



Full wwPDB NMR Structure Validation Report ⓘ

Feb 23, 2022 – 01:06 PM EST

PDB ID : 1XDX
Title : Solution Structure of the Tctex1 Light Chain From Chlamydomonas Inner Dynein Arm I1
Authors : Wu, H.; Maciejewski, M.W.; Takebe, S.; King, S.M.
Deposited on : 2004-09-08

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 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)
RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
ShiftChecker : 2.26
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.26

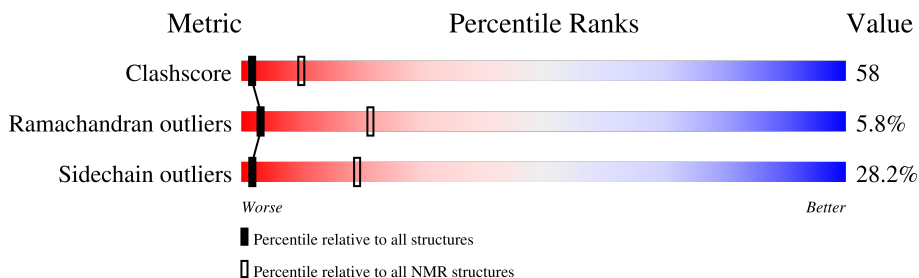
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment was not calculated.

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 | 114 | 29% 58% 11% . |
| 1 | B | 114 | 30% 59% 9% . |

2 Ensemble composition and analysis i

This entry contains 15 models. Model 13 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *fewest violations*.

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:4-A:114, B:4-B:114 (222) | 0.59 | 13 |

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 2 clusters. No single-model clusters were found.

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

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 3502 atoms, of which 1734 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Tctex1 Light Chain protein.

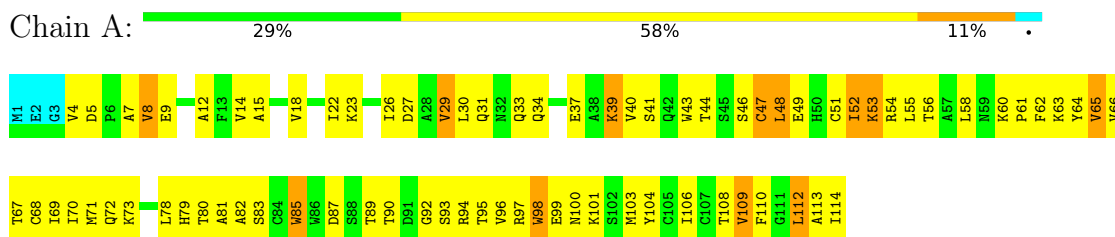
| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---|-------|
| | | | Total | C | H | N | O | S | |
| 1 | A | 114 | 1751 | 556 | 867 | 148 | 171 | 9 | 0 |
| 1 | B | 114 | 1751 | 556 | 867 | 148 | 171 | 9 | 0 |

4 Residue-property plots

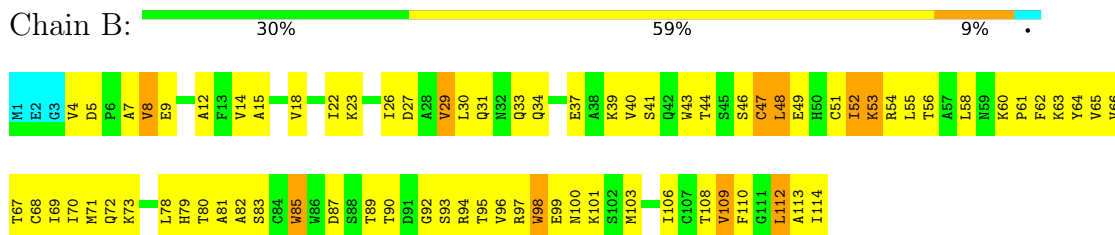
4.1 Average score per residue in the NMR ensemble

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: Tctex1 Light Chain protein



- Molecule 1: Tctex1 Light Chain protein

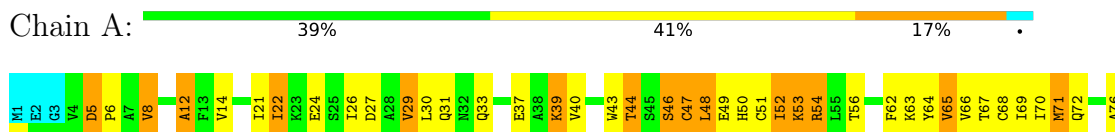


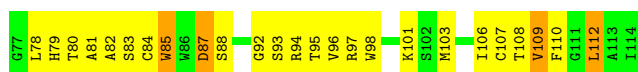
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

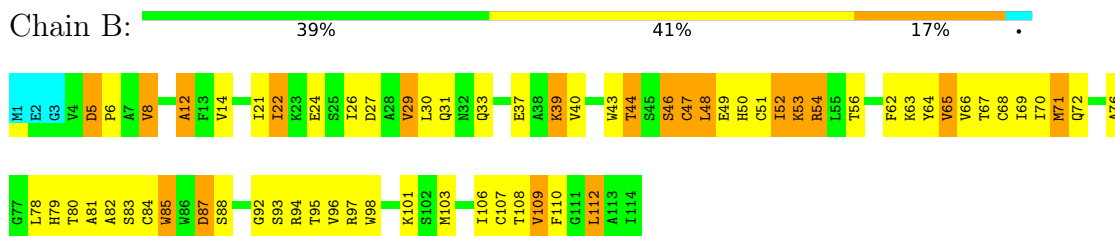
4.2.1 Score per residue for model 1

- Molecule 1: Tctex1 Light Chain protein



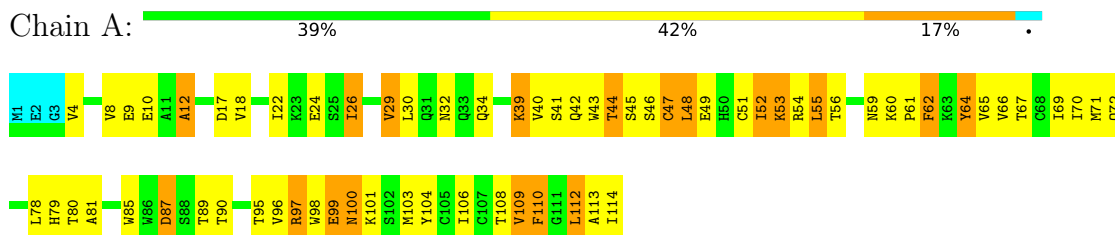


- Molecule 1: Tctex1 Light Chain protein

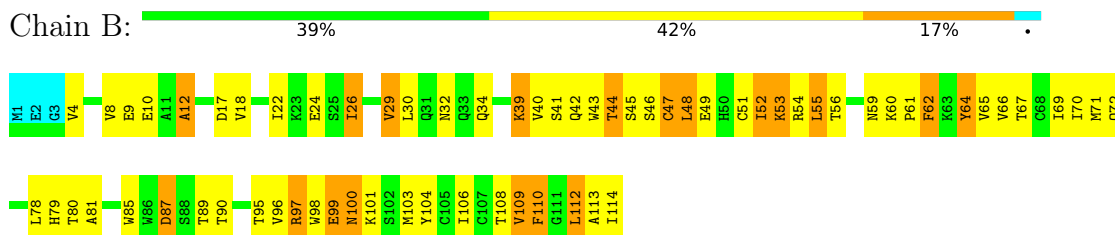


4.2.2 Score per residue for model 2

- Molecule 1: Tctex1 Light Chain protein

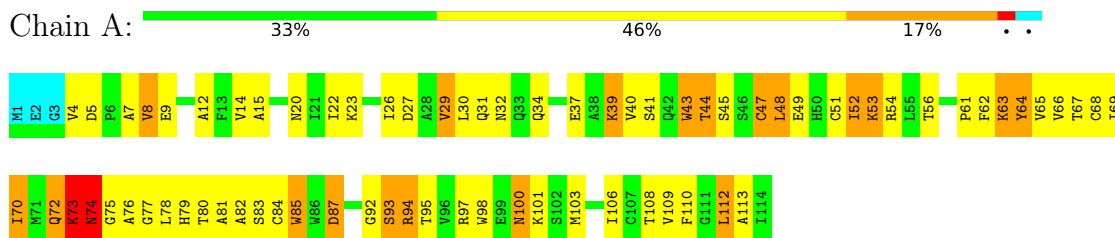


- Molecule 1: Tctex1 Light Chain protein

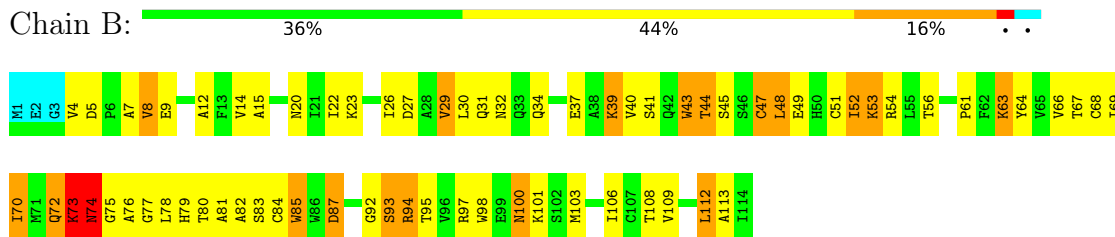


4.2.3 Score per residue for model 3

- Molecule 1: Tctex1 Light Chain protein

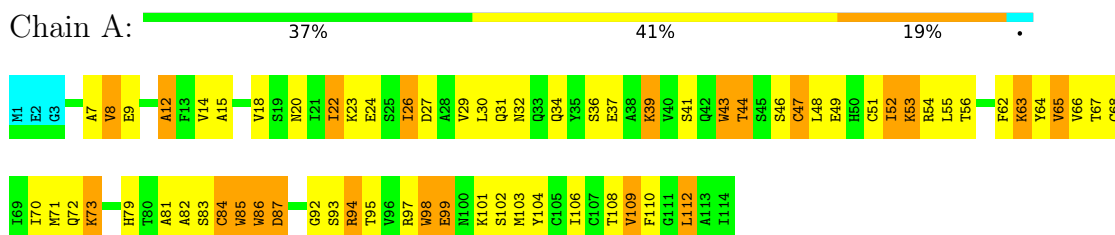


- Molecule 1: Tctex1 Light Chain protein

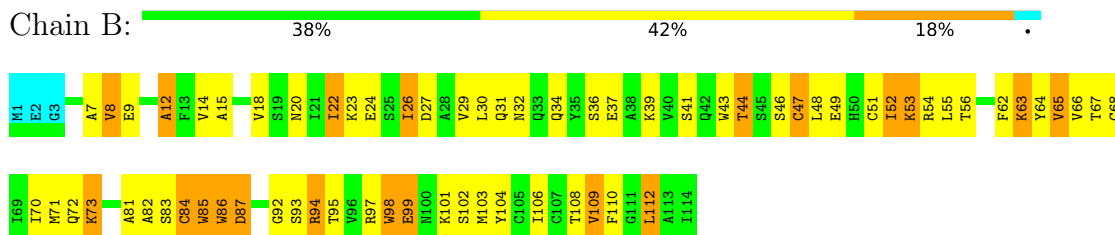


4.2.4 Score per residue for model 4

- Molecule 1: Tctex1 Light Chain protein

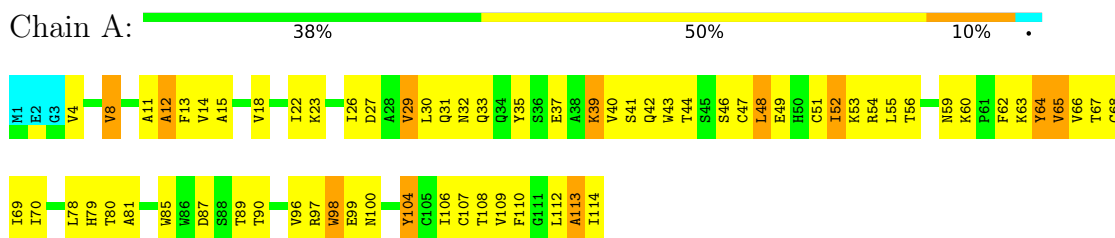


- Molecule 1: Tctex1 Light Chain protein

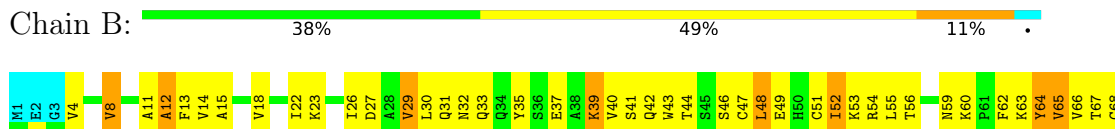


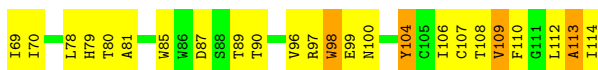
4.2.5 Score per residue for model 5

- Molecule 1: Tctex1 Light Chain protein



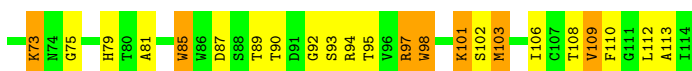
- Molecule 1: Tctex1 Light Chain protein



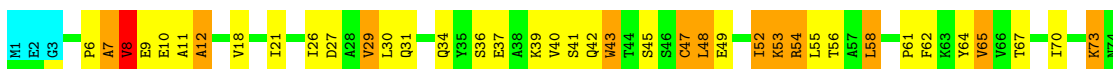


4.2.6 Score per residue for model 6

- Molecule 1: Tctex1 Light Chain protein

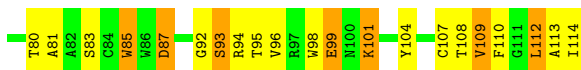
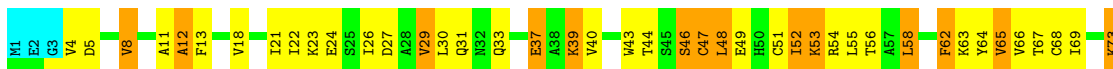


- Molecule 1: Tctex1 Light Chain protein

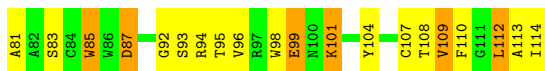
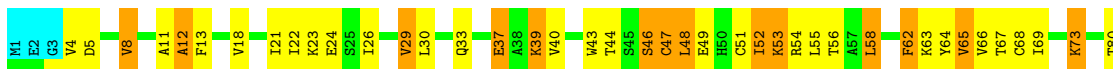


4.2.7 Score per residue for model 7

- Molecule 1: Tctex1 Light Chain protein

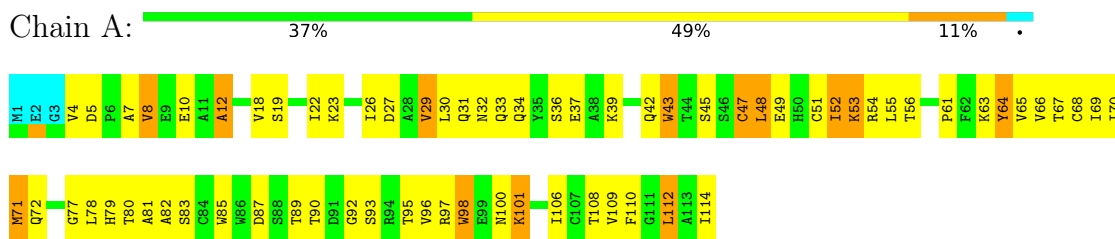


- Molecule 1: Tctex1 Light Chain protein

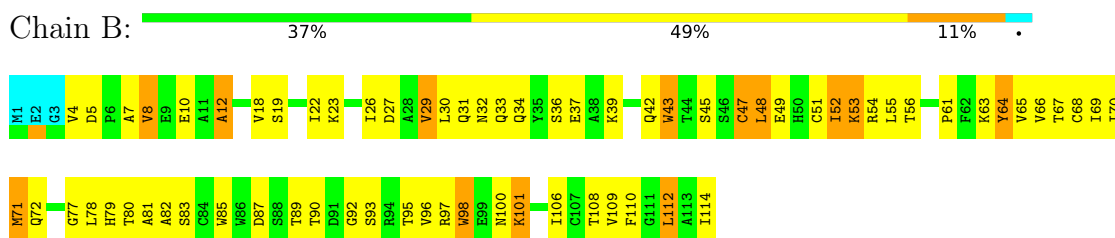


4.2.8 Score per residue for model 8

- Molecule 1: Tctex1 Light Chain protein

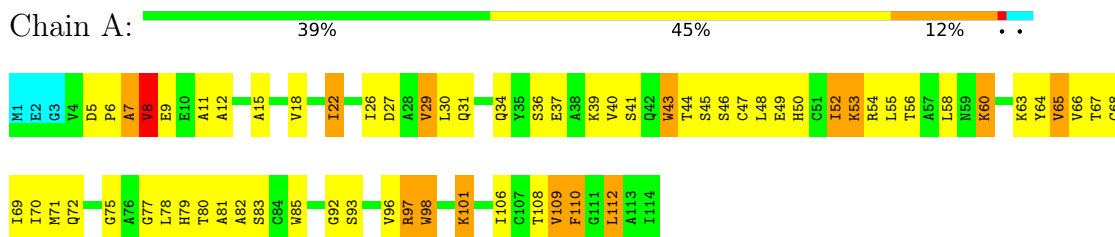


- Molecule 1: Tctex1 Light Chain protein

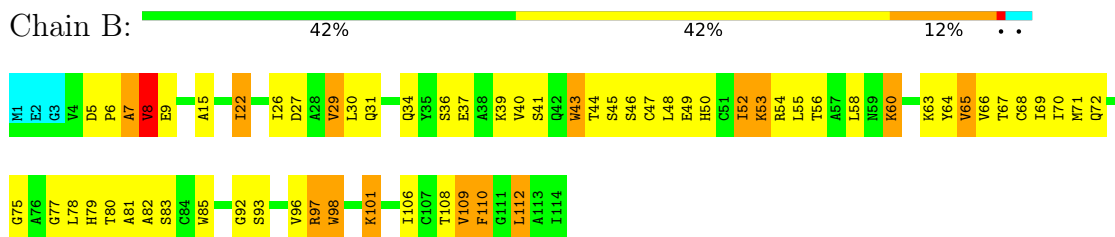


4.2.9 Score per residue for model 9

- Molecule 1: Tctex1 Light Chain protein

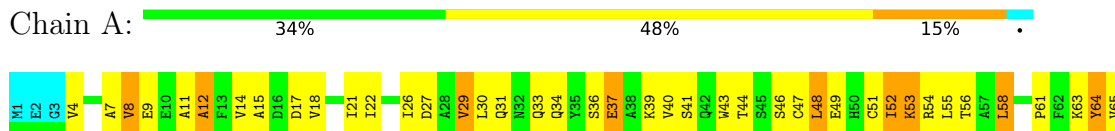


- Molecule 1: Tctex1 Light Chain protein

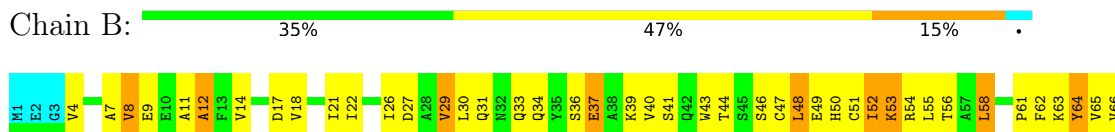


4.2.10 Score per residue for model 10

- Molecule 1: Tctex1 Light Chain protein

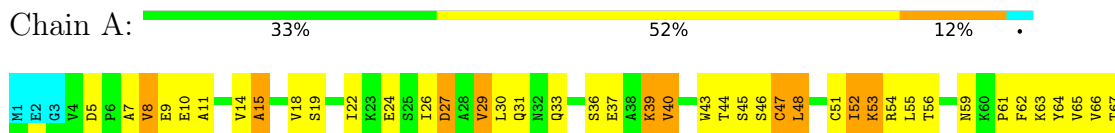


• Molecule 1: Tctex1 Light Chain protein

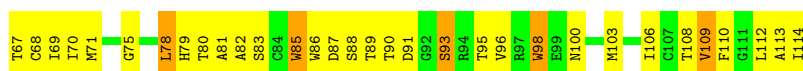
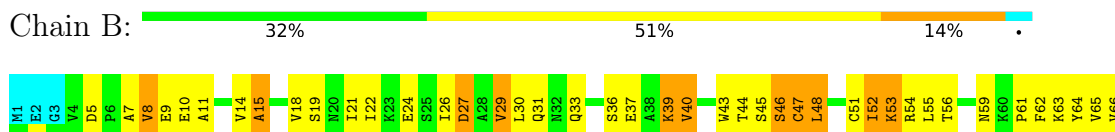


4.2.11 Score per residue for model 11

• Molecule 1: Tctex1 Light Chain protein

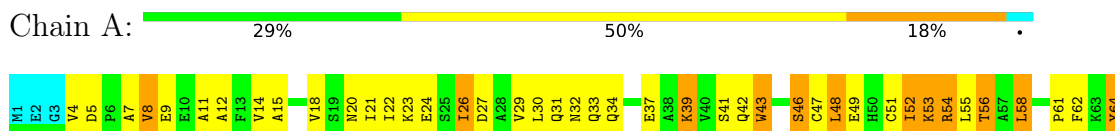


• Molecule 1: Tctex1 Light Chain protein



4.2.12 Score per residue for model 12

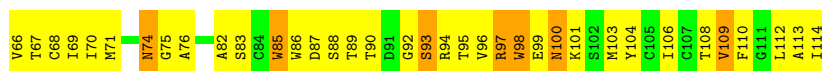
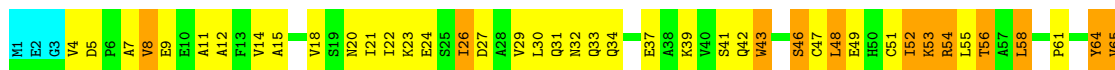
• Molecule 1: Tctex1 Light Chain protein





- Molecule 1: Tctex1 Light Chain protein

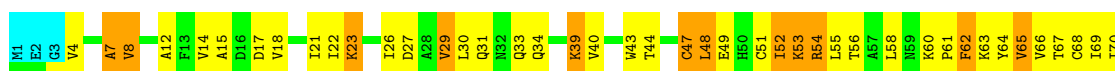
Chain B: 29% 52% 17%



4.2.13 Score per residue for model 13 (medoid)

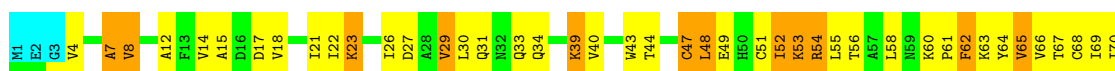
- Molecule 1: Tctex1 Light Chain protein

Chain A: 36% 46% 15%



- Molecule 1: Tctex1 Light Chain protein

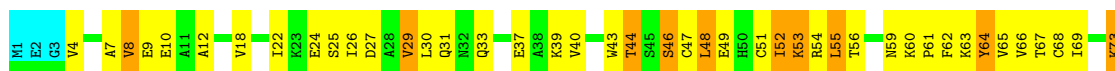
Chain B: 36% 46% 16%



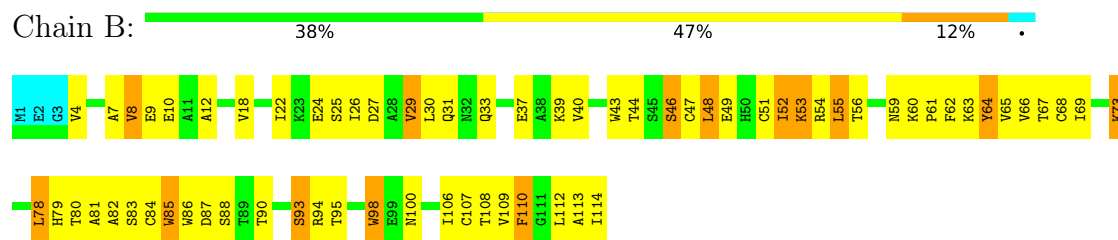
4.2.14 Score per residue for model 14

- Molecule 1: Tctex1 Light Chain protein

Chain A: 38% 46% 13%

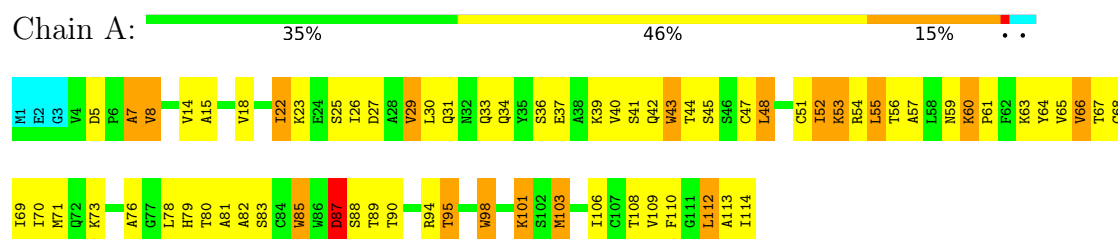


- Molecule 1: Tctex1 Light Chain protein

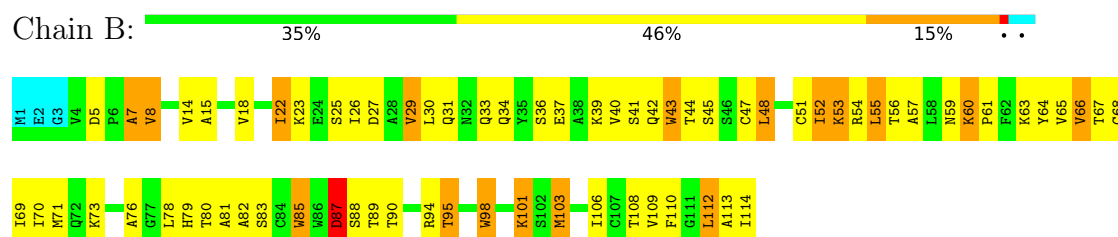


4.2.15 Score per residue for model 15

- Molecule 1: Tctex1 Light Chain protein



- Molecule 1: Tctex1 Light Chain protein



5 Refinement protocol and experimental data overview

The models were refined using the following method: *torsion angle dynamics simulated annealing*.

Of the 90 calculated structures, 15 were deposited, based on the following criterion: *target function, structures with the least restraint violations*.

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

| Software name | Classification | Version |
|---------------|--------------------|---------|
| CYANA | structure solution | 1.1 |
| X-PLOR | refinement | 3.851 |

No chemical shift data was provided.

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 | 863 | 849 | 847 | 148±57 |
| 1 | B | 863 | 849 | 847 | 148±56 |
| All | All | 25890 | 25470 | 25388 | 2981 |

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 58.

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

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:78:LEU:CD2 | 1:B:78:LEU:HD23 | 1.66 | 1.15 | 1 | 1 |
| 1:A:78:LEU:HD23 | 1:B:78:LEU:CD2 | 1.57 | 1.15 | 1 | 1 |
| 1:A:78:LEU:CD2 | 1:B:69:ILE:CG2 | 1.54 | 1.84 | 3 | 3 |
| 1:A:79:HIS:HB2 | 1:B:70:ILE:CD1 | 1.54 | 1.01 | 8 | 6 |
| 1:A:69:ILE:CG2 | 1:B:78:LEU:CD2 | 1.52 | 1.84 | 3 | 3 |
| 1:A:79:HIS:CB | 1:B:70:ILE:HD11 | 1.51 | 1.01 | 8 | 4 |
| 1:A:70:ILE:HD11 | 1:B:79:HIS:CB | 1.51 | 1.00 | 8 | 4 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:HB2 | 1.51 | 1.01 | 8 | 6 |
| 1:A:69:ILE:CD1 | 1:B:80:THR:HG23 | 1.47 | 1.38 | 10 | 5 |
| 1:A:80:THR:HG23 | 1:B:69:ILE:CD1 | 1.45 | 1.38 | 10 | 5 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:HG23 | 1.44 | 1.42 | 8 | 10 |
| 1:A:85:TRP:CD1 | 1:B:64:TYR:CE1 | 1.44 | 1.83 | 1 | 2 |
| 1:A:79:HIS:HB2 | 1:B:70:ILE:CG1 | 1.43 | 1.41 | 9 | 6 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:78:LEU:HD21 | 1:B:69:ILE:CG2 | 1.43 | 1.43 | 8 | 6 |
| 1:A:80:THR:HG23 | 1:B:69:ILE:CG1 | 1.43 | 1.42 | 8 | 10 |
| 1:A:69:ILE:CG2 | 1:B:78:LEU:HD21 | 1.42 | 1.43 | 8 | 6 |
| 1:A:70:ILE:HD11 | 1:B:79:HIS:CD2 | 1.42 | 1.46 | 9 | 1 |
| 1:A:64:TYR:CE1 | 1:B:85:TRP:CD1 | 1.42 | 1.83 | 1 | 2 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:HB2 | 1.42 | 1.41 | 9 | 6 |
| 1:A:79:HIS:CD2 | 1:B:70:ILE:HD11 | 1.42 | 1.46 | 9 | 1 |
| 1:A:81:ALA:CB | 1:B:44:THR:HG23 | 1.41 | 1.43 | 3 | 5 |
| 1:A:44:THR:HG23 | 1:B:81:ALA:CB | 1.41 | 1.43 | 3 | 6 |
| 1:A:78:LEU:CD2 | 1:B:78:LEU:CD2 | 1.39 | 1.81 | 1 | 1 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:SG | 1.37 | 1.59 | 3 | 2 |
| 1:A:68:CYS:SG | 1:B:81:ALA:HB3 | 1.36 | 1.59 | 3 | 2 |
| 1:A:72:GLN:HB3 | 1:B:77:GLY:CA | 1.35 | 1.51 | 9 | 1 |
| 1:A:77:GLY:HA3 | 1:B:72:GLN:CB | 1.35 | 1.52 | 9 | 2 |
| 1:A:72:GLN:CB | 1:B:77:GLY:HA3 | 1.34 | 1.52 | 9 | 2 |
| 1:A:82:ALA:N | 1:B:48:LEU:CD2 | 1.33 | 1.91 | 3 | 3 |
| 1:A:77:GLY:CA | 1:B:72:GLN:HB3 | 1.33 | 1.51 | 9 | 1 |
| 1:A:87:ASP:OD1 | 1:B:63:LYS:NZ | 1.33 | 1.62 | 1 | 1 |
| 1:A:48:LEU:CD2 | 1:B:82:ALA:N | 1.32 | 1.91 | 3 | 3 |
| 1:A:63:LYS:NZ | 1:B:87:ASP:OD1 | 1.31 | 1.62 | 1 | 1 |
| 1:A:83:SER:O | 1:B:65:VAL:HA | 1.28 | 1.25 | 14 | 5 |
| 1:A:65:VAL:HA | 1:B:83:SER:O | 1.27 | 1.14 | 11 | 5 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:CB | 1.26 | 2.11 | 1 | 4 |
| 1:A:79:HIS:CB | 1:B:70:ILE:CG1 | 1.26 | 2.11 | 1 | 4 |
| 1:A:68:CYS:N | 1:B:81:ALA:O | 1.26 | 1.68 | 10 | 8 |
| 1:A:67:THR:HB | 1:B:82:ALA:CB | 1.25 | 1.60 | 10 | 7 |
| 1:A:82:ALA:CB | 1:B:67:THR:HB | 1.25 | 1.60 | 10 | 7 |
| 1:A:85:TRP:CE3 | 1:B:62:PHE:C | 1.25 | 2.10 | 14 | 1 |
| 1:A:63:LYS:HB2 | 1:B:86:TRP:CD1 | 1.24 | 1.67 | 14 | 1 |
| 1:A:81:ALA:O | 1:B:68:CYS:N | 1.24 | 1.68 | 10 | 8 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:HB2 | 1.23 | 1.67 | 14 | 1 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:CG2 | 1.23 | 2.17 | 8 | 6 |
| 1:A:80:THR:CG2 | 1:B:69:ILE:CG1 | 1.23 | 2.17 | 8 | 6 |
| 1:A:62:PHE:C | 1:B:85:TRP:CE3 | 1.23 | 2.10 | 14 | 1 |
| 1:A:62:PHE:HB3 | 1:B:85:TRP:CZ3 | 1.22 | 1.67 | 14 | 1 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:CG2 | 1.22 | 1.64 | 3 | 9 |
| 1:A:85:TRP:CB | 1:B:64:TYR:H | 1.22 | 1.46 | 4 | 2 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:HB3 | 1.22 | 1.67 | 14 | 1 |
| 1:A:64:TYR:H | 1:B:85:TRP:CB | 1.22 | 1.46 | 4 | 2 |
| 1:A:85:TRP:HE1 | 1:B:56:THR:CG2 | 1.21 | 1.47 | 3 | 4 |
| 1:A:80:THR:CG2 | 1:B:69:ILE:HG13 | 1.21 | 1.64 | 3 | 9 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:79:HIS:CB | 1:B:70:ILE:HG13 | 1.21 | 1.64 | 9 | 2 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:CB | 1.21 | 1.64 | 9 | 2 |
| 1:A:85:TRP:NE1 | 1:B:56:THR:HG22 | 1.21 | 1.51 | 3 | 5 |
| 1:A:56:THR:CG2 | 1:B:85:TRP:HE1 | 1.20 | 1.47 | 3 | 4 |
| 1:A:66:VAL:O | 1:B:83:SER:N | 1.20 | 1.74 | 10 | 8 |
| 1:A:82:ALA:CA | 1:B:48:LEU:CD2 | 1.20 | 2.20 | 3 | 1 |
| 1:A:79:HIS:N | 1:B:70:ILE:O | 1.19 | 1.76 | 3 | 3 |
| 1:A:48:LEU:CD2 | 1:B:82:ALA:CA | 1.19 | 2.20 | 3 | 1 |
| 1:A:69:ILE:HG12 | 1:B:80:THR:OG1 | 1.19 | 1.35 | 8 | 4 |
| 1:A:81:ALA:N | 1:B:68:CYS:O | 1.19 | 1.74 | 3 | 6 |
| 1:A:83:SER:N | 1:B:66:VAL:O | 1.19 | 1.73 | 11 | 8 |
| 1:A:56:THR:HG22 | 1:B:85:TRP:NE1 | 1.19 | 1.51 | 3 | 5 |
| 1:A:68:CYS:O | 1:B:81:ALA:N | 1.19 | 1.74 | 3 | 6 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:HG12 | 1.19 | 1.35 | 8 | 4 |
| 1:A:70:ILE:O | 1:B:79:HIS:N | 1.18 | 1.76 | 3 | 3 |
| 1:A:79:HIS:CG | 1:B:70:ILE:HD11 | 1.17 | 1.75 | 9 | 3 |
| 1:A:70:ILE:HD11 | 1:B:79:HIS:CG | 1.17 | 1.75 | 9 | 3 |
| 1:A:69:ILE:HG12 | 1:B:80:THR:CB | 1.16 | 1.70 | 8 | 2 |
| 1:A:80:THR:CB | 1:B:69:ILE:HG12 | 1.15 | 1.70 | 8 | 2 |
| 1:A:83:SER:O | 1:B:65:VAL:CA | 1.15 | 1.94 | 11 | 3 |
| 1:A:67:THR:OG1 | 1:B:81:ALA:O | 1.14 | 1.65 | 11 | 6 |
| 1:A:67:THR:HA | 1:B:82:ALA:CA | 1.14 | 1.73 | 1 | 6 |
| 1:A:65:VAL:CA | 1:B:83:SER:O | 1.14 | 1.95 | 11 | 3 |
| 1:A:52:ILE:HD11 | 1:B:85:TRP:CD1 | 1.14 | 1.77 | 3 | 4 |
| 1:A:85:TRP:CD1 | 1:B:52:ILE:HD11 | 1.14 | 1.77 | 3 | 4 |
| 1:A:48:LEU:CD2 | 1:B:81:ALA:HB1 | 1.14 | 1.72 | 11 | 6 |
| 1:A:62:PHE:O | 1:B:85:TRP:CD2 | 1.14 | 2.01 | 14 | 1 |
| 1:A:80:THR:CB | 1:B:69:ILE:HG13 | 1.13 | 1.73 | 10 | 4 |
| 1:A:70:ILE:HD12 | 1:B:79:HIS:N | 1.13 | 1.58 | 8 | 1 |
| 1:A:48:LEU:HD21 | 1:B:81:ALA:C | 1.13 | 1.64 | 3 | 4 |
| 1:A:68:CYS:SG | 1:B:81:ALA:CB | 1.13 | 2.36 | 1 | 2 |
| 1:A:85:TRP:CD2 | 1:B:62:PHE:O | 1.13 | 2.01 | 14 | 1 |
| 1:A:48:LEU:HD23 | 1:B:82:ALA:N | 1.13 | 1.54 | 3 | 2 |
| 1:A:81:ALA:HB1 | 1:B:48:LEU:CD2 | 1.13 | 1.72 | 11 | 6 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:CD2 | 1.13 | 2.32 | 9 | 1 |
| 1:A:79:HIS:CD2 | 1:B:70:ILE:CD1 | 1.12 | 2.32 | 9 | 1 |
| 1:A:81:ALA:CB | 1:B:68:CYS:SG | 1.12 | 2.36 | 1 | 2 |
| 1:A:82:ALA:CA | 1:B:67:THR:HA | 1.12 | 1.73 | 1 | 6 |
| 1:A:79:HIS:N | 1:B:70:ILE:HD12 | 1.12 | 1.58 | 8 | 1 |
| 1:A:63:LYS:NZ | 1:B:87:ASP:CG | 1.12 | 2.03 | 1 | 1 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:CB | 1.12 | 1.73 | 10 | 4 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:69:ILE:HD11 | 1:B:80:THR:CG2 | 1.12 | 1.75 | 10 | 2 |
| 1:A:81:ALA:O | 1:B:67:THR:OG1 | 1.11 | 1.65 | 11 | 6 |
| 1:A:81:ALA:C | 1:B:48:LEU:HD21 | 1.11 | 1.64 | 3 | 4 |
| 1:A:63:LYS:CE | 1:B:90:THR:HG21 | 1.11 | 1.74 | 14 | 1 |
| 1:A:85:TRP:CB | 1:B:64:TYR:N | 1.11 | 2.13 | 4 | 2 |
| 1:A:90:THR:HG21 | 1:B:63:LYS:CE | 1.11 | 1.74 | 14 | 1 |
| 1:A:63:LYS:HE2 | 1:B:90:THR:CG2 | 1.11 | 1.75 | 14 | 1 |
| 1:A:90:THR:CG2 | 1:B:63:LYS:HE2 | 1.10 | 1.74 | 14 | 1 |
| 1:A:87:ASP:CG | 1:B:63:LYS:NZ | 1.10 | 2.03 | 1 | 1 |
| 1:A:81:ALA:O | 1:B:67:THR:CA | 1.10 | 1.99 | 10 | 6 |
| 1:A:69:ILE:HA | 1:B:80:THR:HA | 1.10 | 1.21 | 8 | 7 |
| 1:A:81:ALA:HB2 | 1:B:44:THR:CG2 | 1.10 | 1.76 | 3 | 3 |
| 1:A:81:ALA:HB3 | 1:B:44:THR:HG23 | 1.10 | 1.17 | 3 | 2 |
| 1:A:86:TRP:CZ2 | 1:B:63:LYS:HB3 | 1.10 | 1.61 | 4 | 1 |
| 1:A:80:THR:CG2 | 1:B:69:ILE:HD11 | 1.10 | 1.75 | 10 | 2 |
| 1:A:63:LYS:HB3 | 1:B:86:TRP:CZ2 | 1.10 | 1.61 | 4 | 1 |
| 1:A:67:THR:CA | 1:B:81:ALA:O | 1.10 | 1.99 | 10 | 6 |
| 1:A:79:HIS:O | 1:B:70:ILE:N | 1.09 | 1.84 | 9 | 6 |
| 1:A:81:ALA:CB | 1:B:44:THR:CG2 | 1.09 | 2.30 | 3 | 3 |
| 1:A:64:TYR:N | 1:B:85:TRP:CB | 1.09 | 2.13 | 4 | 2 |
| 1:A:85:TRP:HZ3 | 1:B:62:PHE:CZ | 1.09 | 1.65 | 11 | 1 |
| 1:A:70:ILE:HG12 | 1:B:79:HIS:CB | 1.09 | 1.77 | 13 | 2 |
| 1:A:62:PHE:CZ | 1:B:85:TRP:HZ3 | 1.09 | 1.66 | 11 | 1 |
| 1:A:44:THR:CG2 | 1:B:81:ALA:CB | 1.09 | 2.30 | 3 | 3 |
| 1:A:70:ILE:N | 1:B:79:HIS:O | 1.09 | 1.84 | 9 | 6 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:CA | 1.09 | 1.76 | 10 | 3 |
| 1:A:48:LEU:HB3 | 1:B:83:SER:HB2 | 1.09 | 1.10 | 3 | 5 |
| 1:A:80:THR:CA | 1:B:69:ILE:HG13 | 1.09 | 1.76 | 10 | 3 |
| 1:A:82:ALA:CA | 1:B:48:LEU:HD23 | 1.08 | 1.76 | 3 | 2 |
| 1:A:44:THR:CG2 | 1:B:81:ALA:HB2 | 1.08 | 1.76 | 3 | 3 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:HG23 | 1.08 | 1.09 | 1 | 11 |
| 1:A:82:ALA:HA | 1:B:67:THR:HA | 1.08 | 1.25 | 10 | 9 |
| 1:A:67:THR:HA | 1:B:82:ALA:HA | 1.08 | 1.25 | 10 | 9 |
| 1:A:65:VAL:HG13 | 1:B:84:CYS:HA | 1.08 | 1.23 | 4 | 1 |
| 1:A:79:HIS:CB | 1:B:70:ILE:HG12 | 1.08 | 1.77 | 13 | 2 |
| 1:A:67:THR:CB | 1:B:82:ALA:HB2 | 1.07 | 1.78 | 1 | 5 |
| 1:A:82:ALA:HB2 | 1:B:67:THR:CB | 1.07 | 1.78 | 1 | 5 |
| 1:A:78:LEU:HG | 1:B:70:ILE:O | 1.07 | 1.48 | 10 | 4 |
| 1:A:44:THR:HG23 | 1:B:81:ALA:HB3 | 1.07 | 1.17 | 3 | 2 |
| 1:A:48:LEU:HD23 | 1:B:82:ALA:CA | 1.07 | 1.76 | 3 | 2 |
| 1:A:70:ILE:O | 1:B:78:LEU:HG | 1.06 | 1.48 | 10 | 4 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:83:SER:HB2 | 1:B:48:LEU:HB3 | 1.06 | 1.11 | 3 | 5 |
| 1:A:82:ALA:HA | 1:B:67:THR:CA | 1.06 | 1.81 | 1 | 8 |
| 1:A:69:ILE:HG21 | 1:B:78:LEU:HD21 | 1.06 | 1.16 | 3 | 3 |
| 1:A:67:THR:CA | 1:B:82:ALA:HA | 1.05 | 1.80 | 1 | 8 |
| 1:A:62:PHE:CB | 1:B:85:TRP:CZ3 | 1.05 | 2.39 | 14 | 1 |
| 1:A:80:THR:HG23 | 1:B:69:ILE:HG13 | 1.05 | 1.06 | 3 | 10 |
| 1:A:78:LEU:HD21 | 1:B:69:ILE:HG22 | 1.05 | 1.06 | 3 | 2 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:CB | 1.04 | 2.39 | 14 | 1 |
| 1:A:66:VAL:N | 1:B:83:SER:O | 1.04 | 1.90 | 4 | 5 |
| 1:A:84:CYS:SG | 1:B:65:VAL:CG1 | 1.04 | 2.46 | 1 | 2 |
| 1:A:69:ILE:HG22 | 1:B:78:LEU:HD21 | 1.04 | 1.06 | 3 | 2 |
| 1:A:63:LYS:HA | 1:B:85:TRP:HB3 | 1.04 | 1.27 | 14 | 2 |
| 1:A:80:THR:HA | 1:B:69:ILE:HA | 1.04 | 1.21 | 8 | 7 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:OG1 | 1.04 | 2.04 | 3 | 4 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:CG1 | 1.04 | 2.04 | 3 | 4 |
| 1:A:78:LEU:CD2 | 1:B:78:LEU:HD21 | 1.03 | 1.82 | 1 | 1 |
| 1:A:69:ILE:CD1 | 1:B:80:THR:CG2 | 1.03 | 2.35 | 10 | 2 |
| 1:A:83:SER:O | 1:B:66:VAL:N | 1.03 | 1.90 | 4 | 5 |
| 1:A:82:ALA:HB2 | 1:B:67:THR:HB | 1.03 | 1.11 | 10 | 5 |
| 1:A:82:ALA:N | 1:B:48:LEU:HD23 | 1.03 | 1.54 | 3 | 2 |
| 1:A:56:THR:HG22 | 1:B:85:TRP:HE1 | 1.03 | 0.87 | 3 | 4 |
| 1:A:65:VAL:CG1 | 1:B:84:CYS:SG | 1.03 | 2.46 | 1 | 2 |
| 1:A:82:ALA:CB | 1:B:67:THR:CB | 1.03 | 2.35 | 1 | 5 |
| 1:A:85:TRP:HB3 | 1:B:63:LYS:HA | 1.03 | 1.27 | 14 | 2 |
| 1:A:80:THR:CG2 | 1:B:69:ILE:CD1 | 1.03 | 2.35 | 10 | 2 |
| 1:A:67:THR:CB | 1:B:82:ALA:CB | 1.02 | 2.35 | 1 | 5 |
| 1:A:81:ALA:HB2 | 1:B:44:THR:HG23 | 1.02 | 1.23 | 3 | 2 |
| 1:A:85:TRP:HB2 | 1:B:64:TYR:N | 1.02 | 1.67 | 4 | 2 |
| 1:A:80:THR:CG2 | 1:B:68:CYS:O | 1.02 | 2.07 | 3 | 1 |
| 1:A:67:THR:HB | 1:B:82:ALA:HB2 | 1.02 | 1.11 | 10 | 5 |
| 1:A:78:LEU:HD21 | 1:B:69:ILE:HG21 | 1.02 | 1.16 | 3 | 3 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:CB | 1.02 | 2.43 | 14 | 1 |
| 1:A:48:LEU:HD21 | 1:B:82:ALA:N | 1.02 | 1.66 | 3 | 4 |
| 1:A:78:LEU:HD21 | 1:B:78:LEU:CD2 | 1.01 | 1.82 | 1 | 1 |
| 1:A:68:CYS:O | 1:B:80:THR:CG2 | 1.01 | 2.07 | 3 | 1 |
| 1:A:79:HIS:HB2 | 1:B:70:ILE:HG12 | 1.01 | 1.26 | 13 | 2 |
| 1:A:63:LYS:CB | 1:B:86:TRP:CD1 | 1.01 | 2.43 | 14 | 1 |
| 1:A:70:ILE:HD12 | 1:B:79:HIS:H | 1.01 | 1.06 | 8 | 1 |
| 1:A:70:ILE:O | 1:B:78:LEU:HD22 | 1.01 | 1.56 | 13 | 1 |
| 1:A:63:LYS:HZ2 | 1:B:87:ASP:CG | 1.00 | 1.59 | 1 | 1 |
| 1:A:69:ILE:HA | 1:B:80:THR:CA | 1.00 | 1.86 | 3 | 3 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:84:CYS:HA | 1:B:65:VAL:HG13 | 1.00 | 1.23 | 4 | 1 |
| 1:A:63:LYS:HE2 | 1:B:90:THR:HG21 | 1.00 | 1.02 | 14 | 1 |
| 1:A:79:HIS:HB2 | 1:B:70:ILE:HD11 | 1.00 | 1.33 | 1 | 4 |
| 1:A:85:TRP:HE1 | 1:B:56:THR:HG22 | 1.00 | 0.88 | 7 | 4 |
| 1:A:80:THR:CA | 1:B:69:ILE:HA | 1.00 | 1.86 | 3 | 3 |
| 1:A:64:TYR:N | 1:B:85:TRP:HB2 | 1.00 | 1.67 | 4 | 2 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:CZ | 1.00 | 2.50 | 11 | 2 |
| 1:A:78:LEU:HG | 1:B:78:LEU:HG | 1.00 | 1.34 | 11 | 1 |
| 1:A:90:THR:HG21 | 1:B:63:LYS:HE2 | 1.00 | 1.02 | 14 | 1 |
| 1:A:69:ILE:HG21 | 1:B:78:LEU:CD2 | 0.99 | 1.77 | 8 | 2 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:HA | 0.99 | 1.30 | 10 | 3 |
| 1:A:78:LEU:CD2 | 1:B:69:ILE:HG23 | 0.99 | 1.60 | 3 | 4 |
| 1:A:78:LEU:HD22 | 1:B:70:ILE:O | 0.99 | 1.56 | 13 | 1 |
| 1:A:62:PHE:CZ | 1:B:85:TRP:CZ3 | 0.99 | 2.50 | 11 | 2 |
| 1:A:70:ILE:HD11 | 1:B:79:HIS:HB2 | 0.98 | 1.33 | 5 | 4 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:H | 0.98 | 1.15 | 13 | 3 |
| 1:A:62:PHE:O | 1:B:85:TRP:CE3 | 0.98 | 2.13 | 14 | 2 |
| 1:A:85:TRP:CG | 1:B:64:TYR:N | 0.98 | 2.31 | 4 | 1 |
| 1:A:79:HIS:H | 1:B:70:ILE:HG13 | 0.98 | 1.15 | 13 | 3 |
| 1:A:80:THR:CG2 | 1:B:69:ILE:HG12 | 0.98 | 1.85 | 8 | 3 |
| 1:A:80:THR:HA | 1:B:69:ILE:HG13 | 0.97 | 1.30 | 10 | 3 |
| 1:A:84:CYS:SG | 1:B:65:VAL:HG13 | 0.97 | 2.00 | 4 | 2 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:CA | 0.97 | 2.42 | 8 | 1 |
| 1:A:79:HIS:C | 1:B:70:ILE:CD1 | 0.97 | 2.31 | 3 | 1 |
| 1:A:83:SER:CB | 1:B:48:LEU:HB3 | 0.97 | 1.90 | 3 | 4 |
| 1:A:85:TRP:CE3 | 1:B:62:PHE:O | 0.97 | 2.13 | 14 | 2 |
| 1:A:78:LEU:HD21 | 1:B:71:MET:SD | 0.96 | 1.99 | 11 | 1 |
| 1:A:71:MET:SD | 1:B:78:LEU:HD21 | 0.96 | 1.99 | 11 | 1 |
| 1:A:65:VAL:HG13 | 1:B:84:CYS:SG | 0.96 | 2.00 | 4 | 2 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:CB | 0.96 | 1.88 | 8 | 4 |
| 1:A:78:LEU:HD21 | 1:B:69:ILE:HG23 | 0.96 | 0.98 | 3 | 3 |
| 1:A:62:PHE:HB3 | 1:B:85:TRP:HZ3 | 0.96 | 0.92 | 14 | 1 |
| 1:A:79:HIS:CA | 1:B:70:ILE:CD1 | 0.96 | 2.43 | 8 | 1 |
| 1:A:67:THR:OG1 | 1:B:82:ALA:HB2 | 0.96 | 1.60 | 1 | 5 |
| 1:A:70:ILE:HG12 | 1:B:79:HIS:HB2 | 0.96 | 1.26 | 13 | 2 |
| 1:A:69:ILE:HG23 | 1:B:78:LEU:HD21 | 0.95 | 0.98 | 3 | 3 |
| 1:A:85:TRP:HZ3 | 1:B:62:PHE:HB3 | 0.95 | 0.92 | 14 | 1 |
| 1:A:79:HIS:HB3 | 1:B:70:ILE:HG12 | 0.95 | 1.35 | 1 | 1 |
| 1:A:52:ILE:HD11 | 1:B:85:TRP:HD1 | 0.95 | 1.16 | 3 | 3 |
| 1:A:69:ILE:HG12 | 1:B:80:THR:CG2 | 0.95 | 1.84 | 8 | 3 |
| 1:A:48:LEU:HB3 | 1:B:83:SER:CB | 0.95 | 1.90 | 3 | 4 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:70:ILE:HG12 | 1:B:79:HIS:HB3 | 0.95 | 1.35 | 1 | 1 |
| 1:A:78:LEU:HD12 | 1:B:71:MET:HG2 | 0.95 | 1.36 | 15 | 1 |
| 1:A:48:LEU:CD2 | 1:B:81:ALA:C | 0.94 | 2.31 | 3 | 2 |
| 1:A:79:HIS:H | 1:B:70:ILE:CD1 | 0.94 | 1.75 | 8 | 1 |
| 1:A:82:ALA:HB2 | 1:B:67:THR:OG1 | 0.94 | 1.60 | 1 | 5 |
| 1:A:63:LYS:HA | 1:B:85:TRP:CB | 0.94 | 1.92 | 14 | 1 |
| 1:A:79:HIS:CB | 1:B:70:ILE:CD1 | 0.94 | 1.88 | 8 | 4 |
| 1:A:64:TYR:N | 1:B:85:TRP:CG | 0.94 | 2.31 | 4 | 1 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:H | 0.94 | 1.75 | 8 | 1 |
| 1:A:71:MET:HG2 | 1:B:78:LEU:HD12 | 0.94 | 1.36 | 15 | 1 |
| 1:A:87:ASP:CG | 1:B:63:LYS:HZ2 | 0.93 | 1.62 | 1 | 1 |
| 1:A:80:THR:HG23 | 1:B:69:ILE:HD11 | 0.93 | 0.94 | 10 | 3 |
| 1:A:86:TRP:CZ2 | 1:B:63:LYS:CB | 0.92 | 2.52 | 4 | 1 |
| 1:A:56:THR:CG2 | 1:B:85:TRP:NE1 | 0.92 | 2.32 | 12 | 2 |
| 1:A:85:TRP:CB | 1:B:63:LYS:HA | 0.92 | 1.92 | 14 | 1 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:C | 0.92 | 2.31 | 3 | 1 |
| 1:A:78:LEU:CD1 | 1:B:71:MET:HG2 | 0.92 | 1.95 | 15 | 1 |
| 1:B:22:ILE:HD13 | 1:B:109:VAL:HG22 | 0.92 | 1.39 | 1 | 1 |
| 1:A:80:THR:CB | 1:B:69:ILE:CG1 | 0.92 | 2.47 | 8 | 5 |
| 1:A:22:ILE:HD13 | 1:A:109:VAL:HG22 | 0.92 | 1.39 | 1 | 1 |
| 1:A:81:ALA:C | 1:B:48:LEU:CD2 | 0.92 | 2.31 | 3 | 2 |
| 1:A:48:LEU:CD2 | 1:B:82:ALA:HA | 0.91 | 1.95 | 3 | 1 |
| 1:A:78:LEU:CD2 | 1:B:69:ILE:HG21 | 0.91 | 1.77 | 8 | 2 |
| 1:A:63:LYS:CB | 1:B:86:TRP:CZ2 | 0.91 | 2.52 | 4 | 1 |
| 1:A:85:TRP:NE1 | 1:B:56:THR:CG2 | 0.91 | 2.32 | 12 | 2 |
| 1:A:86:TRP:HD1 | 1:B:63:LYS:CG | 0.91 | 1.78 | 14 | 2 |
| 1:A:86:TRP:HD1 | 1:B:63:LYS:CB | 0.91 | 1.77 | 14 | 1 |
| 1:A:79:HIS:N | 1:B:70:ILE:CD1 | 0.91 | 2.33 | 8 | 1 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:CA | 0.91 | 2.53 | 14 | 1 |
| 1:A:79:HIS:H | 1:B:70:ILE:HD12 | 0.91 | 1.06 | 8 | 1 |
| 1:A:69:ILE:HG23 | 1:B:78:LEU:CD2 | 0.91 | 1.60 | 3 | 4 |
| 1:A:81:ALA:O | 1:B:67:THR:CB | 0.91 | 2.18 | 10 | 5 |
| 1:A:80:THR:HG23 | 1:B:68:CYS:O | 0.90 | 1.66 | 3 | 1 |
| 1:A:63:LYS:CG | 1:B:86:TRP:HD1 | 0.90 | 1.78 | 14 | 2 |
| 1:A:67:THR:CB | 1:B:81:ALA:O | 0.90 | 2.18 | 10 | 5 |
| 1:A:64:TYR:CE2 | 1:B:85:TRP:CE2 | 0.90 | 2.59 | 14 | 2 |
| 1:A:81:ALA:HB1 | 1:B:48:LEU:HD22 | 0.90 | 1.42 | 13 | 7 |
| 1:A:68:CYS:O | 1:B:80:THR:HG23 | 0.90 | 1.66 | 3 | 1 |
| 1:A:69:ILE:CA | 1:B:80:THR:HA | 0.90 | 1.96 | 3 | 6 |
| 1:A:62:PHE:CA | 1:B:85:TRP:CZ3 | 0.90 | 2.54 | 14 | 1 |
| 1:A:86:TRP:HD1 | 1:B:63:LYS:HB2 | 0.90 | 1.27 | 14 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:85:TRP:CE2 | 1:B:64:TYR:CE2 | 0.90 | 2.59 | 14 | 2 |
| 1:A:65:VAL:CG1 | 1:B:84:CYS:HA | 0.90 | 1.95 | 4 | 1 |
| 1:A:69:ILE:HD11 | 1:B:80:THR:HG23 | 0.90 | 0.94 | 10 | 3 |
| 1:A:86:TRP:HE1 | 1:B:62:PHE:HE2 | 0.90 | 1.10 | 11 | 1 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:N | 0.90 | 1.82 | 13 | 1 |
| 1:A:71:MET:HG2 | 1:B:78:LEU:CD1 | 0.90 | 1.95 | 15 | 1 |
| 1:A:82:ALA:HA | 1:B:48:LEU:CD2 | 0.90 | 1.95 | 3 | 1 |
| 1:A:82:ALA:HB1 | 1:B:67:THR:HB | 0.90 | 1.43 | 1 | 2 |
| 1:A:84:CYS:HA | 1:B:65:VAL:CG1 | 0.90 | 1.95 | 4 | 1 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:CB | 0.89 | 2.47 | 8 | 5 |
| 1:A:85:TRP:HB2 | 1:B:64:TYR:O | 0.89 | 1.68 | 1 | 2 |
| 1:A:80:THR:HA | 1:B:69:ILE:CG1 | 0.89 | 1.97 | 9 | 3 |
| 1:A:69:ILE:HG12 | 1:B:80:THR:HG23 | 0.89 | 1.44 | 9 | 2 |
| 1:A:48:LEU:HD22 | 1:B:81:ALA:HB1 | 0.89 | 1.42 | 13 | 7 |
| 1:A:52:ILE:CD1 | 1:B:85:TRP:HD1 | 0.89 | 1.80 | 3 | 3 |
| 1:A:67:THR:C | 1:B:81:ALA:O | 0.89 | 2.11 | 10 | 5 |
| 1:A:64:TYR:O | 1:B:85:TRP:HB2 | 0.89 | 1.67 | 1 | 2 |
| 1:A:62:PHE:HE2 | 1:B:86:TRP:HE1 | 0.89 | 1.10 | 11 | 1 |
| 1:A:81:ALA:O | 1:B:67:THR:C | 0.88 | 2.11 | 10 | 5 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:HA | 0.88 | 1.97 | 9 | 3 |
| 1:A:85:TRP:HD1 | 1:B:52:ILE:CD1 | 0.88 | 1.80 | 3 | 3 |
| 1:A:79:HIS:N | 1:B:70:ILE:HG13 | 0.88 | 1.82 | 13 | 1 |
| 1:A:114:ILE:C | 1:B:86:TRP:NE1 | 0.87 | 2.28 | 14 | 1 |
| 1:A:65:VAL:HG12 | 1:B:84:CYS:SG | 0.87 | 2.09 | 1 | 1 |
| 1:A:85:TRP:CD1 | 1:B:52:ILE:CD1 | 0.87 | 2.57 | 3 | 3 |
| 1:A:52:ILE:CD1 | 1:B:85:TRP:CD1 | 0.87 | 2.56 | 3 | 3 |
| 1:A:70:ILE:HD12 | 1:B:79:HIS:CA | 0.87 | 1.99 | 8 | 1 |
| 1:A:67:THR:HB | 1:B:82:ALA:HB1 | 0.87 | 1.43 | 1 | 2 |
| 1:A:87:ASP:OD2 | 1:B:63:LYS:CD | 0.87 | 2.23 | 3 | 1 |
| 1:A:80:THR:HA | 1:B:69:ILE:CA | 0.87 | 2.00 | 8 | 5 |
| 1:A:79:HIS:CA | 1:B:70:ILE:HD12 | 0.86 | 2.00 | 8 | 1 |
| 1:A:63:LYS:CB | 1:B:86:TRP:HD1 | 0.86 | 1.77 | 14 | 1 |
| 1:A:84:CYS:SG | 1:B:65:VAL:HG12 | 0.86 | 2.09 | 1 | 1 |
| 1:A:78:LEU:HA | 1:B:70:ILE:O | 0.86 | 1.70 | 8 | 2 |
| 1:A:70:ILE:O | 1:B:78:LEU:HA | 0.86 | 1.70 | 8 | 2 |
| 1:A:80:THR:HG23 | 1:B:69:ILE:HG12 | 0.86 | 1.44 | 9 | 3 |
| 1:A:84:CYS:CA | 1:B:65:VAL:HG13 | 0.86 | 2.00 | 4 | 1 |
| 1:A:41:SER:OG | 1:B:79:HIS:HB3 | 0.86 | 1.71 | 6 | 1 |
| 1:A:86:TRP:NE1 | 1:B:114:ILE:C | 0.86 | 2.28 | 14 | 1 |
| 1:A:67:THR:CB | 1:B:82:ALA:HA | 0.86 | 2.01 | 9 | 5 |
| 1:A:63:LYS:CD | 1:B:87:ASP:OD2 | 0.86 | 2.23 | 3 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:79:HIS:C | 1:B:70:ILE:HD13 | 0.85 | 1.91 | 3 | 1 |
| 1:A:79:HIS:HB3 | 1:B:41:SER:OG | 0.85 | 1.71 | 6 | 1 |
| 1:A:85:TRP:HD1 | 1:B:52:ILE:HD11 | 0.85 | 1.16 | 3 | 2 |
| 1:A:82:ALA:HA | 1:B:67:THR:CB | 0.85 | 2.01 | 9 | 4 |
| 1:A:48:LEU:HD23 | 1:B:82:ALA:C | 0.85 | 1.92 | 3 | 1 |
| 1:A:65:VAL:HG13 | 1:B:84:CYS:CA | 0.84 | 2.00 | 4 | 1 |
| 1:A:18:VAL:HG13 | 1:A:55:LEU:HD21 | 0.84 | 1.50 | 12 | 7 |
| 1:A:78:LEU:HD21 | 1:B:78:LEU:HD21 | 0.84 | 1.38 | 1 | 1 |
| 1:B:52:ILE:O | 1:B:56:THR:HG23 | 0.84 | 1.73 | 13 | 14 |
| 1:A:69:ILE:HG12 | 1:B:80:THR:HG1 | 0.84 | 1.30 | 8 | 3 |
| 1:A:64:TYR:HE1 | 1:B:85:TRP:CD1 | 0.84 | 1.66 | 1 | 1 |
| 1:A:22:ILE:HD11 | 1:A:96:VAL:HG21 | 0.84 | 1.50 | 2 | 3 |
| 1:A:86:TRP:HZ2 | 1:B:63:LYS:HB3 | 0.83 | 1.08 | 4 | 1 |
| 1:A:52:ILE:O | 1:A:56:THR:HG23 | 0.83 | 1.74 | 1 | 14 |
| 1:A:87:ASP:OD2 | 1:B:63:LYS:HD2 | 0.83 | 1.74 | 3 | 2 |
| 1:A:79:HIS:CG | 1:B:70:ILE:CD1 | 0.83 | 2.59 | 9 | 1 |
| 1:A:82:ALA:CA | 1:B:48:LEU:HD21 | 0.83 | 1.99 | 3 | 1 |
| 1:A:70:ILE:HD13 | 1:B:79:HIS:C | 0.83 | 1.91 | 3 | 1 |
| 1:A:82:ALA:C | 1:B:48:LEU:HD23 | 0.83 | 1.92 | 3 | 1 |
| 1:B:22:ILE:HD11 | 1:B:96:VAL:HG21 | 0.83 | 1.50 | 2 | 3 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:CE2 | 0.83 | 2.67 | 11 | 2 |
| 1:A:79:HIS:HD2 | 1:B:70:ILE:CD1 | 0.82 | 1.81 | 9 | 1 |
| 1:A:62:PHE:CE2 | 1:B:85:TRP:CZ3 | 0.82 | 2.67 | 11 | 2 |
| 1:A:85:TRP:CH2 | 1:B:62:PHE:CZ | 0.82 | 2.67 | 6 | 1 |
| 1:A:64:TYR:CE1 | 1:B:85:TRP:HD1 | 0.82 | 1.88 | 1 | 1 |
| 1:A:82:ALA:N | 1:B:48:LEU:HD21 | 0.82 | 1.66 | 3 | 4 |
| 1:B:18:VAL:HG13 | 1:B:55:LEU:HD21 | 0.82 | 1.50 | 12 | 6 |
| 1:A:37:GLU:O | 1:A:40:VAL:HG22 | 0.82 | 1.75 | 10 | 2 |
| 1:A:78:LEU:CD1 | 1:B:78:LEU:HD22 | 0.82 | 2.05 | 15 | 1 |
| 1:A:63:LYS:HB2 | 1:B:86:TRP:NE1 | 0.81 | 1.90 | 14 | 1 |
| 1:B:7:ALA:HB2 | 1:B:98:TRP:CZ3 | 0.81 | 2.10 | 8 | 6 |
| 1:A:63:LYS:HB3 | 1:B:86:TRP:HZ2 | 0.81 | 1.08 | 4 | 1 |
| 1:A:81:ALA:CB | 1:B:48:LEU:CD2 | 0.81 | 2.58 | 11 | 4 |
| 1:A:7:ALA:HB2 | 1:A:98:TRP:CZ3 | 0.81 | 2.11 | 10 | 6 |
| 1:A:62:PHE:CZ | 1:B:85:TRP:CH2 | 0.81 | 2.68 | 6 | 1 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:C | 0.81 | 2.54 | 14 | 1 |
| 1:A:63:LYS:HD2 | 1:B:87:ASP:OD2 | 0.81 | 1.74 | 3 | 2 |
| 1:A:62:PHE:C | 1:B:85:TRP:CZ3 | 0.81 | 2.54 | 14 | 1 |
| 1:A:77:GLY:HA3 | 1:B:72:GLN:HB2 | 0.80 | 1.54 | 13 | 1 |
| 1:A:86:TRP:NE1 | 1:B:63:LYS:HB2 | 0.80 | 1.90 | 14 | 1 |
| 1:A:78:LEU:HD22 | 1:B:78:LEU:CD1 | 0.80 | 2.05 | 15 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:37:GLU:O | 1:B:40:VAL:HG22 | 0.80 | 1.75 | 10 | 2 |
| 1:A:81:ALA:C | 1:B:68:CYS:H | 0.80 | 1.80 | 10 | 4 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:HB2 | 0.80 | 0.81 | 9 | 2 |
| 1:B:29:VAL:HG12 | 1:B:30:LEU:CD2 | 0.80 | 2.07 | 1 | 14 |
| 1:A:56:THR:HG21 | 1:B:85:TRP:HE1 | 0.80 | 1.37 | 12 | 2 |
| 1:A:68:CYS:HB3 | 1:B:81:ALA:HB3 | 0.80 | 1.53 | 8 | 3 |
| 1:A:68:CYS:H | 1:B:81:ALA:C | 0.79 | 1.79 | 10 | 4 |
| 1:A:69:ILE:HG23 | 1:B:78:LEU:HD23 | 0.79 | 1.53 | 8 | 2 |
| 1:A:29:VAL:HG12 | 1:A:30:LEU:CD2 | 0.79 | 2.07 | 11 | 14 |
| 1:A:78:LEU:HD23 | 1:B:69:ILE:HG23 | 0.79 | 1.53 | 8 | 2 |
| 1:A:48:LEU:CD2 | 1:B:81:ALA:CB | 0.79 | 2.58 | 11 | 4 |
| 1:A:85:TRP:CD1 | 1:B:64:TYR:HE1 | 0.79 | 1.66 | 1 | 1 |
| 1:A:65:VAL:HG13 | 1:A:110:PHE:CB | 0.79 | 2.07 | 15 | 2 |
| 1:A:78:LEU:CG | 1:B:78:LEU:HG | 0.79 | 2.08 | 11 | 1 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:CG | 0.79 | 2.59 | 9 | 1 |
| 1:B:65:VAL:HG13 | 1:B:110:PHE:CB | 0.79 | 2.07 | 15 | 2 |
| 1:A:64:TYR:H | 1:B:85:TRP:HB2 | 0.79 | 1.37 | 14 | 1 |
| 1:A:64:TYR:CE1 | 1:B:85:TRP:CG | 0.79 | 2.66 | 1 | 1 |
| 1:A:64:TYR:CD1 | 1:B:85:TRP:CD1 | 0.79 | 2.68 | 1 | 1 |
| 1:A:79:HIS:HB2 | 1:B:70:ILE:HG13 | 0.78 | 0.81 | 9 | 2 |
| 1:A:81:ALA:HB1 | 1:B:48:LEU:HD21 | 0.78 | 1.56 | 11 | 1 |
| 1:A:85:TRP:HD1 | 1:B:64:TYR:CE1 | 0.78 | 1.88 | 1 | 1 |
| 1:A:48:LEU:HD21 | 1:B:82:ALA:CA | 0.78 | 1.99 | 3 | 1 |
| 1:B:65:VAL:HG13 | 1:B:110:PHE:HB2 | 0.78 | 1.52 | 15 | 3 |
| 1:A:72:GLN:HB2 | 1:B:77:GLY:CA | 0.78 | 2.09 | 13 | 1 |
| 1:A:67:THR:HA | 1:B:81:ALA:O | 0.78 | 1.78 | 10 | 6 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:C | 0.78 | 1.97 | 9 | 1 |
| 1:A:79:HIS:HB3 | 1:B:70:ILE:CG1 | 0.78 | 1.96 | 1 | 1 |
| 1:A:85:TRP:CD1 | 1:B:64:TYR:CD1 | 0.78 | 2.68 | 1 | 1 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:HB3 | 0.78 | 1.53 | 8 | 3 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:HD2 | 0.78 | 1.81 | 9 | 1 |
| 1:A:65:VAL:HG13 | 1:A:110:PHE:HB2 | 0.78 | 1.53 | 15 | 3 |
| 1:A:78:LEU:HG | 1:B:78:LEU:CG | 0.78 | 2.08 | 11 | 1 |
| 1:A:72:GLN:HB2 | 1:B:77:GLY:HA3 | 0.78 | 1.54 | 13 | 1 |
| 1:A:77:GLY:CA | 1:B:72:GLN:HB2 | 0.78 | 2.09 | 13 | 1 |
| 1:A:85:TRP:CG | 1:B:64:TYR:CE1 | 0.78 | 2.66 | 1 | 1 |
| 1:A:82:ALA:HA | 1:B:66:VAL:O | 0.78 | 1.79 | 10 | 5 |
| 1:A:66:VAL:O | 1:B:82:ALA:HA | 0.78 | 1.79 | 10 | 6 |
| 1:B:29:VAL:HG11 | 1:B:47:CYS:HB2 | 0.78 | 1.56 | 1 | 15 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:N | 0.78 | 2.33 | 8 | 1 |
| 1:A:80:THR:HA | 1:B:69:ILE:CB | 0.77 | 2.09 | 9 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:78:LEU:HD23 | 1:B:69:ILE:CG2 | 0.77 | 2.07 | 8 | 1 |
| 1:A:63:LYS:N | 1:B:85:TRP:CE3 | 0.77 | 2.52 | 14 | 1 |
| 1:A:85:TRP:HB2 | 1:B:64:TYR:C | 0.77 | 2.00 | 4 | 1 |
| 1:A:69:ILE:CB | 1:B:80:THR:HA | 0.77 | 2.09 | 9 | 2 |
| 1:A:85:TRP:HB2 | 1:B:64:TYR:H | 0.77 | 1.37 | 14 | 1 |
| 1:A:85:TRP:CE3 | 1:B:63:LYS:N | 0.76 | 2.52 | 14 | 1 |
| 1:A:66:VAL:CB | 1:B:83:SER:O | 0.76 | 2.33 | 1 | 1 |
| 1:B:26:ILE:HG21 | 1:B:98:TRP:CD1 | 0.76 | 2.16 | 1 | 10 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:CG | 0.76 | 2.67 | 14 | 1 |
| 1:B:22:ILE:HG22 | 1:B:51:CYS:SG | 0.76 | 2.20 | 4 | 2 |
| 1:A:81:ALA:O | 1:B:67:THR:HA | 0.76 | 1.78 | 10 | 6 |
| 1:A:68:CYS:C | 1:B:81:ALA:HB3 | 0.76 | 1.97 | 9 | 1 |
| 1:A:85:TRP:HE1 | 1:B:56:THR:HG21 | 0.76 | 1.37 | 12 | 1 |
| 1:A:44:THR:HG23 | 1:B:81:ALA:HB2 | 0.76 | 1.55 | 13 | 1 |
| 1:A:48:LEU:CB | 1:B:83:SER:HB2 | 0.76 | 2.10 | 1 | 2 |
| 1:A:86:TRP:HE1 | 1:B:114:ILE:C | 0.76 | 1.83 | 14 | 1 |
| 1:A:114:ILE:C | 1:B:86:TRP:HE1 | 0.76 | 1.83 | 14 | 1 |
| 1:A:80:THR:HG1 | 1:B:69:ILE:HG12 | 0.76 | 1.40 | 8 | 3 |
| 1:A:83:SER:O | 1:B:66:VAL:CB | 0.76 | 2.33 | 1 | 1 |
| 1:A:22:ILE:HG22 | 1:A:51:CYS:SG | 0.76 | 2.20 | 4 | 2 |
| 1:A:26:ILE:HG21 | 1:A:98:TRP:CD1 | 0.76 | 2.16 | 1 | 10 |
| 1:A:64:TYR:C | 1:B:85:TRP:HB2 | 0.75 | 2.00 | 4 | 1 |
| 1:A:83:SER:HB2 | 1:B:48:LEU:CB | 0.75 | 2.10 | 1 | 2 |
| 1:B:22:ILE:HD12 | 1:B:51:CYS:SG | 0.75 | 2.22 | 1 | 2 |
| 1:A:48:LEU:HD21 | 1:B:81:ALA:HB1 | 0.75 | 1.56 | 11 | 2 |
| 1:A:79:HIS:O | 1:B:70:ILE:HD13 | 0.75 | 1.82 | 3 | 1 |
| 1:A:68:CYS:CA | 1:B:81:ALA:HB3 | 0.74 | 2.12 | 9 | 1 |
| 1:A:71:MET:CE | 1:B:78:LEU:HD21 | 0.74 | 2.12 | 11 | 1 |
| 1:B:40:VAL:CG1 | 1:B:70:ILE:HD13 | 0.74 | 2.12 | 2 | 1 |
| 1:A:22:ILE:HD12 | 1:A:51:CYS:SG | 0.74 | 2.22 | 1 | 2 |
| 1:A:62:PHE:O | 1:B:85:TRP:CZ3 | 0.74 | 2.40 | 1 | 1 |
| 1:B:22:ILE:HD11 | 1:B:107:CYS:SG | 0.74 | 2.23 | 1 | 1 |
| 1:B:90:THR:HG22 | 1:B:114:ILE:CG1 | 0.74 | 2.13 | 15 | 2 |
| 1:A:29:VAL:HG11 | 1:A:47:CYS:HB2 | 0.74 | 1.56 | 1 | 15 |
| 1:A:48:LEU:O | 1:A:52:ILE:HG22 | 0.74 | 1.83 | 5 | 6 |
| 1:A:78:LEU:HD12 | 1:B:71:MET:HG3 | 0.74 | 1.58 | 10 | 2 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:CA | 0.74 | 2.12 | 9 | 1 |
| 1:A:70:ILE:HD13 | 1:B:79:HIS:O | 0.74 | 1.82 | 3 | 1 |
| 1:A:21:ILE:HD11 | 1:A:58:LEU:CD1 | 0.74 | 2.13 | 6 | 4 |
| 1:A:71:MET:HG3 | 1:B:78:LEU:HD12 | 0.74 | 1.58 | 10 | 2 |
| 1:A:90:THR:HG22 | 1:A:114:ILE:CG1 | 0.74 | 2.13 | 15 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:40:VAL:CG1 | 1:A:70:ILE:HD13 | 0.74 | 2.12 | 2 | 1 |
| 1:A:22:ILE:HD11 | 1:A:96:VAL:CG2 | 0.74 | 2.13 | 2 | 1 |
| 1:B:22:ILE:HD11 | 1:B:96:VAL:CG2 | 0.74 | 2.13 | 2 | 1 |
| 1:B:48:LEU:O | 1:B:52:ILE:HG22 | 0.74 | 1.83 | 5 | 6 |
| 1:A:63:LYS:CG | 1:B:86:TRP:CD1 | 0.74 | 2.67 | 14 | 1 |
| 1:A:14:VAL:HG22 | 1:A:94:ARG:HB3 | 0.73 | 1.60 | 10 | 2 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:O | 0.73 | 2.40 | 1 | 1 |
| 1:B:14:VAL:HG22 | 1:B:94:ARG:HB3 | 0.73 | 1.60 | 10 | 2 |
| 1:A:22:ILE:HD11 | 1:A:107:CYS:SG | 0.73 | 2.23 | 1 | 1 |
| 1:A:67:THR:HG23 | 1:A:108:THR:HG22 | 0.73 | 1.61 | 13 | 15 |
| 1:A:41:SER:OG | 1:B:79:HIS:CB | 0.73 | 2.36 | 6 | 1 |
| 1:A:79:HIS:CB | 1:B:41:SER:OG | 0.73 | 2.36 | 6 | 1 |
| 1:A:78:LEU:HD21 | 1:B:71:MET:CE | 0.73 | 2.12 | 11 | 1 |
| 1:A:63:LYS:CD | 1:B:86:TRP:HD1 | 0.73 | 1.96 | 14 | 1 |
| 1:A:86:TRP:HD1 | 1:B:63:LYS:CD | 0.73 | 1.96 | 14 | 1 |
| 1:B:89:THR:HG23 | 1:B:90:THR:HG23 | 0.73 | 1.60 | 13 | 5 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:N | 0.73 | 2.52 | 13 | 1 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:HB3 | 0.72 | 1.96 | 1 | 1 |
| 1:B:21:ILE:HD11 | 1:B:58:LEU:CD1 | 0.72 | 2.13 | 6 | 4 |
| 1:B:67:THR:HG23 | 1:B:108:THR:HG22 | 0.72 | 1.61 | 7 | 15 |
| 1:A:55:LEU:HD13 | 1:A:64:TYR:CB | 0.72 | 2.15 | 12 | 3 |
| 1:A:67:THR:HG23 | 1:A:108:THR:CG2 | 0.72 | 2.14 | 15 | 14 |
| 1:A:63:LYS:CB | 1:A:114:ILE:HD12 | 0.72 | 2.15 | 15 | 1 |
| 1:A:89:THR:HG23 | 1:A:90:THR:HG23 | 0.72 | 1.60 | 13 | 5 |
| 1:A:81:ALA:O | 1:B:48:LEU:HD21 | 0.72 | 1.85 | 3 | 1 |
| 1:B:63:LYS:CB | 1:B:114:ILE:HD12 | 0.72 | 2.15 | 15 | 1 |
| 1:B:67:THR:HG23 | 1:B:108:THR:CG2 | 0.71 | 2.15 | 10 | 14 |
| 1:A:79:HIS:N | 1:B:70:ILE:CG1 | 0.71 | 2.52 | 13 | 1 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:HD2 | 0.71 | 2.20 | 14 | 1 |
| 1:B:22:ILE:HG21 | 1:B:109:VAL:HG21 | 0.71 | 1.63 | 10 | 1 |
| 1:A:71:MET:SD | 1:B:78:LEU:CD2 | 0.71 | 2.79 | 11 | 1 |
| 1:A:81:ALA:CB | 1:B:48:LEU:HD21 | 0.71 | 2.16 | 11 | 2 |
| 1:A:80:THR:CA | 1:B:68:CYS:O | 0.71 | 2.39 | 3 | 1 |
| 1:B:55:LEU:HD13 | 1:B:64:TYR:CB | 0.71 | 2.15 | 12 | 3 |
| 1:A:67:THR:HB | 1:B:82:ALA:HA | 0.71 | 1.62 | 9 | 2 |
| 1:A:56:THR:HG22 | 1:B:85:TRP:CE2 | 0.71 | 2.21 | 12 | 1 |
| 1:A:85:TRP:HZ3 | 1:B:62:PHE:CB | 0.71 | 1.79 | 14 | 1 |
| 1:A:48:LEU:HD21 | 1:B:81:ALA:O | 0.70 | 1.85 | 3 | 1 |
| 1:A:79:HIS:O | 1:B:69:ILE:HA | 0.70 | 1.87 | 10 | 3 |
| 1:A:80:THR:CA | 1:B:69:ILE:CG1 | 0.70 | 2.64 | 9 | 2 |
| 1:A:68:CYS:O | 1:B:80:THR:CA | 0.70 | 2.39 | 3 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:97:ARG:HD3 | 1:B:106:ILE:HD12 | 0.70 | 1.63 | 9 | 4 |
| 1:A:66:VAL:CA | 1:B:83:SER:O | 0.70 | 2.39 | 1 | 1 |
| 1:A:83:SER:O | 1:B:66:VAL:CA | 0.70 | 2.39 | 1 | 1 |
| 1:A:78:LEU:HD12 | 1:B:71:MET:CG | 0.70 | 2.17 | 8 | 3 |
| 1:A:63:LYS:HD2 | 1:B:86:TRP:CD1 | 0.70 | 2.20 | 14 | 1 |
| 1:A:83:SER:O | 1:B:66:VAL:HG23 | 0.70 | 1.87 | 1 | 1 |
| 1:A:84:CYS:SG | 1:B:65:VAL:HG11 | 0.70 | 2.26 | 4 | 1 |
| 1:A:21:ILE:HD11 | 1:A:58:LEU:HD13 | 0.70 | 1.62 | 12 | 5 |
| 1:A:71:MET:CG | 1:B:78:LEU:HD12 | 0.70 | 2.17 | 8 | 3 |
| 1:A:82:ALA:HA | 1:B:67:THR:HB | 0.70 | 1.62 | 9 | 2 |
| 1:A:52:ILE:O | 1:A:52:ILE:HD13 | 0.70 | 1.87 | 2 | 10 |
| 1:A:48:LEU:HD21 | 1:B:81:ALA:CB | 0.69 | 2.16 | 11 | 2 |
| 1:A:66:VAL:HG23 | 1:B:83:SER:O | 0.69 | 1.87 | 1 | 1 |
| 1:A:82:ALA:HA | 1:B:48:LEU:HD21 | 0.69 | 1.60 | 3 | 1 |
| 1:A:97:ARG:HD3 | 1:A:106:ILE:HD12 | 0.69 | 1.63 | 9 | 4 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:O | 0.69 | 1.88 | 11 | 1 |
| 1:B:40:VAL:HG12 | 1:B:70:ILE:HD13 | 0.69 | 1.65 | 5 | 2 |
| 1:A:85:TRP:CE2 | 1:B:56:THR:HG22 | 0.69 | 2.21 | 12 | 1 |
| 1:A:85:TRP:NE1 | 1:B:64:TYR:CE2 | 0.69 | 2.60 | 14 | 1 |
| 1:A:22:ILE:HG21 | 1:A:109:VAL:HG21 | 0.69 | 1.63 | 10 | 1 |
| 1:B:52:ILE:O | 1:B:52:ILE:HD13 | 0.69 | 1.88 | 9 | 10 |
| 1:A:40:VAL:HG12 | 1:A:70:ILE:HD13 | 0.69 | 1.65 | 5 | 2 |
| 1:B:90:THR:HG22 | 1:B:114:ILE:O | 0.69 | 1.88 | 2 | 1 |
| 1:A:68:CYS:O | 1:B:81:ALA:HB3 | 0.69 | 1.88 | 11 | 1 |
| 1:A:64:TYR:CA | 1:B:85:TRP:HB2 | 0.69 | 2.18 | 4 | 1 |
| 1:B:21:ILE:HD11 | 1:B:58:LEU:HD13 | 0.69 | 1.62 | 12 | 5 |
| 1:A:12:ALA:HB3 | 1:A:95:THR:O | 0.68 | 1.88 | 1 | 4 |
| 1:B:12:ALA:HB3 | 1:B:95:THR:O | 0.68 | 1.89 | 1 | 4 |
| 1:A:69:ILE:HA | 1:B:79:HIS:O | 0.68 | 1.87 | 10 | 3 |
| 1:A:64:TYR:CE2 | 1:B:85:TRP:NE1 | 0.68 | 2.60 | 14 | 1 |
| 1:A:77:GLY:O | 1:B:72:GLN:N | 0.68 | 2.26 | 9 | 3 |
| 1:A:67:THR:CA | 1:B:82:ALA:CA | 0.68 | 2.59 | 1 | 2 |
| 1:A:65:VAL:HG11 | 1:B:84:CYS:SG | 0.68 | 2.26 | 4 | 1 |
| 1:A:82:ALA:CA | 1:B:67:THR:CA | 0.68 | 2.59 | 1 | 2 |
| 1:A:78:LEU:HD11 | 1:B:69:ILE:CG2 | 0.68 | 2.19 | 11 | 3 |
| 1:A:85:TRP:CD1 | 1:B:64:TYR:CD2 | 0.68 | 2.82 | 14 | 2 |
| 1:A:85:TRP:HB2 | 1:B:64:TYR:CA | 0.68 | 2.18 | 4 | 1 |
| 1:B:29:VAL:HG11 | 1:B:47:CYS:CB | 0.68 | 2.19 | 1 | 12 |
| 1:B:68:CYS:C | 1:B:69:ILE:HD12 | 0.68 | 2.09 | 7 | 4 |
| 1:A:29:VAL:HG11 | 1:A:47:CYS:CB | 0.68 | 2.19 | 1 | 12 |
| 1:A:90:THR:HG22 | 1:A:114:ILE:O | 0.68 | 1.88 | 2 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:68:CYS:C | 1:B:80:THR:HG23 | 0.68 | 2.09 | 3 | 1 |
| 1:A:69:ILE:CG2 | 1:B:78:LEU:HD11 | 0.68 | 2.19 | 11 | 3 |
| 1:A:72:GLN:N | 1:B:77:GLY:O | 0.68 | 2.26 | 9 | 3 |
| 1:B:14:VAL:HG22 | 1:B:94:ARG:CB | 0.67 | 2.19 | 10 | 3 |
| 1:A:85:TRP:HB3 | 1:B:63:LYS:HG3 | 0.67 | 1.64 | 11 | 1 |
| 1:A:68:CYS:C | 1:A:69:ILE:HD12 | 0.67 | 2.09 | 7 | 4 |
| 1:A:29:VAL:HG21 | 1:A:47:CYS:HA | 0.67 | 1.67 | 4 | 10 |
| 1:B:26:ILE:HD12 | 1:B:47:CYS:SG | 0.67 | 2.30 | 12 | 5 |
| 1:A:78:LEU:CD2 | 1:B:71:MET:SD | 0.67 | 2.79 | 11 | 1 |
| 1:A:64:TYR:CD2 | 1:B:85:TRP:CD1 | 0.67 | 2.82 | 14 | 2 |
| 1:A:14:VAL:HG22 | 1:A:94:ARG:CB | 0.66 | 2.19 | 10 | 3 |
| 1:A:56:THR:HG22 | 1:A:64:TYR:CE2 | 0.66 | 2.25 | 14 | 2 |
| 1:B:113:ALA:O | 1:B:114:ILE:HD13 | 0.66 | 1.90 | 14 | 1 |
| 1:A:26:ILE:HD12 | 1:A:47:CYS:SG | 0.66 | 2.30 | 12 | 5 |
| 1:A:69:ILE:CG1 | 1:B:80:THR:CA | 0.66 | 2.64 | 9 | 2 |
| 1:A:7:ALA:HB2 | 1:A:98:TRP:CE3 | 0.66 | 2.25 | 3 | 5 |
| 1:A:80:THR:HG23 | 1:B:68:CYS:C | 0.66 | 2.09 | 3 | 1 |
| 1:A:67:THR:HB | 1:B:82:ALA:CA | 0.66 | 2.20 | 10 | 4 |
| 1:A:63:LYS:HG3 | 1:B:85:TRP:HB3 | 0.66 | 1.64 | 11 | 1 |
| 1:B:29:VAL:C | 1:B:30:LEU:HD22 | 0.66 | 2.10 | 2 | 14 |
| 1:B:29:VAL:HG21 | 1:B:47:CYS:HA | 0.66 | 1.67 | 4 | 10 |
| 1:A:18:VAL:HG12 | 1:A:109:VAL:HG21 | 0.66 | 1.67 | 2 | 1 |
| 1:A:78:LEU:CD2 | 1:B:69:ILE:HG22 | 0.66 | 1.83 | 3 | 2 |
| 1:A:48:LEU:HD22 | 1:B:81:ALA:CB | 0.66 | 2.19 | 13 | 2 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:HG13 | 0.66 | 1.90 | 10 | 1 |
| 1:A:55:LEU:HD13 | 1:A:64:TYR:HB2 | 0.66 | 1.66 | 12 | 1 |
| 1:A:87:ASP:CG | 1:B:63:LYS:HZ3 | 0.66 | 1.79 | 1 | 1 |
| 1:B:29:VAL:HG12 | 1:B:30:LEU:HD22 | 0.66 | 1.67 | 1 | 15 |
| 1:B:7:ALA:HB2 | 1:B:98:TRP:CE3 | 0.66 | 2.24 | 3 | 5 |
| 1:A:29:VAL:C | 1:A:30:LEU:HD22 | 0.66 | 2.10 | 2 | 14 |
| 1:A:65:VAL:HG11 | 1:A:110:PHE:CD2 | 0.66 | 2.26 | 2 | 3 |
| 1:A:82:ALA:CA | 1:B:67:THR:HB | 0.66 | 2.20 | 11 | 4 |
| 1:B:18:VAL:HG12 | 1:B:109:VAL:HG21 | 0.66 | 1.67 | 2 | 1 |
| 1:B:56:THR:HG22 | 1:B:64:TYR:CE2 | 0.66 | 2.25 | 14 | 2 |
| 1:A:113:ALA:O | 1:A:114:ILE:HD13 | 0.66 | 1.90 | 14 | 1 |
| 1:A:81:ALA:CB | 1:B:48:LEU:HD22 | 0.66 | 2.19 | 13 | 2 |
| 1:A:22:ILE:HD12 | 1:A:107:CYS:SG | 0.65 | 2.32 | 5 | 1 |
| 1:A:22:ILE:CD1 | 1:A:96:VAL:HG21 | 0.65 | 2.22 | 10 | 2 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:CA | 0.65 | 2.73 | 13 | 1 |
| 1:A:79:HIS:CA | 1:B:70:ILE:CG1 | 0.65 | 2.73 | 13 | 1 |
| 1:B:22:ILE:HD12 | 1:B:107:CYS:SG | 0.65 | 2.31 | 5 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:22:ILE:CD1 | 1:B:96:VAL:HG21 | 0.65 | 2.22 | 10 | 2 |
| 1:B:55:LEU:HD13 | 1:B:64:TYR:HB2 | 0.65 | 1.66 | 12 | 1 |
| 1:A:68:CYS:C | 1:B:81:ALA:H | 0.65 | 1.93 | 3 | 1 |
| 1:A:97:ARG:CD | 1:A:106:ILE:HD12 | 0.65 | 2.21 | 4 | 3 |
| 1:A:71:MET:HE1 | 1:B:78:LEU:HD21 | 0.65 | 1.69 | 11 | 1 |
| 1:A:66:VAL:O | 1:B:82:ALA:CA | 0.65 | 2.45 | 10 | 4 |
| 1:A:82:ALA:CA | 1:B:66:VAL:O | 0.65 | 2.45 | 10 | 4 |
| 1:A:63:LYS:CD | 1:B:86:TRP:CD1 | 0.65 | 2.80 | 14 | 1 |
| 1:B:97:ARG:CD | 1:B:106:ILE:HD12 | 0.64 | 2.21 | 4 | 3 |
| 1:A:78:LEU:HD22 | 1:B:78:LEU:HD22 | 0.64 | 1.69 | 10 | 1 |
| 1:A:29:VAL:HG12 | 1:A:30:LEU:HD22 | 0.64 | 1.67 | 1 | 15 |
| 1:A:48:LEU:HD21 | 1:B:82:ALA:HA | 0.64 | 1.60 | 3 | 1 |
| 1:B:52:ILE:HG23 | 1:B:53:LYS:HD2 | 0.64 | 1.69 | 11 | 11 |
| 1:A:78:LEU:HD13 | 1:B:78:LEU:HD22 | 0.64 | 1.68 | 15 | 1 |
| 1:A:65:VAL:HG13 | 1:B:84:CYS:CB | 0.64 | 2.22 | 1 | 2 |
| 1:A:78:LEU:HD22 | 1:B:78:LEU:HD13 | 0.64 | 1.68 | 15 | 1 |
| 1:A:84:CYS:CB | 1:B:65:VAL:HG13 | 0.64 | 2.22 | 1 | 2 |
| 1:B:78:LEU:HD13 | 1:B:79:HIS:N | 0.64 | 2.08 | 9 | 4 |
| 1:A:79:HIS:O | 1:B:69:ILE:C | 0.64 | 2.35 | 9 | 1 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:CD | 0.64 | 2.80 | 14 | 1 |
| 1:B:65:VAL:HG11 | 1:B:110:PHE:CD2 | 0.64 | 2.26 | 2 | 3 |
| 1:A:70:ILE:HG12 | 1:B:79:HIS:CA | 0.64 | 2.23 | 13 | 1 |
| 1:B:64:TYR:CE2 | 1:B:66:VAL:HG22 | 0.64 | 2.27 | 15 | 1 |
| 1:A:83:SER:O | 1:B:66:VAL:CG2 | 0.64 | 2.46 | 1 | 1 |
| 1:A:66:VAL:CG2 | 1:B:83:SER:O | 0.63 | 2.46 | 1 | 1 |
| 1:A:64:TYR:CE2 | 1:A:66:VAL:HG22 | 0.63 | 2.27 | 15 | 1 |
| 1:A:70:ILE:O | 1:B:78:LEU:CA | 0.63 | 2.47 | 8 | 2 |
| 1:A:65:VAL:HG23 | 1:A:110:PHE:CB | 0.63 | 2.23 | 4 | 4 |
| 1:B:22:ILE:HD13 | 1:B:109:VAL:CG2 | 0.63 | 2.21 | 1 | 1 |
| 1:A:78:LEU:HD13 | 1:A:79:HIS:N | 0.63 | 2.08 | 9 | 4 |
| 1:A:79:HIS:CA | 1:B:70:ILE:HG12 | 0.63 | 2.23 | 13 | 1 |
| 1:B:7:ALA:HB1 | 1:B:98:TRP:CZ3 | 0.63 | 2.29 | 6 | 3 |
| 1:A:69:ILE:C | 1:B:79:HIS:O | 0.63 | 2.36 | 9 | 1 |
| 1:A:63:LYS:HG3 | 1:B:86:TRP:HD1 | 0.63 | 1.54 | 11 | 1 |
| 1:A:81:ALA:H | 1:B:68:CYS:C | 0.63 | 1.93 | 3 | 1 |
| 1:A:86:TRP:HD1 | 1:B:63:LYS:HG3 | 0.63 | 1.54 | 11 | 1 |
| 1:A:78:LEU:CA | 1:B:70:ILE:O | 0.63 | 2.47 | 8 | 2 |
| 1:A:7:ALA:HB1 | 1:A:98:TRP:CZ3 | 0.63 | 2.28 | 6 | 3 |
| 1:B:65:VAL:HG23 | 1:B:110:PHE:CB | 0.62 | 2.23 | 4 | 4 |
| 1:B:18:VAL:CG1 | 1:B:109:VAL:HG11 | 0.62 | 2.24 | 13 | 7 |
| 1:A:69:ILE:HG22 | 1:B:78:LEU:CG | 0.62 | 2.24 | 3 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:78:LEU:CG | 1:B:69:ILE:HG22 | 0.62 | 2.24 | 3 | 2 |
| 1:A:62:PHE:CB | 1:B:85:TRP:HZ3 | 0.62 | 1.79 | 14 | 1 |
| 1:B:95:THR:OG1 | 1:B:106:ILE:HD11 | 0.62 | 1.94 | 12 | 7 |
| 1:B:87:ASP:OD1 | 1:B:89:THR:HG22 | 0.62 | 1.95 | 10 | 1 |
| 1:A:76:ALA:HB1 | 1:B:76:ALA:HB1 | 0.62 | 1.71 | 15 | 1 |
| 1:B:89:THR:O | 1:B:113:ALA:HB3 | 0.62 | 1.95 | 11 | 4 |
| 1:A:18:VAL:CG1 | 1:A:109:VAL:HG11 | 0.62 | 2.24 | 13 | 7 |
| 1:B:55:LEU:HD13 | 1:B:64:TYR:CG | 0.62 | 2.30 | 6 | 2 |
| 1:A:52:ILE:HG23 | 1:A:53:LYS:HD2 | 0.62 | 1.69 | 11 | 11 |
| 1:A:95:THR:OG1 | 1:A:106:ILE:HD11 | 0.62 | 1.94 | 12 | 7 |
| 1:A:22:ILE:HD13 | 1:A:109:VAL:CG2 | 0.61 | 2.21 | 1 | 1 |
| 1:A:90:THR:HG22 | 1:A:112:LEU:HB3 | 0.61 | 1.70 | 5 | 1 |
| 1:A:55:LEU:HD13 | 1:A:64:TYR:CG | 0.61 | 2.30 | 6 | 2 |
| 1:B:90:THR:HG22 | 1:B:112:LEU:HB3 | 0.61 | 1.70 | 5 | 1 |
| 1:A:78:LEU:HD21 | 1:B:71:MET:HE1 | 0.61 | 1.71 | 11 | 1 |
| 1:A:63:LYS:HE3 | 1:B:87:ASP:HB2 | 0.61 | 1.71 | 10 | 2 |
| 1:A:55:LEU:HD12 | 1:A:64:TYR:CE1 | 0.61 | 2.31 | 15 | 1 |
| 1:A:89:THR:O | 1:A:113:ALA:HB3 | 0.61 | 1.94 | 11 | 4 |
| 1:A:44:THR:CG2 | 1:B:81:ALA:HB3 | 0.61 | 2.09 | 3 | 1 |
| 1:B:55:LEU:HD12 | 1:B:64:TYR:CE1 | 0.61 | 2.31 | 15 | 1 |
| 1:A:69:ILE:HG22 | 1:B:78:LEU:CD2 | 0.61 | 1.83 | 3 | 2 |
| 1:B:52:ILE:C | 1:B:52:ILE:HD13 | 0.61 | 2.16 | 12 | 2 |
| 1:A:69:ILE:HG13 | 1:B:80:THR:OG1 | 0.61 | 1.90 | 10 | 1 |
| 1:A:87:ASP:OD1 | 1:A:89:THR:HG22 | 0.61 | 1.95 | 10 | 1 |
| 1:A:85:TRP:CB | 1:B:63:LYS:CA | 0.61 | 2.76 | 14 | 1 |
| 1:B:4:VAL:HG13 | 1:B:100:ASN:O | 0.61 | 1.96 | 10 | 7 |
| 1:A:87:ASP:HB2 | 1:B:63:LYS:HE3 | 0.61 | 1.71 | 10 | 2 |
| 1:A:80:THR:C | 1:B:68:CYS:O | 0.60 | 2.38 | 3 | 1 |
| 1:A:52:ILE:C | 1:A:52:ILE:HD13 | 0.60 | 2.16 | 12 | 2 |
| 1:B:5:ASP:OD2 | 1:B:8:VAL:HG13 | 0.60 | 1.97 | 12 | 1 |
| 1:A:69:ILE:CA | 1:B:79:HIS:O | 0.60 | 2.50 | 9 | 3 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:CB | 0.60 | 2.27 | 8 | 2 |
| 1:A:85:TRP:NE1 | 1:B:64:TYR:CD2 | 0.60 | 2.69 | 14 | 1 |
| 1:A:79:HIS:O | 1:B:69:ILE:CA | 0.60 | 2.49 | 9 | 2 |
| 1:A:64:TYR:CD2 | 1:B:85:TRP:NE1 | 0.60 | 2.69 | 14 | 1 |
| 1:A:78:LEU:HD22 | 1:B:78:LEU:HD11 | 0.60 | 1.72 | 15 | 1 |
| 1:A:85:TRP:CB | 1:B:64:TYR:O | 0.60 | 2.49 | 4 | 1 |
| 1:A:4:VAL:HG13 | 1:A:100:ASN:O | 0.60 | 1.96 | 10 | 7 |
| 1:A:62:PHE:CD2 | 1:B:85:TRP:CH2 | 0.60 | 2.89 | 4 | 1 |
| 1:A:68:CYS:O | 1:B:80:THR:C | 0.59 | 2.38 | 3 | 1 |
| 1:A:5:ASP:OD2 | 1:A:8:VAL:HG13 | 0.59 | 1.97 | 12 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:78:LEU:HG | 1:B:70:ILE:C | 0.59 | 2.17 | 3 | 1 |
| 1:A:64:TYR:O | 1:B:85:TRP:CB | 0.59 | 2.49 | 4 | 1 |
| 1:B:22:ILE:HG21 | 1:B:109:VAL:CG2 | 0.59 | 2.27 | 10 | 2 |
| 1:A:22:ILE:HG21 | 1:A:109:VAL:CG2 | 0.59 | 2.28 | 10 | 2 |
| 1:A:67:THR:CB | 1:B:82:ALA:CA | 0.59 | 2.80 | 10 | 4 |
| 1:B:18:VAL:CG1 | 1:B:109:VAL:HG21 | 0.59 | 2.28 | 2 | 1 |
| 1:A:18:VAL:CG1 | 1:A:109:VAL:HG21 | 0.59 | 2.28 | 2 | 1 |
| 1:A:70:ILE:C | 1:B:78:LEU:HG | 0.59 | 2.17 | 3 | 1 |
| 1:A:29:VAL:HG21 | 1:A:47:CYS:CA | 0.59 | 2.28 | 2 | 10 |
| 1:A:68:CYS:CB | 1:B:81:ALA:HB3 | 0.59 | 2.27 | 8 | 2 |
| 1:A:18:VAL:HG11 | 1:A:109:VAL:HG11 | 0.59 | 1.74 | 14 | 1 |
| 1:A:63:LYS:CA | 1:B:85:TRP:HB3 | 0.59 | 2.18 | 14 | 1 |
| 1:A:78:LEU:HD11 | 1:B:78:LEU:HD22 | 0.59 | 1.72 | 15 | 1 |
| 1:A:82:ALA:CA | 1:B:67:THR:CB | 0.59 | 2.81 | 9 | 4 |
| 1:A:86:TRP:HZ2 | 1:B:112:LEU:HB2 | 0.58 | 1.57 | 4 | 1 |
| 1:A:65:VAL:HG13 | 1:B:84:CYS:HB3 | 0.58 | 1.76 | 1 | 1 |
| 1:B:29:VAL:HG21 | 1:B:47:CYS:CA | 0.58 | 2.28 | 2 | 10 |
| 1:B:29:VAL:HG13 | 1:B:43:TRP:O | 0.58 | 1.98 | 11 | 8 |
| 1:A:29:VAL:HG13 | 1:A:43:TRP:O | 0.58 | 1.98 | 11 | 8 |
| 1:A:70:ILE:HD12 | 1:A:70:ILE:O | 0.58 | 1.98 | 8 | 2 |
| 1:A:63:LYS:CA | 1:B:85:TRP:CB | 0.58 | 2.76 | 14 | 1 |
| 1:A:52:ILE:HD13 | 1:A:52:ILE:O | 0.58 | 1.99 | 15 | 1 |
| 1:B:52:ILE:HD13 | 1:B:52:ILE:O | 0.58 | 1.99 | 15 | 1 |
| 1:A:80:THR:HG22 | 1:B:68:CYS:O | 0.58 | 1.94 | 3 | 1 |
| 1:A:112:LEU:HB2 | 1:B:86:TRP:HZ2 | 0.58 | 1.57 | 4 | 1 |
| 1:A:79:HIS:O | 1:B:69:ILE:CG2 | 0.58 | 2.52 | 9 | 1 |
| 1:A:22:ILE:O | 1:A:26:ILE:HD12 | 0.58 | 1.99 | 11 | 2 |
| 1:A:66:VAL:O | 1:B:82:ALA:C | 0.58 | 2.41 | 10 | 4 |
| 1:A:85:TRP:CZ2 | 1:B:64:TYR:CE2 | 0.58 | 2.91 | 14 | 1 |
| 1:B:51:CYS:HB3 | 1:B:66:VAL:HG11 | 0.58 | 1.76 | 3 | 7 |
| 1:B:40:VAL:HG13 | 1:B:103:MET:SD | 0.58 | 2.39 | 6 | 1 |
| 1:A:85:TRP:HB3 | 1:B:63:LYS:CA | 0.58 | 2.18 | 14 | 1 |
| 1:A:70:ILE:CD1 | 1:B:79:HIS:O | 0.58 | 2.48 | 3 | 1 |
| 1:A:64:TYR:CE2 | 1:B:85:TRP:CZ2 | 0.58 | 2.91 | 14 | 1 |
| 1:A:78:LEU:HD23 | 1:B:78:LEU:CG | 0.57 | 2.16 | 1 | 1 |
| 1:A:79:HIS:O | 1:B:69:ILE:HG23 | 0.57 | 1.99 | 9 | 1 |
| 1:A:68:CYS:SG | 1:B:81:ALA:HB1 | 0.57 | 2.36 | 1 | 1 |
| 1:A:112:LEU:HB2 | 1:B:86:TRP:CZ2 | 0.57 | 2.34 | 4 | 1 |
| 1:B:22:ILE:O | 1:B:26:ILE:HD12 | 0.57 | 1.99 | 11 | 2 |
| 1:A:41:SER:O | 1:A:44:THR:HG22 | 0.57 | 1.99 | 5 | 4 |
| 1:A:40:VAL:HG13 | 1:A:103:MET:SD | 0.57 | 2.39 | 6 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:69:ILE:HG23 | 1:B:78:LEU:HD11 | 0.57 | 1.76 | 13 | 1 |
| 1:A:53:LYS:O | 1:A:57:ALA:HB2 | 0.57 | 1.99 | 15 | 1 |
| 1:A:85:TRP:HD1 | 1:B:52:ILE:CG1 | 0.57 | 2.12 | 12 | 1 |
| 1:B:70:ILE:HD12 | 1:B:70:ILE:O | 0.57 | 1.98 | 8 | 2 |
| 1:A:81:ALA:CB | 1:B:68:CYS:O | 0.57 | 2.53 | 11 | 2 |
| 1:B:18:VAL:HG11 | 1:B:109:VAL:HG11 | 0.57 | 1.74 | 14 | 1 |
| 1:A:66:VAL:HB | 1:B:83:SER:HB3 | 0.57 | 1.77 | 1 | 3 |
| 1:B:5:ASP:CG | 1:B:8:VAL:HG13 | 0.57 | 2.20 | 11 | 3 |
| 1:A:52:ILE:CG1 | 1:B:85:TRP:HD1 | 0.57 | 2.12 | 12 | 1 |
| 1:B:53:LYS:O | 1:B:57:ALA:HB2 | 0.57 | 1.99 | 15 | 1 |
| 1:A:84:CYS:HB3 | 1:B:65:VAL:HG13 | 0.57 | 1.76 | 1 | 1 |
| 1:A:69:ILE:HG23 | 1:B:80:THR:OG1 | 0.57 | 2.00 | 3 | 1 |
| 1:A:85:TRP:CH2 | 1:B:62:PHE:CD2 | 0.57 | 2.89 | 4 | 1 |
| 1:A:63:LYS:HD2 | 1:A:114:ILE:HD12 | 0.57 | 1.77 | 11 | 1 |
| 1:B:22:ILE:HD11 | 1:B:109:VAL:HG21 | 0.57 | 1.76 | 14 | 2 |
| 1:A:65:VAL:HG23 | 1:A:110:PHE:HB3 | 0.57 | 1.77 | 4 | 3 |
| 1:A:83:SER:HB3 | 1:B:66:VAL:HB | 0.57 | 1.77 | 1 | 3 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:CB | 0.57 | 2.53 | 3 | 1 |
| 1:A:56:THR:HG22 | 1:A:64:TYR:OH | 0.57 | 2.00 | 5 | 1 |
| 1:A:51:CYS:HB3 | 1:A:66:VAL:HG11 | 0.56 | 1.76 | 3 | 6 |
| 1:B:55:LEU:HD13 | 1:B:64:TYR:HB3 | 0.56 | 1.77 | 10 | 2 |
| 1:A:5:ASP:CG | 1:A:8:VAL:HG13 | 0.56 | 2.20 | 11 | 3 |
| 1:A:67:THR:HG1 | 1:B:81:ALA:C | 0.56 | 1.96 | 10 | 1 |
| 1:B:7:ALA:O | 1:B:8:VAL:HG23 | 0.56 | 2.01 | 10 | 8 |
| 1:A:86:TRP:CZ2 | 1:B:112:LEU:HB2 | 0.56 | 2.34 | 4 | 1 |
| 1:A:69:ILE:HG23 | 1:B:79:HIS:O | 0.56 | 1.99 | 9 | 1 |
| 1:B:56:THR:HG22 | 1:B:64:TYR:OH | 0.56 | 2.00 | 5 | 1 |
| 1:A:69:ILE:CG2 | 1:B:79:HIS:O | 0.56 | 2.52 | 9 | 1 |
| 1:A:68:CYS:O | 1:B:81:ALA:CB | 0.56 | 2.53 | 11 | 2 |
| 1:B:19:SER:HA | 1:B:22:ILE:HD12 | 0.56 | 1.77 | 11 | 1 |
| 1:A:78:LEU:HD11 | 1:B:69:ILE:HG23 | 0.56 | 1.76 | 13 | 1 |
| 1:A:22:ILE:HG21 | 1:A:107:CYS:HB2 | 0.56 | 1.78 | 14 | 1 |
| 1:B:97:ARG:NE | 1:B:106:ILE:HD12 | 0.56 | 2.16 | 4 | 1 |
| 1:A:81:ALA:HB1 | 1:B:68:CYS:SG | 0.56 | 2.36 | 1 | 1 |
| 1:A:7:ALA:O | 1:A:8:VAL:HG23 | 0.56 | 2.01 | 10 | 8 |
| 1:A:97:ARG:NE | 1:A:106:ILE:HD12 | 0.56 | 2.16 | 4 | 1 |
| 1:B:41:SER:O | 1:B:44:THR:HG22 | 0.56 | 1.99 | 5 | 4 |
| 1:B:65:VAL:HG23 | 1:B:110:PHE:HB3 | 0.56 | 1.77 | 4 | 3 |
| 1:A:70:ILE:CG1 | 1:B:79:HIS:O | 0.56 | 2.54 | 3 | 3 |
| 1:A:22:ILE:HD11 | 1:A:109:VAL:HG21 | 0.56 | 1.76 | 14 | 2 |
| 1:B:52:ILE:HD12 | 1:B:53:LYS:NZ | 0.56 | 2.16 | 12 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:69:ILE:CB | 1:B:80:THR:OG1 | 0.56 | 2.53 | 3 | 1 |
| 1:A:86:TRP:CD1 | 1:B:63:LYS:HG3 | 0.56 | 2.35 | 11 | 1 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:HG23 | 0.56 | 2.00 | 3 | 1 |
| 1:A:63:LYS:HG3 | 1:B:86:TRP:CD1 | 0.56 | 2.35 | 11 | 1 |
| 1:B:22:ILE:HG21 | 1:B:107:CYS:HB2 | 0.55 | 1.78 | 14 | 1 |
| 1:A:81:ALA:HB3 | 1:B:44:THR:CG2 | 0.55 | 2.09 | 3 | 1 |
| 1:A:87:ASP:OD2 | 1:B:63:LYS:CE | 0.55 | 2.54 | 3 | 1 |
| 1:B:14:VAL:HG12 | 1:B:94:ARG:NH1 | 0.55 | 2.17 | 3 | 1 |
| 1:A:69:ILE:HG23 | 1:B:79:HIS:C | 0.55 | 2.22 | 9 | 1 |
| 1:A:82:ALA:CB | 1:B:67:THR:CA | 0.55 | 2.84 | 1 | 1 |
| 1:A:63:LYS:CE | 1:B:87:ASP:OD2 | 0.55 | 2.54 | 3 | 1 |
| 1:A:79:HIS:C | 1:B:69:ILE:HG23 | 0.55 | 2.22 | 9 | 1 |
| 1:A:90:THR:HG21 | 1:B:63:LYS:NZ | 0.55 | 2.16 | 14 | 1 |
| 1:A:113:ALA:C | 1:A:114:ILE:HD12 | 0.55 | 2.22 | 12 | 2 |
| 1:A:67:THR:CA | 1:B:82:ALA:CB | 0.55 | 2.84 | 1 | 1 |
| 1:A:78:LEU:CG | 1:B:78:LEU:HD23 | 0.55 | 2.16 | 1 | 1 |
| 1:A:68:CYS:O | 1:B:80:THR:HG22 | 0.55 | 1.94 | 3 | 1 |
| 1:A:78:LEU:C | 1:B:70:ILE:O | 0.55 | 2.45 | 3 | 1 |
| 1:B:113:ALA:C | 1:B:114:ILE:HD12 | 0.55 | 2.22 | 12 | 2 |
| 1:A:77:GLY:C | 1:B:72:GLN:H | 0.55 | 2.05 | 9 | 1 |
| 1:A:52:ILE:HD12 | 1:A:53:LYS:NZ | 0.55 | 2.16 | 12 | 1 |
| 1:A:55:LEU:HD13 | 1:A:64:TYR:HB3 | 0.54 | 1.77 | 10 | 2 |
| 1:A:83:SER:O | 1:B:65:VAL:C | 0.54 | 2.45 | 11 | 2 |
| 1:B:63:LYS:HD2 | 1:B:114:ILE:HD12 | 0.54 | 1.77 | 11 | 1 |
| 1:B:90:THR:HG22 | 1:B:114:ILE:HG12 | 0.54 | 1.79 | 15 | 2 |
| 1:A:63:LYS:NZ | 1:B:90:THR:HG21 | 0.54 | 2.15 | 14 | 1 |
| 1:B:55:LEU:N | 1:B:55:LEU:HD23 | 0.54 | 2.17 | 15 | 1 |
| 1:A:69:ILE:O | 1:A:106:ILE:HG22 | 0.54 | 2.03 | 12 | 9 |
| 1:A:15:ALA:HB2 | 1:A:94:ARG:NH1 | 0.54 | 2.17 | 3 | 1 |
| 1:A:64:TYR:CE1 | 1:A:109:VAL:HG13 | 0.54 | 2.38 | 15 | 1 |
| 1:A:55:LEU:N | 1:A:55:LEU:HD23 | 0.54 | 2.17 | 15 | 1 |
| 1:A:79:HIS:O | 1:B:70:ILE:CG1 | 0.54 | 2.54 | 3 | 3 |
| 1:A:72:GLN:H | 1:B:77:GLY:C | 0.54 | 2.05 | 9 | 1 |
| 1:A:64:TYR:N | 1:B:85:TRP:CD2 | 0.54 | 2.76 | 4 | 1 |
| 1:A:63:LYS:HZ3 | 1:B:87:ASP:CG | 0.53 | 1.82 | 1 | 1 |
| 1:A:14:VAL:HG12 | 1:A:94:ARG:NH1 | 0.53 | 2.17 | 3 | 1 |
| 1:A:19:SER:HA | 1:A:22:ILE:HD12 | 0.53 | 1.77 | 11 | 1 |
| 1:A:22:ILE:HG21 | 1:A:109:VAL:HG22 | 0.53 | 1.80 | 4 | 2 |
| 1:B:29:VAL:HG22 | 1:B:46:SER:HB3 | 0.53 | 1.81 | 14 | 4 |
| 1:B:64:TYR:CE1 | 1:B:109:VAL:HG13 | 0.53 | 2.38 | 15 | 1 |
| 1:A:79:HIS:O | 1:B:70:ILE:CD1 | 0.53 | 2.48 | 3 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:82:ALA:C | 1:B:66:VAL:O | 0.53 | 2.41 | 10 | 4 |
| 1:B:52:ILE:HD13 | 1:B:52:ILE:C | 0.53 | 2.24 | 11 | 11 |
| 1:B:12:ALA:HB1 | 1:B:94:ARG:CG | 0.53 | 2.34 | 4 | 1 |
| 1:A:90:THR:HG22 | 1:A:114:ILE:HG12 | 0.53 | 1.79 | 11 | 2 |
| 1:B:69:ILE:O | 1:B:106:ILE:HG22 | 0.53 | 2.03 | 12 | 10 |
| 1:A:48:LEU:HD12 | 1:A:66:VAL:HG12 | 0.53 | 1.81 | 12 | 3 |
| 1:A:68:CYS:O | 1:B:80:THR:HA | 0.53 | 2.04 | 3 | 2 |
| 1:A:69:ILE:CG2 | 1:B:80:THR:OG1 | 0.53 | 2.57 | 3 | 1 |
| 1:A:82:ALA:C | 1:B:48:LEU:CD2 | 0.53 | 2.68 | 3 | 1 |
| 1:B:22:ILE:HG21 | 1:B:109:VAL:HG22 | 0.53 | 1.79 | 4 | 2 |
| 1:A:65:VAL:C | 1:B:83:SER:O | 0.53 | 2.45 | 11 | 1 |
| 1:A:67:THR:HG1 | 1:B:82:ALA:HB2 | 0.53 | 1.59 | 1 | 1 |
| 1:A:97:ARG:HG2 | 1:A:106:ILE:HD12 | 0.53 | 1.80 | 1 | 1 |
| 1:A:80:THR:OG1 | 1:B:69:ILE:CG2 | 0.53 | 2.57 | 3 | 1 |
| 1:A:66:VAL:HG13 | 1:A:109:VAL:HG13 | 0.53 | 1.82 | 11 | 1 |
| 1:A:56:THR:HG21 | 1:B:85:TRP:NE1 | 0.53 | 2.19 | 15 | 1 |
| 1:A:79:HIS:CA | 1:B:70:ILE:HG13 | 0.52 | 2.34 | 1 | 1 |
| 1:B:49:GLU:O | 1:B:53:LYS:CG | 0.52 | 2.58 | 5 | 3 |
| 1:A:74:ASN:O | 1:A:76:ALA:N | 0.52 | 2.42 | 3 | 2 |
| 1:B:15:ALA:HB2 | 1:B:94:ARG:NH1 | 0.52 | 2.17 | 3 | 1 |
| 1:A:79:HIS:ND1 | 1:B:70:ILE:HD11 | 0.52 | 2.19 | 13 | 1 |
| 1:A:83:SER:O | 1:B:66:VAL:HB | 0.52 | 2.05 | 1 | 1 |
| 1:A:22:ILE:HG22 | 1:A:26:ILE:CD1 | 0.52 | 2.35 | 11 | 1 |
| 1:A:85:TRP:NE1 | 1:B:56:THR:HG21 | 0.52 | 2.19 | 15 | 1 |
| 1:A:52:ILE:HD13 | 1:A:52:ILE:C | 0.52 | 2.24 | 11 | 11 |
| 1:A:56:THR:HB | 1:B:85:TRP:HZ2 | 0.52 | 1.65 | 12 | 1 |
| 1:B:97:ARG:HG2 | 1:B:106:ILE:HD12 | 0.52 | 1.80 | 1 | 1 |
| 1:A:85:TRP:HH2 | 1:B:62:PHE:CD2 | 0.52 | 2.15 | 4 | 1 |
| 1:A:12:ALA:HB1 | 1:A:94:ARG:CG | 0.52 | 2.34 | 4 | 1 |
| 1:A:51:CYS:SG | 1:A:66:VAL:HG11 | 0.52 | 2.45 | 11 | 4 |
| 1:B:22:ILE:HG22 | 1:B:26:ILE:CD1 | 0.52 | 2.35 | 11 | 1 |
| 1:B:74:ASN:O | 1:B:76:ALA:N | 0.52 | 2.42 | 3 | 2 |
| 1:A:65:VAL:CG1 | 1:B:84:CYS:CA | 0.52 | 2.76 | 4 | 1 |
| 1:A:72:GLN:CB | 1:B:77:GLY:CA | 0.52 | 2.42 | 9 | 1 |
| 1:A:22:ILE:HD12 | 1:A:96:VAL:HG21 | 0.52 | 1.82 | 10 | 1 |
| 1:A:22:ILE:HD11 | 1:A:109:VAL:CG2 | 0.52 | 2.35 | 11 | 2 |
| 1:A:85:TRP:HZ2 | 1:B:56:THR:HB | 0.52 | 1.65 | 12 | 1 |
| 1:A:65:VAL:HG23 | 1:B:83:SER:O | 0.52 | 2.05 | 15 | 1 |
| 1:A:70:ILE:HD11 | 1:B:79:HIS:ND1 | 0.52 | 2.19 | 13 | 1 |
| 1:A:85:TRP:HE3 | 1:B:63:LYS:N | 0.52 | 2.02 | 14 | 1 |
| 1:A:83:SER:O | 1:B:65:VAL:HG23 | 0.52 | 2.05 | 15 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:48:LEU:HD12 | 1:B:66:VAL:HG12 | 0.52 | 1.82 | 12 | 3 |
| 1:B:22:ILE:HD11 | 1:B:109:VAL:CG2 | 0.52 | 2.35 | 11 | 2 |
| 1:A:82:ALA:HA | 1:B:48:LEU:CG | 0.52 | 2.35 | 3 | 1 |
| 1:B:26:ILE:HG23 | 1:B:30:LEU:HD23 | 0.52 | 1.82 | 15 | 4 |
| 1:A:77:GLY:CA | 1:B:72:GLN:CB | 0.51 | 2.42 | 9 | 1 |
| 1:B:51:CYS:SG | 1:B:66:VAL:HG11 | 0.51 | 2.44 | 11 | 4 |
| 1:B:30:LEU:HD13 | 1:B:43:TRP:CD1 | 0.51 | 2.41 | 12 | 9 |
| 1:A:48:LEU:CG | 1:B:82:ALA:HA | 0.51 | 2.35 | 3 | 1 |
| 1:A:85:TRP:N | 1:B:64:TYR:O | 0.51 | 2.44 | 4 | 1 |
| 1:A:49:GLU:O | 1:A:53:LYS:CG | 0.51 | 2.58 | 5 | 3 |
| 1:B:48:LEU:CD1 | 1:B:66:VAL:HG12 | 0.51 | 2.36 | 12 | 2 |
| 1:A:26:ILE:HG23 | 1:A:30:LEU:HD23 | 0.51 | 1.82 | 15 | 4 |
| 1:A:52:ILE:HD12 | 1:A:53:LYS:HE3 | 0.51 | 1.82 | 5 | 2 |
| 1:A:66:VAL:HB | 1:B:83:SER:O | 0.51 | 2.05 | 1 | 1 |
| 1:A:80:THR:HA | 1:B:68:CYS:O | 0.51 | 2.04 | 3 | 2 |
| 1:A:22:ILE:HD11 | 1:A:51:CYS:SG | 0.51 | 2.46 | 5 | 1 |
| 1:A:54:ARG:NH1 | 1:A:58:LEU:HD11 | 0.51 | 2.21 | 13 | 1 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:CA | 0.51 | 2.34 | 1 | 1 |
| 1:B:52:ILE:HD12 | 1:B:53:LYS:HE3 | 0.51 | 1.82 | 5 | 2 |
| 1:A:78:LEU:O | 1:A:78:LEU:HD23 | 0.51 | 2.06 | 2 | 1 |
| 1:A:7:ALA:C | 1:A:8:VAL:HG23 | 0.51 | 2.26 | 3 | 10 |
| 1:B:7:ALA:C | 1:B:8:VAL:HG23 | 0.51 | 2.26 | 10 | 10 |
| 1:A:69:ILE:HD12 | 1:A:69:ILE:N | 0.51 | 2.20 | 5 | 6 |
| 1:B:30:LEU:CD1 | 1:B:43:TRP:CE3 | 0.51 | 2.94 | 10 | 6 |
| 1:A:64:TYR:O | 1:B:85:TRP:N | 0.51 | 2.44 | 4 | 1 |
| 1:A:84:CYS:CA | 1:B:65:VAL:CG1 | 0.51 | 2.76 | 4 | 1 |
| 1:B:5:ASP:OD1 | 1:B:8:VAL:HG22 | 0.51 | 2.06 | 8 | 2 |
| 1:A:85:TRP:CE3 | 1:B:62:PHE:CE2 | 0.51 | 2.98 | 11 | 1 |
| 1:A:85:TRP:CD2 | 1:B:64:TYR:N | 0.51 | 2.76 | 4 | 1 |
| 1:A:30:LEU:CD1 | 1:A:43:TRP:CE3 | 0.51 | 2.94 | 10 | 6 |
| 1:B:18:VAL:HG13 | 1:B:55:LEU:HD11 | 0.51 | 1.83 | 2 | 1 |
| 1:A:5:ASP:OD1 | 1:A:8:VAL:HG13 | 0.51 | 2.06 | 8 | 2 |
| 1:A:67:THR:HA | 1:B:81:ALA:C | 0.51 | 2.26 | 10 | 2 |
| 1:A:86:TRP:NE1 | 1:B:62:PHE:HE2 | 0.51 | 1.93 | 11 | 1 |
| 1:A:29:VAL:HG22 | 1:A:46:SER:HB3 | 0.51 | 1.80 | 14 | 3 |
| 1:A:81:ALA:C | 1:B:67:THR:HA | 0.51 | 2.26 | 10 | 1 |
| 1:B:26:ILE:HG21 | 1:B:98:TRP:CG | 0.51 | 2.40 | 11 | 1 |
| 1:B:66:VAL:HG13 | 1:B:109:VAL:HG13 | 0.51 | 1.82 | 11 | 1 |
| 1:A:44:THR:HG23 | 1:A:68:CYS:SG | 0.50 | 2.46 | 3 | 3 |
| 1:B:78:LEU:O | 1:B:78:LEU:HD23 | 0.50 | 2.06 | 2 | 1 |
| 1:B:69:ILE:HD12 | 1:B:69:ILE:N | 0.50 | 2.21 | 5 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:5:ASP:OD1 | 1:A:8:VAL:HG22 | 0.50 | 2.06 | 8 | 2 |
| 1:A:26:ILE:HG21 | 1:A:98:TRP:CG | 0.50 | 2.40 | 11 | 1 |
| 1:A:67:THR:CG2 | 1:A:108:THR:HG22 | 0.50 | 2.36 | 13 | 1 |
| 1:B:44:THR:HG23 | 1:B:68:CYS:SG | 0.50 | 2.46 | 3 | 3 |
| 1:A:48:LEU:CD1 | 1:A:66:VAL:HG12 | 0.50 | 2.36 | 12 | 2 |
| 1:B:54:ARG:NH1 | 1:B:58:LEU:HD11 | 0.50 | 2.21 | 13 | 1 |
| 1:A:30:LEU:HD13 | 1:A:43:TRP:CD1 | 0.50 | 2.41 | 12 | 7 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:HA | 0.50 | 2.41 | 14 | 1 |
| 1:B:22:ILE:HD11 | 1:B:51:CYS:SG | 0.50 | 2.46 | 5 | 1 |
| 1:B:5:ASP:OD1 | 1:B:8:VAL:HG13 | 0.50 | 2.06 | 8 | 2 |
| 1:A:22:ILE:HD12 | 1:A:23:LYS:N | 0.50 | 2.21 | 4 | 1 |
| 1:B:4:VAL:HG13 | 1:B:100:ASN:C | 0.50 | 2.27 | 13 | 3 |
| 1:A:85:TRP:HH2 | 1:B:62:PHE:CZ | 0.50 | 2.22 | 6 | 1 |
| 1:A:71:MET:CE | 1:B:78:LEU:CD1 | 0.50 | 2.90 | 10 | 1 |
| 1:B:22:ILE:HD12 | 1:B:23:LYS:N | 0.50 | 2.21 | 4 | 1 |
| 1:A:18:VAL:HG13 | 1:A:55:LEU:HD11 | 0.50 | 1.83 | 2 | 1 |
| 1:A:78:LEU:CD1 | 1:B:71:MET:CE | 0.50 | 2.90 | 10 | 1 |
| 1:B:22:ILE:HD12 | 1:B:96:VAL:HG21 | 0.50 | 1.82 | 10 | 1 |
| 1:A:85:TRP:CE3 | 1:A:86:TRP:CD1 | 0.50 | 3.00 | 12 | 1 |
| 1:B:85:TRP:CE3 | 1:B:86:TRP:CD1 | 0.50 | 3.00 | 12 | 1 |
| 1:B:40:VAL:O | 1:B:70:ILE:HG21 | 0.49 | 2.07 | 2 | 3 |
| 1:A:62:PHE:CE2 | 1:B:85:TRP:CE3 | 0.49 | 2.98 | 11 | 1 |
| 1:A:49:GLU:HA | 1:A:52:ILE:HG22 | 0.49 | 1.85 | 2 | 9 |
| 1:A:78:LEU:C | 1:A:78:LEU:HD13 | 0.49 | 2.28 | 1 | 1 |
| 1:A:70:ILE:O | 1:B:78:LEU:C | 0.49 | 2.45 | 3 | 1 |
| 1:A:4:VAL:HG13 | 1:A:100:ASN:C | 0.49 | 2.27 | 5 | 3 |
| 1:A:78:LEU:CD1 | 1:B:69:ILE:CG2 | 0.49 | 2.89 | 11 | 1 |
| 1:A:83:SER:H | 1:B:66:VAL:C | 0.49 | 1.95 | 11 | 1 |
| 1:A:70:ILE:HG13 | 1:B:79:HIS:O | 0.49 | 2.07 | 15 | 2 |
| 1:A:62:PHE:CZ | 1:B:85:TRP:HH2 | 0.49 | 2.22 | 6 | 1 |
| 1:A:66:VAL:HG23 | 1:B:83:SER:HB3 | 0.49 | 1.84 | 15 | 1 |
| 1:B:49:GLU:HA | 1:B:52:ILE:HG22 | 0.49 | 1.84 | 2 | 9 |
| 1:A:70:ILE:HG12 | 1:B:79:HIS:O | 0.49 | 2.08 | 13 | 2 |
| 1:B:51:CYS:CB | 1:B:66:VAL:HG11 | 0.49 | 2.38 | 2 | 3 |
| 1:A:49:GLU:O | 1:A:53:LYS:HG2 | 0.49 | 2.08 | 10 | 2 |
| 1:A:84:CYS:CB | 1:B:65:VAL:CG1 | 0.49 | 2.89 | 1 | 1 |
| 1:A:51:CYS:CB | 1:A:66:VAL:HG11 | 0.49 | 2.38 | 2 | 3 |
| 1:A:64:TYR:HB2 | 1:B:85:TRP:CD1 | 0.49 | 2.42 | 4 | 1 |
| 1:B:18:VAL:HG21 | 1:B:64:TYR:CE1 | 0.49 | 2.43 | 6 | 1 |
| 1:A:114:ILE:HD13 | 1:B:114:ILE:HD13 | 0.49 | 1.85 | 11 | 1 |
| 1:A:87:ASP:CG | 1:B:63:LYS:HD2 | 0.49 | 2.28 | 3 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:8:VAL:HG23 | 1:B:99:GLU:CB | 0.49 | 2.38 | 5 | 1 |
| 1:A:85:TRP:CD1 | 1:B:64:TYR:HB2 | 0.49 | 2.42 | 4 | 1 |
| 1:A:85:TRP:HZ3 | 1:B:62:PHE:CE2 | 0.49 | 2.25 | 6 | 2 |
| 1:B:67:THR:CG2 | 1:B:108:THR:HG22 | 0.49 | 2.36 | 13 | 1 |
| 1:A:79:HIS:O | 1:B:70:ILE:HG12 | 0.49 | 2.08 | 13 | 2 |
| 1:A:18:VAL:HG21 | 1:A:64:TYR:CE1 | 0.49 | 2.43 | 6 | 1 |
| 1:A:29:VAL:HG21 | 1:A:47:CYS:N | 0.49 | 2.22 | 12 | 7 |
| 1:A:81:ALA:HB3 | 1:B:68:CYS:N | 0.49 | 2.23 | 9 | 1 |
| 1:A:78:LEU:HD13 | 1:B:78:LEU:HD13 | 0.48 | 1.85 | 15 | 1 |
| 1:A:112:LEU:CD1 | 1:A:112:LEU:N | 0.48 | 2.76 | 15 | 9 |
| 1:A:62:PHE:CE1 | 1:B:85:TRP:CH2 | 0.48 | 3.02 | 6 | 1 |
| 1:A:69:ILE:CG2 | 1:B:78:LEU:CD1 | 0.48 | 2.89 | 11 | 1 |
| 1:B:18:VAL:HG13 | 1:B:55:LEU:CD2 | 0.48 | 2.33 | 12 | 1 |
| 1:A:40:VAL:O | 1:A:70:ILE:HG21 | 0.48 | 2.08 | 2 | 4 |
| 1:B:112:LEU:CD1 | 1:B:112:LEU:N | 0.48 | 2.76 | 15 | 7 |
| 1:B:49:GLU:O | 1:B:53:LYS:HG2 | 0.48 | 2.08 | 10 | 2 |
| 1:B:29:VAL:HG21 | 1:B:47:CYS:N | 0.48 | 2.22 | 12 | 7 |
| 1:B:78:LEU:HD23 | 1:B:78:LEU:O | 0.48 | 2.09 | 8 | 1 |
| 1:A:6:PRO:O | 1:A:7:ALA:HB2 | 0.48 | 2.09 | 6 | 2 |
| 1:A:55:LEU:HD13 | 1:A:64:TYR:CD1 | 0.48 | 2.44 | 9 | 1 |
| 1:A:68:CYS:N | 1:B:81:ALA:HB3 | 0.48 | 2.23 | 9 | 1 |
| 1:A:78:LEU:CD2 | 1:B:78:LEU:HG | 0.48 | 2.38 | 11 | 1 |
| 1:B:69:ILE:N | 1:B:69:ILE:HD12 | 0.48 | 2.24 | 11 | 1 |
| 1:B:78:LEU:HD13 | 1:B:78:LEU:C | 0.48 | 2.28 | 1 | 3 |
| 1:A:8:VAL:HG23 | 1:A:99:GLU:CB | 0.48 | 2.38 | 5 | 1 |
| 1:A:85:TRP:CH2 | 1:B:62:PHE:CE1 | 0.48 | 3.01 | 6 | 1 |
| 1:A:68:CYS:O | 1:B:81:ALA:CA | 0.48 | 2.62 | 15 | 1 |
| 1:A:79:HIS:O | 1:B:70:ILE:HG13 | 0.48 | 2.08 | 15 | 1 |
| 1:A:78:LEU:HD23 | 1:A:78:LEU:O | 0.48 | 2.09 | 8 | 1 |
| 1:B:67:THR:HG1 | 1:B:68:CYS:N | 0.48 | 2.05 | 10 | 1 |
| 1:A:87:ASP:CB | 1:B:63:LYS:HE3 | 0.47 | 2.39 | 10 | 1 |
| 1:A:77:GLY:O | 1:B:72:GLN:HB2 | 0.47 | 2.09 | 3 | 1 |
| 1:B:55:LEU:HD13 | 1:B:64:TYR:CD1 | 0.47 | 2.44 | 9 | 2 |
| 1:A:52:ILE:HD12 | 1:A:53:LYS:HE2 | 0.47 | 1.86 | 11 | 1 |
| 1:A:70:ILE:CD1 | 1:B:80:THR:N | 0.47 | 2.77 | 3 | 1 |
| 1:B:55:LEU:HD22 | 1:B:64:TYR:CZ | 0.47 | 2.44 | 9 | 1 |
| 1:A:93:SER:CB | 1:A:110:PHE:CD1 | 0.47 | 2.97 | 10 | 2 |
| 1:A:65:VAL:HG11 | 1:A:110:PHE:CE2 | 0.47 | 2.45 | 2 | 1 |
| 1:B:65:VAL:HG11 | 1:B:110:PHE:CE2 | 0.47 | 2.45 | 2 | 1 |
| 1:B:52:ILE:HD12 | 1:B:53:LYS:HE2 | 0.47 | 1.86 | 11 | 1 |
| 1:A:81:ALA:CA | 1:B:68:CYS:O | 0.47 | 2.62 | 15 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:84:CYS:HA | 1:B:65:VAL:HA | 0.47 | 1.87 | 1 | 1 |
| 1:A:72:GLN:HB2 | 1:B:77:GLY:O | 0.47 | 2.09 | 3 | 1 |
| 1:A:11:ALA:O | 1:A:12:ALA:HB2 | 0.47 | 2.10 | 5 | 2 |
| 1:B:93:SER:CB | 1:B:110:PHE:CD1 | 0.47 | 2.97 | 10 | 2 |
| 1:A:52:ILE:HG12 | 1:B:85:TRP:HD1 | 0.47 | 1.69 | 12 | 1 |
| 1:A:72:GLN:O | 1:A:76:ALA:HB3 | 0.47 | 2.10 | 1 | 1 |
| 1:A:63:LYS:HD2 | 1:B:87:ASP:CG | 0.47 | 2.28 | 3 | 2 |
| 1:B:6:PRO:O | 1:B:7:ALA:HB2 | 0.47 | 2.09 | 6 | 2 |
| 1:B:8:VAL:HG23 | 1:B:99:GLU:HB2 | 0.47 | 1.87 | 13 | 2 |
| 1:A:78:LEU:HG | 1:B:78:LEU:CD2 | 0.47 | 2.38 | 11 | 1 |
| 1:A:85:TRP:HD1 | 1:B:52:ILE:HG12 | 0.47 | 1.69 | 12 | 1 |
| 1:A:76:ALA:CB | 1:B:76:ALA:HB1 | 0.47 | 2.39 | 15 | 1 |
| 1:A:21:ILE:HG23 | 1:A:54:ARG:HG2 | 0.47 | 1.87 | 12 | 2 |
| 1:B:40:VAL:HG11 | 1:B:103:MET:HE1 | 0.47 | 1.87 | 3 | 1 |
| 1:A:8:VAL:HG23 | 1:A:99:GLU:HB2 | 0.47 | 1.87 | 13 | 2 |
| 1:A:62:PHE:HE2 | 1:B:86:TRP:NE1 | 0.47 | 1.93 | 11 | 1 |
| 1:A:62:PHE:HA | 1:B:85:TRP:CZ3 | 0.47 | 2.41 | 14 | 1 |
| 1:A:85:TRP:CE2 | 1:B:62:PHE:O | 0.47 | 2.63 | 14 | 1 |
| 1:A:78:LEU:CD2 | 1:B:78:LEU:HD13 | 0.47 | 2.39 | 15 | 1 |
| 1:A:83:SER:HB3 | 1:B:66:VAL:HG23 | 0.47 | 1.84 | 15 | 1 |
| 1:A:17:ASP:OD2 | 1:A:18:VAL:HG23 | 0.47 | 2.10 | 10 | 1 |
| 1:B:21:ILE:HG23 | 1:B:54:ARG:HG2 | 0.47 | 1.87 | 12 | 2 |
| 1:B:96:VAL:HG12 | 1:B:98:TRP:CZ3 | 0.47 | 2.45 | 1 | 2 |
| 1:B:8:VAL:HG23 | 1:B:99:GLU:HB3 | 0.46 | 1.87 | 5 | 1 |
| 1:B:17:ASP:OD2 | 1:B:18:VAL:HG23 | 0.46 | 2.10 | 10 | 1 |
| 1:A:51:CYS:HB3 | 1:A:66:VAL:HG21 | 0.46 | 1.87 | 11 | 1 |
| 1:A:55:LEU:HD22 | 1:A:64:TYR:CZ | 0.46 | 2.44 | 9 | 1 |
| 1:A:52:ILE:HG12 | 1:B:85:TRP:CD1 | 0.46 | 2.45 | 12 | 1 |
| 1:A:40:VAL:HG11 | 1:A:103:MET:HE1 | 0.46 | 1.88 | 3 | 1 |
| 1:A:48:LEU:CD2 | 1:B:82:ALA:C | 0.46 | 2.68 | 3 | 1 |
| 1:A:26:ILE:CG2 | 1:A:98:TRP:CD1 | 0.46 | 2.98 | 4 | 5 |
| 1:B:11:ALA:O | 1:B:12:ALA:HB2 | 0.46 | 2.10 | 5 | 1 |
| 1:A:7:ALA:CB | 1:A:98:TRP:CZ3 | 0.46 | 2.98 | 14 | 4 |
| 1:A:64:TYR:HD2 | 1:B:85:TRP:CD1 | 0.46 | 2.28 | 14 | 1 |
| 1:A:55:LEU:N | 1:A:55:LEU:CD2 | 0.46 | 2.79 | 15 | 1 |
| 1:A:96:VAL:HG12 | 1:A:98:TRP:CZ3 | 0.46 | 2.45 | 1 | 2 |
| 1:A:65:VAL:CG1 | 1:B:84:CYS:CB | 0.46 | 2.89 | 1 | 1 |
| 1:B:72:GLN:O | 1:B:76:ALA:HB3 | 0.46 | 2.10 | 1 | 1 |
| 1:B:78:LEU:HD22 | 1:B:79:HIS:N | 0.46 | 2.26 | 1 | 1 |
| 1:B:11:ALA:O | 1:B:12:ALA:HB3 | 0.46 | 2.11 | 6 | 2 |
| 1:A:87:ASP:HB3 | 1:A:90:THR:HG23 | 0.46 | 1.87 | 10 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:85:TRP:CD1 | 1:B:52:ILE:HG12 | 0.46 | 2.45 | 12 | 1 |
| 1:A:63:LYS:N | 1:B:85:TRP:HE3 | 0.46 | 2.02 | 14 | 1 |
| 1:A:39:LYS:HB3 | 1:A:43:TRP:CD1 | 0.46 | 2.46 | 2 | 6 |
| 1:B:93:SER:CB | 1:B:110:PHE:CE2 | 0.46 | 2.99 | 12 | 3 |
| 1:B:112:LEU:N | 1:B:112:LEU:CD1 | 0.46 | 2.77 | 4 | 7 |
| 1:B:104:TYR:CD1 | 1:B:104:TYR:N | 0.46 | 2.84 | 5 | 3 |
| 1:A:80:THR:N | 1:B:70:ILE:CD1 | 0.46 | 2.77 | 3 | 1 |
| 1:B:41:SER:CB | 1:B:70:ILE:HD13 | 0.46 | 2.41 | 4 | 1 |
| 1:B:55:LEU:CD1 | 1:B:64:TYR:CE1 | 0.46 | 2.99 | 15 | 1 |
| 1:A:97:ARG:HE | 1:A:106:ILE:HD12 | 0.46 | 1.70 | 3 | 1 |
| 1:B:55:LEU:CB | 1:B:64:TYR:CE1 | 0.46 | 2.99 | 13 | 2 |
| 1:A:62:PHE:O | 1:B:85:TRP:CE2 | 0.46 | 2.63 | 14 | 1 |
| 1:A:63:LYS:HB3 | 1:A:114:ILE:HD12 | 0.46 | 1.86 | 15 | 1 |
| 1:B:97:ARG:HE | 1:B:106:ILE:HD12 | 0.46 | 1.70 | 3 | 1 |
| 1:B:7:ALA:CB | 1:B:98:TRP:CZ3 | 0.46 | 2.98 | 14 | 5 |
| 1:A:69:ILE:CG2 | 1:B:80:THR:HA | 0.46 | 2.41 | 9 | 1 |
| 1:B:108:THR:HG23 | 1:B:110:PHE:CE1 | 0.46 | 2.46 | 10 | 2 |
| 1:A:55:LEU:CD1 | 1:A:64:TYR:CE1 | 0.46 | 2.99 | 15 | 1 |
| 1:A:96:VAL:CG1 | 1:A:98:TRP:CZ3 | 0.45 | 2.99 | 1 | 2 |
| 1:A:8:VAL:HG23 | 1:A:99:GLU:HB3 | 0.45 | 1.87 | 5 | 1 |
| 1:A:23:LYS:NZ | 1:A:96:VAL:HG13 | 0.45 | 2.26 | 5 | 1 |
| 1:A:83:SER:OG | 1:B:52:ILE:HB | 0.45 | 2.11 | 11 | 1 |
| 1:A:56:THR:HG22 | 1:A:64:TYR:HE2 | 0.45 | 1.70 | 14 | 1 |
| 1:B:22:ILE:HD12 | 1:B:22:ILE:C | 0.45 | 2.32 | 4 | 1 |
| 1:A:11:ALA:O | 1:A:12:ALA:HB3 | 0.45 | 2.11 | 6 | 2 |
| 1:B:11:ALA:O | 1:B:96:VAL:HG22 | 0.45 | 2.11 | 11 | 2 |
| 1:B:87:ASP:HB3 | 1:B:90:THR:HG23 | 0.45 | 1.87 | 10 | 1 |
| 1:A:104:TYR:CD1 | 1:A:104:TYR:N | 0.45 | 2.84 | 5 | 2 |
| 1:A:22:ILE:HD12 | 1:A:22:ILE:C | 0.45 | 2.32 | 4 | 1 |
| 1:B:23:LYS:NZ | 1:B:96:VAL:HG13 | 0.45 | 2.26 | 5 | 1 |
| 1:A:93:SER:CB | 1:A:110:PHE:CE2 | 0.45 | 2.99 | 9 | 3 |
| 1:A:62:PHE:CE1 | 1:B:85:TRP:CZ3 | 0.45 | 3.04 | 11 | 1 |
| 1:B:40:VAL:HG13 | 1:B:103:MET:HE1 | 0.45 | 1.89 | 11 | 1 |
| 1:A:71:MET:CG | 1:B:78:LEU:CD1 | 0.45 | 2.85 | 15 | 1 |
| 1:B:55:LEU:N | 1:B:55:LEU:CD2 | 0.45 | 2.79 | 15 | 1 |
| 1:A:78:LEU:HD22 | 1:A:79:HIS:N | 0.45 | 2.26 | 1 | 1 |
| 1:A:96:VAL:HB | 1:A:98:TRP:CZ3 | 0.45 | 2.46 | 7 | 2 |
| 1:B:96:VAL:HB | 1:B:98:TRP:CZ3 | 0.45 | 2.46 | 7 | 2 |
| 1:A:41:SER:CB | 1:A:70:ILE:HD13 | 0.45 | 2.41 | 4 | 1 |
| 1:A:99:GLU:CG | 1:A:104:TYR:CD1 | 0.45 | 3.00 | 4 | 3 |
| 1:B:4:VAL:HG22 | 1:B:101:LYS:HB3 | 0.45 | 1.88 | 7 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:108:THR:HG23 | 1:A:110:PHE:CE1 | 0.45 | 2.46 | 10 | 2 |
| 1:A:52:ILE:HB | 1:B:83:SER:OG | 0.45 | 2.11 | 11 | 1 |
| 1:B:51:CYS:HB3 | 1:B:66:VAL:HG21 | 0.45 | 1.88 | 11 | 1 |
| 1:A:76:ALA:HB1 | 1:B:76:ALA:CB | 0.45 | 2.39 | 15 | 1 |
| 1:A:65:VAL:HA | 1:B:84:CYS:HA | 0.45 | 1.86 | 1 | 1 |
| 1:B:96:VAL:CG1 | 1:B:98:TRP:CZ3 | 0.45 | 2.99 | 1 | 2 |
| 1:B:99:GLU:CG | 1:B:104:TYR:CD1 | 0.45 | 3.00 | 4 | 3 |
| 1:B:114:ILE:HG22 | 1:B:114:ILE:O | 0.45 | 2.11 | 7 | 1 |
| 1:A:78:LEU:HD23 | 1:A:78:LEU:C | 0.45 | 2.31 | 2 | 1 |
| 1:B:78:LEU:HD23 | 1:B:78:LEU:C | 0.45 | 2.31 | 2 | 1 |
| 1:B:65:VAL:CG1 | 1:B:110:PHE:CG | 0.45 | 3.00 | 5 | 1 |
| 1:A:55:LEU:CB | 1:A:64:TYR:CE1 | 0.45 | 2.99 | 13 | 2 |
| 1:A:30:LEU:HD13 | 1:A:43:TRP:CD2 | 0.45 | 2.47 | 11 | 6 |
| 1:A:114:ILE:O | 1:A:114:ILE:HG22 | 0.45 | 2.11 | 7 | 1 |
| 1:A:69:ILE:HA | 1:B:80:THR:CB | 0.45 | 2.42 | 3 | 1 |
| 1:A:27:ASP:O | 1:A:31:GLN:CB | 0.45 | 2.65 | 3 | 14 |
| 1:B:39:LYS:HB3 | 1:B:43:TRP:CD1 | 0.45 | 2.47 | 5 | 4 |
| 1:B:97:ARG:HB2 | 1:B:106:ILE:HD12 | 0.45 | 1.88 | 2 | 1 |
| 1:B:26:ILE:CG2 | 1:B:98:TRP:CD1 | 0.45 | 2.99 | 13 | 7 |
| 1:A:69:ILE:CG2 | 1:B:78:LEU:CG | 0.45 | 2.90 | 8 | 1 |
| 1:A:63:LYS:CG | 1:B:85:TRP:HB3 | 0.45 | 2.41 | 11 | 1 |
| 1:A:114:ILE:C | 1:B:86:TRP:CE2 | 0.45 | 2.90 | 14 | 1 |
| 1:A:11:ALA:O | 1:A:96:VAL:HG22 | 0.45 | 2.11 | 11 | 2 |
| 1:A:5:ASP:OD2 | 1:A:8:VAL:HG21 | 0.44 | 2.13 | 1 | 1 |
| 1:B:30:LEU:HD13 | 1:B:43:TRP:CD2 | 0.44 | 2.47 | 1 | 6 |
| 1:A:80:THR:HA | 1:B:69:ILE:CG2 | 0.44 | 2.41 | 9 | 1 |
| 1:B:5:ASP:CG | 1:B:8:VAL:HG22 | 0.44 | 2.33 | 12 | 1 |
| 1:A:47:CYS:O | 1:A:51:CYS:N | 0.44 | 2.50 | 8 | 7 |
| 1:A:5:ASP:CG | 1:A:8:VAL:HG22 | 0.44 | 2.32 | 12 | 1 |
| 1:A:85:TRP:CZ2 | 1:B:56:THR:HB | 0.44 | 2.48 | 12 | 1 |
| 1:B:47:CYS:O | 1:B:51:CYS:N | 0.44 | 2.50 | 8 | 6 |
| 1:B:96:VAL:CG1 | 1:B:98:TRP:CH2 | 0.44 | 3.00 | 1 | 1 |
| 1:A:62:PHE:O | 1:B:85:TRP:CG | 0.44 | 2.65 | 14 | 1 |
| 1:B:27:ASP:O | 1:B:31:GLN:CB | 0.44 | 2.65 | 3 | 13 |
| 1:B:65:VAL:HG23 | 1:B:110:PHE:HB2 | 0.44 | 1.89 | 4 | 4 |
| 1:A:97:ARG:HB2 | 1:A:106:ILE:HD12 | 0.44 | 1.88 | 2 | 1 |
| 1:B:21:ILE:HG23 | 1:B:54:ARG:CB | 0.44 | 2.43 | 6 | 1 |
| 1:A:52:ILE:CD1 | 1:A:52:ILE:C | 0.44 | 2.86 | 12 | 1 |
| 1:A:68:CYS:SG | 1:B:81:ALA:CA | 0.44 | 3.06 | 3 | 1 |
| 1:A:21:ILE:HG23 | 1:A:54:ARG:CB | 0.44 | 2.43 | 6 | 1 |
| 1:B:52:ILE:CD1 | 1:B:52:ILE:C | 0.44 | 2.86 | 12 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:65:VAL:CG1 | 1:A:110:PHE:CG | 0.44 | 3.00 | 5 | 1 |
| 1:A:30:LEU:CD1 | 1:A:43:TRP:CD2 | 0.44 | 3.01 | 7 | 2 |
| 1:B:30:LEU:CD1 | 1:B:43:TRP:CD2 | 0.44 | 3.01 | 7 | 2 |
| 1:A:78:LEU:HB3 | 1:B:78:LEU:HB3 | 0.44 | 1.90 | 8 | 1 |
| 1:A:40:VAL:HG13 | 1:A:103:MET:HE1 | 0.44 | 1.90 | 11 | 1 |
| 1:A:85:TRP:CZ3 | 1:B:62:PHE:CE1 | 0.44 | 3.04 | 11 | 1 |
| 1:B:22:ILE:HG22 | 1:B:26:ILE:HD13 | 0.44 | 1.90 | 11 | 1 |
| 1:B:65:VAL:HG13 | 1:B:110:PHE:HB3 | 0.44 | 1.86 | 15 | 1 |
| 1:A:96:VAL:CG1 | 1:A:98:TRP:CH2 | 0.44 | 3.00 | 1 | 1 |
| 1:A:12:ALA:HB2 | 1:A:95:THR:O | 0.44 | 2.13 | 2 | 1 |
| 1:B:22:ILE:HG23 | 1:B:23:LYS:N | 0.44 | 2.28 | 8 | 5 |
| 1:A:40:VAL:HG13 | 1:A:103:MET:CE | 0.44 | 2.43 | 11 | 1 |
| 1:A:78:LEU:HD13 | 1:A:79:HIS:H | 0.44 | 1.73 | 11 | 2 |
| 1:A:63:LYS:CA | 1:B:85:TRP:CE3 | 0.44 | 3.01 | 14 | 1 |
| 1:B:5:ASP:OD2 | 1:B:8:VAL:HG21 | 0.43 | 2.13 | 1 | 1 |
| 1:A:29:VAL:O | 1:A:43:TRP:CG | 0.43 | 2.71 | 3 | 6 |
| 1:A:22:ILE:HG23 | 1:A:23:LYS:N | 0.43 | 2.28 | 8 | 5 |
| 1:A:79:HIS:CD2 | 1:B:41:SER:OG | 0.43 | 2.71 | 3 | 1 |
| 1:A:65:VAL:HG23 | 1:A:110:PHE:HB2 | 0.43 | 1.90 | 13 | 2 |
| 1:A:65:VAL:CG1 | 1:A:110:PHE:HB2 | 0.43 | 2.43 | 12 | 3 |
| 1:B:65:VAL:CG1 | 1:B:110:PHE:HB2 | 0.43 | 2.43 | 12 | 4 |
| 1:B:56:THR:HG22 | 1:B:64:TYR:CD2 | 0.43 | 2.48 | 14 | 2 |
| 1:B:29:VAL:O | 1:B:43:TRP:CG | 0.43 | 2.71 | 3 | 7 |
| 1:A:80:THR:CB | 1:B:69:ILE:HA | 0.43 | 2.42 | 3 | 1 |
| 1:A:55:LEU:HD22 | 1:A:64:TYR:CE1 | 0.43 | 2.48 | 9 | 1 |
| 1:B:55:LEU:HD22 | 1:B:64:TYR:CE1 | 0.43 | 2.48 | 9 | 1 |
| 1:A:66:VAL:C | 1:B:83:SER:H | 0.43 | 1.95 | 11 | 1 |
| 1:A:83:SER:HB3 | 1:B:66:VAL:H | 0.43 | 1.73 | 11 | 1 |
| 1:A:56:THR:HB | 1:B:85:TRP:CZ2 | 0.43 | 2.48 | 12 | 1 |
| 1:B:62:PHE:CB | 1:B:114:ILE:HD13 | 0.43 | 2.43 | 13 | 1 |
| 1:B:5:ASP:HB3 | 1:B:8:VAL:HG22 | 0.43 | 1.91 | 9 | 2 |
| 1:A:64:TYR:CD1 | 1:A:64:TYR:N | 0.43 | 2.87 | 5 | 1 |
| 1:A:63:LYS:HE3 | 1:B:87:ASP:CB | 0.43 | 2.39 | 10 | 1 |
| 1:B:40:VAL:HG13 | 1:B:103:MET:CE | 0.43 | 2.43 | 11 | 1 |
| 1:A:62:PHE:CB | 1:A:114:ILE:HD13 | 0.43 | 2.43 | 13 | 1 |
| 1:B:71:MET:SD | 1:B:78:LEU:HD12 | 0.43 | 2.54 | 1 | 1 |
| 1:B:65:VAL:HB | 1:B:110:PHE:HB2 | 0.43 | 1.89 | 5 | 4 |
| 1:B:90:THR:O | 1:B:112:LEU:HA | 0.43 | 2.13 | 6 | 1 |
| 1:A:4:VAL:HG22 | 1:A:101:LYS:HB3 | 0.43 | 1.88 | 7 | 1 |
| 1:A:22:ILE:HG22 | 1:A:26:ILE:HD13 | 0.43 | 1.90 | 11 | 1 |
| 1:A:30:LEU:HD22 | 1:A:30:LEU:N | 0.43 | 2.28 | 2 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:90:THR:O | 1:B:112:LEU:HD12 | 0.43 | 2.14 | 6 | 1 |
| 1:A:66:VAL:H | 1:B:83:SER:HB3 | 0.43 | 1.73 | 11 | 1 |
| 1:B:67:THR:CG2 | 1:B:110:PHE:CZ | 0.43 | 3.02 | 14 | 1 |
| 1:B:22:ILE:HD13 | 1:B:22:ILE:O | 0.43 | 2.14 | 15 | 1 |
| 1:B:40:VAL:HG11 | 1:B:103:MET:CE | 0.43 | 2.44 | 15 | 1 |
| 1:B:12:ALA:HB2 | 1:B:95:THR:O | 0.43 | 2.13 | 2 | 1 |
| 1:A:65:VAL:HB | 1:A:110:PHE:HB2 | 0.43 | 1.91 | 6 | 5 |
| 1:A:48:LEU:HD12 | 1:A:66:VAL:CG1 | 0.43 | 2.44 | 12 | 1 |
| 1:A:22:ILE:HD13 | 1:A:22:ILE:O | 0.43 | 2.14 | 15 | 1 |
| 1:A:5:ASP:HB3 | 1:A:8:VAL:HG22 | 0.43 | 1.89 | 3 | 2 |
| 1:A:85:TRP:HB3 | 1:B:63:LYS:CG | 0.43 | 2.41 | 11 | 1 |
| 1:A:85:TRP:CE3 | 1:B:63:LYS:CA | 0.43 | 3.01 | 14 | 1 |
| 1:A:78:LEU:HD13 | 1:B:78:LEU:CD2 | 0.43 | 2.39 | 15 | 1 |
| 1:A:62:PHE:CE2 | 1:B:85:TRP:HZ3 | 0.43 | 2.25 | 6 | 1 |
| 1:A:90:THR:O | 1:A:112:LEU:HA | 0.43 | 2.13 | 6 | 1 |
| 1:B:29:VAL:CG1 | 1:B:43:TRP:O | 0.43 | 2.67 | 12 | 3 |
| 1:B:90:THR:HG22 | 1:B:114:ILE:HD13 | 0.43 | 1.90 | 8 | 1 |
| 1:A:41:SER:OG | 1:B:79:HIS:CG | 0.43 | 2.72 | 6 | 2 |
| 1:B:110:PHE:N | 1:B:110:PHE:CD1 | 0.43 | 2.86 | 2 | 1 |
| 1:A:80:THR:CB | 1:B:68:CYS:O | 0.43 | 2.65 | 3 | 1 |
| 1:A:81:ALA:CA | 1:B:68:CYS:SG | 0.43 | 3.06 | 3 | 1 |
| 1:A:29:VAL:CG1 | 1:A:43:TRP:O | 0.43 | 2.67 | 12 | 4 |
| 1:A:65:VAL:HG13 | 1:A:110:PHE:HB3 | 0.43 | 1.86 | 15 | 1 |
| 1:A:110:PHE:CD1 | 1:A:110:PHE:N | 0.42 | 2.86 | 2 | 1 |
| 1:B:51:CYS:O | 1:B:55:LEU:CD2 | 0.42 | 2.67 | 2 | 2 |
| 1:B:64:TYR:CD1 | 1:B:64:TYR:N | 0.42 | 2.87 | 5 | 1 |
| 1:A:56:THR:HG22 | 1:A:64:TYR:CD2 | 0.42 | 2.48 | 14 | 2 |
| 1:A:40:VAL:HG11 | 1:A:103:MET:CE | 0.42 | 2.44 | 15 | 1 |
| 1:A:71:MET:SD | 1:A:78:LEU:HD12 | 0.42 | 2.54 | 1 | 1 |
| 1:B:14:VAL:HG12 | 1:B:15:ALA:N | 0.42 | 2.29 | 13 | 5 |
| 1:B:52:ILE:HD12 | 1:B:53:LYS:CE | 0.42 | 2.44 | 5 | 1 |
| 1:A:65:VAL:HG12 | 1:A:110:PHE:O | 0.42 | 2.14 | 14 | 2 |
| 1:B:14:VAL:O | 1:B:15:ALA:HB2 | 0.42 | 2.14 | 11 | 1 |
| 1:A:22:ILE:CD1 | 1:A:109:VAL:HG21 | 0.42 | 2.44 | 14 | 1 |
| 1:A:67:THR:CG2 | 1:A:108:THR:CG2 | 0.42 | 2.98 | 2 | 2 |
| 1:B:30:LEU:HD22 | 1:B:30:LEU:N | 0.42 | 2.28 | 2 | 2 |
| 1:B:32:ASN:OD1 | 1:B:43:TRP:CH2 | 0.42 | 2.73 | 4 | 2 |
| 1:A:90:THR:O | 1:A:112:LEU:HD12 | 0.42 | 2.14 | 6 | 1 |
| 1:B:90:THR:HG22 | 1:B:114:ILE:HG13 | 0.42 | 1.88 | 15 | 1 |
| 1:A:32:ASN:OD1 | 1:A:43:TRP:CH2 | 0.42 | 2.73 | 12 | 3 |
| 1:A:99:GLU:CG | 1:A:104:TYR:CD2 | 0.42 | 3.02 | 2 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:99:GLU:CG | 1:B:104:TYR:CD2 | 0.42 | 3.02 | 2 | 1 |
| 1:A:41:SER:OG | 1:B:79:HIS:CD2 | 0.42 | 2.71 | 3 | 1 |
| 1:A:48:LEU:HD23 | 1:B:82:ALA:H | 0.42 | 1.60 | 3 | 1 |
| 1:A:14:VAL:HG12 | 1:A:15:ALA:N | 0.42 | 2.29 | 13 | 7 |
| 1:A:78:LEU:HD12 | 1:B:78:LEU:HD21 | 0.42 | 1.52 | 9 | 1 |
| 1:B:30:LEU:HD13 | 1:B:43:TRP:CG | 0.42 | 2.50 | 14 | 1 |
| 1:A:90:THR:HG22 | 1:A:114:ILE:HD13 | 0.42 | 1.90 | 8 | 1 |
| 1:A:15:ALA:HB1 | 1:A:18:VAL:HB | 0.42 | 1.91 | 11 | 1 |
| 1:B:48:LEU:HD12 | 1:B:66:VAL:CG1 | 0.42 | 2.44 | 12 | 1 |
| 1:A:64:TYR:CD1 | 1:B:85:TRP:CG | 0.42 | 3.03 | 1 | 1 |
| 1:A:52:ILE:HD12 | 1:A:53:LYS:CE | 0.42 | 2.44 | 5 | 1 |
| 1:B:65:VAL:HG12 | 1:B:110:PHE:O | 0.42 | 2.15 | 14 | 2 |
| 1:A:43:TRP:O | 1:A:46:SER:N | 0.42 | 2.52 | 12 | 1 |
| 1:B:43:TRP:O | 1:B:46:SER:N | 0.42 | 2.52 | 12 | 1 |
| 1:A:67:THR:CG2 | 1:A:110:PHE:CZ | 0.42 | 3.02 | 14 | 1 |
| 1:A:83:SER:HB2 | 1:B:48:LEU:CG | 0.42 | 2.44 | 1 | 1 |
| 1:A:83:SER:N | 1:B:48:LEU:HG | 0.42 | 2.30 | 3 | 1 |
| 1:A:78:LEU:HD21 | 1:B:78:LEU:HD12 | 0.42 | 1.52 | 9 | 1 |
| 1:B:15:ALA:HB1 | 1:B:18:VAL:HB | 0.42 | 1.91 | 11 | 1 |
| 1:A:93:SER:HB3 | 1:A:110:PHE:CE2 | 0.42 | 2.49 | 13 | 2 |
| 1:A:55:LEU:HD12 | 1:A:64:TYR:CD1 | 0.42 | 2.50 | 15 | 1 |
| 1:B:63:LYS:HB3 | 1:B:114:ILE:HD12 | 0.42 | 1.86 | 15 | 1 |
| 1:A:30:LEU:CD2 | 1:A:30:LEU:N | 0.42 | 2.83 | 1 | 3 |
| 1:A:51:CYS:O | 1:A:55:LEU:CD2 | 0.42 | 2.67 | 2 | 2 |
| 1:A:78:LEU:HD13 | 1:A:78:LEU:C | 0.42 | 2.35 | 13 | 2 |
| 1:B:93:SER:HB2 | 1:B:110:PHE:CE2 | 0.42 | 2.50 | 9 | 1 |
| 1:B:11:ALA:HB3 | 1:B:96:VAL:HA | 0.42 | 1.92 | 10 | 2 |
| 1:A:85:TRP:CG | 1:B:64:TYR:CD1 | 0.42 | 3.03 | 1 | 1 |
| 1:B:39:LYS:O | 1:B:43:TRP:CG | 0.42 | 2.73 | 7 | 4 |
| 1:A:32:ASN:OD1 | 1:A:43:TRP:CZ2 | 0.42 | 2.73 | 2 | 2 |
| 1:B:73:LYS:CG | 1:B:73:LYS:O | 0.42 | 2.68 | 3 | 1 |
| 1:B:93:SER:HB3 | 1:B:110:PHE:CE2 | 0.42 | 2.49 | 13 | 2 |
| 1:A:30:LEU:HD13 | 1:A:43:TRP:CG | 0.42 | 2.50 | 14 | 1 |
| 1:A:86:TRP:CE2 | 1:B:114:ILE:C | 0.42 | 2.90 | 14 | 1 |
| 1:B:22:ILE:CG2 | 1:B:23:LYS:N | 0.42 | 2.83 | 15 | 1 |
| 1:A:79:HIS:CG | 1:B:41:SER:OG | 0.42 | 2.72 | 6 | 2 |
| 1:A:48:LEU:HG | 1:B:83:SER:N | 0.42 | 2.30 | 3 | 1 |
| 1:A:85:TRP:NE1 | 1:B:64:TYR:OH | 0.42 | 2.53 | 7 | 1 |
| 1:A:93:SER:HB2 | 1:A:110:PHE:CE2 | 0.42 | 2.50 | 9 | 1 |
| 1:B:18:VAL:HA | 1:B:21:ILE:HD12 | 0.42 | 1.92 | 11 | 1 |
| 1:A:48:LEU:CG | 1:B:83:SER:HB2 | 0.41 | 2.44 | 1 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:112:LEU:N | 1:A:112:LEU:CD1 | 0.41 | 2.83 | 5 | 6 |
| 1:B:62:PHE:O | 1:B:64:TYR:CE1 | 0.41 | 2.73 | 5 | 2 |
| 1:B:67:THR:CG2 | 1:B:108:THR:CG2 | 0.41 | 2.97 | 2 | 2 |
| 1:B:13:PHE:CD2 | 1:B:14:VAL:HG23 | 0.41 | 2.50 | 5 | 1 |
| 1:A:18:VAL:HG12 | 1:A:109:VAL:HG11 | 0.41 | 1.91 | 13 | 1 |
| 1:B:22:ILE:CD1 | 1:B:109:VAL:HG21 | 0.41 | 2.44 | 14 | 1 |
| 1:A:55:LEU:CD1 | 1:A:64:TYR:CZ | 0.41 | 3.03 | 15 | 1 |
| 1:B:55:LEU:CD1 | 1:B:64:TYR:CZ | 0.41 | 3.03 | 15 | 1 |
| 1:A:73:LYS:CG | 1:A:73:LYS:O | 0.41 | 2.67 | 3 | 1 |
| 1:B:22:ILE:CD1 | 1:B:109:VAL:CG2 | 0.41 | 2.98 | 11 | 2 |
| 1:B:29:VAL:HG11 | 1:B:47:CYS:SG | 0.41 | 2.55 | 11 | 1 |
| 1:A:22:ILE:CG2 | 1:A:23:LYS:N | 0.41 | 2.83 | 15 | 1 |
| 1:A:62:PHE:O | 1:A:64:TYR:CE1 | 0.41 | 2.73 | 2 | 2 |
| 1:A:13:PHE:CD2 | 1:A:14:VAL:HG23 | 0.41 | 2.50 | 5 | 1 |
| 1:A:80:THR:CA | 1:B:69:ILE:HG23 | 0.41 | 2.45 | 9 | 1 |
| 1:A:67:THR:HG1 | 1:A:68:CYS:N | 0.41 | 2.11 | 10 | 1 |
| 1:A:29:VAL:HG11 | 1:A:47:CYS:SG | 0.41 | 2.55 | 11 | 1 |
| 1:B:7:ALA:N | 1:B:98:TRP:CZ3 | 0.41 | 2.88 | 11 | 1 |
| 1:B:78:LEU:HD13 | 1:B:79:HIS:H | 0.41 | 1.73 | 11 | 2 |
| 1:B:99:GLU:OE1 | 1:B:104:TYR:CG | 0.41 | 2.73 | 13 | 1 |
| 1:B:64:TYR:CZ | 1:B:109:VAL:HG13 | 0.41 | 2.51 | 15 | 1 |
| 1:A:39:LYS:O | 1:A:43:TRP:CG | 0.41 | 2.74 | 11 | 4 |
| 1:A:62:PHE:O | 1:A:64:TYR:CZ | 0.41 | 2.74 | 2 | 3 |
| 1:A:15:ALA:CB | 1:A:94:ARG:NH1 | 0.41 | 2.84 | 3 | 1 |
| 1:A:68:CYS:SG | 1:B:81:ALA:O | 0.41 | 2.79 | 3 | 1 |
| 1:A:81:ALA:O | 1:B:68:CYS:SG | 0.41 | 2.79 | 3 | 1 |
| 1:B:93:SER:CB | 1:B:110:PHE:CE1 | 0.41 | 3.04 | 4 | 1 |
| 1:A:69:ILE:HG23 | 1:B:80:THR:CA | 0.41 | 2.45 | 9 | 1 |
| 1:A:11:ALA:HB3 | 1:A:96:VAL:HA | 0.41 | 1.92 | 10 | 1 |
| 1:A:7:ALA:N | 1:A:98:TRP:CZ3 | 0.41 | 2.89 | 11 | 1 |
| 1:A:78:LEU:CD2 | 1:B:70:ILE:O | 0.41 | 2.49 | 13 | 1 |
| 1:A:22:ILE:O | 1:A:26:ILE:CD1 | 0.41 | 2.69 | 14 | 1 |
| 1:B:46:SER:O | 1:B:50:HIS:CD2 | 0.41 | 2.73 | 1 | 3 |
| 1:B:32:ASN:OD1 | 1:B:43:TRP:CZ2 | 0.41 | 2.73 | 8 | 2 |
| 1:B:22:ILE:O | 1:B:26:ILE:CD1 | 0.41 | 2.69 | 14 | 2 |
| 1:A:22:ILE:CD1 | 1:A:109:VAL:CG2 | 0.41 | 2.99 | 14 | 2 |
| 1:B:66:VAL:HG13 | 1:B:109:VAL:HG22 | 0.41 | 1.92 | 15 | 1 |
| 1:B:30:LEU:CD2 | 1:B:30:LEU:N | 0.41 | 2.83 | 1 | 1 |
| 1:A:93:SER:HB3 | 1:A:110:PHE:CD1 | 0.41 | 2.50 | 10 | 1 |
| 1:A:29:VAL:O | 1:A:43:TRP:CD2 | 0.41 | 2.73 | 4 | 3 |
| 1:B:62:PHE:O | 1:B:64:TYR:CZ | 0.41 | 2.74 | 2 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:93:SER:HB3 | 1:A:110:PHE:CD2 | 0.41 | 2.51 | 9 | 1 |
| 1:A:11:ALA:HB3 | 1:A:96:VAL:CA | 0.41 | 2.45 | 10 | 1 |
| 1:A:67:THR:HG23 | 1:A:108:THR:HG23 | 0.41 | 1.90 | 10 | 1 |
| 1:B:37:GLU:HA | 1:B:40:VAL:HG13 | 0.41 | 1.91 | 10 | 1 |
| 1:A:99:GLU:OE1 | 1:A:104:TYR:CG | 0.41 | 2.73 | 13 | 1 |
| 1:B:18:VAL:HG12 | 1:B:109:VAL:HG11 | 0.41 | 1.91 | 13 | 1 |
| 1:A:51:CYS:O | 1:A:55:LEU:HD22 | 0.41 | 2.16 | 14 | 1 |
| 1:A:85:TRP:CG | 1:B:62:PHE:O | 0.41 | 2.65 | 14 | 1 |
| 1:B:29:VAL:O | 1:B:43:TRP:CD2 | 0.41 | 2.73 | 4 | 3 |
| 1:B:93:SER:HB2 | 1:B:110:PHE:CE1 | 0.41 | 2.51 | 4 | 1 |
| 1:A:62:PHE:O | 1:A:64:TYR:CE2 | 0.41 | 2.74 | 14 | 2 |
| 1:A:46:SER:O | 1:A:50:HIS:CD2 | 0.41 | 2.74 | 9 | 2 |
| 1:A:99:GLU:HG2 | 1:A:104:TYR:CD2 | 0.41 | 2.51 | 2 | 1 |
| 1:A:93:SER:CB | 1:A:110:PHE:CE1 | 0.41 | 3.04 | 4 | 1 |
| 1:A:99:GLU:HG2 | 1:A:104:TYR:CD1 | 0.41 | 2.51 | 4 | 1 |
| 1:B:99:GLU:HG2 | 1:B:104:TYR:CD1 | 0.41 | 2.51 | 4 | 1 |
| 1:B:22:ILE:HG13 | 1:B:109:VAL:HG22 | 0.41 | 1.93 | 5 | 1 |
| 1:B:62:PHE:O | 1:B:64:TYR:CE2 | 0.41 | 2.74 | 14 | 3 |
| 1:A:23:LYS:CG | 1:A:96:VAL:HG11 | 0.41 | 2.45 | 8 | 1 |
| 1:A:43:TRP:CE3 | 1:A:43:TRP:HA | 0.41 | 2.51 | 9 | 1 |
| 1:B:43:TRP:HA | 1:B:43:TRP:CE3 | 0.41 | 2.51 | 9 | 1 |
| 1:A:37:GLU:HA | 1:A:40:VAL:HG13 | 0.41 | 1.92 | 10 | 1 |
| 1:A:65:VAL:HG13 | 1:A:65:VAL:O | 0.41 | 2.16 | 11 | 1 |
| 1:B:65:VAL:HG13 | 1:B:65:VAL:O | 0.41 | 2.16 | 11 | 1 |
| 1:A:70:ILE:O | 1:B:78:LEU:CD2 | 0.41 | 2.49 | 13 | 1 |
| 1:B:99:GLU:OE1 | 1:B:104:TYR:CD2 | 0.41 | 2.74 | 13 | 1 |
| 1:B:55:LEU:HD12 | 1:B:64:TYR:CD1 | 0.41 | 2.50 | 15 | 1 |
| 1:A:102:SER:O | 1:A:104:TYR:CE1 | 0.41 | 2.74 | 4 | 1 |
| 1:B:52:ILE:CD1 | 1:B:53:LYS:CE | 0.41 | 2.99 | 5 | 1 |
| 1:B:21:ILE:CG2 | 1:B:54:ARG:CB | 0.41 | 2.99 | 6 | 1 |
| 1:A:78:LEU:HD11 | 1:B:78:LEU:HD11 | 0.41 | 1.68 | 9 | 1 |
| 1:B:55:LEU:HB3 | 1:B:64:TYR:CE1 | 0.41 | 2.51 | 13 | 1 |
| 1:B:56:THR:HG22 | 1:B:64:TYR:HE2 | 0.41 | 1.70 | 14 | 1 |
| 1:A:22:ILE:CD1 | 1:A:26:ILE:CD1 | 0.41 | 2.99 | 15 | 1 |
| 1:A:71:MET:HG2 | 1:B:78:LEU:HD11 | 0.41 | 1.84 | 15 | 1 |
| 1:B:43:TRP:CE3 | 1:B:43:TRP:HA | 0.41 | 2.51 | 15 | 1 |
| 1:A:95:THR:HA | 1:A:108:THR:HA | 0.40 | 1.93 | 3 | 1 |
| 1:A:112:LEU:CB | 1:B:86:TRP:CZ2 | 0.40 | 3.04 | 4 | 1 |
| 1:B:23:LYS:CG | 1:B:96:VAL:HG11 | 0.40 | 2.45 | 8 | 1 |
| 1:A:99:GLU:OE1 | 1:A:104:TYR:CD1 | 0.40 | 2.74 | 10 | 1 |
| 1:A:14:VAL:O | 1:A:15:ALA:HB2 | 0.40 | 2.15 | 11 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:B:51:CYS:O | 1:B:55:LEU:HD22 | 0.40 | 2.16 | 14 | 1 |
| 1:A:66:VAL:HG13 | 1:A:109:VAL:HG22 | 0.40 | 1.92 | 15 | 1 |
| 1:A:93:SER:HB2 | 1:A:110:PHE:CE1 | 0.40 | 2.51 | 4 | 1 |
| 1:A:51:CYS:SG | 1:A:66:VAL:HG21 | 0.40 | 2.56 | 10 | 1 |
| 1:B:73:LYS:O | 1:B:104:TYR:CD1 | 0.40 | 2.74 | 13 | 1 |
| 1:B:5:ASP:O | 1:B:8:VAL:HG22 | 0.40 | 2.16 | 15 | 1 |
| 1:B:99:GLU:HG2 | 1:B:104:TYR:CD2 | 0.40 | 2.51 | 2 | 1 |
| 1:B:102:SER:O | 1:B:104:TYR:CE1 | 0.40 | 2.74 | 4 | 1 |
| 1:A:55:LEU:HB2 | 1:A:64:TYR:CE1 | 0.40 | 2.51 | 7 | 1 |
| 1:A:93:SER:HB2 | 1:A:110:PHE:CZ | 0.40 | 2.52 | 7 | 1 |
| 1:B:55:LEU:HB2 | 1:B:64:TYR:CE1 | 0.40 | 2.51 | 7 | 1 |
| 1:B:11:ALA:HB3 | 1:B:96:VAL:CA | 0.40 | 2.45 | 10 | 1 |
| 1:A:78:LEU:CD1 | 1:B:69:ILE:HG23 | 0.40 | 2.46 | 11 | 1 |
| 1:B:93:SER:CB | 1:B:110:PHE:CZ | 0.40 | 3.04 | 11 | 1 |
| 1:B:22:ILE:CD1 | 1:B:26:ILE:CD1 | 0.40 | 2.99 | 15 | 1 |
| 1:A:68:CYS:O | 1:B:80:THR:CB | 0.40 | 2.65 | 3 | 1 |
| 1:A:81:ALA:C | 1:B:68:CYS:SG | 0.40 | 3.00 | 3 | 1 |
| 1:A:98:TRP:CE3 | 1:A:98:TRP:HA | 0.40 | 2.52 | 5 | 1 |
| 1:B:52:ILE:HG23 | 1:B:53:LYS:N | 0.40 | 2.32 | 6 | 1 |
| 1:B:55:LEU:CB | 1:B:64:TYR:CD2 | 0.40 | 3.04 | 12 | 1 |
| 1:A:78:LEU:HD12 | 1:B:78:LEU:HD12 | 0.40 | 1.93 | 2 | 1 |
| 1:B:95:THR:HA | 1:B:108:THR:HA | 0.40 | 1.93 | 2 | 2 |
| 1:A:52:ILE:CD1 | 1:A:53:LYS:CE | 0.40 | 2.99 | 5 | 1 |
| 1:B:55:LEU:HB3 | 1:B:64:TYR:CE2 | 0.40 | 2.52 | 5 | 1 |
| 1:A:66:VAL:HG22 | 1:A:109:VAL:CG1 | 0.40 | 2.47 | 10 | 1 |
| 1:A:44:THR:OG1 | 1:A:68:CYS:CB | 0.40 | 2.70 | 14 | 1 |
| 1:A:5:ASP:O | 1:A:8:VAL:HG22 | 0.40 | 2.16 | 15 | 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 | 110/114 (96%) | 89±2 (81±2%) | 14±3 (13±2%) | 6±2 (6±2%) | 3 | 21 |
| 1 | B | 110/114 (96%) | 89±2 (81±2%) | 14±3 (13±2%) | 6±2 (6±2%) | 3 | 21 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|-----------|----------|-------------|----|
| All | All | 3300/3420 (96%) | 2681 (81%) | 429 (13%) | 190 (6%) | 3 | 21 |

All 38 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 | 87 | ASP | 14 |
| 1 | B | 87 | ASP | 14 |
| 1 | A | 12 | ALA | 11 |
| 1 | B | 12 | ALA | 11 |
| 1 | A | 61 | PRO | 10 |
| 1 | B | 61 | PRO | 10 |
| 1 | A | 93 | SER | 9 |
| 1 | B | 93 | SER | 9 |
| 1 | A | 92 | GLY | 8 |
| 1 | B | 92 | GLY | 8 |
| 1 | A | 73 | LYS | 6 |
| 1 | B | 73 | LYS | 6 |
| 1 | A | 59 | ASN | 5 |
| 1 | B | 59 | ASN | 5 |
| 1 | A | 75 | GLY | 5 |
| 1 | A | 113 | ALA | 5 |
| 1 | B | 75 | GLY | 5 |
| 1 | B | 113 | ALA | 5 |
| 1 | A | 7 | ALA | 4 |
| 1 | A | 101 | LYS | 4 |
| 1 | B | 7 | ALA | 4 |
| 1 | B | 101 | LYS | 4 |
| 1 | A | 32 | ASN | 2 |
| 1 | A | 74 | ASN | 2 |
| 1 | B | 32 | ASN | 2 |
| 1 | B | 74 | ASN | 2 |
| 1 | A | 63 | LYS | 2 |
| 1 | B | 63 | LYS | 2 |
| 1 | A | 8 | VAL | 2 |
| 1 | B | 8 | VAL | 2 |
| 1 | A | 15 | ALA | 2 |
| 1 | A | 60 | LYS | 2 |
| 1 | B | 15 | ALA | 2 |
| 1 | B | 60 | LYS | 2 |
| 1 | A | 6 | PRO | 1 |
| 1 | B | 6 | PRO | 1 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 72 | GLN | 1 |
| 1 | B | 72 | GLN | 1 |

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 | 96/98 (98%) | 69±4 (72±4%) | 27±4 (28±4%) | 2 | 19 |
| 1 | B | 96/98 (98%) | 69±4 (72±4%) | 27±4 (28±4%) | 2 | 19 |
| All | All | 2880/2940 (98%) | 2069 (72%) | 811 (28%) | 2 | 19 |

All 143 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 | 8 | VAL | 15 |
| 1 | A | 48 | LEU | 15 |
| 1 | A | 52 | ILE | 15 |
| 1 | A | 54 | ARG | 15 |
| 1 | A | 85 | TRP | 15 |
| 1 | B | 8 | VAL | 15 |
| 1 | B | 48 | LEU | 15 |
| 1 | B | 52 | ILE | 15 |
| 1 | B | 54 | ARG | 15 |
| 1 | B | 85 | TRP | 15 |
| 1 | A | 39 | LYS | 14 |
| 1 | A | 53 | LYS | 14 |
| 1 | B | 39 | LYS | 14 |
| 1 | B | 53 | LYS | 14 |
| 1 | A | 29 | VAL | 13 |
| 1 | A | 37 | GLU | 13 |
| 1 | A | 109 | VAL | 13 |
| 1 | B | 29 | VAL | 13 |
| 1 | B | 37 | GLU | 13 |
| 1 | B | 109 | VAL | 13 |
| 1 | A | 98 | TRP | 12 |
| 1 | B | 98 | TRP | 12 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 101 | LYS | 11 |
| 1 | B | 101 | LYS | 11 |
| 1 | A | 33 | GLN | 10 |
| 1 | B | 33 | GLN | 10 |
| 1 | A | 34 | GLN | 10 |
| 1 | B | 34 | GLN | 10 |
| 1 | A | 47 | CYS | 9 |
| 1 | A | 112 | LEU | 9 |
| 1 | B | 47 | CYS | 9 |
| 1 | B | 112 | LEU | 9 |
| 1 | A | 9 | GLU | 9 |
| 1 | B | 9 | GLU | 9 |
| 1 | A | 46 | SER | 8 |
| 1 | A | 65 | VAL | 8 |
| 1 | A | 103 | MET | 8 |
| 1 | B | 46 | SER | 8 |
| 1 | B | 65 | VAL | 8 |
| 1 | B | 103 | MET | 8 |
| 1 | A | 97 | ARG | 8 |
| 1 | B | 97 | ARG | 8 |
| 1 | A | 24 | GLU | 7 |
| 1 | A | 71 | MET | 7 |
| 1 | B | 24 | GLU | 7 |
| 1 | B | 71 | MET | 7 |
| 1 | A | 45 | SER | 7 |
| 1 | A | 64 | TYR | 7 |
| 1 | B | 45 | SER | 7 |
| 1 | B | 64 | TYR | 7 |
| 1 | A | 43 | TRP | 7 |
| 1 | A | 36 | SER | 7 |
| 1 | B | 36 | SER | 7 |
| 1 | A | 44 | THR | 6 |
| 1 | B | 44 | THR | 6 |
| 1 | A | 42 | GLN | 6 |
| 1 | A | 60 | LYS | 6 |
| 1 | A | 100 | ASN | 6 |
| 1 | B | 42 | GLN | 6 |
| 1 | B | 60 | LYS | 6 |
| 1 | B | 100 | ASN | 6 |
| 1 | A | 73 | LYS | 6 |
| 1 | A | 94 | ARG | 6 |
| 1 | B | 43 | TRP | 6 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | B | 73 | LYS | 6 |
| 1 | B | 94 | ARG | 6 |
| 1 | A | 88 | SER | 5 |
| 1 | B | 88 | SER | 5 |
| 1 | A | 10 | GLU | 5 |
| 1 | B | 10 | GLU | 5 |
| 1 | A | 58 | LEU | 5 |
| 1 | B | 58 | LEU | 5 |
| 1 | A | 22 | ILE | 4 |
| 1 | A | 40 | VAL | 4 |
| 1 | B | 22 | ILE | 4 |
| 1 | B | 40 | VAL | 4 |
| 1 | A | 62 | PHE | 4 |
| 1 | A | 110 | PHE | 4 |
| 1 | B | 110 | PHE | 4 |
| 1 | A | 63 | LYS | 4 |
| 1 | B | 63 | LYS | 4 |
| 1 | A | 26 | ILE | 3 |
| 1 | A | 55 | LEU | 3 |
| 1 | A | 72 | GLN | 3 |
| 1 | A | 87 | ASP | 3 |
| 1 | A | 99 | GLU | 3 |
| 1 | B | 26 | ILE | 3 |
| 1 | B | 55 | LEU | 3 |
| 1 | B | 62 | PHE | 3 |
| 1 | B | 72 | GLN | 3 |
| 1 | B | 87 | ASP | 3 |
| 1 | B | 99 | GLU | 3 |
| 1 | A | 20 | ASN | 3 |
| 1 | A | 84 | CYS | 3 |
| 1 | B | 20 | ASN | 3 |
| 1 | B | 84 | CYS | 3 |
| 1 | A | 5 | ASP | 2 |
| 1 | B | 5 | ASP | 2 |
| 1 | A | 17 | ASP | 2 |
| 1 | B | 17 | ASP | 2 |
| 1 | A | 74 | ASN | 2 |
| 1 | B | 74 | ASN | 2 |
| 1 | A | 78 | LEU | 2 |
| 1 | B | 78 | LEU | 2 |
| 1 | A | 25 | SER | 2 |
| 1 | B | 25 | SER | 2 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 70 | ILE | 1 |
| 1 | A | 93 | SER | 1 |
| 1 | B | 70 | ILE | 1 |
| 1 | B | 93 | SER | 1 |
| 1 | A | 79 | HIS | 1 |
| 1 | A | 86 | TRP | 1 |
| 1 | B | 86 | TRP | 1 |
| 1 | A | 35 | TYR | 1 |
| 1 | A | 104 | TYR | 1 |
| 1 | B | 35 | TYR | 1 |
| 1 | B | 104 | TYR | 1 |
| 1 | A | 89 | THR | 1 |
| 1 | A | 102 | SER | 1 |
| 1 | B | 89 | THR | 1 |
| 1 | B | 102 | SER | 1 |
| 1 | A | 13 | PHE | 1 |
| 1 | A | 107 | CYS | 1 |
| 1 | B | 13 | PHE | 1 |
| 1 | B | 107 | CYS | 1 |
| 1 | A | 19 | SER | 1 |
| 1 | B | 19 | SER | 1 |
| 1 | A | 27 | ASP | 1 |
| 1 | A | 91 | ASP | 1 |
| 1 | B | 27 | ASP | 1 |
| 1 | B | 91 | ASP | 1 |
| 1 | A | 41 | SER | 1 |
| 1 | A | 56 | THR | 1 |
| 1 | B | 41 | SER | 1 |
| 1 | B | 56 | THR | 1 |
| 1 | A | 23 | LYS | 1 |
| 1 | A | 108 | THR | 1 |
| 1 | B | 23 | LYS | 1 |
| 1 | B | 108 | THR | 1 |
| 1 | A | 66 | VAL | 1 |
| 1 | A | 95 | THR | 1 |
| 1 | B | 66 | VAL | 1 |
| 1 | B | 95 | THR | 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

No chemical shift data were provided