



Full wwPDB NMR Structure Validation Report ⓘ

Jun 4, 2023 – 02:28 AM EDT

PDB ID : 2LFE
BMRB ID : 17750
Title : Solution NMR structure of N-terminal domain of human E3 ubiquitin-protein ligase HECW2, Northeast structural genomics consortium (NESG) target ht6306A
Authors : Lemak, A.; Yee, A.; Houliston, S.; Garcia, M.; Chitayat, S.; Dhe-Paganon, S.; Montelione, G.T.; Arrowsmith, C.; Northeast Structural Genomics Consortium (NESG); Structural Genomics Consortium (SGC)
Deposited on : 2011-06-29

This is a Full wwPDB NMR Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

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>.

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

MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.33

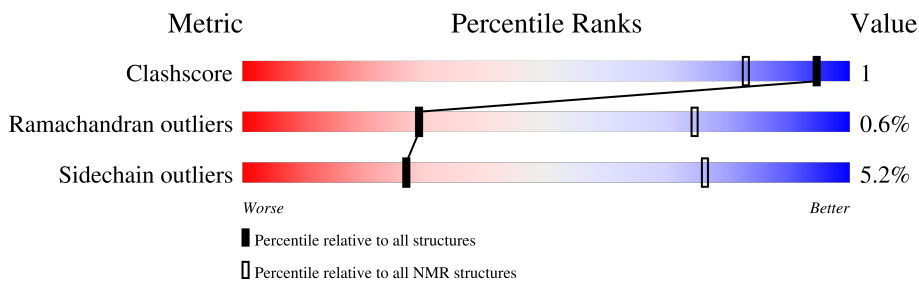
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 89%.

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) | NMR archive (#Entries) |
|-----------------------|-----------------------------|---------------------------|
| Clashscore | 158937 | 12864 |
| Ramachandran outliers | 154571 | 11451 |
| Sidechain outliers | 154315 | 11428 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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 $\leq 5\%$.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | A | 138 | 70% 23% |

2 Ensemble composition and analysis i

This entry contains 16 models. Model 10 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

The following residues are included in the computation of the global validation metrics.

| Well-defined (core) protein residues | | | |
|--------------------------------------|----------------------------------|-------------------|--------------|
| Well-defined core | Residue range (total) | Backbone RMSD (Å) | Medoid model |
| 1 | A:59-A:144, A:149-A:162 (100) | 0.70 | 10 |

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 5 clusters and 1 single-model cluster was found.

| Cluster number | Models |
|-----------------------|------------------------|
| 1 | 2, 3, 4, 8, 10, 14, 16 |
| 2 | 7, 11 |
| 3 | 5, 9 |
| 4 | 1, 13 |
| 5 | 12, 15 |
| Single-model clusters | 6 |

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 1684 atoms, of which 827 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called E3 ubiquitin-protein ligase HECW2.

| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---|-------|
| | | | Total | C | H | N | O | S | |
| 1 | A | 106 | 1684 | 551 | 827 | 141 | 161 | 4 | 0 |

There are 18 discrepancies between the modelled and reference sequences:

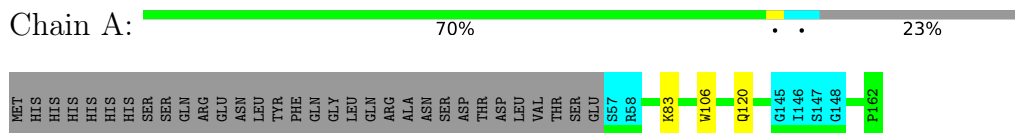
| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------------|------------|
| A | 25 | MET | - | expression tag | UNP Q9P2P5 |
| A | 26 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 27 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 28 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 29 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 30 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 31 | HIS | - | expression tag | UNP Q9P2P5 |
| A | 32 | SER | - | expression tag | UNP Q9P2P5 |
| A | 33 | SER | - | expression tag | UNP Q9P2P5 |
| A | 34 | GLN | - | expression tag | UNP Q9P2P5 |
| A | 35 | ARG | - | expression tag | UNP Q9P2P5 |
| A | 36 | GLU | - | expression tag | UNP Q9P2P5 |
| A | 37 | ASN | - | expression tag | UNP Q9P2P5 |
| A | 38 | LEU | - | expression tag | UNP Q9P2P5 |
| A | 39 | TYR | - | expression tag | UNP Q9P2P5 |
| A | 40 | PHE | - | expression tag | UNP Q9P2P5 |
| A | 41 | GLN | - | expression tag | UNP Q9P2P5 |
| A | 42 | GLY | - | expression tag | UNP Q9P2P5 |

4 Residue-property plots

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: E3 ubiquitin-protein ligase HECW2

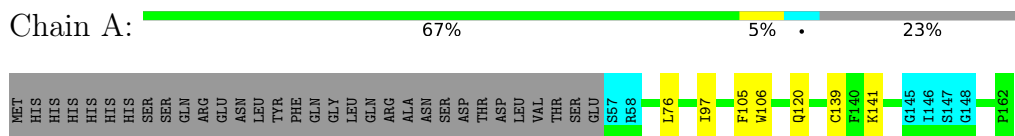


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

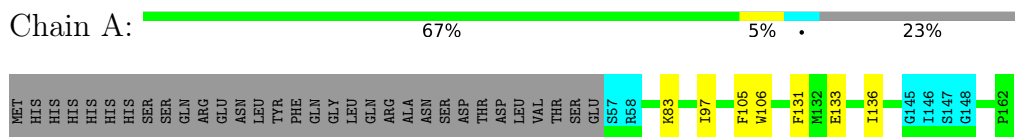
4.2.1 Score per residue for model 1

- Molecule 1: E3 ubiquitin-protein ligase HECW2



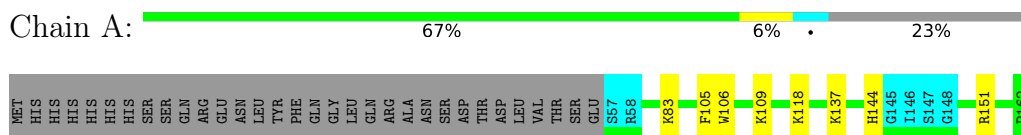
4.2.2 Score per residue for model 2

- Molecule 1: E3 ubiquitin-protein ligase HECW2



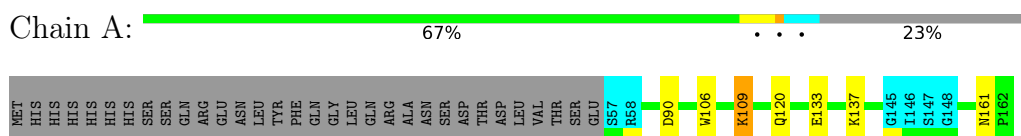
4.2.3 Score per residue for model 3

- Molecule 1: E3 ubiquitin-protein ligase HECW2



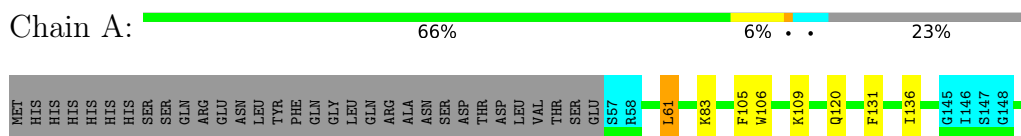
4.2.4 Score per residue for model 4

- Molecule 1: E3 ubiquitin-protein ligase HECW2



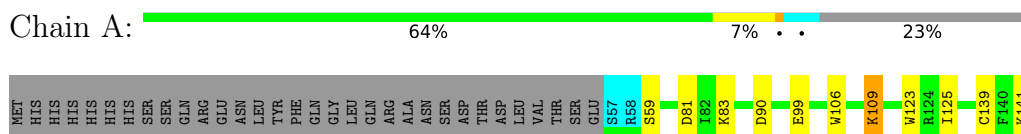
4.2.5 Score per residue for model 5

- Molecule 1: E3 ubiquitin-protein ligase HECW2



4.2.6 Score per residue for model 6

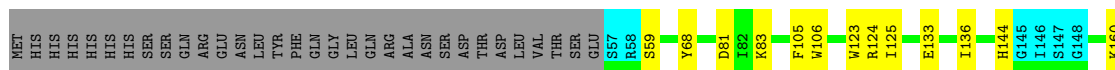
- Molecule 1: E3 ubiquitin-protein ligase HECW2



4.2.7 Score per residue for model 7

- Molecule 1: E3 ubiquitin-protein ligase HECW2



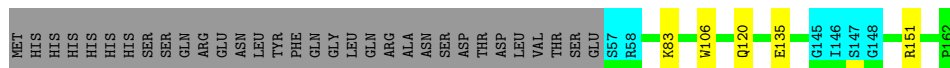


W161
P162

4.2.8 Score per residue for model 8

- Molecule 1: E3 ubiquitin-protein ligase HECW2

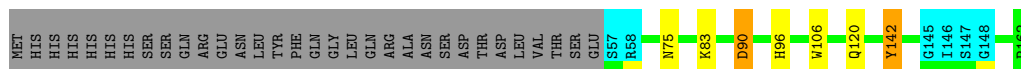
Chain A: 69% 23%



4.2.9 Score per residue for model 9

- Molecule 1: E3 ubiquitin-protein ligase HECW2

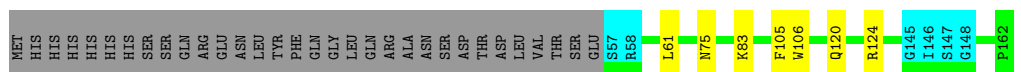
Chain A: 67% 23%



4.2.10 Score per residue for model 10 (medoid)

- Molecule 1: E3 ubiquitin-protein ligase HECW2

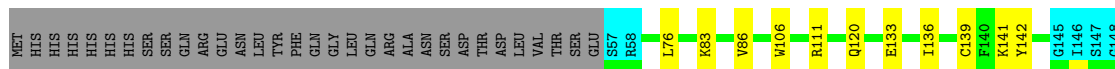
Chain A: 67% 5% 23%



4.2.11 Score per residue for model 11

- Molecule 1: E3 ubiquitin-protein ligase HECW2

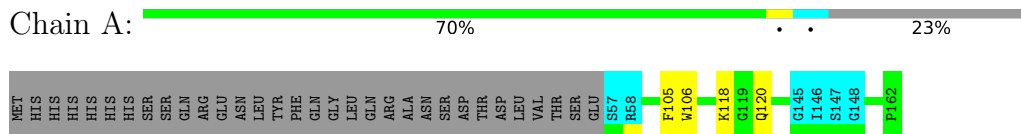
Chain A: 64% 9% 23%



R151
P162

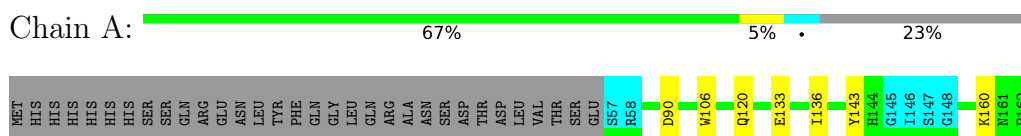
4.2.12 Score per residue for model 12

- Molecule 1: E3 ubiquitin-protein ligase HECW2



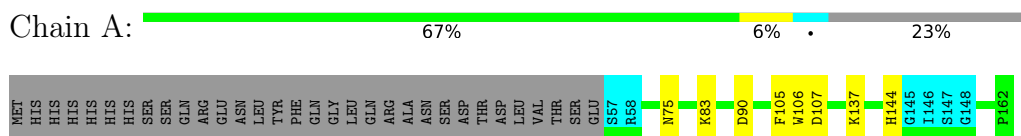
4.2.13 Score per residue for model 13

- Molecule 1: E3 ubiquitin-protein ligase HECW2



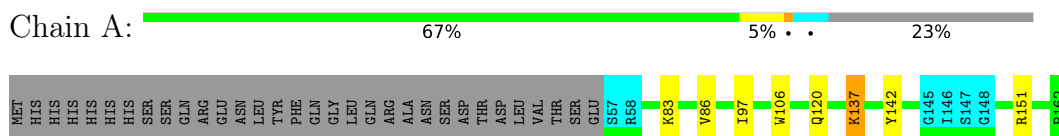
4.2.14 Score per residue for model 14

- Molecule 1: E3 ubiquitin-protein ligase HECW2



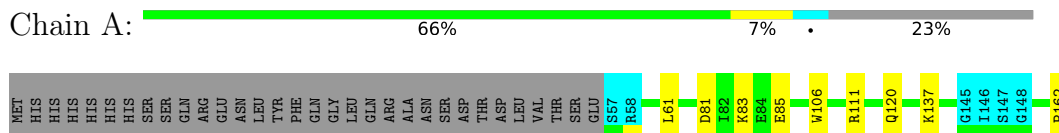
4.2.15 Score per residue for model 15

- Molecule 1: E3 ubiquitin-protein ligase HECW2



4.2.16 Score per residue for model 16

- Molecule 1: E3 ubiquitin-protein ligase HECW2



5 Refinement protocol and experimental data overview

The models were refined using the following method: *restrained molecular dynamics*.

Of the 100 calculated structures, 16 were deposited, based on the following criterion: *structures with the lowest energy*.

The following table shows the software used for structure solution, optimisation and refinement.

| Software name | Classification | Version |
|---------------|--------------------|---------|
| CYANA | structure solution | |
| CNS | refinement | |

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

| | |
|--|----------------|
| Chemical shift file(s) | working_cs.cif |
| Number of chemical shift lists | 1 |
| Total number of shifts | 1434 |
| Number of shifts mapped to atoms | 1273 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 161 |
| Number of shifts with mapping warnings | 0 |
| Assignment completeness (well-defined parts) | 89% |

6 Model quality i

6.1 Standard geometry i

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 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 each 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 averaged over the ensemble.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes |
|-----|-------|-------|----------|----------|---------|
| 1 | A | 818 | 787 | 785 | 2±1 |
| All | All | 13088 | 12592 | 12560 | 27 |

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 1.

All unique clashes are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:139:CYS:SG | 1:A:141:LYS:HE3 | 0.53 | 2.44 | 1 | 3 |
| 1:A:86:VAL:HG12 | 1:A:151:ARG:HH12 | 0.47 | 1.69 | 15 | 1 |
| 1:A:109:LYS:HA | 1:A:109:LYS:NZ | 0.46 | 2.26 | 6 | 1 |
| 1:A:144:HIS:HB2 | 1:A:151:ARG:HD3 | 0.46 | 1.87 | 3 | 1 |
| 1:A:133:GLU:HB2 | 1:A:136:ILE:HG13 | 0.46 | 1.88 | 7 | 4 |
| 1:A:109:LYS:HA | 1:A:109:LYS:HE2 | 0.46 | 1.87 | 3 | 3 |
| 1:A:90:ASP:HB3 | 1:A:142:TYR:HE1 | 0.45 | 1.70 | 9 | 1 |
| 1:A:133:GLU:O | 1:A:161:ASN:HB3 | 0.43 | 2.13 | 4 | 1 |
| 1:A:123:TRP:CZ3 | 1:A:125:ILE:HG12 | 0.43 | 2.48 | 6 | 2 |
| 1:A:131:PHE:HA | 1:A:136:ILE:HG12 | 0.42 | 1.90 | 5 | 2 |
| 1:A:68:TYR:OH | 1:A:124:ARG:HG3 | 0.42 | 2.15 | 7 | 1 |
| 1:A:75:ASN:ND2 | 1:A:124:ARG:HB3 | 0.41 | 2.30 | 10 | 1 |
| 1:A:59:SER:HA | 1:A:81:ASP:O | 0.41 | 2.16 | 6 | 2 |
| 1:A:97:ILE:HB | 1:A:137:LYS:HB2 | 0.41 | 1.93 | 15 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:86:VAL:HA | 1:A:151:ARG:HH12 | 0.40 | 1.76 | 11 | 1 |
| 1:A:90:ASP:HB2 | 1:A:143:TYR:O | 0.40 | 2.17 | 13 | 1 |
| 1:A:61:LEU:HB2 | 1:A:152:ALA:HB1 | 0.40 | 1.93 | 5 | 1 |

6.3 Torsion angles [i](#)

6.3.1 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 PDB entries followed by that with respect to all NMR entries. 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 | 99/138 (72%) | 88±2 (89±2%) | 11±3 (11±3%) | 1±1 (1±1%) | 29 | 74 |
| All | All | 1584/2208 (72%) | 1403 (89%) | 171 (11%) | 10 (1%) | 29 | 74 |

All 2 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 105 | PHE | 8 |
| 1 | A | 97 | ILE | 2 |

6.3.2 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 PDB entries followed by that with respect to all NMR entries. 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 | 89/123 (72%) | 84±2 (95±2%) | 5±2 (5±2%) | 27 | 76 |
| All | All | 1424/1968 (72%) | 1350 (95%) | 74 (5%) | 27 | 76 |

All 22 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 106 | TRP | 16 |
| 1 | A | 83 | LYS | 12 |
| 1 | A | 120 | GLN | 11 |
| 1 | A | 137 | LYS | 5 |
| 1 | A | 61 | LEU | 3 |
| 1 | A | 142 | TYR | 3 |
| 1 | A | 76 | LEU | 2 |
| 1 | A | 118 | LYS | 2 |
| 1 | A | 109 | LYS | 2 |
| 1 | A | 144 | HIS | 2 |
| 1 | A | 160 | LYS | 2 |
| 1 | A | 75 | ASN | 2 |
| 1 | A | 90 | ASP | 2 |
| 1 | A | 111 | ARG | 2 |
| 1 | A | 99 | GLU | 1 |
| 1 | A | 135 | GLU | 1 |
| 1 | A | 151 | ARG | 1 |
| 1 | A | 96 | HIS | 1 |
| 1 | A | 107 | ASP | 1 |
| 1 | A | 81 | ASP | 1 |
| 1 | A | 85 | GLU | 1 |
| 1 | A | 162 | PRO | 1 |

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation i

The completeness of assignment taking into account all chemical shift lists is 89% for the well-defined parts and 88% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping i

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

| | |
|---|------|
| Total number of shifts | 1434 |
| Number of shifts mapped to atoms | 1273 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 161 |
| Number of shifts with mapping warnings | 0 |
| Number of shift outliers (ShiftChecker) | 7 |

The following assigned chemical shifts were not mapped to the molecules present in the coordinate file.

- No matching atom found in the structure. All 161 occurrences are reported below.

| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 43 | LEU | HA | 4.206 | 0.04 | 1 |
| 1 | A | 43 | LEU | CA | 55.349 | 0.40 | 1 |
| 1 | A | 43 | LEU | HB3 | 1.469 | 0.04 | 2 |
| 1 | A | 43 | LEU | CB | 42.35 | 0.40 | 1 |
| 1 | A | 43 | LEU | HB2 | 1.527 | 0.04 | 2 |
| 1 | A | 43 | LEU | HG | 1.477 | 0.04 | 1 |
| 1 | A | 43 | LEU | CG | 26.819 | 0.40 | 1 |
| 1 | A | 43 | LEU | HD11 | 0.799 | 0.04 | 2 |
| 1 | A | 43 | LEU | HD12 | 0.799 | 0.04 | 2 |
| 1 | A | 43 | LEU | HD13 | 0.799 | 0.04 | 2 |
| 1 | A | 43 | LEU | CD1 | 24.83 | 0.40 | 2 |
| 1 | A | 43 | LEU | HD21 | 0.741 | 0.04 | 2 |
| 1 | A | 43 | LEU | HD22 | 0.741 | 0.04 | 2 |
| 1 | A | 43 | LEU | HD23 | 0.741 | 0.04 | 2 |

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| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 43 | LEU | CD2 | 23.468 | 0.40 | 2 |
| 1 | A | 43 | LEU | H | 7.881 | 0.04 | 1 |
| 1 | A | 43 | LEU | N | 121.393 | 0.40 | 1 |
| 1 | A | 43 | LEU | C | 177.422 | 0.40 | 1 |
| 1 | A | 44 | GLN | HA | 4.182 | 0.04 | 1 |
| 1 | A | 44 | GLN | CA | 55.977 | 0.40 | 1 |
| 1 | A | 44 | GLN | HB3 | 1.86 | 0.04 | 2 |
| 1 | A | 44 | GLN | CB | 29.294 | 0.40 | 1 |
| 1 | A | 44 | GLN | HB2 | 1.965 | 0.04 | 2 |
| 1 | A | 44 | GLN | HG2 | 2.223 | 0.04 | 2 |
| 1 | A | 44 | GLN | HG3 | 2.223 | 0.04 | 2 |
| 1 | A | 44 | GLN | CG | 33.792 | 0.40 | 1 |
| 1 | A | 44 | GLN | H | 8.246 | 0.04 | 1 |
| 1 | A | 44 | GLN | N | 120.78 | 0.40 | 1 |
| 1 | A | 44 | GLN | C | 175.921 | 0.40 | 1 |
| 1 | A | 45 | ARG | HA | 4.189 | 0.04 | 1 |
| 1 | A | 45 | ARG | CA | 55.922 | 0.40 | 1 |
| 1 | A | 45 | ARG | HB3 | 1.63 | 0.04 | 2 |
| 1 | A | 45 | ARG | CB | 31.083 | 0.40 | 1 |
| 1 | A | 45 | ARG | HB2 | 1.733 | 0.04 | 2 |
| 1 | A | 45 | ARG | HG2 | 1.503 | 0.04 | 2 |
| 1 | A | 45 | ARG | HG3 | 1.503 | 0.04 | 2 |
| 1 | A | 45 | ARG | CG | 26.982 | 0.40 | 1 |
| 1 | A | 45 | ARG | HD2 | 3.063 | 0.04 | 2 |
| 1 | A | 45 | ARG | HD3 | 3.063 | 0.04 | 2 |
| 1 | A | 45 | ARG | CD | 43.244 | 0.40 | 1 |
| 1 | A | 45 | ARG | H | 8.18 | 0.04 | 1 |
| 1 | A | 45 | ARG | N | 122.04 | 0.40 | 1 |
| 1 | A | 45 | ARG | C | 175.962 | 0.40 | 1 |
| 1 | A | 46 | ALA | HA | 4.19 | 0.04 | 1 |
| 1 | A | 46 | ALA | CA | 52.592 | 0.40 | 1 |
| 1 | A | 46 | ALA | HB1 | 1.282 | 0.04 | 1 |
| 1 | A | 46 | ALA | HB2 | 1.282 | 0.04 | 1 |
| 1 | A | 46 | ALA | HB3 | 1.282 | 0.04 | 1 |
| 1 | A | 46 | ALA | CB | 19.4 | 0.40 | 1 |
| 1 | A | 46 | ALA | H | 8.288 | 0.04 | 1 |
| 1 | A | 46 | ALA | N | 125.104 | 0.40 | 1 |
| 1 | A | 46 | ALA | C | 177.49 | 0.40 | 1 |
| 1 | A | 47 | ASN | HA | 4.593 | 0.04 | 1 |
| 1 | A | 47 | ASN | CA | 53.356 | 0.40 | 1 |
| 1 | A | 47 | ASN | HB3 | 2.677 | 0.04 | 2 |

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| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 47 | ASN | CB | 39.012 | 0.40 | 1 |
| 1 | A | 47 | ASN | HB2 | 2.748 | 0.04 | 2 |
| 1 | A | 47 | ASN | HD21 | 6.85 | 0.04 | 2 |
| 1 | A | 47 | ASN | ND2 | 113.27 | 0.40 | 1 |
| 1 | A | 47 | ASN | HD22 | 7.538 | 0.04 | 2 |
| 1 | A | 47 | ASN | H | 8.354 | 0.04 | 1 |
| 1 | A | 47 | ASN | N | 117.971 | 0.40 | 1 |
| 1 | A | 47 | ASN | C | 175.279 | 0.40 | 1 |
| 1 | A | 48 | SER | HA | 4.36 | 0.04 | 1 |
| 1 | A | 48 | SER | CA | 58.488 | 0.40 | 1 |
| 1 | A | 48 | SER | HB2 | 3.841 | 0.04 | 2 |
| 1 | A | 48 | SER | HB3 | 3.841 | 0.04 | 2 |
| 1 | A | 48 | SER | CB | 63.947 | 0.40 | 1 |
| 1 | A | 48 | SER | H | 8.2 | 0.04 | 1 |
| 1 | A | 48 | SER | N | 115.74 | 0.40 | 1 |
| 1 | A | 48 | SER | C | 174.433 | 0.40 | 1 |
| 1 | A | 49 | ASP | HA | 4.556 | 0.04 | 1 |
| 1 | A | 49 | ASP | CA | 54.694 | 0.40 | 1 |
| 1 | A | 49 | ASP | HB3 | 2.571 | 0.04 | 2 |
| 1 | A | 49 | ASP | CB | 40.95 | 0.40 | 1 |
| 1 | A | 49 | ASP | HB2 | 2.654 | 0.04 | 2 |
| 1 | A | 49 | ASP | H | 8.352 | 0.04 | 1 |
| 1 | A | 49 | ASP | N | 122.414 | 0.40 | 1 |
| 1 | A | 49 | ASP | C | 176.603 | 0.40 | 1 |
| 1 | A | 50 | THR | HA | 4.194 | 0.04 | 1 |
| 1 | A | 50 | THR | CA | 62.064 | 0.40 | 1 |
| 1 | A | 50 | THR | HB | 4.146 | 0.04 | 1 |
| 1 | A | 50 | THR | CB | 69.652 | 0.40 | 1 |
| 1 | A | 50 | THR | HG21 | 1.088 | 0.04 | 1 |
| 1 | A | 50 | THR | HG22 | 1.088 | 0.04 | 1 |
| 1 | A | 50 | THR | HG23 | 1.088 | 0.04 | 1 |
| 1 | A | 50 | THR | CG2 | 21.466 | 0.40 | 1 |
| 1 | A | 50 | THR | H | 7.934 | 0.04 | 1 |
| 1 | A | 50 | THR | N | 113.34 | 0.40 | 1 |
| 1 | A | 50 | THR | C | 174.378 | 0.40 | 1 |
| 1 | A | 51 | ASP | HA | 4.507 | 0.04 | 1 |
| 1 | A | 51 | ASP | CA | 54.53 | 0.40 | 1 |
| 1 | A | 51 | ASP | HB3 | 2.517 | 0.04 | 2 |
| 1 | A | 51 | ASP | CB | 41.019 | 0.40 | 1 |
| 1 | A | 51 | ASP | HB2 | 2.606 | 0.04 | 2 |
| 1 | A | 51 | ASP | H | 8.202 | 0.04 | 1 |

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| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 51 | ASP | N | 122.584 | 0.40 | 1 |
| 1 | A | 51 | ASP | C | 176.057 | 0.40 | 1 |
| 1 | A | 52 | LEU | HA | 4.216 | 0.04 | 1 |
| 1 | A | 52 | LEU | CA | 55.322 | 0.40 | 1 |
| 1 | A | 52 | LEU | HB3 | 1.468 | 0.04 | 2 |
| 1 | A | 52 | LEU | CB | 42.351 | 0.40 | 1 |
| 1 | A | 52 | LEU | HB2 | 1.529 | 0.04 | 2 |
| 1 | A | 52 | LEU | HG | 1.485 | 0.04 | 1 |
| 1 | A | 52 | LEU | CG | 26.873 | 0.40 | 1 |
| 1 | A | 52 | LEU | HD11 | 0.798 | 0.04 | 2 |
| 1 | A | 52 | LEU | HD12 | 0.798 | 0.04 | 2 |
| 1 | A | 52 | LEU | HD13 | 0.798 | 0.04 | 2 |
| 1 | A | 52 | LEU | CD1 | 24.912 | 0.40 | 2 |
| 1 | A | 52 | LEU | HD21 | 0.741 | 0.04 | 2 |
| 1 | A | 52 | LEU | HD22 | 0.741 | 0.04 | 2 |
| 1 | A | 52 | LEU | HD23 | 0.741 | 0.04 | 2 |
| 1 | A | 52 | LEU | CD2 | 23.468 | 0.40 | 2 |
| 1 | A | 52 | LEU | H | 7.991 | 0.04 | 1 |
| 1 | A | 52 | LEU | N | 122.329 | 0.40 | 1 |
| 1 | A | 52 | LEU | C | 177.381 | 0.40 | 1 |
| 1 | A | 53 | VAL | HA | 4.039 | 0.04 | 1 |
| 1 | A | 53 | VAL | CA | 62.637 | 0.40 | 1 |
| 1 | A | 53 | VAL | HB | 1.985 | 0.04 | 1 |
| 1 | A | 53 | VAL | CB | 32.502 | 0.40 | 1 |
| 1 | A | 53 | VAL | HG11 | 0.828 | 0.04 | 2 |
| 1 | A | 53 | VAL | HG12 | 0.828 | 0.04 | 2 |
| 1 | A | 53 | VAL | HG13 | 0.828 | 0.04 | 2 |
| 1 | A | 53 | VAL | CG1 | 21.098 | 0.40 | 2 |
| 1 | A | 53 | VAL | HG21 | 0.842 | 0.04 | 2 |
| 1 | A | 53 | VAL | HG22 | 0.842 | 0.04 | 2 |
| 1 | A | 53 | VAL | HG23 | 0.842 | 0.04 | 2 |
| 1 | A | 53 | VAL | CG2 | 20.744 | 0.40 | 2 |
| 1 | A | 53 | VAL | H | 8.065 | 0.04 | 1 |
| 1 | A | 53 | VAL | N | 121.478 | 0.40 | 1 |
| 1 | A | 53 | VAL | C | 176.548 | 0.40 | 1 |
| 1 | A | 54 | THR | HA | 4.292 | 0.04 | 1 |
| 1 | A | 54 | THR | CA | 61.681 | 0.40 | 1 |
| 1 | A | 54 | THR | HB | 4.169 | 0.04 | 1 |
| 1 | A | 54 | THR | CB | 69.843 | 0.40 | 1 |
| 1 | A | 54 | THR | HG21 | 1.092 | 0.04 | 1 |
| 1 | A | 54 | THR | HG22 | 1.092 | 0.04 | 1 |

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| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 54 | THR | HG23 | 1.092 | 0.04 | 1 |
| 1 | A | 54 | THR | CG2 | 21.466 | 0.40 | 1 |
| 1 | A | 54 | THR | H | 8.158 | 0.04 | 1 |
| 1 | A | 54 | THR | N | 117.715 | 0.40 | 1 |
| 1 | A | 54 | THR | C | 174.706 | 0.40 | 1 |
| 1 | A | 55 | SER | HA | 4.339 | 0.04 | 1 |
| 1 | A | 55 | SER | CA | 58.652 | 0.40 | 1 |
| 1 | A | 55 | SER | HB3 | 3.732 | 0.04 | 2 |
| 1 | A | 55 | SER | CB | 63.729 | 0.40 | 1 |
| 1 | A | 55 | SER | HB2 | 3.807 | 0.04 | 2 |
| 1 | A | 55 | SER | H | 8.244 | 0.04 | 1 |
| 1 | A | 55 | SER | N | 117.92 | 0.40 | 1 |
| 1 | A | 55 | SER | C | 174.61 | 0.40 | 1 |
| 1 | A | 56 | GLU | HA | 4.216 | 0.04 | 1 |
| 1 | A | 56 | GLU | CA | 56.605 | 0.40 | 1 |
| 1 | A | 56 | GLU | HB3 | 1.828 | 0.04 | 2 |
| 1 | A | 56 | GLU | CB | 30.264 | 0.40 | 1 |
| 1 | A | 56 | GLU | HB2 | 1.971 | 0.04 | 2 |
| 1 | A | 56 | GLU | HG3 | 2.138 | 0.04 | 2 |
| 1 | A | 56 | GLU | CG | 36.312 | 0.40 | 1 |
| 1 | A | 56 | GLU | HG2 | 2.19 | 0.04 | 2 |
| 1 | A | 56 | GLU | H | 8.335 | 0.04 | 1 |
| 1 | A | 56 | GLU | N | 122.567 | 0.40 | 1 |
| 1 | A | 56 | GLU | C | 176.303 | 0.40 | 1 |

7.1.2 Chemical shift referencing [i](#)

The following table shows the suggested chemical shift referencing corrections.

| Nucleus | # values | Correction \pm precision, ppm | Suggested action |
|------------------------|----------|---------------------------------|-------------------------|
| $^{13}\text{C}_\alpha$ | 118 | 0.13 ± 0.12 | None needed (< 0.5 ppm) |
| $^{13}\text{C}_\beta$ | 110 | -0.07 ± 0.14 | None needed (< 0.5 ppm) |
| $^{13}\text{C}'$ | 106 | 0.49 ± 0.13 | None needed (< 0.5 ppm) |
| ^{15}N | 106 | 0.33 ± 0.67 | None needed (< 0.5 ppm) |

7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 89%, i.e. 1223 atoms were assigned a chemical shift out of a possible 1378. 0 out of 9 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹ H | ¹³ C | ¹⁵ N |
|-----------|-----------------|----------------|-----------------|-----------------|
| Backbone | 470/492 (96%) | 194/199 (97%) | 187/200 (94%) | 89/93 (96%) |
| Sidechain | 645/728 (89%) | 439/473 (93%) | 197/231 (85%) | 9/24 (38%) |
| Aromatic | 108/158 (68%) | 54/76 (71%) | 51/74 (69%) | 3/8 (38%) |
| Overall | 1223/1378 (89%) | 687/748 (92%) | 435/505 (86%) | 101/125 (81%) |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 88%, i.e. 1272 atoms were assigned a chemical shift out of a possible 1447. 0 out of 9 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹ H | ¹³ C | ¹⁵ N |
|-----------|-----------------|----------------|-----------------|-----------------|
| Backbone | 491/524 (94%) | 203/213 (95%) | 196/212 (92%) | 92/99 (93%) |
| Sidechain | 673/765 (88%) | 458/497 (92%) | 206/241 (85%) | 9/27 (33%) |
| Aromatic | 108/158 (68%) | 54/76 (71%) | 51/74 (69%) | 3/8 (38%) |
| Overall | 1272/1447 (88%) | 715/786 (91%) | 453/527 (86%) | 104/134 (78%) |

7.1.4 Statistically unusual chemical shifts [i](#)

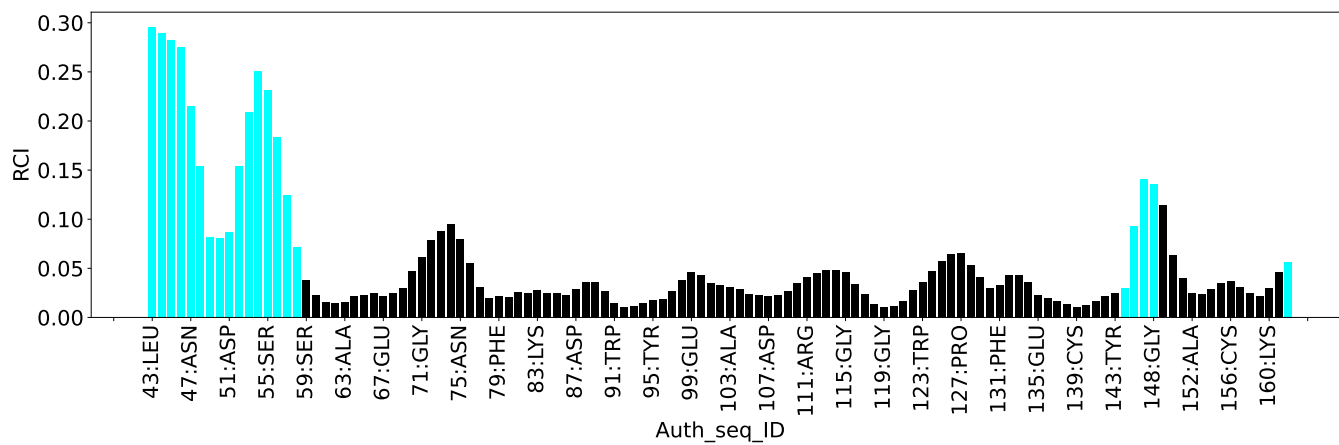
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1 | A | 123 | TRP | CZ3 | 1000.00 | 113.48 – 129.28 | 556.1 |
| 1 | A | 109 | LYS | HE3 | 0.99 | 1.92 – 3.89 | -9.7 |
| 1 | A | 109 | LYS | HD2 | 0.22 | 0.58 – 2.64 | -6.8 |
| 1 | A | 109 | LYS | HD3 | 0.22 | 0.54 – 2.65 | -6.5 |
| 1 | A | 143 | TYR | HB3 | 0.65 | 0.93 – 4.76 | -5.7 |
| 1 | A | 130 | TYR | HB3 | 0.90 | 0.93 – 4.76 | -5.1 |
| 1 | A | 130 | TYR | HB2 | 1.07 | 1.09 – 4.72 | -5.1 |

7.1.5 Random Coil Index (RCI) plots [i](#)

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition. If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

The following table provides the summary of experimentally observed NMR restraints in different categories. Restraints are classified into different categories based on the sequence separation of the atoms involved.

| Description | Value |
|--|-------|
| Total distance restraints | 1993 |
| Intra-residue ($ i-j =0$) | 469 |
| Sequential ($ i-j =1$) | 524 |
| Medium range ($ i-j >1$ and $ i-j <5$) | 180 |
| Long range ($ i-j \geq 5$) | 764 |
| Inter-chain | 0 |
| Hydrogen bond restraints | 56 |
| Disulfide bond restraints | 0 |
| Total dihedral-angle restraints | 175 |
| Number of unmapped restraints | 0 |
| Number of restraints per residue | 15.7 |
| Number of long range restraints per residue ¹ | 5.9 |

¹Long range hydrogen bonds and disulfide bonds are counted as long range restraints while calculating the number of long range restraints per residue

8.2 Residual restraint violations

This section provides the overview of the restraint violations analysis. The violations are binned as small, medium and large violations based on its absolute value. Average number of violations per model is calculated by dividing the total number of violations in each bin by the size of the ensemble.

8.2.1 Average number of distance violations per model

Distance violations less than 0.1 Å are not included in the calculation.

| Bins (Å) | Average number of violations per model | Max (Å) |
|------------------|--|---------|
| 0.1-0.2 (Small) | 12.6 | 0.2 |
| 0.2-0.5 (Medium) | 10.8 | 0.5 |
| >0.5 (Large) | 50.2 | 4.35 |

8.2.2 Average number of dihedral-angle violations per model [i](#)

Dihedral-angle violations less than 1° are not included in the calculation.

| Bins (°) | Average number of violations per model | Max (°) |
|--------------------|--|---------|
| 1.0-10.0 (Small) | 8.3 | 7.3 |
| 10.0-20.0 (Medium) | None | None |
| >20.0 (Large) | None | None |

9 Distance violation analysis [i](#)

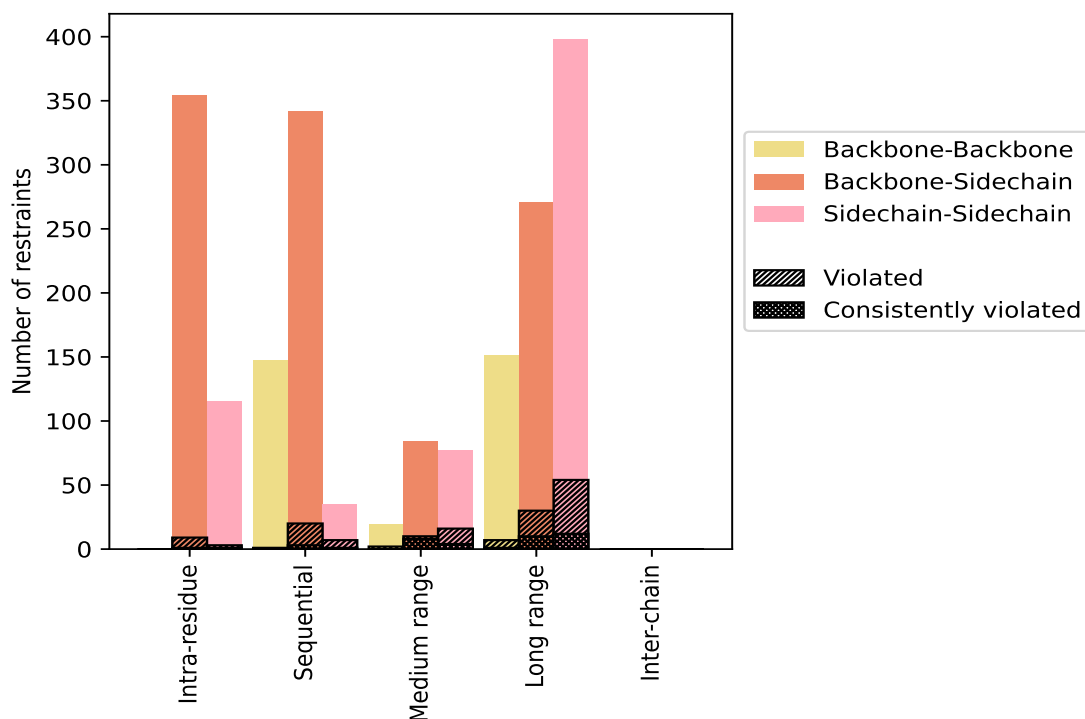
9.1 Summary of distance violations [i](#)

The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

| Restrains type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|---|-------------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| Intra-residue ($i-j =0$) | 469 | 23.5 | 12 | 2.6 | 0.6 | 2 | 0.4 | 0.1 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 354 | 17.8 | 9 | 2.5 | 0.5 | 1 | 0.3 | 0.1 |
| Sidechain-Sidechain | 115 | 5.8 | 3 | 2.6 | 0.2 | 1 | 0.9 | 0.1 |
| Sequential ($i-j =1$) | 524 | 26.3 | 28 | 5.3 | 1.4 | 4 | 0.8 | 0.2 |
| Backbone-Backbone | 147 | 7.4 | 1 | 0.7 | 0.1 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 342 | 17.2 | 20 | 5.8 | 1.0 | 3 | 0.9 | 0.2 |
| Sidechain-Sidechain | 35 | 1.8 | 7 | 20.0 | 0.4 | 1 | 2.9 | 0.1 |
| Medium range ($i-j >1$ & $i-j <5$) | 180 | 9.0 | 28 | 15.6 | 1.4 | 12 | 6.7 | 0.6 |
| Backbone-Backbone | 19 | 1.0 | 2 | 10.5 | 0.1 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 84 | 4.2 | 10 | 11.9 | 0.5 | 8 | 9.5 | 0.4 |
| Sidechain-Sidechain | 77 | 3.9 | 16 | 20.8 | 0.8 | 4 | 5.2 | 0.2 |
| Long range ($i-j \geq 5$) | 764 | 38.3 | 84 | 11.0 | 4.2 | 22 | 2.9 | 1.1 |
| Backbone-Backbone | 95 | 4.8 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 271 | 13.6 | 30 | 11.1 | 1.5 | 10 | 3.7 | 0.5 |
| Sidechain-Sidechain | 398 | 20.0 | 54 | 13.6 | 2.7 | 12 | 3.0 | 0.6 |
| Inter-chain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Hydrogen bond | 56 | 2.8 | 7 | 12.5 | 0.4 | 1 | 1.8 | 0.1 |
| Disulfide bond | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Total | 1993 | 100.0 | 159 | 8.0 | 8.0 | 41 | 2.1 | 2.1 |
| Backbone-Backbone | 317 | 15.9 | 10 | 3.2 | 0.5 | 1 | 0.3 | 0.1 |
| Backbone-Sidechain | 1051 | 52.7 | 69 | 6.6 | 3.5 | 22 | 2.1 | 1.1 |
| Sidechain-Sidechain | 625 | 31.4 | 80 | 12.8 | 4.0 | 18 | 2.9 | 0.9 |

¹ percentage calculated with respect to the total number of distance restraints, ² percentage calculated with respect to the number of restraints in a particular restraint category, ³ violated in at least one model, ⁴ violated in all the models

9.1.1 Bar chart : Distribution of distance restraints and violations [i](#)



Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfid bonds are counted in their appropriate category on the x-axis

9.2 Distance violation statistics for each model [i](#)

The following table provides the distance violation statistics for each model in the ensemble. Violations less than 0.1 Å are not included in the statistics.

| Model ID | Number of violations | | | | | | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | | | | |
| 1 | 5 | 11 | 17 | 35 | 0 | 68 | 1.13 | 3.32 | 0.87 | 0.98 |
| 2 | 2 | 12 | 14 | 49 | 0 | 77 | 1.31 | 4.3 | 0.97 | 1.22 |
| 3 | 4 | 14 | 16 | 55 | 0 | 89 | 1.23 | 4.28 | 1.01 | 0.99 |
| 4 | 3 | 9 | 16 | 47 | 0 | 75 | 1.16 | 4.2 | 0.92 | 0.99 |
| 5 | 3 | 10 | 16 | 50 | 0 | 79 | 1.19 | 4.24 | 1.01 | 0.89 |
| 6 | 4 | 15 | 15 | 45 | 0 | 79 | 1.33 | 4.35 | 1.03 | 1.16 |
| 7 | 6 | 8 | 15 | 41 | 0 | 70 | 1.22 | 4.28 | 0.97 | 0.99 |
| 8 | 8 | 8 | 19 | 39 | 0 | 74 | 1.11 | 3.43 | 0.89 | 0.86 |
| 9 | 3 | 10 | 21 | 41 | 0 | 75 | 1.2 | 4.23 | 0.92 | 0.95 |
| 10 | 2 | 14 | 16 | 49 | 0 | 81 | 1.31 | 4.34 | 0.99 | 1.06 |
| 11 | 4 | 13 | 16 | 42 | 0 | 75 | 1.12 | 3.95 | 0.94 | 0.85 |

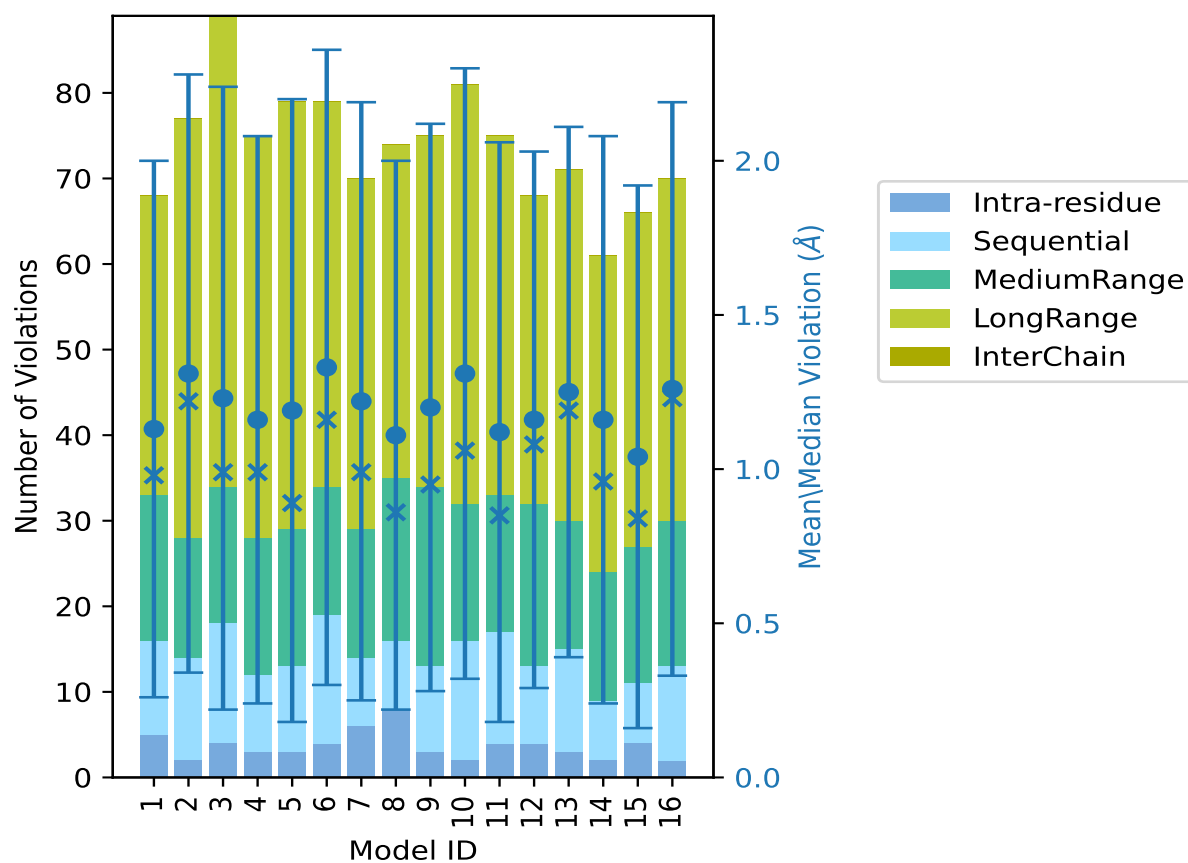
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| Model ID | Number of violations | | | | | | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | | | | |
| 12 | 4 | 9 | 19 | 36 | 0 | 68 | 1.16 | 3.72 | 0.87 | 1.08 |
| 13 | 3 | 12 | 15 | 41 | 0 | 71 | 1.25 | 3.39 | 0.86 | 1.19 |
| 14 | 2 | 7 | 15 | 37 | 0 | 61 | 1.16 | 3.73 | 0.92 | 0.96 |
| 15 | 4 | 7 | 16 | 39 | 0 | 66 | 1.04 | 3.09 | 0.88 | 0.84 |
| 16 | 2 | 11 | 17 | 40 | 0 | 70 | 1.26 | 3.68 | 0.93 | 1.23 |

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model [i](#)



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

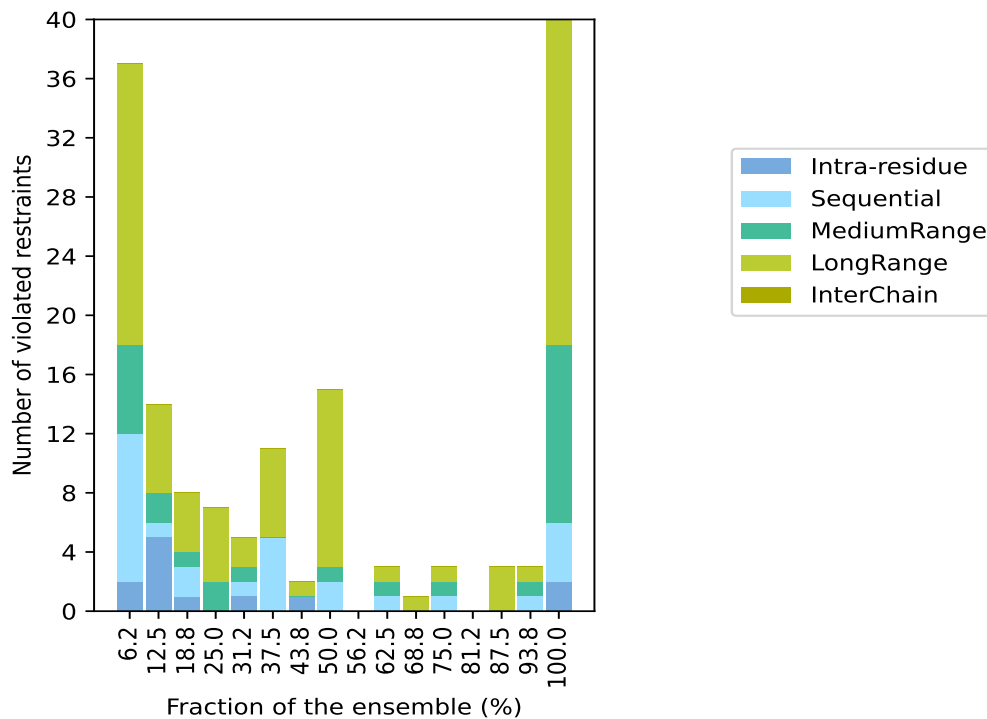
9.3 Distance violation statistics for the ensemble

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 1785(IR:457, SQ:496, MR:152, LR:680, IC:0) restraints are not violated in the ensemble.

| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|-------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 2 | 10 | 6 | 19 | 0 | 37 | 1 | 6.2 |
| 5 | 1 | 2 | 6 | 0 | 14 | 2 | 12.5 |
| 1 | 2 | 1 | 4 | 0 | 8 | 3 | 18.8 |
| 0 | 0 | 2 | 5 | 0 | 7 | 4 | 25.0 |
| 1 | 1 | 1 | 2 | 0 | 5 | 5 | 31.2 |
| 0 | 5 | 0 | 6 | 0 | 11 | 6 | 37.5 |
| 1 | 0 | 0 | 1 | 0 | 2 | 7 | 43.8 |
| 0 | 2 | 1 | 12 | 0 | 15 | 8 | 50.0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 9 | 56.2 |
| 0 | 1 | 1 | 1 | 0 | 3 | 10 | 62.5 |
| 0 | 0 | 0 | 1 | 0 | 1 | 11 | 68.8 |
| 0 | 1 | 1 | 1 | 0 | 3 | 12 | 75.0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 13 | 81.2 |
| 0 | 0 | 0 | 3 | 0 | 3 | 14 | 87.5 |
| 0 | 1 | 1 | 1 | 0 | 3 | 15 | 93.8 |
| 2 | 4 | 12 | 22 | 0 | 40 | 16 | 100.0 |

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶ Number of models with violations

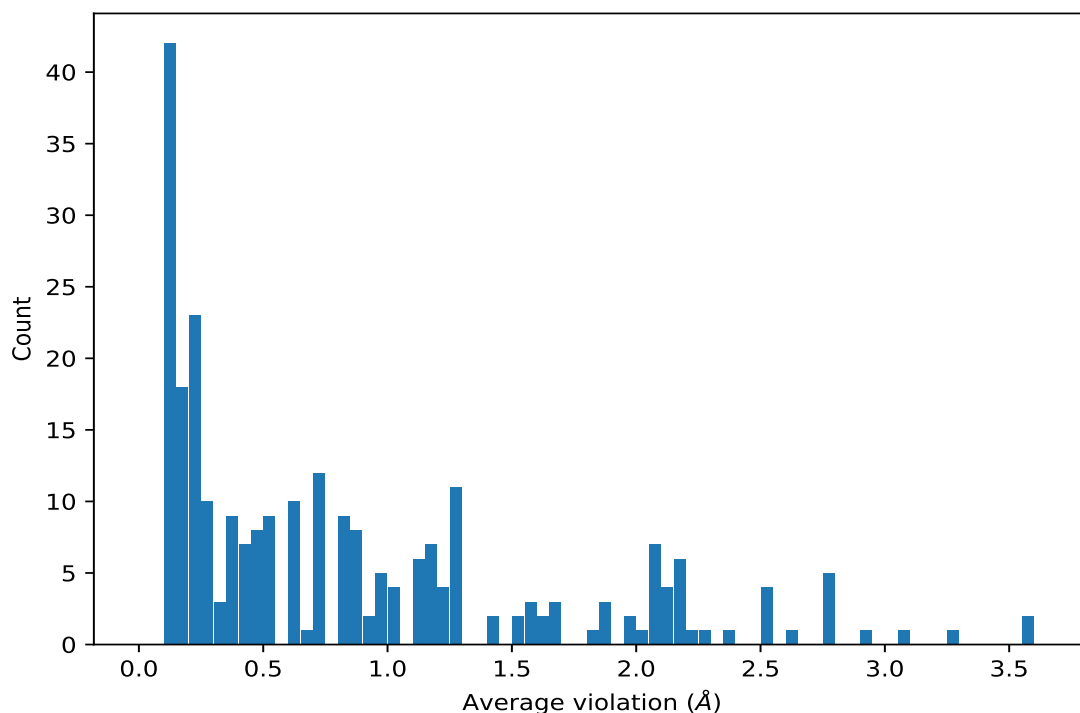
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



9.4 Most violated distance restraints in the ensemble [i](#)

9.4.1 Histogram : Distribution of mean distance violations [i](#)

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble



9.4.2 Table: Most violated distance restraints [i](#)

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|-----------------|------------------|---------------------|----------|---------------------|------------|
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 16 | 3.27 | 0.35 | 3.28 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 16 | 2.77 | 0.17 | 2.78 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 16 | 2.76 | 0.17 | 2.72 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 16 | 2.76 | 0.17 | 2.72 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 16 | 2.76 | 0.17 | 2.72 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 16 | 2.36 | 0.14 | 2.37 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 16 | 2.25 | 0.16 | 2.26 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 16 | 2.23 | 0.13 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 16 | 2.17 | 0.25 | 2.16 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 16 | 2.12 | 0.17 | 2.09 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 16 | 2.12 | 0.17 | 2.09 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 16 | 2.12 | 0.17 | 2.09 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 16 | 2.1 | 0.12 | 2.1 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 16 | 2.08 | 0.66 | 2.41 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 16 | 2.08 | 0.66 | 2.41 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 16 | 2.08 | 0.66 | 2.41 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 16 | 2.05 | 0.22 | 2.03 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 16 | 2.04 | 0.23 | 1.95 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 16 | 1.99 | 0.22 | 1.99 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 16 | 1.95 | 0.52 | 1.89 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 16 | 1.86 | 0.78 | 2.04 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 16 | 1.86 | 0.78 | 2.04 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 16 | 1.86 | 0.78 | 2.04 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 16 | 1.84 | 0.21 | 1.78 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 16 | 1.69 | 0.35 | 1.6 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 16 | 1.68 | 0.28 | 1.62 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 16 | 1.65 | 0.28 | 1.63 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 16 | 1.63 | 0.12 | 1.6 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 16 | 1.6 | 0.21 | 1.6 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 16 | 1.55 | 1.02 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 16 | 1.55 | 1.02 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 16 | 1.55 | 1.02 | 1.06 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 16 | 1.44 | 0.18 | 1.42 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 16 | 1.42 | 0.06 | 1.42 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 16 | 1.27 | 0.26 | 1.28 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 16 | 1.27 | 0.26 | 1.28 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 16 | 1.27 | 0.26 | 1.28 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 16 | 1.26 | 0.15 | 1.23 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 16 | 1.2 | 0.23 | 1.19 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 16 | 1.18 | 0.23 | 1.18 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 16 | 1.13 | 0.58 | 0.85 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 16 | 1.13 | 0.58 | 0.85 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 16 | 1.13 | 0.58 | 0.85 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 16 | 1.03 | 0.18 | 1.08 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 16 | 0.96 | 0.14 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 16 | 0.96 | 0.14 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 16 | 0.96 | 0.14 | 0.96 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 16 | 0.89 | 0.26 | 0.9 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 16 | 0.87 | 0.08 | 0.91 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 16 | 0.8 | 0.06 | 0.81 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 16 | 0.8 | 0.06 | 0.81 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 16 | 0.8 | 0.06 | 0.81 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 16 | 0.73 | 0.15 | 0.75 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 16 | 0.73 | 0.15 | 0.75 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 16 | 0.73 | 0.15 | 0.75 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 16 | 0.71 | 0.22 | 0.66 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 16 | 0.71 | 0.22 | 0.66 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 16 | 0.71 | 0.22 | 0.66 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 16 | 0.7 | 0.19 | 0.7 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 16 | 0.7 | 0.19 | 0.7 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 16 | 0.7 | 0.19 | 0.7 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 16 | 0.7 | 0.19 | 0.7 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 16 | 0.7 | 0.19 | 0.7 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 16 | 0.7 | 0.19 | 0.7 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 16 | 0.68 | 0.18 | 0.65 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 16 | 0.45 | 0.15 | 0.46 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 16 | 0.45 | 0.15 | 0.46 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 16 | 0.45 | 0.15 | 0.46 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 16 | 0.39 | 0.04 | 0.4 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 16 | 0.19 | 0.04 | 0.2 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 15 | 0.91 | 0.35 | 1.01 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 15 | 0.52 | 0.17 | 0.46 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 15 | 0.52 | 0.17 | 0.46 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 15 | 0.52 | 0.17 | 0.46 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 15 | 0.41 | 0.15 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 15 | 0.41 | 0.15 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 15 | 0.41 | 0.15 | 0.42 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 14 | 2.52 | 2.03 | 4.22 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 14 | 0.33 | 0.29 | 0.24 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 14 | 0.33 | 0.29 | 0.24 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 14 | 0.33 | 0.29 | 0.24 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 14 | 0.18 | 0.05 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 14 | 0.18 | 0.05 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 14 | 0.18 | 0.05 | 0.18 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 12 | 0.88 | 0.65 | 0.7 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 12 | 0.88 | 0.65 | 0.7 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 12 | 0.88 | 0.65 | 0.7 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 12 | 0.18 | 0.03 | 0.18 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 12 | 0.17 | 0.03 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 12 | 0.17 | 0.03 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 12 | 0.17 | 0.03 | 0.17 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 11 | 0.43 | 0.27 | 0.36 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 10 | 1.17 | 0.66 | 1.17 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 10 | 0.38 | 0.68 | 0.16 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 10 | 0.14 | 0.03 | 0.14 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 8 | 3.58 | 0.29 | 3.76 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 8 | 2.91 | 0.46 | 3.06 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 8 | 2.52 | 0.15 | 2.53 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 8 | 2.52 | 0.15 | 2.53 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 8 | 2.52 | 0.15 | 2.53 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 8 | 2.09 | 0.11 | 2.08 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 8 | 2.09 | 0.11 | 2.08 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 8 | 2.09 | 0.11 | 2.08 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 8 | 1.26 | 0.67 | 1.1 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 8 | 1.21 | 0.17 | 1.27 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 8 | 1.21 | 0.17 | 1.27 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 8 | 1.21 | 0.17 | 1.27 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 8 | 1.13 | 0.52 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 8 | 1.13 | 0.52 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 8 | 1.13 | 0.52 | 1.06 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 8 | 0.96 | 0.06 | 0.96 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 8 | 0.85 | 0.62 | 0.95 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 8 | 0.85 | 0.62 | 0.95 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 8 | 0.85 | 0.62 | 0.95 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 8 | 0.84 | 0.08 | 0.84 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 8 | 0.84 | 0.08 | 0.84 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 8 | 0.84 | 0.08 | 0.84 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 8 | 0.81 | 0.34 | 0.86 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 8 | 0.81 | 0.34 | 0.86 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 8 | 0.81 | 0.34 | 0.86 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 8 | 0.35 | 0.14 | 0.34 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 8 | 0.35 | 0.14 | 0.34 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 8 | 0.35 | 0.14 | 0.34 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 8 | 0.35 | 0.16 | 0.32 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 8 | 0.28 | 0.06 | 0.27 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 8 | 0.28 | 0.06 | 0.27 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 8 | 0.17 | 0.04 | 0.18 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|-----------------|------------------|---------------------|----------|---------------------|------------|
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 8 | 0.17 | 0.04 | 0.18 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 7 | 0.64 | 0.12 | 0.63 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 7 | 0.14 | 0.01 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 7 | 0.12 | 0.01 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 7 | 0.12 | 0.01 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 7 | 0.12 | 0.01 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 7 | 0.12 | 0.01 | 0.12 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 6 | 3.55 | 0.31 | 3.7 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 6 | 3.08 | 0.42 | 3.14 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 6 | 2.78 | 0.55 | 2.52 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 6 | 1.52 | 0.19 | 1.51 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 6 | 1.52 | 0.19 | 1.51 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 6 | 1.27 | 0.84 | 0.8 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 6 | 1.01 | 0.71 | 0.62 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 6 | 1.01 | 0.71 | 0.62 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 6 | 0.96 | 0.07 | 0.97 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 6 | 0.62 | 0.4 | 0.5 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 6 | 0.62 | 0.4 | 0.5 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 6 | 0.62 | 0.4 | 0.5 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 6 | 0.42 | 0.12 | 0.42 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 6 | 0.42 | 0.12 | 0.42 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 6 | 0.42 | 0.12 | 0.42 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 6 | 0.36 | 0.13 | 0.36 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 6 | 0.36 | 0.13 | 0.36 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 6 | 0.36 | 0.13 | 0.36 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 6 | 0.22 | 0.11 | 0.18 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 6 | 0.22 | 0.11 | 0.18 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 6 | 0.22 | 0.11 | 0.18 |
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 5 | 0.6 | 0.38 | 0.63 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 5 | 0.5 | 0.05 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 5 | 0.5 | 0.05 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 5 | 0.5 | 0.05 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 5 | 0.5 | 0.05 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 5 | 0.5 | 0.05 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 5 | 0.5 | 0.05 | 0.49 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 5 | 0.27 | 0.1 | 0.24 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 5 | 0.27 | 0.1 | 0.24 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 5 | 0.27 | 0.1 | 0.24 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 5 | 0.26 | 0.08 | 0.24 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 5 | 0.2 | 0.06 | 0.16 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 5 | 0.2 | 0.06 | 0.16 |
| (1,1494) | 1:A:109:LYS:HE3 | 1:A:140:PHE:HE2 | 4 | 0.94 | 0.23 | 0.94 |
| (1,890) | 1:A:138:ILE:HD11 | 1:A:140:PHE:HD1 | 4 | 0.48 | 0.06 | 0.47 |
| (1,890) | 1:A:138:ILE:HD12 | 1:A:140:PHE:HD1 | 4 | 0.48 | 0.06 | 0.47 |
| (1,890) | 1:A:138:ILE:HD13 | 1:A:140:PHE:HD1 | 4 | 0.48 | 0.06 | 0.47 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD11 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD12 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD13 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD21 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD22 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD23 | 4 | 0.21 | 0.05 | 0.23 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE2 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE3 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE2 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE3 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE2 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE3 | 4 | 0.2 | 0.06 | 0.18 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB1 | 4 | 0.19 | 0.04 | 0.2 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB2 | 4 | 0.19 | 0.04 | 0.2 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB3 | 4 | 0.19 | 0.04 | 0.2 |
| (1,235) | 1:A:109:LYS:HG3 | 1:A:141:LYS:H | 4 | 0.15 | 0.02 | 0.15 |
| (2,49) | 1:A:142:TYR:O | 1:A:152:ALA:H | 4 | 0.14 | 0.02 | 0.13 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG11 | 4 | 0.12 | 0.01 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG12 | 4 | 0.12 | 0.01 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG13 | 4 | 0.12 | 0.01 | 0.12 |
| (1,254) | 1:A:143:TYR:HE1 | 1:A:150:LEU:H | 3 | 2.63 | 0.4 | 2.7 |
| (1,323) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE21 | 3 | 1.02 | 0.67 | 0.62 |
| (1,1068) | 1:A:68:TYR:HD2 | 1:A:125:ILE:HB | 3 | 0.25 | 0.1 | 0.24 |
| (1,296) | 1:A:117:GLN:HA | 1:A:117:GLN:HE22 | 3 | 0.17 | 0.02 | 0.18 |
| (1,1166) | 1:A:126:GLU:HG2 | 1:A:127:PRO:HD2 | 3 | 0.14 | 0.02 | 0.14 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB1 | 3 | 0.13 | 0.01 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB2 | 3 | 0.13 | 0.01 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB3 | 3 | 0.13 | 0.01 | 0.12 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG2 | 3 | 0.12 | 0.01 | 0.12 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG3 | 3 | 0.12 | 0.01 | 0.12 |
| (1,1254) | 1:A:83:LYS:HA | 1:A:117:GLN:HE21 | 3 | 0.12 | 0.0 | 0.12 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB2 | 2 | 0.45 | 0.0 | 0.45 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB3 | 2 | 0.45 | 0.0 | 0.45 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG21 | 2 | 0.26 | 0.12 | 0.26 |

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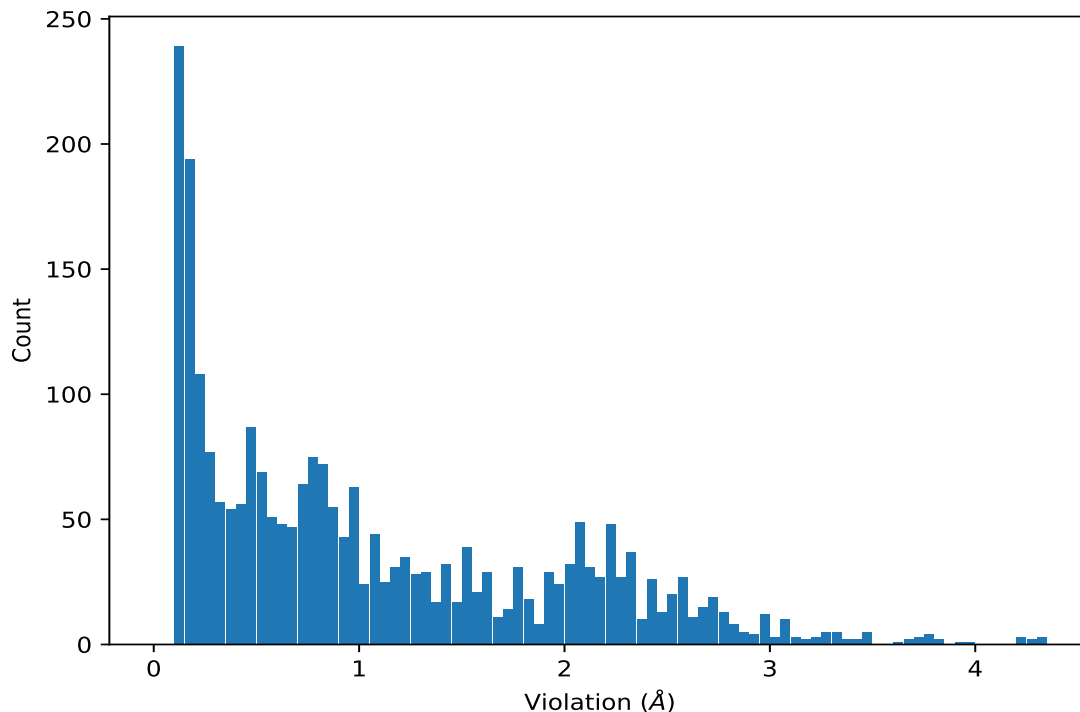
| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG22 | 2 | 0.26 | 0.12 | 0.26 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG23 | 2 | 0.26 | 0.12 | 0.26 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG21 | 2 | 0.24 | 0.01 | 0.24 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG22 | 2 | 0.24 | 0.01 | 0.24 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG23 | 2 | 0.24 | 0.01 | 0.24 |
| (1,1197) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HB3 | 2 | 0.2 | 0.04 | 0.2 |
| (1,1197) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HB3 | 2 | 0.2 | 0.04 | 0.2 |
| (1,1197) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HB3 | 2 | 0.2 | 0.04 | 0.2 |
| (1,1330) | 1:A:83:LYS:HA | 1:A:83:LYS:HD3 | 2 | 0.16 | 0.02 | 0.16 |
| (1,1745) | 1:A:84:GLU:HB2 | 1:A:85:GLU:H | 2 | 0.15 | 0.0 | 0.15 |
| (1,1745) | 1:A:84:GLU:HB3 | 1:A:85:GLU:H | 2 | 0.15 | 0.0 | 0.15 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB2 | 2 | 0.14 | 0.03 | 0.14 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB3 | 2 | 0.14 | 0.03 | 0.14 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB2 | 2 | 0.14 | 0.03 | 0.14 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB3 | 2 | 0.14 | 0.03 | 0.14 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE2 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE3 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,1615) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 2 | 0.13 | 0.01 | 0.13 |
| (1,587) | 1:A:117:GLN:H | 1:A:117:GLN:HE21 | 2 | 0.12 | 0.02 | 0.12 |
| (1,1276) | 1:A:70:LEU:HD21 | 1:A:127:PRO:HG2 | 2 | 0.12 | 0.02 | 0.12 |
| (1,1276) | 1:A:70:LEU:HD22 | 1:A:127:PRO:HG2 | 2 | 0.12 | 0.02 | 0.12 |
| (1,1276) | 1:A:70:LEU:HD23 | 1:A:127:PRO:HG2 | 2 | 0.12 | 0.02 | 0.12 |
| (1,151) | 1:A:150:LEU:HD21 | 1:A:153:THR:H | 2 | 0.12 | 0.0 | 0.12 |
| (1,151) | 1:A:150:LEU:HD22 | 1:A:153:THR:H | 2 | 0.12 | 0.0 | 0.12 |
| (1,151) | 1:A:150:LEU:HD23 | 1:A:153:THR:H | 2 | 0.12 | 0.0 | 0.12 |
| (2,50) | 1:A:142:TYR:O | 1:A:152:ALA:N | 2 | 0.12 | 0.0 | 0.12 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG21 | 2 | 0.11 | 0.0 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG22 | 2 | 0.11 | 0.0 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG23 | 2 | 0.11 | 0.0 | 0.11 |
| (1,299) | 1:A:117:GLN:HB2 | 1:A:117:GLN:HE22 | 2 | 0.11 | 0.0 | 0.11 |

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

9.5.1 Histogram : Distribution of distance violations [i](#)

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.



9.5.2 Table : All distance violations [i](#)

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|----------------|-----------------|----------|---------------|
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 6 | 4.35 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 10 | 4.34 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 2 | 4.3 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 3 | 4.28 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 7 | 4.28 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 5 | 4.24 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 9 | 4.23 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 4 | 4.2 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 11 | 3.95 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 6 | 3.92 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 10 | 3.82 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 10 | 3.8 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 3 | 3.78 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 3 | 3.78 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 2 | 3.77 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 11 | 3.76 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 5 | 3.74 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 14 | 3.73 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 12 | 3.72 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 16 | 3.68 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 16 | 3.65 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 6 | 3.61 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 10 | 3.48 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 3 | 3.46 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 5 | 3.46 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 5 | 3.46 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 5 | 3.46 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 8 | 3.43 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 16 | 3.42 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 13 | 3.39 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 3 | 3.36 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 6 | 3.34 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 1 | 3.32 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 1 | 3.32 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 1 | 3.32 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 5 | 3.3 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 7 | 3.29 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 13 | 3.27 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 7 | 3.26 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 7 | 3.26 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 7 | 3.26 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 3 | 3.23 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 11 | 3.2 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 4 | 3.2 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 6 | 3.17 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 10 | 3.16 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 9 | 3.14 |
| (1,1222) | 1:A:108:SER:HA | 1:A:140:PHE:HE2 | 9 | 3.14 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 6 | 3.12 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 15 | 3.09 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 15 | 3.09 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 15 | 3.09 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 6 | 3.09 |
| (1,254) | 1:A:143:TYR:HE1 | 1:A:150:LEU:H | 5 | 3.08 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 10 | 3.08 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 7 | 3.07 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 14 | 3.05 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 14 | 3.05 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 14 | 3.05 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 16 | 3.03 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 2 | 3.03 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 7 | 3.02 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 2 | 2.98 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 2 | 2.98 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 2 | 2.98 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 1 | 2.98 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 15 | 2.98 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 15 | 2.98 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 15 | 2.98 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 5 | 2.97 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 5 | 2.97 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 5 | 2.97 |
| (1,331) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HE1 | 13 | 2.97 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 15 | 2.95 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 8 | 2.92 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 1 | 2.91 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 5 | 2.91 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 13 | 2.9 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 4 | 2.88 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 9 | 2.87 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 9 | 2.87 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 9 | 2.87 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 10 | 2.87 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 14 | 2.84 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 12 | 2.82 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 12 | 2.81 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 12 | 2.81 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 12 | 2.81 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 12 | 2.81 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 12 | 2.81 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 12 | 2.81 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 12 | 2.79 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 12 | 2.79 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 12 | 2.79 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 1 | 2.78 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 1 | 2.78 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 1 | 2.78 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 6 | 2.78 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 6 | 2.78 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 6 | 2.78 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 3 | 2.78 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 2 | 2.77 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 2 | 2.77 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 11 | 2.76 |
| (1,891) | 1:A:96:HIS:HA | 1:A:131:PHE:HE2 | 9 | 2.74 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 8 | 2.73 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 8 | 2.73 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 8 | 2.73 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 5 | 2.73 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 4 | 2.72 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 4 | 2.72 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 4 | 2.72 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 3 | 2.72 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 3 | 2.72 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 3 | 2.72 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 6 | 2.72 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 6 | 2.72 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 6 | 2.72 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 12 | 2.71 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 12 | 2.71 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 12 | 2.71 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 4 | 2.7 |
| (1,254) | 1:A:143:TYR:HE1 | 1:A:150:LEU:H | 8 | 2.7 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 8 | 2.69 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 15 | 2.69 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 8 | 2.68 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 8 | 2.68 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 8 | 2.68 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 2 | 2.67 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 2 | 2.67 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 2 | 2.67 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 11 | 2.67 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 13 | 2.66 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 13 | 2.66 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 13 | 2.66 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 11 | 2.65 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 11 | 2.65 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 11 | 2.65 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 16 | 2.64 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 16 | 2.64 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 16 | 2.64 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 7 | 2.64 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 6 | 2.63 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 6 | 2.63 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 6 | 2.63 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 10 | 2.61 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 10 | 2.61 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 10 | 2.61 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 15 | 2.61 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 10 | 2.59 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 10 | 2.59 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 10 | 2.59 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 4 | 2.58 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 4 | 2.58 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 4 | 2.58 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 8 | 2.58 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 8 | 2.58 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 8 | 2.58 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 9 | 2.57 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 9 | 2.57 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 9 | 2.57 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 7 | 2.57 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 7 | 2.57 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 7 | 2.57 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 10 | 2.57 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 16 | 2.57 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 7 | 2.56 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 7 | 2.56 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 7 | 2.56 |
| (1,835) | 1:A:63:ALA:HB1 | 1:A:79:PHE:HD2 | 16 | 2.56 |
| (1,835) | 1:A:63:ALA:HB2 | 1:A:79:PHE:HD2 | 16 | 2.56 |
| (1,835) | 1:A:63:ALA:HB3 | 1:A:79:PHE:HD2 | 16 | 2.56 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 4 | 2.56 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 4 | 2.56 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 4 | 2.56 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 8 | 2.56 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 1 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 1 | 2.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 1 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 2 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 2 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 2 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 4 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 4 | 2.54 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 4 | 2.54 |
| (1,138) | 1:A:104:ASN:H | 1:A:105:PHE:HD1 | 9 | 2.54 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 11 | 2.54 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 14 | 2.53 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 2 | 2.52 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 2 | 2.52 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 2 | 2.52 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 9 | 2.51 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 9 | 2.51 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 9 | 2.51 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 16 | 2.51 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 3 | 2.5 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 11 | 2.49 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 11 | 2.49 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 11 | 2.49 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 3 | 2.49 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 3 | 2.49 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 3 | 2.49 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 13 | 2.49 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 5 | 2.48 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 16 | 2.47 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 7 | 2.46 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 15 | 2.46 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 3 | 2.45 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 8 | 2.45 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 3 | 2.44 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 2 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 6 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 6 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 6 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 6 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 6 | 2.44 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 6 | 2.44 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 6 | 2.43 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 6 | 2.43 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 6 | 2.43 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 3 | 2.43 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 3 | 2.43 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 3 | 2.43 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 14 | 2.43 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 15 | 2.43 |
| (1,51) | 1:A:68:TYR:HD2 | 1:A:70:LEU:H | 9 | 2.42 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 6 | 2.42 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 14 | 2.42 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 16 | 2.42 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 14 | 2.42 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 9 | 2.41 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 10 | 2.41 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 12 | 2.4 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 12 | 2.4 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 12 | 2.4 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 9 | 2.39 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 6 | 2.39 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 5 | 2.38 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 5 | 2.38 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 5 | 2.38 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 13 | 2.38 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 2 | 2.37 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 5 | 2.37 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 15 | 2.35 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 6 | 2.35 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 12 | 2.34 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 1 | 2.34 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 3 | 2.33 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 5 | 2.32 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 5 | 2.32 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 5 | 2.32 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 11 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 4 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 9 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 9 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 9 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 9 | 2.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 9 | 2.32 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 9 | 2.32 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 13 | 2.32 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 10 | 2.31 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 10 | 2.31 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 10 | 2.31 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 2 | 2.31 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 14 | 2.31 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 1 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 14 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 14 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 14 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 14 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 14 | 2.31 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 14 | 2.31 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 1 | 2.3 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 5 | 2.3 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 16 | 2.3 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 13 | 2.3 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 3 | 2.3 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 4 | 2.28 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 1 | 2.28 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 15 | 2.27 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 4 | 2.27 |
| (1,836) | 1:A:63:ALA:HB1 | 1:A:140:PHE:HE1 | 7 | 2.26 |
| (1,836) | 1:A:63:ALA:HB2 | 1:A:140:PHE:HE1 | 7 | 2.26 |
| (1,836) | 1:A:63:ALA:HB3 | 1:A:140:PHE:HE1 | 7 | 2.26 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 7 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 12 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 3 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 3 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 3 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 3 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 3 | 2.26 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 3 | 2.26 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 14 | 2.26 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 14 | 2.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 14 | 2.25 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 14 | 2.25 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 4 | 2.25 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 5 | 2.25 |
| (1,1321) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 10 | 2.25 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 4 | 2.24 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 4 | 2.24 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 4 | 2.24 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 15 | 2.24 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 2 | 2.24 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 8 | 2.24 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 13 | 2.24 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 2 | 2.23 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 3 | 2.23 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 4 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 8 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 8 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 8 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 8 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 8 | 2.23 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 8 | 2.23 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 3 | 2.22 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 3 | 2.22 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 3 | 2.22 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 9 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 2 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 5 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 5 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 5 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 5 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 5 | 2.22 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 5 | 2.22 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 13 | 2.22 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 6 | 2.21 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 7 | 2.21 |
| (1,332) | 1:A:106:TRP:HE1 | 1:A:130:TYR:HD1 | 13 | 2.21 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 10 | 2.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 2 | 2.21 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 11 | 2.21 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 11 | 2.21 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 11 | 2.21 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 6 | 2.2 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 10 | 2.2 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 6 | 2.19 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 14 | 2.18 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 2 | 2.18 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 2 | 2.18 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 2 | 2.18 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 6 | 2.17 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 6 | 2.17 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 6 | 2.17 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 5 | 2.17 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 5 | 2.17 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 5 | 2.17 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 14 | 2.17 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 8 | 2.17 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 1 | 2.17 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 10 | 2.17 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 10 | 2.17 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 10 | 2.17 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 9 | 2.16 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 14 | 2.16 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 14 | 2.16 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 14 | 2.16 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 2 | 2.15 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 7 | 2.15 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 8 | 2.15 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 3 | 2.15 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 3 | 2.15 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 3 | 2.15 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 11 | 2.14 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 15 | 2.14 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 11 | 2.14 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 16 | 2.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 6 | 2.14 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 6 | 2.14 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 6 | 2.14 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 9 | 2.13 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 9 | 2.13 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 9 | 2.13 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 16 | 2.13 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 16 | 2.13 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 11 | 2.13 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 2 | 2.12 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 8 | 2.11 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 8 | 2.11 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 8 | 2.11 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 6 | 2.11 |
| (1,254) | 1:A:143:TYR:HE1 | 1:A:150:LEU:H | 1 | 2.11 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 5 | 2.1 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 5 | 2.1 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 12 | 2.1 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 14 | 2.1 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 10 | 2.1 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 6 | 2.1 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 12 | 2.1 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 12 | 2.1 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 12 | 2.1 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 13 | 2.1 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 13 | 2.1 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 13 | 2.1 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 12 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 11 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 11 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 11 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 11 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 11 | 2.09 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 11 | 2.09 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 7 | 2.09 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 7 | 2.09 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 7 | 2.09 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 9 | 2.08 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 9 | 2.08 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 9 | 2.08 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 8 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 13 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 13 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 13 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 13 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 13 | 2.08 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 13 | 2.08 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 5 | 2.08 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 5 | 2.08 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 5 | 2.08 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 8 | 2.07 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 12 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 1 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 1 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 1 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 1 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 1 | 2.07 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 1 | 2.07 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 13 | 2.06 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 3 | 2.06 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 7 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 2 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 2 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 2 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 2 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 2 | 2.06 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 2 | 2.06 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 13 | 2.05 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 2 | 2.05 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 3 | 2.05 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 12 | 2.05 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 10 | 2.04 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 10 | 2.04 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 10 | 2.04 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 9 | 2.04 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 10 | 2.04 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 10 | 2.03 |
| (1,73) | 1:A:77:ILE:H | 1:A:79:PHE:HD2 | 8 | 2.03 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 2 | 2.02 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 2 | 2.02 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 2 | 2.02 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 13 | 2.02 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 15 | 2.02 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 16 | 2.02 |
| (1,19) | 1:A:64:SER:H | 1:A:79:PHE:HD2 | 11 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 4 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 4 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 4 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 15 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 15 | 2.02 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 15 | 2.02 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 7 | 2.01 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 7 | 2.01 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 7 | 2.01 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 7 | 2.01 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 4 | 2.01 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 11 | 2.0 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 14 | 2.0 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 2 | 1.99 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 2 | 1.99 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 2 | 1.99 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 9 | 1.98 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 3 | 1.98 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 12 | 1.97 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 12 | 1.97 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 12 | 1.97 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 11 | 1.97 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 11 | 1.97 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 11 | 1.97 |
| (1,323) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE21 | 8 | 1.97 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 9 | 1.97 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 9 | 1.97 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 9 | 1.97 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 10 | 1.96 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 11 | 1.96 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 10 | 1.95 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 10 | 1.95 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 10 | 1.95 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 8 | 1.95 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 1 | 1.95 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 1 | 1.95 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 1 | 1.95 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 2 | 1.94 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 9 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 10 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 10 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 10 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 10 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 10 | 1.94 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 10 | 1.94 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 13 | 1.93 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 13 | 1.93 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 13 | 1.93 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 16 | 1.93 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 14 | 1.92 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 16 | 1.92 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD11 | 5 | 1.91 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD12 | 5 | 1.91 |
| (1,945) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HD13 | 5 | 1.91 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 16 | 1.91 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 16 | 1.91 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 16 | 1.91 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 13 | 1.91 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 12 | 1.91 |
| (1,258) | 1:A:142:TYR:HD2 | 1:A:151:ARG:H | 9 | 1.91 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG21 | 16 | 1.91 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG22 | 16 | 1.91 |
| (1,1086) | 1:A:131:PHE:HE2 | 1:A:136:ILE:HG23 | 16 | 1.91 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 6 | 1.9 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 12 | 1.9 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 1 | 1.9 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 13 | 1.89 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 13 | 1.89 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 15 | 1.88 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 16 | 1.88 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 4 | 1.87 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 10 | 1.87 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 2 | 1.87 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 1 | 1.86 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 4 | 1.84 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 11 | 1.84 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 12 | 1.84 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 7 | 1.83 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 12 | 1.83 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 12 | 1.83 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 12 | 1.83 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 15 | 1.83 |
| (1,790) | 1:A:64:SER:HA | 1:A:79:PHE:HD2 | 3 | 1.81 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 7 | 1.81 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 6 | 1.81 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 10 | 1.8 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 10 | 1.8 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 10 | 1.8 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 3 | 1.8 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 3 | 1.8 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 4 | 1.8 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 4 | 1.8 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 3 | 1.79 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 15 | 1.79 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 15 | 1.79 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 2 | 1.79 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 2 | 1.79 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 2 | 1.79 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 6 | 1.78 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 8 | 1.78 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 14 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 16 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 16 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 16 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 16 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 16 | 1.78 |
| (1,1652) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 16 | 1.78 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 14 | 1.78 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 9 | 1.78 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 13 | 1.77 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 3 | 1.77 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 7 | 1.77 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 3 | 1.77 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 12 | 1.76 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 3 | 1.76 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 3 | 1.76 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 11 | 1.75 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 11 | 1.75 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 1 | 1.74 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 4 | 1.74 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 11 | 1.74 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 5 | 1.73 |
| (1,1304) | 1:A:140:PHE:HD1 | 1:A:157:ILE:HG12 | 4 | 1.73 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 16 | 1.73 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 11 | 1.72 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 13 | 1.71 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 11 | 1.7 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 4 | 1.7 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 10 | 1.7 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 5 | 1.7 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 1 | 1.7 |
| (1,1250) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HA | 5 | 1.7 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 9 | 1.69 |
| (1,375) | 1:A:64:SER:H | 1:A:79:PHE:HE2 | 7 | 1.68 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 4 | 1.67 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 12 | 1.66 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 12 | 1.66 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 12 | 1.66 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 14 | 1.65 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 14 | 1.65 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 14 | 1.65 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 1 | 1.65 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 8 | 1.65 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 1 | 1.64 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 6 | 1.64 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 16 | 1.64 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 16 | 1.64 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 16 | 1.64 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 10 | 1.63 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 1 | 1.63 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 1 | 1.63 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 1 | 1.63 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 1 | 1.63 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 1 | 1.63 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 1 | 1.63 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 2 | 1.63 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 6 | 1.63 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 1 | 1.62 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 1 | 1.62 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 1 | 1.62 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 4 | 1.62 |
| (1,76) | 1:A:78:ILE:H | 1:A:79:PHE:HD2 | 8 | 1.62 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 10 | 1.62 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 16 | 1.62 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 7 | 1.62 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 15 | 1.61 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 10 | 1.61 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 7 | 1.6 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 7 | 1.6 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 12 | 1.6 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 2 | 1.6 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 13 | 1.6 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 6 | 1.59 |
| (1,830) | 1:A:63:ALA:HA | 1:A:79:PHE:HD2 | 16 | 1.59 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 2 | 1.59 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 5 | 1.59 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 16 | 1.57 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 1 | 1.57 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 13 | 1.57 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 16 | 1.57 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 12 | 1.57 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 10 | 1.57 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 10 | 1.57 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 2 | 1.56 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 2 | 1.56 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 2 | 1.56 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 15 | 1.56 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 12 | 1.56 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 5 | 1.55 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 6 | 1.55 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 15 | 1.55 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 16 | 1.55 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 11 | 1.55 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 13 | 1.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 13 | 1.54 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 13 | 1.54 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 7 | 1.54 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 7 | 1.54 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 7 | 1.54 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 10 | 1.54 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 7 | 1.54 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 10 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 1 | 1.54 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 12 | 1.53 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 16 | 1.53 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 11 | 1.53 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 11 | 1.52 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 15 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 7 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 7 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 7 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 8 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 8 | 1.52 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 8 | 1.52 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 3 | 1.51 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 3 | 1.51 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 3 | 1.51 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 12 | 1.51 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 12 | 1.51 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 12 | 1.51 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 16 | 1.51 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 16 | 1.51 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 16 | 1.51 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 1 | 1.51 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 2 | 1.51 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 11 | 1.5 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 1 | 1.5 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 7 | 1.49 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 2 | 1.49 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 1 | 1.49 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 1 | 1.49 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 1 | 1.49 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 12 | 1.48 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 1 | 1.48 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 5 | 1.48 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 12 | 1.47 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 14 | 1.46 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 2 | 1.46 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 6 | 1.46 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 7 | 1.45 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 14 | 1.45 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 5 | 1.45 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 6 | 1.45 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 6 | 1.45 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 5 | 1.44 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 14 | 1.44 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 2 | 1.44 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 2 | 1.44 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 2 | 1.44 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 12 | 1.43 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 8 | 1.43 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 8 | 1.43 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 8 | 1.43 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 13 | 1.43 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 5 | 1.43 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 13 | 1.43 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 13 | 1.43 |
| (1,202) | 1:A:131:PHE:HD2 | 1:A:133:GLU:H | 9 | 1.43 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 3 | 1.42 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 3 | 1.42 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 3 | 1.42 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 3 | 1.42 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 8 | 1.42 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 3 | 1.42 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 5 | 1.41 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 16 | 1.41 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 12 | 1.41 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 13 | 1.4 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 13 | 1.4 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 13 | 1.4 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 9 | 1.4 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 14 | 1.4 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 1 | 1.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 1 | 1.4 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 1 | 1.4 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 2 | 1.4 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 2 | 1.38 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 1 | 1.38 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 6 | 1.38 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 4 | 1.38 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 3 | 1.38 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 3 | 1.38 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 3 | 1.38 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 7 | 1.37 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 4 | 1.37 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 15 | 1.37 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 13 | 1.37 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 13 | 1.37 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 13 | 1.37 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 8 | 1.36 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 10 | 1.36 |
| (1,1084) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HB | 9 | 1.36 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 8 | 1.35 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 13 | 1.34 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 13 | 1.34 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 13 | 1.34 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 9 | 1.34 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 10 | 1.33 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 6 | 1.33 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 6 | 1.33 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 6 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 16 | 1.33 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 7 | 1.33 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 1 | 1.32 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 15 | 1.32 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 15 | 1.32 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 15 | 1.32 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 8 | 1.32 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 13 | 1.32 |
| (1,77) | 1:A:79:PHE:H | 1:A:79:PHE:HD2 | 2 | 1.31 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 6 | 1.31 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 9 | 1.31 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 9 | 1.31 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 1 | 1.3 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 4 | 1.3 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 9 | 1.3 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 16 | 1.3 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 4 | 1.29 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 4 | 1.29 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 4 | 1.29 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 6 | 1.28 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 6 | 1.28 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 6 | 1.28 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 6 | 1.28 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 6 | 1.28 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 6 | 1.28 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 6 | 1.28 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 8 | 1.28 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 10 | 1.28 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 10 | 1.28 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 10 | 1.28 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 16 | 1.27 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 13 | 1.27 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 4 | 1.27 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 4 | 1.27 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 4 | 1.27 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 16 | 1.26 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 16 | 1.26 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 16 | 1.26 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 9 | 1.26 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 9 | 1.26 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 9 | 1.26 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 13 | 1.25 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 2 | 1.25 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 12 | 1.25 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 5 | 1.24 |
| (1,803) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HA | 16 | 1.24 |
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 8 | 1.24 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 3 | 1.24 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 12 | 1.24 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 12 | 1.24 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 12 | 1.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 12 | 1.24 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 12 | 1.24 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 12 | 1.24 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 8 | 1.23 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 8 | 1.23 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 8 | 1.23 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 3 | 1.23 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 3 | 1.23 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 3 | 1.23 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 5 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 16 | 1.23 |
| (1,1323) | 1:A:129:PRO:HD2 | 1:A:130:TYR:HD2 | 16 | 1.23 |
| (1,1323) | 1:A:129:PRO:HD3 | 1:A:130:TYR:HD2 | 16 | 1.23 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 6 | 1.22 |
| (1,1494) | 1:A:109:LYS:HE3 | 1:A:140:PHE:HE2 | 2 | 1.22 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 12 | 1.22 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 12 | 1.22 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 12 | 1.22 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 7 | 1.21 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 6 | 1.21 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 15 | 1.2 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 4 | 1.2 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 1 | 1.2 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 13 | 1.19 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 3 | 1.18 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 10 | 1.18 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 7 | 1.18 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 4 | 1.17 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 4 | 1.17 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 4 | 1.17 |
| (1,67) | 1:A:68:TYR:HE1 | 1:A:76:LEU:H | 11 | 1.17 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 15 | 1.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 14 | 1.17 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 5 | 1.16 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 5 | 1.16 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 5 | 1.16 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 15 | 1.16 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 6 | 1.16 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 6 | 1.16 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 6 | 1.16 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 6 | 1.15 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 11 | 1.15 |
| (1,72) | 1:A:77:ILE:H | 1:A:79:PHE:HE2 | 8 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 10 | 1.15 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 12 | 1.14 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 12 | 1.14 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 12 | 1.14 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 12 | 1.14 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 9 | 1.13 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 13 | 1.13 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 14 | 1.13 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 14 | 1.13 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 14 | 1.13 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 10 | 1.12 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 10 | 1.12 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 10 | 1.12 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 2 | 1.12 |
| (1,1494) | 1:A:109:LYS:HE3 | 1:A:140:PHE:HE2 | 10 | 1.12 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 7 | 1.12 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 7 | 1.12 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 7 | 1.12 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 3 | 1.11 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 15 | 1.11 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 14 | 1.11 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 14 | 1.11 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 14 | 1.11 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 1 | 1.1 |
| (1,1519) | 1:A:64:SER:HA | 1:A:79:PHE:HE2 | 3 | 1.1 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 4 | 1.1 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 9 | 1.09 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 6 | 1.09 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 6 | 1.09 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 6 | 1.09 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 3 | 1.08 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 3 | 1.08 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 3 | 1.08 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 14 | 1.08 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 5 | 1.08 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 16 | 1.08 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 3 | 1.07 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 16 | 1.07 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 15 | 1.07 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 15 | 1.07 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 15 | 1.07 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 8 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 3 | 1.07 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 11 | 1.07 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 14 | 1.06 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 14 | 1.06 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 14 | 1.06 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 10 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 10 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 10 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 10 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 13 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 13 | 1.06 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 13 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 4 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 4 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 4 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 9 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 9 | 1.06 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 9 | 1.06 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 4 | 1.05 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 7 | 1.05 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 4 | 1.05 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 4 | 1.05 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 4 | 1.05 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 11 | 1.04 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 8 | 1.04 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 8 | 1.04 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 8 | 1.04 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 14 | 1.03 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 12 | 1.03 |
| (1,196) | 1:A:131:PHE:HD2 | 1:A:132:MET:H | 9 | 1.02 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 3 | 1.02 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 6 | 1.02 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 13 | 1.02 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 10 | 1.02 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 10 | 1.02 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 10 | 1.02 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 11 | 1.01 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 11 | 1.01 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 11 | 1.01 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 5 | 1.01 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 15 | 1.0 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 9 | 1.0 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 9 | 1.0 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 9 | 1.0 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 9 | 1.0 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 9 | 1.0 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 9 | 1.0 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 1 | 0.99 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 4 | 0.99 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 4 | 0.99 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 4 | 0.99 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 2 | 0.99 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 2 | 0.99 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 2 | 0.99 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 4 | 0.99 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 6 | 0.99 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 5 | 0.99 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 3 | 0.99 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 3 | 0.99 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 3 | 0.99 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 3 | 0.99 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 3 | 0.99 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 3 | 0.99 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 13 | 0.97 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 13 | 0.97 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 13 | 0.97 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 10 | 0.97 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 2 | 0.97 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 2 | 0.97 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 2 | 0.97 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 8 | 0.97 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 8 | 0.97 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 8 | 0.97 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 1 | 0.97 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 1 | 0.97 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 1 | 0.97 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 13 | 0.97 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 14 | 0.96 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 12 | 0.96 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 2 | 0.96 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 2 | 0.96 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 2 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 5 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 5 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 5 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 13 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 13 | 0.96 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 13 | 0.96 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 3 | 0.96 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 10 | 0.96 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 1 | 0.95 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 1 | 0.95 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 1 | 0.95 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 1 | 0.95 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 15 | 0.95 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 15 | 0.95 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 15 | 0.95 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 10 | 0.95 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 10 | 0.95 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 10 | 0.95 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 9 | 0.95 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 12 | 0.95 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 12 | 0.95 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 12 | 0.95 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 10 | 0.94 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 4 | 0.93 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 2 | 0.93 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 5 | 0.93 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 8 | 0.93 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 3 | 0.93 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 3 | 0.93 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 3 | 0.93 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 16 | 0.93 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 16 | 0.93 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 16 | 0.93 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 1 | 0.93 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 2 | 0.92 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 10 | 0.92 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 7 | 0.92 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 7 | 0.92 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 7 | 0.92 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 15 | 0.92 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 15 | 0.92 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 15 | 0.92 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 2 | 0.92 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 9 | 0.92 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 9 | 0.92 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 9 | 0.92 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 16 | 0.91 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 3 | 0.91 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 13 | 0.91 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 15 | 0.91 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 6 | 0.91 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 6 | 0.91 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 6 | 0.91 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 10 | 0.91 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 12 | 0.91 |
| (1,145) | 1:A:105:PHE:HD2 | 1:A:106:TRP:H | 9 | 0.91 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 8 | 0.9 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 13 | 0.9 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 5 | 0.9 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 6 | 0.9 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 11 | 0.89 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 9 | 0.89 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 2 | 0.89 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 11 | 0.89 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 5 | 0.89 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 5 | 0.89 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 5 | 0.89 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 13 | 0.89 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 13 | 0.89 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 13 | 0.89 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 11 | 0.88 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 10 | 0.88 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 10 | 0.88 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 10 | 0.88 |
| (1,58) | 1:A:68:TYR:HE2 | 1:A:71:GLY:H | 12 | 0.88 |
| (1,229) | 1:A:140:PHE:HD2 | 1:A:141:LYS:H | 7 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 11 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 11 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 11 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 13 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 13 | 0.88 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 13 | 0.88 |
| (1,1227) | 1:A:92:ILE:HD11 | 1:A:140:PHE:HE2 | 5 | 0.88 |
| (1,1227) | 1:A:92:ILE:HD12 | 1:A:140:PHE:HE2 | 5 | 0.88 |
| (1,1227) | 1:A:92:ILE:HD13 | 1:A:140:PHE:HE2 | 5 | 0.88 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 3 | 0.88 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 3 | 0.88 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 3 | 0.88 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 11 | 0.87 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 11 | 0.87 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 11 | 0.87 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 4 | 0.87 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 4 | 0.87 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 4 | 0.87 |
| (1,193) | 1:A:130:TYR:HD2 | 1:A:131:PHE:H | 16 | 0.87 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 7 | 0.87 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 7 | 0.87 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 7 | 0.87 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 6 | 0.86 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 9 | 0.86 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 9 | 0.86 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 9 | 0.86 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 6 | 0.86 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 6 | 0.86 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 6 | 0.86 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 1 | 0.86 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 1 | 0.86 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 1 | 0.86 |
| (1,995) | 1:A:68:TYR:HD2 | 1:A:159:VAL:HA | 15 | 0.85 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 14 | 0.85 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 14 | 0.85 |
| (1,937) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 14 | 0.85 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 11 | 0.85 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 11 | 0.85 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 11 | 0.85 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 7 | 0.84 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 1 | 0.84 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 1 | 0.84 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 1 | 0.84 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 13 | 0.84 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 13 | 0.84 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 13 | 0.84 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 15 | 0.84 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 15 | 0.84 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 15 | 0.84 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 6 | 0.83 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 6 | 0.83 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 6 | 0.83 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 6 | 0.83 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 6 | 0.83 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 6 | 0.83 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 14 | 0.83 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 14 | 0.83 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 14 | 0.83 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 16 | 0.82 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 3 | 0.82 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 3 | 0.82 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 3 | 0.82 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 5 | 0.82 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 5 | 0.82 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 5 | 0.82 |
| (1,1648) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE21 | 8 | 0.82 |
| (1,1648) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 8 | 0.82 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 11 | 0.82 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 7 | 0.82 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 7 | 0.82 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 7 | 0.82 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 1 | 0.81 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 5 | 0.81 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 5 | 0.81 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 5 | 0.81 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 2 | 0.81 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 2 | 0.81 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 2 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 10 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 9 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 14 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 14 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 14 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 14 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 14 | 0.81 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 14 | 0.81 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 8 | 0.81 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 8 | 0.81 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 8 | 0.81 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 7 | 0.8 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 7 | 0.8 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 7 | 0.8 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 8 | 0.8 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 8 | 0.8 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 8 | 0.8 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 8 | 0.8 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 8 | 0.8 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 8 | 0.8 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 2 | 0.8 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 2 | 0.8 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 2 | 0.8 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 11 | 0.79 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 11 | 0.79 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 11 | 0.79 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 6 | 0.79 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 11 | 0.79 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 11 | 0.79 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 11 | 0.79 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 4 | 0.78 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 8 | 0.78 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 3 | 0.78 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 16 | 0.78 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 16 | 0.78 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 16 | 0.78 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 2 | 0.78 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 2 | 0.78 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 2 | 0.78 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 10 | 0.78 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 10 | 0.78 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 10 | 0.78 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 12 | 0.77 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 12 | 0.77 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 12 | 0.77 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 13 | 0.77 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 13 | 0.77 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 13 | 0.77 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 16 | 0.77 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 16 | 0.77 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 16 | 0.77 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 3 | 0.77 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 3 | 0.77 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 3 | 0.77 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 3 | 0.77 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 3 | 0.77 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 3 | 0.77 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 12 | 0.77 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 5 | 0.77 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 5 | 0.77 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 5 | 0.77 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 9 | 0.76 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 9 | 0.76 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 9 | 0.76 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 5 | 0.76 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 5 | 0.76 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 5 | 0.76 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 16 | 0.76 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 16 | 0.76 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 16 | 0.76 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 5 | 0.76 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 5 | 0.76 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 5 | 0.76 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 3 | 0.75 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 3 | 0.75 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 3 | 0.75 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 8 | 0.75 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 8 | 0.75 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 8 | 0.75 |
| (1,842) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HE1 | 9 | 0.75 |
| (1,842) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HE1 | 9 | 0.75 |
| (1,842) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HE1 | 9 | 0.75 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG21 | 7 | 0.75 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG22 | 7 | 0.75 |
| (1,828) | 1:A:131:PHE:HD2 | 1:A:138:ILE:HG23 | 7 | 0.75 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 4 | 0.75 |
| (1,1494) | 1:A:109:LYS:HE3 | 1:A:140:PHE:HE2 | 3 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 10 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 10 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 10 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 16 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 16 | 0.75 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 16 | 0.75 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 2 | 0.74 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 2 | 0.74 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 2 | 0.74 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 4 | 0.74 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 4 | 0.74 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 4 | 0.74 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 1 | 0.74 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 1 | 0.74 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 1 | 0.74 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 4 | 0.74 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 3 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 4 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 5 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 5 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 5 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 5 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 5 | 0.74 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 5 | 0.74 |
| (1,1517) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HB2 | 9 | 0.74 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 12 | 0.74 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 12 | 0.74 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 12 | 0.74 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 7 | 0.73 |
| (1,846) | 1:A:92:ILE:HG21 | 1:A:140:PHE:HE2 | 6 | 0.73 |
| (1,846) | 1:A:92:ILE:HG22 | 1:A:140:PHE:HE2 | 6 | 0.73 |
| (1,846) | 1:A:92:ILE:HG23 | 1:A:140:PHE:HE2 | 6 | 0.73 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 11 | 0.73 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 4 | 0.73 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 4 | 0.73 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 4 | 0.73 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 14 | 0.72 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 8 | 0.72 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 8 | 0.72 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 8 | 0.72 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 14 | 0.71 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 14 | 0.71 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 14 | 0.71 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 4 | 0.71 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 4 | 0.71 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 4 | 0.71 |
| (1,1046) | 1:A:78:ILE:HG21 | 1:A:79:PHE:HD2 | 6 | 0.71 |
| (1,1046) | 1:A:78:ILE:HG22 | 1:A:79:PHE:HD2 | 6 | 0.71 |
| (1,1046) | 1:A:78:ILE:HG23 | 1:A:79:PHE:HD2 | 6 | 0.71 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 4 | 0.7 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 4 | 0.7 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 4 | 0.7 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 8 | 0.7 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 8 | 0.7 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 8 | 0.7 |
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 12 | 0.7 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 6 | 0.7 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 6 | 0.7 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 6 | 0.7 |
| (1,85) | 1:A:79:PHE:HD1 | 1:A:80:TRP:H | 14 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 9 | 0.69 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 9 | 0.69 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 9 | 0.69 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 9 | 0.69 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 5 | 0.69 |
| (1,1494) | 1:A:109:LYS:HE3 | 1:A:140:PHE:HE2 | 5 | 0.68 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 10 | 0.68 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 10 | 0.68 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 10 | 0.68 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 9 | 0.68 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 9 | 0.68 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 9 | 0.68 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 14 | 0.68 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 14 | 0.68 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 14 | 0.68 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 3 | 0.67 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 3 | 0.67 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 3 | 0.67 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 10 | 0.66 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 1 | 0.66 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 1 | 0.66 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 1 | 0.66 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 11 | 0.66 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 10 | 0.65 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 10 | 0.65 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 10 | 0.65 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 4 | 0.65 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 14 | 0.65 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 15 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 11 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 11 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 11 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 11 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 11 | 0.65 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 11 | 0.65 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 4 | 0.65 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 4 | 0.65 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 4 | 0.65 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 2 | 0.65 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 2 | 0.65 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 2 | 0.65 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 5 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 1 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 2 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 2 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 2 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 2 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 2 | 0.64 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 2 | 0.64 |
| (1,9) | 1:A:62:THR:H | 1:A:79:PHE:HD2 | 7 | 0.63 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 11 | 0.63 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 11 | 0.63 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 11 | 0.63 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 9 | 0.63 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 9 | 0.63 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 11 | 0.63 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 11 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 5 | 0.63 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 11 | 0.63 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 11 | 0.63 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 11 | 0.63 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 8 | 0.63 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 8 | 0.63 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 8 | 0.63 |
| (1,323) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE21 | 12 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 13 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 13 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 13 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 13 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 13 | 0.62 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 13 | 0.62 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 11 | 0.61 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 6 | 0.61 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 10 | 0.6 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 3 | 0.6 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 3 | 0.6 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 12 | 0.6 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 12 | 0.6 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 12 | 0.6 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 7 | 0.59 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 7 | 0.59 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 7 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 15 | 0.59 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 2 | 0.59 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 2 | 0.59 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 2 | 0.59 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 2 | 0.59 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 2 | 0.59 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 2 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 10 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 10 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 10 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 10 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 10 | 0.59 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 10 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 3 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 3 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 3 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 3 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 3 | 0.59 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 3 | 0.59 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 12 | 0.59 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 12 | 0.59 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 12 | 0.59 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 11 | 0.58 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 11 | 0.58 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 11 | 0.58 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 5 | 0.58 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 5 | 0.58 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 5 | 0.58 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 14 | 0.57 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 14 | 0.57 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 14 | 0.57 |
| (1,890) | 1:A:138:ILE:HD11 | 1:A:140:PHE:HD1 | 9 | 0.57 |
| (1,890) | 1:A:138:ILE:HD12 | 1:A:140:PHE:HD1 | 9 | 0.57 |
| (1,890) | 1:A:138:ILE:HD13 | 1:A:140:PHE:HD1 | 9 | 0.57 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 2 | 0.57 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 2 | 0.57 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 2 | 0.57 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 5 | 0.56 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 5 | 0.56 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 5 | 0.56 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 13 | 0.55 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 13 | 0.55 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 13 | 0.55 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 12 | 0.54 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 12 | 0.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 12 | 0.54 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 1 | 0.54 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 1 | 0.54 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 1 | 0.54 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 15 | 0.53 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 15 | 0.53 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 15 | 0.53 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 10 | 0.53 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 10 | 0.53 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 10 | 0.53 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 8 | 0.53 |
| (1,1322) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 10 | 0.53 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 11 | 0.53 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 11 | 0.53 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 11 | 0.53 |
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 9 | 0.52 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 9 | 0.52 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 9 | 0.52 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 9 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 7 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 7 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 7 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 7 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 7 | 0.52 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 7 | 0.52 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 11 | 0.52 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 11 | 0.52 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 11 | 0.52 |
| (1,843) | 1:A:92:ILE:HD11 | 1:A:142:TYR:HD1 | 15 | 0.51 |
| (1,843) | 1:A:92:ILE:HD12 | 1:A:142:TYR:HD1 | 15 | 0.51 |
| (1,843) | 1:A:92:ILE:HD13 | 1:A:142:TYR:HD1 | 15 | 0.51 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 16 | 0.51 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 16 | 0.51 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 16 | 0.51 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 5 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 15 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 15 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 15 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 15 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 15 | 0.51 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 15 | 0.51 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 4 | 0.51 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 4 | 0.51 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 4 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 3 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 3 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 3 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 10 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 10 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 10 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 14 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 14 | 0.51 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 14 | 0.51 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 3 | 0.51 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 3 | 0.51 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 3 | 0.51 |
| (1,890) | 1:A:138:ILE:HD11 | 1:A:140:PHE:HD1 | 7 | 0.5 |
| (1,890) | 1:A:138:ILE:HD12 | 1:A:140:PHE:HD1 | 7 | 0.5 |
| (1,890) | 1:A:138:ILE:HD13 | 1:A:140:PHE:HD1 | 7 | 0.5 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 10 | 0.5 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 7 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 16 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 16 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 16 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 16 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 16 | 0.5 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 16 | 0.5 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 8 | 0.49 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 8 | 0.49 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 8 | 0.49 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 3 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 6 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1711) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 7 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 14 | 0.49 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 14 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 14 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 14 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 14 | 0.49 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 14 | 0.49 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 6 | 0.49 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 6 | 0.49 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 6 | 0.49 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 4 | 0.48 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 8 | 0.48 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD11 | 16 | 0.48 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD12 | 16 | 0.48 |
| (1,1251) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD13 | 16 | 0.48 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 15 | 0.48 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 15 | 0.48 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 15 | 0.48 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 8 | 0.47 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 8 | 0.47 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 8 | 0.47 |
| (1,323) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE21 | 9 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 13 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 13 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 13 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 13 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 13 | 0.47 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 13 | 0.47 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 5 | 0.46 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 5 | 0.46 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 5 | 0.46 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 2 | 0.46 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 7 | 0.46 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 7 | 0.46 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 7 | 0.46 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 10 | 0.46 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 10 | 0.46 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 10 | 0.46 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 9 | 0.46 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 9 | 0.46 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 9 | 0.46 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 5 | 0.46 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 5 | 0.46 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 5 | 0.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 15 | 0.46 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 15 | 0.46 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 15 | 0.46 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 6 | 0.45 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 6 | 0.45 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 6 | 0.45 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 6 | 0.45 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 6 | 0.45 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 6 | 0.45 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB2 | 5 | 0.45 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB3 | 5 | 0.45 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB2 | 8 | 0.45 |
| (1,1912) | 1:A:143:TYR:HE1 | 1:A:150:LEU:HB3 | 8 | 0.45 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 6 | 0.45 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 6 | 0.45 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 8 | 0.45 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 8 | 0.45 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 8 | 0.45 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 8 | 0.45 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 8 | 0.45 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 8 | 0.45 |
| (1,1132) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 14 | 0.45 |
| (1,1132) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 14 | 0.45 |
| (1,1132) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 14 | 0.45 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 9 | 0.45 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 13 | 0.45 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 13 | 0.45 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 13 | 0.45 |
| (1,890) | 1:A:138:ILE:HD11 | 1:A:140:PHE:HD1 | 3 | 0.44 |
| (1,890) | 1:A:138:ILE:HD12 | 1:A:140:PHE:HD1 | 3 | 0.44 |
| (1,890) | 1:A:138:ILE:HD13 | 1:A:140:PHE:HD1 | 3 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 11 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 11 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 11 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD21 | 11 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD22 | 11 | 0.44 |
| (1,1649) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD23 | 11 | 0.44 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 6 | 0.44 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 3 | 0.43 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 3 | 0.43 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 3 | 0.43 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 16 | 0.43 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 7 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 7 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 7 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 13 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 13 | 0.42 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 13 | 0.42 |
| (1,48) | 1:A:68:TYR:HE2 | 1:A:69:THR:H | 16 | 0.42 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 9 | 0.42 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 9 | 0.42 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 9 | 0.42 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 4 | 0.42 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 8 | 0.42 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 9 | 0.42 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 9 | 0.42 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 9 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 15 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 15 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 15 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG21 | 16 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG22 | 16 | 0.42 |
| (1,1080) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HG23 | 16 | 0.42 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 3 | 0.41 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 3 | 0.41 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 3 | 0.41 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 10 | 0.41 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 10 | 0.41 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 10 | 0.41 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 10 | 0.41 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 12 | 0.41 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 14 | 0.41 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 4 | 0.41 |
| (1,890) | 1:A:138:ILE:HD11 | 1:A:140:PHE:HD1 | 10 | 0.4 |
| (1,890) | 1:A:138:ILE:HD12 | 1:A:140:PHE:HD1 | 10 | 0.4 |
| (1,890) | 1:A:138:ILE:HD13 | 1:A:140:PHE:HD1 | 10 | 0.4 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 11 | 0.4 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 11 | 0.4 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 11 | 0.4 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 13 | 0.4 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 13 | 0.4 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 13 | 0.4 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 5 | 0.4 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 7 | 0.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 16 | 0.39 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 16 | 0.39 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 16 | 0.39 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 1 | 0.39 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 7 | 0.39 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 7 | 0.39 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 11 | 0.39 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 6 | 0.39 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 6 | 0.39 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 6 | 0.39 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 10 | 0.38 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 10 | 0.38 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 10 | 0.38 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 12 | 0.38 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 12 | 0.38 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 12 | 0.38 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG21 | 5 | 0.38 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG22 | 5 | 0.38 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG23 | 5 | 0.38 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 3 | 0.38 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 15 | 0.38 |
| (1,1068) | 1:A:68:TYR:HD2 | 1:A:125:ILE:HB | 12 | 0.38 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD21 | 15 | 0.37 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD22 | 15 | 0.37 |
| (1,810) | 1:A:68:TYR:HE2 | 1:A:70:LEU:HD23 | 15 | 0.37 |
| (1,187) | 1:A:128:GLY:H | 1:A:131:PHE:HD1 | 16 | 0.37 |
| (1,1863) | 1:A:129:PRO:HG2 | 1:A:130:TYR:HD2 | 10 | 0.37 |
| (1,1863) | 1:A:129:PRO:HG3 | 1:A:130:TYR:HD2 | 10 | 0.37 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 4 | 0.36 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 4 | 0.36 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 4 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 1 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 1 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 1 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 2 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 2 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 2 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 9 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 9 | 0.36 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 9 | 0.36 |
| (1,416) | 1:A:72:GLN:H | 1:A:72:GLN:HG2 | 8 | 0.36 |
| (1,416) | 1:A:72:GLN:H | 1:A:72:GLN:HG3 | 8 | 0.36 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 15 | 0.36 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 2 | 0.36 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 13 | 0.36 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 14 | 0.36 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 14 | 0.36 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 14 | 0.36 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 9 | 0.35 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 9 | 0.35 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 9 | 0.35 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 1 | 0.35 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 2 | 0.35 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 3 | 0.35 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD11 | 15 | 0.34 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD12 | 15 | 0.34 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD13 | 15 | 0.34 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD21 | 15 | 0.34 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD22 | 15 | 0.34 |
| (1,1653) | 1:A:68:TYR:HD2 | 1:A:70:LEU:HD23 | 15 | 0.34 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 1 | 0.34 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 1 | 0.34 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 1 | 0.34 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 11 | 0.34 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 11 | 0.34 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 11 | 0.34 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 13 | 0.34 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 7 | 0.34 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 7 | 0.34 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 7 | 0.34 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 2 | 0.34 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 2 | 0.34 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 2 | 0.34 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 4 | 0.33 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 4 | 0.33 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 4 | 0.33 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 4 | 0.33 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 4 | 0.33 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 12 | 0.32 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 12 | 0.32 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 12 | 0.32 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 7 | 0.32 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 7 | 0.32 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 7 | 0.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,921) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HB2 | 12 | 0.31 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 10 | 0.31 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 10 | 0.31 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 10 | 0.31 |
| (1,1308) | 1:A:65:MET:HE1 | 1:A:68:TYR:HE1 | 6 | 0.31 |
| (1,1308) | 1:A:65:MET:HE2 | 1:A:68:TYR:HE1 | 6 | 0.31 |
| (1,1308) | 1:A:65:MET:HE3 | 1:A:68:TYR:HE1 | 6 | 0.31 |
| (1,1105) | 1:A:68:TYR:HB3 | 1:A:68:TYR:HE2 | 6 | 0.31 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 4 | 0.31 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 4 | 0.31 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 4 | 0.31 |
| (1,1076) | 1:A:125:ILE:HD11 | 1:A:131:PHE:HD1 | 16 | 0.31 |
| (1,1076) | 1:A:125:ILE:HD12 | 1:A:131:PHE:HD1 | 16 | 0.31 |
| (1,1076) | 1:A:125:ILE:HD13 | 1:A:131:PHE:HD1 | 16 | 0.31 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 11 | 0.3 |
| (1,294) | 1:A:101:SER:HB2 | 1:A:104:ASN:HD22 | 15 | 0.3 |
| (1,294) | 1:A:101:SER:HB3 | 1:A:104:ASN:HD22 | 15 | 0.3 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 16 | 0.3 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 16 | 0.3 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 16 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE2 | 3 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE3 | 3 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE2 | 3 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE3 | 3 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE2 | 3 | 0.3 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE3 | 3 | 0.3 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 10 | 0.3 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 3 | 0.29 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 9 | 0.29 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 9 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 2 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 2 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 2 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 5 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 5 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 5 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 16 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 16 | 0.29 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 16 | 0.29 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 14 | 0.28 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 14 | 0.28 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 14 | 0.28 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 13 | 0.28 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 13 | 0.28 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 13 | 0.28 |
| (1,1302) | 1:A:76:LEU:HD21 | 1:A:140:PHE:HE1 | 6 | 0.28 |
| (1,1302) | 1:A:76:LEU:HD22 | 1:A:140:PHE:HE1 | 6 | 0.28 |
| (1,1302) | 1:A:76:LEU:HD23 | 1:A:140:PHE:HE1 | 6 | 0.28 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 13 | 0.27 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 13 | 0.27 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 13 | 0.27 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 13 | 0.27 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 11 | 0.27 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 11 | 0.27 |
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 4 | 0.27 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 6 | 0.27 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 6 | 0.27 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 10 | 0.27 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 10 | 0.27 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 4 | 0.26 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 4 | 0.26 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 4 | 0.26 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 12 | 0.26 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 12 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD11 | 3 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD12 | 3 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD13 | 3 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD21 | 3 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD22 | 3 | 0.26 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD23 | 3 | 0.26 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 6 | 0.26 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 6 | 0.26 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 6 | 0.26 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 6 | 0.25 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 6 | 0.25 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 6 | 0.25 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 7 | 0.25 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 7 | 0.25 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 7 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG11 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG12 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG13 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG21 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG22 | 3 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1763) | 1:A:90:ASP:HB2 | 1:A:113:VAL:HG23 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG11 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG12 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG13 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG21 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG22 | 3 | 0.25 |
| (1,1763) | 1:A:90:ASP:HB3 | 1:A:113:VAL:HG23 | 3 | 0.25 |
| (1,1571) | 1:A:58:ARG:HA | 1:A:83:LYS:HD2 | 12 | 0.25 |
| (1,1571) | 1:A:58:ARG:HA | 1:A:83:LYS:HD3 | 12 | 0.25 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 7 | 0.25 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 13 | 0.25 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG21 | 7 | 0.25 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG22 | 7 | 0.25 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG23 | 7 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 2 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 2 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 2 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 11 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 11 | 0.25 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 11 | 0.25 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 1 | 0.24 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 1 | 0.24 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 1 | 0.24 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 1 | 0.24 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 5 | 0.24 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 5 | 0.24 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 5 | 0.24 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 15 | 0.24 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 15 | 0.24 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 15 | 0.24 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 8 | 0.24 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 8 | 0.24 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 8 | 0.24 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD11 | 15 | 0.24 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD12 | 15 | 0.24 |
| (1,816) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HD13 | 15 | 0.24 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 6 | 0.24 |
| (1,1262) | 1:A:103:ALA:HB1 | 1:A:105:PHE:HD1 | 9 | 0.24 |
| (1,1262) | 1:A:103:ALA:HB2 | 1:A:105:PHE:HD1 | 9 | 0.24 |
| (1,1262) | 1:A:103:ALA:HB3 | 1:A:105:PHE:HD1 | 9 | 0.24 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB1 | 8 | 0.24 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB2 | 8 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB3 | 8 | 0.24 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG21 | 8 | 0.24 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG22 | 8 | 0.24 |
| (1,1135) | 1:A:114:THR:H | 1:A:114:THR:HG23 | 8 | 0.24 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG21 | 1 | 0.24 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG22 | 1 | 0.24 |
| (1,1087) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HG23 | 1 | 0.24 |
| (1,1068) | 1:A:68:TYR:HD2 | 1:A:125:ILE:HB | 9 | 0.24 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 9 | 0.24 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 8 | 0.23 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 10 | 0.23 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 15 | 0.23 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 15 | 0.23 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 15 | 0.23 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 3 | 0.23 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 3 | 0.23 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 3 | 0.23 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 14 | 0.23 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 14 | 0.23 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 14 | 0.23 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 8 | 0.23 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 8 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 7 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD11 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD12 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD13 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD21 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD22 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD23 | 11 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD11 | 13 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD12 | 13 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD13 | 13 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD21 | 13 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD22 | 13 | 0.23 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD23 | 13 | 0.23 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 5 | 0.23 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 5 | 0.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1197) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HB3 | 3 | 0.23 |
| (1,1197) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HB3 | 3 | 0.23 |
| (1,1197) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HB3 | 3 | 0.23 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 6 | 0.22 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 7 | 0.22 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 2 | 0.22 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 2 | 0.22 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 2 | 0.22 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 2 | 0.22 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 2 | 0.22 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 3 | 0.22 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB1 | 14 | 0.22 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB2 | 14 | 0.22 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB3 | 14 | 0.22 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 11 | 0.21 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 14 | 0.21 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 15 | 0.21 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 10 | 0.21 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 10 | 0.21 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 10 | 0.21 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 15 | 0.21 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 16 | 0.21 |
| (1,1493) | 1:A:109:LYS:HD2 | 1:A:140:PHE:HE2 | 3 | 0.21 |
| (1,1493) | 1:A:109:LYS:HD3 | 1:A:140:PHE:HE2 | 3 | 0.21 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 10 | 0.21 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 2 | 0.21 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 4 | 0.2 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 15 | 0.2 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 14 | 0.2 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 14 | 0.2 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 14 | 0.2 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 15 | 0.2 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 15 | 0.2 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 15 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1827) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HD1 | 8 | 0.2 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 1 | 0.2 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 3 | 0.2 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 3 | 0.2 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 3 | 0.2 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 14 | 0.19 |
| (1,922) | 1:A:76:LEU:HD11 | 1:A:140:PHE:HE1 | 5 | 0.19 |
| (1,922) | 1:A:76:LEU:HD12 | 1:A:140:PHE:HE1 | 5 | 0.19 |
| (1,922) | 1:A:76:LEU:HD13 | 1:A:140:PHE:HE1 | 5 | 0.19 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 13 | 0.19 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 2 | 0.19 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 2 | 0.19 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 4 | 0.19 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 4 | 0.19 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 12 | 0.19 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 12 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 8 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 8 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 8 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 12 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 12 | 0.19 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 12 | 0.19 |
| (1,1808) | 1:A:101:SER:HB2 | 1:A:104:ASN:HD21 | 15 | 0.19 |
| (1,1808) | 1:A:101:SER:HB2 | 1:A:104:ASN:HD22 | 15 | 0.19 |
| (1,1808) | 1:A:101:SER:HB3 | 1:A:104:ASN:HD21 | 15 | 0.19 |
| (1,1808) | 1:A:101:SER:HB3 | 1:A:104:ASN:HD22 | 15 | 0.19 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 14 | 0.19 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 5 | 0.19 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 6 | 0.19 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 16 | 0.19 |
| (1,1179) | 1:A:86:VAL:HG11 | 1:A:117:GLN:HA | 3 | 0.19 |
| (1,1179) | 1:A:86:VAL:HG12 | 1:A:117:GLN:HA | 3 | 0.19 |
| (1,1179) | 1:A:86:VAL:HG13 | 1:A:117:GLN:HA | 3 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 5 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 5 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 5 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 16 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 16 | 0.19 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 16 | 0.19 |
| (1,980) | 1:A:57:SER:HB2 | 1:A:58:ARG:HD2 | 8 | 0.18 |
| (1,980) | 1:A:57:SER:HB2 | 1:A:58:ARG:HD3 | 8 | 0.18 |
| (1,980) | 1:A:57:SER:HB3 | 1:A:58:ARG:HD2 | 8 | 0.18 |
| (1,980) | 1:A:57:SER:HB3 | 1:A:58:ARG:HD3 | 8 | 0.18 |
| (1,899) | 1:A:114:THR:H | 1:A:121:ILE:HD11 | 11 | 0.18 |
| (1,899) | 1:A:114:THR:H | 1:A:121:ILE:HD12 | 11 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,899) | 1:A:114:THR:H | 1:A:121:ILE:HD13 | 11 | 0.18 |
| (1,861) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 3 | 0.18 |
| (1,861) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 3 | 0.18 |
| (1,861) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 3 | 0.18 |
| (1,823) | 1:A:138:ILE:HG21 | 1:A:157:ILE:HG21 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG21 | 1:A:157:ILE:HG22 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG21 | 1:A:157:ILE:HG23 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG22 | 1:A:157:ILE:HG21 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG22 | 1:A:157:ILE:HG22 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG22 | 1:A:157:ILE:HG23 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG23 | 1:A:157:ILE:HG21 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG23 | 1:A:157:ILE:HG22 | 4 | 0.18 |
| (1,823) | 1:A:138:ILE:HG23 | 1:A:157:ILE:HG23 | 4 | 0.18 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 10 | 0.18 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 10 | 0.18 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 11 | 0.18 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 11 | 0.18 |
| (1,296) | 1:A:117:GLN:HA | 1:A:117:GLN:HE22 | 1 | 0.18 |
| (1,296) | 1:A:117:GLN:HA | 1:A:117:GLN:HE22 | 15 | 0.18 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 1 | 0.18 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 1 | 0.18 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 1 | 0.18 |
| (1,235) | 1:A:109:LYS:HG3 | 1:A:141:LYS:H | 2 | 0.18 |
| (1,201) | 1:A:133:GLU:H | 1:A:135:GLU:H | 6 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG21 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG22 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1828) | 1:A:113:VAL:HG23 | 1:A:142:TYR:HE1 | 15 | 0.18 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB2 | 12 | 0.18 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB3 | 12 | 0.18 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB2 | 12 | 0.18 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB3 | 12 | 0.18 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 13 | 0.18 |
| (1,1330) | 1:A:83:LYS:HA | 1:A:83:LYS:HD3 | 3 | 0.18 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 14 | 0.18 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 14 | 0.18 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 14 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE2 | 4 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE3 | 4 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE2 | 4 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE3 | 4 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE2 | 4 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE3 | 4 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE2 | 15 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE3 | 15 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE2 | 15 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE3 | 15 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE2 | 15 | 0.18 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE3 | 15 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 13 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 13 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 13 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 15 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 15 | 0.18 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 15 | 0.18 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 5 | 0.17 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 3 | 0.17 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 13 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 3 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 3 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 3 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 9 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 9 | 0.17 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 9 | 0.17 |
| (1,1518) | 1:A:68:TYR:HE1 | 1:A:124:ARG:HA | 4 | 0.17 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 1 | 0.17 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 7 | 0.17 |
| (1,1406) | 1:A:135:GLU:HG2 | 1:A:136:ILE:H | 6 | 0.17 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB1 | 1 | 0.17 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB2 | 1 | 0.17 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB3 | 1 | 0.17 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 14 | 0.17 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 14 | 0.17 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 14 | 0.17 |
| (2,49) | 1:A:142:TYR:O | 1:A:152:ALA:H | 2 | 0.16 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 5 | 0.16 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 2 | 0.16 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 9 | 0.16 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 12 | 0.16 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 6 | 0.16 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 6 | 0.16 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 6 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 5 | 0.16 |
| (1,860) | 1:A:61:LEU:HD21 | 1:A:78:ILE:HD11 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD21 | 1:A:78:ILE:HD12 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD21 | 1:A:78:ILE:HD13 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD22 | 1:A:78:ILE:HD11 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD22 | 1:A:78:ILE:HD12 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD22 | 1:A:78:ILE:HD13 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD23 | 1:A:78:ILE:HD11 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD23 | 1:A:78:ILE:HD12 | 3 | 0.16 |
| (1,860) | 1:A:61:LEU:HD23 | 1:A:78:ILE:HD13 | 3 | 0.16 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 2 | 0.16 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 2 | 0.16 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 2 | 0.16 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG21 | 5 | 0.16 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG22 | 5 | 0.16 |
| (1,829) | 1:A:131:PHE:HE2 | 1:A:138:ILE:HG23 | 5 | 0.16 |
| (1,637) | 1:A:124:ARG:HG3 | 1:A:125:ILE:H | 1 | 0.16 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 1 | 0.16 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 1 | 0.16 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 6 | 0.16 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 6 | 0.16 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 10 | 0.16 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 10 | 0.16 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 10 | 0.16 |
| (1,1515) | 1:A:68:TYR:HD2 | 1:A:69:THR:H | 15 | 0.16 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 4 | 0.16 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE2 | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HE3 | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE2 | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HE3 | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE2 | 8 | 0.16 |
| (1,1290) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HE3 | 8 | 0.16 |
| (1,1197) | 1:A:97:ILE:HD11 | 1:A:137:LYS:HB3 | 4 | 0.16 |
| (1,1197) | 1:A:97:ILE:HD12 | 1:A:137:LYS:HB3 | 4 | 0.16 |
| (1,1197) | 1:A:97:ILE:HD13 | 1:A:137:LYS:HB3 | 4 | 0.16 |
| (1,1166) | 1:A:126:GLU:HG2 | 1:A:127:PRO:HD2 | 2 | 0.16 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 7 | 0.16 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 7 | 0.16 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 7 | 0.16 |
| (1,1062) | 1:A:75:ASN:HD22 | 1:A:122:VAL:HG21 | 11 | 0.16 |
| (1,1062) | 1:A:75:ASN:HD22 | 1:A:122:VAL:HG22 | 11 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1062) | 1:A:75:ASN:HD22 | 1:A:122:VAL:HG23 | 11 | 0.16 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 5 | 0.16 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 5 | 0.16 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 5 | 0.16 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 9 | 0.15 |
| (1,981) | 1:A:57:SER:HA | 1:A:58:ARG:HG2 | 9 | 0.15 |
| (1,981) | 1:A:57:SER:HA | 1:A:58:ARG:HG3 | 9 | 0.15 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 3 | 0.15 |
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 11 | 0.15 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 11 | 0.15 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 11 | 0.15 |
| (1,804) | 1:A:70:LEU:HD11 | 1:A:131:PHE:HD1 | 14 | 0.15 |
| (1,804) | 1:A:70:LEU:HD12 | 1:A:131:PHE:HD1 | 14 | 0.15 |
| (1,804) | 1:A:70:LEU:HD13 | 1:A:131:PHE:HD1 | 14 | 0.15 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 11 | 0.15 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 11 | 0.15 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 11 | 0.15 |
| (1,235) | 1:A:109:LYS:HG3 | 1:A:141:LYS:H | 10 | 0.15 |
| (1,1745) | 1:A:84:GLU:HB2 | 1:A:85:GLU:H | 1 | 0.15 |
| (1,1745) | 1:A:84:GLU:HB3 | 1:A:85:GLU:H | 1 | 0.15 |
| (1,1745) | 1:A:84:GLU:HB2 | 1:A:85:GLU:H | 6 | 0.15 |
| (1,1745) | 1:A:84:GLU:HB3 | 1:A:85:GLU:H | 6 | 0.15 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG21 | 4 | 0.15 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG22 | 4 | 0.15 |
| (1,1175) | 1:A:140:PHE:HD1 | 1:A:154:THR:HG23 | 4 | 0.15 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 10 | 0.15 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 10 | 0.15 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 10 | 0.15 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 12 | 0.14 |
| (2,49) | 1:A:142:TYR:O | 1:A:152:ALA:H | 4 | 0.14 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 10 | 0.14 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 16 | 0.14 |
| (1,994) | 1:A:135:GLU:HB2 | 1:A:160:LYS:H | 8 | 0.14 |
| (1,994) | 1:A:135:GLU:HB3 | 1:A:160:LYS:H | 8 | 0.14 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 10 | 0.14 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 13 | 0.14 |
| (1,959) | 1:A:68:TYR:HD1 | 1:A:157:ILE:HG21 | 2 | 0.14 |
| (1,959) | 1:A:68:TYR:HD1 | 1:A:157:ILE:HG22 | 2 | 0.14 |
| (1,959) | 1:A:68:TYR:HD1 | 1:A:157:ILE:HG23 | 2 | 0.14 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 8 | 0.14 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 8 | 0.14 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 8 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,858) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 9 | 0.14 |
| (1,858) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 9 | 0.14 |
| (1,858) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 9 | 0.14 |
| (1,690) | 1:A:97:ILE:HG12 | 1:A:137:LYS:H | 16 | 0.14 |
| (1,587) | 1:A:117:GLN:H | 1:A:117:GLN:HE21 | 15 | 0.14 |
| (1,322) | 1:A:68:TYR:HD1 | 1:A:72:GLN:HE22 | 16 | 0.14 |
| (1,296) | 1:A:117:GLN:HA | 1:A:117:GLN:HE22 | 7 | 0.14 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 5 | 0.14 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 5 | 0.14 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 5 | 0.14 |
| (1,235) | 1:A:109:LYS:HG3 | 1:A:141:LYS:H | 16 | 0.14 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 3 | 0.14 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 3 | 0.14 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 3 | 0.14 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 3 | 0.14 |
| (1,1746) | 1:A:84:GLU:HG2 | 1:A:85:GLU:H | 5 | 0.14 |
| (1,1746) | 1:A:84:GLU:HG3 | 1:A:85:GLU:H | 5 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1615) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 8 | 0.14 |
| (1,1516) | 1:A:68:TYR:HE2 | 1:A:125:ILE:HB | 12 | 0.14 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 11 | 0.14 |
| (1,143) | 1:A:103:ALA:HA | 1:A:105:PHE:H | 12 | 0.14 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE1 | 13 | 0.14 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE2 | 13 | 0.14 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE3 | 13 | 0.14 |
| (1,1307) | 1:A:65:MET:HE1 | 1:A:68:TYR:HD1 | 5 | 0.14 |
| (1,1307) | 1:A:65:MET:HE2 | 1:A:68:TYR:HD1 | 5 | 0.14 |
| (1,1307) | 1:A:65:MET:HE3 | 1:A:68:TYR:HD1 | 5 | 0.14 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB1 | 14 | 0.14 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB2 | 14 | 0.14 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB3 | 14 | 0.14 |
| (1,1276) | 1:A:70:LEU:HD21 | 1:A:127:PRO:HG2 | 9 | 0.14 |
| (1,1276) | 1:A:70:LEU:HD22 | 1:A:127:PRO:HG2 | 9 | 0.14 |
| (1,1276) | 1:A:70:LEU:HD23 | 1:A:127:PRO:HG2 | 9 | 0.14 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB1 | 16 | 0.14 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB2 | 16 | 0.14 |
| (1,1239) | 1:A:61:LEU:HB3 | 1:A:63:ALA:HB3 | 16 | 0.14 |
| (1,1166) | 1:A:126:GLU:HG2 | 1:A:127:PRO:HD2 | 11 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1101) | 1:A:136:ILE:H | 1:A:158:THR:HG21 | 11 | 0.14 |
| (1,1101) | 1:A:136:ILE:H | 1:A:158:THR:HG22 | 11 | 0.14 |
| (1,1101) | 1:A:136:ILE:H | 1:A:158:THR:HG23 | 11 | 0.14 |
| (1,1068) | 1:A:68:TYR:HD2 | 1:A:125:ILE:HB | 10 | 0.14 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 2 | 0.13 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 8 | 0.13 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 11 | 0.13 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 15 | 0.13 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 2 | 0.13 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 11 | 0.13 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 11 | 0.13 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 11 | 0.13 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 2 | 0.13 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG11 | 14 | 0.13 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG12 | 14 | 0.13 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG13 | 14 | 0.13 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG2 | 4 | 0.13 |
| (1,338) | 1:A:58:ARG:H | 1:A:58:ARG:HG3 | 4 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 6 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 6 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 6 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD11 | 7 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD12 | 7 | 0.13 |
| (1,273) | 1:A:156:CYS:H | 1:A:157:ILE:HD13 | 7 | 0.13 |
| (1,235) | 1:A:109:LYS:HG3 | 1:A:141:LYS:H | 11 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 9 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 9 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 9 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 9 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 12 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 12 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 12 | 0.13 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 12 | 0.13 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG2 | 11 | 0.13 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG3 | 11 | 0.13 |
| (1,1330) | 1:A:83:LYS:HA | 1:A:83:LYS:HD3 | 8 | 0.13 |
| (1,1320) | 1:A:113:VAL:HG11 | 1:A:142:TYR:HD1 | 15 | 0.13 |
| (1,1320) | 1:A:113:VAL:HG12 | 1:A:142:TYR:HD1 | 15 | 0.13 |
| (1,1320) | 1:A:113:VAL:HG13 | 1:A:142:TYR:HD1 | 15 | 0.13 |
| (1,1265) | 1:A:117:GLN:HG3 | 1:A:118:LYS:H | 12 | 0.13 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 4 | 0.13 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 4 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 4 | 0.13 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 9 | 0.13 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 9 | 0.13 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 9 | 0.13 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 4 | 0.13 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 4 | 0.13 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 4 | 0.13 |
| (1,1039) | 1:A:78:ILE:HG12 | 1:A:140:PHE:HE1 | 7 | 0.13 |
| (2,56) | 1:A:80:TRP:O | 1:A:119:GLY:N | 5 | 0.12 |
| (2,55) | 1:A:80:TRP:O | 1:A:119:GLY:H | 16 | 0.12 |
| (2,50) | 1:A:142:TYR:O | 1:A:152:ALA:N | 2 | 0.12 |
| (2,49) | 1:A:142:TYR:O | 1:A:152:ALA:H | 8 | 0.12 |
| (2,49) | 1:A:142:TYR:O | 1:A:152:ALA:H | 13 | 0.12 |
| (2,33) | 1:A:94:LEU:O | 1:A:107:ASP:H | 12 | 0.12 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD11 | 1 | 0.12 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD12 | 1 | 0.12 |
| (1,923) | 1:A:68:TYR:HD1 | 1:A:76:LEU:HD13 | 1 | 0.12 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 1 | 0.12 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 11 | 0.12 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 3 | 0.12 |
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 3 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG11 | 3 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG12 | 3 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG13 | 3 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG11 | 13 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG12 | 13 | 0.12 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG13 | 13 | 0.12 |
| (1,274) | 1:A:97:ILE:HG13 | 1:A:156:CYS:H | 16 | 0.12 |
| (1,221) | 1:A:140:PHE:H | 1:A:140:PHE:HD1 | 7 | 0.12 |
| (1,217) | 1:A:97:ILE:HG12 | 1:A:138:ILE:H | 14 | 0.12 |
| (1,1913) | 1:A:144:HIS:HB2 | 1:A:149:ALA:H | 13 | 0.12 |
| (1,1913) | 1:A:144:HIS:HB3 | 1:A:149:ALA:H | 13 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 6 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 6 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 6 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 6 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 8 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 8 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 8 | 0.12 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 8 | 0.12 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG2 | 1 | 0.12 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG3 | 1 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD11 | 15 | 0.12 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD12 | 15 | 0.12 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD13 | 15 | 0.12 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD21 | 15 | 0.12 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD22 | 15 | 0.12 |
| (1,1650) | 1:A:68:TYR:HE1 | 1:A:76:LEU:HD23 | 15 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD11 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD12 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD13 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD21 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD22 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,1615) | 1:A:61:LEU:HD23 | 1:A:142:TYR:HD1 | 5 | 0.12 |
| (1,151) | 1:A:150:LEU:HD21 | 1:A:153:THR:H | 15 | 0.12 |
| (1,151) | 1:A:150:LEU:HD22 | 1:A:153:THR:H | 15 | 0.12 |
| (1,151) | 1:A:150:LEU:HD23 | 1:A:153:THR:H | 15 | 0.12 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE1 | 8 | 0.12 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE2 | 8 | 0.12 |
| (1,1319) | 1:A:132:MET:H | 1:A:132:MET:HE3 | 8 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB1 | 2 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB2 | 2 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB3 | 2 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB1 | 5 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB2 | 5 | 0.12 |
| (1,13) | 1:A:62:THR:H | 1:A:63:ALA:HB3 | 5 | 0.12 |
| (1,1254) | 1:A:83:LYS:HA | 1:A:117:GLN:HE21 | 6 | 0.12 |
| (1,1254) | 1:A:83:LYS:HA | 1:A:117:GLN:HE21 | 16 | 0.12 |
| (1,1166) | 1:A:126:GLU:HG2 | 1:A:127:PRO:HD2 | 4 | 0.12 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 8 | 0.12 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 8 | 0.12 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 8 | 0.12 |
| (2,50) | 1:A:142:TYR:O | 1:A:152:ALA:N | 4 | 0.11 |
| (2,3) | 1:A:78:ILE:O | 1:A:121:ILE:H | 11 | 0.11 |
| (2,21) | 1:A:157:ILE:O | 1:A:138:ILE:H | 14 | 0.11 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 1 | 0.11 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 3 | 0.11 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 4 | 0.11 |
| (1,968) | 1:A:93:GLY:H | 1:A:94:LEU:HA | 7 | 0.11 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD11 | 12 | 0.11 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD12 | 12 | 0.11 |
| (1,915) | 1:A:131:PHE:HD2 | 1:A:136:ILE:HD13 | 12 | 0.11 |
| (1,888) | 1:A:103:ALA:HA | 1:A:105:PHE:HD1 | 12 | 0.11 |
| (1,773) | 1:A:160:LYS:HD2 | 1:A:161:ASN:H | 5 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,773) | 1:A:160:LYS:HD3 | 1:A:161:ASN:H | 5 | 0.11 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG11 | 15 | 0.11 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG12 | 15 | 0.11 |
| (1,69) | 1:A:76:LEU:H | 1:A:122:VAL:HG13 | 15 | 0.11 |
| (1,683) | 1:A:135:GLU:HG3 | 1:A:136:ILE:H | 1 | 0.11 |
| (1,587) | 1:A:117:GLN:H | 1:A:117:GLN:HE21 | 1 | 0.11 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 1 | 0.11 |
| (1,333) | 1:A:109:LYS:H | 1:A:140:PHE:HE2 | 12 | 0.11 |
| (1,299) | 1:A:117:GLN:HB2 | 1:A:117:GLN:HE22 | 8 | 0.11 |
| (1,299) | 1:A:117:GLN:HB2 | 1:A:117:GLN:HE22 | 11 | 0.11 |
| (1,289) | 1:A:69:THR:HG21 | 1:A:161:ASN:H | 14 | 0.11 |
| (1,289) | 1:A:69:THR:HG22 | 1:A:161:ASN:H | 14 | 0.11 |
| (1,289) | 1:A:69:THR:HG23 | 1:A:161:ASN:H | 14 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG21 | 6 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG22 | 6 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG23 | 6 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG21 | 10 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG22 | 10 | 0.11 |
| (1,231) | 1:A:141:LYS:H | 1:A:154:THR:HG23 | 10 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 5 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 5 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 5 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 5 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD2 | 7 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB2 | 1:A:137:LYS:HD3 | 7 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD2 | 7 | 0.11 |
| (1,1896) | 1:A:137:LYS:HB3 | 1:A:137:LYS:HD3 | 7 | 0.11 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB2 | 9 | 0.11 |
| (1,1807) | 1:A:101:SER:HB2 | 1:A:104:ASN:HB3 | 9 | 0.11 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB2 | 9 | 0.11 |
| (1,1807) | 1:A:101:SER:HB3 | 1:A:104:ASN:HB3 | 9 | 0.11 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG2 | 7 | 0.11 |
| (1,1801) | 1:A:97:ILE:HG12 | 1:A:137:LYS:HG3 | 7 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD11 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD12 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD13 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD21 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD22 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1784) | 1:A:94:LEU:HD23 | 1:A:96:HIS:HD2 | 9 | 0.11 |
| (1,1544) | 1:A:131:PHE:HA | 1:A:136:ILE:HG12 | 5 | 0.11 |
| (1,1544) | 1:A:131:PHE:HA | 1:A:136:ILE:HG13 | 5 | 0.11 |
| (1,151) | 1:A:150:LEU:HD21 | 1:A:153:THR:H | 1 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,151) | 1:A:150:LEU:HD22 | 1:A:153:THR:H | 1 | 0.11 |
| (1,151) | 1:A:150:LEU:HD23 | 1:A:153:THR:H | 1 | 0.11 |
| (1,1371) | 1:A:121:ILE:HG13 | 1:A:122:VAL:H | 16 | 0.11 |
| (1,1276) | 1:A:70:LEU:HD21 | 1:A:127:PRO:HG2 | 3 | 0.11 |
| (1,1276) | 1:A:70:LEU:HD22 | 1:A:127:PRO:HG2 | 3 | 0.11 |
| (1,1276) | 1:A:70:LEU:HD23 | 1:A:127:PRO:HG2 | 3 | 0.11 |
| (1,1254) | 1:A:83:LYS:HA | 1:A:117:GLN:HE21 | 12 | 0.11 |
| (1,1137) | 1:A:136:ILE:HG12 | 1:A:160:LYS:HA | 7 | 0.11 |
| (1,1137) | 1:A:136:ILE:HG13 | 1:A:160:LYS:HA | 7 | 0.11 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG21 | 3 | 0.11 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG22 | 3 | 0.11 |
| (1,1064) | 1:A:76:LEU:HB3 | 1:A:122:VAL:HG23 | 3 | 0.11 |
| (1,1047) | 1:A:78:ILE:HG21 | 1:A:140:PHE:HE1 | 14 | 0.11 |
| (1,1047) | 1:A:78:ILE:HG22 | 1:A:140:PHE:HE1 | 14 | 0.11 |
| (1,1047) | 1:A:78:ILE:HG23 | 1:A:140:PHE:HE1 | 14 | 0.11 |

10 Dihedral-angle violation analysis [i](#)

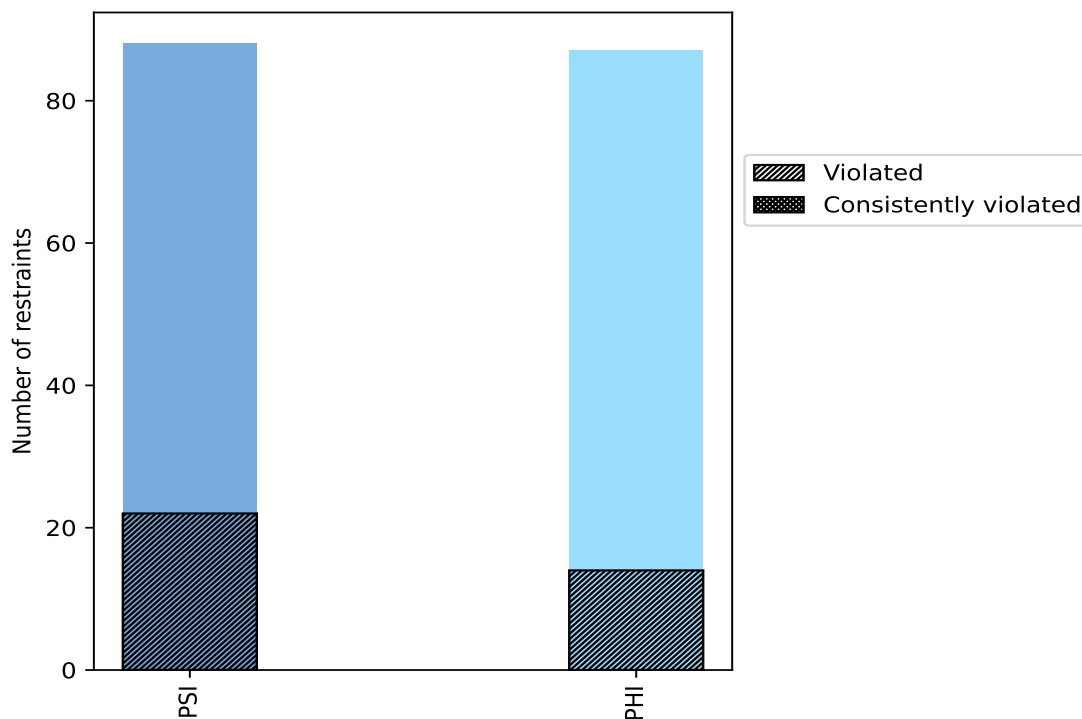
10.1 Summary of dihedral-angle violations [i](#)

The following table provides the summary of dihedral-angle violations in different dihedral-angle types. Violations less than 1° are not included in the calculation.

| Angle type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|------------|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| PSI | 88 | 50.3 | 22 | 25.0 | 12.6 | 0 | 0.0 | 0.0 |
| PHI | 87 | 49.7 | 14 | 16.1 | 8.0 | 0 | 0.0 | 0.0 |
| Total | 175 | 100.0 | 36 | 20.6 | 20.6 | 0 | 0.0 | 0.0 |

¹ percentage calculated with respect to total number of dihedral-angle restraints, ² percentage calculated with respect to number of restraints in a particular dihedral-angle type, ³ violated in at least one model, ⁴ violated in all the models

10.1.1 Bar chart : Distribution of dihedral-angles and violations [i](#)



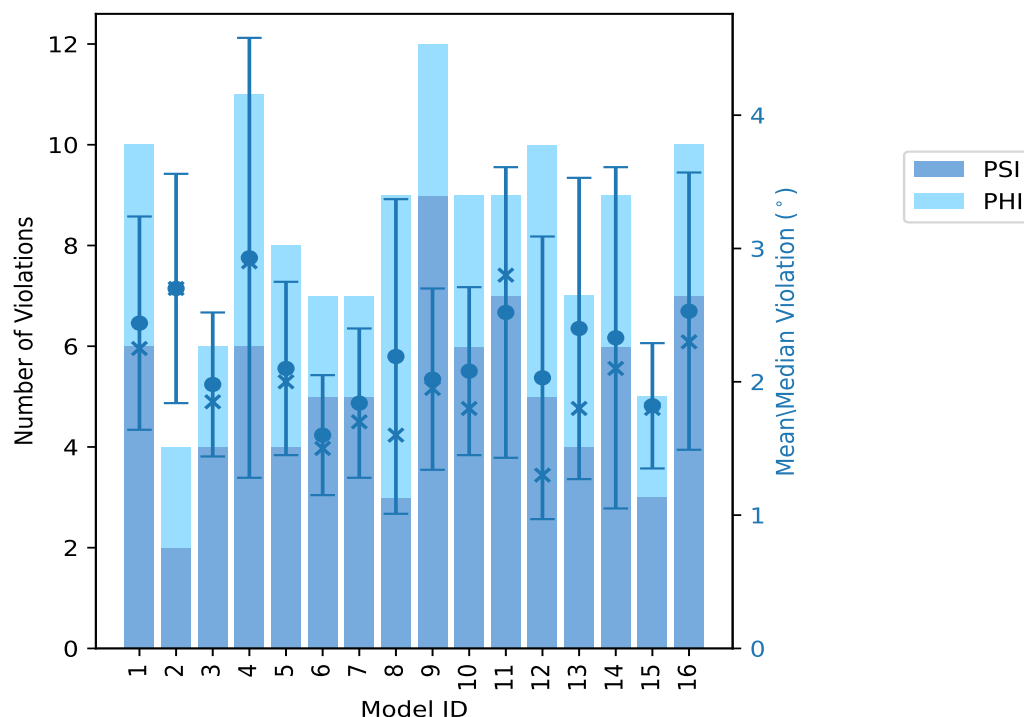
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

10.2 Dihedral-angle violation statistics for each model [i](#)

The following table provides the dihedral-angle violation statistics for each model in the ensemble. Violations less than 1° are not included in the statistics.

| Model ID | Number of violations | | | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|-------|----------|---------|--------|------------|
| | PSI | PHI | Total | | | | |
| 1 | 6 | 4 | 10 | 2.44 | 3.9 | 0.8 | 2.25 |
| 2 | 2 | 2 | 4 | 2.7 | 3.7 | 0.86 | 2.7 |
| 3 | 4 | 2 | 6 | 1.98 | 2.7 | 0.54 | 1.85 |
| 4 | 6 | 5 | 11 | 2.93 | 7.3 | 1.65 | 2.9 |
| 5 | 4 | 4 | 8 | 2.1 | 3.0 | 0.65 | 2.0 |
| 6 | 5 | 2 | 7 | 1.6 | 2.2 | 0.45 | 1.5 |
| 7 | 5 | 2 | 7 | 1.84 | 2.8 | 0.56 | 1.7 |
| 8 | 3 | 6 | 9 | 2.19 | 4.2 | 1.18 | 1.6 |
| 9 | 9 | 3 | 12 | 2.02 | 3.2 | 0.68 | 1.95 |
| 10 | 6 | 3 | 9 | 2.08 | 3.0 | 0.63 | 1.8 |
| 11 | 7 | 2 | 9 | 2.52 | 4.0 | 1.09 | 2.8 |
| 12 | 5 | 5 | 10 | 2.03 | 3.8 | 1.06 | 1.3 |
| 13 | 4 | 3 | 7 | 2.4 | 4.5 | 1.13 | 1.8 |
| 14 | 6 | 3 | 9 | 2.33 | 5.3 | 1.28 | 2.1 |
| 15 | 3 | 2 | 5 | 1.82 | 2.6 | 0.47 | 1.8 |
| 16 | 7 | 3 | 10 | 2.53 | 4.9 | 1.04 | 2.3 |

10.2.1 Bar graph : Dihedral violation statistics for each model [i](#)



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

10.3 Dihedral-angle violation statistics for the ensemble [i](#)

Violation analysis may find that some restraints are violated in very few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of ensemble.

| Number of violated restraints | | | Fraction of the ensemble | |
|-------------------------------|-----|-------|--------------------------|------|
| PSI | PHI | Total | Count ¹ | % |
| 7 | 6 | 13 | 1 | 6.2 |
| 3 | 2 | 5 | 2 | 12.5 |
| 2 | 1 | 3 | 3 | 18.8 |
| 0 | 2 | 2 | 4 | 25.0 |
| 4 | 0 | 4 | 5 | 31.2 |
| 4 | 0 | 4 | 6 | 37.5 |
| 0 | 1 | 1 | 7 | 43.8 |
| 0 | 0 | 0 | 8 | 50.0 |
| 1 | 1 | 2 | 9 | 56.2 |
| 1 | 0 | 1 | 10 | 62.5 |
| 0 | 0 | 0 | 11 | 68.8 |

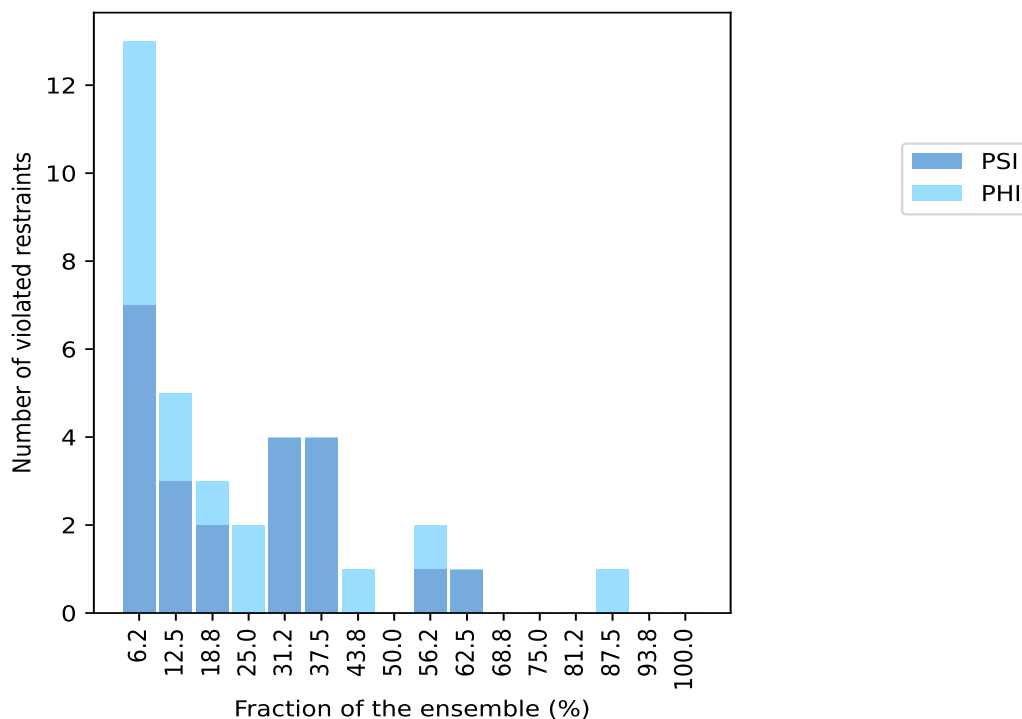
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| Number of violated restraints | | | Fraction of the ensemble | |
|-------------------------------|-----|-------|--------------------------|-------|
| PSI | PHI | Total | Count ¹ | % |
| 0 | 0 | 0 | 12 | 75.0 |
| 0 | 0 | 0 | 13 | 81.2 |
| 0 | 1 | 1 | 14 | 87.5 |
| 0 | 0 | 0 | 15 | 93.8 |
| 0 | 0 | 0 | 16 | 100.0 |

¹ Number of models with violations

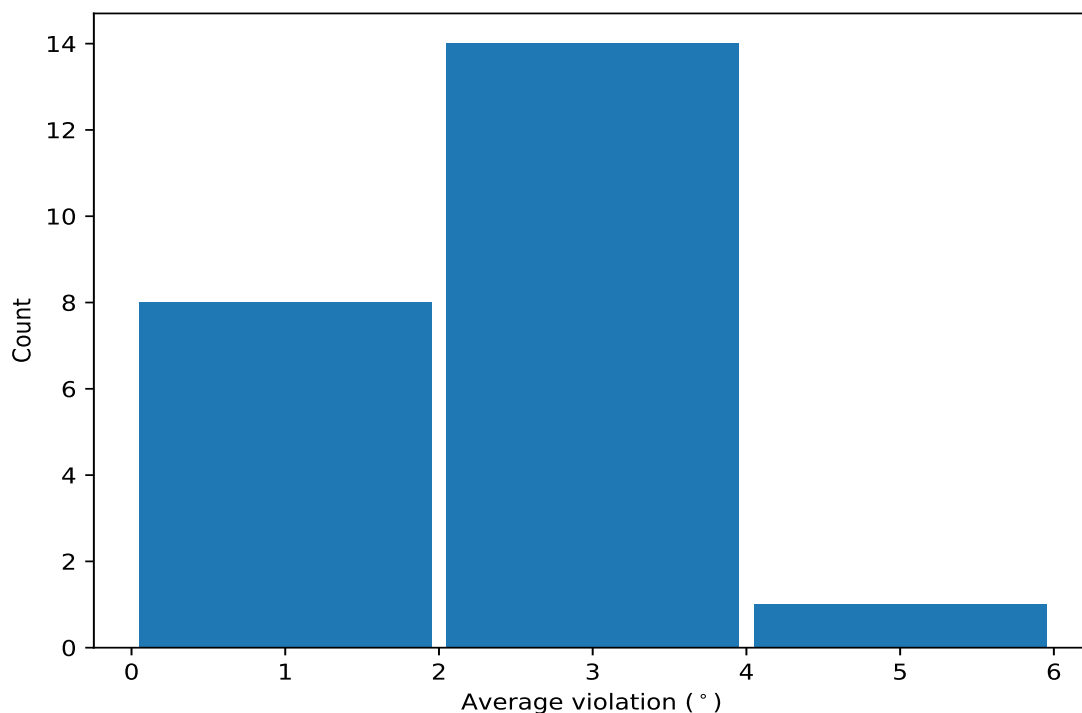
10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble [i](#)



10.4 Most violated dihedral-angle restraints in the ensemble [i](#)

10.4.1 Histogram : Distribution of mean dihedral-angle violations [i](#)

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble



10.4.2 Table: Most violated dihedral-angle restraints [i](#)

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint.

| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Models ¹ | Mean | SD ² | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|------|-----------------|--------|
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 14 | 2.59 | 0.91 | 2.95 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 10 | 2.25 | 0.74 | 2.4 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 9 | 2.51 | 1.23 | 2.1 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 9 | 2.09 | 0.62 | 2.2 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 7 | 2.0 | 0.83 | 1.7 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 6 | 2.85 | 0.84 | 2.8 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 6 | 2.65 | 0.89 | 2.45 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 6 | 2.32 | 1.22 | 1.8 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 6 | 1.58 | 0.41 | 1.55 |
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 5 | 2.66 | 1.09 | 2.8 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 5 | 2.46 | 0.58 | 2.7 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 5 | 2.1 | 0.46 | 2.0 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 5 | 1.96 | 0.7 | 1.8 |
| (1,68) | 1:A:99:GLU:C | 1:A:100:ASN:N | 1:A:100:ASN:CA | 1:A:100:ASN:C | 4 | 2.65 | 0.91 | 2.65 |
| (1,54) | 1:A:91:TRP:C | 1:A:92:ILE:N | 1:A:92:ILE:CA | 1:A:92:ILE:C | 4 | 1.33 | 0.18 | 1.3 |
| (1,3) | 1:A:58:ARG:N | 1:A:58:ARG:CA | 1:A:58:ARG:C | 1:A:59:SER:N | 3 | 4.23 | 2.17 | 2.8 |
| (1,81) | 1:A:107:ASP:N | 1:A:107:ASP:CA | 1:A:107:ASP:C | 1:A:108:SER:N | 3 | 3.0 | 1.71 | 2.5 |
| (1,40) | 1:A:80:TRP:C | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 3 | 2.3 | 0.86 | 2.7 |
| (1,131) | 1:A:136:ILE:N | 1:A:136:ILE:CA | 1:A:136:ILE:C | 1:A:137:LYS:N | 2 | 1.7 | 0.4 | 1.7 |
| (1,137) | 1:A:139:CYS:N | 1:A:139:CYS:CA | 1:A:139:CYS:C | 1:A:140:PHE:N | 2 | 1.3 | 0.2 | 1.3 |
| (1,25) | 1:A:71:GLY:N | 1:A:71:GLY:CA | 1:A:71:GLY:C | 1:A:72:GLN:N | 2 | 1.25 | 0.05 | 1.25 |

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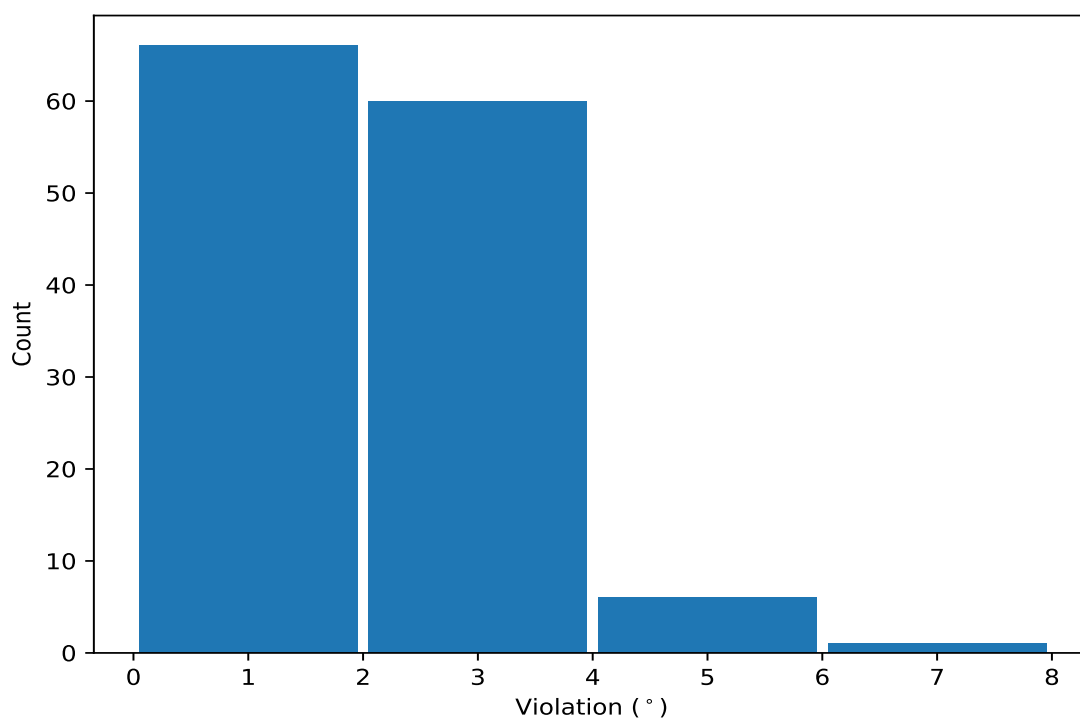
| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Models ¹ | Mean | SD ² | Median |
|---------|---------------|---------------|----------------|---------------|---------------------|------|-----------------|--------|
| (1,46) | 1:A:85:GLU:C | 1:A:86:VAL:N | 1:A:86:VAL:CA | 1:A:86:VAL:C | 2 | 1.15 | 0.05 | 1.15 |
| (1,102) | 1:A:118:LYS:C | 1:A:119:GLY:N | 1:A:119:GLY:CA | 1:A:119:GLY:C | 2 | 1.15 | 0.05 | 1.15 |

¹ Number of violated models, ²Standard deviation, All angle values are in degree (°)

10.5 All violated dihedral-angle restraints [i](#)

10.5.1 Histogram : Distribution of violations [i](#)

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.



10.5.2 Table: All violated dihedral-angle restraints [i](#)

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint.

| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,3) | 1:A:58:ARG:N | 1:A:58:ARG:CA | 1:A:58:ARG:C | 1:A:59:SER:N | 4 | 7.3 |
| (1,81) | 1:A:107:ASP:N | 1:A:107:ASP:CA | 1:A:107:ASP:C | 1:A:108:SER:N | 14 | 5.3 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 16 | 4.9 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 13 | 4.5 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 8 | 4.2 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 4 | 4.2 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 11 | 4.0 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 1 | 3.9 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 12 | 3.8 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 11 | 3.7 |
| (1,68) | 1:A:99:GLU:C | 1:A:100:ASN:N | 1:A:100:ASN:CA | 1:A:100:ASN:C | 16 | 3.7 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 2 | 3.7 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 8 | 3.7 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 4 | 3.5 |
| (1,68) | 1:A:99:GLU:C | 1:A:100:ASN:N | 1:A:100:ASN:CA | 1:A:100:ASN:C | 12 | 3.4 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 2 | 3.4 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 11 | 3.4 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 14 | 3.4 |
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 13 | 3.4 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 8 | 3.4 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 11 | 3.3 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 1 | 3.3 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 9 | 3.2 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 1 | 3.2 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 12 | 3.2 |
| (1,40) | 1:A:80:TRP:C | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 4 | 3.1 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 10 | 3.0 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 4 | 3.0 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 5 | 3.0 |
| (1,2) | 1:A:57:SER:C | 1:A:58:ARG:N | 1:A:58:ARG:CA | 1:A:58:ARG:C | 5 | 2.9 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 4 | 2.9 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 10 | 2.9 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 9 | 2.9 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 7 | 2.8 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 10 | 2.8 |
| (1,3) | 1:A:58:ARG:N | 1:A:58:ARG:CA | 1:A:58:ARG:C | 1:A:59:SER:N | 11 | 2.8 |
| (1,172) | 1:A:143:TYR:C | 1:A:144:HIS:N | 1:A:144:HIS:CA | 1:A:144:HIS:C | 12 | 2.8 |
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 14 | 2.8 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 13 | 2.8 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 16 | 2.8 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 16 | 2.7 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 3 | 2.7 |
| (1,40) | 1:A:80:TRP:C | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1 | 2.7 |
| (1,26) | 1:A:72:GLN:C | 1:A:73:ALA:N | 1:A:73:ALA:CA | 1:A:73:ALA:C | 3 | 2.7 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 16 | 2.7 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 9 | 2.7 |
| (1,3) | 1:A:58:ARG:N | 1:A:58:ARG:CA | 1:A:58:ARG:C | 1:A:59:SER:N | 5 | 2.6 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 15 | 2.6 |
| (1,81) | 1:A:107:ASP:N | 1:A:107:ASP:CA | 1:A:107:ASP:C | 1:A:108:SER:N | 9 | 2.5 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 7 | 2.5 |
| (1,9) | 1:A:61:LEU:N | 1:A:61:LEU:CA | 1:A:61:LEU:C | 1:A:62:THR:N | 1 | 2.4 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 5 | 2.4 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 9 | 2.3 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 9 | 2.2 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 14 | 2.2 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 10 | 2.2 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 4 | 2.2 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 6 | 2.2 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 8 | 2.2 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 1 | 2.1 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 1 | 2.1 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 14 | 2.1 |
| (1,131) | 1:A:136:ILE:N | 1:A:136:ILE:CA | 1:A:136:ILE:C | 1:A:137:LYS:N | 6 | 2.1 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 2 | 2.0 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 1 | 2.0 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 15 | 2.0 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 6 | 2.0 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 7 | 1.9 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 3 | 1.9 |
| (1,68) | 1:A:99:GLU:C | 1:A:100:ASN:N | 1:A:100:ASN:CA | 1:A:100:ASN:C | 11 | 1.9 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 16 | 1.9 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 16 | 1.9 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 4 | 1.9 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 13 | 1.8 |
| (1,57) | 1:A:93:GLY:N | 1:A:93:GLY:CA | 1:A:93:GLY:C | 1:A:94:LEU:N | 3 | 1.8 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 10 | 1.8 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 15 | 1.8 |
| (1,11) | 1:A:62:THR:N | 1:A:62:THR:CA | 1:A:62:THR:C | 1:A:63:ALA:N | 16 | 1.8 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 2 | 1.7 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 9 | 1.7 |
| (1,62) | 1:A:95:TYR:C | 1:A:96:HIS:N | 1:A:96:HIS:CA | 1:A:96:HIS:C | 10 | 1.7 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 13 | 1.7 |
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 7 | 1.7 |
| (1,68) | 1:A:99:GLU:C | 1:A:100:ASN:N | 1:A:100:ASN:CA | 1:A:100:ASN:C | 1 | 1.6 |
| (1,54) | 1:A:91:TRP:C | 1:A:92:ILE:N | 1:A:92:ILE:CA | 1:A:92:ILE:C | 5 | 1.6 |
| (1,41) | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 1:A:82:ILE:N | 14 | 1.6 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 8 | 1.6 |
| (1,115) | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 1:A:126:GLU:N | 10 | 1.6 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 16 | 1.6 |
| (1,87) | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 1:A:111:ARG:N | 15 | 1.5 |
| (1,85) | 1:A:109:LYS:N | 1:A:109:LYS:CA | 1:A:109:LYS:C | 1:A:110:ASN:N | 4 | 1.5 |
| (1,5) | 1:A:59:SER:N | 1:A:59:SER:CA | 1:A:59:SER:C | 1:A:60:SER:N | 9 | 1.5 |
| (1,19) | 1:A:68:TYR:N | 1:A:68:TYR:CA | 1:A:68:TYR:C | 1:A:69:THR:N | 10 | 1.5 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 6 | 1.5 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 9 | 1.5 |
| (1,137) | 1:A:139:CYS:N | 1:A:139:CYS:CA | 1:A:139:CYS:C | 1:A:140:PHE:N | 3 | 1.5 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 5 | 1.5 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 5 | 1.5 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 12 | 1.4 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 13 | 1.4 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 7 | 1.4 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 3 | 1.3 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 9 | 1.3 |
| (1,54) | 1:A:91:TRP:C | 1:A:92:ILE:N | 1:A:92:ILE:CA | 1:A:92:ILE:C | 4 | 1.3 |
| (1,54) | 1:A:91:TRP:C | 1:A:92:ILE:N | 1:A:92:ILE:CA | 1:A:92:ILE:C | 7 | 1.3 |
| (1,25) | 1:A:71:GLY:N | 1:A:71:GLY:CA | 1:A:71:GLY:C | 1:A:72:GLN:N | 9 | 1.3 |
| (1,24) | 1:A:70:LEU:C | 1:A:71:GLY:N | 1:A:71:GLY:CA | 1:A:71:GLY:C | 8 | 1.3 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,131) | 1:A:136:ILE:N | 1:A:136:ILE:CA | 1:A:136:ILE:C | 1:A:137:LYS:N | 4 | 1.3 |
| (1,129) | 1:A:135:GLU:N | 1:A:135:GLU:CA | 1:A:135:GLU:C | 1:A:136:ILE:N | 14 | 1.3 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 7 | 1.3 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 11 | 1.3 |
| (1,121) | 1:A:130:TYR:N | 1:A:130:TYR:CA | 1:A:130:TYR:C | 1:A:131:PHE:N | 16 | 1.3 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 5 | 1.3 |
| (1,81) | 1:A:107:ASP:N | 1:A:107:ASP:CA | 1:A:107:ASP:C | 1:A:108:SER:N | 12 | 1.2 |
| (1,65) | 1:A:97:ILE:N | 1:A:97:ILE:CA | 1:A:97:ILE:C | 1:A:98:ASP:N | 6 | 1.2 |
| (1,46) | 1:A:85:GLU:C | 1:A:86:VAL:N | 1:A:86:VAL:CA | 1:A:86:VAL:C | 14 | 1.2 |
| (1,25) | 1:A:71:GLY:N | 1:A:71:GLY:CA | 1:A:71:GLY:C | 1:A:72:GLN:N | 12 | 1.2 |
| (1,149) | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 1:A:150:LEU:N | 11 | 1.2 |
| (1,123) | 1:A:131:PHE:N | 1:A:131:PHE:CA | 1:A:131:PHE:C | 1:A:132:MET:N | 10 | 1.2 |
| (1,114) | 1:A:124:ARG:C | 1:A:125:ILE:N | 1:A:125:ILE:CA | 1:A:125:ILE:C | 15 | 1.2 |
| (1,102) | 1:A:118:LYS:C | 1:A:119:GLY:N | 1:A:119:GLY:CA | 1:A:119:GLY:C | 13 | 1.2 |
| (1,86) | 1:A:109:LYS:C | 1:A:110:ASN:N | 1:A:110:ASN:CA | 1:A:110:ASN:C | 8 | 1.1 |
| (1,67) | 1:A:99:GLU:N | 1:A:99:GLU:CA | 1:A:99:GLU:C | 1:A:100:ASN:N | 6 | 1.1 |
| (1,54) | 1:A:91:TRP:C | 1:A:92:ILE:N | 1:A:92:ILE:CA | 1:A:92:ILE:C | 14 | 1.1 |
| (1,51) | 1:A:89:SER:N | 1:A:89:SER:CA | 1:A:89:SER:C | 1:A:90:ASP:N | 6 | 1.1 |
| (1,46) | 1:A:85:GLU:C | 1:A:86:VAL:N | 1:A:86:VAL:CA | 1:A:86:VAL:C | 1 | 1.1 |
| (1,40) | 1:A:80:TRP:C | 1:A:81:ASP:N | 1:A:81:ASP:CA | 1:A:81:ASP:C | 8 | 1.1 |
| (1,162) | 1:A:156:CYS:C | 1:A:157:ILE:N | 1:A:157:ILE:CA | 1:A:157:ILE:C | 12 | 1.1 |
| (1,148) | 1:A:148:GLY:C | 1:A:149:ALA:N | 1:A:149:ALA:CA | 1:A:149:ALA:C | 8 | 1.1 |
| (1,137) | 1:A:139:CYS:N | 1:A:139:CYS:CA | 1:A:139:CYS:C | 1:A:140:PHE:N | 12 | 1.1 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 11 | 1.1 |
| (1,133) | 1:A:137:LYS:N | 1:A:137:LYS:CA | 1:A:137:LYS:C | 1:A:138:ILE:N | 12 | 1.1 |
| (1,102) | 1:A:118:LYS:C | 1:A:119:GLY:N | 1:A:119:GLY:CA | 1:A:119:GLY:C | 9 | 1.1 |