



Full wwPDB NMR Structure Validation Report ⓘ

Dec 24, 2024 – 09:20 PM EST

PDB ID : 2MC0
BMRB ID : 19422
Title : Structural Basis of a Thiopeptide Antibiotic Multidrug Resistance System from *Streptomyces lividans*:Nosiheptide in Complex with TipAS
Authors : Habazettl, J.; Allan, M.G.; Jensen, P.; Sass, H.; Grzesiek, S.
Deposited on : 2013-08-12

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
Mogul : 2022.3.0, CSD as543be (2022)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

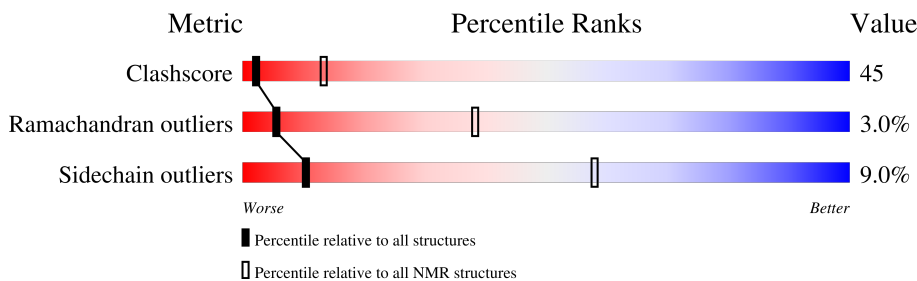
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 89%.

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



| Metric | Whole archive (#Entries) | NMR archive (#Entries) |
|-----------------------|-----------------------------|---------------------------|
| Clashscore | 210492 | 14027 |
| Ramachandran outliers | 207382 | 12486 |
| Sidechain outliers | 206894 | 12463 |

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 | 144 | |
| 2 | B | 13 | |

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA and RNA chains that are outliers for geometric criteria:

| Mol | Chain | Compound | Res | Total models with violations | |
|-----|-------|----------|-----|------------------------------|----------|
| | | | | Chirality | Geometry |
| 2 | B | BB9 | 509 | - | 10 |
| 2 | B | DBU | 504 | - | 1 |
| 2 | B | MH6 | 510 | - | 10 |

2 Ensemble composition and analysis i

This entry contains 10 models. Model 4 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

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

| Well-defined (core) protein residues | | | |
|--------------------------------------|---|-------------------|--------------|
| Well-defined core | Residue range (total) | Backbone RMSD (Å) | Medoid model |
| 1 | A:112-A:209, A:214-A:253, B:501-B:501, B:503-B:503, B:508-B:508, B:512-B:512 (142) | 0.54 | 4 |

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 3 clusters and 1 single-model cluster was found.

| Cluster number | Models |
|-----------------------|------------|
| 1 | 3, 6, 8, 9 |
| 2 | 1, 2, 5 |
| 3 | 4, 10 |
| Single-model clusters | 7 |

3 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 2330 atoms, of which 1094 are hydrogens and 0 are deuteriums.

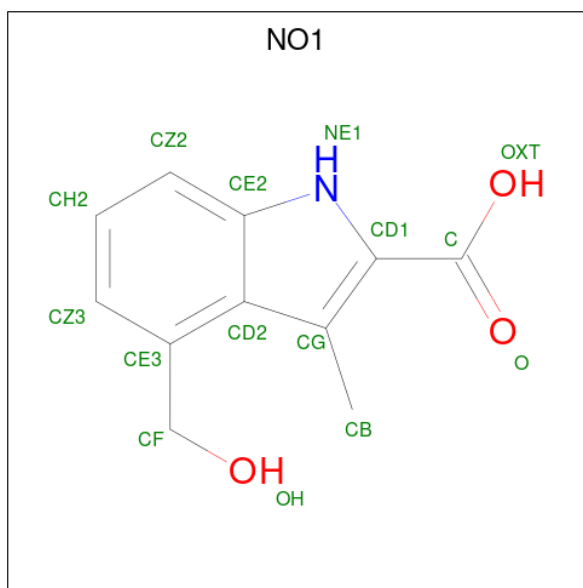
- Molecule 1 is a protein called HTH-type transcriptional activator TipA.

| Mol | Chain | Residues | Atoms | | | | | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|-------|---|
| | | | Total | C | H | N | O | | S |
| 1 | A | 143 | 2207 | 706 | 1053 | 204 | 237 | 7 | 0 |

- Molecule 2 is a protein called nosiheptide.

| Mol | Chain | Residues | Atoms | | | | | Trace | |
|-----|-------|----------|-------|----|----|----|----|-------|---|
| | | | Total | C | H | N | O | | S |
| 2 | B | 13 | 101 | 40 | 32 | 12 | 11 | 6 | 1 |

- Molecule 3 is 4-(hydroxymethyl)-3-methyl-1H-indole-2-carboxylic acid (three-letter code: NO1) (formula: C₁₁H₁₁NO₃).



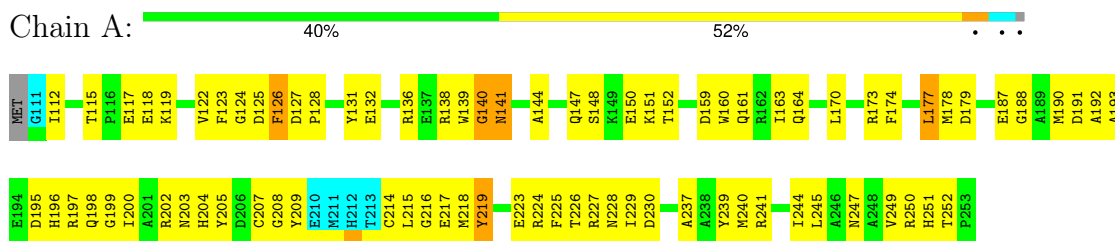
| Mol | Chain | Residues | Atoms | | | | |
|-----|-------|----------|-------|----|---|---|---|
| | | | Total | C | H | N | O |
| 3 | B | 1 | 22 | 11 | 9 | 1 | 1 |

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: HTH-type transcriptional activator TipA



- Molecule 2: nosiheptide

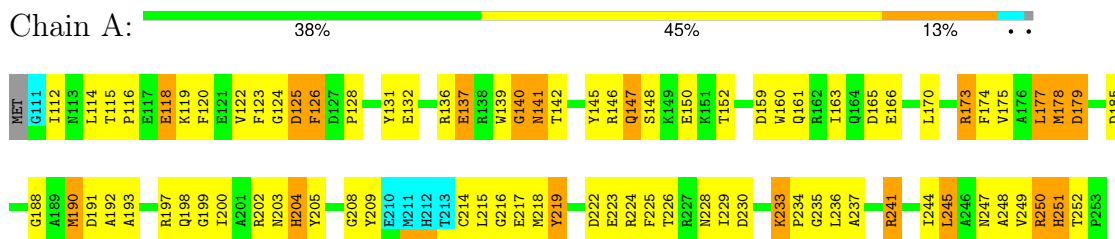


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

- Molecule 1: HTH-type transcriptional activator TipA

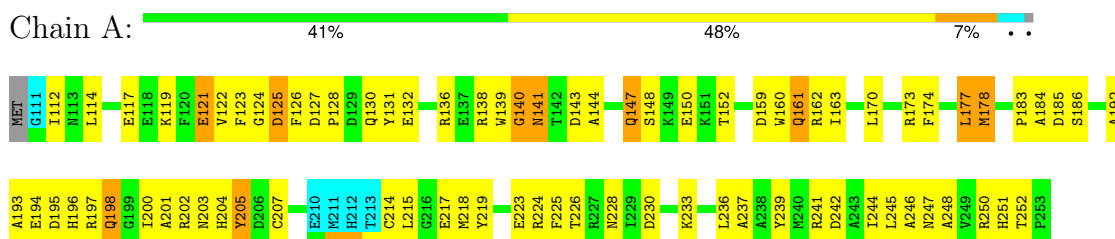


- Molecule 2: nosiheptide



4.2.2 Score per residue for model 2

- Molecule 1: HTH-type transcriptional activator TipA

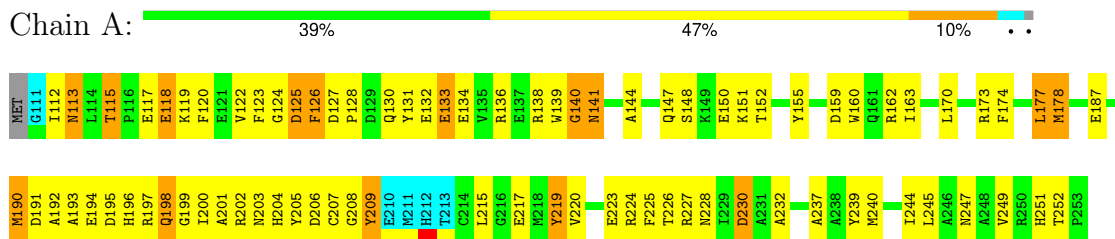


- Molecule 2: nosiheptide



4.2.3 Score per residue for model 3

- Molecule 1: HTH-type transcriptional activator TipA

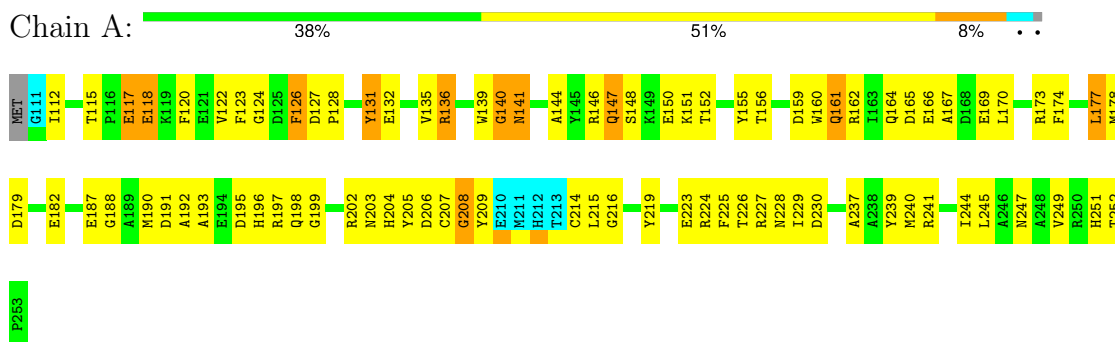


- Molecule 2: nosiheptide



4.2.4 Score per residue for model 4 (medoid)

- Molecule 1: HTH-type transcriptional activator TipA

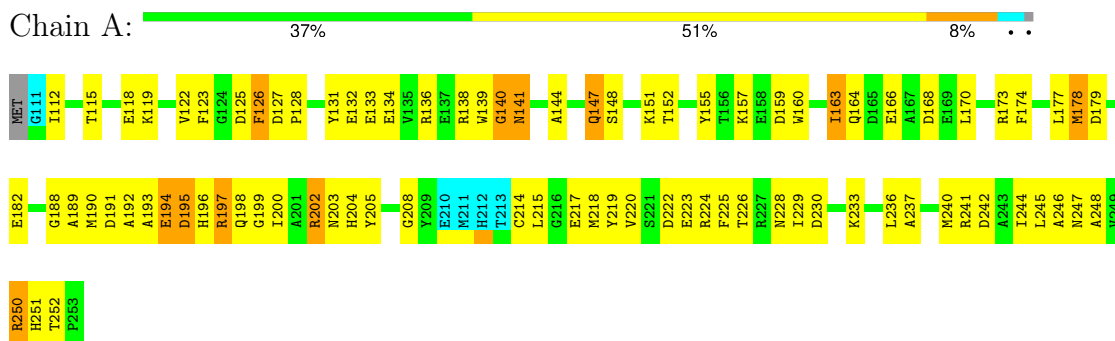


- Molecule 2: nosiheptide



4.2.5 Score per residue for model 5

- Molecule 1: HTH-type transcriptional activator TipA

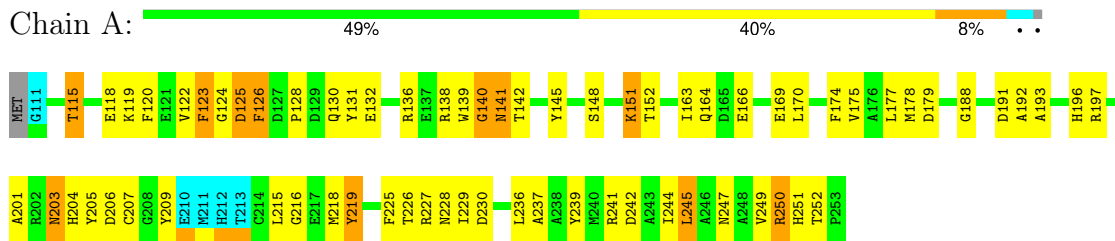


- Molecule 2: nosiheptide



4.2.6 Score per residue for model 6

- Molecule 1: HTH-type transcriptional activator TipA

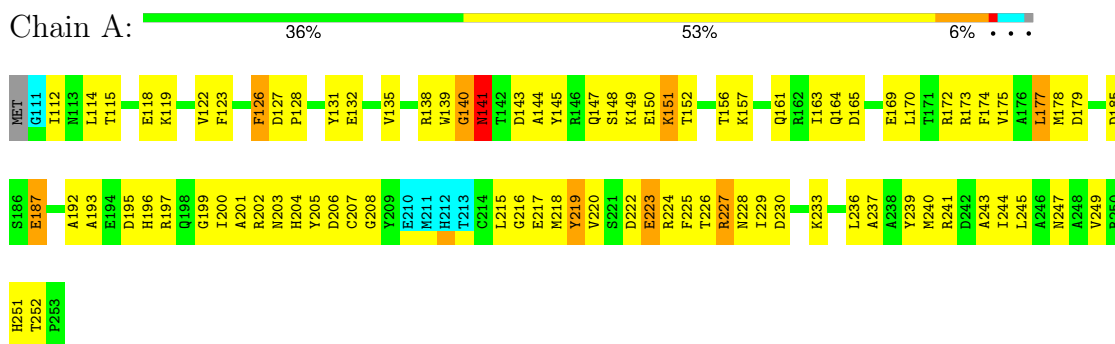


- Molecule 2: nosiheptide



4.2.7 Score per residue for model 7

- Molecule 1: HTH-type transcriptional activator TipA

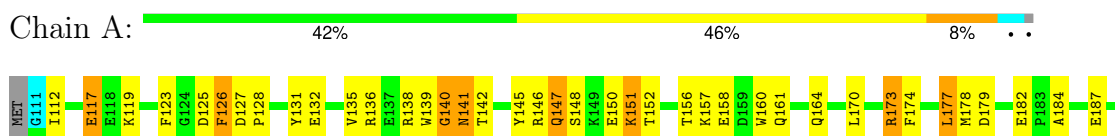


- Molecule 2: nosiheptide



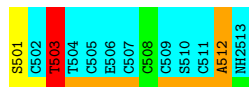
4.2.8 Score per residue for model 8

- Molecule 1: HTH-type transcriptional activator TipA





- Molecule 2: nosiheptide

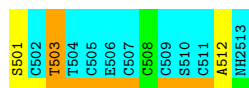


4.2.9 Score per residue for model 9

- Molecule 1: HTH-type transcriptional activator TipA

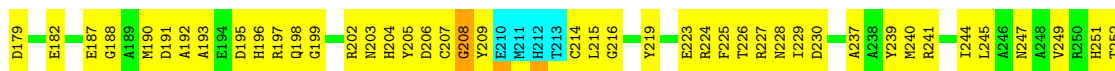
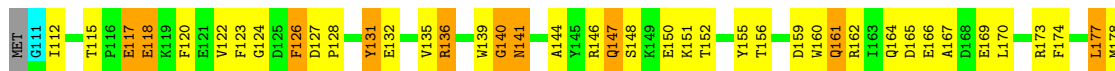
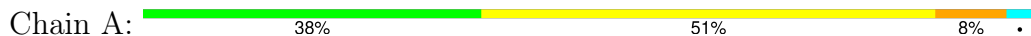


- Molecule 2: nosiheptide



4.2.10 Score per residue for model 10

- Molecule 1: HTH-type transcriptional activator TipA



- Molecule 2: nosiheptide



| |
|--------|
| S501 |
| C502 |
| T503 |
| T504 |
| C505 |
| E506 |
| C507 |
| C508 |
| C509 |
| S510 |
| C511 |
| A512 |
| HP2513 |

5 Refinement protocol and experimental data overview

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

Of the 100 calculated structures, 10 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 |
|---------------|--------------------|---------|
| Xplor-NIH | structure solution | 2.30 |
| Xplor-NIH | refinement | 2.30 |

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

| | |
|--|----------------|
| Chemical shift file(s) | working_cs.cif |
| Number of chemical shift lists | 1 |
| Total number of shifts | 1738 |
| Number of shifts mapped to atoms | 1737 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 1 |
| Number of shifts with mapping warnings | 0 |
| Assignment completeness (well-defined parts) | 89% |

6 Model quality i

6.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 3GL, DBU, MH6, NO1, BB9, NH2

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 | 0.27±0.00 | 0±0/1139 (0.0± 0.0%) | 0.47±0.01 | 0±0/1537 (0.0± 0.0%) |
| 2 | B | 2.65±0.03 | 1±0/16 (6.2± 0.0%) | 1.40±0.05 | 0±0/16 (3.1± 3.1%) |
| All | All | 0.41 | 10/11550 (0.1%) | 0.49 | 5/15530 (0.0%) |

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 |
|-----|-------|-----------|-----------|
| 2 | B | 0.2±0.4 | 0.0±0.0 |
| All | All | 2 | 0 |

All unique bond outliers are listed below.

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) | Models | |
|-----|-------|-----|------|-------|--------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 2 | B | 501 | SER | CA-CB | -10.29 | 1.37 | 1.52 | 1 | 10 |

All unique angle outliers are listed below.

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|---------|------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 2 | B | 501 | SER | CB-CA-C | 5.24 | 120.06 | 110.10 | 10 | 5 |

All unique chiral outliers are listed below.

| Mol | Chain | Res | Type | Atoms | Models (Total) |
|-----|-------|-----|------|-------|----------------|
| 2 | B | 501 | SER | CA | 2 |

There are no planarity outliers.

6.2 Too-close contacts

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 | 1116 | 1021 | 1020 | 99±8 |
| 2 | B | 20 | 15 | 16 | 1±1 |
| 3 | B | 13 | 9 | 7 | 2±2 |
| All | All | 11490 | 10450 | 10430 | 988 |

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 45.

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

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:174:PHE:CE1 | 1:A:192:ALA:HB1 | 0.97 | 1.94 | 7 | 10 |
| 1:A:159:ASP:O | 1:A:163:ILE:HD13 | 0.90 | 1.66 | 2 | 3 |
| 1:A:245:LEU:O | 1:A:249:VAL:HG23 | 0.87 | 1.70 | 7 | 4 |
| 1:A:230:ASP:OD1 | 1:A:237:ALA:HB2 | 0.82 | 1.73 | 3 | 3 |
| 1:A:118:GLU:OE1 | 1:A:118:GLU:N | 0.82 | 2.13 | 1 | 2 |
| 1:A:204:HIS:NE2 | 3:B:601:NO1:HB3C | 0.81 | 1.91 | 8 | 5 |
| 1:A:170:LEU:HD21 | 1:A:174:PHE:CE2 | 0.80 | 2.12 | 9 | 7 |
| 1:A:119:LYS:O | 1:A:123:PHE:N | 0.80 | 2.14 | 6 | 4 |
| 1:A:139:TRP:O | 1:A:141:ASN:N | 0.79 | 2.15 | 10 | 9 |
| 1:A:116:PRO:O | 1:A:120:PHE:CE2 | 0.79 | 2.34 | 1 | 1 |
| 1:A:138:ARG:NH1 | 1:A:139:TRP:CZ2 | 0.78 | 2.52 | 8 | 1 |
| 1:A:204:HIS:ND1 | 1:A:205:TYR:N | 0.77 | 2.32 | 5 | 4 |
| 1:A:144:ALA:HB1 | 1:A:205:TYR:CE2 | 0.76 | 2.15 | 7 | 6 |
| 1:A:198:GLN:O | 1:A:202:ARG:NH1 | 0.76 | 2.19 | 5 | 1 |
| 1:A:148:SER:O | 1:A:152:THR:HG22 | 0.75 | 1.82 | 2 | 10 |
| 1:A:204:HIS:ND1 | 1:A:205:TYR:CD1 | 0.75 | 2.54 | 9 | 3 |
| 1:A:199:GLY:O | 1:A:203:ASN:OD1 | 0.74 | 2.05 | 7 | 1 |
| 1:A:205:TYR:CE2 | 1:A:207:CYS:SG | 0.74 | 2.81 | 9 | 1 |
| 1:A:197:ARG:NH1 | 1:A:209:TYR:CD2 | 0.74 | 2.55 | 3 | 1 |
| 1:A:247:ASN:O | 1:A:251:HIS:ND1 | 0.73 | 2.20 | 10 | 10 |
| 1:A:225:PHE:O | 1:A:228:ASN:OD1 | 0.73 | 2.04 | 5 | 3 |
| 1:A:163:ILE:HG23 | 1:A:203:ASN:HD22 | 0.73 | 1.43 | 7 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:177:LEU:HD11 | 1:A:239:TYR:OH | 0.73 | 1.82 | 4 | 2 |
| 1:A:188:GLY:O | 1:A:191:ASP:OD1 | 0.72 | 2.08 | 5 | 6 |
| 1:A:233:LYS:NZ | 1:A:236:LEU:HD13 | 0.71 | 2.00 | 1 | 1 |
| 1:A:248:ALA:O | 1:A:252:THR:HG22 | 0.71 | 1.83 | 2 | 4 |
| 1:A:191:ASP:OD1 | 1:A:192:ALA:N | 0.70 | 2.25 | 1 | 4 |
| 1:A:145:TYR:CZ | 1:A:149:LYS:NZ | 0.70 | 2.60 | 7 | 1 |
| 1:A:205:TYR:CE1 | 1:A:207:CYS:SG | 0.70 | 2.84 | 4 | 3 |
| 1:A:203:ASN:O | 1:A:203:ASN:ND2 | 0.70 | 2.24 | 6 | 1 |
| 1:A:194:GLU:N | 1:A:194:GLU:OE1 | 0.70 | 2.25 | 8 | 1 |
| 1:A:233:LYS:HZ1 | 1:A:236:LEU:HD13 | 0.69 | 1.48 | 5 | 3 |
| 1:A:136:ARG:O | 1:A:140:GLY:CA | 0.69 | 2.40 | 2 | 9 |
| 1:A:200:ILE:O | 1:A:204:HIS:ND1 | 0.68 | 2.26 | 7 | 2 |
| 1:A:226:THR:HG23 | 1:A:237:ALA:CB | 0.68 | 2.19 | 8 | 10 |
| 1:A:219:TYR:OH | 1:A:240:MET:SD | 0.68 | 2.49 | 4 | 5 |
| 1:A:215:LEU:O | 1:A:219:TYR:N | 0.68 | 2.27 | 8 | 3 |
| 1:A:197:ARG:NH2 | 1:A:247:ASN:HD22 | 0.68 | 1.87 | 9 | 1 |
| 1:A:243:ALA:O | 1:A:247:ASN:ND2 | 0.68 | 2.27 | 7 | 1 |
| 1:A:163:ILE:HG23 | 1:A:203:ASN:ND2 | 0.67 | 2.04 | 7 | 1 |
| 1:A:140:GLY:O | 1:A:141:ASN:CG | 0.67 | 2.33 | 6 | 3 |
| 1:A:123:PHE:CZ | 1:A:126:PHE:CE1 | 0.66 | 2.82 | 6 | 1 |
| 1:A:130:GLN:NE2 | 1:A:131:TYR:CG | 0.66 | 2.63 | 2 | 1 |
| 1:A:197:ARG:NH1 | 1:A:209:TYR:CZ | 0.66 | 2.64 | 1 | 1 |
| 1:A:190:MET:SD | 1:A:194:GLU:OE2 | 0.66 | 2.54 | 5 | 2 |
| 1:A:193:ALA:HB3 | 1:A:247:ASN:ND2 | 0.66 | 2.05 | 7 | 2 |
| 1:A:122:VAL:O | 1:A:164:GLN:NE2 | 0.66 | 2.28 | 4 | 2 |
| 1:A:197:ARG:HE | 1:A:197:ARG:C | 0.66 | 1.94 | 5 | 1 |
| 1:A:197:ARG:NH1 | 1:A:208:GLY:C | 0.66 | 2.49 | 3 | 1 |
| 1:A:170:LEU:C | 1:A:170:LEU:HD23 | 0.66 | 2.11 | 8 | 10 |
| 1:A:223:GLU:OE1 | 1:A:223:GLU:N | 0.66 | 2.28 | 7 | 1 |
| 1:A:170:LEU:HD21 | 1:A:174:PHE:CZ | 0.66 | 2.26 | 3 | 4 |
| 1:A:197:ARG:HH21 | 1:A:247:ASN:ND2 | 0.66 | 1.88 | 9 | 1 |
| 1:A:190:MET:O | 1:A:194:GLU:OE1 | 0.65 | 2.15 | 8 | 2 |
| 1:A:130:GLN:NE2 | 1:A:131:TYR:CD1 | 0.65 | 2.64 | 2 | 1 |
| 1:A:203:ASN:OD1 | 1:A:204:HIS:ND1 | 0.65 | 2.29 | 3 | 1 |
| 1:A:233:LYS:HZ1 | 1:A:236:LEU:CD1 | 0.64 | 2.05 | 5 | 2 |
| 1:A:143:ASP:O | 1:A:147:GLN:NE2 | 0.64 | 2.29 | 2 | 1 |
| 1:A:144:ALA:HB1 | 1:A:205:TYR:CD2 | 0.64 | 2.28 | 7 | 2 |
| 1:A:155:TYR:CD2 | 1:A:159:ASP:OD2 | 0.64 | 2.50 | 3 | 1 |
| 1:A:145:TYR:CE2 | 1:A:149:LYS:NZ | 0.64 | 2.66 | 7 | 1 |
| 1:A:249:VAL:O | 1:A:252:THR:HG22 | 0.64 | 1.93 | 6 | 6 |
| 1:A:124:GLY:O | 1:A:125:ASP:CB | 0.64 | 2.46 | 6 | 4 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:122:VAL:HG13 | 1:A:123:PHE:CD2 | 0.64 | 2.28 | 2 | 4 |
| 1:A:147:GLN:OE1 | 1:A:147:GLN:O | 0.64 | 2.15 | 1 | 1 |
| 1:A:119:LYS:NZ | 1:A:127:ASP:OD1 | 0.64 | 2.31 | 8 | 1 |
| 1:A:202:ARG:HH11 | 1:A:202:ARG:HG2 | 0.63 | 1.53 | 5 | 1 |
| 1:A:112:ILE:CD1 | 1:A:160:TRP:HE1 | 0.63 | 2.06 | 3 | 8 |
| 1:A:199:GLY:O | 1:A:203:ASN:ND2 | 0.63 | 2.32 | 1 | 4 |
| 1:A:252:THR:HG23 | 1:A:252:THR:O | 0.63 | 1.92 | 1 | 1 |
| 1:A:173:ARG:HH22 | 1:A:195:ASP:CG | 0.63 | 1.96 | 2 | 1 |
| 1:A:204:HIS:CG | 1:A:205:TYR:H | 0.62 | 2.12 | 7 | 1 |
| 1:A:217:GLU:OE1 | 1:A:218:MET:N | 0.62 | 2.32 | 9 | 1 |
| 1:A:204:HIS:CG | 1:A:205:TYR:N | 0.62 | 2.67 | 7 | 1 |
| 1:A:205:TYR:O | 1:A:207:CYS:SG | 0.62 | 2.57 | 4 | 2 |
| 1:A:187:GLU:N | 1:A:187:GLU:OE1 | 0.62 | 2.32 | 9 | 2 |
| 1:A:140:GLY:O | 1:A:141:ASN:ND2 | 0.62 | 2.32 | 6 | 1 |
| 1:A:226:THR:HG22 | 1:A:230:ASP:OD2 | 0.62 | 1.93 | 5 | 4 |
| 1:A:194:GLU:OE1 | 1:A:247:ASN:ND2 | 0.62 | 2.31 | 5 | 1 |
| 1:A:123:PHE:CD1 | 1:A:164:GLN:NE2 | 0.62 | 2.68 | 7 | 3 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:HB2 | 0.62 | 1.55 | 1 | 1 |
| 1:A:204:HIS:CD2 | 3:B:601:NO1:CD1 | 0.62 | 2.83 | 6 | 4 |
| 1:A:148:SER:O | 1:A:152:THR:CG2 | 0.61 | 2.48 | 4 | 10 |
| 1:A:175:VAL:CG2 | 1:A:233:LYS:NZ | 0.61 | 2.63 | 1 | 1 |
| 1:A:144:ALA:HB1 | 1:A:205:TYR:CZ | 0.61 | 2.30 | 5 | 3 |
| 1:A:123:PHE:CD1 | 1:A:164:GLN:OE1 | 0.61 | 2.53 | 4 | 2 |
| 1:A:112:ILE:CD1 | 1:A:160:TRP:NE1 | 0.61 | 2.62 | 3 | 8 |
| 1:A:169:GLU:OE1 | 1:A:170:LEU:N | 0.61 | 2.33 | 9 | 4 |
| 1:A:195:ASP:O | 1:A:199:GLY:N | 0.61 | 2.33 | 9 | 3 |
| 1:A:197:ARG:NH1 | 1:A:209:TYR:CE1 | 0.61 | 2.67 | 1 | 3 |
| 1:A:174:PHE:O | 1:A:178:MET:HB2 | 0.61 | 1.95 | 8 | 6 |
| 1:A:175:VAL:CG2 | 1:A:233:LYS:HZ2 | 0.61 | 2.08 | 1 | 1 |
| 1:A:214:CYS:O | 1:A:218:MET:SD | 0.61 | 2.58 | 5 | 2 |
| 1:A:202:ARG:HH11 | 1:A:202:ARG:CG | 0.61 | 2.08 | 5 | 1 |
| 1:A:139:TRP:O | 1:A:141:ASN:OD1 | 0.61 | 2.19 | 1 | 3 |
| 1:A:158:GLU:N | 1:A:158:GLU:OE1 | 0.60 | 2.34 | 9 | 1 |
| 1:A:161:GLN:NE2 | 1:A:162:ARG:N | 0.60 | 2.49 | 2 | 1 |
| 1:A:161:GLN:NE2 | 1:A:161:GLN:C | 0.60 | 2.55 | 2 | 3 |
| 1:A:147:GLN:N | 1:A:147:GLN:OE1 | 0.60 | 2.35 | 8 | 4 |
| 1:A:224:ARG:O | 1:A:228:ASN:ND2 | 0.60 | 2.35 | 7 | 3 |
| 1:A:190:MET:SD | 1:A:191:ASP:N | 0.60 | 2.75 | 1 | 1 |
| 1:A:177:LEU:C | 1:A:177:LEU:HD12 | 0.60 | 2.18 | 5 | 8 |
| 1:A:127:ASP:O | 1:A:131:TYR:CD1 | 0.60 | 2.55 | 10 | 2 |
| 1:A:174:PHE:O | 1:A:178:MET:CB | 0.59 | 2.49 | 5 | 6 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:126:PHE:CD1 | 1:A:126:PHE:C | 0.59 | 2.75 | 6 | 8 |
| 1:A:141:ASN:O | 1:A:141:ASN:ND2 | 0.59 | 2.35 | 7 | 1 |
| 1:A:202:ARG:NH1 | 1:A:203:ASN:OD1 | 0.59 | 2.35 | 7 | 4 |
| 1:A:119:LYS:O | 1:A:123:PHE:HB2 | 0.59 | 1.97 | 9 | 3 |
| 1:A:195:ASP:OD1 | 1:A:196:HIS:N | 0.59 | 2.35 | 4 | 2 |
| 1:A:193:ALA:CB | 1:A:247:ASN:ND2 | 0.59 | 2.65 | 7 | 1 |
| 1:A:123:PHE:CE1 | 1:A:164:GLN:OE1 | 0.59 | 2.56 | 4 | 2 |
| 1:A:143:ASP:OD1 | 1:A:144:ALA:N | 0.59 | 2.36 | 7 | 1 |
| 1:A:204:HIS:NE2 | 3:B:601:NO1:CB | 0.59 | 2.66 | 8 | 4 |
| 1:A:204:HIS:NE2 | 3:B:601:NO1:CG | 0.59 | 2.65 | 6 | 3 |
| 1:A:197:ARG:NH1 | 1:A:207:CYS:SG | 0.59 | 2.76 | 6 | 1 |
| 1:A:161:GLN:NE2 | 1:A:165:ASP:OD2 | 0.59 | 2.36 | 1 | 1 |
| 1:A:120:PHE:CD2 | 1:A:124:GLY:O | 0.59 | 2.56 | 10 | 2 |
| 1:A:205:TYR:CD1 | 1:A:207:CYS:SG | 0.59 | 2.96 | 4 | 2 |
| 1:A:197:ARG:NH2 | 1:A:247:ASN:ND2 | 0.59 | 2.50 | 9 | 1 |
| 1:A:175:VAL:HG13 | 1:A:233:LYS:HZ1 | 0.59 | 1.57 | 7 | 1 |
| 1:A:179:ASP:O | 1:A:179:ASP:OD1 | 0.58 | 2.21 | 10 | 5 |
| 1:A:202:ARG:CB | 1:A:202:ARG:NH1 | 0.58 | 2.65 | 3 | 1 |
| 1:A:121:GLU:N | 1:A:121:GLU:OE1 | 0.58 | 2.36 | 2 | 1 |
| 1:A:193:ALA:O | 1:A:196:HIS:HB3 | 0.58 | 1.98 | 7 | 9 |
| 1:A:178:MET:SD | 1:A:239:TYR:CG | 0.58 | 2.96 | 4 | 4 |
| 1:A:125:ASP:O | 1:A:125:ASP:OD1 | 0.58 | 2.21 | 5 | 4 |
| 1:A:131:TYR:O | 1:A:135:VAL:HG23 | 0.58 | 1.98 | 8 | 1 |
| 1:A:215:LEU:C | 1:A:215:LEU:HD13 | 0.58 | 2.19 | 1 | 5 |
| 1:A:127:ASP:O | 1:A:131:TYR:CD2 | 0.58 | 2.57 | 8 | 3 |
| 1:A:202:ARG:HH11 | 1:A:202:ARG:HB2 | 0.58 | 1.58 | 3 | 1 |
| 1:A:203:ASN:OD1 | 1:A:204:HIS:CE1 | 0.58 | 2.56 | 3 | 1 |
| 1:A:200:ILE:O | 1:A:204:HIS:CE1 | 0.58 | 2.56 | 7 | 3 |
| 1:A:209:TYR:CZ | 1:A:251:HIS:O | 0.58 | 2.56 | 9 | 2 |
| 1:A:114:LEU:O | 1:A:119:LYS:NZ | 0.58 | 2.29 | 1 | 3 |
| 1:A:140:GLY:O | 1:A:141:ASN:CB | 0.58 | 2.52 | 6 | 3 |
| 1:A:175:VAL:HG22 | 1:A:233:LYS:NZ | 0.58 | 2.12 | 1 | 1 |
| 1:A:198:GLN:O | 1:A:198:GLN:OE1 | 0.58 | 2.22 | 8 | 1 |
| 1:A:244:ILE:HG23 | 1:A:245:LEU:N | 0.58 | 2.13 | 9 | 6 |
| 1:A:197:ARG:CZ | 1:A:207:CYS:SG | 0.58 | 2.92 | 6 | 1 |
| 1:A:247:ASN:OD1 | 1:A:251:HIS:CE1 | 0.57 | 2.56 | 4 | 7 |
| 1:A:205:TYR:CD2 | 1:A:207:CYS:SG | 0.57 | 2.97 | 9 | 1 |
| 1:A:230:ASP:OD1 | 1:A:237:ALA:N | 0.57 | 2.38 | 10 | 2 |
| 1:A:130:GLN:NE2 | 1:A:131:TYR:CD2 | 0.57 | 2.73 | 2 | 1 |
| 1:A:131:TYR:OH | 1:A:224:ARG:NH2 | 0.57 | 2.38 | 3 | 2 |
| 1:A:201:ALA:HA | 1:A:205:TYR:O | 0.57 | 1.99 | 6 | 3 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:219:TYR:OH | 1:A:229:ILE:HD13 | 0.57 | 2.00 | 9 | 2 |
| 1:A:197:ARG:NH1 | 1:A:208:GLY:O | 0.57 | 2.37 | 3 | 2 |
| 1:A:197:ARG:HH12 | 1:A:209:TYR:CA | 0.57 | 2.13 | 3 | 1 |
| 1:A:170:LEU:O | 1:A:174:PHE:CD1 | 0.57 | 2.58 | 5 | 4 |
| 1:A:209:TYR:CE2 | 1:A:251:HIS:O | 0.57 | 2.58 | 9 | 3 |
| 1:A:205:TYR:OH | 2:B:508:CYS:SG | 0.57 | 2.62 | 2 | 1 |
| 1:A:245:LEU:HD23 | 1:A:245:LEU:O | 0.57 | 1.99 | 5 | 5 |
| 1:A:173:ARG:NH2 | 1:A:195:ASP:CG | 0.56 | 2.57 | 4 | 2 |
| 1:A:206:ASP:O | 1:A:206:ASP:OD1 | 0.56 | 2.23 | 7 | 3 |
| 1:A:202:ARG:NH1 | 1:A:203:ASN:ND2 | 0.56 | 2.53 | 4 | 2 |
| 1:A:163:ILE:CD1 | 1:A:203:ASN:HD21 | 0.56 | 2.14 | 6 | 1 |
| 1:A:169:GLU:CD | 1:A:172:ARG:HH21 | 0.56 | 2.04 | 7 | 1 |
| 1:A:134:GLU:OE2 | 1:A:138:ARG:NH2 | 0.56 | 2.38 | 5 | 1 |
| 1:A:135:VAL:HG11 | 1:A:145:TYR:CE1 | 0.56 | 2.35 | 7 | 3 |
| 1:A:204:HIS:CD2 | 3:B:601:NO1:HB3C | 0.56 | 2.36 | 3 | 1 |
| 1:A:135:VAL:HG11 | 2:B:503:THR:N | 0.56 | 2.16 | 4 | 2 |
| 1:A:151:LYS:HZ2 | 1:A:204:HIS:C | 0.56 | 2.03 | 9 | 1 |
| 1:A:132:GLU:OE2 | 1:A:145:TYR:OH | 0.56 | 2.23 | 1 | 1 |
| 1:A:115:THR:OG1 | 1:A:118:GLU:OE1 | 0.56 | 2.24 | 1 | 2 |
| 1:A:118:GLU:OE2 | 1:A:157:LYS:NZ | 0.55 | 2.38 | 5 | 1 |
| 1:A:126:PHE:O | 1:A:126:PHE:CD1 | 0.55 | 2.59 | 8 | 3 |
| 1:A:136:ARG:O | 1:A:140:GLY:HA3 | 0.55 | 2.00 | 2 | 6 |
| 1:A:144:ALA:O | 1:A:205:TYR:CD2 | 0.55 | 2.60 | 2 | 1 |
| 1:A:130:GLN:NE2 | 1:A:131:TYR:CZ | 0.55 | 2.75 | 6 | 1 |
| 1:A:214:CYS:SG | 1:A:218:MET:SD | 0.55 | 3.04 | 2 | 1 |
| 1:A:198:GLN:N | 1:A:198:GLN:OE1 | 0.55 | 2.39 | 3 | 2 |
| 1:A:119:LYS:O | 1:A:123:PHE:CB | 0.55 | 2.54 | 6 | 1 |
| 1:A:201:ALA:HB2 | 1:A:207:CYS:SG | 0.55 | 2.41 | 6 | 1 |
| 1:A:194:GLU:OE2 | 1:A:251:HIS:NE2 | 0.55 | 2.39 | 8 | 1 |
| 1:A:127:ASP:O | 1:A:130:GLN:NE2 | 0.55 | 2.37 | 2 | 1 |
| 1:A:204:HIS:CE1 | 3:B:601:NO1:HB3C | 0.55 | 2.37 | 6 | 2 |
| 1:A:173:ARG:NH1 | 1:A:195:ASP:OD2 | 0.54 | 2.40 | 2 | 1 |
| 1:A:145:TYR:OH | 1:A:149:LYS:NZ | 0.54 | 2.40 | 7 | 1 |
| 1:A:230:ASP:O | 1:A:230:ASP:OD1 | 0.54 | 2.25 | 1 | 1 |
| 1:A:123:PHE:CE1 | 1:A:126:PHE:CD1 | 0.54 | 2.96 | 6 | 1 |
| 1:A:215:LEU:HD13 | 1:A:215:LEU:O | 0.54 | 2.01 | 2 | 2 |
| 1:A:190:MET:CE | 1:A:194:GLU:OE2 | 0.54 | 2.56 | 5 | 1 |
| 1:A:151:LYS:NZ | 1:A:151:LYS:CB | 0.54 | 2.70 | 6 | 3 |
| 1:A:197:ARG:NH2 | 1:A:208:GLY:O | 0.54 | 2.40 | 7 | 1 |
| 1:A:161:GLN:HE21 | 1:A:165:ASP:CG | 0.54 | 2.06 | 7 | 2 |
| 1:A:227:ARG:HA | 1:A:230:ASP:OD1 | 0.54 | 2.02 | 9 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:128:PRO:O | 1:A:132:GLU:N | 0.54 | 2.40 | 8 | 10 |
| 1:A:162:ARG:NH2 | 1:A:165:ASP:OD2 | 0.54 | 2.40 | 4 | 2 |
| 1:A:137:GLU:OE1 | 1:A:137:GLU:C | 0.54 | 2.46 | 1 | 1 |
| 1:A:204:HIS:CD2 | 3:B:601:NO1:C | 0.54 | 2.91 | 10 | 2 |
| 1:A:142:THR:O | 1:A:146:ARG:NE | 0.54 | 2.40 | 8 | 1 |
| 1:A:127:ASP:OD1 | 1:A:131:TYR:CE1 | 0.54 | 2.60 | 5 | 1 |
| 1:A:194:GLU:OE1 | 1:A:247:ASN:OD1 | 0.54 | 2.26 | 8 | 1 |
| 1:A:192:ALA:O | 1:A:195:ASP:CG | 0.53 | 2.47 | 4 | 2 |
| 1:A:216:GLY:O | 1:A:219:TYR:CD1 | 0.53 | 2.61 | 7 | 1 |
| 1:A:173:ARG:NH2 | 1:A:195:ASP:OD2 | 0.53 | 2.41 | 3 | 2 |
| 1:A:151:LYS:CE | 1:A:155:TYR:OH | 0.53 | 2.57 | 4 | 2 |
| 1:A:197:ARG:NH1 | 1:A:209:TYR:OH | 0.53 | 2.40 | 1 | 1 |
| 1:A:197:ARG:HH12 | 1:A:209:TYR:N | 0.53 | 1.99 | 3 | 1 |
| 1:A:244:ILE:CG2 | 1:A:245:LEU:N | 0.53 | 2.71 | 8 | 7 |
| 1:A:193:ALA:HB1 | 1:A:244:ILE:HD12 | 0.53 | 1.81 | 1 | 2 |
| 1:A:197:ARG:NH2 | 1:A:207:CYS:O | 0.53 | 2.42 | 2 | 1 |
| 1:A:132:GLU:OE2 | 1:A:149:LYS:NZ | 0.53 | 2.42 | 9 | 1 |
| 1:A:198:GLN:CG | 1:A:199:GLY:N | 0.53 | 2.71 | 5 | 3 |
| 1:A:123:PHE:CE2 | 1:A:126:PHE:CE1 | 0.53 | 2.97 | 6 | 1 |
| 1:A:226:THR:O | 1:A:230:ASP:OD2 | 0.53 | 2.26 | 5 | 4 |
| 1:A:214:CYS:SG | 2:B:512:ALA:O | 0.52 | 2.67 | 8 | 1 |
| 1:A:170:LEU:HD23 | 1:A:170:LEU:O | 0.52 | 2.05 | 2 | 10 |
| 1:A:161:GLN:HE21 | 1:A:162:ARG:N | 0.52 | 2.03 | 2 | 1 |
| 1:A:201:ALA:CA | 1:A:205:TYR:O | 0.52 | 2.57 | 2 | 1 |
| 1:A:215:LEU:O | 1:A:215:LEU:HD13 | 0.52 | 2.04 | 6 | 2 |
| 1:A:163:ILE:CG2 | 1:A:203:ASN:HD22 | 0.52 | 2.15 | 7 | 1 |
| 1:A:169:GLU:HA | 1:A:172:ARG:HE | 0.52 | 1.63 | 7 | 1 |
| 1:A:122:VAL:CA | 1:A:164:GLN:HE22 | 0.52 | 2.18 | 10 | 2 |
| 1:A:112:ILE:HD13 | 1:A:160:TRP:HE1 | 0.52 | 1.64 | 1 | 8 |
| 1:A:194:GLU:OE1 | 1:A:194:GLU:N | 0.52 | 2.43 | 5 | 1 |
| 1:A:170:LEU:HA | 1:A:173:ARG:NE | 0.52 | 2.20 | 7 | 4 |
| 1:A:230:ASP:OD2 | 1:A:235:GLY:N | 0.52 | 2.41 | 1 | 1 |
| 1:A:174:PHE:O | 1:A:178:MET:N | 0.52 | 2.38 | 3 | 4 |
| 1:A:219:TYR:CE1 | 1:A:229:ILE:HD13 | 0.52 | 2.40 | 8 | 1 |
| 1:A:116:PRO:N | 1:A:119:LYS:HZ3 | 0.52 | 2.02 | 1 | 1 |
| 1:A:169:GLU:OE2 | 1:A:172:ARG:NH2 | 0.52 | 2.43 | 7 | 1 |
| 1:A:141:ASN:O | 1:A:146:ARG:NH1 | 0.52 | 2.43 | 1 | 1 |
| 1:A:225:PHE:HA | 1:A:228:ASN:ND2 | 0.52 | 2.19 | 1 | 2 |
| 1:A:241:ARG:CD | 1:A:241:ARG:C | 0.52 | 2.78 | 1 | 1 |
| 1:A:204:HIS:CD2 | 2:B:508:CYS:CB | 0.52 | 2.93 | 7 | 1 |
| 1:A:190:MET:SD | 1:A:190:MET:C | 0.51 | 2.88 | 1 | 3 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:241:ARG:CZ | 1:A:242:ASP:OD1 | 0.51 | 2.58 | 6 | 2 |
| 1:A:215:LEU:O | 1:A:219:TYR:HB2 | 0.51 | 2.05 | 6 | 1 |
| 1:A:215:LEU:HD22 | 1:A:218:MET:SD | 0.51 | 2.45 | 6 | 1 |
| 1:A:248:ALA:O | 1:A:252:THR:CG2 | 0.51 | 2.57 | 1 | 4 |
| 1:A:169:GLU:OE1 | 1:A:172:ARG:NE | 0.51 | 2.43 | 7 | 1 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:CB | 0.51 | 2.18 | 1 | 1 |
| 1:A:193:ALA:HB3 | 1:A:247:ASN:HD22 | 0.51 | 1.66 | 3 | 1 |
| 1:A:122:VAL:HG23 | 1:A:123:PHE:CD2 | 0.51 | 2.40 | 10 | 2 |
| 1:A:216:GLY:O | 1:A:219:TYR:CB | 0.51 | 2.59 | 4 | 4 |
| 1:A:187:GLU:O | 1:A:191:ASP:OD1 | 0.51 | 2.29 | 4 | 3 |
| 1:A:219:TYR:OH | 1:A:229:ILE:HG21 | 0.51 | 2.06 | 9 | 1 |
| 1:A:187:GLU:OE1 | 1:A:190:MET:SD | 0.51 | 2.68 | 8 | 1 |
| 1:A:251:HIS:ND1 | 1:A:251:HIS:N | 0.51 | 2.59 | 1 | 1 |
| 1:A:130:GLN:NE2 | 1:A:131:TYR:CE1 | 0.51 | 2.77 | 2 | 2 |
| 1:A:226:THR:HG23 | 1:A:237:ALA:HB3 | 0.51 | 1.82 | 6 | 2 |
| 1:A:130:GLN:OE1 | 1:A:131:TYR:CE1 | 0.51 | 2.63 | 2 | 1 |
| 1:A:117:GLU:OE1 | 1:A:117:GLU:O | 0.51 | 2.29 | 8 | 3 |
| 1:A:123:PHE:CZ | 1:A:126:PHE:CD1 | 0.51 | 2.98 | 6 | 1 |
| 1:A:175:VAL:HG22 | 1:A:233:LYS:HZ2 | 0.51 | 1.65 | 1 | 1 |
| 1:A:182:GLU:OE2 | 1:A:189:ALA:N | 0.51 | 2.44 | 5 | 1 |
| 1:A:202:ARG:NE | 1:A:202:ARG:HA | 0.51 | 2.20 | 9 | 1 |
| 1:A:200:ILE:HG12 | 1:A:204:HIS:NE2 | 0.50 | 2.21 | 9 | 4 |
| 1:A:202:ARG:NH1 | 1:A:203:ASN:CG | 0.50 | 2.64 | 4 | 2 |
| 1:A:194:GLU:OE2 | 1:A:251:HIS:CE1 | 0.50 | 2.64 | 8 | 1 |
| 1:A:217:GLU:CB | 1:A:241:ARG:NH1 | 0.50 | 2.75 | 1 | 1 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:HD13 | 0.50 | 1.66 | 1 | 1 |
| 1:A:162:ARG:NH2 | 1:A:165:ASP:CG | 0.50 | 2.65 | 4 | 2 |
| 1:A:214:CYS:SG | 1:A:218:MET:HE3 | 0.50 | 2.46 | 5 | 1 |
| 1:A:126:PHE:CD1 | 1:A:126:PHE:O | 0.50 | 2.64 | 9 | 6 |
| 1:A:178:MET:HG2 | 1:A:239:TYR:CD2 | 0.50 | 2.40 | 10 | 2 |
| 1:A:131:TYR:OH | 1:A:224:ARG:CZ | 0.50 | 2.60 | 3 | 1 |
| 1:A:219:TYR:O | 1:A:222:ASP:OD1 | 0.50 | 2.30 | 7 | 1 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:CG | 0.50 | 2.18 | 1 | 1 |
| 1:A:130:GLN:OE1 | 1:A:131:TYR:CD1 | 0.50 | 2.63 | 2 | 1 |
| 1:A:139:TRP:CD2 | 2:B:501:SER:CB | 0.50 | 2.95 | 7 | 1 |
| 1:A:133:GLU:CB | 1:A:136:ARG:HH12 | 0.50 | 2.19 | 5 | 1 |
| 1:A:202:ARG:CZ | 1:A:203:ASN:OD1 | 0.50 | 2.59 | 7 | 1 |
| 1:A:116:PRO:O | 1:A:120:PHE:CZ | 0.49 | 2.64 | 1 | 1 |
| 1:A:147:GLN:O | 1:A:150:GLU:HB3 | 0.49 | 2.07 | 1 | 4 |
| 1:A:156:THR:HG22 | 1:A:157:LYS:H | 0.49 | 1.65 | 7 | 1 |
| 1:A:204:HIS:CE1 | 1:A:207:CYS:SG | 0.49 | 3.05 | 7 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:112:ILE:HD11 | 1:A:160:TRP:CZ2 | 0.49 | 2.43 | 10 | 5 |
| 1:A:164:GLN:O | 1:A:168:ASP:OD1 | 0.49 | 2.31 | 9 | 2 |
| 1:A:138:ARG:NH1 | 1:A:139:TRP:CH2 | 0.49 | 2.81 | 8 | 1 |
| 1:A:122:VAL:HG22 | 1:A:122:VAL:O | 0.49 | 2.06 | 9 | 1 |
| 1:A:117:GLU:OE1 | 1:A:117:GLU:C | 0.49 | 2.50 | 4 | 3 |
| 1:A:178:MET:SD | 1:A:236:LEU:HD13 | 0.49 | 2.48 | 7 | 1 |
| 1:A:175:VAL:HG13 | 1:A:179:ASP:OD2 | 0.49 | 2.07 | 1 | 2 |
| 1:A:222:ASP:O | 1:A:224:ARG:N | 0.49 | 2.45 | 5 | 2 |
| 1:A:233:LYS:NZ | 1:A:236:LEU:HD22 | 0.49 | 2.23 | 1 | 1 |
| 1:A:169:GLU:OE1 | 1:A:169:GLU:C | 0.49 | 2.51 | 4 | 4 |
| 1:A:157:LYS:NZ | 1:A:161:GLN:OE1 | 0.49 | 2.45 | 8 | 1 |
| 1:A:151:LYS:CB | 1:A:151:LYS:HZ3 | 0.49 | 2.21 | 6 | 2 |
| 1:A:177:LEU:HD11 | 1:A:239:TYR:CZ | 0.49 | 2.42 | 4 | 2 |
| 1:A:227:ARG:C | 1:A:227:ARG:HE | 0.49 | 2.11 | 7 | 1 |
| 1:A:197:ARG:CB | 1:A:197:ARG:NH1 | 0.49 | 2.76 | 9 | 1 |
| 1:A:137:GLU:OE1 | 1:A:137:GLU:O | 0.48 | 2.31 | 1 | 1 |
| 1:A:179:ASP:N | 1:A:179:ASP:OD1 | 0.48 | 2.45 | 1 | 1 |
| 1:A:230:ASP:OD2 | 1:A:233:LYS:O | 0.48 | 2.30 | 1 | 1 |
| 1:A:209:TYR:CE1 | 1:A:251:HIS:HB3 | 0.48 | 2.43 | 8 | 4 |
| 1:A:115:THR:OG1 | 1:A:118:GLU:CG | 0.48 | 2.61 | 6 | 1 |
| 1:A:230:ASP:CG | 1:A:233:LYS:O | 0.48 | 2.51 | 1 | 1 |
| 1:A:163:ILE:HD13 | 1:A:203:ASN:HD21 | 0.48 | 1.68 | 6 | 1 |
| 1:A:219:TYR:OH | 1:A:240:MET:CB | 0.48 | 2.61 | 3 | 2 |
| 1:A:202:ARG:NH1 | 1:A:202:ARG:CG | 0.48 | 2.73 | 5 | 1 |
| 1:A:185:ASP:OD1 | 1:A:185:ASP:O | 0.48 | 2.31 | 7 | 2 |
| 1:A:147:GLN:HE21 | 1:A:147:GLN:H | 0.48 | 1.52 | 2 | 1 |
| 1:A:224:ARG:O | 1:A:228:ASN:OD1 | 0.48 | 2.32 | 2 | 3 |
| 1:A:197:ARG:CZ | 1:A:209:TYR:CD2 | 0.48 | 2.96 | 3 | 1 |
| 1:A:202:ARG:NH1 | 1:A:202:ARG:HB2 | 0.48 | 2.21 | 3 | 1 |
| 1:A:175:VAL:HG13 | 1:A:233:LYS:NZ | 0.48 | 2.21 | 7 | 1 |
| 1:A:204:HIS:CD2 | 1:A:205:TYR:CE2 | 0.48 | 3.02 | 7 | 1 |
| 1:A:123:PHE:CE1 | 1:A:164:GLN:NE2 | 0.48 | 2.82 | 7 | 1 |
| 1:A:169:GLU:CD | 1:A:172:ARG:NH2 | 0.48 | 2.67 | 7 | 1 |
| 1:A:202:ARG:HG3 | 1:A:202:ARG:HH11 | 0.48 | 1.68 | 1 | 1 |
| 1:A:223:GLU:N | 1:A:223:GLU:CD | 0.48 | 2.67 | 9 | 1 |
| 1:A:252:THR:O | 1:A:252:THR:CG2 | 0.48 | 2.62 | 1 | 1 |
| 1:A:197:ARG:CZ | 1:A:207:CYS:O | 0.48 | 2.61 | 2 | 1 |
| 1:A:223:GLU:OE1 | 1:A:223:GLU:C | 0.48 | 2.53 | 2 | 1 |
| 1:A:148:SER:O | 1:A:152:THR:CB | 0.47 | 2.62 | 10 | 2 |
| 1:A:151:LYS:NZ | 1:A:204:HIS:C | 0.47 | 2.67 | 9 | 1 |
| 1:A:227:ARG:CB | 1:A:227:ARG:NH1 | 0.47 | 2.77 | 4 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:142:THR:C | 1:A:146:ARG:NH1 | 0.47 | 2.68 | 1 | 1 |
| 1:A:197:ARG:O | 1:A:201:ALA:CB | 0.47 | 2.62 | 3 | 2 |
| 1:A:204:HIS:ND1 | 1:A:205:TYR:CD2 | 0.47 | 2.83 | 5 | 1 |
| 1:A:209:TYR:CE1 | 1:A:251:HIS:CB | 0.47 | 2.97 | 8 | 2 |
| 1:A:142:THR:C | 1:A:146:ARG:HE | 0.47 | 2.13 | 8 | 1 |
| 1:A:118:GLU:O | 1:A:122:VAL:HG12 | 0.47 | 2.09 | 6 | 1 |
| 1:A:247:ASN:OD1 | 1:A:251:HIS:NE2 | 0.47 | 2.48 | 1 | 1 |
| 1:A:201:ALA:O | 1:A:205:TYR:O | 0.47 | 2.33 | 2 | 2 |
| 1:A:202:ARG:CB | 1:A:202:ARG:HH11 | 0.47 | 2.23 | 3 | 1 |
| 1:A:177:LEU:HD13 | 1:A:182:GLU:OE2 | 0.47 | 2.09 | 4 | 4 |
| 1:A:119:LYS:O | 1:A:123:PHE:CA | 0.47 | 2.61 | 6 | 1 |
| 1:A:142:THR:HG23 | 1:A:145:TYR:CB | 0.47 | 2.40 | 6 | 2 |
| 1:A:200:ILE:CG2 | 1:A:201:ALA:N | 0.47 | 2.77 | 7 | 1 |
| 1:A:217:GLU:O | 1:A:220:VAL:CG1 | 0.47 | 2.62 | 7 | 1 |
| 1:A:223:GLU:CD | 1:A:223:GLU:H | 0.47 | 2.12 | 9 | 1 |
| 1:A:124:GLY:O | 1:A:125:ASP:CG | 0.47 | 2.53 | 1 | 2 |
| 1:A:215:LEU:HD22 | 1:A:218:MET:CG | 0.47 | 2.40 | 6 | 1 |
| 1:A:184:ALA:HB3 | 1:A:242:ASP:OD2 | 0.47 | 2.10 | 8 | 1 |
| 1:A:117:GLU:O | 1:A:121:GLU:OE2 | 0.47 | 2.32 | 2 | 1 |
| 1:A:192:ALA:O | 1:A:195:ASP:OD2 | 0.47 | 2.33 | 4 | 2 |
| 1:A:239:TYR:C | 1:A:239:TYR:CD1 | 0.47 | 2.88 | 4 | 2 |
| 1:A:214:CYS:SG | 1:A:218:MET:CE | 0.47 | 3.03 | 5 | 1 |
| 1:A:119:LYS:NZ | 1:A:128:PRO:HD2 | 0.46 | 2.25 | 3 | 1 |
| 1:A:207:CYS:O | 1:A:208:GLY:O | 0.46 | 2.34 | 4 | 2 |
| 1:A:124:GLY:O | 1:A:125:ASP:HB2 | 0.46 | 2.10 | 3 | 2 |
| 1:A:217:GLU:O | 1:A:220:VAL:HG12 | 0.46 | 2.11 | 7 | 2 |
| 1:A:166:GLU:OE1 | 1:A:166:GLU:C | 0.46 | 2.54 | 4 | 2 |
| 1:A:222:ASP:OD1 | 1:A:222:ASP:O | 0.46 | 2.34 | 7 | 1 |
| 1:A:139:TRP:O | 1:A:140:GLY:C | 0.46 | 2.54 | 6 | 7 |
| 1:A:202:ARG:HB3 | 1:A:202:ARG:CZ | 0.46 | 2.40 | 5 | 1 |
| 1:A:139:TRP:C | 1:A:141:ASN:N | 0.46 | 2.68 | 4 | 4 |
| 1:A:131:TYR:N | 1:A:131:TYR:CD1 | 0.46 | 2.84 | 1 | 3 |
| 1:A:170:LEU:C | 1:A:170:LEU:CD2 | 0.46 | 2.83 | 10 | 7 |
| 1:A:124:GLY:O | 1:A:125:ASP:OD2 | 0.46 | 2.34 | 3 | 1 |
| 1:A:141:ASN:O | 1:A:141:ASN:CG | 0.46 | 2.54 | 3 | 1 |
| 1:A:197:ARG:HG3 | 1:A:198:GLN:N | 0.46 | 2.26 | 1 | 4 |
| 1:A:219:TYR:OH | 1:A:240:MET:HB2 | 0.46 | 2.11 | 7 | 2 |
| 1:A:146:ARG:O | 1:A:150:GLU:HB2 | 0.46 | 2.11 | 4 | 2 |
| 1:A:161:GLN:O | 1:A:165:ASP:OD1 | 0.46 | 2.34 | 7 | 1 |
| 1:A:178:MET:SD | 1:A:239:TYR:CB | 0.46 | 3.04 | 10 | 3 |
| 1:A:249:VAL:HG12 | 1:A:250:ARG:NH2 | 0.45 | 2.26 | 1 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:173:ARG:HH22 | 1:A:195:ASP:CB | 0.45 | 2.23 | 2 | 1 |
| 1:A:178:MET:CE | 1:A:233:LYS:NZ | 0.45 | 2.79 | 5 | 2 |
| 1:A:156:THR:HG22 | 1:A:159:ASP:OD2 | 0.45 | 2.11 | 4 | 2 |
| 1:A:140:GLY:O | 1:A:141:ASN:HB2 | 0.45 | 2.11 | 3 | 1 |
| 1:A:124:GLY:O | 1:A:125:ASP:HB3 | 0.45 | 2.10 | 6 | 2 |
| 1:A:140:GLY:O | 1:A:141:ASN:HB3 | 0.45 | 2.12 | 2 | 1 |
| 1:A:147:GLN:HE21 | 1:A:147:GLN:N | 0.45 | 2.10 | 2 | 1 |
| 1:A:113:ASN:C | 1:A:113:ASN:HD22 | 0.45 | 2.15 | 9 | 2 |
| 1:A:209:TYR:CE2 | 1:A:251:HIS:CB | 0.45 | 2.98 | 3 | 1 |
| 1:A:163:ILE:CD1 | 1:A:203:ASN:ND2 | 0.45 | 2.80 | 6 | 1 |
| 1:A:173:ARG:CB | 1:A:173:ARG:NH1 | 0.45 | 2.80 | 8 | 2 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:CD1 | 0.45 | 2.25 | 1 | 1 |
| 1:A:112:ILE:CG2 | 1:A:114:LEU:HD12 | 0.45 | 2.42 | 7 | 1 |
| 1:A:178:MET:C | 1:A:178:MET:SD | 0.45 | 2.95 | 1 | 3 |
| 1:A:225:PHE:HA | 1:A:228:ASN:OD1 | 0.45 | 2.12 | 3 | 1 |
| 1:A:249:VAL:O | 1:A:252:THR:CG2 | 0.45 | 2.65 | 6 | 3 |
| 1:A:151:LYS:NZ | 1:A:203:ASN:O | 0.45 | 2.39 | 3 | 1 |
| 1:A:127:ASP:O | 1:A:131:TYR:HD1 | 0.45 | 1.94 | 4 | 2 |
| 1:A:127:ASP:OD1 | 1:A:127:ASP:O | 0.45 | 2.34 | 5 | 1 |
| 1:A:217:GLU:O | 1:A:220:VAL:HG22 | 0.45 | 2.12 | 5 | 1 |
| 1:A:204:HIS:CD2 | 1:A:205:TYR:CD2 | 0.45 | 3.05 | 7 | 1 |
| 1:A:122:VAL:O | 1:A:122:VAL:CG2 | 0.45 | 2.65 | 9 | 1 |
| 1:A:123:PHE:CD1 | 1:A:126:PHE:CD1 | 0.45 | 3.05 | 6 | 1 |
| 1:A:113:ASN:C | 1:A:113:ASN:ND2 | 0.44 | 2.71 | 3 | 2 |
| 1:A:134:GLU:OE2 | 1:A:138:ARG:CZ | 0.44 | 2.65 | 3 | 1 |
| 1:A:230:ASP:C | 1:A:230:ASP:OD1 | 0.44 | 2.55 | 7 | 1 |
| 1:A:184:ALA:CB | 1:A:242:ASP:OD1 | 0.44 | 2.65 | 2 | 1 |
| 1:A:203:ASN:N | 1:A:203:ASN:HD22 | 0.44 | 2.09 | 2 | 3 |
| 1:A:170:LEU:CD2 | 1:A:174:PHE:CZ | 0.44 | 3.00 | 3 | 1 |
| 1:A:117:GLU:O | 1:A:121:GLU:HG2 | 0.44 | 2.13 | 9 | 1 |
| 1:A:194:GLU:O | 1:A:198:GLN:CD | 0.44 | 2.56 | 2 | 1 |
| 1:A:115:THR:CG2 | 1:A:118:GLU:OE1 | 0.44 | 2.66 | 4 | 2 |
| 1:A:115:THR:O | 1:A:119:LYS:CD | 0.44 | 2.66 | 5 | 1 |
| 1:A:205:TYR:O | 1:A:206:ASP:C | 0.44 | 2.55 | 10 | 2 |
| 1:A:178:MET:CG | 1:A:239:TYR:CG | 0.44 | 3.00 | 9 | 1 |
| 1:A:163:ILE:O | 1:A:166:GLU:N | 0.44 | 2.51 | 6 | 2 |
| 1:A:147:GLN:NE2 | 1:A:147:GLN:N | 0.44 | 2.66 | 2 | 1 |
| 1:A:203:ASN:N | 1:A:203:ASN:ND2 | 0.44 | 2.64 | 2 | 2 |
| 1:A:241:ARG:HD2 | 1:A:241:ARG:C | 0.44 | 2.32 | 2 | 4 |
| 1:A:196:HIS:O | 1:A:200:ILE:HG22 | 0.44 | 2.12 | 3 | 1 |
| 1:A:205:TYR:OH | 2:B:508:CYS:HB2 | 0.44 | 2.13 | 2 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:163:ILE:CG2 | 1:A:203:ASN:OD1 | 0.44 | 2.66 | 6 | 1 |
| 1:A:200:ILE:HA | 1:A:203:ASN:OD1 | 0.44 | 2.12 | 3 | 1 |
| 1:A:204:HIS:NE2 | 1:A:205:TYR:CE1 | 0.44 | 2.85 | 7 | 1 |
| 1:A:115:THR:O | 1:A:118:GLU:N | 0.44 | 2.51 | 3 | 2 |
| 1:A:161:GLN:C | 1:A:161:GLN:HE21 | 0.44 | 2.16 | 10 | 2 |
| 1:A:151:LYS:CG | 1:A:152:THR:N | 0.44 | 2.80 | 7 | 4 |
| 1:A:130:GLN:CD | 1:A:131:TYR:CD1 | 0.44 | 2.91 | 2 | 1 |
| 1:A:217:GLU:OE1 | 1:A:218:MET:CG | 0.44 | 2.66 | 9 | 1 |
| 1:A:151:LYS:CD | 1:A:204:HIS:O | 0.43 | 2.66 | 9 | 2 |
| 1:A:223:GLU:H | 1:A:223:GLU:CD | 0.43 | 2.16 | 10 | 2 |
| 1:A:130:GLN:O | 1:A:133:GLU:OE2 | 0.43 | 2.35 | 3 | 1 |
| 1:A:209:TYR:CE2 | 1:A:251:HIS:HB3 | 0.43 | 2.48 | 3 | 1 |
| 1:A:177:LEU:HD12 | 1:A:178:MET:N | 0.43 | 2.27 | 5 | 1 |
| 1:A:217:GLU:O | 1:A:220:VAL:CG2 | 0.43 | 2.66 | 5 | 1 |
| 1:A:147:GLN:OE1 | 1:A:150:GLU:OE1 | 0.43 | 2.36 | 3 | 1 |
| 1:A:225:PHE:C | 1:A:228:ASN:OD1 | 0.43 | 2.57 | 8 | 2 |
| 1:A:202:ARG:NH1 | 1:A:202:ARG:N | 0.43 | 2.67 | 5 | 1 |
| 1:A:222:ASP:OD2 | 1:A:225:PHE:CD1 | 0.43 | 2.71 | 7 | 1 |
| 1:A:226:THR:O | 1:A:230:ASP:OD1 | 0.43 | 2.36 | 9 | 1 |
| 1:A:194:GLU:O | 1:A:198:GLN:NE2 | 0.43 | 2.51 | 2 | 1 |
| 1:A:151:LYS:NZ | 1:A:151:LYS:HB2 | 0.43 | 2.29 | 6 | 1 |
| 1:A:223:GLU:O | 1:A:227:ARG:CB | 0.43 | 2.67 | 3 | 1 |
| 1:A:151:LYS:HE2 | 1:A:155:TYR:OH | 0.43 | 2.13 | 5 | 1 |
| 1:A:175:VAL:O | 1:A:179:ASP:OD1 | 0.43 | 2.37 | 6 | 1 |
| 1:A:197:ARG:HH22 | 1:A:208:GLY:C | 0.43 | 2.17 | 8 | 1 |
| 1:A:178:MET:HG2 | 1:A:239:TYR:CD1 | 0.43 | 2.49 | 9 | 2 |
| 1:A:163:ILE:N | 1:A:163:ILE:CD1 | 0.43 | 2.81 | 5 | 1 |
| 1:A:247:ASN:OD1 | 1:A:247:ASN:C | 0.43 | 2.57 | 5 | 1 |
| 1:A:122:VAL:HG13 | 1:A:123:PHE:N | 0.43 | 2.29 | 7 | 1 |
| 1:A:217:GLU:OE1 | 1:A:218:MET:HG3 | 0.43 | 2.14 | 9 | 1 |
| 1:A:217:GLU:CB | 1:A:241:ARG:HH12 | 0.43 | 2.27 | 1 | 1 |
| 1:A:239:TYR:O | 1:A:242:ASP:OD1 | 0.43 | 2.37 | 2 | 1 |
| 1:A:215:LEU:HA | 1:A:218:MET:HG2 | 0.43 | 1.91 | 6 | 1 |
| 1:A:179:ASP:OD1 | 1:A:233:LYS:HE3 | 0.42 | 2.14 | 1 | 1 |
| 1:A:178:MET:SD | 1:A:236:LEU:CD1 | 0.42 | 3.07 | 7 | 2 |
| 1:A:226:THR:O | 1:A:230:ASP:CG | 0.42 | 2.56 | 7 | 1 |
| 1:A:219:TYR:C | 1:A:219:TYR:CD1 | 0.42 | 2.92 | 3 | 1 |
| 1:A:198:GLN:OE1 | 1:A:198:GLN:C | 0.42 | 2.58 | 8 | 1 |
| 1:A:230:ASP:C | 1:A:232:ALA:N | 0.42 | 2.73 | 3 | 1 |
| 1:A:197:ARG:HE | 1:A:198:GLN:N | 0.42 | 2.13 | 5 | 1 |
| 1:A:133:GLU:CD | 1:A:134:GLU:N | 0.42 | 2.73 | 3 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:250:ARG:CD | 1:A:250:ARG:N | 0.42 | 2.82 | 6 | 1 |
| 1:A:144:ALA:CB | 1:A:205:TYR:CE2 | 0.42 | 3.02 | 9 | 1 |
| 1:A:173:ARG:HH12 | 1:A:192:ALA:HA | 0.42 | 1.74 | 3 | 1 |
| 1:A:183:PRO:O | 1:A:186:SER:OG | 0.42 | 2.37 | 2 | 1 |
| 1:A:214:CYS:O | 1:A:217:GLU:CG | 0.42 | 2.68 | 8 | 1 |
| 1:A:133:GLU:OE2 | 1:A:134:GLU:N | 0.42 | 2.51 | 3 | 1 |
| 1:A:178:MET:CE | 1:A:233:LYS:HZ3 | 0.42 | 2.27 | 5 | 1 |
| 1:A:246:ALA:O | 1:A:250:ARG:CD | 0.42 | 2.67 | 5 | 1 |
| 1:A:156:THR:HG23 | 1:A:158:GLU:H | 0.42 | 1.75 | 8 | 1 |
| 1:A:233:LYS:HZ3 | 1:A:236:LEU:HD22 | 0.42 | 1.75 | 1 | 1 |
| 1:A:202:ARG:C | 1:A:203:ASN:HD22 | 0.42 | 2.17 | 2 | 1 |
| 1:A:230:ASP:O | 1:A:233:LYS:N | 0.42 | 2.53 | 5 | 2 |
| 1:A:198:GLN:O | 1:A:202:ARG:CZ | 0.42 | 2.68 | 5 | 1 |
| 1:A:190:MET:CG | 1:A:191:ASP:N | 0.42 | 2.82 | 4 | 2 |
| 1:A:194:GLU:O | 1:A:197:ARG:HG3 | 0.42 | 2.14 | 5 | 1 |
| 1:A:240:MET:O | 1:A:244:ILE:HG22 | 0.42 | 2.15 | 5 | 2 |
| 1:A:177:LEU:HG | 1:A:178:MET:N | 0.41 | 2.30 | 2 | 3 |
| 1:A:219:TYR:OH | 1:A:229:ILE:CD1 | 0.41 | 2.68 | 1 | 1 |
| 1:A:166:GLU:OE1 | 1:A:167:ALA:N | 0.41 | 2.53 | 10 | 2 |
| 1:A:225:PHE:CA | 1:A:228:ASN:OD1 | 0.41 | 2.69 | 3 | 1 |
| 1:A:112:ILE:HG21 | 1:A:114:LEU:HD12 | 0.41 | 1.91 | 7 | 1 |
| 1:A:172:ARG:CB | 1:A:172:ARG:NH1 | 0.41 | 2.84 | 9 | 1 |
| 1:A:200:ILE:HG12 | 1:A:204:HIS:HE2 | 0.41 | 1.75 | 9 | 1 |
| 1:A:131:TYR:CD1 | 1:A:131:TYR:N | 0.41 | 2.88 | 10 | 2 |
| 1:A:215:LEU:C | 1:A:215:LEU:CD1 | 0.41 | 2.88 | 7 | 1 |
| 1:A:224:ARG:NE | 1:A:224:ARG:HA | 0.41 | 2.31 | 9 | 1 |
| 1:A:185:ASP:OD1 | 1:A:246:ALA:CB | 0.41 | 2.68 | 2 | 1 |
| 1:A:214:CYS:O | 1:A:217:GLU:HG2 | 0.41 | 2.15 | 2 | 1 |
| 1:A:202:ARG:HA | 1:A:202:ARG:HH11 | 0.41 | 1.76 | 2 | 1 |
| 1:A:160:TRP:CE3 | 1:A:163:ILE:HD12 | 0.41 | 2.51 | 3 | 1 |
| 1:A:200:ILE:HA | 1:A:203:ASN:ND2 | 0.41 | 2.31 | 5 | 1 |
| 1:A:245:LEU:CD2 | 1:A:245:LEU:C | 0.41 | 2.89 | 5 | 1 |
| 1:A:217:GLU:HB3 | 1:A:241:ARG:NH1 | 0.41 | 2.30 | 1 | 1 |
| 1:A:230:ASP:OD1 | 1:A:234:PRO:HA | 0.41 | 2.15 | 1 | 1 |
| 1:A:151:LYS:HE3 | 1:A:155:TYR:OH | 0.41 | 2.16 | 4 | 2 |
| 1:A:202:ARG:NH1 | 1:A:202:ARG:CB | 0.41 | 2.84 | 5 | 1 |
| 1:A:214:CYS:O | 1:A:217:GLU:HG3 | 0.41 | 2.16 | 8 | 1 |
| 1:A:118:GLU:OE1 | 1:A:118:GLU:CA | 0.41 | 2.67 | 1 | 1 |
| 1:A:173:ARG:NH2 | 1:A:195:ASP:HB3 | 0.41 | 2.31 | 7 | 2 |
| 1:A:202:ARG:HH11 | 1:A:202:ARG:H | 0.41 | 1.57 | 5 | 1 |
| 1:A:122:VAL:O | 1:A:122:VAL:HG22 | 0.41 | 2.15 | 6 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:139:TRP:CE3 | 2:B:501:SER:CB | 0.41 | 3.04 | 7 | 1 |
| 1:A:151:LYS:CB | 1:A:151:LYS:HZ2 | 0.41 | 2.28 | 7 | 1 |
| 1:A:177:LEU:HD12 | 1:A:177:LEU:C | 0.41 | 2.36 | 7 | 1 |
| 1:A:216:GLY:O | 1:A:219:TYR:HB2 | 0.41 | 2.16 | 1 | 1 |
| 1:A:193:ALA:HB3 | 1:A:247:ASN:CG | 0.41 | 2.36 | 2 | 1 |
| 1:A:240:MET:O | 1:A:244:ILE:HB | 0.41 | 2.15 | 4 | 2 |
| 1:A:140:GLY:O | 1:A:141:ASN:OD1 | 0.41 | 2.39 | 10 | 1 |
| 1:A:163:ILE:O | 1:A:166:GLU:CB | 0.40 | 2.69 | 6 | 1 |
| 1:A:215:LEU:HD13 | 1:A:215:LEU:C | 0.40 | 2.36 | 9 | 1 |
| 1:A:230:ASP:OD2 | 1:A:234:PRO:HA | 0.40 | 2.15 | 1 | 1 |
| 1:A:196:HIS:CE1 | 1:A:244:ILE:CD1 | 0.40 | 3.05 | 5 | 1 |
| 3:B:601:NO1:HB1C | 3:B:601:NO1:CF | 0.40 | 2.46 | 6 | 1 |
| 1:A:135:VAL:CG1 | 1:A:145:TYR:CE1 | 0.40 | 3.05 | 8 | 1 |
| 1:A:178:MET:HG3 | 1:A:239:TYR:CG | 0.40 | 2.51 | 8 | 1 |
| 1:A:115:THR:OG1 | 1:A:118:GLU:CD | 0.40 | 2.59 | 1 | 1 |
| 1:A:141:ASN:C | 1:A:146:ARG:NH1 | 0.40 | 2.75 | 1 | 1 |
| 1:A:191:ASP:OD1 | 1:A:191:ASP:C | 0.40 | 2.59 | 1 | 1 |
| 1:A:163:ILE:O | 1:A:166:GLU:HB3 | 0.40 | 2.17 | 5 | 1 |
| 1:A:222:ASP:C | 1:A:224:ARG:N | 0.40 | 2.75 | 5 | 1 |
| 1:A:173:ARG:NH2 | 1:A:195:ASP:CB | 0.40 | 2.85 | 7 | 1 |
| 1:A:219:TYR:CD1 | 1:A:220:VAL:N | 0.40 | 2.89 | 7 | 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 | 137/144 (95%) | 128±2 (94±2%) | 6±2 (4±1%) | 3±1 (2±1%) | 8 | 48 |
| 2 | B | 3/13 (23%) | 1±1 (27±25%) | 1±1 (30±23%) | 1±0 (43±15%) | 0 | 0 |
| All | All | 1400/1570 (89%) | 1293 (92%) | 65 (5%) | 42 (3%) | 5 | 38 |

All 7 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 | 140 | GLY | 10 |
| 1 | A | 141 | ASN | 10 |
| 2 | B | 503 | THR | 10 |
| 1 | A | 125 | ASP | 4 |
| 1 | A | 208 | GLY | 3 |
| 2 | B | 512 | ALA | 3 |
| 1 | A | 223 | GLU | 2 |

6.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR entries. The Analysed column shows the number of residues for which the sidechain conformation was analysed and the total number of residues.

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|---------------|-------------|-------------|----|
| 1 | A | 113/118 (96%) | 103±3 (91±3%) | 10±3 (9±3%) | 10 | 57 |
| 2 | B | 2/3 (67%) | 2±0 (95±15%) | 0±0 (5±15%) | 23 | 76 |
| All | All | 1150/1210 (95%) | 1046 (91%) | 104 (9%) | 10 | 58 |

All 45 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 | 126 | PHE | 9 |
| 1 | A | 177 | LEU | 9 |
| 1 | A | 219 | TYR | 7 |
| 1 | A | 147 | GLN | 6 |
| 1 | A | 118 | GLU | 4 |
| 1 | A | 178 | MET | 4 |
| 1 | A | 250 | ARG | 4 |
| 1 | A | 117 | GLU | 4 |
| 1 | A | 241 | ARG | 3 |
| 1 | A | 245 | LEU | 3 |
| 1 | A | 161 | GLN | 3 |
| 1 | A | 198 | GLN | 3 |
| 1 | A | 151 | LYS | 3 |
| 1 | A | 227 | ARG | 3 |
| 1 | A | 173 | ARG | 2 |
| 1 | A | 190 | MET | 2 |
| 1 | A | 113 | ASN | 2 |
| 1 | A | 115 | THR | 2 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 120 | PHE | 2 |
| 1 | A | 131 | TYR | 2 |
| 1 | A | 136 | ARG | 2 |
| 1 | A | 187 | GLU | 2 |
| 1 | A | 137 | GLU | 1 |
| 1 | A | 179 | ASP | 1 |
| 1 | A | 204 | HIS | 1 |
| 1 | A | 233 | LYS | 1 |
| 1 | A | 251 | HIS | 1 |
| 1 | A | 121 | GLU | 1 |
| 1 | A | 205 | TYR | 1 |
| 1 | A | 133 | GLU | 1 |
| 1 | A | 162 | ARG | 1 |
| 1 | A | 209 | TYR | 1 |
| 1 | A | 230 | ASP | 1 |
| 1 | A | 163 | ILE | 1 |
| 1 | A | 194 | GLU | 1 |
| 1 | A | 195 | ASP | 1 |
| 1 | A | 197 | ARG | 1 |
| 1 | A | 202 | ARG | 1 |
| 1 | A | 123 | PHE | 1 |
| 1 | A | 203 | ASN | 1 |
| 1 | A | 141 | ASN | 1 |
| 1 | A | 223 | GLU | 1 |
| 2 | B | 503 | THR | 1 |
| 1 | A | 158 | GLU | 1 |
| 1 | A | 217 | GLU | 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](#)

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

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with $|Z| > 2$ is

considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

| Mol | Type | Chain | Res | Link | Counts | Bond lengths | |
|-----|------|-------|-----|------|--------|--------------|-------------|
| | | | | | | RMSZ | #Z>2 |
| 2 | BB9 | B | 502 | 2 | 2,5,6 | 0.98±0.08 | 0±0 (0±0%) |
| 2 | BB9 | B | 511 | 2 | 2,5,6 | 0.82±0.05 | 0±0 (0±0%) |
| 2 | BB9 | B | 509 | 2 | 2,4,6 | 2.26±0.05 | 1±0 (50±0%) |
| 2 | BB9 | B | 505 | 2 | 2,5,6 | 0.80±0.22 | 0±0 (0±0%) |
| 2 | DBU | B | 504 | 2 | 3,4,6 | 1.81±0.06 | 1±0 (33±0%) |
| 2 | 3GL | B | 506 | 3,2 | 8,8,10 | 0.80±0.07 | 0±0 (0±0%) |
| 2 | BB9 | B | 507 | 2 | 2,5,6 | 0.84±0.08 | 0±0 (0±0%) |
| 2 | MH6 | B | 510 | 2 | 3,4,6 | 2.63±0.03 | 2±0 (66±0%) |

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

| Mol | Type | Chain | Res | Link | Counts | Bond angles | |
|-----|------|-------|-----|------|---------|-------------|--------------|
| | | | | | | RMSZ | #Z>2 |
| 2 | BB9 | B | 502 | 2 | 1,5,7 | 3.71±0.28 | 1±0 (100±0%) |
| 2 | BB9 | B | 511 | 2 | 1,5,7 | 3.08±0.10 | 1±0 (100±0%) |
| 2 | BB9 | B | 509 | 2 | 3,4,7 | 2.96±0.03 | 3±0 (100±0%) |
| 2 | BB9 | B | 505 | 2 | 1,5,7 | 2.83±0.23 | 1±0 (100±0%) |
| 2 | DBU | B | 504 | 2 | 3,4,7 | 4.41±0.45 | 2±0 (66±0%) |
| 2 | 3GL | B | 506 | 3,2 | 9,10,13 | 1.44±0.12 | 2±0 (18±5%) |
| 2 | BB9 | B | 507 | 2 | 1,5,7 | 2.98±0.16 | 1±0 (100±0%) |
| 2 | MH6 | B | 510 | 2 | 2,4,7 | 2.22±0.01 | 1±0 (50±0%) |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|-----------|-------|
| 2 | BB9 | B | 511 | 2 | - | 0±0,0,4,6 | - |
| 2 | BB9 | B | 507 | 2 | - | 0±0,0,4,6 | - |
| 2 | DBU | B | 504 | 2 | - | 0±0,1,2,6 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|-------|
| 2 | BB9 | B | 505 | 2 | - | 0±0,0,4,6 | - |
| 2 | MH6 | B | 510 | 2 | - | 0±0,1,2,6 | - |
| 2 | BB9 | B | 509 | 2 | - | 0±0,0,2,6 | - |
| 2 | 3GL | B | 506 | 3,2 | - | 0±0,8,8,12 | - |
| 2 | BB9 | B | 502 | 2 | - | 0±0,0,4,6 | - |

All unique bond 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(Å) | Ideal(Å) | Models | |
|-----|-------|-----|------|-------|------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 2 | B | 510 | MH6 | CA-N | 3.54 | 1.35 | 1.27 | 1 | 10 |
| 2 | B | 509 | BB9 | CA-N | 3.28 | 1.41 | 1.33 | 2 | 10 |
| 2 | B | 504 | DBU | CA-N | 3.26 | 1.41 | 1.33 | 8 | 10 |
| 2 | B | 510 | MH6 | C-CA | 2.95 | 1.45 | 1.49 | 5 | 10 |

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 |
| 2 | B | 504 | DBU | CB-CA-N | 7.57 | 118.43 | 122.88 | 7 | 10 |
| 2 | B | 504 | DBU | C-CA-N | 5.43 | 122.37 | 116.44 | 7 | 10 |
| 2 | B | 502 | BB9 | O-C-CA | 4.04 | 120.33 | 125.39 | 4 | 10 |
| 2 | B | 506 | 3GL | OE1-CD-CG | 3.59 | 120.33 | 112.74 | 1 | 10 |
| 2 | B | 509 | BB9 | C-CA-CB | 3.37 | 127.66 | 121.45 | 10 | 10 |
| 2 | B | 511 | BB9 | O-C-CA | 3.23 | 121.34 | 125.39 | 1 | 10 |
| 2 | B | 507 | BB9 | O-C-CA | 3.22 | 121.35 | 125.39 | 2 | 10 |
| 2 | B | 505 | BB9 | O-C-CA | 3.19 | 121.39 | 125.39 | 1 | 10 |
| 2 | B | 510 | MH6 | OG-CB-CA | 3.14 | 120.51 | 112.27 | 5 | 10 |
| 2 | B | 509 | BB9 | CB-CA-N | 3.03 | 113.20 | 122.53 | 8 | 10 |
| 2 | B | 509 | BB9 | C-CA-N | 2.88 | 119.59 | 116.44 | 5 | 10 |
| 2 | B | 506 | 3GL | OE1-CD-OE2 | 2.19 | 119.12 | 124.08 | 4 | 7 |

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.6 Ligand geometry

1 ligand is modelled in this entry.

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

| Mol | Type | Chain | Res | Link | Bond lengths | | |
|-----|------|-------|-----|------|--------------|-----------|-------------|
| | | | | | Counts | RMSZ | #Z>2 |
| 3 | NO1 | B | 601 | 2 | 11,14,16 | 1.59±0.05 | 3±0 (24±4%) |

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

| Mol | Type | Chain | Res | Link | Bond angles | | |
|-----|------|-------|-----|------|-------------|-----------|-------------|
| | | | | | Counts | RMSZ | #Z>2 |
| 3 | NO1 | B | 601 | 2 | 13,20,23 | 1.78±0.09 | 4±0 (27±3%) |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|-----------|-----------|
| 3 | NO1 | B | 601 | 2 | - | 0±0,0,2,6 | 0±0,2,2,2 |

All unique bond 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(Å) | Ideal(Å) | Models | |
|-----|-------|-----|------|---------|------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 3 | B | 601 | NO1 | CG-CD2 | 4.04 | 1.45 | 1.40 | 2 | 10 |
| 3 | B | 601 | NO1 | CD1-C | 3.29 | 1.52 | 1.48 | 6 | 10 |
| 3 | B | 601 | NO1 | CE3-CD2 | 2.42 | 1.40 | 1.44 | 7 | 7 |

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 |
| 3 | B | 601 | NO1 | O-C-CD1 | 5.12 | 117.94 | 124.37 | 1 | 10 |
| 3 | B | 601 | NO1 | CE3-CD2-CE2 | 3.04 | 117.82 | 122.70 | 1 | 10 |
| 3 | B | 601 | NO1 | CF-CE3-CD2 | 2.70 | 119.68 | 124.32 | 6 | 6 |
| 3 | B | 601 | NO1 | CD1-NE1-CE2 | 2.23 | 109.10 | 104.45 | 8 | 10 |

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation i

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

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping i

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

| | |
|---|------|
| Total number of shifts | 1738 |
| Number of shifts mapped to atoms | 1737 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 1 |
| Number of shifts with mapping warnings | 0 |
| Number of shift outliers (ShiftChecker) | 6 |

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

- No matching atom found in the structure. All 1 occurrences are reported below.

| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | B | 501 | SER | HB2 | 7.028 | 0.015 | 1 |

7.1.2 Chemical shift referencing i

The following table shows the suggested chemical shift referencing corrections.

| Nucleus | # values | Correction \pm precision, ppm | Suggested action |
|------------------------|----------|---------------------------------|----------------------------|
| $^{13}\text{C}_\alpha$ | 143 | -0.67 ± 0.14 | Should be checked |
| $^{13}\text{C}_\beta$ | 132 | 0.32 ± 0.16 | None needed (< 0.5 ppm) |
| $^{13}\text{C}'$ | 132 | -0.57 ± 0.10 | Should be applied |
| ^{15}N | 138 | 0.41 ± 0.32 | None needed (< 0.5 ppm) |

7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 89%, i.e. 1668 atoms were assigned a chemical shift out of a possible 1878. 0 out of 11 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹H | ¹³C | ¹⁵N |
|-----------|-----------------|----------------------|-----------------------|-----------------------|
| Backbone | 683/708 (96%) | 283/287 (99%) | 267/284 (94%) | 133/137 (97%) |
| Sidechain | 847/1011 (84%) | 586/644 (91%) | 249/316 (79%) | 12/51 (24%) |
| Aromatic | 138/159 (87%) | 69/77 (90%) | 67/76 (88%) | 2/6 (33%) |
| Overall | 1668/1878 (89%) | 938/1008 (93%) | 583/676 (86%) | 147/194 (76%) |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 89%, i.e. 1716 atoms were assigned a chemical shift out of a possible 1937. 0 out of 11 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹H | ¹³C | ¹⁵N |
|-----------|-----------------|----------------------|-----------------------|-----------------------|
| Backbone | 707/734 (96%) | 294/298 (99%) | 275/294 (94%) | 138/142 (97%) |
| Sidechain | 865/1037 (83%) | 597/661 (90%) | 256/325 (79%) | 12/51 (24%) |
| Aromatic | 144/166 (87%) | 72/81 (89%) | 69/78 (88%) | 3/7 (43%) |
| Overall | 1716/1937 (89%) | 963/1040 (93%) | 600/697 (86%) | 153/200 (76%) |

7.1.4 Statistically unusual chemical shifts [i](#)

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

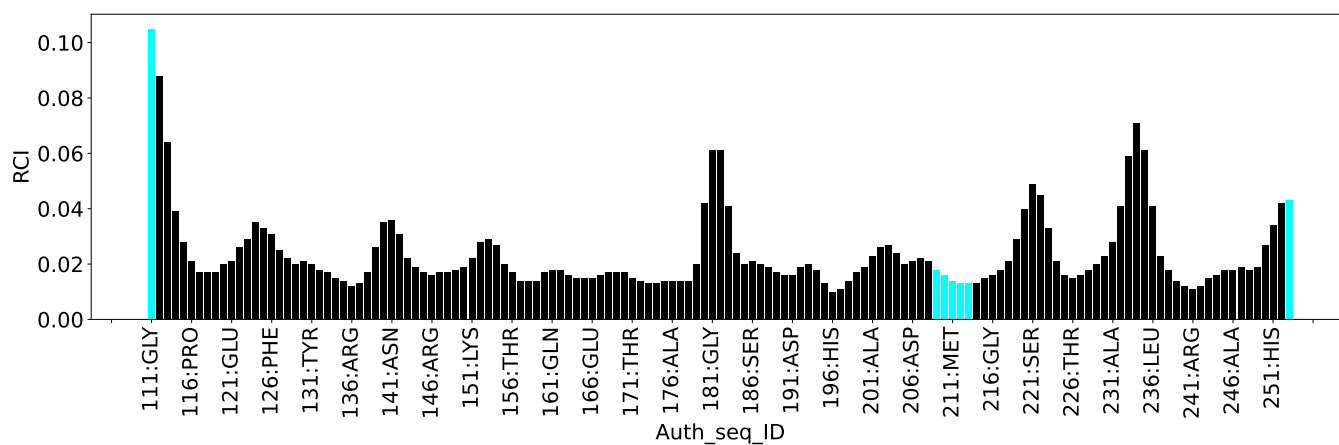
| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1 | B | 512 | ALA | HB1 | 6.39 | 0.14 – 2.58 | 20.6 |
| 1 | B | 512 | ALA | HB2 | 5.87 | 0.14 – 2.58 | 18.5 |
| 1 | B | 501 | SER | HB2 | 7.03 | 2.61 – 5.13 | 12.5 |
| 1 | B | 501 | SER | HB3 | 7.03 | 2.49 – 5.20 | 11.7 |
| 1 | A | 138 | ARG | HG3 | -0.26 | 0.15 – 2.94 | -6.5 |
| 1 | A | 138 | ARG | HG2 | -0.04 | 0.26 – 2.87 | -6.1 |

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

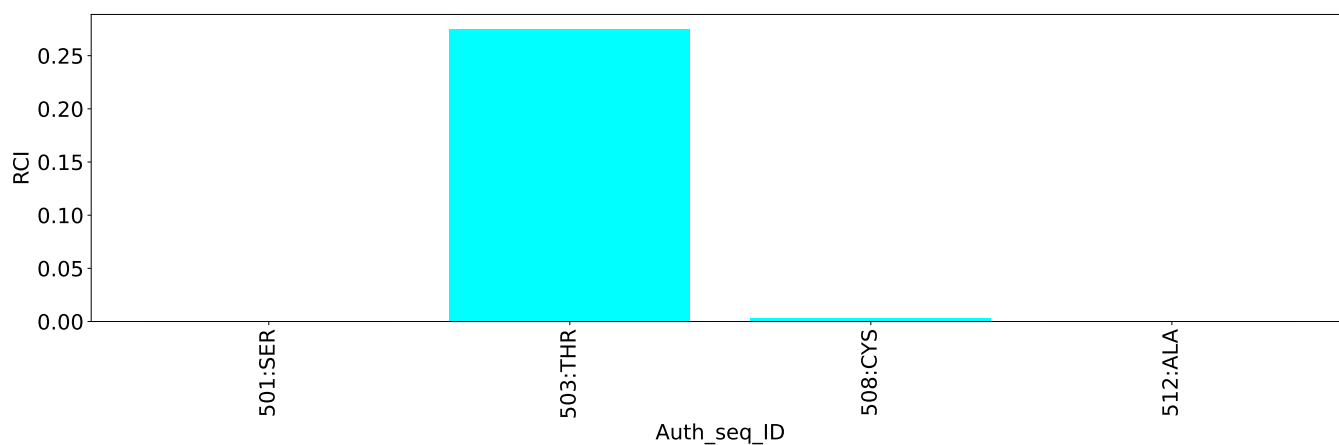
The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble

composition. If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain A:



Random coil index (RCI) for chain B:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

| Description | Value |
|--|-------|
| Total distance restraints | 2395 |
| Intra-residue ($ i-j =0$) | 221 |
| Sequential ($ i-j =1$) | 652 |
| Medium range ($ i-j >1$ and $ i-j <5$) | 726 |
| Long range ($ i-j \geq 5$) | 526 |
| Inter-chain | 138 |
| Hydrogen bond restraints | 132 |
| Disulfide bond restraints | 0 |
| Total dihedral-angle restraints | 260 |
| Number of unmapped restraints | 0 |
| Number of restraints per residue | 16.8 |
| Number of long range restraints per residue ¹ | 3.3 |

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

8.2 Residual restraint violations

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

8.2.1 Average number of distance violations per model

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

| Bins (Å) | Average number of violations per model | Max (Å) |
|------------------|--|---------|
| 0.1-0.2 (Small) | 53.8 | 0.2 |
| 0.2-0.5 (Medium) | 22.4 | 0.5 |
| >0.5 (Large) | 2.7 | 1.99 |

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

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

| Bins (°) | Average number of violations per model | Max (°) |
|--------------------|--|---------|
| 1.0-10.0 (Small) | 34.2 | 4.87 |
| 10.0-20.0 (Medium) | None | None |
| >20.0 (Large) | None | None |

9 Distance violation analysis [i](#)

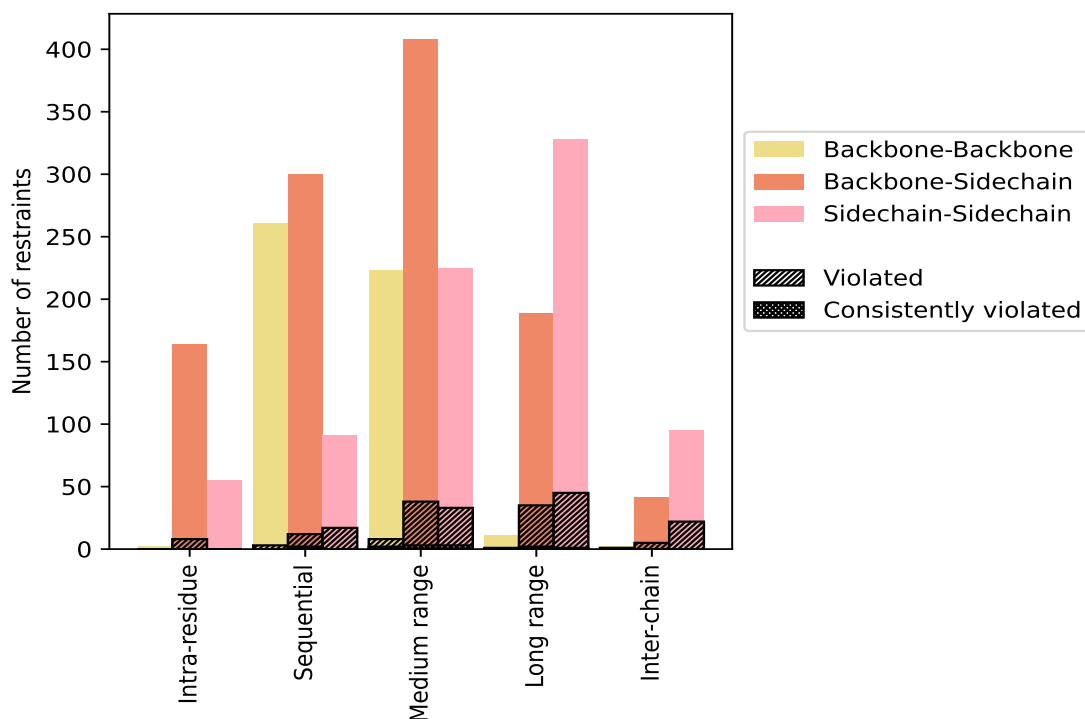
9.1 Summary of distance violations [i](#)

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

| Restrains type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|---|-------------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| Intra-residue ($i-j =0$) | 221 | 9.2 | 8 | 3.6 | 0.3 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 2 | 0.1 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 164 | 6.8 | 8 | 4.9 | 0.3 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 55 | 2.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sequential ($i-j =1$) | 652 | 27.2 | 32 | 4.9 | 1.3 | 2 | 0.3 | 0.1 |
| Backbone-Backbone | 261 | 10.9 | 3 | 1.1 | 0.1 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 300 | 12.5 | 12 | 4.0 | 0.5 | 2 | 0.7 | 0.1 |
| Sidechain-Sidechain | 91 | 3.8 | 17 | 18.7 | 0.7 | 0 | 0.0 | 0.0 |
| Medium range ($i-j >1$ & $i-j <5$) | 726 | 30.3 | 72 | 9.9 | 3.0 | 8 | 1.1 | 0.3 |
| Backbone-Backbone | 223 | 9.3 | 8 | 3.6 | 0.3 | 2 | 0.9 | 0.1 |
| Backbone-Sidechain | 278 | 11.6 | 31 | 11.2 | 1.3 | 3 | 1.1 | 0.1 |
| Sidechain-Sidechain | 225 | 9.4 | 33 | 14.7 | 1.4 | 3 | 1.3 | 0.1 |
| Long range ($i-j \geq 5$) | 526 | 22.0 | 80 | 15.2 | 3.3 | 3 | 0.6 | 0.1 |
| Backbone-Backbone | 11 | 0.5 | 1 | 9.1 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 189 | 7.9 | 35 | 18.5 | 1.5 | 2 | 1.1 | 0.1 |
| Sidechain-Sidechain | 326 | 13.6 | 44 | 13.5 | 1.8 | 1 | 0.3 | 0.0 |
| Inter-chain | 138 | 5.8 | 28 | 20.3 | 1.2 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 2 | 0.1 | 1 | 50.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 41 | 1.7 | 5 | 12.2 | 0.2 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 95 | 4.0 | 22 | 23.2 | 0.9 | 0 | 0.0 | 0.0 |
| Hydrogen bond | 132 | 5.5 | 8 | 6.1 | 0.3 | 0 | 0.0 | 0.0 |
| Disulfide bond | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Total | 2395 | 100.0 | 228 | 9.5 | 9.5 | 13 | 0.5 | 0.5 |
| Backbone-Backbone | 499 | 20.8 | 13 | 2.6 | 0.5 | 2 | 0.4 | 0.1 |
| Backbone-Sidechain | 1102 | 46.0 | 98 | 8.9 | 4.1 | 7 | 0.6 | 0.3 |
| Sidechain-Sidechain | 794 | 33.2 | 117 | 14.7 | 4.9 | 4 | 0.5 | 0.2 |

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

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



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

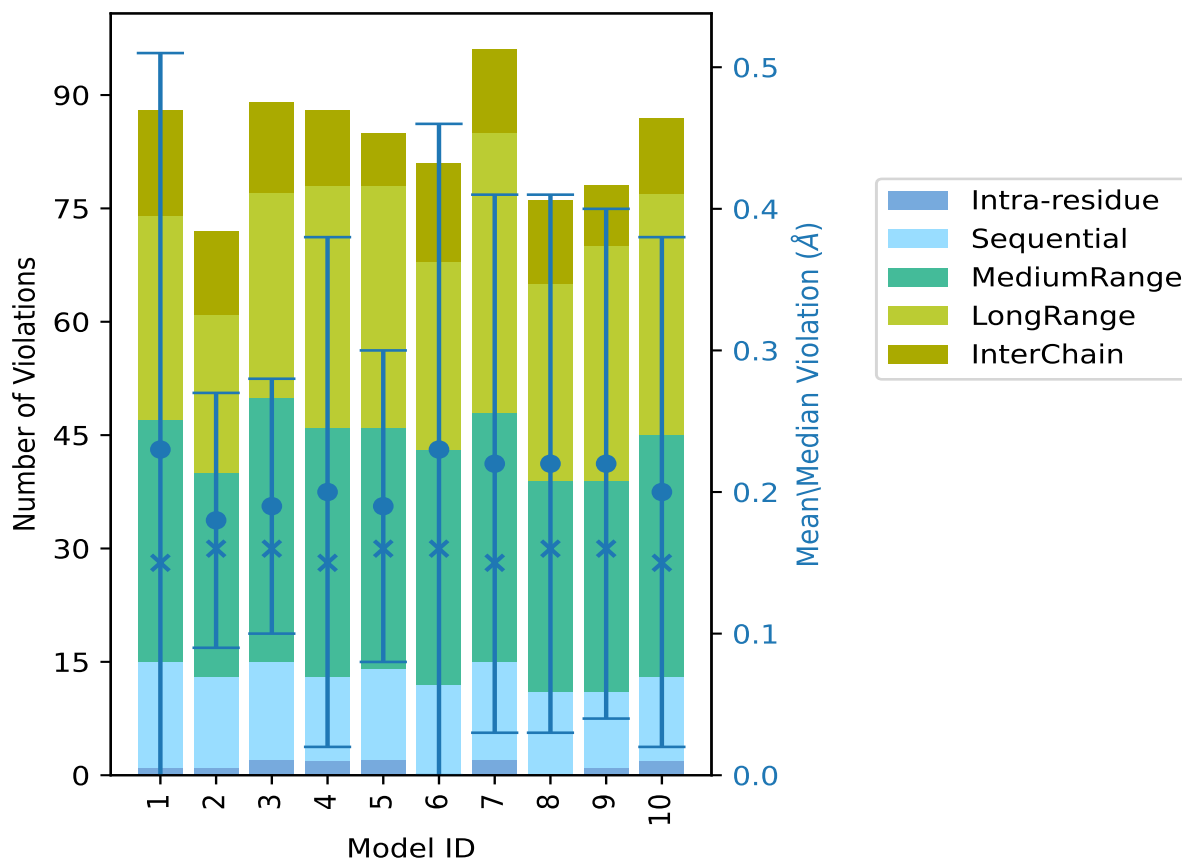
9.2 Distance violation statistics for each model [i](#)

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

| Model ID | Number of violations | | | | | | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | | | | |
| 1 | 1 | 14 | 32 | 27 | 14 | 88 | 0.23 | 1.99 | 0.28 | 0.15 |
| 2 | 1 | 12 | 27 | 21 | 11 | 72 | 0.18 | 0.56 | 0.09 | 0.16 |
| 3 | 2 | 13 | 35 | 27 | 12 | 89 | 0.19 | 0.63 | 0.09 | 0.16 |
| 4 | 2 | 11 | 33 | 32 | 10 | 88 | 0.2 | 1.15 | 0.18 | 0.15 |
| 5 | 2 | 12 | 32 | 32 | 7 | 85 | 0.19 | 0.98 | 0.11 | 0.16 |
| 6 | 0 | 12 | 31 | 25 | 13 | 81 | 0.23 | 1.45 | 0.23 | 0.16 |
| 7 | 2 | 13 | 33 | 37 | 11 | 96 | 0.22 | 1.29 | 0.19 | 0.15 |
| 8 | 0 | 11 | 28 | 26 | 11 | 76 | 0.22 | 1.23 | 0.19 | 0.16 |
| 9 | 1 | 10 | 28 | 31 | 8 | 78 | 0.22 | 1.1 | 0.18 | 0.16 |
| 10 | 2 | 11 | 32 | 32 | 10 | 87 | 0.2 | 1.16 | 0.18 | 0.15 |

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

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



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

9.3 Distance violation statistics for the ensemble [i](#)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 2043(IR:213, SQ:620, MR:654, LR:446, IC:110) restraints are not violated in the ensemble.

| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 5 | 10 | 20 | 18 | 6 | 59 | 1 | 10.0 |
| 1 | 4 | 9 | 18 | 4 | 36 | 2 | 20.0 |
| 2 | 3 | 8 | 14 | 6 | 33 | 3 | 30.0 |

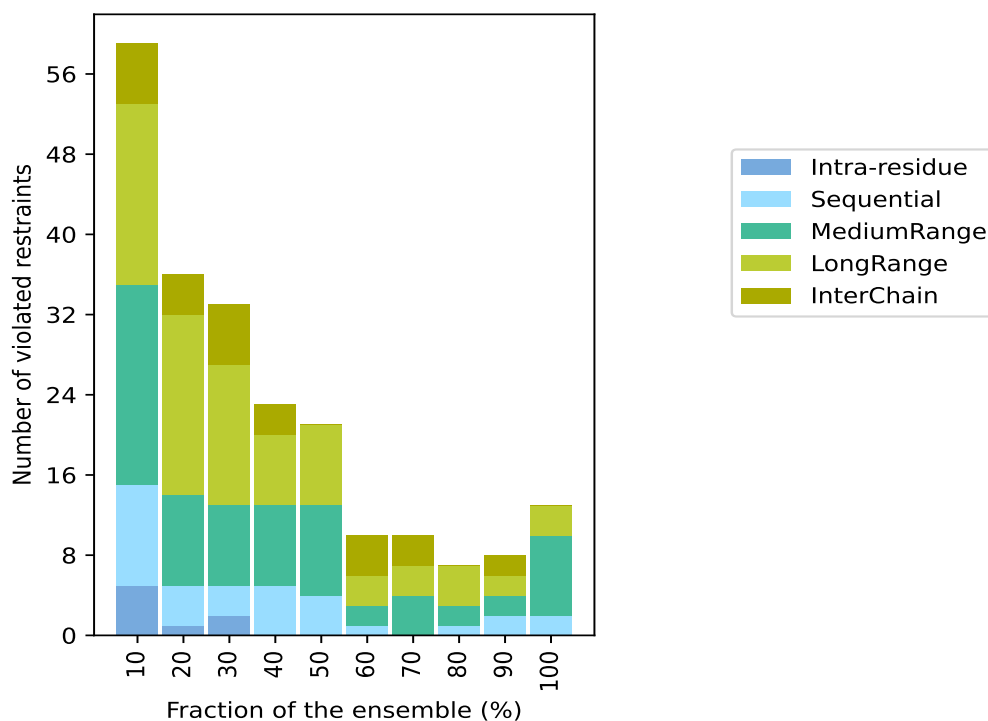
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| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|-------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 0 | 5 | 8 | 7 | 3 | 23 | 4 | 40.0 |
| 0 | 4 | 9 | 8 | 0 | 21 | 5 | 50.0 |
| 0 | 1 | 2 | 3 | 4 | 10 | 6 | 60.0 |
| 0 | 0 | 4 | 3 | 3 | 10 | 7 | 70.0 |
| 0 | 1 | 2 | 4 | 0 | 7 | 8 | 80.0 |
| 0 | 2 | 2 | 2 | 2 | 8 | 9 | 90.0 |
| 0 | 2 | 8 | 3 | 0 | 13 | 10 | 100.0 |

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

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

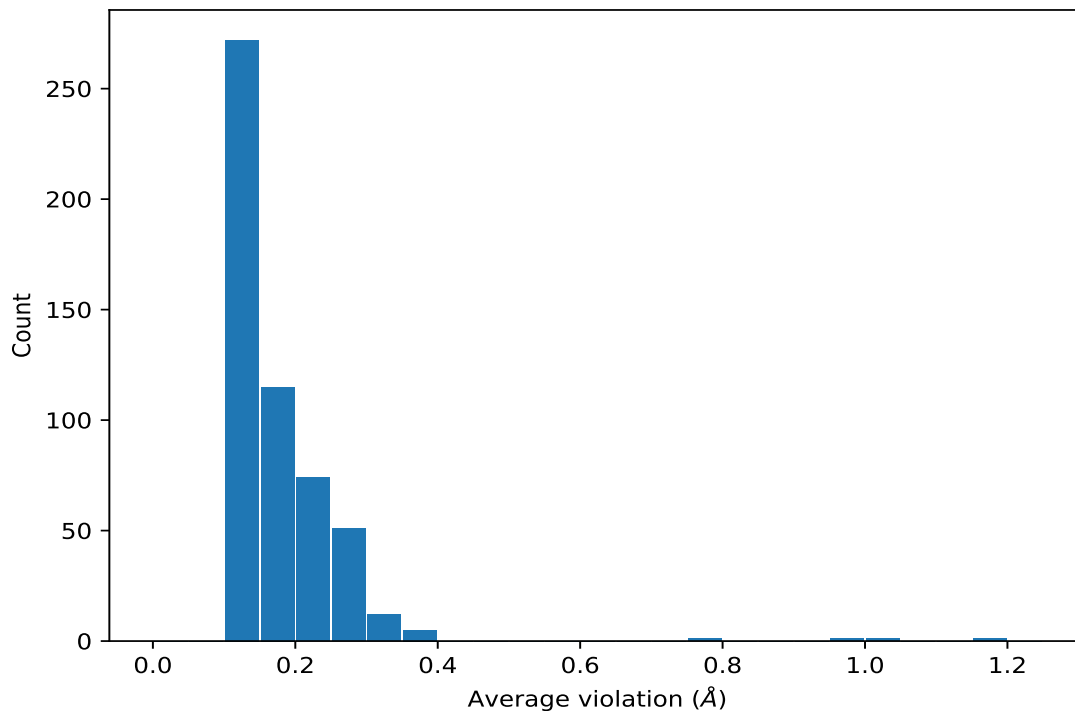


9.4 Most violated distance restraints in the ensemble [i](#)

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

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

in the ensemble



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

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

| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 10 | 0.39 | 0.09 | 0.36 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 10 | 0.39 | 0.09 | 0.36 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 10 | 0.34 | 0.05 | 0.36 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 10 | 0.34 | 0.05 | 0.36 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 10 | 0.32 | 0.02 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 10 | 0.32 | 0.02 | 0.34 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 10 | 0.28 | 0.11 | 0.24 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 10 | 0.28 | 0.11 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 10 | 0.28 | 0.11 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 10 | 0.28 | 0.11 | 0.24 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 10 | 0.27 | 0.03 | 0.26 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 10 | 0.27 | 0.03 | 0.26 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 10 | 0.27 | 0.03 | 0.26 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 10 | 0.27 | 0.03 | 0.26 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 10 | 0.27 | 0.09 | 0.27 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 10 | 0.27 | 0.09 | 0.27 |
| (3,1544) | 1:202:A:ARG:HH21 | 1:204:A:HIS:H | 10 | 0.27 | 0.09 | 0.27 |
| (3,1544) | 1:202:A:ARG:HH22 | 1:204:A:HIS:H | 10 | 0.27 | 0.09 | 0.27 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 10 | 0.25 | 0.04 | 0.24 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 10 | 0.25 | 0.04 | 0.24 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 10 | 0.25 | 0.04 | 0.24 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 10 | 0.25 | 0.05 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 10 | 0.24 | 0.04 | 0.24 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 10 | 0.2 | 0.02 | 0.2 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 10 | 0.2 | 0.05 | 0.19 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 10 | 0.2 | 0.05 | 0.19 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 10 | 0.19 | 0.02 | 0.2 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 10 | 0.17 | 0.03 | 0.18 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 9 | 1.17 | 0.4 | 1.16 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 9 | 1.0 | 0.44 | 1.07 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 9 | 0.23 | 0.07 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 9 | 0.22 | 0.05 | 0.21 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 9 | 0.22 | 0.05 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 9 | 0.2 | 0.07 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 9 | 0.2 | 0.07 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 9 | 0.2 | 0.07 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 9 | 0.2 | 0.07 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 9 | 0.2 | 0.07 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 9 | 0.2 | 0.07 | 0.18 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 9 | 0.19 | 0.07 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 9 | 0.19 | 0.07 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 9 | 0.19 | 0.07 | 0.19 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 9 | 0.14 | 0.02 | 0.13 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 9 | 0.13 | 0.02 | 0.13 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 9 | 0.13 | 0.02 | 0.13 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 9 | 0.13 | 0.02 | 0.13 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 9 | 0.13 | 0.02 | 0.13 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD1 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD2 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD1 | 8 | 0.32 | 0.08 | 0.32 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD2 | 8 | 0.32 | 0.08 | 0.32 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 8 | 0.19 | 0.05 | 0.21 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 8 | 0.19 | 0.05 | 0.21 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 8 | 0.16 | 0.04 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 8 | 0.15 | 0.03 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 8 | 0.15 | 0.03 | 0.15 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 8 | 0.13 | 0.02 | 0.13 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 8 | 0.13 | 0.02 | 0.13 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 8 | 0.13 | 0.02 | 0.13 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 8 | 0.12 | 0.02 | 0.11 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 8 | 0.12 | 0.02 | 0.11 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 8 | 0.12 | 0.01 | 0.11 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 7 | 0.75 | 0.37 | 0.8 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 7 | 0.3 | 0.03 | 0.29 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 7 | 0.3 | 0.03 | 0.29 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 7 | 0.29 | 0.15 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 7 | 0.29 | 0.15 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 7 | 0.29 | 0.15 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 7 | 0.29 | 0.15 | 0.39 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 7 | 0.27 | 0.05 | 0.27 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 7 | 0.27 | 0.05 | 0.27 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 7 | 0.27 | 0.05 | 0.27 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 7 | 0.18 | 0.05 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 7 | 0.16 | 0.01 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 7 | 0.16 | 0.01 | 0.17 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 7 | 0.16 | 0.06 | 0.17 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 7 | 0.16 | 0.06 | 0.17 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 7 | 0.14 | 0.03 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 7 | 0.14 | 0.03 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 7 | 0.14 | 0.03 | 0.15 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 7 | 0.14 | 0.02 | 0.13 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 7 | 0.14 | 0.02 | 0.13 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 7 | 0.13 | 0.03 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 7 | 0.13 | 0.03 | 0.11 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 7 | 0.12 | 0.01 | 0.12 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 6 | 0.2 | 0.03 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 6 | 0.2 | 0.03 | 0.18 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 6 | 0.2 | 0.03 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 6 | 0.2 | 0.03 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 6 | 0.2 | 0.03 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 6 | 0.2 | 0.03 | 0.18 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 6 | 0.18 | 0.02 | 0.18 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 6 | 0.17 | 0.05 | 0.18 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 6 | 0.17 | 0.02 | 0.17 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 6 | 0.17 | 0.02 | 0.17 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 6 | 0.17 | 0.02 | 0.17 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 6 | 0.15 | 0.03 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 6 | 0.15 | 0.03 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 6 | 0.15 | 0.03 | 0.15 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 6 | 0.15 | 0.04 | 0.15 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 6 | 0.15 | 0.02 | 0.16 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 6 | 0.15 | 0.02 | 0.16 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 6 | 0.15 | 0.01 | 0.15 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 6 | 0.12 | 0.01 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 6 | 0.12 | 0.01 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 6 | 0.12 | 0.01 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 6 | 0.12 | 0.01 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 6 | 0.12 | 0.01 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 6 | 0.12 | 0.01 | 0.12 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 6 | 0.12 | 0.01 | 0.12 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 5 | 0.21 | 0.07 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 5 | 0.21 | 0.07 | 0.25 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 5 | 0.2 | 0.05 | 0.23 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 5 | 0.2 | 0.05 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 5 | 0.2 | 0.05 | 0.23 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 5 | 0.2 | 0.04 | 0.19 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 5 | 0.2 | 0.04 | 0.19 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 5 | 0.2 | 0.04 | 0.19 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 5 | 0.2 | 0.04 | 0.19 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 5 | 0.2 | 0.04 | 0.19 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 5 | 0.2 | 0.04 | 0.19 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 5 | 0.2 | 0.06 | 0.23 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 5 | 0.2 | 0.06 | 0.23 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 5 | 0.19 | 0.06 | 0.22 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 5 | 0.19 | 0.06 | 0.22 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 5 | 0.19 | 0.06 | 0.22 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 5 | 0.19 | 0.04 | 0.19 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 5 | 0.19 | 0.04 | 0.19 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 5 | 0.19 | 0.04 | 0.19 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 5 | 0.19 | 0.04 | 0.19 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 5 | 0.18 | 0.01 | 0.18 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 5 | 0.18 | 0.01 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 5 | 0.18 | 0.01 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 5 | 0.18 | 0.01 | 0.18 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 5 | 0.18 | 0.02 | 0.18 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 5 | 0.18 | 0.02 | 0.18 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 5 | 0.18 | 0.04 | 0.17 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 5 | 0.16 | 0.06 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 5 | 0.16 | 0.06 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 5 | 0.16 | 0.06 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 5 | 0.16 | 0.06 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 5 | 0.16 | 0.06 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 5 | 0.16 | 0.06 | 0.14 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 5 | 0.16 | 0.02 | 0.16 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 5 | 0.16 | 0.02 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 5 | 0.16 | 0.02 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 5 | 0.16 | 0.02 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 5 | 0.16 | 0.02 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 5 | 0.16 | 0.02 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 5 | 0.16 | 0.02 | 0.16 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 5 | 0.16 | 0.02 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 5 | 0.16 | 0.02 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 5 | 0.16 | 0.02 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 5 | 0.15 | 0.02 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 5 | 0.15 | 0.02 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 5 | 0.14 | 0.01 | 0.14 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 5 | 0.14 | 0.01 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 5 | 0.14 | 0.01 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 5 | 0.14 | 0.01 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 5 | 0.14 | 0.01 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 5 | 0.14 | 0.01 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 5 | 0.14 | 0.01 | 0.15 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 5 | 0.14 | 0.02 | 0.13 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 5 | 0.14 | 0.02 | 0.13 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 5 | 0.14 | 0.02 | 0.13 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 5 | 0.14 | 0.02 | 0.13 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 5 | 0.12 | 0.04 | 0.11 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 5 | 0.12 | 0.02 | 0.12 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 5 | 0.12 | 0.02 | 0.12 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 5 | 0.12 | 0.02 | 0.12 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 5 | 0.12 | 0.02 | 0.12 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 5 | 0.12 | 0.02 | 0.12 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 5 | 0.12 | 0.02 | 0.12 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 5 | 0.12 | 0.01 | 0.12 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 5 | 0.12 | 0.01 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 5 | 0.12 | 0.01 | 0.11 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 5 | 0.11 | 0.01 | 0.11 |
| (3,2221) | 2:508:B:CYS:H | 3:601:B:NO1:HB1C | 4 | 0.98 | 0.09 | 0.94 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG2 | 4 | 0.28 | 0.12 | 0.32 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG3 | 4 | 0.28 | 0.12 | 0.32 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG2 | 4 | 0.28 | 0.12 | 0.32 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG3 | 4 | 0.28 | 0.12 | 0.32 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA2 | 4 | 0.28 | 0.08 | 0.27 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA3 | 4 | 0.28 | 0.08 | 0.27 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA2 | 4 | 0.28 | 0.08 | 0.27 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA3 | 4 | 0.28 | 0.08 | 0.27 |
| (3,1774) | 1:224:A:ARG:HG2 | 2:505:B:BB9:HB | 4 | 0.26 | 0.09 | 0.24 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,1774) | 1:224:A:ARG:HG3 | 2:505:B:BB9:HB | 4 | 0.26 | 0.09 | 0.24 |
| (3,600) | 1:151:A:LYS:HE2 | 1:152:A:THR:HA | 4 | 0.23 | 0.1 | 0.24 |
| (3,600) | 1:151:A:LYS:HE3 | 1:152:A:THR:HA | 4 | 0.23 | 0.1 | 0.24 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB2 | 4 | 0.18 | 0.03 | 0.19 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB3 | 4 | 0.18 | 0.03 | 0.19 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB2 | 4 | 0.18 | 0.03 | 0.19 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB3 | 4 | 0.18 | 0.03 | 0.19 |
| (3,430) | 1:138:A:ARG:HG2 | 1:139:A:TRP:HZ2 | 4 | 0.17 | 0.03 | 0.16 |
| (3,430) | 1:138:A:ARG:HG3 | 1:139:A:TRP:HZ2 | 4 | 0.17 | 0.03 | 0.16 |
| (3,1546) | 1:203:A:ASN:H | 1:204:A:HIS:HE1 | 4 | 0.16 | 0.03 | 0.17 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE1 | 4 | 0.16 | 0.02 | 0.16 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE2 | 4 | 0.16 | 0.02 | 0.16 |
| (3,607) | 1:151:A:LYS:HE2 | 1:202:A:ARG:HA | 4 | 0.16 | 0.05 | 0.15 |
| (3,607) | 1:151:A:LYS:HE3 | 1:202:A:ARG:HA | 4 | 0.16 | 0.05 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG11 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG12 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG13 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG21 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG22 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG23 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG11 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG12 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG13 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG21 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG22 | 4 | 0.15 | 0.02 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG23 | 4 | 0.15 | 0.02 | 0.16 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB1 | 4 | 0.14 | 0.03 | 0.14 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB2 | 4 | 0.14 | 0.03 | 0.14 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB3 | 4 | 0.14 | 0.03 | 0.14 |
| (3,1518) | 1:200:A:ILE:HG21 | 2:508:B:CYS:HA | 4 | 0.14 | 0.03 | 0.12 |
| (3,1518) | 1:200:A:ILE:HG22 | 2:508:B:CYS:HA | 4 | 0.14 | 0.03 | 0.12 |
| (3,1518) | 1:200:A:ILE:HG23 | 2:508:B:CYS:HA | 4 | 0.14 | 0.03 | 0.12 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB2 | 4 | 0.13 | 0.04 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB3 | 4 | 0.13 | 0.04 | 0.11 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD2 | 4 | 0.13 | 0.01 | 0.13 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD3 | 4 | 0.13 | 0.01 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD2 | 4 | 0.13 | 0.01 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD3 | 4 | 0.13 | 0.01 | 0.13 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE1 | 4 | 0.13 | 0.02 | 0.13 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE2 | 4 | 0.13 | 0.02 | 0.13 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE1 | 4 | 0.13 | 0.02 | 0.13 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE2 | 4 | 0.13 | 0.02 | 0.13 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,1936) | 1:233:A:LYS:HD2 | 1:236:A:LEU:HA | 4 | 0.12 | 0.01 | 0.12 |
| (3,1936) | 1:233:A:LYS:HD3 | 1:236:A:LEU:HA | 4 | 0.12 | 0.01 | 0.12 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG2 | 4 | 0.12 | 0.01 | 0.12 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG3 | 4 | 0.12 | 0.01 | 0.12 |
| (3,1877) | 1:229:A:ILE:HB | 1:237:A:ALA:H | 4 | 0.12 | 0.01 | 0.12 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG2 | 4 | 0.12 | 0.01 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG3 | 4 | 0.12 | 0.01 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG2 | 4 | 0.12 | 0.01 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG3 | 4 | 0.12 | 0.01 | 0.11 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD2 | 4 | 0.12 | 0.01 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD3 | 4 | 0.12 | 0.01 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD21 | 1:188:A:GLY:H | 4 | 0.11 | 0.01 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD22 | 1:188:A:GLY:H | 4 | 0.11 | 0.01 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD23 | 1:188:A:GLY:H | 4 | 0.11 | 0.01 | 0.12 |
| (3,1089) | 1:175:A:VAL:HG11 | 1:232:A:ALA:HB1 | 4 | 0.11 | 0.01 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG12 | 1:232:A:ALA:HB1 | 4 | 0.11 | 0.01 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG13 | 1:232:A:ALA:HB1 | 4 | 0.11 | 0.01 | 0.1 |
| (3,2214) | 2:506:B:3GL:HB2C | 3:601:B:NO1:HB1C | 3 | 0.39 | 0.12 | 0.34 |
| (3,1939) | 1:233:A:LYS:HG2 | 1:236:A:LEU:HA | 3 | 0.38 | 0.01 | 0.38 |
| (3,1939) | 1:233:A:LYS:HG3 | 1:236:A:LEU:HA | 3 | 0.38 | 0.01 | 0.38 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB2 | 3 | 0.28 | 0.02 | 0.28 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB3 | 3 | 0.28 | 0.02 | 0.28 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB2 | 3 | 0.28 | 0.02 | 0.28 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB3 | 3 | 0.28 | 0.02 | 0.28 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE1 | 3 | 0.27 | 0.06 | 0.31 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE2 | 3 | 0.27 | 0.06 | 0.31 |
| (3,1925) | 1:233:A:LYS:HD2 | 1:233:A:LYS:HA | 3 | 0.21 | 0.01 | 0.22 |
| (3,1925) | 1:233:A:LYS:HD3 | 1:233:A:LYS:HA | 3 | 0.21 | 0.01 | 0.22 |
| (3,1849) | 1:228:A:ASN:HB2 | 2:505:B:BB9:HB | 3 | 0.2 | 0.06 | 0.19 |
| (3,1683) | 1:218:A:MET:HB2 | 2:509:B:BB9:HB | 3 | 0.19 | 0.02 | 0.19 |
| (3,1683) | 1:218:A:MET:HB3 | 2:509:B:BB9:HB | 3 | 0.19 | 0.02 | 0.19 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB1 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB2 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB3 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB1 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB2 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB3 | 3 | 0.18 | 0.05 | 0.15 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB2 | 3 | 0.18 | 0.06 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB3 | 3 | 0.18 | 0.06 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB2 | 3 | 0.18 | 0.06 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB3 | 3 | 0.18 | 0.06 | 0.16 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD1 | 3 | 0.17 | 0.0 | 0.17 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD2 | 3 | 0.17 | 0.0 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD1 | 3 | 0.17 | 0.0 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD2 | 3 | 0.17 | 0.0 | 0.17 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD1 | 3 | 0.17 | 0.03 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD2 | 3 | 0.17 | 0.03 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD1 | 3 | 0.17 | 0.03 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD2 | 3 | 0.17 | 0.03 | 0.15 |
| (3,1658) | 1:215:A:LEU:HG | 2:508:B:CYS:HB3 | 3 | 0.17 | 0.06 | 0.13 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG12 | 3 | 0.17 | 0.02 | 0.16 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG13 | 3 | 0.17 | 0.02 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB2 | 3 | 0.17 | 0.02 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB3 | 3 | 0.17 | 0.02 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB2 | 3 | 0.17 | 0.02 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB3 | 3 | 0.17 | 0.02 | 0.16 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB2 | 3 | 0.16 | 0.01 | 0.17 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB3 | 3 | 0.16 | 0.01 | 0.17 |
| (3,1563) | 1:205:A:TYR:HD1 | 2:508:B:CYS:HB3 | 3 | 0.16 | 0.04 | 0.13 |
| (3,1563) | 1:205:A:TYR:HD2 | 2:508:B:CYS:HB3 | 3 | 0.16 | 0.04 | 0.13 |
| (3,1933) | 1:233:A:LYS:HG2 | 1:235:A:GLY:H | 3 | 0.15 | 0.01 | 0.15 |
| (3,1933) | 1:233:A:LYS:HG3 | 1:235:A:GLY:H | 3 | 0.15 | 0.01 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD2 | 3 | 0.15 | 0.0 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD3 | 3 | 0.15 | 0.0 | 0.15 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB1 | 3 | 0.15 | 0.05 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB2 | 3 | 0.15 | 0.05 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB3 | 3 | 0.15 | 0.05 | 0.11 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE1 | 3 | 0.14 | 0.02 | 0.14 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE2 | 3 | 0.14 | 0.02 | 0.14 |
| (2,29) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HZ3 | 3 | 0.14 | 0.01 | 0.13 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG21 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG22 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG23 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG21 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG22 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG23 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG21 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG22 | 3 | 0.14 | 0.02 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG23 | 3 | 0.14 | 0.02 | 0.15 |
| (3,1099) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HG3 | 3 | 0.14 | 0.01 | 0.14 |
| (3,1099) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HG3 | 3 | 0.14 | 0.01 | 0.14 |
| (3,1099) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HG3 | 3 | 0.14 | 0.01 | 0.14 |
| (3,2060) | 1:242:A:ASP:HB2 | 1:246:A:ALA:H | 3 | 0.14 | 0.01 | 0.13 |
| (3,2060) | 1:242:A:ASP:HB3 | 1:246:A:ALA:H | 3 | 0.14 | 0.01 | 0.13 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (3,1199) | 1:178:A:MET:HE1 | 1:236:A:LEU:HG | 3 | 0.13 | 0.02 | 0.13 |
| (3,1199) | 1:178:A:MET:HE2 | 1:236:A:LEU:HG | 3 | 0.13 | 0.02 | 0.13 |
| (3,1199) | 1:178:A:MET:HE3 | 1:236:A:LEU:HG | 3 | 0.13 | 0.02 | 0.13 |
| (3,988) | 1:173:A:ARG:HG2 | 1:174:A:PHE:HZ | 3 | 0.13 | 0.01 | 0.12 |
| (3,988) | 1:173:A:ARG:HG3 | 1:174:A:PHE:HZ | 3 | 0.13 | 0.01 | 0.12 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB1 | 3 | 0.13 | 0.01 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB2 | 3 | 0.13 | 0.01 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB3 | 3 | 0.13 | 0.01 | 0.14 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD2 | 3 | 0.12 | 0.01 | 0.13 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD3 | 3 | 0.12 | 0.01 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD2 | 3 | 0.12 | 0.01 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD3 | 3 | 0.12 | 0.01 | 0.13 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE1 | 3 | 0.12 | 0.03 | 0.1 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE2 | 3 | 0.12 | 0.03 | 0.1 |
| (3,1158) | 1:177:A:LEU:HD11 | 1:188:A:GLY:HA2 | 3 | 0.12 | 0.01 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD12 | 1:188:A:GLY:HA2 | 3 | 0.12 | 0.01 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD13 | 1:188:A:GLY:HA2 | 3 | 0.12 | 0.01 | 0.11 |
| (3,2049) | 1:241:A:ARG:HD2 | 1:245:A:LEU:HA | 3 | 0.12 | 0.01 | 0.11 |
| (3,2049) | 1:241:A:ARG:HD3 | 1:245:A:LEU:HA | 3 | 0.12 | 0.01 | 0.11 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD2 | 3 | 0.11 | 0.02 | 0.1 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD3 | 3 | 0.11 | 0.02 | 0.1 |
| (3,1307) | 1:186:A:SER:H | 1:187:A:GLU:H | 3 | 0.11 | 0.0 | 0.11 |
| (3,1695) | 1:219:A:TYR:HE1 | 1:226:A:THR:HA | 2 | 0.3 | 0.01 | 0.3 |
| (3,1695) | 1:219:A:TYR:HE2 | 1:226:A:THR:HA | 2 | 0.3 | 0.01 | 0.3 |
| (4,2) | 1:175:A:VAL:HG21 | 1:233:A:LYS:HE2 | 2 | 0.29 | 0.0 | 0.29 |
| (4,2) | 1:175:A:VAL:HG22 | 1:233:A:LYS:HE2 | 2 | 0.29 | 0.0 | 0.29 |
| (4,2) | 1:175:A:VAL:HG23 | 1:233:A:LYS:HE2 | 2 | 0.29 | 0.0 | 0.29 |
| (3,1418) | 1:193:A:ALA:HA | 1:212:A:HIS:HE1 | 2 | 0.24 | 0.0 | 0.24 |
| (1,24) | 1:149:A:LYS:O | 1:153:A:ALA:H | 2 | 0.19 | 0.0 | 0.19 |
| (3,1709) | 1:219:A:TYR:HD1 | 2:507:B:BB9:HB | 2 | 0.16 | 0.02 | 0.16 |
| (3,1709) | 1:219:A:TYR:HD2 | 2:507:B:BB9:HB | 2 | 0.16 | 0.02 | 0.16 |
| (3,202) | 1:122:A:VAL:HG11 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,202) | 1:122:A:VAL:HG12 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,202) | 1:122:A:VAL:HG13 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,202) | 1:122:A:VAL:HG21 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,202) | 1:122:A:VAL:HG22 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,202) | 1:122:A:VAL:HG23 | 1:160:A:TRP:HA | 2 | 0.16 | 0.0 | 0.16 |
| (3,549) | 1:147:A:GLN:HE21 | 1:206:A:ASP:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,549) | 1:147:A:GLN:HE22 | 1:206:A:ASP:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,1098) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HA | 2 | 0.16 | 0.02 | 0.16 |
| (3,1098) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HA | 2 | 0.16 | 0.02 | 0.16 |
| (3,1098) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HA | 2 | 0.16 | 0.02 | 0.16 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,1376) | 1:190:A:MET:HB2 | 1:247:A:ASN:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,1376) | 1:190:A:MET:HB3 | 1:247:A:ASN:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,1507) | 1:200:A:ILE:HG12 | 1:205:A:TYR:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,1507) | 1:200:A:ILE:HG13 | 1:205:A:TYR:H | 2 | 0.16 | 0.02 | 0.16 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG2 | 2 | 0.16 | 0.04 | 0.16 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG3 | 2 | 0.16 | 0.04 | 0.16 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB1 | 2 | 0.15 | 0.02 | 0.15 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB2 | 2 | 0.15 | 0.02 | 0.15 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB3 | 2 | 0.15 | 0.02 | 0.15 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB1 | 2 | 0.15 | 0.02 | 0.15 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB2 | 2 | 0.15 | 0.02 | 0.15 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB3 | 2 | 0.15 | 0.02 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ1 | 2 | 0.15 | 0.0 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ2 | 2 | 0.15 | 0.0 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ3 | 2 | 0.15 | 0.0 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ1 | 2 | 0.15 | 0.0 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ2 | 2 | 0.15 | 0.0 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ3 | 2 | 0.15 | 0.0 | 0.15 |
| (3,1212) | 1:178:A:MET:HE1 | 1:239:A:TYR:HA | 2 | 0.15 | 0.0 | 0.15 |
| (3,1212) | 1:178:A:MET:HE2 | 1:239:A:TYR:HA | 2 | 0.15 | 0.0 | 0.15 |
| (3,1212) | 1:178:A:MET:HE3 | 1:239:A:TYR:HA | 2 | 0.15 | 0.0 | 0.15 |
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG2 | 2 | 0.15 | 0.02 | 0.15 |
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG3 | 2 | 0.15 | 0.02 | 0.15 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG2 | 2 | 0.15 | 0.02 | 0.15 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG3 | 2 | 0.15 | 0.02 | 0.15 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG2 | 2 | 0.15 | 0.02 | 0.15 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG3 | 2 | 0.15 | 0.02 | 0.15 |
| (3,824) | 1:166:A:GLU:HG2 | 1:167:A:ALA:HA | 2 | 0.15 | 0.02 | 0.15 |
| (3,824) | 1:166:A:GLU:HG3 | 1:167:A:ALA:HA | 2 | 0.15 | 0.02 | 0.15 |
| (3,364) | 1:135:A:VAL:H | 1:136:A:ARG:HA | 2 | 0.14 | 0.01 | 0.14 |
| (3,1848) | 1:228:A:ASN:HB3 | 2:505:B:BB9:HB | 2 | 0.14 | 0.01 | 0.14 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG12 | 2 | 0.14 | 0.02 | 0.14 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG13 | 2 | 0.14 | 0.02 | 0.14 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG12 | 2 | 0.14 | 0.02 | 0.14 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG13 | 2 | 0.14 | 0.02 | 0.14 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG21 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG22 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG23 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG21 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG22 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG23 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG21 | 2 | 0.13 | 0.02 | 0.13 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG22 | 2 | 0.13 | 0.02 | 0.13 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG23 | 2 | 0.13 | 0.02 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB2 | 2 | 0.13 | 0.0 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB3 | 2 | 0.13 | 0.0 | 0.13 |
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB2 | 2 | 0.13 | 0.0 | 0.13 |
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB3 | 2 | 0.13 | 0.0 | 0.13 |
| (1,86) | 1:210:A:GLU:O | 1:214:A:CYS:H | 2 | 0.12 | 0.01 | 0.12 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG21 | 2 | 0.12 | 0.02 | 0.12 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG22 | 2 | 0.12 | 0.02 | 0.12 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG23 | 2 | 0.12 | 0.02 | 0.12 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG21 | 2 | 0.12 | 0.02 | 0.12 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG22 | 2 | 0.12 | 0.02 | 0.12 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG23 | 2 | 0.12 | 0.02 | 0.12 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB2 | 2 | 0.12 | 0.01 | 0.12 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB3 | 2 | 0.12 | 0.01 | 0.12 |
| (3,350) | 1:133:A:GLU:HB2 | 1:135:A:VAL:H | 2 | 0.12 | 0.02 | 0.12 |
| (3,350) | 1:133:A:GLU:HB3 | 1:135:A:VAL:H | 2 | 0.12 | 0.02 | 0.12 |
| (3,741) | 1:160:A:TRP:HZ2 | 3:601:B:NO1:HZ2 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (1,102) | 1:227:A:ARG:O | 1:231:A:ALA:H | 2 | 0.11 | 0.01 | 0.11 |
| (3,156) | 1:120:A:PHE:HE1 | 1:120:A:PHE:HA | 2 | 0.11 | 0.0 | 0.11 |
| (3,156) | 1:120:A:PHE:HE2 | 1:120:A:PHE:HA | 2 | 0.11 | 0.0 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD1 | 2 | 0.11 | 0.0 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD2 | 2 | 0.11 | 0.0 | 0.11 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB3 | 2 | 0.11 | 0.01 | 0.11 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB3 | 2 | 0.11 | 0.01 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD11 | 2 | 0.11 | 0.0 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD12 | 2 | 0.11 | 0.0 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD13 | 2 | 0.11 | 0.0 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD21 | 2 | 0.11 | 0.0 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD22 | 2 | 0.11 | 0.0 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD23 | 2 | 0.11 | 0.0 | 0.11 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB1 | 2 | 0.11 | 0.01 | 0.11 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB3 | 2 | 0.11 | 0.01 | 0.11 |

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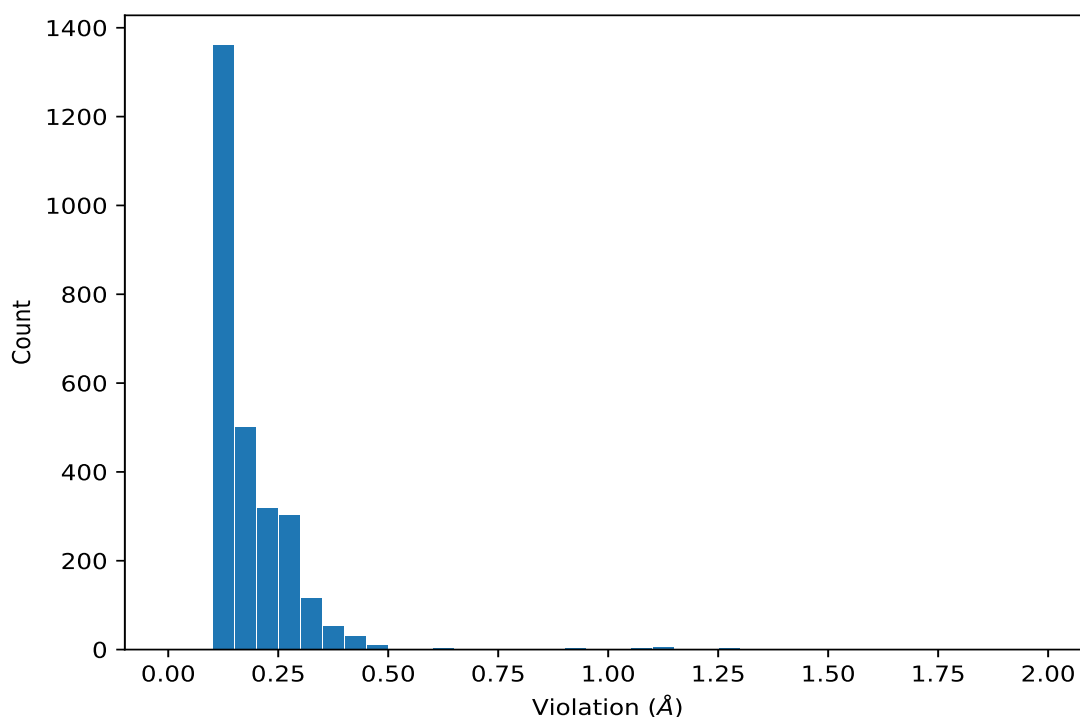
| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|----------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (3,1587) | 1:209:A:TYR:HD1 | 1:248:A:ALA:H | 2 | 0.11 | 0.0 | 0.11 |
| (3,1587) | 1:209:A:TYR:HD2 | 1:248:A:ALA:H | 2 | 0.11 | 0.0 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD3 | 2 | 0.11 | 0.01 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD3 | 2 | 0.11 | 0.01 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD2 | 2 | 0.11 | 0.01 | 0.11 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD3 | 2 | 0.11 | 0.01 | 0.11 |
| (3,23) | 1:112:A:ILE:HG12 | 1:126:A:PHE:HZ | 2 | 0.11 | 0.0 | 0.11 |
| (3,23) | 1:112:A:ILE:HG13 | 1:126:A:PHE:HZ | 2 | 0.11 | 0.0 | 0.11 |
| (3,732) | 1:160:A:TRP:H | 1:163:A:ILE:HB | 2 | 0.11 | 0.0 | 0.11 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB2 | 2 | 0.11 | 0.0 | 0.11 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB3 | 2 | 0.11 | 0.0 | 0.11 |
| (3,1674) | 1:217:A:GLU:H | 1:245:A:LEU:HG | 2 | 0.1 | 0.0 | 0.1 |

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

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

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



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

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

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 1 | 1.99 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 1 | 1.73 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 6 | 1.45 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 7 | 1.29 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 6 | 1.28 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 6 | 1.26 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 8 | 1.23 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 10 | 1.16 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 4 | 1.15 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 10 | 1.15 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 4 | 1.15 |
| (3,2221) | 2:508:B:CYS:H | 3:601:B:NO1:HB1C | 1 | 1.14 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 9 | 1.1 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 7 | 1.1 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 7 | 1.07 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 9 | 1.07 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 8 | 1.06 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 5 | 0.98 |
| (3,2221) | 2:508:B:CYS:H | 3:601:B:NO1:HB1C | 4 | 0.94 |
| (3,2221) | 2:508:B:CYS:H | 3:601:B:NO1:HB1C | 10 | 0.94 |
| (3,2221) | 2:508:B:CYS:H | 3:601:B:NO1:HB1C | 9 | 0.91 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 8 | 0.8 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 3 | 0.63 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 6 | 0.61 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 6 | 0.61 |
| (3,2212) | 2:506:B:3GL:HA | 3:601:B:NO1:HB1C | 2 | 0.56 |
| (3,2214) | 2:506:B:3GL:HB2C | 3:601:B:NO1:HB1C | 6 | 0.55 |
| (3,2213) | 2:506:B:3GL:HB1C | 3:601:B:NO1:HB1C | 1 | 0.51 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 2 | 0.5 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 8 | 0.48 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 8 | 0.48 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 8 | 0.48 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 8 | 0.48 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 9 | 0.47 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 9 | 0.47 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 9 | 0.47 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 9 | 0.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 7 | 0.46 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 7 | 0.46 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 7 | 0.44 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 7 | 0.44 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 7 | 0.44 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 7 | 0.44 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 9 | 0.43 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 9 | 0.43 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 9 | 0.43 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 9 | 0.43 |
| (3,2158) | 1:250:A:ARG:HD2 | 1:250:A:ARG:HA | 9 | 0.42 |
| (3,2158) | 1:250:A:ARG:HD3 | 1:250:A:ARG:HA | 9 | 0.42 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 3 | 0.42 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 3 | 0.42 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 3 | 0.42 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 8 | 0.42 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 8 | 0.42 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 8 | 0.42 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 8 | 0.42 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 4 | 0.41 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 4 | 0.41 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 4 | 0.41 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 4 | 0.41 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 10 | 0.41 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 10 | 0.41 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 10 | 0.41 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 10 | 0.41 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 7 | 0.4 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 7 | 0.4 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 7 | 0.4 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 7 | 0.4 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 1 | 0.4 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 1 | 0.4 |
| (3,1939) | 1:233:A:LYS:HG2 | 1:236:A:LEU:HA | 5 | 0.39 |
| (3,1939) | 1:233:A:LYS:HG3 | 1:236:A:LEU:HA | 5 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 3 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 3 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 3 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 3 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 8 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 8 | 0.39 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 8 | 0.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 8 | 0.39 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 9 | 0.39 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 9 | 0.39 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG2 | 9 | 0.39 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG3 | 9 | 0.39 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG2 | 9 | 0.39 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG3 | 9 | 0.39 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 3 | 0.39 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 3 | 0.39 |
| (3,1939) | 1:233:A:LYS:HG2 | 1:236:A:LEU:HA | 2 | 0.38 |
| (3,1939) | 1:233:A:LYS:HG3 | 1:236:A:LEU:HA | 2 | 0.38 |
| (3,1774) | 1:224:A:ARG:HG2 | 2:505:B:BB9:HB | 7 | 0.38 |
| (3,1774) | 1:224:A:ARG:HG3 | 2:505:B:BB9:HB | 7 | 0.38 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 3 | 0.38 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 3 | 0.38 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 7 | 0.38 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 7 | 0.38 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 8 | 0.38 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 8 | 0.38 |
| (3,1939) | 1:233:A:LYS:HG2 | 1:236:A:LEU:HA | 1 | 0.37 |
| (3,1939) | 1:233:A:LYS:HG3 | 1:236:A:LEU:HA | 1 | 0.37 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 5 | 0.37 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 5 | 0.37 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA2 | 9 | 0.37 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA3 | 9 | 0.37 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA2 | 9 | 0.37 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA3 | 9 | 0.37 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG2 | 7 | 0.37 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG3 | 7 | 0.37 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG2 | 7 | 0.37 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG3 | 7 | 0.37 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 5 | 0.37 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 5 | 0.37 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 5 | 0.36 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 5 | 0.36 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 1 | 0.36 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 1 | 0.36 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 2 | 0.36 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 2 | 0.36 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD1 | 5 | 0.36 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD2 | 5 | 0.36 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD1 | 5 | 0.36 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD2 | 5 | 0.36 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 8 | 0.36 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 8 | 0.36 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 9 | 0.35 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 9 | 0.35 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 5 | 0.35 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 5 | 0.35 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 5 | 0.35 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 2 | 0.35 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 2 | 0.35 |
| (3,2214) | 2:506:B:3GL:HB2C | 3:601:B:NO1:HB1C | 8 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 1 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 1 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 1 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 1 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 1 | 0.34 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 1 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 2 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 2 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 4 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 4 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 8 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 8 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 10 | 0.34 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 10 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 4 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 4 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 7 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 7 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 10 | 0.34 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 10 | 0.34 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 9 | 0.34 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 6 | 0.33 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 6 | 0.33 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 6 | 0.33 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 1 | 0.33 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 1 | 0.33 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 5 | 0.33 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 5 | 0.33 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 5 | 0.33 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 6 | 0.33 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 6 | 0.33 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 6 | 0.33 |
| (3,600) | 1:151:A:LYS:HE2 | 1:152:A:THR:HA | 4 | 0.33 |
| (3,600) | 1:151:A:LYS:HE3 | 1:152:A:THR:HA | 4 | 0.33 |
| (3,600) | 1:151:A:LYS:HE2 | 1:152:A:THR:HA | 10 | 0.33 |
| (3,600) | 1:151:A:LYS:HE3 | 1:152:A:THR:HA | 10 | 0.33 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA2 | 7 | 0.33 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA3 | 7 | 0.33 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA2 | 7 | 0.33 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA3 | 7 | 0.33 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 6 | 0.32 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 6 | 0.32 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 6 | 0.32 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 6 | 0.32 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 6 | 0.32 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 6 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 3 | 0.32 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 7 | 0.32 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 7 | 0.32 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 7 | 0.32 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 7 | 0.32 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 4 | 0.32 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 4 | 0.32 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 10 | 0.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 10 | 0.32 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 3 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 8 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 8 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 8 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 8 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 8 | 0.31 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 8 | 0.31 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 6 | 0.31 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 6 | 0.31 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE1 | 3 | 0.31 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE2 | 3 | 0.31 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE1 | 5 | 0.31 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE2 | 5 | 0.31 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 6 | 0.31 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 3 | 0.31 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 3 | 0.31 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB2 | 6 | 0.31 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB3 | 6 | 0.31 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB2 | 6 | 0.31 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB3 | 6 | 0.31 |
| (3,26) | 1:112:A:ILE:HG12 | 1:152:A:THR:HA | 9 | 0.31 |
| (3,26) | 1:112:A:ILE:HG13 | 1:152:A:THR:HA | 9 | 0.31 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 3 | 0.3 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 3 | 0.3 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 7 | 0.3 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 7 | 0.3 |
| (3,1695) | 1:219:A:TYR:HE1 | 1:226:A:THR:HA | 7 | 0.3 |
| (3,1695) | 1:219:A:TYR:HE2 | 1:226:A:THR:HA | 7 | 0.3 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 7 | 0.3 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 7 | 0.3 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 7 | 0.3 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 8 | 0.3 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 8 | 0.3 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 8 | 0.3 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 4 | 0.3 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 4 | 0.3 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 10 | 0.3 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 10 | 0.3 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 7 | 0.3 |
| (3,50) | 1:114:A:LEU:HB2 | 1:115:A:THR:HG21 | 3 | 0.3 |
| (3,50) | 1:114:A:LEU:HB2 | 1:115:A:THR:HG22 | 3 | 0.3 |
| (3,50) | 1:114:A:LEU:HB2 | 1:115:A:THR:HG23 | 3 | 0.3 |
| (3,50) | 1:114:A:LEU:HB3 | 1:115:A:THR:HG21 | 3 | 0.3 |
| (3,50) | 1:114:A:LEU:HB3 | 1:115:A:THR:HG22 | 3 | 0.3 |
| (3,50) | 1:114:A:LEU:HB3 | 1:115:A:THR:HG23 | 3 | 0.3 |
| (4,2) | 1:175:A:VAL:HG21 | 1:233:A:LYS:HE2 | 1 | 0.29 |
| (4,2) | 1:175:A:VAL:HG22 | 1:233:A:LYS:HE2 | 1 | 0.29 |
| (4,2) | 1:175:A:VAL:HG23 | 1:233:A:LYS:HE2 | 1 | 0.29 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB2 | 5 | 0.29 |
| (3,2015) | 1:239:A:TYR:HA | 1:240:A:MET:HB3 | 5 | 0.29 |
| (3,1695) | 1:219:A:TYR:HE1 | 1:226:A:THR:HA | 5 | 0.29 |
| (3,1695) | 1:219:A:TYR:HE2 | 1:226:A:THR:HA | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 5 | 0.29 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 5 | 0.29 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 3 | 0.29 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 3 | 0.29 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 8 | 0.29 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 8 | 0.29 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 1 | 0.29 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 1 | 0.29 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 4 | 0.29 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 4 | 0.29 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 4 | 0.29 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 10 | 0.29 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 10 | 0.29 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 10 | 0.29 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 9 | 0.29 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 9 | 0.29 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 9 | 0.29 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 9 | 0.29 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 9 | 0.29 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 9 | 0.29 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 9 | 0.29 |
| (4,2) | 1:175:A:VAL:HG21 | 1:233:A:LYS:HE2 | 7 | 0.28 |
| (4,2) | 1:175:A:VAL:HG22 | 1:233:A:LYS:HE2 | 7 | 0.28 |
| (4,2) | 1:175:A:VAL:HG23 | 1:233:A:LYS:HE2 | 7 | 0.28 |
| (3,1849) | 1:228:A:ASN:HB2 | 2:505:B:BB9:HB | 8 | 0.28 |
| (3,1774) | 1:224:A:ARG:HG2 | 2:505:B:BB9:HB | 6 | 0.28 |
| (3,1774) | 1:224:A:ARG:HG3 | 2:505:B:BB9:HB | 6 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 2 | 0.28 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 6 | 0.28 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 6 | 0.28 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 2 | 0.28 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 2 | 0.28 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 2 | 0.28 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 2 | 0.28 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 3 | 0.28 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 3 | 0.28 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 3 | 0.28 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 3 | 0.28 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB2 | 7 | 0.28 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB3 | 7 | 0.28 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB2 | 7 | 0.28 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB3 | 7 | 0.28 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 1 | 0.28 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 1 | 0.28 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 1 | 0.28 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 1 | 0.28 |
| (3,2214) | 2:506:B:3GL:HB2C | 3:601:B:NO1:HB1C | 1 | 0.27 |
| (3,1625) | 1:213:A:THR:HG21 | 1:245:A:LEU:HB2 | 7 | 0.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1625) | 1:213:A:THR:HG21 | 1:245:A:LEU:HB3 | 7 | 0.27 |
| (3,1625) | 1:213:A:THR:HG22 | 1:245:A:LEU:HB2 | 7 | 0.27 |
| (3,1625) | 1:213:A:THR:HG22 | 1:245:A:LEU:HB3 | 7 | 0.27 |
| (3,1625) | 1:213:A:THR:HG23 | 1:245:A:LEU:HB2 | 7 | 0.27 |
| (3,1625) | 1:213:A:THR:HG23 | 1:245:A:LEU:HB3 | 7 | 0.27 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 9 | 0.27 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 9 | 0.27 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 9 | 0.27 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 6 | 0.27 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 6 | 0.27 |
| (3,1593) | 1:209:A:TYR:HB2 | 1:251:A:HIS:H | 9 | 0.27 |
| (3,1593) | 1:209:A:TYR:HB3 | 1:251:A:HIS:H | 9 | 0.27 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 3 | 0.27 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 3 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 1 | 0.27 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 8 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 4 | 0.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 4 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 10 | 0.27 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 10 | 0.27 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 5 | 0.27 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 5 | 0.27 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 4 | 0.27 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 4 | 0.27 |
| (3,800) | 1:164:A:GLN:HG2 | 1:166:A:GLU:H | 10 | 0.27 |
| (3,800) | 1:164:A:GLN:HG3 | 1:166:A:GLU:H | 10 | 0.27 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 8 | 0.27 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 8 | 0.27 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 8 | 0.27 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 8 | 0.27 |
| (3,513) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HG2 | 3 | 0.27 |
| (3,513) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HG3 | 3 | 0.27 |
| (3,513) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HG2 | 3 | 0.27 |
| (3,513) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HG3 | 3 | 0.27 |
| (3,141) | 1:119:A:LYS:HD2 | 1:120:A:PHE:HD1 | 6 | 0.27 |
| (3,141) | 1:119:A:LYS:HD2 | 1:120:A:PHE:HD2 | 6 | 0.27 |
| (3,141) | 1:119:A:LYS:HD3 | 1:120:A:PHE:HD1 | 6 | 0.27 |
| (3,141) | 1:119:A:LYS:HD3 | 1:120:A:PHE:HD2 | 6 | 0.27 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 4 | 0.26 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 4 | 0.26 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 4 | 0.26 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 4 | 0.26 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 4 | 0.26 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 4 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 5 | 0.26 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 5 | 0.26 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 6 | 0.26 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 6 | 0.26 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 6 | 0.26 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 6 | 0.26 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 6 | 0.26 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB2 | 9 | 0.26 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB3 | 9 | 0.26 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB2 | 9 | 0.26 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB3 | 9 | 0.26 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 8 | 0.26 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 8 | 0.26 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 8 | 0.26 |
| (3,639) | 1:155:A:TYR:HA | 1:156:A:THR:HG21 | 7 | 0.26 |
| (3,639) | 1:155:A:TYR:HA | 1:156:A:THR:HG22 | 7 | 0.26 |
| (3,639) | 1:155:A:TYR:HA | 1:156:A:THR:HG23 | 7 | 0.26 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 6 | 0.26 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 6 | 0.26 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 6 | 0.26 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 6 | 0.26 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB2 | 9 | 0.26 |
| (3,548) | 1:147:A:GLN:HG2 | 1:206:A:ASP:HB3 | 9 | 0.26 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB2 | 9 | 0.26 |
| (3,548) | 1:147:A:GLN:HG3 | 1:206:A:ASP:HB3 | 9 | 0.26 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG2 | 6 | 0.26 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG3 | 6 | 0.26 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG2 | 6 | 0.26 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG3 | 6 | 0.26 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 6 | 0.26 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 6 | 0.26 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 6 | 0.26 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 6 | 0.26 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 10 | 0.25 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 10 | 0.25 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 10 | 0.25 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 10 | 0.25 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 10 | 0.25 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 10 | 0.25 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 3 | 0.25 |
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 3 | 0.25 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 3 | 0.25 |
| (3,1658) | 1:215:A:LEU:HG | 2:508:B:CYS:HB3 | 6 | 0.25 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 5 | 0.25 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 5 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 9 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 9 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 9 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 9 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 9 | 0.25 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 9 | 0.25 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 6 | 0.25 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 6 | 0.25 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 6 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB1 | 5 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB2 | 5 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB3 | 5 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB1 | 5 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB2 | 5 | 0.25 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB3 | 5 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 7 | 0.25 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 1 | 0.25 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 1 | 0.25 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 1 | 0.25 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 1 | 0.25 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 1 | 0.25 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 1 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 2 | 0.25 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 5 | 0.25 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 5 | 0.25 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 1 | 0.25 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 1 | 0.25 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 1 | 0.25 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 1 | 0.25 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 5 | 0.25 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 5 | 0.25 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 5 | 0.25 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 5 | 0.25 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 3 | 0.25 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 1 | 0.25 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 1 | 0.25 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 1 | 0.25 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 1 | 0.25 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 1 | 0.25 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 1 | 0.25 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 1 | 0.25 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 1 | 0.25 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 1 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 1 | 0.25 |
| (3,2215) | 2:506:B:3GL:H2 | 3:601:B:NO1:HB1C | 2 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 7 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 7 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 7 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 7 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 7 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 7 | 0.24 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 7 | 0.24 |
| (3,1418) | 1:193:A:ALA:HA | 1:212:A:HIS:HE1 | 1 | 0.24 |
| (3,1418) | 1:193:A:ALA:HA | 1:212:A:HIS:HE1 | 2 | 0.24 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 1 | 0.24 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 1 | 0.24 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 5 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 9 | 0.24 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 3 | 0.24 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 3 | 0.24 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 9 | 0.24 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 9 | 0.24 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 1 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD1 | 2 | 0.24 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD2 | 2 | 0.24 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD1 | 2 | 0.24 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD2 | 2 | 0.24 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD1 | 7 | 0.24 |
| (3,431) | 1:138:A:ARG:HH21 | 1:225:A:PHE:HD2 | 7 | 0.24 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD1 | 7 | 0.24 |
| (3,431) | 1:138:A:ARG:HH22 | 1:225:A:PHE:HD2 | 7 | 0.24 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 4 | 0.24 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 4 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 4 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 4 | 0.24 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 10 | 0.24 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 10 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 10 | 0.24 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 10 | 0.24 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 4 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 10 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 10 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 10 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 10 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 10 | 0.23 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 10 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 4 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 4 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 4 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 10 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 10 | 0.23 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 10 | 0.23 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 3 | 0.23 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 5 | 0.23 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 8 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 2 | 0.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 2 | 0.23 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 2 | 0.23 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 3 | 0.23 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 1 | 0.23 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 1 | 0.23 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 1 | 0.23 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 6 | 0.23 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 6 | 0.23 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 8 | 0.23 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 8 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 3 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 3 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 3 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 9 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 9 | 0.23 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 9 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 2 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 3 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 3 | 0.23 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 3 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 3 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 3 | 0.23 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 3 | 0.23 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 9 | 0.23 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 9 | 0.23 |
| (3,607) | 1:151:A:LYS:HE2 | 1:202:A:ARG:HA | 3 | 0.23 |
| (3,607) | 1:151:A:LYS:HE3 | 1:202:A:ARG:HA | 3 | 0.23 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 7 | 0.23 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 7 | 0.23 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 4 | 0.23 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 4 | 0.23 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 4 | 0.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 4 | 0.23 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB2 | 10 | 0.23 |
| (3,555) | 1:148:A:SER:HB2 | 1:150:A:GLU:HB3 | 10 | 0.23 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB2 | 10 | 0.23 |
| (3,555) | 1:148:A:SER:HB3 | 1:150:A:GLU:HB3 | 10 | 0.23 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD1 | 9 | 0.23 |
| (3,431) | 1:138:A:ARG:HH11 | 1:225:A:PHE:HD2 | 9 | 0.23 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD1 | 9 | 0.23 |
| (3,431) | 1:138:A:ARG:HH12 | 1:225:A:PHE:HD2 | 9 | 0.23 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 2 | 0.23 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 2 | 0.23 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 2 | 0.23 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 2 | 0.23 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 2 | 0.23 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 2 | 0.23 |
| (3,1925) | 1:233:A:LYS:HD2 | 1:233:A:LYS:HA | 1 | 0.22 |
| (3,1925) | 1:233:A:LYS:HD3 | 1:233:A:LYS:HA | 1 | 0.22 |
| (3,1925) | 1:233:A:LYS:HD2 | 1:233:A:LYS:HA | 2 | 0.22 |
| (3,1925) | 1:233:A:LYS:HD3 | 1:233:A:LYS:HA | 2 | 0.22 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 7 | 0.22 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 2 | 0.22 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 2 | 0.22 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 2 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 4 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 4 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 4 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 6 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 6 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 6 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG21 | 10 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG22 | 10 | 0.22 |
| (3,1613) | 1:212:A:HIS:HE1 | 1:244:A:ILE:HG23 | 10 | 0.22 |
| (3,1563) | 1:205:A:TYR:HD1 | 2:508:B:CYS:HB3 | 2 | 0.22 |
| (3,1563) | 1:205:A:TYR:HD2 | 2:508:B:CYS:HB3 | 2 | 0.22 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD1 | 9 | 0.22 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD2 | 9 | 0.22 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD1 | 9 | 0.22 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD2 | 9 | 0.22 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 1 | 0.22 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 1 | 0.22 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 1 | 0.22 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 7 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 7 | 0.22 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 7 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 8 | 0.22 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB1 | 7 | 0.22 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB2 | 7 | 0.22 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB3 | 7 | 0.22 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 8 | 0.22 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 8 | 0.22 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 8 | 0.22 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 8 | 0.22 |
| (3,430) | 1:138:A:ARG:HG2 | 1:139:A:TRP:HZ2 | 6 | 0.22 |
| (3,430) | 1:138:A:ARG:HG3 | 1:139:A:TRP:HZ2 | 6 | 0.22 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 5 | 0.22 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 5 | 0.22 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 5 | 0.22 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 5 | 0.22 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 9 | 0.22 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 9 | 0.22 |
| (3,2143) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HD2 | 9 | 0.21 |
| (3,2143) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HD3 | 9 | 0.21 |
| (3,2143) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HD2 | 9 | 0.21 |
| (3,2143) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HD3 | 9 | 0.21 |
| (3,2143) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HD2 | 9 | 0.21 |
| (3,2143) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HD3 | 9 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 3 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 3 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 3 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 3 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 3 | 0.21 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 3 | 0.21 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 6 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 8 | 0.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 8 | 0.21 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 8 | 0.21 |
| (3,1774) | 1:224:A:ARG:HG2 | 2:505:B:BB9:HB | 8 | 0.21 |
| (3,1774) | 1:224:A:ARG:HG3 | 2:505:B:BB9:HB | 8 | 0.21 |
| (3,1683) | 1:218:A:MET:HB2 | 2:509:B:BB9:HB | 3 | 0.21 |
| (3,1683) | 1:218:A:MET:HB3 | 2:509:B:BB9:HB | 3 | 0.21 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 5 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 1 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 1 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 1 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 1 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 1 | 0.21 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 1 | 0.21 |
| (3,1415) | 1:193:A:ALA:HB1 | 1:196:A:HIS:HD2 | 2 | 0.21 |
| (3,1415) | 1:193:A:ALA:HB2 | 1:196:A:HIS:HD2 | 2 | 0.21 |
| (3,1415) | 1:193:A:ALA:HB3 | 1:196:A:HIS:HD2 | 2 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB2 | 4 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB3 | 4 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB2 | 4 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB3 | 4 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB2 | 10 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB3 | 10 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB2 | 10 | 0.21 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB3 | 10 | 0.21 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 4 | 0.21 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 7 | 0.21 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 10 | 0.21 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 3 | 0.21 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 4 | 0.21 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 10 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 6 | 0.21 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 4 | 0.21 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 4 | 0.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 4 | 0.21 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 4 | 0.21 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 4 | 0.21 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 4 | 0.21 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 10 | 0.21 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 4 | 0.21 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 10 | 0.21 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 2 | 0.21 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 2 | 0.21 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 2 | 0.21 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 2 | 0.21 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA2 | 1 | 0.21 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA3 | 1 | 0.21 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA2 | 1 | 0.21 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA3 | 1 | 0.21 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 3 | 0.21 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 4 | 0.2 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 7 | 0.2 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 10 | 0.2 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB2 | 8 | 0.2 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB3 | 8 | 0.2 |
| (3,1925) | 1:233:A:LYS:HD2 | 1:233:A:LYS:HA | 5 | 0.2 |
| (3,1925) | 1:233:A:LYS:HD3 | 1:233:A:LYS:HA | 5 | 0.2 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 9 | 0.2 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 9 | 0.2 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 1 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 4 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG11 | 1:177:A:LEU:HG | 10 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG12 | 1:177:A:LEU:HG | 10 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG13 | 1:177:A:LEU:HG | 10 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG21 | 1:177:A:LEU:HG | 10 | 0.2 |
| (3,1074) | 1:175:A:VAL:HG22 | 1:177:A:LEU:HG | 10 | 0.2 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1074) | 1:175:A:VAL:HG23 | 1:177:A:LEU:HG | 10 | 0.2 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 3 | 0.2 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 7 | 0.2 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 7 | 0.2 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 6 | 0.2 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 6 | 0.2 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 2 | 0.2 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 6 | 0.2 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 6 | 0.2 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 6 | 0.2 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 6 | 0.2 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 2 | 0.2 |
| (3,152) | 1:119:A:LYS:HB2 | 1:127:A:ASP:HB2 | 3 | 0.2 |
| (3,152) | 1:119:A:LYS:HB2 | 1:127:A:ASP:HB3 | 3 | 0.2 |
| (3,152) | 1:119:A:LYS:HB3 | 1:127:A:ASP:HB2 | 3 | 0.2 |
| (3,152) | 1:119:A:LYS:HB3 | 1:127:A:ASP:HB3 | 3 | 0.2 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 8 | 0.2 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 8 | 0.2 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 8 | 0.2 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 8 | 0.2 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 6 | 0.19 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 6 | 0.19 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 6 | 0.19 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 7 | 0.19 |
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 7 | 0.19 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 7 | 0.19 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 1 | 0.19 |
| (3,1849) | 1:228:A:ASN:HB2 | 2:505:B:BB9:HB | 1 | 0.19 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG2 | 5 | 0.19 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG3 | 5 | 0.19 |
| (3,1683) | 1:218:A:MET:HB2 | 2:509:B:BB9:HB | 7 | 0.19 |
| (3,1683) | 1:218:A:MET:HB3 | 2:509:B:BB9:HB | 7 | 0.19 |
| (3,1546) | 1:203:A:ASN:H | 1:204:A:HIS:HE1 | 5 | 0.19 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 2 | 0.19 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 5 | 0.19 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 5 | 0.19 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 5 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 5 | 0.19 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 5 | 0.19 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 5 | 0.19 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB2 | 5 | 0.19 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB3 | 5 | 0.19 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB2 | 5 | 0.19 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB3 | 5 | 0.19 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 6 | 0.19 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 9 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 1 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 1 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 1 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 4 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 4 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 4 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 10 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 10 | 0.19 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 10 | 0.19 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 4 | 0.19 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 4 | 0.19 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 6 | 0.19 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 6 | 0.19 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 10 | 0.19 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 10 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 3 | 0.19 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 3 | 0.19 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG12 | 1 | 0.19 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG13 | 1 | 0.19 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 3 | 0.19 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 3 | 0.19 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 3 | 0.19 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 3 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 2 | 0.19 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 2 | 0.19 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 2 | 0.19 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 4 | 0.19 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 4 | 0.19 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 4 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 1 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 1 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 1 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 2 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 2 | 0.19 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 2 | 0.19 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 3 | 0.19 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 3 | 0.19 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 3 | 0.19 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 3 | 0.19 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 7 | 0.19 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 7 | 0.19 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 7 | 0.19 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA2 | 8 | 0.19 |
| (3,171) | 1:120:A:PHE:HE1 | 1:124:A:GLY:HA3 | 8 | 0.19 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA2 | 8 | 0.19 |
| (3,171) | 1:120:A:PHE:HE2 | 1:124:A:GLY:HA3 | 8 | 0.19 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 3 | 0.19 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 3 | 0.19 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 3 | 0.19 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 3 | 0.19 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 2 | 0.19 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 5 | 0.19 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 5 | 0.19 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 5 | 0.19 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 5 | 0.19 |
| (1,24) | 1:149:A:LYS:O | 1:153:A:ALA:H | 4 | 0.19 |
| (1,24) | 1:149:A:LYS:O | 1:153:A:ALA:H | 10 | 0.19 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 2 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 2 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 2 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 2 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 2 | 0.18 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 2 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 4 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 10 | 0.18 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 10 | 0.18 |
| (3,1709) | 1:219:A:TYR:HD1 | 2:507:B:BB9:HB | 8 | 0.18 |
| (3,1709) | 1:219:A:TYR:HD2 | 2:507:B:BB9:HB | 8 | 0.18 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB1 | 3 | 0.18 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB2 | 3 | 0.18 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB3 | 3 | 0.18 |
| (3,1546) | 1:203:A:ASN:H | 1:204:A:HIS:HE1 | 2 | 0.18 |
| (3,1518) | 1:200:A:ILE:HG21 | 2:508:B:CYS:HA | 6 | 0.18 |
| (3,1518) | 1:200:A:ILE:HG22 | 2:508:B:CYS:HA | 6 | 0.18 |
| (3,1518) | 1:200:A:ILE:HG23 | 2:508:B:CYS:HA | 6 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 4 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 4 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 4 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 4 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 4 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 4 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 10 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 10 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 10 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 10 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 10 | 0.18 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 10 | 0.18 |
| (3,1507) | 1:200:A:ILE:HG12 | 1:205:A:TYR:H | 9 | 0.18 |
| (3,1507) | 1:200:A:ILE:HG13 | 1:205:A:TYR:H | 9 | 0.18 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE1 | 7 | 0.18 |
| (3,1461) | 1:196:A:HIS:HD2 | 1:219:A:TYR:HE2 | 7 | 0.18 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 1 | 0.18 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 1 | 0.18 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 6 | 0.18 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 6 | 0.18 |
| (3,1376) | 1:190:A:MET:HB2 | 1:247:A:ASN:H | 5 | 0.18 |
| (3,1376) | 1:190:A:MET:HB3 | 1:247:A:ASN:H | 5 | 0.18 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 2 | 0.18 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 8 | 0.18 |
| (3,1098) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HA | 6 | 0.18 |
| (3,1098) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HA | 6 | 0.18 |
| (3,1098) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HA | 6 | 0.18 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD1 | 4 | 0.18 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD2 | 4 | 0.18 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD1 | 4 | 0.18 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD2 | 4 | 0.18 |
| (3,926) | 1:170:A:LEU:HD11 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,926) | 1:170:A:LEU:HD12 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,926) | 1:170:A:LEU:HD13 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,926) | 1:170:A:LEU:HD21 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,926) | 1:170:A:LEU:HD22 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,926) | 1:170:A:LEU:HD23 | 1:240:A:MET:HA | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 5 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 5 | 0.18 |
| (3,869) | 1:169:A:GLU:HG2 | 1:172:A:ARG:HD2 | 7 | 0.18 |
| (3,869) | 1:169:A:GLU:HG2 | 1:172:A:ARG:HD3 | 7 | 0.18 |
| (3,869) | 1:169:A:GLU:HG3 | 1:172:A:ARG:HD2 | 7 | 0.18 |
| (3,869) | 1:169:A:GLU:HG3 | 1:172:A:ARG:HD3 | 7 | 0.18 |
| (3,739) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HB1C | 9 | 0.18 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 8 | 0.18 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 8 | 0.18 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 8 | 0.18 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 8 | 0.18 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 8 | 0.18 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 8 | 0.18 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 8 | 0.18 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 8 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 8 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 8 | 0.18 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 9 | 0.18 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 9 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 9 | 0.18 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 9 | 0.18 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 10 | 0.18 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 10 | 0.18 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 10 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG11 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG12 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG13 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG21 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG22 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG23 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG11 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG12 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG13 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG21 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG22 | 7 | 0.18 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG23 | 7 | 0.18 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 7 | 0.18 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 7 | 0.18 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 7 | 0.18 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 7 | 0.18 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE1 | 4 | 0.18 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE2 | 4 | 0.18 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE1 | 10 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE2 | 10 | 0.18 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 1 | 0.18 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 1 | 0.18 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 9 | 0.18 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 9 | 0.18 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 9 | 0.18 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 9 | 0.18 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 9 | 0.18 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 9 | 0.18 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 3 | 0.18 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 3 | 0.18 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 3 | 0.18 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 3 | 0.18 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 4 | 0.18 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 10 | 0.18 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 2 | 0.17 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 8 | 0.17 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 8 | 0.17 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 8 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 5 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 5 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 5 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 5 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 5 | 0.17 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 5 | 0.17 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 2 | 0.17 |
| (3,2100) | 1:246:A:ALA:HA | 1:249:A:VAL:HA | 9 | 0.17 |
| (3,1933) | 1:233:A:LYS:HG2 | 1:235:A:GLY:H | 5 | 0.17 |
| (3,1933) | 1:233:A:LYS:HG3 | 1:235:A:GLY:H | 5 | 0.17 |
| (3,1683) | 1:218:A:MET:HB2 | 2:509:B:BB9:HB | 2 | 0.17 |
| (3,1683) | 1:218:A:MET:HB3 | 2:509:B:BB9:HB | 2 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB1 | 5 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB2 | 5 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB3 | 5 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB1 | 5 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB2 | 5 | 0.17 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB3 | 5 | 0.17 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 8 | 0.17 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 8 | 0.17 |
| (3,1544) | 1:202:A:ARG:HH21 | 1:204:A:HIS:H | 9 | 0.17 |
| (3,1544) | 1:202:A:ARG:HH22 | 1:204:A:HIS:H | 9 | 0.17 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 6 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 4 | 0.17 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 4 | 0.17 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 10 | 0.17 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 10 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD1 | 7 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG21 | 1:205:A:TYR:HD2 | 7 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD1 | 7 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG22 | 1:205:A:TYR:HD2 | 7 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD1 | 7 | 0.17 |
| (3,1508) | 1:200:A:ILE:HG23 | 1:205:A:TYR:HD2 | 7 | 0.17 |
| (3,1472) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HE1 | 3 | 0.17 |
| (3,1472) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HE2 | 3 | 0.17 |
| (3,1472) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HE1 | 3 | 0.17 |
| (3,1472) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HE2 | 3 | 0.17 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB2 | 2 | 0.17 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB3 | 2 | 0.17 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB2 | 3 | 0.17 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB3 | 3 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 4 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 4 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 10 | 0.17 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 10 | 0.17 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB2 | 5 | 0.17 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB3 | 5 | 0.17 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB2 | 5 | 0.17 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB3 | 5 | 0.17 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 9 | 0.17 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 1 | 0.17 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 1 | 0.17 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 1 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 1 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 1 | 0.17 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 1 | 0.17 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 7 | 0.17 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD1 | 5 | 0.17 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD2 | 5 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD1 | 5 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD2 | 5 | 0.17 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD1 | 10 | 0.17 |
| (3,989) | 1:173:A:ARG:HH21 | 1:174:A:PHE:HD2 | 10 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD1 | 10 | 0.17 |
| (3,989) | 1:173:A:ARG:HH22 | 1:174:A:PHE:HD2 | 10 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 8 | 0.17 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 8 | 0.17 |
| (3,549) | 1:147:A:GLN:HE21 | 1:206:A:ASP:H | 6 | 0.17 |
| (3,549) | 1:147:A:GLN:HE22 | 1:206:A:ASP:H | 6 | 0.17 |
| (3,468) | 1:141:A:ASN:HA | 1:145:A:TYR:HD1 | 3 | 0.17 |
| (3,468) | 1:141:A:ASN:HA | 1:145:A:TYR:HD2 | 3 | 0.17 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 7 | 0.17 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 6 | 0.17 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 6 | 0.17 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 9 | 0.17 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 9 | 0.17 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE1 | 9 | 0.17 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE2 | 9 | 0.17 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE1 | 7 | 0.17 |
| (3,443) | 1:139:A:TRP:HB2 | 1:145:A:TYR:HE2 | 7 | 0.17 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE1 | 7 | 0.17 |
| (3,443) | 1:139:A:TRP:HB3 | 1:145:A:TYR:HE2 | 7 | 0.17 |
| (3,430) | 1:138:A:ARG:HG2 | 1:139:A:TRP:HZ2 | 3 | 0.17 |
| (3,430) | 1:138:A:ARG:HG3 | 1:139:A:TRP:HZ2 | 3 | 0.17 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 1 | 0.17 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 1 | 0.17 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 1 | 0.17 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 1 | 0.17 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 4 | 0.17 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 4 | 0.17 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 10 | 0.17 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 10 | 0.17 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 8 | 0.17 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 8 | 0.17 |
| (3,169) | 1:120:A:PHE:HD1 | 1:124:A:GLY:HA3 | 6 | 0.17 |
| (3,169) | 1:120:A:PHE:HD2 | 1:124:A:GLY:HA3 | 6 | 0.17 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 5 | 0.17 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 7 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 9 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 9 | 0.16 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 9 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 3 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 3 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 5 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 5 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 7 | 0.16 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 7 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 1 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 5 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 5 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 5 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 5 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 5 | 0.16 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 5 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB2 | 1:229:A:ILE:HD11 | 6 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB2 | 1:229:A:ILE:HD12 | 6 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB2 | 1:229:A:ILE:HD13 | 6 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB3 | 1:229:A:ILE:HD11 | 6 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB3 | 1:229:A:ILE:HD12 | 6 | 0.16 |
| (3,1696) | 1:219:A:TYR:HB3 | 1:229:A:ILE:HD13 | 6 | 0.16 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB1 | 8 | 0.16 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB2 | 8 | 0.16 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB3 | 8 | 0.16 |
| (3,1560) | 1:205:A:TYR:HD1 | 1:206:A:ASP:HB2 | 2 | 0.16 |
| (3,1560) | 1:205:A:TYR:HD1 | 1:206:A:ASP:HB3 | 2 | 0.16 |
| (3,1560) | 1:205:A:TYR:HD2 | 1:206:A:ASP:HB2 | 2 | 0.16 |
| (3,1560) | 1:205:A:TYR:HD2 | 1:206:A:ASP:HB3 | 2 | 0.16 |
| (3,1546) | 1:203:A:ASN:H | 1:204:A:HIS:HE1 | 1 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB2 | 8 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB3 | 8 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB2 | 8 | 0.16 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB3 | 8 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB2 | 8 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB3 | 8 | 0.16 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB2 | 8 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB3 | 8 | 0.16 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 3 | 0.16 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 3 | 0.16 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD2 | 7 | 0.16 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD3 | 7 | 0.16 |
| (3,1199) | 1:178:A:MET:HE1 | 1:236:A:LEU:HG | 5 | 0.16 |
| (3,1199) | 1:178:A:MET:HE2 | 1:236:A:LEU:HG | 5 | 0.16 |
| (3,1199) | 1:178:A:MET:HE3 | 1:236:A:LEU:HG | 5 | 0.16 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 2 | 0.16 |
| (3,1146) | 1:177:A:LEU:HG | 1:180:A:ALA:H | 6 | 0.16 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 8 | 0.16 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 8 | 0.16 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 8 | 0.16 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE1 | 5 | 0.16 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE2 | 5 | 0.16 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 1 | 0.16 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 1 | 0.16 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 2 | 0.16 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 2 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 9 | 0.16 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 9 | 0.16 |
| (3,824) | 1:166:A:GLU:HG2 | 1:167:A:ALA:HA | 3 | 0.16 |
| (3,824) | 1:166:A:GLU:HG3 | 1:167:A:ALA:HA | 3 | 0.16 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG12 | 5 | 0.16 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG13 | 5 | 0.16 |
| (3,607) | 1:151:A:LYS:HE2 | 1:202:A:ARG:HA | 5 | 0.16 |
| (3,607) | 1:151:A:LYS:HE3 | 1:202:A:ARG:HA | 5 | 0.16 |
| (3,600) | 1:151:A:LYS:HE2 | 1:152:A:THR:HA | 3 | 0.16 |
| (3,600) | 1:151:A:LYS:HE3 | 1:152:A:THR:HA | 3 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 6 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 6 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 6 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 6 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 6 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 6 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 7 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 9 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 9 | 0.16 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 9 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 9 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 9 | 0.16 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 9 | 0.16 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 8 | 0.16 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 1 | 0.16 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 1 | 0.16 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 1 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG11 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG12 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG13 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG21 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG22 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG23 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG11 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG12 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG13 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG21 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG22 | 6 | 0.16 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG23 | 6 | 0.16 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 4 | 0.16 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 4 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 4 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 4 | 0.16 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 10 | 0.16 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 10 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 10 | 0.16 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 10 | 0.16 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 5 | 0.16 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 5 | 0.16 |
| (3,202) | 1:122:A:VAL:HG11 | 1:160:A:TRP:HA | 4 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,202) | 1:122:A:VAL:HG12 | 1:160:A:TRP:HA | 4 | 0.16 |
| (3,202) | 1:122:A:VAL:HG13 | 1:160:A:TRP:HA | 4 | 0.16 |
| (3,202) | 1:122:A:VAL:HG21 | 1:160:A:TRP:HA | 4 | 0.16 |
| (3,202) | 1:122:A:VAL:HG22 | 1:160:A:TRP:HA | 4 | 0.16 |
| (3,202) | 1:122:A:VAL:HG23 | 1:160:A:TRP:HA | 4 | 0.16 |
| (3,202) | 1:122:A:VAL:HG11 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,202) | 1:122:A:VAL:HG12 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,202) | 1:122:A:VAL:HG13 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,202) | 1:122:A:VAL:HG21 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,202) | 1:122:A:VAL:HG22 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,202) | 1:122:A:VAL:HG23 | 1:160:A:TRP:HA | 10 | 0.16 |
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG2 | 6 | 0.16 |
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG3 | 6 | 0.16 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG2 | 6 | 0.16 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG3 | 6 | 0.16 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG2 | 6 | 0.16 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG3 | 6 | 0.16 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 3 | 0.16 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 2 | 0.16 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 2 | 0.16 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 2 | 0.16 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 1 | 0.16 |
| (3,2177) | 1:252:A:THR:HG21 | 1:253:A:PRO:HB2 | 1 | 0.15 |
| (3,2177) | 1:252:A:THR:HG21 | 1:253:A:PRO:HB3 | 1 | 0.15 |
| (3,2177) | 1:252:A:THR:HG22 | 1:253:A:PRO:HB2 | 1 | 0.15 |
| (3,2177) | 1:252:A:THR:HG22 | 1:253:A:PRO:HB3 | 1 | 0.15 |
| (3,2177) | 1:252:A:THR:HG23 | 1:253:A:PRO:HB2 | 1 | 0.15 |
| (3,2177) | 1:252:A:THR:HG23 | 1:253:A:PRO:HB3 | 1 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 3 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 3 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 3 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 7 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 7 | 0.15 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 7 | 0.15 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 7 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD11 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD12 | 1 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD13 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD21 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD22 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG12 | 1:245:A:LEU:HD23 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD11 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD12 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD13 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD21 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD22 | 1 | 0.15 |
| (3,2076) | 1:244:A:ILE:HG13 | 1:245:A:LEU:HD23 | 1 | 0.15 |
| (3,2060) | 1:242:A:ASP:HB2 | 1:246:A:ALA:H | 3 | 0.15 |
| (3,2060) | 1:242:A:ASP:HB3 | 1:246:A:ALA:H | 3 | 0.15 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 6 | 0.15 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 6 | 0.15 |
| (3,1933) | 1:233:A:LYS:HG2 | 1:235:A:GLY:H | 2 | 0.15 |
| (3,1933) | 1:233:A:LYS:HG3 | 1:235:A:GLY:H | 2 | 0.15 |
| (3,1848) | 1:228:A:ASN:HB3 | 2:505:B:BB9:HB | 7 | 0.15 |
| (3,1774) | 1:224:A:ARG:HG2 | 2:505:B:BB9:HB | 9 | 0.15 |
| (3,1774) | 1:224:A:ARG:HG3 | 2:505:B:BB9:HB | 9 | 0.15 |
| (3,1709) | 1:219:A:TYR:HD1 | 2:507:B:BB9:HB | 1 | 0.15 |
| (3,1709) | 1:219:A:TYR:HD2 | 2:507:B:BB9:HB | 1 | 0.15 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG12 | 7 | 0.15 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG13 | 7 | 0.15 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG12 | 7 | 0.15 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG13 | 7 | 0.15 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 8 | 0.15 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 8 | 0.15 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 8 | 0.15 |
| (3,1583) | 1:209:A:TYR:HD1 | 1:212:A:HIS:HE1 | 3 | 0.15 |
| (3,1583) | 1:209:A:TYR:HD2 | 1:212:A:HIS:HE1 | 3 | 0.15 |
| (3,1538) | 1:202:A:ARG:H | 1:202:A:ARG:HG2 | 5 | 0.15 |
| (3,1538) | 1:202:A:ARG:H | 1:202:A:ARG:HG3 | 5 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD1 | 4 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD2 | 4 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD1 | 4 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD2 | 4 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD1 | 10 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG2 | 1:209:A:TYR:HD2 | 10 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD1 | 10 | 0.15 |
| (3,1469) | 1:197:A:ARG:HG3 | 1:209:A:TYR:HD2 | 10 | 0.15 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB2 | 1 | 0.15 |
| (3,1460) | 1:196:A:HIS:HE1 | 1:215:A:LEU:HB3 | 1 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB2 | 7 | 0.15 |
| (3,1393) | 1:191:A:ASP:HB2 | 1:195:A:ASP:HB3 | 7 | 0.15 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB2 | 7 | 0.15 |
| (3,1393) | 1:191:A:ASP:HB3 | 1:195:A:ASP:HB3 | 7 | 0.15 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 9 | 0.15 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 9 | 0.15 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB2 | 3 | 0.15 |
| (3,1333) | 1:187:A:GLU:HG2 | 1:190:A:MET:HB3 | 3 | 0.15 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB2 | 3 | 0.15 |
| (3,1333) | 1:187:A:GLU:HG3 | 1:190:A:MET:HB3 | 3 | 0.15 |
| (3,1301) | 1:185:A:ASP:HB2 | 1:190:A:MET:HB2 | 7 | 0.15 |
| (3,1301) | 1:185:A:ASP:HB2 | 1:190:A:MET:HB3 | 7 | 0.15 |
| (3,1301) | 1:185:A:ASP:HB3 | 1:190:A:MET:HB2 | 7 | 0.15 |
| (3,1301) | 1:185:A:ASP:HB3 | 1:190:A:MET:HB3 | 7 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB1 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB2 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB3 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB1 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB2 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB3 | 4 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB1 | 10 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB2 | 10 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG2 | 1:189:A:ALA:HB3 | 10 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB1 | 10 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB2 | 10 | 0.15 |
| (3,1268) | 1:183:A:PRO:HG3 | 1:189:A:ALA:HB3 | 10 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD2 | 4 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD3 | 4 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD2 | 10 | 0.15 |
| (3,1226) | 1:179:A:ASP:HA | 1:233:A:LYS:HD3 | 10 | 0.15 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 3 | 0.15 |
| (3,1212) | 1:178:A:MET:HE1 | 1:239:A:TYR:HA | 8 | 0.15 |
| (3,1212) | 1:178:A:MET:HE2 | 1:239:A:TYR:HA | 8 | 0.15 |
| (3,1212) | 1:178:A:MET:HE3 | 1:239:A:TYR:HA | 8 | 0.15 |
| (3,1212) | 1:178:A:MET:HE1 | 1:239:A:TYR:HA | 9 | 0.15 |
| (3,1212) | 1:178:A:MET:HE2 | 1:239:A:TYR:HA | 9 | 0.15 |
| (3,1212) | 1:178:A:MET:HE3 | 1:239:A:TYR:HA | 9 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE1 | 4 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE2 | 4 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE1 | 4 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE2 | 4 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE1 | 10 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE2 | 10 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE1 | 10 | 0.15 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE2 | 10 | 0.15 |
| (3,1099) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HG3 | 9 | 0.15 |
| (3,1099) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HG3 | 9 | 0.15 |
| (3,1099) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HG3 | 9 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 4 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 6 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 7 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 10 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 10 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 10 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 10 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 10 | 0.15 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 10 | 0.15 |
| (3,988) | 1:173:A:ARG:HG2 | 1:174:A:PHE:HZ | 2 | 0.15 |
| (3,988) | 1:173:A:ARG:HG3 | 1:174:A:PHE:HZ | 2 | 0.15 |
| (3,920) | 1:170:A:LEU:HB2 | 1:196:A:HIS:HD2 | 9 | 0.15 |
| (3,920) | 1:170:A:LEU:HB3 | 1:196:A:HIS:HD2 | 9 | 0.15 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG12 | 2 | 0.15 |
| (3,733) | 1:160:A:TRP:H | 1:163:A:ILE:HG13 | 2 | 0.15 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 1 | 0.15 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 1 | 0.15 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 1 | 0.15 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 1 | 0.15 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 1 | 0.15 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 1 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ1 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ2 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ3 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ1 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ2 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ3 | 4 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ1 | 10 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ2 | 10 | 0.15 |
| (3,515) | 1:145:A:TYR:HD1 | 1:149:A:LYS:HZ3 | 10 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ1 | 10 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ2 | 10 | 0.15 |
| (3,515) | 1:145:A:TYR:HD2 | 1:149:A:LYS:HZ3 | 10 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 2 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 2 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 5 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 5 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 7 | 0.15 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 7 | 0.15 |
| (3,430) | 1:138:A:ARG:HG2 | 1:139:A:TRP:HZ2 | 7 | 0.15 |
| (3,430) | 1:138:A:ARG:HG3 | 1:139:A:TRP:HZ2 | 7 | 0.15 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 5 | 0.15 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 5 | 0.15 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 5 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG21 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG22 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG23 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG21 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG22 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG23 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG21 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG22 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG23 | 7 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG21 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG22 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG23 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG21 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG22 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG23 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG21 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG22 | 9 | 0.15 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG23 | 9 | 0.15 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG21 | 3 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG22 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG23 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG21 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG22 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG23 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG21 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG22 | 3 | 0.15 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG23 | 3 | 0.15 |
| (3,364) | 1:135:A:VAL:H | 1:136:A:ARG:HA | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG11 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG12 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG13 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG21 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG22 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG23 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG11 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG12 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG13 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG21 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG22 | 8 | 0.15 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG23 | 8 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 4 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 4 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 4 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 10 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 10 | 0.15 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 10 | 0.15 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 3 | 0.15 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 3 | 0.15 |
| (3,262) | 1:126:A:PHE:HD1 | 1:127:A:ASP:HB2 | 3 | 0.15 |
| (3,262) | 1:126:A:PHE:HD1 | 1:127:A:ASP:HB3 | 3 | 0.15 |
| (3,262) | 1:126:A:PHE:HD2 | 1:127:A:ASP:HB2 | 3 | 0.15 |
| (3,262) | 1:126:A:PHE:HD2 | 1:127:A:ASP:HB3 | 3 | 0.15 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB2 | 6 | 0.15 |
| (3,215) | 1:122:A:VAL:HB | 1:164:A:GLN:HB3 | 6 | 0.15 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD2 | 8 | 0.15 |
| (3,193) | 1:122:A:VAL:HG21 | 1:157:A:LYS:HD3 | 8 | 0.15 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD2 | 8 | 0.15 |
| (3,193) | 1:122:A:VAL:HG22 | 1:157:A:LYS:HD3 | 8 | 0.15 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD2 | 8 | 0.15 |
| (3,193) | 1:122:A:VAL:HG23 | 1:157:A:LYS:HD3 | 8 | 0.15 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 7 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 7 | 0.15 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 7 | 0.15 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 7 | 0.15 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 4 | 0.15 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 5 | 0.15 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 10 | 0.15 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 8 | 0.15 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 8 | 0.15 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 8 | 0.15 |
| (2,29) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HZ3 | 7 | 0.15 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 4 | 0.14 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 10 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 1 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 2 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG21 | 5 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG22 | 5 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG2 | 1:252:A:THR:HG23 | 5 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG21 | 5 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG22 | 5 | 0.14 |
| (3,2165) | 1:250:A:ARG:HG3 | 1:252:A:THR:HG23 | 5 | 0.14 |
| (3,1936) | 1:233:A:LYS:HD2 | 1:236:A:LEU:HA | 7 | 0.14 |
| (3,1936) | 1:233:A:LYS:HD3 | 1:236:A:LEU:HA | 7 | 0.14 |
| (3,1933) | 1:233:A:LYS:HG2 | 1:235:A:GLY:H | 1 | 0.14 |
| (3,1933) | 1:233:A:LYS:HG3 | 1:235:A:GLY:H | 1 | 0.14 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD2 | 7 | 0.14 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD3 | 7 | 0.14 |
| (3,1898) | 1:230:A:ASP:HB2 | 1:234:A:PRO:HB2 | 1 | 0.14 |
| (3,1898) | 1:230:A:ASP:HB2 | 1:234:A:PRO:HB3 | 1 | 0.14 |
| (3,1898) | 1:230:A:ASP:HB3 | 1:234:A:PRO:HB2 | 1 | 0.14 |
| (3,1898) | 1:230:A:ASP:HB3 | 1:234:A:PRO:HB3 | 1 | 0.14 |
| (3,1877) | 1:229:A:ILE:HB | 1:237:A:ALA:H | 3 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 4 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 4 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 4 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 4 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 4 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 4 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 10 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 10 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 10 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 10 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 10 | 0.14 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 10 | 0.14 |
| (3,1849) | 1:228:A:ASN:HB2 | 2:505:B:BB9:HB | 6 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB2 | 1:237:A:ALA:HB1 | 3 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB2 | 1:237:A:ALA:HB2 | 3 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB2 | 1:237:A:ALA:HB3 | 3 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB3 | 1:237:A:ALA:HB1 | 3 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB3 | 1:237:A:ALA:HB2 | 3 | 0.14 |
| (3,1701) | 1:219:A:TYR:HB3 | 1:237:A:ALA:HB3 | 3 | 0.14 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 4 | 0.14 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 4 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 10 | 0.14 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 10 | 0.14 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB2 | 2 | 0.14 |
| (3,1391) | 1:191:A:ASP:H | 1:194:A:GLU:HB3 | 2 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB1 | 4 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB2 | 4 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB3 | 4 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB1 | 10 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB2 | 10 | 0.14 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB3 | 10 | 0.14 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 5 | 0.14 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 5 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 1 | 0.14 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 8 | 0.14 |
| (3,1158) | 1:177:A:LEU:HD11 | 1:188:A:GLY:HA2 | 7 | 0.14 |
| (3,1158) | 1:177:A:LEU:HD12 | 1:188:A:GLY:HA2 | 7 | 0.14 |
| (3,1158) | 1:177:A:LEU:HD13 | 1:188:A:GLY:HA2 | 7 | 0.14 |
| (3,1099) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HG3 | 7 | 0.14 |
| (3,1099) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HG3 | 7 | 0.14 |
| (3,1099) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HG3 | 7 | 0.14 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 7 | 0.14 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 7 | 0.14 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 7 | 0.14 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG2 | 5 | 0.14 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG3 | 5 | 0.14 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 1 | 0.14 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 1 | 0.14 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 7 | 0.14 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 6 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 6 | 0.14 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 6 | 0.14 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 6 | 0.14 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG21 | 7 | 0.14 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG22 | 7 | 0.14 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG23 | 7 | 0.14 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG21 | 7 | 0.14 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG22 | 7 | 0.14 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG23 | 7 | 0.14 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 5 | 0.14 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 5 | 0.14 |
| (3,549) | 1:147:A:GLN:HE21 | 1:206:A:ASP:H | 2 | 0.14 |
| (3,549) | 1:147:A:GLN:HE22 | 1:206:A:ASP:H | 2 | 0.14 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG2 | 2 | 0.14 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG3 | 2 | 0.14 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG2 | 2 | 0.14 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG3 | 2 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 4 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 4 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 9 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 9 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 10 | 0.14 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 10 | 0.14 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 5 | 0.14 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 1 | 0.14 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 1 | 0.14 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE1 | 5 | 0.14 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE2 | 5 | 0.14 |
| (3,393) | 1:135:A:VAL:HG21 | 2:503:B:THR:HB | 3 | 0.14 |
| (3,393) | 1:135:A:VAL:HG22 | 2:503:B:THR:HB | 3 | 0.14 |
| (3,393) | 1:135:A:VAL:HG23 | 2:503:B:THR:HB | 3 | 0.14 |
| (3,389) | 1:135:A:VAL:HG21 | 2:502:B:BB9:HB | 1 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,389) | 1:135:A:VAL:HG22 | 2:502:B:BB9:HB | 1 | 0.14 |
| (3,389) | 1:135:A:VAL:HG23 | 2:502:B:BB9:HB | 1 | 0.14 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 6 | 0.14 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 9 | 0.14 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE1 | 2 | 0.14 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE2 | 2 | 0.14 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD2 | 2 | 0.14 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD3 | 2 | 0.14 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD2 | 2 | 0.14 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD3 | 2 | 0.14 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 4 | 0.14 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 4 | 0.14 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 4 | 0.14 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 4 | 0.14 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD1 | 10 | 0.14 |
| (3,121) | 1:117:A:GLU:HG2 | 1:120:A:PHE:HD2 | 10 | 0.14 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD1 | 10 | 0.14 |
| (3,121) | 1:117:A:GLU:HG3 | 1:120:A:PHE:HD2 | 10 | 0.14 |
| (3,81) | 1:115:A:THR:H | 1:115:A:THR:HG21 | 3 | 0.14 |
| (3,81) | 1:115:A:THR:H | 1:115:A:THR:HG22 | 3 | 0.14 |
| (3,81) | 1:115:A:THR:H | 1:115:A:THR:HG23 | 3 | 0.14 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 8 | 0.14 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 1 | 0.14 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 1 | 0.14 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 1 | 0.14 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 9 | 0.14 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 9 | 0.14 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 9 | 0.14 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 9 | 0.14 |
| (2,20) | 1:132:A:GLU:HA | 2:503:B:THR:HA | 1 | 0.14 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 2 | 0.14 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 2 | 0.14 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 2 | 0.14 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 3 | 0.14 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 3 | 0.14 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 3 | 0.14 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 4 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 10 | 0.14 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 1 | 0.13 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 8 | 0.13 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 9 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 6 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 6 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 6 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 6 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 6 | 0.13 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 6 | 0.13 |
| (3,2060) | 1:242:A:ASP:HB2 | 1:246:A:ALA:H | 4 | 0.13 |
| (3,2060) | 1:242:A:ASP:HB3 | 1:246:A:ALA:H | 4 | 0.13 |
| (3,2060) | 1:242:A:ASP:HB2 | 1:246:A:ALA:H | 10 | 0.13 |
| (3,2060) | 1:242:A:ASP:HB3 | 1:246:A:ALA:H | 10 | 0.13 |
| (3,2049) | 1:241:A:ARG:HD2 | 1:245:A:LEU:HA | 2 | 0.13 |
| (3,2049) | 1:241:A:ARG:HD3 | 1:245:A:LEU:HA | 2 | 0.13 |
| (3,1936) | 1:233:A:LYS:HD2 | 1:236:A:LEU:HA | 9 | 0.13 |
| (3,1936) | 1:233:A:LYS:HD3 | 1:236:A:LEU:HA | 9 | 0.13 |
| (3,1848) | 1:228:A:ASN:HB3 | 2:505:B:BB9:HB | 2 | 0.13 |
| (3,1742) | 1:222:A:ASP:HA | 1:225:A:PHE:HD1 | 7 | 0.13 |
| (3,1742) | 1:222:A:ASP:HA | 1:225:A:PHE:HD2 | 7 | 0.13 |
| (3,1724) | 1:220:A:VAL:H | 1:237:A:ALA:HB1 | 7 | 0.13 |
| (3,1724) | 1:220:A:VAL:H | 1:237:A:ALA:HB2 | 7 | 0.13 |
| (3,1724) | 1:220:A:VAL:H | 1:237:A:ALA:HB3 | 7 | 0.13 |
| (3,1684) | 1:218:A:MET:HE1 | 2:509:B:BB9:HB | 5 | 0.13 |
| (3,1684) | 1:218:A:MET:HE2 | 2:509:B:BB9:HB | 5 | 0.13 |
| (3,1684) | 1:218:A:MET:HE3 | 2:509:B:BB9:HB | 5 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 6 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 6 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 6 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 6 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 6 | 0.13 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 6 | 0.13 |
| (3,1658) | 1:215:A:LEU:HG | 2:508:B:CYS:HB3 | 4 | 0.13 |
| (3,1658) | 1:215:A:LEU:HG | 2:508:B:CYS:HB3 | 10 | 0.13 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 6 | 0.13 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 6 | 0.13 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 6 | 0.13 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 6 | 0.13 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB1 | 7 | 0.13 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB2 | 7 | 0.13 |
| (3,1588) | 1:209:A:TYR:HE1 | 1:248:A:ALA:HB3 | 7 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB1 | 7 | 0.13 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB2 | 7 | 0.13 |
| (3,1588) | 1:209:A:TYR:HE2 | 1:248:A:ALA:HB3 | 7 | 0.13 |
| (3,1563) | 1:205:A:TYR:HD1 | 2:508:B:CYS:HB3 | 4 | 0.13 |
| (3,1563) | 1:205:A:TYR:HD2 | 2:508:B:CYS:HB3 | 4 | 0.13 |
| (3,1563) | 1:205:A:TYR:HD1 | 2:508:B:CYS:HB3 | 10 | 0.13 |
| (3,1563) | 1:205:A:TYR:HD2 | 2:508:B:CYS:HB3 | 10 | 0.13 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 8 | 0.13 |
| (3,1518) | 1:200:A:ILE:HG21 | 2:508:B:CYS:HA | 7 | 0.13 |
| (3,1518) | 1:200:A:ILE:HG22 | 2:508:B:CYS:HA | 7 | 0.13 |
| (3,1518) | 1:200:A:ILE:HG23 | 2:508:B:CYS:HA | 7 | 0.13 |
| (3,1507) | 1:200:A:ILE:HG12 | 1:205:A:TYR:H | 5 | 0.13 |
| (3,1507) | 1:200:A:ILE:HG13 | 1:205:A:TYR:H | 5 | 0.13 |
| (3,1376) | 1:190:A:MET:HB2 | 1:247:A:ASN:H | 8 | 0.13 |
| (3,1376) | 1:190:A:MET:HB3 | 1:247:A:ASN:H | 8 | 0.13 |
| (3,1326) | 1:187:A:GLU:HB2 | 1:189:A:ALA:H | 5 | 0.13 |
| (3,1326) | 1:187:A:GLU:HB3 | 1:189:A:ALA:H | 5 | 0.13 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB2 | 6 | 0.13 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB3 | 6 | 0.13 |
| (3,1199) | 1:178:A:MET:HE1 | 1:236:A:LEU:HG | 2 | 0.13 |
| (3,1199) | 1:178:A:MET:HE2 | 1:236:A:LEU:HG | 2 | 0.13 |
| (3,1199) | 1:178:A:MET:HE3 | 1:236:A:LEU:HG | 2 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 8 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB1 | 9 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB2 | 9 | 0.13 |
| (3,1190) | 1:178:A:MET:HG2 | 1:189:A:ALA:HB3 | 9 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB1 | 9 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB2 | 9 | 0.13 |
| (3,1190) | 1:178:A:MET:HG3 | 1:189:A:ALA:HB3 | 9 | 0.13 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 5 | 0.13 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 5 | 0.13 |
| (3,1098) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HA | 1 | 0.13 |
| (3,1098) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HA | 1 | 0.13 |
| (3,1098) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HA | 1 | 0.13 |
| (3,1089) | 1:175:A:VAL:HG11 | 1:232:A:ALA:HB1 | 9 | 0.13 |
| (3,1089) | 1:175:A:VAL:HG12 | 1:232:A:ALA:HB1 | 9 | 0.13 |
| (3,1089) | 1:175:A:VAL:HG13 | 1:232:A:ALA:HB1 | 9 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG2 | 8 | 0.13 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG3 | 8 | 0.13 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 5 | 0.13 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 4 | 0.13 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 10 | 0.13 |
| (3,824) | 1:166:A:GLU:HG2 | 1:167:A:ALA:HA | 9 | 0.13 |
| (3,824) | 1:166:A:GLU:HG3 | 1:167:A:ALA:HA | 9 | 0.13 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 3 | 0.13 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 5 | 0.13 |
| (3,607) | 1:151:A:LYS:HE2 | 1:202:A:ARG:HA | 9 | 0.13 |
| (3,607) | 1:151:A:LYS:HE3 | 1:202:A:ARG:HA | 9 | 0.13 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 1 | 0.13 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 1 | 0.13 |
| (3,598) | 1:151:A:LYS:HD2 | 1:152:A:THR:HA | 2 | 0.13 |
| (3,598) | 1:151:A:LYS:HD3 | 1:152:A:THR:HA | 2 | 0.13 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB1 | 1 | 0.13 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB2 | 1 | 0.13 |
| (3,589) | 1:150:A:GLU:HG2 | 1:153:A:ALA:HB3 | 1 | 0.13 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB1 | 1 | 0.13 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB2 | 1 | 0.13 |
| (3,589) | 1:150:A:GLU:HG3 | 1:153:A:ALA:HB3 | 1 | 0.13 |
| (3,567) | 1:148:A:SER:HB2 | 1:205:A:TYR:HE1 | 1 | 0.13 |
| (3,567) | 1:148:A:SER:HB2 | 1:205:A:TYR:HE2 | 1 | 0.13 |
| (3,567) | 1:148:A:SER:HB3 | 1:205:A:TYR:HE1 | 1 | 0.13 |
| (3,567) | 1:148:A:SER:HB3 | 1:205:A:TYR:HE2 | 1 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB2 | 2 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB3 | 2 | 0.13 |
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB2 | 2 | 0.13 |
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB3 | 2 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB2 | 7 | 0.13 |
| (3,536) | 1:147:A:GLN:HB2 | 1:148:A:SER:HB3 | 7 | 0.13 |
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB2 | 7 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (3,536) | 1:147:A:GLN:HB3 | 1:148:A:SER:HB3 | 7 | 0.13 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB2 | 3 | 0.13 |
| (3,498) | 1:144:A:ALA:H | 1:205:A:TYR:HB3 | 3 | 0.13 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 5 | 0.13 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 5 | 0.13 |
| (3,430) | 1:138:A:ARG:HG2 | 1:139:A:TRP:HZ2 | 1 | 0.13 |
| (3,430) | 1:138:A:ARG:HG3 | 1:139:A:TRP:HZ2 | 1 | 0.13 |
| (3,364) | 1:135:A:VAL:H | 1:136:A:ARG:HA | 6 | 0.13 |
| (3,350) | 1:133:A:GLU:HB2 | 1:135:A:VAL:H | 3 | 0.13 |
| (3,350) | 1:133:A:GLU:HB3 | 1:135:A:VAL:H | 3 | 0.13 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG2 | 2 | 0.13 |
| (3,309) | 1:130:A:GLN:HG2 | 1:133:A:GLU:HG3 | 2 | 0.13 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG2 | 2 | 0.13 |
| (3,309) | 1:130:A:GLN:HG3 | 1:133:A:GLU:HG3 | 2 | 0.13 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 5 | 0.13 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 7 | 0.13 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE1 | 1 | 0.13 |
| (3,286) | 1:128:A:PRO:HA | 1:131:A:TYR:HE2 | 1 | 0.13 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD2 | 1 | 0.13 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD3 | 1 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD2 | 1 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD3 | 1 | 0.13 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD2 | 3 | 0.13 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD3 | 3 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD2 | 3 | 0.13 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD3 | 3 | 0.13 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA2 | 6 | 0.13 |
| (3,225) | 1:123:A:PHE:HD1 | 1:124:A:GLY:HA3 | 6 | 0.13 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA2 | 6 | 0.13 |
| (3,225) | 1:123:A:PHE:HD2 | 1:124:A:GLY:HA3 | 6 | 0.13 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 6 | 0.13 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 6 | 0.13 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 6 | 0.13 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 6 | 0.13 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD2 | 4 | 0.13 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD3 | 4 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD2 | 4 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD3 | 4 | 0.13 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD2 | 10 | 0.13 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD3 | 10 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD2 | 10 | 0.13 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD3 | 10 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG2 | 1 | 0.13 |
| (3,94) | 1:115:A:THR:HG21 | 1:117:A:GLU:HG3 | 1 | 0.13 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG2 | 1 | 0.13 |
| (3,94) | 1:115:A:THR:HG22 | 1:117:A:GLU:HG3 | 1 | 0.13 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG2 | 1 | 0.13 |
| (3,94) | 1:115:A:THR:HG23 | 1:117:A:GLU:HG3 | 1 | 0.13 |
| (3,34) | 1:112:A:ILE:HB | 1:160:A:TRP:HE1 | 9 | 0.13 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 7 | 0.13 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 7 | 0.13 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 7 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 2 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 5 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 5 | 0.13 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 5 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 5 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 5 | 0.13 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 5 | 0.13 |
| (2,29) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HZ3 | 6 | 0.13 |
| (2,29) | 1:160:A:TRP:HH2 | 3:601:B:NO1:HZ3 | 8 | 0.13 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 4 | 0.13 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 4 | 0.13 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 4 | 0.13 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 10 | 0.13 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 10 | 0.13 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 10 | 0.13 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 4 | 0.13 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 7 | 0.13 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 10 | 0.13 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 8 | 0.13 |
| (1,86) | 1:210:A:GLU:O | 1:214:A:CYS:H | 2 | 0.13 |
| (1,64) | 1:188:A:GLY:O | 1:192:A:ALA:H | 5 | 0.13 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 6 | 0.12 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 4 | 0.12 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 4 | 0.12 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 4 | 0.12 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 10 | 0.12 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 10 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 10 | 0.12 |
| (3,2079) | 1:244:A:ILE:HB | 1:247:A:ASN:HB2 | 7 | 0.12 |
| (3,2079) | 1:244:A:ILE:HB | 1:247:A:ASN:HB3 | 7 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD2 | 6 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD3 | 6 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD2 | 6 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD3 | 6 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD2 | 6 | 0.12 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD3 | 6 | 0.12 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG2 | 1 | 0.12 |
| (3,2000) | 1:238:A:ALA:H | 1:240:A:MET:HG3 | 1 | 0.12 |
| (3,1975) | 1:236:A:LEU:HA | 1:239:A:TYR:HA | 3 | 0.12 |
| (3,1936) | 1:233:A:LYS:HD2 | 1:236:A:LEU:HA | 6 | 0.12 |
| (3,1936) | 1:233:A:LYS:HD3 | 1:236:A:LEU:HA | 6 | 0.12 |
| (3,1877) | 1:229:A:ILE:HB | 1:237:A:ALA:H | 1 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB2 | 2 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG21 | 1:233:A:LYS:HB3 | 2 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB2 | 2 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG22 | 1:233:A:LYS:HB3 | 2 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB2 | 2 | 0.12 |
| (3,1868) | 1:229:A:ILE:HG23 | 1:233:A:LYS:HB3 | 2 | 0.12 |
| (3,1773) | 1:224:A:ARG:HD2 | 2:505:B:BB9:HB | 9 | 0.12 |
| (3,1773) | 1:224:A:ARG:HD3 | 2:505:B:BB9:HB | 9 | 0.12 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG2 | 3 | 0.12 |
| (3,1708) | 1:219:A:TYR:H | 1:241:A:ARG:HG3 | 3 | 0.12 |
| (3,1707) | 1:219:A:TYR:HE1 | 1:241:A:ARG:HA | 1 | 0.12 |
| (3,1707) | 1:219:A:TYR:HE2 | 1:241:A:ARG:HA | 1 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB2 | 8 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB3 | 8 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB2 | 8 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB3 | 8 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB2 | 8 | 0.12 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB3 | 8 | 0.12 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG12 | 5 | 0.12 |
| (3,1652) | 1:215:A:LEU:HB2 | 1:244:A:ILE:HG13 | 5 | 0.12 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG12 | 5 | 0.12 |
| (3,1652) | 1:215:A:LEU:HB3 | 1:244:A:ILE:HG13 | 5 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 4 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 4 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 4 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 4 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB2 | 10 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1641) | 1:214:A:CYS:HB2 | 1:217:A:GLU:HB3 | 10 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB2 | 10 | 0.12 |
| (3,1641) | 1:214:A:CYS:HB3 | 1:217:A:GLU:HB3 | 10 | 0.12 |
| (3,1631) | 1:213:A:THR:HG21 | 1:245:A:LEU:HG | 7 | 0.12 |
| (3,1631) | 1:213:A:THR:HG22 | 1:245:A:LEU:HG | 7 | 0.12 |
| (3,1631) | 1:213:A:THR:HG23 | 1:245:A:LEU:HG | 7 | 0.12 |
| (3,1546) | 1:203:A:ASN:H | 1:204:A:HIS:HE1 | 9 | 0.12 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 7 | 0.12 |
| (3,1518) | 1:200:A:ILE:HG21 | 2:508:B:CYS:HA | 3 | 0.12 |
| (3,1518) | 1:200:A:ILE:HG22 | 2:508:B:CYS:HA | 3 | 0.12 |
| (3,1518) | 1:200:A:ILE:HG23 | 2:508:B:CYS:HA | 3 | 0.12 |
| (3,1484) | 1:198:A:GLN:HA | 1:202:A:ARG:HD2 | 1 | 0.12 |
| (3,1484) | 1:198:A:GLN:HA | 1:202:A:ARG:HD3 | 1 | 0.12 |
| (3,1449) | 1:196:A:HIS:H | 1:196:A:HIS:HD2 | 7 | 0.12 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB2 | 3 | 0.12 |
| (3,1447) | 1:195:A:ASP:HB2 | 1:198:A:GLN:HB3 | 3 | 0.12 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB2 | 3 | 0.12 |
| (3,1447) | 1:195:A:ASP:HB3 | 1:198:A:GLN:HB3 | 3 | 0.12 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB1 | 1 | 0.12 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB2 | 1 | 0.12 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB3 | 1 | 0.12 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 8 | 0.12 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 8 | 0.12 |
| (3,1221) | 1:179:A:ASP:H | 1:182:A:GLU:H | 5 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD21 | 1:188:A:GLY:H | 4 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD22 | 1:188:A:GLY:H | 4 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD23 | 1:188:A:GLY:H | 4 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD21 | 1:188:A:GLY:H | 10 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD22 | 1:188:A:GLY:H | 10 | 0.12 |
| (3,1160) | 1:177:A:LEU:HD23 | 1:188:A:GLY:H | 10 | 0.12 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG2 | 8 | 0.12 |
| (3,1153) | 1:177:A:LEU:HA | 1:182:A:GLU:HG3 | 8 | 0.12 |
| (3,1099) | 1:175:A:VAL:HG11 | 1:233:A:LYS:HG3 | 6 | 0.12 |
| (3,1099) | 1:175:A:VAL:HG12 | 1:233:A:LYS:HG3 | 6 | 0.12 |
| (3,1099) | 1:175:A:VAL:HG13 | 1:233:A:LYS:HG3 | 6 | 0.12 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 3 | 0.12 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 3 | 0.12 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 3 | 0.12 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG11 | 8 | 0.12 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG12 | 8 | 0.12 |
| (3,1016) | 1:174:A:PHE:HB2 | 1:175:A:VAL:HG13 | 8 | 0.12 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG11 | 8 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG12 | 8 | 0.12 |
| (3,1016) | 1:174:A:PHE:HB3 | 1:175:A:VAL:HG13 | 8 | 0.12 |
| (3,988) | 1:173:A:ARG:HG2 | 1:174:A:PHE:HZ | 1 | 0.12 |
| (3,988) | 1:173:A:ARG:HG3 | 1:174:A:PHE:HZ | 1 | 0.12 |
| (3,988) | 1:173:A:ARG:HG2 | 1:174:A:PHE:HZ | 3 | 0.12 |
| (3,988) | 1:173:A:ARG:HG3 | 1:174:A:PHE:HZ | 3 | 0.12 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 3 | 0.12 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 4 | 0.12 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 10 | 0.12 |
| (3,914) | 1:170:A:LEU:HD11 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,914) | 1:170:A:LEU:HD12 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,914) | 1:170:A:LEU:HD13 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,914) | 1:170:A:LEU:HD21 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,914) | 1:170:A:LEU:HD22 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,914) | 1:170:A:LEU:HD23 | 1:195:A:ASP:HA | 2 | 0.12 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 3 | 0.12 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 3 | 0.12 |
| (3,781) | 1:163:A:ILE:HG12 | 1:166:A:GLU:HG2 | 6 | 0.12 |
| (3,781) | 1:163:A:ILE:HG12 | 1:166:A:GLU:HG3 | 6 | 0.12 |
| (3,781) | 1:163:A:ILE:HG13 | 1:166:A:GLU:HG2 | 6 | 0.12 |
| (3,781) | 1:163:A:ILE:HG13 | 1:166:A:GLU:HG3 | 6 | 0.12 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 9 | 0.12 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 6 | 0.12 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 7 | 0.12 |
| (3,741) | 1:160:A:TRP:HZ2 | 3:601:B:NO1:HZ2 | 2 | 0.12 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 8 | 0.12 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 8 | 0.12 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 8 | 0.12 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 8 | 0.12 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 8 | 0.12 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 8 | 0.12 |
| (3,541) | 1:147:A:GLN:HG2 | 1:151:A:LYS:HD2 | 3 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (3,541) | 1:147:A:GLN:HG2 | 1:151:A:LYS:HD3 | 3 | 0.12 |
| (3,541) | 1:147:A:GLN:HG3 | 1:151:A:LYS:HD2 | 3 | 0.12 |
| (3,541) | 1:147:A:GLN:HG3 | 1:151:A:LYS:HD3 | 3 | 0.12 |
| (3,451) | 1:139:A:TRP:HZ3 | 2:504:B:DBU:HB | 6 | 0.12 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 7 | 0.12 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 7 | 0.12 |
| (3,372) | 1:135:A:VAL:HB | 1:138:A:ARG:HD2 | 6 | 0.12 |
| (3,372) | 1:135:A:VAL:HB | 1:138:A:ARG:HD3 | 6 | 0.12 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB2 | 7 | 0.12 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB3 | 7 | 0.12 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB2 | 7 | 0.12 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB3 | 7 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG11 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG12 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG13 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG21 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG22 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB2 | 1:135:A:VAL:HG23 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG11 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG12 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG13 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG21 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG22 | 9 | 0.12 |
| (3,351) | 1:133:A:GLU:HB3 | 1:135:A:VAL:HG23 | 9 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 3 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 3 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 3 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG1 | 5 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG2 | 5 | 0.12 |
| (3,331) | 1:131:A:TYR:HB2 | 2:504:B:DBU:HG3 | 5 | 0.12 |
| (3,287) | 1:128:A:PRO:HA | 1:132:A:GLU:HA | 1 | 0.12 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 7 | 0.12 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 7 | 0.12 |
| (3,275) | 1:126:A:PHE:HE1 | 2:506:B:3GL:HA | 9 | 0.12 |
| (3,275) | 1:126:A:PHE:HE2 | 2:506:B:3GL:HA | 9 | 0.12 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 4 | 0.12 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 4 | 0.12 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 4 | 0.12 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 4 | 0.12 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE1 | 10 | 0.12 |
| (3,148) | 1:119:A:LYS:HG2 | 1:126:A:PHE:HE2 | 10 | 0.12 |
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE1 | 10 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,148) | 1:119:A:LYS:HG3 | 1:126:A:PHE:HE2 | 10 | 0.12 |
| (3,133) | 1:118:A:GLU:HA | 1:157:A:LYS:HE2 | 5 | 0.12 |
| (3,133) | 1:118:A:GLU:HA | 1:157:A:LYS:HE3 | 5 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD2 | 4 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD3 | 4 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD2 | 7 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD3 | 7 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD2 | 10 | 0.12 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD3 | 10 | 0.12 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 6 | 0.12 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 6 | 0.12 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 6 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 3 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 8 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 8 | 0.12 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 8 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 8 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 8 | 0.12 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 8 | 0.12 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 1 | 0.12 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 1 | 0.12 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 1 | 0.12 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 5 | 0.12 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 6 | 0.12 |
| (1,102) | 1:227:A:ARG:O | 1:231:A:ALA:H | 9 | 0.12 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 3 | 0.12 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 6 | 0.12 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 9 | 0.12 |
| (1,86) | 1:210:A:GLU:O | 1:214:A:CYS:H | 1 | 0.12 |
| (3,2205) | 2:504:B:DBU:HB | 2:509:B:BB9:HB | 5 | 0.11 |
| (3,2161) | 1:250:A:ARG:HB2 | 1:251:A:HIS:H | 5 | 0.11 |
| (3,2161) | 1:250:A:ARG:HB3 | 1:251:A:HIS:H | 5 | 0.11 |
| (3,2141) | 1:249:A:VAL:HG21 | 1:250:A:ARG:H | 8 | 0.11 |
| (3,2141) | 1:249:A:VAL:HG22 | 1:250:A:ARG:H | 8 | 0.11 |
| (3,2141) | 1:249:A:VAL:HG23 | 1:250:A:ARG:H | 8 | 0.11 |
| (3,2067) | 1:243:A:ALA:H | 1:245:A:LEU:HB2 | 7 | 0.11 |
| (3,2067) | 1:243:A:ALA:H | 1:245:A:LEU:HB3 | 7 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,2049) | 1:241:A:ARG:HD2 | 1:245:A:LEU:HA | 4 | 0.11 |
| (3,2049) | 1:241:A:ARG:HD3 | 1:245:A:LEU:HA | 4 | 0.11 |
| (3,2049) | 1:241:A:ARG:HD2 | 1:245:A:LEU:HA | 10 | 0.11 |
| (3,2049) | 1:241:A:ARG:HD3 | 1:245:A:LEU:HA | 10 | 0.11 |
| (3,1958) | 1:236:A:LEU:HA | 1:236:A:LEU:HD21 | 3 | 0.11 |
| (3,1958) | 1:236:A:LEU:HA | 1:236:A:LEU:HD22 | 3 | 0.11 |
| (3,1958) | 1:236:A:LEU:HA | 1:236:A:LEU:HD23 | 3 | 0.11 |
| (3,1936) | 1:233:A:LYS:HD2 | 1:236:A:LEU:HA | 3 | 0.11 |
| (3,1936) | 1:233:A:LYS:HD3 | 1:236:A:LEU:HA | 3 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB2 | 1 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB3 | 1 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB2 | 2 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB3 | 2 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB2 | 5 | 0.11 |
| (3,1930) | 1:233:A:LYS:HA | 1:234:A:PRO:HB3 | 5 | 0.11 |
| (3,1877) | 1:229:A:ILE:HB | 1:237:A:ALA:H | 4 | 0.11 |
| (3,1877) | 1:229:A:ILE:HB | 1:237:A:ALA:H | 10 | 0.11 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 3 | 0.11 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE1 | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE2 | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG2 | 1:218:A:MET:HE3 | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE1 | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE2 | 7 | 0.11 |
| (3,1669) | 1:217:A:GLU:HG3 | 1:218:A:MET:HE3 | 7 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB2 | 6 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD11 | 2:508:B:CYS:HB3 | 6 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB2 | 6 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD12 | 2:508:B:CYS:HB3 | 6 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB2 | 6 | 0.11 |
| (3,1656) | 1:215:A:LEU:HD13 | 2:508:B:CYS:HB3 | 6 | 0.11 |
| (3,1633) | 1:213:A:THR:HG21 | 1:248:A:ALA:H | 5 | 0.11 |
| (3,1633) | 1:213:A:THR:HG22 | 1:248:A:ALA:H | 5 | 0.11 |
| (3,1633) | 1:213:A:THR:HG23 | 1:248:A:ALA:H | 5 | 0.11 |
| (3,1600) | 1:211:A:MET:HA | 1:213:A:THR:H | 5 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB1 | 4 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB2 | 4 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB3 | 4 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB1 | 10 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB2 | 10 | 0.11 |
| (3,1589) | 1:209:A:TYR:H | 1:248:A:ALA:HB3 | 10 | 0.11 |
| (3,1587) | 1:209:A:TYR:HD1 | 1:248:A:ALA:H | 6 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (3,1587) | 1:209:A:TYR:HD2 | 1:248:A:ALA:H | 6 | 0.11 |
| (3,1587) | 1:209:A:TYR:HD1 | 1:248:A:ALA:H | 9 | 0.11 |
| (3,1587) | 1:209:A:TYR:HD2 | 1:248:A:ALA:H | 9 | 0.11 |
| (3,1544) | 1:202:A:ARG:HH11 | 1:204:A:HIS:H | 2 | 0.11 |
| (3,1544) | 1:202:A:ARG:HH12 | 1:204:A:HIS:H | 2 | 0.11 |
| (3,1518) | 1:200:A:ILE:HG21 | 2:508:B:CYS:HA | 1 | 0.11 |
| (3,1518) | 1:200:A:ILE:HG22 | 2:508:B:CYS:HA | 1 | 0.11 |
| (3,1518) | 1:200:A:ILE:HG23 | 2:508:B:CYS:HA | 1 | 0.11 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 9 | 0.11 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 9 | 0.11 |
| (3,1476) | 1:197:A:ARG:HG2 | 1:251:A:HIS:HD2 | 2 | 0.11 |
| (3,1476) | 1:197:A:ARG:HG3 | 1:251:A:HIS:HD2 | 2 | 0.11 |
| (3,1451) | 1:196:A:HIS:H | 1:197:A:ARG:HB2 | 1 | 0.11 |
| (3,1451) | 1:196:A:HIS:H | 1:197:A:ARG:HB3 | 1 | 0.11 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB2 | 7 | 0.11 |
| (3,1312) | 1:186:A:SER:HA | 1:187:A:GLU:HB3 | 7 | 0.11 |
| (3,1307) | 1:186:A:SER:H | 1:187:A:GLU:H | 3 | 0.11 |
| (3,1307) | 1:186:A:SER:H | 1:187:A:GLU:H | 9 | 0.11 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB1 | 6 | 0.11 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB2 | 6 | 0.11 |
| (3,1291) | 1:184:A:ALA:H | 1:243:A:ALA:HB3 | 6 | 0.11 |
| (3,1270) | 1:183:A:PRO:HA | 1:239:A:TYR:HD1 | 6 | 0.11 |
| (3,1270) | 1:183:A:PRO:HA | 1:239:A:TYR:HD2 | 6 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 3 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 3 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 4 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 4 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB2 | 10 | 0.11 |
| (3,1236) | 1:180:A:ALA:HA | 1:182:A:GLU:HB3 | 10 | 0.11 |
| (3,1199) | 1:178:A:MET:HE1 | 1:236:A:LEU:HG | 1 | 0.11 |
| (3,1199) | 1:178:A:MET:HE2 | 1:236:A:LEU:HG | 1 | 0.11 |
| (3,1199) | 1:178:A:MET:HE3 | 1:236:A:LEU:HG | 1 | 0.11 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE1 | 1 | 0.11 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE2 | 1 | 0.11 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE1 | 1 | 0.11 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE2 | 1 | 0.11 |
| (3,1160) | 1:177:A:LEU:HD21 | 1:188:A:GLY:H | 5 | 0.11 |
| (3,1160) | 1:177:A:LEU:HD22 | 1:188:A:GLY:H | 5 | 0.11 |
| (3,1160) | 1:177:A:LEU:HD23 | 1:188:A:GLY:H | 5 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD11 | 1:188:A:GLY:HA2 | 4 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD12 | 1:188:A:GLY:HA2 | 4 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD13 | 1:188:A:GLY:HA2 | 4 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1158) | 1:177:A:LEU:HD11 | 1:188:A:GLY:HA2 | 10 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD12 | 1:188:A:GLY:HA2 | 10 | 0.11 |
| (3,1158) | 1:177:A:LEU:HD13 | 1:188:A:GLY:HA2 | 10 | 0.11 |
| (3,1087) | 1:175:A:VAL:HG21 | 1:179:A:ASP:HB3 | 2 | 0.11 |
| (3,1087) | 1:175:A:VAL:HG22 | 1:179:A:ASP:HB3 | 2 | 0.11 |
| (3,1087) | 1:175:A:VAL:HG23 | 1:179:A:ASP:HB3 | 2 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB1 | 4 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB2 | 4 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB3 | 4 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB1 | 10 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB2 | 10 | 0.11 |
| (3,1057) | 1:174:A:PHE:HZ | 1:243:A:ALA:HB3 | 10 | 0.11 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG2 | 3 | 0.11 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG3 | 3 | 0.11 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG2 | 9 | 0.11 |
| (3,1031) | 1:174:A:PHE:HA | 1:178:A:MET:HG3 | 9 | 0.11 |
| (3,974) | 1:172:A:ARG:HB2 | 1:175:A:VAL:HG11 | 5 | 0.11 |
| (3,974) | 1:172:A:ARG:HB2 | 1:175:A:VAL:HG12 | 5 | 0.11 |
| (3,974) | 1:172:A:ARG:HB2 | 1:175:A:VAL:HG13 | 5 | 0.11 |
| (3,974) | 1:172:A:ARG:HB3 | 1:175:A:VAL:HG11 | 5 | 0.11 |
| (3,974) | 1:172:A:ARG:HB3 | 1:175:A:VAL:HG12 | 5 | 0.11 |
| (3,974) | 1:172:A:ARG:HB3 | 1:175:A:VAL:HG13 | 5 | 0.11 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 1 | 0.11 |
| (3,933) | 1:171:A:THR:H | 1:172:A:ARG:HA | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 5 | 0.11 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 8 | 0.11 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 9 | 0.11 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 9 | 0.11 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 9 | 0.11 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 9 | 0.11 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 9 | 0.11 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 9 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 1 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 4 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 6 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 7 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 7 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 9 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD11 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD12 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD13 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD21 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD22 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB2 | 10 | 0.11 |
| (3,894) | 1:170:A:LEU:HD23 | 1:173:A:ARG:HB3 | 10 | 0.11 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB2 | 2 | 0.11 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB3 | 2 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD11 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD12 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD13 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD21 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD22 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD23 | 7 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD11 | 8 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD12 | 8 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD13 | 8 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD21 | 8 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD22 | 8 | 0.11 |
| (3,852) | 1:168:A:ASP:HA | 1:170:A:LEU:HD23 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 4 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 7 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 8 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD11 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD12 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD13 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD21 | 10 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD22 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB2 | 1:170:A:LEU:HD23 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD11 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD12 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD13 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD21 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD22 | 10 | 0.11 |
| (3,832) | 1:166:A:GLU:HB3 | 1:170:A:LEU:HD23 | 10 | 0.11 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 2 | 0.11 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 5 | 0.11 |
| (3,741) | 1:160:A:TRP:HZ2 | 3:601:B:NO1:HZ2 | 1 | 0.11 |
| (3,732) | 1:160:A:TRP:H | 1:163:A:ILE:HB | 4 | 0.11 |
| (3,689) | 1:157:A:LYS:HG2 | 1:161:A:GLN:HG2 | 5 | 0.11 |
| (3,689) | 1:157:A:LYS:HG2 | 1:161:A:GLN:HG3 | 5 | 0.11 |
| (3,689) | 1:157:A:LYS:HG3 | 1:161:A:GLN:HG2 | 5 | 0.11 |
| (3,689) | 1:157:A:LYS:HG3 | 1:161:A:GLN:HG3 | 5 | 0.11 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 2 | 0.11 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 2 | 0.11 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 2 | 0.11 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 2 | 0.11 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 2 | 0.11 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 2 | 0.11 |
| (3,607) | 1:151:A:LYS:HE2 | 1:202:A:ARG:HA | 8 | 0.11 |
| (3,607) | 1:151:A:LYS:HE3 | 1:202:A:ARG:HA | 8 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG2 | 4 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG3 | 4 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG2 | 4 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG3 | 4 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG2 | 9 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG3 | 9 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG2 | 9 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG3 | 9 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG2 | 10 | 0.11 |
| (3,508) | 1:145:A:TYR:HE1 | 1:146:A:ARG:HG3 | 10 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG2 | 10 | 0.11 |
| (3,508) | 1:145:A:TYR:HE2 | 1:146:A:ARG:HG3 | 10 | 0.11 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 4 | 0.11 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 4 | 0.11 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD1 | 10 | 0.11 |
| (3,445) | 1:139:A:TRP:HH2 | 1:225:A:PHE:HD2 | 10 | 0.11 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE1 | 2 | 0.11 |
| (3,444) | 1:139:A:TRP:HZ2 | 1:225:A:PHE:HE2 | 2 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG21 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG22 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG21 | 1:142:A:THR:HG23 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG21 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG22 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG22 | 1:142:A:THR:HG23 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG21 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG22 | 6 | 0.11 |
| (3,381) | 1:135:A:VAL:HG23 | 1:142:A:THR:HG23 | 6 | 0.11 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG21 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG22 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG11 | 1:142:A:THR:HG23 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG21 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG22 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG12 | 1:142:A:THR:HG23 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG21 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG22 | 1 | 0.11 |
| (3,380) | 1:135:A:VAL:HG13 | 1:142:A:THR:HG23 | 1 | 0.11 |
| (3,306) | 1:130:A:GLN:HG2 | 1:131:A:TYR:HD1 | 7 | 0.11 |
| (3,306) | 1:130:A:GLN:HG2 | 1:131:A:TYR:HD2 | 7 | 0.11 |
| (3,306) | 1:130:A:GLN:HG3 | 1:131:A:TYR:HD1 | 7 | 0.11 |
| (3,306) | 1:130:A:GLN:HG3 | 1:131:A:TYR:HD2 | 7 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD1 | 4 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD2 | 4 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD1 | 10 | 0.11 |
| (3,271) | 1:126:A:PHE:HA | 1:131:A:TYR:HD2 | 10 | 0.11 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD2 | 8 | 0.11 |
| (3,249) | 1:125:A:ASP:HB2 | 1:227:A:ARG:HD3 | 8 | 0.11 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD2 | 8 | 0.11 |
| (3,249) | 1:125:A:ASP:HB3 | 1:227:A:ARG:HD3 | 8 | 0.11 |
| (3,156) | 1:120:A:PHE:HE1 | 1:120:A:PHE:HA | 4 | 0.11 |
| (3,156) | 1:120:A:PHE:HE2 | 1:120:A:PHE:HA | 4 | 0.11 |
| (3,156) | 1:120:A:PHE:HE1 | 1:120:A:PHE:HA | 10 | 0.11 |
| (3,156) | 1:120:A:PHE:HE2 | 1:120:A:PHE:HA | 10 | 0.11 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD2 | 5 | 0.11 |
| (3,131) | 1:118:A:GLU:HG2 | 1:157:A:LYS:HD3 | 5 | 0.11 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD2 | 5 | 0.11 |
| (3,131) | 1:118:A:GLU:HG3 | 1:157:A:LYS:HD3 | 5 | 0.11 |
| (3,23) | 1:112:A:ILE:HG12 | 1:126:A:PHE:HZ | 6 | 0.11 |
| (3,23) | 1:112:A:ILE:HG13 | 1:126:A:PHE:HZ | 6 | 0.11 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 3 | 0.11 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 3 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 3 | 0.11 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD11 | 1 | 0.11 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD12 | 1 | 0.11 |
| (2,30) | 1:174:A:PHE:HD1 | 1:177:A:LEU:HD13 | 1 | 0.11 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD11 | 1 | 0.11 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD12 | 1 | 0.11 |
| (2,30) | 1:174:A:PHE:HD2 | 1:177:A:LEU:HD13 | 1 | 0.11 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 7 | 0.11 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 7 | 0.11 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 7 | 0.11 |
| (2,14) | 1:114:A:LEU:HD11 | 1:157:A:LYS:HA | 8 | 0.11 |
| (2,14) | 1:114:A:LEU:HD12 | 1:157:A:LYS:HA | 8 | 0.11 |
| (2,14) | 1:114:A:LEU:HD13 | 1:157:A:LYS:HA | 8 | 0.11 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 8 | 0.11 |
| (1,124) | 1:196:A:HIS:ND1 | 1:212:A:HIS:HE2 | 9 | 0.11 |
| (1,88) | 1:211:A:MET:O | 1:215:A:LEU:H | 1 | 0.11 |
| (3,2155) | 1:249:A:VAL:HG21 | 1:252:A:THR:H | 9 | 0.1 |
| (3,2155) | 1:249:A:VAL:HG22 | 1:252:A:THR:H | 9 | 0.1 |
| (3,2155) | 1:249:A:VAL:HG23 | 1:252:A:THR:H | 9 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB2 | 8 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG21 | 1:250:A:ARG:HB3 | 8 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB2 | 8 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG22 | 1:250:A:ARG:HB3 | 8 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB2 | 8 | 0.1 |
| (3,2142) | 1:249:A:VAL:HG23 | 1:250:A:ARG:HB3 | 8 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD2 | 5 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB1 | 1:241:A:ARG:HD3 | 5 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD2 | 5 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB2 | 1:241:A:ARG:HD3 | 5 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD2 | 5 | 0.1 |
| (3,2002) | 1:238:A:ALA:HB3 | 1:241:A:ARG:HD3 | 5 | 0.1 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD2 | 4 | 0.1 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD3 | 4 | 0.1 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD2 | 10 | 0.1 |
| (3,1924) | 1:233:A:LYS:H | 1:233:A:LYS:HD3 | 10 | 0.1 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 6 | 0.1 |
| (3,1837) | 1:227:A:ARG:HA | 1:230:A:ASP:HA | 8 | 0.1 |
| (3,1760) | 1:223:A:GLU:HB2 | 1:227:A:ARG:HG2 | 2 | 0.1 |
| (3,1760) | 1:223:A:GLU:HB2 | 1:227:A:ARG:HG3 | 2 | 0.1 |
| (3,1760) | 1:223:A:GLU:HB3 | 1:227:A:ARG:HG2 | 2 | 0.1 |
| (3,1760) | 1:223:A:GLU:HB3 | 1:227:A:ARG:HG3 | 2 | 0.1 |
| (3,1681) | 1:218:A:MET:HA | 1:221:A:SER:HA | 8 | 0.1 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (3,1674) | 1:217:A:GLU:H | 1:245:A:LEU:HG | 4 | 0.1 |
| (3,1674) | 1:217:A:GLU:H | 1:245:A:LEU:HG | 10 | 0.1 |
| (3,1532) | 1:201:A:ALA:H | 1:206:A:ASP:HA | 3 | 0.1 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 3 | 0.1 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 3 | 0.1 |
| (3,1516) | 1:200:A:ILE:HG12 | 2:507:B:BB9:HB | 7 | 0.1 |
| (3,1516) | 1:200:A:ILE:HG13 | 2:507:B:BB9:HB | 7 | 0.1 |
| (3,1360) | 1:189:A:ALA:HB1 | 1:243:A:ALA:H | 3 | 0.1 |
| (3,1360) | 1:189:A:ALA:HB2 | 1:243:A:ALA:H | 3 | 0.1 |
| (3,1360) | 1:189:A:ALA:HB3 | 1:243:A:ALA:H | 3 | 0.1 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB1 | 8 | 0.1 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB2 | 8 | 0.1 |
| (3,1328) | 1:187:A:GLU:HA | 1:189:A:ALA:HB3 | 8 | 0.1 |
| (3,1319) | 1:186:A:SER:HA | 1:190:A:MET:HB2 | 2 | 0.1 |
| (3,1319) | 1:186:A:SER:HA | 1:190:A:MET:HB3 | 2 | 0.1 |
| (3,1307) | 1:186:A:SER:H | 1:187:A:GLU:H | 1 | 0.1 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE1 | 8 | 0.1 |
| (3,1173) | 1:177:A:LEU:HB2 | 1:239:A:TYR:HE2 | 8 | 0.1 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE1 | 8 | 0.1 |
| (3,1173) | 1:177:A:LEU:HB3 | 1:239:A:TYR:HE2 | 8 | 0.1 |
| (3,1160) | 1:177:A:LEU:HD21 | 1:188:A:GLY:H | 3 | 0.1 |
| (3,1160) | 1:177:A:LEU:HD22 | 1:188:A:GLY:H | 3 | 0.1 |
| (3,1160) | 1:177:A:LEU:HD23 | 1:188:A:GLY:H | 3 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG11 | 1:232:A:ALA:HB1 | 4 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG12 | 1:232:A:ALA:HB1 | 4 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG13 | 1:232:A:ALA:HB1 | 4 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG11 | 1:232:A:ALA:HB1 | 7 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG12 | 1:232:A:ALA:HB1 | 7 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG13 | 1:232:A:ALA:HB1 | 7 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG11 | 1:232:A:ALA:HB1 | 10 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG12 | 1:232:A:ALA:HB1 | 10 | 0.1 |
| (3,1089) | 1:175:A:VAL:HG13 | 1:232:A:ALA:HB1 | 10 | 0.1 |
| (3,1004) | 1:173:A:ARG:HE | 1:192:A:ALA:HB1 | 3 | 0.1 |
| (3,1004) | 1:173:A:ARG:HE | 1:192:A:ALA:HB2 | 3 | 0.1 |
| (3,1004) | 1:173:A:ARG:HE | 1:192:A:ALA:HB3 | 3 | 0.1 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE1 | 4 | 0.1 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE2 | 4 | 0.1 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE1 | 10 | 0.1 |
| (3,944) | 1:171:A:THR:HA | 1:174:A:PHE:HE2 | 10 | 0.1 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD11 | 1:200:A:ILE:HG23 | 7 | 0.1 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD12 | 1:200:A:ILE:HG23 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD13 | 1:200:A:ILE:HG23 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD21 | 1:200:A:ILE:HG23 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD22 | 1:200:A:ILE:HG23 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG21 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG22 | 7 | 0.1 |
| (3,924) | 1:170:A:LEU:HD23 | 1:200:A:ILE:HG23 | 7 | 0.1 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 2 | 0.1 |
| (3,917) | 1:170:A:LEU:HD11 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,917) | 1:170:A:LEU:HD12 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,917) | 1:170:A:LEU:HD13 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,917) | 1:170:A:LEU:HD21 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,917) | 1:170:A:LEU:HD22 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,917) | 1:170:A:LEU:HD23 | 1:195:A:ASP:H | 6 | 0.1 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB2 | 9 | 0.1 |
| (3,873) | 1:169:A:GLU:H | 1:172:A:ARG:HB3 | 9 | 0.1 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 4 | 0.1 |
| (3,779) | 1:163:A:ILE:HB | 1:166:A:GLU:H | 10 | 0.1 |
| (3,751) | 1:161:A:GLN:HA | 1:164:A:GLN:HA | 8 | 0.1 |
| (3,732) | 1:160:A:TRP:H | 1:163:A:ILE:HB | 10 | 0.1 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD2 | 9 | 0.1 |
| (3,660) | 1:156:A:THR:HG21 | 1:157:A:LYS:HD3 | 9 | 0.1 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD2 | 9 | 0.1 |
| (3,660) | 1:156:A:THR:HG22 | 1:157:A:LYS:HD3 | 9 | 0.1 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD2 | 9 | 0.1 |
| (3,660) | 1:156:A:THR:HG23 | 1:157:A:LYS:HD3 | 9 | 0.1 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG21 | 9 | 0.1 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG22 | 9 | 0.1 |
| (3,651) | 1:155:A:TYR:HE1 | 1:163:A:ILE:HG23 | 9 | 0.1 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG21 | 9 | 0.1 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG22 | 9 | 0.1 |
| (3,651) | 1:155:A:TYR:HE2 | 1:163:A:ILE:HG23 | 9 | 0.1 |
| (3,600) | 1:151:A:LYS:HE2 | 1:152:A:THR:HA | 5 | 0.1 |
| (3,600) | 1:151:A:LYS:HE3 | 1:152:A:THR:HA | 5 | 0.1 |
| (3,542) | 1:147:A:GLN:HB2 | 1:204:A:HIS:HA | 7 | 0.1 |
| (3,542) | 1:147:A:GLN:HB3 | 1:204:A:HIS:HA | 7 | 0.1 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB2 | 1 | 0.1 |
| (3,355) | 1:133:A:GLU:HG2 | 1:136:A:ARG:HB3 | 1 | 0.1 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB2 | 1 | 0.1 |
| (3,355) | 1:133:A:GLU:HG3 | 1:136:A:ARG:HB3 | 1 | 0.1 |
| (3,350) | 1:133:A:GLU:HB2 | 1:135:A:VAL:H | 4 | 0.1 |
| (3,350) | 1:133:A:GLU:HB3 | 1:135:A:VAL:H | 4 | 0.1 |
| (3,327) | 1:131:A:TYR:HD1 | 2:503:B:THR:HA | 6 | 0.1 |
| (3,327) | 1:131:A:TYR:HD2 | 2:503:B:THR:HA | 6 | 0.1 |
| (3,324) | 1:131:A:TYR:HE1 | 1:224:A:ARG:HG2 | 1 | 0.1 |
| (3,324) | 1:131:A:TYR:HE1 | 1:224:A:ARG:HG3 | 1 | 0.1 |
| (3,324) | 1:131:A:TYR:HE2 | 1:224:A:ARG:HG2 | 1 | 0.1 |
| (3,324) | 1:131:A:TYR:HE2 | 1:224:A:ARG:HG3 | 1 | 0.1 |
| (3,274) | 1:126:A:PHE:HE1 | 2:505:B:BB9:HB | 3 | 0.1 |
| (3,274) | 1:126:A:PHE:HE2 | 2:505:B:BB9:HB | 3 | 0.1 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG2 | 3 | 0.1 |
| (3,122) | 1:117:A:GLU:HG2 | 1:121:A:GLU:HG3 | 3 | 0.1 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG2 | 3 | 0.1 |
| (3,122) | 1:117:A:GLU:HG3 | 1:121:A:GLU:HG3 | 3 | 0.1 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD2 | 2 | 0.1 |
| (3,115) | 1:117:A:GLU:H | 1:119:A:LYS:HD3 | 2 | 0.1 |
| (3,23) | 1:112:A:ILE:HG12 | 1:126:A:PHE:HZ | 5 | 0.1 |
| (3,23) | 1:112:A:ILE:HG13 | 1:126:A:PHE:HZ | 5 | 0.1 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 4 | 0.1 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 4 | 0.1 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 4 | 0.1 |
| (2,38) | 1:177:A:LEU:HD21 | 1:188:A:GLY:HA3 | 10 | 0.1 |
| (2,38) | 1:177:A:LEU:HD22 | 1:188:A:GLY:HA3 | 10 | 0.1 |
| (2,38) | 1:177:A:LEU:HD23 | 1:188:A:GLY:HA3 | 10 | 0.1 |
| (1,102) | 1:227:A:ARG:O | 1:231:A:ALA:H | 1 | 0.1 |
| (1,96) | 1:224:A:ARG:O | 1:228:A:ASN:H | 2 | 0.1 |
| (1,92) | 1:213:A:THR:O | 1:217:A:GLU:H | 6 | 0.1 |

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

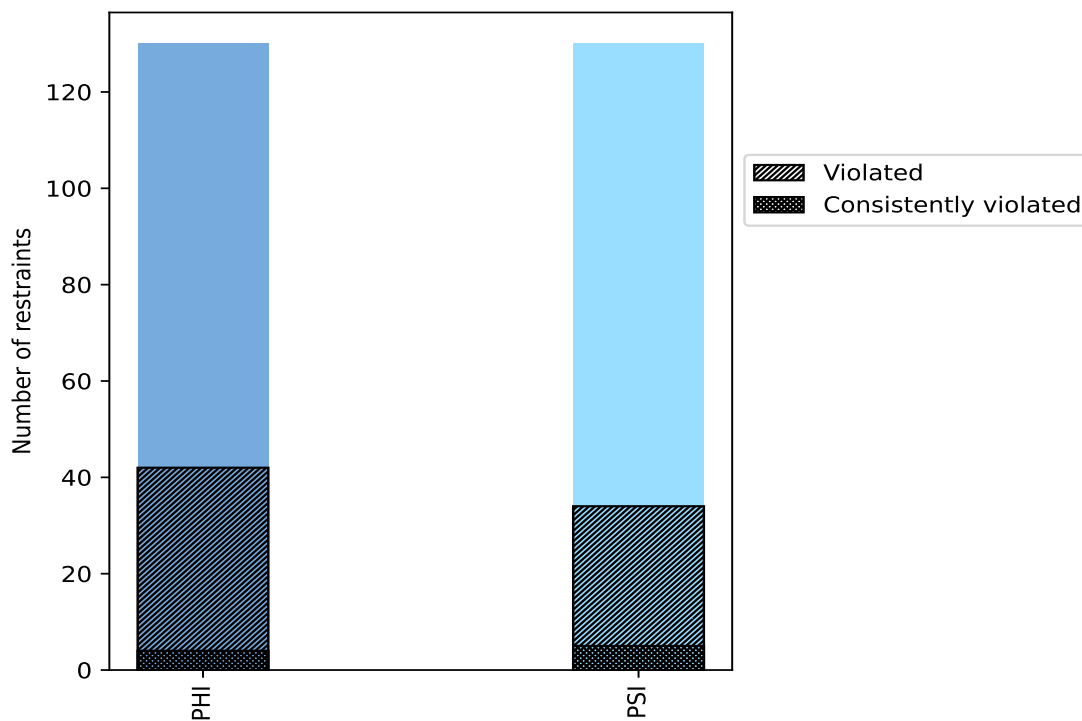
10.1 Summary of dihedral-angle violations [i](#)

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

| Angle type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|------------|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| PHI | 130 | 50.0 | 42 | 32.3 | 16.2 | 4 | 3.1 | 1.5 |
| PSI | 130 | 50.0 | 34 | 26.2 | 13.1 | 5 | 3.8 | 1.9 |
| Total | 260 | 100.0 | 76 | 29.2 | 29.2 | 9 | 3.5 | 3.5 |

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

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



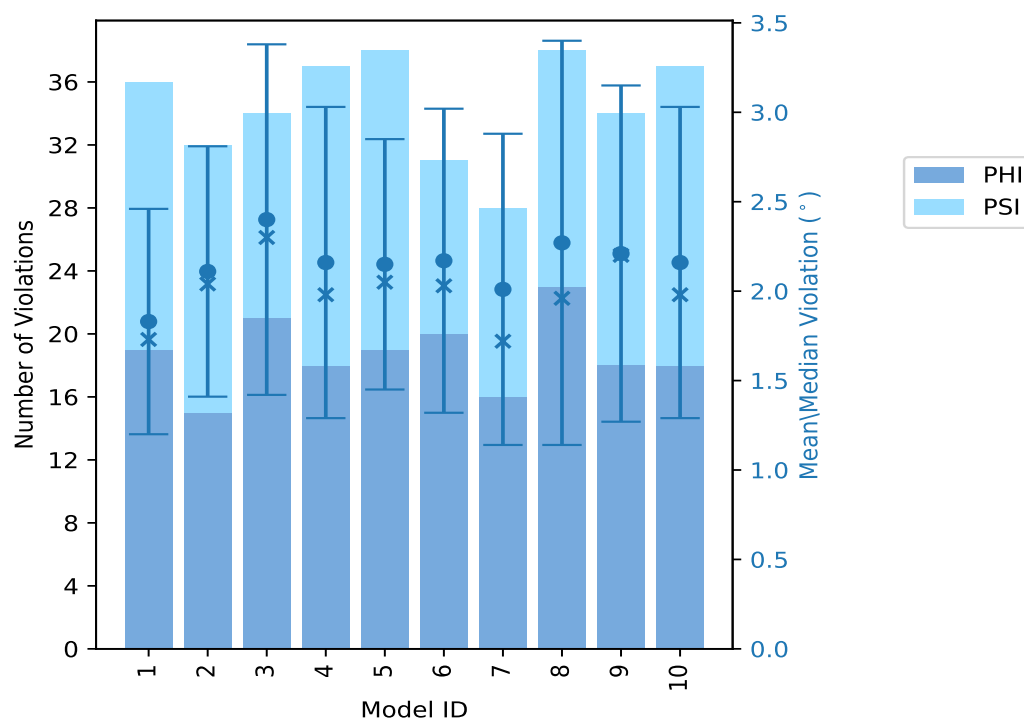
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

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

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

| Model ID | Number of violations | | | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|-------|----------|---------|--------|------------|
| | PHI | PSI | Total | | | | |
| 1 | 19 | 17 | 36 | 1.83 | 3.57 | 0.63 | 1.73 |
| 2 | 15 | 17 | 32 | 2.11 | 3.55 | 0.7 | 2.04 |
| 3 | 21 | 13 | 34 | 2.4 | 4.7 | 0.98 | 2.3 |
| 4 | 18 | 19 | 37 | 2.16 | 4.28 | 0.87 | 1.98 |
| 5 | 19 | 19 | 38 | 2.15 | 4.1 | 0.7 | 2.05 |
| 6 | 20 | 11 | 31 | 2.17 | 4.69 | 0.85 | 2.03 |
| 7 | 16 | 12 | 28 | 2.01 | 4.56 | 0.87 | 1.72 |
| 8 | 23 | 15 | 38 | 2.27 | 4.87 | 1.13 | 1.96 |
| 9 | 18 | 16 | 34 | 2.21 | 4.82 | 0.94 | 2.2 |
| 10 | 18 | 19 | 37 | 2.16 | 4.44 | 0.87 | 1.98 |

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



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

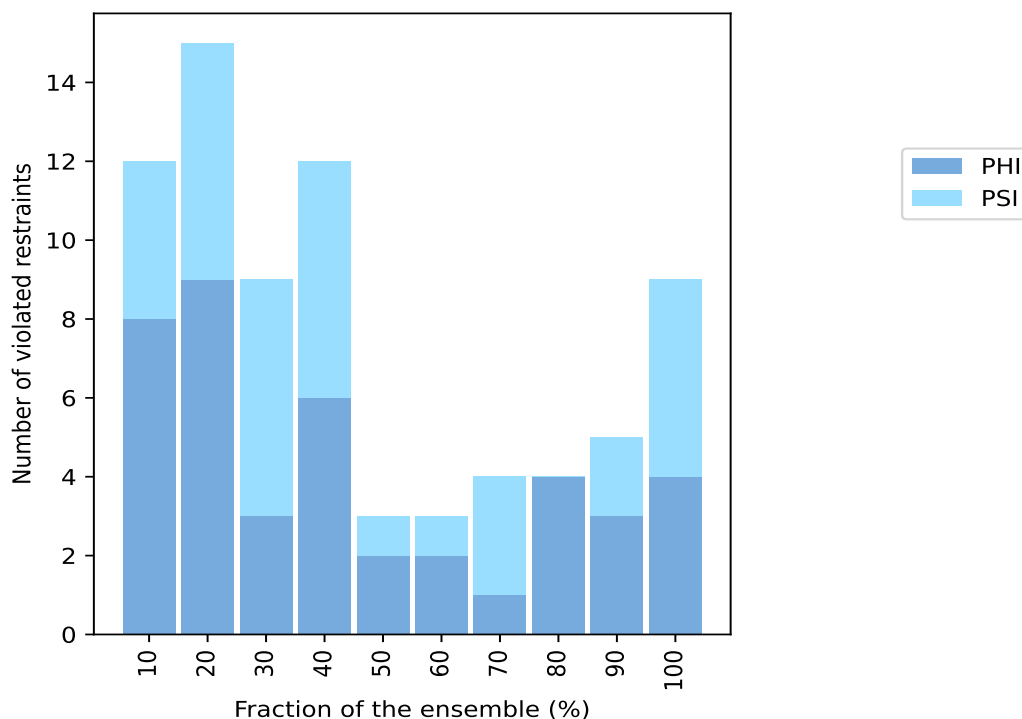
10.3 Dihedral-angle violation statistics for the ensemble [i](#)

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

| Number of violated restraints | | | Fraction of the ensemble | |
|-------------------------------|-----|-------|--------------------------|-------|
| PHI | PSI | Total | Count ¹ | % |
| 8 | 4 | 12 | 1 | 10.0 |
| 9 | 6 | 15 | 2 | 20.0 |
| 3 | 6 | 9 | 3 | 30.0 |
| 6 | 6 | 12 | 4 | 40.0 |
| 2 | 1 | 3 | 5 | 50.0 |
| 2 | 1 | 3 | 6 | 60.0 |
| 1 | 3 | 4 | 7 | 70.0 |
| 4 | 0 | 4 | 8 | 80.0 |
| 3 | 2 | 5 | 9 | 90.0 |
| 4 | 5 | 9 | 10 | 100.0 |

¹ Number of models with violations

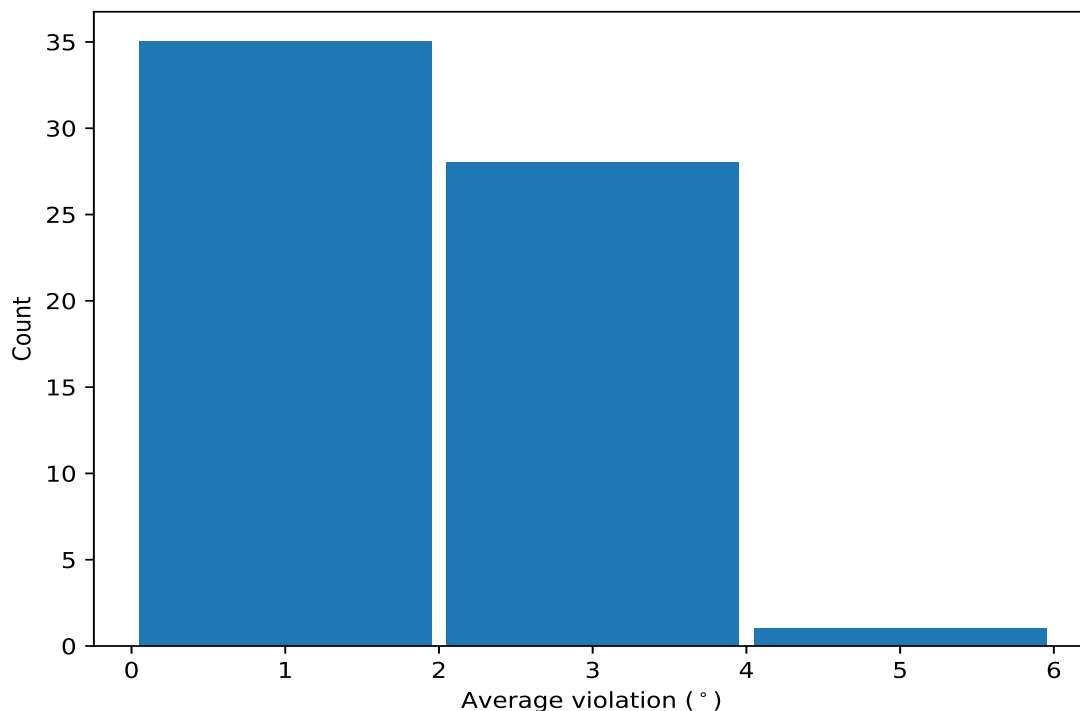
10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble [i](#)



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

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

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



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

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

| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Models ¹ | Mean | SD ² | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|------|-----------------|--------|
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 10 | 3.69 | 0.69 | 3.73 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 10 | 3.08 | 0.85 | 3.06 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 10 | 2.82 | 0.55 | 2.86 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 10 | 2.82 | 0.87 | 2.72 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 10 | 2.66 | 0.82 | 2.76 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 10 | 2.63 | 0.32 | 2.58 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 10 | 2.28 | 0.4 | 2.33 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 10 | 1.84 | 0.54 | 1.95 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 10 | 1.83 | 0.29 | 1.9 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 9 | 2.41 | 1.37 | 1.61 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 9 | 2.1 | 0.58 | 2.03 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 9 | 1.96 | 0.3 | 1.98 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 9 | 1.74 | 0.32 | 1.91 |

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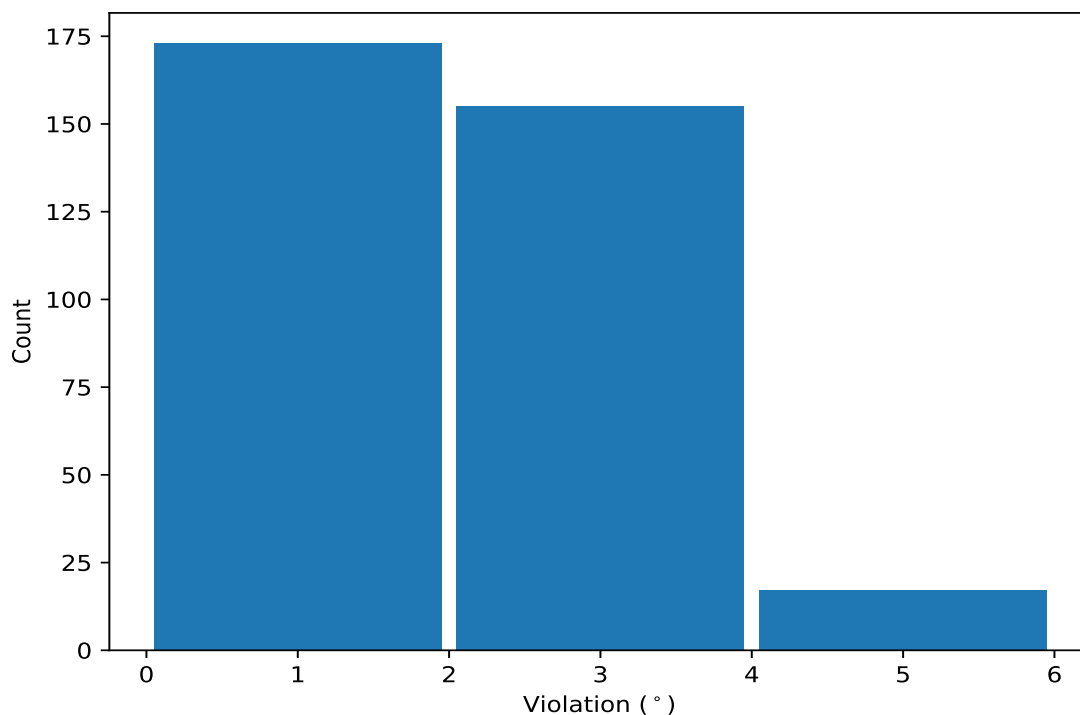
| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Models ¹ | Mean | SD ² | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|------|-----------------|--------|
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 9 | 1.71 | 0.35 | 1.71 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 8 | 2.38 | 0.61 | 2.54 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 8 | 2.34 | 0.55 | 2.4 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 8 | 2.22 | 1.18 | 2.02 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 8 | 1.87 | 0.61 | 1.84 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 7 | 2.34 | 0.54 | 2.57 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 7 | 2.24 | 0.83 | 2.35 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 7 | 1.86 | 0.47 | 2.12 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 7 | 1.81 | 0.7 | 1.43 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 6 | 3.06 | 0.47 | 3.1 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 6 | 2.52 | 0.32 | 2.55 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 6 | 2.23 | 0.53 | 2.32 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 5 | 2.51 | 0.78 | 2.08 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 5 | 1.75 | 0.5 | 1.45 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 5 | 1.51 | 0.36 | 1.34 |
| (1,19) | 1:121:A:GLU:C | 1:122:A:VAL:N | 1:122:A:VAL:CA | 1:122:A:VAL:C | 4 | 3.48 | 1.38 | 3.89 |
| (1,197) | 1:217:A:GLU:C | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 4 | 2.6 | 0.84 | 2.71 |
| (1,172) | 1:202:A:ARG:N | 1:202:A:ARG:CA | 1:202:A:ARG:C | 1:203:A:ASN:N | 4 | 1.87 | 0.43 | 2.02 |
| (1,1) | 1:111:A:GLY:C | 1:112:A:ILE:N | 1:112:A:ILE:CA | 1:112:A:ILE:C | 4 | 1.8 | 0.37 | 1.68 |
| (1,130) | 1:180:A:ALA:N | 1:180:A:ALA:CA | 1:180:A:ALA:C | 1:181:A:GLY:N | 4 | 1.73 | 0.19 | 1.78 |
| (1,42) | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 1:136:A:ARG:N | 4 | 1.71 | 0.27 | 1.86 |
| (1,190) | 1:214:A:CYS:N | 1:214:A:CYS:CA | 1:214:A:CYS:C | 1:215:A:LEU:N | 4 | 1.56 | 0.49 | 1.46 |
| (1,9) | 1:116:A:PRO:C | 1:117:A:GLU:N | 1:117:A:GLU:CA | 1:117:A:GLU:C | 4 | 1.4 | 0.2 | 1.4 |
| (1,13) | 1:118:A:GLU:C | 1:119:A:LYS:N | 1:119:A:LYS:CA | 1:119:A:LYS:C | 4 | 1.37 | 0.08 | 1.34 |
| (1,88) | 1:159:A:ASP:N | 1:159:A:ASP:CA | 1:159:A:ASP:C | 1:160:A:TRP:N | 4 | 1.27 | 0.19 | 1.23 |
| (1,203) | 1:220:A:VAL:C | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 4 | 1.2 | 0.16 | 1.14 |
| (1,106) | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1:169:A:GLU:N | 4 | 1.05 | 0.05 | 1.04 |
| (1,165) | 1:198:A:GLN:C | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 3 | 3.05 | 0.49 | 3.04 |
| (1,166) | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 1:200:A:ILE:N | 3 | 3.01 | 1.36 | 3.13 |
| (1,21) | 1:122:A:VAL:C | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 3 | 2.86 | 1.01 | 3.13 |
| (1,230) | 1:234:A:PRO:N | 1:234:A:PRO:CA | 1:234:A:PRO:C | 1:235:A:GLY:N | 3 | 2.15 | 0.48 | 2.47 |
| (1,23) | 1:125:A:ASP:C | 1:126:A:PHE:N | 1:126:A:PHE:CA | 1:126:A:PHE:C | 3 | 1.59 | 0.25 | 1.74 |
| (1,212) | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 1:226:A:THR:N | 3 | 1.44 | 0.51 | 1.12 |
| (1,196) | 1:217:A:GLU:N | 1:217:A:GLU:CA | 1:217:A:GLU:C | 1:218:A:MET:N | 3 | 1.35 | 0.17 | 1.47 |
| (1,176) | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 1:205:A:TYR:N | 3 | 1.13 | 0.09 | 1.12 |
| (1,182) | 1:210:A:GLU:N | 1:210:A:GLU:CA | 1:210:A:GLU:C | 1:211:A:MET:N | 3 | 1.09 | 0.07 | 1.08 |
| (1,75) | 1:152:A:THR:C | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 2 | 4.36 | 0.08 | 4.36 |
| (1,69) | 1:149:A:LYS:C | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 2 | 2.76 | 0.01 | 2.76 |
| (1,168) | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 1:201:A:ALA:N | 2 | 2.36 | 0.96 | 2.36 |
| (1,37) | 1:132:A:GLU:C | 1:133:A:GLU:N | 1:133:A:GLU:CA | 1:133:A:GLU:C | 2 | 2.16 | 0.26 | 2.16 |
| (1,11) | 1:117:A:GLU:C | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 2 | 2.11 | 0.08 | 2.11 |
| (1,251) | 1:246:A:ALA:C | 1:247:A:ASN:N | 1:247:A:ASN:CA | 1:247:A:ASN:C | 2 | 1.95 | 0.59 | 1.95 |
| (1,77) | 1:153:A:ALA:C | 1:154:A:SER:N | 1:154:A:SER:CA | 1:154:A:SER:C | 2 | 1.95 | 0.0 | 1.95 |
| (1,199) | 1:218:A:MET:C | 1:219:A:TYR:N | 1:219:A:TYR:CA | 1:219:A:TYR:C | 2 | 1.75 | 0.13 | 1.75 |
| (1,204) | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 1:222:A:ASP:N | 2 | 1.65 | 0.65 | 1.65 |
| (1,76) | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 1:154:A:SER:N | 2 | 1.52 | 0.15 | 1.52 |
| (1,194) | 1:216:A:GLY:N | 1:216:A:GLY:CA | 1:216:A:GLY:C | 1:217:A:GLU:N | 2 | 1.46 | 0.02 | 1.46 |
| (1,70) | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 1:151:A:LYS:N | 2 | 1.34 | 0.22 | 1.34 |
| (1,259) | 1:251:A:HIS:C | 1:252:A:THR:N | 1:252:A:THR:CA | 1:252:A:THR:C | 2 | 1.32 | 0.26 | 1.32 |
| (1,233) | 1:237:A:ALA:C | 1:238:A:ALA:N | 1:238:A:ALA:CA | 1:238:A:ALA:C | 2 | 1.12 | 0.1 | 1.12 |
| (1,198) | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 1:219:A:TYR:N | 2 | 1.1 | 0.09 | 1.1 |

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

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

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

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



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

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

| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 8 | 4.87 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 9 | 4.82 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 8 | 4.76 |
| (1,19) | 1:121:A:GLU:C | 1:122:A:VAL:N | 1:122:A:VAL:CA | 1:122:A:VAL:C | 8 | 4.75 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 3 | 4.7 |
| (1,19) | 1:121:A:GLU:C | 1:122:A:VAL:N | 1:122:A:VAL:CA | 1:122:A:VAL:C | 6 | 4.69 |
| (1,166) | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 1:200:A:ILE:N | 3 | 4.62 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 7 | 4.56 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 8 | 4.46 |
| (1,75) | 1:152:A:THR:C | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 10 | 4.44 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 9 | 4.31 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,75) | 1:152:A:THR:C | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 4 | 4.28 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 4 | 4.18 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 6 | 4.15 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 5 | 4.1 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 3 | 4.09 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 10 | 4.04 |
| (1,21) | 1:122:A:VAL:C | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 8 | 3.95 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 4 | 3.75 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 10 | 3.71 |
| (1,197) | 1:217:A:GLU:C | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 7 | 3.66 |
| (1,165) | 1:198:A:GLN:C | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 3 | 3.66 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 8 | 3.62 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 3 | 3.61 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 5 | 3.6 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 1 | 3.57 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 2 | 3.55 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 3 | 3.54 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 10 | 3.48 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 5 | 3.47 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 4 | 3.44 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 6 | 3.44 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 2 | 3.43 |
| (1,168) | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 1:201:A:ALA:N | 9 | 3.32 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 4 | 3.32 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 10 | 3.31 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 9 | 3.3 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 9 | 3.26 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 2 | 3.26 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 2 | 3.25 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 6 | 3.22 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 9 | 3.21 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 5 | 3.19 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 8 | 3.18 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 3 | 3.15 |
| (1,166) | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 1:200:A:ILE:N | 8 | 3.13 |
| (1,21) | 1:122:A:VAL:C | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 9 | 3.13 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 5 | 3.11 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 8 | 3.09 |
| (1,19) | 1:121:A:GLU:C | 1:122:A:VAL:N | 1:122:A:VAL:CA | 1:122:A:VAL:C | 9 | 3.09 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 1 | 3.06 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 7 | 3.05 |
| (1,165) | 1:198:A:GLN:C | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 8 | 3.04 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 2 | 3.03 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 1 | 3.02 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 10 | 3.01 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 4 | 2.99 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 7 | 2.99 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 10 | 2.98 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 3 | 2.97 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 3 | 2.96 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 10 | 2.93 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 4 | 2.92 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 7 | 2.92 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 7 | 2.91 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 4 | 2.87 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 3 | 2.86 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 5 | 2.83 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 10 | 2.82 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 2 | 2.82 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 9 | 2.81 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 3 | 2.81 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 10 | 2.8 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 8 | 2.78 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 4 | 2.77 |
| (1,69) | 1:149:A:LYS:C | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 4 | 2.77 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 4 | 2.77 |
| (1,69) | 1:149:A:LYS:C | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 10 | 2.76 |
| (1,197) | 1:217:A:GLU:C | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 5 | 2.74 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 6 | 2.74 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 6 | 2.71 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 1 | 2.7 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 6 | 2.69 |
| (1,197) | 1:217:A:GLU:C | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 3 | 2.68 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 7 | 2.68 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 2 | 2.66 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 5 | 2.66 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 3 | 2.64 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 6 | 2.64 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 1 | 2.63 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 3 | 2.63 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 9 | 2.62 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 2 | 2.6 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 8 | 2.6 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 5 | 2.59 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 9 | 2.57 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 8 | 2.57 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 3 | 2.55 |
| (1,251) | 1:246:A:ALA:C | 1:247:A:ASN:N | 1:247:A:ASN:CA | 1:247:A:ASN:C | 5 | 2.54 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 1 | 2.52 |
| (1,230) | 1:234:A:PRO:N | 1:234:A:PRO:CA | 1:234:A:PRO:C | 1:235:A:GLY:N | 5 | 2.51 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 6 | 2.51 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 1 | 2.49 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 6 | 2.49 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 7 | 2.48 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 2 | 2.48 |
| (1,230) | 1:234:A:PRO:N | 1:234:A:PRO:CA | 1:234:A:PRO:C | 1:235:A:GLY:N | 2 | 2.47 |
| (1,165) | 1:198:A:GLN:C | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 9 | 2.46 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 2 | 2.46 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 3 | 2.45 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 5 | 2.45 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 9 | 2.44 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 4 | 2.43 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 6 | 2.42 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 2 | 2.41 |
| (1,37) | 1:132:A:GLU:C | 1:133:A:GLU:N | 1:133:A:GLU:CA | 1:133:A:GLU:C | 5 | 2.41 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 10 | 2.4 |
| (1,1) | 1:111:A:GLY:C | 1:112:A:ILE:N | 1:112:A:ILE:CA | 1:112:A:ILE:C | 6 | 2.4 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 6 | 2.35 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 5 | 2.34 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 9 | 2.34 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 4 | 2.33 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 9 | 2.32 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 3 | 2.32 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 4 | 2.32 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 10 | 2.32 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 7 | 2.32 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 6 | 2.31 |
| (1,204) | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 1:222:A:ASP:N | 1 | 2.3 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 8 | 2.3 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 5 | 2.28 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 8 | 2.28 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 3 | 2.27 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 8 | 2.26 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 4 | 2.26 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 9 | 2.25 |
| (1,22) | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 1:124:A:GLY:N | 3 | 2.25 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 10 | 2.25 |
| (1,190) | 1:214:A:CYS:N | 1:214:A:CYS:CA | 1:214:A:CYS:C | 1:215:A:LEU:N | 5 | 2.24 |
| (1,172) | 1:202:A:ARG:N | 1:202:A:ARG:CA | 1:202:A:ARG:C | 1:203:A:ASN:N | 2 | 2.24 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 7 | 2.22 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 5 | 2.21 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 9 | 2.2 |
| (1,172) | 1:202:A:ARG:N | 1:202:A:ARG:CA | 1:202:A:ARG:C | 1:203:A:ASN:N | 9 | 2.19 |
| (1,100) | 1:165:A:ASP:N | 1:165:A:ASP:CA | 1:165:A:ASP:C | 1:166:A:GLU:N | 10 | 2.19 |
| (1,11) | 1:117:A:GLU:C | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 8 | 2.19 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 8 | 2.18 |
| (1,212) | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 1:226:A:THR:N | 7 | 2.16 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 1 | 2.16 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 2 | 2.15 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 5 | 2.15 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 6 | 2.12 |
| (1,50) | 1:139:A:TRP:N | 1:139:A:TRP:CA | 1:139:A:TRP:C | 1:140:A:GLY:N | 1 | 2.12 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 2 | 2.12 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 5 | 2.08 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 4 | 2.07 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 2 | 2.06 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 1 | 2.06 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 4 | 2.05 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 1 | 2.05 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 7 | 2.04 |
| (1,57) | 1:143:A:ASP:C | 1:144:A:ALA:N | 1:144:A:ALA:CA | 1:144:A:ALA:C | 10 | 2.04 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 4 | 2.03 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 2 | 2.03 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 10 | 2.03 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 6 | 2.03 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 5 | 2.03 |
| (1,11) | 1:117:A:GLU:C | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1 | 2.03 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 5 | 2.02 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 10 | 2.01 |
| (1,211) | 1:224:A:ARG:C | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 8 | 2.0 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1 | 2.0 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 4 | 1.98 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 10 | 1.98 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 4 | 1.96 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 10 | 1.95 |
| (1,77) | 1:153:A:ALA:C | 1:154:A:SER:N | 1:154:A:SER:CA | 1:154:A:SER:C | 4 | 1.95 |
| (1,77) | 1:153:A:ALA:C | 1:154:A:SER:N | 1:154:A:SER:CA | 1:154:A:SER:C | 10 | 1.95 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 9 | 1.95 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 1 | 1.94 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 1 | 1.94 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 10 | 1.94 |
| (1,130) | 1:180:A:ALA:N | 1:180:A:ALA:CA | 1:180:A:ALA:C | 1:181:A:GLY:N | 4 | 1.93 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 4 | 1.92 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 9 | 1.91 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 7 | 1.91 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 8 | 1.91 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 2 | 1.9 |
| (1,37) | 1:132:A:GLU:C | 1:133:A:GLU:N | 1:133:A:GLU:CA | 1:133:A:GLU:C | 3 | 1.9 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 1 | 1.88 |
| (1,199) | 1:218:A:MET:C | 1:219:A:TYR:N | 1:219:A:TYR:CA | 1:219:A:TYR:C | 1 | 1.88 |
| (1,42) | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 1:136:A:ARG:N | 2 | 1.87 |
| (1,42) | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 1:136:A:ARG:N | 10 | 1.87 |
| (1,172) | 1:202:A:ARG:N | 1:202:A:ARG:CA | 1:202:A:ARG:C | 1:203:A:ASN:N | 5 | 1.86 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 3 | 1.85 |
| (1,42) | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 1:136:A:ARG:N | 4 | 1.85 |
| (1,130) | 1:180:A:ALA:N | 1:180:A:ALA:CA | 1:180:A:ALA:C | 1:181:A:GLY:N | 10 | 1.84 |
| (1,41) | 1:134:A:GLU:C | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 3 | 1.84 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 5 | 1.84 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 3 | 1.83 |
| (1,193) | 1:215:A:LEU:C | 1:216:A:GLY:N | 1:216:A:GLY:CA | 1:216:A:GLY:C | 6 | 1.81 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 8 | 1.81 |
| (1,7) | 1:115:A:THR:C | 1:116:A:PRO:N | 1:116:A:PRO:CA | 1:116:A:PRO:C | 3 | 1.81 |
| (1,190) | 1:214:A:CYS:N | 1:214:A:CYS:CA | 1:214:A:CYS:C | 1:215:A:LEU:N | 6 | 1.8 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 9 | 1.8 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 8 | 1.79 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 2 | 1.79 |
| (1,23) | 1:125:A:ASP:C | 1:126:A:PHE:N | 1:126:A:PHE:CA | 1:126:A:PHE:C | 4 | 1.79 |
| (1,1) | 1:111:A:GLY:C | 1:112:A:ILE:N | 1:112:A:ILE:CA | 1:112:A:ILE:C | 2 | 1.79 |
| (1,82) | 1:156:A:THR:N | 1:156:A:THR:CA | 1:156:A:THR:C | 1:157:A:LYS:N | 5 | 1.77 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 3 | 1.76 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 9 | 1.75 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 6 | 1.74 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 5 | 1.74 |
| (1,23) | 1:125:A:ASP:C | 1:126:A:PHE:N | 1:126:A:PHE:CA | 1:126:A:PHE:C | 10 | 1.74 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,130) | 1:180:A:ALA:N | 1:180:A:ALA:CA | 1:180:A:ALA:C | 1:181:A:GLY:N | 7 | 1.72 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 7 | 1.71 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 7 | 1.71 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 7 | 1.7 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 2 | 1.69 |
| (1,76) | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 1:154:A:SER:N | 5 | 1.68 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 3 | 1.68 |
| (1,9) | 1:116:A:PRO:C | 1:117:A:GLU:N | 1:117:A:GLU:CA | 1:117:A:GLU:C | 9 | 1.68 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 6 | 1.67 |
| (1,177) | 1:206:A:ASP:C | 1:207:A:CYS:N | 1:207:A:CYS:CA | 1:207:A:CYS:C | 6 | 1.66 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 6 | 1.66 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 8 | 1.65 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 2 | 1.63 |
| (1,199) | 1:218:A:MET:C | 1:219:A:TYR:N | 1:219:A:TYR:CA | 1:219:A:TYR:C | 2 | 1.62 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 5 | 1.61 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 6 | 1.61 |
| (1,51) | 1:139:A:TRP:C | 1:140:A:GLY:N | 1:140:A:GLY:CA | 1:140:A:GLY:C | 8 | 1.59 |
| (1,259) | 1:251:A:HIS:C | 1:252:A:THR:N | 1:252:A:THR:CA | 1:252:A:THR:C | 1 | 1.58 |
| (1,155) | 1:193:A:ALA:C | 1:194:A:GLU:N | 1:194:A:GLU:CA | 1:194:A:GLU:C | 7 | 1.58 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 5 | 1.58 |
| (1,1) | 1:111:A:GLY:C | 1:112:A:ILE:N | 1:112:A:ILE:CA | 1:112:A:ILE:C | 5 | 1.57 |
| (1,88) | 1:159:A:ASP:N | 1:159:A:ASP:CA | 1:159:A:ASP:C | 1:160:A:TRP:N | 5 | 1.56 |
| (1,70) | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 1:151:A:LYS:N | 5 | 1.56 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 1 | 1.55 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 8 | 1.55 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 1 | 1.55 |
| (1,126) | 1:178:A:MET:N | 1:178:A:MET:CA | 1:178:A:MET:C | 1:179:A:ASP:N | 2 | 1.52 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 5 | 1.51 |
| (1,21) | 1:122:A:VAL:C | 1:123:A:PHE:N | 1:123:A:PHE:CA | 1:123:A:PHE:C | 6 | 1.51 |
| (1,13) | 1:118:A:GLU:C | 1:119:A:LYS:N | 1:119:A:LYS:CA | 1:119:A:LYS:C | 1 | 1.5 |
| (1,207) | 1:222:A:ASP:C | 1:223:A:GLU:N | 1:223:A:GLU:CA | 1:223:A:GLU:C | 2 | 1.49 |
| (1,200) | 1:219:A:TYR:N | 1:219:A:TYR:CA | 1:219:A:TYR:C | 1:220:A:VAL:N | 9 | 1.49 |
| (1,230) | 1:234:A:PRO:N | 1:234:A:PRO:CA | 1:234:A:PRO:C | 1:235:A:GLY:N | 1 | 1.48 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 3 | 1.48 |
| (1,196) | 1:217:A:GLU:N | 1:217:A:GLU:CA | 1:217:A:GLU:C | 1:218:A:MET:N | 10 | 1.48 |
| (1,203) | 1:220:A:VAL:C | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 2 | 1.47 |
| (1,196) | 1:217:A:GLU:N | 1:217:A:GLU:CA | 1:217:A:GLU:C | 1:218:A:MET:N | 4 | 1.47 |
| (1,194) | 1:216:A:GLY:N | 1:216:A:GLY:CA | 1:216:A:GLY:C | 1:217:A:GLU:N | 10 | 1.47 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 3 | 1.47 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 1 | 1.47 |
| (1,9) | 1:116:A:PRO:C | 1:117:A:GLU:N | 1:117:A:GLU:CA | 1:117:A:GLU:C | 6 | 1.47 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 8 | 1.45 |
| (1,1) | 1:111:A:GLY:C | 1:112:A:ILE:N | 1:112:A:ILE:CA | 1:112:A:ILE:C | 8 | 1.45 |
| (1,194) | 1:216:A:GLY:N | 1:216:A:GLY:CA | 1:216:A:GLY:C | 1:217:A:GLU:N | 4 | 1.44 |
| (1,130) | 1:180:A:ALA:N | 1:180:A:ALA:CA | 1:180:A:ALA:C | 1:181:A:GLY:N | 6 | 1.43 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 8 | 1.43 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 5 | 1.42 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 3 | 1.41 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 7 | 1.4 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 4 | 1.4 |
| (1,168) | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 1:201:A:ALA:N | 8 | 1.39 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 5 | 1.38 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 9 | 1.38 |
| (1,19) | 1:121:A:GLU:C | 1:122:A:VAL:N | 1:122:A:VAL:CA | 1:122:A:VAL:C | 7 | 1.38 |
| (1,223) | 1:230:A:ASP:C | 1:231:A:ALA:N | 1:231:A:ALA:CA | 1:231:A:ALA:C | 6 | 1.37 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 10 | 1.37 |
| (1,76) | 1:153:A:ALA:N | 1:153:A:ALA:CA | 1:153:A:ALA:C | 1:154:A:SER:N | 1 | 1.37 |
| (1,251) | 1:246:A:ALA:C | 1:247:A:ASN:N | 1:247:A:ASN:CA | 1:247:A:ASN:C | 2 | 1.36 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 10 | 1.34 |
| (1,13) | 1:118:A:GLU:C | 1:119:A:LYS:N | 1:119:A:LYS:CA | 1:119:A:LYS:C | 10 | 1.34 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 1 | 1.33 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 4 | 1.33 |
| (1,151) | 1:191:A:ASP:C | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 10 | 1.33 |
| (1,30) | 1:129:A:ASP:N | 1:129:A:ASP:CA | 1:129:A:ASP:C | 1:130:A:GLN:N | 6 | 1.33 |
| (1,13) | 1:118:A:GLU:C | 1:119:A:LYS:N | 1:119:A:LYS:CA | 1:119:A:LYS:C | 8 | 1.33 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 1 | 1.32 |
| (1,9) | 1:116:A:PRO:C | 1:117:A:GLU:N | 1:117:A:GLU:CA | 1:117:A:GLU:C | 3 | 1.32 |
| (1,197) | 1:217:A:GLU:C | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 9 | 1.31 |
| (1,88) | 1:159:A:ASP:N | 1:159:A:ASP:CA | 1:159:A:ASP:C | 1:160:A:TRP:N | 8 | 1.31 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 4 | 1.31 |
| (1,13) | 1:118:A:GLU:C | 1:119:A:LYS:N | 1:119:A:LYS:CA | 1:119:A:LYS:C | 4 | 1.31 |
| (1,167) | 1:199:A:GLY:C | 1:200:A:ILE:N | 1:200:A:ILE:CA | 1:200:A:ILE:C | 5 | 1.3 |
| (1,166) | 1:199:A:GLY:N | 1:199:A:GLY:CA | 1:199:A:GLY:C | 1:200:A:ILE:N | 9 | 1.29 |
| (1,245) | 1:243:A:ALA:C | 1:244:A:ILE:N | 1:244:A:ILE:CA | 1:244:A:ILE:C | 5 | 1.28 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 7 | 1.27 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 4 | 1.26 |
| (1,186) | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 1:213:A:THR:N | 7 | 1.25 |
| (1,15) | 1:119:A:LYS:C | 1:120:A:PHE:N | 1:120:A:PHE:CA | 1:120:A:PHE:C | 3 | 1.25 |
| (1,176) | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 1:205:A:TYR:N | 10 | 1.24 |
| (1,42) | 1:135:A:VAL:N | 1:135:A:VAL:CA | 1:135:A:VAL:C | 1:136:A:ARG:N | 1 | 1.24 |
| (1,23) | 1:125:A:ASP:C | 1:126:A:PHE:N | 1:126:A:PHE:CA | 1:126:A:PHE:C | 5 | 1.24 |
| (1,233) | 1:237:A:ALA:C | 1:238:A:ALA:N | 1:238:A:ALA:CA | 1:238:A:ALA:C | 1 | 1.22 |
| (1,209) | 1:223:A:GLU:C | 1:224:A:ARG:N | 1:224:A:ARG:CA | 1:224:A:ARG:C | 8 | 1.21 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 9 | 1.2 |
| (1,18) | 1:121:A:GLU:N | 1:121:A:GLU:CA | 1:121:A:GLU:C | 1:122:A:VAL:N | 1 | 1.2 |
| (1,198) | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 1:219:A:TYR:N | 2 | 1.19 |
| (1,182) | 1:210:A:GLU:N | 1:210:A:GLU:CA | 1:210:A:GLU:C | 1:211:A:MET:N | 9 | 1.18 |
| (1,203) | 1:220:A:VAL:C | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 1 | 1.17 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 4 | 1.17 |
| (1,172) | 1:202:A:ARG:N | 1:202:A:ARG:CA | 1:202:A:ARG:C | 1:203:A:ASN:N | 1 | 1.17 |
| (1,152) | 1:192:A:ALA:N | 1:192:A:ALA:CA | 1:192:A:ALA:C | 1:193:A:ALA:N | 7 | 1.17 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 10 | 1.16 |
| (1,66) | 1:148:A:SER:N | 1:148:A:SER:CA | 1:148:A:SER:C | 1:149:A:LYS:N | 9 | 1.16 |
| (1,88) | 1:159:A:ASP:N | 1:159:A:ASP:CA | 1:159:A:ASP:C | 1:160:A:TRP:N | 10 | 1.15 |
| (1,9) | 1:116:A:PRO:C | 1:117:A:GLU:N | 1:117:A:GLU:CA | 1:117:A:GLU:C | 8 | 1.15 |
| (1,185) | 1:211:A:MET:C | 1:212:A:HIS:N | 1:212:A:HIS:CA | 1:212:A:HIS:C | 10 | 1.14 |
| (1,54) | 1:142:A:THR:N | 1:142:A:THR:CA | 1:142:A:THR:C | 1:143:A:ASP:N | 7 | 1.14 |
| (1,106) | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1:169:A:GLU:N | 10 | 1.13 |
| (1,38) | 1:133:A:GLU:N | 1:133:A:GLU:CA | 1:133:A:GLU:C | 1:134:A:GLU:N | 9 | 1.13 |
| (1,215) | 1:226:A:THR:C | 1:227:A:ARG:N | 1:227:A:ARG:CA | 1:227:A:ARG:C | 1 | 1.12 |
| (1,212) | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 1:226:A:THR:N | 5 | 1.12 |
| (1,176) | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 1:205:A:TYR:N | 4 | 1.12 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,70) | 1:150:A:GLU:N | 1:150:A:GLU:CA | 1:150:A:GLU:C | 1:151:A:LYS:N | 2 | 1.12 |
| (1,196) | 1:217:A:GLU:N | 1:217:A:GLU:CA | 1:217:A:GLU:C | 1:218:A:MET:N | 6 | 1.11 |
| (1,190) | 1:214:A:CYS:N | 1:214:A:CYS:CA | 1:214:A:CYS:C | 1:215:A:LEU:N | 8 | 1.11 |
| (1,203) | 1:220:A:VAL:C | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 6 | 1.1 |
| (1,123) | 1:176:A:ALA:C | 1:177:A:LEU:N | 1:177:A:LEU:CA | 1:177:A:LEU:C | 1 | 1.1 |
| (1,222) | 1:230:A:ASP:N | 1:230:A:ASP:CA | 1:230:A:ASP:C | 1:231:A:ALA:N | 9 | 1.09 |
| (1,137) | 1:184:A:ALA:C | 1:185:A:ASP:N | 1:185:A:ASP:CA | 1:185:A:ASP:C | 7 | 1.09 |
| (1,46) | 1:137:A:GLU:N | 1:137:A:GLU:CA | 1:137:A:GLU:C | 1:138:A:ARG:N | 7 | 1.09 |
| (1,190) | 1:214:A:CYS:N | 1:214:A:CYS:CA | 1:214:A:CYS:C | 1:215:A:LEU:N | 9 | 1.08 |
| (1,182) | 1:210:A:GLU:N | 1:210:A:GLU:CA | 1:210:A:GLU:C | 1:211:A:MET:N | 4 | 1.08 |
| (1,219) | 1:228:A:ASN:C | 1:229:A:ILE:N | 1:229:A:ILE:CA | 1:229:A:ILE:C | 8 | 1.07 |
| (1,259) | 1:251:A:HIS:C | 1:252:A:THR:N | 1:252:A:THR:CA | 1:252:A:THR:C | 3 | 1.06 |
| (1,175) | 1:203:A:ASN:C | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 1 | 1.06 |
| (1,106) | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1:169:A:GLU:N | 2 | 1.06 |
| (1,88) | 1:159:A:ASP:N | 1:159:A:ASP:CA | 1:159:A:ASP:C | 1:160:A:TRP:N | 4 | 1.06 |
| (1,212) | 1:225:A:PHE:N | 1:225:A:PHE:CA | 1:225:A:PHE:C | 1:226:A:THR:N | 2 | 1.05 |
| (1,203) | 1:220:A:VAL:C | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 9 | 1.05 |
| (1,105) | 1:167:A:ALA:C | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 6 | 1.03 |
| (1,27) | 1:127:A:ASP:C | 1:128:A:PRO:N | 1:128:A:PRO:CA | 1:128:A:PRO:C | 7 | 1.03 |
| (1,176) | 1:204:A:HIS:N | 1:204:A:HIS:CA | 1:204:A:HIS:C | 1:205:A:TYR:N | 3 | 1.02 |
| (1,233) | 1:237:A:ALA:C | 1:238:A:ALA:N | 1:238:A:ALA:CA | 1:238:A:ALA:C | 7 | 1.01 |
| (1,198) | 1:218:A:MET:N | 1:218:A:MET:CA | 1:218:A:MET:C | 1:219:A:TYR:N | 1 | 1.01 |
| (1,106) | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1:169:A:GLU:N | 3 | 1.01 |
| (1,71) | 1:150:A:GLU:C | 1:151:A:LYS:N | 1:151:A:LYS:CA | 1:151:A:LYS:C | 8 | 1.01 |
| (1,12) | 1:118:A:GLU:N | 1:118:A:GLU:CA | 1:118:A:GLU:C | 1:119:A:LYS:N | 8 | 1.01 |
| (1,204) | 1:221:A:SER:N | 1:221:A:SER:CA | 1:221:A:SER:C | 1:222:A:ASP:N | 8 | 1.0 |
| (1,182) | 1:210:A:GLU:N | 1:210:A:GLU:CA | 1:210:A:GLU:C | 1:211:A:MET:N | 10 | 1.0 |
| (1,106) | 1:168:A:ASP:N | 1:168:A:ASP:CA | 1:168:A:ASP:C | 1:169:A:GLU:N | 4 | 1.0 |