



Full wwPDB NMR Structure Validation Report ⓘ

Jun 15, 2024 – 11:13 PM EDT

PDB ID : 2HHI
Title : The solution structure of antigen MPT64 from Mycobacterium tuberculosis defines a novel class of beta-grasp proteins
Authors : Wang, Z.; Potter, B.M.; Gray, A.M.; Sacksteder, K.A.; Geisbrecht, B.V.; Laity, J.H.
Deposited on : 2006-06-28

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

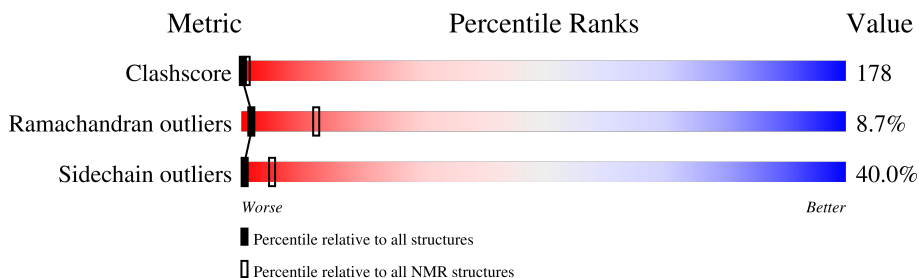
1 Overall quality at a glance

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 | 204 | |

2 Ensemble composition and analysis i

This entry contains 24 models. Model 16 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *closest to the average*.

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:3-A:35, A:40-A:162, A:169-A:206 (194) | 0.26 | 16 |

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 4 clusters and 2 single-model clusters were found.

| Cluster number | Models |
|-----------------------|---------------------------------|
| 1 | 4, 6, 9, 11, 14, 16, 19, 22, 23 |
| 2 | 1, 2, 3, 7, 12, 13, 20, 21, 24 |
| 3 | 10, 18 |
| 4 | 8, 17 |
| Single-model clusters | 5; 15 |

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 3106 atoms, of which 1527 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Immunogenic protein MPT64.

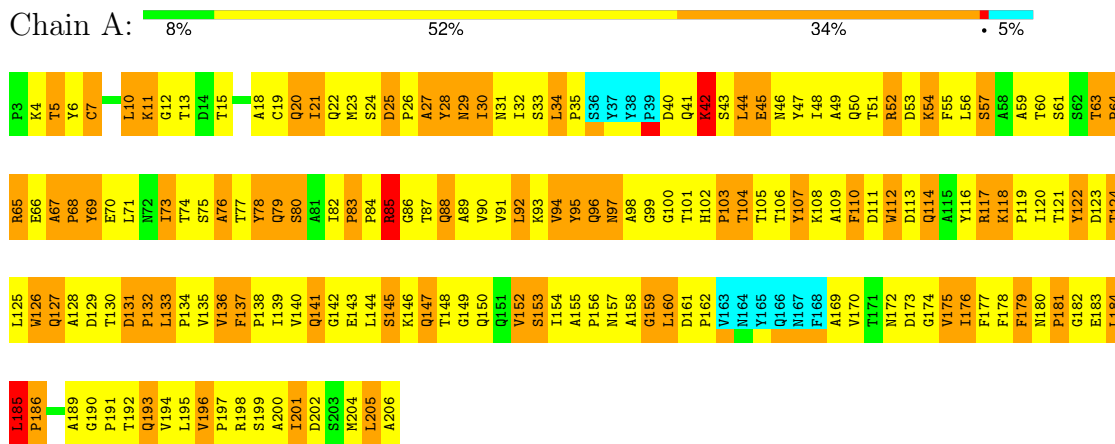
| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|-------|
| | | | Total | C | H | N | O | S | |
| 1 | A | 204 | 3106 | 1003 | 1527 | 257 | 315 | 4 | 0 |

4 Residue-property plots i

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: Immunogenic protein MPT64

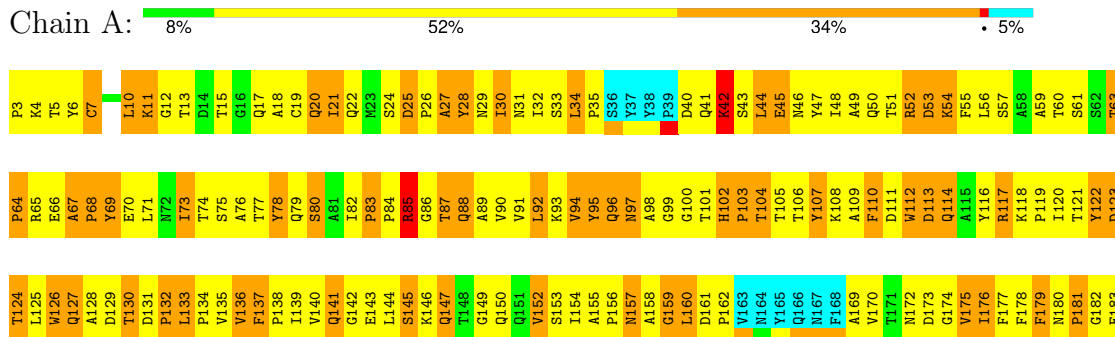


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

- Molecule 1: Immunogenic protein MPT64

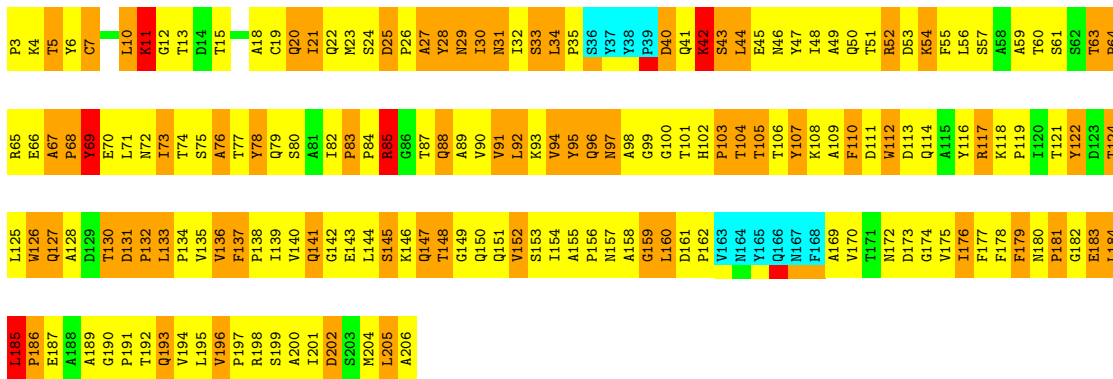




4.2.2 Score per residue for model 2

- Molecule 1: Immunogenic protein MPT64

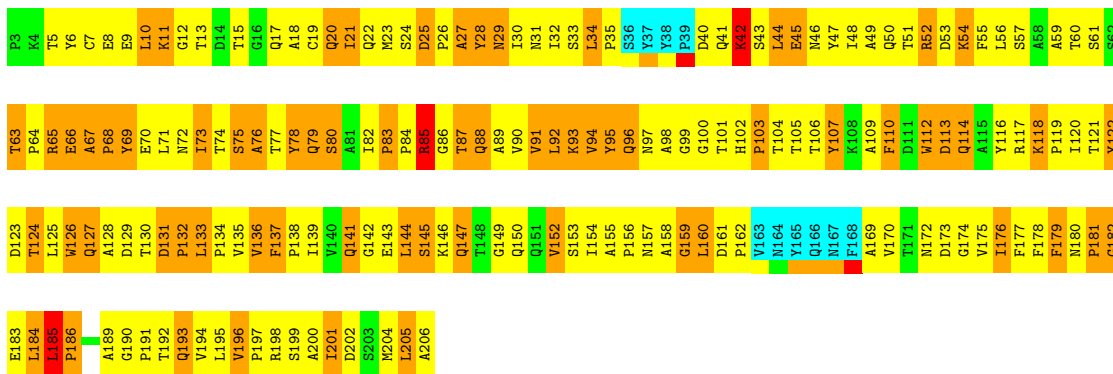
Chain A: 8% 52% 33% 5%



4.2.3 Score per residue for model 3

- Molecule 1: Immunogenic protein MPT64

Chain A: 8% 52% 33% 5%

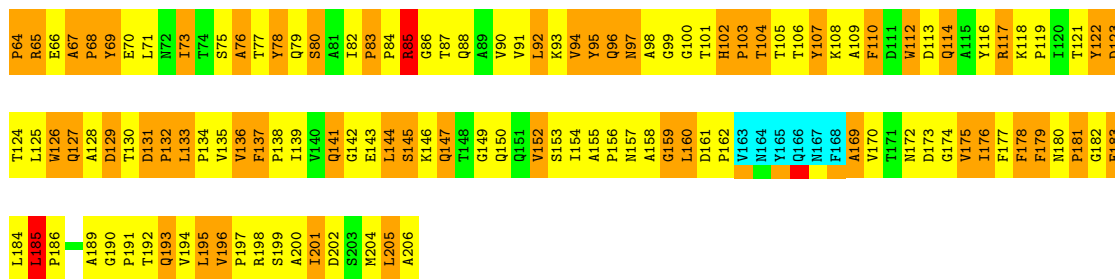


4.2.4 Score per residue for model 4

- Molecule 1: Immunogenic protein MPT64

Chain A: 10% 48% 35% 5%

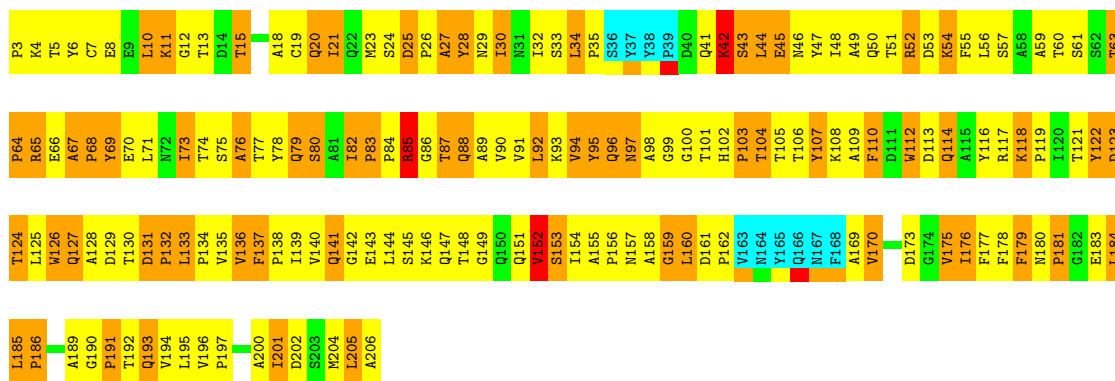




4.2.5 Score per residue for model 5

- Molecule 1: Immunogenic protein MPT64

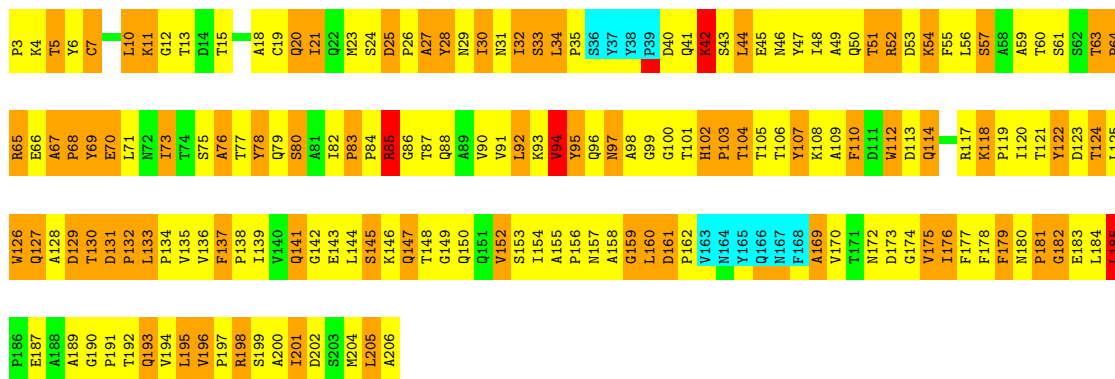
Chain A: 12% 49% 33% 5%



4.2.6 Score per residue for model 6

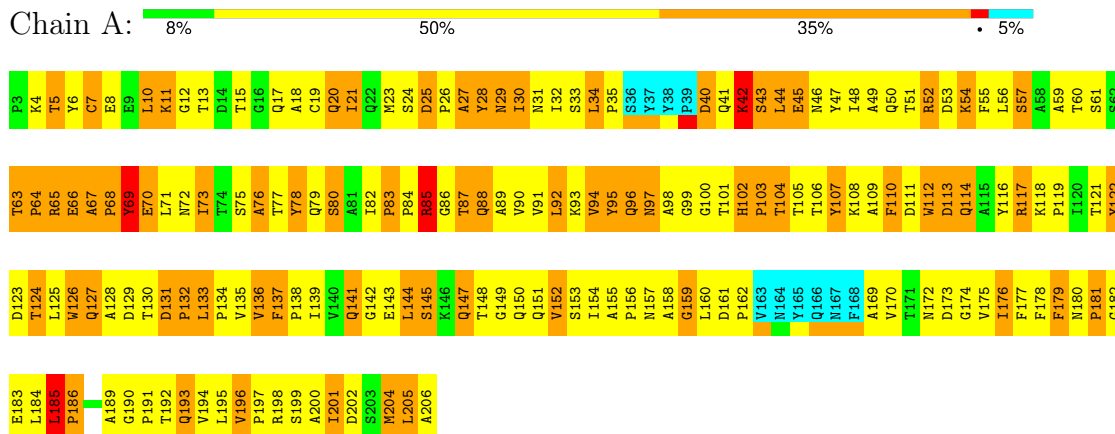
- Molecule 1: Immunogenic protein MPT64

Chain A: 10% 49% 34% 5%



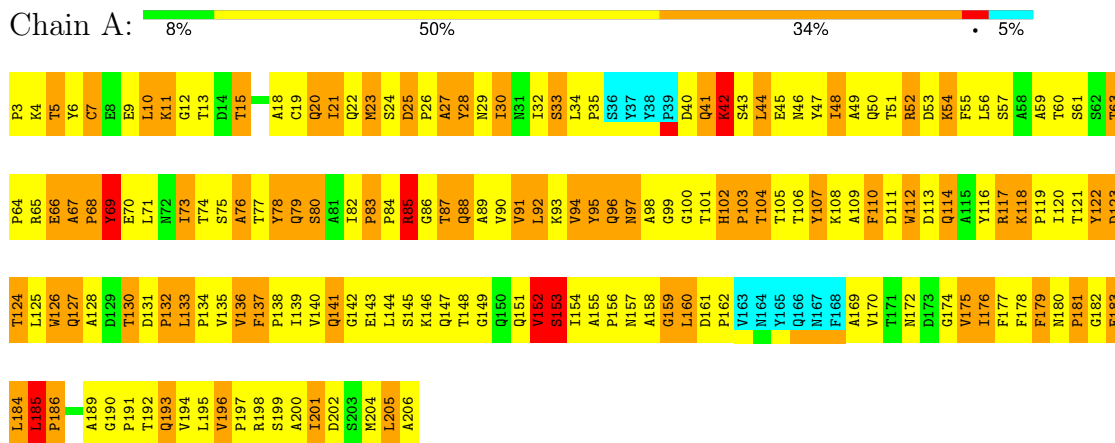
4.2.7 Score per residue for model 7

- Molecule 1: Immunogenic protein MPT64



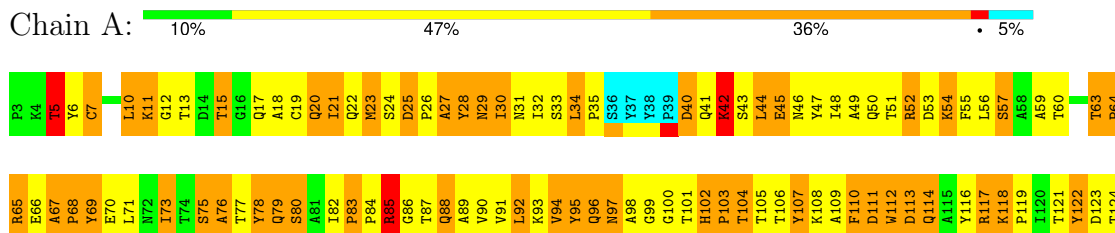
4.2.8 Score per residue for model 8

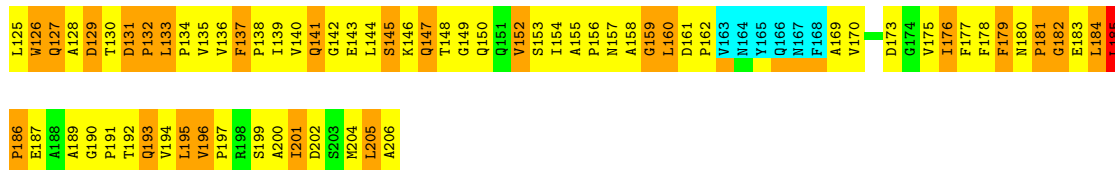
- Molecule 1: Immunogenic protein MPT64



4.2.9 Score per residue for model 9

- Molecule 1: Immunogenic protein MPT64

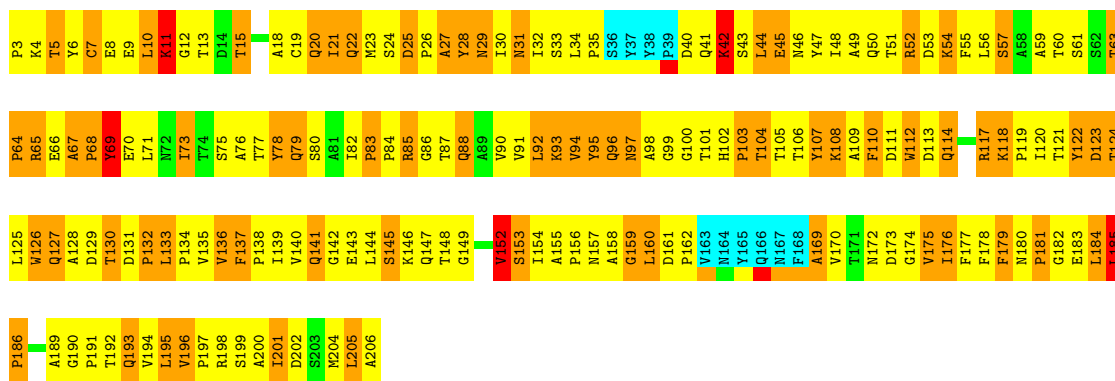




4.2.10 Score per residue for model 10

- Molecule 1: Immunogenic protein MPT64

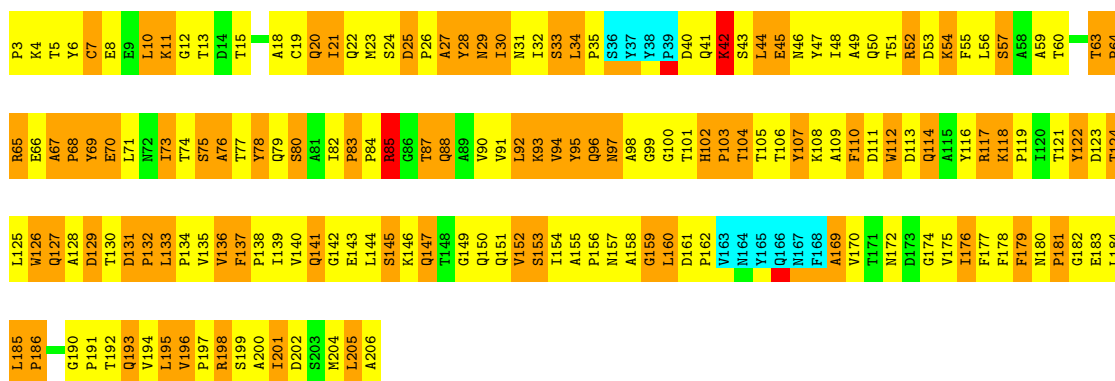
Chain A: 8% 50% 34% 5%



4.2.11 Score per residue for model 11

- Molecule 1: Immunogenic protein MPT64

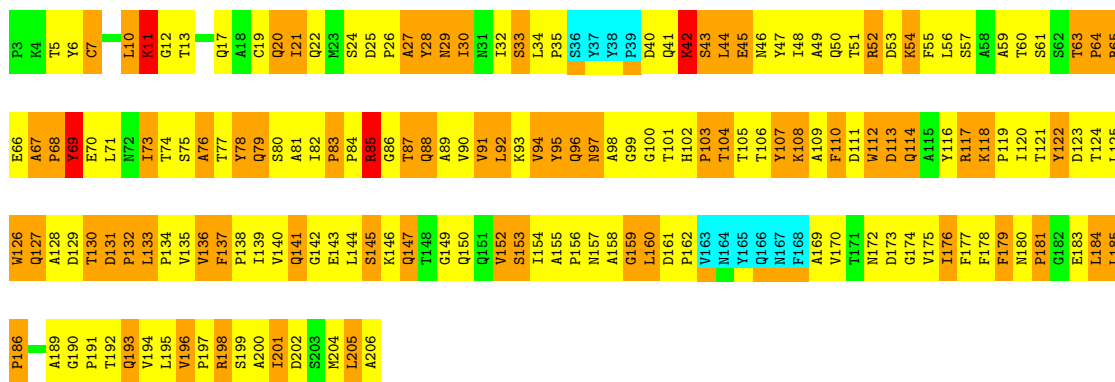
Chain A: 10% 47% 37% 5%



4.2.12 Score per residue for model 12

- Molecule 1: Immunogenic protein MPT64

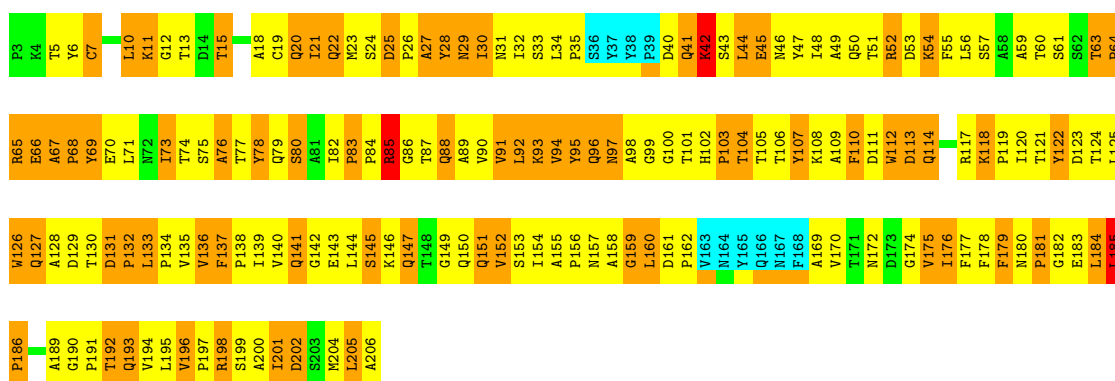
Chain A: 10% 49% 34% 5%



4.2.13 Score per residue for model 13

- Molecule 1: Immunogenic protein MPT64

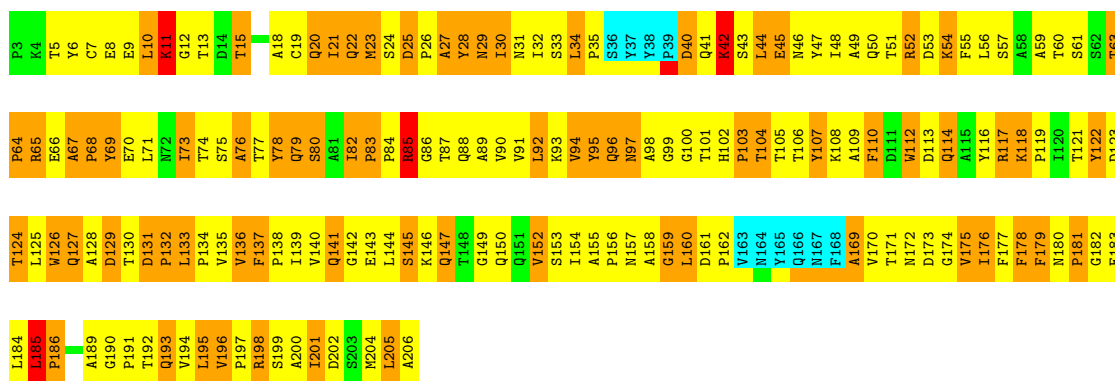
Chain A: 9% 49% 36% 5%



4.2.14 Score per residue for model 14

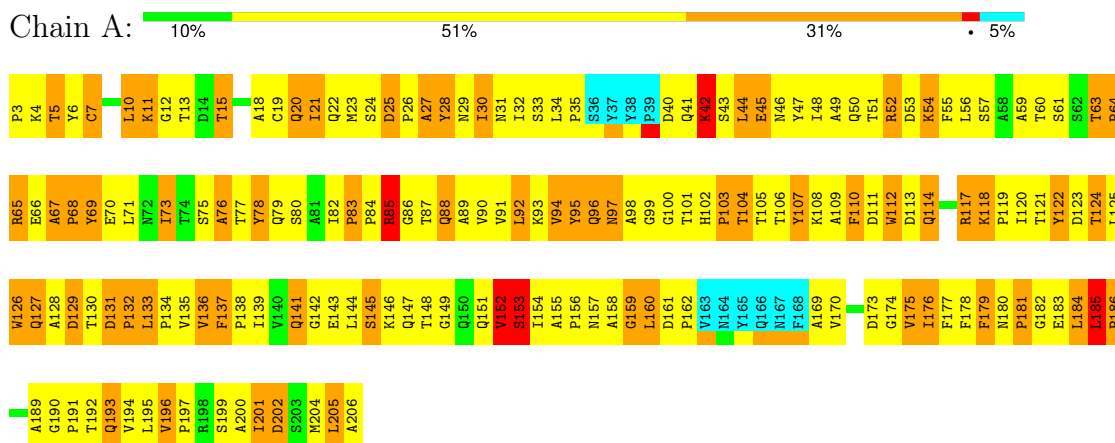
- Molecule 1: Immunogenic protein MPT64

Chain A: 8% 50% 35% 5%



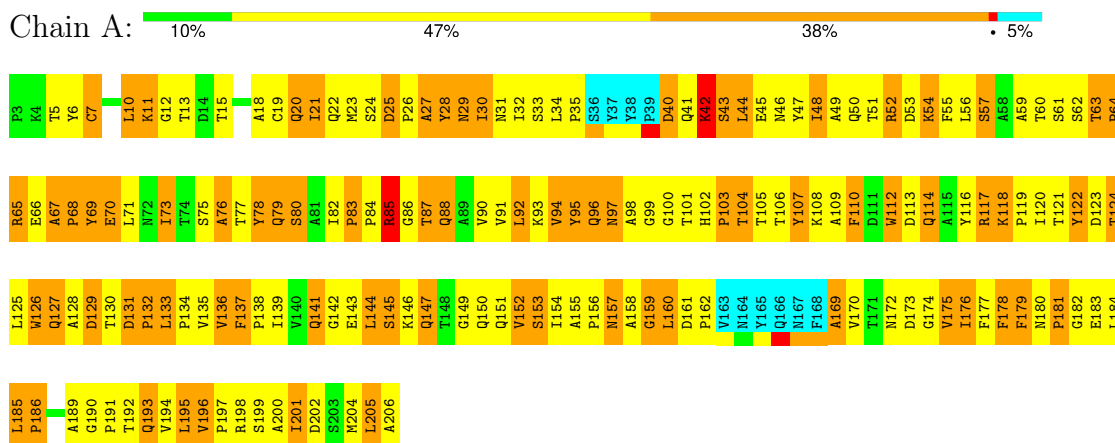
4.2.15 Score per residue for model 15

- Molecule 1: Immunogenic protein MPT64



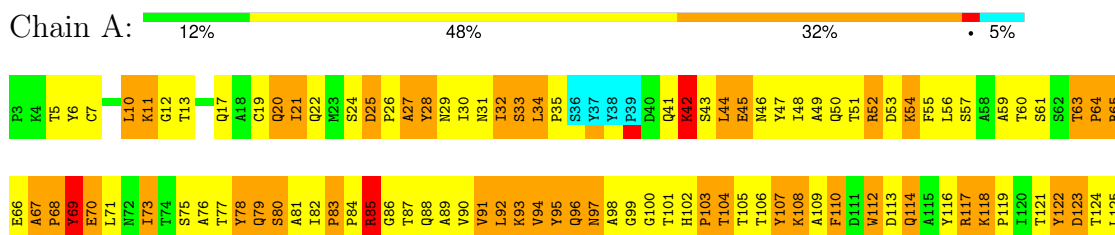
4.2.16 Score per residue for model 16 (medoid)

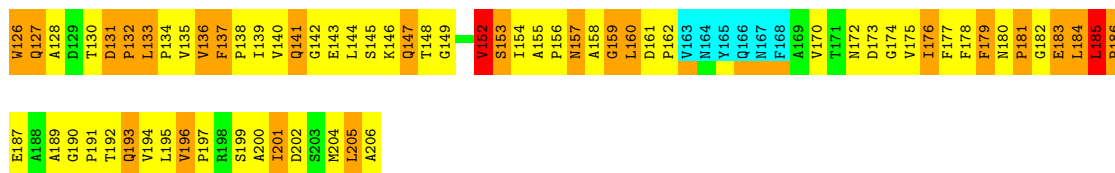
- Molecule 1: Immunogenic protein MPT64



4.2.17 Score per residue for model 17

- Molecule 1: Immunogenic protein MPT64

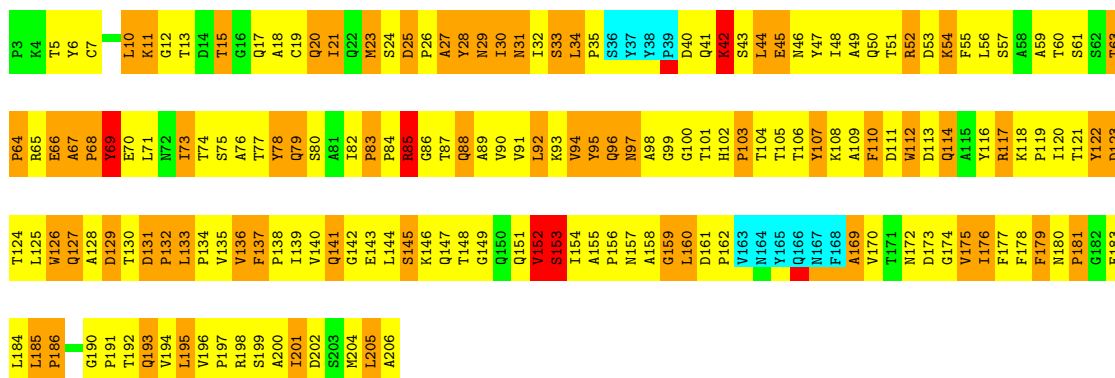




4.2.18 Score per residue for model 18

- Molecule 1: Immunogenic protein MPT64

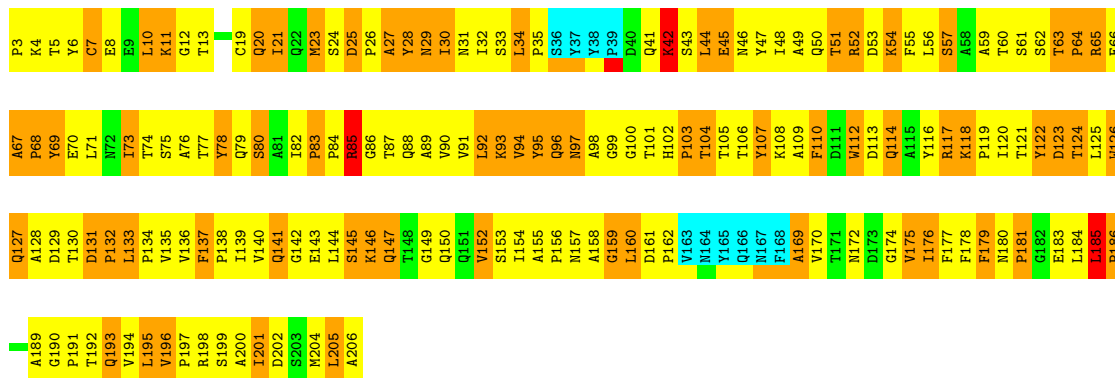
Chain A: 9% 52% 31% 5%



4.2.19 Score per residue for model 19

- Molecule 1: Immunogenic protein MPT64

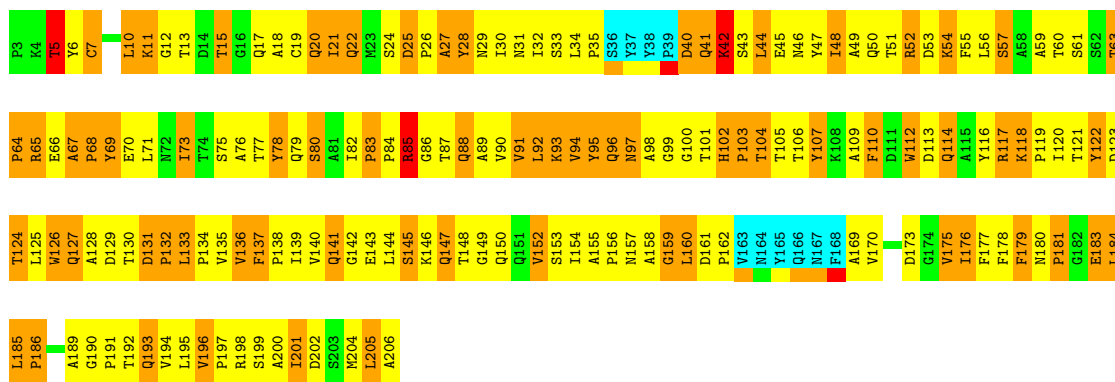
Chain A: 10% 50% 34% 5%



4.2.20 Score per residue for model 20

- Molecule 1: Immunogenic protein MPT64

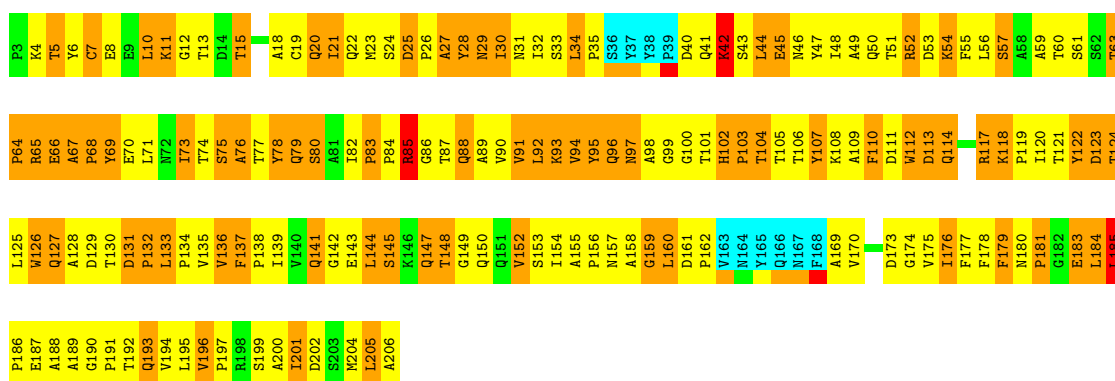
Chain A: 11% 48% 35% 5%



4.2.21 Score per residue for model 21

- Molecule 1: Immunogenic protein MPT64

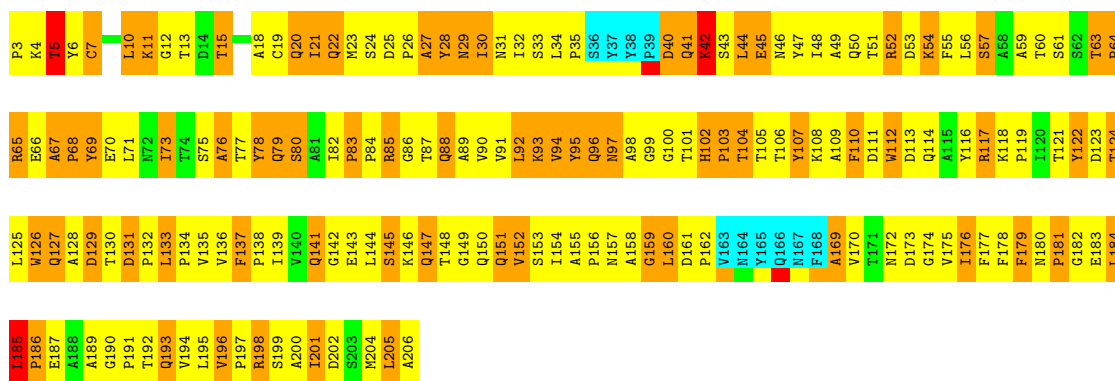
Chain A: 9% 47% 38% 5%



4.2.22 Score per residue for model 22

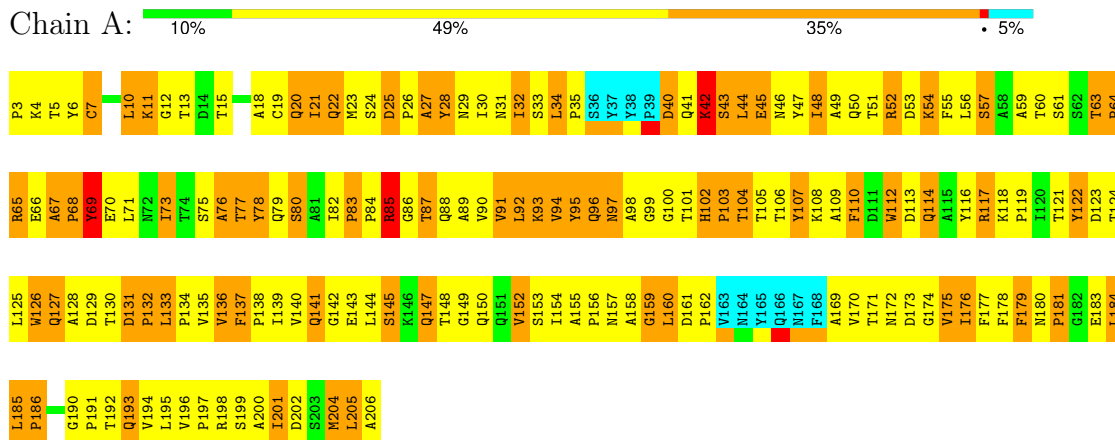
- Molecule 1: Immunogenic protein MPT64

Chain A: 8% 51% 35% 5%



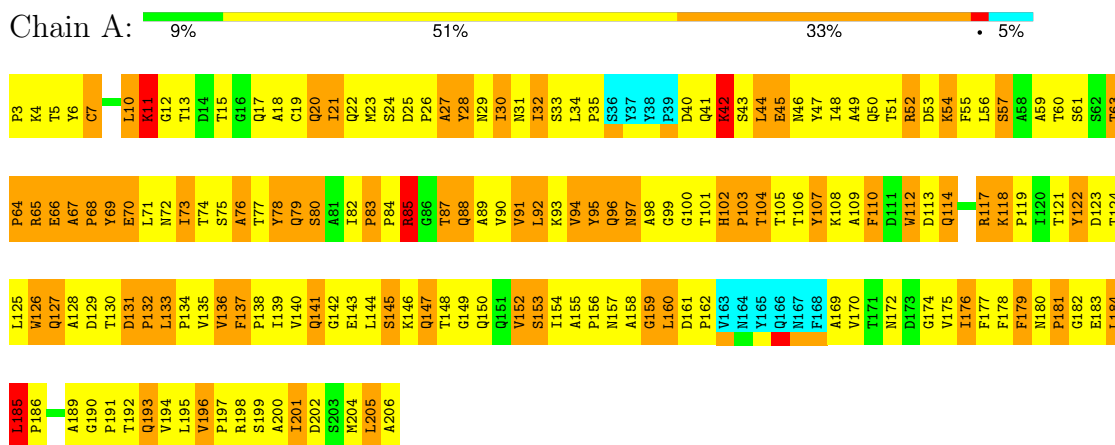
4.2.23 Score per residue for model 23

- Molecule 1: Immunogenic protein MPT64



4.2.24 Score per residue for model 24

- Molecule 1: Immunogenic protein MPT64



5 Refinement protocol and experimental data overview

The models were refined using the following method: *Torsion Angle Dynamics followed by RDC refinement using CNS 1.1.*

Of the 50 calculated structures, 24 were deposited, based on the following criterion: *structures with the lowest energy.*

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

| Software name | Classification | Version |
|---------------|----------------|---------|
| CNS | refinement | 1.1 |

No chemical shift data was provided.

6 Model quality i

6.1 Standard geometry i

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

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------------------|-------------|-----------------------|
| | | RMSZ | #Z>5 | RMSZ | #Z>5 |
| 1 | A | 0.59±0.01 | 0±0/1524 (0.0± 0.0%) | 1.06±0.01 | 5±1/2087 (0.2± 0.0%) |
| All | All | 0.59 | 0/36576 (0.0%) | 1.06 | 119/50088 (0.2%) |

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

| Mol | Chain | Chirality | Planarity |
|-----|-------|-----------|-----------|
| 1 | A | 0.0±0.0 | 1.0±0.0 |
| All | All | 0 | 24 |

There are no bond-length outliers.

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|-----------|-------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 1 | A | 76 | ALA | CA-C-N | 9.19 | 137.42 | 117.20 | 3 | 24 |
| 1 | A | 94 | VAL | CA-C-N | -8.27 | 99.00 | 117.20 | 6 | 24 |
| 1 | A | 76 | ALA | O-C-N | -5.74 | 113.51 | 122.70 | 3 | 24 |
| 1 | A | 76 | ALA | CA-C-O | -5.44 | 108.68 | 120.10 | 3 | 24 |
| 1 | A | 69 | TYR | CB-CG-CD1 | 5.29 | 124.18 | 121.00 | 10 | 8 |
| 1 | A | 153 | SER | N-CA-C | -5.26 | 96.80 | 111.00 | 17 | 6 |
| 1 | A | 195 | LEU | CA-C-N | 5.24 | 128.72 | 117.20 | 18 | 9 |

There are no chirality outliers.

All unique planar outliers are listed below.

| Mol | Chain | Res | Type | Group | Models (Total) |
|-----|-------|-----|------|-----------|----------------|
| 1 | A | 126 | TRP | Mainchain | 24 |

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 | 1487 | 1450 | 1447 | 522±11 |
| All | All | 35688 | 34800 | 34728 | 12538 |

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 178.

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

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:66:GLU:HB3 | 1:A:99:GLY:O | 1.29 | 1.26 | 16 | 24 |
| 1:A:184:LEU:O | 1:A:185:LEU:HG | 1.26 | 1.19 | 13 | 15 |
| 1:A:66:GLU:CB | 1:A:99:GLY:O | 1.25 | 1.84 | 15 | 24 |
| 1:A:94:VAL:O | 1:A:106:THR:O | 1.23 | 1.56 | 7 | 24 |
| 1:A:185:LEU:HD21 | 1:A:191:PRO:O | 1.20 | 1.35 | 7 | 15 |
| 1:A:65:ARG:HA | 1:A:98:ALA:O | 1.19 | 1.38 | 8 | 24 |
| 1:A:185:LEU:HD13 | 1:A:185:LEU:O | 1.17 | 1.34 | 21 | 6 |
| 1:A:155:ALA:HB3 | 1:A:158:ALA:HB3 | 1.14 | 1.15 | 17 | 24 |
| 1:A:44:LEU:HD22 | 1:A:92:LEU:HD21 | 1.12 | 1.16 | 7 | 24 |
| 1:A:30:ILE:HG22 | 1:A:32:ILE:HD11 | 1.12 | 1.12 | 14 | 16 |
| 1:A:156:PRO:HB3 | 1:A:160:LEU:HD12 | 1.11 | 1.14 | 24 | 24 |
| 1:A:160:LEU:HD13 | 1:A:194:VAL:HG12 | 1.11 | 1.21 | 7 | 24 |
| 1:A:42:LYS:O | 1:A:46:ASN:HB2 | 1.08 | 1.48 | 12 | 24 |
| 1:A:178:PHE:CG | 1:A:193:GLN:HB2 | 1.08 | 1.83 | 4 | 24 |
| 1:A:185:LEU:HD11 | 1:A:190:GLY:O | 1.08 | 1.45 | 21 | 1 |
| 1:A:91:VAL:HG23 | 1:A:109:ALA:HB2 | 1.08 | 1.15 | 23 | 5 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:HG12 | 1.06 | 1.19 | 20 | 3 |
| 1:A:66:GLU:HB2 | 1:A:100:GLY:HA3 | 1.05 | 1.28 | 3 | 24 |
| 1:A:95:TYR:HB2 | 1:A:105:THR:HG23 | 1.05 | 1.26 | 18 | 22 |
| 1:A:196:VAL:HG13 | 1:A:201:ILE:HG21 | 1.04 | 1.24 | 13 | 3 |
| 1:A:196:VAL:HG12 | 1:A:201:ILE:HG21 | 1.04 | 1.29 | 23 | 21 |
| 1:A:185:LEU:HD11 | 1:A:191:PRO:C | 1.04 | 1.73 | 10 | 14 |
| 1:A:69:TYR:HA | 1:A:99:GLY:H | 1.03 | 1.13 | 19 | 24 |
| 1:A:133:LEU:HD23 | 1:A:196:VAL:HG22 | 1.03 | 1.24 | 2 | 20 |
| 1:A:156:PRO:O | 1:A:184:LEU:HD12 | 1.02 | 1.54 | 1 | 18 |
| 1:A:136:VAL:HG23 | 1:A:195:LEU:HD22 | 1.02 | 1.08 | 7 | 2 |
| 1:A:184:LEU:O | 1:A:185:LEU:CG | 1.01 | 2.07 | 13 | 15 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:133:LEU:HD22 | 1:A:194:VAL:HG23 | 0.99 | 1.34 | 7 | 24 |
| 1:A:15:THR:CG2 | 1:A:18:ALA:HB3 | 0.98 | 1.88 | 24 | 19 |
| 1:A:185:LEU:HD21 | 1:A:190:GLY:N | 0.98 | 1.73 | 21 | 1 |
| 1:A:155:ALA:O | 1:A:159:GLY:N | 0.98 | 1.97 | 14 | 24 |
| 1:A:91:VAL:CG2 | 1:A:109:ALA:HB2 | 0.96 | 1.90 | 23 | 13 |
| 1:A:127:GLN:CG | 1:A:204:MET:O | 0.96 | 2.14 | 8 | 24 |
| 1:A:197:PRO:HB2 | 1:A:200:ALA:HB3 | 0.96 | 1.37 | 17 | 24 |
| 1:A:44:LEU:CD2 | 1:A:92:LEU:HD21 | 0.96 | 1.90 | 12 | 24 |
| 1:A:155:ALA:HB3 | 1:A:158:ALA:CB | 0.96 | 1.91 | 21 | 24 |
| 1:A:127:GLN:CB | 1:A:204:MET:O | 0.95 | 2.13 | 18 | 24 |
| 1:A:91:VAL:HG23 | 1:A:109:ALA:CB | 0.95 | 1.91 | 23 | 3 |
| 1:A:53:ASP:O | 1:A:57:SER:HB2 | 0.95 | 1.59 | 18 | 24 |
| 1:A:185:LEU:CD2 | 1:A:191:PRO:O | 0.95 | 2.14 | 7 | 12 |
| 1:A:41:GLN:HE22 | 1:A:90:VAL:HG21 | 0.95 | 1.16 | 4 | 10 |
| 1:A:127:GLN:HB3 | 1:A:204:MET:O | 0.95 | 1.61 | 18 | 24 |
| 1:A:197:PRO:CB | 1:A:200:ALA:HB3 | 0.95 | 1.90 | 11 | 24 |
| 1:A:48:ILE:HD11 | 1:A:71:LEU:HD21 | 0.95 | 1.38 | 3 | 10 |
| 1:A:29:ASN:N | 1:A:69:TYR:O | 0.95 | 2.00 | 13 | 24 |
| 1:A:66:GLU:CA | 1:A:99:GLY:O | 0.95 | 2.14 | 3 | 24 |
| 1:A:178:PHE:CD1 | 1:A:193:GLN:HB2 | 0.95 | 1.97 | 5 | 24 |
| 1:A:91:VAL:HB | 1:A:109:ALA:HB2 | 0.95 | 1.37 | 4 | 21 |
| 1:A:30:ILE:HG22 | 1:A:32:ILE:CD1 | 0.94 | 1.93 | 13 | 16 |
| 1:A:44:LEU:HD22 | 1:A:92:LEU:CD2 | 0.94 | 1.93 | 12 | 24 |
| 1:A:160:LEU:HD13 | 1:A:194:VAL:CG1 | 0.93 | 1.93 | 4 | 24 |
| 1:A:185:LEU:O | 1:A:185:LEU:HD12 | 0.92 | 1.63 | 16 | 8 |
| 1:A:67:ALA:HB3 | 1:A:68:PRO:HD3 | 0.92 | 1.39 | 21 | 24 |
| 1:A:179:PHE:O | 1:A:192:THR:N | 0.92 | 2.01 | 15 | 24 |
| 1:A:176:ILE:HG23 | 1:A:178:PHE:CE1 | 0.92 | 1.99 | 4 | 10 |
| 1:A:133:LEU:N | 1:A:134:PRO:HD3 | 0.92 | 1.80 | 22 | 24 |
| 1:A:30:ILE:CG2 | 1:A:32:ILE:HD11 | 0.91 | 1.96 | 6 | 15 |
| 1:A:68:PRO:O | 1:A:99:GLY:CA | 0.91 | 2.17 | 3 | 24 |
| 1:A:136:VAL:CG2 | 1:A:195:LEU:HD22 | 0.91 | 1.95 | 7 | 2 |
| 1:A:65:ARG:CA | 1:A:98:ALA:O | 0.91 | 2.19 | 20 | 24 |
| 1:A:15:THR:HG22 | 1:A:18:ALA:HB3 | 0.91 | 1.39 | 1 | 8 |
| 1:A:196:VAL:CG1 | 1:A:201:ILE:HG21 | 0.90 | 1.97 | 12 | 24 |
| 1:A:196:VAL:HG13 | 1:A:201:ILE:CG2 | 0.90 | 1.96 | 15 | 3 |
| 1:A:87:THR:CA | 1:A:114:GLN:HB2 | 0.90 | 1.95 | 11 | 22 |
| 1:A:175:VAL:HG11 | 1:A:201:ILE:HD11 | 0.90 | 1.42 | 3 | 24 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:HG23 | 0.90 | 1.43 | 18 | 15 |
| 1:A:175:VAL:HG11 | 1:A:201:ILE:CD1 | 0.89 | 1.97 | 3 | 21 |
| 1:A:175:VAL:CG1 | 1:A:196:VAL:HG12 | 0.88 | 1.97 | 20 | 3 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:32:ILE:HG13 | 1:A:73:ILE:HG23 | 0.88 | 1.43 | 10 | 22 |
| 1:A:91:VAL:CB | 1:A:109:ALA:HB2 | 0.88 | 1.99 | 12 | 24 |
| 1:A:44:LEU:HD23 | 1:A:110:PHE:CZ | 0.88 | 2.04 | 13 | 19 |
| 1:A:73:ILE:HA | 1:A:93:LYS:O | 0.88 | 1.68 | 8 | 24 |
| 1:A:185:LEU:HD13 | 1:A:185:LEU:C | 0.88 | 1.89 | 21 | 2 |
| 1:A:42:LYS:O | 1:A:46:ASN:CB | 0.87 | 2.23 | 8 | 24 |
| 1:A:176:ILE:HG21 | 1:A:193:GLN:OE1 | 0.87 | 1.69 | 20 | 24 |
| 1:A:71:LEU:HA | 1:A:96:GLN:HB2 | 0.87 | 1.46 | 19 | 24 |
| 1:A:87:THR:HA | 1:A:114:GLN:HB2 | 0.87 | 1.43 | 24 | 16 |
| 1:A:184:LEU:HD23 | 1:A:184:LEU:O | 0.87 | 1.68 | 16 | 6 |
| 1:A:178:PHE:CE2 | 1:A:193:GLN:HB3 | 0.87 | 2.05 | 21 | 24 |
| 1:A:34:LEU:HD13 | 1:A:35:PRO:HD2 | 0.86 | 1.44 | 5 | 8 |
| 1:A:82:ILE:O | 1:A:85:ARG:O | 0.86 | 1.93 | 5 | 24 |
| 1:A:6:TYR:CG | 1:A:45:GLU:HG2 | 0.86 | 2.05 | 3 | 24 |
| 1:A:41:GLN:HB3 | 1:A:44:LEU:HD11 | 0.86 | 1.47 | 13 | 13 |
| 1:A:25:ASP:HB2 | 1:A:28:TYR:CE1 | 0.85 | 2.07 | 11 | 24 |
| 1:A:178:PHE:CD1 | 1:A:193:GLN:CB | 0.85 | 2.59 | 17 | 21 |
| 1:A:180:ASN:HA | 1:A:191:PRO:HA | 0.85 | 1.46 | 23 | 24 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:HG12 | 0.85 | 1.46 | 3 | 22 |
| 1:A:15:THR:HG23 | 1:A:18:ALA:HB3 | 0.85 | 1.48 | 13 | 9 |
| 1:A:23:MET:O | 1:A:30:ILE:HD12 | 0.85 | 1.72 | 21 | 19 |
| 1:A:77:THR:CB | 1:A:90:VAL:HG12 | 0.85 | 2.02 | 12 | 23 |
| 1:A:178:PHE:CD2 | 1:A:193:GLN:HB2 | 0.84 | 2.07 | 4 | 7 |
| 1:A:44:LEU:O | 1:A:48:ILE:N | 0.84 | 2.10 | 4 | 24 |
| 1:A:136:VAL:HG23 | 1:A:195:LEU:CD2 | 0.84 | 2.00 | 7 | 2 |
| 1:A:69:TYR:HA | 1:A:99:GLY:N | 0.84 | 1.87 | 23 | 24 |
| 1:A:124:THR:HA | 1:A:206:ALA:CB | 0.84 | 2.02 | 11 | 24 |
| 1:A:47:TYR:O | 1:A:51:THR:N | 0.84 | 2.11 | 6 | 24 |
| 1:A:66:GLU:N | 1:A:99:GLY:O | 0.84 | 2.11 | 3 | 13 |
| 1:A:185:LEU:HD11 | 1:A:191:PRO:O | 0.84 | 1.71 | 16 | 13 |
| 1:A:161:ASP:OD1 | 1:A:194:VAL:HA | 0.84 | 1.73 | 6 | 23 |
| 1:A:200:ALA:O | 1:A:204:MET:HB2 | 0.83 | 1.72 | 9 | 22 |
| 1:A:41:GLN:OE1 | 1:A:44:LEU:HD21 | 0.83 | 1.73 | 24 | 6 |
| 1:A:179:PHE:CE1 | 1:A:192:THR:HG22 | 0.83 | 2.08 | 13 | 17 |
| 1:A:116:TYR:O | 1:A:117:ARG:HG3 | 0.83 | 1.73 | 23 | 12 |
| 1:A:196:VAL:HG22 | 1:A:197:PRO:HD2 | 0.83 | 1.50 | 13 | 3 |
| 1:A:34:LEU:HD23 | 1:A:44:LEU:HD11 | 0.83 | 1.49 | 11 | 8 |
| 1:A:133:LEU:HD23 | 1:A:196:VAL:CG2 | 0.83 | 2.01 | 23 | 16 |
| 1:A:185:LEU:O | 1:A:185:LEU:CD1 | 0.83 | 2.25 | 21 | 13 |
| 1:A:185:LEU:HD12 | 1:A:190:GLY:N | 0.83 | 1.89 | 3 | 6 |
| 1:A:10:LEU:O | 1:A:21:ILE:HG13 | 0.83 | 1.74 | 4 | 24 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:55:PHE:CD2 | 1:A:96:GLN:NE2 | 0.83 | 2.45 | 19 | 8 |
| 1:A:161:ASP:OD2 | 1:A:195:LEU:N | 0.83 | 2.11 | 7 | 23 |
| 1:A:144:LEU:HD23 | 1:A:152:VAL:HG21 | 0.83 | 1.49 | 18 | 8 |
| 1:A:77:THR:HB | 1:A:90:VAL:HG12 | 0.83 | 1.50 | 9 | 22 |
| 1:A:56:LEU:HD22 | 1:A:69:TYR:CD2 | 0.82 | 2.10 | 8 | 24 |
| 1:A:83:PRO:HB2 | 1:A:84:PRO:CD | 0.82 | 2.04 | 21 | 24 |
| 1:A:71:LEU:HD11 | 1:A:94:VAL:HG23 | 0.82 | 1.50 | 17 | 23 |
| 1:A:34:LEU:HD21 | 1:A:41:GLN:OE1 | 0.82 | 1.75 | 19 | 4 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:CG2 | 0.82 | 2.04 | 19 | 14 |
| 1:A:184:LEU:CD1 | 1:A:192:THR:HG23 | 0.82 | 2.04 | 12 | 17 |
| 1:A:156:PRO:HB3 | 1:A:160:LEU:CD1 | 0.82 | 2.05 | 8 | 23 |
| 1:A:73:ILE:HB | 1:A:94:VAL:HB | 0.82 | 1.49 | 10 | 21 |
| 1:A:30:ILE:HG23 | 1:A:32:ILE:CD1 | 0.82 | 2.05 | 12 | 2 |
| 1:A:91:VAL:HG23 | 1:A:108:LYS:C | 0.82 | 1.95 | 16 | 10 |
| 1:A:73:ILE:HD11 | 1:A:92:LEU:HD22 | 0.81 | 1.50 | 12 | 18 |
| 1:A:93:LYS:HA | 1:A:107:TYR:CE1 | 0.81 | 2.10 | 10 | 23 |
| 1:A:178:PHE:CD2 | 1:A:193:GLN:CB | 0.81 | 2.63 | 4 | 23 |
| 1:A:127:GLN:O | 1:A:130:THR:HG23 | 0.81 | 1.75 | 23 | 20 |
| 1:A:136:VAL:HG21 | 1:A:176:ILE:HD12 | 0.81 | 1.52 | 7 | 4 |
| 1:A:49:ALA:O | 1:A:53:ASP:HB2 | 0.81 | 1.76 | 1 | 24 |
| 1:A:92:LEU:HD11 | 1:A:110:PHE:CZ | 0.81 | 2.10 | 7 | 18 |
| 1:A:176:ILE:CG2 | 1:A:193:GLN:OE1 | 0.81 | 2.28 | 20 | 24 |
| 1:A:161:ASP:O | 1:A:184:LEU:HD21 | 0.81 | 1.76 | 21 | 17 |
| 1:A:66:GLU:N | 1:A:99:GLY:C | 0.81 | 2.34 | 3 | 24 |
| 1:A:87:THR:N | 1:A:114:GLN:HG3 | 0.81 | 1.90 | 22 | 2 |
| 1:A:66:GLU:HB2 | 1:A:100:GLY:CA | 0.80 | 2.06 | 12 | 24 |
| 1:A:185:LEU:HD11 | 1:A:191:PRO:N | 0.80 | 1.92 | 1 | 8 |
| 1:A:28:TYR:HB3 | 1:A:69:TYR:CD2 | 0.80 | 2.10 | 20 | 24 |
| 1:A:63:THR:O | 1:A:65:ARG:N | 0.80 | 2.13 | 4 | 24 |
| 1:A:161:ASP:CB | 1:A:193:GLN:NE2 | 0.80 | 2.45 | 15 | 24 |
| 1:A:87:THR:CA | 1:A:114:GLN:HG3 | 0.80 | 2.05 | 2 | 1 |
| 1:A:156:PRO:CB | 1:A:160:LEU:HD12 | 0.80 | 2.07 | 13 | 13 |
| 1:A:71:LEU:HD13 | 1:A:96:GLN:NE2 | 0.80 | 1.92 | 21 | 20 |
| 1:A:32:ILE:HD11 | 1:A:71:LEU:HD23 | 0.80 | 1.53 | 8 | 9 |
| 1:A:112:TRP:HA | 1:A:119:PRO:HA | 0.80 | 1.52 | 16 | 24 |
| 1:A:185:LEU:HD12 | 1:A:190:GLY:CA | 0.80 | 2.07 | 17 | 6 |
| 1:A:48:ILE:CD1 | 1:A:71:LEU:HD21 | 0.80 | 2.07 | 3 | 10 |
| 1:A:112:TRP:CZ2 | 1:A:117:ARG:HA | 0.80 | 2.12 | 2 | 24 |
| 1:A:32:ILE:CG1 | 1:A:73:ILE:HG23 | 0.79 | 2.07 | 3 | 21 |
| 1:A:78:TYR:CE1 | 1:A:91:VAL:HG13 | 0.79 | 2.12 | 12 | 10 |
| 1:A:152:VAL:HG12 | 1:A:153:SER:H | 0.79 | 1.37 | 16 | 24 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:44:LEU:HD23 | 1:A:110:PHE:CE1 | 0.79 | 2.13 | 12 | 17 |
| 1:A:64:PRO:O | 1:A:101:THR:HB | 0.79 | 1.76 | 14 | 24 |
| 1:A:41:GLN:OE1 | 1:A:90:VAL:HG21 | 0.79 | 1.78 | 10 | 6 |
| 1:A:155:ALA:CB | 1:A:158:ALA:HB3 | 0.78 | 2.06 | 3 | 24 |
| 1:A:110:PHE:N | 1:A:110:PHE:CD1 | 0.78 | 2.51 | 1 | 24 |
| 1:A:28:TYR:CB | 1:A:69:TYR:CD2 | 0.78 | 2.67 | 13 | 24 |
| 1:A:120:ILE:CG2 | 1:A:124:THR:HG23 | 0.78 | 2.08 | 19 | 10 |
| 1:A:176:ILE:N | 1:A:195:LEU:HD12 | 0.78 | 1.93 | 9 | 24 |
| 1:A:75:SER:CB | 1:A:92:LEU:HD23 | 0.78 | 2.09 | 3 | 4 |
| 1:A:120:ILE:HG23 | 1:A:124:THR:HG23 | 0.78 | 1.56 | 18 | 13 |
| 1:A:127:GLN:HG3 | 1:A:204:MET:O | 0.78 | 1.77 | 5 | 24 |
| 1:A:28:TYR:CD2 | 1:A:56:LEU:HD13 | 0.78 | 2.13 | 13 | 24 |
| 1:A:32:ILE:N | 1:A:32:ILE:HD12 | 0.77 | 1.94 | 24 | 12 |
| 1:A:56:LEU:HD22 | 1:A:69:TYR:HD2 | 0.77 | 1.38 | 3 | 24 |
| 1:A:178:PHE:CD2 | 1:A:193:GLN:HB3 | 0.77 | 2.14 | 19 | 23 |
| 1:A:79:GLN:NE2 | 1:A:114:GLN:OE1 | 0.77 | 2.17 | 22 | 8 |
| 1:A:144:LEU:HD23 | 1:A:152:VAL:CG2 | 0.77 | 2.08 | 18 | 17 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:HB | 0.77 | 1.55 | 18 | 2 |
| 1:A:48:ILE:HD13 | 1:A:73:ILE:HD13 | 0.77 | 1.56 | 4 | 12 |
| 1:A:138:PRO:O | 1:A:142:GLY:N | 0.77 | 2.18 | 10 | 24 |
| 1:A:41:GLN:HE21 | 1:A:44:LEU:HD21 | 0.77 | 1.40 | 6 | 10 |
| 1:A:31:ASN:C | 1:A:32:ILE:HD12 | 0.77 | 2.00 | 20 | 14 |
| 1:A:161:ASP:HB2 | 1:A:193:GLN:NE2 | 0.77 | 1.95 | 17 | 24 |
| 1:A:91:VAL:HG12 | 1:A:109:ALA:CB | 0.77 | 2.10 | 12 | 9 |
| 1:A:91:VAL:HG23 | 1:A:109:ALA:N | 0.77 | 1.95 | 18 | 10 |
| 1:A:124:THR:HA | 1:A:206:ALA:HB2 | 0.76 | 1.54 | 18 | 18 |
| 1:A:133:LEU:HD22 | 1:A:194:VAL:CG2 | 0.76 | 2.10 | 18 | 20 |
| 1:A:127:GLN:HA | 1:A:206:ALA:C | 0.76 | 2.00 | 3 | 24 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:CD | 0.76 | 2.59 | 19 | 23 |
| 1:A:10:LEU:O | 1:A:21:ILE:CG1 | 0.76 | 2.34 | 8 | 24 |
| 1:A:44:LEU:HB3 | 1:A:110:PHE:CZ | 0.76 | 2.16 | 20 | 21 |
| 1:A:185:LEU:HD11 | 1:A:190:GLY:C | 0.76 | 2.00 | 21 | 1 |
| 1:A:32:ILE:HG13 | 1:A:73:ILE:CG2 | 0.76 | 2.10 | 22 | 19 |
| 1:A:113:ASP:N | 1:A:118:LYS:O | 0.76 | 2.14 | 11 | 11 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:HG23 | 0.76 | 1.57 | 21 | 17 |
| 1:A:52:ARG:HB3 | 1:A:71:LEU:HD22 | 0.76 | 1.56 | 19 | 18 |
| 1:A:91:VAL:HG11 | 1:A:169:ALA:HB2 | 0.76 | 1.57 | 21 | 8 |
| 1:A:44:LEU:O | 1:A:47:TYR:HB3 | 0.75 | 1.81 | 12 | 24 |
| 1:A:159:GLY:N | 1:A:184:LEU:HD12 | 0.75 | 1.96 | 19 | 5 |
| 1:A:41:GLN:O | 1:A:44:LEU:HG | 0.75 | 1.81 | 17 | 21 |
| 1:A:202:ASP:HA | 1:A:205:LEU:HD22 | 0.75 | 1.56 | 5 | 23 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:184:LEU:C | 1:A:185:LEU:HD12 | 0.75 | 2.02 | 10 | 6 |
| 1:A:185:LEU:C | 1:A:189:ALA:HB3 | 0.75 | 2.02 | 19 | 11 |
| 1:A:34:LEU:HD11 | 1:A:41:GLN:HG3 | 0.75 | 1.59 | 19 | 9 |
| 1:A:34:LEU:CD1 | 1:A:41:GLN:HG3 | 0.75 | 2.11 | 19 | 16 |
| 1:A:184:LEU:O | 1:A:184:LEU:HD22 | 0.75 | 1.80 | 21 | 16 |
| 1:A:92:LEU:HD12 | 1:A:108:LYS:O | 0.74 | 1.81 | 7 | 8 |
| 1:A:196:VAL:HG12 | 1:A:201:ILE:CG2 | 0.74 | 2.11 | 18 | 21 |
| 1:A:19:CYS:O | 1:A:33:SER:HA | 0.74 | 1.82 | 2 | 24 |
| 1:A:77:THR:OG1 | 1:A:90:VAL:HG12 | 0.74 | 1.82 | 3 | 15 |
| 1:A:44:LEU:HB3 | 1:A:92:LEU:HD21 | 0.74 | 1.58 | 19 | 2 |
| 1:A:82:ILE:O | 1:A:83:PRO:C | 0.74 | 2.26 | 20 | 24 |
| 1:A:176:ILE:HG12 | 1:A:193:GLN:CG | 0.74 | 2.13 | 15 | 24 |
| 1:A:89:ALA:HB2 | 1:A:170:VAL:HG13 | 0.74 | 1.60 | 5 | 1 |
| 1:A:43:SER:O | 1:A:47:TYR:HB2 | 0.74 | 1.82 | 7 | 24 |
| 1:A:63:THR:O | 1:A:65:ARG:HG3 | 0.74 | 1.83 | 13 | 12 |
| 1:A:80:SER:N | 1:A:87:THR:O | 0.74 | 2.21 | 7 | 24 |
| 1:A:139:ILE:O | 1:A:143:GLU:N | 0.74 | 2.20 | 17 | 24 |
| 1:A:41:GLN:C | 1:A:43:SER:N | 0.74 | 2.40 | 15 | 24 |
| 1:A:170:VAL:HG23 | 1:A:174:GLY:O | 0.74 | 1.83 | 7 | 21 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:HB3 | 0.74 | 2.18 | 17 | 3 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:HB3 | 0.74 | 2.18 | 11 | 18 |
| 1:A:184:LEU:HD12 | 1:A:192:THR:HG23 | 0.74 | 1.60 | 12 | 6 |
| 1:A:133:LEU:N | 1:A:134:PRO:CD | 0.73 | 2.51 | 22 | 24 |
| 1:A:55:PHE:CD1 | 1:A:104:THR:HG21 | 0.73 | 2.18 | 24 | 22 |
| 1:A:152:VAL:HG12 | 1:A:153:SER:N | 0.73 | 1.98 | 21 | 18 |
| 1:A:95:TYR:CD1 | 1:A:105:THR:HG22 | 0.73 | 2.18 | 8 | 2 |
| 1:A:32:ILE:CG2 | 1:A:73:ILE:HG23 | 0.73 | 2.14 | 18 | 15 |
| 1:A:44:LEU:HB3 | 1:A:110:PHE:HZ | 0.73 | 1.43 | 17 | 21 |
| 1:A:124:THR:CA | 1:A:206:ALA:HB2 | 0.73 | 2.14 | 11 | 24 |
| 1:A:27:ALA:O | 1:A:69:TYR:CD1 | 0.72 | 2.42 | 20 | 24 |
| 1:A:92:LEU:O | 1:A:107:TYR:CD1 | 0.72 | 2.41 | 17 | 22 |
| 1:A:78:TYR:CE1 | 1:A:91:VAL:HG12 | 0.72 | 2.19 | 9 | 11 |
| 1:A:6:TYR:CG | 1:A:7:CYS:N | 0.72 | 2.55 | 6 | 24 |
| 1:A:33:SER:O | 1:A:34:LEU:HD22 | 0.72 | 1.84 | 24 | 10 |
| 1:A:68:PRO:O | 1:A:99:GLY:HA2 | 0.72 | 1.84 | 3 | 7 |
| 1:A:6:TYR:OH | 1:A:34:LEU:HD23 | 0.72 | 1.84 | 15 | 10 |
| 1:A:97:ASN:OD1 | 1:A:100:GLY:C | 0.72 | 2.27 | 17 | 5 |
| 1:A:144:LEU:HD23 | 1:A:152:VAL:HG23 | 0.72 | 1.61 | 6 | 16 |
| 1:A:53:ASP:O | 1:A:57:SER:CB | 0.72 | 2.37 | 24 | 24 |
| 1:A:107:TYR:HB2 | 1:A:191:PRO:HG3 | 0.72 | 1.60 | 21 | 9 |
| 1:A:44:LEU:HB3 | 1:A:92:LEU:HD11 | 0.72 | 1.59 | 5 | 18 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:185:LEU:CD1 | 1:A:190:GLY:C | 0.72 | 2.58 | 20 | 8 |
| 1:A:21:ILE:CG2 | 1:A:32:ILE:HB | 0.72 | 2.15 | 6 | 22 |
| 1:A:185:LEU:HD12 | 1:A:190:GLY:C | 0.72 | 2.05 | 8 | 10 |
| 1:A:31:ASN:O | 1:A:32:ILE:HD12 | 0.72 | 1.85 | 23 | 4 |
| 1:A:90:VAL:HG23 | 1:A:110:PHE:CE1 | 0.71 | 2.20 | 11 | 22 |
| 1:A:133:LEU:HD13 | 1:A:194:VAL:HG21 | 0.71 | 1.62 | 13 | 15 |
| 1:A:160:LEU:CD1 | 1:A:194:VAL:HG12 | 0.71 | 2.15 | 4 | 21 |
| 1:A:185:LEU:O | 1:A:190:GLY:O | 0.71 | 2.08 | 4 | 15 |
| 1:A:178:PHE:CG | 1:A:193:GLN:CB | 0.71 | 2.73 | 7 | 23 |
| 1:A:197:PRO:HB3 | 1:A:200:ALA:HB3 | 0.71 | 1.61 | 18 | 24 |
| 1:A:68:PRO:C | 1:A:99:GLY:HA2 | 0.71 | 2.05 | 5 | 24 |
| 1:A:73:ILE:HB | 1:A:94:VAL:CG2 | 0.71 | 2.14 | 6 | 23 |
| 1:A:54:LYS:O | 1:A:57:SER:HB3 | 0.71 | 1.86 | 8 | 16 |
| 1:A:159:GLY:CA | 1:A:184:LEU:HD12 | 0.71 | 2.16 | 11 | 5 |
| 1:A:102:HIS:CE1 | 1:A:104:THR:OG1 | 0.70 | 2.43 | 2 | 14 |
| 1:A:196:VAL:HG12 | 1:A:197:PRO:HD2 | 0.70 | 1.63 | 16 | 21 |
| 1:A:178:PHE:CD1 | 1:A:178:PHE:N | 0.70 | 2.59 | 16 | 5 |
| 1:A:34:LEU:HD11 | 1:A:44:LEU:HD21 | 0.70 | 1.63 | 15 | 3 |
| 1:A:73:ILE:HB | 1:A:94:VAL:CB | 0.70 | 2.16 | 3 | 21 |
| 1:A:133:LEU:HD13 | 1:A:194:VAL:CG2 | 0.70 | 2.16 | 13 | 17 |
| 1:A:41:GLN:NE2 | 1:A:90:VAL:HG21 | 0.70 | 2.02 | 17 | 15 |
| 1:A:78:TYR:HE1 | 1:A:91:VAL:HG12 | 0.70 | 1.47 | 15 | 7 |
| 1:A:52:ARG:HA | 1:A:96:GLN:HE22 | 0.70 | 1.46 | 6 | 5 |
| 1:A:44:LEU:CB | 1:A:92:LEU:HD21 | 0.70 | 2.17 | 19 | 8 |
| 1:A:34:LEU:HD13 | 1:A:35:PRO:CD | 0.70 | 2.17 | 5 | 6 |
| 1:A:6:TYR:CD2 | 1:A:7:CYS:N | 0.70 | 2.60 | 19 | 24 |
| 1:A:41:GLN:NE2 | 1:A:44:LEU:HD21 | 0.70 | 2.00 | 9 | 7 |
| 1:A:133:LEU:HB2 | 1:A:194:VAL:HB | 0.70 | 1.63 | 4 | 24 |
| 1:A:34:LEU:HD21 | 1:A:44:LEU:HD21 | 0.69 | 1.64 | 5 | 2 |
| 1:A:88:GLN:HB3 | 1:A:114:GLN:HG2 | 0.69 | 1.64 | 3 | 2 |
| 1:A:41:GLN:CD | 1:A:44:LEU:HD21 | 0.69 | 2.08 | 3 | 4 |
| 1:A:75:SER:HB3 | 1:A:92:LEU:HD23 | 0.69 | 1.63 | 3 | 6 |
| 1:A:95:TYR:CG | 1:A:105:THR:HG22 | 0.69 | 2.22 | 1 | 2 |
| 1:A:136:VAL:HG11 | 1:A:162:PRO:CD | 0.69 | 2.17 | 7 | 23 |
| 1:A:161:ASP:OD2 | 1:A:195:LEU:HB2 | 0.69 | 1.87 | 17 | 23 |
| 1:A:116:TYR:O | 1:A:117:ARG:HG2 | 0.69 | 1.86 | 12 | 2 |
| 1:A:93:LYS:CA | 1:A:107:TYR:CE1 | 0.69 | 2.75 | 18 | 23 |
| 1:A:96:GLN:O | 1:A:104:THR:O | 0.69 | 2.11 | 18 | 24 |
| 1:A:134:PRO:O | 1:A:138:PRO:HD3 | 0.69 | 1.88 | 5 | 24 |
| 1:A:184:LEU:O | 1:A:184:LEU:CD2 | 0.69 | 2.40 | 7 | 18 |
| 1:A:42:LYS:HE3 | 1:A:42:LYS:HA | 0.69 | 1.63 | 8 | 7 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:90:VAL:CG2 | 1:A:110:PHE:CE1 | 0.69 | 2.76 | 5 | 3 |
| 1:A:68:PRO:HD2 | 1:A:99:GLY:HA2 | 0.69 | 1.64 | 6 | 23 |
| 1:A:124:THR:HB | 1:A:206:ALA:HB2 | 0.69 | 1.63 | 24 | 6 |
| 1:A:197:PRO:HB2 | 1:A:201:ILE:HG23 | 0.69 | 1.64 | 18 | 6 |
| 1:A:13:THR:N | 1:A:20:GLN:O | 0.68 | 2.24 | 2 | 24 |
| 1:A:71:LEU:HD11 | 1:A:94:VAL:CG2 | 0.68 | 2.16 | 17 | 23 |
| 1:A:176:ILE:HD13 | 1:A:193:GLN:OE1 | 0.68 | 1.88 | 19 | 24 |
| 1:A:184:LEU:O | 1:A:184:LEU:HD23 | 0.68 | 1.87 | 7 | 1 |
| 1:A:68:PRO:O | 1:A:99:GLY:N | 0.68 | 2.26 | 20 | 24 |
| 1:A:161:ASP:OD2 | 1:A:176:ILE:CG1 | 0.68 | 2.41 | 6 | 24 |
| 1:A:41:GLN:O | 1:A:43:SER:N | 0.68 | 2.26 | 15 | 24 |
| 1:A:181:PRO:CG | 1:A:192:THR:OG1 | 0.68 | 2.42 | 1 | 24 |
| 1:A:92:LEU:HD11 | 1:A:110:PHE:HZ | 0.68 | 1.48 | 13 | 19 |
| 1:A:55:PHE:CD2 | 1:A:96:GLN:HG2 | 0.68 | 2.24 | 6 | 2 |
| 1:A:42:LYS:HE3 | 1:A:42:LYS:CA | 0.68 | 2.17 | 2 | 13 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:CD | 0.68 | 2.67 | 6 | 14 |
| 1:A:30:ILE:HG22 | 1:A:32:ILE:HD12 | 0.68 | 1.65 | 16 | 4 |
| 1:A:86:GLY:C | 1:A:114:GLN:HB2 | 0.68 | 2.08 | 16 | 9 |
| 1:A:124:THR:CB | 1:A:206:ALA:HB2 | 0.68 | 2.19 | 9 | 24 |
| 1:A:116:TYR:C | 1:A:117:ARG:HG3 | 0.68 | 2.10 | 14 | 2 |
| 1:A:175:VAL:O | 1:A:196:VAL:HG23 | 0.68 | 1.89 | 21 | 20 |
| 1:A:184:LEU:HD13 | 1:A:192:THR:HG23 | 0.67 | 1.65 | 1 | 10 |
| 1:A:44:LEU:HD12 | 1:A:45:GLU:H | 0.67 | 1.50 | 15 | 10 |
| 1:A:122:TYR:HB3 | 1:A:126:TRP:CD1 | 0.67 | 2.23 | 5 | 24 |
| 1:A:133:LEU:N | 1:A:133:LEU:HD12 | 0.67 | 2.05 | 19 | 24 |
| 1:A:157:ASN:O | 1:A:184:LEU:HB2 | 0.67 | 1.88 | 7 | 22 |
| 1:A:184:LEU:HB3 | 1:A:192:THR:OG1 | 0.67 | 1.89 | 15 | 23 |
| 1:A:59:ALA:HA | 1:A:63:THR:OG1 | 0.67 | 1.89 | 3 | 24 |
| 1:A:96:GLN:O | 1:A:104:THR:CB | 0.67 | 2.42 | 6 | 19 |
| 1:A:28:TYR:HA | 1:A:69:TYR:H | 0.67 | 1.50 | 17 | 24 |
| 1:A:65:ARG:O | 1:A:66:GLU:C | 0.67 | 2.32 | 3 | 24 |
| 1:A:116:TYR:O | 1:A:118:LYS:HG3 | 0.67 | 1.89 | 2 | 6 |
| 1:A:141:GLN:HA | 1:A:144:LEU:HB2 | 0.67 | 1.66 | 21 | 24 |
| 1:A:184:LEU:O | 1:A:185:LEU:HB2 | 0.67 | 1.88 | 17 | 7 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:CB | 0.66 | 2.79 | 1 | 21 |
| 1:A:88:GLN:HB2 | 1:A:114:GLN:OE1 | 0.66 | 1.89 | 22 | 1 |
| 1:A:176:ILE:HG23 | 1:A:193:GLN:HG3 | 0.66 | 1.67 | 11 | 24 |
| 1:A:201:ILE:HA | 1:A:204:MET:HB3 | 0.66 | 1.68 | 7 | 24 |
| 1:A:28:TYR:C | 1:A:28:TYR:HD1 | 0.66 | 1.92 | 5 | 24 |
| 1:A:48:ILE:CG1 | 1:A:71:LEU:HD21 | 0.66 | 2.20 | 7 | 23 |
| 1:A:91:VAL:CG1 | 1:A:109:ALA:HB2 | 0.66 | 2.20 | 12 | 9 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:178:PHE:CE2 | 1:A:193:GLN:CB | 0.66 | 2.78 | 21 | 17 |
| 1:A:66:GLU:HB2 | 1:A:99:GLY:O | 0.66 | 1.87 | 3 | 2 |
| 1:A:75:SER:HA | 1:A:92:LEU:HA | 0.66 | 1.67 | 3 | 21 |
| 1:A:69:TYR:HB3 | 1:A:98:ALA:HA | 0.66 | 1.68 | 17 | 24 |
| 1:A:21:ILE:C | 1:A:21:ILE:HD13 | 0.66 | 2.12 | 14 | 22 |
| 1:A:48:ILE:HD13 | 1:A:73:ILE:CD1 | 0.66 | 2.21 | 2 | 12 |
| 1:A:48:ILE:CD1 | 1:A:73:ILE:HD13 | 0.66 | 2.21 | 4 | 6 |
| 1:A:77:THR:HG23 | 1:A:90:VAL:CG1 | 0.66 | 2.21 | 23 | 1 |
| 1:A:66:GLU:H | 1:A:99:GLY:C | 0.65 | 1.93 | 3 | 3 |
| 1:A:137:PHE:CE1 | 1:A:160:LEU:HA | 0.65 | 2.25 | 15 | 24 |
| 1:A:170:VAL:HA | 1:A:175:VAL:HA | 0.65 | 1.68 | 4 | 21 |
| 1:A:15:THR:HG21 | 1:A:20:GLN:NE2 | 0.65 | 2.05 | 23 | 9 |
| 1:A:111:ASP:OD2 | 1:A:170:VAL:HG11 | 0.65 | 1.91 | 10 | 5 |
| 1:A:176:ILE:HG13 | 1:A:195:LEU:HB2 | 0.65 | 1.67 | 21 | 24 |
| 1:A:86:GLY:O | 1:A:114:GLN:HB2 | 0.65 | 1.92 | 20 | 7 |
| 1:A:133:LEU:O | 1:A:195:LEU:N | 0.65 | 2.30 | 13 | 24 |
| 1:A:144:LEU:O | 1:A:147:GLN:N | 0.65 | 2.30 | 15 | 24 |
| 1:A:185:LEU:CB | 1:A:191:PRO:O | 0.65 | 2.45 | 17 | 8 |
| 1:A:90:VAL:O | 1:A:109:ALA:HA | 0.65 | 1.92 | 23 | 9 |
| 1:A:125:LEU:HD13 | 1:A:125:LEU:C | 0.65 | 2.12 | 18 | 24 |
| 1:A:141:GLN:O | 1:A:145:SER:N | 0.65 | 2.27 | 10 | 24 |
| 1:A:156:PRO:O | 1:A:184:LEU:CD1 | 0.65 | 2.44 | 17 | 15 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:CG2 | 0.65 | 2.20 | 21 | 17 |
| 1:A:42:LYS:HA | 1:A:42:LYS:CE | 0.65 | 2.22 | 24 | 12 |
| 1:A:28:TYR:HA | 1:A:69:TYR:N | 0.65 | 2.06 | 23 | 24 |
| 1:A:29:ASN:O | 1:A:70:GLU:HA | 0.65 | 1.91 | 19 | 24 |
| 1:A:82:ILE:O | 1:A:83:PRO:O | 0.65 | 2.15 | 20 | 24 |
| 1:A:160:LEU:HD22 | 1:A:161:ASP:OD1 | 0.65 | 1.92 | 17 | 14 |
| 1:A:176:ILE:HA | 1:A:195:LEU:HA | 0.65 | 1.68 | 5 | 24 |
| 1:A:80:SER:HB2 | 1:A:87:THR:N | 0.65 | 2.05 | 2 | 3 |
| 1:A:28:TYR:C | 1:A:28:TYR:CD1 | 0.64 | 2.70 | 15 | 21 |
| 1:A:141:GLN:NE2 | 1:A:154:ILE:HD12 | 0.64 | 2.07 | 18 | 20 |
| 1:A:21:ILE:HG23 | 1:A:21:ILE:O | 0.64 | 1.91 | 23 | 24 |
| 1:A:179:PHE:CD1 | 1:A:192:THR:HG22 | 0.64 | 2.26 | 13 | 1 |
| 1:A:6:TYR:CD1 | 1:A:45:GLU:HG2 | 0.64 | 2.26 | 13 | 16 |
| 1:A:152:VAL:CG1 | 1:A:153:SER:H | 0.64 | 2.03 | 6 | 24 |
| 1:A:178:PHE:CA | 1:A:192:THR:O | 0.64 | 2.46 | 19 | 24 |
| 1:A:156:PRO:HA | 1:A:160:LEU:HB2 | 0.64 | 1.69 | 14 | 15 |
| 1:A:32:ILE:CG1 | 1:A:73:ILE:CG2 | 0.64 | 2.75 | 13 | 22 |
| 1:A:184:LEU:O | 1:A:185:LEU:HB3 | 0.64 | 1.92 | 21 | 1 |
| 1:A:87:THR:N | 1:A:114:GLN:HB2 | 0.64 | 2.06 | 3 | 7 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:30:ILE:HG22 | 1:A:32:ILE:HD13 | 0.64 | 1.70 | 23 | 2 |
| 1:A:12:GLY:HA2 | 1:A:20:GLN:O | 0.64 | 1.92 | 12 | 24 |
| 1:A:56:LEU:HB3 | 1:A:69:TYR:CE2 | 0.64 | 2.28 | 12 | 24 |
| 1:A:113:ASP:O | 1:A:113:ASP:OD1 | 0.64 | 2.15 | 1 | 14 |
| 1:A:66:GLU:CB | 1:A:99:GLY:C | 0.64 | 2.65 | 24 | 23 |
| 1:A:91:VAL:HB | 1:A:109:ALA:CB | 0.64 | 2.21 | 9 | 9 |
| 1:A:88:GLN:OE1 | 1:A:112:TRP:HB3 | 0.64 | 1.93 | 6 | 20 |
| 1:A:28:TYR:CD1 | 1:A:28:TYR:C | 0.64 | 2.71 | 7 | 3 |
| 1:A:42:LYS:CE | 1:A:42:LYS:HA | 0.63 | 2.23 | 1 | 7 |
| 1:A:63:THR:HG22 | 1:A:64:PRO:HD2 | 0.63 | 1.68 | 17 | 23 |
| 1:A:136:VAL:CG1 | 1:A:161:ASP:HA | 0.63 | 2.24 | 17 | 22 |
| 1:A:134:PRO:HA | 1:A:160:LEU:HD21 | 0.63 | 1.71 | 7 | 19 |
| 1:A:26:PRO:O | 1:A:27:ALA:HB2 | 0.63 | 1.93 | 15 | 24 |
| 1:A:15:THR:HG21 | 1:A:18:ALA:HB3 | 0.63 | 1.70 | 15 | 12 |
| 1:A:21:ILE:HG22 | 1:A:32:ILE:O | 0.63 | 1.93 | 6 | 13 |
| 1:A:32:ILE:HD11 | 1:A:71:LEU:CD2 | 0.63 | 2.24 | 20 | 5 |
| 1:A:52:ARG:O | 1:A:56:LEU:HG | 0.63 | 1.93 | 8 | 24 |
| 1:A:41:GLN:OE1 | 1:A:41:GLN:N | 0.63 | 2.31 | 8 | 11 |
| 1:A:133:LEU:CD2 | 1:A:196:VAL:HG22 | 0.63 | 2.15 | 23 | 1 |
| 1:A:176:ILE:CA | 1:A:195:LEU:HD12 | 0.63 | 2.23 | 9 | 24 |
| 1:A:185:LEU:HD21 | 1:A:190:GLY:CA | 0.63 | 2.23 | 21 | 1 |
| 1:A:137:PHE:N | 1:A:138:PRO:HD2 | 0.63 | 2.09 | 22 | 24 |
| 1:A:71:LEU:HD13 | 1:A:96:GLN:HE21 | 0.63 | 1.51 | 11 | 13 |
| 1:A:136:VAL:HG11 | 1:A:176:ILE:HD11 | 0.63 | 1.70 | 6 | 14 |
| 1:A:205:LEU:O | 1:A:206:ALA:HB3 | 0.63 | 1.94 | 18 | 24 |
| 1:A:161:ASP:H | 1:A:184:LEU:HD11 | 0.63 | 1.54 | 3 | 11 |
| 1:A:185:LEU:CD1 | 1:A:190:GLY:N | 0.63 | 2.62 | 3 | 8 |
| 1:A:34:LEU:HD11 | 1:A:41:GLN:OE1 | 0.63 | 1.94 | 24 | 2 |
| 1:A:181:PRO:HG3 | 1:A:192:THR:CB | 0.62 | 2.23 | 22 | 20 |
| 1:A:44:LEU:CG | 1:A:92:LEU:HD21 | 0.62 | 2.24 | 11 | 9 |
| 1:A:156:PRO:HA | 1:A:160:LEU:H | 0.62 | 1.54 | 19 | 6 |
| 1:A:89:ALA:CB | 1:A:170:VAL:HG13 | 0.62 | 2.23 | 5 | 1 |
| 1:A:178:PHE:HA | 1:A:192:THR:O | 0.62 | 1.94 | 19 | 23 |
| 1:A:91:VAL:CA | 1:A:109:ALA:HB2 | 0.62 | 2.24 | 12 | 3 |
| 1:A:107:TYR:HB2 | 1:A:191:PRO:CG | 0.62 | 2.24 | 21 | 18 |
| 1:A:135:VAL:C | 1:A:195:LEU:HD23 | 0.62 | 2.15 | 8 | 23 |
| 1:A:87:THR:HA | 1:A:114:GLN:HG3 | 0.62 | 1.69 | 2 | 1 |
| 1:A:113:ASP:CB | 1:A:118:LYS:O | 0.62 | 2.48 | 24 | 6 |
| 1:A:156:PRO:O | 1:A:184:LEU:HD13 | 0.62 | 1.95 | 11 | 5 |
| 1:A:30:ILE:HG23 | 1:A:32:ILE:HD12 | 0.62 | 1.71 | 12 | 1 |
| 1:A:136:VAL:C | 1:A:138:PRO:HD2 | 0.62 | 2.15 | 7 | 24 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:145:SER:O | 1:A:149:GLY:CA | 0.62 | 2.47 | 4 | 24 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:CB | 0.62 | 2.82 | 5 | 18 |
| 1:A:6:TYR:CD2 | 1:A:45:GLU:CB | 0.62 | 2.83 | 6 | 16 |
| 1:A:79:GLN:HA | 1:A:87:THR:O | 0.62 | 1.95 | 7 | 23 |
| 1:A:97:ASN:OD1 | 1:A:100:GLY:CA | 0.62 | 2.48 | 6 | 3 |
| 1:A:183:GLU:HA | 1:A:186:PRO:HD3 | 0.62 | 1.72 | 11 | 20 |
| 1:A:197:PRO:O | 1:A:201:ILE:HG23 | 0.62 | 1.94 | 13 | 3 |
| 1:A:47:TYR:O | 1:A:50:GLN:HB2 | 0.62 | 1.95 | 15 | 24 |
| 1:A:30:ILE:HG23 | 1:A:71:LEU:HD23 | 0.62 | 1.71 | 22 | 9 |
| 1:A:177:PHE:O | 1:A:193:GLN:HA | 0.62 | 1.95 | 13 | 24 |
| 1:A:176:ILE:HG23 | 1:A:178:PHE:CZ | 0.62 | 2.30 | 4 | 2 |
| 1:A:175:VAL:C | 1:A:195:LEU:HD12 | 0.61 | 2.15 | 9 | 24 |
| 1:A:179:PHE:O | 1:A:191:PRO:CA | 0.61 | 2.48 | 10 | 10 |
| 1:A:77:THR:OG1 | 1:A:90:VAL:CG1 | 0.61 | 2.49 | 3 | 1 |
| 1:A:88:GLN:CB | 1:A:114:GLN:HG2 | 0.61 | 2.25 | 11 | 2 |
| 1:A:124:THR:O | 1:A:205:LEU:HB3 | 0.61 | 1.94 | 18 | 8 |
| 1:A:41:GLN:CD | 1:A:41:GLN:N | 0.61 | 2.54 | 22 | 15 |
| 1:A:34:LEU:HD23 | 1:A:44:LEU:CD1 | 0.61 | 2.24 | 11 | 6 |
| 1:A:112:TRP:C | 1:A:112:TRP:CD1 | 0.61 | 2.74 | 5 | 18 |
| 1:A:175:VAL:HG11 | 1:A:201:ILE:CG1 | 0.61 | 2.26 | 1 | 4 |
| 1:A:30:ILE:CG2 | 1:A:71:LEU:HD23 | 0.61 | 2.25 | 21 | 9 |
| 1:A:91:VAL:HG12 | 1:A:109:ALA:HB2 | 0.61 | 1.73 | 2 | 5 |
| 1:A:176:ILE:CG2 | 1:A:178:PHE:CE1 | 0.61 | 2.82 | 4 | 3 |
| 1:A:134:PRO:O | 1:A:138:PRO:CD | 0.61 | 2.49 | 5 | 24 |
| 1:A:21:ILE:HG23 | 1:A:32:ILE:HD13 | 0.61 | 1.70 | 24 | 9 |
| 1:A:179:PHE:HE1 | 1:A:192:THR:HG22 | 0.61 | 1.55 | 15 | 18 |
| 1:A:78:TYR:HE1 | 1:A:91:VAL:HG13 | 0.61 | 1.55 | 12 | 7 |
| 1:A:31:ASN:C | 1:A:32:ILE:CD1 | 0.61 | 2.69 | 17 | 3 |
| 1:A:77:THR:HG23 | 1:A:90:VAL:HG12 | 0.61 | 1.71 | 23 | 1 |
| 1:A:83:PRO:HB2 | 1:A:84:PRO:HD3 | 0.61 | 1.73 | 21 | 24 |
| 1:A:176:ILE:HG13 | 1:A:195:LEU:CB | 0.61 | 2.26 | 20 | 24 |
| 1:A:87:THR:C | 1:A:114:GLN:HG3 | 0.61 | 2.17 | 21 | 9 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:C | 0.61 | 2.55 | 24 | 5 |
| 1:A:185:LEU:C | 1:A:185:LEU:HD12 | 0.61 | 2.15 | 9 | 1 |
| 1:A:181:PRO:HG3 | 1:A:192:THR:HB | 0.60 | 1.73 | 22 | 15 |
| 1:A:185:LEU:CD2 | 1:A:189:ALA:HB3 | 0.60 | 2.26 | 21 | 1 |
| 1:A:89:ALA:HA | 1:A:110:PHE:O | 0.60 | 1.97 | 1 | 18 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:NE2 | 0.60 | 2.69 | 6 | 10 |
| 1:A:97:ASN:HB2 | 1:A:102:HIS:O | 0.60 | 1.97 | 7 | 12 |
| 1:A:6:TYR:CG | 1:A:45:GLU:CG | 0.60 | 2.84 | 23 | 24 |
| 1:A:53:ASP:O | 1:A:57:SER:N | 0.60 | 2.34 | 8 | 24 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:84:PRO:O | 1:A:85:ARG:O | 0.60 | 2.18 | 16 | 24 |
| 1:A:116:TYR:O | 1:A:117:ARG:CG | 0.60 | 2.49 | 4 | 11 |
| 1:A:124:THR:HA | 1:A:206:ALA:CA | 0.60 | 2.26 | 6 | 24 |
| 1:A:91:VAL:CG2 | 1:A:91:VAL:O | 0.60 | 2.49 | 12 | 3 |
| 1:A:136:VAL:CG1 | 1:A:162:PRO:HD3 | 0.60 | 2.27 | 22 | 24 |
| 1:A:66:GLU:CB | 1:A:100:GLY:HA3 | 0.60 | 2.25 | 18 | 23 |
| 1:A:112:TRP:CE3 | 1:A:119:PRO:HD3 | 0.60 | 2.32 | 6 | 18 |
| 1:A:56:LEU:HD22 | 1:A:69:TYR:HB2 | 0.60 | 1.74 | 24 | 21 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:CG1 | 0.60 | 2.18 | 13 | 2 |
| 1:A:10:LEU:O | 1:A:21:ILE:HG12 | 0.60 | 1.97 | 16 | 24 |
| 1:A:47:TYR:CD2 | 1:A:51:THR:OG1 | 0.60 | 2.53 | 19 | 24 |
| 1:A:41:GLN:HA | 1:A:41:GLN:NE2 | 0.60 | 2.12 | 1 | 3 |
| 1:A:121:THR:O | 1:A:125:LEU:N | 0.60 | 2.35 | 10 | 24 |
| 1:A:44:LEU:HD23 | 1:A:110:PHE:HE1 | 0.60 | 1.51 | 12 | 1 |
| 1:A:157:ASN:HD22 | 1:A:192:THR:HG21 | 0.60 | 1.57 | 15 | 10 |
| 1:A:77:THR:CG2 | 1:A:90:VAL:HG12 | 0.60 | 2.26 | 23 | 2 |
| 1:A:131:ASP:HB3 | 1:A:132:PRO:CD | 0.60 | 2.25 | 22 | 3 |
| 1:A:47:TYR:CE2 | 1:A:51:THR:HG23 | 0.60 | 2.32 | 19 | 1 |
| 1:A:40:ASP:O | 1:A:43:SER:N | 0.59 | 2.34 | 8 | 16 |
| 1:A:185:LEU:CD1 | 1:A:191:PRO:N | 0.59 | 2.65 | 23 | 8 |
| 1:A:161:ASP:HB3 | 1:A:176:ILE:HD11 | 0.59 | 1.74 | 22 | 10 |
| 1:A:95:TYR:CD1 | 1:A:95:TYR:C | 0.59 | 2.73 | 15 | 24 |
| 1:A:145:SER:HA | 1:A:150:GLN:C | 0.59 | 2.18 | 3 | 18 |
| 1:A:48:ILE:HG13 | 1:A:71:LEU:HD21 | 0.59 | 1.74 | 21 | 12 |
| 1:A:90:VAL:O | 1:A:110:PHE:CE1 | 0.59 | 2.54 | 3 | 17 |
| 1:A:41:GLN:N | 1:A:41:GLN:OE1 | 0.59 | 2.35 | 22 | 4 |
| 1:A:42:LYS:HZ1 | 1:A:46:ASN:HA | 0.59 | 1.57 | 5 | 4 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:CG1 | 0.59 | 2.26 | 6 | 21 |
| 1:A:41:GLN:O | 1:A:44:LEU:N | 0.59 | 2.36 | 15 | 20 |
| 1:A:101:THR:O | 1:A:103:PRO:HD3 | 0.59 | 1.98 | 12 | 24 |
| 1:A:112:TRP:NE1 | 1:A:113:ASP:O | 0.59 | 2.36 | 11 | 22 |
| 1:A:136:VAL:HG11 | 1:A:162:PRO:HD3 | 0.59 | 1.74 | 7 | 15 |
| 1:A:185:LEU:CD1 | 1:A:191:PRO:O | 0.59 | 2.51 | 18 | 11 |
| 1:A:94:VAL:O | 1:A:94:VAL:HG13 | 0.59 | 1.97 | 20 | 23 |
| 1:A:161:ASP:HB3 | 1:A:193:GLN:NE2 | 0.59 | 2.10 | 12 | 24 |
| 1:A:131:ASP:CB | 1:A:132:PRO:CD | 0.59 | 2.80 | 22 | 4 |
| 1:A:78:TYR:O | 1:A:79:GLN:HG2 | 0.59 | 1.97 | 7 | 5 |
| 1:A:196:VAL:HG13 | 1:A:201:ILE:HG12 | 0.59 | 1.74 | 13 | 3 |
| 1:A:73:ILE:HB | 1:A:94:VAL:HG23 | 0.59 | 1.75 | 21 | 17 |
| 1:A:6:TYR:CE1 | 1:A:44:LEU:HD11 | 0.59 | 2.32 | 10 | 8 |
| 1:A:70:GLU:O | 1:A:96:GLN:HB2 | 0.59 | 1.97 | 6 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:179:PHE:N | 1:A:192:THR:O | 0.59 | 2.33 | 6 | 24 |
| 1:A:42:LYS:CE | 1:A:46:ASN:HB2 | 0.59 | 2.28 | 2 | 24 |
| 1:A:127:GLN:HA | 1:A:206:ALA:OXT | 0.59 | 1.97 | 5 | 24 |
| 1:A:178:PHE:CD2 | 1:A:192:THR:C | 0.59 | 2.76 | 17 | 7 |
| 1:A:184:LEU:C | 1:A:185:LEU:CG | 0.59 | 2.71 | 13 | 2 |
| 1:A:91:VAL:HG13 | 1:A:91:VAL:O | 0.59 | 1.96 | 7 | 8 |
| 1:A:185:LEU:HD11 | 1:A:192:THR:N | 0.59 | 2.13 | 7 | 7 |
| 1:A:97:ASN:OD1 | 1:A:100:GLY:N | 0.59 | 2.36 | 17 | 3 |
| 1:A:68:PRO:O | 1:A:69:TYR:HD1 | 0.58 | 1.81 | 8 | 24 |
| 1:A:112:TRP:CZ2 | 1:A:117:ARG:CA | 0.58 | 2.86 | 21 | 24 |
| 1:A:113:ASP:OD2 | 1:A:116:TYR:HB2 | 0.58 | 1.98 | 1 | 4 |
| 1:A:48:ILE:O | 1:A:49:ALA:C | 0.58 | 2.41 | 14 | 24 |
| 1:A:112:TRP:CD1 | 1:A:113:ASP:O | 0.58 | 2.56 | 16 | 20 |
| 1:A:178:PHE:N | 1:A:178:PHE:HD1 | 0.58 | 1.96 | 4 | 3 |
| 1:A:91:VAL:O | 1:A:91:VAL:CG1 | 0.58 | 2.51 | 23 | 2 |
| 1:A:31:ASN:C | 1:A:32:ILE:HD13 | 0.58 | 2.19 | 17 | 1 |
| 1:A:127:GLN:H | 1:A:127:GLN:NE2 | 0.58 | 1.96 | 2 | 24 |
| 1:A:136:VAL:HG11 | 1:A:161:ASP:HA | 0.58 | 1.75 | 5 | 22 |
| 1:A:145:SER:HA | 1:A:150:GLN:O | 0.58 | 1.98 | 6 | 18 |
| 1:A:28:TYR:CE1 | 1:A:30:ILE:HD11 | 0.58 | 2.34 | 5 | 12 |
| 1:A:95:TYR:CB | 1:A:105:THR:HG23 | 0.58 | 2.18 | 21 | 3 |
| 1:A:73:ILE:CG1 | 1:A:94:VAL:HG23 | 0.58 | 2.29 | 6 | 1 |
| 1:A:185:LEU:HD22 | 1:A:190:GLY:CA | 0.58 | 2.28 | 10 | 5 |
| 1:A:185:LEU:HD22 | 1:A:190:GLY:C | 0.58 | 2.18 | 19 | 5 |
| 1:A:154:ILE:CG2 | 1:A:159:GLY:HA3 | 0.58 | 2.27 | 14 | 5 |
| 1:A:78:TYR:CD1 | 1:A:78:TYR:N | 0.58 | 2.71 | 23 | 23 |
| 1:A:86:GLY:C | 1:A:114:GLN:HB3 | 0.58 | 2.18 | 23 | 7 |
| 1:A:112:TRP:CZ3 | 1:A:119:PRO:HD3 | 0.58 | 2.33 | 24 | 12 |
| 1:A:196:VAL:CB | 1:A:201:ILE:HG21 | 0.58 | 2.28 | 7 | 18 |
| 1:A:178:PHE:CD2 | 1:A:192:THR:O | 0.58 | 2.56 | 17 | 8 |
| 1:A:122:TYR:HA | 1:A:126:TRP:CD1 | 0.58 | 2.34 | 18 | 7 |
| 1:A:32:ILE:CG2 | 1:A:73:ILE:HD13 | 0.58 | 2.29 | 6 | 2 |
| 1:A:28:TYR:HB2 | 1:A:69:TYR:CD2 | 0.58 | 2.33 | 15 | 24 |
| 1:A:91:VAL:O | 1:A:91:VAL:CG2 | 0.58 | 2.52 | 24 | 7 |
| 1:A:96:GLN:O | 1:A:104:THR:HG22 | 0.58 | 1.99 | 8 | 9 |
| 1:A:135:VAL:HB | 1:A:195:LEU:HD23 | 0.58 | 1.76 | 7 | 12 |
| 1:A:170:VAL:HB | 1:A:175:VAL:HB | 0.58 | 1.75 | 15 | 11 |
| 1:A:201:ILE:HA | 1:A:204:MET:CB | 0.58 | 2.28 | 5 | 18 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:HG3 | 0.58 | 2.33 | 4 | 3 |
| 1:A:140:VAL:O | 1:A:144:LEU:HD13 | 0.58 | 1.98 | 11 | 11 |
| 1:A:22:GLN:HA | 1:A:30:ILE:O | 0.57 | 1.99 | 12 | 12 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:71:LEU:CD1 | 1:A:94:VAL:HG23 | 0.57 | 2.29 | 14 | 11 |
| 1:A:172:ASN:O | 1:A:198:ARG:HG3 | 0.57 | 1.99 | 11 | 17 |
| 1:A:32:ILE:HG12 | 1:A:73:ILE:CG2 | 0.57 | 2.29 | 12 | 8 |
| 1:A:94:VAL:O | 1:A:94:VAL:CG1 | 0.57 | 2.51 | 6 | 2 |
| 1:A:42:LYS:HA | 1:A:42:LYS:HE3 | 0.57 | 1.76 | 24 | 17 |
| 1:A:184:LEU:HD13 | 1:A:193:GLN:H | 0.57 | 1.58 | 24 | 6 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:O | 0.57 | 2.37 | 3 | 1 |
| 1:A:143:GLU:O | 1:A:147:GLN:N | 0.57 | 2.36 | 5 | 6 |
| 1:A:176:ILE:HG23 | 1:A:178:PHE:HE1 | 0.57 | 1.57 | 14 | 10 |
| 1:A:181:PRO:HG3 | 1:A:192:THR:OG1 | 0.57 | 1.99 | 15 | 7 |
| 1:A:54:LYS:CA | 1:A:57:SER:HB2 | 0.57 | 2.30 | 22 | 19 |
| 1:A:185:LEU:HD22 | 1:A:189:ALA:HB3 | 0.57 | 1.76 | 21 | 1 |
| 1:A:152:VAL:CG1 | 1:A:153:SER:N | 0.57 | 2.67 | 1 | 16 |
| 1:A:89:ALA:HB2 | 1:A:170:VAL:CG1 | 0.57 | 2.28 | 5 | 1 |
| 1:A:182:GLY:O | 1:A:183:GLU:HG3 | 0.57 | 1.99 | 13 | 10 |
| 1:A:10:LEU:O | 1:A:11:LYS:HB2 | 0.57 | 1.98 | 24 | 23 |
| 1:A:41:GLN:C | 1:A:43:SER:H | 0.57 | 2.02 | 15 | 23 |
| 1:A:55:PHE:CE1 | 1:A:104:THR:HG21 | 0.57 | 2.35 | 9 | 18 |
| 1:A:161:ASP:OD2 | 1:A:176:ILE:HD11 | 0.57 | 1.99 | 20 | 23 |
| 1:A:27:ALA:O | 1:A:69:TYR:CE1 | 0.57 | 2.58 | 12 | 24 |
| 1:A:93:LYS:HB2 | 1:A:107:TYR:CE1 | 0.57 | 2.35 | 2 | 20 |
| 1:A:44:LEU:HD12 | 1:A:45:GLU:HB3 | 0.57 | 1.75 | 24 | 10 |
| 1:A:185:LEU:CD1 | 1:A:191:PRO:C | 0.57 | 2.73 | 13 | 8 |
| 1:A:29:ASN:ND2 | 1:A:31:ASN:OD1 | 0.57 | 2.38 | 9 | 3 |
| 1:A:73:ILE:CB | 1:A:94:VAL:HG23 | 0.56 | 2.30 | 6 | 1 |
| 1:A:63:THR:HG22 | 1:A:102:HIS:HB2 | 0.56 | 1.76 | 21 | 12 |
| 1:A:90:VAL:O | 1:A:110:PHE:CD1 | 0.56 | 2.58 | 3 | 15 |
| 1:A:101:THR:O | 1:A:103:PRO:CD | 0.56 | 2.53 | 3 | 23 |
| 1:A:111:ASP:CG | 1:A:170:VAL:HG11 | 0.56 | 2.20 | 8 | 5 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:CG | 0.56 | 2.89 | 23 | 22 |
| 1:A:75:SER:HB2 | 1:A:92:LEU:HD23 | 0.56 | 1.76 | 19 | 6 |
| 1:A:42:LYS:CA | 1:A:42:LYS:CE | 0.56 | 2.82 | 8 | 1 |
| 1:A:185:LEU:HG | 1:A:191:PRO:N | 0.56 | 2.15 | 9 | 2 |
| 1:A:178:PHE:CD1 | 1:A:193:GLN:HB3 | 0.56 | 2.31 | 17 | 1 |
| 1:A:175:VAL:O | 1:A:175:VAL:HG22 | 0.56 | 1.99 | 23 | 5 |
| 1:A:91:VAL:HG12 | 1:A:109:ALA:HB1 | 0.56 | 1.77 | 8 | 7 |
| 1:A:102:HIS:CE1 | 1:A:104:THR:HG1 | 0.56 | 2.19 | 18 | 4 |
| 1:A:141:GLN:O | 1:A:144:LEU:N | 0.56 | 2.39 | 24 | 23 |
| 1:A:161:ASP:CB | 1:A:193:GLN:CD | 0.56 | 2.74 | 15 | 24 |
| 1:A:185:LEU:HD13 | 1:A:189:ALA:CB | 0.56 | 2.30 | 17 | 4 |
| 1:A:175:VAL:CG1 | 1:A:196:VAL:HB | 0.56 | 2.31 | 18 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:34:LEU:CD2 | 1:A:44:LEU:HD11 | 0.56 | 2.27 | 11 | 2 |
| 1:A:52:ARG:CB | 1:A:71:LEU:HD22 | 0.56 | 2.30 | 19 | 7 |
| 1:A:66:GLU:H | 1:A:101:THR:H | 0.56 | 1.42 | 18 | 24 |
| 1:A:88:GLN:OE1 | 1:A:112:TRP:CD1 | 0.56 | 2.58 | 8 | 13 |
| 1:A:129:ASP:HB2 | 1:A:204:MET:HG3 | 0.56 | 1.76 | 10 | 5 |
| 1:A:55:PHE:CE1 | 1:A:104:THR:CG2 | 0.56 | 2.89 | 10 | 15 |
| 1:A:63:THR:HG21 | 1:A:102:HIS:CD2 | 0.56 | 2.36 | 18 | 2 |
| 1:A:94:VAL:O | 1:A:94:VAL:HG12 | 0.56 | 2.00 | 6 | 1 |
| 1:A:30:ILE:CG2 | 1:A:32:ILE:CD1 | 0.56 | 2.84 | 3 | 4 |
| 1:A:113:ASP:HB3 | 1:A:118:LYS:O | 0.55 | 2.02 | 8 | 5 |
| 1:A:34:LEU:HD21 | 1:A:44:LEU:HD13 | 0.55 | 1.78 | 13 | 2 |
| 1:A:133:LEU:HD13 | 1:A:194:VAL:HB | 0.55 | 1.76 | 18 | 4 |
| 1:A:95:TYR:HB2 | 1:A:105:THR:HG22 | 0.55 | 1.78 | 8 | 2 |
| 1:A:185:LEU:HB3 | 1:A:191:PRO:O | 0.55 | 2.00 | 24 | 7 |
| 1:A:71:LEU:HG | 1:A:73:ILE:CG2 | 0.55 | 2.31 | 20 | 5 |
| 1:A:55:PHE:HD2 | 1:A:96:GLN:NE2 | 0.55 | 1.99 | 10 | 7 |
| 1:A:93:LYS:HB2 | 1:A:107:TYR:CZ | 0.55 | 2.36 | 15 | 18 |
| 1:A:159:GLY:O | 1:A:160:LEU:C | 0.55 | 2.44 | 4 | 9 |
| 1:A:156:PRO:CA | 1:A:160:LEU:HB2 | 0.55 | 2.31 | 19 | 16 |
| 1:A:34:LEU:CD1 | 1:A:35:PRO:HD2 | 0.55 | 2.28 | 5 | 2 |
| 1:A:124:THR:CA | 1:A:206:ALA:CB | 0.55 | 2.79 | 23 | 2 |
| 1:A:185:LEU:HD11 | 1:A:191:PRO:CA | 0.55 | 2.32 | 1 | 5 |
| 1:A:48:ILE:HD13 | 1:A:73:ILE:HD12 | 0.55 | 1.79 | 22 | 3 |
| 1:A:98:ALA:HB3 | 1:A:102:HIS:HB3 | 0.55 | 1.79 | 3 | 17 |
| 1:A:157:ASN:ND2 | 1:A:192:THR:HG21 | 0.55 | 2.17 | 15 | 2 |
| 1:A:41:GLN:O | 1:A:42:LYS:C | 0.55 | 2.45 | 18 | 24 |
| 1:A:145:SER:O | 1:A:149:GLY:HA2 | 0.55 | 2.01 | 19 | 24 |
| 1:A:29:ASN:HB3 | 1:A:70:GLU:CG | 0.55 | 2.32 | 21 | 2 |
| 1:A:144:LEU:HD22 | 1:A:154:ILE:HD11 | 0.55 | 1.79 | 15 | 6 |
| 1:A:44:LEU:O | 1:A:47:TYR:CB | 0.55 | 2.55 | 12 | 24 |
| 1:A:196:VAL:CG1 | 1:A:197:PRO:HD2 | 0.55 | 2.32 | 18 | 3 |
| 1:A:95:TYR:C | 1:A:95:TYR:HD1 | 0.55 | 2.05 | 15 | 1 |
| 1:A:95:TYR:CB | 1:A:105:THR:HG22 | 0.55 | 2.32 | 8 | 2 |
| 1:A:141:GLN:HE22 | 1:A:154:ILE:HD12 | 0.55 | 1.60 | 7 | 19 |
| 1:A:90:VAL:HG23 | 1:A:110:PHE:HE1 | 0.55 | 1.61 | 16 | 15 |
| 1:A:95:TYR:HD1 | 1:A:96:GLN:N | 0.55 | 2.00 | 15 | 3 |
| 1:A:83:PRO:HB2 | 1:A:84:PRO:HD2 | 0.55 | 1.79 | 14 | 24 |
| 1:A:44:LEU:CD2 | 1:A:110:PHE:CZ | 0.55 | 2.88 | 13 | 6 |
| 1:A:175:VAL:HG13 | 1:A:196:VAL:CB | 0.55 | 2.32 | 11 | 17 |
| 1:A:197:PRO:O | 1:A:201:ILE:CG1 | 0.55 | 2.55 | 15 | 21 |
| 1:A:185:LEU:CD1 | 1:A:189:ALA:CB | 0.55 | 2.84 | 24 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:97:ASN:HD22 | 1:A:97:ASN:C | 0.55 | 2.05 | 24 | 8 |
| 1:A:134:PRO:O | 1:A:137:PHE:HB2 | 0.55 | 2.02 | 13 | 22 |
| 1:A:194:VAL:HG23 | 1:A:194:VAL:O | 0.55 | 2.01 | 17 | 21 |
| 1:A:6:TYR:CD2 | 1:A:45:GLU:CG | 0.54 | 2.90 | 24 | 21 |
| 1:A:6:TYR:CE2 | 1:A:45:GLU:CB | 0.54 | 2.90 | 23 | 24 |
| 1:A:52:ARG:HD3 | 1:A:53:ASP:N | 0.54 | 2.17 | 12 | 6 |
| 1:A:93:LYS:HG3 | 1:A:107:TYR:CZ | 0.54 | 2.37 | 5 | 4 |
| 1:A:122:TYR:HB3 | 1:A:126:TRP:NE1 | 0.54 | 2.17 | 8 | 24 |
| 1:A:156:PRO:HA | 1:A:160:LEU:N | 0.54 | 2.17 | 19 | 21 |
| 1:A:181:PRO:HG2 | 1:A:192:THR:OG1 | 0.54 | 2.02 | 6 | 11 |
| 1:A:66:GLU:HB2 | 1:A:101:THR:N | 0.54 | 2.17 | 7 | 7 |
| 1:A:6:TYR:CE1 | 1:A:41:GLN:HB3 | 0.54 | 2.38 | 6 | 20 |
| 1:A:42:LYS:CE | 1:A:42:LYS:CA | 0.54 | 2.84 | 24 | 19 |
| 1:A:136:VAL:HB | 1:A:195:LEU:HB2 | 0.54 | 1.77 | 10 | 20 |
| 1:A:34:LEU:HD21 | 1:A:41:GLN:CG | 0.54 | 2.32 | 18 | 2 |
| 1:A:112:TRP:CD1 | 1:A:112:TRP:C | 0.54 | 2.80 | 22 | 6 |
| 1:A:170:VAL:O | 1:A:170:VAL:HG13 | 0.54 | 2.02 | 9 | 5 |
| 1:A:34:LEU:HD12 | 1:A:41:GLN:HG3 | 0.54 | 1.78 | 12 | 3 |
| 1:A:78:TYR:C | 1:A:79:GLN:HG2 | 0.54 | 2.21 | 17 | 9 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:OE1 | 0.54 | 2.61 | 4 | 4 |
| 1:A:46:ASN:O | 1:A:50:GLN:HG2 | 0.54 | 2.03 | 10 | 24 |
| 1:A:131:ASP:HB3 | 1:A:132:PRO:HD2 | 0.54 | 1.78 | 22 | 7 |
| 1:A:157:ASN:C | 1:A:184:LEU:HB2 | 0.54 | 2.23 | 21 | 4 |
| 1:A:30:ILE:CG2 | 1:A:32:ILE:HD13 | 0.54 | 2.32 | 20 | 2 |
| 1:A:161:ASP:HB3 | 1:A:193:GLN:CD | 0.54 | 2.23 | 1 | 22 |
| 1:A:175:VAL:O | 1:A:196:VAL:N | 0.54 | 2.34 | 22 | 17 |
| 1:A:197:PRO:HD2 | 1:A:201:ILE:CG2 | 0.54 | 2.32 | 1 | 18 |
| 1:A:65:ARG:CB | 1:A:99:GLY:HA3 | 0.54 | 2.32 | 3 | 1 |
| 1:A:185:LEU:CD1 | 1:A:189:ALA:HB3 | 0.54 | 2.33 | 6 | 4 |
| 1:A:69:TYR:CA | 1:A:99:GLY:H | 0.54 | 2.04 | 19 | 6 |
| 1:A:6:TYR:HE1 | 1:A:41:GLN:HB3 | 0.54 | 1.62 | 14 | 15 |
| 1:A:52:ARG:HA | 1:A:96:GLN:NE2 | 0.54 | 2.17 | 6 | 9 |
| 1:A:65:ARG:HB3 | 1:A:99:GLY:HA3 | 0.54 | 1.78 | 3 | 1 |
| 1:A:80:SER:HB3 | 1:A:87:THR:N | 0.54 | 2.17 | 8 | 8 |
| 1:A:3:PRO:O | 1:A:4:LYS:HG2 | 0.54 | 2.03 | 5 | 12 |
| 1:A:28:TYR:CB | 1:A:69:TYR:CG | 0.54 | 2.90 | 23 | 24 |
| 1:A:67:ALA:HB3 | 1:A:68:PRO:CD | 0.54 | 2.27 | 5 | 14 |
| 1:A:136:VAL:HG21 | 1:A:176:ILE:CD1 | 0.54 | 2.33 | 17 | 19 |
| 1:A:88:GLN:HG3 | 1:A:112:TRP:CD1 | 0.54 | 2.38 | 15 | 2 |
| 1:A:111:ASP:OD2 | 1:A:125:LEU:HD23 | 0.54 | 2.03 | 9 | 1 |
| 1:A:32:ILE:CB | 1:A:73:ILE:HG23 | 0.54 | 2.33 | 2 | 13 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:110:PHE:N | 1:A:110:PHE:HD1 | 0.54 | 2.00 | 1 | 1 |
| 1:A:113:ASP:OD1 | 1:A:118:LYS:N | 0.54 | 2.41 | 16 | 9 |
| 1:A:161:ASP:HB2 | 1:A:193:GLN:O | 0.54 | 2.03 | 14 | 21 |
| 1:A:55:PHE:CG | 1:A:104:THR:HG21 | 0.54 | 2.38 | 15 | 12 |
| 1:A:28:TYR:HB3 | 1:A:69:TYR:CG | 0.54 | 2.38 | 10 | 24 |
| 1:A:42:LYS:CD | 1:A:45:GLU:OE2 | 0.54 | 2.56 | 5 | 8 |
| 1:A:34:LEU:CG | 1:A:41:GLN:HG3 | 0.53 | 2.33 | 4 | 10 |
| 1:A:90:VAL:O | 1:A:90:VAL:HG23 | 0.53 | 2.04 | 23 | 11 |
| 1:A:126:TRP:O | 1:A:206:ALA:CA | 0.53 | 2.56 | 18 | 24 |
| 1:A:131:ASP:CB | 1:A:132:PRO:HD2 | 0.53 | 2.33 | 22 | 22 |
| 1:A:91:VAL:O | 1:A:91:VAL:HG22 | 0.53 | 2.04 | 1 | 1 |
| 1:A:64:PRO:O | 1:A:102:HIS:N | 0.53 | 2.42 | 4 | 4 |
| 1:A:113:ASP:CG | 1:A:116:TYR:HB2 | 0.53 | 2.22 | 22 | 3 |
| 1:A:6:TYR:CE2 | 1:A:45:GLU:HB3 | 0.53 | 2.39 | 20 | 6 |
| 1:A:181:PRO:HD3 | 1:A:192:THR:H | 0.53 | 1.63 | 23 | 14 |
| 1:A:175:VAL:O | 1:A:175:VAL:CG2 | 0.53 | 2.57 | 23 | 2 |
| 1:A:144:LEU:CD2 | 1:A:152:VAL:HG21 | 0.53 | 2.28 | 18 | 3 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:HG2 | 0.53 | 2.04 | 18 | 1 |
| 1:A:175:VAL:CG2 | 1:A:177:PHE:CE1 | 0.53 | 2.92 | 1 | 18 |
| 1:A:202:ASP:O | 1:A:205:LEU:HB2 | 0.53 | 2.03 | 14 | 24 |
| 1:A:71:LEU:HG | 1:A:73:ILE:HG22 | 0.53 | 1.79 | 17 | 10 |
| 1:A:29:ASN:HB3 | 1:A:70:GLU:HG3 | 0.53 | 1.79 | 2 | 2 |
| 1:A:41:GLN:NE2 | 1:A:41:GLN:N | 0.53 | 2.56 | 12 | 4 |
| 1:A:55:PHE:CE1 | 1:A:104:THR:HB | 0.53 | 2.39 | 19 | 1 |
| 1:A:73:ILE:HD11 | 1:A:92:LEU:HD13 | 0.53 | 1.81 | 21 | 2 |
| 1:A:179:PHE:CD1 | 1:A:179:PHE:N | 0.53 | 2.77 | 13 | 1 |
| 1:A:185:LEU:HD12 | 1:A:191:PRO:C | 0.53 | 2.24 | 21 | 1 |
| 1:A:32:ILE:N | 1:A:32:ILE:CD1 | 0.53 | 2.66 | 24 | 8 |
| 1:A:40:ASP:C | 1:A:42:LYS:N | 0.53 | 2.61 | 8 | 20 |
| 1:A:54:LYS:O | 1:A:57:SER:CB | 0.53 | 2.57 | 23 | 23 |
| 1:A:82:ILE:N | 1:A:85:ARG:O | 0.53 | 2.42 | 3 | 24 |
| 1:A:179:PHE:N | 1:A:179:PHE:CD1 | 0.53 | 2.77 | 23 | 21 |
| 1:A:82:ILE:HG23 | 1:A:83:PRO:HD2 | 0.53 | 1.79 | 16 | 12 |
| 1:A:96:GLN:O | 1:A:104:THR:HB | 0.53 | 2.03 | 6 | 7 |
| 1:A:90:VAL:HG23 | 1:A:110:PHE:CD1 | 0.53 | 2.38 | 4 | 4 |
| 1:A:178:PHE:HB3 | 1:A:192:THR:O | 0.53 | 2.03 | 4 | 4 |
| 1:A:185:LEU:HD21 | 1:A:191:PRO:HD2 | 0.53 | 1.81 | 10 | 3 |
| 1:A:29:ASN:OD1 | 1:A:30:ILE:N | 0.53 | 2.42 | 17 | 2 |
| 1:A:97:ASN:CG | 1:A:102:HIS:O | 0.53 | 2.47 | 21 | 2 |
| 1:A:71:LEU:CD1 | 1:A:73:ILE:HG22 | 0.53 | 2.34 | 23 | 1 |
| 1:A:86:GLY:O | 1:A:114:GLN:HB3 | 0.53 | 2.03 | 1 | 6 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:160:LEU:CD2 | 1:A:161:ASP:OD1 | 0.53 | 2.57 | 15 | 17 |
| 1:A:180:ASN:CA | 1:A:191:PRO:HA | 0.53 | 2.30 | 20 | 4 |
| 1:A:184:LEU:O | 1:A:185:LEU:HD23 | 0.53 | 2.03 | 1 | 7 |
| 1:A:41:GLN:OE1 | 1:A:44:LEU:CD2 | 0.53 | 2.53 | 24 | 4 |
| 1:A:34:LEU:HD21 | 1:A:44:LEU:CD2 | 0.53 | 2.34 | 5 | 1 |
| 1:A:87:THR:C | 1:A:114:GLN:CG | 0.53 | 2.77 | 16 | 8 |
| 1:A:113:ASP:CG | 1:A:118:LYS:O | 0.53 | 2.48 | 7 | 3 |
| 1:A:91:VAL:HG23 | 1:A:107:TYR:CE1 | 0.53 | 2.39 | 17 | 1 |
| 1:A:33:SER:HB2 | 1:A:74:THR:HG23 | 0.53 | 1.79 | 14 | 8 |
| 1:A:128:ALA:C | 1:A:130:THR:H | 0.53 | 2.07 | 1 | 24 |
| 1:A:141:GLN:NE2 | 1:A:154:ILE:CD1 | 0.53 | 2.71 | 18 | 23 |
| 1:A:197:PRO:CB | 1:A:201:ILE:HG23 | 0.53 | 2.34 | 18 | 6 |
| 1:A:80:SER:HB2 | 1:A:87:THR:HB | 0.53 | 1.81 | 13 | 10 |
| 1:A:45:GLU:HA | 1:A:48:ILE:HB | 0.53 | 1.80 | 15 | 1 |
| 1:A:32:ILE:HD12 | 1:A:73:ILE:CG2 | 0.53 | 2.34 | 17 | 1 |
| 1:A:179:PHE:CE1 | 1:A:181:PRO:HG3 | 0.53 | 2.39 | 17 | 1 |
| 1:A:32:ILE:HD11 | 1:A:71:LEU:HG | 0.53 | 1.81 | 23 | 1 |
| 1:A:131:ASP:O | 1:A:132:PRO:O | 0.52 | 2.27 | 8 | 18 |
| 1:A:6:TYR:CZ | 1:A:45:GLU:HB3 | 0.52 | 2.38 | 13 | 12 |
| 1:A:55:PHE:CE2 | 1:A:104:THR:HB | 0.52 | 2.38 | 6 | 1 |
| 1:A:124:THR:OG1 | 1:A:206:ALA:HB2 | 0.52 | 2.04 | 8 | 5 |
| 1:A:48:ILE:C | 1:A:50:GLN:N | 0.52 | 2.62 | 13 | 24 |
| 1:A:176:ILE:HG13 | 1:A:195:LEU:CA | 0.52 | 2.34 | 20 | 18 |
| 1:A:68:PRO:C | 1:A:99:GLY:CA | 0.52 | 2.76 | 19 | 8 |
| 1:A:196:VAL:HG13 | 1:A:201:ILE:CG1 | 0.52 | 2.34 | 20 | 3 |
| 1:A:6:TYR:CD2 | 1:A:45:GLU:HB2 | 0.52 | 2.38 | 6 | 4 |
| 1:A:19:CYS:O | 1:A:33:SER:CA | 0.52 | 2.56 | 6 | 10 |
| 1:A:88:GLN:OE1 | 1:A:112:TRP:CG | 0.52 | 2.63 | 10 | 15 |
| 1:A:32:ILE:HG12 | 1:A:73:ILE:HG23 | 0.52 | 1.79 | 3 | 1 |
| 1:A:48:ILE:HD12 | 1:A:51:THR:HB | 0.52 | 1.81 | 11 | 3 |
| 1:A:132:PRO:C | 1:A:134:PRO:HD3 | 0.52 | 2.24 | 10 | 19 |
| 1:A:184:LEU:O | 1:A:185:LEU:CB | 0.52 | 2.58 | 9 | 4 |
| 1:A:185:LEU:CG | 1:A:191:PRO:O | 0.52 | 2.57 | 23 | 5 |
| 1:A:91:VAL:HG23 | 1:A:109:ALA:CA | 0.52 | 2.34 | 16 | 3 |
| 1:A:141:GLN:NE2 | 1:A:154:ILE:CG1 | 0.52 | 2.73 | 15 | 17 |
| 1:A:176:ILE:N | 1:A:195:LEU:CD1 | 0.52 | 2.71 | 9 | 19 |
| 1:A:90:VAL:HG23 | 1:A:90:VAL:O | 0.52 | 2.04 | 4 | 10 |
| 1:A:175:VAL:CG1 | 1:A:201:ILE:HD11 | 0.52 | 2.34 | 5 | 2 |
| 1:A:88:GLN:CG | 1:A:112:TRP:CD1 | 0.52 | 2.92 | 15 | 1 |
| 1:A:75:SER:HB3 | 1:A:92:LEU:CD2 | 0.52 | 2.34 | 23 | 3 |
| 1:A:68:PRO:O | 1:A:99:GLY:HA3 | 0.52 | 2.04 | 3 | 3 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:19:CYS:CB | 1:A:34:LEU:O | 0.52 | 2.58 | 17 | 8 |
| 1:A:73:ILE:HB | 1:A:94:VAL:HG22 | 0.52 | 1.80 | 6 | 1 |
| 1:A:116:TYR:HB2 | 1:A:118:LYS:HD2 | 0.52 | 1.82 | 11 | 1 |
| 1:A:34:LEU:HD11 | 1:A:41:GLN:CG | 0.52 | 2.32 | 19 | 1 |
| 1:A:83:PRO:CB | 1:A:84:PRO:CD | 0.52 | 2.87 | 1 | 20 |
| 1:A:176:ILE:CD1 | 1:A:193:GLN:OE1 | 0.52 | 2.56 | 19 | 17 |
| 1:A:179:PHE:O | 1:A:181:PRO:HD3 | 0.52 | 2.05 | 23 | 16 |
| 1:A:90:VAL:O | 1:A:90:VAL:CG2 | 0.52 | 2.58 | 3 | 8 |
| 1:A:43:SER:CB | 1:A:110:PHE:CE2 | 0.52 | 2.93 | 5 | 2 |
| 1:A:73:ILE:CD1 | 1:A:92:LEU:HD13 | 0.52 | 2.34 | 21 | 1 |
| 1:A:26:PRO:O | 1:A:27:ALA:CB | 0.52 | 2.58 | 18 | 24 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:CA | 0.52 | 2.72 | 2 | 17 |
| 1:A:65:ARG:CB | 1:A:98:ALA:O | 0.52 | 2.58 | 20 | 13 |
| 1:A:97:ASN:HD21 | 1:A:101:THR:N | 0.52 | 2.01 | 24 | 4 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:HB3 | 0.52 | 2.05 | 21 | 10 |
| 1:A:75:SER:HB3 | 1:A:92:LEU:CG | 0.52 | 2.35 | 1 | 5 |
| 1:A:88:GLN:OE1 | 1:A:88:GLN:O | 0.52 | 2.28 | 24 | 8 |
| 1:A:178:PHE:CB | 1:A:192:THR:O | 0.52 | 2.58 | 19 | 12 |
| 1:A:184:LEU:O | 1:A:185:LEU:HD12 | 0.52 | 2.04 | 10 | 2 |
| 1:A:161:ASP:HB3 | 1:A:176:ILE:CD1 | 0.51 | 2.35 | 22 | 7 |
| 1:A:51:THR:O | 1:A:55:PHE:HD2 | 0.51 | 1.88 | 19 | 1 |
| 1:A:137:PHE:CE1 | 1:A:159:GLY:O | 0.51 | 2.63 | 14 | 21 |
| 1:A:44:LEU:HD12 | 1:A:45:GLU:N | 0.51 | 2.20 | 12 | 9 |
| 1:A:51:THR:O | 1:A:55:PHE:CD2 | 0.51 | 2.63 | 19 | 2 |
| 1:A:35:PRO:CG | 1:A:75:SER:O | 0.51 | 2.58 | 14 | 7 |
| 1:A:48:ILE:HG13 | 1:A:71:LEU:CD2 | 0.51 | 2.35 | 8 | 17 |
| 1:A:67:ALA:N | 1:A:99:GLY:O | 0.51 | 2.43 | 22 | 18 |
| 1:A:68:PRO:C | 1:A:69:TYR:CD1 | 0.51 | 2.83 | 3 | 24 |
| 1:A:93:LYS:CB | 1:A:107:TYR:CZ | 0.51 | 2.94 | 5 | 14 |
| 1:A:6:TYR:HD2 | 1:A:10:LEU:HG | 0.51 | 1.65 | 12 | 17 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:HB2 | 0.51 | 2.39 | 21 | 4 |
| 1:A:186:PRO:O | 1:A:190:GLY:N | 0.51 | 2.38 | 17 | 7 |
| 1:A:129:ASP:HB3 | 1:A:204:MET:HG3 | 0.51 | 1.81 | 16 | 5 |
| 1:A:91:VAL:CG1 | 1:A:109:ALA:CB | 0.51 | 2.89 | 8 | 2 |
| 1:A:185:LEU:HD11 | 1:A:189:ALA:C | 0.51 | 2.25 | 9 | 1 |
| 1:A:179:PHE:O | 1:A:191:PRO:CB | 0.51 | 2.58 | 22 | 7 |
| 1:A:87:THR:N | 1:A:114:GLN:CG | 0.51 | 2.70 | 22 | 1 |
| 1:A:79:GLN:HB3 | 1:A:114:GLN:HE22 | 0.51 | 1.65 | 5 | 4 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:HB2 | 0.51 | 2.05 | 14 | 8 |
| 1:A:73:ILE:HG13 | 1:A:94:VAL:HG23 | 0.51 | 1.83 | 6 | 1 |
| 1:A:48:ILE:O | 1:A:51:THR:N | 0.51 | 2.44 | 13 | 24 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:136:VAL:HG11 | 1:A:161:ASP:CB | 0.51 | 2.35 | 6 | 17 |
| 1:A:125:LEU:CD1 | 1:A:126:TRP:CE3 | 0.51 | 2.94 | 5 | 13 |
| 1:A:96:GLN:O | 1:A:104:THR:OG1 | 0.51 | 2.29 | 17 | 6 |
| 1:A:125:LEU:HD12 | 1:A:126:TRP:CE2 | 0.51 | 2.41 | 5 | 23 |
| 1:A:185:LEU:CD1 | 1:A:190:GLY:CA | 0.51 | 2.88 | 8 | 2 |
| 1:A:13:THR:HB | 1:A:20:GLN:HG3 | 0.51 | 1.83 | 7 | 9 |
| 1:A:21:ILE:C | 1:A:21:ILE:CD1 | 0.51 | 2.79 | 14 | 18 |
| 1:A:76:ALA:O | 1:A:78:TYR:CE1 | 0.51 | 2.64 | 3 | 18 |
| 1:A:145:SER:O | 1:A:149:GLY:N | 0.51 | 2.44 | 15 | 6 |
| 1:A:97:ASN:ND2 | 1:A:97:ASN:C | 0.51 | 2.64 | 24 | 4 |
| 1:A:15:THR:CG2 | 1:A:20:GLN:NE2 | 0.51 | 2.74 | 23 | 6 |
| 1:A:35:PRO:HG2 | 1:A:75:SER:O | 0.51 | 2.05 | 14 | 7 |
| 1:A:93:LYS:HA | 1:A:107:TYR:CD1 | 0.51 | 2.41 | 6 | 22 |
| 1:A:141:GLN:CA | 1:A:144:LEU:HB2 | 0.51 | 2.35 | 21 | 23 |
| 1:A:169:ALA:N | 1:A:176:ILE:O | 0.51 | 2.44 | 6 | 8 |
| 1:A:185:LEU:HB3 | 1:A:191:PRO:C | 0.51 | 2.26 | 8 | 5 |
| 1:A:19:CYS:HB3 | 1:A:34:LEU:O | 0.51 | 2.06 | 19 | 9 |
| 1:A:160:LEU:HD22 | 1:A:194:VAL:HA | 0.51 | 1.82 | 7 | 14 |
| 1:A:21:ILE:O | 1:A:21:ILE:CG2 | 0.51 | 2.58 | 8 | 19 |
| 1:A:178:PHE:CD2 | 1:A:191:PRO:O | 0.51 | 2.63 | 7 | 3 |
| 1:A:32:ILE:HG12 | 1:A:48:ILE:HG12 | 0.51 | 1.83 | 20 | 1 |
| 1:A:184:LEU:O | 1:A:185:LEU:CD2 | 0.50 | 2.59 | 1 | 6 |
| 1:A:91:VAL:HG23 | 1:A:91:VAL:O | 0.50 | 2.06 | 2 | 1 |
| 1:A:59:ALA:HB2 | 1:A:98:ALA:HB1 | 0.50 | 1.83 | 3 | 2 |
| 1:A:45:GLU:HG3 | 1:A:46:ASN:N | 0.50 | 2.21 | 10 | 19 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:HA2 | 0.50 | 2.22 | 3 | 8 |
| 1:A:133:LEU:HB2 | 1:A:194:VAL:C | 0.50 | 2.27 | 13 | 10 |
| 1:A:91:VAL:CG1 | 1:A:169:ALA:HB2 | 0.50 | 2.32 | 21 | 2 |
| 1:A:32:ILE:HG12 | 1:A:73:ILE:HD13 | 0.50 | 1.82 | 10 | 1 |
| 1:A:82:ILE:HB | 1:A:86:GLY:HA2 | 0.50 | 1.83 | 23 | 14 |
| 1:A:6:TYR:CE1 | 1:A:41:GLN:CB | 0.50 | 2.94 | 8 | 19 |
| 1:A:112:TRP:HZ2 | 1:A:117:ARG:HA | 0.50 | 1.66 | 7 | 1 |
| 1:A:77:THR:HB | 1:A:90:VAL:CG1 | 0.50 | 2.32 | 15 | 12 |
| 1:A:178:PHE:CG | 1:A:193:GLN:HB3 | 0.50 | 2.40 | 7 | 1 |
| 1:A:67:ALA:CB | 1:A:68:PRO:HD3 | 0.50 | 2.24 | 22 | 15 |
| 1:A:84:PRO:O | 1:A:85:ARG:C | 0.50 | 2.50 | 10 | 24 |
| 1:A:137:PHE:CD1 | 1:A:160:LEU:HA | 0.50 | 2.42 | 17 | 4 |
| 1:A:185:LEU:HD12 | 1:A:185:LEU:N | 0.50 | 2.21 | 14 | 5 |
| 1:A:157:ASN:O | 1:A:183:GLU:C | 0.50 | 2.50 | 3 | 13 |
| 1:A:87:THR:CA | 1:A:114:GLN:CG | 0.50 | 2.89 | 22 | 2 |
| 1:A:42:LYS:O | 1:A:42:LYS:HE3 | 0.50 | 2.06 | 5 | 13 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:184:LEU:O | 1:A:185:LEU:CD1 | 0.50 | 2.59 | 10 | 3 |
| 1:A:133:LEU:HD13 | 1:A:194:VAL:CB | 0.50 | 2.36 | 18 | 3 |
| 1:A:32:ILE:CG2 | 1:A:73:ILE:CG2 | 0.50 | 2.89 | 22 | 10 |
| 1:A:80:SER:HB2 | 1:A:87:THR:CB | 0.50 | 2.37 | 21 | 12 |
| 1:A:97:ASN:CB | 1:A:102:HIS:O | 0.50 | 2.60 | 18 | 17 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:CB | 0.50 | 2.59 | 19 | 10 |
| 1:A:87:THR:HA | 1:A:114:GLN:CB | 0.50 | 2.37 | 4 | 2 |
| 1:A:55:PHE:CE2 | 1:A:104:THR:CG2 | 0.50 | 2.94 | 6 | 2 |
| 1:A:124:THR:HA | 1:A:206:ALA:HA | 0.50 | 1.84 | 17 | 24 |
| 1:A:157:ASN:HA | 1:A:184:LEU:HB2 | 0.50 | 1.84 | 8 | 4 |
| 1:A:34:LEU:HG | 1:A:41:GLN:HG3 | 0.50 | 1.82 | 5 | 2 |
| 1:A:87:THR:CG2 | 1:A:112:TRP:O | 0.50 | 2.60 | 15 | 4 |
| 1:A:6:TYR:CD2 | 1:A:45:GLU:CD | 0.50 | 2.85 | 15 | 5 |
| 1:A:88:GLN:N | 1:A:114:GLN:HG2 | 0.50 | 2.22 | 16 | 4 |
| 1:A:127:GLN:O | 1:A:130:THR:CG2 | 0.50 | 2.58 | 3 | 8 |
| 1:A:32:ILE:HD11 | 1:A:71:LEU:CG | 0.50 | 2.37 | 23 | 2 |
| 1:A:159:GLY:HA2 | 1:A:184:LEU:HD12 | 0.50 | 1.83 | 11 | 2 |
| 1:A:40:ASP:HB2 | 1:A:112:TRP:HZ3 | 0.50 | 1.67 | 15 | 1 |
| 1:A:19:CYS:N | 1:A:34:LEU:O | 0.50 | 2.45 | 21 | 3 |
| 1:A:4:LYS:HE3 | 1:A:8:GLU:CG | 0.50 | 2.37 | 19 | 1 |
| 1:A:34:LEU:HD21 | 1:A:41:GLN:CD | 0.49 | 2.28 | 3 | 2 |
| 1:A:178:PHE:CZ | 1:A:193:GLN:CG | 0.49 | 2.94 | 4 | 6 |
| 1:A:71:LEU:HA | 1:A:96:GLN:CB | 0.49 | 2.36 | 6 | 1 |
| 1:A:97:ASN:ND2 | 1:A:98:ALA:N | 0.49 | 2.59 | 24 | 4 |
| 1:A:6:TYR:CE2 | 1:A:45:GLU:HB2 | 0.49 | 2.42 | 1 | 9 |
| 1:A:133:LEU:HB2 | 1:A:194:VAL:CB | 0.49 | 2.35 | 20 | 14 |
| 1:A:196:VAL:HG22 | 1:A:197:PRO:CD | 0.49 | 2.32 | 13 | 1 |
| 1:A:34:LEU:HD11 | 1:A:44:LEU:CD2 | 0.49 | 2.35 | 15 | 1 |
| 1:A:68:PRO:C | 1:A:69:TYR:HD1 | 0.49 | 2.11 | 19 | 24 |
| 1:A:52:ARG:HA | 1:A:96:GLN:OE1 | 0.49 | 2.07 | 10 | 7 |
| 1:A:117:ARG:O | 1:A:118:LYS:HG2 | 0.49 | 2.07 | 14 | 1 |
| 1:A:179:PHE:CZ | 1:A:181:PRO:HB3 | 0.49 | 2.42 | 17 | 1 |
| 1:A:59:ALA:CA | 1:A:63:THR:OG1 | 0.49 | 2.58 | 3 | 11 |
| 1:A:185:LEU:O | 1:A:186:PRO:O | 0.49 | 2.31 | 7 | 8 |
| 1:A:34:LEU:HD21 | 1:A:41:GLN:HG3 | 0.49 | 1.84 | 2 | 4 |
| 1:A:97:ASN:HD21 | 1:A:100:GLY:HA2 | 0.49 | 1.67 | 3 | 1 |
| 1:A:140:VAL:HG12 | 1:A:154:ILE:HD12 | 0.49 | 1.84 | 17 | 5 |
| 1:A:32:ILE:CD1 | 1:A:32:ILE:N | 0.49 | 2.75 | 17 | 4 |
| 1:A:185:LEU:C | 1:A:185:LEU:CD1 | 0.49 | 2.65 | 21 | 2 |
| 1:A:156:PRO:HA | 1:A:160:LEU:CB | 0.49 | 2.38 | 14 | 5 |
| 1:A:6:TYR:OH | 1:A:34:LEU:CD2 | 0.49 | 2.60 | 15 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:133:LEU:N | 1:A:133:LEU:CD1 | 0.49 | 2.76 | 2 | 17 |
| 1:A:134:PRO:HA | 1:A:160:LEU:CD2 | 0.49 | 2.37 | 4 | 14 |
| 1:A:40:ASP:HB2 | 1:A:112:TRP:CZ3 | 0.49 | 2.43 | 3 | 3 |
| 1:A:74:THR:O | 1:A:92:LEU:HA | 0.49 | 2.07 | 3 | 2 |
| 1:A:77:THR:HG23 | 1:A:88:GLN:OE1 | 0.49 | 2.07 | 3 | 1 |
| 1:A:21:ILE:HG22 | 1:A:32:ILE:HB | 0.49 | 1.85 | 8 | 7 |
| 1:A:89:ALA:CB | 1:A:170:VAL:HG12 | 0.49 | 2.38 | 9 | 1 |
| 1:A:185:LEU:HD11 | 1:A:190:GLY:N | 0.49 | 2.23 | 9 | 1 |
| 1:A:30:ILE:HD13 | 1:A:52:ARG:NH2 | 0.49 | 2.23 | 1 | 1 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:H | 0.49 | 2.06 | 15 | 16 |
| 1:A:161:ASP:HB2 | 1:A:193:GLN:HE21 | 0.49 | 1.65 | 22 | 17 |
| 1:A:15:THR:HG23 | 1:A:18:ALA:CB | 0.49 | 2.35 | 21 | 3 |
| 1:A:43:SER:HB2 | 1:A:110:PHE:CE2 | 0.49 | 2.43 | 5 | 1 |
| 1:A:113:ASP:OD1 | 1:A:113:ASP:C | 0.49 | 2.51 | 1 | 5 |
| 1:A:197:PRO:O | 1:A:201:ILE:HG13 | 0.49 | 2.08 | 2 | 9 |
| 1:A:75:SER:HB2 | 1:A:92:LEU:HG | 0.49 | 1.85 | 6 | 3 |
| 1:A:30:ILE:HG23 | 1:A:32:ILE:HD11 | 0.49 | 1.83 | 12 | 1 |
| 1:A:54:LYS:HA | 1:A:57:SER:HB2 | 0.49 | 1.84 | 19 | 18 |
| 1:A:122:TYR:CB | 1:A:126:TRP:CD1 | 0.49 | 2.96 | 19 | 22 |
| 1:A:177:PHE:O | 1:A:193:GLN:CA | 0.49 | 2.60 | 15 | 8 |
| 1:A:117:ARG:O | 1:A:117:ARG:HG3 | 0.49 | 2.08 | 5 | 1 |
| 1:A:87:THR:O | 1:A:114:GLN:NE2 | 0.49 | 2.46 | 6 | 4 |
| 1:A:136:VAL:CG1 | 1:A:176:ILE:HD11 | 0.49 | 2.38 | 19 | 5 |
| 1:A:75:SER:HB2 | 1:A:92:LEU:CD2 | 0.49 | 2.38 | 7 | 1 |
| 1:A:74:THR:O | 1:A:93:LYS:N | 0.49 | 2.37 | 21 | 8 |
| 1:A:81:ALA:HB3 | 1:A:172:ASN:ND2 | 0.49 | 2.23 | 12 | 1 |
| 1:A:21:ILE:HG23 | 1:A:32:ILE:CD1 | 0.48 | 2.38 | 6 | 4 |
| 1:A:28:TYR:CD2 | 1:A:56:LEU:CD1 | 0.48 | 2.93 | 13 | 13 |
| 1:A:63:THR:O | 1:A:65:ARG:CG | 0.48 | 2.62 | 10 | 3 |
| 1:A:136:VAL:HG11 | 1:A:162:PRO:HD2 | 0.48 | 1.84 | 7 | 2 |
| 1:A:178:PHE:HD2 | 1:A:191:PRO:O | 0.48 | 1.90 | 7 | 2 |
| 1:A:185:LEU:CA | 1:A:189:ALA:HB3 | 0.48 | 2.37 | 19 | 3 |
| 1:A:192:THR:CG2 | 1:A:193:GLN:N | 0.48 | 2.76 | 16 | 7 |
| 1:A:178:PHE:CE2 | 1:A:191:PRO:O | 0.48 | 2.66 | 17 | 1 |
| 1:A:185:LEU:HG | 1:A:191:PRO:O | 0.48 | 2.08 | 21 | 1 |
| 1:A:75:SER:CA | 1:A:92:LEU:HA | 0.48 | 2.38 | 2 | 11 |
| 1:A:175:VAL:HG22 | 1:A:196:VAL:HG23 | 0.48 | 1.85 | 1 | 1 |
| 1:A:196:VAL:CG1 | 1:A:201:ILE:HG12 | 0.48 | 2.37 | 13 | 3 |
| 1:A:135:VAL:C | 1:A:138:PRO:HD2 | 0.48 | 2.28 | 15 | 21 |
| 1:A:89:ALA:CB | 1:A:170:VAL:CG1 | 0.48 | 2.91 | 5 | 1 |
| 1:A:33:SER:C | 1:A:34:LEU:HD22 | 0.48 | 2.28 | 13 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:121:THR:HG23 | 1:A:123:ASP:H | 0.48 | 1.68 | 14 | 17 |
| 1:A:34:LEU:HD21 | 1:A:92:LEU:CD2 | 0.48 | 2.38 | 16 | 1 |
| 1:A:56:LEU:HD22 | 1:A:69:TYR:CB | 0.48 | 2.36 | 24 | 12 |
| 1:A:91:VAL:O | 1:A:91:VAL:HG13 | 0.48 | 2.08 | 23 | 1 |
| 1:A:141:GLN:NE2 | 1:A:154:ILE:HG13 | 0.48 | 2.23 | 11 | 22 |
| 1:A:56:LEU:HB3 | 1:A:69:TYR:CD2 | 0.48 | 2.43 | 24 | 16 |
| 1:A:176:ILE:CG2 | 1:A:178:PHE:CZ | 0.48 | 2.96 | 4 | 1 |
| 1:A:161:ASP:CG | 1:A:176:ILE:HD11 | 0.48 | 2.29 | 7 | 1 |
| 1:A:54:LYS:C | 1:A:57:SER:HB2 | 0.48 | 2.28 | 23 | 6 |
| 1:A:137:PHE:CZ | 1:A:160:LEU:HA | 0.48 | 2.44 | 16 | 5 |
| 1:A:117:ARG:CG | 1:A:117:ARG:O | 0.48 | 2.62 | 12 | 1 |
| 1:A:137:PHE:CD1 | 1:A:160:LEU:O | 0.48 | 2.66 | 22 | 5 |
| 1:A:44:LEU:HD13 | 1:A:92:LEU:CD2 | 0.48 | 2.39 | 11 | 1 |
| 1:A:102:HIS:NE2 | 1:A:104:THR:HG23 | 0.48 | 2.24 | 4 | 1 |
| 1:A:40:ASP:HB3 | 1:A:112:TRP:CZ3 | 0.48 | 2.43 | 21 | 2 |
| 1:A:18:ALA:HB1 | 1:A:20:GLN:NE2 | 0.48 | 2.24 | 20 | 1 |
| 1:A:47:TYR:O | 1:A:50:GLN:CB | 0.48 | 2.62 | 8 | 24 |
| 1:A:127:GLN:NE2 | 1:A:127:GLN:N | 0.48 | 2.62 | 2 | 24 |
| 1:A:136:VAL:CG1 | 1:A:161:ASP:OD2 | 0.48 | 2.62 | 4 | 18 |
| 1:A:93:LYS:HB2 | 1:A:107:TYR:OH | 0.47 | 2.09 | 4 | 8 |
| 1:A:126:TRP:O | 1:A:206:ALA:HA | 0.47 | 2.08 | 18 | 19 |
| 1:A:143:GLU:O | 1:A:146:LYS:HB3 | 0.47 | 2.09 | 17 | 4 |
| 1:A:41:GLN:NE2 | 1:A:41:GLN:CA | 0.47 | 2.77 | 18 | 4 |
| 1:A:68:PRO:O | 1:A:69:TYR:CD1 | 0.47 | 2.66 | 8 | 24 |
| 1:A:116:TYR:C | 1:A:117:ARG:CG | 0.47 | 2.82 | 1 | 6 |
| 1:A:80:SER:HB3 | 1:A:87:THR:CB | 0.47 | 2.39 | 8 | 1 |
| 1:A:113:ASP:HB3 | 1:A:118:LYS:CG | 0.47 | 2.39 | 8 | 1 |
| 1:A:107:TYR:H | 1:A:191:PRO:HG3 | 0.47 | 1.68 | 13 | 1 |
| 1:A:32:ILE:HD13 | 1:A:32:ILE:N | 0.47 | 2.24 | 17 | 1 |
| 1:A:125:LEU:O | 1:A:125:LEU:HD22 | 0.47 | 2.09 | 16 | 19 |
| 1:A:136:VAL:CG1 | 1:A:137:PHE:N | 0.47 | 2.78 | 4 | 17 |
| 1:A:86:GLY:C | 1:A:114:GLN:CB | 0.47 | 2.81 | 16 | 7 |
| 1:A:73:ILE:CB | 1:A:94:VAL:CG2 | 0.47 | 2.91 | 6 | 1 |
| 1:A:113:ASP:OD2 | 1:A:116:TYR:N | 0.47 | 2.45 | 8 | 1 |
| 1:A:43:SER:HB3 | 1:A:110:PHE:CD2 | 0.47 | 2.44 | 23 | 3 |
| 1:A:112:TRP:CZ2 | 1:A:117:ARG:C | 0.47 | 2.87 | 18 | 3 |
| 1:A:112:TRP:CA | 1:A:119:PRO:HA | 0.47 | 2.36 | 6 | 3 |
| 1:A:141:GLN:O | 1:A:144:LEU:HB2 | 0.47 | 2.09 | 24 | 14 |
| 1:A:176:ILE:CG1 | 1:A:195:LEU:HD13 | 0.47 | 2.39 | 18 | 12 |
| 1:A:13:THR:O | 1:A:20:GLN:HG2 | 0.47 | 2.10 | 6 | 3 |
| 1:A:91:VAL:O | 1:A:91:VAL:HG23 | 0.47 | 2.09 | 12 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:59:ALA:HB2 | 1:A:98:ALA:CB | 0.47 | 2.39 | 8 | 15 |
| 1:A:80:SER:CB | 1:A:87:THR:N | 0.47 | 2.78 | 7 | 5 |
| 1:A:133:LEU:HB3 | 1:A:195:LEU:C | 0.47 | 2.30 | 2 | 15 |
| 1:A:161:ASP:OD2 | 1:A:176:ILE:CD1 | 0.47 | 2.63 | 22 | 20 |
| 1:A:72:ASN:O | 1:A:94:VAL:HA | 0.47 | 2.09 | 2 | 4 |
| 1:A:8:GLU:CG | 1:A:9:GLU:N | 0.47 | 2.77 | 3 | 3 |
| 1:A:67:ALA:H | 1:A:68:PRO:CD | 0.47 | 2.23 | 3 | 1 |
| 1:A:42:LYS:HZ1 | 1:A:46:ASN:CA | 0.47 | 2.23 | 5 | 2 |
| 1:A:135:VAL:O | 1:A:138:PRO:CG | 0.47 | 2.63 | 18 | 10 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:HD13 | 0.47 | 1.86 | 6 | 1 |
| 1:A:196:VAL:HB | 1:A:201:ILE:HG12 | 0.47 | 1.85 | 7 | 2 |
| 1:A:185:LEU:HD21 | 1:A:191:PRO:CD | 0.47 | 2.39 | 10 | 2 |
| 1:A:44:LEU:O | 1:A:47:TYR:CA | 0.47 | 2.63 | 9 | 24 |
| 1:A:79:GLN:CA | 1:A:87:THR:O | 0.47 | 2.62 | 15 | 7 |
| 1:A:192:THR:HG22 | 1:A:193:GLN:N | 0.47 | 2.25 | 19 | 4 |
| 1:A:136:VAL:CB | 1:A:176:ILE:HD11 | 0.47 | 2.40 | 15 | 7 |
| 1:A:93:LYS:CB | 1:A:107:TYR:CE1 | 0.47 | 2.97 | 2 | 11 |
| 1:A:22:GLN:HB3 | 1:A:31:ASN:ND2 | 0.47 | 2.25 | 4 | 9 |
| 1:A:75:SER:HB2 | 1:A:92:LEU:CA | 0.47 | 2.40 | 8 | 2 |
| 1:A:6:TYR:CE1 | 1:A:44:LEU:CD1 | 0.47 | 2.97 | 10 | 3 |
| 1:A:10:LEU:HD21 | 1:A:45:GLU:OE1 | 0.47 | 2.10 | 22 | 1 |
| 1:A:177:PHE:O | 1:A:194:VAL:N | 0.47 | 2.46 | 15 | 10 |
| 1:A:196:VAL:HB | 1:A:201:ILE:HG21 | 0.47 | 1.85 | 1 | 8 |
| 1:A:44:LEU:HA | 1:A:47:TYR:HB3 | 0.47 | 1.87 | 11 | 4 |
| 1:A:135:VAL:CB | 1:A:195:LEU:HD23 | 0.47 | 2.40 | 22 | 5 |
| 1:A:32:ILE:HG23 | 1:A:73:ILE:CD1 | 0.47 | 2.40 | 6 | 2 |
| 1:A:75:SER:HG | 1:A:90:VAL:HB | 0.47 | 1.69 | 20 | 2 |
| 1:A:47:TYR:O | 1:A:50:GLN:CA | 0.46 | 2.64 | 14 | 24 |
| 1:A:94:VAL:HG12 | 1:A:106:THR:O | 0.46 | 2.10 | 6 | 1 |
| 1:A:127:GLN:OE1 | 1:A:130:THR:HG23 | 0.46 | 2.10 | 8 | 1 |
| 1:A:196:VAL:HG13 | 1:A:201:ILE:CB | 0.46 | 2.40 | 20 | 3 |
| 1:A:92:LEU:C | 1:A:107:TYR:CE1 | 0.46 | 2.88 | 17 | 1 |
| 1:A:28:TYR:HB3 | 1:A:69:TYR:CE2 | 0.46 | 2.45 | 14 | 12 |
| 1:A:42:LYS:HE2 | 1:A:46:ASN:HB2 | 0.46 | 1.87 | 2 | 3 |
| 1:A:170:VAL:O | 1:A:170:VAL:CG1 | 0.46 | 2.63 | 20 | 2 |
| 1:A:137:PHE:N | 1:A:138:PRO:CD | 0.46 | 2.78 | 4 | 24 |
| 1:A:143:GLU:O | 1:A:146:LYS:N | 0.46 | 2.48 | 15 | 20 |
| 1:A:73:ILE:CG2 | 1:A:94:VAL:HG23 | 0.46 | 2.40 | 3 | 4 |
| 1:A:160:LEU:C | 1:A:161:ASP:OD1 | 0.46 | 2.53 | 22 | 5 |
| 1:A:185:LEU:HD11 | 1:A:192:THR:CA | 0.46 | 2.40 | 7 | 2 |
| 1:A:7:CYS:HA | 1:A:10:LEU:HB2 | 0.46 | 1.87 | 19 | 9 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:87:THR:HG22 | 1:A:112:TRP:O | 0.46 | 2.10 | 1 | 5 |
| 1:A:89:ALA:CA | 1:A:110:PHE:O | 0.46 | 2.63 | 2 | 6 |
| 1:A:127:GLN:NE2 | 1:A:205:LEU:HD12 | 0.46 | 2.25 | 13 | 15 |
| 1:A:175:VAL:CG1 | 1:A:201:ILE:HG12 | 0.46 | 2.41 | 1 | 12 |
| 1:A:121:THR:HG23 | 1:A:123:ASP:HB2 | 0.46 | 1.87 | 19 | 6 |
| 1:A:6:TYR:CD1 | 1:A:41:GLN:HB2 | 0.46 | 2.44 | 6 | 4 |
| 1:A:160:LEU:O | 1:A:161:ASP:OD1 | 0.46 | 2.34 | 7 | 1 |
| 1:A:185:LEU:HD13 | 1:A:189:ALA:HB3 | 0.46 | 1.87 | 4 | 4 |
| 1:A:136:VAL:N | 1:A:195:LEU:HD23 | 0.46 | 2.26 | 8 | 7 |
| 1:A:136:VAL:HG11 | 1:A:161:ASP:CA | 0.46 | 2.41 | 18 | 12 |
| 1:A:78:TYR:HD1 | 1:A:89:ALA:O | 0.46 | 1.93 | 18 | 3 |
| 1:A:63:THR:CG2 | 1:A:102:HIS:HB2 | 0.46 | 2.41 | 8 | 8 |
| 1:A:15:THR:HB | 1:A:18:ALA:HB3 | 0.46 | 1.86 | 16 | 2 |
| 1:A:137:PHE:HZ | 1:A:154:ILE:O | 0.46 | 1.94 | 14 | 2 |
| 1:A:70:GLU:O | 1:A:96:GLN:HG3 | 0.46 | 2.11 | 19 | 1 |
| 1:A:48:ILE:O | 1:A:52:ARG:HG3 | 0.46 | 2.11 | 6 | 5 |
| 1:A:127:GLN:CD | 1:A:204:MET:O | 0.46 | 2.53 | 2 | 15 |
| 1:A:186:PRO:O | 1:A:189:ALA:N | 0.46 | 2.48 | 3 | 12 |
| 1:A:64:PRO:O | 1:A:101:THR:CB | 0.46 | 2.60 | 3 | 1 |
| 1:A:184:LEU:CD2 | 1:A:184:LEU:O | 0.46 | 2.64 | 6 | 2 |
| 1:A:135:VAL:HG21 | 1:A:197:PRO:N | 0.46 | 2.26 | 10 | 1 |
| 1:A:116:TYR:O | 1:A:117:ARG:CD | 0.46 | 2.64 | 20 | 1 |
| 1:A:6:TYR:OH | 1:A:44:LEU:HD11 | 0.46 | 2.10 | 21 | 1 |
| 1:A:185:LEU:CD2 | 1:A:190:GLY:N | 0.46 | 2.64 | 21 | 1 |
| 1:A:133:LEU:CD2 | 1:A:194:VAL:HG23 | 0.46 | 2.27 | 1 | 4 |
| 1:A:181:PRO:CD | 1:A:192:THR:OG1 | 0.46 | 2.63 | 1 | 1 |
| 1:A:94:VAL:C | 1:A:106:THR:O | 0.46 | 2.51 | 6 | 1 |
| 1:A:205:LEU:O | 1:A:206:ALA:CB | 0.46 | 2.64 | 13 | 1 |
| 1:A:180:ASN:O | 1:A:180:ASN:OD1 | 0.46 | 2.34 | 19 | 1 |
| 1:A:185:LEU:O | 1:A:190:GLY:N | 0.46 | 2.49 | 19 | 1 |
| 1:A:44:LEU:CD1 | 1:A:92:LEU:HD21 | 0.46 | 2.41 | 11 | 1 |
| 1:A:92:LEU:HD21 | 1:A:110:PHE:CZ | 0.46 | 2.46 | 21 | 1 |
| 1:A:156:PRO:O | 1:A:184:LEU:HG | 0.45 | 2.11 | 2 | 1 |
| 1:A:126:TRP:O | 1:A:206:ALA:O | 0.45 | 2.34 | 21 | 22 |
| 1:A:141:GLN:HE22 | 1:A:154:ILE:CD1 | 0.45 | 2.24 | 7 | 8 |
| 1:A:184:LEU:HB3 | 1:A:192:THR:HG23 | 0.45 | 1.88 | 2 | 4 |
| 1:A:162:PRO:O | 1:A:193:GLN:NE2 | 0.45 | 2.48 | 21 | 3 |
| 1:A:143:GLU:O | 1:A:146:LYS:CB | 0.45 | 2.64 | 10 | 6 |
| 1:A:133:LEU:HG | 1:A:196:VAL:HG23 | 0.45 | 1.87 | 13 | 1 |
| 1:A:81:ALA:O | 1:A:172:ASN:ND2 | 0.45 | 2.49 | 17 | 1 |
| 1:A:185:LEU:C | 1:A:185:LEU:HD22 | 0.45 | 2.32 | 21 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:113:ASP:OD1 | 1:A:117:ARG:N | 0.45 | 2.48 | 13 | 6 |
| 1:A:87:THR:C | 1:A:114:GLN:NE2 | 0.45 | 2.70 | 6 | 1 |
| 1:A:78:TYR:HB3 | 1:A:171:THR:HG22 | 0.45 | 1.88 | 23 | 2 |
| 1:A:176:ILE:HG12 | 1:A:193:GLN:CD | 0.45 | 2.32 | 6 | 12 |
| 1:A:43:SER:O | 1:A:47:TYR:CB | 0.45 | 2.63 | 6 | 14 |
| 1:A:48:ILE:CG1 | 1:A:71:LEU:CD2 | 0.45 | 2.94 | 15 | 5 |
| 1:A:29:ASN:ND2 | 1:A:30:ILE:N | 0.45 | 2.65 | 7 | 3 |
| 1:A:10:LEU:O | 1:A:10:LEU:CD1 | 0.45 | 2.65 | 13 | 1 |
| 1:A:82:ILE:CG2 | 1:A:83:PRO:HD2 | 0.45 | 2.42 | 13 | 5 |
| 1:A:49:ALA:O | 1:A:53:ASP:CB | 0.45 | 2.64 | 4 | 6 |
| 1:A:44:LEU:HB3 | 1:A:110:PHE:CE2 | 0.45 | 2.45 | 20 | 1 |
| 1:A:77:THR:CG2 | 1:A:88:GLN:HG2 | 0.45 | 2.41 | 23 | 1 |
| 1:A:77:THR:CG2 | 1:A:88:GLN:OE1 | 0.45 | 2.65 | 3 | 1 |
| 1:A:78:TYR:O | 1:A:79:GLN:OE1 | 0.45 | 2.35 | 6 | 1 |
| 1:A:97:ASN:OD1 | 1:A:100:GLY:HA2 | 0.45 | 2.12 | 6 | 1 |
| 1:A:117:ARG:HG2 | 1:A:117:ARG:O | 0.45 | 2.11 | 12 | 1 |
| 1:A:75:SER:HB2 | 1:A:92:LEU:CG | 0.45 | 2.41 | 15 | 8 |
| 1:A:176:ILE:HG12 | 1:A:193:GLN:HG2 | 0.45 | 1.88 | 7 | 11 |
| 1:A:27:ALA:C | 1:A:68:PRO:HB2 | 0.45 | 2.31 | 18 | 7 |
| 1:A:185:LEU:CD2 | 1:A:191:PRO:N | 0.45 | 2.80 | 19 | 4 |
| 1:A:97:ASN:ND2 | 1:A:101:THR:N | 0.45 | 2.65 | 21 | 2 |
| 1:A:95:TYR:HB2 | 1:A:105:THR:CG2 | 0.45 | 2.24 | 19 | 2 |
| 1:A:44:LEU:HD13 | 1:A:92:LEU:HD21 | 0.45 | 1.88 | 11 | 1 |
| 1:A:52:ARG:CG | 1:A:71:LEU:HD22 | 0.45 | 2.42 | 12 | 9 |
| 1:A:29:ASN:OD1 | 1:A:70:GLU:CG | 0.45 | 2.64 | 6 | 1 |
| 1:A:75:SER:HB3 | 1:A:92:LEU:HG | 0.45 | 1.89 | 12 | 3 |
| 1:A:97:ASN:ND2 | 1:A:100:GLY:N | 0.45 | 2.65 | 12 | 16 |
| 1:A:97:ASN:ND2 | 1:A:97:ASN:O | 0.45 | 2.48 | 8 | 12 |
| 1:A:113:ASP:OD1 | 1:A:116:TYR:N | 0.45 | 2.50 | 3 | 2 |
| 1:A:34:LEU:HD21 | 1:A:41:GLN:HE21 | 0.45 | 1.72 | 23 | 2 |
| 1:A:127:GLN:HG2 | 1:A:129:ASP:H | 0.45 | 1.70 | 5 | 8 |
| 1:A:185:LEU:N | 1:A:185:LEU:HD12 | 0.45 | 2.26 | 7 | 1 |
| 1:A:140:VAL:O | 1:A:144:LEU:CD1 | 0.45 | 2.65 | 11 | 4 |
| 1:A:185:LEU:HD11 | 1:A:191:PRO:CD | 0.45 | 2.40 | 23 | 2 |
| 1:A:48:ILE:HD11 | 1:A:73:ILE:HG21 | 0.45 | 1.88 | 12 | 2 |
| 1:A:87:THR:C | 1:A:114:GLN:HG2 | 0.45 | 2.32 | 22 | 1 |
| 1:A:34:LEU:CD1 | 1:A:41:GLN:OE1 | 0.45 | 2.65 | 24 | 1 |
| 1:A:161:ASP:OD2 | 1:A:195:LEU:CB | 0.44 | 2.64 | 24 | 4 |
| 1:A:4:LYS:HD2 | 1:A:8:GLU:HB2 | 0.44 | 1.88 | 21 | 5 |
| 1:A:134:PRO:O | 1:A:137:PHE:CB | 0.44 | 2.65 | 22 | 7 |
| 1:A:144:LEU:O | 1:A:147:GLN:CB | 0.44 | 2.66 | 15 | 6 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:161:ASP:CB | 1:A:176:ILE:HD11 | 0.44 | 2.41 | 7 | 1 |
| 1:A:6:TYR:CD2 | 1:A:45:GLU:HG2 | 0.44 | 2.47 | 15 | 1 |
| 1:A:32:ILE:HG13 | 1:A:73:ILE:HG21 | 0.44 | 1.88 | 17 | 1 |
| 1:A:77:THR:CG2 | 1:A:90:VAL:CG1 | 0.44 | 2.92 | 23 | 1 |
| 1:A:6:TYR:HE1 | 1:A:41:GLN:CB | 0.44 | 2.26 | 12 | 4 |
| 1:A:94:VAL:O | 1:A:106:THR:N | 0.44 | 2.44 | 6 | 1 |
| 1:A:184:LEU:C | 1:A:185:LEU:CD1 | 0.44 | 2.82 | 22 | 4 |
| 1:A:92:LEU:O | 1:A:107:TYR:HD1 | 0.44 | 1.96 | 18 | 1 |
| 1:A:29:ASN:ND2 | 1:A:70:GLU:HG3 | 0.44 | 2.28 | 5 | 2 |
| 1:A:141:GLN:NE2 | 1:A:141:GLN:N | 0.44 | 2.65 | 10 | 6 |
| 1:A:43:SER:HB3 | 1:A:110:PHE:CE2 | 0.44 | 2.48 | 12 | 1 |
| 1:A:47:TYR:O | 1:A:51:THR:OG1 | 0.44 | 2.35 | 19 | 1 |
| 1:A:34:LEU:CD2 | 1:A:41:GLN:HG3 | 0.44 | 2.43 | 2 | 3 |
| 1:A:63:THR:HG21 | 1:A:102:HIS:CG | 0.44 | 2.48 | 19 | 4 |
| 1:A:161:ASP:OD2 | 1:A:176:ILE:HG13 | 0.44 | 2.11 | 6 | 5 |
| 1:A:97:ASN:ND2 | 1:A:102:HIS:N | 0.44 | 2.66 | 6 | 1 |
| 1:A:66:GLU:CB | 1:A:100:GLY:CA | 0.44 | 2.93 | 7 | 1 |
| 1:A:179:PHE:CZ | 1:A:194:VAL:CG2 | 0.44 | 3.00 | 9 | 3 |
| 1:A:107:TYR:HB2 | 1:A:191:PRO:HG2 | 0.44 | 1.88 | 16 | 1 |
| 1:A:97:ASN:HD22 | 1:A:100:GLY:H | 0.44 | 1.56 | 18 | 8 |
| 1:A:102:HIS:CE1 | 1:A:104:THR:CG2 | 0.44 | 3.00 | 4 | 3 |
| 1:A:56:LEU:CD2 | 1:A:69:TYR:HD2 | 0.44 | 2.18 | 8 | 12 |
| 1:A:98:ALA:H | 1:A:102:HIS:HB3 | 0.44 | 1.73 | 18 | 3 |
| 1:A:10:LEU:HD12 | 1:A:21:ILE:HG13 | 0.44 | 1.90 | 13 | 1 |
| 1:A:185:LEU:H | 1:A:186:PRO:CD | 0.44 | 2.26 | 19 | 1 |
| 1:A:75:SER:OG | 1:A:90:VAL:HB | 0.44 | 2.13 | 21 | 1 |
| 1:A:21:ILE:CG2 | 1:A:21:ILE:O | 0.44 | 2.66 | 20 | 2 |
| 1:A:48:ILE:CG2 | 1:A:49:ALA:N | 0.44 | 2.81 | 3 | 8 |
| 1:A:6:TYR:OH | 1:A:44:LEU:CD1 | 0.44 | 2.66 | 19 | 2 |
| 1:A:182:GLY:O | 1:A:183:GLU:HG2 | 0.44 | 2.12 | 3 | 1 |
| 1:A:42:LYS:CA | 1:A:42:LYS:HE3 | 0.44 | 2.43 | 14 | 6 |
| 1:A:66:GLU:HB2 | 1:A:99:GLY:C | 0.44 | 2.30 | 23 | 2 |
| 1:A:181:PRO:HD3 | 1:A:192:THR:HB | 0.44 | 1.89 | 21 | 1 |
| 1:A:77:THR:HG21 | 1:A:88:GLN:HG2 | 0.44 | 1.88 | 23 | 1 |
| 1:A:77:THR:CA | 1:A:90:VAL:HG12 | 0.44 | 2.42 | 1 | 1 |
| 1:A:185:LEU:CD1 | 1:A:189:ALA:C | 0.44 | 2.86 | 2 | 3 |
| 1:A:42:LYS:CE | 1:A:46:ASN:CB | 0.44 | 2.95 | 12 | 4 |
| 1:A:15:THR:CG2 | 1:A:18:ALA:CB | 0.44 | 2.86 | 13 | 4 |
| 1:A:178:PHE:HB3 | 1:A:191:PRO:HB2 | 0.44 | 1.90 | 23 | 3 |
| 1:A:33:SER:O | 1:A:74:THR:HA | 0.44 | 2.13 | 21 | 3 |
| 1:A:34:LEU:HD21 | 1:A:44:LEU:HD22 | 0.44 | 1.88 | 15 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:181:PRO:CG | 1:A:192:THR:CB | 0.44 | 2.96 | 3 | 8 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:CG | 0.44 | 2.66 | 16 | 4 |
| 1:A:129:ASP:HB3 | 1:A:204:MET:CG | 0.44 | 2.43 | 16 | 3 |
| 1:A:32:ILE:CG1 | 1:A:73:ILE:HD13 | 0.44 | 2.42 | 10 | 1 |
| 1:A:30:ILE:CG2 | 1:A:32:ILE:HD12 | 0.43 | 2.39 | 3 | 1 |
| 1:A:90:VAL:HG22 | 1:A:110:PHE:CD1 | 0.43 | 2.47 | 3 | 1 |
| 1:A:125:LEU:CD1 | 1:A:126:TRP:CD2 | 0.43 | 3.01 | 5 | 1 |
| 1:A:51:THR:O | 1:A:55:PHE:CD1 | 0.43 | 2.71 | 6 | 1 |
| 1:A:102:HIS:NE2 | 1:A:104:THR:CG2 | 0.43 | 2.81 | 4 | 2 |
| 1:A:89:ALA:CB | 1:A:110:PHE:O | 0.43 | 2.66 | 2 | 4 |
| 1:A:42:LYS:HA | 1:A:42:LYS:HD2 | 0.43 | 1.69 | 22 | 6 |
| 1:A:176:ILE:CG1 | 1:A:193:GLN:OE1 | 0.43 | 2.66 | 19 | 2 |
| 1:A:205:LEU:HD12 | 1:A:205:LEU:HA | 0.43 | 1.72 | 24 | 8 |
| 1:A:157:ASN:HA | 1:A:192:THR:HG21 | 0.43 | 1.88 | 11 | 2 |
| 1:A:15:THR:OG1 | 1:A:20:GLN:NE2 | 0.43 | 2.51 | 16 | 1 |
| 1:A:87:THR:HA | 1:A:114:GLN:CG | 0.43 | 2.42 | 2 | 1 |
| 1:A:136:VAL:CG1 | 1:A:161:ASP:CG | 0.43 | 2.86 | 6 | 4 |
| 1:A:116:TYR:CB | 1:A:118:LYS:HD2 | 0.43 | 2.43 | 11 | 1 |
| 1:A:159:GLY:CA | 1:A:184:LEU:CD1 | 0.43 | 2.96 | 19 | 4 |
| 1:A:55:PHE:CZ | 1:A:104:THR:CG2 | 0.43 | 3.01 | 23 | 2 |
| 1:A:197:PRO:CA | 1:A:201:ILE:HG23 | 0.43 | 2.42 | 20 | 2 |
| 1:A:32:ILE:CD1 | 1:A:73:ILE:CG2 | 0.43 | 2.97 | 17 | 1 |
| 1:A:178:PHE:HA | 1:A:193:GLN:HA | 0.43 | 1.91 | 21 | 3 |
| 1:A:73:ILE:CD1 | 1:A:92:LEU:HD22 | 0.43 | 2.42 | 9 | 1 |
| 1:A:176:ILE:CB | 1:A:195:LEU:HD13 | 0.43 | 2.43 | 20 | 3 |
| 1:A:185:LEU:HD21 | 1:A:190:GLY:C | 0.43 | 2.34 | 21 | 1 |
| 1:A:10:LEU:CD2 | 1:A:45:GLU:OE1 | 0.43 | 2.67 | 22 | 1 |
| 1:A:125:LEU:C | 1:A:125:LEU:CD1 | 0.43 | 2.82 | 18 | 2 |
| 1:A:96:GLN:N | 1:A:104:THR:O | 0.43 | 2.51 | 9 | 11 |
| 1:A:137:PHE:CE1 | 1:A:154:ILE:CG2 | 0.43 | 3.01 | 22 | 2 |
| 1:A:87:THR:HG23 | 1:A:112:TRP:O | 0.43 | 2.13 | 19 | 1 |
| 1:A:91:VAL:HA | 1:A:109:ALA:HA | 0.43 | 1.89 | 20 | 1 |
| 1:A:52:ARG:CA | 1:A:96:GLN:HE22 | 0.43 | 2.20 | 6 | 1 |
| 1:A:178:PHE:CE1 | 1:A:193:GLN:OE1 | 0.43 | 2.72 | 7 | 2 |
| 1:A:53:ASP:O | 1:A:57:SER:CA | 0.43 | 2.67 | 8 | 1 |
| 1:A:89:ALA:HB3 | 1:A:170:VAL:HG12 | 0.43 | 1.90 | 9 | 1 |
| 1:A:176:ILE:HB | 1:A:195:LEU:HD13 | 0.43 | 1.89 | 16 | 2 |
| 1:A:126:TRP:O | 1:A:206:ALA:C | 0.43 | 2.57 | 2 | 18 |
| 1:A:48:ILE:CD1 | 1:A:73:ILE:CD1 | 0.43 | 2.96 | 14 | 4 |
| 1:A:170:VAL:HB | 1:A:175:VAL:CB | 0.43 | 2.44 | 11 | 1 |
| 1:A:44:LEU:CB | 1:A:92:LEU:CD2 | 0.43 | 2.94 | 19 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:186:PRO:HD2 | 1:A:189:ALA:HB3 | 0.43 | 1.91 | 21 | 1 |
| 1:A:41:GLN:HE21 | 1:A:41:GLN:N | 0.43 | 2.11 | 24 | 1 |
| 1:A:185:LEU:HD12 | 1:A:189:ALA:HB3 | 0.43 | 1.90 | 24 | 1 |
| 1:A:133:LEU:HD12 | 1:A:133:LEU:H | 0.43 | 1.70 | 10 | 1 |
| 1:A:94:VAL:HG13 | 1:A:106:THR:O | 0.43 | 2.14 | 24 | 1 |
| 1:A:78:TYR:CE1 | 1:A:91:VAL:CG1 | 0.43 | 3.00 | 15 | 2 |
| 1:A:156:PRO:CG | 1:A:160:LEU:HD12 | 0.43 | 2.44 | 19 | 3 |
| 1:A:125:LEU:HD12 | 1:A:126:TRP:CD2 | 0.42 | 2.49 | 5 | 1 |
| 1:A:55:PHE:CD2 | 1:A:104:THR:HB | 0.42 | 2.49 | 6 | 1 |
| 1:A:64:PRO:HB2 | 1:A:101:THR:HB | 0.42 | 1.89 | 3 | 1 |
| 1:A:97:ASN:OD1 | 1:A:101:THR:N | 0.42 | 2.52 | 9 | 1 |
| 1:A:201:ILE:HD12 | 1:A:205:LEU:HD13 | 0.42 | 1.90 | 15 | 2 |
| 1:A:48:ILE:HD11 | 1:A:71:LEU:CD2 | 0.42 | 2.28 | 3 | 1 |
| 1:A:133:LEU:O | 1:A:160:LEU:CD2 | 0.42 | 2.67 | 17 | 4 |
| 1:A:15:THR:CG2 | 1:A:15:THR:O | 0.42 | 2.67 | 4 | 4 |
| 1:A:90:VAL:HG22 | 1:A:110:PHE:CE1 | 0.42 | 2.47 | 5 | 1 |
| 1:A:170:VAL:CG2 | 1:A:174:GLY:O | 0.42 | 2.63 | 15 | 6 |
| 1:A:185:LEU:HG | 1:A:190:GLY:C | 0.42 | 2.34 | 24 | 2 |
| 1:A:184:LEU:HB3 | 1:A:192:THR:HG1 | 0.42 | 1.72 | 13 | 1 |
| 1:A:179:PHE:CE1 | 1:A:192:THR:HB | 0.42 | 2.49 | 17 | 1 |
| 1:A:29:ASN:ND2 | 1:A:70:GLU:HG2 | 0.42 | 2.30 | 2 | 1 |
| 1:A:6:TYR:HD2 | 1:A:10:LEU:CG | 0.42 | 2.27 | 9 | 1 |
| 1:A:91:VAL:CG1 | 1:A:91:VAL:O | 0.42 | 2.67 | 19 | 1 |
| 1:A:54:LYS:HA | 1:A:57:SER:CB | 0.42 | 2.44 | 12 | 3 |
| 1:A:184:LEU:HB3 | 1:A:192:THR:CB | 0.42 | 2.44 | 4 | 2 |
| 1:A:102:HIS:NE2 | 1:A:104:THR:OG1 | 0.42 | 2.52 | 5 | 2 |
| 1:A:184:LEU:HD22 | 1:A:192:THR:HA | 0.42 | 1.92 | 14 | 3 |
| 1:A:185:LEU:CD2 | 1:A:191:PRO:HD2 | 0.42 | 2.44 | 15 | 1 |
| 1:A:112:TRP:HB2 | 1:A:119:PRO:HA | 0.42 | 1.91 | 2 | 1 |
| 1:A:111:ASP:OD2 | 1:A:125:LEU:CD2 | 0.42 | 2.65 | 9 | 1 |
| 1:A:111:ASP:OD1 | 1:A:170:VAL:HG11 | 0.42 | 2.13 | 15 | 2 |
| 1:A:157:ASN:CA | 1:A:184:LEU:HB2 | 0.42 | 2.44 | 21 | 1 |
| 1:A:129:ASP:CB | 1:A:204:MET:HG3 | 0.42 | 2.45 | 22 | 3 |
| 1:A:136:VAL:CG2 | 1:A:176:ILE:HD12 | 0.42 | 2.36 | 7 | 1 |
| 1:A:91:VAL:HA | 1:A:109:ALA:CB | 0.42 | 2.45 | 12 | 1 |
| 1:A:90:VAL:CG2 | 1:A:110:PHE:CZ | 0.42 | 3.03 | 5 | 1 |
| 1:A:55:PHE:CD2 | 1:A:104:THR:CG2 | 0.42 | 3.02 | 6 | 1 |
| 1:A:87:THR:HG22 | 1:A:111:ASP:OD1 | 0.42 | 2.14 | 8 | 1 |
| 1:A:95:TYR:HA | 1:A:105:THR:HA | 0.42 | 1.92 | 22 | 2 |
| 1:A:186:PRO:C | 1:A:188:ALA:N | 0.42 | 2.73 | 21 | 1 |
| 1:A:170:VAL:CA | 1:A:175:VAL:HA | 0.42 | 2.43 | 3 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:125:LEU:HD22 | 1:A:125:LEU:O | 0.42 | 2.15 | 19 | 3 |
| 1:A:34:LEU:O | 1:A:35:PRO:O | 0.42 | 2.37 | 5 | 4 |
| 1:A:25:ASP:CG | 1:A:26:PRO:CD | 0.42 | 2.88 | 7 | 1 |
| 1:A:112:TRP:CE2 | 1:A:117:ARG:HA | 0.42 | 2.48 | 10 | 1 |
| 1:A:183:GLU:CA | 1:A:186:PRO:HD3 | 0.42 | 2.45 | 19 | 2 |
| 1:A:133:LEU:H | 1:A:134:PRO:HD3 | 0.42 | 1.67 | 22 | 1 |
| 1:A:66:GLU:HA | 1:A:101:THR:OG1 | 0.42 | 2.14 | 4 | 2 |
| 1:A:88:GLN:OE1 | 1:A:112:TRP:CB | 0.42 | 2.68 | 4 | 3 |
| 1:A:122:TYR:HB3 | 1:A:126:TRP:HE1 | 0.42 | 1.73 | 10 | 1 |
| 1:A:75:SER:HB3 | 1:A:92:LEU:CA | 0.42 | 2.45 | 12 | 1 |
| 1:A:141:GLN:HB3 | 1:A:151:GLN:HB2 | 0.42 | 1.91 | 22 | 2 |
| 1:A:172:ASN:O | 1:A:198:ARG:NE | 0.42 | 2.53 | 22 | 2 |
| 1:A:44:LEU:HG | 1:A:45:GLU:H | 0.42 | 1.75 | 19 | 1 |
| 1:A:87:THR:CA | 1:A:114:GLN:HG2 | 0.42 | 2.45 | 22 | 1 |
| 1:A:65:ARG:O | 1:A:67:ALA:N | 0.41 | 2.53 | 3 | 1 |
| 1:A:156:PRO:O | 1:A:160:LEU:N | 0.41 | 2.51 | 4 | 1 |
| 1:A:85:ARG:CD | 1:A:85:ARG:N | 0.41 | 2.83 | 8 | 1 |
| 1:A:67:ALA:CB | 1:A:68:PRO:CD | 0.41 | 2.95 | 21 | 1 |
| 1:A:185:LEU:HD21 | 1:A:189:ALA:C | 0.41 | 2.34 | 21 | 1 |
| 1:A:30:ILE:CD1 | 1:A:52:ARG:NH2 | 0.41 | 2.83 | 1 | 1 |
| 1:A:105:THR:O | 1:A:106:THR:CG2 | 0.41 | 2.68 | 12 | 5 |
| 1:A:180:ASN:CG | 1:A:191:PRO:HB3 | 0.41 | 2.35 | 7 | 3 |
| 1:A:185:LEU:HD12 | 1:A:191:PRO:N | 0.41 | 2.30 | 8 | 1 |
| 1:A:6:TYR:CD2 | 1:A:10:LEU:HG | 0.41 | 2.50 | 13 | 1 |
| 1:A:170:VAL:CB | 1:A:175:VAL:HB | 0.41 | 2.45 | 15 | 1 |
| 1:A:55:PHE:CG | 1:A:96:GLN:NE2 | 0.41 | 2.87 | 19 | 1 |
| 1:A:159:GLY:N | 1:A:184:LEU:HG | 0.41 | 2.30 | 9 | 2 |
| 1:A:66:GLU:N | 1:A:101:THR:H | 0.41 | 2.13 | 20 | 2 |
| 1:A:56:LEU:N | 1:A:56:LEU:HD23 | 0.41 | 2.31 | 17 | 1 |
| 1:A:127:GLN:N | 1:A:127:GLN:HE21 | 0.41 | 2.14 | 18 | 1 |
| 1:A:185:LEU:HD12 | 1:A:185:LEU:C | 0.41 | 2.36 | 24 | 1 |
| 1:A:69:TYR:HA | 1:A:99:GLY:CA | 0.41 | 2.44 | 3 | 3 |
| 1:A:41:GLN:NE2 | 1:A:41:GLN:HA | 0.41 | 2.29 | 6 | 1 |
| 1:A:91:VAL:HA | 1:A:109:ALA:HB2 | 0.41 | 1.90 | 12 | 1 |
| 1:A:44:LEU:HG | 1:A:44:LEU:H | 0.41 | 1.48 | 14 | 1 |
| 1:A:32:ILE:HG13 | 1:A:48:ILE:HG12 | 0.41 | 1.92 | 17 | 1 |
| 1:A:32:ILE:CD1 | 1:A:73:ILE:HG23 | 0.41 | 2.45 | 23 | 1 |
| 1:A:184:LEU:CB | 1:A:192:THR:HG23 | 0.41 | 2.46 | 2 | 2 |
| 1:A:170:VAL:CG2 | 1:A:175:VAL:HB | 0.41 | 2.46 | 22 | 2 |
| 1:A:176:ILE:CB | 1:A:195:LEU:CD1 | 0.41 | 2.99 | 16 | 3 |
| 1:A:68:PRO:HD2 | 1:A:99:GLY:CA | 0.41 | 2.42 | 6 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:185:LEU:O | 1:A:185:LEU:HD13 | 0.41 | 2.16 | 7 | 1 |
| 1:A:144:LEU:CD2 | 1:A:154:ILE:HD11 | 0.41 | 2.45 | 10 | 1 |
| 1:A:137:PHE:CZ | 1:A:154:ILE:O | 0.41 | 2.73 | 14 | 1 |
| 1:A:137:PHE:CE1 | 1:A:160:LEU:CA | 0.41 | 3.02 | 17 | 1 |
| 1:A:52:ARG:HG2 | 1:A:71:LEU:CD2 | 0.41 | 2.45 | 22 | 1 |
| 1:A:10:LEU:HD21 | 1:A:45:GLU:OE2 | 0.41 | 2.16 | 3 | 1 |
| 1:A:32:ILE:CA | 1:A:73:ILE:HG23 | 0.41 | 2.45 | 6 | 1 |
| 1:A:44:LEU:CB | 1:A:110:PHE:CZ | 0.41 | 3.03 | 6 | 1 |
| 1:A:55:PHE:CD2 | 1:A:104:THR:HG21 | 0.41 | 2.50 | 6 | 1 |
| 1:A:48:ILE:O | 1:A:52:ARG:CD | 0.41 | 2.69 | 8 | 3 |
| 1:A:196:VAL:CG1 | 1:A:201:ILE:CG1 | 0.41 | 2.98 | 20 | 1 |
| 1:A:141:GLN:O | 1:A:144:LEU:CB | 0.41 | 2.69 | 22 | 2 |
| 1:A:43:SER:CB | 1:A:110:PHE:CD2 | 0.41 | 3.03 | 23 | 2 |
| 1:A:78:TYR:OH | 1:A:91:VAL:CG1 | 0.41 | 2.68 | 10 | 1 |
| 1:A:78:TYR:OH | 1:A:91:VAL:HG12 | 0.41 | 2.16 | 10 | 1 |
| 1:A:23:MET:O | 1:A:30:ILE:CD1 | 0.41 | 2.67 | 24 | 1 |
| 1:A:197:PRO:CD | 1:A:201:ILE:CG2 | 0.41 | 2.98 | 1 | 2 |
| 1:A:148:THR:C | 1:A:150:GLN:H | 0.41 | 2.19 | 21 | 3 |
| 1:A:42:LYS:HD2 | 1:A:45:GLU:OE2 | 0.41 | 2.16 | 5 | 1 |
| 1:A:42:LYS:HA | 1:A:45:GLU:OE2 | 0.41 | 2.15 | 6 | 1 |
| 1:A:43:SER:HG | 1:A:110:PHE:HD2 | 0.41 | 1.57 | 8 | 1 |
| 1:A:113:ASP:OD2 | 1:A:118:LYS:HD3 | 0.41 | 2.16 | 11 | 1 |
| 1:A:185:LEU:HD22 | 1:A:191:PRO:N | 0.41 | 2.29 | 15 | 1 |
| 1:A:116:TYR:O | 1:A:118:LYS:CG | 0.41 | 2.69 | 22 | 1 |
| 1:A:137:PHE:CZ | 1:A:154:ILE:HB | 0.41 | 2.51 | 22 | 1 |
| 1:A:90:VAL:CG2 | 1:A:110:PHE:CD1 | 0.41 | 3.04 | 23 | 1 |
| 1:A:65:ARG:HB3 | 1:A:99:GLY:CA | 0.41 | 2.45 | 3 | 1 |
| 1:A:88:GLN:OE1 | 1:A:89:ALA:N | 0.41 | 2.53 | 3 | 1 |
| 1:A:87:THR:CA | 1:A:114:GLN:CB | 0.41 | 2.99 | 4 | 1 |
| 1:A:88:GLN:N | 1:A:114:GLN:CG | 0.41 | 2.84 | 8 | 1 |
| 1:A:94:VAL:CG1 | 1:A:106:THR:O | 0.41 | 2.69 | 8 | 1 |
| 1:A:86:GLY:C | 1:A:114:GLN:HG3 | 0.41 | 2.35 | 22 | 1 |
| 1:A:32:ILE:HA | 1:A:73:ILE:HG23 | 0.40 | 1.91 | 6 | 2 |
| 1:A:175:VAL:CG1 | 1:A:196:VAL:CG1 | 0.40 | 2.90 | 13 | 1 |
| 1:A:40:ASP:CG | 1:A:40:ASP:O | 0.40 | 2.60 | 21 | 1 |
| 1:A:185:LEU:CD2 | 1:A:189:ALA:CB | 0.40 | 2.99 | 21 | 1 |
| 1:A:93:LYS:HG3 | 1:A:107:TYR:OH | 0.40 | 2.15 | 5 | 1 |
| 1:A:185:LEU:HD13 | 1:A:190:GLY:O | 0.40 | 2.16 | 15 | 1 |
| 1:A:34:LEU:HD21 | 1:A:92:LEU:HD23 | 0.40 | 1.93 | 16 | 1 |
| 1:A:156:PRO:O | 1:A:184:LEU:CG | 0.40 | 2.70 | 2 | 1 |
| 1:A:77:THR:HG22 | 1:A:78:TYR:N | 0.40 | 2.31 | 3 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:34:LEU:C | 1:A:34:LEU:HD13 | 0.40 | 2.35 | 4 | 1 |
| 1:A:97:ASN:OD1 | 1:A:102:HIS:O | 0.40 | 2.39 | 21 | 1 |
| 1:A:21:ILE:N | 1:A:32:ILE:O | 0.40 | 2.53 | 6 | 1 |
| 1:A:6:TYR:HB2 | 1:A:10:LEU:HD23 | 0.40 | 1.92 | 9 | 1 |
| 1:A:185:LEU:HD21 | 1:A:191:PRO:N | 0.40 | 2.31 | 10 | 1 |
| 1:A:43:SER:OG | 1:A:110:PHE:CD2 | 0.40 | 2.75 | 23 | 1 |
| 1:A:193:GLN:HG2 | 1:A:194:VAL:N | 0.40 | 2.30 | 23 | 1 |
| 1:A:48:ILE:O | 1:A:52:ARG:HD2 | 0.40 | 2.16 | 24 | 1 |
| 1:A:182:GLY:O | 1:A:183:GLU:CG | 0.40 | 2.70 | 3 | 1 |
| 1:A:134:PRO:N | 1:A:160:LEU:HD21 | 0.40 | 2.31 | 4 | 1 |
| 1:A:148:THR:C | 1:A:150:GLN:N | 0.40 | 2.75 | 7 | 1 |
| 1:A:136:VAL:HG12 | 1:A:160:LEU:O | 0.40 | 2.16 | 8 | 1 |
| 1:A:20:GLN:HA | 1:A:32:ILE:O | 0.40 | 2.17 | 9 | 1 |
| 1:A:82:ILE:CA | 1:A:85:ARG:O | 0.40 | 2.69 | 9 | 1 |
| 1:A:89:ALA:HB2 | 1:A:111:ASP:HA | 0.40 | 1.92 | 9 | 1 |
| 1:A:79:GLN:HB2 | 1:A:114:GLN:HE22 | 0.40 | 1.76 | 10 | 1 |
| 1:A:179:PHE:HE1 | 1:A:192:THR:CG2 | 0.40 | 2.29 | 16 | 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 | 192/204 (94%) | 150±1 (78±1%) | 25±1 (13±1%) | 17±1 (9±0%) | 1 | 12 |
| All | All | 4608/4896 (94%) | 3604 (78%) | 602 (13%) | 402 (9%) | 1 | 12 |

All 22 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 | 11 | LYS | 24 |
| 1 | A | 27 | ALA | 24 |
| 1 | A | 42 | LYS | 24 |
| 1 | A | 67 | ALA | 24 |
| 1 | A | 68 | PRO | 24 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 83 | PRO | 24 |
| 1 | A | 85 | ARG | 24 |
| 1 | A | 103 | PRO | 24 |
| 1 | A | 152 | VAL | 24 |
| 1 | A | 159 | GLY | 24 |
| 1 | A | 181 | PRO | 24 |
| 1 | A | 185 | LEU | 24 |
| 1 | A | 132 | PRO | 23 |
| 1 | A | 64 | PRO | 22 |
| 1 | A | 186 | PRO | 20 |
| 1 | A | 7 | CYS | 19 |
| 1 | A | 5 | THR | 9 |
| 1 | A | 182 | GLY | 9 |
| 1 | A | 169 | ALA | 9 |
| 1 | A | 66 | GLU | 1 |
| 1 | A | 183 | GLU | 1 |
| 1 | A | 131 | ASP | 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 | 163/173 (94%) | 98±2 (60±2%) | 65±2 (40±2%) | 0 5 |
| All | All | 3912/4152 (94%) | 2347 (60%) | 1565 (40%) | 0 5 |

All 110 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 | 5 | THR | 24 |
| 1 | A | 10 | LEU | 24 |
| 1 | A | 20 | GLN | 24 |
| 1 | A | 21 | ILE | 24 |
| 1 | A | 24 | SER | 24 |
| 1 | A | 28 | TYR | 24 |
| 1 | A | 42 | LYS | 24 |
| 1 | A | 44 | LEU | 24 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 52 | ARG | 24 |
| 1 | A | 54 | LYS | 24 |
| 1 | A | 60 | THR | 24 |
| 1 | A | 63 | THR | 24 |
| 1 | A | 69 | TYR | 24 |
| 1 | A | 73 | ILE | 24 |
| 1 | A | 92 | LEU | 24 |
| 1 | A | 95 | TYR | 24 |
| 1 | A | 107 | TYR | 24 |
| 1 | A | 110 | PHE | 24 |
| 1 | A | 112 | TRP | 24 |
| 1 | A | 122 | TYR | 24 |
| 1 | A | 127 | GLN | 24 |
| 1 | A | 133 | LEU | 24 |
| 1 | A | 137 | PHE | 24 |
| 1 | A | 141 | GLN | 24 |
| 1 | A | 176 | ILE | 24 |
| 1 | A | 179 | PHE | 24 |
| 1 | A | 193 | GLN | 24 |
| 1 | A | 205 | LEU | 24 |
| 1 | A | 78 | TYR | 23 |
| 1 | A | 96 | GLN | 23 |
| 1 | A | 97 | ASN | 23 |
| 1 | A | 160 | LEU | 23 |
| 1 | A | 199 | SER | 23 |
| 1 | A | 201 | ILE | 23 |
| 1 | A | 85 | ARG | 22 |
| 1 | A | 104 | THR | 22 |
| 1 | A | 114 | GLN | 22 |
| 1 | A | 25 | ASP | 21 |
| 1 | A | 61 | SER | 21 |
| 1 | A | 145 | SER | 21 |
| 1 | A | 196 | VAL | 21 |
| 1 | A | 117 | ARG | 20 |
| 1 | A | 136 | VAL | 20 |
| 1 | A | 131 | ASP | 20 |
| 1 | A | 65 | ARG | 20 |
| 1 | A | 30 | ILE | 19 |
| 1 | A | 45 | GLU | 19 |
| 1 | A | 80 | SER | 19 |
| 1 | A | 147 | GLN | 19 |
| 1 | A | 173 | ASP | 19 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 88 | GLN | 18 |
| 1 | A | 118 | LYS | 17 |
| 1 | A | 124 | THR | 16 |
| 1 | A | 185 | LEU | 16 |
| 1 | A | 34 | LEU | 15 |
| 1 | A | 123 | ASP | 15 |
| 1 | A | 184 | LEU | 15 |
| 1 | A | 129 | ASP | 14 |
| 1 | A | 175 | VAL | 14 |
| 1 | A | 29 | ASN | 14 |
| 1 | A | 148 | THR | 14 |
| 1 | A | 79 | GLN | 13 |
| 1 | A | 57 | SER | 13 |
| 1 | A | 102 | HIS | 12 |
| 1 | A | 15 | THR | 12 |
| 1 | A | 22 | GLN | 11 |
| 1 | A | 17 | GLN | 10 |
| 1 | A | 87 | THR | 10 |
| 1 | A | 91 | VAL | 10 |
| 1 | A | 151 | GLN | 10 |
| 1 | A | 93 | LYS | 10 |
| 1 | A | 40 | ASP | 9 |
| 1 | A | 198 | ARG | 8 |
| 1 | A | 113 | ASP | 7 |
| 1 | A | 33 | SER | 7 |
| 1 | A | 153 | SER | 7 |
| 1 | A | 130 | THR | 6 |
| 1 | A | 11 | LYS | 6 |
| 1 | A | 43 | SER | 6 |
| 1 | A | 187 | GLU | 6 |
| 1 | A | 23 | MET | 6 |
| 1 | A | 152 | VAL | 6 |
| 1 | A | 70 | GLU | 6 |
| 1 | A | 66 | GLU | 6 |
| 1 | A | 108 | LYS | 5 |
| 1 | A | 183 | GLU | 5 |
| 1 | A | 144 | LEU | 5 |
| 1 | A | 202 | ASP | 4 |
| 1 | A | 31 | ASN | 4 |
| 1 | A | 75 | SER | 4 |
| 1 | A | 32 | ILE | 4 |
| 1 | A | 41 | GLN | 4 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 48 | ILE | 4 |
| 1 | A | 157 | ASN | 3 |
| 1 | A | 178 | PHE | 3 |
| 1 | A | 146 | LYS | 2 |
| 1 | A | 82 | ILE | 2 |
| 1 | A | 51 | THR | 2 |
| 1 | A | 204 | MET | 2 |
| 1 | A | 62 | SER | 2 |
| 1 | A | 53 | ASP | 1 |
| 1 | A | 105 | THR | 1 |
| 1 | A | 170 | VAL | 1 |
| 1 | A | 191 | PRO | 1 |
| 1 | A | 94 | VAL | 1 |
| 1 | A | 161 | ASP | 1 |
| 1 | A | 9 | GLU | 1 |
| 1 | A | 111 | ASP | 1 |
| 1 | A | 192 | THR | 1 |
| 1 | A | 77 | 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

There are no chain breaks in this entry.

7 Chemical shift validation

No chemical shift data were provided