | 71     | GLU  | CB-CA-C   | 5.52  | 121.43      | 110.40   |
| 1   | D     | 71     | GLU  | CB-CA-C   | 5.51  | 121.43      | 110.40   |
| 1   | F     | 271    | THR  | CA-CB-CG2 | -5.51 | 104.68      | 112.40   |
| 1   | G     | 100    | TYR  | N-CA-CB   | 5.51  | 120.52      | 110.60   |
| 1   | L     | 961    | ARG  | NE-CZ-NH1 | 5.51  | 123.06      | 120.30   |
| 1   | A     | 599    | ARG  | NE-CZ-NH2 | 5.51  | 123.06      | 120.30   |
| 1   | B     | 954    | ASP  | CB-CG-OD2 | -5.51 | 113.34      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | D     | 699[A] | ARG  | NE-CZ-NH1 | 5.51  | 123.06      | 120.30   |
| 1   | D     | 699[B] | ARG  | NE-CZ-NH1 | 5.51  | 123.06      | 120.30   |
| 1   | F     | 594    | ASP  | CB-CG-OD1 | 5.51  | 123.26      | 118.30   |
| 1   | H     | 425    | ARG  | NE-CZ-NH2 | -5.51 | 117.54      | 120.30   |
| 1   | H     | 100    | TYR  | N-CA-CB   | 5.51  | 120.52      | 110.60   |
| 1   | J     | 100    | TYR  | N-CA-CB   | 5.51  | 120.52      | 110.60   |
| 1   | A     | 425    | ARG  | NE-CZ-NH2 | -5.51 | 117.55      | 120.30   |
| 1   | C     | 479    | ASP  | CB-CG-OD2 | -5.51 | 113.34      | 118.30   |
| 1   | D     | 100    | TYR  | N-CA-CB   | 5.51  | 120.52      | 110.60   |
| 1   | F     | 479    | ASP  | CB-CG-OD2 | -5.51 | 113.34      | 118.30   |
| 1   | I     | 594    | ASP  | CB-CG-OD1 | 5.51  | 123.26      | 118.30   |
| 1   | K     | 954    | ASP  | CB-CG-OD2 | -5.51 | 113.34      | 118.30   |
| 1   | C     | 828    | ASP  | CB-CG-OD1 | 5.51  | 123.26      | 118.30   |
| 1   | G     | 71     | GLU  | CB-CA-C   | 5.51  | 121.42      | 110.40   |
| 1   | G     | 425    | ARG  | NE-CZ-NH2 | -5.51 | 117.55      | 120.30   |
| 1   | A     | 479    | ASP  | CB-CG-OD2 | -5.51 | 113.34      | 118.30   |
| 1   | A     | 699[A] | ARG  | NE-CZ-NH1 | 5.51  | 123.05      | 120.30   |
| 1   | A     | 699[B] | ARG  | NE-CZ-NH1 | 5.51  | 123.05      | 120.30   |
| 1   | D     | 828    | ASP  | CB-CG-OD1 | 5.51  | 123.26      | 118.30   |
| 1   | K     | 425    | ARG  | NE-CZ-NH2 | -5.51 | 117.55      | 120.30   |
| 1   | O     | 71     | GLU  | CB-CA-C   | 5.51  | 121.41      | 110.40   |
| 1   | I     | 100    | TYR  | N-CA-CB   | 5.50  | 120.51      | 110.60   |
| 1   | L     | 599    | ARG  | NE-CZ-NH2 | 5.50  | 123.05      | 120.30   |
| 1   | A     | 100    | TYR  | N-CA-CB   | 5.50  | 120.51      | 110.60   |
| 1   | E     | 100    | TYR  | N-CA-CB   | 5.50  | 120.51      | 110.60   |
| 1   | G     | 800    | ARG  | NE-CZ-NH1 | 5.50  | 123.05      | 120.30   |
| 1   | H     | 271    | THR  | CA-CB-CG2 | -5.50 | 104.70      | 112.40   |
| 1   | J     | 71     | GLU  | CB-CA-C   | 5.50  | 121.40      | 110.40   |
| 1   | L     | 71     | GLU  | CB-CA-C   | 5.50  | 121.40      | 110.40   |
| 1   | L     | 100    | TYR  | N-CA-CB   | 5.50  | 120.50      | 110.60   |
| 1   | N     | 100    | TYR  | N-CA-CB   | 5.50  | 120.50      | 110.60   |
| 1   | E     | 699[A] | ARG  | NE-CZ-NH1 | 5.50  | 123.05      | 120.30   |
| 1   | E     | 699[B] | ARG  | NE-CZ-NH1 | 5.50  | 123.05      | 120.30   |
| 1   | H     | 479    | ASP  | CB-CG-OD2 | -5.50 | 113.35      | 118.30   |
| 1   | A     | 271    | THR  | CA-CB-CG2 | -5.50 | 104.70      | 112.40   |
| 1   | B     | 271    | THR  | CA-CB-CG2 | -5.50 | 104.70      | 112.40   |
| 1   | C     | 100    | TYR  | N-CA-CB   | 5.50  | 120.50      | 110.60   |
| 1   | E     | 271    | THR  | CA-CB-CG2 | -5.50 | 104.70      | 112.40   |
| 1   | H     | 92     | MET  | CG-SD-CE  | -5.50 | 91.40       | 100.20   |
| 1   | M     | 100    | TYR  | N-CA-CB   | 5.50  | 120.50      | 110.60   |
| 1   | M     | 954    | ASP  | CB-CG-OD2 | -5.50 | 113.35      | 118.30   |
| 1   | O     | 954    | ASP  | CB-CG-OD2 | -5.50 | 113.35      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | A     | 71     | GLU  | CB-CA-C   | 5.50  | 121.39      | 110.40   |
| 1   | F     | 100    | TYR  | N-CA-CB   | 5.50  | 120.49      | 110.60   |
| 1   | P     | 479    | ASP  | CB-CG-OD2 | -5.50 | 113.35      | 118.30   |
| 1   | C     | 71     | GLU  | CB-CA-C   | 5.50  | 121.39      | 110.40   |
| 1   | E     | 71     | GLU  | CB-CA-C   | 5.50  | 121.39      | 110.40   |
| 1   | G     | 594    | ASP  | CB-CG-OD1 | 5.50  | 123.25      | 118.30   |
| 1   | L     | 594    | ASP  | CB-CG-OD1 | 5.50  | 123.25      | 118.30   |
| 1   | A     | 954    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | D     | 599    | ARG  | NE-CZ-NH2 | 5.49  | 123.05      | 120.30   |
| 1   | G     | 954    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | N     | 954    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | B     | 594    | ASP  | CB-CG-OD1 | 5.49  | 123.24      | 118.30   |
| 1   | D     | 479    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | G     | 479    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | I     | 699[A] | ARG  | NE-CZ-NH1 | 5.49  | 123.05      | 120.30   |
| 1   | I     | 699[B] | ARG  | NE-CZ-NH1 | 5.49  | 123.05      | 120.30   |
| 1   | M     | 271    | THR  | CA-CB-CG2 | -5.49 | 104.71      | 112.40   |
| 1   | K     | 71     | GLU  | CB-CA-C   | 5.49  | 121.38      | 110.40   |
| 1   | K     | 479    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | P     | 699[A] | ARG  | NE-CZ-NH1 | 5.49  | 123.04      | 120.30   |
| 1   | P     | 699[B] | ARG  | NE-CZ-NH1 | 5.49  | 123.04      | 120.30   |
| 1   | K     | 100    | TYR  | N-CA-CB   | 5.49  | 120.48      | 110.60   |
| 1   | L     | 271    | THR  | CA-CB-CG2 | -5.49 | 104.72      | 112.40   |
| 1   | C     | 961    | ARG  | NE-CZ-NH1 | 5.49  | 123.04      | 120.30   |
| 1   | D     | 961    | ARG  | NE-CZ-NH1 | 5.49  | 123.04      | 120.30   |
| 1   | H     | 71     | GLU  | CB-CA-C   | 5.49  | 121.37      | 110.40   |
| 1   | J     | 271    | THR  | CA-CB-CG2 | -5.49 | 104.72      | 112.40   |
| 1   | L     | 828    | ASP  | CB-CG-OD1 | 5.49  | 123.24      | 118.30   |
| 1   | M     | 71     | GLU  | CB-CA-C   | 5.49  | 121.37      | 110.40   |
| 1   | N     | 271    | THR  | CA-CB-CG2 | -5.49 | 104.72      | 112.40   |
| 1   | N     | 479    | ASP  | CB-CG-OD2 | -5.49 | 113.36      | 118.30   |
| 1   | P     | 71     | GLU  | CB-CA-C   | 5.49  | 121.37      | 110.40   |
| 1   | A     | 594    | ASP  | CB-CG-OD1 | 5.48  | 123.24      | 118.30   |
| 1   | J     | 954    | ASP  | CB-CG-OD2 | -5.48 | 113.37      | 118.30   |
| 1   | K     | 271    | THR  | CA-CB-CG2 | -5.48 | 104.72      | 112.40   |
| 1   | N     | 92     | MET  | CG-SD-CE  | -5.48 | 91.43       | 100.20   |
| 1   | O     | 92     | MET  | CG-SD-CE  | -5.48 | 91.43       | 100.20   |
| 1   | G     | 271    | THR  | CA-CB-CG2 | -5.48 | 104.73      | 112.40   |
| 1   | G     | 832    | ASP  | CB-CG-OD1 | 5.48  | 123.23      | 118.30   |
| 1   | I     | 71     | GLU  | CB-CA-C   | 5.48  | 121.36      | 110.40   |
| 1   | I     | 92     | MET  | CG-SD-CE  | -5.48 | 91.43       | 100.20   |
| 1   | J     | 479    | ASP  | CB-CG-OD2 | -5.48 | 113.37      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | O     | 594    | ASP  | CB-CG-OD1 | 5.48  | 123.23      | 118.30   |
| 1   | P     | 100    | TYR  | N-CA-CB   | 5.48  | 120.47      | 110.60   |
| 1   | F     | 92     | MET  | CG-SD-CE  | -5.48 | 91.43       | 100.20   |
| 1   | K     | 403    | ASP  | CB-CG-OD2 | -5.48 | 113.37      | 118.30   |
| 1   | A     | 92     | MET  | CG-SD-CE  | -5.48 | 91.44       | 100.20   |
| 1   | D     | 92     | MET  | CG-SD-CE  | -5.48 | 91.44       | 100.20   |
| 1   | L     | 954    | ASP  | CB-CG-OD2 | -5.48 | 113.37      | 118.30   |
| 1   | N     | 828    | ASP  | CB-CG-OD1 | 5.48  | 123.23      | 118.30   |
| 1   | F     | 699[A] | ARG  | NE-CZ-NH1 | 5.47  | 123.04      | 120.30   |
| 1   | F     | 699[B] | ARG  | NE-CZ-NH1 | 5.47  | 123.04      | 120.30   |
| 1   | F     | 954    | ASP  | CB-CG-OD2 | -5.47 | 113.37      | 118.30   |
| 1   | N     | 71     | GLU  | CB-CA-C   | 5.47  | 121.34      | 110.40   |
| 1   | N     | 599    | ARG  | NE-CZ-NH2 | 5.47  | 123.04      | 120.30   |
| 1   | M     | 92     | MET  | CG-SD-CE  | -5.47 | 91.45       | 100.20   |
| 1   | O     | 403    | ASP  | CB-CG-OD2 | -5.47 | 113.38      | 118.30   |
| 1   | B     | 961    | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | L     | 92     | MET  | CG-SD-CE  | -5.47 | 91.45       | 100.20   |
| 1   | M     | 599    | ARG  | NE-CZ-NH2 | 5.47  | 123.03      | 120.30   |
| 1   | M     | 828    | ASP  | CB-CG-OD1 | 5.47  | 123.22      | 118.30   |
| 1   | P     | 92     | MET  | CG-SD-CE  | -5.47 | 91.45       | 100.20   |
| 1   | B     | 71     | GLU  | CB-CA-C   | 5.47  | 121.33      | 110.40   |
| 1   | B     | 92     | MET  | CG-SD-CE  | -5.47 | 91.45       | 100.20   |
| 1   | C     | 403    | ASP  | CB-CG-OD2 | -5.47 | 113.38      | 118.30   |
| 1   | J     | 699[A] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | J     | 699[B] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | O     | 479    | ASP  | CB-CG-OD2 | -5.47 | 113.38      | 118.30   |
| 1   | O     | 828    | ASP  | CB-CG-OD1 | 5.47  | 123.22      | 118.30   |
| 1   | C     | 271    | THR  | CA-CB-CG2 | -5.47 | 104.75      | 112.40   |
| 1   | F     | 599    | ARG  | NE-CZ-NH2 | 5.47  | 123.03      | 120.30   |
| 1   | G     | 699[A] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | G     | 699[B] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | G     | 828    | ASP  | CB-CG-OD1 | 5.47  | 123.22      | 118.30   |
| 1   | J     | 92     | MET  | CG-SD-CE  | -5.47 | 91.45       | 100.20   |
| 1   | L     | 479    | ASP  | CB-CG-OD2 | -5.47 | 113.38      | 118.30   |
| 1   | L     | 699[A] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | L     | 699[B] | ARG  | NE-CZ-NH1 | 5.47  | 123.03      | 120.30   |
| 1   | A     | 828    | ASP  | CB-CG-OD1 | 5.46  | 123.22      | 118.30   |
| 1   | F     | 828    | ASP  | CB-CG-OD1 | 5.46  | 123.22      | 118.30   |
| 1   | G     | 92     | MET  | CG-SD-CE  | -5.46 | 91.46       | 100.20   |
| 1   | P     | 271    | THR  | CA-CB-CG2 | -5.46 | 104.75      | 112.40   |
| 1   | E     | 92     | MET  | CG-SD-CE  | -5.46 | 91.46       | 100.20   |
| 1   | M     | 479    | ASP  | CB-CG-OD2 | -5.46 | 113.38      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | C     | 92     | MET  | CG-SD-CE  | -5.46 | 91.46       | 100.20   |
| 1   | K     | 92     | MET  | CG-SD-CE  | -5.46 | 91.46       | 100.20   |
| 1   | D     | 594    | ASP  | CB-CG-OD1 | 5.46  | 123.21      | 118.30   |
| 1   | H     | 828    | ASP  | CB-CG-OD1 | 5.46  | 123.21      | 118.30   |
| 1   | I     | 954    | ASP  | CB-CG-OD2 | -5.46 | 113.39      | 118.30   |
| 1   | B     | 403    | ASP  | CB-CG-OD2 | -5.46 | 113.39      | 118.30   |
| 1   | E     | 599    | ARG  | NE-CZ-NH2 | 5.46  | 123.03      | 120.30   |
| 1   | C     | 425    | ARG  | NE-CZ-NH2 | -5.46 | 117.57      | 120.30   |
| 1   | M     | 425    | ARG  | NE-CZ-NH2 | -5.46 | 117.57      | 120.30   |
| 1   | N     | 699[A] | ARG  | NE-CZ-NH1 | 5.46  | 123.03      | 120.30   |
| 1   | N     | 699[B] | ARG  | NE-CZ-NH1 | 5.46  | 123.03      | 120.30   |
| 1   | P     | 954    | ASP  | CB-CG-OD2 | -5.46 | 113.39      | 118.30   |
| 1   | A     | 832    | ASP  | CB-CG-OD1 | 5.45  | 123.21      | 118.30   |
| 1   | D     | 178    | ARG  | NE-CZ-NH1 | -5.45 | 117.57      | 120.30   |
| 1   | I     | 828    | ASP  | CB-CG-OD1 | 5.45  | 123.21      | 118.30   |
| 1   | P     | 828    | ASP  | CB-CG-OD1 | 5.45  | 123.21      | 118.30   |
| 1   | M     | 699[A] | ARG  | NE-CZ-NH1 | 5.45  | 123.02      | 120.30   |
| 1   | M     | 699[B] | ARG  | NE-CZ-NH1 | 5.45  | 123.02      | 120.30   |
| 1   | N     | 832    | ASP  | CB-CG-OD1 | 5.45  | 123.20      | 118.30   |
| 1   | K     | 832    | ASP  | CB-CG-OD1 | 5.45  | 123.20      | 118.30   |
| 1   | E     | 425    | ARG  | NE-CZ-NH2 | -5.44 | 117.58      | 120.30   |
| 1   | E     | 594    | ASP  | CB-CG-OD1 | 5.44  | 123.20      | 118.30   |
| 1   | O     | 425    | ARG  | NE-CZ-NH2 | -5.44 | 117.58      | 120.30   |
| 1   | P     | 178    | ARG  | NE-CZ-NH1 | -5.44 | 117.58      | 120.30   |
| 1   | M     | 594    | ASP  | CB-CG-OD1 | 5.44  | 123.19      | 118.30   |
| 1   | N     | 403    | ASP  | CB-CG-OD2 | -5.44 | 113.41      | 118.30   |
| 1   | P     | 425    | ARG  | NE-CZ-NH2 | -5.44 | 117.58      | 120.30   |
| 1   | A     | 800    | ARG  | NE-CZ-NH1 | 5.43  | 123.02      | 120.30   |
| 1   | M     | 77     | ASP  | CB-CG-OD1 | 5.43  | 123.19      | 118.30   |
| 1   | C     | 599    | ARG  | NE-CZ-NH2 | 5.43  | 123.02      | 120.30   |
| 1   | J     | 828    | ASP  | CB-CG-OD1 | 5.43  | 123.19      | 118.30   |
| 1   | G     | 403    | ASP  | CB-CG-OD2 | -5.43 | 113.41      | 118.30   |
| 1   | P     | 403    | ASP  | CB-CG-OD2 | -5.43 | 113.42      | 118.30   |
| 1   | B     | 425    | ARG  | NE-CZ-NH2 | -5.43 | 117.59      | 120.30   |
| 1   | O     | 599    | ARG  | NE-CZ-NH2 | 5.42  | 123.01      | 120.30   |
| 1   | C     | 594    | ASP  | CB-CG-OD1 | 5.42  | 123.18      | 118.30   |
| 1   | H     | 403    | ASP  | CB-CG-OD2 | -5.42 | 113.42      | 118.30   |
| 1   | I     | 425    | ARG  | NE-CZ-NH2 | -5.42 | 117.59      | 120.30   |
| 1   | L     | 403    | ASP  | CB-CG-OD2 | -5.42 | 113.42      | 118.30   |
| 1   | A     | 403    | ASP  | CB-CG-OD2 | -5.42 | 113.42      | 118.30   |
| 1   | F     | 832    | ASP  | CB-CG-OD1 | 5.42  | 123.17      | 118.30   |
| 1   | E     | 996    | ASP  | CB-CG-OD2 | -5.42 | 113.43      | 118.30   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | P     | 832    | ASP  | CB-CG-OD1 | 5.42  | 123.17      | 118.30   |
| 1   | D     | 403    | ASP  | CB-CG-OD2 | -5.41 | 113.43      | 118.30   |
| 1   | E     | 828    | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | B     | 996    | ASP  | CB-CG-OD2 | -5.41 | 113.43      | 118.30   |
| 1   | J     | 77     | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | I     | 832    | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | P     | 77     | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | B     | 77     | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | B     | 828    | ASP  | CB-CG-OD1 | 5.41  | 123.17      | 118.30   |
| 1   | F     | 77     | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | I     | 403    | ASP  | CB-CG-OD2 | -5.40 | 113.44      | 118.30   |
| 1   | I     | 77     | ASP  | N-CA-CB   | 5.40  | 120.33      | 110.60   |
| 1   | J     | 832    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | M     | 832    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | O     | 832    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | D     | 996    | ASP  | CB-CG-OD2 | -5.40 | 113.44      | 118.30   |
| 1   | E     | 210    | ARG  | N-CA-CB   | 5.40  | 120.32      | 110.60   |
| 1   | J     | 403    | ASP  | CB-CG-OD2 | -5.40 | 113.44      | 118.30   |
| 1   | L     | 832    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | B     | 403    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | J     | 77     | ASP  | N-CA-CB   | 5.40  | 120.32      | 110.60   |
| 1   | O     | 996    | ASP  | CB-CG-OD2 | -5.40 | 113.44      | 118.30   |
| 1   | C     | 77     | ASP  | N-CA-CB   | 5.40  | 120.31      | 110.60   |
| 1   | C     | 832    | ASP  | CB-CG-OD1 | 5.40  | 123.16      | 118.30   |
| 1   | D     | 77     | ASP  | N-CA-CB   | 5.40  | 120.31      | 110.60   |
| 1   | D     | 210    | ARG  | N-CA-CB   | 5.40  | 120.31      | 110.60   |
| 1   | O     | 699[A] | ARG  | NE-CZ-NH1 | 5.40  | 123.00      | 120.30   |
| 1   | O     | 699[B] | ARG  | NE-CZ-NH1 | 5.40  | 123.00      | 120.30   |
| 1   | J     | 210    | ARG  | N-CA-CB   | 5.39  | 120.31      | 110.60   |
| 1   | K     | 828    | ASP  | CB-CG-OD1 | 5.39  | 123.16      | 118.30   |
| 1   | P     | 210    | ARG  | N-CA-CB   | 5.39  | 120.31      | 110.60   |
| 1   | C     | 77     | ASP  | CB-CG-OD1 | 5.39  | 123.15      | 118.30   |
| 1   | F     | 77     | ASP  | N-CA-CB   | 5.39  | 120.31      | 110.60   |
| 1   | M     | 77     | ASP  | N-CA-CB   | 5.39  | 120.30      | 110.60   |
| 1   | A     | 77     | ASP  | CB-CG-OD1 | 5.39  | 123.15      | 118.30   |
| 1   | F     | 425    | ARG  | NE-CZ-NH2 | -5.39 | 117.61      | 120.30   |
| 1   | H     | 77     | ASP  | N-CA-CB   | 5.39  | 120.30      | 110.60   |
| 1   | K     | 599    | ARG  | NE-CZ-NH2 | 5.39  | 122.99      | 120.30   |
| 1   | L     | 77     | ASP  | CB-CG-OD1 | 5.39  | 123.15      | 118.30   |
| 1   | N     | 210    | ARG  | N-CA-CB   | 5.39  | 120.30      | 110.60   |
| 1   | O     | 77     | ASP  | N-CA-CB   | 5.39  | 120.30      | 110.60   |
| 1   | A     | 210    | ARG  | N-CA-CB   | 5.38  | 120.29      | 110.60   |

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| Mol | Chain | Res    | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-----------|-------|-------------|----------|
| 1   | B     | 210    | ARG  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | C     | 210    | ARG  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | E     | 77     | ASP  | CB-CG-OD1 | 5.38  | 123.15      | 118.30   |
| 1   | G     | 210    | ARG  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | L     | 210    | ARG  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | M     | 996    | ASP  | CB-CG-OD2 | -5.38 | 113.45      | 118.30   |
| 1   | A     | 77     | ASP  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | D     | 77     | ASP  | CB-CG-OD1 | 5.38  | 123.14      | 118.30   |
| 1   | G     | 77     | ASP  | N-CA-CB   | 5.38  | 120.29      | 110.60   |
| 1   | M     | 403    | ASP  | CB-CG-OD2 | -5.38 | 113.46      | 118.30   |
| 1   | E     | 77     | ASP  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | J     | 178    | ARG  | NE-CZ-NH1 | -5.38 | 117.61      | 120.30   |
| 1   | E     | 403    | ASP  | CB-CG-OD2 | -5.38 | 113.46      | 118.30   |
| 1   | F     | 210    | ARG  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | G     | 77     | ASP  | CB-CG-OD1 | 5.38  | 123.14      | 118.30   |
| 1   | H     | 210    | ARG  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | I     | 210    | ARG  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | I     | 996    | ASP  | CB-CG-OD2 | -5.38 | 113.46      | 118.30   |
| 1   | K     | 210    | ARG  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | N     | 77     | ASP  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | O     | 210    | ARG  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | E     | 832    | ASP  | CB-CG-OD1 | 5.38  | 123.14      | 118.30   |
| 1   | P     | 77     | ASP  | N-CA-CB   | 5.38  | 120.28      | 110.60   |
| 1   | E     | 178    | ARG  | NE-CZ-NH1 | -5.37 | 117.61      | 120.30   |
| 1   | I     | 77     | ASP  | CB-CG-OD1 | 5.37  | 123.14      | 118.30   |
| 1   | K     | 77     | ASP  | N-CA-CB   | 5.37  | 120.27      | 110.60   |
| 1   | M     | 210    | ARG  | N-CA-CB   | 5.37  | 120.27      | 110.60   |
| 1   | O     | 403    | ASP  | CB-CG-OD1 | 5.37  | 123.14      | 118.30   |
| 1   | A     | 996    | ASP  | CB-CG-OD2 | -5.37 | 113.47      | 118.30   |
| 1   | N     | 996    | ASP  | CB-CG-OD2 | -5.37 | 113.47      | 118.30   |
| 1   | K     | 996    | ASP  | CB-CG-OD2 | -5.37 | 113.47      | 118.30   |
| 1   | B     | 178    | ARG  | NE-CZ-NH1 | -5.37 | 117.62      | 120.30   |
| 1   | B     | 832    | ASP  | CB-CG-OD1 | 5.37  | 123.13      | 118.30   |
| 1   | B     | 699[A] | ARG  | NE-CZ-NH1 | 5.37  | 122.98      | 120.30   |
| 1   | B     | 699[B] | ARG  | NE-CZ-NH1 | 5.37  | 122.98      | 120.30   |
| 1   | L     | 178    | ARG  | NE-CZ-NH1 | -5.37 | 117.62      | 120.30   |
| 1   | O     | 908    | ASP  | CB-CG-OD1 | 5.37  | 123.13      | 118.30   |
| 1   | E     | 908    | ASP  | CB-CG-OD1 | 5.37  | 123.13      | 118.30   |
| 1   | C     | 996    | ASP  | CB-CG-OD2 | -5.36 | 113.47      | 118.30   |
| 1   | F     | 403    | ASP  | CB-CG-OD2 | -5.36 | 113.47      | 118.30   |
| 1   | M     | 1013   | ARG  | NE-CZ-NH1 | 5.36  | 122.98      | 120.30   |
| 1   | B     | 77     | ASP  | N-CA-CB   | 5.36  | 120.25      | 110.60   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | D     | 832  | ASP  | CB-CG-OD1 | 5.36  | 123.12      | 118.30   |
| 1   | G     | 178  | ARG  | NE-CZ-NH1 | -5.36 | 117.62      | 120.30   |
| 1   | H     | 996  | ASP  | CB-CG-OD2 | -5.36 | 113.48      | 118.30   |
| 1   | O     | 77   | ASP  | CB-CG-OD1 | 5.36  | 123.12      | 118.30   |
| 1   | P     | 996  | ASP  | CB-CG-OD2 | -5.36 | 113.48      | 118.30   |
| 1   | K     | 864  | MET  | CG-SD-CE  | -5.36 | 91.62       | 100.20   |
| 1   | G     | 996  | ASP  | CB-CG-OD2 | -5.36 | 113.48      | 118.30   |
| 1   | J     | 826  | THR  | CA-CB-CG2 | -5.36 | 104.90      | 112.40   |
| 1   | N     | 77   | ASP  | CB-CG-OD1 | 5.36  | 123.12      | 118.30   |
| 1   | P     | 908  | ASP  | CB-CG-OD1 | 5.36  | 123.12      | 118.30   |
| 1   | D     | 1018 | LEU  | CB-CG-CD1 | -5.36 | 101.90      | 111.00   |
| 1   | E     | 1018 | LEU  | CB-CG-CD1 | -5.36 | 101.89      | 111.00   |
| 1   | J     | 908  | ASP  | CB-CG-OD1 | 5.36  | 123.12      | 118.30   |
| 1   | H     | 77   | ASP  | CB-CG-OD1 | 5.35  | 123.12      | 118.30   |
| 1   | N     | 864  | MET  | CG-SD-CE  | -5.35 | 91.63       | 100.20   |
| 1   | L     | 77   | ASP  | N-CA-CB   | 5.35  | 120.23      | 110.60   |
| 1   | M     | 864  | MET  | CG-SD-CE  | -5.35 | 91.64       | 100.20   |
| 1   | F     | 996  | ASP  | CB-CG-OD2 | -5.35 | 113.48      | 118.30   |
| 1   | F     | 1018 | LEU  | CB-CG-CD1 | -5.35 | 101.90      | 111.00   |
| 1   | J     | 864  | MET  | CG-SD-CE  | -5.35 | 91.64       | 100.20   |
| 1   | C     | 864  | MET  | CG-SD-CE  | -5.35 | 91.64       | 100.20   |
| 1   | G     | 826  | THR  | CA-CB-CG2 | -5.35 | 104.91      | 112.40   |
| 1   | L     | 864  | MET  | CG-SD-CE  | -5.35 | 91.64       | 100.20   |
| 1   | H     | 864  | MET  | CG-SD-CE  | -5.35 | 91.65       | 100.20   |
| 1   | K     | 77   | ASP  | CB-CG-OD1 | 5.35  | 123.11      | 118.30   |
| 1   | L     | 996  | ASP  | CB-CG-OD2 | -5.35 | 113.49      | 118.30   |
| 1   | A     | 864  | MET  | CG-SD-CE  | -5.34 | 91.65       | 100.20   |
| 1   | D     | 864  | MET  | CG-SD-CE  | -5.34 | 91.65       | 100.20   |
| 1   | G     | 864  | MET  | CG-SD-CE  | -5.34 | 91.65       | 100.20   |
| 1   | I     | 178  | ARG  | NE-CZ-NH1 | -5.34 | 117.63      | 120.30   |
| 1   | N     | 403  | ASP  | CB-CG-OD1 | 5.34  | 123.11      | 118.30   |
| 1   | D     | 826  | THR  | CA-CB-CG2 | -5.34 | 104.92      | 112.40   |
| 1   | H     | 1018 | LEU  | CB-CG-CD1 | -5.34 | 101.92      | 111.00   |
| 1   | A     | 729  | THR  | CA-C-N    | -5.34 | 105.45      | 117.20   |
| 1   | D     | 908  | ASP  | CB-CG-OD1 | 5.34  | 123.11      | 118.30   |
| 1   | G     | 1018 | LEU  | CB-CG-CD1 | -5.34 | 101.92      | 111.00   |
| 1   | N     | 178  | ARG  | NE-CZ-NH1 | -5.34 | 117.63      | 120.30   |
| 1   | O     | 864  | MET  | CG-SD-CE  | -5.34 | 91.66       | 100.20   |
| 1   | P     | 826  | THR  | CA-CB-CG2 | -5.34 | 104.92      | 112.40   |
| 1   | P     | 864  | MET  | CG-SD-CE  | -5.34 | 91.65       | 100.20   |
| 1   | D     | 1013 | ARG  | NE-CZ-NH1 | 5.34  | 122.97      | 120.30   |
| 1   | J     | 996  | ASP  | CB-CG-OD2 | -5.34 | 113.49      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | M     | 826  | THR  | CA-CB-CG2 | -5.34 | 104.93      | 112.40   |
| 1   | P     | 1018 | LEU  | CB-CG-CD1 | -5.34 | 101.92      | 111.00   |
| 1   | A     | 908  | ASP  | CB-CG-OD1 | 5.34  | 123.10      | 118.30   |
| 1   | A     | 1018 | LEU  | CB-CG-CD1 | -5.34 | 101.93      | 111.00   |
| 1   | G     | 183  | ARG  | CD-NE-CZ  | -5.34 | 116.13      | 123.60   |
| 1   | H     | 427  | THR  | CA-CB-CG2 | -5.34 | 104.93      | 112.40   |
| 1   | C     | 826  | THR  | CA-CB-CG2 | -5.33 | 104.93      | 112.40   |
| 1   | D     | 403  | ASP  | CB-CG-OD1 | 5.33  | 123.10      | 118.30   |
| 1   | F     | 183  | ARG  | CD-NE-CZ  | -5.33 | 116.13      | 123.60   |
| 1   | N     | 826  | THR  | CA-CB-CG2 | -5.33 | 104.93      | 112.40   |
| 1   | P     | 729  | THR  | CA-C-N    | -5.33 | 105.47      | 117.20   |
| 1   | C     | 403  | ASP  | CB-CG-OD1 | 5.33  | 123.10      | 118.30   |
| 1   | E     | 864  | MET  | CG-SD-CE  | -5.33 | 91.67       | 100.20   |
| 1   | B     | 695  | TRP  | CB-CA-C   | -5.33 | 99.74       | 110.40   |
| 1   | F     | 427  | THR  | CA-CB-CG2 | -5.33 | 104.94      | 112.40   |
| 1   | F     | 864  | MET  | CG-SD-CE  | -5.33 | 91.67       | 100.20   |
| 1   | H     | 826  | THR  | CA-CB-CG2 | -5.33 | 104.94      | 112.40   |
| 1   | H     | 832  | ASP  | CB-CG-OD1 | 5.33  | 123.10      | 118.30   |
| 1   | I     | 427  | THR  | CA-CB-CG2 | -5.33 | 104.94      | 112.40   |
| 1   | I     | 864  | MET  | CG-SD-CE  | -5.33 | 91.67       | 100.20   |
| 1   | K     | 1018 | LEU  | CB-CG-CD1 | -5.33 | 101.94      | 111.00   |
| 1   | O     | 826  | THR  | CA-CB-CG2 | -5.33 | 104.94      | 112.40   |
| 1   | O     | 1018 | LEU  | CB-CG-CD1 | -5.33 | 101.94      | 111.00   |
| 1   | B     | 729  | THR  | CA-C-N    | -5.33 | 105.48      | 117.20   |
| 1   | D     | 729  | THR  | CA-C-N    | -5.33 | 105.48      | 117.20   |
| 1   | F     | 908  | ASP  | CB-CG-OD1 | 5.33  | 123.09      | 118.30   |
| 1   | G     | 403  | ASP  | CB-CG-OD1 | 5.33  | 123.09      | 118.30   |
| 1   | H     | 178  | ARG  | NE-CZ-NH1 | -5.33 | 117.64      | 120.30   |
| 1   | K     | 729  | THR  | CA-C-N    | -5.33 | 105.49      | 117.20   |
| 1   | N     | 1013 | ARG  | NE-CZ-NH1 | 5.33  | 122.96      | 120.30   |
| 1   | P     | 183  | ARG  | CD-NE-CZ  | -5.33 | 116.14      | 123.60   |
| 1   | C     | 729  | THR  | CA-C-N    | -5.32 | 105.49      | 117.20   |
| 1   | D     | 183  | ARG  | CD-NE-CZ  | -5.32 | 116.15      | 123.60   |
| 1   | I     | 1018 | LEU  | CB-CG-CD1 | -5.32 | 101.95      | 111.00   |
| 1   | J     | 1018 | LEU  | CB-CG-CD1 | -5.32 | 101.95      | 111.00   |
| 1   | P     | 403  | ASP  | CB-CG-OD1 | 5.32  | 123.09      | 118.30   |
| 1   | B     | 1018 | LEU  | CB-CG-CD1 | -5.32 | 101.95      | 111.00   |
| 1   | B     | 864  | MET  | CG-SD-CE  | -5.32 | 91.69       | 100.20   |
| 1   | C     | 183  | ARG  | CD-NE-CZ  | -5.32 | 116.15      | 123.60   |
| 1   | H     | 729  | THR  | CA-C-N    | -5.32 | 105.50      | 117.20   |
| 1   | N     | 729  | THR  | CA-C-N    | -5.32 | 105.49      | 117.20   |
| 1   | B     | 183  | ARG  | CD-NE-CZ  | -5.32 | 116.15      | 123.60   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | I     | 908  | ASP  | CB-CG-OD1 | 5.32  | 123.09      | 118.30   |
| 1   | K     | 183  | ARG  | CD-NE-CZ  | -5.32 | 116.15      | 123.60   |
| 1   | M     | 183  | ARG  | CD-NE-CZ  | -5.32 | 116.15      | 123.60   |
| 1   | M     | 729  | THR  | CA-C-N    | -5.32 | 105.50      | 117.20   |
| 1   | A     | 178  | ARG  | NE-CZ-NH1 | -5.32 | 117.64      | 120.30   |
| 1   | J     | 427  | THR  | CA-CB-CG2 | -5.32 | 104.95      | 112.40   |
| 1   | K     | 908  | ASP  | CB-CG-OD1 | 5.32  | 123.09      | 118.30   |
| 1   | L     | 403  | ASP  | CB-CG-OD1 | 5.32  | 123.08      | 118.30   |
| 1   | L     | 729  | THR  | CA-C-N    | -5.32 | 105.50      | 117.20   |
| 1   | L     | 1018 | LEU  | CB-CG-CD1 | -5.32 | 101.96      | 111.00   |
| 1   | N     | 1018 | LEU  | CB-CG-CD1 | -5.32 | 101.96      | 111.00   |
| 1   | O     | 729  | THR  | CA-C-N    | -5.32 | 105.50      | 117.20   |
| 1   | C     | 427  | THR  | CA-CB-CG2 | -5.32 | 104.96      | 112.40   |
| 1   | O     | 695  | TRP  | CB-CA-C   | -5.32 | 99.77       | 110.40   |
| 1   | A     | 427  | THR  | CA-CB-CG2 | -5.31 | 104.96      | 112.40   |
| 1   | C     | 1018 | LEU  | CB-CG-CD1 | -5.31 | 101.97      | 111.00   |
| 1   | G     | 427  | THR  | CA-CB-CG2 | -5.31 | 104.96      | 112.40   |
| 1   | I     | 183  | ARG  | CD-NE-CZ  | -5.31 | 116.16      | 123.60   |
| 1   | J     | 729  | THR  | CA-C-N    | -5.31 | 105.51      | 117.20   |
| 1   | K     | 403  | ASP  | CB-CG-OD1 | 5.31  | 123.08      | 118.30   |
| 1   | M     | 1018 | LEU  | CB-CG-CD1 | -5.31 | 101.97      | 111.00   |
| 1   | P     | 427  | THR  | CA-CB-CG2 | -5.31 | 104.96      | 112.40   |
| 1   | A     | 826  | THR  | CA-CB-CG2 | -5.31 | 104.96      | 112.40   |
| 1   | N     | 427  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | A     | 183  | ARG  | CD-NE-CZ  | -5.31 | 116.17      | 123.60   |
| 1   | B     | 826  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | C     | 104  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | G     | 729  | THR  | CA-C-N    | -5.31 | 105.52      | 117.20   |
| 1   | H     | 183  | ARG  | CD-NE-CZ  | -5.31 | 116.17      | 123.60   |
| 1   | I     | 729  | THR  | CA-C-N    | -5.31 | 105.52      | 117.20   |
| 1   | I     | 826  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | L     | 826  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | A     | 403  | ASP  | CB-CG-OD1 | 5.31  | 123.08      | 118.30   |
| 1   | C     | 908  | ASP  | CB-CG-OD1 | 5.31  | 123.08      | 118.30   |
| 1   | E     | 729  | THR  | CA-C-N    | -5.31 | 105.53      | 117.20   |
| 1   | P     | 104  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | D     | 695  | TRP  | CB-CA-C   | -5.31 | 99.79       | 110.40   |
| 1   | H     | 104  | THR  | CA-CB-CG2 | -5.31 | 104.97      | 112.40   |
| 1   | O     | 178  | ARG  | NE-CZ-NH1 | -5.31 | 117.65      | 120.30   |
| 1   | F     | 729  | THR  | CA-C-N    | -5.30 | 105.53      | 117.20   |
| 1   | N     | 908  | ASP  | CB-CG-OD1 | 5.30  | 123.07      | 118.30   |
| 1   | E     | 183  | ARG  | CD-NE-CZ  | -5.30 | 116.18      | 123.60   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | E     | 826 | THR  | CA-CB-CG2 | -5.30 | 104.98      | 112.40   |
| 1   | C     | 695 | TRP  | CB-CA-C   | -5.30 | 99.80       | 110.40   |
| 1   | M     | 427 | THR  | CA-CB-CG2 | -5.30 | 104.98      | 112.40   |
| 1   | A     | 695 | TRP  | CB-CA-C   | -5.30 | 99.80       | 110.40   |
| 1   | G     | 802 | ASP  | CB-CG-OD1 | 5.30  | 123.07      | 118.30   |
| 1   | H     | 908 | ASP  | CB-CG-OD1 | 5.30  | 123.07      | 118.30   |
| 1   | L     | 908 | ASP  | CB-CG-OD1 | 5.30  | 123.07      | 118.30   |
| 1   | B     | 427 | THR  | CA-CB-CG2 | -5.30 | 104.98      | 112.40   |
| 1   | C     | 729 | THR  | N-CA-CB   | 5.30  | 120.37      | 110.30   |
| 1   | J     | 695 | TRP  | CB-CA-C   | -5.30 | 99.81       | 110.40   |
| 1   | F     | 729 | THR  | N-CA-CB   | 5.30  | 120.36      | 110.30   |
| 1   | H     | 695 | TRP  | CB-CA-C   | -5.30 | 99.81       | 110.40   |
| 1   | I     | 729 | THR  | N-CA-CB   | 5.30  | 120.36      | 110.30   |
| 1   | N     | 729 | THR  | N-CA-CB   | 5.30  | 120.36      | 110.30   |
| 1   | O     | 183 | ARG  | CD-NE-CZ  | -5.30 | 116.18      | 123.60   |
| 1   | G     | 695 | TRP  | CB-CA-C   | -5.29 | 99.81       | 110.40   |
| 1   | M     | 403 | ASP  | CB-CG-OD1 | 5.29  | 123.06      | 118.30   |
| 1   | I     | 403 | ASP  | CB-CG-OD1 | 5.29  | 123.06      | 118.30   |
| 1   | I     | 695 | TRP  | CB-CA-C   | -5.29 | 99.81       | 110.40   |
| 1   | L     | 427 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | M     | 695 | TRP  | CB-CA-C   | -5.29 | 99.81       | 110.40   |
| 1   | N     | 695 | TRP  | CB-CA-C   | -5.29 | 99.81       | 110.40   |
| 1   | O     | 427 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | B     | 104 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | F     | 826 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | K     | 802 | ASP  | CB-CG-OD1 | 5.29  | 123.06      | 118.30   |
| 1   | K     | 178 | ARG  | NE-CZ-NH1 | -5.29 | 117.66      | 120.30   |
| 1   | K     | 695 | TRP  | CB-CA-C   | -5.29 | 99.82       | 110.40   |
| 1   | K     | 826 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | L     | 695 | TRP  | CB-CA-C   | -5.29 | 99.82       | 110.40   |
| 1   | M     | 908 | ASP  | CB-CG-OD1 | 5.29  | 123.06      | 118.30   |
| 1   | O     | 104 | THR  | CA-CB-CG2 | -5.29 | 104.99      | 112.40   |
| 1   | B     | 729 | THR  | N-CA-CB   | 5.29  | 120.35      | 110.30   |
| 1   | E     | 427 | THR  | CA-CB-CG2 | -5.29 | 105.00      | 112.40   |
| 1   | F     | 104 | THR  | CA-CB-CG2 | -5.29 | 105.00      | 112.40   |
| 1   | F     | 695 | TRP  | CB-CA-C   | -5.29 | 99.82       | 110.40   |
| 1   | H     | 403 | ASP  | CB-CG-OD1 | 5.29  | 123.06      | 118.30   |
| 1   | M     | 729 | THR  | N-CA-CB   | 5.29  | 120.34      | 110.30   |
| 1   | P     | 695 | TRP  | CB-CA-C   | -5.29 | 99.83       | 110.40   |
| 1   | A     | 104 | THR  | CA-CB-CG2 | -5.29 | 105.00      | 112.40   |
| 1   | B     | 84  | VAL  | N-CA-CB   | -5.29 | 99.87       | 111.50   |
| 1   | G     | 84  | VAL  | N-CA-CB   | -5.29 | 99.87       | 111.50   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | K     | 427  | THR  | CA-CB-CG2 | -5.28 | 105.00      | 112.40   |
| 1   | L     | 802  | ASP  | CB-CG-OD1 | 5.28  | 123.06      | 118.30   |
| 1   | J     | 183  | ARG  | CD-NE-CZ  | -5.28 | 116.20      | 123.60   |
| 1   | A     | 1013 | ARG  | NE-CZ-NH1 | 5.28  | 122.94      | 120.30   |
| 1   | D     | 427  | THR  | CA-CB-CG2 | -5.28 | 105.01      | 112.40   |
| 1   | J     | 729  | THR  | N-CA-CB   | 5.28  | 120.33      | 110.30   |
| 1   | O     | 84   | VAL  | N-CA-CB   | -5.28 | 99.89       | 111.50   |
| 1   | B     | 114  | VAL  | N-CA-CB   | -5.28 | 99.89       | 111.50   |
| 1   | E     | 695  | TRP  | CB-CA-C   | -5.28 | 99.85       | 110.40   |
| 1   | F     | 84   | VAL  | N-CA-CB   | -5.28 | 99.89       | 111.50   |
| 1   | F     | 403  | ASP  | CB-CG-OD1 | 5.28  | 123.05      | 118.30   |
| 1   | F     | 802  | ASP  | CB-CG-OD1 | 5.28  | 123.05      | 118.30   |
| 1   | G     | 1013 | ARG  | NE-CZ-NH1 | 5.28  | 122.94      | 120.30   |
| 1   | J     | 104  | THR  | CA-CB-CG2 | -5.28 | 105.01      | 112.40   |
| 1   | L     | 729  | THR  | N-CA-CB   | 5.28  | 120.33      | 110.30   |
| 1   | O     | 729  | THR  | N-CA-CB   | 5.28  | 120.33      | 110.30   |
| 1   | P     | 729  | THR  | N-CA-CB   | 5.28  | 120.33      | 110.30   |
| 1   | C     | 84   | VAL  | N-CA-CB   | -5.28 | 99.89       | 111.50   |
| 1   | G     | 729  | THR  | N-CA-CB   | 5.28  | 120.32      | 110.30   |
| 1   | I     | 1013 | ARG  | NE-CZ-NH1 | 5.28  | 122.94      | 120.30   |
| 1   | H     | 114  | VAL  | N-CA-CB   | -5.27 | 99.90       | 111.50   |
| 1   | H     | 802  | ASP  | CB-CG-OD1 | 5.27  | 123.05      | 118.30   |
| 1   | N     | 183  | ARG  | CD-NE-CZ  | -5.27 | 116.22      | 123.60   |
| 1   | P     | 114  | VAL  | N-CA-CB   | -5.27 | 99.90       | 111.50   |
| 1   | E     | 114  | VAL  | N-CA-CB   | -5.27 | 99.90       | 111.50   |
| 1   | K     | 84   | VAL  | N-CA-CB   | -5.27 | 99.90       | 111.50   |
| 1   | M     | 104  | THR  | CA-CB-CG2 | -5.27 | 105.02      | 112.40   |
| 1   | P     | 84   | VAL  | N-CA-CB   | -5.27 | 99.90       | 111.50   |
| 1   | D     | 729  | THR  | N-CA-CB   | 5.27  | 120.31      | 110.30   |
| 1   | H     | 729  | THR  | N-CA-CB   | 5.27  | 120.31      | 110.30   |
| 1   | B     | 908  | ASP  | CB-CG-OD1 | 5.27  | 123.04      | 118.30   |
| 1   | K     | 729  | THR  | N-CA-CB   | 5.27  | 120.31      | 110.30   |
| 1   | L     | 183  | ARG  | CD-NE-CZ  | -5.27 | 116.22      | 123.60   |
| 1   | M     | 178  | ARG  | NE-CZ-NH1 | -5.27 | 117.67      | 120.30   |
| 1   | N     | 104  | THR  | CA-CB-CG2 | -5.27 | 105.02      | 112.40   |
| 1   | A     | 84   | VAL  | N-CA-CB   | -5.27 | 99.91       | 111.50   |
| 1   | E     | 84   | VAL  | N-CA-CB   | -5.27 | 99.91       | 111.50   |
| 1   | E     | 104  | THR  | CA-CB-CG2 | -5.27 | 105.03      | 112.40   |
| 1   | E     | 729  | THR  | N-CA-CB   | 5.27  | 120.31      | 110.30   |
| 1   | I     | 104  | THR  | CA-CB-CG2 | -5.27 | 105.03      | 112.40   |
| 1   | K     | 104  | THR  | CA-CB-CG2 | -5.27 | 105.02      | 112.40   |
| 1   | L     | 84   | VAL  | N-CA-CB   | -5.27 | 99.91       | 111.50   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | N     | 114  | VAL  | N-CA-CB   | -5.27 | 99.91       | 111.50   |
| 1   | O     | 114  | VAL  | N-CA-CB   | -5.27 | 99.91       | 111.50   |
| 1   | E     | 403  | ASP  | CB-CG-OD1 | 5.26  | 123.04      | 118.30   |
| 1   | J     | 403  | ASP  | CB-CG-OD1 | 5.26  | 123.04      | 118.30   |
| 1   | D     | 84   | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | D     | 114  | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | J     | 114  | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | K     | 114  | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | B     | 1013 | ARG  | NE-CZ-NH1 | 5.26  | 122.93      | 120.30   |
| 1   | G     | 104  | THR  | CA-CB-CG2 | -5.26 | 105.03      | 112.40   |
| 1   | I     | 84   | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | L     | 104  | THR  | CA-CB-CG2 | -5.26 | 105.03      | 112.40   |
| 1   | M     | 84   | VAL  | N-CA-CB   | -5.26 | 99.92       | 111.50   |
| 1   | P     | 802  | ASP  | CB-CG-OD1 | 5.26  | 123.04      | 118.30   |
| 1   | A     | 114  | VAL  | N-CA-CB   | -5.26 | 99.93       | 111.50   |
| 1   | B     | 782  | ASP  | CB-CG-OD1 | 5.26  | 123.03      | 118.30   |
| 1   | C     | 802  | ASP  | CB-CG-OD1 | 5.26  | 123.03      | 118.30   |
| 1   | D     | 104  | THR  | CA-CB-CG2 | -5.26 | 105.04      | 112.40   |
| 1   | H     | 84   | VAL  | N-CA-CB   | -5.26 | 99.93       | 111.50   |
| 1   | I     | 114  | VAL  | N-CA-CB   | -5.26 | 99.93       | 111.50   |
| 1   | N     | 84   | VAL  | N-CA-CB   | -5.26 | 99.93       | 111.50   |
| 1   | E     | 802  | ASP  | CB-CG-OD1 | 5.26  | 123.03      | 118.30   |
| 1   | F     | 114  | VAL  | N-CA-CB   | -5.26 | 99.94       | 111.50   |
| 1   | E     | 1013 | ARG  | NE-CZ-NH1 | 5.25  | 122.93      | 120.30   |
| 1   | J     | 84   | VAL  | N-CA-CB   | -5.25 | 99.94       | 111.50   |
| 1   | O     | 1013 | ARG  | NE-CZ-NH1 | 5.25  | 122.93      | 120.30   |
| 1   | A     | 729  | THR  | N-CA-CB   | 5.25  | 120.28      | 110.30   |
| 1   | A     | 802  | ASP  | CB-CG-OD1 | 5.25  | 123.03      | 118.30   |
| 1   | G     | 114  | VAL  | N-CA-CB   | -5.25 | 99.95       | 111.50   |
| 1   | K     | 1013 | ARG  | NE-CZ-NH1 | 5.25  | 122.92      | 120.30   |
| 1   | D     | 802  | ASP  | CB-CG-OD1 | 5.25  | 123.02      | 118.30   |
| 1   | C     | 114  | VAL  | N-CA-CB   | -5.25 | 99.96       | 111.50   |
| 1   | G     | 908  | ASP  | CB-CG-OD1 | 5.25  | 123.02      | 118.30   |
| 1   | J     | 802  | ASP  | CB-CG-OD1 | 5.25  | 123.02      | 118.30   |
| 1   | F     | 178  | ARG  | NE-CZ-NH1 | -5.25 | 117.68      | 120.30   |
| 1   | J     | 1013 | ARG  | NE-CZ-NH1 | 5.24  | 122.92      | 120.30   |
| 1   | L     | 114  | VAL  | N-CA-CB   | -5.24 | 99.96       | 111.50   |
| 1   | M     | 114  | VAL  | N-CA-CB   | -5.24 | 99.97       | 111.50   |
| 1   | L     | 761  | GLN  | CA-CB-CG  | -5.24 | 101.87      | 113.40   |
| 1   | H     | 761  | GLN  | CA-CB-CG  | -5.24 | 101.88      | 113.40   |
| 1   | N     | 802  | ASP  | CB-CG-OD1 | 5.24  | 123.02      | 118.30   |
| 1   | O     | 802  | ASP  | CB-CG-OD1 | 5.24  | 123.01      | 118.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | C     | 178  | ARG  | NE-CZ-NH1 | -5.24 | 117.68      | 120.30   |
| 1   | P     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.89      | 113.40   |
| 1   | C     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.89      | 113.40   |
| 1   | O     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.89      | 113.40   |
| 1   | P     | 1013 | ARG  | NE-CZ-NH1 | 5.23  | 122.92      | 120.30   |
| 1   | E     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.89      | 113.40   |
| 1   | J     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.89      | 113.40   |
| 1   | C     | 1013 | ARG  | NE-CZ-NH1 | 5.23  | 122.92      | 120.30   |
| 1   | I     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.90      | 113.40   |
| 1   | P     | 782  | ASP  | CB-CG-OD1 | 5.23  | 123.00      | 118.30   |
| 1   | G     | 761  | GLN  | CA-CB-CG  | -5.23 | 101.90      | 113.40   |
| 1   | A     | 761  | GLN  | CA-CB-CG  | -5.22 | 101.91      | 113.40   |
| 1   | E     | 782  | ASP  | CB-CG-OD1 | 5.22  | 123.00      | 118.30   |
| 1   | K     | 761  | GLN  | CA-CB-CG  | -5.22 | 101.91      | 113.40   |
| 1   | B     | 761  | GLN  | CA-CB-CG  | -5.22 | 101.92      | 113.40   |
| 1   | D     | 761  | GLN  | CA-CB-CG  | -5.22 | 101.92      | 113.40   |
| 1   | M     | 802  | ASP  | CB-CG-OD1 | 5.22  | 123.00      | 118.30   |
| 1   | E     | 651  | LEU  | CB-CA-C   | -5.22 | 100.29      | 110.20   |
| 1   | F     | 761  | GLN  | CA-CB-CG  | -5.21 | 101.93      | 113.40   |
| 1   | M     | 761  | GLN  | CA-CB-CG  | -5.21 | 101.93      | 113.40   |
| 1   | O     | 651  | LEU  | CB-CA-C   | -5.21 | 100.30      | 110.20   |
| 1   | I     | 802  | ASP  | CB-CG-OD1 | 5.21  | 122.99      | 118.30   |
| 1   | N     | 761  | GLN  | CA-CB-CG  | -5.21 | 101.93      | 113.40   |
| 1   | C     | 651  | LEU  | CB-CA-C   | -5.21 | 100.31      | 110.20   |
| 1   | L     | 1013 | ARG  | NE-CZ-NH1 | 5.21  | 122.90      | 120.30   |
| 1   | L     | 745  | MET  | CB-CA-C   | -5.21 | 99.99       | 110.40   |
| 1   | F     | 651  | LEU  | CB-CA-C   | -5.20 | 100.31      | 110.20   |
| 1   | P     | 651  | LEU  | CB-CA-C   | -5.20 | 100.31      | 110.20   |
| 1   | D     | 651  | LEU  | CB-CA-C   | -5.20 | 100.32      | 110.20   |
| 1   | H     | 1013 | ARG  | NE-CZ-NH1 | 5.20  | 122.90      | 120.30   |
| 1   | O     | 782  | ASP  | CB-CG-OD1 | 5.20  | 122.98      | 118.30   |
| 1   | B     | 802  | ASP  | CB-CG-OD1 | 5.20  | 122.98      | 118.30   |
| 1   | F     | 745  | MET  | CB-CA-C   | -5.20 | 100.00      | 110.40   |
| 1   | K     | 745  | MET  | CB-CA-C   | -5.20 | 100.00      | 110.40   |
| 1   | K     | 651  | LEU  | CB-CA-C   | -5.20 | 100.33      | 110.20   |
| 1   | C     | 782  | ASP  | CB-CG-OD1 | 5.20  | 122.97      | 118.30   |
| 1   | N     | 651  | LEU  | CB-CA-C   | -5.20 | 100.33      | 110.20   |
| 1   | I     | 782  | ASP  | CB-CG-OD1 | 5.19  | 122.97      | 118.30   |
| 1   | J     | 651  | LEU  | CB-CA-C   | -5.19 | 100.33      | 110.20   |
| 1   | A     | 651  | LEU  | CB-CA-C   | -5.19 | 100.33      | 110.20   |
| 1   | H     | 651  | LEU  | CB-CA-C   | -5.19 | 100.33      | 110.20   |
| 1   | B     | 651  | LEU  | CB-CA-C   | -5.19 | 100.34      | 110.20   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | G     | 651  | LEU  | CB-CA-C   | -5.19 | 100.34      | 110.20   |
| 1   | I     | 651  | LEU  | CB-CA-C   | -5.19 | 100.34      | 110.20   |
| 1   | J     | 745  | MET  | CB-CA-C   | -5.19 | 100.02      | 110.40   |
| 1   | H     | 745  | MET  | CB-CA-C   | -5.19 | 100.03      | 110.40   |
| 1   | M     | 745  | MET  | CB-CA-C   | -5.19 | 100.03      | 110.40   |
| 1   | A     | 782  | ASP  | CB-CG-OD1 | 5.19  | 122.97      | 118.30   |
| 1   | P     | 745  | MET  | CB-CA-C   | -5.18 | 100.03      | 110.40   |
| 1   | J     | 782  | ASP  | CB-CG-OD1 | 5.18  | 122.96      | 118.30   |
| 1   | L     | 651  | LEU  | CB-CA-C   | -5.18 | 100.35      | 110.20   |
| 1   | B     | 745  | MET  | CB-CA-C   | -5.18 | 100.04      | 110.40   |
| 1   | G     | 745  | MET  | CB-CA-C   | -5.18 | 100.04      | 110.40   |
| 1   | K     | 782  | ASP  | CB-CG-OD1 | 5.18  | 122.96      | 118.30   |
| 1   | M     | 782  | ASP  | CB-CG-OD1 | 5.18  | 122.96      | 118.30   |
| 1   | C     | 745  | MET  | CB-CA-C   | -5.18 | 100.04      | 110.40   |
| 1   | E     | 745  | MET  | CB-CA-C   | -5.18 | 100.04      | 110.40   |
| 1   | F     | 782  | ASP  | CB-CG-OD1 | 5.18  | 122.96      | 118.30   |
| 1   | F     | 1013 | ARG  | NE-CZ-NH1 | 5.18  | 122.89      | 120.30   |
| 1   | A     | 745  | MET  | CB-CA-C   | -5.18 | 100.05      | 110.40   |
| 1   | D     | 745  | MET  | CB-CA-C   | -5.18 | 100.05      | 110.40   |
| 1   | M     | 651  | LEU  | CB-CA-C   | -5.18 | 100.36      | 110.20   |
| 1   | N     | 745  | MET  | CB-CA-C   | -5.18 | 100.05      | 110.40   |
| 1   | O     | 745  | MET  | CB-CA-C   | -5.17 | 100.05      | 110.40   |
| 1   | D     | 782  | ASP  | CB-CG-OD1 | 5.17  | 122.95      | 118.30   |
| 1   | K     | 310  | ARG  | N-CA-CB   | 5.17  | 119.90      | 110.60   |
| 1   | L     | 782  | ASP  | CB-CG-OD1 | 5.16  | 122.94      | 118.30   |
| 1   | I     | 745  | MET  | CB-CA-C   | -5.16 | 100.08      | 110.40   |
| 1   | J     | 147  | ASN  | N-CA-CB   | -5.16 | 101.32      | 110.60   |
| 1   | M     | 147  | ASN  | N-CA-CB   | -5.16 | 101.32      | 110.60   |
| 1   | L     | 147  | ASN  | N-CA-CB   | -5.16 | 101.32      | 110.60   |
| 1   | O     | 310  | ARG  | N-CA-CB   | 5.16  | 119.88      | 110.60   |
| 1   | D     | 310  | ARG  | N-CA-CB   | 5.15  | 119.88      | 110.60   |
| 1   | G     | 147  | ASN  | N-CA-CB   | -5.15 | 101.32      | 110.60   |
| 1   | H     | 782  | ASP  | CB-CG-OD1 | 5.15  | 122.94      | 118.30   |
| 1   | A     | 147  | ASN  | N-CA-CB   | -5.15 | 101.33      | 110.60   |
| 1   | B     | 310  | ARG  | N-CA-CB   | 5.15  | 119.87      | 110.60   |
| 1   | I     | 147  | ASN  | N-CA-CB   | -5.15 | 101.33      | 110.60   |
| 1   | G     | 782  | ASP  | CB-CG-OD1 | 5.14  | 122.93      | 118.30   |
| 1   | E     | 508  | GLU  | CA-CB-CG  | 5.14  | 124.71      | 113.40   |
| 1   | H     | 508  | GLU  | CA-CB-CG  | 5.14  | 124.71      | 113.40   |
| 1   | B     | 147  | ASN  | N-CA-CB   | -5.14 | 101.35      | 110.60   |
| 1   | K     | 508  | GLU  | CA-CB-CG  | 5.14  | 124.71      | 113.40   |
| 1   | C     | 310  | ARG  | N-CA-CB   | 5.14  | 119.85      | 110.60   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | C     | 147 | ASN  | N-CA-CB   | -5.14 | 101.35      | 110.60   |
| 1   | C     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.69      | 113.40   |
| 1   | F     | 147 | ASN  | N-CA-CB   | -5.13 | 101.36      | 110.60   |
| 1   | N     | 310 | ARG  | N-CA-CB   | 5.13  | 119.84      | 110.60   |
| 1   | N     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.70      | 113.40   |
| 1   | A     | 310 | ARG  | N-CA-CB   | 5.13  | 119.84      | 110.60   |
| 1   | O     | 147 | ASN  | N-CA-CB   | -5.13 | 101.36      | 110.60   |
| 1   | I     | 524 | LEU  | CB-CA-C   | -5.13 | 100.45      | 110.20   |
| 1   | I     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.69      | 113.40   |
| 1   | A     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.68      | 113.40   |
| 1   | B     | 598 | ASP  | CB-CG-OD2 | -5.13 | 113.69      | 118.30   |
| 1   | D     | 147 | ASN  | N-CA-CB   | -5.13 | 101.37      | 110.60   |
| 1   | K     | 147 | ASN  | N-CA-CB   | -5.13 | 101.37      | 110.60   |
| 1   | L     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.68      | 113.40   |
| 1   | L     | 848 | THR  | CA-CB-CG2 | -5.13 | 105.22      | 112.40   |
| 1   | B     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.68      | 113.40   |
| 1   | F     | 508 | GLU  | CA-CB-CG  | 5.13  | 124.68      | 113.40   |
| 1   | H     | 147 | ASN  | N-CA-CB   | -5.13 | 101.37      | 110.60   |
| 1   | N     | 782 | ASP  | CB-CG-OD1 | 5.12  | 122.91      | 118.30   |
| 1   | E     | 147 | ASN  | N-CA-CB   | -5.12 | 101.38      | 110.60   |
| 1   | E     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | G     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | H     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | O     | 848 | THR  | CA-CB-CG2 | -5.12 | 105.23      | 112.40   |
| 1   | P     | 147 | ASN  | N-CA-CB   | -5.12 | 101.38      | 110.60   |
| 1   | F     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | F     | 598 | ASP  | CB-CG-OD2 | -5.12 | 113.69      | 118.30   |
| 1   | I     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | E     | 848 | THR  | CA-CB-CG2 | -5.12 | 105.23      | 112.40   |
| 1   | M     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | M     | 508 | GLU  | CA-CB-CG  | 5.12  | 124.66      | 113.40   |
| 1   | P     | 310 | ARG  | N-CA-CB   | 5.12  | 119.82      | 110.60   |
| 1   | H     | 524 | LEU  | CB-CA-C   | -5.12 | 100.47      | 110.20   |
| 1   | L     | 310 | ARG  | N-CA-CB   | 5.12  | 119.81      | 110.60   |
| 1   | P     | 508 | GLU  | CA-CB-CG  | 5.12  | 124.66      | 113.40   |
| 1   | B     | 524 | LEU  | CB-CA-C   | -5.12 | 100.48      | 110.20   |
| 1   | H     | 598 | ASP  | CB-CG-OD2 | -5.12 | 113.70      | 118.30   |
| 1   | J     | 508 | GLU  | CA-CB-CG  | 5.12  | 124.66      | 113.40   |
| 1   | J     | 710 | GLU  | CB-CA-C   | -5.12 | 100.17      | 110.40   |
| 1   | O     | 508 | GLU  | CA-CB-CG  | 5.12  | 124.66      | 113.40   |
| 1   | O     | 508 | GLU  | CB-CA-C   | -5.12 | 100.17      | 110.40   |
| 1   | O     | 524 | LEU  | CB-CA-C   | -5.12 | 100.48      | 110.20   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | D     | 508 | GLU  | CB-CA-C   | -5.11 | 100.17      | 110.40   |
| 1   | F     | 524 | LEU  | CB-CA-C   | -5.11 | 100.49      | 110.20   |
| 1   | J     | 524 | LEU  | CB-CA-C   | -5.11 | 100.48      | 110.20   |
| 1   | K     | 598 | ASP  | CB-CG-OD2 | -5.11 | 113.70      | 118.30   |
| 1   | N     | 147 | ASN  | N-CA-CB   | -5.11 | 101.40      | 110.60   |
| 1   | O     | 710 | GLU  | CB-CA-C   | -5.11 | 100.17      | 110.40   |
| 1   | P     | 524 | LEU  | CB-CA-C   | -5.11 | 100.48      | 110.20   |
| 1   | I     | 710 | GLU  | CB-CA-C   | -5.11 | 100.17      | 110.40   |
| 1   | M     | 524 | LEU  | CB-CA-C   | -5.11 | 100.49      | 110.20   |
| 1   | A     | 524 | LEU  | CB-CA-C   | -5.11 | 100.49      | 110.20   |
| 1   | D     | 710 | GLU  | CB-CA-C   | -5.11 | 100.18      | 110.40   |
| 1   | E     | 710 | GLU  | CB-CA-C   | -5.11 | 100.18      | 110.40   |
| 1   | J     | 310 | ARG  | N-CA-CB   | 5.11  | 119.80      | 110.60   |
| 1   | K     | 226 | HIS  | CB-CA-C   | -5.11 | 100.18      | 110.40   |
| 1   | L     | 524 | LEU  | CB-CA-C   | -5.11 | 100.49      | 110.20   |
| 1   | O     | 226 | HIS  | CB-CA-C   | -5.11 | 100.18      | 110.40   |
| 1   | L     | 598 | ASP  | CB-CG-OD2 | -5.11 | 113.70      | 118.30   |
| 1   | C     | 710 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | D     | 508 | GLU  | CA-CB-CG  | 5.11  | 124.64      | 113.40   |
| 1   | D     | 524 | LEU  | CB-CA-C   | -5.11 | 100.50      | 110.20   |
| 1   | I     | 508 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | A     | 710 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | B     | 710 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | D     | 598 | ASP  | CB-CG-OD2 | -5.11 | 113.70      | 118.30   |
| 1   | N     | 710 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | P     | 710 | GLU  | CB-CA-C   | -5.11 | 100.19      | 110.40   |
| 1   | C     | 524 | LEU  | CB-CA-C   | -5.10 | 100.50      | 110.20   |
| 1   | D     | 226 | HIS  | CB-CA-C   | -5.10 | 100.19      | 110.40   |
| 1   | G     | 710 | GLU  | CB-CA-C   | -5.10 | 100.19      | 110.40   |
| 1   | N     | 226 | HIS  | CB-CA-C   | -5.10 | 100.19      | 110.40   |
| 1   | B     | 848 | THR  | CA-CB-CG2 | -5.10 | 105.26      | 112.40   |
| 1   | G     | 508 | GLU  | CA-CB-CG  | 5.10  | 124.63      | 113.40   |
| 1   | K     | 848 | THR  | CA-CB-CG2 | -5.10 | 105.26      | 112.40   |
| 1   | M     | 710 | GLU  | CB-CA-C   | -5.10 | 100.19      | 110.40   |
| 1   | M     | 848 | THR  | CA-CB-CG2 | -5.10 | 105.26      | 112.40   |
| 1   | N     | 598 | ASP  | CB-CG-OD2 | -5.10 | 113.71      | 118.30   |
| 1   | P     | 508 | GLU  | CB-CA-C   | -5.10 | 100.19      | 110.40   |
| 1   | A     | 508 | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | F     | 508 | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | F     | 710 | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | G     | 508 | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | K     | 524 | LEU  | CB-CA-C   | -5.10 | 100.51      | 110.20   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | C     | 226  | HIS  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | G     | 524  | LEU  | CB-CA-C   | -5.10 | 100.51      | 110.20   |
| 1   | H     | 508  | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | H     | 1014 | TYR  | CB-CG-CD2 | -5.10 | 117.94      | 121.00   |
| 1   | I     | 598  | ASP  | CB-CG-OD2 | -5.10 | 113.71      | 118.30   |
| 1   | H     | 226  | HIS  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | J     | 336  | ARG  | NE-CZ-NH1 | 5.10  | 122.85      | 120.30   |
| 1   | J     | 508  | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | L     | 710  | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | M     | 508  | GLU  | CB-CA-C   | -5.10 | 100.20      | 110.40   |
| 1   | P     | 848  | THR  | CA-CB-CG2 | -5.10 | 105.26      | 112.40   |
| 1   | A     | 598  | ASP  | CB-CG-OD2 | -5.09 | 113.72      | 118.30   |
| 1   | E     | 524  | LEU  | CB-CA-C   | -5.09 | 100.52      | 110.20   |
| 1   | I     | 226  | HIS  | CB-CA-C   | -5.09 | 100.21      | 110.40   |
| 1   | L     | 508  | GLU  | CB-CA-C   | -5.09 | 100.21      | 110.40   |
| 1   | N     | 508  | GLU  | CB-CA-C   | -5.09 | 100.21      | 110.40   |
| 1   | L     | 226  | HIS  | CB-CA-C   | -5.09 | 100.21      | 110.40   |
| 1   | A     | 226  | HIS  | CB-CA-C   | -5.09 | 100.22      | 110.40   |
| 1   | C     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.27      | 112.40   |
| 1   | D     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.27      | 112.40   |
| 1   | J     | 598  | ASP  | CB-CG-OD2 | -5.09 | 113.72      | 118.30   |
| 1   | J     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.27      | 112.40   |
| 1   | N     | 524  | LEU  | CB-CA-C   | -5.09 | 100.53      | 110.20   |
| 1   | B     | 226  | HIS  | CB-CA-C   | -5.09 | 100.22      | 110.40   |
| 1   | I     | 750  | GLU  | N-CA-CB   | -5.09 | 101.44      | 110.60   |
| 1   | M     | 226  | HIS  | CB-CA-C   | -5.09 | 100.22      | 110.40   |
| 1   | A     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.28      | 112.40   |
| 1   | G     | 226  | HIS  | CB-CA-C   | -5.09 | 100.22      | 110.40   |
| 1   | E     | 508  | GLU  | CB-CA-C   | -5.09 | 100.22      | 110.40   |
| 1   | F     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.28      | 112.40   |
| 1   | I     | 848  | THR  | CA-CB-CG2 | -5.09 | 105.28      | 112.40   |
| 1   | H     | 710  | GLU  | CB-CA-C   | -5.08 | 100.23      | 110.40   |
| 1   | K     | 508  | GLU  | CB-CA-C   | -5.08 | 100.23      | 110.40   |
| 1   | H     | 848  | THR  | CA-CB-CG2 | -5.08 | 105.28      | 112.40   |
| 1   | K     | 710  | GLU  | CB-CA-C   | -5.08 | 100.23      | 110.40   |
| 1   | B     | 508  | GLU  | CB-CA-C   | -5.08 | 100.23      | 110.40   |
| 1   | C     | 508  | GLU  | CB-CA-C   | -5.08 | 100.24      | 110.40   |
| 1   | E     | 612  | THR  | N-CA-CB   | 5.08  | 119.95      | 110.30   |
| 1   | G     | 598  | ASP  | CB-CG-OD2 | -5.08 | 113.73      | 118.30   |
| 1   | J     | 750  | GLU  | N-CA-CB   | -5.08 | 101.45      | 110.60   |
| 1   | N     | 612  | THR  | N-CA-CB   | 5.08  | 119.95      | 110.30   |
| 1   | N     | 750  | GLU  | N-CA-CB   | -5.08 | 101.45      | 110.60   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | P     | 612 | THR  | N-CA-CB   | 5.08  | 119.95      | 110.30   |
| 1   | N     | 848 | THR  | CA-CB-CG2 | -5.08 | 105.29      | 112.40   |
| 1   | B     | 750 | GLU  | N-CA-CB   | -5.08 | 101.46      | 110.60   |
| 1   | C     | 598 | ASP  | CB-CG-OD2 | -5.08 | 113.73      | 118.30   |
| 1   | F     | 226 | HIS  | CB-CA-C   | -5.08 | 100.24      | 110.40   |
| 1   | H     | 750 | GLU  | N-CA-CB   | -5.08 | 101.46      | 110.60   |
| 1   | M     | 750 | GLU  | N-CA-CB   | -5.08 | 101.46      | 110.60   |
| 1   | B     | 612 | THR  | N-CA-CB   | 5.08  | 119.95      | 110.30   |
| 1   | E     | 226 | HIS  | CB-CA-C   | -5.08 | 100.25      | 110.40   |
| 1   | P     | 750 | GLU  | N-CA-CB   | -5.08 | 101.46      | 110.60   |
| 1   | M     | 598 | ASP  | CB-CG-OD2 | -5.08 | 113.73      | 118.30   |
| 1   | E     | 598 | ASP  | CB-CG-OD2 | -5.07 | 113.73      | 118.30   |
| 1   | G     | 750 | GLU  | N-CA-CB   | -5.07 | 101.47      | 110.60   |
| 1   | I     | 363 | HIS  | CA-CB-CG  | -5.07 | 104.97      | 113.60   |
| 1   | M     | 336 | ARG  | NE-CZ-NH1 | 5.07  | 122.84      | 120.30   |
| 1   | P     | 226 | HIS  | CB-CA-C   | -5.07 | 100.26      | 110.40   |
| 1   | E     | 750 | GLU  | N-CA-CB   | -5.07 | 101.47      | 110.60   |
| 1   | O     | 612 | THR  | N-CA-CB   | 5.07  | 119.93      | 110.30   |
| 1   | I     | 612 | THR  | N-CA-CB   | 5.07  | 119.93      | 110.30   |
| 1   | J     | 226 | HIS  | CB-CA-C   | -5.07 | 100.27      | 110.40   |
| 1   | K     | 750 | GLU  | N-CA-CB   | -5.07 | 101.48      | 110.60   |
| 1   | P     | 598 | ASP  | CB-CG-OD2 | -5.07 | 113.74      | 118.30   |
| 1   | F     | 750 | GLU  | N-CA-CB   | -5.07 | 101.48      | 110.60   |
| 1   | G     | 363 | HIS  | CA-CB-CG  | -5.07 | 104.99      | 113.60   |
| 1   | L     | 750 | GLU  | N-CA-CB   | -5.07 | 101.48      | 110.60   |
| 1   | K     | 59  | ARG  | NE-CZ-NH2 | -5.06 | 117.77      | 120.30   |
| 1   | A     | 612 | THR  | N-CA-CB   | 5.06  | 119.92      | 110.30   |
| 1   | A     | 750 | GLU  | N-CA-CB   | -5.06 | 101.49      | 110.60   |
| 1   | C     | 750 | GLU  | N-CA-CB   | -5.06 | 101.49      | 110.60   |
| 1   | F     | 363 | HIS  | CA-CB-CG  | -5.06 | 104.99      | 113.60   |
| 1   | H     | 612 | THR  | N-CA-CB   | 5.06  | 119.92      | 110.30   |
| 1   | L     | 336 | ARG  | NE-CZ-NH1 | 5.06  | 122.83      | 120.30   |
| 1   | L     | 612 | THR  | N-CA-CB   | 5.06  | 119.92      | 110.30   |
| 1   | N     | 336 | ARG  | NE-CZ-NH1 | 5.06  | 122.83      | 120.30   |
| 1   | O     | 750 | GLU  | N-CA-CB   | -5.06 | 101.49      | 110.60   |
| 1   | C     | 363 | HIS  | CA-CB-CG  | -5.06 | 105.00      | 113.60   |
| 1   | D     | 612 | THR  | N-CA-CB   | 5.06  | 119.91      | 110.30   |
| 1   | G     | 848 | THR  | CA-CB-CG2 | -5.06 | 105.32      | 112.40   |
| 1   | M     | 612 | THR  | N-CA-CB   | 5.06  | 119.91      | 110.30   |
| 1   | G     | 336 | ARG  | NE-CZ-NH1 | 5.05  | 122.83      | 120.30   |
| 1   | F     | 612 | THR  | N-CA-CB   | 5.05  | 119.90      | 110.30   |
| 1   | A     | 363 | HIS  | CA-CB-CG  | -5.05 | 105.01      | 113.60   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | B     | 363  | HIS  | CA-CB-CG  | -5.05 | 105.01      | 113.60   |
| 1   | G     | 612  | THR  | N-CA-CB   | 5.05  | 119.90      | 110.30   |
| 1   | K     | 612  | THR  | N-CA-CB   | 5.05  | 119.90      | 110.30   |
| 1   | C     | 612  | THR  | N-CA-CB   | 5.05  | 119.89      | 110.30   |
| 1   | N     | 1014 | TYR  | CB-CG-CD2 | -5.05 | 117.97      | 121.00   |
| 1   | E     | 336  | ARG  | NE-CZ-NH1 | 5.05  | 122.82      | 120.30   |
| 1   | G     | 172  | ASP  | CB-CG-OD2 | -5.05 | 113.76      | 118.30   |
| 1   | H     | 363  | HIS  | CA-CB-CG  | -5.05 | 105.02      | 113.60   |
| 1   | P     | 363  | HIS  | CA-CB-CG  | -5.05 | 105.02      | 113.60   |
| 1   | M     | 59   | ARG  | NE-CZ-NH2 | -5.04 | 117.78      | 120.30   |
| 1   | N     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.02      | 113.60   |
| 1   | O     | 172  | ASP  | CB-CG-OD2 | -5.04 | 113.76      | 118.30   |
| 1   | D     | 750  | GLU  | N-CA-CB   | -5.04 | 101.52      | 110.60   |
| 1   | I     | 1014 | TYR  | CB-CG-CD2 | -5.04 | 117.97      | 121.00   |
| 1   | J     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.03      | 113.60   |
| 1   | J     | 612  | THR  | N-CA-CB   | 5.04  | 119.88      | 110.30   |
| 1   | K     | 336  | ARG  | NE-CZ-NH1 | 5.04  | 122.82      | 120.30   |
| 1   | K     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.03      | 113.60   |
| 1   | P     | 1014 | TYR  | CB-CG-CD2 | -5.04 | 117.97      | 121.00   |
| 1   | H     | 336  | ARG  | NE-CZ-NH1 | 5.04  | 122.82      | 120.30   |
| 1   | L     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.03      | 113.60   |
| 1   | O     | 598  | ASP  | CB-CG-OD2 | -5.04 | 113.76      | 118.30   |
| 1   | E     | 172  | ASP  | CB-CG-OD2 | -5.04 | 113.77      | 118.30   |
| 1   | O     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.03      | 113.60   |
| 1   | M     | 363  | HIS  | CA-CB-CG  | -5.04 | 105.04      | 113.60   |
| 1   | C     | 336  | ARG  | NE-CZ-NH1 | 5.03  | 122.82      | 120.30   |
| 1   | K     | 172  | ASP  | CB-CG-OD2 | -5.03 | 113.77      | 118.30   |
| 1   | B     | 120  | THR  | CA-CB-CG2 | -5.03 | 105.36      | 112.40   |
| 1   | B     | 172  | ASP  | CB-CG-OD2 | -5.03 | 113.78      | 118.30   |
| 1   | O     | 336  | ARG  | NE-CZ-NH1 | 5.03  | 122.81      | 120.30   |
| 1   | H     | 859  | ASP  | CB-CG-OD2 | -5.03 | 113.78      | 118.30   |
| 1   | E     | 363  | HIS  | CA-CB-CG  | -5.02 | 105.06      | 113.60   |
| 1   | D     | 172  | ASP  | CB-CG-OD2 | -5.02 | 113.78      | 118.30   |
| 1   | G     | 1014 | TYR  | CB-CG-CD2 | -5.02 | 117.99      | 121.00   |
| 1   | A     | 1014 | TYR  | CB-CG-CD2 | -5.02 | 117.99      | 121.00   |
| 1   | M     | 343  | LEU  | CB-CA-C   | -5.02 | 100.66      | 110.20   |
| 1   | A     | 336  | ARG  | NE-CZ-NH1 | 5.02  | 122.81      | 120.30   |
| 1   | D     | 363  | HIS  | CA-CB-CG  | -5.02 | 105.07      | 113.60   |
| 1   | J     | 1014 | TYR  | CB-CG-CD2 | -5.02 | 117.99      | 121.00   |
| 1   | A     | 172  | ASP  | CB-CG-OD2 | -5.02 | 113.78      | 118.30   |
| 1   | O     | 343  | LEU  | CB-CA-C   | -5.02 | 100.67      | 110.20   |
| 1   | B     | 336  | ARG  | NE-CZ-NH1 | 5.01  | 122.81      | 120.30   |

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| Mol | Chain | Res  | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1   | D     | 336  | ARG  | NE-CZ-NH1 | 5.01  | 122.81      | 120.30   |
| 1   | I     | 172  | ASP  | CB-CG-OD2 | -5.01 | 113.79      | 118.30   |
| 1   | E     | 59   | ARG  | NE-CZ-NH2 | -5.01 | 117.79      | 120.30   |
| 1   | G     | 343  | LEU  | CB-CA-C   | -5.01 | 100.68      | 110.20   |
| 1   | D     | 859  | ASP  | CB-CG-OD2 | -5.01 | 113.79      | 118.30   |
| 1   | J     | 120  | THR  | CA-CB-CG2 | -5.01 | 105.39      | 112.40   |
| 1   | B     | 59   | ARG  | NE-CZ-NH2 | -5.01 | 117.80      | 120.30   |
| 1   | C     | 859  | ASP  | CB-CG-OD2 | -5.01 | 113.80      | 118.30   |
| 1   | E     | 1014 | TYR  | CB-CG-CD2 | -5.00 | 118.00      | 121.00   |
| 1   | I     | 343  | LEU  | CB-CA-C   | -5.00 | 100.69      | 110.20   |
| 1   | K     | 120  | THR  | CA-CB-CG2 | -5.00 | 105.39      | 112.40   |
| 1   | H     | 343  | LEU  | CB-CA-C   | -5.00 | 100.69      | 110.20   |
| 1   | L     | 1014 | TYR  | CB-CG-CD2 | -5.00 | 118.00      | 121.00   |
| 1   | C     | 343  | LEU  | CB-CA-C   | -5.00 | 100.70      | 110.20   |
| 1   | F     | 120  | THR  | CA-CB-CG2 | -5.00 | 105.40      | 112.40   |
| 1   | L     | 172  | ASP  | CB-CG-OD2 | -5.00 | 113.80      | 118.30   |
| 1   | M     | 172  | ASP  | CB-CG-OD2 | -5.00 | 113.80      | 118.30   |
| 1   | P     | 343  | LEU  | CB-CA-C   | -5.00 | 100.70      | 110.20   |

All (32) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1   | A     | 166 | ARG  | CA   |
| 1   | A     | 249 | GLU  | CA   |
| 1   | B     | 166 | ARG  | CA   |
| 1   | B     | 249 | GLU  | CA   |
| 1   | C     | 166 | ARG  | CA   |
| 1   | C     | 249 | GLU  | CA   |
| 1   | D     | 166 | ARG  | CA   |
| 1   | D     | 249 | GLU  | CA   |
| 1   | E     | 166 | ARG  | CA   |
| 1   | E     | 249 | GLU  | CA   |
| 1   | F     | 166 | ARG  | CA   |
| 1   | F     | 249 | GLU  | CA   |
| 1   | G     | 166 | ARG  | CA   |
| 1   | G     | 249 | GLU  | CA   |
| 1   | H     | 166 | ARG  | CA   |
| 1   | H     | 249 | GLU  | CA   |
| 1   | I     | 166 | ARG  | CA   |
| 1   | I     | 249 | GLU  | CA   |
| 1   | J     | 166 | ARG  | CA   |
| 1   | J     | 249 | GLU  | CA   |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1   | K     | 166 | ARG  | CA   |
| 1   | K     | 249 | GLU  | CA   |
| 1   | L     | 166 | ARG  | CA   |
| 1   | L     | 249 | GLU  | CA   |
| 1   | M     | 166 | ARG  | CA   |
| 1   | M     | 249 | GLU  | CA   |
| 1   | N     | 166 | ARG  | CA   |
| 1   | N     | 249 | GLU  | CA   |
| 1   | O     | 166 | ARG  | CA   |
| 1   | O     | 249 | GLU  | CA   |
| 1   | P     | 166 | ARG  | CA   |
| 1   | P     | 249 | GLU  | CA   |

There are no planarity outliers.

## 5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | A     | 8232  | 0        | 7817     | 270     | 3            |
| 1   | B     | 8232  | 0        | 7817     | 267     | 4            |
| 1   | C     | 8232  | 0        | 7817     | 262     | 1            |
| 1   | D     | 8232  | 0        | 7817     | 275     | 0            |
| 1   | E     | 8232  | 0        | 7817     | 266     | 0            |
| 1   | F     | 8232  | 0        | 7817     | 269     | 0            |
| 1   | G     | 8232  | 0        | 7817     | 267     | 0            |
| 1   | H     | 8232  | 0        | 7817     | 261     | 0            |
| 1   | I     | 8232  | 0        | 7817     | 269     | 1            |
| 1   | J     | 8232  | 0        | 7817     | 274     | 0            |
| 1   | K     | 8232  | 0        | 7817     | 277     | 0            |
| 1   | L     | 8232  | 0        | 7817     | 264     | 0            |
| 1   | M     | 8232  | 0        | 7817     | 271     | 0            |
| 1   | N     | 8232  | 0        | 7817     | 269     | 0            |
| 1   | O     | 8232  | 0        | 7817     | 271     | 0            |
| 1   | P     | 8232  | 0        | 7817     | 269     | 1            |
| 2   | A     | 2     | 0        | 0        | 0       | 0            |
| 2   | B     | 2     | 0        | 0        | 0       | 0            |
| 2   | C     | 2     | 0        | 0        | 0       | 0            |

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| Mol | Chain | Non-H  | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|--------|----------|----------|---------|--------------|
| 2   | D     | 2      | 0        | 0        | 0       | 0            |
| 2   | E     | 2      | 0        | 0        | 0       | 0            |
| 2   | F     | 2      | 0        | 0        | 0       | 0            |
| 2   | G     | 2      | 0        | 0        | 0       | 0            |
| 2   | H     | 2      | 0        | 0        | 0       | 0            |
| 2   | I     | 2      | 0        | 0        | 0       | 0            |
| 2   | J     | 2      | 0        | 0        | 0       | 0            |
| 2   | K     | 2      | 0        | 0        | 0       | 0            |
| 2   | L     | 2      | 0        | 0        | 0       | 0            |
| 2   | M     | 2      | 0        | 0        | 0       | 0            |
| 2   | N     | 2      | 0        | 0        | 0       | 0            |
| 2   | O     | 2      | 0        | 0        | 0       | 0            |
| 2   | P     | 2      | 0        | 0        | 0       | 0            |
| 3   | A     | 434    | 0        | 0        | 13      | 0            |
| 3   | B     | 436    | 0        | 0        | 13      | 0            |
| 3   | C     | 433    | 0        | 0        | 13      | 0            |
| 3   | D     | 437    | 0        | 0        | 13      | 0            |
| 3   | E     | 435    | 0        | 0        | 13      | 0            |
| 3   | F     | 436    | 0        | 0        | 13      | 0            |
| 3   | G     | 434    | 0        | 0        | 13      | 0            |
| 3   | H     | 435    | 0        | 0        | 13      | 0            |
| 3   | I     | 434    | 0        | 0        | 13      | 0            |
| 3   | J     | 436    | 0        | 0        | 13      | 0            |
| 3   | K     | 435    | 0        | 0        | 13      | 0            |
| 3   | L     | 435    | 0        | 0        | 13      | 0            |
| 3   | M     | 434    | 0        | 0        | 13      | 0            |
| 3   | N     | 436    | 0        | 0        | 13      | 0            |
| 3   | O     | 433    | 0        | 0        | 13      | 0            |
| 3   | P     | 437    | 0        | 0        | 13      | 0            |
| All | All   | 138704 | 0        | 125072   | 4201    | 5            |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 16.

All (4201) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1         | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|-----------------|--------------------------|-------------------|
| 1:L:427:THR:HA | 1:L:436:MET:HE1 | 1.43                     | 1.01              |
| 1:E:427:THR:HA | 1:E:436:MET:HE1 | 1.41                     | 1.00              |
| 1:M:427:THR:HA | 1:M:436:MET:HE1 | 1.43                     | 1.00              |
| 1:J:427:THR:HA | 1:J:436:MET:HE1 | 1.44                     | 0.99              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:C:427:THR:HA   | 1:C:436:MET:HE1 | 1.45                     | 0.98              |
| 1:K:427:THR:HA   | 1:K:436:MET:HE1 | 1.47                     | 0.97              |
| 1:I:427:THR:HA   | 1:I:436:MET:HE1 | 1.47                     | 0.96              |
| 1:G:427:THR:HA   | 1:G:436:MET:HE1 | 1.47                     | 0.96              |
| 1:P:427:THR:HA   | 1:P:436:MET:HE1 | 1.47                     | 0.95              |
| 1:B:525:SER:HB3  | 3:B:3101:HOH:O  | 1.68                     | 0.94              |
| 1:O:427:THR:HA   | 1:O:436:MET:HE1 | 1.50                     | 0.93              |
| 1:D:427:THR:HA   | 1:D:436:MET:HE1 | 1.48                     | 0.93              |
| 1:B:427:THR:HA   | 1:B:436:MET:HE1 | 1.50                     | 0.93              |
| 1:A:427:THR:HA   | 1:A:436:MET:HE1 | 1.53                     | 0.90              |
| 1:F:427:THR:HA   | 1:F:436:MET:HE1 | 1.53                     | 0.90              |
| 1:N:427:THR:HA   | 1:N:436:MET:HE1 | 1.53                     | 0.90              |
| 1:H:427:THR:HA   | 1:H:436:MET:CE  | 2.02                     | 0.89              |
| 1:D:427:THR:HA   | 1:D:436:MET:CE  | 2.02                     | 0.89              |
| 1:L:427:THR:HA   | 1:L:436:MET:CE  | 2.02                     | 0.89              |
| 1:G:427:THR:HA   | 1:G:436:MET:CE  | 2.02                     | 0.89              |
| 1:C:427:THR:HA   | 1:C:436:MET:CE  | 2.02                     | 0.89              |
| 1:N:427:THR:HA   | 1:N:436:MET:CE  | 2.02                     | 0.89              |
| 1:F:427:THR:HA   | 1:F:436:MET:CE  | 2.02                     | 0.89              |
| 1:H:427:THR:HA   | 1:H:436:MET:HE1 | 1.53                     | 0.89              |
| 1:A:427:THR:HA   | 1:A:436:MET:CE  | 2.02                     | 0.88              |
| 1:K:427:THR:HA   | 1:K:436:MET:CE  | 2.02                     | 0.88              |
| 1:E:427:THR:HA   | 1:E:436:MET:CE  | 2.02                     | 0.88              |
| 1:B:427:THR:HA   | 1:B:436:MET:CE  | 2.03                     | 0.88              |
| 1:I:427:THR:HA   | 1:I:436:MET:CE  | 2.02                     | 0.88              |
| 1:J:427:THR:HA   | 1:J:436:MET:CE  | 2.03                     | 0.88              |
| 1:M:427:THR:HA   | 1:M:436:MET:CE  | 2.02                     | 0.88              |
| 1:O:427:THR:HA   | 1:O:436:MET:CE  | 2.02                     | 0.87              |
| 1:N:595:THR:HG23 | 1:N:596:PRO:HA  | 1.57                     | 0.87              |
| 1:F:595:THR:HG23 | 1:F:596:PRO:HA  | 1.57                     | 0.87              |
| 1:H:595:THR:HG23 | 1:H:596:PRO:HA  | 1.57                     | 0.87              |
| 1:P:427:THR:HA   | 1:P:436:MET:CE  | 2.02                     | 0.87              |
| 1:P:595:THR:HG23 | 1:P:596:PRO:HA  | 1.57                     | 0.87              |
| 1:K:525:SER:HB3  | 3:K:4178:HOH:O  | 1.74                     | 0.87              |
| 1:E:595:THR:HG23 | 1:E:596:PRO:HA  | 1.57                     | 0.86              |
| 1:M:595:THR:HG23 | 1:M:596:PRO:HA  | 1.57                     | 0.86              |
| 1:A:595:THR:HG23 | 1:A:596:PRO:HA  | 1.57                     | 0.86              |
| 1:C:595:THR:HG23 | 1:C:596:PRO:HA  | 1.57                     | 0.86              |
| 1:K:595:THR:HG23 | 1:K:596:PRO:HA  | 1.57                     | 0.86              |
| 1:L:595:THR:HG23 | 1:L:596:PRO:HA  | 1.57                     | 0.85              |
| 1:B:595:THR:HG23 | 1:B:596:PRO:HA  | 1.57                     | 0.85              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:595:THR:HG23 | 1:D:596:PRO:HA   | 1.57                     | 0.85              |
| 1:O:525:SER:HB3  | 3:O:3528:HOH:O   | 1.76                     | 0.85              |
| 1:I:595:THR:HG23 | 1:I:596:PRO:HA   | 1.57                     | 0.84              |
| 1:G:595:THR:HG23 | 1:G:596:PRO:HA   | 1.57                     | 0.84              |
| 1:J:595:THR:HG23 | 1:J:596:PRO:HA   | 1.57                     | 0.84              |
| 1:O:595:THR:HG23 | 1:O:596:PRO:HA   | 1.57                     | 0.84              |
| 1:M:525:SER:HB3  | 3:M:4424:HOH:O   | 1.76                     | 0.84              |
| 1:B:434:PRO:HB3  | 1:C:434:PRO:HB3  | 1.58                     | 0.83              |
| 1:H:525:SER:HB3  | 3:H:4178:HOH:O   | 1.77                     | 0.83              |
| 1:A:282:ARG:HD3  | 1:D:420:MET:O    | 1.81                     | 0.81              |
| 1:J:436:MET:CE   | 1:J:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:G:436:MET:CE   | 1:G:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:C:436:MET:CE   | 1:C:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:F:436:MET:CE   | 1:F:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:N:436:MET:CE   | 1:N:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:D:436:MET:CE   | 1:D:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:M:436:MET:CE   | 1:M:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:E:436:MET:CE   | 1:E:467:ASN:HD22 | 1.95                     | 0.80              |
| 1:I:436:MET:CE   | 1:I:467:ASN:HD22 | 1.95                     | 0.79              |
| 1:A:436:MET:CE   | 1:A:467:ASN:HD22 | 1.95                     | 0.79              |
| 1:L:436:MET:CE   | 1:L:467:ASN:HD22 | 1.95                     | 0.79              |
| 1:I:525:SER:HB3  | 3:I:4424:HOH:O   | 1.81                     | 0.79              |
| 1:L:525:SER:HB3  | 3:L:3107:HOH:O   | 1.81                     | 0.79              |
| 1:I:316:HIS:HA   | 1:I:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:K:436:MET:CE   | 1:K:467:ASN:HD22 | 1.95                     | 0.78              |
| 1:P:436:MET:CE   | 1:P:467:ASN:HD22 | 1.95                     | 0.78              |
| 1:D:316:HIS:HA   | 1:D:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:H:436:MET:CE   | 1:H:467:ASN:HD22 | 1.95                     | 0.78              |
| 1:B:436:MET:CE   | 1:B:467:ASN:HD22 | 1.95                     | 0.78              |
| 1:P:316:HIS:HA   | 1:P:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:O:436:MET:CE   | 1:O:467:ASN:HD22 | 1.95                     | 0.78              |
| 1:C:316:HIS:HA   | 1:C:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:L:316:HIS:HA   | 1:L:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:J:316:HIS:HA   | 1:J:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:K:316:HIS:HA   | 1:K:323:ILE:HD12 | 1.66                     | 0.78              |
| 1:A:436:MET:HE1  | 1:A:467:ASN:HD22 | 1.49                     | 0.77              |
| 1:H:316:HIS:HA   | 1:H:323:ILE:HD12 | 1.66                     | 0.77              |
| 1:N:436:MET:HE1  | 1:N:467:ASN:HD22 | 1.49                     | 0.77              |
| 1:F:436:MET:HE1  | 1:F:467:ASN:HD22 | 1.49                     | 0.77              |
| 1:H:436:MET:HE1  | 1:H:467:ASN:HD22 | 1.49                     | 0.77              |
| 1:B:316:HIS:HA   | 1:B:323:ILE:HD12 | 1.66                     | 0.77              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:G:525:SER:HB3 | 3:G:3531:HOH:O   | 1.85                     | 0.77              |
| 1:E:316:HIS:HA  | 1:E:323:ILE:HD12 | 1.66                     | 0.77              |
| 1:G:316:HIS:HA  | 1:G:323:ILE:HD12 | 1.66                     | 0.77              |
| 1:O:316:HIS:HA  | 1:O:323:ILE:HD12 | 1.66                     | 0.77              |
| 1:J:285:TYR:HB3 | 1:J:288:ARG:HG3  | 1.67                     | 0.76              |
| 1:B:285:TYR:HB3 | 1:B:288:ARG:HG3  | 1.67                     | 0.76              |
| 1:E:525:SER:HB3 | 3:E:4426:HOH:O   | 1.85                     | 0.76              |
| 1:L:949:HIS:CD2 | 1:L:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:A:316:HIS:HA  | 1:A:323:ILE:HD12 | 1.66                     | 0.76              |
| 1:M:316:HIS:HA  | 1:M:323:ILE:HD12 | 1.66                     | 0.76              |
| 1:I:949:HIS:CD2 | 1:I:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:L:57:GLU:HG2  | 1:L:83:THR:CG2   | 2.16                     | 0.76              |
| 1:B:949:HIS:CD2 | 1:B:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:J:57:GLU:HG2  | 1:J:83:THR:CG2   | 2.16                     | 0.76              |
| 1:N:316:HIS:HA  | 1:N:323:ILE:HD12 | 1.66                     | 0.76              |
| 1:O:57:GLU:HG2  | 1:O:83:THR:CG2   | 2.16                     | 0.76              |
| 1:E:57:GLU:HG2  | 1:E:83:THR:CG2   | 2.16                     | 0.76              |
| 1:K:285:TYR:HB3 | 1:K:288:ARG:HG3  | 1.68                     | 0.76              |
| 1:N:949:HIS:CD2 | 1:N:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:F:316:HIS:HA  | 1:F:323:ILE:HD12 | 1.66                     | 0.76              |
| 1:F:949:HIS:CD2 | 1:F:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:J:949:HIS:CD2 | 1:J:1020:TRP:HE1 | 2.04                     | 0.76              |
| 1:M:57:GLU:HG2  | 1:M:83:THR:CG2   | 2.16                     | 0.76              |
| 1:D:57:GLU:HG2  | 1:D:83:THR:CG2   | 2.16                     | 0.75              |
| 1:D:525:SER:HB3 | 3:D:3109:HOH:O   | 1.86                     | 0.75              |
| 1:K:57:GLU:HG2  | 1:K:83:THR:CG2   | 2.16                     | 0.75              |
| 1:L:285:TYR:HB3 | 1:L:288:ARG:HG3  | 1.68                     | 0.75              |
| 1:A:949:HIS:CD2 | 1:A:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:C:949:HIS:CD2 | 1:C:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:G:949:HIS:CD2 | 1:G:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:H:57:GLU:HG2  | 1:H:83:THR:CG2   | 2.16                     | 0.75              |
| 1:I:285:TYR:HB3 | 1:I:288:ARG:HG3  | 1.67                     | 0.75              |
| 1:P:57:GLU:HG2  | 1:P:83:THR:CG2   | 2.16                     | 0.75              |
| 1:A:57:GLU:HG2  | 1:A:83:THR:CG2   | 2.16                     | 0.75              |
| 1:C:57:GLU:HG2  | 1:C:83:THR:CG2   | 2.16                     | 0.75              |
| 1:F:285:TYR:HB3 | 1:F:288:ARG:HG3  | 1.67                     | 0.75              |
| 1:G:57:GLU:HG2  | 1:G:83:THR:CG2   | 2.16                     | 0.75              |
| 1:I:57:GLU:HG2  | 1:I:83:THR:CG2   | 2.16                     | 0.75              |
| 1:M:949:HIS:CD2 | 1:M:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:O:949:HIS:CD2 | 1:O:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:F:701:VAL:O   | 1:F:703:PRO:HD3  | 1.86                     | 0.75              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:K:701:VAL:O   | 1:K:703:PRO:HD3  | 1.87                     | 0.75              |
| 1:N:285:TYR:HB3 | 1:N:288:ARG:HG3  | 1.68                     | 0.75              |
| 1:N:525:SER:HB3 | 3:N:3102:HOH:O   | 1.87                     | 0.75              |
| 1:A:701:VAL:O   | 1:A:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:H:285:TYR:HB3 | 1:H:288:ARG:HG3  | 1.68                     | 0.75              |
| 1:B:701:VAL:O   | 1:B:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:C:701:VAL:O   | 1:C:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:D:78:LEU:HB3  | 1:D:79:PRO:HD2   | 1.69                     | 0.75              |
| 1:D:701:VAL:O   | 1:D:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:E:949:HIS:CD2 | 1:E:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:H:701:VAL:O   | 1:H:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:I:701:VAL:O   | 1:I:703:PRO:HD3  | 1.86                     | 0.75              |
| 1:P:285:TYR:HB3 | 1:P:288:ARG:HG3  | 1.67                     | 0.75              |
| 1:J:78:LEU:HB3  | 1:J:79:PRO:HD2   | 1.69                     | 0.75              |
| 1:P:949:HIS:CD2 | 1:P:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:B:57:GLU:HG2  | 1:B:83:THR:CG2   | 2.16                     | 0.75              |
| 1:D:949:HIS:CD2 | 1:D:1020:TRP:HE1 | 2.04                     | 0.75              |
| 1:N:57:GLU:HG2  | 1:N:83:THR:CG2   | 2.16                     | 0.75              |
| 1:A:285:TYR:HB3 | 1:A:288:ARG:HG3  | 1.68                     | 0.74              |
| 1:G:285:TYR:HB3 | 1:G:288:ARG:HG3  | 1.68                     | 0.74              |
| 1:K:78:LEU:HB3  | 1:K:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:O:285:TYR:HB3 | 1:O:288:ARG:HG3  | 1.67                     | 0.74              |
| 1:P:701:VAL:O   | 1:P:703:PRO:HD3  | 1.86                     | 0.74              |
| 1:C:78:LEU:HB3  | 1:C:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:C:285:TYR:HB3 | 1:C:288:ARG:HG3  | 1.67                     | 0.74              |
| 1:E:78:LEU:HB3  | 1:E:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:E:285:TYR:HB3 | 1:E:288:ARG:HG3  | 1.68                     | 0.74              |
| 1:K:949:HIS:CD2 | 1:K:1020:TRP:HE1 | 2.04                     | 0.74              |
| 1:F:57:GLU:HG2  | 1:F:83:THR:CG2   | 2.16                     | 0.74              |
| 1:G:701:VAL:O   | 1:G:703:PRO:HD3  | 1.86                     | 0.74              |
| 1:P:525:SER:HB3 | 3:P:3107:HOH:O   | 1.86                     | 0.74              |
| 1:P:78:LEU:HB3  | 1:P:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:H:78:LEU:HB3  | 1:H:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:L:701:VAL:O   | 1:L:703:PRO:HD3  | 1.86                     | 0.74              |
| 1:M:285:TYR:HB3 | 1:M:288:ARG:HG3  | 1.68                     | 0.74              |
| 1:E:189:LEU:N   | 1:E:189:LEU:HD23 | 2.03                     | 0.74              |
| 1:J:189:LEU:N   | 1:J:189:LEU:HD23 | 2.03                     | 0.74              |
| 1:M:78:LEU:HB3  | 1:M:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:M:189:LEU:N   | 1:M:189:LEU:HD23 | 2.03                     | 0.74              |
| 1:K:189:LEU:N   | 1:K:189:LEU:HD23 | 2.03                     | 0.74              |
| 1:M:745:MET:HE2 | 1:M:745:MET:HA   | 1.70                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:701:VAL:O    | 1:M:703:PRO:HD3  | 1.86                     | 0.74              |
| 1:N:701:VAL:O    | 1:N:703:PRO:HD3  | 1.86                     | 0.74              |
| 1:O:436:MET:HE1  | 1:O:467:ASN:HD22 | 1.52                     | 0.74              |
| 1:B:78:LEU:HB3   | 1:B:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:I:78:LEU:HB3   | 1:I:79:PRO:HD2   | 1.69                     | 0.74              |
| 1:J:701:VAL:O    | 1:J:703:PRO:HD3  | 1.87                     | 0.74              |
| 1:P:316:HIS:HA   | 1:P:323:ILE:CD1  | 2.18                     | 0.74              |
| 1:D:285:TYR:HB3  | 1:D:288:ARG:HG3  | 1.68                     | 0.73              |
| 1:L:568:TRP:HE1  | 1:L:604:ASN:HD22 | 1.37                     | 0.73              |
| 1:A:189:LEU:HD23 | 1:A:189:LEU:N    | 2.03                     | 0.73              |
| 1:H:316:HIS:HA   | 1:H:323:ILE:CD1  | 2.19                     | 0.73              |
| 1:J:568:TRP:HE1  | 1:J:604:ASN:HD22 | 1.36                     | 0.73              |
| 1:B:189:LEU:N    | 1:B:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:E:316:HIS:HA   | 1:E:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:E:701:VAL:O    | 1:E:703:PRO:HD3  | 1.86                     | 0.73              |
| 1:F:78:LEU:HB3   | 1:F:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:H:949:HIS:CD2  | 1:H:1020:TRP:HE1 | 2.04                     | 0.73              |
| 1:K:316:HIS:HA   | 1:K:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:L:78:LEU:HB3   | 1:L:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:M:316:HIS:HA   | 1:M:323:ILE:CD1  | 2.19                     | 0.73              |
| 1:L:189:LEU:N    | 1:L:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:M:278:ILE:HD12 | 1:M:278:ILE:H    | 1.54                     | 0.73              |
| 1:N:78:LEU:HB3   | 1:N:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:O:316:HIS:HA   | 1:O:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:A:316:HIS:HA   | 1:A:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:B:316:HIS:HA   | 1:B:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:C:316:HIS:HA   | 1:C:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:E:278:ILE:HD12 | 1:E:278:ILE:H    | 1.54                     | 0.73              |
| 1:G:316:HIS:HA   | 1:G:323:ILE:CD1  | 2.19                     | 0.73              |
| 1:I:316:HIS:HA   | 1:I:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:I:745:MET:HE2  | 1:I:745:MET:HA   | 1.70                     | 0.73              |
| 1:P:189:LEU:N    | 1:P:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:H:189:LEU:N    | 1:H:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:L:316:HIS:HA   | 1:L:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:C:189:LEU:N    | 1:C:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:D:894:ARG:NH2  | 1:D:921:PRO:HD3  | 2.04                     | 0.73              |
| 1:J:316:HIS:HA   | 1:J:323:ILE:CD1  | 2.18                     | 0.73              |
| 1:E:568:TRP:HE1  | 1:E:604:ASN:HD22 | 1.36                     | 0.73              |
| 1:K:894:ARG:NH2  | 1:K:921:PRO:HD3  | 2.04                     | 0.73              |
| 1:L:278:ILE:H    | 1:L:278:ILE:HD12 | 1.54                     | 0.73              |
| 1:M:568:TRP:HE1  | 1:M:604:ASN:HD22 | 1.37                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:189:LEU:HD23 | 1:N:189:LEU:N    | 2.03                     | 0.73              |
| 1:O:78:LEU:HB3   | 1:O:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:A:78:LEU:HB3   | 1:A:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:F:189:LEU:HD23 | 1:F:189:LEU:N    | 2.03                     | 0.73              |
| 1:G:78:LEU:HB3   | 1:G:79:PRO:HD2   | 1.69                     | 0.73              |
| 1:M:282:ARG:HD3  | 1:P:420:MET:O    | 1.88                     | 0.73              |
| 1:E:894:ARG:NH2  | 1:E:921:PRO:HD3  | 2.04                     | 0.73              |
| 1:G:189:LEU:N    | 1:G:189:LEU:HD23 | 2.03                     | 0.73              |
| 1:I:568:TRP:HE1  | 1:I:604:ASN:HD22 | 1.37                     | 0.73              |
| 1:J:894:ARG:NH2  | 1:J:921:PRO:HD3  | 2.04                     | 0.73              |
| 1:G:894:ARG:NH2  | 1:G:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:H:278:ILE:HD12 | 1:H:278:ILE:H    | 1.54                     | 0.72              |
| 1:K:568:TRP:HE1  | 1:K:604:ASN:HD22 | 1.36                     | 0.72              |
| 1:O:894:ARG:NH2  | 1:O:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:C:278:ILE:H    | 1:C:278:ILE:HD12 | 1.54                     | 0.72              |
| 1:D:189:LEU:N    | 1:D:189:LEU:HD23 | 2.03                     | 0.72              |
| 1:O:701:VAL:O    | 1:O:703:PRO:HD3  | 1.86                     | 0.72              |
| 1:B:436:MET:HE1  | 1:B:467:ASN:HD22 | 1.52                     | 0.72              |
| 1:L:894:ARG:NH2  | 1:L:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:A:894:ARG:NH2  | 1:A:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:F:316:HIS:HA   | 1:F:323:ILE:CD1  | 2.18                     | 0.72              |
| 1:F:894:ARG:NH2  | 1:F:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:N:316:HIS:HA   | 1:N:323:ILE:CD1  | 2.18                     | 0.72              |
| 1:C:894:ARG:NH2  | 1:C:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:D:316:HIS:HA   | 1:D:323:ILE:CD1  | 2.18                     | 0.72              |
| 1:M:894:ARG:NH2  | 1:M:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:B:278:ILE:H    | 1:B:278:ILE:HD12 | 1.54                     | 0.72              |
| 1:N:894:ARG:NH2  | 1:N:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:P:278:ILE:HD12 | 1:P:278:ILE:H    | 1.54                     | 0.72              |
| 1:A:568:TRP:HE1  | 1:A:604:ASN:HD22 | 1.36                     | 0.72              |
| 1:B:894:ARG:NH2  | 1:B:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:H:894:ARG:NH2  | 1:H:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:K:436:MET:HE1  | 1:K:467:ASN:HD22 | 1.55                     | 0.72              |
| 1:C:568:TRP:HE1  | 1:C:604:ASN:HD22 | 1.37                     | 0.72              |
| 1:I:189:LEU:HD23 | 1:I:189:LEU:N    | 2.03                     | 0.72              |
| 1:N:745:MET:HE2  | 1:N:745:MET:HA   | 1.72                     | 0.72              |
| 1:O:189:LEU:N    | 1:O:189:LEU:HD23 | 2.03                     | 0.72              |
| 1:P:894:ARG:NH2  | 1:P:921:PRO:HD3  | 2.04                     | 0.72              |
| 1:F:745:MET:HE2  | 1:F:745:MET:HA   | 1.72                     | 0.72              |
| 1:I:278:ILE:H    | 1:I:278:ILE:HD12 | 1.54                     | 0.72              |
| 1:M:425:ARG:NH2  | 1:P:287:ASP:OD2  | 2.23                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:568:TRP:HE1  | 1:B:604:ASN:HD22 | 1.37                     | 0.72              |
| 1:C:7:LEU:CD1    | 1:C:74:LEU:HD11  | 2.20                     | 0.72              |
| 1:C:183:ARG:HD3  | 3:C:4254:HOH:O   | 1.90                     | 0.72              |
| 1:D:278:ILE:H    | 1:D:278:ILE:HD12 | 1.54                     | 0.72              |
| 1:O:278:ILE:H    | 1:O:278:ILE:HD12 | 1.54                     | 0.72              |
| 1:D:436:MET:HE1  | 1:D:467:ASN:HD22 | 1.53                     | 0.71              |
| 1:F:7:LEU:CD1    | 1:F:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:F:278:ILE:H    | 1:F:278:ILE:HD12 | 1.54                     | 0.71              |
| 1:M:7:LEU:CD1    | 1:M:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:K:7:LEU:CD1    | 1:K:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:N:278:ILE:H    | 1:N:278:ILE:HD12 | 1.54                     | 0.71              |
| 1:E:7:LEU:CD1    | 1:E:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:I:894:ARG:NH2  | 1:I:921:PRO:HD3  | 2.04                     | 0.71              |
| 1:K:278:ILE:H    | 1:K:278:ILE:HD12 | 1.54                     | 0.71              |
| 1:N:7:LEU:CD1    | 1:N:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:A:278:ILE:H    | 1:A:278:ILE:HD12 | 1.54                     | 0.71              |
| 1:J:7:LEU:CD1    | 1:J:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:N:183:ARG:HD3  | 3:N:3360:HOH:O   | 1.90                     | 0.71              |
| 1:P:568:TRP:HE1  | 1:P:604:ASN:HD22 | 1.36                     | 0.71              |
| 1:B:7:LEU:CD1    | 1:B:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:E:183:ARG:HD3  | 3:E:4253:HOH:O   | 1.90                     | 0.71              |
| 1:A:7:LEU:CD1    | 1:A:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:D:1021:CME:HE2 | 1:D:1021:CME:C   | 2.21                     | 0.71              |
| 1:G:7:LEU:CD1    | 1:G:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:G:278:ILE:H    | 1:G:278:ILE:HD12 | 1.54                     | 0.71              |
| 1:O:7:LEU:CD1    | 1:O:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:F:1021:CME:C   | 1:F:1021:CME:HE2 | 2.21                     | 0.71              |
| 1:N:568:TRP:HE1  | 1:N:604:ASN:HD22 | 1.37                     | 0.71              |
| 1:D:183:ARG:HD3  | 3:D:3366:HOH:O   | 1.90                     | 0.71              |
| 1:D:568:TRP:HE1  | 1:D:604:ASN:HD22 | 1.37                     | 0.71              |
| 1:G:436:MET:HE1  | 1:G:467:ASN:HD22 | 1.55                     | 0.71              |
| 1:H:568:TRP:HE1  | 1:H:604:ASN:HD22 | 1.36                     | 0.71              |
| 1:I:7:LEU:CD1    | 1:I:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:I:436:MET:HE1  | 1:I:467:ASN:HD22 | 1.55                     | 0.71              |
| 1:L:183:ARG:HD3  | 3:L:3363:HOH:O   | 1.90                     | 0.71              |
| 1:P:7:LEU:CD1    | 1:P:74:LEU:HD11  | 2.20                     | 0.71              |
| 1:F:568:TRP:HE1  | 1:F:604:ASN:HD22 | 1.37                     | 0.71              |
| 1:C:436:MET:HE1  | 1:C:467:ASN:HD22 | 1.56                     | 0.70              |
| 1:L:7:LEU:CD1    | 1:L:74:LEU:HD11  | 2.20                     | 0.70              |
| 1:M:183:ARG:HD3  | 3:M:4253:HOH:O   | 1.90                     | 0.70              |
| 1:E:1021:CME:C   | 1:E:1021:CME:HE2 | 2.21                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:183:ARG:HD3  | 3:G:3357:HOH:O   | 1.90                     | 0.70              |
| 1:H:7:LEU:CD1    | 1:H:74:LEU:HD11  | 2.20                     | 0.70              |
| 1:K:1021:CME:C   | 1:K:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:L:1021:CME:HE2 | 1:L:1021:CME:C   | 2.21                     | 0.70              |
| 1:O:183:ARG:HD3  | 3:O:3357:HOH:O   | 1.90                     | 0.70              |
| 1:K:183:ARG:HD3  | 3:K:4254:HOH:O   | 1.90                     | 0.70              |
| 1:B:183:ARG:HD3  | 3:B:3357:HOH:O   | 1.90                     | 0.70              |
| 1:D:7:LEU:CD1    | 1:D:74:LEU:HD11  | 2.20                     | 0.70              |
| 1:F:183:ARG:HD3  | 3:F:3359:HOH:O   | 1.90                     | 0.70              |
| 1:J:183:ARG:HD3  | 3:J:3360:HOH:O   | 1.90                     | 0.70              |
| 1:A:1021:CME:C   | 1:A:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:N:1021:CME:C   | 1:N:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:G:568:TRP:HE1  | 1:G:604:ASN:HD22 | 1.36                     | 0.70              |
| 1:J:278:ILE:H    | 1:J:278:ILE:HD12 | 1.54                     | 0.70              |
| 1:C:1021:CME:C   | 1:C:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:O:568:TRP:HE1  | 1:O:604:ASN:HD22 | 1.37                     | 0.70              |
| 1:I:1021:CME:C   | 1:I:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:P:1021:CME:C   | 1:P:1021:CME:HE2 | 2.21                     | 0.70              |
| 1:P:183:ARG:HD3  | 3:P:3365:HOH:O   | 1.90                     | 0.70              |
| 1:I:183:ARG:HD3  | 3:I:4252:HOH:O   | 1.90                     | 0.70              |
| 1:J:579:ASP:OD1  | 1:J:583:ASN:HB2  | 1.92                     | 0.70              |
| 1:M:579:ASP:OD1  | 1:M:583:ASN:HB2  | 1.92                     | 0.70              |
| 1:B:1021:CME:C   | 1:B:1021:CME:HE2 | 2.21                     | 0.69              |
| 1:E:579:ASP:OD1  | 1:E:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:G:166:ARG:HG3  | 1:G:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:P:166:ARG:HG3  | 1:P:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:P:436:MET:HE1  | 1:P:467:ASN:HD22 | 1.55                     | 0.69              |
| 1:A:183:ARG:HD3  | 3:A:4254:HOH:O   | 1.90                     | 0.69              |
| 1:B:579:ASP:OD1  | 1:B:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:D:166:ARG:HG3  | 1:D:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:K:579:ASP:OD1  | 1:K:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:O:166:ARG:HG3  | 1:O:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:P:579:ASP:OD1  | 1:P:583:ASN:HB2  | 1.93                     | 0.69              |
| 1:G:579:ASP:OD1  | 1:G:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:H:166:ARG:HG3  | 1:H:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:C:579:ASP:OD1  | 1:C:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:K:63:PHE:HB3   | 1:K:64:PRO:HD2   | 1.75                     | 0.69              |
| 1:O:1021:CME:HE2 | 1:O:1021:CME:C   | 2.21                     | 0.69              |
| 1:G:1021:CME:C   | 1:G:1021:CME:HE2 | 2.21                     | 0.69              |
| 1:H:183:ARG:HD3  | 3:H:4254:HOH:O   | 1.90                     | 0.69              |
| 1:I:63:PHE:HB3   | 1:I:64:PRO:HD2   | 1.75                     | 0.69              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:B:166:ARG:HG3 | 1:B:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:B:745:MET:HE2 | 1:B:745:MET:HA   | 1.73                     | 0.69              |
| 1:F:579:ASP:OD1 | 1:F:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:A:579:ASP:OD1 | 1:A:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:E:856:TYR:HD2 | 1:E:864:MET:HE2  | 1.58                     | 0.69              |
| 1:F:434:PRO:HB3 | 1:G:434:PRO:HB3  | 1.74                     | 0.69              |
| 1:G:63:PHE:HB3  | 1:G:64:PRO:HD2   | 1.75                     | 0.69              |
| 1:H:1021:CME:C  | 1:H:1021:CME:HE2 | 2.21                     | 0.69              |
| 1:J:1021:CME:C  | 1:J:1021:CME:HE2 | 2.21                     | 0.69              |
| 1:N:166:ARG:HG3 | 1:N:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:O:63:PHE:HB3  | 1:O:64:PRO:HD2   | 1.75                     | 0.69              |
| 1:O:579:ASP:OD1 | 1:O:583:ASN:HB2  | 1.92                     | 0.69              |
| 1:B:919:ASP:O   | 1:B:920:LEU:HD23 | 1.93                     | 0.69              |
| 1:F:166:ARG:HG3 | 1:F:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:B:63:PHE:HB3  | 1:B:64:PRO:HD2   | 1.75                     | 0.69              |
| 1:C:166:ARG:HG3 | 1:C:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:E:166:ARG:HG3 | 1:E:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:J:166:ARG:HG3 | 1:J:392:TYR:HB2  | 1.74                     | 0.69              |
| 1:O:952:ARG:NH1 | 1:O:952:ARG:HG2  | 2.08                     | 0.69              |
| 1:A:63:PHE:HB3  | 1:A:64:PRO:HD2   | 1.75                     | 0.68              |
| 1:J:952:ARG:NH1 | 1:J:952:ARG:HG2  | 2.08                     | 0.68              |
| 1:L:579:ASP:OD1 | 1:L:583:ASN:HB2  | 1.92                     | 0.68              |
| 1:M:1021:CME:C  | 1:M:1021:CME:HE2 | 2.21                     | 0.68              |
| 1:N:579:ASP:OD1 | 1:N:583:ASN:HB2  | 1.92                     | 0.68              |
| 1:P:952:ARG:NH1 | 1:P:952:ARG:HG2  | 2.08                     | 0.68              |
| 1:C:525:SER:HB3 | 3:C:4178:HOH:O   | 1.91                     | 0.68              |
| 1:G:919:ASP:O   | 1:G:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:H:952:ARG:NH1 | 1:H:952:ARG:HG2  | 2.08                     | 0.68              |
| 1:L:952:ARG:HG2 | 1:L:952:ARG:NH1  | 2.08                     | 0.68              |
| 1:A:919:ASP:O   | 1:A:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:D:919:ASP:O   | 1:D:920:LEU:HD23 | 1.94                     | 0.68              |
| 1:I:166:ARG:HG3 | 1:I:392:TYR:HB2  | 1.74                     | 0.68              |
| 1:L:166:ARG:HG3 | 1:L:392:TYR:HB2  | 1.74                     | 0.68              |
| 1:A:952:ARG:HG2 | 1:A:952:ARG:NH1  | 2.08                     | 0.68              |
| 1:I:919:ASP:O   | 1:I:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:O:919:ASP:O   | 1:O:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:D:745:MET:HA  | 1:D:745:MET:HE2  | 1.74                     | 0.68              |
| 1:H:919:ASP:O   | 1:H:920:LEU:HD23 | 1.94                     | 0.68              |
| 1:J:436:MET:HE1 | 1:J:467:ASN:HD22 | 1.58                     | 0.68              |
| 1:A:166:ARG:HG3 | 1:A:392:TYR:HB2  | 1.74                     | 0.68              |
| 1:D:856:TYR:HD2 | 1:D:864:MET:HE2  | 1.59                     | 0.68              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:J:63:PHE:HB3  | 1:J:64:PRO:HD2   | 1.75                     | 0.68              |
| 1:M:166:ARG:HG3 | 1:M:392:TYR:HB2  | 1.74                     | 0.68              |
| 1:N:919:ASP:O   | 1:N:920:LEU:HD23 | 1.94                     | 0.68              |
| 1:D:63:PHE:HB3  | 1:D:64:PRO:HD2   | 1.75                     | 0.68              |
| 1:E:919:ASP:O   | 1:E:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:I:579:ASP:OD1 | 1:I:583:ASN:HB2  | 1.92                     | 0.68              |
| 1:L:63:PHE:HB3  | 1:L:64:PRO:HD2   | 1.75                     | 0.68              |
| 1:B:43:ARG:HG2  | 1:B:43:ARG:HH11  | 1.59                     | 0.68              |
| 1:H:43:ARG:HG2  | 1:H:43:ARG:HH11  | 1.59                     | 0.68              |
| 1:I:920:LEU:HB3 | 1:I:921:PRO:HD2  | 1.76                     | 0.68              |
| 1:P:745:MET:HE2 | 1:P:745:MET:HA   | 1.75                     | 0.68              |
| 1:G:890:GLN:HG3 | 1:G:891:VAL:N    | 2.09                     | 0.68              |
| 1:I:890:GLN:HG3 | 1:I:891:VAL:N    | 2.09                     | 0.68              |
| 1:J:43:ARG:HH11 | 1:J:43:ARG:HG2   | 1.59                     | 0.68              |
| 1:A:890:GLN:HG3 | 1:A:891:VAL:N    | 2.09                     | 0.68              |
| 1:D:579:ASP:OD1 | 1:D:583:ASN:HB2  | 1.92                     | 0.68              |
| 1:J:919:ASP:O   | 1:J:920:LEU:HD23 | 1.93                     | 0.68              |
| 1:O:43:ARG:HG2  | 1:O:43:ARG:HH11  | 1.59                     | 0.68              |
| 1:C:43:ARG:HG2  | 1:C:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:F:919:ASP:O   | 1:F:920:LEU:HD23 | 1.94                     | 0.67              |
| 1:G:952:ARG:NH1 | 1:G:952:ARG:HG2  | 2.08                     | 0.67              |
| 1:H:579:ASP:OD1 | 1:H:583:ASN:HB2  | 1.92                     | 0.67              |
| 1:I:952:ARG:HG2 | 1:I:952:ARG:NH1  | 2.08                     | 0.67              |
| 1:L:745:MET:HA  | 1:L:745:MET:HE2  | 1.75                     | 0.67              |
| 1:L:919:ASP:O   | 1:L:920:LEU:HD23 | 1.93                     | 0.67              |
| 1:M:919:ASP:O   | 1:M:920:LEU:HD23 | 1.94                     | 0.67              |
| 1:P:43:ARG:HG2  | 1:P:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:E:745:MET:HE2 | 1:E:745:MET:HA   | 1.76                     | 0.67              |
| 1:P:919:ASP:O   | 1:P:920:LEU:HD23 | 1.94                     | 0.67              |
| 1:E:43:ARG:HG2  | 1:E:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:G:43:ARG:HG2  | 1:G:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:K:166:ARG:HG3 | 1:K:392:TYR:HB2  | 1.74                     | 0.67              |
| 1:M:43:ARG:HG2  | 1:M:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:N:890:GLN:HG3 | 1:N:891:VAL:N    | 2.09                     | 0.67              |
| 1:C:952:ARG:HG2 | 1:C:952:ARG:NH1  | 2.08                     | 0.67              |
| 1:E:920:LEU:HB3 | 1:E:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:J:890:GLN:HG3 | 1:J:891:VAL:N    | 2.09                     | 0.67              |
| 1:K:919:ASP:O   | 1:K:920:LEU:HD23 | 1.94                     | 0.67              |
| 1:L:920:LEU:HB3 | 1:L:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:M:63:PHE:HB3  | 1:M:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:M:920:LEU:HB3 | 1:M:921:PRO:HD2  | 1.76                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:920:LEU:HB3  | 1:B:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:C:63:PHE:HB3   | 1:C:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:E:63:PHE:HB3   | 1:E:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:N:952:ARG:HG2  | 1:N:952:ARG:NH1  | 2.08                     | 0.67              |
| 1:E:952:ARG:NH1  | 1:E:952:ARG:HG2  | 2.08                     | 0.67              |
| 1:F:43:ARG:HG2   | 1:F:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:G:920:LEU:HB3  | 1:G:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:H:63:PHE:HB3   | 1:H:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:N:43:ARG:HG2   | 1:N:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:O:920:LEU:HB3  | 1:O:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:K:920:LEU:HB3  | 1:K:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:M:425:ARG:HH22 | 1:P:287:ASP:CG   | 1.98                     | 0.67              |
| 1:F:63:PHE:HB3   | 1:F:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:F:890:GLN:HG3  | 1:F:891:VAL:N    | 2.09                     | 0.67              |
| 1:F:952:ARG:HG2  | 1:F:952:ARG:NH1  | 2.08                     | 0.67              |
| 1:K:952:ARG:HG2  | 1:K:952:ARG:NH1  | 2.08                     | 0.67              |
| 1:L:436:MET:HE1  | 1:L:467:ASN:HD22 | 1.59                     | 0.67              |
| 1:M:7:LEU:HD13   | 1:M:74:LEU:HD11  | 1.77                     | 0.67              |
| 1:M:952:ARG:NH1  | 1:M:952:ARG:HG2  | 2.08                     | 0.67              |
| 1:N:63:PHE:HB3   | 1:N:64:PRO:HD2   | 1.75                     | 0.67              |
| 1:A:43:ARG:HG2   | 1:A:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:B:278:ILE:HD12 | 1:B:278:ILE:N    | 2.10                     | 0.67              |
| 1:C:919:ASP:O    | 1:C:920:LEU:HD23 | 1.94                     | 0.67              |
| 1:E:7:LEU:HD13   | 1:E:74:LEU:HD11  | 1.77                     | 0.67              |
| 1:F:920:LEU:HB3  | 1:F:921:PRO:HD2  | 1.76                     | 0.67              |
| 1:H:890:GLN:HG3  | 1:H:891:VAL:N    | 2.09                     | 0.67              |
| 1:J:745:MET:HE2  | 1:J:745:MET:HA   | 1.76                     | 0.67              |
| 1:A:745:MET:HE2  | 1:A:745:MET:HA   | 1.76                     | 0.67              |
| 1:A:856:TYR:HD2  | 1:A:864:MET:HE2  | 1.60                     | 0.67              |
| 1:G:856:TYR:HD2  | 1:G:864:MET:HE2  | 1.59                     | 0.67              |
| 1:J:278:ILE:HD12 | 1:J:278:ILE:N    | 2.10                     | 0.67              |
| 1:K:43:ARG:HG2   | 1:K:43:ARG:HH11  | 1.59                     | 0.67              |
| 1:O:745:MET:HA   | 1:O:745:MET:HE2  | 1.76                     | 0.67              |
| 1:P:278:ILE:HD12 | 1:P:278:ILE:N    | 2.10                     | 0.67              |
| 1:D:952:ARG:HG2  | 1:D:952:ARG:NH1  | 2.08                     | 0.66              |
| 1:G:278:ILE:HD12 | 1:G:278:ILE:N    | 2.10                     | 0.66              |
| 1:H:278:ILE:HD12 | 1:H:278:ILE:N    | 2.10                     | 0.66              |
| 1:L:43:ARG:HG2   | 1:L:43:ARG:HH11  | 1.59                     | 0.66              |
| 1:L:952:ARG:HG2  | 1:L:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:N:920:LEU:HB3  | 1:N:921:PRO:HD2  | 1.76                     | 0.66              |
| 1:O:278:ILE:HD12 | 1:O:278:ILE:N    | 2.10                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:7:LEU:HD13   | 1:A:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:C:890:GLN:HG3  | 1:C:891:VAL:N    | 2.09                     | 0.66              |
| 1:G:745:MET:HA   | 1:G:745:MET:HE2  | 1.76                     | 0.66              |
| 1:H:745:MET:HE2  | 1:H:745:MET:HA   | 1.76                     | 0.66              |
| 1:I:278:ILE:HD12 | 1:I:278:ILE:N    | 2.10                     | 0.66              |
| 1:J:920:LEU:HB3  | 1:J:921:PRO:HD2  | 1.76                     | 0.66              |
| 1:L:278:ILE:HD12 | 1:L:278:ILE:N    | 2.10                     | 0.66              |
| 1:M:278:ILE:HD12 | 1:M:278:ILE:N    | 2.10                     | 0.66              |
| 1:B:952:ARG:HG2  | 1:B:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:F:278:ILE:HD12 | 1:F:278:ILE:N    | 2.10                     | 0.66              |
| 1:K:278:ILE:HD12 | 1:K:278:ILE:N    | 2.10                     | 0.66              |
| 1:L:890:GLN:HG3  | 1:L:891:VAL:N    | 2.09                     | 0.66              |
| 1:N:278:ILE:HD12 | 1:N:278:ILE:N    | 2.10                     | 0.66              |
| 1:A:418:HIS:O    | 1:D:282:ARG:HD2  | 1.96                     | 0.66              |
| 1:C:952:ARG:HG2  | 1:C:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:E:278:ILE:HD12 | 1:E:278:ILE:N    | 2.10                     | 0.66              |
| 1:I:43:ARG:HG2   | 1:I:43:ARG:HH11  | 1.59                     | 0.66              |
| 1:O:890:GLN:HG3  | 1:O:891:VAL:N    | 2.09                     | 0.66              |
| 1:P:63:PHE:HB3   | 1:P:64:PRO:HD2   | 1.75                     | 0.66              |
| 1:D:278:ILE:HD12 | 1:D:278:ILE:N    | 2.10                     | 0.66              |
| 1:H:7:LEU:HD13   | 1:H:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:B:890:GLN:HG3  | 1:B:891:VAL:N    | 2.09                     | 0.66              |
| 1:B:952:ARG:HG2  | 1:B:952:ARG:NH1  | 2.08                     | 0.66              |
| 1:D:43:ARG:HG2   | 1:D:43:ARG:HH11  | 1.59                     | 0.66              |
| 1:D:890:GLN:HG3  | 1:D:891:VAL:N    | 2.09                     | 0.66              |
| 1:E:436:MET:HE3  | 1:E:467:ASN:HD22 | 1.60                     | 0.66              |
| 1:P:7:LEU:HD13   | 1:P:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:A:525:SER:HB3  | 3:A:4178:HOH:O   | 1.94                     | 0.66              |
| 1:D:7:LEU:HD13   | 1:D:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:J:7:LEU:HD13   | 1:J:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:L:7:LEU:HD13   | 1:L:74:LEU:HD11  | 1.77                     | 0.66              |
| 1:C:745:MET:HE2  | 1:C:745:MET:HA   | 1.76                     | 0.66              |
| 1:C:920:LEU:HB3  | 1:C:921:PRO:HD2  | 1.76                     | 0.66              |
| 1:E:952:ARG:HG2  | 1:E:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:J:434:PRO:HB3  | 1:K:434:PRO:HB3  | 1.76                     | 0.66              |
| 1:M:890:GLN:HG3  | 1:M:891:VAL:N    | 2.09                     | 0.66              |
| 1:N:952:ARG:HG2  | 1:N:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:P:890:GLN:HG3  | 1:P:891:VAL:N    | 2.09                     | 0.66              |
| 1:A:278:ILE:HD12 | 1:A:278:ILE:N    | 2.10                     | 0.66              |
| 1:C:278:ILE:HD12 | 1:C:278:ILE:N    | 2.10                     | 0.66              |
| 1:M:952:ARG:HG2  | 1:M:952:ARG:HH11 | 1.61                     | 0.66              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:N:43:ARG:HG2  | 1:N:43:ARG:NH1   | 2.11                     | 0.66              |
| 1:A:920:LEU:HB3 | 1:A:921:PRO:HD2  | 1.76                     | 0.66              |
| 1:D:43:ARG:HG2  | 1:D:43:ARG:NH1   | 2.11                     | 0.66              |
| 1:D:952:ARG:HG2 | 1:D:952:ARG:HH11 | 1.61                     | 0.66              |
| 1:O:43:ARG:HG2  | 1:O:43:ARG:NH1   | 2.11                     | 0.66              |
| 1:P:952:ARG:HG2 | 1:P:952:ARG:HH11 | 1.60                     | 0.66              |
| 1:D:920:LEU:HB3 | 1:D:921:PRO:HD2  | 1.76                     | 0.65              |
| 1:P:43:ARG:HG2  | 1:P:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:P:920:LEU:HB3 | 1:P:921:PRO:HD2  | 1.76                     | 0.65              |
| 1:E:43:ARG:HG2  | 1:E:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:F:525:SER:HB3 | 3:F:3102:HOH:O   | 1.95                     | 0.65              |
| 1:F:952:ARG:HG2 | 1:F:952:ARG:HH11 | 1.61                     | 0.65              |
| 1:H:43:ARG:HG2  | 1:H:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:B:367:MET:HB3 | 1:B:372:MET:HE3  | 1.78                     | 0.65              |
| 1:J:334:GLU:OE1 | 1:J:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:K:890:GLN:HG3 | 1:K:891:VAL:N    | 2.09                     | 0.65              |
| 1:A:117:GLU:OE1 | 1:A:117:GLU:N    | 2.29                     | 0.65              |
| 1:D:7:LEU:N     | 1:D:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:D:334:GLU:OE1 | 1:D:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:H:59:ARG:NH2  | 1:H:81:ALA:O     | 2.30                     | 0.65              |
| 1:H:952:ARG:HG2 | 1:H:952:ARG:HH11 | 1.61                     | 0.65              |
| 1:K:43:ARG:HG2  | 1:K:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:M:436:MET:HE1 | 1:M:467:ASN:HD22 | 1.59                     | 0.65              |
| 1:M:436:MET:HE3 | 1:M:467:ASN:HD22 | 1.62                     | 0.65              |
| 1:A:334:GLU:OE1 | 1:A:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:B:7:LEU:N     | 1:B:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:F:7:LEU:N     | 1:F:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:I:7:LEU:N     | 1:I:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:J:7:LEU:N     | 1:J:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:K:952:ARG:HG2 | 1:K:952:ARG:HH11 | 1.61                     | 0.65              |
| 1:L:334:GLU:OE1 | 1:L:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:P:59:ARG:NH2  | 1:P:81:ALA:O     | 2.30                     | 0.65              |
| 1:A:43:ARG:HG2  | 1:A:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:B:7:LEU:HD13  | 1:B:74:LEU:HD11  | 1.77                     | 0.65              |
| 1:E:890:GLN:HG3 | 1:E:891:VAL:N    | 2.09                     | 0.65              |
| 1:F:367:MET:HB3 | 1:F:372:MET:HE3  | 1.79                     | 0.65              |
| 1:I:681:GLU:HA  | 1:I:681:GLU:OE2  | 1.97                     | 0.65              |
| 1:M:43:ARG:HG2  | 1:M:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:O:7:LEU:HD13  | 1:O:74:LEU:HD11  | 1.77                     | 0.65              |
| 1:H:920:LEU:HB3 | 1:H:921:PRO:HD2  | 1.76                     | 0.65              |
| 1:I:59:ARG:NH2  | 1:I:81:ALA:O     | 2.30                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:745:MET:HE2  | 1:K:745:MET:HA   | 1.76                     | 0.65              |
| 1:L:7:LEU:N      | 1:L:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:O:254:LEU:C    | 1:O:255:ARG:HG2  | 2.17                     | 0.65              |
| 1:E:254:LEU:C    | 1:E:255:ARG:HG2  | 2.17                     | 0.65              |
| 1:F:334:GLU:OE1  | 1:F:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:J:59:ARG:NH2   | 1:J:81:ALA:O     | 2.30                     | 0.65              |
| 1:J:952:ARG:HG2  | 1:J:952:ARG:HH11 | 1.61                     | 0.65              |
| 1:K:7:LEU:N      | 1:K:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:M:117:GLU:OE1  | 1:M:117:GLU:N    | 2.29                     | 0.65              |
| 1:N:334:GLU:OE1  | 1:N:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:B:59:ARG:NH2   | 1:B:81:ALA:O     | 2.30                     | 0.65              |
| 1:C:7:LEU:N      | 1:C:71:GLU:OE2   | 2.30                     | 0.65              |
| 1:C:681:GLU:HA   | 1:C:681:GLU:OE2  | 1.97                     | 0.65              |
| 1:D:367:MET:HB3  | 1:D:372:MET:HE3  | 1.77                     | 0.65              |
| 1:E:117:GLU:OE1  | 1:E:117:GLU:N    | 2.29                     | 0.65              |
| 1:E:334:GLU:OE1  | 1:E:336:ARG:NH1  | 2.30                     | 0.65              |
| 1:G:7:LEU:HD13   | 1:G:74:LEU:HD11  | 1.77                     | 0.65              |
| 1:N:7:LEU:HD13   | 1:N:74:LEU:HD11  | 1.77                     | 0.65              |
| 1:F:43:ARG:HG2   | 1:F:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:F:59:ARG:NH2   | 1:F:81:ALA:O     | 2.30                     | 0.65              |
| 1:G:254:LEU:C    | 1:G:255:ARG:HG2  | 2.17                     | 0.65              |
| 1:J:43:ARG:HG2   | 1:J:43:ARG:NH1   | 2.11                     | 0.65              |
| 1:L:59:ARG:NH2   | 1:L:81:ALA:O     | 2.30                     | 0.65              |
| 1:A:952:ARG:HG2  | 1:A:952:ARG:HH11 | 1.61                     | 0.64              |
| 1:B:43:ARG:HG2   | 1:B:43:ARG:NH1   | 2.11                     | 0.64              |
| 1:C:59:ARG:NH2   | 1:C:81:ALA:O     | 2.30                     | 0.64              |
| 1:D:917:ARG:NH2  | 1:D:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:G:43:ARG:HG2   | 1:G:43:ARG:NH1   | 2.11                     | 0.64              |
| 1:G:952:ARG:HG2  | 1:G:952:ARG:HH11 | 1.61                     | 0.64              |
| 1:J:917:ARG:NH2  | 1:J:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:M:334:GLU:OE1  | 1:M:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:N:59:ARG:NH2   | 1:N:81:ALA:O     | 2.30                     | 0.64              |
| 1:P:7:LEU:N      | 1:P:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:A:59:ARG:NH2   | 1:A:81:ALA:O     | 2.30                     | 0.64              |
| 1:A:425:ARG:HH22 | 1:D:287:ASP:CG   | 2.01                     | 0.64              |
| 1:C:334:GLU:OE1  | 1:C:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:C:917:ARG:NH2  | 1:C:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:F:7:LEU:HD13   | 1:F:74:LEU:HD11  | 1.77                     | 0.64              |
| 1:F:753:ASN:OD1  | 1:F:753:ASN:N    | 2.30                     | 0.64              |
| 1:H:7:LEU:N      | 1:H:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:I:254:LEU:C    | 1:I:255:ARG:HG2  | 2.17                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:367:MET:HB3  | 1:I:372:MET:HE3  | 1.79                     | 0.64              |
| 1:L:43:ARG:HG2   | 1:L:43:ARG:NH1   | 2.11                     | 0.64              |
| 1:L:254:LEU:C    | 1:L:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:O:917:ARG:NH2  | 1:O:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:A:7:LEU:N      | 1:A:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:B:254:LEU:C    | 1:B:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:B:334:GLU:OE1  | 1:B:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:E:436:MET:HE1  | 1:E:467:ASN:HD22 | 1.61                     | 0.64              |
| 1:F:254:LEU:C    | 1:F:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:G:917:ARG:NH2  | 1:G:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:H:254:LEU:C    | 1:H:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:K:334:GLU:OE1  | 1:K:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:M:279:ILE:HD11 | 1:P:422:PRO:HG2  | 1.79                     | 0.64              |
| 1:N:753:ASN:OD1  | 1:N:753:ASN:N    | 2.30                     | 0.64              |
| 1:P:254:LEU:C    | 1:P:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:D:254:LEU:C    | 1:D:255:ARG:HG2  | 2.17                     | 0.64              |
| 1:E:7:LEU:N      | 1:E:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:G:59:ARG:NH2   | 1:G:81:ALA:O     | 2.30                     | 0.64              |
| 1:G:334:GLU:OE1  | 1:G:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:L:917:ARG:NH2  | 1:L:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:N:287:ASP:OD2  | 1:O:425:ARG:NH2  | 2.30                     | 0.64              |
| 1:N:917:ARG:NH2  | 1:N:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:O:334:GLU:OE1  | 1:O:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:O:856:TYR:HD2  | 1:O:864:MET:HE2  | 1.61                     | 0.64              |
| 1:F:917:ARG:NH2  | 1:F:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:I:7:LEU:HD13   | 1:I:74:LEU:HD11  | 1.77                     | 0.64              |
| 1:I:952:ARG:HG2  | 1:I:952:ARG:HH11 | 1.61                     | 0.64              |
| 1:J:117:GLU:N    | 1:J:117:GLU:OE1  | 2.29                     | 0.64              |
| 1:C:117:GLU:OE1  | 1:C:117:GLU:N    | 2.29                     | 0.64              |
| 1:G:681:GLU:HA   | 1:G:681:GLU:OE2  | 1.97                     | 0.64              |
| 1:H:917:ARG:NH2  | 1:H:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:I:334:GLU:OE1  | 1:I:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:J:436:MET:HE3  | 1:J:467:ASN:HD22 | 1.63                     | 0.64              |
| 1:N:287:ASP:CG   | 1:O:425:ARG:HH22 | 2.01                     | 0.64              |
| 1:P:917:ARG:NH2  | 1:P:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:C:43:ARG:HG2   | 1:C:43:ARG:NH1   | 2.11                     | 0.64              |
| 1:H:334:GLU:OE1  | 1:H:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:I:917:ARG:NH2  | 1:I:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:M:7:LEU:N      | 1:M:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:M:59:ARG:NH2   | 1:M:81:ALA:O     | 2.30                     | 0.64              |
| 1:M:254:LEU:C    | 1:M:255:ARG:HG2  | 2.17                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:917:ARG:NH2  | 1:B:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:C:7:LEU:HD13   | 1:C:74:LEU:HD11  | 1.77                     | 0.64              |
| 1:E:59:ARG:NH2   | 1:E:81:ALA:O     | 2.30                     | 0.64              |
| 1:I:43:ARG:HG2   | 1:I:43:ARG:NH1   | 2.11                     | 0.64              |
| 1:J:525:SER:HB3  | 3:J:3103:HOH:O   | 1.97                     | 0.64              |
| 1:N:7:LEU:N      | 1:N:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:O:7:LEU:N      | 1:O:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:P:334:GLU:OE1  | 1:P:336:ARG:NH1  | 2.30                     | 0.64              |
| 1:G:7:LEU:N      | 1:G:71:GLU:OE2   | 2.30                     | 0.64              |
| 1:L:436:MET:HE3  | 1:L:467:ASN:HD22 | 1.62                     | 0.64              |
| 1:O:59:ARG:NH2   | 1:O:81:ALA:O     | 2.30                     | 0.64              |
| 1:O:681:GLU:OE2  | 1:O:681:GLU:HA   | 1.97                     | 0.64              |
| 1:B:681:GLU:HA   | 1:B:681:GLU:OE2  | 1.97                     | 0.64              |
| 1:D:59:ARG:NH2   | 1:D:81:ALA:O     | 2.30                     | 0.64              |
| 1:D:681:GLU:OE2  | 1:D:681:GLU:HA   | 1.97                     | 0.64              |
| 1:K:59:ARG:NH2   | 1:K:81:ALA:O     | 2.30                     | 0.64              |
| 1:M:917:ARG:NH2  | 1:M:943:GLU:OE1  | 2.30                     | 0.64              |
| 1:E:129:VAL:HG23 | 1:E:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:K:117:GLU:OE1  | 1:K:117:GLU:N    | 2.29                     | 0.63              |
| 1:L:367:MET:HB3  | 1:L:372:MET:HE3  | 1.79                     | 0.63              |
| 1:C:367:MET:HB3  | 1:C:372:MET:HE3  | 1.79                     | 0.63              |
| 1:F:117:GLU:OE1  | 1:F:117:GLU:N    | 2.29                     | 0.63              |
| 1:A:917:ARG:NH2  | 1:A:943:GLU:OE1  | 2.30                     | 0.63              |
| 1:J:129:VAL:HG23 | 1:J:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:K:7:LEU:HD13   | 1:K:74:LEU:HD11  | 1.77                     | 0.63              |
| 1:K:917:ARG:NH2  | 1:K:943:GLU:OE1  | 2.30                     | 0.63              |
| 1:L:129:VAL:HG23 | 1:L:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:P:681:GLU:HA   | 1:P:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:D:129:VAL:HG23 | 1:D:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:J:681:GLU:HA   | 1:J:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:K:254:LEU:C    | 1:K:255:ARG:HG2  | 2.17                     | 0.63              |
| 1:K:681:GLU:HA   | 1:K:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:O:129:VAL:HG23 | 1:O:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:P:117:GLU:OE1  | 1:P:117:GLU:N    | 2.29                     | 0.63              |
| 1:A:681:GLU:HA   | 1:A:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:E:917:ARG:NH2  | 1:E:943:GLU:OE1  | 2.30                     | 0.63              |
| 1:H:129:VAL:HG23 | 1:H:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:J:367:MET:HB3  | 1:J:372:MET:HE3  | 1.81                     | 0.63              |
| 1:M:129:VAL:HG23 | 1:M:182:ASN:HD22 | 1.64                     | 0.63              |
| 1:N:681:GLU:HA   | 1:N:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:O:917:ARG:HH22 | 1:O:943:GLU:CD   | 2.02                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:254:LEU:C    | 1:C:255:ARG:HG2  | 2.17                     | 0.63              |
| 1:E:681:GLU:HA   | 1:E:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:M:681:GLU:HA   | 1:M:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:A:254:LEU:C    | 1:A:255:ARG:HG2  | 2.17                     | 0.63              |
| 1:J:254:LEU:C    | 1:J:255:ARG:HG2  | 2.17                     | 0.63              |
| 1:L:681:GLU:OE2  | 1:L:681:GLU:HA   | 1.97                     | 0.63              |
| 1:A:917:ARG:HH22 | 1:A:943:GLU:CD   | 2.02                     | 0.63              |
| 1:F:681:GLU:HA   | 1:F:681:GLU:OE2  | 1.97                     | 0.63              |
| 1:K:367:MET:HB3  | 1:K:372:MET:HE3  | 1.79                     | 0.63              |
| 1:L:917:ARG:HH22 | 1:L:943:GLU:CD   | 2.02                     | 0.63              |
| 1:N:254:LEU:C    | 1:N:255:ARG:HG2  | 2.17                     | 0.63              |
| 1:E:66:PRO:HB3   | 1:E:187:MET:CE   | 2.29                     | 0.63              |
| 1:E:367:MET:HB3  | 1:E:372:MET:HE3  | 1.79                     | 0.63              |
| 1:F:66:PRO:HB3   | 1:F:187:MET:CE   | 2.29                     | 0.63              |
| 1:G:129:VAL:HG23 | 1:G:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:I:917:ARG:HH22 | 1:I:943:GLU:CD   | 2.02                     | 0.63              |
| 1:N:66:PRO:HB3   | 1:N:187:MET:CE   | 2.29                     | 0.63              |
| 1:P:129:VAL:HG23 | 1:P:182:ASN:HD22 | 1.63                     | 0.63              |
| 1:A:129:VAL:HG23 | 1:A:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:G:917:ARG:HH22 | 1:G:943:GLU:CD   | 2.02                     | 0.62              |
| 1:J:66:PRO:HB3   | 1:J:187:MET:CE   | 2.29                     | 0.62              |
| 1:K:129:VAL:HG23 | 1:K:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:K:917:ARG:HH22 | 1:K:943:GLU:CD   | 2.02                     | 0.62              |
| 1:N:367:MET:HB3  | 1:N:372:MET:HE3  | 1.81                     | 0.62              |
| 1:A:367:MET:HB3  | 1:A:372:MET:HE3  | 1.81                     | 0.62              |
| 1:C:66:PRO:HB3   | 1:C:187:MET:CE   | 2.29                     | 0.62              |
| 1:O:952:ARG:HG2  | 1:O:952:ARG:HH11 | 1.60                     | 0.62              |
| 1:B:66:PRO:HB3   | 1:B:187:MET:CE   | 2.29                     | 0.62              |
| 1:D:917:ARG:HH22 | 1:D:943:GLU:CD   | 2.02                     | 0.62              |
| 1:J:753:ASN:OD1  | 1:J:753:ASN:N    | 2.30                     | 0.62              |
| 1:C:129:VAL:HG23 | 1:C:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:F:129:VAL:HG23 | 1:F:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:M:66:PRO:HB3   | 1:M:187:MET:CE   | 2.30                     | 0.62              |
| 1:M:917:ARG:HH22 | 1:M:943:GLU:CD   | 2.02                     | 0.62              |
| 1:O:66:PRO:HB3   | 1:O:187:MET:CE   | 2.29                     | 0.62              |
| 1:D:66:PRO:HB3   | 1:D:187:MET:CE   | 2.30                     | 0.62              |
| 1:G:66:PRO:HB3   | 1:G:187:MET:CE   | 2.29                     | 0.62              |
| 1:H:681:GLU:HA   | 1:H:681:GLU:OE2  | 1.97                     | 0.62              |
| 1:N:129:VAL:HG23 | 1:N:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:B:129:VAL:HG23 | 1:B:182:ASN:HD22 | 1.63                     | 0.62              |
| 1:E:917:ARG:HH22 | 1:E:943:GLU:CD   | 2.02                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:66:PRO:HB3   | 1:L:187:MET:CE   | 2.29                     | 0.62              |
| 1:M:367:MET:HB3  | 1:M:372:MET:HE3  | 1.79                     | 0.62              |
| 1:A:66:PRO:HB3   | 1:A:187:MET:CE   | 2.29                     | 0.62              |
| 1:H:917:ARG:HH22 | 1:H:943:GLU:CD   | 2.02                     | 0.62              |
| 1:K:856:TYR:HD2  | 1:K:864:MET:HE2  | 1.63                     | 0.62              |
| 1:B:917:ARG:HH22 | 1:B:943:GLU:CD   | 2.02                     | 0.62              |
| 1:I:117:GLU:OE1  | 1:I:117:GLU:N    | 2.29                     | 0.62              |
| 1:J:856:TYR:HD2  | 1:J:864:MET:HE2  | 1.63                     | 0.62              |
| 1:N:30:HIS:ND1   | 1:N:31:PRO:O     | 2.30                     | 0.62              |
| 1:C:917:ARG:HH22 | 1:C:943:GLU:CD   | 2.02                     | 0.62              |
| 1:H:117:GLU:OE1  | 1:H:117:GLU:N    | 2.29                     | 0.62              |
| 1:K:66:PRO:HB3   | 1:K:187:MET:CE   | 2.29                     | 0.62              |
| 1:K:753:ASN:OD1  | 1:K:753:ASN:N    | 2.30                     | 0.62              |
| 1:O:367:MET:HB3  | 1:O:372:MET:HE3  | 1.81                     | 0.62              |
| 1:F:917:ARG:HH22 | 1:F:943:GLU:CD   | 2.02                     | 0.61              |
| 1:H:66:PRO:HB3   | 1:H:187:MET:CE   | 2.29                     | 0.61              |
| 1:I:129:VAL:HG23 | 1:I:182:ASN:HD22 | 1.63                     | 0.61              |
| 1:J:917:ARG:HH22 | 1:J:943:GLU:CD   | 2.02                     | 0.61              |
| 1:N:917:ARG:HH22 | 1:N:943:GLU:CD   | 2.02                     | 0.61              |
| 1:P:66:PRO:HB3   | 1:P:187:MET:CE   | 2.29                     | 0.61              |
| 1:P:917:ARG:HH22 | 1:P:943:GLU:CD   | 2.02                     | 0.61              |
| 1:I:66:PRO:HB3   | 1:I:187:MET:CE   | 2.29                     | 0.61              |
| 1:A:30:HIS:ND1   | 1:A:31:PRO:O     | 2.30                     | 0.61              |
| 1:L:634:GLN:O    | 1:L:682:LEU:HB2  | 2.01                     | 0.61              |
| 1:A:425:ARG:NH2  | 1:D:287:ASP:OD2  | 2.34                     | 0.61              |
| 1:A:749:ILE:CD1  | 1:A:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:C:436:MET:HE3  | 1:C:467:ASN:HD22 | 1.64                     | 0.61              |
| 1:E:749:ILE:CD1  | 1:E:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:F:749:ILE:CD1  | 1:F:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:I:30:HIS:ND1   | 1:I:31:PRO:O     | 2.30                     | 0.61              |
| 1:I:749:ILE:CD1  | 1:I:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:L:753:ASN:OD1  | 1:L:753:ASN:N    | 2.30                     | 0.61              |
| 1:M:749:ILE:CD1  | 1:M:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:N:749:ILE:CD1  | 1:N:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:C:749:ILE:CD1  | 1:C:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:L:1020:TRP:HD1 | 1:L:1021:CME:N   | 1.99                     | 0.61              |
| 1:F:129:VAL:HG23 | 1:F:182:ASN:ND2  | 2.16                     | 0.61              |
| 1:G:634:GLN:O    | 1:G:682:LEU:HB2  | 2.01                     | 0.61              |
| 1:G:749:ILE:CD1  | 1:G:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:H:634:GLN:O    | 1:H:682:LEU:HB2  | 2.01                     | 0.61              |
| 1:I:436:MET:HE3  | 1:I:467:ASN:HD22 | 1.66                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:129:VAL:HG23 | 1:N:182:ASN:ND2  | 2.16                     | 0.61              |
| 1:O:129:VAL:HG23 | 1:O:182:ASN:ND2  | 2.16                     | 0.61              |
| 1:O:749:ILE:CD1  | 1:O:834:VAL:HG11 | 2.31                     | 0.61              |
| 1:O:1020:TRP:HD1 | 1:O:1021:CME:N   | 1.99                     | 0.61              |
| 1:C:634:GLN:O    | 1:C:682:LEU:HB2  | 2.01                     | 0.61              |
| 1:F:1020:TRP:HD1 | 1:F:1021:CME:N   | 1.99                     | 0.61              |
| 1:P:1020:TRP:HD1 | 1:P:1021:CME:N   | 1.99                     | 0.61              |
| 1:C:1020:TRP:HD1 | 1:C:1021:CME:N   | 1.99                     | 0.61              |
| 1:D:117:GLU:OE1  | 1:D:117:GLU:N    | 2.29                     | 0.61              |
| 1:D:1020:TRP:HD1 | 1:D:1021:CME:N   | 1.99                     | 0.60              |
| 1:G:436:MET:HE3  | 1:G:467:ASN:HD22 | 1.66                     | 0.60              |
| 1:L:129:VAL:HG23 | 1:L:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:L:749:ILE:CD1  | 1:L:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:N:1020:TRP:HD1 | 1:N:1021:CME:N   | 1.99                     | 0.60              |
| 1:O:634:GLN:O    | 1:O:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:P:634:GLN:O    | 1:P:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:A:129:VAL:HG23 | 1:A:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:B:129:VAL:HG23 | 1:B:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:D:749:ILE:CD1  | 1:D:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:E:129:VAL:HG23 | 1:E:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:H:749:ILE:CD1  | 1:H:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:J:634:GLN:O    | 1:J:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:K:1020:TRP:HD1 | 1:K:1021:CME:N   | 1.99                     | 0.60              |
| 1:B:634:GLN:O    | 1:B:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:C:129:VAL:HG23 | 1:C:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:G:117:GLU:N    | 1:G:117:GLU:OE1  | 2.29                     | 0.60              |
| 1:H:30:HIS:ND1   | 1:H:31:PRO:O     | 2.30                     | 0.60              |
| 1:H:427:THR:HA   | 1:H:436:MET:HE2  | 1.83                     | 0.60              |
| 1:H:1020:TRP:HD1 | 1:H:1021:CME:N   | 1.99                     | 0.60              |
| 1:K:749:ILE:CD1  | 1:K:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:N:682:LEU:HD22 | 1:N:683:PRO:HD2  | 1.84                     | 0.60              |
| 1:O:682:LEU:HD22 | 1:O:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:D:30:HIS:ND1   | 1:D:31:PRO:O     | 2.30                     | 0.60              |
| 1:F:682:LEU:HD22 | 1:F:683:PRO:HD2  | 1.84                     | 0.60              |
| 1:K:634:GLN:O    | 1:K:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:K:682:LEU:HD22 | 1:K:683:PRO:HD2  | 1.84                     | 0.60              |
| 1:L:682:LEU:HD22 | 1:L:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:M:129:VAL:HG23 | 1:M:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:P:367:MET:HB3  | 1:P:372:MET:HE3  | 1.81                     | 0.60              |
| 1:P:682:LEU:HD22 | 1:P:683:PRO:HD2  | 1.84                     | 0.60              |
| 1:C:333:ARG:NH2  | 3:C:4202:HOH:O   | 2.31                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:682:LEU:HD22 | 1:C:683:PRO:HD2  | 1.84                     | 0.60              |
| 1:G:129:VAL:HG23 | 1:G:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:G:682:LEU:HD22 | 1:G:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:H:129:VAL:HG23 | 1:H:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:H:682:LEU:HD22 | 1:H:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:I:1020:TRP:HD1 | 1:I:1021:CME:N   | 1.99                     | 0.60              |
| 1:J:749:ILE:CD1  | 1:J:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:O:117:GLU:OE1  | 1:O:117:GLU:N    | 2.29                     | 0.60              |
| 1:B:749:ILE:CD1  | 1:B:834:VAL:HG11 | 2.31                     | 0.60              |
| 1:E:634:GLN:O    | 1:E:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:F:634:GLN:O    | 1:F:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:G:322:LEU:HD23 | 1:G:324:GLU:N    | 2.17                     | 0.60              |
| 1:G:1020:TRP:HD1 | 1:G:1021:CME:N   | 1.99                     | 0.60              |
| 1:H:856:TYR:HD2  | 1:H:864:MET:HE2  | 1.66                     | 0.60              |
| 1:I:682:LEU:HD22 | 1:I:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:L:178:ARG:NH1  | 1:L:181:GLU:O    | 2.35                     | 0.60              |
| 1:A:634:GLN:O    | 1:A:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:B:1020:TRP:HD1 | 1:B:1021:CME:N   | 1.99                     | 0.60              |
| 1:D:634:GLN:O    | 1:D:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:F:178:ARG:NH1  | 1:F:181:GLU:O    | 2.35                     | 0.60              |
| 1:J:88:SER:HA    | 1:J:366:VAL:HG21 | 1.84                     | 0.60              |
| 1:K:129:VAL:HG23 | 1:K:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:M:178:ARG:NH1  | 1:M:181:GLU:O    | 2.35                     | 0.60              |
| 1:N:634:GLN:O    | 1:N:682:LEU:HB2  | 2.01                     | 0.60              |
| 1:O:322:LEU:HD23 | 1:O:324:GLU:N    | 2.17                     | 0.60              |
| 1:A:88:SER:HA    | 1:A:366:VAL:HG21 | 1.84                     | 0.60              |
| 1:E:322:LEU:HD23 | 1:E:324:GLU:N    | 2.17                     | 0.60              |
| 1:H:360:HIS:CE1  | 1:H:362:LEU:HB2  | 2.37                     | 0.60              |
| 1:K:178:ARG:NH1  | 1:K:181:GLU:O    | 2.35                     | 0.60              |
| 1:N:322:LEU:HD23 | 1:N:324:GLU:N    | 2.17                     | 0.60              |
| 1:P:322:LEU:HD23 | 1:P:324:GLU:N    | 2.17                     | 0.60              |
| 1:A:1020:TRP:HD1 | 1:A:1021:CME:N   | 1.99                     | 0.60              |
| 1:B:178:ARG:NH1  | 1:B:181:GLU:O    | 2.35                     | 0.60              |
| 1:B:322:LEU:HD23 | 1:B:324:GLU:N    | 2.17                     | 0.60              |
| 1:C:88:SER:HA    | 1:C:366:VAL:HG21 | 1.84                     | 0.60              |
| 1:D:178:ARG:NH1  | 1:D:181:GLU:O    | 2.35                     | 0.60              |
| 1:G:367:MET:HB3  | 1:G:372:MET:HE3  | 1.82                     | 0.60              |
| 1:H:322:LEU:HD23 | 1:H:324:GLU:N    | 2.17                     | 0.60              |
| 1:H:367:MET:HB3  | 1:H:372:MET:HE3  | 1.81                     | 0.60              |
| 1:I:178:ARG:NH1  | 1:I:181:GLU:O    | 2.35                     | 0.60              |
| 1:K:436:MET:HE3  | 1:K:467:ASN:HD22 | 1.66                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:577:LYS:O    | 1:K:584:PRO:HA   | 2.02                     | 0.60              |
| 1:L:577:LYS:O    | 1:L:584:PRO:HA   | 2.02                     | 0.60              |
| 1:M:682:LEU:HD22 | 1:M:683:PRO:HD2  | 1.83                     | 0.60              |
| 1:M:753:ASN:OD1  | 1:M:753:ASN:N    | 2.30                     | 0.60              |
| 1:P:577:LYS:O    | 1:P:584:PRO:HA   | 2.02                     | 0.60              |
| 1:A:577:LYS:O    | 1:A:584:PRO:HA   | 2.02                     | 0.60              |
| 1:B:360:HIS:CE1  | 1:B:362:LEU:HB2  | 2.37                     | 0.60              |
| 1:D:129:VAL:HG23 | 1:D:182:ASN:ND2  | 2.16                     | 0.60              |
| 1:H:577:LYS:O    | 1:H:584:PRO:HA   | 2.02                     | 0.60              |
| 1:J:322:LEU:HD23 | 1:J:324:GLU:N    | 2.17                     | 0.60              |
| 1:K:88:SER:HA    | 1:K:366:VAL:HG21 | 1.84                     | 0.60              |
| 1:K:333:ARG:NH2  | 3:K:4202:HOH:O   | 2.31                     | 0.60              |
| 1:K:360:HIS:CE1  | 1:K:362:LEU:HB2  | 2.37                     | 0.60              |
| 1:L:117:GLU:OE1  | 1:L:117:GLU:N    | 2.29                     | 0.60              |
| 1:N:360:HIS:CE1  | 1:N:362:LEU:HB2  | 2.37                     | 0.60              |
| 1:B:856:TYR:HD2  | 1:B:864:MET:HE2  | 1.67                     | 0.59              |
| 1:E:178:ARG:NH1  | 1:E:181:GLU:O    | 2.35                     | 0.59              |
| 1:E:753:ASN:OD1  | 1:E:753:ASN:N    | 2.30                     | 0.59              |
| 1:F:30:HIS:ND1   | 1:F:31:PRO:O     | 2.30                     | 0.59              |
| 1:F:360:HIS:CE1  | 1:F:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:F:427:THR:HA   | 1:F:436:MET:HE2  | 1.83                     | 0.59              |
| 1:G:178:ARG:NH1  | 1:G:181:GLU:O    | 2.35                     | 0.59              |
| 1:G:577:LYS:O    | 1:G:584:PRO:HA   | 2.02                     | 0.59              |
| 1:J:682:LEU:HD22 | 1:J:683:PRO:HD2  | 1.83                     | 0.59              |
| 1:J:744:GLU:HB3  | 1:J:745:MET:HE3  | 1.84                     | 0.59              |
| 1:L:322:LEU:HD23 | 1:L:324:GLU:N    | 2.17                     | 0.59              |
| 1:M:88:SER:HA    | 1:M:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:N:178:ARG:NH1  | 1:N:181:GLU:O    | 2.35                     | 0.59              |
| 1:N:427:THR:HA   | 1:N:436:MET:HE2  | 1.83                     | 0.59              |
| 1:N:577:LYS:O    | 1:N:584:PRO:HA   | 2.02                     | 0.59              |
| 1:P:129:VAL:HG23 | 1:P:182:ASN:ND2  | 2.16                     | 0.59              |
| 1:P:436:MET:HE3  | 1:P:467:ASN:HD22 | 1.66                     | 0.59              |
| 1:D:322:LEU:HD23 | 1:D:324:GLU:N    | 2.17                     | 0.59              |
| 1:I:129:VAL:HG23 | 1:I:182:ASN:ND2  | 2.16                     | 0.59              |
| 1:I:322:LEU:HD23 | 1:I:324:GLU:N    | 2.17                     | 0.59              |
| 1:M:322:LEU:HD23 | 1:M:324:GLU:N    | 2.17                     | 0.59              |
| 1:O:178:ARG:NH1  | 1:O:181:GLU:O    | 2.35                     | 0.59              |
| 1:O:577:LYS:O    | 1:O:584:PRO:HA   | 2.02                     | 0.59              |
| 1:O:744:GLU:HB3  | 1:O:745:MET:HE3  | 1.84                     | 0.59              |
| 1:P:178:ARG:NH1  | 1:P:181:GLU:O    | 2.35                     | 0.59              |
| 1:P:360:HIS:CE1  | 1:P:362:LEU:HB2  | 2.37                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:322:LEU:HD23 | 1:A:324:GLU:N    | 2.17                     | 0.59              |
| 1:B:744:GLU:HB3  | 1:B:745:MET:HE3  | 1.84                     | 0.59              |
| 1:B:786:ARG:HH11 | 1:B:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:D:360:HIS:CE1  | 1:D:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:E:786:ARG:HH11 | 1:E:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:E:1020:TRP:HD1 | 1:E:1021:CME:N   | 1.99                     | 0.59              |
| 1:F:287:ASP:OD2  | 1:G:425:ARG:NH2  | 2.35                     | 0.59              |
| 1:F:577:LYS:O    | 1:F:584:PRO:HA   | 2.02                     | 0.59              |
| 1:G:88:SER:HA    | 1:G:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:H:178:ARG:NH1  | 1:H:181:GLU:O    | 2.35                     | 0.59              |
| 1:I:634:GLN:O    | 1:I:682:LEU:HB2  | 2.01                     | 0.59              |
| 1:J:129:VAL:HG23 | 1:J:182:ASN:ND2  | 2.16                     | 0.59              |
| 1:J:178:ARG:NH1  | 1:J:181:GLU:O    | 2.35                     | 0.59              |
| 1:J:360:HIS:CE1  | 1:J:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:J:786:ARG:HH11 | 1:J:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:J:1020:TRP:HD1 | 1:J:1021:CME:N   | 1.99                     | 0.59              |
| 1:K:322:LEU:HD23 | 1:K:324:GLU:N    | 2.17                     | 0.59              |
| 1:N:117:GLU:OE1  | 1:N:117:GLU:N    | 2.29                     | 0.59              |
| 1:O:88:SER:HA    | 1:O:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:A:178:ARG:NH1  | 1:A:181:GLU:O    | 2.35                     | 0.59              |
| 1:A:360:HIS:CE1  | 1:A:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:A:682:LEU:HD22 | 1:A:683:PRO:HD2  | 1.84                     | 0.59              |
| 1:A:786:ARG:HH11 | 1:A:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:B:577:LYS:O    | 1:B:584:PRO:HA   | 2.02                     | 0.59              |
| 1:D:682:LEU:HD22 | 1:D:683:PRO:HD2  | 1.83                     | 0.59              |
| 1:E:88:SER:HA    | 1:E:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:E:682:LEU:HD22 | 1:E:683:PRO:HD2  | 1.83                     | 0.59              |
| 1:F:744:GLU:HB3  | 1:F:745:MET:HE3  | 1.84                     | 0.59              |
| 1:G:360:HIS:CE1  | 1:G:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:G:744:GLU:HB3  | 1:G:745:MET:HE3  | 1.84                     | 0.59              |
| 1:M:1020:TRP:HD1 | 1:M:1021:CME:N   | 1.99                     | 0.59              |
| 1:N:894:ARG:NH1  | 1:N:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:A:744:GLU:HB3  | 1:A:745:MET:HE3  | 1.84                     | 0.59              |
| 1:B:894:ARG:NH1  | 1:B:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:C:178:ARG:NH1  | 1:C:181:GLU:O    | 2.35                     | 0.59              |
| 1:C:894:ARG:NH1  | 1:C:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:F:894:ARG:NH1  | 1:F:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:G:786:ARG:HH11 | 1:G:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:I:333:ARG:NH2  | 3:I:4200:HOH:O   | 2.31                     | 0.59              |
| 1:L:786:ARG:HH11 | 1:L:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:N:744:GLU:HB3  | 1:N:745:MET:HE3  | 1.84                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:786:ARG:HH11 | 1:N:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:O:786:ARG:HH11 | 1:O:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:B:682:LEU:HD22 | 1:B:683:PRO:HD2  | 1.84                     | 0.59              |
| 1:C:322:LEU:HD23 | 1:C:324:GLU:N    | 2.17                     | 0.59              |
| 1:C:577:LYS:O    | 1:C:584:PRO:HA   | 2.02                     | 0.59              |
| 1:F:786:ARG:HH11 | 1:F:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:H:786:ARG:HH11 | 1:H:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:I:577:LYS:O    | 1:I:584:PRO:HA   | 2.02                     | 0.59              |
| 1:L:88:SER:HA    | 1:L:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:P:749:ILE:CD1  | 1:P:834:VAL:HG11 | 2.31                     | 0.59              |
| 1:B:117:GLU:OE1  | 1:B:117:GLU:N    | 2.29                     | 0.59              |
| 1:G:894:ARG:NH1  | 1:G:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:H:88:SER:HA    | 1:H:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:B:333:ARG:NH2  | 3:B:3305:HOH:O   | 2.31                     | 0.59              |
| 1:D:744:GLU:HB3  | 1:D:745:MET:HE3  | 1.84                     | 0.59              |
| 1:I:786:ARG:HH11 | 1:I:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:K:894:ARG:NH1  | 1:K:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:L:744:GLU:HB3  | 1:L:745:MET:HE3  | 1.84                     | 0.59              |
| 1:M:894:ARG:NH1  | 1:M:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:C:249:GLU:OE1  | 1:C:251:ARG:NH1  | 2.34                     | 0.59              |
| 1:D:786:ARG:HH11 | 1:D:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:D:786:ARG:HH11 | 1:D:990:HIS:HE1  | 1.51                     | 0.59              |
| 1:F:322:LEU:HD23 | 1:F:324:GLU:N    | 2.17                     | 0.59              |
| 1:J:894:ARG:NH1  | 1:J:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:K:744:GLU:HB3  | 1:K:745:MET:HE3  | 1.84                     | 0.59              |
| 1:L:894:ARG:NH1  | 1:L:919:ASP:OD2  | 2.36                     | 0.59              |
| 1:M:746:ASP:HA   | 1:M:760:ARG:HG3  | 1.85                     | 0.59              |
| 1:N:333:ARG:NH2  | 3:N:3308:HOH:O   | 2.31                     | 0.59              |
| 1:P:786:ARG:HH11 | 1:P:990:HIS:CE1  | 2.21                     | 0.59              |
| 1:A:746:ASP:HA   | 1:A:760:ARG:HG3  | 1.85                     | 0.59              |
| 1:D:753:ASN:OD1  | 1:D:753:ASN:N    | 2.30                     | 0.59              |
| 1:E:746:ASP:HA   | 1:E:760:ARG:HG3  | 1.85                     | 0.59              |
| 1:I:88:SER:HA    | 1:I:366:VAL:HG21 | 1.84                     | 0.59              |
| 1:I:360:HIS:CE1  | 1:I:362:LEU:HB2  | 2.37                     | 0.59              |
| 1:M:577:LYS:O    | 1:M:584:PRO:HA   | 2.02                     | 0.59              |
| 1:A:786:ARG:HH11 | 1:A:990:HIS:HE1  | 1.50                     | 0.58              |
| 1:C:360:HIS:CE1  | 1:C:362:LEU:HB2  | 2.37                     | 0.58              |
| 1:D:577:LYS:O    | 1:D:584:PRO:HA   | 2.02                     | 0.58              |
| 1:E:894:ARG:NH1  | 1:E:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:F:88:SER:HA    | 1:F:366:VAL:HG21 | 1.84                     | 0.58              |
| 1:F:746:ASP:HA   | 1:F:760:ARG:HG3  | 1.85                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:377:LEU:N    | 1:J:377:LEU:HD23 | 2.18                     | 0.58              |
| 1:N:746:ASP:HA   | 1:N:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:O:360:HIS:CE1  | 1:O:362:LEU:HB2  | 2.37                     | 0.58              |
| 1:A:427:THR:HA   | 1:A:436:MET:HE2  | 1.83                     | 0.58              |
| 1:E:360:HIS:CE1  | 1:E:362:LEU:HB2  | 2.37                     | 0.58              |
| 1:E:786:ARG:HH11 | 1:E:990:HIS:HE1  | 1.50                     | 0.58              |
| 1:H:744:GLU:HB3  | 1:H:745:MET:HE3  | 1.84                     | 0.58              |
| 1:L:746:ASP:HA   | 1:L:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:M:634:GLN:O    | 1:M:682:LEU:HB2  | 2.01                     | 0.58              |
| 1:P:88:SER:HA    | 1:P:366:VAL:HG21 | 1.84                     | 0.58              |
| 1:P:786:ARG:HH11 | 1:P:990:HIS:HE1  | 1.50                     | 0.58              |
| 1:B:287:ASP:OD2  | 1:C:425:ARG:NH2  | 2.36                     | 0.58              |
| 1:C:786:ARG:HH11 | 1:C:990:HIS:CE1  | 2.21                     | 0.58              |
| 1:D:88:SER:HA    | 1:D:366:VAL:HG21 | 1.84                     | 0.58              |
| 1:E:577:LYS:O    | 1:E:584:PRO:HA   | 2.02                     | 0.58              |
| 1:H:786:ARG:HH11 | 1:H:990:HIS:HE1  | 1.50                     | 0.58              |
| 1:H:894:ARG:NH1  | 1:H:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:I:746:ASP:HA   | 1:I:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:N:88:SER:HA    | 1:N:366:VAL:HG21 | 1.84                     | 0.58              |
| 1:O:894:ARG:NH1  | 1:O:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:D:746:ASP:HA   | 1:D:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:G:272:ALA:HB1  | 1:G:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:J:746:ASP:HA   | 1:J:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:L:166:ARG:HD3  | 3:L:3144:HOH:O   | 2.04                     | 0.58              |
| 1:M:360:HIS:CE1  | 1:M:362:LEU:HB2  | 2.37                     | 0.58              |
| 1:O:272:ALA:HB1  | 1:O:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:C:744:GLU:HB3  | 1:C:745:MET:HE3  | 1.84                     | 0.58              |
| 1:E:333:ARG:NH2  | 3:E:4201:HOH:O   | 2.31                     | 0.58              |
| 1:F:166:ARG:HD3  | 3:F:3140:HOH:O   | 2.04                     | 0.58              |
| 1:N:166:ARG:HD3  | 3:N:3141:HOH:O   | 2.04                     | 0.58              |
| 1:P:894:ARG:NH1  | 1:P:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:G:166:ARG:HD3  | 3:G:3138:HOH:O   | 2.04                     | 0.58              |
| 1:I:377:LEU:N    | 1:I:377:LEU:HD23 | 2.19                     | 0.58              |
| 1:J:249:GLU:OE1  | 1:J:251:ARG:NH1  | 2.34                     | 0.58              |
| 1:J:577:LYS:O    | 1:J:584:PRO:HA   | 2.02                     | 0.58              |
| 1:L:272:ALA:HB1  | 1:L:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:L:360:HIS:CE1  | 1:L:362:LEU:HB2  | 2.37                     | 0.58              |
| 1:M:724:GLU:O    | 1:N:847:LYS:NZ   | 2.27                     | 0.58              |
| 1:M:786:ARG:HH11 | 1:M:990:HIS:HE1  | 1.50                     | 0.58              |
| 1:M:786:ARG:HH11 | 1:M:990:HIS:CE1  | 2.21                     | 0.58              |
| 1:B:88:SER:HA    | 1:B:366:VAL:HG21 | 1.84                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:856:TYR:HD2  | 1:C:864:MET:HE2  | 1.67                     | 0.58              |
| 1:D:436:MET:HE3  | 1:D:467:ASN:HD22 | 1.67                     | 0.58              |
| 1:E:434:PRO:HB3  | 1:H:434:PRO:HB3  | 1.84                     | 0.58              |
| 1:G:249:GLU:OE1  | 1:G:251:ARG:NH1  | 2.34                     | 0.58              |
| 1:I:894:ARG:NH1  | 1:I:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:J:786:ARG:HH11 | 1:J:990:HIS:HE1  | 1.51                     | 0.58              |
| 1:O:249:GLU:OE1  | 1:O:251:ARG:NH1  | 2.34                     | 0.58              |
| 1:P:744:GLU:HB3  | 1:P:745:MET:HE3  | 1.84                     | 0.58              |
| 1:A:249:GLU:OE1  | 1:A:251:ARG:NH1  | 2.34                     | 0.58              |
| 1:A:377:LEU:N    | 1:A:377:LEU:HD23 | 2.18                     | 0.58              |
| 1:B:377:LEU:N    | 1:B:377:LEU:HD23 | 2.18                     | 0.58              |
| 1:H:746:ASP:HA   | 1:H:760:ARG:HG3  | 1.86                     | 0.58              |
| 1:I:272:ALA:HB1  | 1:I:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:J:272:ALA:HB1  | 1:J:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:K:597:ASN:HD22 | 1:K:599:ARG:H    | 1.52                     | 0.58              |
| 1:K:786:ARG:HH11 | 1:K:990:HIS:CE1  | 2.21                     | 0.58              |
| 1:L:597:ASN:HD22 | 1:L:599:ARG:H    | 1.52                     | 0.58              |
| 1:M:333:ARG:NH2  | 3:M:4201:HOH:O   | 2.31                     | 0.58              |
| 1:O:427:THR:HA   | 1:O:436:MET:HE2  | 1.86                     | 0.58              |
| 1:A:894:ARG:NH1  | 1:A:919:ASP:OD2  | 2.36                     | 0.58              |
| 1:B:272:ALA:HB1  | 1:B:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:B:786:ARG:HH11 | 1:B:990:HIS:HE1  | 1.51                     | 0.58              |
| 1:C:166:ARG:HD3  | 3:C:4034:HOH:O   | 2.04                     | 0.58              |
| 1:C:746:ASP:HA   | 1:C:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:E:597:ASN:HD22 | 1:E:599:ARG:H    | 1.52                     | 0.58              |
| 1:E:744:GLU:HB3  | 1:E:745:MET:HE3  | 1.84                     | 0.58              |
| 1:K:786:ARG:HH11 | 1:K:990:HIS:HE1  | 1.51                     | 0.58              |
| 1:M:377:LEU:N    | 1:M:377:LEU:HD23 | 2.19                     | 0.58              |
| 1:M:830:LEU:HD11 | 1:N:830:LEU:HD11 | 1.86                     | 0.58              |
| 1:N:377:LEU:HD23 | 1:N:377:LEU:N    | 2.19                     | 0.58              |
| 1:N:420:MET:O    | 1:O:282:ARG:HD3  | 2.03                     | 0.58              |
| 1:A:272:ALA:HB1  | 1:A:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:D:597:ASN:HD22 | 1:D:599:ARG:H    | 1.52                     | 0.58              |
| 1:F:272:ALA:HB1  | 1:F:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:G:668:VAL:HG13 | 1:G:669:PRO:HD2  | 1.86                     | 0.58              |
| 1:N:272:ALA:HB1  | 1:N:273:PRO:HD2  | 1.86                     | 0.58              |
| 1:P:166:ARG:HG3  | 1:P:392:TYR:CB   | 2.34                     | 0.58              |
| 1:P:746:ASP:HA   | 1:P:760:ARG:HG3  | 1.85                     | 0.58              |
| 1:A:333:ARG:NH2  | 3:A:4202:HOH:O   | 2.31                     | 0.57              |
| 1:B:166:ARG:HD3  | 3:B:3139:HOH:O   | 2.04                     | 0.57              |
| 1:C:753:ASN:OD1  | 1:C:753:ASN:N    | 2.30                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:786:ARG:HH11 | 1:C:990:HIS:HE1  | 1.50                     | 0.57              |
| 1:K:272:ALA:HB1  | 1:K:273:PRO:HD2  | 1.86                     | 0.57              |
| 1:L:377:LEU:N    | 1:L:377:LEU:HD23 | 2.18                     | 0.57              |
| 1:M:597:ASN:HD22 | 1:M:599:ARG:H    | 1.52                     | 0.57              |
| 1:O:668:VAL:HG13 | 1:O:669:PRO:HD2  | 1.87                     | 0.57              |
| 1:A:668:VAL:HG13 | 1:A:669:PRO:HD2  | 1.87                     | 0.57              |
| 1:B:436:MET:HE3  | 1:B:467:ASN:HD22 | 1.69                     | 0.57              |
| 1:I:668:VAL:HG13 | 1:I:669:PRO:HD2  | 1.87                     | 0.57              |
| 1:L:30:HIS:ND1   | 1:L:31:PRO:O     | 2.30                     | 0.57              |
| 1:M:249:GLU:OE1  | 1:M:251:ARG:NH1  | 2.34                     | 0.57              |
| 1:E:166:ARG:HD3  | 3:E:4034:HOH:O   | 2.04                     | 0.57              |
| 1:I:744:GLU:HB3  | 1:I:745:MET:HE3  | 1.85                     | 0.57              |
| 1:M:166:ARG:HG3  | 1:M:392:TYR:CB   | 2.34                     | 0.57              |
| 1:N:434:PRO:HB3  | 1:O:434:PRO:HB3  | 1.85                     | 0.57              |
| 1:B:597:ASN:HD22 | 1:B:599:ARG:H    | 1.52                     | 0.57              |
| 1:B:668:VAL:HG13 | 1:B:669:PRO:HD2  | 1.86                     | 0.57              |
| 1:C:272:ALA:HB1  | 1:C:273:PRO:HD2  | 1.86                     | 0.57              |
| 1:E:166:ARG:HG3  | 1:E:392:TYR:CB   | 2.34                     | 0.57              |
| 1:G:377:LEU:N    | 1:G:377:LEU:HD23 | 2.18                     | 0.57              |
| 1:M:744:GLU:HB3  | 1:M:745:MET:HE3  | 1.85                     | 0.57              |
| 1:O:377:LEU:N    | 1:O:377:LEU:HD23 | 2.18                     | 0.57              |
| 1:C:668:VAL:HG13 | 1:C:669:PRO:HD2  | 1.87                     | 0.57              |
| 1:D:166:ARG:HD3  | 3:D:3147:HOH:O   | 2.04                     | 0.57              |
| 1:D:377:LEU:N    | 1:D:377:LEU:HD23 | 2.18                     | 0.57              |
| 1:L:668:VAL:HG13 | 1:L:669:PRO:HD2  | 1.86                     | 0.57              |
| 1:P:597:ASN:HD22 | 1:P:599:ARG:H    | 1.52                     | 0.57              |
| 1:A:279:ILE:HD11 | 1:D:422:PRO:HG2  | 1.86                     | 0.57              |
| 1:C:377:LEU:HD23 | 1:C:377:LEU:N    | 2.18                     | 0.57              |
| 1:G:166:ARG:HG3  | 1:G:392:TYR:CB   | 2.34                     | 0.57              |
| 1:G:746:ASP:HA   | 1:G:760:ARG:HG3  | 1.85                     | 0.57              |
| 1:I:279:ILE:HD11 | 1:L:422:PRO:HG2  | 1.85                     | 0.57              |
| 1:O:166:ARG:HG3  | 1:O:392:TYR:CB   | 2.34                     | 0.57              |
| 1:O:746:ASP:HA   | 1:O:760:ARG:HG3  | 1.85                     | 0.57              |
| 1:D:747:PHE:HE1  | 1:D:825:CYS:HG   | 1.51                     | 0.57              |
| 1:H:166:ARG:HG3  | 1:H:392:TYR:CB   | 2.34                     | 0.57              |
| 1:I:166:ARG:HG3  | 1:I:392:TYR:CB   | 2.34                     | 0.57              |
| 1:I:786:ARG:HH11 | 1:I:990:HIS:HE1  | 1.50                     | 0.57              |
| 1:J:30:HIS:ND1   | 1:J:31:PRO:O     | 2.30                     | 0.57              |
| 1:K:30:HIS:ND1   | 1:K:31:PRO:O     | 2.30                     | 0.57              |
| 1:N:166:ARG:HG3  | 1:N:392:TYR:CB   | 2.34                     | 0.57              |
| 1:N:668:VAL:HG13 | 1:N:669:PRO:HD2  | 1.87                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:333:ARG:NH2  | 3:O:3305:HOH:O   | 2.31                     | 0.57              |
| 1:A:597:ASN:HD22 | 1:A:599:ARG:H    | 1.52                     | 0.57              |
| 1:B:166:ARG:HG3  | 1:B:392:TYR:CB   | 2.34                     | 0.57              |
| 1:B:249:GLU:OE1  | 1:B:251:ARG:NH1  | 2.34                     | 0.57              |
| 1:F:668:VAL:HG13 | 1:F:669:PRO:HD2  | 1.86                     | 0.57              |
| 1:F:786:ARG:HH11 | 1:F:990:HIS:HE1  | 1.50                     | 0.57              |
| 1:G:333:ARG:NH2  | 3:G:3305:HOH:O   | 2.31                     | 0.57              |
| 1:I:166:ARG:HD3  | 3:I:4034:HOH:O   | 2.04                     | 0.57              |
| 1:K:166:ARG:HD3  | 3:K:4034:HOH:O   | 2.04                     | 0.57              |
| 1:P:166:ARG:HD3  | 3:P:3146:HOH:O   | 2.04                     | 0.57              |
| 1:D:166:ARG:HG3  | 1:D:392:TYR:CB   | 2.34                     | 0.57              |
| 1:D:249:GLU:OE1  | 1:D:251:ARG:NH1  | 2.34                     | 0.57              |
| 1:D:894:ARG:NH1  | 1:D:919:ASP:OD2  | 2.36                     | 0.57              |
| 1:E:63:PHE:CB    | 1:E:64:PRO:HD2   | 2.34                     | 0.57              |
| 1:E:856:TYR:CD2  | 1:E:864:MET:HE2  | 2.40                     | 0.57              |
| 1:F:166:ARG:HG3  | 1:F:392:TYR:CB   | 2.34                     | 0.57              |
| 1:J:597:ASN:HD22 | 1:J:599:ARG:H    | 1.52                     | 0.57              |
| 1:C:30:HIS:ND1   | 1:C:31:PRO:O     | 2.30                     | 0.57              |
| 1:E:249:GLU:OE1  | 1:E:251:ARG:NH1  | 2.34                     | 0.57              |
| 1:J:166:ARG:HD3  | 3:J:3141:HOH:O   | 2.04                     | 0.57              |
| 1:J:422:PRO:HG2  | 1:K:279:ILE:HD11 | 1.85                     | 0.57              |
| 1:M:272:ALA:HB1  | 1:M:273:PRO:HD2  | 1.86                     | 0.57              |
| 1:O:166:ARG:HD3  | 3:O:3138:HOH:O   | 2.04                     | 0.57              |
| 1:P:272:ALA:HB1  | 1:P:273:PRO:HD2  | 1.86                     | 0.57              |
| 1:B:949:HIS:HD2  | 1:B:1020:TRP:HE1 | 1.53                     | 0.56              |
| 1:H:597:ASN:HD22 | 1:H:599:ARG:H    | 1.52                     | 0.56              |
| 1:H:668:VAL:HG13 | 1:H:669:PRO:HD2  | 1.86                     | 0.56              |
| 1:N:249:GLU:OE1  | 1:N:251:ARG:NH1  | 2.34                     | 0.56              |
| 1:P:30:HIS:ND1   | 1:P:31:PRO:O     | 2.30                     | 0.56              |
| 1:A:166:ARG:HG3  | 1:A:392:TYR:CB   | 2.34                     | 0.56              |
| 1:A:166:ARG:HD3  | 3:A:4034:HOH:O   | 2.04                     | 0.56              |
| 1:F:249:GLU:OE1  | 1:F:251:ARG:NH1  | 2.35                     | 0.56              |
| 1:L:786:ARG:HH11 | 1:L:990:HIS:HE1  | 1.50                     | 0.56              |
| 1:B:30:HIS:ND1   | 1:B:31:PRO:O     | 2.30                     | 0.56              |
| 1:C:166:ARG:HG3  | 1:C:392:TYR:CB   | 2.34                     | 0.56              |
| 1:C:597:ASN:HD22 | 1:C:599:ARG:H    | 1.52                     | 0.56              |
| 1:D:272:ALA:HB1  | 1:D:273:PRO:HD2  | 1.86                     | 0.56              |
| 1:F:377:LEU:HD23 | 1:F:377:LEU:N    | 2.19                     | 0.56              |
| 1:H:166:ARG:HD3  | 3:H:4034:HOH:O   | 2.04                     | 0.56              |
| 1:K:166:ARG:HG3  | 1:K:392:TYR:CB   | 2.34                     | 0.56              |
| 1:K:377:LEU:N    | 1:K:377:LEU:HD23 | 2.18                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:166:ARG:HG3  | 1:L:392:TYR:CB   | 2.34                     | 0.56              |
| 1:L:949:HIS:HD2  | 1:L:1020:TRP:HE1 | 1.53                     | 0.56              |
| 1:M:166:ARG:HD3  | 3:M:4034:HOH:O   | 2.04                     | 0.56              |
| 1:N:786:ARG:HH11 | 1:N:990:HIS:HE1  | 1.51                     | 0.56              |
| 1:B:316:HIS:HD2  | 1:B:317:THR:O    | 1.89                     | 0.56              |
| 1:D:316:HIS:HD2  | 1:D:317:THR:O    | 1.89                     | 0.56              |
| 1:D:668:VAL:HG13 | 1:D:669:PRO:HD2  | 1.87                     | 0.56              |
| 1:G:316:HIS:HD2  | 1:G:317:THR:O    | 1.89                     | 0.56              |
| 1:H:272:ALA:HB1  | 1:H:273:PRO:HD2  | 1.86                     | 0.56              |
| 1:H:333:ARG:NH2  | 3:H:4202:HOH:O   | 2.31                     | 0.56              |
| 1:O:30:HIS:ND1   | 1:O:31:PRO:O     | 2.30                     | 0.56              |
| 1:B:746:ASP:HA   | 1:B:760:ARG:HG3  | 1.85                     | 0.56              |
| 1:E:30:HIS:ND1   | 1:E:31:PRO:O     | 2.30                     | 0.56              |
| 1:E:316:HIS:HD2  | 1:E:317:THR:O    | 1.89                     | 0.56              |
| 1:H:493:THR:HG23 | 3:H:4019:HOH:O   | 2.06                     | 0.56              |
| 1:I:645:ARG:NH2  | 1:I:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:K:493:THR:HG23 | 3:K:4019:HOH:O   | 2.06                     | 0.56              |
| 1:M:434:PRO:HB3  | 1:P:434:PRO:HB3  | 1.87                     | 0.56              |
| 1:N:316:HIS:HD2  | 1:N:317:THR:O    | 1.89                     | 0.56              |
| 1:P:493:THR:HG23 | 3:P:3131:HOH:O   | 2.06                     | 0.56              |
| 1:A:316:HIS:HD2  | 1:A:317:THR:O    | 1.89                     | 0.56              |
| 1:E:377:LEU:N    | 1:E:377:LEU:HD23 | 2.18                     | 0.56              |
| 1:E:645:ARG:NH2  | 1:E:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:F:493:THR:HG23 | 3:F:3125:HOH:O   | 2.06                     | 0.56              |
| 1:G:786:ARG:HH11 | 1:G:990:HIS:HE1  | 1.50                     | 0.56              |
| 1:M:316:HIS:HD2  | 1:M:317:THR:O    | 1.89                     | 0.56              |
| 1:D:949:HIS:HD2  | 1:D:1020:TRP:HE1 | 1.53                     | 0.56              |
| 1:E:272:ALA:HB1  | 1:E:273:PRO:HD2  | 1.86                     | 0.56              |
| 1:I:63:PHE:CB    | 1:I:64:PRO:HD2   | 2.34                     | 0.56              |
| 1:K:746:ASP:HA   | 1:K:760:ARG:HG3  | 1.85                     | 0.56              |
| 1:O:597:ASN:HD22 | 1:O:599:ARG:H    | 1.52                     | 0.56              |
| 1:O:786:ARG:HH11 | 1:O:990:HIS:HE1  | 1.51                     | 0.56              |
| 1:P:645:ARG:NH2  | 1:P:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:P:668:VAL:HG13 | 1:P:669:PRO:HD2  | 1.87                     | 0.56              |
| 1:D:645:ARG:NH2  | 1:D:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:G:597:ASN:HD22 | 1:G:599:ARG:H    | 1.52                     | 0.56              |
| 1:I:493:THR:HG23 | 3:I:4019:HOH:O   | 2.06                     | 0.56              |
| 1:I:753:ASN:OD1  | 1:I:753:ASN:N    | 2.30                     | 0.56              |
| 1:C:595:THR:HG23 | 1:C:596:PRO:CA   | 2.35                     | 0.56              |
| 1:F:63:PHE:CB    | 1:F:64:PRO:HD2   | 2.34                     | 0.56              |
| 1:F:597:ASN:HD22 | 1:F:599:ARG:H    | 1.52                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:377:LEU:N    | 1:H:377:LEU:HD23 | 2.19                     | 0.56              |
| 1:I:894:ARG:HD3  | 1:I:919:ASP:OD2  | 2.06                     | 0.56              |
| 1:M:493:THR:HG23 | 3:M:4019:HOH:O   | 2.06                     | 0.56              |
| 1:M:856:TYR:HD2  | 1:M:864:MET:HE2  | 1.69                     | 0.56              |
| 1:P:377:LEU:N    | 1:P:377:LEU:HD23 | 2.18                     | 0.56              |
| 1:A:493:THR:HG23 | 3:A:4019:HOH:O   | 2.06                     | 0.56              |
| 1:A:894:ARG:HD3  | 1:A:919:ASP:OD2  | 2.06                     | 0.56              |
| 1:F:645:ARG:NH2  | 1:F:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:J:645:ARG:NH2  | 1:J:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:L:770:ILE:HD11 | 1:L:1022:GLN:HG2 | 1.88                     | 0.56              |
| 1:N:63:PHE:CB    | 1:N:64:PRO:HD2   | 2.34                     | 0.56              |
| 1:N:597:ASN:HD22 | 1:N:599:ARG:H    | 1.52                     | 0.56              |
| 1:N:645:ARG:NH2  | 1:N:650:GLU:OE1  | 2.39                     | 0.56              |
| 1:P:316:HIS:HD2  | 1:P:317:THR:O    | 1.89                     | 0.56              |
| 1:P:333:ARG:NH2  | 3:P:3313:HOH:O   | 2.31                     | 0.56              |
| 1:F:333:ARG:NH2  | 3:F:3307:HOH:O   | 2.31                     | 0.55              |
| 1:H:316:HIS:HD2  | 1:H:317:THR:O    | 1.89                     | 0.55              |
| 1:J:166:ARG:HG3  | 1:J:392:TYR:CB   | 2.34                     | 0.55              |
| 1:J:493:THR:HG23 | 3:J:3126:HOH:O   | 2.06                     | 0.55              |
| 1:L:894:ARG:HD3  | 1:L:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:O:645:ARG:NH2  | 1:O:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:C:316:HIS:HD2  | 1:C:317:THR:O    | 1.89                     | 0.55              |
| 1:D:333:ARG:NH2  | 3:D:3314:HOH:O   | 2.31                     | 0.55              |
| 1:D:493:THR:HG23 | 3:D:3132:HOH:O   | 2.06                     | 0.55              |
| 1:G:770:ILE:HD11 | 1:G:1022:GLN:HG2 | 1.88                     | 0.55              |
| 1:J:316:HIS:HD2  | 1:J:317:THR:O    | 1.89                     | 0.55              |
| 1:J:668:VAL:HG13 | 1:J:669:PRO:HD2  | 1.87                     | 0.55              |
| 1:K:645:ARG:NH2  | 1:K:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:L:645:ARG:NH2  | 1:L:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:M:645:ARG:NH2  | 1:M:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:N:493:THR:HG23 | 3:N:3126:HOH:O   | 2.06                     | 0.55              |
| 1:O:316:HIS:HD2  | 1:O:317:THR:O    | 1.89                     | 0.55              |
| 1:A:645:ARG:NH2  | 1:A:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:B:645:ARG:NH2  | 1:B:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:H:249:GLU:OE1  | 1:H:251:ARG:NH1  | 2.35                     | 0.55              |
| 1:H:645:ARG:NH2  | 1:H:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:H:894:ARG:HD3  | 1:H:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:K:668:VAL:HG13 | 1:K:669:PRO:HD2  | 1.87                     | 0.55              |
| 1:M:668:VAL:HG13 | 1:M:669:PRO:HD2  | 1.87                     | 0.55              |
| 1:O:493:THR:HG23 | 3:O:3123:HOH:O   | 2.06                     | 0.55              |
| 1:O:770:ILE:HD11 | 1:O:1022:GLN:HG2 | 1.88                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:493:THR:HG23 | 3:C:4019:HOH:O   | 2.06                     | 0.55              |
| 1:C:894:ARG:HD3  | 1:C:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:D:360:HIS:ND1  | 1:D:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:D:894:ARG:HD3  | 1:D:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:F:949:HIS:HD2  | 1:F:1020:TRP:HE1 | 1.53                     | 0.55              |
| 1:G:645:ARG:NH2  | 1:G:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:H:360:HIS:ND1  | 1:H:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:J:824:GLN:O    | 1:J:838:THR:HA   | 2.07                     | 0.55              |
| 1:K:824:GLN:O    | 1:K:838:THR:HA   | 2.07                     | 0.55              |
| 1:L:316:HIS:HD2  | 1:L:317:THR:O    | 1.89                     | 0.55              |
| 1:L:493:THR:HG23 | 3:L:3129:HOH:O   | 2.06                     | 0.55              |
| 1:O:894:ARG:HD3  | 1:O:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:P:249:GLU:OE1  | 1:P:251:ARG:NH1  | 2.34                     | 0.55              |
| 1:P:824:GLN:O    | 1:P:838:THR:HA   | 2.07                     | 0.55              |
| 1:A:422:PRO:HG2  | 1:D:279:ILE:CD1  | 2.37                     | 0.55              |
| 1:C:433:LEU:HB3  | 1:C:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:E:360:HIS:ND1  | 1:E:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:G:856:TYR:CD2  | 1:G:864:MET:HE2  | 2.41                     | 0.55              |
| 1:H:824:GLN:O    | 1:H:838:THR:HA   | 2.07                     | 0.55              |
| 1:I:824:GLN:O    | 1:I:838:THR:HA   | 2.07                     | 0.55              |
| 1:J:360:HIS:ND1  | 1:J:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:J:894:ARG:HD3  | 1:J:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:N:949:HIS:HD2  | 1:N:1020:TRP:HE1 | 1.53                     | 0.55              |
| 1:O:824:GLN:O    | 1:O:838:THR:HA   | 2.07                     | 0.55              |
| 1:P:360:HIS:ND1  | 1:P:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:A:360:HIS:ND1  | 1:A:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:B:894:ARG:HD3  | 1:B:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:G:949:HIS:HD2  | 1:G:1020:TRP:HE1 | 1.53                     | 0.55              |
| 1:K:43:ARG:NH1   | 1:K:44:THR:HG23  | 2.22                     | 0.55              |
| 1:K:894:ARG:HD3  | 1:K:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:O:651:LEU:HD12 | 1:O:668:VAL:O    | 2.07                     | 0.55              |
| 1:A:770:ILE:HD11 | 1:A:1022:GLN:HG2 | 1.88                     | 0.55              |
| 1:B:824:GLN:O    | 1:B:838:THR:HA   | 2.07                     | 0.55              |
| 1:C:645:ARG:NH2  | 1:C:650:GLU:OE1  | 2.39                     | 0.55              |
| 1:D:651:LEU:HD12 | 1:D:668:VAL:O    | 2.07                     | 0.55              |
| 1:E:668:VAL:HG13 | 1:E:669:PRO:HD2  | 1.87                     | 0.55              |
| 1:F:651:LEU:HD12 | 1:F:668:VAL:O    | 2.07                     | 0.55              |
| 1:G:651:LEU:HD12 | 1:G:668:VAL:O    | 2.07                     | 0.55              |
| 1:J:770:ILE:HD11 | 1:J:1022:GLN:HG2 | 1.88                     | 0.55              |
| 1:N:43:ARG:NH1   | 1:N:44:THR:HG23  | 2.22                     | 0.55              |
| 1:O:360:HIS:ND1  | 1:O:361:PRO:HD2  | 2.22                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:422:PRO:HG2  | 1:D:279:ILE:HD11 | 1.89                     | 0.55              |
| 1:B:493:THR:HG23 | 3:B:3124:HOH:O   | 2.06                     | 0.55              |
| 1:C:43:ARG:NH1   | 1:C:44:THR:HG23  | 2.22                     | 0.55              |
| 1:F:43:ARG:NH1   | 1:F:44:THR:HG23  | 2.22                     | 0.55              |
| 1:F:894:ARG:HD3  | 1:F:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:G:824:GLN:O    | 1:G:838:THR:HA   | 2.07                     | 0.55              |
| 1:I:597:ASN:HD22 | 1:I:599:ARG:H    | 1.52                     | 0.55              |
| 1:J:43:ARG:NH1   | 1:J:44:THR:HG23  | 2.22                     | 0.55              |
| 1:L:856:TYR:HD2  | 1:L:864:MET:HE2  | 1.71                     | 0.55              |
| 1:M:30:HIS:ND1   | 1:M:31:PRO:O     | 2.30                     | 0.55              |
| 1:M:651:LEU:HD12 | 1:M:668:VAL:O    | 2.07                     | 0.55              |
| 1:N:894:ARG:HD3  | 1:N:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:C:824:GLN:O    | 1:C:838:THR:HA   | 2.07                     | 0.55              |
| 1:D:433:LEU:HB3  | 1:D:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:D:770:ILE:HD11 | 1:D:1022:GLN:HG2 | 1.88                     | 0.55              |
| 1:E:43:ARG:NH1   | 1:E:44:THR:HG23  | 2.22                     | 0.55              |
| 1:E:493:THR:HG23 | 3:E:4019:HOH:O   | 2.06                     | 0.55              |
| 1:E:651:LEU:HD12 | 1:E:668:VAL:O    | 2.07                     | 0.55              |
| 1:F:316:HIS:HD2  | 1:F:317:THR:O    | 1.89                     | 0.55              |
| 1:F:433:LEU:HB3  | 1:F:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:G:433:LEU:HB3  | 1:G:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:I:316:HIS:HD2  | 1:I:317:THR:O    | 1.89                     | 0.55              |
| 1:I:360:HIS:ND1  | 1:I:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:I:433:LEU:HB3  | 1:I:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:L:740:LEU:HD12 | 1:L:741:THR:H    | 1.72                     | 0.55              |
| 1:N:433:LEU:HB3  | 1:N:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:P:43:ARG:NH1   | 1:P:44:THR:HG23  | 2.22                     | 0.55              |
| 1:P:949:HIS:HD2  | 1:P:1020:TRP:HE1 | 1.53                     | 0.55              |
| 1:B:770:ILE:HD11 | 1:B:1022:GLN:HG2 | 1.88                     | 0.55              |
| 1:G:894:ARG:HD3  | 1:G:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:L:651:LEU:HD12 | 1:L:668:VAL:O    | 2.07                     | 0.55              |
| 1:M:824:GLN:O    | 1:M:838:THR:HA   | 2.07                     | 0.55              |
| 1:M:894:ARG:HD3  | 1:M:919:ASP:OD2  | 2.06                     | 0.55              |
| 1:N:279:ILE:HD11 | 1:O:422:PRO:HG2  | 1.89                     | 0.55              |
| 1:N:360:HIS:ND1  | 1:N:361:PRO:HD2  | 2.22                     | 0.55              |
| 1:O:433:LEU:HB3  | 1:O:434:PRO:HD3  | 1.89                     | 0.55              |
| 1:A:856:TYR:CD2  | 1:A:864:MET:HE2  | 2.42                     | 0.54              |
| 1:C:949:HIS:HD2  | 1:C:1020:TRP:HE1 | 1.53                     | 0.54              |
| 1:E:894:ARG:HD3  | 1:E:919:ASP:OD2  | 2.06                     | 0.54              |
| 1:H:43:ARG:NH1   | 1:H:44:THR:HG23  | 2.22                     | 0.54              |
| 1:H:651:LEU:HD12 | 1:H:668:VAL:O    | 2.07                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:740:LEU:HD12 | 1:J:741:THR:H    | 1.72                     | 0.54              |
| 1:K:360:HIS:ND1  | 1:K:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:K:433:LEU:HB3  | 1:K:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:M:43:ARG:NH1   | 1:M:44:THR:HG23  | 2.22                     | 0.54              |
| 1:P:651:LEU:HD12 | 1:P:668:VAL:O    | 2.07                     | 0.54              |
| 1:A:651:LEU:HD12 | 1:A:668:VAL:O    | 2.07                     | 0.54              |
| 1:B:43:ARG:NH1   | 1:B:44:THR:HG23  | 2.22                     | 0.54              |
| 1:D:43:ARG:NH1   | 1:D:44:THR:HG23  | 2.22                     | 0.54              |
| 1:I:43:ARG:NH1   | 1:I:44:THR:HG23  | 2.22                     | 0.54              |
| 1:I:249:GLU:OE1  | 1:I:251:ARG:NH1  | 2.34                     | 0.54              |
| 1:I:254:LEU:O    | 1:I:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:I:651:LEU:HD12 | 1:I:668:VAL:O    | 2.07                     | 0.54              |
| 1:J:433:LEU:HB3  | 1:J:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:K:740:LEU:HD12 | 1:K:741:THR:H    | 1.73                     | 0.54              |
| 1:L:254:LEU:O    | 1:L:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:L:433:LEU:HB3  | 1:L:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:N:651:LEU:HD12 | 1:N:668:VAL:O    | 2.07                     | 0.54              |
| 1:N:856:TYR:HD2  | 1:N:864:MET:HE2  | 1.72                     | 0.54              |
| 1:O:125:LEU:HG   | 1:O:126:THR:N    | 2.23                     | 0.54              |
| 1:P:125:LEU:HG   | 1:P:126:THR:N    | 2.23                     | 0.54              |
| 1:P:254:LEU:O    | 1:P:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:B:651:LEU:HD12 | 1:B:668:VAL:O    | 2.07                     | 0.54              |
| 1:B:740:LEU:HD12 | 1:B:741:THR:H    | 1.72                     | 0.54              |
| 1:F:125:LEU:HG   | 1:F:126:THR:N    | 2.23                     | 0.54              |
| 1:F:167:LEU:HB3  | 1:F:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:F:824:GLN:O    | 1:F:838:THR:HA   | 2.07                     | 0.54              |
| 1:G:254:LEU:O    | 1:G:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:G:360:HIS:ND1  | 1:G:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:G:740:LEU:HD12 | 1:G:741:THR:H    | 1.73                     | 0.54              |
| 1:I:420:MET:O    | 1:L:282:ARG:HD3  | 2.08                     | 0.54              |
| 1:J:333:ARG:NH2  | 3:J:3308:HOH:O   | 2.31                     | 0.54              |
| 1:L:167:LEU:HB3  | 1:L:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:N:167:LEU:HB3  | 1:N:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:P:427:THR:HA   | 1:P:436:MET:HE2  | 1.89                     | 0.54              |
| 1:A:254:LEU:O    | 1:A:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:D:254:LEU:O    | 1:D:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:G:30:HIS:ND1   | 1:G:31:PRO:O     | 2.30                     | 0.54              |
| 1:G:493:THR:HG23 | 3:G:3123:HOH:O   | 2.06                     | 0.54              |
| 1:H:770:ILE:HD11 | 1:H:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:I:167:LEU:HB3  | 1:I:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:I:740:LEU:HD12 | 1:I:741:THR:H    | 1.73                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:824:GLN:O    | 1:L:838:THR:HA   | 2.07                     | 0.54              |
| 1:P:167:LEU:HB3  | 1:P:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:A:73:TRP:CE2   | 1:A:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:A:595:THR:HG23 | 1:A:596:PRO:CA   | 2.35                     | 0.54              |
| 1:A:824:GLN:O    | 1:A:838:THR:HA   | 2.07                     | 0.54              |
| 1:C:651:LEU:HD12 | 1:C:668:VAL:O    | 2.07                     | 0.54              |
| 1:D:73:TRP:CE2   | 1:D:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:F:360:HIS:ND1  | 1:F:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:G:73:TRP:CE2   | 1:G:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:H:63:PHE:CB    | 1:H:64:PRO:HD2   | 2.34                     | 0.54              |
| 1:H:125:LEU:HG   | 1:H:126:THR:N    | 2.23                     | 0.54              |
| 1:H:254:LEU:O    | 1:H:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:I:427:THR:HA   | 1:I:436:MET:HE2  | 1.89                     | 0.54              |
| 1:M:167:LEU:HB3  | 1:M:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:O:73:TRP:CE2   | 1:O:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:P:73:TRP:CE2   | 1:P:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:P:894:ARG:HD3  | 1:P:919:ASP:OD2  | 2.06                     | 0.54              |
| 1:A:433:LEU:HB3  | 1:A:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:F:254:LEU:O    | 1:F:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:F:770:ILE:HD11 | 1:F:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:G:43:ARG:NH1   | 1:G:44:THR:HG23  | 2.22                     | 0.54              |
| 1:H:167:LEU:HB3  | 1:H:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:J:50:GLN:O     | 1:J:215:LEU:HA   | 2.08                     | 0.54              |
| 1:J:127:PHE:HE2  | 1:J:184:LEU:HG   | 1.73                     | 0.54              |
| 1:J:254:LEU:O    | 1:J:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:K:254:LEU:O    | 1:K:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:K:651:LEU:HD12 | 1:K:668:VAL:O    | 2.07                     | 0.54              |
| 1:L:360:HIS:ND1  | 1:L:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:N:254:LEU:O    | 1:N:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:N:770:ILE:HD11 | 1:N:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:P:63:PHE:CB    | 1:P:64:PRO:HD2   | 2.34                     | 0.54              |
| 1:B:167:LEU:HB3  | 1:B:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:C:50:GLN:O     | 1:C:215:LEU:HA   | 2.08                     | 0.54              |
| 1:D:824:GLN:O    | 1:D:838:THR:HA   | 2.07                     | 0.54              |
| 1:F:50:GLN:O     | 1:F:215:LEU:HA   | 2.08                     | 0.54              |
| 1:H:73:TRP:CE2   | 1:H:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:L:50:GLN:O     | 1:L:215:LEU:HA   | 2.08                     | 0.54              |
| 1:L:333:ARG:NH2  | 3:L:3311:HOH:O   | 2.31                     | 0.54              |
| 1:P:433:LEU:HB3  | 1:P:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:B:254:LEU:O    | 1:B:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:C:167:LEU:HB3  | 1:C:168:PRO:HD2  | 1.90                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:254:LEU:O    | 1:C:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:C:770:ILE:HD11 | 1:C:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:D:595:THR:HG23 | 1:D:596:PRO:CA   | 2.35                     | 0.54              |
| 1:H:436:MET:HE3  | 1:H:467:ASN:HD22 | 1.72                     | 0.54              |
| 1:I:770:ILE:HD11 | 1:I:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:J:125:LEU:HG   | 1:J:126:THR:N    | 2.23                     | 0.54              |
| 1:J:651:LEU:HD12 | 1:J:668:VAL:O    | 2.07                     | 0.54              |
| 1:K:316:HIS:HD2  | 1:K:317:THR:O    | 1.89                     | 0.54              |
| 1:K:427:THR:HA   | 1:K:436:MET:HE2  | 1.89                     | 0.54              |
| 1:M:254:LEU:O    | 1:M:255:ARG:HG2  | 2.08                     | 0.54              |
| 1:M:433:LEU:HB3  | 1:M:434:PRO:HD3  | 1.89                     | 0.54              |
| 1:A:127:PHE:HE2  | 1:A:184:LEU:HG   | 1.73                     | 0.54              |
| 1:C:37:ARG:NH2   | 1:C:218:PRO:HD3  | 2.23                     | 0.54              |
| 1:C:73:TRP:CE2   | 1:C:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:E:167:LEU:HB3  | 1:E:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:H:127:PHE:HE2  | 1:H:184:LEU:HG   | 1.73                     | 0.54              |
| 1:L:249:GLU:OE1  | 1:L:251:ARG:NH1  | 2.34                     | 0.54              |
| 1:M:360:HIS:ND1  | 1:M:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:O:43:ARG:NH1   | 1:O:44:THR:HG23  | 2.22                     | 0.54              |
| 1:O:740:LEU:HD12 | 1:O:741:THR:H    | 1.73                     | 0.54              |
| 1:A:167:LEU:HB3  | 1:A:168:PRO:HD2  | 1.90                     | 0.54              |
| 1:B:73:TRP:CE2   | 1:B:122:CYS:HB3  | 2.43                     | 0.54              |
| 1:B:322:LEU:HD23 | 1:B:323:ILE:N    | 2.23                     | 0.54              |
| 1:B:360:HIS:ND1  | 1:B:361:PRO:HD2  | 2.22                     | 0.54              |
| 1:C:127:PHE:HE2  | 1:C:184:LEU:HG   | 1.73                     | 0.54              |
| 1:E:125:LEU:HG   | 1:E:126:THR:N    | 2.23                     | 0.54              |
| 1:H:50:GLN:O     | 1:H:215:LEU:HA   | 2.08                     | 0.54              |
| 1:J:287:ASP:OD2  | 1:K:425:ARG:NH2  | 2.41                     | 0.54              |
| 1:L:43:ARG:NH1   | 1:L:44:THR:HG23  | 2.22                     | 0.54              |
| 1:L:322:LEU:HD23 | 1:L:323:ILE:N    | 2.23                     | 0.54              |
| 1:N:127:PHE:HE2  | 1:N:184:LEU:HG   | 1.73                     | 0.54              |
| 1:N:824:GLN:O    | 1:N:838:THR:HA   | 2.07                     | 0.54              |
| 1:P:770:ILE:HD11 | 1:P:1022:GLN:HG2 | 1.88                     | 0.54              |
| 1:A:37:ARG:NH2   | 1:A:218:PRO:HD3  | 2.24                     | 0.53              |
| 1:B:433:LEU:HB3  | 1:B:434:PRO:HD3  | 1.89                     | 0.53              |
| 1:C:740:LEU:HD12 | 1:C:741:THR:H    | 1.73                     | 0.53              |
| 1:D:50:GLN:O     | 1:D:215:LEU:HA   | 2.08                     | 0.53              |
| 1:E:433:LEU:HB3  | 1:E:434:PRO:HD3  | 1.89                     | 0.53              |
| 1:F:37:ARG:NH2   | 1:F:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:F:322:LEU:HD23 | 1:F:323:ILE:N    | 2.23                     | 0.53              |
| 1:F:740:LEU:HD12 | 1:F:741:THR:H    | 1.72                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:856:TYR:HD2  | 1:F:864:MET:HE2  | 1.73                     | 0.53              |
| 1:H:322:LEU:HD23 | 1:H:323:ILE:N    | 2.23                     | 0.53              |
| 1:H:740:LEU:HD12 | 1:H:741:THR:H    | 1.72                     | 0.53              |
| 1:K:127:PHE:HE2  | 1:K:184:LEU:HG   | 1.73                     | 0.53              |
| 1:M:50:GLN:O     | 1:M:215:LEU:HA   | 2.08                     | 0.53              |
| 1:N:73:TRP:CE2   | 1:N:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:N:125:LEU:HG   | 1:N:126:THR:N    | 2.23                     | 0.53              |
| 1:O:37:ARG:NH2   | 1:O:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:O:50:GLN:O     | 1:O:215:LEU:HA   | 2.08                     | 0.53              |
| 1:O:436:MET:HE3  | 1:O:467:ASN:HD22 | 1.69                     | 0.53              |
| 1:P:50:GLN:O     | 1:P:215:LEU:HA   | 2.08                     | 0.53              |
| 1:P:127:PHE:HE2  | 1:P:184:LEU:HG   | 1.73                     | 0.53              |
| 1:B:127:PHE:HE2  | 1:B:184:LEU:HG   | 1.73                     | 0.53              |
| 1:B:427:THR:HA   | 1:B:436:MET:HE2  | 1.86                     | 0.53              |
| 1:C:125:LEU:HG   | 1:C:126:THR:N    | 2.23                     | 0.53              |
| 1:C:322:LEU:HD23 | 1:C:323:ILE:N    | 2.23                     | 0.53              |
| 1:E:254:LEU:O    | 1:E:255:ARG:HG2  | 2.08                     | 0.53              |
| 1:F:73:TRP:CE2   | 1:F:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:G:50:GLN:O     | 1:G:215:LEU:HA   | 2.08                     | 0.53              |
| 1:I:282:ARG:HD3  | 1:L:420:MET:O    | 2.08                     | 0.53              |
| 1:K:770:ILE:HD11 | 1:K:1022:GLN:HG2 | 1.89                     | 0.53              |
| 1:L:73:TRP:CE2   | 1:L:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:M:125:LEU:HG   | 1:M:126:THR:N    | 2.23                     | 0.53              |
| 1:N:37:ARG:NH2   | 1:N:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:N:740:LEU:HD12 | 1:N:741:THR:H    | 1.73                     | 0.53              |
| 1:O:254:LEU:O    | 1:O:255:ARG:HG2  | 2.08                     | 0.53              |
| 1:A:703:PRO:O    | 1:A:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:B:369:GLU:O    | 1:B:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:C:63:PHE:CB    | 1:C:64:PRO:HD2   | 2.34                     | 0.53              |
| 1:D:37:ARG:NH2   | 1:D:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:D:322:LEU:HD23 | 1:D:323:ILE:N    | 2.23                     | 0.53              |
| 1:E:770:ILE:HD11 | 1:E:1022:GLN:HG2 | 1.88                     | 0.53              |
| 1:F:422:PRO:HG2  | 1:G:279:ILE:HD11 | 1.90                     | 0.53              |
| 1:G:167:LEU:HB3  | 1:G:168:PRO:HD2  | 1.90                     | 0.53              |
| 1:G:322:LEU:HD23 | 1:G:323:ILE:N    | 2.23                     | 0.53              |
| 1:G:703:PRO:O    | 1:G:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:H:433:LEU:HB3  | 1:H:434:PRO:HD3  | 1.89                     | 0.53              |
| 1:I:127:PHE:HE2  | 1:I:184:LEU:HG   | 1.73                     | 0.53              |
| 1:J:167:LEU:HB3  | 1:J:168:PRO:HD2  | 1.90                     | 0.53              |
| 1:J:369:GLU:O    | 1:J:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:K:125:LEU:HG   | 1:K:126:THR:N    | 2.23                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:127:PHE:HE2  | 1:L:184:LEU:HG   | 1.73                     | 0.53              |
| 1:M:770:ILE:HD11 | 1:M:1022:GLN:HG2 | 1.88                     | 0.53              |
| 1:N:703:PRO:O    | 1:N:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:P:703:PRO:O    | 1:P:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:A:50:GLN:O     | 1:A:215:LEU:HA   | 2.08                     | 0.53              |
| 1:A:673:ALA:HB1  | 1:A:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:B:703:PRO:O    | 1:B:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:D:703:PRO:O    | 1:D:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:G:37:ARG:NH2   | 1:G:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:G:125:LEU:HG   | 1:G:126:THR:N    | 2.23                     | 0.53              |
| 1:H:703:PRO:O    | 1:H:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:L:369:GLU:O    | 1:L:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:P:740:LEU:HD12 | 1:P:741:THR:H    | 1.73                     | 0.53              |
| 1:A:436:MET:HE3  | 1:A:467:ASN:HD22 | 1.72                     | 0.53              |
| 1:E:127:PHE:HE2  | 1:E:184:LEU:HG   | 1.73                     | 0.53              |
| 1:F:127:PHE:HE2  | 1:F:184:LEU:HG   | 1.73                     | 0.53              |
| 1:G:369:GLU:O    | 1:G:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:I:369:GLU:O    | 1:I:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:I:856:TYR:HD2  | 1:I:864:MET:HE2  | 1.73                     | 0.53              |
| 1:O:167:LEU:HB3  | 1:O:168:PRO:HD2  | 1.90                     | 0.53              |
| 1:O:673:ALA:HB1  | 1:O:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:P:37:ARG:NH2   | 1:P:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:A:43:ARG:NH1   | 1:A:44:THR:HG23  | 2.22                     | 0.53              |
| 1:A:125:LEU:HG   | 1:A:126:THR:N    | 2.23                     | 0.53              |
| 1:B:473:ARG:HD2  | 1:C:469:ASP:HB3  | 1.90                     | 0.53              |
| 1:B:745:MET:HA   | 1:B:745:MET:CE   | 2.39                     | 0.53              |
| 1:C:360:HIS:ND1  | 1:C:361:PRO:HD2  | 2.22                     | 0.53              |
| 1:C:673:ALA:HB1  | 1:C:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:E:69:VAL:HG13  | 1:E:70:PRO:HD2   | 1.91                     | 0.53              |
| 1:E:703:PRO:O    | 1:E:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:G:673:ALA:HB1  | 1:G:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:H:37:ARG:NH2   | 1:H:218:PRO:HD3  | 2.24                     | 0.53              |
| 1:I:703:PRO:O    | 1:I:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:J:322:LEU:HD23 | 1:J:323:ILE:N    | 2.23                     | 0.53              |
| 1:J:745:MET:HA   | 1:J:745:MET:CE   | 2.39                     | 0.53              |
| 1:K:50:GLN:O     | 1:K:215:LEU:HA   | 2.08                     | 0.53              |
| 1:M:740:LEU:HD12 | 1:M:741:THR:H    | 1.72                     | 0.53              |
| 1:N:422:PRO:HG2  | 1:O:279:ILE:HD11 | 1.89                     | 0.53              |
| 1:O:322:LEU:HD23 | 1:O:323:ILE:N    | 2.23                     | 0.53              |
| 1:O:369:GLU:O    | 1:O:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:P:322:LEU:HD23 | 1:P:323:ILE:N    | 2.24                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:282:ARG:NH1  | 1:D:419:GLY:O    | 2.41                     | 0.53              |
| 1:E:740:LEU:HD12 | 1:E:741:THR:H    | 1.73                     | 0.53              |
| 1:E:824:GLN:O    | 1:E:838:THR:HA   | 2.07                     | 0.53              |
| 1:H:673:ALA:HB1  | 1:H:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:K:322:LEU:HD23 | 1:K:323:ILE:N    | 2.23                     | 0.53              |
| 1:M:37:ARG:NH2   | 1:M:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:M:69:VAL:HG13  | 1:M:70:PRO:HD2   | 1.91                     | 0.53              |
| 1:M:127:PHE:HE2  | 1:M:184:LEU:HG   | 1.73                     | 0.53              |
| 1:N:673:ALA:HB1  | 1:N:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:A:63:PHE:CB    | 1:A:64:PRO:HD2   | 2.34                     | 0.53              |
| 1:A:740:LEU:HD12 | 1:A:741:THR:H    | 1.73                     | 0.53              |
| 1:D:167:LEU:HB3  | 1:D:168:PRO:HD2  | 1.90                     | 0.53              |
| 1:D:369:GLU:O    | 1:D:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:E:37:ARG:NH2   | 1:E:218:PRO:HD3  | 2.24                     | 0.53              |
| 1:E:73:TRP:CE2   | 1:E:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:H:745:MET:HA   | 1:H:745:MET:CE   | 2.39                     | 0.53              |
| 1:I:125:LEU:HG   | 1:I:126:THR:N    | 2.23                     | 0.53              |
| 1:J:703:PRO:O    | 1:J:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:L:37:ARG:NH2   | 1:L:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:M:673:ALA:HB1  | 1:M:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:M:703:PRO:O    | 1:M:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:N:322:LEU:HD23 | 1:N:323:ILE:N    | 2.23                     | 0.53              |
| 1:O:703:PRO:O    | 1:O:711:ALA:HB1  | 2.09                     | 0.53              |
| 1:P:745:MET:HA   | 1:P:745:MET:CE   | 2.39                     | 0.53              |
| 1:A:322:LEU:HD23 | 1:A:323:ILE:N    | 2.23                     | 0.53              |
| 1:A:745:MET:HA   | 1:A:745:MET:CE   | 2.39                     | 0.53              |
| 1:B:651:LEU:CD1  | 1:B:669:PRO:HA   | 2.39                     | 0.53              |
| 1:G:745:MET:HA   | 1:G:745:MET:CE   | 2.39                     | 0.53              |
| 1:H:369:GLU:O    | 1:H:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:I:50:GLN:O     | 1:I:215:LEU:HA   | 2.08                     | 0.53              |
| 1:I:73:TRP:CE2   | 1:I:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:I:651:LEU:CD1  | 1:I:669:PRO:HA   | 2.39                     | 0.53              |
| 1:J:949:HIS:HD2  | 1:J:1020:TRP:HE1 | 1.53                     | 0.53              |
| 1:M:73:TRP:CE2   | 1:M:122:CYS:HB3  | 2.43                     | 0.53              |
| 1:M:369:GLU:O    | 1:M:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:O:745:MET:HA   | 1:O:745:MET:CE   | 2.39                     | 0.53              |
| 1:A:369:GLU:O    | 1:A:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:D:69:VAL:HG13  | 1:D:70:PRO:HD2   | 1.91                     | 0.53              |
| 1:D:662:PRO:C    | 1:D:663:LEU:HD23 | 2.30                     | 0.53              |
| 1:E:50:GLN:O     | 1:E:215:LEU:HA   | 2.08                     | 0.53              |
| 1:E:673:ALA:HB1  | 1:E:674:PRO:HD2  | 1.91                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:673:ALA:HB1  | 1:I:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:J:37:ARG:NH2   | 1:J:218:PRO:HD3  | 2.23                     | 0.53              |
| 1:J:69:VAL:HG13  | 1:J:70:PRO:HD2   | 1.91                     | 0.53              |
| 1:J:662:PRO:C    | 1:J:663:LEU:HD23 | 2.30                     | 0.53              |
| 1:J:673:ALA:HB1  | 1:J:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:K:37:ARG:NH2   | 1:K:218:PRO:HD3  | 2.24                     | 0.53              |
| 1:L:651:LEU:CD1  | 1:L:669:PRO:HA   | 2.39                     | 0.53              |
| 1:M:7:LEU:HD13   | 1:M:74:LEU:CD1   | 2.39                     | 0.53              |
| 1:N:279:ILE:CD1  | 1:O:422:PRO:HG2  | 2.39                     | 0.53              |
| 1:O:7:LEU:HD13   | 1:O:74:LEU:CD1   | 2.39                     | 0.53              |
| 1:O:949:HIS:HD2  | 1:O:1020:TRP:HE1 | 1.53                     | 0.53              |
| 1:P:369:GLU:O    | 1:P:373:VAL:HG23 | 2.09                     | 0.53              |
| 1:P:651:LEU:CD1  | 1:P:669:PRO:HA   | 2.39                     | 0.53              |
| 1:P:673:ALA:HB1  | 1:P:674:PRO:HD2  | 1.91                     | 0.53              |
| 1:B:50:GLN:O     | 1:B:215:LEU:HA   | 2.08                     | 0.52              |
| 1:B:69:VAL:HG13  | 1:B:70:PRO:HD2   | 1.91                     | 0.52              |
| 1:C:682:LEU:CD2  | 1:C:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:E:322:LEU:HD23 | 1:E:323:ILE:N    | 2.23                     | 0.52              |
| 1:E:422:PRO:HG2  | 1:H:279:ILE:HD11 | 1.91                     | 0.52              |
| 1:F:210:ARG:HD3  | 3:F:3141:HOH:O   | 2.10                     | 0.52              |
| 1:F:673:ALA:HB1  | 1:F:674:PRO:HD2  | 1.91                     | 0.52              |
| 1:G:127:PHE:HE2  | 1:G:184:LEU:HG   | 1.73                     | 0.52              |
| 1:J:651:LEU:CD1  | 1:J:669:PRO:HA   | 2.39                     | 0.52              |
| 1:K:651:LEU:CD1  | 1:K:669:PRO:HA   | 2.39                     | 0.52              |
| 1:L:662:PRO:C    | 1:L:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:L:673:ALA:HB1  | 1:L:674:PRO:HD2  | 1.91                     | 0.52              |
| 1:L:703:PRO:O    | 1:L:711:ALA:HB1  | 2.09                     | 0.52              |
| 1:N:369:GLU:O    | 1:N:373:VAL:HG23 | 2.09                     | 0.52              |
| 1:O:856:TYR:CD2  | 1:O:864:MET:HE2  | 2.43                     | 0.52              |
| 1:P:278:ILE:H    | 1:P:278:ILE:CD1  | 2.22                     | 0.52              |
| 1:C:369:GLU:O    | 1:C:373:VAL:HG23 | 2.09                     | 0.52              |
| 1:D:127:PHE:HE2  | 1:D:184:LEU:HG   | 1.73                     | 0.52              |
| 1:E:7:LEU:HD13   | 1:E:74:LEU:CD1   | 2.40                     | 0.52              |
| 1:E:420:MET:O    | 1:H:282:ARG:HD3  | 2.10                     | 0.52              |
| 1:E:662:PRO:C    | 1:E:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:F:436:MET:HE3  | 1:F:467:ASN:HD22 | 1.72                     | 0.52              |
| 1:F:662:PRO:C    | 1:F:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:F:703:PRO:O    | 1:F:711:ALA:HB1  | 2.09                     | 0.52              |
| 1:H:651:LEU:CD1  | 1:H:669:PRO:HA   | 2.39                     | 0.52              |
| 1:I:682:LEU:CD2  | 1:I:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:J:73:TRP:CE2   | 1:J:122:CYS:HB3  | 2.43                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:210:ARG:HD3  | 3:J:3142:HOH:O   | 2.09                     | 0.52              |
| 1:K:369:GLU:O    | 1:K:373:VAL:HG23 | 2.09                     | 0.52              |
| 1:M:322:LEU:HD23 | 1:M:323:ILE:N    | 2.23                     | 0.52              |
| 1:M:651:LEU:CD1  | 1:M:669:PRO:HA   | 2.39                     | 0.52              |
| 1:N:436:MET:HE3  | 1:N:467:ASN:HD22 | 1.72                     | 0.52              |
| 1:A:420:MET:O    | 1:D:282:ARG:HD3  | 2.09                     | 0.52              |
| 1:A:949:HIS:HD2  | 1:A:1020:TRP:HE1 | 1.53                     | 0.52              |
| 1:C:7:LEU:HD13   | 1:C:74:LEU:CD1   | 2.39                     | 0.52              |
| 1:C:651:LEU:CD1  | 1:C:669:PRO:HA   | 2.39                     | 0.52              |
| 1:D:740:LEU:HD12 | 1:D:741:THR:H    | 1.72                     | 0.52              |
| 1:H:251:ARG:HB3  | 1:H:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:K:69:VAL:HG13  | 1:K:70:PRO:HD2   | 1.91                     | 0.52              |
| 1:K:167:LEU:HB3  | 1:K:168:PRO:HD2  | 1.90                     | 0.52              |
| 1:L:125:LEU:HG   | 1:L:126:THR:N    | 2.23                     | 0.52              |
| 1:L:210:ARG:HD3  | 3:L:3145:HOH:O   | 2.09                     | 0.52              |
| 1:N:50:GLN:O     | 1:N:215:LEU:HA   | 2.08                     | 0.52              |
| 1:P:251:ARG:HB3  | 1:P:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:B:37:ARG:NH2   | 1:B:218:PRO:HD3  | 2.24                     | 0.52              |
| 1:B:673:ALA:HB1  | 1:B:674:PRO:HD2  | 1.91                     | 0.52              |
| 1:C:210:ARG:HD3  | 3:C:4035:HOH:O   | 2.10                     | 0.52              |
| 1:I:434:PRO:HB3  | 1:L:434:PRO:HB3  | 1.90                     | 0.52              |
| 1:K:73:TRP:CE2   | 1:K:122:CYS:HB3  | 2.43                     | 0.52              |
| 1:A:682:LEU:CD2  | 1:A:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:F:7:LEU:HD13   | 1:F:74:LEU:CD1   | 2.39                     | 0.52              |
| 1:F:251:ARG:HB3  | 1:F:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:F:369:GLU:O    | 1:F:373:VAL:HG23 | 2.09                     | 0.52              |
| 1:H:7:LEU:HD13   | 1:H:74:LEU:CD1   | 2.39                     | 0.52              |
| 1:I:830:LEU:HD11 | 1:J:830:LEU:HD11 | 1.91                     | 0.52              |
| 1:M:682:LEU:CD2  | 1:M:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:N:416:GLU:OE1  | 1:N:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:N:662:PRO:C    | 1:N:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:P:662:PRO:C    | 1:P:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:D:210:ARG:HD3  | 3:D:3148:HOH:O   | 2.09                     | 0.52              |
| 1:D:682:LEU:CD2  | 1:D:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:H:682:LEU:CD2  | 1:H:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:I:322:LEU:HD23 | 1:I:323:ILE:N    | 2.23                     | 0.52              |
| 1:J:682:LEU:CD2  | 1:J:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:K:7:LEU:HD13   | 1:K:74:LEU:CD1   | 2.40                     | 0.52              |
| 1:K:251:ARG:HB3  | 1:K:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:K:701:VAL:HG22 | 1:K:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:K:703:PRO:O    | 1:K:711:ALA:HB1  | 2.09                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:745:MET:HA   | 1:K:745:MET:CE   | 2.39                     | 0.52              |
| 1:L:251:ARG:HB3  | 1:L:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:O:127:PHE:HE2  | 1:O:184:LEU:HG   | 1.73                     | 0.52              |
| 1:B:701:VAL:HG22 | 1:B:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:C:416:GLU:OE1  | 1:C:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:C:701:VAL:HG22 | 1:C:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:C:703:PRO:O    | 1:C:711:ALA:HB1  | 2.09                     | 0.52              |
| 1:F:287:ASP:CG   | 1:G:425:ARG:HH22 | 2.12                     | 0.52              |
| 1:G:651:LEU:CD1  | 1:G:669:PRO:HA   | 2.39                     | 0.52              |
| 1:H:662:PRO:C    | 1:H:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:M:194:GLY:O    | 1:M:198:GLU:HG3  | 2.10                     | 0.52              |
| 1:M:416:GLU:OE1  | 1:M:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:N:745:MET:HA   | 1:N:745:MET:CE   | 2.39                     | 0.52              |
| 1:O:251:ARG:HB3  | 1:O:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:O:701:VAL:HG22 | 1:O:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:B:125:LEU:HG   | 1:B:126:THR:N    | 2.23                     | 0.52              |
| 1:B:194:GLY:O    | 1:B:198:GLU:HG3  | 2.10                     | 0.52              |
| 1:B:595:THR:HG23 | 1:B:596:PRO:CA   | 2.35                     | 0.52              |
| 1:C:662:PRO:C    | 1:C:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:D:125:LEU:HG   | 1:D:126:THR:N    | 2.23                     | 0.52              |
| 1:E:701:VAL:HG22 | 1:E:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:G:701:VAL:HG22 | 1:G:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:H:194:GLY:O    | 1:H:198:GLU:HG3  | 2.10                     | 0.52              |
| 1:H:210:ARG:HD3  | 3:H:4035:HOH:O   | 2.09                     | 0.52              |
| 1:I:7:LEU:HD13   | 1:I:74:LEU:CD1   | 2.39                     | 0.52              |
| 1:I:69:VAL:HG13  | 1:I:70:PRO:HD2   | 1.91                     | 0.52              |
| 1:I:662:PRO:C    | 1:I:663:LEU:HD23 | 2.30                     | 0.52              |
| 1:K:210:ARG:HD3  | 3:K:4035:HOH:O   | 2.09                     | 0.52              |
| 1:L:69:VAL:HG13  | 1:L:70:PRO:HD2   | 1.91                     | 0.52              |
| 1:N:651:LEU:CD1  | 1:N:669:PRO:HA   | 2.39                     | 0.52              |
| 1:P:416:GLU:OE1  | 1:P:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:A:7:LEU:HD13   | 1:A:74:LEU:CD1   | 2.39                     | 0.52              |
| 1:A:251:ARG:HB3  | 1:A:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:B:251:ARG:HB3  | 1:B:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:B:747:PHE:HE1  | 1:B:825:CYS:HG   | 1.58                     | 0.52              |
| 1:B:881:ARG:HD3  | 1:B:987:ASP:OD1  | 2.10                     | 0.52              |
| 1:E:416:GLU:OE1  | 1:E:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:H:753:ASN:OD1  | 1:H:753:ASN:N    | 2.30                     | 0.52              |
| 1:I:194:GLY:O    | 1:I:198:GLU:HG3  | 2.10                     | 0.52              |
| 1:N:251:ARG:HB3  | 1:N:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:P:210:ARG:HD3  | 3:P:3147:HOH:O   | 2.09                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:682:LEU:CD2  | 1:B:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:E:682:LEU:CD2  | 1:E:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:F:701:VAL:HG22 | 1:F:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:G:251:ARG:HB3  | 1:G:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:H:701:VAL:HG22 | 1:H:714:ILE:CD1  | 2.40                     | 0.52              |
| 1:J:416:GLU:OE1  | 1:J:418:HIS:HB2  | 2.10                     | 0.52              |
| 1:M:251:ARG:HB3  | 1:M:253:TYR:CE2  | 2.45                     | 0.52              |
| 1:M:881:ARG:HD3  | 1:M:987:ASP:OD1  | 2.10                     | 0.52              |
| 1:O:210:ARG:HD3  | 3:O:3139:HOH:O   | 2.10                     | 0.52              |
| 1:O:651:LEU:CD1  | 1:O:669:PRO:HA   | 2.39                     | 0.52              |
| 1:O:682:LEU:CD2  | 1:O:683:PRO:HD2  | 2.39                     | 0.52              |
| 1:A:69:VAL:HG13  | 1:A:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:A:416:GLU:OE1  | 1:A:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:D:673:ALA:HB1  | 1:D:674:PRO:HD2  | 1.91                     | 0.51              |
| 1:D:701:VAL:HG22 | 1:D:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:E:251:ARG:HB3  | 1:E:253:TYR:CE2  | 2.45                     | 0.51              |
| 1:E:651:LEU:CD1  | 1:E:669:PRO:HA   | 2.39                     | 0.51              |
| 1:E:745:MET:HA   | 1:E:745:MET:CE   | 2.39                     | 0.51              |
| 1:E:949:HIS:HD2  | 1:E:1020:TRP:HE1 | 1.53                     | 0.51              |
| 1:G:210:ARG:HD3  | 3:G:3139:HOH:O   | 2.10                     | 0.51              |
| 1:G:662:PRO:C    | 1:G:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:G:682:LEU:CD2  | 1:G:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:H:69:VAL:HG13  | 1:H:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:I:251:ARG:HB3  | 1:I:253:TYR:CE2  | 2.45                     | 0.51              |
| 1:J:595:THR:HG23 | 1:J:596:PRO:CA   | 2.35                     | 0.51              |
| 1:J:701:VAL:HG22 | 1:J:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:J:856:TYR:CD2  | 1:J:864:MET:HE2  | 2.45                     | 0.51              |
| 1:O:416:GLU:OE1  | 1:O:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:O:662:PRO:C    | 1:O:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:P:701:VAL:HG22 | 1:P:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:A:651:LEU:CD1  | 1:A:669:PRO:HA   | 2.39                     | 0.51              |
| 1:B:416:GLU:OE1  | 1:B:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:C:69:VAL:HG13  | 1:C:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:C:251:ARG:HB3  | 1:C:253:TYR:CE2  | 2.45                     | 0.51              |
| 1:F:194:GLY:O    | 1:F:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:F:416:GLU:OE1  | 1:F:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:F:682:LEU:CD2  | 1:F:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:I:37:ARG:NH2   | 1:I:218:PRO:HD3  | 2.24                     | 0.51              |
| 1:I:416:GLU:OE1  | 1:I:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:I:881:ARG:HD3  | 1:I:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:L:881:ARG:HD3  | 1:L:987:ASP:OD1  | 2.10                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:682:LEU:CD2  | 1:N:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:N:701:VAL:HG22 | 1:N:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:O:43:ARG:HH11  | 1:O:43:ARG:CG    | 2.24                     | 0.51              |
| 1:B:210:ARG:HD3  | 3:B:3140:HOH:O   | 2.09                     | 0.51              |
| 1:C:43:ARG:HH11  | 1:C:43:ARG:CG    | 2.24                     | 0.51              |
| 1:C:745:MET:HA   | 1:C:745:MET:CE   | 2.39                     | 0.51              |
| 1:D:7:LEU:HD13   | 1:D:74:LEU:CD1   | 2.39                     | 0.51              |
| 1:E:210:ARG:HD3  | 3:E:4035:HOH:O   | 2.10                     | 0.51              |
| 1:E:473:ARG:O    | 1:E:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:F:473:ARG:O    | 1:F:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:F:651:LEU:CD1  | 1:F:669:PRO:HA   | 2.39                     | 0.51              |
| 1:I:660:GLY:O    | 1:I:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:J:251:ARG:HB3  | 1:J:253:TYR:CE2  | 2.45                     | 0.51              |
| 1:J:427:THR:HA   | 1:J:436:MET:HE2  | 1.92                     | 0.51              |
| 1:K:673:ALA:HB1  | 1:K:674:PRO:HD2  | 1.91                     | 0.51              |
| 1:L:7:LEU:HD13   | 1:L:74:LEU:CD1   | 2.39                     | 0.51              |
| 1:L:610:ASP:OD2  | 1:L:612:THR:HG23 | 2.11                     | 0.51              |
| 1:L:701:VAL:HG22 | 1:L:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:M:660:GLY:O    | 1:M:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:N:210:ARG:HD3  | 3:N:3142:HOH:O   | 2.10                     | 0.51              |
| 1:O:69:VAL:HG13  | 1:O:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:A:278:ILE:H    | 1:A:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:A:610:ASP:OD2  | 1:A:612:THR:HG23 | 2.11                     | 0.51              |
| 1:B:662:PRO:C    | 1:B:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:C:881:ARG:HD3  | 1:C:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:G:69:VAL:HG13  | 1:G:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:G:416:GLU:OE1  | 1:G:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:H:473:ARG:O    | 1:H:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:H:881:ARG:HD3  | 1:H:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:I:278:ILE:H    | 1:I:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:I:473:ARG:O    | 1:I:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:J:881:ARG:HD3  | 1:J:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:K:682:LEU:CD2  | 1:K:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:L:682:LEU:CD2  | 1:L:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:M:278:ILE:H    | 1:M:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:M:473:ARG:O    | 1:M:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:M:662:PRO:C    | 1:M:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:N:473:ARG:O    | 1:N:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:O:881:ARG:HD3  | 1:O:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:P:69:VAL:HG13  | 1:P:70:PRO:HD2   | 1.91                     | 0.51              |
| 1:P:610:ASP:OD2  | 1:P:612:THR:HG23 | 2.11                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:767:GLN:HG3  | 1:P:768:MET:N    | 2.26                     | 0.51              |
| 1:P:952:ARG:HD2  | 3:P:3534:HOH:O   | 2.11                     | 0.51              |
| 1:A:194:GLY:O    | 1:A:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:C:767:GLN:HG3  | 1:C:768:MET:N    | 2.26                     | 0.51              |
| 1:D:251:ARG:HB3  | 1:D:253:TYR:CE2  | 2.45                     | 0.51              |
| 1:D:416:GLU:OE1  | 1:D:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:D:473:ARG:O    | 1:D:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:E:369:GLU:O    | 1:E:373:VAL:HG23 | 2.09                     | 0.51              |
| 1:E:767:GLN:HG3  | 1:E:768:MET:N    | 2.26                     | 0.51              |
| 1:F:5:ASP:OD2    | 1:F:157:ARG:HA   | 2.11                     | 0.51              |
| 1:G:278:ILE:H    | 1:G:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:G:881:ARG:HD3  | 1:G:987:ASP:OD1  | 2.11                     | 0.51              |
| 1:H:949:HIS:HD2  | 1:H:1020:TRP:HE1 | 1.53                     | 0.51              |
| 1:J:194:GLY:O    | 1:J:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:K:194:GLY:O    | 1:K:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:K:416:GLU:OE1  | 1:K:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:K:660:GLY:O    | 1:K:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:K:662:PRO:C    | 1:K:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:K:1020:TRP:CD1 | 1:K:1021:CME:N   | 2.79                     | 0.51              |
| 1:M:767:GLN:HG3  | 1:M:768:MET:N    | 2.26                     | 0.51              |
| 1:N:595:THR:HG23 | 1:N:596:PRO:CA   | 2.35                     | 0.51              |
| 1:N:610:ASP:OD2  | 1:N:612:THR:HG23 | 2.11                     | 0.51              |
| 1:P:7:LEU:HD13   | 1:P:74:LEU:CD1   | 2.39                     | 0.51              |
| 1:P:473:ARG:O    | 1:P:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:A:881:ARG:HD3  | 1:A:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:C:952:ARG:HD2  | 3:C:4429:HOH:O   | 2.11                     | 0.51              |
| 1:D:651:LEU:CD1  | 1:D:669:PRO:HA   | 2.39                     | 0.51              |
| 1:E:278:ILE:H    | 1:E:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:J:422:PRO:HG2  | 1:K:279:ILE:CD1  | 2.41                     | 0.51              |
| 1:J:660:GLY:O    | 1:J:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:J:767:GLN:HG3  | 1:J:768:MET:N    | 2.26                     | 0.51              |
| 1:J:1020:TRP:CD1 | 1:J:1021:CME:N   | 2.79                     | 0.51              |
| 1:K:473:ARG:O    | 1:K:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:L:278:ILE:H    | 1:L:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:M:610:ASP:OD2  | 1:M:612:THR:HG23 | 2.11                     | 0.51              |
| 1:N:43:ARG:HH11  | 1:N:43:ARG:CG    | 2.24                     | 0.51              |
| 1:N:194:GLY:O    | 1:N:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:O:571:VAL:HG13 | 1:O:607:VAL:HG23 | 1.93                     | 0.51              |
| 1:O:767:GLN:HG3  | 1:O:768:MET:N    | 2.26                     | 0.51              |
| 1:A:210:ARG:HD3  | 3:A:4035:HOH:O   | 2.09                     | 0.51              |
| 1:C:5:ASP:OD2    | 1:C:157:ARG:HA   | 2.11                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:473:ARG:O    | 1:C:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:F:745:MET:HA   | 1:F:745:MET:CE   | 2.39                     | 0.51              |
| 1:F:987:ASP:OD2  | 1:F:990:HIS:HD2  | 1.94                     | 0.51              |
| 1:G:427:THR:HA   | 1:G:436:MET:HE2  | 1.89                     | 0.51              |
| 1:G:767:GLN:HG3  | 1:G:768:MET:N    | 2.26                     | 0.51              |
| 1:H:610:ASP:OD2  | 1:H:612:THR:HG23 | 2.11                     | 0.51              |
| 1:K:952:ARG:HD2  | 3:K:4431:HOH:O   | 2.11                     | 0.51              |
| 1:L:745:MET:HA   | 1:L:745:MET:CE   | 2.39                     | 0.51              |
| 1:N:7:LEU:HD13   | 1:N:74:LEU:CD1   | 2.39                     | 0.51              |
| 1:N:881:ARG:HD3  | 1:N:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:O:5:ASP:OD2    | 1:O:157:ARG:HA   | 2.11                     | 0.51              |
| 1:O:610:ASP:OD2  | 1:O:612:THR:HG23 | 2.11                     | 0.51              |
| 1:O:753:ASN:OD1  | 1:O:753:ASN:N    | 2.30                     | 0.51              |
| 1:P:194:GLY:O    | 1:P:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:P:660:GLY:O    | 1:P:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:P:881:ARG:HD3  | 1:P:987:ASP:OD1  | 2.10                     | 0.51              |
| 1:A:753:ASN:OD1  | 1:A:753:ASN:N    | 2.30                     | 0.51              |
| 1:B:610:ASP:OD2  | 1:B:612:THR:HG23 | 2.11                     | 0.51              |
| 1:E:194:GLY:O    | 1:E:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:E:595:THR:HG23 | 1:E:596:PRO:CA   | 2.35                     | 0.51              |
| 1:E:610:ASP:OD2  | 1:E:612:THR:HG23 | 2.11                     | 0.51              |
| 1:G:5:ASP:OD2    | 1:G:157:ARG:HA   | 2.11                     | 0.51              |
| 1:I:701:VAL:HG22 | 1:I:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:J:952:ARG:HD2  | 3:J:3529:HOH:O   | 2.11                     | 0.51              |
| 1:L:416:GLU:OE1  | 1:L:418:HIS:HB2  | 2.10                     | 0.51              |
| 1:M:701:VAL:HG22 | 1:M:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:M:987:ASP:OD2  | 1:M:990:HIS:HD2  | 1.94                     | 0.51              |
| 1:N:987:ASP:OD2  | 1:N:990:HIS:HD2  | 1.94                     | 0.51              |
| 1:P:682:LEU:CD2  | 1:P:683:PRO:HD2  | 2.39                     | 0.51              |
| 1:A:662:PRO:C    | 1:A:663:LEU:HD23 | 2.30                     | 0.51              |
| 1:B:5:ASP:OD2    | 1:B:157:ARG:HA   | 2.11                     | 0.51              |
| 1:B:571:VAL:HG13 | 1:B:607:VAL:HG23 | 1.93                     | 0.51              |
| 1:B:767:GLN:HG3  | 1:B:768:MET:N    | 2.26                     | 0.51              |
| 1:C:73:TRP:CZ2   | 1:C:185:ALA:HB1  | 2.46                     | 0.51              |
| 1:C:571:VAL:HG13 | 1:C:607:VAL:HG23 | 1.93                     | 0.51              |
| 1:G:571:VAL:HG13 | 1:G:607:VAL:HG23 | 1.93                     | 0.51              |
| 1:H:261:TRP:CZ3  | 1:H:266:GLN:HB2  | 2.46                     | 0.51              |
| 1:H:660:GLY:O    | 1:H:662:PRO:HD3  | 2.10                     | 0.51              |
| 1:H:767:GLN:HG3  | 1:H:768:MET:N    | 2.26                     | 0.51              |
| 1:I:210:ARG:HD3  | 3:I:4035:HOH:O   | 2.10                     | 0.51              |
| 1:I:279:ILE:CD1  | 1:L:422:PRO:HG2  | 2.40                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:261:TRP:CZ3  | 1:K:266:GLN:HB2  | 2.46                     | 0.51              |
| 1:K:610:ASP:OD2  | 1:K:612:THR:HG23 | 2.11                     | 0.51              |
| 1:L:194:GLY:O    | 1:L:198:GLU:HG3  | 2.10                     | 0.51              |
| 1:L:767:GLN:HG3  | 1:L:768:MET:N    | 2.26                     | 0.51              |
| 1:M:210:ARG:HD3  | 3:M:4035:HOH:O   | 2.09                     | 0.51              |
| 1:O:473:ARG:O    | 1:O:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:P:73:TRP:CZ2   | 1:P:185:ALA:HB1  | 2.46                     | 0.51              |
| 1:A:261:TRP:CZ3  | 1:A:266:GLN:HB2  | 2.46                     | 0.51              |
| 1:A:701:VAL:HG22 | 1:A:714:ILE:CD1  | 2.40                     | 0.51              |
| 1:B:63:PHE:CB    | 1:B:64:PRO:HD2   | 2.34                     | 0.51              |
| 1:B:73:TRP:CZ2   | 1:B:185:ALA:HB1  | 2.46                     | 0.51              |
| 1:B:473:ARG:O    | 1:B:473:ARG:HD3  | 2.11                     | 0.51              |
| 1:B:660:GLY:O    | 1:B:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:D:278:ILE:H    | 1:D:278:ILE:CD1  | 2.22                     | 0.51              |
| 1:D:637:GLU:HA   | 1:D:679:LEU:HD23 | 1.93                     | 0.51              |
| 1:D:660:GLY:O    | 1:D:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:F:610:ASP:OD2  | 1:F:612:THR:HG23 | 2.11                     | 0.51              |
| 1:G:73:TRP:CZ2   | 1:G:185:ALA:HB1  | 2.46                     | 0.51              |
| 1:G:660:GLY:O    | 1:G:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:J:7:LEU:HD13   | 1:J:74:LEU:CD1   | 2.39                     | 0.51              |
| 1:K:573:GLN:HB2  | 1:K:602:CYS:O    | 2.11                     | 0.51              |
| 1:L:43:ARG:HH11  | 1:L:43:ARG:CG    | 2.24                     | 0.51              |
| 1:L:637:GLU:HA   | 1:L:679:LEU:HD23 | 1.93                     | 0.51              |
| 1:L:741:THR:O    | 1:L:741:THR:HG22 | 2.11                     | 0.51              |
| 1:N:637:GLU:HA   | 1:N:679:LEU:HD23 | 1.93                     | 0.51              |
| 1:O:660:GLY:O    | 1:O:662:PRO:HD3  | 2.11                     | 0.51              |
| 1:A:473:ARG:O    | 1:A:473:ARG:HD3  | 2.11                     | 0.50              |
| 1:A:573:GLN:HB2  | 1:A:602:CYS:O    | 2.12                     | 0.50              |
| 1:C:261:TRP:CZ3  | 1:C:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:D:427:THR:HA   | 1:D:436:MET:HE2  | 1.87                     | 0.50              |
| 1:D:767:GLN:HG3  | 1:D:768:MET:N    | 2.26                     | 0.50              |
| 1:F:637:GLU:HA   | 1:F:679:LEU:HD23 | 1.94                     | 0.50              |
| 1:F:881:ARG:HD3  | 1:F:987:ASP:OD1  | 2.10                     | 0.50              |
| 1:G:747:PHE:HE1  | 1:G:825:CYS:HG   | 1.59                     | 0.50              |
| 1:G:952:ARG:HD2  | 3:G:3527:HOH:O   | 2.11                     | 0.50              |
| 1:H:416:GLU:OE1  | 1:H:418:HIS:HB2  | 2.10                     | 0.50              |
| 1:I:422:PRO:HG2  | 1:L:279:ILE:HD11 | 1.93                     | 0.50              |
| 1:K:5:ASP:OD2    | 1:K:157:ARG:HA   | 2.11                     | 0.50              |
| 1:K:73:TRP:CZ2   | 1:K:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:K:881:ARG:HD3  | 1:K:987:ASP:OD1  | 2.11                     | 0.50              |
| 1:K:987:ASP:OD2  | 1:K:990:HIS:HD2  | 1.94                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:741:THR:O    | 1:O:741:THR:HG22 | 2.12                     | 0.50              |
| 1:B:7:LEU:HD13   | 1:B:74:LEU:CD1   | 2.39                     | 0.50              |
| 1:B:85:VAL:HG12  | 1:B:86:VAL:N     | 2.26                     | 0.50              |
| 1:B:261:TRP:CZ3  | 1:B:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:B:278:ILE:H    | 1:B:278:ILE:CD1  | 2.22                     | 0.50              |
| 1:B:637:GLU:HA   | 1:B:679:LEU:HD23 | 1.93                     | 0.50              |
| 1:C:637:GLU:HA   | 1:C:679:LEU:HD23 | 1.93                     | 0.50              |
| 1:C:741:THR:O    | 1:C:741:THR:HG22 | 2.12                     | 0.50              |
| 1:E:73:TRP:CZ2   | 1:E:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:F:69:VAL:HG13  | 1:F:70:PRO:HD2   | 1.91                     | 0.50              |
| 1:G:7:LEU:HD13   | 1:G:74:LEU:CD1   | 2.39                     | 0.50              |
| 1:G:194:GLY:O    | 1:G:198:GLU:HG3  | 2.10                     | 0.50              |
| 1:G:595:THR:HG23 | 1:G:596:PRO:CA   | 2.35                     | 0.50              |
| 1:H:278:ILE:H    | 1:H:278:ILE:CD1  | 2.22                     | 0.50              |
| 1:K:767:GLN:HG3  | 1:K:768:MET:N    | 2.26                     | 0.50              |
| 1:L:473:ARG:O    | 1:L:473:ARG:HD3  | 2.11                     | 0.50              |
| 1:L:660:GLY:O    | 1:L:662:PRO:HD3  | 2.10                     | 0.50              |
| 1:L:952:ARG:HD2  | 3:L:3532:HOH:O   | 2.11                     | 0.50              |
| 1:M:595:THR:HG23 | 1:M:596:PRO:CA   | 2.35                     | 0.50              |
| 1:M:1020:TRP:CD1 | 1:M:1021:CME:N   | 2.79                     | 0.50              |
| 1:N:261:TRP:CZ3  | 1:N:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:O:261:TRP:CZ3  | 1:O:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:O:595:THR:CG2  | 1:O:596:PRO:HA   | 2.37                     | 0.50              |
| 1:O:747:PHE:HE1  | 1:O:825:CYS:HG   | 1.59                     | 0.50              |
| 1:P:261:TRP:CZ3  | 1:P:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:P:573:GLN:HB2  | 1:P:602:CYS:O    | 2.11                     | 0.50              |
| 1:C:194:GLY:O    | 1:C:198:GLU:HG3  | 2.10                     | 0.50              |
| 1:C:427:THR:HA   | 1:C:436:MET:HE2  | 1.90                     | 0.50              |
| 1:D:573:GLN:HB2  | 1:D:602:CYS:O    | 2.12                     | 0.50              |
| 1:D:856:TYR:CD2  | 1:D:864:MET:HE2  | 2.41                     | 0.50              |
| 1:E:741:THR:O    | 1:E:741:THR:HG22 | 2.12                     | 0.50              |
| 1:E:952:ARG:HD2  | 3:E:4422:HOH:O   | 2.11                     | 0.50              |
| 1:F:73:TRP:CZ2   | 1:F:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:F:595:THR:HG23 | 1:F:596:PRO:CA   | 2.35                     | 0.50              |
| 1:H:571:VAL:HG13 | 1:H:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:I:745:MET:HA   | 1:I:745:MET:CE   | 2.39                     | 0.50              |
| 1:I:987:ASP:OD2  | 1:I:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:K:278:ILE:H    | 1:K:278:ILE:CD1  | 2.22                     | 0.50              |
| 1:L:380:LYS:HE3  | 1:L:406:GLY:O    | 2.12                     | 0.50              |
| 1:L:571:VAL:HG13 | 1:L:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:M:63:PHE:CB    | 1:M:64:PRO:HD2   | 2.34                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:73:TRP:CZ2   | 1:N:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:O:194:GLY:O    | 1:O:198:GLU:HG3  | 2.10                     | 0.50              |
| 1:P:1020:TRP:CD1 | 1:P:1021:CME:N   | 2.79                     | 0.50              |
| 1:A:85:VAL:HG12  | 1:A:86:VAL:N     | 2.27                     | 0.50              |
| 1:A:660:GLY:O    | 1:A:662:PRO:HD3  | 2.11                     | 0.50              |
| 1:A:952:ARG:HD2  | 3:A:4429:HOH:O   | 2.11                     | 0.50              |
| 1:B:987:ASP:OD2  | 1:B:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:C:610:ASP:OD2  | 1:C:612:THR:HG23 | 2.11                     | 0.50              |
| 1:C:830:LEU:HD11 | 1:D:830:LEU:HD11 | 1.94                     | 0.50              |
| 1:D:127:PHE:CE2  | 1:D:184:LEU:HG   | 2.47                     | 0.50              |
| 1:D:571:VAL:HG13 | 1:D:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:D:610:ASP:OD2  | 1:D:612:THR:HG23 | 2.11                     | 0.50              |
| 1:E:660:GLY:O    | 1:E:662:PRO:HD3  | 2.11                     | 0.50              |
| 1:E:881:ARG:HD3  | 1:E:987:ASP:OD1  | 2.10                     | 0.50              |
| 1:F:660:GLY:O    | 1:F:662:PRO:HD3  | 2.11                     | 0.50              |
| 1:H:573:GLN:HB2  | 1:H:602:CYS:O    | 2.12                     | 0.50              |
| 1:I:637:GLU:HA   | 1:I:679:LEU:HD23 | 1.93                     | 0.50              |
| 1:J:5:ASP:OD2    | 1:J:157:ARG:HA   | 2.11                     | 0.50              |
| 1:J:610:ASP:OD2  | 1:J:612:THR:HG23 | 2.11                     | 0.50              |
| 1:K:249:GLU:OE1  | 1:K:251:ARG:NH1  | 2.35                     | 0.50              |
| 1:K:856:TYR:CD2  | 1:K:864:MET:HE2  | 2.45                     | 0.50              |
| 1:L:261:TRP:CZ3  | 1:L:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:L:987:ASP:OD2  | 1:L:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:M:73:TRP:CZ2   | 1:M:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:M:741:THR:O    | 1:M:741:THR:HG22 | 2.12                     | 0.50              |
| 1:N:5:ASP:OD2    | 1:N:157:ARG:HA   | 2.11                     | 0.50              |
| 1:N:69:VAL:HG13  | 1:N:70:PRO:HD2   | 1.91                     | 0.50              |
| 1:N:952:ARG:HD2  | 3:N:3528:HOH:O   | 2.11                     | 0.50              |
| 1:P:987:ASP:OD2  | 1:P:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:A:987:ASP:OD2  | 1:A:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:A:1004:SER:HB2 | 1:A:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:B:287:ASP:CG   | 1:C:425:ARG:HH22 | 2.14                     | 0.50              |
| 1:B:380:LYS:HE3  | 1:B:406:GLY:O    | 2.12                     | 0.50              |
| 1:C:85:VAL:HG12  | 1:C:86:VAL:N     | 2.27                     | 0.50              |
| 1:E:571:VAL:HG13 | 1:E:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:F:261:TRP:CZ3  | 1:F:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:F:952:ARG:HD2  | 3:F:3528:HOH:O   | 2.11                     | 0.50              |
| 1:F:1004:SER:HB2 | 1:F:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:G:610:ASP:OD2  | 1:G:612:THR:HG23 | 2.11                     | 0.50              |
| 1:G:637:GLU:HA   | 1:G:679:LEU:HD23 | 1.93                     | 0.50              |
| 1:I:261:TRP:CZ3  | 1:I:266:GLN:HB2  | 2.46                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:380:LYS:HE3  | 1:I:406:GLY:O    | 2.12                     | 0.50              |
| 1:N:127:PHE:CE2  | 1:N:184:LEU:HG   | 2.47                     | 0.50              |
| 1:O:595:THR:HG23 | 1:O:596:PRO:CA   | 2.35                     | 0.50              |
| 1:A:73:TRP:CZ2   | 1:A:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:C:1020:TRP:CD1 | 1:C:1021:CME:N   | 2.79                     | 0.50              |
| 1:D:73:TRP:CZ2   | 1:D:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:D:741:THR:O    | 1:D:741:THR:HG22 | 2.11                     | 0.50              |
| 1:D:745:MET:HA   | 1:D:745:MET:CE   | 2.39                     | 0.50              |
| 1:E:127:PHE:CE2  | 1:E:184:LEU:HG   | 2.47                     | 0.50              |
| 1:G:473:ARG:O    | 1:G:473:ARG:HD3  | 2.11                     | 0.50              |
| 1:I:571:VAL:HG13 | 1:I:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:J:573:GLN:HB2  | 1:J:602:CYS:O    | 2.12                     | 0.50              |
| 1:K:380:LYS:HE3  | 1:K:406:GLY:O    | 2.12                     | 0.50              |
| 1:L:73:TRP:CZ2   | 1:L:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:N:571:VAL:HG13 | 1:N:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:N:660:GLY:O    | 1:N:662:PRO:HD3  | 2.11                     | 0.50              |
| 1:O:278:ILE:H    | 1:O:278:ILE:CD1  | 2.22                     | 0.50              |
| 1:O:637:GLU:HA   | 1:O:679:LEU:HD23 | 1.94                     | 0.50              |
| 1:O:987:ASP:OD2  | 1:O:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:O:1004:SER:HB2 | 1:O:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:A:127:PHE:CE2  | 1:A:184:LEU:HG   | 2.47                     | 0.50              |
| 1:A:190:ARG:HG3  | 1:A:206:SER:OG   | 2.12                     | 0.50              |
| 1:C:660:GLY:O    | 1:C:662:PRO:HD3  | 2.10                     | 0.50              |
| 1:C:987:ASP:OD2  | 1:C:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:D:5:ASP:OD2    | 1:D:157:ARG:HA   | 2.11                     | 0.50              |
| 1:D:261:TRP:CZ3  | 1:D:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:D:952:ARG:HD2  | 3:D:3534:HOH:O   | 2.11                     | 0.50              |
| 1:D:1020:TRP:CD1 | 1:D:1021:CME:N   | 2.79                     | 0.50              |
| 1:F:380:LYS:HE3  | 1:F:406:GLY:O    | 2.12                     | 0.50              |
| 1:F:571:VAL:HG13 | 1:F:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:G:573:GLN:HB2  | 1:G:602:CYS:O    | 2.12                     | 0.50              |
| 1:G:987:ASP:OD2  | 1:G:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:H:73:TRP:CZ2   | 1:H:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:H:85:VAL:HG12  | 1:H:86:VAL:N     | 2.27                     | 0.50              |
| 1:H:987:ASP:OD2  | 1:H:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:H:1004:SER:HB2 | 1:H:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:H:1020:TRP:CD1 | 1:H:1021:CME:N   | 2.79                     | 0.50              |
| 1:I:73:TRP:CZ2   | 1:I:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:J:73:TRP:CZ2   | 1:J:185:ALA:HB1  | 2.46                     | 0.50              |
| 1:J:85:VAL:HG12  | 1:J:86:VAL:N     | 2.27                     | 0.50              |
| 1:K:127:PHE:CE2  | 1:K:184:LEU:HG   | 2.47                     | 0.50              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:K:595:THR:CG2    | 1:K:596:PRO:HA   | 2.37                     | 0.50              |
| 1:L:903[A]:GLN:NE2 | 3:L:3424:HOH:O   | 2.45                     | 0.50              |
| 1:N:380:LYS:HE3    | 1:N:406:GLY:O    | 2.12                     | 0.50              |
| 1:P:571:VAL:HG13   | 1:P:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:A:767:GLN:HG3    | 1:A:768:MET:N    | 2.26                     | 0.50              |
| 1:C:1004:SER:HB2   | 1:C:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:E:5:ASP:OD2      | 1:E:157:ARG:HA   | 2.11                     | 0.50              |
| 1:F:573:GLN:HB2    | 1:F:602:CYS:O    | 2.12                     | 0.50              |
| 1:I:741:THR:O      | 1:I:741:THR:HG22 | 2.12                     | 0.50              |
| 1:M:5:ASP:OD2      | 1:M:157:ARG:HA   | 2.11                     | 0.50              |
| 1:P:5:ASP:OD2      | 1:P:157:ARG:HA   | 2.11                     | 0.50              |
| 1:B:1020:TRP:CD1   | 1:B:1021:CME:N   | 2.79                     | 0.50              |
| 1:D:194:GLY:O      | 1:D:198:GLU:HG3  | 2.10                     | 0.50              |
| 1:E:85:VAL:HG12    | 1:E:86:VAL:N     | 2.27                     | 0.50              |
| 1:E:261:TRP:CZ3    | 1:E:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:E:282:ARG:HD3    | 1:H:420:MET:O    | 2.12                     | 0.50              |
| 1:E:1020:TRP:CD1   | 1:E:1021:CME:N   | 2.79                     | 0.50              |
| 1:G:190:ARG:HG3    | 1:G:206:SER:OG   | 2.12                     | 0.50              |
| 1:H:5:ASP:OD2      | 1:H:157:ARG:HA   | 2.11                     | 0.50              |
| 1:H:355:ASN:OD1    | 1:H:388:ARG:HD3  | 2.12                     | 0.50              |
| 1:H:380:LYS:HE3    | 1:H:406:GLY:O    | 2.12                     | 0.50              |
| 1:H:856:TYR:HD2    | 1:H:864:MET:CE   | 2.25                     | 0.50              |
| 1:J:127:PHE:CE2    | 1:J:184:LEU:HG   | 2.47                     | 0.50              |
| 1:J:987:ASP:OD2    | 1:J:990:HIS:HD2  | 1.94                     | 0.50              |
| 1:J:1004:SER:HB2   | 1:J:1006:GLU:OE2 | 2.12                     | 0.50              |
| 1:L:595:THR:HG23   | 1:L:596:PRO:CA   | 2.35                     | 0.50              |
| 1:M:261:TRP:CZ3    | 1:M:266:GLN:HB2  | 2.46                     | 0.50              |
| 1:M:571:VAL:HG13   | 1:M:607:VAL:HG23 | 1.93                     | 0.50              |
| 1:M:903[A]:GLN:NE2 | 3:M:4314:HOH:O   | 2.45                     | 0.50              |
| 1:N:507:ASP:OD1    | 1:N:521:LYS:HE2  | 2.12                     | 0.50              |
| 1:N:573:GLN:HB2    | 1:N:602:CYS:O    | 2.12                     | 0.50              |
| 1:N:747:PHE:HE1    | 1:N:825:CYS:HG   | 1.58                     | 0.50              |
| 1:P:190:ARG:HG3    | 1:P:206:SER:OG   | 2.12                     | 0.50              |
| 1:A:5:ASP:OD2      | 1:A:157:ARG:HA   | 2.11                     | 0.49              |
| 1:A:571:VAL:HG13   | 1:A:607:VAL:HG23 | 1.93                     | 0.49              |
| 1:B:507:ASP:OD1    | 1:B:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:C:903[A]:GLN:NE2 | 3:C:4315:HOH:O   | 2.45                     | 0.49              |
| 1:D:507:ASP:OD1    | 1:D:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:D:881:ARG:HD3    | 1:D:987:ASP:OD1  | 2.10                     | 0.49              |
| 1:D:987:ASP:OD2    | 1:D:990:HIS:HD2  | 1.94                     | 0.49              |
| 1:D:1004:SER:HB2   | 1:D:1006:GLU:OE2 | 2.12                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:573:GLN:HB2  | 1:E:602:CYS:O    | 2.11                     | 0.49              |
| 1:F:507:ASP:OD1  | 1:F:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:G:261:TRP:CZ3  | 1:G:266:GLN:HB2  | 2.46                     | 0.49              |
| 1:G:380:LYS:HE3  | 1:G:406:GLY:O    | 2.12                     | 0.49              |
| 1:H:127:PHE:CE2  | 1:H:184:LEU:HG   | 2.47                     | 0.49              |
| 1:H:856:TYR:CD2  | 1:H:864:MET:HE2  | 2.47                     | 0.49              |
| 1:H:952:ARG:HD2  | 3:H:4432:HOH:O   | 2.11                     | 0.49              |
| 1:I:5:ASP:OD2    | 1:I:157:ARG:HA   | 2.11                     | 0.49              |
| 1:I:37:ARG:NH2   | 1:I:216:HIS:O    | 2.45                     | 0.49              |
| 1:I:190:ARG:HG3  | 1:I:206:SER:OG   | 2.12                     | 0.49              |
| 1:I:610:ASP:OD2  | 1:I:612:THR:HG23 | 2.11                     | 0.49              |
| 1:K:37:ARG:NH2   | 1:K:216:HIS:O    | 2.45                     | 0.49              |
| 1:K:190:ARG:HG3  | 1:K:206:SER:OG   | 2.12                     | 0.49              |
| 1:L:190:ARG:HG3  | 1:L:206:SER:OG   | 2.12                     | 0.49              |
| 1:M:127:PHE:CE2  | 1:M:184:LEU:HG   | 2.47                     | 0.49              |
| 1:M:190:ARG:HG3  | 1:M:206:SER:OG   | 2.12                     | 0.49              |
| 1:M:380:LYS:HE3  | 1:M:406:GLY:O    | 2.12                     | 0.49              |
| 1:N:741:THR:O    | 1:N:741:THR:HG22 | 2.11                     | 0.49              |
| 1:N:1004:SER:HB2 | 1:N:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:N:1020:TRP:CD1 | 1:N:1021:CME:N   | 2.79                     | 0.49              |
| 1:O:190:ARG:HG3  | 1:O:206:SER:OG   | 2.12                     | 0.49              |
| 1:O:856:TYR:HD2  | 1:O:864:MET:CE   | 2.25                     | 0.49              |
| 1:P:140:ARG:HB2  | 1:P:171:PHE:O    | 2.12                     | 0.49              |
| 1:P:507:ASP:OD1  | 1:P:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:A:380:LYS:HE3  | 1:A:406:GLY:O    | 2.12                     | 0.49              |
| 1:A:637:GLU:HA   | 1:A:679:LEU:HD23 | 1.93                     | 0.49              |
| 1:B:573:GLN:HB2  | 1:B:602:CYS:O    | 2.12                     | 0.49              |
| 1:C:507:ASP:OD1  | 1:C:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:E:380:LYS:HE3  | 1:E:406:GLY:O    | 2.12                     | 0.49              |
| 1:E:595:THR:CG2  | 1:E:596:PRO:HA   | 2.37                     | 0.49              |
| 1:G:1004:SER:HB2 | 1:G:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:H:190:ARG:HG3  | 1:H:206:SER:OG   | 2.12                     | 0.49              |
| 1:H:507:ASP:OD1  | 1:H:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:I:85:VAL:HG12  | 1:I:86:VAL:N     | 2.27                     | 0.49              |
| 1:I:573:GLN:HB2  | 1:I:602:CYS:O    | 2.11                     | 0.49              |
| 1:I:952:ARG:HD2  | 3:I:4420:HOH:O   | 2.11                     | 0.49              |
| 1:J:140:ARG:HB2  | 1:J:171:PHE:O    | 2.13                     | 0.49              |
| 1:J:473:ARG:O    | 1:J:473:ARG:HD3  | 2.11                     | 0.49              |
| 1:K:43:ARG:HH11  | 1:K:43:ARG:CG    | 2.24                     | 0.49              |
| 1:K:355:ASN:OD1  | 1:K:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:L:5:ASP:OD2    | 1:L:157:ARG:HA   | 2.11                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:37:ARG:NH2   | 1:L:216:HIS:O    | 2.46                     | 0.49              |
| 1:L:573:GLN:HB2  | 1:L:602:CYS:O    | 2.12                     | 0.49              |
| 1:M:85:VAL:HG12  | 1:M:86:VAL:N     | 2.27                     | 0.49              |
| 1:M:573:GLN:HB2  | 1:M:602:CYS:O    | 2.12                     | 0.49              |
| 1:O:73:TRP:CZ2   | 1:O:185:ALA:HB1  | 2.46                     | 0.49              |
| 1:O:380:LYS:HE3  | 1:O:406:GLY:O    | 2.12                     | 0.49              |
| 1:O:952:ARG:HD2  | 3:O:3524:HOH:O   | 2.11                     | 0.49              |
| 1:B:1004:SER:HB2 | 1:B:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:C:355:ASN:OD1  | 1:C:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:E:637:GLU:HA   | 1:E:679:LEU:HD23 | 1.93                     | 0.49              |
| 1:F:127:PHE:CE2  | 1:F:184:LEU:HG   | 2.47                     | 0.49              |
| 1:F:741:THR:O    | 1:F:741:THR:HG22 | 2.12                     | 0.49              |
| 1:F:767:GLN:HG3  | 1:F:768:MET:N    | 2.26                     | 0.49              |
| 1:F:1020:TRP:CD1 | 1:F:1021:CME:N   | 2.79                     | 0.49              |
| 1:G:37:ARG:NH2   | 1:G:216:HIS:O    | 2.45                     | 0.49              |
| 1:G:1020:TRP:CD1 | 1:G:1021:CME:N   | 2.79                     | 0.49              |
| 1:I:127:PHE:CE2  | 1:I:184:LEU:HG   | 2.47                     | 0.49              |
| 1:J:261:TRP:CZ3  | 1:J:266:GLN:HB2  | 2.46                     | 0.49              |
| 1:L:355:ASN:OD1  | 1:L:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:M:37:ARG:NH2   | 1:M:216:HIS:O    | 2.45                     | 0.49              |
| 1:M:952:ARG:HD2  | 3:M:4420:HOH:O   | 2.11                     | 0.49              |
| 1:N:355:ASN:OD1  | 1:N:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:O:433:LEU:O    | 1:O:437:SER:HB3  | 2.13                     | 0.49              |
| 1:O:507:ASP:OD1  | 1:O:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:O:1020:TRP:CD1 | 1:O:1021:CME:N   | 2.79                     | 0.49              |
| 1:A:856:TYR:HD2  | 1:A:864:MET:CE   | 2.25                     | 0.49              |
| 1:B:188:VAL:C    | 1:B:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:B:952:ARG:HD2  | 3:B:3528:HOH:O   | 2.11                     | 0.49              |
| 1:C:37:ARG:NH2   | 1:C:216:HIS:O    | 2.46                     | 0.49              |
| 1:C:573:GLN:HB2  | 1:C:602:CYS:O    | 2.11                     | 0.49              |
| 1:E:1004:SER:HB2 | 1:E:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:F:85:VAL:HG12  | 1:F:86:VAL:N     | 2.27                     | 0.49              |
| 1:F:190:ARG:HG3  | 1:F:206:SER:OG   | 2.12                     | 0.49              |
| 1:G:140:ARG:HB2  | 1:G:171:PHE:O    | 2.13                     | 0.49              |
| 1:G:355:ASN:OD1  | 1:G:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:G:507:ASP:OD1  | 1:G:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:G:741:THR:O    | 1:G:741:THR:HG22 | 2.12                     | 0.49              |
| 1:I:355:ASN:OD1  | 1:I:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:J:190:ARG:HG3  | 1:J:206:SER:OG   | 2.12                     | 0.49              |
| 1:J:380:LYS:HE3  | 1:J:406:GLY:O    | 2.12                     | 0.49              |
| 1:J:507:ASP:OD1  | 1:J:521:LYS:HE2  | 2.12                     | 0.49              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:J:571:VAL:HG13   | 1:J:607:VAL:HG23 | 1.93                     | 0.49              |
| 1:K:85:VAL:HG12    | 1:K:86:VAL:N     | 2.27                     | 0.49              |
| 1:K:322:LEU:HD23   | 1:K:322:LEU:C    | 2.33                     | 0.49              |
| 1:L:1020:TRP:CD1   | 1:L:1021:CME:N   | 2.79                     | 0.49              |
| 1:M:279:ILE:CD1    | 1:P:422:PRO:HG2  | 2.42                     | 0.49              |
| 1:M:433:LEU:O      | 1:M:437:SER:HB3  | 2.13                     | 0.49              |
| 1:N:190:ARG:HG3    | 1:N:206:SER:OG   | 2.12                     | 0.49              |
| 1:O:37:ARG:NH2     | 1:O:216:HIS:O    | 2.46                     | 0.49              |
| 1:O:355:ASN:OD1    | 1:O:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:P:856:TYR:HD2    | 1:P:864:MET:CE   | 2.25                     | 0.49              |
| 1:A:355:ASN:OD1    | 1:A:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:A:433:LEU:O      | 1:A:437:SER:HB3  | 2.13                     | 0.49              |
| 1:A:1020:TRP:CD1   | 1:A:1021:CME:N   | 2.79                     | 0.49              |
| 1:B:37:ARG:NH2     | 1:B:216:HIS:O    | 2.46                     | 0.49              |
| 1:B:140:ARG:HB2    | 1:B:171:PHE:O    | 2.12                     | 0.49              |
| 1:B:355:ASN:OD1    | 1:B:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:B:741:THR:O      | 1:B:741:THR:HG22 | 2.11                     | 0.49              |
| 1:D:322:LEU:HD23   | 1:D:322:LEU:C    | 2.33                     | 0.49              |
| 1:D:433:LEU:O      | 1:D:437:SER:HB3  | 2.13                     | 0.49              |
| 1:E:37:ARG:NH2     | 1:E:216:HIS:O    | 2.45                     | 0.49              |
| 1:E:43:ARG:HH11    | 1:E:43:ARG:CG    | 2.24                     | 0.49              |
| 1:E:190:ARG:HG3    | 1:E:206:SER:OG   | 2.12                     | 0.49              |
| 1:E:903[A]:GLN:NE2 | 3:E:4314:HOH:O   | 2.45                     | 0.49              |
| 1:F:37:ARG:NH2     | 1:F:216:HIS:O    | 2.46                     | 0.49              |
| 1:G:127:PHE:CE2    | 1:G:184:LEU:HG   | 2.47                     | 0.49              |
| 1:I:322:LEU:HD23   | 1:I:322:LEU:C    | 2.33                     | 0.49              |
| 1:J:287:ASP:OD1    | 1:J:287:ASP:N    | 2.41                     | 0.49              |
| 1:J:433:LEU:O      | 1:J:437:SER:HB3  | 2.13                     | 0.49              |
| 1:J:903[A]:GLN:NE2 | 3:J:3421:HOH:O   | 2.45                     | 0.49              |
| 1:K:433:LEU:O      | 1:K:437:SER:HB3  | 2.13                     | 0.49              |
| 1:K:1004:SER:HB2   | 1:K:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:L:507:ASP:OD1    | 1:L:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:M:140:ARG:HB2    | 1:M:171:PHE:O    | 2.13                     | 0.49              |
| 1:N:37:ARG:NH2     | 1:N:216:HIS:O    | 2.46                     | 0.49              |
| 1:N:188:VAL:C      | 1:N:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:N:278:ILE:H      | 1:N:278:ILE:CD1  | 2.22                     | 0.49              |
| 1:O:127:PHE:CE2    | 1:O:184:LEU:HG   | 2.47                     | 0.49              |
| 1:O:573:GLN:HB2    | 1:O:602:CYS:O    | 2.12                     | 0.49              |
| 1:P:127:PHE:CE2    | 1:P:184:LEU:HG   | 2.47                     | 0.49              |
| 1:B:433:LEU:O      | 1:B:437:SER:HB3  | 2.13                     | 0.49              |
| 1:B:903[A]:GLN:NE2 | 3:B:3418:HOH:O   | 2.45                     | 0.49              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:C:102:ASN:ND2    | 1:C:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:C:800:ARG:CZ     | 1:C:800:ARG:HB3  | 2.43                     | 0.49              |
| 1:D:190:ARG:HG3    | 1:D:206:SER:OG   | 2.12                     | 0.49              |
| 1:E:140:ARG:HB2    | 1:E:171:PHE:O    | 2.13                     | 0.49              |
| 1:E:355:ASN:OD1    | 1:E:388:ARG:HD3  | 2.13                     | 0.49              |
| 1:E:987:ASP:OD2    | 1:E:990:HIS:HD2  | 1.94                     | 0.49              |
| 1:F:322:LEU:HD23   | 1:F:322:LEU:C    | 2.33                     | 0.49              |
| 1:F:856:TYR:HD2    | 1:F:864:MET:CE   | 2.25                     | 0.49              |
| 1:H:800:ARG:HB3    | 1:H:800:ARG:CZ   | 2.43                     | 0.49              |
| 1:I:433:LEU:O      | 1:I:437:SER:HB3  | 2.13                     | 0.49              |
| 1:J:741:THR:O      | 1:J:741:THR:HG22 | 2.12                     | 0.49              |
| 1:K:507:ASP:OD1    | 1:K:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:N:767:GLN:HG3    | 1:N:768:MET:N    | 2.26                     | 0.49              |
| 1:P:102:ASN:ND2    | 1:P:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:A:140:ARG:HB2    | 1:A:171:PHE:O    | 2.12                     | 0.49              |
| 1:A:322:LEU:HD23   | 1:A:322:LEU:C    | 2.33                     | 0.49              |
| 1:A:507:ASP:OD1    | 1:A:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:B:190:ARG:HG3    | 1:B:206:SER:OG   | 2.12                     | 0.49              |
| 1:C:856:TYR:HD2    | 1:C:864:MET:CE   | 2.25                     | 0.49              |
| 1:E:679:LEU:HD23   | 1:E:679:LEU:HA   | 1.40                     | 0.49              |
| 1:F:800:ARG:CZ     | 1:F:800:ARG:HB3  | 2.43                     | 0.49              |
| 1:H:102:ASN:ND2    | 1:H:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:I:767:GLN:HG3    | 1:I:768:MET:N    | 2.26                     | 0.49              |
| 1:I:903[A]:GLN:NE2 | 3:I:4313:HOH:O   | 2.45                     | 0.49              |
| 1:I:1020:TRP:CD1   | 1:I:1021:CME:N   | 2.79                     | 0.49              |
| 1:K:571:VAL:HG13   | 1:K:607:VAL:HG23 | 1.93                     | 0.49              |
| 1:L:140:ARG:HB2    | 1:L:171:PHE:O    | 2.13                     | 0.49              |
| 1:N:856:TYR:HD2    | 1:N:864:MET:CE   | 2.25                     | 0.49              |
| 1:P:800:ARG:HB3    | 1:P:800:ARG:CZ   | 2.43                     | 0.49              |
| 1:P:856:TYR:HD2    | 1:P:864:MET:HE2  | 1.77                     | 0.49              |
| 1:C:127:PHE:CE2    | 1:C:184:LEU:HG   | 2.47                     | 0.49              |
| 1:C:380:LYS:HE3    | 1:C:406:GLY:O    | 2.12                     | 0.49              |
| 1:D:380:LYS:HE3    | 1:D:406:GLY:O    | 2.12                     | 0.49              |
| 1:F:747:PHE:HE1    | 1:F:825:CYS:HG   | 1.59                     | 0.49              |
| 1:G:65:ALA:HB1     | 1:G:66:PRO:HD2   | 1.95                     | 0.49              |
| 1:G:188:VAL:C      | 1:G:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:G:433:LEU:O      | 1:G:437:SER:HB3  | 2.13                     | 0.49              |
| 1:J:637:GLU:HA     | 1:J:679:LEU:HD23 | 1.93                     | 0.49              |
| 1:L:102:ASN:ND2    | 1:L:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:L:127:PHE:CE2    | 1:L:184:LEU:HG   | 2.47                     | 0.49              |
| 1:M:102:ASN:ND2    | 1:M:201:ASP:HB2  | 2.28                     | 0.49              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:M:637:GLU:HA     | 1:M:679:LEU:HD23 | 1.93                     | 0.49              |
| 1:N:57:GLU:HG2     | 1:N:83:THR:HG22  | 1.95                     | 0.49              |
| 1:N:102:ASN:ND2    | 1:N:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:N:800:ARG:CZ     | 1:N:800:ARG:HB3  | 2.43                     | 0.49              |
| 1:A:419:GLY:O      | 1:D:282:ARG:NH1  | 2.46                     | 0.49              |
| 1:B:127:PHE:CE2    | 1:B:184:LEU:HG   | 2.47                     | 0.49              |
| 1:C:190:ARG:HG3    | 1:C:206:SER:OG   | 2.12                     | 0.49              |
| 1:C:322:LEU:HD23   | 1:C:322:LEU:C    | 2.33                     | 0.49              |
| 1:D:43:ARG:HH11    | 1:D:43:ARG:CG    | 2.24                     | 0.49              |
| 1:E:102:ASN:ND2    | 1:E:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:F:102:ASN:ND2    | 1:F:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:H:140:ARG:HB2    | 1:H:171:PHE:O    | 2.13                     | 0.49              |
| 1:H:741:THR:O      | 1:H:741:THR:HG22 | 2.12                     | 0.49              |
| 1:I:102:ASN:ND2    | 1:I:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:I:856:TYR:HD2    | 1:I:864:MET:CE   | 2.26                     | 0.49              |
| 1:K:595:THR:HG23   | 1:K:596:PRO:CA   | 2.35                     | 0.49              |
| 1:K:637:GLU:HA     | 1:K:679:LEU:HD23 | 1.93                     | 0.49              |
| 1:L:188:VAL:C      | 1:L:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:L:322:LEU:HD23   | 1:L:322:LEU:C    | 2.33                     | 0.49              |
| 1:M:285:TYR:CB     | 1:M:288:ARG:HG3  | 2.42                     | 0.49              |
| 1:M:1004:SER:HB2   | 1:M:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:O:65:ALA:HB1     | 1:O:66:PRO:HD2   | 1.95                     | 0.49              |
| 1:O:140:ARG:HB2    | 1:O:171:PHE:O    | 2.12                     | 0.49              |
| 1:O:188:VAL:C      | 1:O:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:D:37:ARG:NH2     | 1:D:216:HIS:O    | 2.45                     | 0.49              |
| 1:D:65:ALA:HB1     | 1:D:66:PRO:HD2   | 1.95                     | 0.49              |
| 1:D:102:ASN:ND2    | 1:D:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:E:507:ASP:OD1    | 1:E:521:LYS:HE2  | 2.12                     | 0.49              |
| 1:F:73:TRP:CZ2     | 1:F:122:CYS:HB3  | 2.48                     | 0.49              |
| 1:F:903[A]:GLN:NE2 | 3:F:3420:HOH:O   | 2.45                     | 0.49              |
| 1:G:85:VAL:HG12    | 1:G:86:VAL:N     | 2.27                     | 0.49              |
| 1:I:188:VAL:C      | 1:I:189:LEU:HD23 | 2.33                     | 0.49              |
| 1:J:355:ASN:OD1    | 1:J:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:K:102:ASN:ND2    | 1:K:201:ASP:HB2  | 2.28                     | 0.49              |
| 1:L:1004:SER:HB2   | 1:L:1006:GLU:OE2 | 2.12                     | 0.49              |
| 1:M:355:ASN:OD1    | 1:M:388:ARG:HD3  | 2.12                     | 0.49              |
| 1:M:800:ARG:HB3    | 1:M:800:ARG:CZ   | 2.43                     | 0.49              |
| 1:N:73:TRP:CZ2     | 1:N:122:CYS:HB3  | 2.48                     | 0.49              |
| 1:P:380:LYS:HE3    | 1:P:406:GLY:O    | 2.12                     | 0.49              |
| 1:P:429:ASP:OD1    | 1:P:430:PRO:HD2  | 2.13                     | 0.49              |
| 1:P:1004:SER:HB2   | 1:P:1006:GLU:OE2 | 2.12                     | 0.49              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:A:102:ASN:ND2    | 1:A:201:ASP:HB2  | 2.28                     | 0.48              |
| 1:B:65:ALA:HB1     | 1:B:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:B:102:ASN:ND2    | 1:B:201:ASP:HB2  | 2.28                     | 0.48              |
| 1:B:429:ASP:OD1    | 1:B:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:E:800:ARG:HB3    | 1:E:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:F:9:VAL:O        | 1:F:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:G:73:TRP:CZ2     | 1:G:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:G:903[A]:GLN:NE2 | 3:G:3418:HOH:O   | 2.45                     | 0.48              |
| 1:I:800:ARG:HB3    | 1:I:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:I:949:HIS:HD2    | 1:I:1020:TRP:HE1 | 1.53                     | 0.48              |
| 1:I:1004:SER:HB2   | 1:I:1006:GLU:OE2 | 2.12                     | 0.48              |
| 1:J:37:ARG:NH2     | 1:J:216:HIS:O    | 2.45                     | 0.48              |
| 1:J:285:TYR:CB     | 1:J:288:ARG:HG3  | 2.42                     | 0.48              |
| 1:K:429:ASP:OD1    | 1:K:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:L:85:VAL:HG12    | 1:L:86:VAL:N     | 2.27                     | 0.48              |
| 1:M:949:HIS:HD2    | 1:M:1020:TRP:HE1 | 1.53                     | 0.48              |
| 1:P:85:VAL:HG12    | 1:P:86:VAL:N     | 2.27                     | 0.48              |
| 1:P:188:VAL:C      | 1:P:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:B:73:TRP:CZ2     | 1:B:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:B:653[A]:HIS:HD2 | 1:B:666:GLY:O    | 1.97                     | 0.48              |
| 1:D:134:LEU:HD23   | 1:D:134:LEU:HA   | 1.68                     | 0.48              |
| 1:E:653[A]:HIS:HD2 | 1:E:666:GLY:O    | 1.96                     | 0.48              |
| 1:H:653[A]:HIS:HD2 | 1:H:666:GLY:O    | 1.96                     | 0.48              |
| 1:I:429:ASP:OD1    | 1:I:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:I:507:ASP:OD1    | 1:I:521:LYS:HE2  | 2.12                     | 0.48              |
| 1:J:9:VAL:O        | 1:J:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:J:73:TRP:CZ2     | 1:J:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:J:322:LEU:HD23   | 1:J:322:LEU:C    | 2.33                     | 0.48              |
| 1:L:9:VAL:O        | 1:L:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:L:73:TRP:CZ2     | 1:L:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:L:429:ASP:OD1    | 1:L:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:M:507:ASP:OD1    | 1:M:521:LYS:HE2  | 2.12                     | 0.48              |
| 1:N:429:ASP:OD1    | 1:N:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:O:73:TRP:CZ2     | 1:O:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:O:85:VAL:HG12    | 1:O:86:VAL:N     | 2.27                     | 0.48              |
| 1:P:57:GLU:HG2     | 1:P:83:THR:HG22  | 1.95                     | 0.48              |
| 1:P:595:THR:CG2    | 1:P:596:PRO:HA   | 2.37                     | 0.48              |
| 1:A:741:THR:HG22   | 1:A:741:THR:O    | 2.12                     | 0.48              |
| 1:B:800:ARG:HB3    | 1:B:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:C:9:VAL:O        | 1:C:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:C:65:ALA:HB1     | 1:C:66:PRO:HD2   | 1.95                     | 0.48              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:C:73:TRP:CZ2     | 1:C:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:C:433:LEU:O      | 1:C:437:SER:HB3  | 2.13                     | 0.48              |
| 1:E:65:ALA:HB1     | 1:E:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:H:637:GLU:HA     | 1:H:679:LEU:HD23 | 1.93                     | 0.48              |
| 1:J:469:ASP:HB3    | 1:K:473:ARG:HD2  | 1.94                     | 0.48              |
| 1:K:65:ALA:HB1     | 1:K:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:L:800:ARG:HB3    | 1:L:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:M:653[A]:HIS:HD2 | 1:M:666:GLY:O    | 1.97                     | 0.48              |
| 1:O:78:LEU:HB3     | 1:O:79:PRO:CD    | 2.43                     | 0.48              |
| 1:O:429:ASP:OD1    | 1:O:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:O:903[A]:GLN:NE2 | 3:O:3418:HOH:O   | 2.45                     | 0.48              |
| 1:P:637:GLU:HA     | 1:P:679:LEU:HD23 | 1.93                     | 0.48              |
| 1:A:429:ASP:OD1    | 1:A:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:A:830:LEU:HD11   | 1:B:830:LEU:HD11 | 1.95                     | 0.48              |
| 1:D:355:ASN:OD1    | 1:D:388:ARG:HD3  | 2.12                     | 0.48              |
| 1:F:653[A]:HIS:HD2 | 1:F:666:GLY:O    | 1.97                     | 0.48              |
| 1:H:9:VAL:O        | 1:H:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:H:78:LEU:HB3     | 1:H:79:PRO:CD    | 2.43                     | 0.48              |
| 1:H:433:LEU:O      | 1:H:437:SER:HB3  | 2.13                     | 0.48              |
| 1:I:73:TRP:CZ2     | 1:I:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:I:78:LEU:HB3     | 1:I:79:PRO:CD    | 2.43                     | 0.48              |
| 1:I:287:ASP:OD1    | 1:I:287:ASP:N    | 2.41                     | 0.48              |
| 1:J:73:TRP:CH2     | 1:J:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:J:429:ASP:OD1    | 1:J:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:M:856:TYR:HD2    | 1:M:864:MET:CE   | 2.25                     | 0.48              |
| 1:N:322:LEU:HD23   | 1:N:322:LEU:C    | 2.33                     | 0.48              |
| 1:O:322:LEU:HD23   | 1:O:322:LEU:C    | 2.33                     | 0.48              |
| 1:P:217:LYS:HG2    | 1:P:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:P:903[A]:GLN:NE2 | 3:P:3426:HOH:O   | 2.45                     | 0.48              |
| 1:A:37:ARG:NH2     | 1:A:216:HIS:O    | 2.46                     | 0.48              |
| 1:A:73:TRP:CZ2     | 1:A:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:B:9:VAL:O        | 1:B:12:GLN:HB3   | 2.14                     | 0.48              |
| 1:C:35:SER:O       | 1:C:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:C:278:ILE:H      | 1:C:278:ILE:CD1  | 2.22                     | 0.48              |
| 1:D:595:THR:CG2    | 1:D:596:PRO:HA   | 2.37                     | 0.48              |
| 1:F:78:LEU:HB3     | 1:F:79:PRO:CD    | 2.43                     | 0.48              |
| 1:F:420:MET:O      | 1:G:282:ARG:HD3  | 2.14                     | 0.48              |
| 1:G:35:SER:O       | 1:G:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:G:322:LEU:HD23   | 1:G:322:LEU:C    | 2.33                     | 0.48              |
| 1:H:217:LYS:HG2    | 1:H:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:I:35:SER:O       | 1:I:50:GLN:HG3   | 2.14                     | 0.48              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:J:35:SER:O       | 1:J:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:J:65:ALA:HB1     | 1:J:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:J:188:VAL:C      | 1:J:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:J:278:ILE:H      | 1:J:278:ILE:CD1  | 2.22                     | 0.48              |
| 1:J:800:ARG:HB3    | 1:J:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:K:903[A]:GLN:NE2 | 3:K:4315:HOH:O   | 2.45                     | 0.48              |
| 1:N:85:VAL:HG12    | 1:N:86:VAL:N     | 2.27                     | 0.48              |
| 1:N:433:LEU:O      | 1:N:437:SER:HB3  | 2.13                     | 0.48              |
| 1:O:35:SER:O       | 1:O:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:O:800:ARG:HB3    | 1:O:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:P:9:VAL:O        | 1:P:12:GLN:HB3   | 2.14                     | 0.48              |
| 1:P:355:ASN:OD1    | 1:P:388:ARG:HD3  | 2.12                     | 0.48              |
| 1:A:217:LYS:HG2    | 1:A:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:A:903[A]:GLN:NE2 | 3:A:4315:HOH:O   | 2.45                     | 0.48              |
| 1:E:73:TRP:CH2     | 1:E:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:E:322:LEU:HD23   | 1:E:322:LEU:C    | 2.33                     | 0.48              |
| 1:E:433:LEU:O      | 1:E:437:SER:HB3  | 2.13                     | 0.48              |
| 1:G:653[A]:HIS:HD2 | 1:G:666:GLY:O    | 1.97                     | 0.48              |
| 1:H:35:SER:O       | 1:H:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:H:57:GLU:HG2     | 1:H:83:THR:HG22  | 1.95                     | 0.48              |
| 1:H:261:TRP:CH2    | 1:H:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:I:73:TRP:CH2     | 1:I:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:K:73:TRP:CZ2     | 1:K:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:K:188:VAL:C      | 1:K:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:K:800:ARG:HB3    | 1:K:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:L:73:TRP:CH2     | 1:L:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:M:73:TRP:CH2     | 1:M:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:M:322:LEU:HD23   | 1:M:322:LEU:C    | 2.33                     | 0.48              |
| 1:N:73:TRP:CH2     | 1:N:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:O:9:VAL:O        | 1:O:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:A:9:VAL:O        | 1:A:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:A:595:THR:CG2    | 1:A:596:PRO:HA   | 2.37                     | 0.48              |
| 1:B:322:LEU:HD23   | 1:B:322:LEU:C    | 2.33                     | 0.48              |
| 1:C:140:ARG:HB2    | 1:C:171:PHE:O    | 2.12                     | 0.48              |
| 1:C:581:ASN:O      | 1:J:581:ASN:O    | 2.30                     | 0.48              |
| 1:D:903[A]:GLN:NE2 | 3:D:3427:HOH:O   | 2.45                     | 0.48              |
| 1:E:429:ASP:OD1    | 1:E:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:F:188:VAL:C      | 1:F:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:G:800:ARG:HB3    | 1:G:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:I:140:ARG:HB2    | 1:I:171:PHE:O    | 2.13                     | 0.48              |
| 1:I:147:ASN:HA     | 1:I:148:SER:HA   | 1.57                     | 0.48              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:K:73:TRP:CH2     | 1:K:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:K:261:TRP:CH2    | 1:K:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:L:433:LEU:O      | 1:L:437:SER:HB3  | 2.13                     | 0.48              |
| 1:M:65:ALA:HB1     | 1:M:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:M:73:TRP:CZ2     | 1:M:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:N:78:LEU:HB3     | 1:N:79:PRO:CD    | 2.43                     | 0.48              |
| 1:N:140:ARG:HB2    | 1:N:171:PHE:O    | 2.13                     | 0.48              |
| 1:P:35:SER:O       | 1:P:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:P:73:TRP:CH2     | 1:P:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:P:261:TRP:CH2    | 1:P:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:P:741:THR:O      | 1:P:741:THR:HG22 | 2.12                     | 0.48              |
| 1:B:57:GLU:HG2     | 1:B:83:THR:HG22  | 1.95                     | 0.48              |
| 1:B:856:TYR:HD2    | 1:B:864:MET:CE   | 2.25                     | 0.48              |
| 1:D:35:SER:O       | 1:D:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:D:73:TRP:CH2     | 1:D:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:D:85:VAL:HG12    | 1:D:86:VAL:N     | 2.27                     | 0.48              |
| 1:D:800:ARG:HB3    | 1:D:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:G:80:GLU:H       | 1:G:80:GLU:HG3   | 1.29                     | 0.48              |
| 1:G:102:ASN:ND2    | 1:G:201:ASP:HB2  | 2.28                     | 0.48              |
| 1:G:429:ASP:OD1    | 1:G:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:G:856:TYR:HD2    | 1:G:864:MET:CE   | 2.26                     | 0.48              |
| 1:K:140:ARG:HB2    | 1:K:171:PHE:O    | 2.13                     | 0.48              |
| 1:K:741:THR:O      | 1:K:741:THR:HG22 | 2.12                     | 0.48              |
| 1:L:856:TYR:HD2    | 1:L:864:MET:CE   | 2.26                     | 0.48              |
| 1:M:9:VAL:O        | 1:M:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:M:429:ASP:OD1    | 1:M:430:PRO:HD2  | 2.13                     | 0.48              |
| 1:N:147:ASN:HA     | 1:N:148:SER:HA   | 1.58                     | 0.48              |
| 1:N:261:TRP:CH2    | 1:N:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:O:102:ASN:ND2    | 1:O:201:ASP:HB2  | 2.28                     | 0.48              |
| 1:O:285:TYR:CB     | 1:O:288:ARG:HG3  | 2.42                     | 0.48              |
| 1:P:322:LEU:HD23   | 1:P:322:LEU:C    | 2.33                     | 0.48              |
| 1:P:433:LEU:O      | 1:P:437:SER:HB3  | 2.13                     | 0.48              |
| 1:A:653[A]:HIS:HD2 | 1:A:666:GLY:O    | 1.97                     | 0.48              |
| 1:A:800:ARG:HB3    | 1:A:800:ARG:CZ   | 2.43                     | 0.48              |
| 1:B:35:SER:O       | 1:B:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:C:80:GLU:H       | 1:C:80:GLU:HG3   | 1.29                     | 0.48              |
| 1:C:595:THR:CG2    | 1:C:596:PRO:HA   | 2.37                     | 0.48              |
| 1:D:140:ARG:HB2    | 1:D:171:PHE:O    | 2.13                     | 0.48              |
| 1:D:217:LYS:HG2    | 1:D:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:E:9:VAL:O        | 1:E:12:GLN:HB3   | 2.13                     | 0.48              |
| 1:E:78:LEU:HB3     | 1:E:79:PRO:CD    | 2.43                     | 0.48              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:F:65:ALA:HB1     | 1:F:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:F:147:ASN:HA     | 1:F:148:SER:HA   | 1.57                     | 0.48              |
| 1:F:261:TRP:CH2    | 1:F:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:F:355:ASN:OD1    | 1:F:388:ARG:HD3  | 2.12                     | 0.48              |
| 1:G:285:TYR:CB     | 1:G:288:ARG:HG3  | 2.42                     | 0.48              |
| 1:H:37:ARG:NH2     | 1:H:216:HIS:O    | 2.45                     | 0.48              |
| 1:H:903[A]:GLN:NE2 | 3:H:4315:HOH:O   | 2.45                     | 0.48              |
| 1:I:261:TRP:CH2    | 1:I:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:J:102:ASN:ND2    | 1:J:201:ASP:HB2  | 2.28                     | 0.48              |
| 1:J:217:LYS:HG2    | 1:J:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:J:425:ARG:NH2    | 1:K:287:ASP:OD2  | 2.47                     | 0.48              |
| 1:N:65:ALA:HB1     | 1:N:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:P:37:ARG:NH2     | 1:P:216:HIS:O    | 2.45                     | 0.48              |
| 1:A:73:TRP:CH2     | 1:A:185:ALA:HB1  | 2.49                     | 0.48              |
| 1:A:188:VAL:C      | 1:A:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:A:279:ILE:CD1    | 1:D:422:PRO:HG2  | 2.43                     | 0.48              |
| 1:C:653[A]:HIS:HD2 | 1:C:666:GLY:O    | 1.97                     | 0.48              |
| 1:E:73:TRP:CZ2     | 1:E:122:CYS:HB3  | 2.48                     | 0.48              |
| 1:E:261:TRP:CH2    | 1:E:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:H:188:VAL:C      | 1:H:189:LEU:HD23 | 2.33                     | 0.48              |
| 1:H:322:LEU:HD23   | 1:H:322:LEU:C    | 2.33                     | 0.48              |
| 1:I:914:CME:HE2    | 1:I:914:CME:HB3  | 1.74                     | 0.48              |
| 1:J:261:TRP:CH2    | 1:J:266:GLN:HB2  | 2.49                     | 0.48              |
| 1:K:217:LYS:HG2    | 1:K:218:PRO:HD2  | 1.96                     | 0.48              |
| 1:K:653[A]:HIS:HD2 | 1:K:666:GLY:O    | 1.97                     | 0.48              |
| 1:N:35:SER:O       | 1:N:50:GLN:HG3   | 2.14                     | 0.48              |
| 1:N:903[A]:GLN:NE2 | 3:N:3421:HOH:O   | 2.45                     | 0.48              |
| 1:P:65:ALA:HB1     | 1:P:66:PRO:HD2   | 1.95                     | 0.48              |
| 1:C:188:VAL:C      | 1:C:189:LEU:HD23 | 2.33                     | 0.47              |
| 1:D:73:TRP:CZ2     | 1:D:122:CYS:HB3  | 2.48                     | 0.47              |
| 1:D:261:TRP:CH2    | 1:D:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:E:279:ILE:HD11   | 1:H:422:PRO:HG2  | 1.95                     | 0.47              |
| 1:F:35:SER:O       | 1:F:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:F:217:LYS:HG2    | 1:F:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:F:278:ILE:H      | 1:F:278:ILE:CD1  | 2.22                     | 0.47              |
| 1:H:65:ALA:HB1     | 1:H:66:PRO:HD2   | 1.95                     | 0.47              |
| 1:H:429:ASP:OD1    | 1:H:430:PRO:HD2  | 2.13                     | 0.47              |
| 1:I:65:ALA:HB1     | 1:I:66:PRO:HD2   | 1.95                     | 0.47              |
| 1:K:910:LEU:C      | 1:K:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:L:35:SER:O       | 1:L:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:L:217:LYS:HG2    | 1:L:218:PRO:HD2  | 1.96                     | 0.47              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:M:261:TRP:CH2    | 1:M:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:M:745:MET:HA     | 1:M:745:MET:CE   | 2.39                     | 0.47              |
| 1:N:217:LYS:HG2    | 1:N:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:P:595:THR:HG23   | 1:P:596:PRO:CA   | 2.35                     | 0.47              |
| 1:A:3:ILE:HG13     | 1:A:4:THR:N      | 2.25                     | 0.47              |
| 1:A:35:SER:O       | 1:A:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:B:261:TRP:CH2    | 1:B:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:D:18:ASN:ND2     | 1:D:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:D:653[A]:HIS:HD2 | 1:D:666:GLY:O    | 1.96                     | 0.47              |
| 1:D:910:LEU:C      | 1:D:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:G:57:GLU:HG2     | 1:G:83:THR:HG22  | 1.95                     | 0.47              |
| 1:G:73:TRP:CH2     | 1:G:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:K:856:TYR:HD2    | 1:K:864:MET:CE   | 2.25                     | 0.47              |
| 1:N:914:CME:HE2    | 1:N:914:CME:HB3  | 1.74                     | 0.47              |
| 1:O:73:TRP:CH2     | 1:O:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:B:217:LYS:HG2    | 1:B:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:C:217:LYS:HG2    | 1:C:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:D:429:ASP:OD1    | 1:D:430:PRO:HD2  | 2.13                     | 0.47              |
| 1:F:429:ASP:OD1    | 1:F:430:PRO:HD2  | 2.13                     | 0.47              |
| 1:G:9:VAL:O        | 1:G:12:GLN:HB3   | 2.13                     | 0.47              |
| 1:I:595:THR:HG23   | 1:I:596:PRO:CA   | 2.35                     | 0.47              |
| 1:L:65:ALA:HB1     | 1:L:66:PRO:HD2   | 1.95                     | 0.47              |
| 1:N:653[A]:HIS:HD2 | 1:N:666:GLY:O    | 1.97                     | 0.47              |
| 1:A:43:ARG:HH11    | 1:A:43:ARG:CG    | 2.24                     | 0.47              |
| 1:C:73:TRP:CH2     | 1:C:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:C:645:ARG:HH22   | 1:C:650:GLU:CD   | 2.18                     | 0.47              |
| 1:D:9:VAL:O        | 1:D:12:GLN:HB3   | 2.13                     | 0.47              |
| 1:E:910:LEU:C      | 1:E:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:F:254:LEU:HD23   | 1:F:254:LEU:HA   | 1.71                     | 0.47              |
| 1:F:433:LEU:O      | 1:F:437:SER:HB3  | 2.13                     | 0.47              |
| 1:F:645:ARG:HH22   | 1:F:650:GLU:CD   | 2.18                     | 0.47              |
| 1:G:257:THR:OG1    | 1:G:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:I:18:ASN:ND2     | 1:I:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:L:257:THR:OG1    | 1:L:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:L:653[A]:HIS:HD2 | 1:L:666:GLY:O    | 1.96                     | 0.47              |
| 1:L:910:LEU:C      | 1:L:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:M:188:VAL:C      | 1:M:189:LEU:HD23 | 2.33                     | 0.47              |
| 1:M:257:THR:OG1    | 1:M:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:C:429:ASP:OD1    | 1:C:430:PRO:HD2  | 2.13                     | 0.47              |
| 1:E:188:VAL:C      | 1:E:189:LEU:HD23 | 2.33                     | 0.47              |
| 1:E:645:ARG:HH22   | 1:E:650:GLU:CD   | 2.18                     | 0.47              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:J:3:ILE:HG13     | 1:J:4:THR:N      | 2.25                     | 0.47              |
| 1:J:856:TYR:HD2    | 1:J:864:MET:CE   | 2.26                     | 0.47              |
| 1:O:261:TRP:CH2    | 1:O:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:O:645:ARG:HH22   | 1:O:650:GLU:CD   | 2.18                     | 0.47              |
| 1:P:18:ASN:ND2     | 1:P:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:P:254:LEU:HA     | 1:P:254:LEU:HD23 | 1.71                     | 0.47              |
| 1:P:910:LEU:C      | 1:P:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:A:419:GLY:C      | 1:D:282:ARG:HH11 | 2.16                     | 0.47              |
| 1:C:78:LEU:HB3     | 1:C:79:PRO:CD    | 2.43                     | 0.47              |
| 1:F:73:TRP:CH2     | 1:F:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:H:73:TRP:CH2     | 1:H:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:H:910:LEU:C      | 1:H:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:I:287:ASP:OD2    | 1:L:425:ARG:NH2  | 2.47                     | 0.47              |
| 1:O:910:LEU:C      | 1:O:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:P:73:TRP:CZ2     | 1:P:122:CYS:HB3  | 2.48                     | 0.47              |
| 1:P:257:THR:OG1    | 1:P:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:P:653[A]:HIS:HD2 | 1:P:666:GLY:O    | 1.96                     | 0.47              |
| 1:A:261:TRP:CH2    | 1:A:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:A:910:LEU:C      | 1:A:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:B:43:ARG:HH11    | 1:B:43:ARG:CG    | 2.24                     | 0.47              |
| 1:B:73:TRP:CH2     | 1:B:185:ALA:HB1  | 2.49                     | 0.47              |
| 1:B:645:ARG:HH22   | 1:B:650:GLU:CD   | 2.18                     | 0.47              |
| 1:B:910:LEU:C      | 1:B:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:C:910:LEU:C      | 1:C:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:D:188:VAL:C      | 1:D:189:LEU:HD23 | 2.33                     | 0.47              |
| 1:E:18:ASN:ND2     | 1:E:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:F:43:ARG:HH11    | 1:F:43:ARG:CG    | 2.24                     | 0.47              |
| 1:F:595:THR:CG2    | 1:F:596:PRO:HA   | 2.37                     | 0.47              |
| 1:G:237:ARG:HE     | 1:G:237:ARG:HB2  | 1.35                     | 0.47              |
| 1:G:910:LEU:C      | 1:G:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:H:73:TRP:CZ2     | 1:H:122:CYS:HB3  | 2.48                     | 0.47              |
| 1:I:9:VAL:O        | 1:I:12:GLN:HB3   | 2.13                     | 0.47              |
| 1:J:645:ARG:HH22   | 1:J:650:GLU:CD   | 2.18                     | 0.47              |
| 1:J:653[A]:HIS:HD2 | 1:J:666:GLY:O    | 1.97                     | 0.47              |
| 1:K:9:VAL:O        | 1:K:12:GLN:HB3   | 2.13                     | 0.47              |
| 1:K:35:SER:O       | 1:K:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:M:35:SER:O       | 1:M:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:M:910:LEU:C      | 1:M:910:LEU:HD12 | 2.35                     | 0.47              |
| 1:N:9:VAL:O        | 1:N:12:GLN:HB3   | 2.13                     | 0.47              |
| 1:O:653[A]:HIS:HD2 | 1:O:666:GLY:O    | 1.97                     | 0.47              |
| 1:P:645:ARG:HH22   | 1:P:650:GLU:CD   | 2.18                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:679:LEU:HD23 | 1:P:679:LEU:HA   | 1.40                     | 0.47              |
| 1:A:18:ASN:ND2   | 1:A:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:A:679:LEU:HD23 | 1:A:679:LEU:HA   | 1.40                     | 0.47              |
| 1:B:914:CME:HE2  | 1:B:914:CME:HB3  | 1.74                     | 0.47              |
| 1:C:261:TRP:CH2  | 1:C:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:E:35:SER:O     | 1:E:50:GLN:HG3   | 2.14                     | 0.47              |
| 1:F:140:ARG:HB2  | 1:F:171:PHE:O    | 2.13                     | 0.47              |
| 1:F:257:THR:OG1  | 1:F:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:G:217:LYS:HG2  | 1:G:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:H:645:ARG:HH22 | 1:H:650:GLU:CD   | 2.18                     | 0.47              |
| 1:J:134:LEU:HD23 | 1:J:134:LEU:HA   | 1.68                     | 0.47              |
| 1:K:645:ARG:HH22 | 1:K:650:GLU:CD   | 2.18                     | 0.47              |
| 1:L:645:ARG:HH22 | 1:L:650:GLU:CD   | 2.18                     | 0.47              |
| 1:O:362:LEU:HD23 | 1:O:362:LEU:HA   | 1.70                     | 0.47              |
| 1:O:658:LEU:N    | 1:O:661:LYS:O    | 2.40                     | 0.47              |
| 1:P:36:TRP:CE2   | 1:P:42:ALA:HA    | 2.50                     | 0.47              |
| 1:A:183:ARG:HD3  | 1:A:183:ARG:HH11 | 1.62                     | 0.47              |
| 1:B:18:ASN:ND2   | 1:B:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:B:202:MET:HB3  | 1:B:202:MET:HE3  | 1.82                     | 0.47              |
| 1:B:257:THR:OG1  | 1:B:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:C:36:TRP:CE2   | 1:C:42:ALA:HA    | 2.50                     | 0.47              |
| 1:C:856:TYR:CD2  | 1:C:864:MET:HE2  | 2.48                     | 0.47              |
| 1:F:18:ASN:ND2   | 1:F:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:G:261:TRP:CH2  | 1:G:266:GLN:HB2  | 2.49                     | 0.47              |
| 1:H:18:ASN:ND2   | 1:H:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:I:257:THR:OG1  | 1:I:316:HIS:HE1  | 1.98                     | 0.47              |
| 1:K:134:LEU:HD23 | 1:K:134:LEU:HA   | 1.68                     | 0.47              |
| 1:M:78:LEU:HB3   | 1:M:79:PRO:CD    | 2.43                     | 0.47              |
| 1:O:217:LYS:HG2  | 1:O:218:PRO:HD2  | 1.96                     | 0.47              |
| 1:P:134:LEU:HA   | 1:P:134:LEU:HD23 | 1.68                     | 0.47              |
| 1:F:134:LEU:HA   | 1:F:134:LEU:HD23 | 1.68                     | 0.47              |
| 1:F:952:ARG:HH11 | 1:F:952:ARG:CG   | 2.28                     | 0.47              |
| 1:G:18:ASN:ND2   | 1:G:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:H:43:ARG:HH11  | 1:H:43:ARG:CG    | 2.24                     | 0.47              |
| 1:H:595:THR:HG23 | 1:H:596:PRO:CA   | 2.35                     | 0.47              |
| 1:I:7:LEU:HD12   | 1:I:74:LEU:HD11  | 1.97                     | 0.47              |
| 1:I:287:ASP:CG   | 1:L:425:ARG:HH22 | 2.17                     | 0.47              |
| 1:K:78:LEU:HB3   | 1:K:79:PRO:CD    | 2.43                     | 0.47              |
| 1:K:668:VAL:CG1  | 1:K:669:PRO:HD2  | 2.45                     | 0.47              |
| 1:K:949:HIS:HD2  | 1:K:1020:TRP:HE1 | 1.53                     | 0.47              |
| 1:L:261:TRP:CH2  | 1:L:266:GLN:HB2  | 2.49                     | 0.47              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:N:18:ASN:ND2     | 1:N:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:N:910:LEU:HD12   | 1:N:910:LEU:C    | 2.35                     | 0.47              |
| 1:O:18:ASN:ND2     | 1:O:21:VAL:HG23  | 2.29                     | 0.47              |
| 1:A:65:ALA:HB1     | 1:A:66:PRO:HD2   | 1.95                     | 0.46              |
| 1:A:914:CME:HE2    | 1:A:914:CME:HB3  | 1.74                     | 0.46              |
| 1:B:612:THR:HB     | 1:B:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:C:18:ASN:ND2     | 1:C:21:VAL:HG23  | 2.29                     | 0.46              |
| 1:C:429:ASP:HA     | 1:C:430:PRO:HD3  | 1.73                     | 0.46              |
| 1:D:952:ARG:HH11   | 1:D:952:ARG:CG   | 2.28                     | 0.46              |
| 1:E:830:LEU:HD11   | 1:F:830:LEU:HD11 | 1.97                     | 0.46              |
| 1:F:668:VAL:CG1    | 1:F:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:G:645:ARG:HH22   | 1:G:650:GLU:CD   | 2.18                     | 0.46              |
| 1:G:753:ASN:OD1    | 1:G:753:ASN:N    | 2.30                     | 0.46              |
| 1:I:378:LEU:HD23   | 1:I:378:LEU:HA   | 1.74                     | 0.46              |
| 1:I:653[A]:HIS:HD2 | 1:I:666:GLY:O    | 1.97                     | 0.46              |
| 1:J:429:ASP:HA     | 1:J:430:PRO:HD3  | 1.73                     | 0.46              |
| 1:J:910:LEU:C      | 1:J:910:LEU:HD12 | 2.35                     | 0.46              |
| 1:K:18:ASN:ND2     | 1:K:21:VAL:HG23  | 2.29                     | 0.46              |
| 1:L:63:PHE:CB      | 1:L:64:PRO:HD2   | 2.34                     | 0.46              |
| 1:L:134:LEU:HD23   | 1:L:134:LEU:HA   | 1.68                     | 0.46              |
| 1:M:18:ASN:ND2     | 1:M:21:VAL:HG23  | 2.29                     | 0.46              |
| 1:N:645:ARG:HH22   | 1:N:650:GLU:CD   | 2.18                     | 0.46              |
| 1:P:147:ASN:HA     | 1:P:148:SER:HA   | 1.57                     | 0.46              |
| 1:A:36:TRP:CE2     | 1:A:42:ALA:HA    | 2.50                     | 0.46              |
| 1:A:57:GLU:HG2     | 1:A:83:THR:HG22  | 1.95                     | 0.46              |
| 1:A:100:TYR:CE1    | 1:A:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:D:36:TRP:CE2     | 1:D:42:ALA:HA    | 2.50                     | 0.46              |
| 1:F:57:GLU:HG2     | 1:F:83:THR:HG22  | 1.95                     | 0.46              |
| 1:G:91:GLN:HG3     | 1:G:96:ASP:OD1   | 2.15                     | 0.46              |
| 1:H:100:TYR:CE1    | 1:H:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:H:114:VAL:HG22   | 1:H:191:TRP:HB3  | 1.98                     | 0.46              |
| 1:I:91:GLN:HG3     | 1:I:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:I:645:ARG:HH22   | 1:I:650:GLU:CD   | 2.18                     | 0.46              |
| 1:I:910:LEU:C      | 1:I:910:LEU:HD12 | 2.35                     | 0.46              |
| 1:M:856:TYR:CD2    | 1:M:864:MET:HE2  | 2.50                     | 0.46              |
| 1:N:91:GLN:HG3     | 1:N:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:O:7:LEU:HD12     | 1:O:74:LEU:HD11  | 1.97                     | 0.46              |
| 1:A:91:GLN:HG3     | 1:A:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:B:429:ASP:HA     | 1:B:430:PRO:HD3  | 1.73                     | 0.46              |
| 1:B:753:ASN:OD1    | 1:B:753:ASN:N    | 2.30                     | 0.46              |
| 1:C:668:VAL:CG1    | 1:C:669:PRO:HD2  | 2.45                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:57:GLU:HG2   | 1:D:83:THR:HG22  | 1.95                     | 0.46              |
| 1:D:100:TYR:CE1  | 1:D:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:D:645:ARG:HH22 | 1:D:650:GLU:CD   | 2.18                     | 0.46              |
| 1:E:362:LEU:HD23 | 1:E:362:LEU:HA   | 1.70                     | 0.46              |
| 1:G:36:TRP:CE2   | 1:G:42:ALA:HA    | 2.50                     | 0.46              |
| 1:I:36:TRP:CE2   | 1:I:42:ALA:HA    | 2.50                     | 0.46              |
| 1:I:57:GLU:HG2   | 1:I:83:THR:HG22  | 1.95                     | 0.46              |
| 1:J:257:THR:OG1  | 1:J:316:HIS:HE1  | 1.98                     | 0.46              |
| 1:K:952:ARG:HH11 | 1:K:952:ARG:CG   | 2.28                     | 0.46              |
| 1:L:18:ASN:ND2   | 1:L:21:VAL:HG23  | 2.29                     | 0.46              |
| 1:L:36:TRP:CE2   | 1:L:42:ALA:HA    | 2.50                     | 0.46              |
| 1:O:80:GLU:H     | 1:O:80:GLU:HG3   | 1.28                     | 0.46              |
| 1:P:114:VAL:HG22 | 1:P:191:TRP:HB3  | 1.98                     | 0.46              |
| 1:A:362:LEU:HA   | 1:A:362:LEU:HD23 | 1.70                     | 0.46              |
| 1:A:645:ARG:HH22 | 1:A:650:GLU:CD   | 2.18                     | 0.46              |
| 1:A:658:LEU:N    | 1:A:661:LYS:O    | 2.40                     | 0.46              |
| 1:B:91:GLN:HG3   | 1:B:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:B:100:TYR:CE1  | 1:B:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:C:952:ARG:HH11 | 1:C:952:ARG:CG   | 2.28                     | 0.46              |
| 1:D:91:GLN:HG3   | 1:D:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:E:257:THR:OG1  | 1:E:316:HIS:HE1  | 1.98                     | 0.46              |
| 1:G:657:ALA:HA   | 1:G:661:LYS:O    | 2.16                     | 0.46              |
| 1:I:43:ARG:HH11  | 1:I:43:ARG:CG    | 2.24                     | 0.46              |
| 1:I:217:LYS:HG2  | 1:I:218:PRO:HD2  | 1.96                     | 0.46              |
| 1:I:595:THR:CG2  | 1:I:596:PRO:HA   | 2.37                     | 0.46              |
| 1:J:395:HIS:HA   | 1:J:396:PRO:HD3  | 1.69                     | 0.46              |
| 1:K:3:ILE:HG13   | 1:K:4:THR:N      | 2.25                     | 0.46              |
| 1:L:595:THR:CG2  | 1:L:596:PRO:HA   | 2.37                     | 0.46              |
| 1:L:668:VAL:CG1  | 1:L:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:M:546:LEU:HA   | 3:M:4124:HOH:O   | 2.16                     | 0.46              |
| 1:A:114:VAL:HG22 | 1:A:191:TRP:HB3  | 1.98                     | 0.46              |
| 1:A:657:ALA:HA   | 1:A:661:LYS:O    | 2.16                     | 0.46              |
| 1:C:257:THR:OG1  | 1:C:316:HIS:HE1  | 1.98                     | 0.46              |
| 1:D:78:LEU:HB3   | 1:D:79:PRO:CD    | 2.43                     | 0.46              |
| 1:E:36:TRP:CE2   | 1:E:42:ALA:HA    | 2.50                     | 0.46              |
| 1:E:272:ALA:HA   | 1:E:273:PRO:HD3  | 1.78                     | 0.46              |
| 1:F:910:LEU:HD12 | 1:F:910:LEU:C    | 2.35                     | 0.46              |
| 1:G:612:THR:HB   | 1:G:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:L:285:TYR:CB   | 1:L:288:ARG:HG3  | 2.42                     | 0.46              |
| 1:L:612:THR:HB   | 1:L:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:M:43:ARG:HH11  | 1:M:43:ARG:CG    | 2.24                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:612:THR:HB   | 1:N:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:N:679:LEU:HD23 | 1:N:679:LEU:HA   | 1.40                     | 0.46              |
| 1:O:36:TRP:CE2   | 1:O:42:ALA:HA    | 2.50                     | 0.46              |
| 1:O:257:THR:OG1  | 1:O:316:HIS:HE1  | 1.98                     | 0.46              |
| 1:O:668:VAL:CG1  | 1:O:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:P:772:ASP:OD1  | 1:P:772:ASP:N    | 2.48                     | 0.46              |
| 1:P:952:ARG:HH11 | 1:P:952:ARG:CG   | 2.28                     | 0.46              |
| 1:A:422:PRO:HG3  | 1:D:284:GLY:C    | 2.35                     | 0.46              |
| 1:B:36:TRP:CE2   | 1:B:42:ALA:HA    | 2.50                     | 0.46              |
| 1:B:579:ASP:HB2  | 1:B:580:GLU:OE2  | 2.16                     | 0.46              |
| 1:B:856:TYR:CD2  | 1:B:864:MET:HE2  | 2.48                     | 0.46              |
| 1:D:657:ALA:HA   | 1:D:661:LYS:O    | 2.16                     | 0.46              |
| 1:E:100:TYR:CE1  | 1:E:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:E:217:LYS:HG2  | 1:E:218:PRO:HD2  | 1.96                     | 0.46              |
| 1:E:657:ALA:HA   | 1:E:661:LYS:O    | 2.16                     | 0.46              |
| 1:F:36:TRP:CE2   | 1:F:42:ALA:HA    | 2.50                     | 0.46              |
| 1:F:612:THR:HB   | 1:F:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:H:254:LEU:HD23 | 1:H:254:LEU:HA   | 1.71                     | 0.46              |
| 1:J:91:GLN:HG3   | 1:J:96:ASP:OD1   | 2.15                     | 0.46              |
| 1:K:57:GLU:HG2   | 1:K:83:THR:HG22  | 1.95                     | 0.46              |
| 1:K:114:VAL:HG22 | 1:K:191:TRP:HB3  | 1.98                     | 0.46              |
| 1:L:427:THR:HA   | 1:L:436:MET:HE2  | 1.93                     | 0.46              |
| 1:L:657:ALA:HA   | 1:L:661:LYS:O    | 2.16                     | 0.46              |
| 1:M:134:LEU:HA   | 1:M:134:LEU:HD23 | 1.68                     | 0.46              |
| 1:O:657:ALA:HA   | 1:O:661:LYS:O    | 2.16                     | 0.46              |
| 1:O:952:ARG:HH11 | 1:O:952:ARG:CG   | 2.28                     | 0.46              |
| 1:A:668:VAL:CG1  | 1:A:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:B:657:ALA:HA   | 1:B:661:LYS:O    | 2.16                     | 0.46              |
| 1:D:579:ASP:HB2  | 1:D:580:GLU:OE2  | 2.16                     | 0.46              |
| 1:D:612:THR:HB   | 1:D:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:F:469:ASP:HB3  | 1:G:473:ARG:HD2  | 1.97                     | 0.46              |
| 1:F:920:LEU:HB3  | 1:F:921:PRO:CD   | 2.46                     | 0.46              |
| 1:H:3:ILE:HG13   | 1:H:4:THR:N      | 2.25                     | 0.46              |
| 1:H:91:GLN:HG3   | 1:H:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:H:657:ALA:HA   | 1:H:661:LYS:O    | 2.16                     | 0.46              |
| 1:I:579:ASP:HB2  | 1:I:580:GLU:OE2  | 2.16                     | 0.46              |
| 1:I:612:THR:HB   | 1:I:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:I:767:GLN:CG   | 1:I:768:MET:N    | 2.79                     | 0.46              |
| 1:J:100:TYR:CE1  | 1:J:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:J:147:ASN:HA   | 1:J:148:SER:HA   | 1.57                     | 0.46              |
| 1:J:287:ASP:CG   | 1:K:425:ARG:HH22 | 2.18                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:425:ARG:HH22 | 1:K:287:ASP:CG   | 2.19                     | 0.46              |
| 1:M:254:LEU:HA   | 1:M:254:LEU:HD23 | 1.71                     | 0.46              |
| 1:N:36:TRP:CE2   | 1:N:42:ALA:HA    | 2.50                     | 0.46              |
| 1:O:237:ARG:HE   | 1:O:237:ARG:HB2  | 1.35                     | 0.46              |
| 1:O:612:THR:HB   | 1:O:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:A:685:LEU:HA   | 1:A:686:PRO:HD3  | 1.83                     | 0.46              |
| 1:B:114:VAL:HG22 | 1:B:191:TRP:HB3  | 1.98                     | 0.46              |
| 1:B:279:ILE:HD11 | 1:C:422:PRO:HG2  | 1.96                     | 0.46              |
| 1:C:100:TYR:CE1  | 1:C:602:CYS:HB3  | 2.51                     | 0.46              |
| 1:C:118:ASN:HA   | 1:C:119:PRO:HD2  | 1.62                     | 0.46              |
| 1:D:767:GLN:CG   | 1:D:768:MET:N    | 2.79                     | 0.46              |
| 1:G:952:ARG:HH11 | 1:G:952:ARG:CG   | 2.28                     | 0.46              |
| 1:H:285:TYR:CB   | 1:H:288:ARG:HG3  | 2.42                     | 0.46              |
| 1:H:952:ARG:HH11 | 1:H:952:ARG:CG   | 2.28                     | 0.46              |
| 1:J:18:ASN:ND2   | 1:J:21:VAL:HG23  | 2.29                     | 0.46              |
| 1:J:78:LEU:HB3   | 1:J:79:PRO:CD    | 2.43                     | 0.46              |
| 1:J:668:VAL:CG1  | 1:J:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:J:986:ILE:HD13 | 1:J:986:ILE:HG23 | 1.67                     | 0.46              |
| 1:L:91:GLN:HG3   | 1:L:96:ASP:OD1   | 2.16                     | 0.46              |
| 1:M:36:TRP:CE2   | 1:M:42:ALA:HA    | 2.50                     | 0.46              |
| 1:M:91:GLN:HG3   | 1:M:96:ASP:OD1   | 2.15                     | 0.46              |
| 1:M:217:LYS:HG2  | 1:M:218:PRO:HD2  | 1.96                     | 0.46              |
| 1:M:679:LEU:HD23 | 1:M:679:LEU:HA   | 1.40                     | 0.46              |
| 1:N:257:THR:OG1  | 1:N:316:HIS:HE1  | 1.98                     | 0.46              |
| 1:N:282:ARG:HD2  | 1:O:418:HIS:O    | 2.15                     | 0.46              |
| 1:N:579:ASP:HB2  | 1:N:580:GLU:OE2  | 2.16                     | 0.46              |
| 1:N:920:LEU:HB3  | 1:N:921:PRO:CD   | 2.46                     | 0.46              |
| 1:P:118:ASN:HA   | 1:P:119:PRO:HD2  | 1.62                     | 0.46              |
| 1:P:612:THR:HB   | 1:P:613:PRO:HD2  | 1.98                     | 0.46              |
| 1:P:657:ALA:HA   | 1:P:661:LYS:O    | 2.16                     | 0.46              |
| 1:B:111:PRO:HA   | 1:B:112:PRO:HA   | 1.66                     | 0.46              |
| 1:B:668:VAL:CG1  | 1:B:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:C:395:HIS:CG   | 1:C:396:PRO:HD2  | 2.51                     | 0.46              |
| 1:D:658:LEU:N    | 1:D:661:LYS:O    | 2.40                     | 0.46              |
| 1:E:668:VAL:CG1  | 1:E:669:PRO:HD2  | 2.45                     | 0.46              |
| 1:E:767:GLN:CG   | 1:E:768:MET:N    | 2.79                     | 0.46              |
| 1:G:254:LEU:HD23 | 1:G:254:LEU:HA   | 1.71                     | 0.46              |
| 1:G:429:ASP:HA   | 1:G:430:PRO:HD3  | 1.74                     | 0.46              |
| 1:G:579:ASP:HB2  | 1:G:580:GLU:OE2  | 2.16                     | 0.46              |
| 1:H:237:ARG:HE   | 1:H:237:ARG:HB2  | 1.35                     | 0.46              |
| 1:I:657:ALA:HA   | 1:I:661:LYS:O    | 2.16                     | 0.46              |

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| Atom-1             | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-----------------|--------------------------|-------------------|
| 1:K:42:ALA:O       | 1:K:310:ARG:NH1 | 2.49                     | 0.46              |
| 1:K:546:LEU:HA     | 3:K:4124:HOH:O  | 2.16                     | 0.46              |
| 1:K:701:VAL:HG12   | 1:K:702:GLN:N   | 2.31                     | 0.46              |
| 1:L:7:LEU:HD12     | 1:L:74:LEU:HD11 | 1.97                     | 0.46              |
| 1:L:42:ALA:O       | 1:L:310:ARG:NH1 | 2.49                     | 0.46              |
| 1:M:85:VAL:CG1     | 1:M:86:VAL:N    | 2.79                     | 0.46              |
| 1:O:57:GLU:HG2     | 1:O:83:THR:HG22 | 1.95                     | 0.46              |
| 1:O:579:ASP:HB2    | 1:O:580:GLU:OE2 | 2.16                     | 0.46              |
| 1:O:767:GLN:CG     | 1:O:768:MET:N   | 2.79                     | 0.46              |
| 1:P:701:VAL:HG12   | 1:P:702:GLN:N   | 2.31                     | 0.46              |
| 1:P:730:LEU:HA     | 1:P:731:PRO:HD3 | 1.80                     | 0.46              |
| 1:A:395:HIS:HA     | 1:A:396:PRO:HD3 | 1.69                     | 0.46              |
| 1:B:85:VAL:CG1     | 1:B:86:VAL:N    | 2.79                     | 0.46              |
| 1:B:285:TYR:CB     | 1:B:288:ARG:HG3 | 2.42                     | 0.46              |
| 1:C:57:GLU:HG2     | 1:C:83:THR:HG22 | 1.95                     | 0.46              |
| 1:D:701:VAL:HG12   | 1:D:702:GLN:N   | 2.31                     | 0.46              |
| 1:E:85:VAL:CG1     | 1:E:86:VAL:N    | 2.79                     | 0.46              |
| 1:E:655:MET:HE3    | 1:E:655:MET:HB2 | 1.73                     | 0.46              |
| 1:E:701:VAL:HG12   | 1:E:702:GLN:N   | 2.31                     | 0.46              |
| 1:G:546:LEU:HA     | 3:G:3228:HOH:O  | 2.16                     | 0.46              |
| 1:G:767:GLN:CG     | 1:G:768:MET:N   | 2.79                     | 0.46              |
| 1:I:546:LEU:HA     | 3:I:4123:HOH:O  | 2.16                     | 0.46              |
| 1:J:36:TRP:CE2     | 1:J:42:ALA:HA   | 2.50                     | 0.46              |
| 1:J:43:ARG:HH11    | 1:J:43:ARG:CG   | 2.24                     | 0.46              |
| 1:J:546:LEU:HA     | 3:J:3231:HOH:O  | 2.16                     | 0.46              |
| 1:J:579:ASP:HB2    | 1:J:580:GLU:OE2 | 2.16                     | 0.46              |
| 1:J:701:VAL:HG12   | 1:J:702:GLN:N   | 2.31                     | 0.46              |
| 1:K:100:TYR:CE1    | 1:K:602:CYS:HB3 | 2.51                     | 0.46              |
| 1:K:767:GLN:CG     | 1:K:768:MET:N   | 2.79                     | 0.46              |
| 1:M:653[B]:HIS:CD2 | 1:M:667:GLU:HG2 | 2.51                     | 0.46              |
| 1:M:701:VAL:HG12   | 1:M:702:GLN:N   | 2.31                     | 0.46              |
| 1:N:3:ILE:HG13     | 1:N:4:THR:N     | 2.25                     | 0.46              |
| 1:N:701:VAL:HG12   | 1:N:702:GLN:N   | 2.31                     | 0.46              |
| 1:N:778:THR:HG23   | 1:N:779:PRO:HD2 | 1.98                     | 0.46              |
| 1:O:546:LEU:HA     | 3:O:3228:HOH:O  | 2.16                     | 0.46              |
| 1:O:920:LEU:HB3    | 1:O:921:PRO:CD  | 2.46                     | 0.46              |
| 1:P:100:TYR:CE1    | 1:P:602:CYS:HB3 | 2.51                     | 0.46              |
| 1:P:767:GLN:CG     | 1:P:768:MET:N   | 2.79                     | 0.46              |
| 1:A:433:LEU:N      | 1:A:434:PRO:CD  | 2.80                     | 0.45              |
| 1:A:612:THR:HB     | 1:A:613:PRO:HD2 | 1.98                     | 0.45              |
| 1:B:395:HIS:HA     | 1:B:396:PRO:HD3 | 1.69                     | 0.45              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:F:579:ASP:HB2    | 1:F:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:F:701:VAL:HG12   | 1:F:702:GLN:N    | 2.31                     | 0.45              |
| 1:H:36:TRP:CE2     | 1:H:42:ALA:HA    | 2.50                     | 0.45              |
| 1:H:579:ASP:HB2    | 1:H:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:H:595:THR:CG2    | 1:H:596:PRO:HA   | 2.37                     | 0.45              |
| 1:I:653[B]:HIS:CD2 | 1:I:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:J:42:ALA:O       | 1:J:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:K:914:CME:HB3    | 1:K:914:CME:HE2  | 1.74                     | 0.45              |
| 1:L:114:VAL:HG22   | 1:L:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:M:595:THR:CG2    | 1:M:596:PRO:HA   | 2.37                     | 0.45              |
| 1:M:687:GLN:HA     | 1:M:688:PRO:HD3  | 1.73                     | 0.45              |
| 1:M:920:LEU:HB3    | 1:M:921:PRO:CD   | 2.46                     | 0.45              |
| 1:O:118:ASN:HA     | 1:O:119:PRO:HD2  | 1.62                     | 0.45              |
| 1:O:147:ASN:HA     | 1:O:148:SER:HA   | 1.57                     | 0.45              |
| 1:P:395:HIS:CG     | 1:P:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:P:579:ASP:HB2    | 1:P:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:B:362:LEU:HA     | 1:B:362:LEU:HD23 | 1.70                     | 0.45              |
| 1:C:7:LEU:HD12     | 1:C:74:LEU:HD11  | 1.97                     | 0.45              |
| 1:C:653[B]:HIS:CD2 | 1:C:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:C:657:ALA:HA     | 1:C:661:LYS:O    | 2.16                     | 0.45              |
| 1:C:679:LEU:HD23   | 1:C:679:LEU:HA   | 1.40                     | 0.45              |
| 1:C:947:GLY:HA3    | 1:C:948:PRO:HD2  | 1.82                     | 0.45              |
| 1:D:668:VAL:CG1    | 1:D:669:PRO:HD2  | 2.45                     | 0.45              |
| 1:D:778:THR:HG23   | 1:D:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:E:43:ARG:NH1     | 1:E:44:THR:CG2   | 2.80                     | 0.45              |
| 1:E:285:TYR:CB     | 1:E:288:ARG:HG3  | 2.42                     | 0.45              |
| 1:E:653[B]:HIS:CD2 | 1:E:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:E:920:LEU:HB3    | 1:E:921:PRO:CD   | 2.46                     | 0.45              |
| 1:F:395:HIS:CG     | 1:F:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:F:778:THR:HG23   | 1:F:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:G:100:TYR:CE1    | 1:G:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:G:118:ASN:HA     | 1:G:119:PRO:HD2  | 1.62                     | 0.45              |
| 1:H:42:ALA:O       | 1:H:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:H:612:THR:HB     | 1:H:613:PRO:HD2  | 1.98                     | 0.45              |
| 1:I:114:VAL:HG22   | 1:I:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:I:211:ASP:OD1    | 1:I:211:ASP:N    | 2.50                     | 0.45              |
| 1:J:653[B]:HIS:CD2 | 1:J:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:J:878:HIS:HA     | 1:J:879:PRO:HD3  | 1.83                     | 0.45              |
| 1:K:36:TRP:CE2     | 1:K:42:ALA:HA    | 2.50                     | 0.45              |
| 1:K:433:LEU:N      | 1:K:434:PRO:CD   | 2.80                     | 0.45              |
| 1:L:85:VAL:CG1     | 1:L:86:VAL:N     | 2.79                     | 0.45              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:L:653[B]:HIS:CD2 | 1:L:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:L:767:GLN:CG     | 1:L:768:MET:N    | 2.79                     | 0.45              |
| 1:M:114:VAL:HG22   | 1:M:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:M:668:VAL:CG1    | 1:M:669:PRO:HD2  | 2.45                     | 0.45              |
| 1:M:767:GLN:CG     | 1:M:768:MET:N    | 2.79                     | 0.45              |
| 1:O:395:HIS:CG     | 1:O:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:O:653[B]:HIS:CD2 | 1:O:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:P:3:ILE:HG13     | 1:P:4:THR:N      | 2.25                     | 0.45              |
| 1:P:13:ARG:O       | 1:P:14:ARG:HB2   | 2.17                     | 0.45              |
| 1:P:986:ILE:HD13   | 1:P:986:ILE:HG23 | 1.67                     | 0.45              |
| 1:A:202:MET:HB3    | 1:A:202:MET:HE3  | 1.84                     | 0.45              |
| 1:A:579:ASP:HB2    | 1:A:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:B:129:VAL:CG2    | 1:B:182:ASN:ND2  | 2.80                     | 0.45              |
| 1:B:425:ARG:NH2    | 1:C:287:ASP:OD2  | 2.50                     | 0.45              |
| 1:B:778:THR:HG23   | 1:B:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:C:91:GLN:HG3     | 1:C:96:ASP:OD1   | 2.16                     | 0.45              |
| 1:C:362:LEU:HD23   | 1:C:362:LEU:HA   | 1.70                     | 0.45              |
| 1:C:579:ASP:HB2    | 1:C:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:C:701:VAL:HG12   | 1:C:702:GLN:N    | 2.31                     | 0.45              |
| 1:D:129:VAL:CG2    | 1:D:182:ASN:ND2  | 2.80                     | 0.45              |
| 1:D:257:THR:OG1    | 1:D:316:HIS:HE1  | 1.98                     | 0.45              |
| 1:E:91:GLN:HG3     | 1:E:96:ASP:OD1   | 2.16                     | 0.45              |
| 1:E:433:LEU:N      | 1:E:434:PRO:CD   | 2.80                     | 0.45              |
| 1:E:612:THR:HA     | 1:E:613:PRO:HD3  | 1.59                     | 0.45              |
| 1:F:100:TYR:CE1    | 1:F:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:F:653[B]:HIS:CD2 | 1:F:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:F:767:GLN:CG     | 1:F:768:MET:N    | 2.79                     | 0.45              |
| 1:F:847:LYS:HG3    | 1:F:848:THR:N    | 2.32                     | 0.45              |
| 1:G:395:HIS:CG     | 1:G:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:G:847:LYS:HG3    | 1:G:848:THR:N    | 2.32                     | 0.45              |
| 1:H:257:THR:OG1    | 1:H:316:HIS:HE1  | 1.98                     | 0.45              |
| 1:H:668:VAL:CG1    | 1:H:669:PRO:HD2  | 2.45                     | 0.45              |
| 1:H:914:CME:HE2    | 1:H:914:CME:HB3  | 1.74                     | 0.45              |
| 1:H:920:LEU:HB3    | 1:H:921:PRO:CD   | 2.46                     | 0.45              |
| 1:I:100:TYR:CE1    | 1:I:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:J:43:ARG:NH1     | 1:J:44:THR:CG2   | 2.80                     | 0.45              |
| 1:J:129:VAL:CG2    | 1:J:182:ASN:ND2  | 2.80                     | 0.45              |
| 1:J:211:ASP:OD1    | 1:J:211:ASP:N    | 2.50                     | 0.45              |
| 1:J:322:LEU:CD2    | 1:J:324:GLU:N    | 2.80                     | 0.45              |
| 1:J:778:THR:HG23   | 1:J:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:K:91:GLN:HG3     | 1:K:96:ASP:OD1   | 2.15                     | 0.45              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:K:254:LEU:HA     | 1:K:254:LEU:HD23 | 1.71                     | 0.45              |
| 1:L:395:HIS:CG     | 1:L:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:L:579:ASP:HB2    | 1:L:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:L:914:CME:HE2    | 1:L:914:CME:HB3  | 1.74                     | 0.45              |
| 1:M:43:ARG:NH1     | 1:M:44:THR:CG2   | 2.80                     | 0.45              |
| 1:M:645:ARG:HH22   | 1:M:650:GLU:CD   | 2.18                     | 0.45              |
| 1:N:43:ARG:HH12    | 1:N:44:THR:CG2   | 2.30                     | 0.45              |
| 1:N:114:VAL:HG22   | 1:N:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:N:395:HIS:CG     | 1:N:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:N:668:VAL:CG1    | 1:N:669:PRO:HD2  | 2.45                     | 0.45              |
| 1:N:847:LYS:HG3    | 1:N:848:THR:N    | 2.32                     | 0.45              |
| 1:O:100:TYR:CE1    | 1:O:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:P:42:ALA:O       | 1:P:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:A:85:VAL:CG1     | 1:A:86:VAL:N     | 2.79                     | 0.45              |
| 1:A:211:ASP:OD1    | 1:A:211:ASP:N    | 2.50                     | 0.45              |
| 1:C:767:GLN:CG     | 1:C:768:MET:N    | 2.79                     | 0.45              |
| 1:C:778:THR:HG23   | 1:C:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:D:43:ARG:NH1     | 1:D:44:THR:CG2   | 2.80                     | 0.45              |
| 1:D:211:ASP:OD1    | 1:D:211:ASP:N    | 2.50                     | 0.45              |
| 1:E:687:GLN:HA     | 1:E:688:PRO:HD3  | 1.73                     | 0.45              |
| 1:F:3:ILE:HD12     | 1:F:3:ILE:O      | 2.17                     | 0.45              |
| 1:F:237:ARG:HE     | 1:F:237:ARG:HB2  | 1.35                     | 0.45              |
| 1:F:657:ALA:HA     | 1:F:661:LYS:O    | 2.16                     | 0.45              |
| 1:G:42:ALA:O       | 1:G:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:G:43:ARG:NH1     | 1:G:44:THR:CG2   | 2.80                     | 0.45              |
| 1:H:43:ARG:NH1     | 1:H:44:THR:CG2   | 2.80                     | 0.45              |
| 1:H:85:VAL:CG1     | 1:H:86:VAL:N     | 2.79                     | 0.45              |
| 1:H:653[B]:HIS:CD2 | 1:H:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:I:85:VAL:CG1     | 1:I:86:VAL:N     | 2.79                     | 0.45              |
| 1:I:920:LEU:HB3    | 1:I:921:PRO:CD   | 2.46                     | 0.45              |
| 1:J:433:LEU:N      | 1:J:434:PRO:CD   | 2.80                     | 0.45              |
| 1:J:595:THR:CG2    | 1:J:596:PRO:HA   | 2.37                     | 0.45              |
| 1:L:546:LEU:HA     | 3:L:3234:HOH:O   | 2.16                     | 0.45              |
| 1:L:778:THR:HG23   | 1:L:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:M:657:ALA:HA     | 1:M:661:LYS:O    | 2.16                     | 0.45              |
| 1:N:3:ILE:HD12     | 1:N:3:ILE:O      | 2.17                     | 0.45              |
| 1:N:7:LEU:HD12     | 1:N:74:LEU:HD11  | 1.97                     | 0.45              |
| 1:N:100:TYR:CE1    | 1:N:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:N:546:LEU:HA     | 3:N:3231:HOH:O   | 2.16                     | 0.45              |
| 1:N:767:GLN:CG     | 1:N:768:MET:N    | 2.79                     | 0.45              |
| 1:O:42:ALA:O       | 1:O:310:ARG:NH1  | 2.49                     | 0.45              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:O:91:GLN:HG3     | 1:O:96:ASP:OD1    | 2.16                     | 0.45              |
| 1:O:114:VAL:HG22   | 1:O:191:TRP:HB3   | 1.98                     | 0.45              |
| 1:P:3:ILE:O        | 1:P:3:ILE:HD12    | 2.17                     | 0.45              |
| 1:P:78:LEU:HB3     | 1:P:79:PRO:CD     | 2.43                     | 0.45              |
| 1:P:546:LEU:HA     | 3:P:3236:HOH:O    | 2.16                     | 0.45              |
| 1:P:668:VAL:CG1    | 1:P:669:PRO:HD2   | 2.45                     | 0.45              |
| 1:A:653[B]:HIS:CD2 | 1:A:667:GLU:HG2   | 2.51                     | 0.45              |
| 1:B:599:ARG:HB2    | 1:B:600:GLN:H     | 1.63                     | 0.45              |
| 1:B:952:ARG:HH11   | 1:B:952:ARG:CG    | 2.28                     | 0.45              |
| 1:D:147:ASN:HA     | 1:D:148:SER:HA    | 1.57                     | 0.45              |
| 1:D:237:ARG:HE     | 1:D:237:ARG:HB2   | 1.35                     | 0.45              |
| 1:D:278:ILE:N      | 1:D:278:ILE:CD1   | 2.80                     | 0.45              |
| 1:D:433:LEU:N      | 1:D:434:PRO:CD    | 2.80                     | 0.45              |
| 1:D:920:LEU:HB3    | 1:D:921:PRO:CD    | 2.46                     | 0.45              |
| 1:D:947:GLY:HA3    | 1:D:948:PRO:HD2   | 1.82                     | 0.45              |
| 1:F:7:LEU:HD12     | 1:F:74:LEU:HD11   | 1.97                     | 0.45              |
| 1:F:114:VAL:HG22   | 1:F:191:TRP:HB3   | 1.98                     | 0.45              |
| 1:F:279:ILE:HD12   | 1:F:279:ILE:HG21  | 1.77                     | 0.45              |
| 1:G:114:VAL:HG22   | 1:G:191:TRP:HB3   | 1.98                     | 0.45              |
| 1:G:778:THR:HG23   | 1:G:779:PRO:HD2   | 1.98                     | 0.45              |
| 1:H:13:ARG:O       | 1:H:14:ARG:HB2    | 2.17                     | 0.45              |
| 1:H:183:ARG:HD3    | 1:H:183:ARG:HH11  | 1.62                     | 0.45              |
| 1:I:425:ARG:NH2    | 1:L:287:ASP:OD2   | 2.50                     | 0.45              |
| 1:J:85:VAL:CG1     | 1:J:86:VAL:N      | 2.79                     | 0.45              |
| 1:J:612:THR:HB     | 1:J:613:PRO:HD2   | 1.98                     | 0.45              |
| 1:J:767:GLN:CG     | 1:J:768:MET:N     | 2.79                     | 0.45              |
| 1:K:3:ILE:HD12     | 1:K:3:ILE:O       | 2.17                     | 0.45              |
| 1:K:257:THR:OG1    | 1:K:316:HIS:HE1   | 1.98                     | 0.45              |
| 1:K:395:HIS:CG     | 1:K:396:PRO:HD2   | 2.51                     | 0.45              |
| 1:K:612:THR:HB     | 1:K:613:PRO:HD2   | 1.98                     | 0.45              |
| 1:K:657:ALA:HA     | 1:K:661:LYS:O     | 2.16                     | 0.45              |
| 1:L:100:TYR:CE1    | 1:L:602:CYS:HB3   | 2.51                     | 0.45              |
| 1:L:991:MET:HE2    | 1:L:1003:VAL:HG21 | 1.98                     | 0.45              |
| 1:M:42:ALA:O       | 1:M:310:ARG:NH1   | 2.49                     | 0.45              |
| 1:M:80:GLU:H       | 1:M:80:GLU:HG3    | 1.29                     | 0.45              |
| 1:M:433:LEU:N      | 1:M:434:PRO:CD    | 2.80                     | 0.45              |
| 1:M:670:LEU:HD23   | 1:M:670:LEU:HA    | 1.75                     | 0.45              |
| 1:M:847:LYS:HG3    | 1:M:848:THR:N     | 2.32                     | 0.45              |
| 1:N:42:ALA:O       | 1:N:310:ARG:NH1   | 2.49                     | 0.45              |
| 1:N:657:ALA:HA     | 1:N:661:LYS:O     | 2.16                     | 0.45              |
| 1:O:43:ARG:HH12    | 1:O:44:THR:CG2    | 2.30                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:43:ARG:HH12  | 1:A:44:THR:CG2   | 2.30                     | 0.45              |
| 1:A:237:ARG:HE   | 1:A:237:ARG:HB2  | 1.35                     | 0.45              |
| 1:A:546:LEU:HA   | 3:A:4124:HOH:O   | 2.16                     | 0.45              |
| 1:A:847:LYS:HG3  | 1:A:848:THR:N    | 2.32                     | 0.45              |
| 1:B:847:LYS:HG3  | 1:B:848:THR:N    | 2.32                     | 0.45              |
| 1:C:114:VAL:HG22 | 1:C:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:D:85:VAL:CG1   | 1:D:86:VAL:N     | 2.79                     | 0.45              |
| 1:E:43:ARG:HH12  | 1:E:44:THR:CG2   | 2.30                     | 0.45              |
| 1:E:114:VAL:HG22 | 1:E:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:E:395:HIS:CG   | 1:E:396:PRO:HD2  | 2.52                     | 0.45              |
| 1:E:952:ARG:HH11 | 1:E:952:ARG:CG   | 2.28                     | 0.45              |
| 1:F:42:ALA:O     | 1:F:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:G:134:LEU:HA   | 1:G:134:LEU:HD23 | 1.68                     | 0.45              |
| 1:H:134:LEU:HA   | 1:H:134:LEU:HD23 | 1.68                     | 0.45              |
| 1:H:395:HIS:CG   | 1:H:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:I:395:HIS:CG   | 1:I:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:I:701:VAL:HG12 | 1:I:702:GLN:N    | 2.31                     | 0.45              |
| 1:J:13:ARG:O     | 1:J:14:ARG:HB2   | 2.17                     | 0.45              |
| 1:J:395:HIS:CG   | 1:J:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:J:576:ILE:CG2  | 1:J:577:LYS:N    | 2.79                     | 0.45              |
| 1:K:147:ASN:HA   | 1:K:148:SER:HA   | 1.57                     | 0.45              |
| 1:K:395:HIS:HA   | 1:K:396:PRO:HD3  | 1.69                     | 0.45              |
| 1:L:43:ARG:NH1   | 1:L:44:THR:CG2   | 2.80                     | 0.45              |
| 1:M:3:ILE:O      | 1:M:3:ILE:HD12   | 2.17                     | 0.45              |
| 1:M:418:HIS:O    | 1:P:282:ARG:HD2  | 2.17                     | 0.45              |
| 1:M:579:ASP:HB2  | 1:M:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:O:134:LEU:HD23 | 1:O:134:LEU:HA   | 1.68                     | 0.45              |
| 1:O:778:THR:HG23 | 1:O:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:P:111:PRO:HA   | 1:P:112:PRO:HA   | 1.66                     | 0.45              |
| 1:P:183:ARG:HD3  | 1:P:183:ARG:HH11 | 1.62                     | 0.45              |
| 1:A:7:LEU:HD12   | 1:A:74:LEU:HD11  | 1.97                     | 0.45              |
| 1:A:42:ALA:O     | 1:A:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:A:701:VAL:HG12 | 1:A:702:GLN:N    | 2.31                     | 0.45              |
| 1:B:211:ASP:OD1  | 1:B:211:ASP:N    | 2.50                     | 0.45              |
| 1:B:701:VAL:HG12 | 1:B:702:GLN:N    | 2.31                     | 0.45              |
| 1:C:285:TYR:CB   | 1:C:288:ARG:HG3  | 2.42                     | 0.45              |
| 1:C:322:LEU:CD2  | 1:C:324:GLU:N    | 2.80                     | 0.45              |
| 1:D:362:LEU:HD23 | 1:D:362:LEU:HA   | 1.70                     | 0.45              |
| 1:D:395:HIS:CG   | 1:D:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:E:42:ALA:O     | 1:E:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:F:3:ILE:HG13   | 1:F:4:THR:N      | 2.25                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:91:GLN:HG3   | 1:F:96:ASP:OD1   | 2.15                     | 0.45              |
| 1:F:679:LEU:HD23 | 1:F:679:LEU:HA   | 1.40                     | 0.45              |
| 1:G:3:ILE:HD12   | 1:G:3:ILE:O      | 2.17                     | 0.45              |
| 1:G:129:VAL:CG2  | 1:G:182:ASN:ND2  | 2.80                     | 0.45              |
| 1:H:278:ILE:N    | 1:H:278:ILE:CD1  | 2.80                     | 0.45              |
| 1:I:847:LYS:HG3  | 1:I:848:THR:N    | 2.32                     | 0.45              |
| 1:J:856:TYR:CD2  | 1:J:864:MET:CE   | 3.00                     | 0.45              |
| 1:K:63:PHE:CB    | 1:K:64:PRO:HD2   | 2.34                     | 0.45              |
| 1:K:778:THR:HG23 | 1:K:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:L:129:VAL:CG2  | 1:L:182:ASN:ND2  | 2.80                     | 0.45              |
| 1:L:687:GLN:HA   | 1:L:688:PRO:HD3  | 1.73                     | 0.45              |
| 1:M:43:ARG:HH12  | 1:M:44:THR:CG2   | 2.30                     | 0.45              |
| 1:M:479:ASP:HA   | 1:M:480:PRO:HD2  | 1.77                     | 0.45              |
| 1:N:322:LEU:CD2  | 1:N:324:GLU:N    | 2.80                     | 0.45              |
| 1:N:473:ARG:HD2  | 1:O:469:ASP:HB3  | 1.98                     | 0.45              |
| 1:P:43:ARG:NH1   | 1:P:44:THR:CG2   | 2.80                     | 0.45              |
| 1:P:85:VAL:CG1   | 1:P:86:VAL:N     | 2.79                     | 0.45              |
| 1:P:278:ILE:N    | 1:P:278:ILE:CD1  | 2.80                     | 0.45              |
| 1:P:947:GLY:HA3  | 1:P:948:PRO:HD2  | 1.82                     | 0.45              |
| 1:C:42:ALA:O     | 1:C:310:ARG:NH1  | 2.49                     | 0.45              |
| 1:C:546:LEU:HA   | 3:C:4124:HOH:O   | 2.16                     | 0.45              |
| 1:C:920:LEU:HB3  | 1:C:921:PRO:CD   | 2.46                     | 0.45              |
| 1:D:285:TYR:CB   | 1:D:288:ARG:HG3  | 2.42                     | 0.45              |
| 1:D:847:LYS:HG3  | 1:D:848:THR:N    | 2.32                     | 0.45              |
| 1:E:546:LEU:HA   | 3:E:4124:HOH:O   | 2.16                     | 0.45              |
| 1:E:579:ASP:HB2  | 1:E:580:GLU:OE2  | 2.16                     | 0.45              |
| 1:G:668:VAL:CG1  | 1:G:669:PRO:HD2  | 2.45                     | 0.45              |
| 1:H:211:ASP:OD1  | 1:H:211:ASP:N    | 2.50                     | 0.45              |
| 1:I:433:LEU:N    | 1:I:434:PRO:CD   | 2.80                     | 0.45              |
| 1:J:114:VAL:HG22 | 1:J:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:J:254:LEU:HA   | 1:J:254:LEU:HD23 | 1.71                     | 0.45              |
| 1:L:80:GLU:H     | 1:L:80:GLU:HG3   | 1.29                     | 0.45              |
| 1:L:322:LEU:CD2  | 1:L:324:GLU:N    | 2.80                     | 0.45              |
| 1:M:211:ASP:OD1  | 1:M:211:ASP:N    | 2.50                     | 0.45              |
| 1:M:482:ARG:HH11 | 1:M:482:ARG:HD2  | 1.63                     | 0.45              |
| 1:M:612:THR:HB   | 1:M:613:PRO:HD2  | 1.98                     | 0.45              |
| 1:M:668:VAL:HA   | 1:M:669:PRO:HD3  | 1.83                     | 0.45              |
| 1:M:778:THR:HG23 | 1:M:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:N:111:PRO:HA   | 1:N:112:PRO:HA   | 1.66                     | 0.45              |
| 1:O:3:ILE:HD12   | 1:O:3:ILE:O      | 2.17                     | 0.45              |
| 1:O:322:LEU:CD2  | 1:O:324:GLU:N    | 2.80                     | 0.45              |

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| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 1:P:847:LYS:HG3    | 1:P:848:THR:N    | 2.32                     | 0.45              |
| 1:A:395:HIS:CG     | 1:A:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:B:102:ASN:C      | 1:B:102:ASN:HD22 | 2.21                     | 0.45              |
| 1:B:322:LEU:CD2    | 1:B:324:GLU:N    | 2.80                     | 0.45              |
| 1:B:395:HIS:CG     | 1:B:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:B:433:LEU:N      | 1:B:434:PRO:CD   | 2.80                     | 0.45              |
| 1:C:43:ARG:NH1     | 1:C:44:THR:CG2   | 2.80                     | 0.45              |
| 1:C:102:ASN:HD22   | 1:C:102:ASN:C    | 2.21                     | 0.45              |
| 1:C:246:MET:HG2    | 1:C:274:PHE:CE2  | 2.52                     | 0.45              |
| 1:D:114:VAL:HG22   | 1:D:191:TRP:HB3  | 1.98                     | 0.45              |
| 1:E:278:ILE:N      | 1:E:278:ILE:CD1  | 2.80                     | 0.45              |
| 1:F:43:ARG:NH1     | 1:F:44:THR:CG2   | 2.80                     | 0.45              |
| 1:F:43:ARG:HH12    | 1:F:44:THR:CG2   | 2.30                     | 0.45              |
| 1:G:111:PRO:HA     | 1:G:112:PRO:HA   | 1.66                     | 0.45              |
| 1:G:653[B]:HIS:CD2 | 1:G:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:G:701:VAL:HG12   | 1:G:702:GLN:N    | 2.31                     | 0.45              |
| 1:H:546:LEU:HA     | 3:H:4124:HOH:O   | 2.16                     | 0.45              |
| 1:H:856:TYR:CD2    | 1:H:864:MET:CE   | 3.00                     | 0.45              |
| 1:I:254:LEU:HD23   | 1:I:254:LEU:HA   | 1.71                     | 0.45              |
| 1:I:772:ASP:OD1    | 1:I:772:ASP:N    | 2.48                     | 0.45              |
| 1:K:43:ARG:NH1     | 1:K:44:THR:CG2   | 2.80                     | 0.45              |
| 1:K:43:ARG:HH12    | 1:K:44:THR:CG2   | 2.30                     | 0.45              |
| 1:L:3:ILE:HD12     | 1:L:3:ILE:O      | 2.17                     | 0.45              |
| 1:M:100:TYR:CE1    | 1:M:602:CYS:HB3  | 2.51                     | 0.45              |
| 1:M:395:HIS:CG     | 1:M:396:PRO:HD2  | 2.51                     | 0.45              |
| 1:M:867:THR:HG22   | 3:M:4298:HOH:O   | 2.17                     | 0.45              |
| 1:N:43:ARG:NH1     | 1:N:44:THR:CG2   | 2.80                     | 0.45              |
| 1:N:378:LEU:HD23   | 1:N:378:LEU:HA   | 1.74                     | 0.45              |
| 1:O:211:ASP:OD1    | 1:O:211:ASP:N    | 2.50                     | 0.45              |
| 1:O:246:MET:HG2    | 1:O:274:PHE:CE2  | 2.52                     | 0.45              |
| 1:O:701:VAL:HG12   | 1:O:702:GLN:N    | 2.31                     | 0.45              |
| 1:P:653[B]:HIS:CD2 | 1:P:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:P:778:THR:HG23   | 1:P:779:PRO:HD2  | 1.98                     | 0.45              |
| 1:A:612:THR:HA     | 1:A:613:PRO:HD3  | 1.59                     | 0.45              |
| 1:A:767:GLN:CG     | 1:A:768:MET:N    | 2.79                     | 0.45              |
| 1:A:952:ARG:HH11   | 1:A:952:ARG:CG   | 2.28                     | 0.45              |
| 1:B:78:LEU:HB3     | 1:B:79:PRO:CD    | 2.43                     | 0.45              |
| 1:B:567:VAL:HG12   | 1:B:568:TRP:N    | 2.32                     | 0.45              |
| 1:B:653[B]:HIS:CD2 | 1:B:667:GLU:HG2  | 2.51                     | 0.45              |
| 1:B:767:GLN:CG     | 1:B:768:MET:N    | 2.79                     | 0.45              |
| 1:B:856:TYR:CD2    | 1:B:864:MET:CE   | 3.00                     | 0.45              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:C:3:ILE:HD12     | 1:C:3:ILE:O       | 2.17                     | 0.45              |
| 1:D:42:ALA:O       | 1:D:310:ARG:NH1   | 2.49                     | 0.45              |
| 1:D:80:GLU:H       | 1:D:80:GLU:HG3    | 1.29                     | 0.45              |
| 1:E:867:THR:HG22   | 3:E:4298:HOH:O    | 2.17                     | 0.45              |
| 1:F:378:LEU:HD23   | 1:F:378:LEU:HA    | 1.74                     | 0.45              |
| 1:G:78:LEU:HB3     | 1:G:79:PRO:CD     | 2.43                     | 0.45              |
| 1:H:433:LEU:N      | 1:H:434:PRO:CD    | 2.80                     | 0.45              |
| 1:I:13:ARG:O       | 1:I:14:ARG:HB2    | 2.16                     | 0.45              |
| 1:I:856:TYR:CD2    | 1:I:864:MET:CE    | 3.00                     | 0.45              |
| 1:J:57:GLU:HG2     | 1:J:83:THR:HG22   | 1.95                     | 0.45              |
| 1:J:679:LEU:HD23   | 1:J:679:LEU:HA    | 1.40                     | 0.45              |
| 1:K:362:LEU:HD23   | 1:K:362:LEU:HA    | 1.70                     | 0.45              |
| 1:K:579:ASP:HB2    | 1:K:580:GLU:OE2   | 2.16                     | 0.45              |
| 1:K:653[B]:HIS:CD2 | 1:K:667:GLU:HG2   | 2.51                     | 0.45              |
| 1:L:856:TYR:CD2    | 1:L:864:MET:HE2   | 2.51                     | 0.45              |
| 1:M:13:ARG:O       | 1:M:14:ARG:HB2    | 2.17                     | 0.45              |
| 1:M:246:MET:HG2    | 1:M:274:PHE:CE2   | 2.52                     | 0.45              |
| 1:M:322:LEU:CD2    | 1:M:324:GLU:N     | 2.80                     | 0.45              |
| 1:M:856:TYR:CD2    | 1:M:864:MET:CE    | 3.00                     | 0.45              |
| 1:N:612:THR:HA     | 1:N:613:PRO:HD3   | 1.59                     | 0.45              |
| 1:P:129:VAL:CG2    | 1:P:182:ASN:ND2   | 2.80                     | 0.45              |
| 1:P:856:TYR:CD2    | 1:P:864:MET:CE    | 3.00                     | 0.45              |
| 1:B:43:ARG:HH12    | 1:B:44:THR:CG2    | 2.30                     | 0.44              |
| 1:B:991:MET:HE2    | 1:B:1003:VAL:HG21 | 1.99                     | 0.44              |
| 1:C:433:LEU:N      | 1:C:434:PRO:CD    | 2.80                     | 0.44              |
| 1:C:612:THR:HB     | 1:C:613:PRO:HD2   | 1.98                     | 0.44              |
| 1:D:546:LEU:HA     | 3:D:3237:HOH:O    | 2.16                     | 0.44              |
| 1:D:856:TYR:HD2    | 1:D:864:MET:CE    | 2.25                     | 0.44              |
| 1:E:3:ILE:O        | 1:E:3:ILE:HD12    | 2.17                     | 0.44              |
| 1:E:246:MET:HG2    | 1:E:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:E:612:THR:HB     | 1:E:613:PRO:HD2   | 1.98                     | 0.44              |
| 1:F:102:ASN:HD22   | 1:F:102:ASN:C     | 2.21                     | 0.44              |
| 1:F:687:GLN:HA     | 1:F:688:PRO:HD3   | 1.73                     | 0.44              |
| 1:G:362:LEU:HA     | 1:G:362:LEU:HD23  | 1.70                     | 0.44              |
| 1:G:395:HIS:HA     | 1:G:396:PRO:HD3   | 1.69                     | 0.44              |
| 1:G:694:LEU:HD12   | 1:G:694:LEU:HA    | 1.84                     | 0.44              |
| 1:H:7:LEU:HD12     | 1:H:74:LEU:HD11   | 1.97                     | 0.44              |
| 1:H:246:MET:HG2    | 1:H:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:I:43:ARG:HH12    | 1:I:44:THR:CG2    | 2.30                     | 0.44              |
| 1:I:991:MET:HE2    | 1:I:1003:VAL:HG21 | 1.99                     | 0.44              |
| 1:J:63:PHE:CB      | 1:J:64:PRO:HD2    | 2.34                     | 0.44              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:J:246:MET:HG2    | 1:J:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:J:567:VAL:HG12   | 1:J:568:TRP:N     | 2.32                     | 0.44              |
| 1:K:13:ARG:O       | 1:K:14:ARG:HB2    | 2.17                     | 0.44              |
| 1:K:85:VAL:CG1     | 1:K:86:VAL:N      | 2.79                     | 0.44              |
| 1:K:102:ASN:HD22   | 1:K:102:ASN:C     | 2.21                     | 0.44              |
| 1:K:991:MET:HE2    | 1:K:1003:VAL:HG21 | 2.00                     | 0.44              |
| 1:L:43:ARG:HH12    | 1:L:44:THR:CG2    | 2.30                     | 0.44              |
| 1:N:653[B]:HIS:CD2 | 1:N:667:GLU:HG2   | 2.51                     | 0.44              |
| 1:O:433:LEU:N      | 1:O:434:PRO:CD    | 2.80                     | 0.44              |
| 1:P:102:ASN:HD22   | 1:P:102:ASN:C     | 2.21                     | 0.44              |
| 1:A:246:MET:HG2    | 1:A:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:A:257:THR:OG1    | 1:A:316:HIS:HE1   | 1.98                     | 0.44              |
| 1:B:13:ARG:O       | 1:B:14:ARG:HB2    | 2.17                     | 0.44              |
| 1:B:42:ALA:O       | 1:B:310:ARG:NH1   | 2.49                     | 0.44              |
| 1:B:595:THR:CG2    | 1:B:596:PRO:HA    | 2.37                     | 0.44              |
| 1:C:85:VAL:CG1     | 1:C:86:VAL:N      | 2.79                     | 0.44              |
| 1:D:3:ILE:HD12     | 1:D:3:ILE:O       | 2.17                     | 0.44              |
| 1:E:730:LEU:HA     | 1:E:731:PRO:HD3   | 1.80                     | 0.44              |
| 1:E:856:TYR:CD2    | 1:E:864:MET:CE    | 3.00                     | 0.44              |
| 1:F:638:VAL:O      | 1:F:677:LYS:HA    | 2.18                     | 0.44              |
| 1:G:43:ARG:HH11    | 1:G:43:ARG:CG     | 2.24                     | 0.44              |
| 1:G:43:ARG:HH12    | 1:G:44:THR:CG2    | 2.30                     | 0.44              |
| 1:G:85:VAL:CG1     | 1:G:86:VAL:N      | 2.79                     | 0.44              |
| 1:G:246:MET:HG2    | 1:G:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:G:322:LEU:CD2    | 1:G:324:GLU:N     | 2.80                     | 0.44              |
| 1:G:595:THR:CG2    | 1:G:596:PRO:HA    | 2.37                     | 0.44              |
| 1:G:867:THR:HG22   | 3:G:3402:HOH:O    | 2.17                     | 0.44              |
| 1:H:701:VAL:HG12   | 1:H:702:GLN:N     | 2.31                     | 0.44              |
| 1:I:668:VAL:CG1    | 1:I:669:PRO:HD2   | 2.45                     | 0.44              |
| 1:K:7:LEU:HD12     | 1:K:74:LEU:HD11   | 1.97                     | 0.44              |
| 1:K:246:MET:HG2    | 1:K:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:L:272:ALA:HA     | 1:L:273:PRO:HD3   | 1.78                     | 0.44              |
| 1:L:433:LEU:N      | 1:L:434:PRO:CD    | 2.80                     | 0.44              |
| 1:N:85:VAL:CG1     | 1:N:86:VAL:N      | 2.79                     | 0.44              |
| 1:N:856:TYR:CD2    | 1:N:864:MET:HE2   | 2.52                     | 0.44              |
| 1:P:43:ARG:HH12    | 1:P:44:THR:CG2    | 2.30                     | 0.44              |
| 1:P:246:MET:HG2    | 1:P:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:P:914:CME:HB3    | 1:P:914:CME:HE2   | 1.74                     | 0.44              |
| 1:A:3:ILE:HD12     | 1:A:3:ILE:O       | 2.17                     | 0.44              |
| 1:A:80:GLU:H       | 1:A:80:GLU:HG3    | 1.29                     | 0.44              |
| 1:A:670:LEU:HD23   | 1:A:670:LEU:HA    | 1.75                     | 0.44              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:A:920:LEU:HB3    | 1:A:921:PRO:CD    | 2.46                     | 0.44              |
| 1:B:3:ILE:HD12     | 1:B:3:ILE:O       | 2.17                     | 0.44              |
| 1:B:546:LEU:HA     | 3:B:3228:HOH:O    | 2.16                     | 0.44              |
| 1:B:638:VAL:O      | 1:B:677:LYS:HA    | 2.18                     | 0.44              |
| 1:C:13:ARG:O       | 1:C:14:ARG:HB2    | 2.17                     | 0.44              |
| 1:D:102:ASN:C      | 1:D:102:ASN:HD22  | 2.21                     | 0.44              |
| 1:E:102:ASN:C      | 1:E:102:ASN:HD22  | 2.21                     | 0.44              |
| 1:E:129:VAL:CG2    | 1:E:182:ASN:ND2   | 2.80                     | 0.44              |
| 1:E:254:LEU:HA     | 1:E:254:LEU:HD23  | 1.71                     | 0.44              |
| 1:E:322:LEU:CD2    | 1:E:324:GLU:N     | 2.80                     | 0.44              |
| 1:F:129:VAL:CG2    | 1:F:182:ASN:ND2   | 2.80                     | 0.44              |
| 1:F:567:VAL:HG12   | 1:F:568:TRP:N     | 2.32                     | 0.44              |
| 1:G:433:LEU:N      | 1:G:434:PRO:CD    | 2.80                     | 0.44              |
| 1:G:856:TYR:CD2    | 1:G:864:MET:CE    | 3.00                     | 0.44              |
| 1:G:991:MET:HE2    | 1:G:1003:VAL:HG21 | 1.99                     | 0.44              |
| 1:H:638:VAL:O      | 1:H:677:LYS:HA    | 2.18                     | 0.44              |
| 1:H:767:GLN:CG     | 1:H:768:MET:N     | 2.79                     | 0.44              |
| 1:I:778:THR:HG23   | 1:I:779:PRO:HD2   | 1.98                     | 0.44              |
| 1:J:43:ARG:HH12    | 1:J:44:THR:CG2    | 2.30                     | 0.44              |
| 1:K:129:VAL:CG2    | 1:K:182:ASN:ND2   | 2.80                     | 0.44              |
| 1:K:856:TYR:CD2    | 1:K:864:MET:CE    | 3.00                     | 0.44              |
| 1:M:102:ASN:C      | 1:M:102:ASN:HD22  | 2.21                     | 0.44              |
| 1:M:986:ILE:HG23   | 1:M:986:ILE:HD13  | 1.67                     | 0.44              |
| 1:N:433:LEU:N      | 1:N:434:PRO:CD    | 2.80                     | 0.44              |
| 1:N:567:VAL:HG12   | 1:N:568:TRP:N     | 2.32                     | 0.44              |
| 1:O:63:PHE:CB      | 1:O:64:PRO:HD2    | 2.34                     | 0.44              |
| 1:O:85:VAL:CG1     | 1:O:86:VAL:N      | 2.80                     | 0.44              |
| 1:O:694:LEU:HD12   | 1:O:694:LEU:HA    | 1.84                     | 0.44              |
| 1:O:991:MET:HE2    | 1:O:1003:VAL:HG21 | 1.99                     | 0.44              |
| 1:P:638:VAL:O      | 1:P:677:LYS:HA    | 2.18                     | 0.44              |
| 1:P:702:GLN:O      | 1:P:712:GLY:N     | 2.47                     | 0.44              |
| 1:B:43:ARG:NH1     | 1:B:44:THR:CG2    | 2.80                     | 0.44              |
| 1:C:43:ARG:HH12    | 1:C:44:THR:CG2    | 2.30                     | 0.44              |
| 1:C:129:VAL:CG2    | 1:C:182:ASN:ND2   | 2.80                     | 0.44              |
| 1:C:847:LYS:HG3    | 1:C:848:THR:N     | 2.32                     | 0.44              |
| 1:D:567:VAL:HG12   | 1:D:568:TRP:N     | 2.32                     | 0.44              |
| 1:D:653[B]:HIS:CD2 | 1:D:667:GLU:HG2   | 2.51                     | 0.44              |
| 1:E:567:VAL:HG12   | 1:E:568:TRP:N     | 2.32                     | 0.44              |
| 1:E:778:THR:HG23   | 1:E:779:PRO:HD2   | 1.98                     | 0.44              |
| 1:E:856:TYR:HD2    | 1:E:864:MET:CE    | 2.25                     | 0.44              |
| 1:F:433:LEU:N      | 1:F:434:PRO:CD    | 2.80                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:658:LEU:N    | 1:F:661:LYS:O    | 2.40                     | 0.44              |
| 1:G:7:LEU:O      | 1:G:11:LEU:HG    | 2.18                     | 0.44              |
| 1:G:13:ARG:O     | 1:G:14:ARG:HB2   | 2.17                     | 0.44              |
| 1:G:202:MET:HB3  | 1:G:202:MET:HE3  | 1.84                     | 0.44              |
| 1:H:3:ILE:O      | 1:H:3:ILE:HD12   | 2.17                     | 0.44              |
| 1:H:102:ASN:HD22 | 1:H:102:ASN:C    | 2.21                     | 0.44              |
| 1:H:778:THR:HG23 | 1:H:779:PRO:HD2  | 1.98                     | 0.44              |
| 1:I:102:ASN:C    | 1:I:102:ASN:HD22 | 2.21                     | 0.44              |
| 1:I:638:VAL:O    | 1:I:677:LYS:HA   | 2.18                     | 0.44              |
| 1:I:867:THR:HG22 | 3:I:4297:HOH:O   | 2.17                     | 0.44              |
| 1:J:420:MET:O    | 1:K:282:ARG:HD3  | 2.18                     | 0.44              |
| 1:M:221:GLN:H    | 1:M:221:GLN:HG2  | 1.63                     | 0.44              |
| 1:M:567:VAL:HG12 | 1:M:568:TRP:N    | 2.32                     | 0.44              |
| 1:N:702:GLN:O    | 1:N:712:GLY:N    | 2.47                     | 0.44              |
| 1:O:129:VAL:CG2  | 1:O:182:ASN:ND2  | 2.80                     | 0.44              |
| 1:O:202:MET:HB3  | 1:O:202:MET:HE3  | 1.84                     | 0.44              |
| 1:P:91:GLN:HG3   | 1:P:96:ASP:OD1   | 2.16                     | 0.44              |
| 1:A:43:ARG:NH1   | 1:A:44:THR:CG2   | 2.80                     | 0.44              |
| 1:A:867:THR:HG22 | 3:A:4299:HOH:O   | 2.17                     | 0.44              |
| 1:B:7:LEU:O      | 1:B:11:LEU:HG    | 2.18                     | 0.44              |
| 1:D:13:ARG:O     | 1:D:14:ARG:HB2   | 2.17                     | 0.44              |
| 1:D:638:VAL:O    | 1:D:677:LYS:HA   | 2.18                     | 0.44              |
| 1:E:847:LYS:HG3  | 1:E:848:THR:N    | 2.32                     | 0.44              |
| 1:F:111:PRO:HA   | 1:F:112:PRO:HA   | 1.66                     | 0.44              |
| 1:G:102:ASN:C    | 1:G:102:ASN:HD22 | 2.21                     | 0.44              |
| 1:G:183:ARG:HD3  | 1:G:183:ARG:HH11 | 1.62                     | 0.44              |
| 1:G:599:ARG:HB2  | 1:G:600:GLN:H    | 1.64                     | 0.44              |
| 1:G:638:VAL:O    | 1:G:677:LYS:HA   | 2.18                     | 0.44              |
| 1:H:43:ARG:HH12  | 1:H:44:THR:CG2   | 2.30                     | 0.44              |
| 1:H:772:ASP:OD1  | 1:H:772:ASP:N    | 2.48                     | 0.44              |
| 1:H:847:LYS:HG3  | 1:H:848:THR:N    | 2.32                     | 0.44              |
| 1:I:43:ARG:NH1   | 1:I:44:THR:CG2   | 2.80                     | 0.44              |
| 1:J:638:VAL:O    | 1:J:677:LYS:HA   | 2.18                     | 0.44              |
| 1:J:657:ALA:HA   | 1:J:661:LYS:O    | 2.16                     | 0.44              |
| 1:K:285:TYR:CB   | 1:K:288:ARG:HG3  | 2.42                     | 0.44              |
| 1:K:567:VAL:HG12 | 1:K:568:TRP:N    | 2.32                     | 0.44              |
| 1:K:658:LEU:N    | 1:K:661:LYS:O    | 2.40                     | 0.44              |
| 1:L:13:ARG:O     | 1:L:14:ARG:HB2   | 2.17                     | 0.44              |
| 1:L:279:ILE:HD12 | 1:L:279:ILE:HG21 | 1.77                     | 0.44              |
| 1:L:856:TYR:CD2  | 1:L:864:MET:CE   | 3.00                     | 0.44              |
| 1:M:658:LEU:N    | 1:M:661:LYS:O    | 2.40                     | 0.44              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:O:43:ARG:NH1   | 1:O:44:THR:CG2  | 2.80                     | 0.44              |
| 1:O:847:LYS:HG3  | 1:O:848:THR:N   | 2.32                     | 0.44              |
| 1:P:7:LEU:O      | 1:P:11:LEU:HG   | 2.18                     | 0.44              |
| 1:P:80:GLU:H     | 1:P:80:GLU:HG3  | 1.29                     | 0.44              |
| 1:A:129:VAL:CG2  | 1:A:182:ASN:ND2 | 2.80                     | 0.44              |
| 1:B:479:ASP:HA   | 1:B:480:PRO:HD2 | 1.77                     | 0.44              |
| 1:C:211:ASP:OD1  | 1:C:211:ASP:N   | 2.50                     | 0.44              |
| 1:D:43:ARG:HH12  | 1:D:44:THR:CG2  | 2.30                     | 0.44              |
| 1:D:702:GLN:O    | 1:D:712:GLY:N   | 2.47                     | 0.44              |
| 1:F:322:LEU:CD2  | 1:F:324:GLU:N   | 2.80                     | 0.44              |
| 1:F:546:LEU:HA   | 3:F:3230:HOH:O  | 2.16                     | 0.44              |
| 1:F:685:LEU:HA   | 1:F:686:PRO:HD3 | 1.83                     | 0.44              |
| 1:F:856:TYR:CD2  | 1:F:864:MET:CE  | 3.00                     | 0.44              |
| 1:H:7:LEU:O      | 1:H:11:LEU:HG   | 2.18                     | 0.44              |
| 1:I:7:LEU:O      | 1:I:11:LEU:HG   | 2.18                     | 0.44              |
| 1:I:42:ALA:O     | 1:I:310:ARG:NH1 | 2.49                     | 0.44              |
| 1:J:111:PRO:HA   | 1:J:112:PRO:HA  | 1.65                     | 0.44              |
| 1:K:7:LEU:O      | 1:K:11:LEU:HG   | 2.18                     | 0.44              |
| 1:K:322:LEU:CD2  | 1:K:324:GLU:N   | 2.80                     | 0.44              |
| 1:K:702:GLN:O    | 1:K:712:GLY:N   | 2.47                     | 0.44              |
| 1:K:867:THR:HG22 | 3:K:4299:HOH:O  | 2.17                     | 0.44              |
| 1:L:701:VAL:HG12 | 1:L:702:GLN:N   | 2.31                     | 0.44              |
| 1:M:638:VAL:O    | 1:M:677:LYS:HA  | 2.18                     | 0.44              |
| 1:N:687:GLN:HA   | 1:N:688:PRO:HD3 | 1.73                     | 0.44              |
| 1:O:567:VAL:HG12 | 1:O:568:TRP:N   | 2.32                     | 0.44              |
| 1:P:322:LEU:CD2  | 1:P:324:GLU:N   | 2.80                     | 0.44              |
| 1:P:433:LEU:N    | 1:P:434:PRO:CD  | 2.80                     | 0.44              |
| 1:P:599:ARG:HB2  | 1:P:600:GLN:H   | 1.64                     | 0.44              |
| 1:A:7:LEU:O      | 1:A:11:LEU:HG   | 2.18                     | 0.44              |
| 1:A:13:ARG:O     | 1:A:14:ARG:HB2  | 2.17                     | 0.44              |
| 1:A:655:MET:HE3  | 1:A:655:MET:HB2 | 1.78                     | 0.44              |
| 1:A:856:TYR:CD2  | 1:A:864:MET:CE  | 3.00                     | 0.44              |
| 1:B:612:THR:HA   | 1:B:613:PRO:HD3 | 1.59                     | 0.44              |
| 1:B:679:LEU:HD23 | 1:B:679:LEU:HA  | 1.40                     | 0.44              |
| 1:C:111:PRO:HA   | 1:C:112:PRO:HA  | 1.66                     | 0.44              |
| 1:D:322:LEU:CD2  | 1:D:324:GLU:N   | 2.80                     | 0.44              |
| 1:D:378:LEU:HD23 | 1:D:378:LEU:HA  | 1.74                     | 0.44              |
| 1:D:612:THR:HA   | 1:D:613:PRO:HD3 | 1.59                     | 0.44              |
| 1:D:856:TYR:CD2  | 1:D:864:MET:CE  | 3.00                     | 0.44              |
| 1:E:3:ILE:HG13   | 1:E:4:THR:N     | 2.25                     | 0.44              |
| 1:E:147:ASN:HA   | 1:E:148:SER:HA  | 1.57                     | 0.44              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:F:13:ARG:O     | 1:F:14:ARG:HB2    | 2.16                     | 0.44              |
| 1:F:85:VAL:CG1   | 1:F:86:VAL:N      | 2.79                     | 0.44              |
| 1:F:246:MET:HG2  | 1:F:274:PHE:CE2   | 2.52                     | 0.44              |
| 1:G:836:ILE:HG23 | 1:G:836:ILE:HD12  | 1.73                     | 0.44              |
| 1:I:836:ILE:HG23 | 1:I:836:ILE:HD12  | 1.73                     | 0.44              |
| 1:J:991:MET:HE2  | 1:J:1003:VAL:HG21 | 1.99                     | 0.44              |
| 1:K:847:LYS:HG3  | 1:K:848:THR:N     | 2.32                     | 0.44              |
| 1:N:254:LEU:HD23 | 1:N:254:LEU:HA    | 1.71                     | 0.44              |
| 1:O:183:ARG:HD3  | 1:O:183:ARG:HH11  | 1.62                     | 0.44              |
| 1:O:702:GLN:O    | 1:O:712:GLY:N     | 2.47                     | 0.44              |
| 1:O:772:ASP:OD1  | 1:O:772:ASP:N     | 2.48                     | 0.44              |
| 1:P:362:LEU:HA   | 1:P:362:LEU:HD23  | 1.70                     | 0.44              |
| 1:P:857:ARG:HG2  | 1:P:857:ARG:HH11  | 1.83                     | 0.44              |
| 1:B:3:ILE:HG13   | 1:B:4:THR:N       | 2.25                     | 0.44              |
| 1:B:278:ILE:N    | 1:B:278:ILE:CD1   | 2.80                     | 0.44              |
| 1:C:638:VAL:O    | 1:C:677:LYS:HA    | 2.18                     | 0.44              |
| 1:D:7:LEU:HD12   | 1:D:74:LEU:HD11   | 1.97                     | 0.44              |
| 1:D:679:LEU:HD23 | 1:D:679:LEU:HA    | 1.40                     | 0.44              |
| 1:D:867:THR:HG22 | 3:D:3411:HOH:O    | 2.17                     | 0.44              |
| 1:D:914:CME:HE2  | 1:D:914:CME:HB3   | 1.74                     | 0.44              |
| 1:F:285:TYR:CB   | 1:F:288:ARG:HG3   | 2.42                     | 0.44              |
| 1:F:473:ARG:HD2  | 1:G:469:ASP:HB3   | 1.99                     | 0.44              |
| 1:F:682:LEU:HD23 | 1:F:682:LEU:HA    | 1.85                     | 0.44              |
| 1:I:3:ILE:HD12   | 1:I:3:ILE:O       | 2.17                     | 0.44              |
| 1:I:80:GLU:H     | 1:I:80:GLU:HG3    | 1.29                     | 0.44              |
| 1:J:7:LEU:HD12   | 1:J:74:LEU:HD11   | 1.97                     | 0.44              |
| 1:K:237:ARG:HE   | 1:K:237:ARG:HB2   | 1.35                     | 0.44              |
| 1:K:599:ARG:HB2  | 1:K:600:GLN:H     | 1.64                     | 0.44              |
| 1:L:78:LEU:HB3   | 1:L:79:PRO:CD     | 2.43                     | 0.44              |
| 1:M:7:LEU:O      | 1:M:11:LEU:HG     | 2.18                     | 0.44              |
| 1:N:479:ASP:HA   | 1:N:480:PRO:HD2   | 1.77                     | 0.44              |
| 1:N:856:TYR:CD2  | 1:N:864:MET:CE    | 3.00                     | 0.44              |
| 1:O:638:VAL:O    | 1:O:677:LYS:HA    | 2.18                     | 0.44              |
| 1:A:322:LEU:CD2  | 1:A:324:GLU:N     | 2.80                     | 0.44              |
| 1:A:419:GLY:HA2  | 1:D:282:ARG:NH1   | 2.32                     | 0.44              |
| 1:A:638:VAL:O    | 1:A:677:LYS:HA    | 2.18                     | 0.44              |
| 1:B:867:THR:HG22 | 3:B:3402:HOH:O    | 2.17                     | 0.44              |
| 1:C:7:LEU:O      | 1:C:11:LEU:HG     | 2.18                     | 0.44              |
| 1:C:567:VAL:HG12 | 1:C:568:TRP:N     | 2.32                     | 0.44              |
| 1:C:599:ARG:HB2  | 1:C:600:GLN:OE1   | 2.18                     | 0.44              |
| 1:C:856:TYR:CD2  | 1:C:864:MET:CE    | 3.00                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:599:ARG:HB2  | 1:E:600:GLN:OE1  | 2.18                     | 0.44              |
| 1:F:856:TYR:CD2  | 1:F:864:MET:HE2  | 2.53                     | 0.44              |
| 1:G:567:VAL:HG12 | 1:G:568:TRP:N    | 2.32                     | 0.44              |
| 1:H:599:ARG:HB2  | 1:H:600:GLN:OE1  | 2.18                     | 0.44              |
| 1:H:857:ARG:HG2  | 1:H:857:ARG:HH11 | 1.83                     | 0.44              |
| 1:I:567:VAL:HG12 | 1:I:568:TRP:N    | 2.32                     | 0.44              |
| 1:I:612:THR:HA   | 1:I:613:PRO:HD3  | 1.59                     | 0.44              |
| 1:J:3:ILE:HD12   | 1:J:3:ILE:O      | 2.17                     | 0.44              |
| 1:J:682:LEU:HD23 | 1:J:682:LEU:HA   | 1.85                     | 0.44              |
| 1:K:638:VAL:O    | 1:K:677:LYS:HA   | 2.18                     | 0.44              |
| 1:L:211:ASP:N    | 1:L:211:ASP:OD1  | 2.50                     | 0.44              |
| 1:N:13:ARG:O     | 1:N:14:ARG:HB2   | 2.16                     | 0.44              |
| 1:N:129:VAL:CG2  | 1:N:182:ASN:ND2  | 2.80                     | 0.44              |
| 1:N:246:MET:HG2  | 1:N:274:PHE:CE2  | 2.52                     | 0.44              |
| 1:A:778:THR:HG23 | 1:A:779:PRO:HD2  | 1.98                     | 0.43              |
| 1:D:3:ILE:HG13   | 1:D:4:THR:N      | 2.24                     | 0.43              |
| 1:D:173:LEU:HD23 | 1:D:173:LEU:HA   | 1.85                     | 0.43              |
| 1:D:246:MET:HG2  | 1:D:274:PHE:CE2  | 2.52                     | 0.43              |
| 1:D:599:ARG:HB2  | 1:D:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:I:111:PRO:HA   | 1:I:112:PRO:HA   | 1.65                     | 0.43              |
| 1:I:322:LEU:CD2  | 1:I:324:GLU:N    | 2.80                     | 0.43              |
| 1:J:7:LEU:O      | 1:J:11:LEU:HG    | 2.18                     | 0.43              |
| 1:J:378:LEU:HD23 | 1:J:378:LEU:HA   | 1.74                     | 0.43              |
| 1:J:599:ARG:HB2  | 1:J:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:L:57:GLU:HG2   | 1:L:83:THR:HG22  | 1.95                     | 0.43              |
| 1:L:102:ASN:C    | 1:L:102:ASN:HD22 | 2.21                     | 0.43              |
| 1:L:567:VAL:HG12 | 1:L:568:TRP:N    | 2.32                     | 0.43              |
| 1:M:772:ASP:OD1  | 1:M:772:ASP:N    | 2.48                     | 0.43              |
| 1:N:285:TYR:CB   | 1:N:288:ARG:HG3  | 2.42                     | 0.43              |
| 1:N:658:LEU:N    | 1:N:661:LYS:O    | 2.40                     | 0.43              |
| 1:N:836:ILE:HD12 | 1:N:836:ILE:HG23 | 1.73                     | 0.43              |
| 1:O:102:ASN:C    | 1:O:102:ASN:HD22 | 2.21                     | 0.43              |
| 1:P:612:THR:HA   | 1:P:613:PRO:HD3  | 1.59                     | 0.43              |
| 1:A:599:ARG:HB2  | 1:A:600:GLN:H    | 1.63                     | 0.43              |
| 1:C:685:LEU:HA   | 1:C:686:PRO:HD3  | 1.83                     | 0.43              |
| 1:C:702:GLN:O    | 1:C:712:GLY:N    | 2.47                     | 0.43              |
| 1:E:378:LEU:HA   | 1:E:378:LEU:HD23 | 1.74                     | 0.43              |
| 1:E:482:ARG:HH11 | 1:E:482:ARG:HD2  | 1.63                     | 0.43              |
| 1:G:986:ILE:HD13 | 1:G:986:ILE:HG23 | 1.67                     | 0.43              |
| 1:H:322:LEU:CD2  | 1:H:324:GLU:N    | 2.80                     | 0.43              |
| 1:I:857:ARG:HG2  | 1:I:857:ARG:HH11 | 1.83                     | 0.43              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:J:278:ILE:N    | 1:J:278:ILE:CD1   | 2.80                     | 0.43              |
| 1:J:867:THR:HG22 | 3:J:3405:HOH:O    | 2.18                     | 0.43              |
| 1:K:378:LEU:HA   | 1:K:378:LEU:HD23  | 1.74                     | 0.43              |
| 1:K:679:LEU:HD23 | 1:K:679:LEU:HA    | 1.40                     | 0.43              |
| 1:L:127:PHE:CD2  | 1:L:127:PHE:N     | 2.87                     | 0.43              |
| 1:L:246:MET:HG2  | 1:L:274:PHE:CE2   | 2.52                     | 0.43              |
| 1:L:576:ILE:CG2  | 1:L:577:LYS:N     | 2.79                     | 0.43              |
| 1:M:3:ILE:HG13   | 1:M:4:THR:N       | 2.25                     | 0.43              |
| 1:M:991:MET:HE2  | 1:M:1003:VAL:HG21 | 1.99                     | 0.43              |
| 1:N:857:ARG:HG2  | 1:N:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:O:856:TYR:CD2  | 1:O:864:MET:CE    | 3.00                     | 0.43              |
| 1:P:567:VAL:HG12 | 1:P:568:TRP:N     | 2.32                     | 0.43              |
| 1:P:599:ARG:HB2  | 1:P:600:GLN:OE1   | 2.18                     | 0.43              |
| 1:P:687:GLN:HA   | 1:P:688:PRO:HD3   | 1.73                     | 0.43              |
| 1:A:102:ASN:C    | 1:A:102:ASN:HD22  | 2.21                     | 0.43              |
| 1:A:857:ARG:HG2  | 1:A:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:A:991:MET:HE2  | 1:A:1003:VAL:HG21 | 2.00                     | 0.43              |
| 1:B:80:GLU:H     | 1:B:80:GLU:HG3    | 1.29                     | 0.43              |
| 1:B:246:MET:HG2  | 1:B:274:PHE:CE2   | 2.52                     | 0.43              |
| 1:C:576:ILE:CG2  | 1:C:577:LYS:N     | 2.79                     | 0.43              |
| 1:D:221:GLN:H    | 1:D:221:GLN:HG2   | 1.63                     | 0.43              |
| 1:D:576:ILE:CG2  | 1:D:577:LYS:N     | 2.79                     | 0.43              |
| 1:E:638:VAL:O    | 1:E:677:LYS:HA    | 2.18                     | 0.43              |
| 1:E:857:ARG:HG2  | 1:E:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:F:7:LEU:O      | 1:F:11:LEU:HG     | 2.18                     | 0.43              |
| 1:G:127:PHE:CD2  | 1:G:127:PHE:N     | 2.87                     | 0.43              |
| 1:H:947:GLY:HA3  | 1:H:948:PRO:HD2   | 1.82                     | 0.43              |
| 1:J:127:PHE:CD2  | 1:J:127:PHE:N     | 2.87                     | 0.43              |
| 1:J:847:LYS:HG3  | 1:J:848:THR:N     | 2.32                     | 0.43              |
| 1:L:612:THR:HA   | 1:L:613:PRO:HD3   | 1.59                     | 0.43              |
| 1:L:847:LYS:HG3  | 1:L:848:THR:N     | 2.32                     | 0.43              |
| 1:L:857:ARG:HG2  | 1:L:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:L:920:LEU:HB3  | 1:L:921:PRO:CD    | 2.46                     | 0.43              |
| 1:M:857:ARG:HG2  | 1:M:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:N:102:ASN:HD22 | 1:N:102:ASN:C     | 2.21                     | 0.43              |
| 1:N:638:VAL:O    | 1:N:677:LYS:HA    | 2.18                     | 0.43              |
| 1:O:127:PHE:CD2  | 1:O:127:PHE:N     | 2.86                     | 0.43              |
| 1:A:127:PHE:CD2  | 1:A:127:PHE:N     | 2.87                     | 0.43              |
| 1:A:599:ARG:HB2  | 1:A:600:GLN:OE1   | 2.18                     | 0.43              |
| 1:B:183:ARG:HD3  | 1:B:183:ARG:HH11  | 1.62                     | 0.43              |
| 1:B:599:ARG:HB2  | 1:B:600:GLN:OE1   | 2.18                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:730:LEU:HA   | 1:B:731:PRO:HD3  | 1.80                     | 0.43              |
| 1:C:599:ARG:HB2  | 1:C:600:GLN:H    | 1.63                     | 0.43              |
| 1:D:7:LEU:O      | 1:D:11:LEU:HG    | 2.18                     | 0.43              |
| 1:F:279:ILE:HD11 | 1:G:422:PRO:HG2  | 2.01                     | 0.43              |
| 1:F:867:THR:HG22 | 3:F:3404:HOH:O   | 2.17                     | 0.43              |
| 1:G:3:ILE:HG13   | 1:G:4:THR:N      | 2.25                     | 0.43              |
| 1:G:670:LEU:HD23 | 1:G:670:LEU:HA   | 1.75                     | 0.43              |
| 1:H:599:ARG:HB2  | 1:H:600:GLN:H    | 1.64                     | 0.43              |
| 1:H:655:MET:HE3  | 1:H:655:MET:HB2  | 1.73                     | 0.43              |
| 1:I:129:VAL:CG2  | 1:I:182:ASN:ND2  | 2.80                     | 0.43              |
| 1:I:246:MET:HG2  | 1:I:274:PHE:CE2  | 2.52                     | 0.43              |
| 1:I:425:ARG:HH22 | 1:L:287:ASP:CG   | 2.22                     | 0.43              |
| 1:I:947:GLY:HA3  | 1:I:948:PRO:HD2  | 1.82                     | 0.43              |
| 1:J:914:CME:HE2  | 1:J:914:CME:HB3  | 1.74                     | 0.43              |
| 1:J:952:ARG:HH11 | 1:J:952:ARG:CG   | 2.28                     | 0.43              |
| 1:L:183:ARG:HD3  | 1:L:183:ARG:HH11 | 1.62                     | 0.43              |
| 1:L:638:VAL:O    | 1:L:677:LYS:HA   | 2.18                     | 0.43              |
| 1:M:279:ILE:HD12 | 1:M:279:ILE:HG21 | 1.77                     | 0.43              |
| 1:N:772:ASP:OD1  | 1:N:772:ASP:N    | 2.48                     | 0.43              |
| 1:O:7:LEU:O      | 1:O:11:LEU:HG    | 2.18                     | 0.43              |
| 1:O:857:ARG:HG2  | 1:O:857:ARG:HH11 | 1.83                     | 0.43              |
| 1:P:189:LEU:N    | 1:P:189:LEU:CD2  | 2.79                     | 0.43              |
| 1:A:254:LEU:HD23 | 1:A:254:LEU:HA   | 1.71                     | 0.43              |
| 1:F:694:LEU:HD12 | 1:F:694:LEU:HA   | 1.84                     | 0.43              |
| 1:F:836:ILE:HD12 | 1:F:836:ILE:HG23 | 1.73                     | 0.43              |
| 1:G:7:LEU:HD12   | 1:G:74:LEU:HD11  | 1.97                     | 0.43              |
| 1:G:599:ARG:HB2  | 1:G:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:G:914:CME:HB3  | 1:G:914:CME:HE2  | 1.74                     | 0.43              |
| 1:H:702:GLN:O    | 1:H:712:GLY:N    | 2.47                     | 0.43              |
| 1:I:127:PHE:CD2  | 1:I:127:PHE:N    | 2.87                     | 0.43              |
| 1:I:285:TYR:CB   | 1:I:288:ARG:HG3  | 2.42                     | 0.43              |
| 1:I:685:LEU:HA   | 1:I:686:PRO:HD3  | 1.83                     | 0.43              |
| 1:K:278:ILE:N    | 1:K:278:ILE:CD1  | 2.80                     | 0.43              |
| 1:K:920:LEU:HB3  | 1:K:921:PRO:CD   | 2.46                     | 0.43              |
| 1:N:279:ILE:CD1  | 1:O:422:PRO:CG   | 2.95                     | 0.43              |
| 1:N:702:GLN:HA   | 1:N:703:PRO:HD2  | 1.88                     | 0.43              |
| 1:N:986:ILE:HG21 | 1:N:986:ILE:HD12 | 1.75                     | 0.43              |
| 1:O:599:ARG:HB2  | 1:O:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:P:867:THR:HG22 | 3:P:3410:HOH:O   | 2.17                     | 0.43              |
| 1:A:567:VAL:HG12 | 1:A:568:TRP:N    | 2.32                     | 0.43              |
| 1:D:778:THR:HB   | 1:D:887:GLN:H    | 1.84                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:13:ARG:O     | 1:E:14:ARG:HB2   | 2.17                     | 0.43              |
| 1:E:702:GLN:O    | 1:E:712:GLY:N    | 2.47                     | 0.43              |
| 1:F:80:GLU:H     | 1:F:80:GLU:HG3   | 1.28                     | 0.43              |
| 1:F:183:ARG:HD3  | 1:F:183:ARG:HH11 | 1.62                     | 0.43              |
| 1:F:670:LEU:HA   | 1:F:670:LEU:HD23 | 1.75                     | 0.43              |
| 1:F:857:ARG:HG2  | 1:F:857:ARG:HH11 | 1.83                     | 0.43              |
| 1:G:278:ILE:N    | 1:G:278:ILE:CD1  | 2.80                     | 0.43              |
| 1:H:567:VAL:HG12 | 1:H:568:TRP:N    | 2.32                     | 0.43              |
| 1:K:287:ASP:OD1  | 1:K:287:ASP:N    | 2.41                     | 0.43              |
| 1:K:576:ILE:CG2  | 1:K:577:LYS:N    | 2.79                     | 0.43              |
| 1:K:599:ARG:HB2  | 1:K:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:L:7:LEU:O      | 1:L:11:LEU:HG    | 2.18                     | 0.43              |
| 1:L:658:LEU:N    | 1:L:661:LYS:O    | 2.40                     | 0.43              |
| 1:M:129:VAL:CG2  | 1:M:182:ASN:ND2  | 2.80                     | 0.43              |
| 1:M:183:ARG:HD3  | 1:M:183:ARG:HH11 | 1.62                     | 0.43              |
| 1:M:429:ASP:HA   | 1:M:430:PRO:HD3  | 1.73                     | 0.43              |
| 1:M:599:ARG:HB2  | 1:M:600:GLN:H    | 1.63                     | 0.43              |
| 1:N:7:LEU:O      | 1:N:11:LEU:HG    | 2.18                     | 0.43              |
| 1:N:1017:GLN:HB3 | 3:N:3513:HOH:O   | 2.19                     | 0.43              |
| 1:O:685:LEU:HA   | 1:O:686:PRO:HD3  | 1.83                     | 0.43              |
| 1:O:1017:GLN:HB3 | 3:O:3509:HOH:O   | 2.19                     | 0.43              |
| 1:A:482:ARG:HH11 | 1:A:482:ARG:HD2  | 1.63                     | 0.43              |
| 1:B:7:LEU:HD12   | 1:B:74:LEU:HD11  | 1.97                     | 0.43              |
| 1:B:1017:GLN:HB3 | 3:B:3513:HOH:O   | 2.19                     | 0.43              |
| 1:E:57:GLU:HG2   | 1:E:83:THR:HG22  | 1.95                     | 0.43              |
| 1:E:316:HIS:HA   | 1:E:323:ILE:HD13 | 2.01                     | 0.43              |
| 1:E:702:GLN:HA   | 1:E:703:PRO:HD2  | 1.88                     | 0.43              |
| 1:F:127:PHE:N    | 1:F:127:PHE:CD2  | 2.87                     | 0.43              |
| 1:F:221:GLN:H    | 1:F:221:GLN:HG2  | 1.63                     | 0.43              |
| 1:G:778:THR:HB   | 1:G:887:GLN:H    | 1.84                     | 0.43              |
| 1:G:1017:GLN:HB3 | 3:G:3512:HOH:O   | 2.19                     | 0.43              |
| 1:H:129:VAL:CG2  | 1:H:182:ASN:ND2  | 2.80                     | 0.43              |
| 1:I:679:LEU:HD23 | 1:I:679:LEU:HA   | 1.40                     | 0.43              |
| 1:I:702:GLN:O    | 1:I:712:GLY:N    | 2.47                     | 0.43              |
| 1:K:1017:GLN:HB3 | 3:K:4414:HOH:O   | 2.19                     | 0.43              |
| 1:L:3:ILE:HG13   | 1:L:4:THR:N      | 2.24                     | 0.43              |
| 1:M:127:PHE:N    | 1:M:127:PHE:CD2  | 2.87                     | 0.43              |
| 1:N:599:ARG:HB2  | 1:N:600:GLN:OE1  | 2.18                     | 0.43              |
| 1:O:778:THR:HB   | 1:O:887:GLN:H    | 1.84                     | 0.43              |
| 1:O:867:THR:HG22 | 3:O:3402:HOH:O   | 2.17                     | 0.43              |
| 1:P:237:ARG:HE   | 1:P:237:ARG:HB2  | 1.35                     | 0.43              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:78:LEU:HB3   | 1:A:79:PRO:CD     | 2.43                     | 0.43              |
| 1:B:279:ILE:HD11 | 1:C:422:PRO:HB2   | 2.01                     | 0.43              |
| 1:B:986:ILE:HD13 | 1:B:986:ILE:HG23  | 1.67                     | 0.43              |
| 1:D:836:ILE:HD12 | 1:D:836:ILE:HG23  | 1.73                     | 0.43              |
| 1:E:7:LEU:O      | 1:E:11:LEU:HG     | 2.18                     | 0.43              |
| 1:E:127:PHE:N    | 1:E:127:PHE:CD2   | 2.87                     | 0.43              |
| 1:E:772:ASP:OD1  | 1:E:772:ASP:N     | 2.48                     | 0.43              |
| 1:G:612:THR:HA   | 1:G:613:PRO:HD3   | 1.59                     | 0.43              |
| 1:H:867:THR:HG22 | 3:H:4299:HOH:O    | 2.17                     | 0.43              |
| 1:L:147:ASN:HA   | 1:L:148:SER:HA    | 1.57                     | 0.43              |
| 1:L:254:LEU:HD23 | 1:L:254:LEU:HA    | 1.71                     | 0.43              |
| 1:L:278:ILE:N    | 1:L:278:ILE:CD1   | 2.80                     | 0.43              |
| 1:L:679:LEU:HD23 | 1:L:679:LEU:HA    | 1.40                     | 0.43              |
| 1:M:952:ARG:HH11 | 1:M:952:ARG:CG    | 2.28                     | 0.43              |
| 1:N:279:ILE:HD11 | 1:O:422:PRO:HB2   | 1.99                     | 0.43              |
| 1:O:13:ARG:O     | 1:O:14:ARG:HB2    | 2.17                     | 0.43              |
| 1:A:221:GLN:H    | 1:A:221:GLN:HG2   | 1.63                     | 0.43              |
| 1:B:670:LEU:HD23 | 1:B:670:LEU:HA    | 1.75                     | 0.43              |
| 1:C:1000:SER:HA  | 1:C:1001:PRO:HD3  | 1.88                     | 0.43              |
| 1:F:991:MET:HE2  | 1:F:1003:VAL:HG21 | 2.00                     | 0.43              |
| 1:G:682:LEU:HD23 | 1:G:682:LEU:HA    | 1.85                     | 0.43              |
| 1:G:685:LEU:HA   | 1:G:686:PRO:HD3   | 1.83                     | 0.43              |
| 1:G:857:ARG:HG2  | 1:G:857:ARG:HH11  | 1.83                     | 0.43              |
| 1:I:237:ARG:HE   | 1:I:237:ARG:HB2   | 1.35                     | 0.43              |
| 1:J:118:ASN:HA   | 1:J:119:PRO:HD2   | 1.62                     | 0.43              |
| 1:J:237:ARG:HE   | 1:J:237:ARG:HB2   | 1.35                     | 0.43              |
| 1:K:778:THR:HB   | 1:K:887:GLN:H     | 1.84                     | 0.43              |
| 1:K:857:ARG:HH11 | 1:K:857:ARG:HG2   | 1.83                     | 0.43              |
| 1:N:134:LEU:HA   | 1:N:134:LEU:HD23  | 1.68                     | 0.43              |
| 1:N:778:THR:HB   | 1:N:887:GLN:H     | 1.84                     | 0.43              |
| 1:P:778:THR:HB   | 1:P:887:GLN:H     | 1.83                     | 0.43              |
| 1:P:878:HIS:HA   | 1:P:879:PRO:HD3   | 1.83                     | 0.43              |
| 1:A:778:THR:HB   | 1:A:887:GLN:H     | 1.84                     | 0.43              |
| 1:B:778:THR:HB   | 1:B:887:GLN:H     | 1.84                     | 0.43              |
| 1:C:127:PHE:N    | 1:C:127:PHE:CD2   | 2.86                     | 0.43              |
| 1:D:1017:GLN:HB3 | 3:D:3519:HOH:O    | 2.19                     | 0.43              |
| 1:F:599:ARG:HB2  | 1:F:600:GLN:OE1   | 2.19                     | 0.43              |
| 1:F:1017:GLN:HB3 | 3:F:3513:HOH:O    | 2.19                     | 0.43              |
| 1:G:702:GLN:HA   | 1:G:703:PRO:HD2   | 1.88                     | 0.43              |
| 1:H:778:THR:HB   | 1:H:887:GLN:H     | 1.84                     | 0.43              |
| 1:J:102:ASN:C    | 1:J:102:ASN:HD22  | 2.21                     | 0.43              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:J:217:LYS:NZ   | 1:J:326:GLU:OE2   | 2.52                     | 0.43              |
| 1:K:118:ASN:HA   | 1:K:119:PRO:HD2   | 1.62                     | 0.43              |
| 1:L:836:ILE:HG23 | 1:L:836:ILE:HD12  | 1.73                     | 0.43              |
| 1:L:867:THR:HG22 | 3:L:3408:HOH:O    | 2.17                     | 0.43              |
| 1:M:599:ARG:HB2  | 1:M:600:GLN:OE1   | 2.18                     | 0.43              |
| 1:N:127:PHE:N    | 1:N:127:PHE:CD2   | 2.87                     | 0.43              |
| 1:N:694:LEU:HD12 | 1:N:694:LEU:HA    | 1.84                     | 0.43              |
| 1:N:991:MET:HE2  | 1:N:1003:VAL:HG21 | 2.00                     | 0.43              |
| 1:O:612:THR:HA   | 1:O:613:PRO:HD3   | 1.59                     | 0.43              |
| 1:O:682:LEU:HD23 | 1:O:682:LEU:HA    | 1.85                     | 0.43              |
| 1:B:857:ARG:HG2  | 1:B:857:ARG:HH11  | 1.83                     | 0.42              |
| 1:C:134:LEU:HD23 | 1:C:134:LEU:HA    | 1.68                     | 0.42              |
| 1:C:857:ARG:HH11 | 1:C:857:ARG:HG2   | 1.83                     | 0.42              |
| 1:F:271:THR:HG22 | 1:F:272:ALA:N     | 2.34                     | 0.42              |
| 1:H:189:LEU:N    | 1:H:189:LEU:CD2   | 2.79                     | 0.42              |
| 1:I:395:HIS:HA   | 1:I:396:PRO:HD3   | 1.69                     | 0.42              |
| 1:I:599:ARG:HB2  | 1:I:600:GLN:H     | 1.63                     | 0.42              |
| 1:K:4:THR:HA     | 1:K:9:VAL:HG11    | 2.01                     | 0.42              |
| 1:K:271:THR:HG22 | 1:K:272:ALA:N     | 2.35                     | 0.42              |
| 1:M:217:LYS:NZ   | 1:M:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:O:702:GLN:HA   | 1:O:703:PRO:HD2   | 1.88                     | 0.42              |
| 1:P:378:LEU:HD23 | 1:P:378:LEU:HA    | 1.74                     | 0.42              |
| 1:A:217:LYS:NZ   | 1:A:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:A:380:LYS:HE2  | 3:A:4075:HOH:O    | 2.19                     | 0.42              |
| 1:B:287:ASP:OD1  | 1:B:287:ASP:N     | 2.41                     | 0.42              |
| 1:C:778:THR:HB   | 1:C:887:GLN:H     | 1.84                     | 0.42              |
| 1:D:429:ASP:HA   | 1:D:430:PRO:HD3   | 1.73                     | 0.42              |
| 1:E:217:LYS:NZ   | 1:E:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:G:378:LEU:HA   | 1:G:378:LEU:HD23  | 1.74                     | 0.42              |
| 1:G:479:ASP:HA   | 1:G:480:PRO:HD2   | 1.77                     | 0.42              |
| 1:H:217:LYS:NZ   | 1:H:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:H:271:THR:HG22 | 1:H:272:ALA:N     | 2.34                     | 0.42              |
| 1:J:778:THR:HB   | 1:J:887:GLN:H     | 1.84                     | 0.42              |
| 1:J:1017:GLN:HB3 | 3:J:3514:HOH:O    | 2.18                     | 0.42              |
| 1:K:217:LYS:NZ   | 1:K:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:M:271:THR:HG22 | 1:M:272:ALA:N     | 2.34                     | 0.42              |
| 1:N:867:THR:HG22 | 3:N:3405:HOH:O    | 2.17                     | 0.42              |
| 1:P:316:HIS:HA   | 1:P:323:ILE:HD13  | 2.01                     | 0.42              |
| 1:D:271:THR:HG22 | 1:D:272:ALA:N     | 2.34                     | 0.42              |
| 1:D:702:GLN:HA   | 1:D:703:PRO:HD2   | 1.88                     | 0.42              |
| 1:D:772:ASP:OD1  | 1:D:772:ASP:N     | 2.48                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:217:LYS:NZ   | 1:F:326:GLU:OE2  | 2.52                     | 0.42              |
| 1:H:4:THR:HA     | 1:H:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:H:127:PHE:N    | 1:H:127:PHE:CD2  | 2.87                     | 0.42              |
| 1:H:679:LEU:HD23 | 1:H:679:LEU:HA   | 1.40                     | 0.42              |
| 1:I:118:ASN:HA   | 1:I:119:PRO:HD2  | 1.62                     | 0.42              |
| 1:J:173:LEU:HD23 | 1:J:173:LEU:HA   | 1.85                     | 0.42              |
| 1:J:271:THR:HG22 | 1:J:272:ALA:N    | 2.35                     | 0.42              |
| 1:L:772:ASP:OD1  | 1:L:772:ASP:N    | 2.48                     | 0.42              |
| 1:L:778:THR:HB   | 1:L:887:GLN:H    | 1.84                     | 0.42              |
| 1:M:576:ILE:CG2  | 1:M:577:LYS:N    | 2.79                     | 0.42              |
| 1:M:917:ARG:HD2  | 3:M:4341:HOH:O   | 2.19                     | 0.42              |
| 1:N:80:GLU:H     | 1:N:80:GLU:HG3   | 1.29                     | 0.42              |
| 1:N:422:PRO:HG2  | 1:O:279:ILE:CD1  | 2.49                     | 0.42              |
| 1:P:4:THR:HA     | 1:P:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:P:127:PHE:N    | 1:P:127:PHE:CD2  | 2.87                     | 0.42              |
| 1:P:576:ILE:CG2  | 1:P:577:LYS:N    | 2.79                     | 0.42              |
| 1:A:130:ASP:OD1  | 1:A:131:GLU:N    | 2.53                     | 0.42              |
| 1:A:173:LEU:HD23 | 1:A:173:LEU:HA   | 1.86                     | 0.42              |
| 1:B:127:PHE:CD2  | 1:B:127:PHE:N    | 2.87                     | 0.42              |
| 1:B:469:ASP:HB3  | 1:C:473:ARG:HD2  | 2.01                     | 0.42              |
| 1:B:599:ARG:HD2  | 1:B:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:B:685:LEU:HA   | 1:B:686:PRO:HD3  | 1.83                     | 0.42              |
| 1:C:4:THR:HA     | 1:C:9:VAL:HG11   | 2.01                     | 0.42              |
| 1:C:254:LEU:HD23 | 1:C:254:LEU:HA   | 1.71                     | 0.42              |
| 1:D:857:ARG:HG2  | 1:D:857:ARG:HH11 | 1.83                     | 0.42              |
| 1:E:4:THR:HA     | 1:E:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:E:234:ASP:O    | 1:E:235:PHE:HB2  | 2.20                     | 0.42              |
| 1:E:380:LYS:HE2  | 3:E:4075:HOH:O   | 2.19                     | 0.42              |
| 1:F:278:ILE:N    | 1:F:278:ILE:CD1  | 2.80                     | 0.42              |
| 1:F:778:THR:HB   | 1:F:887:GLN:H    | 1.84                     | 0.42              |
| 1:H:380:LYS:HE2  | 3:H:4075:HOH:O   | 2.19                     | 0.42              |
| 1:I:687:GLN:HA   | 1:I:688:PRO:HD3  | 1.73                     | 0.42              |
| 1:K:80:GLU:H     | 1:K:80:GLU:HG3   | 1.29                     | 0.42              |
| 1:K:111:PRO:HA   | 1:K:112:PRO:HA   | 1.66                     | 0.42              |
| 1:L:429:ASP:HA   | 1:L:430:PRO:HD3  | 1.73                     | 0.42              |
| 1:L:670:LEU:HD23 | 1:L:670:LEU:HA   | 1.75                     | 0.42              |
| 1:M:380:LYS:HE2  | 3:M:4075:HOH:O   | 2.19                     | 0.42              |
| 1:P:173:LEU:HD23 | 1:P:173:LEU:HA   | 1.85                     | 0.42              |
| 1:P:380:LYS:HE2  | 3:P:3187:HOH:O   | 2.19                     | 0.42              |
| 1:P:836:ILE:HG23 | 1:P:836:ILE:HD12 | 1.73                     | 0.42              |
| 1:P:1017:GLN:HB3 | 3:P:3519:HOH:O   | 2.19                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:599:ARG:HD2  | 1:A:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:B:217:LYS:NZ   | 1:B:326:GLU:OE2  | 2.52                     | 0.42              |
| 1:B:658:LEU:N    | 1:B:661:LYS:O    | 2.40                     | 0.42              |
| 1:B:917:ARG:HD2  | 3:B:3446:HOH:O   | 2.19                     | 0.42              |
| 1:B:920:LEU:HB3  | 1:B:921:PRO:CD   | 2.46                     | 0.42              |
| 1:C:867:THR:HG22 | 3:C:4299:HOH:O   | 2.17                     | 0.42              |
| 1:C:914:CME:HE2  | 1:C:914:CME:HB3  | 1.74                     | 0.42              |
| 1:D:599:ARG:HD2  | 1:D:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:E:576:ILE:CG2  | 1:E:577:LYS:N    | 2.79                     | 0.42              |
| 1:F:599:ARG:HD2  | 1:F:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:F:772:ASP:OD1  | 1:F:772:ASP:N    | 2.48                     | 0.42              |
| 1:F:917:ARG:HD2  | 3:F:3447:HOH:O   | 2.19                     | 0.42              |
| 1:G:176:PHE:CD1  | 1:G:176:PHE:N    | 2.88                     | 0.42              |
| 1:J:857:ARG:HG2  | 1:J:857:ARG:HH11 | 1.83                     | 0.42              |
| 1:K:127:PHE:N    | 1:K:127:PHE:CD2  | 2.87                     | 0.42              |
| 1:K:562:LEU:HD23 | 1:K:562:LEU:HA   | 1.90                     | 0.42              |
| 1:K:668:VAL:HA   | 1:K:669:PRO:HD3  | 1.83                     | 0.42              |
| 1:L:1017:GLN:HB3 | 3:L:3517:HOH:O   | 2.19                     | 0.42              |
| 1:M:4:THR:HA     | 1:M:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:M:427:THR:HA   | 1:M:436:MET:HE2  | 1.93                     | 0.42              |
| 1:M:599:ARG:HD2  | 1:M:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:N:380:LYS:HE2  | 3:N:3182:HOH:O   | 2.19                     | 0.42              |
| 1:O:479:ASP:HA   | 1:O:480:PRO:HD2  | 1.77                     | 0.42              |
| 1:O:576:ILE:CG2  | 1:O:577:LYS:N    | 2.79                     | 0.42              |
| 1:P:130:ASP:OD1  | 1:P:131:GLU:N    | 2.53                     | 0.42              |
| 1:B:237:ARG:HE   | 1:B:237:ARG:HB2  | 1.35                     | 0.42              |
| 1:C:176:PHE:CD1  | 1:C:176:PHE:N    | 2.88                     | 0.42              |
| 1:C:271:THR:HG22 | 1:C:272:ALA:N    | 2.35                     | 0.42              |
| 1:C:670:LEU:HA   | 1:C:670:LEU:HD23 | 1.75                     | 0.42              |
| 1:C:1017:GLN:HB3 | 3:C:4412:HOH:O   | 2.19                     | 0.42              |
| 1:E:202:MET:HB3  | 1:E:202:MET:HE3  | 1.90                     | 0.42              |
| 1:E:836:ILE:HD12 | 1:E:836:ILE:HG23 | 1.73                     | 0.42              |
| 1:E:917:ARG:HD2  | 3:E:4342:HOH:O   | 2.19                     | 0.42              |
| 1:F:667:GLU:C    | 1:F:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:F:702:GLN:O    | 1:F:712:GLY:N    | 2.47                     | 0.42              |
| 1:H:111:PRO:HA   | 1:H:112:PRO:HA   | 1.66                     | 0.42              |
| 1:H:173:LEU:HD23 | 1:H:173:LEU:HA   | 1.85                     | 0.42              |
| 1:I:599:ARG:HB2  | 1:I:600:GLN:OE1  | 2.18                     | 0.42              |
| 1:J:176:PHE:CD1  | 1:J:176:PHE:N    | 2.88                     | 0.42              |
| 1:J:482:ARG:HH11 | 1:J:482:ARG:HD2  | 1.63                     | 0.42              |
| 1:K:130:ASP:OD1  | 1:K:131:GLU:N    | 2.53                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:130:ASP:OD1  | 1:L:131:GLU:N    | 2.53                     | 0.42              |
| 1:L:217:LYS:NZ   | 1:L:326:GLU:OE2  | 2.52                     | 0.42              |
| 1:L:599:ARG:HB2  | 1:L:600:GLN:OE1  | 2.18                     | 0.42              |
| 1:M:130:ASP:OD1  | 1:M:131:GLU:N    | 2.53                     | 0.42              |
| 1:M:176:PHE:N    | 1:M:176:PHE:CD1  | 2.88                     | 0.42              |
| 1:M:667:GLU:C    | 1:M:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:N:667:GLU:C    | 1:N:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:O:667:GLU:C    | 1:O:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:P:920:LEU:HB3  | 1:P:921:PRO:CD   | 2.46                     | 0.42              |
| 1:A:285:TYR:CB   | 1:A:288:ARG:HG3  | 2.42                     | 0.42              |
| 1:C:147:ASN:HA   | 1:C:148:SER:HA   | 1.57                     | 0.42              |
| 1:C:378:LEU:HA   | 1:C:378:LEU:HD23 | 1.74                     | 0.42              |
| 1:C:380:LYS:HE2  | 3:C:4075:HOH:O   | 2.19                     | 0.42              |
| 1:E:176:PHE:CD1  | 1:E:176:PHE:N    | 2.88                     | 0.42              |
| 1:E:287:ASP:OD2  | 1:H:425:ARG:NH2  | 2.53                     | 0.42              |
| 1:E:778:THR:HB   | 1:E:887:GLN:H    | 1.84                     | 0.42              |
| 1:F:4:THR:HA     | 1:F:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:F:211:ASP:OD1  | 1:F:211:ASP:N    | 2.50                     | 0.42              |
| 1:F:234:ASP:O    | 1:F:235:PHE:HB2  | 2.20                     | 0.42              |
| 1:F:380:LYS:HE2  | 3:F:3181:HOH:O   | 2.19                     | 0.42              |
| 1:G:147:ASN:HA   | 1:G:148:SER:HA   | 1.57                     | 0.42              |
| 1:H:395:HIS:HA   | 1:H:396:PRO:HD3  | 1.69                     | 0.42              |
| 1:I:272:ALA:HA   | 1:I:273:PRO:HD3  | 1.78                     | 0.42              |
| 1:J:279:ILE:HD11 | 1:K:422:PRO:HG2  | 2.02                     | 0.42              |
| 1:K:687:GLN:HA   | 1:K:688:PRO:HD3  | 1.73                     | 0.42              |
| 1:L:378:LEU:HA   | 1:L:378:LEU:HD23 | 1.74                     | 0.42              |
| 1:M:755:ARG:HH11 | 1:M:755:ARG:HD2  | 1.74                     | 0.42              |
| 1:N:4:THR:HA     | 1:N:9:VAL:HG11   | 2.02                     | 0.42              |
| 1:N:176:PHE:N    | 1:N:176:PHE:CD1  | 2.88                     | 0.42              |
| 1:N:217:LYS:NZ   | 1:N:326:GLU:OE2  | 2.52                     | 0.42              |
| 1:O:679:LEU:HD23 | 1:O:679:LEU:HA   | 1.40                     | 0.42              |
| 1:A:176:PHE:N    | 1:A:176:PHE:CD1  | 2.88                     | 0.42              |
| 1:A:755:ARG:HH11 | 1:A:755:ARG:HD2  | 1.74                     | 0.42              |
| 1:B:176:PHE:CD1  | 1:B:176:PHE:N    | 2.88                     | 0.42              |
| 1:B:726:LEU:HD23 | 1:B:726:LEU:HA   | 1.76                     | 0.42              |
| 1:C:772:ASP:OD1  | 1:C:772:ASP:N    | 2.48                     | 0.42              |
| 1:D:127:PHE:CD2  | 1:D:127:PHE:N    | 2.87                     | 0.42              |
| 1:E:670:LEU:HA   | 1:E:670:LEU:HD23 | 1.75                     | 0.42              |
| 1:E:1017:GLN:HB3 | 3:E:4407:HOH:O   | 2.19                     | 0.42              |
| 1:G:130:ASP:OD1  | 1:G:131:GLU:N    | 2.53                     | 0.42              |
| 1:G:513:PRO:O    | 1:G:514:ALA:HB3  | 2.20                     | 0.42              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:G:878:HIS:HA   | 1:G:879:PRO:HD3   | 1.83                     | 0.42              |
| 1:G:917:ARG:HD2  | 3:G:3446:HOH:O    | 2.19                     | 0.42              |
| 1:I:668:VAL:HA   | 1:I:669:PRO:HD3   | 1.83                     | 0.42              |
| 1:I:670:LEU:HA   | 1:I:670:LEU:HD23  | 1.75                     | 0.42              |
| 1:I:778:THR:HB   | 1:I:887:GLN:H     | 1.84                     | 0.42              |
| 1:I:917:ARG:HD2  | 3:I:4340:HOH:O    | 2.19                     | 0.42              |
| 1:J:667:GLU:C    | 1:J:668:VAL:HG23  | 2.40                     | 0.42              |
| 1:M:7:LEU:HD12   | 1:M:74:LEU:HD11   | 1.97                     | 0.42              |
| 1:M:778:THR:HG22 | 1:M:779:PRO:O     | 2.20                     | 0.42              |
| 1:N:599:ARG:HD2  | 1:N:600:GLN:OE1   | 2.20                     | 0.42              |
| 1:N:986:ILE:HG23 | 1:N:986:ILE:HD13  | 1.67                     | 0.42              |
| 1:O:878:HIS:HA   | 1:O:879:PRO:HD3   | 1.83                     | 0.42              |
| 1:O:917:ARG:HD2  | 3:O:3445:HOH:O    | 2.19                     | 0.42              |
| 1:P:7:LEU:HD12   | 1:P:74:LEU:HD11   | 1.97                     | 0.42              |
| 1:B:4:THR:HA     | 1:B:9:VAL:HG11    | 2.02                     | 0.42              |
| 1:B:234:ASP:O    | 1:B:235:PHE:HB2   | 2.20                     | 0.42              |
| 1:B:655:MET:O    | 1:B:655:MET:HG3   | 2.20                     | 0.42              |
| 1:C:130:ASP:OD1  | 1:C:131:GLU:N     | 2.53                     | 0.42              |
| 1:C:778:THR:HG22 | 1:C:779:PRO:O     | 2.20                     | 0.42              |
| 1:D:4:THR:HA     | 1:D:9:VAL:HG11    | 2.01                     | 0.42              |
| 1:D:217:LYS:NZ   | 1:D:326:GLU:OE2   | 2.52                     | 0.42              |
| 1:D:667:GLU:C    | 1:D:668:VAL:HG23  | 2.40                     | 0.42              |
| 1:E:599:ARG:HD2  | 1:E:600:GLN:OE1   | 2.20                     | 0.42              |
| 1:E:991:MET:HE2  | 1:E:1003:VAL:HG21 | 2.01                     | 0.42              |
| 1:H:482:ARG:HH11 | 1:H:482:ARG:HD2   | 1.63                     | 0.42              |
| 1:H:667:GLU:C    | 1:H:668:VAL:HG23  | 2.40                     | 0.42              |
| 1:I:856:TYR:CD2  | 1:I:864:MET:HE2   | 2.53                     | 0.42              |
| 1:J:362:LEU:HD23 | 1:J:362:LEU:HA    | 1.70                     | 0.42              |
| 1:J:658:LEU:N    | 1:J:661:LYS:O     | 2.40                     | 0.42              |
| 1:K:272:ALA:HA   | 1:K:273:PRO:HD3   | 1.78                     | 0.42              |
| 1:K:513:PRO:O    | 1:K:514:ALA:HB3   | 2.20                     | 0.42              |
| 1:K:778:THR:HG22 | 1:K:779:PRO:O     | 2.20                     | 0.42              |
| 1:K:917:ARG:HD2  | 3:K:4343:HOH:O    | 2.19                     | 0.42              |
| 1:L:513:PRO:O    | 1:L:514:ALA:HB3   | 2.20                     | 0.42              |
| 1:L:599:ARG:HD2  | 1:L:600:GLN:OE1   | 2.20                     | 0.42              |
| 1:M:378:LEU:HA   | 1:M:378:LEU:HD23  | 1.74                     | 0.42              |
| 1:M:395:HIS:HA   | 1:M:396:PRO:HD3   | 1.69                     | 0.42              |
| 1:M:422:PRO:HB2  | 1:P:279:ILE:HD11  | 2.02                     | 0.42              |
| 1:N:130:ASP:OD1  | 1:N:131:GLU:N     | 2.53                     | 0.42              |
| 1:N:211:ASP:OD1  | 1:N:211:ASP:N     | 2.50                     | 0.42              |
| 1:N:595:THR:CG2  | 1:N:596:PRO:HA    | 2.37                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:4:THR:HA     | 1:A:9:VAL:HG11   | 2.01                     | 0.42              |
| 1:A:422:PRO:CG   | 1:D:279:ILE:CD1  | 2.97                     | 0.42              |
| 1:B:513:PRO:O    | 1:B:514:ALA:HB3  | 2.20                     | 0.42              |
| 1:C:667:GLU:C    | 1:C:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:E:173:LEU:HD23 | 1:E:173:LEU:HA   | 1.85                     | 0.42              |
| 1:E:667:GLU:C    | 1:E:668:VAL:HG23 | 2.40                     | 0.42              |
| 1:E:694:LEU:HD12 | 1:E:694:LEU:HA   | 1.84                     | 0.42              |
| 1:F:176:PHE:CD1  | 1:F:176:PHE:N    | 2.88                     | 0.42              |
| 1:F:576:ILE:CG2  | 1:F:577:LYS:N    | 2.79                     | 0.42              |
| 1:G:211:ASP:OD1  | 1:G:211:ASP:N    | 2.50                     | 0.42              |
| 1:G:599:ARG:HD2  | 1:G:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:H:130:ASP:OD1  | 1:H:131:GLU:N    | 2.53                     | 0.42              |
| 1:H:513:PRO:O    | 1:H:514:ALA:HB3  | 2.20                     | 0.42              |
| 1:H:917:ARG:HD2  | 3:H:4343:HOH:O   | 2.19                     | 0.42              |
| 1:I:217:LYS:NZ   | 1:I:326:GLU:OE2  | 2.52                     | 0.42              |
| 1:J:778:THR:HG22 | 1:J:779:PRO:O    | 2.20                     | 0.42              |
| 1:K:221:GLN:H    | 1:K:221:GLN:HG2  | 1.62                     | 0.42              |
| 1:K:234:ASP:O    | 1:K:235:PHE:HB2  | 2.20                     | 0.42              |
| 1:K:316:HIS:HA   | 1:K:323:ILE:HD13 | 2.01                     | 0.42              |
| 1:K:599:ARG:HD2  | 1:K:600:GLN:OE1  | 2.20                     | 0.42              |
| 1:K:655:MET:O    | 1:K:655:MET:HG3  | 2.20                     | 0.42              |
| 1:N:183:ARG:HD3  | 1:N:183:ARG:HH11 | 1.62                     | 0.42              |
| 1:N:513:PRO:O    | 1:N:514:ALA:HB3  | 2.20                     | 0.42              |
| 1:O:53:SER:C     | 1:O:54:LEU:HD23  | 2.41                     | 0.42              |
| 1:O:687:GLN:HA   | 1:O:688:PRO:HD3  | 1.73                     | 0.42              |
| 1:P:279:ILE:HD12 | 1:P:279:ILE:HG21 | 1.77                     | 0.42              |
| 1:P:702:GLN:HA   | 1:P:703:PRO:HD2  | 1.88                     | 0.42              |
| 1:A:118:ASN:HA   | 1:A:119:PRO:HD2  | 1.62                     | 0.41              |
| 1:B:778:THR:HG22 | 1:B:779:PRO:O    | 2.20                     | 0.41              |
| 1:C:217:LYS:NZ   | 1:C:326:GLU:OE2  | 2.52                     | 0.41              |
| 1:C:599:ARG:HD2  | 1:C:600:GLN:OE1  | 2.20                     | 0.41              |
| 1:D:917:ARG:HD2  | 3:D:3454:HOH:O   | 2.19                     | 0.41              |
| 1:F:130:ASP:OD1  | 1:F:131:GLU:N    | 2.53                     | 0.41              |
| 1:H:576:ILE:CG2  | 1:H:577:LYS:N    | 2.79                     | 0.41              |
| 1:H:599:ARG:HD2  | 1:H:600:GLN:OE1  | 2.20                     | 0.41              |
| 1:H:670:LEU:HA   | 1:H:670:LEU:HD23 | 1.75                     | 0.41              |
| 1:I:422:PRO:HG2  | 1:L:279:ILE:CD1  | 2.50                     | 0.41              |
| 1:I:655:MET:HE3  | 1:I:655:MET:HB2  | 1.81                     | 0.41              |
| 1:J:599:ARG:HB2  | 1:J:600:GLN:H    | 1.64                     | 0.41              |
| 1:K:176:PHE:N    | 1:K:176:PHE:CD1  | 2.88                     | 0.41              |
| 1:K:726:LEU:HA   | 1:K:726:LEU:HD23 | 1.76                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:130:ASP:OD1  | 1:O:131:GLU:N    | 2.53                     | 0.41              |
| 1:O:217:LYS:NZ   | 1:O:326:GLU:OE2  | 2.52                     | 0.41              |
| 1:P:217:LYS:NZ   | 1:P:326:GLU:OE2  | 2.52                     | 0.41              |
| 1:A:667:GLU:C    | 1:A:668:VAL:HG23 | 2.40                     | 0.41              |
| 1:B:254:LEU:HA   | 1:B:254:LEU:HD23 | 1.71                     | 0.41              |
| 1:B:271:THR:HG22 | 1:B:272:ALA:N    | 2.35                     | 0.41              |
| 1:C:836:ILE:HD12 | 1:C:836:ILE:HG23 | 1.73                     | 0.41              |
| 1:D:234:ASP:O    | 1:D:235:PHE:HB2  | 2.20                     | 0.41              |
| 1:D:986:ILE:HD13 | 1:D:986:ILE:HG23 | 1.67                     | 0.41              |
| 1:E:802:ASP:HA   | 1:E:803:PRO:HD3  | 1.83                     | 0.41              |
| 1:F:74:LEU:HD23  | 1:F:74:LEU:HA    | 1.92                     | 0.41              |
| 1:F:482:ARG:HH11 | 1:F:482:ARG:HD2  | 1.63                     | 0.41              |
| 1:G:217:LYS:NZ   | 1:G:326:GLU:OE2  | 2.52                     | 0.41              |
| 1:H:234:ASP:O    | 1:H:235:PHE:HB2  | 2.20                     | 0.41              |
| 1:H:662:PRO:O    | 1:H:663:LEU:HD23 | 2.20                     | 0.41              |
| 1:I:69:VAL:CG1   | 1:I:70:PRO:HD2   | 2.51                     | 0.41              |
| 1:I:667:GLU:C    | 1:I:668:VAL:HG23 | 2.40                     | 0.41              |
| 1:I:726:LEU:HA   | 1:I:726:LEU:HD23 | 1.76                     | 0.41              |
| 1:L:176:PHE:N    | 1:L:176:PHE:CD1  | 2.88                     | 0.41              |
| 1:M:234:ASP:O    | 1:M:235:PHE:HB2  | 2.20                     | 0.41              |
| 1:M:655:MET:O    | 1:M:655:MET:HG3  | 2.20                     | 0.41              |
| 1:M:661:LYS:HA   | 1:M:662:PRO:HD3  | 1.74                     | 0.41              |
| 1:M:662:PRO:O    | 1:M:663:LEU:HD23 | 2.20                     | 0.41              |
| 1:M:1017:GLN:HB3 | 3:M:4405:HOH:O   | 2.19                     | 0.41              |
| 1:N:576:ILE:CG2  | 1:N:577:LYS:N    | 2.79                     | 0.41              |
| 1:N:655:MET:O    | 1:N:655:MET:HG3  | 2.20                     | 0.41              |
| 1:O:599:ARG:HD2  | 1:O:600:GLN:OE1  | 2.20                     | 0.41              |
| 1:O:836:ILE:HD12 | 1:O:836:ILE:HG23 | 1.73                     | 0.41              |
| 1:P:53:SER:C     | 1:P:54:LEU:HD23  | 2.41                     | 0.41              |
| 1:A:69:VAL:CG1   | 1:A:70:PRO:HD2   | 2.50                     | 0.41              |
| 1:A:513:PRO:O    | 1:A:514:ALA:HB3  | 2.20                     | 0.41              |
| 1:A:772:ASP:OD1  | 1:A:772:ASP:N    | 2.48                     | 0.41              |
| 1:A:917:ARG:HD2  | 3:A:4343:HOH:O   | 2.20                     | 0.41              |
| 1:B:380:LYS:HE2  | 3:B:3180:HOH:O   | 2.19                     | 0.41              |
| 1:D:53:SER:C     | 1:D:54:LEU:HD23  | 2.41                     | 0.41              |
| 1:D:395:HIS:HA   | 1:D:396:PRO:HD3  | 1.69                     | 0.41              |
| 1:F:947:GLY:HA3  | 1:F:948:PRO:HD2  | 1.82                     | 0.41              |
| 1:J:4:THR:HA     | 1:J:9:VAL:HG11   | 2.02                     | 0.41              |
| 1:J:694:LEU:HD12 | 1:J:694:LEU:HA   | 1.84                     | 0.41              |
| 1:M:287:ASP:OD1  | 1:M:287:ASP:N    | 2.41                     | 0.41              |
| 1:N:778:THR:HG22 | 1:N:779:PRO:O    | 2.20                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:4:THR:HA     | 1:O:9:VAL:HG11   | 2.01                     | 0.41              |
| 1:O:914:CME:HE2  | 1:O:914:CME:HB3  | 1.74                     | 0.41              |
| 1:P:599:ARG:HD2  | 1:P:600:GLN:OE1  | 2.20                     | 0.41              |
| 1:A:576:ILE:CG2  | 1:A:577:LYS:N    | 2.79                     | 0.41              |
| 1:B:134:LEU:HA   | 1:B:134:LEU:HD23 | 1.68                     | 0.41              |
| 1:C:482:ARG:HH11 | 1:C:482:ARG:HD2  | 1.63                     | 0.41              |
| 1:C:662:PRO:O    | 1:C:663:LEU:HD23 | 2.20                     | 0.41              |
| 1:D:513:PRO:O    | 1:D:514:ALA:HB3  | 2.20                     | 0.41              |
| 1:E:7:LEU:HD12   | 1:E:74:LEU:HD11  | 1.97                     | 0.41              |
| 1:E:258:VAL:HA   | 1:E:312:VAL:O    | 2.21                     | 0.41              |
| 1:F:53:SER:C     | 1:F:54:LEU:HD23  | 2.41                     | 0.41              |
| 1:F:778:THR:HG22 | 1:F:779:PRO:O    | 2.20                     | 0.41              |
| 1:G:4:THR:HA     | 1:G:9:VAL:HG11   | 2.02                     | 0.41              |
| 1:G:69:VAL:CG1   | 1:G:70:PRO:HD2   | 2.51                     | 0.41              |
| 1:H:778:THR:HG22 | 1:H:779:PRO:O    | 2.20                     | 0.41              |
| 1:I:4:THR:HA     | 1:I:9:VAL:HG11   | 2.01                     | 0.41              |
| 1:I:183:ARG:HD3  | 1:I:183:ARG:HH11 | 1.62                     | 0.41              |
| 1:I:1017:GLN:HB3 | 3:I:4405:HOH:O   | 2.19                     | 0.41              |
| 1:J:513:PRO:O    | 1:J:514:ALA:HB3  | 2.20                     | 0.41              |
| 1:J:662:PRO:O    | 1:J:663:LEU:HD23 | 2.20                     | 0.41              |
| 1:J:730:LEU:HA   | 1:J:731:PRO:HD3  | 1.80                     | 0.41              |
| 1:L:69:VAL:CG1   | 1:L:70:PRO:HD2   | 2.50                     | 0.41              |
| 1:L:118:ASN:HA   | 1:L:119:PRO:HD2  | 1.62                     | 0.41              |
| 1:L:258:VAL:HA   | 1:L:312:VAL:O    | 2.21                     | 0.41              |
| 1:L:271:THR:HG22 | 1:L:272:ALA:N    | 2.35                     | 0.41              |
| 1:L:380:LYS:HE2  | 3:L:3185:HOH:O   | 2.19                     | 0.41              |
| 1:L:778:THR:HG22 | 1:L:779:PRO:O    | 2.20                     | 0.41              |
| 1:M:118:ASN:HA   | 1:M:119:PRO:HD2  | 1.62                     | 0.41              |
| 1:M:258:VAL:HA   | 1:M:312:VAL:O    | 2.21                     | 0.41              |
| 1:M:513:PRO:O    | 1:M:514:ALA:HB3  | 2.20                     | 0.41              |
| 1:M:836:ILE:HG23 | 1:M:836:ILE:HD12 | 1.73                     | 0.41              |
| 1:P:285:TYR:CB   | 1:P:288:ARG:HG3  | 2.42                     | 0.41              |
| 1:P:667:GLU:C    | 1:P:668:VAL:HG23 | 2.40                     | 0.41              |
| 1:A:418:HIS:O    | 1:D:282:ARG:CD   | 2.67                     | 0.41              |
| 1:B:667:GLU:C    | 1:B:668:VAL:HG23 | 2.40                     | 0.41              |
| 1:C:234:ASP:O    | 1:C:235:PHE:HB2  | 2.20                     | 0.41              |
| 1:C:258:VAL:HA   | 1:C:312:VAL:O    | 2.21                     | 0.41              |
| 1:C:513:PRO:O    | 1:C:514:ALA:HB3  | 2.20                     | 0.41              |
| 1:D:682:LEU:HD23 | 1:D:682:LEU:HA   | 1.85                     | 0.41              |
| 1:E:53:SER:C     | 1:E:54:LEU:HD23  | 2.41                     | 0.41              |
| 1:E:130:ASP:OD1  | 1:E:131:GLU:N    | 2.53                     | 0.41              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:E:271:THR:HG22 | 1:E:272:ALA:N     | 2.35                     | 0.41              |
| 1:E:986:ILE:HG21 | 1:E:986:ILE:HD12  | 1.74                     | 0.41              |
| 1:F:702:GLN:HA   | 1:F:703:PRO:HD2   | 1.88                     | 0.41              |
| 1:H:429:ASP:HA   | 1:H:430:PRO:HD3   | 1.73                     | 0.41              |
| 1:H:702:GLN:HA   | 1:H:703:PRO:HD2   | 1.88                     | 0.41              |
| 1:I:53:SER:C     | 1:I:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:I:176:PHE:N    | 1:I:176:PHE:CD1   | 2.88                     | 0.41              |
| 1:J:130:ASP:OD1  | 1:J:131:GLU:N     | 2.53                     | 0.41              |
| 1:J:234:ASP:O    | 1:J:235:PHE:HB2   | 2.20                     | 0.41              |
| 1:J:367:MET:HB3  | 1:J:372:MET:CE    | 2.50                     | 0.41              |
| 1:K:429:ASP:HA   | 1:K:430:PRO:HD3   | 1.73                     | 0.41              |
| 1:K:667:GLU:C    | 1:K:668:VAL:HG23  | 2.40                     | 0.41              |
| 1:L:4:THR:HA     | 1:L:9:VAL:HG11    | 2.01                     | 0.41              |
| 1:L:53:SER:C     | 1:L:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:L:917:ARG:HD2  | 3:L:3452:HOH:O    | 2.19                     | 0.41              |
| 1:M:69:VAL:CG1   | 1:M:70:PRO:HD2    | 2.50                     | 0.41              |
| 1:M:473:ARG:HD2  | 1:P:469:ASP:HB3   | 2.02                     | 0.41              |
| 1:M:778:THR:HB   | 1:M:887:GLN:H     | 1.84                     | 0.41              |
| 1:M:807:VAL:HG13 | 1:M:808:GLU:N     | 2.36                     | 0.41              |
| 1:N:53:SER:C     | 1:N:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:N:668:VAL:HA   | 1:N:669:PRO:HD3   | 1.83                     | 0.41              |
| 1:O:234:ASP:O    | 1:O:235:PHE:HB2   | 2.20                     | 0.41              |
| 1:O:651:LEU:HD13 | 1:O:651:LEU:HA    | 1.64                     | 0.41              |
| 1:O:661:LYS:HA   | 1:O:662:PRO:HD3   | 1.74                     | 0.41              |
| 1:O:726:LEU:HD23 | 1:O:726:LEU:HA    | 1.76                     | 0.41              |
| 1:P:726:LEU:HD23 | 1:P:726:LEU:HA    | 1.76                     | 0.41              |
| 1:A:271:THR:HG22 | 1:A:272:ALA:N     | 2.35                     | 0.41              |
| 1:A:694:LEU:HD12 | 1:A:694:LEU:HA    | 1.84                     | 0.41              |
| 1:B:130:ASP:OD1  | 1:B:131:GLU:N     | 2.53                     | 0.41              |
| 1:B:654:TRP:CE2  | 1:B:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:C:53:SER:C     | 1:C:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:C:991:MET:HE2  | 1:C:1003:VAL:HG21 | 2.01                     | 0.41              |
| 1:D:258:VAL:HA   | 1:D:312:VAL:O     | 2.21                     | 0.41              |
| 1:D:662:PRO:O    | 1:D:663:LEU:HD23  | 2.20                     | 0.41              |
| 1:E:654:TRP:CE2  | 1:E:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:E:755:ARG:HH11 | 1:E:755:ARG:HD2   | 1.74                     | 0.41              |
| 1:G:53:SER:C     | 1:G:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:G:661:LYS:HA   | 1:G:662:PRO:HD3   | 1.74                     | 0.41              |
| 1:G:667:GLU:C    | 1:G:668:VAL:HG23  | 2.40                     | 0.41              |
| 1:G:807:VAL:HG13 | 1:G:808:GLU:N     | 2.36                     | 0.41              |
| 1:H:986:ILE:HD13 | 1:H:986:ILE:HG23  | 1.67                     | 0.41              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:I:271:THR:HG22 | 1:I:272:ALA:N     | 2.34                     | 0.41              |
| 1:I:557:ARG:HH11 | 1:I:557:ARG:HD2   | 1.73                     | 0.41              |
| 1:J:380:LYS:HE2  | 3:J:3182:HOH:O    | 2.19                     | 0.41              |
| 1:K:380:LYS:HE2  | 3:K:4075:HOH:O    | 2.19                     | 0.41              |
| 1:L:173:LEU:HD23 | 1:L:173:LEU:HA    | 1.86                     | 0.41              |
| 1:M:53:SER:C     | 1:M:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:M:682:LEU:HD23 | 1:M:682:LEU:HA    | 1.85                     | 0.41              |
| 1:N:74:LEU:HD23  | 1:N:74:LEU:HA     | 1.92                     | 0.41              |
| 1:N:271:THR:HG22 | 1:N:272:ALA:N     | 2.34                     | 0.41              |
| 1:N:482:ARG:HH11 | 1:N:482:ARG:HD2   | 1.63                     | 0.41              |
| 1:N:654:TRP:CE2  | 1:N:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:O:258:VAL:HA   | 1:O:312:VAL:O     | 2.21                     | 0.41              |
| 1:O:271:THR:HG22 | 1:O:272:ALA:N     | 2.34                     | 0.41              |
| 1:O:662:PRO:O    | 1:O:663:LEU:HD23  | 2.20                     | 0.41              |
| 1:P:234:ASP:O    | 1:P:235:PHE:HB2   | 2.20                     | 0.41              |
| 1:P:258:VAL:HA   | 1:P:312:VAL:O     | 2.21                     | 0.41              |
| 1:P:654:TRP:CE2  | 1:P:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:A:234:ASP:O    | 1:A:235:PHE:HB2   | 2.20                     | 0.41              |
| 1:A:730:LEU:HA   | 1:A:731:PRO:HD3   | 1.80                     | 0.41              |
| 1:B:807:VAL:CG1  | 1:B:808:GLU:N     | 2.84                     | 0.41              |
| 1:D:176:PHE:N    | 1:D:176:PHE:CD1   | 2.88                     | 0.41              |
| 1:D:730:LEU:HA   | 1:D:731:PRO:HD3   | 1.80                     | 0.41              |
| 1:D:807:VAL:HG13 | 1:D:808:GLU:N     | 2.36                     | 0.41              |
| 1:D:991:MET:HE2  | 1:D:1003:VAL:HG21 | 2.02                     | 0.41              |
| 1:E:425:ARG:NH2  | 1:H:287:ASP:OD2   | 2.54                     | 0.41              |
| 1:E:599:ARG:HB2  | 1:E:600:GLN:H     | 1.63                     | 0.41              |
| 1:F:422:PRO:HG2  | 1:G:279:ILE:CD1   | 2.50                     | 0.41              |
| 1:G:271:THR:HG22 | 1:G:272:ALA:N     | 2.35                     | 0.41              |
| 1:G:287:ASP:OD1  | 1:G:287:ASP:N     | 2.41                     | 0.41              |
| 1:G:679:LEU:HD23 | 1:G:679:LEU:HA    | 1.40                     | 0.41              |
| 1:H:53:SER:C     | 1:H:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:H:69:VAL:CG1   | 1:H:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:H:258:VAL:HA   | 1:H:312:VAL:O     | 2.21                     | 0.41              |
| 1:I:130:ASP:OD1  | 1:I:131:GLU:N     | 2.53                     | 0.41              |
| 1:I:694:LEU:HD12 | 1:I:694:LEU:HA    | 1.84                     | 0.41              |
| 1:J:422:PRO:CG   | 1:K:279:ILE:CD1   | 2.98                     | 0.41              |
| 1:K:499:ILE:HG22 | 1:K:501:PRO:HD3   | 2.03                     | 0.41              |
| 1:K:1000:SER:HA  | 1:K:1001:PRO:HD3  | 1.88                     | 0.41              |
| 1:M:57:GLU:HG2   | 1:M:83:THR:HG22   | 1.95                     | 0.41              |
| 1:O:176:PHE:CD1  | 1:O:176:PHE:N     | 2.88                     | 0.41              |
| 1:O:654:TRP:CE2  | 1:O:666:GLY:HA3   | 2.56                     | 0.41              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:P:69:VAL:CG1   | 1:P:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:A:258:VAL:HA   | 1:A:312:VAL:O     | 2.21                     | 0.41              |
| 1:A:422:PRO:CG   | 1:D:279:ILE:HD13  | 2.50                     | 0.41              |
| 1:B:147:ASN:HA   | 1:B:148:SER:HA    | 1.57                     | 0.41              |
| 1:B:258:VAL:HA   | 1:B:312:VAL:O     | 2.21                     | 0.41              |
| 1:B:662:PRO:O    | 1:B:663:LEU:HD23  | 2.20                     | 0.41              |
| 1:C:36:TRP:CD2   | 1:C:42:ALA:HA     | 2.56                     | 0.41              |
| 1:C:917:ARG:HD2  | 3:C:4343:HOH:O    | 2.19                     | 0.41              |
| 1:D:130:ASP:OD1  | 1:D:131:GLU:N     | 2.53                     | 0.41              |
| 1:D:380:LYS:HE2  | 3:D:3188:HOH:O    | 2.19                     | 0.41              |
| 1:D:807:VAL:CG1  | 1:D:808:GLU:N     | 2.84                     | 0.41              |
| 1:I:380:LYS:HE2  | 3:I:4074:HOH:O    | 2.19                     | 0.41              |
| 1:J:612:THR:HA   | 1:J:613:PRO:HD3   | 1.59                     | 0.41              |
| 1:J:917:ARG:HD2  | 3:J:3449:HOH:O    | 2.19                     | 0.41              |
| 1:L:234:ASP:O    | 1:L:235:PHE:HB2   | 2.20                     | 0.41              |
| 1:L:927:THR:HA   | 1:L:928:PRO:HD3   | 1.82                     | 0.41              |
| 1:L:950:GLN:HB2  | 1:L:1023:LYS:HE2  | 2.03                     | 0.41              |
| 1:L:952:ARG:HH11 | 1:L:952:ARG:CG    | 2.28                     | 0.41              |
| 1:N:807:VAL:CG1  | 1:N:808:GLU:N     | 2.84                     | 0.41              |
| 1:N:917:ARG:HD2  | 3:N:3447:HOH:O    | 2.19                     | 0.41              |
| 1:O:513:PRO:O    | 1:O:514:ALA:HB3   | 2.20                     | 0.41              |
| 1:P:271:THR:HG22 | 1:P:272:ALA:N     | 2.35                     | 0.41              |
| 1:P:917:ARG:HD2  | 3:P:3453:HOH:O    | 2.19                     | 0.41              |
| 1:P:991:MET:HE2  | 1:P:1003:VAL:HG21 | 2.01                     | 0.41              |
| 1:A:53:SER:C     | 1:A:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:A:748:CME:HE2  | 1:A:748:CME:HB3   | 1.15                     | 0.41              |
| 1:A:1017:GLN:HB3 | 3:A:4412:HOH:O    | 2.19                     | 0.41              |
| 1:B:53:SER:C     | 1:B:54:LEU:HD23   | 2.41                     | 0.41              |
| 1:B:272:ALA:HA   | 1:B:273:PRO:HD3   | 1.78                     | 0.41              |
| 1:B:807:VAL:HG13 | 1:B:808:GLU:N     | 2.36                     | 0.41              |
| 1:C:661:LYS:HA   | 1:C:662:PRO:HD3   | 1.74                     | 0.41              |
| 1:D:63:PHE:CB    | 1:D:64:PRO:HD2    | 2.34                     | 0.41              |
| 1:D:778:THR:HG22 | 1:D:779:PRO:O     | 2.20                     | 0.41              |
| 1:E:422:PRO:HG2  | 1:H:279:ILE:CD1   | 2.50                     | 0.41              |
| 1:E:662:PRO:O    | 1:E:663:LEU:HD23  | 2.20                     | 0.41              |
| 1:E:778:THR:HG22 | 1:E:779:PRO:O     | 2.20                     | 0.41              |
| 1:F:36:TRP:CD2   | 1:F:42:ALA:HA     | 2.56                     | 0.41              |
| 1:F:69:VAL:CG1   | 1:F:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:F:807:VAL:CG1  | 1:F:808:GLU:N     | 2.84                     | 0.41              |
| 1:F:807:VAL:HG13 | 1:F:808:GLU:N     | 2.36                     | 0.41              |
| 1:G:272:ALA:HA   | 1:G:273:PRO:HD3   | 1.78                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:654:TRP:CE2   | 1:G:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:G:778:THR:HG22  | 1:G:779:PRO:O     | 2.20                     | 0.41              |
| 1:H:305:ILE:HG21  | 1:H:305:ILE:HD13  | 1.84                     | 0.41              |
| 1:H:654:TRP:CE2   | 1:H:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:H:991:MET:HE2   | 1:H:1003:VAL:HG21 | 2.02                     | 0.41              |
| 1:H:1017:GLN:HB3  | 3:H:4415:HOH:O    | 2.19                     | 0.41              |
| 1:I:258:VAL:HA    | 1:I:312:VAL:O     | 2.21                     | 0.41              |
| 1:I:499:ILE:HG22  | 1:I:501:PRO:HD3   | 2.03                     | 0.41              |
| 1:I:599:ARG:HD2   | 1:I:600:GLN:OE1   | 2.20                     | 0.41              |
| 1:I:654:TRP:CE2   | 1:I:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:I:778:THR:HG22  | 1:I:779:PRO:O     | 2.20                     | 0.41              |
| 1:I:986:ILE:HD13  | 1:I:986:ILE:HG23  | 1.67                     | 0.41              |
| 1:J:69:VAL:CG1    | 1:J:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:J:499:ILE:HG22  | 1:J:501:PRO:HD3   | 2.03                     | 0.41              |
| 1:J:668:VAL:HA    | 1:J:669:PRO:HD3   | 1.83                     | 0.41              |
| 1:J:1017:GLN:HE21 | 1:J:1017:GLN:HB2  | 1.65                     | 0.41              |
| 1:K:258:VAL:HA    | 1:K:312:VAL:O     | 2.21                     | 0.41              |
| 1:K:662:PRO:O     | 1:K:663:LEU:HD23  | 2.20                     | 0.41              |
| 1:K:836:ILE:HG23  | 1:K:836:ILE:HD12  | 1.73                     | 0.41              |
| 1:M:36:TRP:CD2    | 1:M:42:ALA:HA     | 2.56                     | 0.41              |
| 1:M:807:VAL:CG1   | 1:M:808:GLU:N     | 2.84                     | 0.41              |
| 1:N:36:TRP:CD2    | 1:N:42:ALA:HA     | 2.56                     | 0.41              |
| 1:O:36:TRP:CD2    | 1:O:42:ALA:HA     | 2.56                     | 0.41              |
| 1:O:69:VAL:CG1    | 1:O:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:O:221:GLN:H     | 1:O:221:GLN:HG2   | 1.63                     | 0.41              |
| 1:O:778:THR:HA    | 1:O:779:PRO:HD3   | 1.95                     | 0.41              |
| 1:P:176:PHE:CD1   | 1:P:176:PHE:N     | 2.88                     | 0.41              |
| 1:P:395:HIS:HA    | 1:P:396:PRO:HD3   | 1.69                     | 0.41              |
| 1:P:682:LEU:HD23  | 1:P:682:LEU:HA    | 1.85                     | 0.41              |
| 1:P:714:ILE:HD13  | 1:P:714:ILE:HA    | 1.78                     | 0.41              |
| 1:A:5:ASP:OD2     | 1:A:157:ARG:HG2   | 2.21                     | 0.41              |
| 1:A:367:MET:HB3   | 1:A:372:MET:CE    | 2.50                     | 0.41              |
| 1:B:153:TRP:CD1   | 1:B:158:TRP:HA    | 2.56                     | 0.41              |
| 1:B:499:ILE:HG22  | 1:B:501:PRO:HD3   | 2.03                     | 0.41              |
| 1:B:928:PRO:HB2   | 1:B:973:ARG:HH11  | 1.86                     | 0.41              |
| 1:C:69:VAL:CG1    | 1:C:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:C:654:TRP:CE2   | 1:C:666:GLY:HA3   | 2.56                     | 0.41              |
| 1:C:655:MET:O     | 1:C:655:MET:HG3   | 2.20                     | 0.41              |
| 1:D:69:VAL:CG1    | 1:D:70:PRO:HD2    | 2.51                     | 0.41              |
| 1:D:202:MET:HB3   | 1:D:202:MET:HE3   | 1.87                     | 0.41              |
| 1:D:748:CME:HE2   | 1:D:748:CME:HB3   | 1.15                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:5:ASP:OD2    | 1:E:157:ARG:HG2  | 2.21                     | 0.41              |
| 1:E:807:VAL:CG1  | 1:E:808:GLU:N    | 2.84                     | 0.41              |
| 1:E:874:SER:HB3  | 1:F:724:GLU:OE1  | 2.21                     | 0.41              |
| 1:G:153:TRP:CD1  | 1:G:158:TRP:HA   | 2.56                     | 0.41              |
| 1:G:221:GLN:H    | 1:G:221:GLN:HG2  | 1.63                     | 0.41              |
| 1:H:36:TRP:CD2   | 1:H:42:ALA:HA    | 2.56                     | 0.41              |
| 1:H:176:PHE:CD1  | 1:H:176:PHE:N    | 2.88                     | 0.41              |
| 1:H:807:VAL:CG1  | 1:H:808:GLU:N    | 2.84                     | 0.41              |
| 1:I:5:ASP:OD2    | 1:I:157:ARG:HG2  | 2.21                     | 0.41              |
| 1:I:928:PRO:HB2  | 1:I:973:ARG:HH11 | 1.86                     | 0.41              |
| 1:J:599:ARG:HD2  | 1:J:600:GLN:OE1  | 2.20                     | 0.41              |
| 1:J:901:GLY:HA3  | 1:J:902:PRO:HA   | 1.89                     | 0.41              |
| 1:J:905:ASN:HB2  | 1:J:910:LEU:HB3  | 2.03                     | 0.41              |
| 1:K:5:ASP:OD2    | 1:K:157:ARG:HG2  | 2.21                     | 0.41              |
| 1:K:36:TRP:CD2   | 1:K:42:ALA:HA    | 2.56                     | 0.41              |
| 1:K:654:TRP:CE2  | 1:K:666:GLY:HA3  | 2.56                     | 0.41              |
| 1:K:905:ASN:HB2  | 1:K:910:LEU:HB3  | 2.03                     | 0.41              |
| 1:L:807:VAL:CG1  | 1:L:808:GLU:N    | 2.84                     | 0.41              |
| 1:M:654:TRP:CE2  | 1:M:666:GLY:HA3  | 2.56                     | 0.41              |
| 1:N:69:VAL:CG1   | 1:N:70:PRO:HD2   | 2.51                     | 0.41              |
| 1:N:807:VAL:HG13 | 1:N:808:GLU:N    | 2.36                     | 0.41              |
| 1:O:380:LYS:HE2  | 3:O:3179:HOH:O   | 2.19                     | 0.41              |
| 1:O:778:THR:HG22 | 1:O:779:PRO:O    | 2.20                     | 0.41              |
| 1:P:662:PRO:O    | 1:P:663:LEU:HD23 | 2.20                     | 0.41              |
| 1:P:807:VAL:CG1  | 1:P:808:GLU:N    | 2.84                     | 0.41              |
| 1:A:282:ARG:HD2  | 1:D:418:HIS:O    | 2.21                     | 0.40              |
| 1:A:807:VAL:CG1  | 1:A:808:GLU:N    | 2.84                     | 0.40              |
| 1:A:807:VAL:HG13 | 1:A:808:GLU:N    | 2.36                     | 0.40              |
| 1:A:905:ASN:HB2  | 1:A:910:LEU:HB3  | 2.03                     | 0.40              |
| 1:B:682:LEU:HD23 | 1:B:682:LEU:HA   | 1.85                     | 0.40              |
| 1:C:153:TRP:CD1  | 1:C:158:TRP:HA   | 2.56                     | 0.40              |
| 1:C:950:GLN:HB2  | 1:C:1023:LYS:HE2 | 2.03                     | 0.40              |
| 1:D:599:ARG:HB2  | 1:D:600:GLN:H    | 1.64                     | 0.40              |
| 1:D:654:TRP:CE2  | 1:D:666:GLY:HA3  | 2.56                     | 0.40              |
| 1:E:520:ILE:HD13 | 1:E:520:ILE:HG21 | 1.79                     | 0.40              |
| 1:E:807:VAL:HG13 | 1:E:808:GLU:N    | 2.36                     | 0.40              |
| 1:F:5:ASP:OD2    | 1:F:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:F:662:PRO:O    | 1:F:663:LEU:HD23 | 2.20                     | 0.40              |
| 1:G:380:LYS:HE2  | 3:G:3179:HOH:O   | 2.19                     | 0.40              |
| 1:G:662:PRO:O    | 1:G:663:LEU:HD23 | 2.20                     | 0.40              |
| 1:H:153:TRP:CD1  | 1:H:158:TRP:HA   | 2.56                     | 0.40              |

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| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:H:905:ASN:HB2   | 1:H:910:LEU:HB3  | 2.04                     | 0.40              |
| 1:I:134:LEU:HD23  | 1:I:134:LEU:HA   | 1.68                     | 0.40              |
| 1:I:253:TYR:O     | 1:I:318:ALA:N    | 2.55                     | 0.40              |
| 1:J:258:VAL:HA    | 1:J:312:VAL:O    | 2.21                     | 0.40              |
| 1:J:422:PRO:CG    | 1:K:279:ILE:HD11 | 2.50                     | 0.40              |
| 1:K:53:SER:C      | 1:K:54:LEU:HD23  | 2.41                     | 0.40              |
| 1:K:685:LEU:HA    | 1:K:686:PRO:HD3  | 1.83                     | 0.40              |
| 1:K:772:ASP:OD1   | 1:K:772:ASP:N    | 2.48                     | 0.40              |
| 1:K:901:GLY:HA3   | 1:K:902:PRO:HA   | 1.89                     | 0.40              |
| 1:L:499:ILE:HG22  | 1:L:501:PRO:HD3  | 2.03                     | 0.40              |
| 1:L:654:TRP:CE2   | 1:L:666:GLY:HA3  | 2.56                     | 0.40              |
| 1:M:173:LEU:HD23  | 1:M:173:LEU:HA   | 1.85                     | 0.40              |
| 1:M:1017:GLN:HE21 | 1:M:1017:GLN:HB2 | 1.65                     | 0.40              |
| 1:N:5:ASP:OD2     | 1:N:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:N:662:PRO:O     | 1:N:663:LEU:HD23 | 2.20                     | 0.40              |
| 1:O:807:VAL:CG1   | 1:O:808:GLU:N    | 2.84                     | 0.40              |
| 1:P:211:ASP:OD1   | 1:P:211:ASP:N    | 2.50                     | 0.40              |
| 1:P:778:THR:HG22  | 1:P:779:PRO:O    | 2.20                     | 0.40              |
| 1:B:63:PHE:CD1    | 1:B:63:PHE:N     | 2.90                     | 0.40              |
| 1:B:253:TYR:O     | 1:B:318:ALA:N    | 2.54                     | 0.40              |
| 1:D:479:ASP:HA    | 1:D:480:PRO:HD2  | 1.77                     | 0.40              |
| 1:E:134:LEU:HA    | 1:E:134:LEU:HD23 | 1.68                     | 0.40              |
| 1:E:429:ASP:HA    | 1:E:430:PRO:HD3  | 1.74                     | 0.40              |
| 1:E:513:PRO:O     | 1:E:514:ALA:HB3  | 2.20                     | 0.40              |
| 1:E:521:LYS:HB2   | 1:F:559:TYR:OH   | 2.21                     | 0.40              |
| 1:E:661:LYS:HA    | 1:E:662:PRO:HD3  | 1.74                     | 0.40              |
| 1:F:253:TYR:O     | 1:F:318:ALA:N    | 2.54                     | 0.40              |
| 1:G:658:LEU:N     | 1:G:661:LYS:O    | 2.40                     | 0.40              |
| 1:G:807:VAL:CG1   | 1:G:808:GLU:N    | 2.84                     | 0.40              |
| 1:H:5:ASP:OD2     | 1:H:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:H:878:HIS:HA    | 1:H:879:PRO:HD3  | 1.83                     | 0.40              |
| 1:J:63:PHE:CD1    | 1:J:63:PHE:N     | 2.90                     | 0.40              |
| 1:J:316:HIS:HA    | 1:J:323:ILE:HD13 | 2.01                     | 0.40              |
| 1:J:772:ASP:OD1   | 1:J:772:ASP:N    | 2.48                     | 0.40              |
| 1:K:807:VAL:CG1   | 1:K:808:GLU:N    | 2.84                     | 0.40              |
| 1:L:36:TRP:CD2    | 1:L:42:ALA:HA    | 2.56                     | 0.40              |
| 1:L:256:VAL:HG12  | 1:L:257:THR:N    | 2.37                     | 0.40              |
| 1:L:685:LEU:HA    | 1:L:686:PRO:HD3  | 1.83                     | 0.40              |
| 1:L:928:PRO:HB2   | 1:L:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:M:74:LEU:HD23   | 1:M:74:LEU:HA    | 1.92                     | 0.40              |
| 1:M:278:ILE:N     | 1:M:278:ILE:CD1  | 2.80                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:234:ASP:O    | 1:N:235:PHE:HB2  | 2.20                     | 0.40              |
| 1:N:726:LEU:HA   | 1:N:726:LEU:HD23 | 1.76                     | 0.40              |
| 1:O:3:ILE:HG13   | 1:O:4:THR:N      | 2.25                     | 0.40              |
| 1:O:367:MET:HB3  | 1:O:372:MET:CE   | 2.50                     | 0.40              |
| 1:O:670:LEU:HA   | 1:O:670:LEU:HD23 | 1.75                     | 0.40              |
| 1:O:928:PRO:HB2  | 1:O:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:P:499:ILE:HG22 | 1:P:501:PRO:HD3  | 2.03                     | 0.40              |
| 1:A:778:THR:HG22 | 1:A:779:PRO:O    | 2.20                     | 0.40              |
| 1:B:78:LEU:CB    | 1:B:79:PRO:CD    | 3.00                     | 0.40              |
| 1:B:702:GLN:HA   | 1:B:703:PRO:HD2  | 1.88                     | 0.40              |
| 1:C:5:ASP:OD2    | 1:C:157:ARG:HG2  | 2.22                     | 0.40              |
| 1:C:928:PRO:HB2  | 1:C:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:E:36:TRP:CD2   | 1:E:42:ALA:HA    | 2.56                     | 0.40              |
| 1:E:153:TRP:CD1  | 1:E:158:TRP:HA   | 2.56                     | 0.40              |
| 1:F:78:LEU:CB    | 1:F:79:PRO:CD    | 3.00                     | 0.40              |
| 1:F:612:THR:HA   | 1:F:613:PRO:HD3  | 1.59                     | 0.40              |
| 1:G:5:ASP:OD2    | 1:G:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:I:513:PRO:O    | 1:I:514:ALA:HB3  | 2.20                     | 0.40              |
| 1:I:655:MET:O    | 1:I:655:MET:HG3  | 2.20                     | 0.40              |
| 1:I:745:MET:CE   | 1:I:745:MET:CA   | 3.00                     | 0.40              |
| 1:I:807:VAL:CG1  | 1:I:808:GLU:N    | 2.84                     | 0.40              |
| 1:J:654:TRP:CE2  | 1:J:666:GLY:HA3  | 2.56                     | 0.40              |
| 1:K:69:VAL:CG1   | 1:K:70:PRO:HD2   | 2.50                     | 0.40              |
| 1:K:748:CME:HE2  | 1:K:748:CME:HB3  | 1.14                     | 0.40              |
| 1:L:667:GLU:C    | 1:L:668:VAL:HG23 | 2.40                     | 0.40              |
| 1:M:802:ASP:HA   | 1:M:803:PRO:HD3  | 1.83                     | 0.40              |
| 1:M:928:PRO:HB2  | 1:M:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:N:153:TRP:CD1  | 1:N:158:TRP:HA   | 2.56                     | 0.40              |
| 1:N:256:VAL:HG12 | 1:N:257:THR:N    | 2.37                     | 0.40              |
| 1:O:5:ASP:OD2    | 1:O:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:P:905:ASN:HB2  | 1:P:910:LEU:HB3  | 2.03                     | 0.40              |
| 1:A:31:PRO:CB    | 1:A:32:PRO:CD    | 3.00                     | 0.40              |
| 1:A:153:TRP:CD1  | 1:A:158:TRP:HA   | 2.56                     | 0.40              |
| 1:C:499:ILE:HG22 | 1:C:501:PRO:HD3  | 2.03                     | 0.40              |
| 1:C:658:LEU:N    | 1:C:661:LYS:O    | 2.40                     | 0.40              |
| 1:D:78:LEU:CB    | 1:D:79:PRO:CD    | 3.00                     | 0.40              |
| 1:D:655:MET:O    | 1:D:655:MET:HG3  | 2.20                     | 0.40              |
| 1:E:986:ILE:HG23 | 1:E:986:ILE:HD13 | 1.67                     | 0.40              |
| 1:F:153:TRP:CD1  | 1:F:158:TRP:HA   | 2.56                     | 0.40              |
| 1:F:425:ARG:NH2  | 1:G:287:ASP:OD2  | 2.55                     | 0.40              |
| 1:F:499:ILE:HG22 | 1:F:501:PRO:HD3  | 2.03                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:513:PRO:O    | 1:F:514:ALA:HB3  | 2.20                     | 0.40              |
| 1:F:654:TRP:CE2  | 1:F:666:GLY:HA3  | 2.56                     | 0.40              |
| 1:H:499:ILE:HG22 | 1:H:501:PRO:HD3  | 2.03                     | 0.40              |
| 1:I:36:TRP:CD2   | 1:I:42:ALA:HA    | 2.56                     | 0.40              |
| 1:I:189:LEU:N    | 1:I:189:LEU:CD2  | 2.79                     | 0.40              |
| 1:J:36:TRP:CD2   | 1:J:42:ALA:HA    | 2.56                     | 0.40              |
| 1:J:920:LEU:CB   | 1:J:921:PRO:CD   | 2.99                     | 0.40              |
| 1:K:211:ASP:OD1  | 1:K:211:ASP:N    | 2.50                     | 0.40              |
| 1:K:256:VAL:HG12 | 1:K:257:THR:N    | 2.37                     | 0.40              |
| 1:K:714:ILE:HD13 | 1:K:714:ILE:HA   | 1.78                     | 0.40              |
| 1:K:947:GLY:HA3  | 1:K:948:PRO:HD2  | 1.82                     | 0.40              |
| 1:L:5:ASP:OD2    | 1:L:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:L:153:TRP:CD1  | 1:L:158:TRP:HA   | 2.56                     | 0.40              |
| 1:M:147:ASN:HA   | 1:M:148:SER:HA   | 1.57                     | 0.40              |
| 1:M:305:ILE:HD13 | 1:M:305:ILE:HG21 | 1.85                     | 0.40              |
| 1:M:422:PRO:HG2  | 1:P:279:ILE:HD11 | 2.03                     | 0.40              |
| 1:N:78:LEU:CB    | 1:N:79:PRO:CD    | 3.00                     | 0.40              |
| 1:N:279:ILE:HD13 | 1:O:422:PRO:CG   | 2.52                     | 0.40              |
| 1:N:499:ILE:HG22 | 1:N:501:PRO:HD3  | 2.03                     | 0.40              |
| 1:P:36:TRP:CD2   | 1:P:42:ALA:HA    | 2.56                     | 0.40              |
| 1:P:928:PRO:HB2  | 1:P:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:B:36:TRP:CD2   | 1:B:42:ALA:HA    | 2.56                     | 0.40              |
| 1:C:253:TYR:O    | 1:C:318:ALA:N    | 2.55                     | 0.40              |
| 1:C:807:VAL:HG13 | 1:C:808:GLU:N    | 2.36                     | 0.40              |
| 1:D:74:LEU:HD23  | 1:D:74:LEU:HA    | 1.92                     | 0.40              |
| 1:D:745:MET:CE   | 1:D:745:MET:CA   | 3.00                     | 0.40              |
| 1:E:395:HIS:HA   | 1:E:396:PRO:HD3  | 1.69                     | 0.40              |
| 1:G:141:ILE:HG12 | 1:G:142:ILE:N    | 2.37                     | 0.40              |
| 1:G:316:HIS:HA   | 1:G:323:ILE:HD13 | 2.01                     | 0.40              |
| 1:G:928:PRO:HB2  | 1:G:973:ARG:HH11 | 1.86                     | 0.40              |
| 1:H:63:PHE:N     | 1:H:63:PHE:CD1   | 2.90                     | 0.40              |
| 1:H:141:ILE:HG12 | 1:H:142:ILE:N    | 2.37                     | 0.40              |
| 1:I:63:PHE:CD1   | 1:I:63:PHE:N     | 2.90                     | 0.40              |
| 1:I:521:LYS:HB2  | 1:J:559:TYR:OH   | 2.22                     | 0.40              |
| 1:J:5:ASP:OD2    | 1:J:157:ARG:HG2  | 2.22                     | 0.40              |
| 1:J:128:ASN:ND2  | 1:J:180:GLY:HA2  | 2.37                     | 0.40              |
| 1:J:685:LEU:HA   | 1:J:686:PRO:HD3  | 1.83                     | 0.40              |
| 1:J:807:VAL:CG1  | 1:J:808:GLU:N    | 2.84                     | 0.40              |
| 1:K:253:TYR:O    | 1:K:318:ALA:N    | 2.55                     | 0.40              |
| 1:K:694:LEU:HA   | 1:K:694:LEU:HD12 | 1.84                     | 0.40              |
| 1:K:745:MET:CE   | 1:K:745:MET:CA   | 3.00                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:111:PRO:HA   | 1:L:112:PRO:HA   | 1.66                     | 0.40              |
| 1:L:662:PRO:O    | 1:L:663:LEU:HD23 | 2.20                     | 0.40              |
| 1:O:253:TYR:O    | 1:O:318:ALA:N    | 2.55                     | 0.40              |
| 1:O:254:LEU:HD23 | 1:O:254:LEU:HA   | 1.71                     | 0.40              |
| 1:P:5:ASP:OD2    | 1:P:157:ARG:HG2  | 2.21                     | 0.40              |
| 1:P:141:ILE:HG12 | 1:P:142:ILE:N    | 2.37                     | 0.40              |
| 1:P:807:VAL:HG13 | 1:P:808:GLU:N    | 2.36                     | 0.40              |
| 1:P:950:GLN:HB2  | 1:P:1023:LYS:HE2 | 2.03                     | 0.40              |

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1          | Atom-2                 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------------|--------------------------|-------------------|
| 1:A:580:GLU:O   | 1:B:578:TYR:CB[2_555]  | 1.77                     | 0.43              |
| 1:A:580:GLU:O   | 1:B:578:TYR:CG[2_555]  | 1.85                     | 0.35              |
| 1:A:580:GLU:O   | 1:B:578:TYR:CD1[2_555] | 2.10                     | 0.10              |
| 1:B:739:HIS:NE2 | 1:P:738:PRO:O[1_354]   | 2.10                     | 0.10              |
| 1:C:739:HIS:ND1 | 1:I:734:SER:O[1_655]   | 2.15                     | 0.05              |

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed         | Favoured  | Allowed | Outliers | Percentiles |    |
|-----|-------|------------------|-----------|---------|----------|-------------|----|
| 1   | A     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | B     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | C     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | D     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | E     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | F     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |
| 1   | G     | 1021/1023 (100%) | 976 (96%) | 42 (4%) | 3 (0%)   | 41          | 61 |

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| Mol | Chain | Analysed           | Favoured    | Allowed  | Outliers | Percentiles |    |
|-----|-------|--------------------|-------------|----------|----------|-------------|----|
| 1   | H     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | I     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | J     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | K     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | L     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | M     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | N     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | O     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| 1   | P     | 1021/1023 (100%)   | 976 (96%)   | 42 (4%)  | 3 (0%)   | 41          | 61 |
| All | All   | 16336/16368 (100%) | 15616 (96%) | 672 (4%) | 48 (0%)  | 41          | 61 |

All (48) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 174 | SER  |
| 1   | B     | 174 | SER  |
| 1   | C     | 174 | SER  |
| 1   | D     | 174 | SER  |
| 1   | E     | 174 | SER  |
| 1   | F     | 174 | SER  |
| 1   | G     | 174 | SER  |
| 1   | H     | 174 | SER  |
| 1   | I     | 174 | SER  |
| 1   | J     | 174 | SER  |
| 1   | K     | 174 | SER  |
| 1   | L     | 174 | SER  |
| 1   | M     | 174 | SER  |
| 1   | N     | 174 | SER  |
| 1   | O     | 174 | SER  |
| 1   | P     | 174 | SER  |
| 1   | A     | 164 | ASP  |
| 1   | B     | 164 | ASP  |
| 1   | C     | 164 | ASP  |
| 1   | D     | 164 | ASP  |
| 1   | E     | 164 | ASP  |
| 1   | F     | 164 | ASP  |
| 1   | G     | 164 | ASP  |
| 1   | H     | 164 | ASP  |
| 1   | I     | 164 | ASP  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | J     | 164 | ASP  |
| 1   | K     | 164 | ASP  |
| 1   | L     | 164 | ASP  |
| 1   | M     | 164 | ASP  |
| 1   | N     | 164 | ASP  |
| 1   | O     | 164 | ASP  |
| 1   | P     | 164 | ASP  |
| 1   | A     | 119 | PRO  |
| 1   | B     | 119 | PRO  |
| 1   | C     | 119 | PRO  |
| 1   | D     | 119 | PRO  |
| 1   | E     | 119 | PRO  |
| 1   | F     | 119 | PRO  |
| 1   | G     | 119 | PRO  |
| 1   | H     | 119 | PRO  |
| 1   | I     | 119 | PRO  |
| 1   | J     | 119 | PRO  |
| 1   | K     | 119 | PRO  |
| 1   | L     | 119 | PRO  |
| 1   | M     | 119 | PRO  |
| 1   | N     | 119 | PRO  |
| 1   | O     | 119 | PRO  |
| 1   | P     | 119 | PRO  |

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed       | Rotameric | Outliers | Percentiles |
|-----|-------|----------------|-----------|----------|-------------|
| 1   | A     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |
| 1   | B     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |
| 1   | C     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |
| 1   | D     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |
| 1   | E     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |
| 1   | F     | 875/872 (100%) | 776 (89%) | 99 (11%) | 6 11        |

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| Mol | Chain | Analysed           | Rotameric   | Outliers   | Percentiles |    |
|-----|-------|--------------------|-------------|------------|-------------|----|
| 1   | G     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | H     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | I     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | J     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | K     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | L     | 875/872 (100%)     | 777 (89%)   | 98 (11%)   | 6           | 11 |
| 1   | M     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | N     | 875/872 (100%)     | 777 (89%)   | 98 (11%)   | 6           | 11 |
| 1   | O     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| 1   | P     | 875/872 (100%)     | 776 (89%)   | 99 (11%)   | 6           | 11 |
| All | All   | 14000/13952 (100%) | 12418 (89%) | 1582 (11%) | 6           | 11 |

All (1582) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 3   | ILE  |
| 1   | A     | 14  | ARG  |
| 1   | A     | 37  | ARG  |
| 1   | A     | 39  | SER  |
| 1   | A     | 46  | ARG  |
| 1   | A     | 48  | SER  |
| 1   | A     | 49  | GLN  |
| 1   | A     | 50  | GLN  |
| 1   | A     | 52  | ARG  |
| 1   | A     | 59  | ARG  |
| 1   | A     | 71  | GLU  |
| 1   | A     | 72  | SER  |
| 1   | A     | 80  | GLU  |
| 1   | A     | 84  | VAL  |
| 1   | A     | 90  | TRP  |
| 1   | A     | 102 | ASN  |
| 1   | A     | 116 | THR  |
| 1   | A     | 125 | LEU  |
| 1   | A     | 128 | ASN  |
| 1   | A     | 132 | SER  |
| 1   | A     | 136 | GLU  |
| 1   | A     | 165 | SER  |
| 1   | A     | 166 | ARG  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | A            | 171        | PHE         |
| 1          | A            | 189        | LEU         |
| 1          | A            | 202        | MET         |
| 1          | A            | 210        | ARG         |
| 1          | A            | 211        | ASP         |
| 1          | A            | 217        | LYS         |
| 1          | A            | 219        | THR         |
| 1          | A            | 246        | MET         |
| 1          | A            | 247        | CYS         |
| 1          | A            | 249        | GLU         |
| 1          | A            | 250        | LEU         |
| 1          | A            | 259        | SER         |
| 1          | A            | 262        | GLN         |
| 1          | A            | 264        | GLU         |
| 1          | A            | 279        | ILE         |
| 1          | A            | 299        | LYS         |
| 1          | A            | 310        | ARG         |
| 1          | A            | 314        | GLU         |
| 1          | A            | 319        | ASP         |
| 1          | A            | 333        | ARG         |
| 1          | A            | 344        | LEU         |
| 1          | A            | 347        | LYS         |
| 1          | A            | 370        | GLN         |
| 1          | A            | 377        | LEU         |
| 1          | A            | 394        | ASN         |
| 1          | A            | 425        | ARG         |
| 1          | A            | 437        | SER         |
| 1          | A            | 448        | ARG         |
| 1          | A            | 473        | ARG         |
| 1          | A            | 519        | SER         |
| 1          | A            | 521        | LYS         |
| 1          | A            | 532        | PRO         |
| 1          | A            | 546        | LEU         |
| 1          | A            | 554        | GLN         |
| 1          | A            | 571        | VAL         |
| 1          | A            | 580        | GLU         |
| 1          | A            | 599        | ARG         |
| 1          | A            | 600        | GLN         |
| 1          | A            | 630        | ARG         |
| 1          | A            | 632        | SER         |
| 1          | A            | 645        | ARG         |
| 1          | A            | 651        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | A            | 655        | MET         |
| 1          | A            | 665        | SER         |
| 1          | A            | 672        | VAL         |
| 1          | A            | 684        | GLU         |
| 1          | A            | 687        | GLN         |
| 1          | A            | 690        | SER         |
| 1          | A            | 710        | GLU         |
| 1          | A            | 719        | GLN         |
| 1          | A            | 730        | LEU         |
| 1          | A            | 734        | SER         |
| 1          | A            | 741        | THR         |
| 1          | A            | 743        | SER         |
| 1          | A            | 751        | LEU         |
| 1          | A            | 753        | ASN         |
| 1          | A            | 755        | ARG         |
| 1          | A            | 768        | MET         |
| 1          | A            | 778        | THR         |
| 1          | A            | 781        | ARG         |
| 1          | A            | 797        | GLU         |
| 1          | A            | 799        | THR         |
| 1          | A            | 800        | ARG         |
| 1          | A            | 824        | GLN         |
| 1          | A            | 829        | THR         |
| 1          | A            | 832        | ASP         |
| 1          | A            | 881        | ARG         |
| 1          | A            | 893        | GLU         |
| 1          | A            | 903[A]     | GLN         |
| 1          | A            | 903[B]     | GLN         |
| 1          | A            | 917        | ARG         |
| 1          | A            | 938        | ARG         |
| 1          | A            | 952        | ARG         |
| 1          | A            | 956        | GLN         |
| 1          | A            | 1006       | GLU         |
| 1          | A            | 1017       | GLN         |
| 1          | B            | 3          | ILE         |
| 1          | B            | 14         | ARG         |
| 1          | B            | 37         | ARG         |
| 1          | B            | 39         | SER         |
| 1          | B            | 46         | ARG         |
| 1          | B            | 48         | SER         |
| 1          | B            | 49         | GLN         |
| 1          | B            | 50         | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | B            | 52         | ARG         |
| 1          | B            | 59         | ARG         |
| 1          | B            | 71         | GLU         |
| 1          | B            | 72         | SER         |
| 1          | B            | 80         | GLU         |
| 1          | B            | 84         | VAL         |
| 1          | B            | 90         | TRP         |
| 1          | B            | 102        | ASN         |
| 1          | B            | 116        | THR         |
| 1          | B            | 125        | LEU         |
| 1          | B            | 128        | ASN         |
| 1          | B            | 132        | SER         |
| 1          | B            | 136        | GLU         |
| 1          | B            | 165        | SER         |
| 1          | B            | 166        | ARG         |
| 1          | B            | 171        | PHE         |
| 1          | B            | 189        | LEU         |
| 1          | B            | 202        | MET         |
| 1          | B            | 210        | ARG         |
| 1          | B            | 211        | ASP         |
| 1          | B            | 217        | LYS         |
| 1          | B            | 219        | THR         |
| 1          | B            | 246        | MET         |
| 1          | B            | 247        | CYS         |
| 1          | B            | 249        | GLU         |
| 1          | B            | 250        | LEU         |
| 1          | B            | 259        | SER         |
| 1          | B            | 262        | GLN         |
| 1          | B            | 264        | GLU         |
| 1          | B            | 279        | ILE         |
| 1          | B            | 299        | LYS         |
| 1          | B            | 310        | ARG         |
| 1          | B            | 314        | GLU         |
| 1          | B            | 319        | ASP         |
| 1          | B            | 333        | ARG         |
| 1          | B            | 344        | LEU         |
| 1          | B            | 347        | LYS         |
| 1          | B            | 370        | GLN         |
| 1          | B            | 377        | LEU         |
| 1          | B            | 394        | ASN         |
| 1          | B            | 425        | ARG         |
| 1          | B            | 437        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | B            | 448        | ARG         |
| 1          | B            | 473        | ARG         |
| 1          | B            | 519        | SER         |
| 1          | B            | 521        | LYS         |
| 1          | B            | 532        | PRO         |
| 1          | B            | 546        | LEU         |
| 1          | B            | 554        | GLN         |
| 1          | B            | 571        | VAL         |
| 1          | B            | 580        | GLU         |
| 1          | B            | 599        | ARG         |
| 1          | B            | 600        | GLN         |
| 1          | B            | 630        | ARG         |
| 1          | B            | 632        | SER         |
| 1          | B            | 645        | ARG         |
| 1          | B            | 651        | LEU         |
| 1          | B            | 655        | MET         |
| 1          | B            | 665        | SER         |
| 1          | B            | 672        | VAL         |
| 1          | B            | 684        | GLU         |
| 1          | B            | 687        | GLN         |
| 1          | B            | 690        | SER         |
| 1          | B            | 710        | GLU         |
| 1          | B            | 719        | GLN         |
| 1          | B            | 730        | LEU         |
| 1          | B            | 734        | SER         |
| 1          | B            | 741        | THR         |
| 1          | B            | 743        | SER         |
| 1          | B            | 751        | LEU         |
| 1          | B            | 753        | ASN         |
| 1          | B            | 755        | ARG         |
| 1          | B            | 768        | MET         |
| 1          | B            | 778        | THR         |
| 1          | B            | 781        | ARG         |
| 1          | B            | 797        | GLU         |
| 1          | B            | 799        | THR         |
| 1          | B            | 800        | ARG         |
| 1          | B            | 824        | GLN         |
| 1          | B            | 829        | THR         |
| 1          | B            | 832        | ASP         |
| 1          | B            | 881        | ARG         |
| 1          | B            | 893        | GLU         |
| 1          | B            | 903[A]     | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | B            | 903[B]     | GLN         |
| 1          | B            | 917        | ARG         |
| 1          | B            | 938        | ARG         |
| 1          | B            | 952        | ARG         |
| 1          | B            | 956        | GLN         |
| 1          | B            | 1006       | GLU         |
| 1          | B            | 1017       | GLN         |
| 1          | C            | 3          | ILE         |
| 1          | C            | 14         | ARG         |
| 1          | C            | 37         | ARG         |
| 1          | C            | 39         | SER         |
| 1          | C            | 46         | ARG         |
| 1          | C            | 48         | SER         |
| 1          | C            | 49         | GLN         |
| 1          | C            | 50         | GLN         |
| 1          | C            | 52         | ARG         |
| 1          | C            | 59         | ARG         |
| 1          | C            | 71         | GLU         |
| 1          | C            | 72         | SER         |
| 1          | C            | 80         | GLU         |
| 1          | C            | 84         | VAL         |
| 1          | C            | 90         | TRP         |
| 1          | C            | 102        | ASN         |
| 1          | C            | 116        | THR         |
| 1          | C            | 125        | LEU         |
| 1          | C            | 128        | ASN         |
| 1          | C            | 132        | SER         |
| 1          | C            | 136        | GLU         |
| 1          | C            | 165        | SER         |
| 1          | C            | 166        | ARG         |
| 1          | C            | 171        | PHE         |
| 1          | C            | 189        | LEU         |
| 1          | C            | 202        | MET         |
| 1          | C            | 210        | ARG         |
| 1          | C            | 211        | ASP         |
| 1          | C            | 217        | LYS         |
| 1          | C            | 219        | THR         |
| 1          | C            | 246        | MET         |
| 1          | C            | 247        | CYS         |
| 1          | C            | 249        | GLU         |
| 1          | C            | 250        | LEU         |
| 1          | C            | 259        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | C            | 262        | GLN         |
| 1          | C            | 264        | GLU         |
| 1          | C            | 279        | ILE         |
| 1          | C            | 299        | LYS         |
| 1          | C            | 310        | ARG         |
| 1          | C            | 314        | GLU         |
| 1          | C            | 319        | ASP         |
| 1          | C            | 333        | ARG         |
| 1          | C            | 344        | LEU         |
| 1          | C            | 347        | LYS         |
| 1          | C            | 370        | GLN         |
| 1          | C            | 377        | LEU         |
| 1          | C            | 394        | ASN         |
| 1          | C            | 425        | ARG         |
| 1          | C            | 437        | SER         |
| 1          | C            | 448        | ARG         |
| 1          | C            | 473        | ARG         |
| 1          | C            | 519        | SER         |
| 1          | C            | 521        | LYS         |
| 1          | C            | 532        | PRO         |
| 1          | C            | 546        | LEU         |
| 1          | C            | 554        | GLN         |
| 1          | C            | 571        | VAL         |
| 1          | C            | 580        | GLU         |
| 1          | C            | 599        | ARG         |
| 1          | C            | 600        | GLN         |
| 1          | C            | 630        | ARG         |
| 1          | C            | 632        | SER         |
| 1          | C            | 645        | ARG         |
| 1          | C            | 651        | LEU         |
| 1          | C            | 655        | MET         |
| 1          | C            | 665        | SER         |
| 1          | C            | 672        | VAL         |
| 1          | C            | 684        | GLU         |
| 1          | C            | 687        | GLN         |
| 1          | C            | 690        | SER         |
| 1          | C            | 710        | GLU         |
| 1          | C            | 719        | GLN         |
| 1          | C            | 730        | LEU         |
| 1          | C            | 734        | SER         |
| 1          | C            | 741        | THR         |
| 1          | C            | 743        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | C            | 751        | LEU         |
| 1          | C            | 753        | ASN         |
| 1          | C            | 755        | ARG         |
| 1          | C            | 768        | MET         |
| 1          | C            | 778        | THR         |
| 1          | C            | 781        | ARG         |
| 1          | C            | 797        | GLU         |
| 1          | C            | 799        | THR         |
| 1          | C            | 800        | ARG         |
| 1          | C            | 824        | GLN         |
| 1          | C            | 829        | THR         |
| 1          | C            | 832        | ASP         |
| 1          | C            | 881        | ARG         |
| 1          | C            | 893        | GLU         |
| 1          | C            | 903[A]     | GLN         |
| 1          | C            | 903[B]     | GLN         |
| 1          | C            | 917        | ARG         |
| 1          | C            | 938        | ARG         |
| 1          | C            | 952        | ARG         |
| 1          | C            | 956        | GLN         |
| 1          | C            | 1006       | GLU         |
| 1          | C            | 1017       | GLN         |
| 1          | D            | 3          | ILE         |
| 1          | D            | 14         | ARG         |
| 1          | D            | 37         | ARG         |
| 1          | D            | 39         | SER         |
| 1          | D            | 46         | ARG         |
| 1          | D            | 48         | SER         |
| 1          | D            | 49         | GLN         |
| 1          | D            | 50         | GLN         |
| 1          | D            | 52         | ARG         |
| 1          | D            | 59         | ARG         |
| 1          | D            | 71         | GLU         |
| 1          | D            | 72         | SER         |
| 1          | D            | 80         | GLU         |
| 1          | D            | 84         | VAL         |
| 1          | D            | 90         | TRP         |
| 1          | D            | 102        | ASN         |
| 1          | D            | 116        | THR         |
| 1          | D            | 125        | LEU         |
| 1          | D            | 128        | ASN         |
| 1          | D            | 132        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 136        | GLU         |
| 1          | D            | 165        | SER         |
| 1          | D            | 166        | ARG         |
| 1          | D            | 171        | PHE         |
| 1          | D            | 189        | LEU         |
| 1          | D            | 202        | MET         |
| 1          | D            | 210        | ARG         |
| 1          | D            | 211        | ASP         |
| 1          | D            | 217        | LYS         |
| 1          | D            | 219        | THR         |
| 1          | D            | 246        | MET         |
| 1          | D            | 247        | CYS         |
| 1          | D            | 249        | GLU         |
| 1          | D            | 250        | LEU         |
| 1          | D            | 259        | SER         |
| 1          | D            | 262        | GLN         |
| 1          | D            | 264        | GLU         |
| 1          | D            | 279        | ILE         |
| 1          | D            | 299        | LYS         |
| 1          | D            | 310        | ARG         |
| 1          | D            | 314        | GLU         |
| 1          | D            | 319        | ASP         |
| 1          | D            | 333        | ARG         |
| 1          | D            | 344        | LEU         |
| 1          | D            | 347        | LYS         |
| 1          | D            | 370        | GLN         |
| 1          | D            | 377        | LEU         |
| 1          | D            | 394        | ASN         |
| 1          | D            | 425        | ARG         |
| 1          | D            | 437        | SER         |
| 1          | D            | 448        | ARG         |
| 1          | D            | 473        | ARG         |
| 1          | D            | 519        | SER         |
| 1          | D            | 521        | LYS         |
| 1          | D            | 532        | PRO         |
| 1          | D            | 546        | LEU         |
| 1          | D            | 554        | GLN         |
| 1          | D            | 571        | VAL         |
| 1          | D            | 580        | GLU         |
| 1          | D            | 599        | ARG         |
| 1          | D            | 600        | GLN         |
| 1          | D            | 630        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 632        | SER         |
| 1          | D            | 645        | ARG         |
| 1          | D            | 651        | LEU         |
| 1          | D            | 655        | MET         |
| 1          | D            | 665        | SER         |
| 1          | D            | 672        | VAL         |
| 1          | D            | 684        | GLU         |
| 1          | D            | 687        | GLN         |
| 1          | D            | 690        | SER         |
| 1          | D            | 710        | GLU         |
| 1          | D            | 719        | GLN         |
| 1          | D            | 730        | LEU         |
| 1          | D            | 734        | SER         |
| 1          | D            | 741        | THR         |
| 1          | D            | 743        | SER         |
| 1          | D            | 751        | LEU         |
| 1          | D            | 753        | ASN         |
| 1          | D            | 755        | ARG         |
| 1          | D            | 768        | MET         |
| 1          | D            | 778        | THR         |
| 1          | D            | 781        | ARG         |
| 1          | D            | 797        | GLU         |
| 1          | D            | 799        | THR         |
| 1          | D            | 800        | ARG         |
| 1          | D            | 824        | GLN         |
| 1          | D            | 829        | THR         |
| 1          | D            | 832        | ASP         |
| 1          | D            | 881        | ARG         |
| 1          | D            | 893        | GLU         |
| 1          | D            | 903[A]     | GLN         |
| 1          | D            | 903[B]     | GLN         |
| 1          | D            | 917        | ARG         |
| 1          | D            | 938        | ARG         |
| 1          | D            | 952        | ARG         |
| 1          | D            | 956        | GLN         |
| 1          | D            | 1006       | GLU         |
| 1          | D            | 1017       | GLN         |
| 1          | E            | 3          | ILE         |
| 1          | E            | 14         | ARG         |
| 1          | E            | 37         | ARG         |
| 1          | E            | 39         | SER         |
| 1          | E            | 46         | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | E            | 48         | SER         |
| 1          | E            | 49         | GLN         |
| 1          | E            | 50         | GLN         |
| 1          | E            | 52         | ARG         |
| 1          | E            | 59         | ARG         |
| 1          | E            | 71         | GLU         |
| 1          | E            | 72         | SER         |
| 1          | E            | 80         | GLU         |
| 1          | E            | 84         | VAL         |
| 1          | E            | 90         | TRP         |
| 1          | E            | 102        | ASN         |
| 1          | E            | 116        | THR         |
| 1          | E            | 125        | LEU         |
| 1          | E            | 128        | ASN         |
| 1          | E            | 132        | SER         |
| 1          | E            | 136        | GLU         |
| 1          | E            | 165        | SER         |
| 1          | E            | 166        | ARG         |
| 1          | E            | 171        | PHE         |
| 1          | E            | 189        | LEU         |
| 1          | E            | 202        | MET         |
| 1          | E            | 210        | ARG         |
| 1          | E            | 211        | ASP         |
| 1          | E            | 217        | LYS         |
| 1          | E            | 219        | THR         |
| 1          | E            | 246        | MET         |
| 1          | E            | 247        | CYS         |
| 1          | E            | 249        | GLU         |
| 1          | E            | 250        | LEU         |
| 1          | E            | 259        | SER         |
| 1          | E            | 262        | GLN         |
| 1          | E            | 264        | GLU         |
| 1          | E            | 279        | ILE         |
| 1          | E            | 299        | LYS         |
| 1          | E            | 310        | ARG         |
| 1          | E            | 314        | GLU         |
| 1          | E            | 319        | ASP         |
| 1          | E            | 333        | ARG         |
| 1          | E            | 344        | LEU         |
| 1          | E            | 347        | LYS         |
| 1          | E            | 370        | GLN         |
| 1          | E            | 377        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | E            | 394        | ASN         |
| 1          | E            | 425        | ARG         |
| 1          | E            | 437        | SER         |
| 1          | E            | 448        | ARG         |
| 1          | E            | 473        | ARG         |
| 1          | E            | 519        | SER         |
| 1          | E            | 521        | LYS         |
| 1          | E            | 532        | PRO         |
| 1          | E            | 546        | LEU         |
| 1          | E            | 554        | GLN         |
| 1          | E            | 571        | VAL         |
| 1          | E            | 580        | GLU         |
| 1          | E            | 599        | ARG         |
| 1          | E            | 600        | GLN         |
| 1          | E            | 630        | ARG         |
| 1          | E            | 632        | SER         |
| 1          | E            | 645        | ARG         |
| 1          | E            | 651        | LEU         |
| 1          | E            | 655        | MET         |
| 1          | E            | 665        | SER         |
| 1          | E            | 672        | VAL         |
| 1          | E            | 684        | GLU         |
| 1          | E            | 687        | GLN         |
| 1          | E            | 690        | SER         |
| 1          | E            | 710        | GLU         |
| 1          | E            | 719        | GLN         |
| 1          | E            | 730        | LEU         |
| 1          | E            | 734        | SER         |
| 1          | E            | 741        | THR         |
| 1          | E            | 743        | SER         |
| 1          | E            | 751        | LEU         |
| 1          | E            | 753        | ASN         |
| 1          | E            | 755        | ARG         |
| 1          | E            | 768        | MET         |
| 1          | E            | 778        | THR         |
| 1          | E            | 781        | ARG         |
| 1          | E            | 797        | GLU         |
| 1          | E            | 799        | THR         |
| 1          | E            | 800        | ARG         |
| 1          | E            | 824        | GLN         |
| 1          | E            | 829        | THR         |
| 1          | E            | 832        | ASP         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | E            | 881        | ARG         |
| 1          | E            | 893        | GLU         |
| 1          | E            | 903[A]     | GLN         |
| 1          | E            | 903[B]     | GLN         |
| 1          | E            | 917        | ARG         |
| 1          | E            | 938        | ARG         |
| 1          | E            | 952        | ARG         |
| 1          | E            | 956        | GLN         |
| 1          | E            | 1006       | GLU         |
| 1          | E            | 1017       | GLN         |
| 1          | F            | 3          | ILE         |
| 1          | F            | 14         | ARG         |
| 1          | F            | 37         | ARG         |
| 1          | F            | 39         | SER         |
| 1          | F            | 46         | ARG         |
| 1          | F            | 48         | SER         |
| 1          | F            | 49         | GLN         |
| 1          | F            | 50         | GLN         |
| 1          | F            | 52         | ARG         |
| 1          | F            | 59         | ARG         |
| 1          | F            | 71         | GLU         |
| 1          | F            | 72         | SER         |
| 1          | F            | 80         | GLU         |
| 1          | F            | 84         | VAL         |
| 1          | F            | 90         | TRP         |
| 1          | F            | 102        | ASN         |
| 1          | F            | 116        | THR         |
| 1          | F            | 125        | LEU         |
| 1          | F            | 128        | ASN         |
| 1          | F            | 132        | SER         |
| 1          | F            | 136        | GLU         |
| 1          | F            | 165        | SER         |
| 1          | F            | 166        | ARG         |
| 1          | F            | 171        | PHE         |
| 1          | F            | 189        | LEU         |
| 1          | F            | 202        | MET         |
| 1          | F            | 210        | ARG         |
| 1          | F            | 211        | ASP         |
| 1          | F            | 217        | LYS         |
| 1          | F            | 219        | THR         |
| 1          | F            | 246        | MET         |
| 1          | F            | 247        | CYS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 249        | GLU         |
| 1          | F            | 250        | LEU         |
| 1          | F            | 259        | SER         |
| 1          | F            | 262        | GLN         |
| 1          | F            | 264        | GLU         |
| 1          | F            | 279        | ILE         |
| 1          | F            | 299        | LYS         |
| 1          | F            | 310        | ARG         |
| 1          | F            | 314        | GLU         |
| 1          | F            | 319        | ASP         |
| 1          | F            | 333        | ARG         |
| 1          | F            | 344        | LEU         |
| 1          | F            | 347        | LYS         |
| 1          | F            | 370        | GLN         |
| 1          | F            | 377        | LEU         |
| 1          | F            | 394        | ASN         |
| 1          | F            | 425        | ARG         |
| 1          | F            | 437        | SER         |
| 1          | F            | 448        | ARG         |
| 1          | F            | 473        | ARG         |
| 1          | F            | 519        | SER         |
| 1          | F            | 521        | LYS         |
| 1          | F            | 532        | PRO         |
| 1          | F            | 546        | LEU         |
| 1          | F            | 554        | GLN         |
| 1          | F            | 571        | VAL         |
| 1          | F            | 580        | GLU         |
| 1          | F            | 599        | ARG         |
| 1          | F            | 600        | GLN         |
| 1          | F            | 630        | ARG         |
| 1          | F            | 632        | SER         |
| 1          | F            | 645        | ARG         |
| 1          | F            | 651        | LEU         |
| 1          | F            | 655        | MET         |
| 1          | F            | 665        | SER         |
| 1          | F            | 672        | VAL         |
| 1          | F            | 684        | GLU         |
| 1          | F            | 687        | GLN         |
| 1          | F            | 690        | SER         |
| 1          | F            | 710        | GLU         |
| 1          | F            | 719        | GLN         |
| 1          | F            | 730        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 734        | SER         |
| 1          | F            | 741        | THR         |
| 1          | F            | 743        | SER         |
| 1          | F            | 751        | LEU         |
| 1          | F            | 753        | ASN         |
| 1          | F            | 755        | ARG         |
| 1          | F            | 768        | MET         |
| 1          | F            | 778        | THR         |
| 1          | F            | 781        | ARG         |
| 1          | F            | 797        | GLU         |
| 1          | F            | 799        | THR         |
| 1          | F            | 800        | ARG         |
| 1          | F            | 824        | GLN         |
| 1          | F            | 829        | THR         |
| 1          | F            | 832        | ASP         |
| 1          | F            | 881        | ARG         |
| 1          | F            | 893        | GLU         |
| 1          | F            | 903[A]     | GLN         |
| 1          | F            | 903[B]     | GLN         |
| 1          | F            | 917        | ARG         |
| 1          | F            | 938        | ARG         |
| 1          | F            | 952        | ARG         |
| 1          | F            | 956        | GLN         |
| 1          | F            | 1006       | GLU         |
| 1          | F            | 1017       | GLN         |
| 1          | G            | 3          | ILE         |
| 1          | G            | 14         | ARG         |
| 1          | G            | 37         | ARG         |
| 1          | G            | 39         | SER         |
| 1          | G            | 46         | ARG         |
| 1          | G            | 48         | SER         |
| 1          | G            | 49         | GLN         |
| 1          | G            | 50         | GLN         |
| 1          | G            | 52         | ARG         |
| 1          | G            | 59         | ARG         |
| 1          | G            | 71         | GLU         |
| 1          | G            | 72         | SER         |
| 1          | G            | 80         | GLU         |
| 1          | G            | 84         | VAL         |
| 1          | G            | 90         | TRP         |
| 1          | G            | 102        | ASN         |
| 1          | G            | 116        | THR         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | G            | 125        | LEU         |
| 1          | G            | 128        | ASN         |
| 1          | G            | 132        | SER         |
| 1          | G            | 136        | GLU         |
| 1          | G            | 165        | SER         |
| 1          | G            | 166        | ARG         |
| 1          | G            | 171        | PHE         |
| 1          | G            | 189        | LEU         |
| 1          | G            | 202        | MET         |
| 1          | G            | 210        | ARG         |
| 1          | G            | 211        | ASP         |
| 1          | G            | 217        | LYS         |
| 1          | G            | 219        | THR         |
| 1          | G            | 246        | MET         |
| 1          | G            | 247        | CYS         |
| 1          | G            | 249        | GLU         |
| 1          | G            | 250        | LEU         |
| 1          | G            | 259        | SER         |
| 1          | G            | 262        | GLN         |
| 1          | G            | 264        | GLU         |
| 1          | G            | 279        | ILE         |
| 1          | G            | 299        | LYS         |
| 1          | G            | 310        | ARG         |
| 1          | G            | 314        | GLU         |
| 1          | G            | 319        | ASP         |
| 1          | G            | 333        | ARG         |
| 1          | G            | 344        | LEU         |
| 1          | G            | 347        | LYS         |
| 1          | G            | 370        | GLN         |
| 1          | G            | 377        | LEU         |
| 1          | G            | 394        | ASN         |
| 1          | G            | 425        | ARG         |
| 1          | G            | 437        | SER         |
| 1          | G            | 448        | ARG         |
| 1          | G            | 473        | ARG         |
| 1          | G            | 519        | SER         |
| 1          | G            | 521        | LYS         |
| 1          | G            | 532        | PRO         |
| 1          | G            | 546        | LEU         |
| 1          | G            | 554        | GLN         |
| 1          | G            | 571        | VAL         |
| 1          | G            | 580        | GLU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | G            | 599        | ARG         |
| 1          | G            | 600        | GLN         |
| 1          | G            | 630        | ARG         |
| 1          | G            | 632        | SER         |
| 1          | G            | 645        | ARG         |
| 1          | G            | 651        | LEU         |
| 1          | G            | 655        | MET         |
| 1          | G            | 665        | SER         |
| 1          | G            | 672        | VAL         |
| 1          | G            | 684        | GLU         |
| 1          | G            | 687        | GLN         |
| 1          | G            | 690        | SER         |
| 1          | G            | 710        | GLU         |
| 1          | G            | 719        | GLN         |
| 1          | G            | 730        | LEU         |
| 1          | G            | 734        | SER         |
| 1          | G            | 741        | THR         |
| 1          | G            | 743        | SER         |
| 1          | G            | 751        | LEU         |
| 1          | G            | 753        | ASN         |
| 1          | G            | 755        | ARG         |
| 1          | G            | 768        | MET         |
| 1          | G            | 778        | THR         |
| 1          | G            | 781        | ARG         |
| 1          | G            | 797        | GLU         |
| 1          | G            | 799        | THR         |
| 1          | G            | 800        | ARG         |
| 1          | G            | 824        | GLN         |
| 1          | G            | 829        | THR         |
| 1          | G            | 832        | ASP         |
| 1          | G            | 881        | ARG         |
| 1          | G            | 893        | GLU         |
| 1          | G            | 903[A]     | GLN         |
| 1          | G            | 903[B]     | GLN         |
| 1          | G            | 917        | ARG         |
| 1          | G            | 938        | ARG         |
| 1          | G            | 952        | ARG         |
| 1          | G            | 956        | GLN         |
| 1          | G            | 1006       | GLU         |
| 1          | G            | 1017       | GLN         |
| 1          | H            | 3          | ILE         |
| 1          | H            | 14         | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 37         | ARG         |
| 1          | H            | 39         | SER         |
| 1          | H            | 46         | ARG         |
| 1          | H            | 48         | SER         |
| 1          | H            | 49         | GLN         |
| 1          | H            | 50         | GLN         |
| 1          | H            | 52         | ARG         |
| 1          | H            | 59         | ARG         |
| 1          | H            | 71         | GLU         |
| 1          | H            | 72         | SER         |
| 1          | H            | 80         | GLU         |
| 1          | H            | 84         | VAL         |
| 1          | H            | 90         | TRP         |
| 1          | H            | 102        | ASN         |
| 1          | H            | 116        | THR         |
| 1          | H            | 125        | LEU         |
| 1          | H            | 128        | ASN         |
| 1          | H            | 132        | SER         |
| 1          | H            | 136        | GLU         |
| 1          | H            | 165        | SER         |
| 1          | H            | 166        | ARG         |
| 1          | H            | 171        | PHE         |
| 1          | H            | 189        | LEU         |
| 1          | H            | 202        | MET         |
| 1          | H            | 210        | ARG         |
| 1          | H            | 211        | ASP         |
| 1          | H            | 217        | LYS         |
| 1          | H            | 219        | THR         |
| 1          | H            | 246        | MET         |
| 1          | H            | 247        | CYS         |
| 1          | H            | 249        | GLU         |
| 1          | H            | 250        | LEU         |
| 1          | H            | 259        | SER         |
| 1          | H            | 262        | GLN         |
| 1          | H            | 264        | GLU         |
| 1          | H            | 279        | ILE         |
| 1          | H            | 299        | LYS         |
| 1          | H            | 310        | ARG         |
| 1          | H            | 314        | GLU         |
| 1          | H            | 319        | ASP         |
| 1          | H            | 333        | ARG         |
| 1          | H            | 344        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 347        | LYS         |
| 1          | H            | 370        | GLN         |
| 1          | H            | 377        | LEU         |
| 1          | H            | 394        | ASN         |
| 1          | H            | 425        | ARG         |
| 1          | H            | 437        | SER         |
| 1          | H            | 448        | ARG         |
| 1          | H            | 473        | ARG         |
| 1          | H            | 519        | SER         |
| 1          | H            | 521        | LYS         |
| 1          | H            | 532        | PRO         |
| 1          | H            | 546        | LEU         |
| 1          | H            | 554        | GLN         |
| 1          | H            | 571        | VAL         |
| 1          | H            | 580        | GLU         |
| 1          | H            | 599        | ARG         |
| 1          | H            | 600        | GLN         |
| 1          | H            | 630        | ARG         |
| 1          | H            | 632        | SER         |
| 1          | H            | 645        | ARG         |
| 1          | H            | 651        | LEU         |
| 1          | H            | 655        | MET         |
| 1          | H            | 665        | SER         |
| 1          | H            | 672        | VAL         |
| 1          | H            | 684        | GLU         |
| 1          | H            | 687        | GLN         |
| 1          | H            | 690        | SER         |
| 1          | H            | 710        | GLU         |
| 1          | H            | 719        | GLN         |
| 1          | H            | 730        | LEU         |
| 1          | H            | 734        | SER         |
| 1          | H            | 741        | THR         |
| 1          | H            | 743        | SER         |
| 1          | H            | 751        | LEU         |
| 1          | H            | 753        | ASN         |
| 1          | H            | 755        | ARG         |
| 1          | H            | 768        | MET         |
| 1          | H            | 778        | THR         |
| 1          | H            | 781        | ARG         |
| 1          | H            | 797        | GLU         |
| 1          | H            | 799        | THR         |
| 1          | H            | 800        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 824        | GLN         |
| 1          | H            | 829        | THR         |
| 1          | H            | 832        | ASP         |
| 1          | H            | 881        | ARG         |
| 1          | H            | 893        | GLU         |
| 1          | H            | 903[A]     | GLN         |
| 1          | H            | 903[B]     | GLN         |
| 1          | H            | 917        | ARG         |
| 1          | H            | 938        | ARG         |
| 1          | H            | 952        | ARG         |
| 1          | H            | 956        | GLN         |
| 1          | H            | 1006       | GLU         |
| 1          | H            | 1017       | GLN         |
| 1          | I            | 3          | ILE         |
| 1          | I            | 14         | ARG         |
| 1          | I            | 37         | ARG         |
| 1          | I            | 39         | SER         |
| 1          | I            | 46         | ARG         |
| 1          | I            | 48         | SER         |
| 1          | I            | 49         | GLN         |
| 1          | I            | 50         | GLN         |
| 1          | I            | 52         | ARG         |
| 1          | I            | 59         | ARG         |
| 1          | I            | 71         | GLU         |
| 1          | I            | 72         | SER         |
| 1          | I            | 80         | GLU         |
| 1          | I            | 84         | VAL         |
| 1          | I            | 90         | TRP         |
| 1          | I            | 102        | ASN         |
| 1          | I            | 116        | THR         |
| 1          | I            | 125        | LEU         |
| 1          | I            | 128        | ASN         |
| 1          | I            | 132        | SER         |
| 1          | I            | 136        | GLU         |
| 1          | I            | 165        | SER         |
| 1          | I            | 166        | ARG         |
| 1          | I            | 171        | PHE         |
| 1          | I            | 189        | LEU         |
| 1          | I            | 202        | MET         |
| 1          | I            | 210        | ARG         |
| 1          | I            | 211        | ASP         |
| 1          | I            | 217        | LYS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | I            | 219        | THR         |
| 1          | I            | 246        | MET         |
| 1          | I            | 247        | CYS         |
| 1          | I            | 249        | GLU         |
| 1          | I            | 250        | LEU         |
| 1          | I            | 259        | SER         |
| 1          | I            | 262        | GLN         |
| 1          | I            | 264        | GLU         |
| 1          | I            | 279        | ILE         |
| 1          | I            | 299        | LYS         |
| 1          | I            | 310        | ARG         |
| 1          | I            | 314        | GLU         |
| 1          | I            | 319        | ASP         |
| 1          | I            | 333        | ARG         |
| 1          | I            | 344        | LEU         |
| 1          | I            | 347        | LYS         |
| 1          | I            | 370        | GLN         |
| 1          | I            | 377        | LEU         |
| 1          | I            | 394        | ASN         |
| 1          | I            | 425        | ARG         |
| 1          | I            | 437        | SER         |
| 1          | I            | 448        | ARG         |
| 1          | I            | 473        | ARG         |
| 1          | I            | 519        | SER         |
| 1          | I            | 521        | LYS         |
| 1          | I            | 532        | PRO         |
| 1          | I            | 546        | LEU         |
| 1          | I            | 554        | GLN         |
| 1          | I            | 571        | VAL         |
| 1          | I            | 580        | GLU         |
| 1          | I            | 599        | ARG         |
| 1          | I            | 600        | GLN         |
| 1          | I            | 630        | ARG         |
| 1          | I            | 632        | SER         |
| 1          | I            | 645        | ARG         |
| 1          | I            | 651        | LEU         |
| 1          | I            | 655        | MET         |
| 1          | I            | 665        | SER         |
| 1          | I            | 672        | VAL         |
| 1          | I            | 684        | GLU         |
| 1          | I            | 687        | GLN         |
| 1          | I            | 690        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | I            | 710        | GLU         |
| 1          | I            | 719        | GLN         |
| 1          | I            | 730        | LEU         |
| 1          | I            | 734        | SER         |
| 1          | I            | 741        | THR         |
| 1          | I            | 743        | SER         |
| 1          | I            | 751        | LEU         |
| 1          | I            | 753        | ASN         |
| 1          | I            | 755        | ARG         |
| 1          | I            | 768        | MET         |
| 1          | I            | 778        | THR         |
| 1          | I            | 781        | ARG         |
| 1          | I            | 797        | GLU         |
| 1          | I            | 799        | THR         |
| 1          | I            | 800        | ARG         |
| 1          | I            | 824        | GLN         |
| 1          | I            | 829        | THR         |
| 1          | I            | 832        | ASP         |
| 1          | I            | 881        | ARG         |
| 1          | I            | 893        | GLU         |
| 1          | I            | 903[A]     | GLN         |
| 1          | I            | 903[B]     | GLN         |
| 1          | I            | 917        | ARG         |
| 1          | I            | 938        | ARG         |
| 1          | I            | 952        | ARG         |
| 1          | I            | 956        | GLN         |
| 1          | I            | 1006       | GLU         |
| 1          | I            | 1017       | GLN         |
| 1          | J            | 3          | ILE         |
| 1          | J            | 14         | ARG         |
| 1          | J            | 37         | ARG         |
| 1          | J            | 39         | SER         |
| 1          | J            | 46         | ARG         |
| 1          | J            | 48         | SER         |
| 1          | J            | 49         | GLN         |
| 1          | J            | 50         | GLN         |
| 1          | J            | 52         | ARG         |
| 1          | J            | 59         | ARG         |
| 1          | J            | 71         | GLU         |
| 1          | J            | 72         | SER         |
| 1          | J            | 80         | GLU         |
| 1          | J            | 84         | VAL         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | J            | 90         | TRP         |
| 1          | J            | 102        | ASN         |
| 1          | J            | 116        | THR         |
| 1          | J            | 125        | LEU         |
| 1          | J            | 128        | ASN         |
| 1          | J            | 132        | SER         |
| 1          | J            | 136        | GLU         |
| 1          | J            | 165        | SER         |
| 1          | J            | 166        | ARG         |
| 1          | J            | 171        | PHE         |
| 1          | J            | 189        | LEU         |
| 1          | J            | 202        | MET         |
| 1          | J            | 210        | ARG         |
| 1          | J            | 211        | ASP         |
| 1          | J            | 217        | LYS         |
| 1          | J            | 219        | THR         |
| 1          | J            | 246        | MET         |
| 1          | J            | 247        | CYS         |
| 1          | J            | 249        | GLU         |
| 1          | J            | 250        | LEU         |
| 1          | J            | 259        | SER         |
| 1          | J            | 262        | GLN         |
| 1          | J            | 264        | GLU         |
| 1          | J            | 279        | ILE         |
| 1          | J            | 299        | LYS         |
| 1          | J            | 310        | ARG         |
| 1          | J            | 314        | GLU         |
| 1          | J            | 319        | ASP         |
| 1          | J            | 333        | ARG         |
| 1          | J            | 344        | LEU         |
| 1          | J            | 347        | LYS         |
| 1          | J            | 370        | GLN         |
| 1          | J            | 377        | LEU         |
| 1          | J            | 394        | ASN         |
| 1          | J            | 425        | ARG         |
| 1          | J            | 437        | SER         |
| 1          | J            | 448        | ARG         |
| 1          | J            | 473        | ARG         |
| 1          | J            | 519        | SER         |
| 1          | J            | 521        | LYS         |
| 1          | J            | 532        | PRO         |
| 1          | J            | 546        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | J            | 554        | GLN         |
| 1          | J            | 571        | VAL         |
| 1          | J            | 580        | GLU         |
| 1          | J            | 599        | ARG         |
| 1          | J            | 600        | GLN         |
| 1          | J            | 630        | ARG         |
| 1          | J            | 632        | SER         |
| 1          | J            | 645        | ARG         |
| 1          | J            | 651        | LEU         |
| 1          | J            | 655        | MET         |
| 1          | J            | 665        | SER         |
| 1          | J            | 672        | VAL         |
| 1          | J            | 684        | GLU         |
| 1          | J            | 687        | GLN         |
| 1          | J            | 690        | SER         |
| 1          | J            | 710        | GLU         |
| 1          | J            | 719        | GLN         |
| 1          | J            | 730        | LEU         |
| 1          | J            | 734        | SER         |
| 1          | J            | 741        | THR         |
| 1          | J            | 743        | SER         |
| 1          | J            | 751        | LEU         |
| 1          | J            | 753        | ASN         |
| 1          | J            | 755        | ARG         |
| 1          | J            | 768        | MET         |
| 1          | J            | 778        | THR         |
| 1          | J            | 781        | ARG         |
| 1          | J            | 797        | GLU         |
| 1          | J            | 799        | THR         |
| 1          | J            | 800        | ARG         |
| 1          | J            | 824        | GLN         |
| 1          | J            | 829        | THR         |
| 1          | J            | 832        | ASP         |
| 1          | J            | 881        | ARG         |
| 1          | J            | 893        | GLU         |
| 1          | J            | 903[A]     | GLN         |
| 1          | J            | 903[B]     | GLN         |
| 1          | J            | 917        | ARG         |
| 1          | J            | 938        | ARG         |
| 1          | J            | 952        | ARG         |
| 1          | J            | 956        | GLN         |
| 1          | J            | 1006       | GLU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | J            | 1017       | GLN         |
| 1          | K            | 3          | ILE         |
| 1          | K            | 14         | ARG         |
| 1          | K            | 37         | ARG         |
| 1          | K            | 39         | SER         |
| 1          | K            | 46         | ARG         |
| 1          | K            | 48         | SER         |
| 1          | K            | 49         | GLN         |
| 1          | K            | 50         | GLN         |
| 1          | K            | 52         | ARG         |
| 1          | K            | 59         | ARG         |
| 1          | K            | 71         | GLU         |
| 1          | K            | 72         | SER         |
| 1          | K            | 80         | GLU         |
| 1          | K            | 84         | VAL         |
| 1          | K            | 90         | TRP         |
| 1          | K            | 102        | ASN         |
| 1          | K            | 116        | THR         |
| 1          | K            | 125        | LEU         |
| 1          | K            | 128        | ASN         |
| 1          | K            | 132        | SER         |
| 1          | K            | 136        | GLU         |
| 1          | K            | 165        | SER         |
| 1          | K            | 166        | ARG         |
| 1          | K            | 171        | PHE         |
| 1          | K            | 189        | LEU         |
| 1          | K            | 202        | MET         |
| 1          | K            | 210        | ARG         |
| 1          | K            | 211        | ASP         |
| 1          | K            | 217        | LYS         |
| 1          | K            | 219        | THR         |
| 1          | K            | 246        | MET         |
| 1          | K            | 247        | CYS         |
| 1          | K            | 249        | GLU         |
| 1          | K            | 250        | LEU         |
| 1          | K            | 259        | SER         |
| 1          | K            | 262        | GLN         |
| 1          | K            | 264        | GLU         |
| 1          | K            | 279        | ILE         |
| 1          | K            | 299        | LYS         |
| 1          | K            | 310        | ARG         |
| 1          | K            | 314        | GLU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | K            | 319        | ASP         |
| 1          | K            | 333        | ARG         |
| 1          | K            | 344        | LEU         |
| 1          | K            | 347        | LYS         |
| 1          | K            | 370        | GLN         |
| 1          | K            | 377        | LEU         |
| 1          | K            | 394        | ASN         |
| 1          | K            | 425        | ARG         |
| 1          | K            | 437        | SER         |
| 1          | K            | 448        | ARG         |
| 1          | K            | 473        | ARG         |
| 1          | K            | 519        | SER         |
| 1          | K            | 521        | LYS         |
| 1          | K            | 532        | PRO         |
| 1          | K            | 546        | LEU         |
| 1          | K            | 554        | GLN         |
| 1          | K            | 571        | VAL         |
| 1          | K            | 580        | GLU         |
| 1          | K            | 599        | ARG         |
| 1          | K            | 600        | GLN         |
| 1          | K            | 630        | ARG         |
| 1          | K            | 632        | SER         |
| 1          | K            | 645        | ARG         |
| 1          | K            | 651        | LEU         |
| 1          | K            | 655        | MET         |
| 1          | K            | 665        | SER         |
| 1          | K            | 672        | VAL         |
| 1          | K            | 684        | GLU         |
| 1          | K            | 687        | GLN         |
| 1          | K            | 690        | SER         |
| 1          | K            | 710        | GLU         |
| 1          | K            | 719        | GLN         |
| 1          | K            | 730        | LEU         |
| 1          | K            | 734        | SER         |
| 1          | K            | 741        | THR         |
| 1          | K            | 743        | SER         |
| 1          | K            | 751        | LEU         |
| 1          | K            | 753        | ASN         |
| 1          | K            | 755        | ARG         |
| 1          | K            | 768        | MET         |
| 1          | K            | 778        | THR         |
| 1          | K            | 781        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | K            | 797        | GLU         |
| 1          | K            | 799        | THR         |
| 1          | K            | 800        | ARG         |
| 1          | K            | 824        | GLN         |
| 1          | K            | 829        | THR         |
| 1          | K            | 832        | ASP         |
| 1          | K            | 881        | ARG         |
| 1          | K            | 893        | GLU         |
| 1          | K            | 903[A]     | GLN         |
| 1          | K            | 903[B]     | GLN         |
| 1          | K            | 917        | ARG         |
| 1          | K            | 938        | ARG         |
| 1          | K            | 952        | ARG         |
| 1          | K            | 956        | GLN         |
| 1          | K            | 1006       | GLU         |
| 1          | K            | 1017       | GLN         |
| 1          | L            | 3          | ILE         |
| 1          | L            | 14         | ARG         |
| 1          | L            | 37         | ARG         |
| 1          | L            | 39         | SER         |
| 1          | L            | 46         | ARG         |
| 1          | L            | 48         | SER         |
| 1          | L            | 49         | GLN         |
| 1          | L            | 50         | GLN         |
| 1          | L            | 52         | ARG         |
| 1          | L            | 59         | ARG         |
| 1          | L            | 71         | GLU         |
| 1          | L            | 72         | SER         |
| 1          | L            | 80         | GLU         |
| 1          | L            | 84         | VAL         |
| 1          | L            | 90         | TRP         |
| 1          | L            | 102        | ASN         |
| 1          | L            | 116        | THR         |
| 1          | L            | 125        | LEU         |
| 1          | L            | 128        | ASN         |
| 1          | L            | 136        | GLU         |
| 1          | L            | 165        | SER         |
| 1          | L            | 166        | ARG         |
| 1          | L            | 171        | PHE         |
| 1          | L            | 189        | LEU         |
| 1          | L            | 202        | MET         |
| 1          | L            | 210        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | L            | 211        | ASP         |
| 1          | L            | 217        | LYS         |
| 1          | L            | 219        | THR         |
| 1          | L            | 246        | MET         |
| 1          | L            | 247        | CYS         |
| 1          | L            | 249        | GLU         |
| 1          | L            | 250        | LEU         |
| 1          | L            | 259        | SER         |
| 1          | L            | 262        | GLN         |
| 1          | L            | 264        | GLU         |
| 1          | L            | 279        | ILE         |
| 1          | L            | 299        | LYS         |
| 1          | L            | 310        | ARG         |
| 1          | L            | 314        | GLU         |
| 1          | L            | 319        | ASP         |
| 1          | L            | 333        | ARG         |
| 1          | L            | 344        | LEU         |
| 1          | L            | 347        | LYS         |
| 1          | L            | 370        | GLN         |
| 1          | L            | 377        | LEU         |
| 1          | L            | 394        | ASN         |
| 1          | L            | 425        | ARG         |
| 1          | L            | 437        | SER         |
| 1          | L            | 448        | ARG         |
| 1          | L            | 473        | ARG         |
| 1          | L            | 519        | SER         |
| 1          | L            | 521        | LYS         |
| 1          | L            | 532        | PRO         |
| 1          | L            | 546        | LEU         |
| 1          | L            | 554        | GLN         |
| 1          | L            | 571        | VAL         |
| 1          | L            | 580        | GLU         |
| 1          | L            | 599        | ARG         |
| 1          | L            | 600        | GLN         |
| 1          | L            | 630        | ARG         |
| 1          | L            | 632        | SER         |
| 1          | L            | 645        | ARG         |
| 1          | L            | 651        | LEU         |
| 1          | L            | 655        | MET         |
| 1          | L            | 665        | SER         |
| 1          | L            | 672        | VAL         |
| 1          | L            | 684        | GLU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | L            | 687        | GLN         |
| 1          | L            | 690        | SER         |
| 1          | L            | 710        | GLU         |
| 1          | L            | 719        | GLN         |
| 1          | L            | 730        | LEU         |
| 1          | L            | 734        | SER         |
| 1          | L            | 741        | THR         |
| 1          | L            | 743        | SER         |
| 1          | L            | 751        | LEU         |
| 1          | L            | 753        | ASN         |
| 1          | L            | 755        | ARG         |
| 1          | L            | 768        | MET         |
| 1          | L            | 778        | THR         |
| 1          | L            | 781        | ARG         |
| 1          | L            | 797        | GLU         |
| 1          | L            | 799        | THR         |
| 1          | L            | 800        | ARG         |
| 1          | L            | 824        | GLN         |
| 1          | L            | 829        | THR         |
| 1          | L            | 832        | ASP         |
| 1          | L            | 881        | ARG         |
| 1          | L            | 893        | GLU         |
| 1          | L            | 903[A]     | GLN         |
| 1          | L            | 903[B]     | GLN         |
| 1          | L            | 917        | ARG         |
| 1          | L            | 938        | ARG         |
| 1          | L            | 952        | ARG         |
| 1          | L            | 956        | GLN         |
| 1          | L            | 1006       | GLU         |
| 1          | L            | 1017       | GLN         |
| 1          | M            | 3          | ILE         |
| 1          | M            | 14         | ARG         |
| 1          | M            | 37         | ARG         |
| 1          | M            | 39         | SER         |
| 1          | M            | 46         | ARG         |
| 1          | M            | 48         | SER         |
| 1          | M            | 49         | GLN         |
| 1          | M            | 50         | GLN         |
| 1          | M            | 52         | ARG         |
| 1          | M            | 59         | ARG         |
| 1          | M            | 71         | GLU         |
| 1          | M            | 72         | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 80         | GLU         |
| 1          | M            | 84         | VAL         |
| 1          | M            | 90         | TRP         |
| 1          | M            | 102        | ASN         |
| 1          | M            | 116        | THR         |
| 1          | M            | 125        | LEU         |
| 1          | M            | 128        | ASN         |
| 1          | M            | 132        | SER         |
| 1          | M            | 136        | GLU         |
| 1          | M            | 165        | SER         |
| 1          | M            | 166        | ARG         |
| 1          | M            | 171        | PHE         |
| 1          | M            | 189        | LEU         |
| 1          | M            | 202        | MET         |
| 1          | M            | 210        | ARG         |
| 1          | M            | 211        | ASP         |
| 1          | M            | 217        | LYS         |
| 1          | M            | 219        | THR         |
| 1          | M            | 246        | MET         |
| 1          | M            | 247        | CYS         |
| 1          | M            | 249        | GLU         |
| 1          | M            | 250        | LEU         |
| 1          | M            | 259        | SER         |
| 1          | M            | 262        | GLN         |
| 1          | M            | 264        | GLU         |
| 1          | M            | 279        | ILE         |
| 1          | M            | 299        | LYS         |
| 1          | M            | 310        | ARG         |
| 1          | M            | 314        | GLU         |
| 1          | M            | 319        | ASP         |
| 1          | M            | 333        | ARG         |
| 1          | M            | 344        | LEU         |
| 1          | M            | 347        | LYS         |
| 1          | M            | 370        | GLN         |
| 1          | M            | 377        | LEU         |
| 1          | M            | 394        | ASN         |
| 1          | M            | 425        | ARG         |
| 1          | M            | 437        | SER         |
| 1          | M            | 448        | ARG         |
| 1          | M            | 473        | ARG         |
| 1          | M            | 519        | SER         |
| 1          | M            | 521        | LYS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 532        | PRO         |
| 1          | M            | 546        | LEU         |
| 1          | M            | 554        | GLN         |
| 1          | M            | 571        | VAL         |
| 1          | M            | 580        | GLU         |
| 1          | M            | 599        | ARG         |
| 1          | M            | 600        | GLN         |
| 1          | M            | 630        | ARG         |
| 1          | M            | 632        | SER         |
| 1          | M            | 645        | ARG         |
| 1          | M            | 651        | LEU         |
| 1          | M            | 655        | MET         |
| 1          | M            | 665        | SER         |
| 1          | M            | 672        | VAL         |
| 1          | M            | 684        | GLU         |
| 1          | M            | 687        | GLN         |
| 1          | M            | 690        | SER         |
| 1          | M            | 710        | GLU         |
| 1          | M            | 719        | GLN         |
| 1          | M            | 730        | LEU         |
| 1          | M            | 734        | SER         |
| 1          | M            | 741        | THR         |
| 1          | M            | 743        | SER         |
| 1          | M            | 751        | LEU         |
| 1          | M            | 753        | ASN         |
| 1          | M            | 755        | ARG         |
| 1          | M            | 768        | MET         |
| 1          | M            | 778        | THR         |
| 1          | M            | 781        | ARG         |
| 1          | M            | 797        | GLU         |
| 1          | M            | 799        | THR         |
| 1          | M            | 800        | ARG         |
| 1          | M            | 824        | GLN         |
| 1          | M            | 829        | THR         |
| 1          | M            | 832        | ASP         |
| 1          | M            | 881        | ARG         |
| 1          | M            | 893        | GLU         |
| 1          | M            | 903[A]     | GLN         |
| 1          | M            | 903[B]     | GLN         |
| 1          | M            | 917        | ARG         |
| 1          | M            | 938        | ARG         |
| 1          | M            | 952        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 956        | GLN         |
| 1          | M            | 1006       | GLU         |
| 1          | M            | 1017       | GLN         |
| 1          | N            | 3          | ILE         |
| 1          | N            | 14         | ARG         |
| 1          | N            | 37         | ARG         |
| 1          | N            | 39         | SER         |
| 1          | N            | 46         | ARG         |
| 1          | N            | 48         | SER         |
| 1          | N            | 49         | GLN         |
| 1          | N            | 50         | GLN         |
| 1          | N            | 52         | ARG         |
| 1          | N            | 59         | ARG         |
| 1          | N            | 71         | GLU         |
| 1          | N            | 72         | SER         |
| 1          | N            | 80         | GLU         |
| 1          | N            | 84         | VAL         |
| 1          | N            | 90         | TRP         |
| 1          | N            | 102        | ASN         |
| 1          | N            | 116        | THR         |
| 1          | N            | 125        | LEU         |
| 1          | N            | 128        | ASN         |
| 1          | N            | 132        | SER         |
| 1          | N            | 136        | GLU         |
| 1          | N            | 165        | SER         |
| 1          | N            | 166        | ARG         |
| 1          | N            | 171        | PHE         |
| 1          | N            | 189        | LEU         |
| 1          | N            | 202        | MET         |
| 1          | N            | 210        | ARG         |
| 1          | N            | 211        | ASP         |
| 1          | N            | 217        | LYS         |
| 1          | N            | 219        | THR         |
| 1          | N            | 246        | MET         |
| 1          | N            | 247        | CYS         |
| 1          | N            | 249        | GLU         |
| 1          | N            | 250        | LEU         |
| 1          | N            | 259        | SER         |
| 1          | N            | 262        | GLN         |
| 1          | N            | 264        | GLU         |
| 1          | N            | 279        | ILE         |
| 1          | N            | 299        | LYS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | N            | 310        | ARG         |
| 1          | N            | 314        | GLU         |
| 1          | N            | 319        | ASP         |
| 1          | N            | 333        | ARG         |
| 1          | N            | 344        | LEU         |
| 1          | N            | 347        | LYS         |
| 1          | N            | 370        | GLN         |
| 1          | N            | 377        | LEU         |
| 1          | N            | 394        | ASN         |
| 1          | N            | 425        | ARG         |
| 1          | N            | 437        | SER         |
| 1          | N            | 448        | ARG         |
| 1          | N            | 473        | ARG         |
| 1          | N            | 519        | SER         |
| 1          | N            | 521        | LYS         |
| 1          | N            | 546        | LEU         |
| 1          | N            | 554        | GLN         |
| 1          | N            | 571        | VAL         |
| 1          | N            | 580        | GLU         |
| 1          | N            | 599        | ARG         |
| 1          | N            | 600        | GLN         |
| 1          | N            | 630        | ARG         |
| 1          | N            | 632        | SER         |
| 1          | N            | 645        | ARG         |
| 1          | N            | 651        | LEU         |
| 1          | N            | 655        | MET         |
| 1          | N            | 665        | SER         |
| 1          | N            | 672        | VAL         |
| 1          | N            | 684        | GLU         |
| 1          | N            | 687        | GLN         |
| 1          | N            | 690        | SER         |
| 1          | N            | 710        | GLU         |
| 1          | N            | 719        | GLN         |
| 1          | N            | 730        | LEU         |
| 1          | N            | 734        | SER         |
| 1          | N            | 741        | THR         |
| 1          | N            | 743        | SER         |
| 1          | N            | 751        | LEU         |
| 1          | N            | 753        | ASN         |
| 1          | N            | 755        | ARG         |
| 1          | N            | 768        | MET         |
| 1          | N            | 778        | THR         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | N            | 781        | ARG         |
| 1          | N            | 797        | GLU         |
| 1          | N            | 799        | THR         |
| 1          | N            | 800        | ARG         |
| 1          | N            | 824        | GLN         |
| 1          | N            | 829        | THR         |
| 1          | N            | 832        | ASP         |
| 1          | N            | 881        | ARG         |
| 1          | N            | 893        | GLU         |
| 1          | N            | 903[A]     | GLN         |
| 1          | N            | 903[B]     | GLN         |
| 1          | N            | 917        | ARG         |
| 1          | N            | 938        | ARG         |
| 1          | N            | 952        | ARG         |
| 1          | N            | 956        | GLN         |
| 1          | N            | 1006       | GLU         |
| 1          | N            | 1017       | GLN         |
| 1          | O            | 3          | ILE         |
| 1          | O            | 14         | ARG         |
| 1          | O            | 37         | ARG         |
| 1          | O            | 39         | SER         |
| 1          | O            | 46         | ARG         |
| 1          | O            | 48         | SER         |
| 1          | O            | 49         | GLN         |
| 1          | O            | 50         | GLN         |
| 1          | O            | 52         | ARG         |
| 1          | O            | 59         | ARG         |
| 1          | O            | 71         | GLU         |
| 1          | O            | 72         | SER         |
| 1          | O            | 80         | GLU         |
| 1          | O            | 84         | VAL         |
| 1          | O            | 90         | TRP         |
| 1          | O            | 102        | ASN         |
| 1          | O            | 116        | THR         |
| 1          | O            | 125        | LEU         |
| 1          | O            | 128        | ASN         |
| 1          | O            | 132        | SER         |
| 1          | O            | 136        | GLU         |
| 1          | O            | 165        | SER         |
| 1          | O            | 166        | ARG         |
| 1          | O            | 171        | PHE         |
| 1          | O            | 189        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | O            | 202        | MET         |
| 1          | O            | 210        | ARG         |
| 1          | O            | 211        | ASP         |
| 1          | O            | 217        | LYS         |
| 1          | O            | 219        | THR         |
| 1          | O            | 246        | MET         |
| 1          | O            | 247        | CYS         |
| 1          | O            | 249        | GLU         |
| 1          | O            | 250        | LEU         |
| 1          | O            | 259        | SER         |
| 1          | O            | 262        | GLN         |
| 1          | O            | 264        | GLU         |
| 1          | O            | 279        | ILE         |
| 1          | O            | 299        | LYS         |
| 1          | O            | 310        | ARG         |
| 1          | O            | 314        | GLU         |
| 1          | O            | 319        | ASP         |
| 1          | O            | 333        | ARG         |
| 1          | O            | 344        | LEU         |
| 1          | O            | 347        | LYS         |
| 1          | O            | 370        | GLN         |
| 1          | O            | 377        | LEU         |
| 1          | O            | 394        | ASN         |
| 1          | O            | 425        | ARG         |
| 1          | O            | 437        | SER         |
| 1          | O            | 448        | ARG         |
| 1          | O            | 473        | ARG         |
| 1          | O            | 519        | SER         |
| 1          | O            | 521        | LYS         |
| 1          | O            | 532        | PRO         |
| 1          | O            | 546        | LEU         |
| 1          | O            | 554        | GLN         |
| 1          | O            | 571        | VAL         |
| 1          | O            | 580        | GLU         |
| 1          | O            | 599        | ARG         |
| 1          | O            | 600        | GLN         |
| 1          | O            | 630        | ARG         |
| 1          | O            | 632        | SER         |
| 1          | O            | 645        | ARG         |
| 1          | O            | 651        | LEU         |
| 1          | O            | 655        | MET         |
| 1          | O            | 665        | SER         |

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| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 1   | O     | 672    | VAL  |
| 1   | O     | 684    | GLU  |
| 1   | O     | 687    | GLN  |
| 1   | O     | 690    | SER  |
| 1   | O     | 710    | GLU  |
| 1   | O     | 719    | GLN  |
| 1   | O     | 730    | LEU  |
| 1   | O     | 734    | SER  |
| 1   | O     | 741    | THR  |
| 1   | O     | 743    | SER  |
| 1   | O     | 751    | LEU  |
| 1   | O     | 753    | ASN  |
| 1   | O     | 755    | ARG  |
| 1   | O     | 768    | MET  |
| 1   | O     | 778    | THR  |
| 1   | O     | 781    | ARG  |
| 1   | O     | 797    | GLU  |
| 1   | O     | 799    | THR  |
| 1   | O     | 800    | ARG  |
| 1   | O     | 824    | GLN  |
| 1   | O     | 829    | THR  |
| 1   | O     | 832    | ASP  |
| 1   | O     | 881    | ARG  |
| 1   | O     | 893    | GLU  |
| 1   | O     | 903[A] | GLN  |
| 1   | O     | 903[B] | GLN  |
| 1   | O     | 917    | ARG  |
| 1   | O     | 938    | ARG  |
| 1   | O     | 952    | ARG  |
| 1   | O     | 956    | GLN  |
| 1   | O     | 1006   | GLU  |
| 1   | O     | 1017   | GLN  |
| 1   | P     | 3      | ILE  |
| 1   | P     | 14     | ARG  |
| 1   | P     | 37     | ARG  |
| 1   | P     | 39     | SER  |
| 1   | P     | 46     | ARG  |
| 1   | P     | 48     | SER  |
| 1   | P     | 49     | GLN  |
| 1   | P     | 50     | GLN  |
| 1   | P     | 52     | ARG  |
| 1   | P     | 59     | ARG  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | P            | 71         | GLU         |
| 1          | P            | 72         | SER         |
| 1          | P            | 80         | GLU         |
| 1          | P            | 84         | VAL         |
| 1          | P            | 90         | TRP         |
| 1          | P            | 102        | ASN         |
| 1          | P            | 116        | THR         |
| 1          | P            | 125        | LEU         |
| 1          | P            | 128        | ASN         |
| 1          | P            | 132        | SER         |
| 1          | P            | 136        | GLU         |
| 1          | P            | 165        | SER         |
| 1          | P            | 166        | ARG         |
| 1          | P            | 171        | PHE         |
| 1          | P            | 189        | LEU         |
| 1          | P            | 202        | MET         |
| 1          | P            | 210        | ARG         |
| 1          | P            | 211        | ASP         |
| 1          | P            | 217        | LYS         |
| 1          | P            | 219        | THR         |
| 1          | P            | 246        | MET         |
| 1          | P            | 247        | CYS         |
| 1          | P            | 249        | GLU         |
| 1          | P            | 250        | LEU         |
| 1          | P            | 259        | SER         |
| 1          | P            | 262        | GLN         |
| 1          | P            | 264        | GLU         |
| 1          | P            | 279        | ILE         |
| 1          | P            | 299        | LYS         |
| 1          | P            | 310        | ARG         |
| 1          | P            | 314        | GLU         |
| 1          | P            | 319        | ASP         |
| 1          | P            | 333        | ARG         |
| 1          | P            | 344        | LEU         |
| 1          | P            | 347        | LYS         |
| 1          | P            | 370        | GLN         |
| 1          | P            | 377        | LEU         |
| 1          | P            | 394        | ASN         |
| 1          | P            | 425        | ARG         |
| 1          | P            | 437        | SER         |
| 1          | P            | 448        | ARG         |
| 1          | P            | 473        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | P            | 519        | SER         |
| 1          | P            | 521        | LYS         |
| 1          | P            | 532        | PRO         |
| 1          | P            | 546        | LEU         |
| 1          | P            | 554        | GLN         |
| 1          | P            | 571        | VAL         |
| 1          | P            | 580        | GLU         |
| 1          | P            | 599        | ARG         |
| 1          | P            | 600        | GLN         |
| 1          | P            | 630        | ARG         |
| 1          | P            | 632        | SER         |
| 1          | P            | 645        | ARG         |
| 1          | P            | 651        | LEU         |
| 1          | P            | 655        | MET         |
| 1          | P            | 665        | SER         |
| 1          | P            | 672        | VAL         |
| 1          | P            | 684        | GLU         |
| 1          | P            | 687        | GLN         |
| 1          | P            | 690        | SER         |
| 1          | P            | 710        | GLU         |
| 1          | P            | 719        | GLN         |
| 1          | P            | 730        | LEU         |
| 1          | P            | 734        | SER         |
| 1          | P            | 741        | THR         |
| 1          | P            | 743        | SER         |
| 1          | P            | 751        | LEU         |
| 1          | P            | 753        | ASN         |
| 1          | P            | 755        | ARG         |
| 1          | P            | 768        | MET         |
| 1          | P            | 778        | THR         |
| 1          | P            | 781        | ARG         |
| 1          | P            | 797        | GLU         |
| 1          | P            | 799        | THR         |
| 1          | P            | 800        | ARG         |
| 1          | P            | 824        | GLN         |
| 1          | P            | 829        | THR         |
| 1          | P            | 832        | ASP         |
| 1          | P            | 881        | ARG         |
| 1          | P            | 893        | GLU         |
| 1          | P            | 903[A]     | GLN         |
| 1          | P            | 903[B]     | GLN         |
| 1          | P            | 917        | ARG         |

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| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | P     | 938  | ARG  |
| 1   | P     | 952  | ARG  |
| 1   | P     | 956  | GLN  |
| 1   | P     | 1006 | GLU  |
| 1   | P     | 1017 | GLN  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (234) such sidechains are listed below:

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | A     | 102  | ASN  |
| 1   | A     | 128  | ASN  |
| 1   | A     | 226  | HIS  |
| 1   | A     | 316  | HIS  |
| 1   | A     | 467  | ASN  |
| 1   | A     | 597  | ASN  |
| 1   | A     | 604  | ASN  |
| 1   | A     | 624  | GLN  |
| 1   | A     | 761  | GLN  |
| 1   | A     | 817  | GLN  |
| 1   | A     | 824  | GLN  |
| 1   | A     | 949  | HIS  |
| 1   | A     | 990  | HIS  |
| 1   | A     | 1017 | GLN  |
| 1   | B     | 102  | ASN  |
| 1   | B     | 128  | ASN  |
| 1   | B     | 226  | HIS  |
| 1   | B     | 316  | HIS  |
| 1   | B     | 467  | ASN  |
| 1   | B     | 597  | ASN  |
| 1   | B     | 604  | ASN  |
| 1   | B     | 624  | GLN  |
| 1   | B     | 739  | HIS  |
| 1   | B     | 761  | GLN  |
| 1   | B     | 817  | GLN  |
| 1   | B     | 824  | GLN  |
| 1   | B     | 949  | HIS  |
| 1   | B     | 990  | HIS  |
| 1   | B     | 1017 | GLN  |
| 1   | C     | 102  | ASN  |
| 1   | C     | 128  | ASN  |
| 1   | C     | 226  | HIS  |
| 1   | C     | 316  | HIS  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | C            | 467        | ASN         |
| 1          | C            | 597        | ASN         |
| 1          | C            | 604        | ASN         |
| 1          | C            | 624        | GLN         |
| 1          | C            | 739        | HIS         |
| 1          | C            | 761        | GLN         |
| 1          | C            | 817        | GLN         |
| 1          | C            | 824        | GLN         |
| 1          | C            | 949        | HIS         |
| 1          | C            | 990        | HIS         |
| 1          | C            | 1017       | GLN         |
| 1          | D            | 102        | ASN         |
| 1          | D            | 128        | ASN         |
| 1          | D            | 226        | HIS         |
| 1          | D            | 316        | HIS         |
| 1          | D            | 467        | ASN         |
| 1          | D            | 597        | ASN         |
| 1          | D            | 604        | ASN         |
| 1          | D            | 624        | GLN         |
| 1          | D            | 739        | HIS         |
| 1          | D            | 761        | GLN         |
| 1          | D            | 817        | GLN         |
| 1          | D            | 824        | GLN         |
| 1          | D            | 949        | HIS         |
| 1          | D            | 990        | HIS         |
| 1          | D            | 1017       | GLN         |
| 1          | E            | 102        | ASN         |
| 1          | E            | 128        | ASN         |
| 1          | E            | 226        | HIS         |
| 1          | E            | 316        | HIS         |
| 1          | E            | 467        | ASN         |
| 1          | E            | 597        | ASN         |
| 1          | E            | 604        | ASN         |
| 1          | E            | 624        | GLN         |
| 1          | E            | 761        | GLN         |
| 1          | E            | 817        | GLN         |
| 1          | E            | 824        | GLN         |
| 1          | E            | 949        | HIS         |
| 1          | E            | 990        | HIS         |
| 1          | E            | 1017       | GLN         |
| 1          | F            | 102        | ASN         |
| 1          | F            | 128        | ASN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 226        | HIS         |
| 1          | F            | 316        | HIS         |
| 1          | F            | 467        | ASN         |
| 1          | F            | 597        | ASN         |
| 1          | F            | 604        | ASN         |
| 1          | F            | 624        | GLN         |
| 1          | F            | 761        | GLN         |
| 1          | F            | 817        | GLN         |
| 1          | F            | 824        | GLN         |
| 1          | F            | 949        | HIS         |
| 1          | F            | 990        | HIS         |
| 1          | F            | 1017       | GLN         |
| 1          | G            | 102        | ASN         |
| 1          | G            | 128        | ASN         |
| 1          | G            | 226        | HIS         |
| 1          | G            | 316        | HIS         |
| 1          | G            | 467        | ASN         |
| 1          | G            | 597        | ASN         |
| 1          | G            | 604        | ASN         |
| 1          | G            | 624        | GLN         |
| 1          | G            | 739        | HIS         |
| 1          | G            | 761        | GLN         |
| 1          | G            | 817        | GLN         |
| 1          | G            | 824        | GLN         |
| 1          | G            | 949        | HIS         |
| 1          | G            | 990        | HIS         |
| 1          | G            | 1017       | GLN         |
| 1          | H            | 102        | ASN         |
| 1          | H            | 128        | ASN         |
| 1          | H            | 226        | HIS         |
| 1          | H            | 316        | HIS         |
| 1          | H            | 467        | ASN         |
| 1          | H            | 597        | ASN         |
| 1          | H            | 604        | ASN         |
| 1          | H            | 624        | GLN         |
| 1          | H            | 761        | GLN         |
| 1          | H            | 817        | GLN         |
| 1          | H            | 824        | GLN         |
| 1          | H            | 949        | HIS         |
| 1          | H            | 990        | HIS         |
| 1          | H            | 1017       | GLN         |
| 1          | I            | 102        | ASN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | I            | 128        | ASN         |
| 1          | I            | 226        | HIS         |
| 1          | I            | 316        | HIS         |
| 1          | I            | 467        | ASN         |
| 1          | I            | 597        | ASN         |
| 1          | I            | 604        | ASN         |
| 1          | I            | 624        | GLN         |
| 1          | I            | 739        | HIS         |
| 1          | I            | 761        | GLN         |
| 1          | I            | 817        | GLN         |
| 1          | I            | 824        | GLN         |
| 1          | I            | 949        | HIS         |
| 1          | I            | 990        | HIS         |
| 1          | I            | 1017       | GLN         |
| 1          | J            | 102        | ASN         |
| 1          | J            | 128        | ASN         |
| 1          | J            | 226        | HIS         |
| 1          | J            | 316        | HIS         |
| 1          | J            | 467        | ASN         |
| 1          | J            | 597        | ASN         |
| 1          | J            | 604        | ASN         |
| 1          | J            | 624        | GLN         |
| 1          | J            | 739        | HIS         |
| 1          | J            | 761        | GLN         |
| 1          | J            | 817        | GLN         |
| 1          | J            | 824        | GLN         |
| 1          | J            | 949        | HIS         |
| 1          | J            | 990        | HIS         |
| 1          | J            | 1017       | GLN         |
| 1          | K            | 102        | ASN         |
| 1          | K            | 128        | ASN         |
| 1          | K            | 226        | HIS         |
| 1          | K            | 316        | HIS         |
| 1          | K            | 467        | ASN         |
| 1          | K            | 597        | ASN         |
| 1          | K            | 604        | ASN         |
| 1          | K            | 624        | GLN         |
| 1          | K            | 739        | HIS         |
| 1          | K            | 761        | GLN         |
| 1          | K            | 817        | GLN         |
| 1          | K            | 824        | GLN         |
| 1          | K            | 949        | HIS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | K            | 990        | HIS         |
| 1          | K            | 1017       | GLN         |
| 1          | L            | 102        | ASN         |
| 1          | L            | 128        | ASN         |
| 1          | L            | 226        | HIS         |
| 1          | L            | 316        | HIS         |
| 1          | L            | 467        | ASN         |
| 1          | L            | 597        | ASN         |
| 1          | L            | 604        | ASN         |
| 1          | L            | 624        | GLN         |
| 1          | L            | 739        | HIS         |
| 1          | L            | 761        | GLN         |
| 1          | L            | 817        | GLN         |
| 1          | L            | 824        | GLN         |
| 1          | L            | 949        | HIS         |
| 1          | L            | 990        | HIS         |
| 1          | L            | 1017       | GLN         |
| 1          | M            | 102        | ASN         |
| 1          | M            | 128        | ASN         |
| 1          | M            | 226        | HIS         |
| 1          | M            | 316        | HIS         |
| 1          | M            | 467        | ASN         |
| 1          | M            | 597        | ASN         |
| 1          | M            | 604        | ASN         |
| 1          | M            | 624        | GLN         |
| 1          | M            | 739        | HIS         |
| 1          | M            | 761        | GLN         |
| 1          | M            | 817        | GLN         |
| 1          | M            | 824        | GLN         |
| 1          | M            | 949        | HIS         |
| 1          | M            | 990        | HIS         |
| 1          | M            | 1017       | GLN         |
| 1          | N            | 102        | ASN         |
| 1          | N            | 128        | ASN         |
| 1          | N            | 226        | HIS         |
| 1          | N            | 316        | HIS         |
| 1          | N            | 467        | ASN         |
| 1          | N            | 597        | ASN         |
| 1          | N            | 604        | ASN         |
| 1          | N            | 624        | GLN         |
| 1          | N            | 739        | HIS         |
| 1          | N            | 761        | GLN         |

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| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | N     | 817  | GLN  |
| 1   | N     | 824  | GLN  |
| 1   | N     | 949  | HIS  |
| 1   | N     | 990  | HIS  |
| 1   | N     | 1017 | GLN  |
| 1   | O     | 102  | ASN  |
| 1   | O     | 128  | ASN  |
| 1   | O     | 226  | HIS  |
| 1   | O     | 316  | HIS  |
| 1   | O     | 467  | ASN  |
| 1   | O     | 597  | ASN  |
| 1   | O     | 604  | ASN  |
| 1   | O     | 624  | GLN  |
| 1   | O     | 761  | GLN  |
| 1   | O     | 817  | GLN  |
| 1   | O     | 824  | GLN  |
| 1   | O     | 949  | HIS  |
| 1   | O     | 990  | HIS  |
| 1   | O     | 1017 | GLN  |
| 1   | P     | 102  | ASN  |
| 1   | P     | 128  | ASN  |
| 1   | P     | 226  | HIS  |
| 1   | P     | 316  | HIS  |
| 1   | P     | 467  | ASN  |
| 1   | P     | 597  | ASN  |
| 1   | P     | 604  | ASN  |
| 1   | P     | 624  | GLN  |
| 1   | P     | 761  | GLN  |
| 1   | P     | 817  | GLN  |
| 1   | P     | 824  | GLN  |
| 1   | P     | 949  | HIS  |
| 1   | P     | 990  | HIS  |
| 1   | P     | 1017 | GLN  |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

### 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

48 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res  | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
|     |      |       |      |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 1   | CME  | A     | 748  | 1    | 8,9,10       | 0.87 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | C     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | L     | 1021 | 1    | 8,9,10       | 1.26 | 0        | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | L     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | B     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | D     | 1021 | 1    | 8,9,10       | 1.26 | 1 (12%)  | 5,9,11      | 3.69 | 1 (20%)  |
| 1   | CME  | G     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | H     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | I     | 748  | 1    | 8,9,10       | 0.87 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | K     | 914  | 1    | 8,9,10       | 0.84 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | N     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | E     | 1021 | 1    | 8,9,10       | 1.27 | 0        | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | O     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.96 | 0        |
| 1   | CME  | H     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | A     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | N     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | O     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | D     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | F     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | O     | 914  | 1    | 8,9,10       | 0.84 | 0        | 5,9,11      | 1.86 | 1 (20%)  |
| 1   | CME  | D     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | C     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | M     | 748  | 1    | 8,9,10       | 0.87 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | P     | 1021 | 1    | 8,9,10       | 1.27 | 0        | 5,9,11      | 3.69 | 1 (20%)  |
| 1   | CME  | I     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | B     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | H     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | A     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | F     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |

| Mol | Type | Chain | Res  | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
|     |      |       |      |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 1   | CME  | P     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.86 | 1 (20%)  |
| 1   | CME  | P     | 748  | 1    | 8,9,10       | 0.87 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | J     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | J     | 914  | 1    | 8,9,10       | 0.84 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | G     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | I     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | F     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | K     | 1021 | 1    | 8,9,10       | 1.26 | 0        | 5,9,11      | 3.69 | 1 (20%)  |
| 1   | CME  | M     | 1021 | 1    | 8,9,10       | 1.28 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | N     | 748  | 1    | 8,9,10       | 0.87 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | E     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | B     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | E     | 914  | 1    | 8,9,10       | 0.83 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | K     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | L     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | M     | 914  | 1    | 8,9,10       | 0.84 | 0        | 5,9,11      | 1.87 | 1 (20%)  |
| 1   | CME  | G     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |
| 1   | CME  | C     | 1021 | 1    | 8,9,10       | 1.27 | 1 (12%)  | 5,9,11      | 3.68 | 1 (20%)  |
| 1   | CME  | J     | 748  | 1    | 8,9,10       | 0.88 | 1 (12%)  | 5,9,11      | 0.95 | 0        |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res  | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|----------|-------|
| 1   | CME  | A     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | C     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | L     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | L     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | B     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | D     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | G     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | H     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | I     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | K     | 914  | 1    | -       | 3/5/8/10 | -     |

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| Mol | Type | Chain | Res  | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|----------|-------|
| 1   | CME  | N     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | E     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | O     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | H     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | A     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | N     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | O     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | D     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | F     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | O     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | D     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | C     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | M     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | P     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | I     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | B     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | H     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | A     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | F     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | P     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | P     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | J     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | J     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | G     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | I     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | F     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | K     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | M     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | N     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | E     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | B     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | E     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | K     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | L     | 748  | 1    | -       | 3/5/8/10 | -     |

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| Mol | Type | Chain | Res  | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|----------|-------|
| 1   | CME  | M     | 914  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | G     | 748  | 1    | -       | 3/5/8/10 | -     |
| 1   | CME  | C     | 1021 | 1    | -       | 4/5/8/10 | -     |
| 1   | CME  | J     | 748  | 1    | -       | 3/5/8/10 | -     |

All (28) bond length outliers are listed below:

| Mol | Chain | Res  | Type | Atoms | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1   | J     | 748  | CME  | CA-N  | -2.35 | 1.41        | 1.48     |
| 1   | H     | 748  | CME  | CA-N  | -2.35 | 1.41        | 1.48     |
| 1   | K     | 748  | CME  | CA-N  | -2.35 | 1.41        | 1.48     |
| 1   | F     | 748  | CME  | CA-N  | -2.34 | 1.41        | 1.48     |
| 1   | G     | 748  | CME  | CA-N  | -2.34 | 1.41        | 1.48     |
| 1   | L     | 748  | CME  | CA-N  | -2.34 | 1.41        | 1.48     |
| 1   | E     | 748  | CME  | CA-N  | -2.34 | 1.41        | 1.48     |
| 1   | O     | 748  | CME  | CA-N  | -2.33 | 1.41        | 1.48     |
| 1   | B     | 748  | CME  | CA-N  | -2.33 | 1.41        | 1.48     |
| 1   | A     | 748  | CME  | CA-N  | -2.33 | 1.41        | 1.48     |
| 1   | C     | 748  | CME  | CA-N  | -2.33 | 1.41        | 1.48     |
| 1   | D     | 748  | CME  | CA-N  | -2.32 | 1.41        | 1.48     |
| 1   | N     | 748  | CME  | CA-N  | -2.32 | 1.41        | 1.48     |
| 1   | M     | 748  | CME  | CA-N  | -2.31 | 1.41        | 1.48     |
| 1   | P     | 748  | CME  | CA-N  | -2.31 | 1.41        | 1.48     |
| 1   | I     | 748  | CME  | CA-N  | -2.30 | 1.41        | 1.48     |
| 1   | F     | 1021 | CME  | SD-SG | -2.01 | 1.88        | 2.03     |
| 1   | N     | 1021 | CME  | SD-SG | -2.01 | 1.88        | 2.03     |
| 1   | G     | 1021 | CME  | SD-SG | -2.01 | 1.88        | 2.03     |
| 1   | O     | 1021 | CME  | SD-SG | -2.01 | 1.88        | 2.03     |
| 1   | C     | 1021 | CME  | SD-SG | -2.01 | 1.88        | 2.03     |
| 1   | A     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | M     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | J     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | D     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | H     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | I     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |
| 1   | B     | 1021 | CME  | SD-SG | -2.00 | 1.88        | 2.03     |

All (32) bond angle outliers are listed below:

| Mol | Chain | Res  | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1   | D     | 1021 | CME  | CB-SG-SD | -8.01 | 83.06       | 103.82   |

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| Mol | Chain | Res  | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1   | K     | 1021 | CME  | CB-SG-SD | -8.01 | 83.07       | 103.82   |
| 1   | P     | 1021 | CME  | CB-SG-SD | -8.00 | 83.08       | 103.82   |
| 1   | N     | 1021 | CME  | CB-SG-SD | -8.00 | 83.09       | 103.82   |
| 1   | I     | 1021 | CME  | CB-SG-SD | -8.00 | 83.10       | 103.82   |
| 1   | L     | 1021 | CME  | CB-SG-SD | -8.00 | 83.10       | 103.82   |
| 1   | E     | 1021 | CME  | CB-SG-SD | -8.00 | 83.11       | 103.82   |
| 1   | A     | 1021 | CME  | CB-SG-SD | -8.00 | 83.11       | 103.82   |
| 1   | F     | 1021 | CME  | CB-SG-SD | -7.99 | 83.11       | 103.82   |
| 1   | J     | 1021 | CME  | CB-SG-SD | -7.99 | 83.11       | 103.82   |
| 1   | H     | 1021 | CME  | CB-SG-SD | -7.99 | 83.11       | 103.82   |
| 1   | G     | 1021 | CME  | CB-SG-SD | -7.99 | 83.11       | 103.82   |
| 1   | B     | 1021 | CME  | CB-SG-SD | -7.99 | 83.11       | 103.82   |
| 1   | M     | 1021 | CME  | CB-SG-SD | -7.99 | 83.12       | 103.82   |
| 1   | C     | 1021 | CME  | CB-SG-SD | -7.99 | 83.12       | 103.82   |
| 1   | O     | 1021 | CME  | CB-SG-SD | -7.98 | 83.15       | 103.82   |
| 1   | C     | 914  | CME  | CB-SG-SD | -4.09 | 93.23       | 103.82   |
| 1   | L     | 914  | CME  | CB-SG-SD | -4.09 | 93.24       | 103.82   |
| 1   | B     | 914  | CME  | CB-SG-SD | -4.08 | 93.25       | 103.82   |
| 1   | H     | 914  | CME  | CB-SG-SD | -4.08 | 93.26       | 103.82   |
| 1   | E     | 914  | CME  | CB-SG-SD | -4.08 | 93.26       | 103.82   |
| 1   | I     | 914  | CME  | CB-SG-SD | -4.08 | 93.26       | 103.82   |
| 1   | M     | 914  | CME  | CB-SG-SD | -4.07 | 93.27       | 103.82   |
| 1   | K     | 914  | CME  | CB-SG-SD | -4.07 | 93.27       | 103.82   |
| 1   | J     | 914  | CME  | CB-SG-SD | -4.07 | 93.27       | 103.82   |
| 1   | F     | 914  | CME  | CB-SG-SD | -4.07 | 93.27       | 103.82   |
| 1   | N     | 914  | CME  | CB-SG-SD | -4.07 | 93.27       | 103.82   |
| 1   | D     | 914  | CME  | CB-SG-SD | -4.07 | 93.28       | 103.82   |
| 1   | G     | 914  | CME  | CB-SG-SD | -4.07 | 93.28       | 103.82   |
| 1   | A     | 914  | CME  | CB-SG-SD | -4.07 | 93.28       | 103.82   |
| 1   | O     | 914  | CME  | CB-SG-SD | -4.07 | 93.28       | 103.82   |
| 1   | P     | 914  | CME  | CB-SG-SD | -4.06 | 93.29       | 103.82   |

There are no chirality outliers.

All (160) torsion outliers are listed below:

| Mol | Chain | Res  | Type | Atoms       |
|-----|-------|------|------|-------------|
| 1   | A     | 748  | CME  | CE-SD-SG-CB |
| 1   | A     | 1021 | CME  | N-CA-CB-SG  |
| 1   | B     | 748  | CME  | CE-SD-SG-CB |
| 1   | B     | 1021 | CME  | N-CA-CB-SG  |
| 1   | C     | 748  | CME  | CE-SD-SG-CB |
| 1   | C     | 1021 | CME  | N-CA-CB-SG  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atoms</b> |
|------------|--------------|------------|-------------|--------------|
| 1          | D            | 748        | CME         | CE-SD-SG-CB  |
| 1          | D            | 1021       | CME         | N-CA-CB-SG   |
| 1          | E            | 748        | CME         | CE-SD-SG-CB  |
| 1          | E            | 1021       | CME         | N-CA-CB-SG   |
| 1          | F            | 748        | CME         | CE-SD-SG-CB  |
| 1          | F            | 1021       | CME         | N-CA-CB-SG   |
| 1          | G            | 748        | CME         | CE-SD-SG-CB  |
| 1          | G            | 1021       | CME         | N-CA-CB-SG   |
| 1          | H            | 748        | CME         | CE-SD-SG-CB  |
| 1          | H            | 1021       | CME         | N-CA-CB-SG   |
| 1          | I            | 748        | CME         | CE-SD-SG-CB  |
| 1          | I            | 1021       | CME         | N-CA-CB-SG   |
| 1          | J            | 748        | CME         | CE-SD-SG-CB  |
| 1          | J            | 1021       | CME         | N-CA-CB-SG   |
| 1          | K            | 748        | CME         | CE-SD-SG-CB  |
| 1          | K            | 1021       | CME         | N-CA-CB-SG   |
| 1          | L            | 748        | CME         | CE-SD-SG-CB  |
| 1          | L            | 1021       | CME         | N-CA-CB-SG   |
| 1          | M            | 748        | CME         | CE-SD-SG-CB  |
| 1          | M            | 1021       | CME         | N-CA-CB-SG   |
| 1          | N            | 748        | CME         | CE-SD-SG-CB  |
| 1          | N            | 1021       | CME         | N-CA-CB-SG   |
| 1          | O            | 748        | CME         | CE-SD-SG-CB  |
| 1          | O            | 1021       | CME         | N-CA-CB-SG   |
| 1          | P            | 748        | CME         | CE-SD-SG-CB  |
| 1          | P            | 1021       | CME         | N-CA-CB-SG   |
| 1          | A            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | B            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | C            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | D            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | E            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | F            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | G            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | H            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | I            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | J            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | K            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | L            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | M            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | N            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | O            | 1021       | CME         | CE-SD-SG-CB  |
| 1          | P            | 1021       | CME         | CE-SD-SG-CB  |

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| Mol | Chain | Res | Type | Atoms       |
|-----|-------|-----|------|-------------|
| 1   | A     | 748 | CME  | SD-CE-CZ-OH |
| 1   | A     | 914 | CME  | SD-CE-CZ-OH |
| 1   | B     | 748 | CME  | SD-CE-CZ-OH |
| 1   | B     | 914 | CME  | SD-CE-CZ-OH |
| 1   | C     | 748 | CME  | SD-CE-CZ-OH |
| 1   | C     | 914 | CME  | SD-CE-CZ-OH |
| 1   | D     | 748 | CME  | SD-CE-CZ-OH |
| 1   | D     | 914 | CME  | SD-CE-CZ-OH |
| 1   | E     | 748 | CME  | SD-CE-CZ-OH |
| 1   | E     | 914 | CME  | SD-CE-CZ-OH |
| 1   | F     | 748 | CME  | SD-CE-CZ-OH |
| 1   | F     | 914 | CME  | SD-CE-CZ-OH |
| 1   | G     | 748 | CME  | SD-CE-CZ-OH |
| 1   | G     | 914 | CME  | SD-CE-CZ-OH |
| 1   | H     | 748 | CME  | SD-CE-CZ-OH |
| 1   | H     | 914 | CME  | SD-CE-CZ-OH |
| 1   | I     | 748 | CME  | SD-CE-CZ-OH |
| 1   | I     | 914 | CME  | SD-CE-CZ-OH |
| 1   | J     | 748 | CME  | SD-CE-CZ-OH |
| 1   | J     | 914 | CME  | SD-CE-CZ-OH |
| 1   | K     | 748 | CME  | SD-CE-CZ-OH |
| 1   | K     | 914 | CME  | SD-CE-CZ-OH |
| 1   | L     | 748 | CME  | SD-CE-CZ-OH |
| 1   | L     | 914 | CME  | SD-CE-CZ-OH |
| 1   | M     | 748 | CME  | SD-CE-CZ-OH |
| 1   | M     | 914 | CME  | SD-CE-CZ-OH |
| 1   | N     | 748 | CME  | SD-CE-CZ-OH |
| 1   | N     | 914 | CME  | SD-CE-CZ-OH |
| 1   | O     | 748 | CME  | SD-CE-CZ-OH |
| 1   | O     | 914 | CME  | SD-CE-CZ-OH |
| 1   | P     | 748 | CME  | SD-CE-CZ-OH |
| 1   | P     | 914 | CME  | SD-CE-CZ-OH |
| 1   | A     | 914 | CME  | CA-CB-SG-SD |
| 1   | B     | 914 | CME  | CA-CB-SG-SD |
| 1   | C     | 914 | CME  | CA-CB-SG-SD |
| 1   | D     | 914 | CME  | CA-CB-SG-SD |
| 1   | E     | 914 | CME  | CA-CB-SG-SD |
| 1   | F     | 914 | CME  | CA-CB-SG-SD |
| 1   | G     | 914 | CME  | CA-CB-SG-SD |
| 1   | H     | 914 | CME  | CA-CB-SG-SD |
| 1   | I     | 914 | CME  | CA-CB-SG-SD |
| 1   | J     | 914 | CME  | CA-CB-SG-SD |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atoms</b> |
|------------|--------------|------------|-------------|--------------|
| 1          | K            | 914        | CME         | CA-CB-SG-SD  |
| 1          | L            | 914        | CME         | CA-CB-SG-SD  |
| 1          | M            | 914        | CME         | CA-CB-SG-SD  |
| 1          | N            | 914        | CME         | CA-CB-SG-SD  |
| 1          | O            | 914        | CME         | CA-CB-SG-SD  |
| 1          | P            | 914        | CME         | CA-CB-SG-SD  |
| 1          | A            | 914        | CME         | CE-SD-SG-CB  |
| 1          | B            | 914        | CME         | CE-SD-SG-CB  |
| 1          | C            | 914        | CME         | CE-SD-SG-CB  |
| 1          | D            | 914        | CME         | CE-SD-SG-CB  |
| 1          | E            | 914        | CME         | CE-SD-SG-CB  |
| 1          | F            | 914        | CME         | CE-SD-SG-CB  |
| 1          | G            | 914        | CME         | CE-SD-SG-CB  |
| 1          | H            | 914        | CME         | CE-SD-SG-CB  |
| 1          | I            | 914        | CME         | CE-SD-SG-CB  |
| 1          | J            | 914        | CME         | CE-SD-SG-CB  |
| 1          | K            | 914        | CME         | CE-SD-SG-CB  |
| 1          | L            | 914        | CME         | CE-SD-SG-CB  |
| 1          | M            | 914        | CME         | CE-SD-SG-CB  |
| 1          | N            | 914        | CME         | CE-SD-SG-CB  |
| 1          | O            | 914        | CME         | CE-SD-SG-CB  |
| 1          | P            | 914        | CME         | CE-SD-SG-CB  |
| 1          | A            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | A            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | B            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | B            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | C            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | C            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | D            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | D            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | E            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | E            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | F            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | F            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | G            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | G            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | H            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | H            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | I            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | I            | 1021       | CME         | CZ-CE-SD-SG  |
| 1          | J            | 748        | CME         | CZ-CE-SD-SG  |
| 1          | J            | 1021       | CME         | CZ-CE-SD-SG  |

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| Mol | Chain | Res  | Type | Atoms       |
|-----|-------|------|------|-------------|
| 1   | K     | 748  | CME  | CZ-CE-SD-SG |
| 1   | K     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | L     | 748  | CME  | CZ-CE-SD-SG |
| 1   | L     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | M     | 748  | CME  | CZ-CE-SD-SG |
| 1   | M     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | N     | 748  | CME  | CZ-CE-SD-SG |
| 1   | N     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | O     | 748  | CME  | CZ-CE-SD-SG |
| 1   | O     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | P     | 748  | CME  | CZ-CE-SD-SG |
| 1   | P     | 1021 | CME  | CZ-CE-SD-SG |
| 1   | A     | 1021 | CME  | CA-CB-SG-SD |
| 1   | B     | 1021 | CME  | CA-CB-SG-SD |
| 1   | C     | 1021 | CME  | CA-CB-SG-SD |
| 1   | D     | 1021 | CME  | CA-CB-SG-SD |
| 1   | E     | 1021 | CME  | CA-CB-SG-SD |
| 1   | F     | 1021 | CME  | CA-CB-SG-SD |
| 1   | G     | 1021 | CME  | CA-CB-SG-SD |
| 1   | H     | 1021 | CME  | CA-CB-SG-SD |
| 1   | I     | 1021 | CME  | CA-CB-SG-SD |
| 1   | J     | 1021 | CME  | CA-CB-SG-SD |
| 1   | K     | 1021 | CME  | CA-CB-SG-SD |
| 1   | L     | 1021 | CME  | CA-CB-SG-SD |
| 1   | M     | 1021 | CME  | CA-CB-SG-SD |
| 1   | N     | 1021 | CME  | CA-CB-SG-SD |
| 1   | O     | 1021 | CME  | CA-CB-SG-SD |
| 1   | P     | 1021 | CME  | CA-CB-SG-SD |

There are no ring outliers.

32 monomers are involved in 64 short contacts:

| Mol | Chain | Res  | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 1   | A     | 748  | CME  | 1       | 0            |
| 1   | C     | 914  | CME  | 1       | 0            |
| 1   | L     | 1021 | CME  | 3       | 0            |
| 1   | L     | 914  | CME  | 1       | 0            |
| 1   | D     | 1021 | CME  | 3       | 0            |
| 1   | G     | 914  | CME  | 1       | 0            |
| 1   | H     | 914  | CME  | 1       | 0            |
| 1   | K     | 914  | CME  | 1       | 0            |
| 1   | N     | 914  | CME  | 1       | 0            |

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| Mol | Chain | Res  | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 1   | E     | 1021 | CME  | 3       | 0            |
| 1   | H     | 1021 | CME  | 3       | 0            |
| 1   | A     | 914  | CME  | 1       | 0            |
| 1   | N     | 1021 | CME  | 3       | 0            |
| 1   | O     | 1021 | CME  | 3       | 0            |
| 1   | D     | 748  | CME  | 1       | 0            |
| 1   | O     | 914  | CME  | 1       | 0            |
| 1   | D     | 914  | CME  | 1       | 0            |
| 1   | P     | 1021 | CME  | 3       | 0            |
| 1   | I     | 914  | CME  | 1       | 0            |
| 1   | B     | 914  | CME  | 1       | 0            |
| 1   | A     | 1021 | CME  | 3       | 0            |
| 1   | F     | 1021 | CME  | 3       | 0            |
| 1   | P     | 914  | CME  | 1       | 0            |
| 1   | J     | 1021 | CME  | 3       | 0            |
| 1   | J     | 914  | CME  | 1       | 0            |
| 1   | G     | 1021 | CME  | 3       | 0            |
| 1   | I     | 1021 | CME  | 3       | 0            |
| 1   | K     | 1021 | CME  | 3       | 0            |
| 1   | M     | 1021 | CME  | 3       | 0            |
| 1   | B     | 1021 | CME  | 3       | 0            |
| 1   | K     | 748  | CME  | 1       | 0            |
| 1   | C     | 1021 | CME  | 3       | 0            |

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 32 ligands modelled in this entry, 32 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed          | <RSRZ> | #RSRZ>2        | OWAB(Å <sup>2</sup> ) | Q<0.9   |
|-----|-------|-------------------|--------|----------------|-----------------------|---------|
| 1   | A     | 1018/1023 (99%)   | -0.85  | 5 (0%) 91 91   | 3, 21, 66, 100        | 1 (0%)  |
| 1   | B     | 1018/1023 (99%)   | -0.91  | 0 100 100      | 3, 21, 66, 100        | 1 (0%)  |
| 1   | C     | 1018/1023 (99%)   | -0.79  | 1 (0%) 95 96   | 2, 19, 63, 98         | 1 (0%)  |
| 1   | D     | 1018/1023 (99%)   | -0.82  | 0 100 100      | 5, 24, 67, 100        | 1 (0%)  |
| 1   | E     | 1018/1023 (99%)   | -0.61  | 3 (0%) 94 94   | 15, 33, 74, 100       | 1 (0%)  |
| 1   | F     | 1018/1023 (99%)   | -0.85  | 1 (0%) 95 96   | 3, 21, 66, 100        | 1 (0%)  |
| 1   | G     | 1018/1023 (99%)   | -0.89  | 1 (0%) 95 96   | 7, 25, 68, 100        | 1 (0%)  |
| 1   | H     | 1018/1023 (99%)   | -0.64  | 4 (0%) 92 93   | 14, 33, 73, 100       | 1 (0%)  |
| 1   | I     | 1018/1023 (99%)   | -0.79  | 1 (0%) 95 96   | 10, 28, 70, 100       | 1 (0%)  |
| 1   | J     | 1018/1023 (99%)   | -0.81  | 1 (0%) 95 96   | 8, 26, 69, 100        | 1 (0%)  |
| 1   | K     | 1018/1023 (99%)   | -0.68  | 6 (0%) 89 90   | 17, 35, 76, 100       | 1 (0%)  |
| 1   | L     | 1018/1023 (99%)   | -0.62  | 3 (0%) 94 94   | 16, 34, 75, 100       | 1 (0%)  |
| 1   | M     | 1018/1023 (99%)   | -0.25  | 18 (1%) 68 71  | 22, 40, 79, 100       | 1 (0%)  |
| 1   | N     | 1018/1023 (99%)   | -0.74  | 0 100 100      | 11, 29, 71, 100       | 1 (0%)  |
| 1   | O     | 1018/1023 (99%)   | -0.81  | 1 (0%) 95 96   | 12, 30, 72, 100       | 1 (0%)  |
| 1   | P     | 1018/1023 (99%)   | 0.26   | 66 (6%) 18 19  | 29, 47, 83, 100       | 1 (0%)  |
| All | All   | 16288/16368 (99%) | -0.68  | 111 (0%) 87 89 | 2, 30, 72, 100        | 16 (0%) |

All (111) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1   | K     | 735 | HIS  | 5.3  |
| 1   | P     | 739 | HIS  | 5.2  |
| 1   | P     | 313 | VAL  | 5.2  |
| 1   | P     | 70  | PRO  | 5.0  |
| 1   | O     | 735 | HIS  | 4.8  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>RSRZ</b> |
|------------|--------------|------------|-------------|-------------|
| 1          | L            | 735        | HIS         | 4.5         |
| 1          | P            | 143        | PHE         | 4.5         |
| 1          | P            | 732        | ALA         | 4.2         |
| 1          | P            | 133        | TRP         | 4.1         |
| 1          | P            | 115        | PRO         | 4.1         |
| 1          | M            | 575        | LEU         | 3.9         |
| 1          | H            | 735        | HIS         | 3.9         |
| 1          | A            | 580        | GLU         | 3.9         |
| 1          | P            | 731        | PRO         | 3.8         |
| 1          | P            | 55         | ASN         | 3.8         |
| 1          | P            | 158        | TRP         | 3.7         |
| 1          | P            | 129        | VAL         | 3.7         |
| 1          | P            | 203        | TRP         | 3.6         |
| 1          | P            | 149        | ALA         | 3.5         |
| 1          | A            | 582        | GLY         | 3.5         |
| 1          | P            | 364        | GLY         | 3.4         |
| 1          | P            | 97         | ALA         | 3.4         |
| 1          | P            | 204        | ARG         | 3.4         |
| 1          | P            | 141        | ILE         | 3.4         |
| 1          | P            | 73         | TRP         | 3.4         |
| 1          | K            | 734        | SER         | 3.3         |
| 1          | P            | 735        | HIS         | 3.3         |
| 1          | P            | 34         | ALA         | 3.3         |
| 1          | L            | 739        | HIS         | 3.3         |
| 1          | P            | 81         | ALA         | 3.2         |
| 1          | P            | 595        | THR         | 3.2         |
| 1          | P            | 68         | ALA         | 3.1         |
| 1          | P            | 191        | TRP         | 3.0         |
| 1          | M            | 6          | SER         | 3.0         |
| 1          | M            | 66         | PRO         | 3.0         |
| 1          | P            | 799        | THR         | 3.0         |
| 1          | M            | 162        | GLY         | 3.0         |
| 1          | L            | 687        | GLN         | 3.0         |
| 1          | K            | 730        | LEU         | 2.9         |
| 1          | P            | 733        | ALA         | 2.8         |
| 1          | M            | 177        | LEU         | 2.8         |
| 1          | M            | 73         | TRP         | 2.8         |
| 1          | G            | 735        | HIS         | 2.8         |
| 1          | A            | 735        | HIS         | 2.8         |
| 1          | P            | 684        | GLU         | 2.8         |
| 1          | P            | 180        | GLY         | 2.8         |
| 1          | M            | 69         | VAL         | 2.8         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>RSRZ</b> |
|------------|--------------|------------|-------------|-------------|
| 1          | P            | 7          | LEU         | 2.8         |
| 1          | P            | 35         | SER         | 2.7         |
| 1          | P            | 209        | PHE         | 2.7         |
| 1          | P            | 9          | VAL         | 2.7         |
| 1          | M            | 75         | GLU         | 2.7         |
| 1          | M            | 149        | ALA         | 2.7         |
| 1          | P            | 317        | THR         | 2.7         |
| 1          | P            | 51         | LEU         | 2.6         |
| 1          | C            | 581        | ASN         | 2.6         |
| 1          | A            | 581        | ASN         | 2.6         |
| 1          | P            | 575        | LEU         | 2.6         |
| 1          | P            | 185        | ALA         | 2.6         |
| 1          | P            | 160        | GLY         | 2.6         |
| 1          | P            | 579        | ASP         | 2.6         |
| 1          | P            | 800        | ARG         | 2.6         |
| 1          | P            | 585        | TRP         | 2.6         |
| 1          | P            | 689        | GLU         | 2.6         |
| 1          | P            | 102        | ASN         | 2.6         |
| 1          | M            | 16         | TRP         | 2.6         |
| 1          | P            | 100        | TYR         | 2.6         |
| 1          | E            | 160        | GLY         | 2.6         |
| 1          | K            | 732        | ALA         | 2.5         |
| 1          | E            | 66         | PRO         | 2.5         |
| 1          | M            | 160        | GLY         | 2.5         |
| 1          | P            | 195        | SER         | 2.5         |
| 1          | J            | 581        | ASN         | 2.5         |
| 1          | M            | 735        | HIS         | 2.4         |
| 1          | P            | 174        | SER         | 2.4         |
| 1          | P            | 85         | VAL         | 2.4         |
| 1          | P            | 580        | GLU         | 2.4         |
| 1          | M            | 173        | LEU         | 2.4         |
| 1          | P            | 221        | GLN         | 2.4         |
| 1          | P            | 884        | LEU         | 2.4         |
| 1          | E            | 143        | PHE         | 2.4         |
| 1          | P            | 594        | ASP         | 2.4         |
| 1          | P            | 138        | GLN         | 2.4         |
| 1          | K            | 731        | PRO         | 2.3         |
| 1          | F            | 689        | GLU         | 2.3         |
| 1          | P            | 178        | ARG         | 2.3         |
| 1          | M            | 249        | GLU         | 2.2         |
| 1          | K            | 739        | HIS         | 2.2         |
| 1          | P            | 58         | TRP         | 2.2         |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1   | M     | 596 | PRO  | 2.2  |
| 1   | P     | 683 | PRO  | 2.2  |
| 1   | P     | 122 | CYS  | 2.2  |
| 1   | P     | 162 | GLY  | 2.2  |
| 1   | H     | 580 | GLU  | 2.2  |
| 1   | P     | 596 | PRO  | 2.2  |
| 1   | I     | 735 | HIS  | 2.2  |
| 1   | P     | 249 | GLU  | 2.2  |
| 1   | P     | 574 | SER  | 2.2  |
| 1   | H     | 4   | THR  | 2.1  |
| 1   | M     | 133 | TRP  | 2.1  |
| 1   | M     | 115 | PRO  | 2.1  |
| 1   | H     | 129 | VAL  | 2.1  |
| 1   | P     | 153 | TRP  | 2.1  |
| 1   | P     | 261 | TRP  | 2.1  |
| 1   | M     | 125 | LEU  | 2.1  |
| 1   | P     | 215 | LEU  | 2.1  |
| 1   | P     | 274 | PHE  | 2.1  |
| 1   | P     | 172 | ASP  | 2.0  |
| 1   | A     | 682 | LEU  | 2.0  |
| 1   | P     | 131 | GLU  | 2.0  |
| 1   | P     | 321 | THR  | 2.0  |

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res  | Atoms | RSCC | RSR  | B-factors(Å <sup>2</sup> ) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 1   | CME  | H     | 1021 | 10/11 | 0.89 | 0.14 | 13,36,100,100              | 0     |
| 1   | CME  | L     | 748  | 10/11 | 0.90 | 0.17 | 31,41,100,100              | 0     |
| 1   | CME  | K     | 748  | 10/11 | 0.91 | 0.15 | 32,42,100,100              | 0     |
| 1   | CME  | P     | 914  | 10/11 | 0.91 | 0.11 | 34,40,100,100              | 0     |
| 1   | CME  | P     | 1021 | 10/11 | 0.91 | 0.13 | 28,51,100,100              | 0     |
| 1   | CME  | M     | 1021 | 10/11 | 0.92 | 0.13 | 21,44,100,100              | 0     |
| 1   | CME  | N     | 1021 | 10/11 | 0.92 | 0.11 | 9,33,100,100               | 0     |
| 1   | CME  | O     | 748  | 10/11 | 0.92 | 0.12 | 27,37,100,100              | 0     |
| 1   | CME  | P     | 748  | 10/11 | 0.92 | 0.12 | 44,54,100,100              | 0     |
| 1   | CME  | E     | 1021 | 10/11 | 0.92 | 0.12 | 14,37,100,100              | 0     |
| 1   | CME  | C     | 748  | 10/11 | 0.92 | 0.12 | 16,26,97,97                | 0     |

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| Mol | Type | Chain | Res  | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 1   | CME  | F     | 1021 | 10/11 | 0.93 | 0.11 | 2,25,100,100                | 0     |
| 1   | CME  | H     | 748  | 10/11 | 0.93 | 0.13 | 29,39,100,100               | 0     |
| 1   | CME  | C     | 1021 | 10/11 | 0.93 | 0.11 | 1,23,97,97                  | 0     |
| 1   | CME  | I     | 1021 | 10/11 | 0.93 | 0.13 | 9,32,100,100                | 0     |
| 1   | CME  | D     | 748  | 10/11 | 0.93 | 0.16 | 21,30,100,100               | 0     |
| 1   | CME  | B     | 748  | 10/11 | 0.93 | 0.08 | 18,28,99,99                 | 0     |
| 1   | CME  | J     | 1021 | 10/11 | 0.94 | 0.10 | 7,30,100,100                | 0     |
| 1   | CME  | G     | 748  | 10/11 | 0.94 | 0.09 | 22,32,100,100               | 0     |
| 1   | CME  | D     | 1021 | 10/11 | 0.94 | 0.13 | 4,27,100,100                | 0     |
| 1   | CME  | M     | 914  | 10/11 | 0.95 | 0.13 | 27,33,100,100               | 0     |
| 1   | CME  | B     | 1021 | 10/11 | 0.95 | 0.08 | 2,25,99,99                  | 0     |
| 1   | CME  | E     | 748  | 10/11 | 0.95 | 0.10 | 30,40,100,100               | 0     |
| 1   | CME  | A     | 1021 | 10/11 | 0.95 | 0.10 | 2,25,100,100                | 0     |
| 1   | CME  | O     | 1021 | 10/11 | 0.95 | 0.14 | 11,34,100,100               | 0     |
| 1   | CME  | K     | 914  | 10/11 | 0.95 | 0.09 | 22,28,100,100               | 0     |
| 1   | CME  | F     | 748  | 10/11 | 0.95 | 0.09 | 18,28,100,100               | 0     |
| 1   | CME  | L     | 1021 | 10/11 | 0.95 | 0.09 | 15,38,100,100               | 0     |
| 1   | CME  | H     | 914  | 10/11 | 0.96 | 0.11 | 19,25,100,100               | 0     |
| 1   | CME  | G     | 1021 | 10/11 | 0.96 | 0.09 | 6,29,100,100                | 0     |
| 1   | CME  | I     | 748  | 10/11 | 0.96 | 0.10 | 25,35,100,100               | 0     |
| 1   | CME  | K     | 1021 | 10/11 | 0.96 | 0.16 | 16,39,100,100               | 0     |
| 1   | CME  | O     | 914  | 10/11 | 0.96 | 0.08 | 17,23,100,100               | 0     |
| 1   | CME  | A     | 748  | 10/11 | 0.96 | 0.09 | 18,28,100,100               | 0     |
| 1   | CME  | L     | 914  | 10/11 | 0.96 | 0.09 | 21,27,100,100               | 0     |
| 1   | CME  | J     | 748  | 10/11 | 0.96 | 0.08 | 23,33,100,100               | 0     |
| 1   | CME  | M     | 748  | 10/11 | 0.96 | 0.10 | 37,47,100,100               | 0     |
| 1   | CME  | J     | 914  | 10/11 | 0.97 | 0.10 | 13,19,100,100               | 0     |
| 1   | CME  | E     | 914  | 10/11 | 0.97 | 0.12 | 20,26,100,100               | 0     |
| 1   | CME  | N     | 748  | 10/11 | 0.97 | 0.07 | 26,35,100,100               | 0     |
| 1   | CME  | N     | 914  | 10/11 | 0.97 | 0.08 | 16,22,100,100               | 0     |
| 1   | CME  | B     | 914  | 10/11 | 0.97 | 0.08 | 8,14,99,99                  | 0     |
| 1   | CME  | D     | 914  | 10/11 | 0.97 | 0.10 | 10,16,100,100               | 0     |
| 1   | CME  | F     | 914  | 10/11 | 0.97 | 0.12 | 8,14,100,100                | 0     |
| 1   | CME  | C     | 914  | 10/11 | 0.97 | 0.10 | 6,12,97,97                  | 0     |
| 1   | CME  | I     | 914  | 10/11 | 0.97 | 0.11 | 15,21,100,100               | 0     |
| 1   | CME  | A     | 914  | 10/11 | 0.97 | 0.10 | 8,14,100,100                | 0     |
| 1   | CME  | G     | 914  | 10/11 | 0.97 | 0.07 | 12,18,100,100               | 0     |

### 6.3 Carbohydrates i

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res  | Atoms | RSCC | RSR  | B-factors(Å <sup>2</sup> ) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 2   | MG   | P     | 3002 | 1/1   | 0.83 | 0.10 | 44,44,44,44                | 0     |
| 2   | MG   | L     | 3001 | 1/1   | 0.84 | 0.06 | 31,31,31,31                | 0     |
| 2   | MG   | I     | 3002 | 1/1   | 0.84 | 0.10 | 25,25,25,25                | 0     |
| 2   | MG   | P     | 3001 | 1/1   | 0.85 | 0.10 | 44,44,44,44                | 0     |
| 2   | MG   | E     | 3002 | 1/1   | 0.88 | 0.10 | 30,30,30,30                | 0     |
| 2   | MG   | F     | 3001 | 1/1   | 0.88 | 0.10 | 18,18,18,18                | 0     |
| 2   | MG   | M     | 3002 | 1/1   | 0.90 | 0.19 | 37,37,37,37                | 0     |
| 2   | MG   | M     | 3001 | 1/1   | 0.91 | 0.10 | 37,37,37,37                | 0     |
| 2   | MG   | A     | 3001 | 1/1   | 0.91 | 0.09 | 18,18,18,18                | 0     |
| 2   | MG   | N     | 3001 | 1/1   | 0.92 | 0.04 | 26,26,26,26                | 0     |
| 2   | MG   | D     | 3001 | 1/1   | 0.93 | 0.04 | 20,20,20,20                | 0     |
| 2   | MG   | J     | 3001 | 1/1   | 0.93 | 0.04 | 23,23,23,23                | 0     |
| 2   | MG   | K     | 3002 | 1/1   | 0.93 | 0.08 | 32,32,32,32                | 0     |
| 2   | MG   | N     | 3002 | 1/1   | 0.94 | 0.13 | 26,26,26,26                | 0     |
| 2   | MG   | H     | 3001 | 1/1   | 0.94 | 0.04 | 29,29,29,29                | 0     |
| 2   | MG   | C     | 3002 | 1/1   | 0.94 | 0.11 | 16,16,16,16                | 0     |
| 2   | MG   | I     | 3001 | 1/1   | 0.95 | 0.05 | 25,25,25,25                | 0     |
| 2   | MG   | G     | 3001 | 1/1   | 0.95 | 0.04 | 22,22,22,22                | 0     |
| 2   | MG   | F     | 3002 | 1/1   | 0.95 | 0.08 | 19,19,19,19                | 0     |
| 2   | MG   | J     | 3002 | 1/1   | 0.95 | 0.12 | 23,23,23,23                | 0     |
| 2   | MG   | K     | 3001 | 1/1   | 0.96 | 0.08 | 32,32,32,32                | 0     |
| 2   | MG   | O     | 3002 | 1/1   | 0.96 | 0.12 | 27,27,27,27                | 0     |
| 2   | MG   | G     | 3002 | 1/1   | 0.96 | 0.05 | 22,22,22,22                | 0     |
| 2   | MG   | D     | 3002 | 1/1   | 0.96 | 0.10 | 21,21,21,21                | 0     |
| 2   | MG   | E     | 3001 | 1/1   | 0.97 | 0.03 | 30,30,30,30                | 0     |
| 2   | MG   | C     | 3001 | 1/1   | 0.97 | 0.04 | 16,16,16,16                | 0     |
| 2   | MG   | A     | 3002 | 1/1   | 0.97 | 0.12 | 18,18,18,18                | 0     |
| 2   | MG   | B     | 3001 | 1/1   | 0.97 | 0.08 | 18,18,18,18                | 0     |
| 2   | MG   | L     | 3002 | 1/1   | 0.97 | 0.09 | 31,31,31,31                | 0     |
| 2   | MG   | B     | 3002 | 1/1   | 0.97 | 0.06 | 18,18,18,18                | 0     |
| 2   | MG   | O     | 3001 | 1/1   | 0.98 | 0.05 | 27,27,27,27                | 0     |
| 2   | MG   | H     | 3002 | 1/1   | 0.98 | 0.12 | 30,30,30,30                | 0     |

## 6.5 Other polymers [i](#)

There are no such residues in this entry.