



Full wwPDB NMR Structure Validation Report ⓘ

Jun 5, 2023 – 04:13 AM EDT

PDB ID : 2LPX
BMRB ID : 18281
Title : Solution Structure of Strawberry Allergen Fra a 1e
Authors : Seutter von Loetzen, C.; Hartl-Spiegelhauer, O.; Schweimer, K.; Schwab, W.;
Roesch, P.
Deposited on : 2012-02-20

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

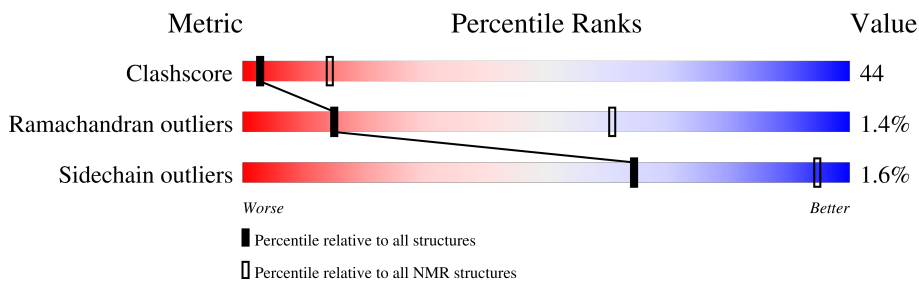
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 87%.

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



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

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | A | 170 | |

2 Ensemble composition and analysis i

This entry contains 20 models. Model 10 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

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

| Well-defined (core) protein residues | | | |
|--------------------------------------|--------------------------------------------|-------------------|--------------|
| Well-defined core | Residue range (total) | Backbone RMSD (Å) | Medoid model |
| 1 | A:3-A:59, A:67-A:123, A:142-A:152 (125) | 0.55 | 10 |

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

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

The models can be grouped into 3 clusters and 1 single-model cluster was found.

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

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 2482 atoms, of which 1235 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Major strawberry allergen Fra a 1-E.

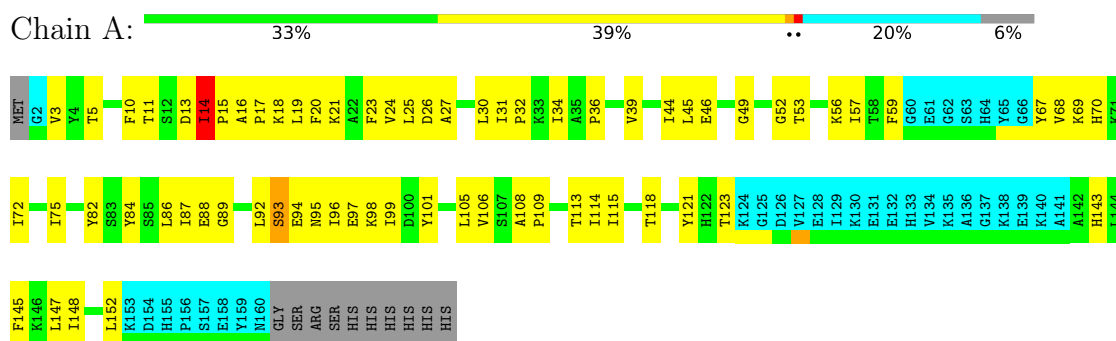
| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|-------|
| | | | Total | C | H | N | O | S | |
| 1 | A | 159 | 2482 | 801 | 1235 | 203 | 242 | 1 | 0 |

There are 10 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------------|------------|
| A | 161 | GLY | - | expression tag | UNP Q256S2 |
| A | 162 | SER | - | expression tag | UNP Q256S2 |
| A | 163 | ARG | - | expression tag | UNP Q256S2 |
| A | 164 | SER | - | expression tag | UNP Q256S2 |
| A | 165 | HIS | - | expression tag | UNP Q256S2 |
| A | 166 | HIS | - | expression tag | UNP Q256S2 |
| A | 167 | HIS | - | expression tag | UNP Q256S2 |
| A | 168 | HIS | - | expression tag | UNP Q256S2 |
| A | 169 | HIS | - | expression tag | UNP Q256S2 |
| A | 170 | HIS | - | expression tag | UNP Q256S2 |

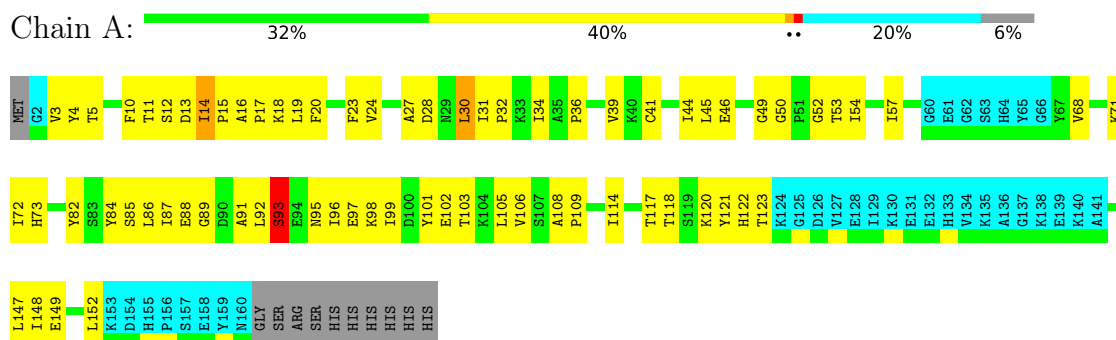
4.2.11 Score per residue for model 11

- Molecule 1: Major strawberry allergen Fra a 1-E



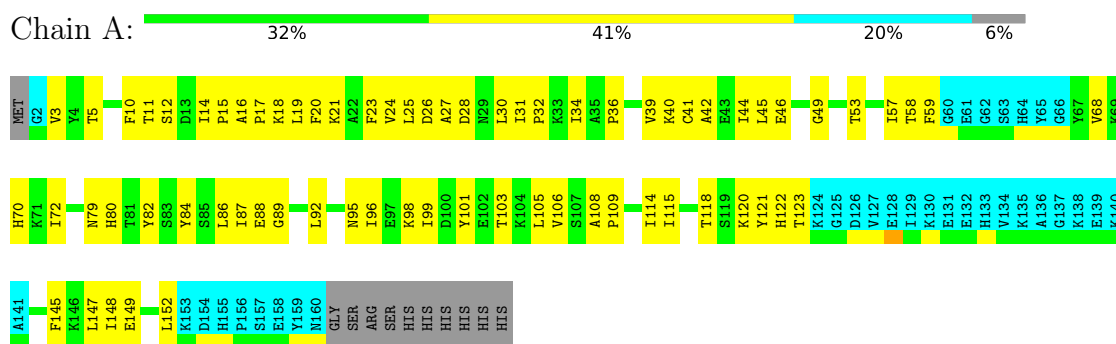
4.2.12 Score per residue for model 12

- Molecule 1: Major strawberry allergen Fra a 1-E



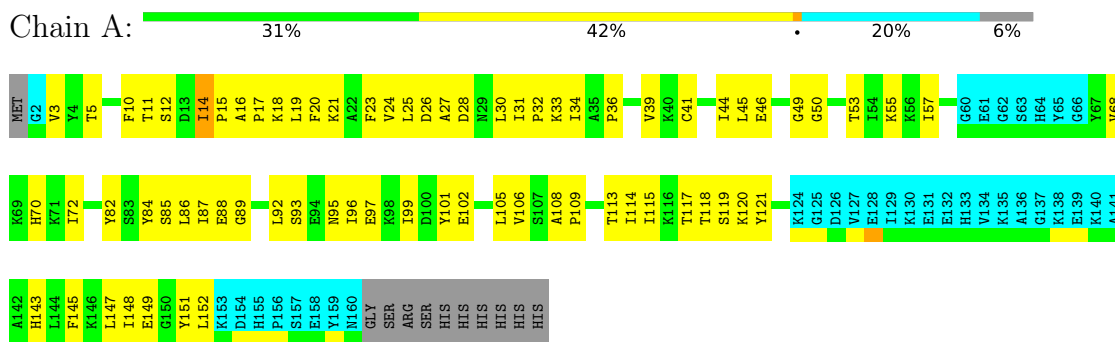
4.2.13 Score per residue for model 13

- Molecule 1: Major strawberry allergen Fra a 1-E



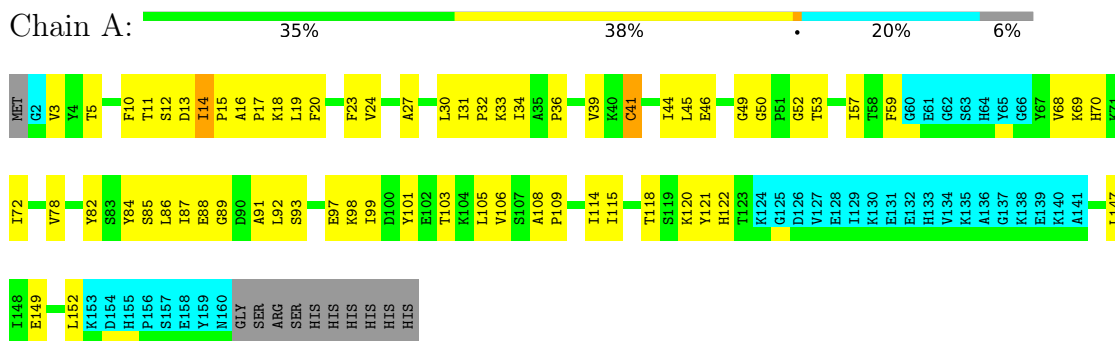
4.2.14 Score per residue for model 14

- Molecule 1: Major strawberry allergen Fra a 1-E



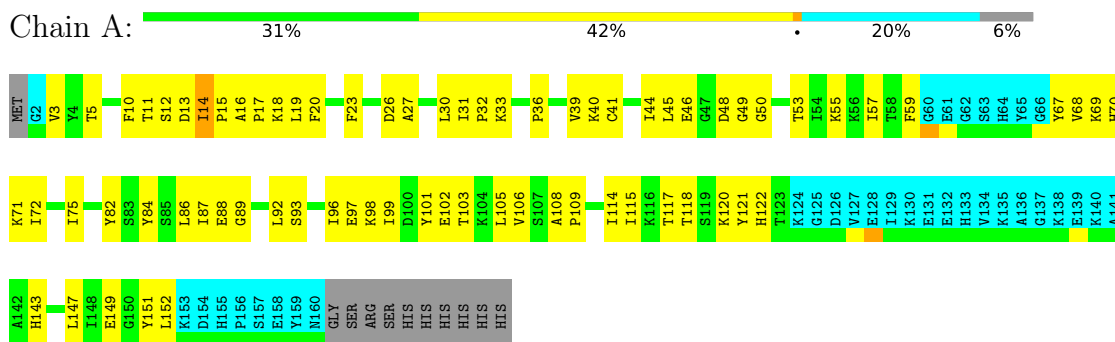
4.2.15 Score per residue for model 15

- Molecule 1: Major strawberry allergen Fra a 1-E



4.2.16 Score per residue for model 16

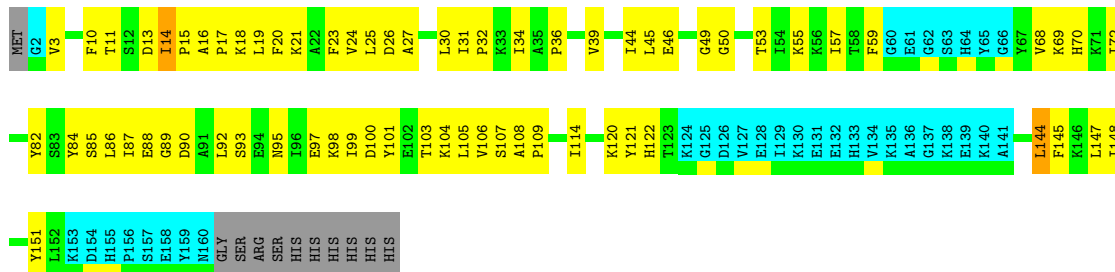
- Molecule 1: Major strawberry allergen Fra a 1-E



4.2.17 Score per residue for model 17

- Molecule 1: Major strawberry allergen Fra a 1-E

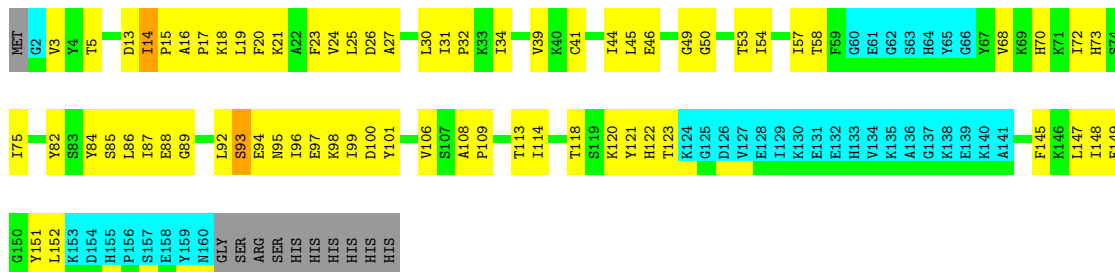
Chain A: 34% 39% 20% 6%



4.2.18 Score per residue for model 18

- Molecule 1: Major strawberry allergen Fra a 1-E

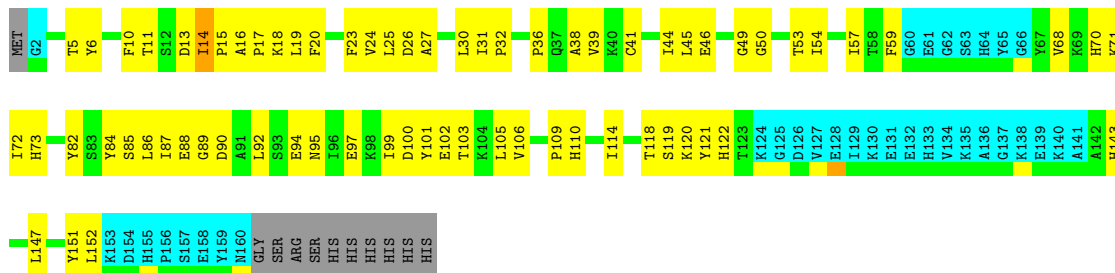
Chain A: 33% 39% 20% 6%



4.2.19 Score per residue for model 19

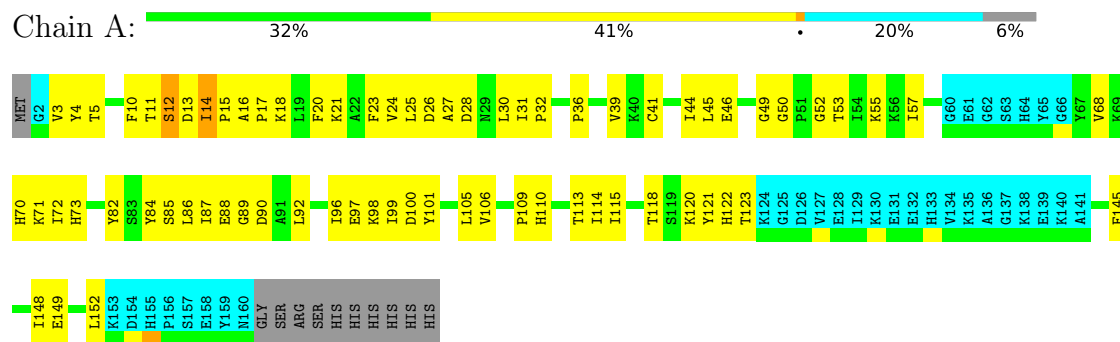
- Molecule 1: Major strawberry allergen Fra a 1-E

Chain A: 33% 40% 20% 6%



4.2.20 Score per residue for model 20

- Molecule 1: Major strawberry allergen Fra a 1-E



5 Refinement protocol and experimental data overview

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

Of the 120 calculated structures, 20 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 |
|---------------|--------------------|---------|
| X-PLOR NIH | structure solution | |
| X-PLOR NIH | refinement | |

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

| | |
|----------------------------------------------|----------------|
| Chemical shift file(s) | working_cs.cif |
| Number of chemical shift lists | 1 |
| Total number of shifts | 1735 |
| Number of shifts mapped to atoms | 1733 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 2 |
| Number of shifts with mapping warnings | 0 |
| Assignment completeness (well-defined parts) | 87% |

6 Model quality i

6.1 Standard geometry i

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

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 Too-close contacts i

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in each chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes averaged over the ensemble.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes |
|-----|-------|-------|----------|----------|---------|
| 1 | A | 986 | 994 | 994 | 88±8 |
| All | All | 19720 | 19880 | 19880 | 1759 |

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 44.

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

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:86:LEU:HD22 | 1:A:92:LEU:HD11 | 1.13 | 1.16 | 8 | 6 |
| 1:A:34:ILE:HG23 | 1:A:147:LEU:HD23 | 1.02 | 1.02 | 9 | 1 |
| 1:A:86:LEU:HD23 | 1:A:92:LEU:HD21 | 1.01 | 1.31 | 3 | 4 |
| 1:A:34:ILE:HG23 | 1:A:147:LEU:CD2 | 1.01 | 1.84 | 9 | 1 |
| 1:A:3:VAL:HG21 | 1:A:121:TYR:O | 0.94 | 1.62 | 10 | 10 |
| 1:A:39:VAL:HG12 | 1:A:59:PHE:CE1 | 0.93 | 1.98 | 3 | 4 |
| 1:A:34:ILE:CG2 | 1:A:147:LEU:HD23 | 0.90 | 1.96 | 9 | 1 |
| 1:A:70:HIS:CE1 | 1:A:86:LEU:HD13 | 0.90 | 2.01 | 9 | 6 |
| 1:A:27:ALA:O | 1:A:31:ILE:HD12 | 0.89 | 1.67 | 4 | 17 |
| 1:A:68:VAL:CG1 | 1:A:86:LEU:HD11 | 0.89 | 1.98 | 17 | 9 |
| 1:A:68:VAL:HG12 | 1:A:86:LEU:HD11 | 0.89 | 1.42 | 10 | 2 |
| 1:A:86:LEU:HD22 | 1:A:92:LEU:CD2 | 0.89 | 1.97 | 1 | 8 |
| 1:A:30:LEU:HD13 | 1:A:30:LEU:O | 0.88 | 1.67 | 15 | 5 |
| 1:A:86:LEU:HD22 | 1:A:92:LEU:CD1 | 0.88 | 1.98 | 8 | 5 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:23:PHE:O | 1:A:27:ALA:HB2 | 0.88 | 1.67 | 8 | 20 |
| 1:A:23:PHE:C | 1:A:27:ALA:HB2 | 0.88 | 1.89 | 15 | 2 |
| 1:A:12:SER:OG | 1:A:115:ILE:HD11 | 0.87 | 1.69 | 10 | 4 |
| 1:A:14:ILE:HD12 | 1:A:149:GLU:OE1 | 0.87 | 1.69 | 16 | 1 |
| 1:A:46:GLU:O | 1:A:53:THR:HG23 | 0.86 | 1.70 | 1 | 20 |
| 1:A:68:VAL:HG22 | 1:A:89:GLY:CA | 0.85 | 2.01 | 1 | 12 |
| 1:A:3:VAL:HG11 | 1:A:121:TYR:O | 0.84 | 1.72 | 20 | 3 |
| 1:A:86:LEU:HD23 | 1:A:87:ILE:N | 0.84 | 1.86 | 1 | 14 |
| 1:A:86:LEU:CD2 | 1:A:92:LEU:HD11 | 0.83 | 2.03 | 5 | 9 |
| 1:A:16:ALA:O | 1:A:105:LEU:HD23 | 0.83 | 1.71 | 15 | 2 |
| 1:A:20:PHE:CZ | 1:A:24:VAL:HG21 | 0.82 | 2.10 | 6 | 13 |
| 1:A:23:PHE:CE2 | 1:A:103:THR:HG21 | 0.81 | 2.10 | 15 | 7 |
| 1:A:19:LEU:HD11 | 1:A:148:ILE:HG22 | 0.81 | 1.50 | 18 | 1 |
| 1:A:68:VAL:HG22 | 1:A:89:GLY:HA2 | 0.80 | 1.53 | 17 | 9 |
| 1:A:115:ILE:HD13 | 1:A:145:PHE:CZ | 0.80 | 2.12 | 10 | 4 |
| 1:A:19:LEU:HD13 | 1:A:152:LEU:HD11 | 0.79 | 1.53 | 12 | 3 |
| 1:A:68:VAL:HG11 | 1:A:86:LEU:HD11 | 0.79 | 1.53 | 8 | 7 |
| 1:A:20:PHE:HB2 | 1:A:105:LEU:HD12 | 0.78 | 1.56 | 10 | 3 |
| 1:A:68:VAL:HG12 | 1:A:89:GLY:CA | 0.78 | 2.08 | 11 | 7 |
| 1:A:96:ILE:HD12 | 1:A:96:ILE:O | 0.78 | 1.78 | 11 | 1 |
| 1:A:86:LEU:HD22 | 1:A:92:LEU:HD21 | 0.78 | 1.56 | 2 | 6 |
| 1:A:68:VAL:HG13 | 1:A:88:GLU:O | 0.77 | 1.79 | 17 | 10 |
| 1:A:105:LEU:HD22 | 1:A:105:LEU:N | 0.77 | 1.95 | 3 | 14 |
| 1:A:86:LEU:HD21 | 1:A:88:GLU:O | 0.77 | 1.79 | 8 | 11 |
| 1:A:87:ILE:HG23 | 1:A:98:LYS:HE2 | 0.76 | 1.54 | 12 | 6 |
| 1:A:53:THR:HB | 1:A:72:ILE:HD12 | 0.76 | 1.56 | 6 | 4 |
| 1:A:24:VAL:HG11 | 1:A:82:TYR:CD1 | 0.76 | 2.15 | 8 | 3 |
| 1:A:19:LEU:HD11 | 1:A:148:ILE:CG2 | 0.76 | 2.11 | 18 | 1 |
| 1:A:99:ILE:HG23 | 1:A:120:LYS:O | 0.75 | 1.81 | 3 | 17 |
| 1:A:14:ILE:HD13 | 1:A:152:LEU:HD12 | 0.75 | 1.56 | 2 | 6 |
| 1:A:102:GLU:O | 1:A:117:THR:HG23 | 0.75 | 1.82 | 12 | 3 |
| 1:A:91:ALA:O | 1:A:96:ILE:HD12 | 0.75 | 1.82 | 8 | 3 |
| 1:A:20:PHE:CE1 | 1:A:24:VAL:HG21 | 0.75 | 2.15 | 15 | 8 |
| 1:A:92:LEU:HD12 | 1:A:92:LEU:N | 0.74 | 1.97 | 13 | 12 |
| 1:A:20:PHE:CE2 | 1:A:24:VAL:HG21 | 0.73 | 2.17 | 6 | 3 |
| 1:A:108:ALA:HB1 | 1:A:109:PRO:HD2 | 0.73 | 1.57 | 17 | 15 |
| 1:A:30:LEU:HD21 | 1:A:148:ILE:HG23 | 0.73 | 1.61 | 9 | 4 |
| 1:A:87:ILE:HG22 | 1:A:88:GLU:HG3 | 0.73 | 1.59 | 18 | 12 |
| 1:A:68:VAL:HG12 | 1:A:89:GLY:HA2 | 0.73 | 1.61 | 11 | 6 |
| 1:A:23:PHE:CE1 | 1:A:103:THR:HG21 | 0.72 | 2.18 | 12 | 7 |
| 1:A:39:VAL:HG21 | 1:A:57:ILE:HG23 | 0.72 | 1.61 | 5 | 10 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:105:LEU:HD13 | 1:A:115:ILE:HG23 | 0.72 | 1.59 | 9 | 9 |
| 1:A:86:LEU:HD13 | 1:A:99:ILE:HD12 | 0.72 | 1.61 | 13 | 2 |
| 1:A:21:LYS:HG3 | 1:A:25:LEU:HD12 | 0.71 | 1.62 | 7 | 3 |
| 1:A:39:VAL:HG12 | 1:A:59:PHE:CE2 | 0.71 | 2.21 | 6 | 3 |
| 1:A:57:ILE:HD11 | 1:A:70:HIS:CD2 | 0.70 | 2.21 | 17 | 5 |
| 1:A:28:ASP:OD2 | 1:A:44:ILE:HD11 | 0.70 | 1.86 | 3 | 8 |
| 1:A:13:ASP:O | 1:A:14:ILE:HD12 | 0.70 | 1.85 | 11 | 9 |
| 1:A:49:GLY:H | 1:A:53:THR:HG21 | 0.69 | 1.47 | 16 | 20 |
| 1:A:92:LEU:HA | 1:A:96:ILE:HD12 | 0.69 | 1.63 | 18 | 3 |
| 1:A:24:VAL:CG2 | 1:A:25:LEU:HD12 | 0.69 | 2.17 | 11 | 1 |
| 1:A:86:LEU:HD21 | 1:A:92:LEU:HD11 | 0.69 | 1.64 | 7 | 1 |
| 1:A:34:ILE:HD12 | 1:A:147:LEU:CB | 0.68 | 2.17 | 6 | 2 |
| 1:A:59:PHE:CE1 | 1:A:68:VAL:HG23 | 0.68 | 2.24 | 17 | 2 |
| 1:A:70:HIS:NE2 | 1:A:86:LEU:HD13 | 0.68 | 2.03 | 15 | 4 |
| 1:A:30:LEU:HD13 | 1:A:30:LEU:C | 0.67 | 2.09 | 18 | 4 |
| 1:A:152:LEU:HD12 | 1:A:152:LEU:N | 0.67 | 2.05 | 14 | 9 |
| 1:A:16:ALA:HB1 | 1:A:105:LEU:HB3 | 0.66 | 1.65 | 15 | 3 |
| 1:A:39:VAL:HG21 | 1:A:57:ILE:CG2 | 0.66 | 2.21 | 16 | 9 |
| 1:A:105:LEU:CD1 | 1:A:115:ILE:HG23 | 0.66 | 2.21 | 3 | 4 |
| 1:A:3:VAL:HG22 | 1:A:121:TYR:O | 0.66 | 1.90 | 17 | 2 |
| 1:A:30:LEU:HD21 | 1:A:148:ILE:HD12 | 0.66 | 1.66 | 6 | 1 |
| 1:A:87:ILE:HG22 | 1:A:88:GLU:HG2 | 0.65 | 1.67 | 19 | 4 |
| 1:A:39:VAL:HG12 | 1:A:59:PHE:CD2 | 0.65 | 2.26 | 6 | 1 |
| 1:A:147:LEU:HD22 | 1:A:147:LEU:N | 0.65 | 2.07 | 19 | 10 |
| 1:A:115:ILE:HD13 | 1:A:145:PHE:CE2 | 0.65 | 2.27 | 10 | 1 |
| 1:A:99:ILE:HD13 | 1:A:121:TYR:CE2 | 0.64 | 2.27 | 14 | 3 |
| 1:A:84:TYR:CZ | 1:A:101:TYR:CB | 0.64 | 2.81 | 6 | 20 |
| 1:A:99:ILE:HD13 | 1:A:121:TYR:CD2 | 0.63 | 2.29 | 14 | 3 |
| 1:A:86:LEU:HD23 | 1:A:86:LEU:C | 0.63 | 2.14 | 20 | 12 |
| 1:A:99:ILE:CG2 | 1:A:101:TYR:CE2 | 0.63 | 2.81 | 13 | 3 |
| 1:A:27:ALA:O | 1:A:31:ILE:HD13 | 0.63 | 1.94 | 9 | 1 |
| 1:A:86:LEU:HD23 | 1:A:92:LEU:HD11 | 0.63 | 1.67 | 17 | 2 |
| 1:A:57:ILE:CD1 | 1:A:70:HIS:CE1 | 0.63 | 2.82 | 11 | 5 |
| 1:A:86:LEU:HD22 | 1:A:92:LEU:HD22 | 0.62 | 1.71 | 1 | 6 |
| 1:A:57:ILE:HD12 | 1:A:70:HIS:CD2 | 0.62 | 2.30 | 9 | 4 |
| 1:A:24:VAL:HG23 | 1:A:25:LEU:HD12 | 0.62 | 1.70 | 11 | 1 |
| 1:A:19:LEU:HD12 | 1:A:152:LEU:HD22 | 0.61 | 1.71 | 9 | 1 |
| 1:A:57:ILE:CD1 | 1:A:70:HIS:CD2 | 0.61 | 2.84 | 9 | 8 |
| 1:A:3:VAL:HG22 | 1:A:122:HIS:HA | 0.61 | 1.71 | 17 | 2 |
| 1:A:13:ASP:C | 1:A:14:ILE:HD12 | 0.61 | 2.16 | 12 | 6 |
| 1:A:86:LEU:HD13 | 1:A:92:LEU:HD11 | 0.61 | 1.72 | 18 | 4 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:5:THR:HG22 | 1:A:118:THR:CG2 | 0.61 | 2.25 | 6 | 18 |
| 1:A:86:LEU:C | 1:A:86:LEU:HD23 | 0.61 | 2.15 | 4 | 2 |
| 1:A:105:LEU:HD23 | 1:A:115:ILE:HG23 | 0.60 | 1.73 | 10 | 3 |
| 1:A:99:ILE:HG21 | 1:A:101:TYR:CZ | 0.60 | 2.31 | 6 | 3 |
| 1:A:19:LEU:HD12 | 1:A:152:LEU:HD11 | 0.60 | 1.73 | 6 | 1 |
| 1:A:71:LYS:HB2 | 1:A:87:ILE:HD11 | 0.60 | 1.73 | 6 | 10 |
| 1:A:68:VAL:HG12 | 1:A:89:GLY:HA3 | 0.60 | 1.72 | 7 | 3 |
| 1:A:39:VAL:CG1 | 1:A:59:PHE:CE2 | 0.60 | 2.85 | 6 | 1 |
| 1:A:39:VAL:HG12 | 1:A:59:PHE:CD1 | 0.59 | 2.32 | 3 | 3 |
| 1:A:70:HIS:CE1 | 1:A:86:LEU:CD1 | 0.59 | 2.85 | 3 | 5 |
| 1:A:86:LEU:HD23 | 1:A:92:LEU:CD2 | 0.59 | 2.19 | 3 | 1 |
| 1:A:34:ILE:HD12 | 1:A:147:LEU:HB3 | 0.59 | 1.74 | 6 | 2 |
| 1:A:19:LEU:HD22 | 1:A:149:GLU:OE2 | 0.59 | 1.98 | 16 | 1 |
| 1:A:5:THR:CG2 | 1:A:118:THR:CG2 | 0.59 | 2.81 | 14 | 19 |
| 1:A:44:ILE:CG2 | 1:A:53:THR:CG2 | 0.59 | 2.81 | 6 | 20 |
| 1:A:39:VAL:CG1 | 1:A:57:ILE:CG2 | 0.59 | 2.81 | 4 | 2 |
| 1:A:115:ILE:HD13 | 1:A:145:PHE:HZ | 0.59 | 1.57 | 9 | 3 |
| 1:A:14:ILE:CD1 | 1:A:152:LEU:HD12 | 0.58 | 2.27 | 2 | 2 |
| 1:A:84:TYR:CE1 | 1:A:101:TYR:CB | 0.58 | 2.86 | 4 | 1 |
| 1:A:23:PHE:CD1 | 1:A:23:PHE:O | 0.58 | 2.57 | 3 | 2 |
| 1:A:59:PHE:HE1 | 1:A:68:VAL:HG23 | 0.58 | 1.59 | 17 | 2 |
| 1:A:34:ILE:HG21 | 1:A:147:LEU:CD1 | 0.58 | 2.29 | 14 | 3 |
| 1:A:10:PHE:CE1 | 1:A:11:THR:O | 0.58 | 2.57 | 7 | 4 |
| 1:A:10:PHE:CE2 | 1:A:11:THR:O | 0.57 | 2.57 | 3 | 14 |
| 1:A:16:ALA:N | 1:A:17:PRO:HD2 | 0.57 | 2.14 | 7 | 20 |
| 1:A:92:LEU:N | 1:A:92:LEU:CD1 | 0.57 | 2.67 | 13 | 10 |
| 1:A:57:ILE:HD12 | 1:A:70:HIS:CE1 | 0.57 | 2.34 | 15 | 5 |
| 1:A:24:VAL:CG1 | 1:A:82:TYR:CD1 | 0.57 | 2.86 | 8 | 2 |
| 1:A:105:LEU:N | 1:A:105:LEU:CD2 | 0.57 | 2.68 | 3 | 14 |
| 1:A:11:THR:HG22 | 1:A:114:ILE:HG12 | 0.57 | 1.76 | 20 | 1 |
| 1:A:57:ILE:CD1 | 1:A:70:HIS:NE2 | 0.57 | 2.67 | 17 | 1 |
| 1:A:45:LEU:HD12 | 1:A:45:LEU:N | 0.57 | 2.15 | 9 | 9 |
| 1:A:23:PHE:CZ | 1:A:103:THR:HG21 | 0.57 | 2.35 | 5 | 3 |
| 1:A:19:LEU:CD1 | 1:A:148:ILE:HG22 | 0.57 | 2.29 | 18 | 1 |
| 1:A:69:LYS:O | 1:A:86:LEU:HD12 | 0.57 | 2.00 | 15 | 4 |
| 1:A:105:LEU:HD12 | 1:A:115:ILE:HG12 | 0.57 | 1.76 | 3 | 1 |
| 1:A:4:TYR:CE2 | 1:A:5:THR:O | 0.57 | 2.58 | 20 | 4 |
| 1:A:34:ILE:HD12 | 1:A:144:LEU:HD11 | 0.57 | 1.76 | 17 | 1 |
| 1:A:30:LEU:HD11 | 1:A:151:TYR:CG | 0.56 | 2.34 | 16 | 1 |
| 1:A:16:ALA:HA | 1:A:113:THR:HG21 | 0.56 | 1.77 | 11 | 2 |
| 1:A:84:TYR:CZ | 1:A:101:TYR:HB2 | 0.56 | 2.36 | 17 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:34:ILE:HD13 | 1:A:147:LEU:HB2 | 0.56 | 1.76 | 14 | 2 |
| 1:A:87:ILE:HG23 | 1:A:98:LYS:NZ | 0.56 | 2.15 | 7 | 1 |
| 1:A:23:PHE:O | 1:A:23:PHE:CD2 | 0.56 | 2.59 | 15 | 2 |
| 1:A:84:TYR:CZ | 1:A:101:TYR:HB3 | 0.56 | 2.36 | 15 | 18 |
| 1:A:34:ILE:CG2 | 1:A:147:LEU:CD1 | 0.56 | 2.83 | 4 | 3 |
| 1:A:89:GLY:CA | 1:A:92:LEU:HD13 | 0.56 | 2.31 | 7 | 4 |
| 1:A:9:GLU:OE2 | 1:A:114:ILE:HG21 | 0.56 | 2.01 | 7 | 2 |
| 1:A:84:TYR:CE1 | 1:A:101:TYR:HB2 | 0.55 | 2.36 | 4 | 1 |
| 1:A:39:VAL:CG1 | 1:A:59:PHE:CE1 | 0.55 | 2.84 | 3 | 2 |
| 1:A:44:ILE:HG21 | 1:A:48:ASP:N | 0.55 | 2.15 | 16 | 1 |
| 1:A:109:PRO:O | 1:A:110:HIS:CB | 0.55 | 2.54 | 19 | 2 |
| 1:A:105:LEU:HD12 | 1:A:115:ILE:HG23 | 0.55 | 1.78 | 5 | 2 |
| 1:A:87:ILE:HG23 | 1:A:88:GLU:N | 0.55 | 2.17 | 17 | 1 |
| 1:A:14:ILE:HD13 | 1:A:152:LEU:CD1 | 0.55 | 2.32 | 19 | 1 |
| 1:A:24:VAL:HG23 | 1:A:25:LEU:N | 0.55 | 2.15 | 11 | 5 |
| 1:A:68:VAL:HG13 | 1:A:86:LEU:HD21 | 0.54 | 1.79 | 8 | 5 |
| 1:A:23:PHE:HE2 | 1:A:103:THR:HG21 | 0.54 | 1.56 | 15 | 1 |
| 1:A:87:ILE:CG2 | 1:A:88:GLU:N | 0.54 | 2.70 | 17 | 1 |
| 1:A:68:VAL:CG1 | 1:A:89:GLY:CA | 0.54 | 2.85 | 6 | 4 |
| 1:A:93:SER:O | 1:A:97:GLU:CG | 0.54 | 2.56 | 6 | 1 |
| 1:A:30:LEU:HD21 | 1:A:148:ILE:CG2 | 0.53 | 2.33 | 9 | 1 |
| 1:A:106:VAL:O | 1:A:114:ILE:N | 0.53 | 2.41 | 2 | 20 |
| 1:A:145:PHE:CE2 | 1:A:149:GLU:OE2 | 0.53 | 2.62 | 10 | 1 |
| 1:A:89:GLY:HA3 | 1:A:92:LEU:HD13 | 0.53 | 1.79 | 15 | 5 |
| 1:A:14:ILE:HG23 | 1:A:15:PRO:HD2 | 0.53 | 1.79 | 16 | 2 |
| 1:A:57:ILE:CD1 | 1:A:70:HIS:ND1 | 0.53 | 2.72 | 3 | 2 |
| 1:A:71:LYS:CB | 1:A:87:ILE:HD11 | 0.53 | 2.33 | 3 | 4 |
| 1:A:3:VAL:CG2 | 1:A:121:TYR:O | 0.53 | 2.57 | 9 | 2 |
| 1:A:45:LEU:O | 1:A:46:GLU:CG | 0.53 | 2.57 | 1 | 20 |
| 1:A:99:ILE:CG2 | 1:A:120:LYS:O | 0.53 | 2.57 | 1 | 14 |
| 1:A:88:GLU:HA | 1:A:92:LEU:HD12 | 0.53 | 1.78 | 12 | 1 |
| 1:A:72:ILE:CD1 | 1:A:82:TYR:OH | 0.53 | 2.57 | 2 | 16 |
| 1:A:3:VAL:CG1 | 1:A:121:TYR:O | 0.52 | 2.56 | 6 | 4 |
| 1:A:87:ILE:O | 1:A:92:LEU:CD1 | 0.52 | 2.58 | 12 | 1 |
| 1:A:26:ASP:O | 1:A:30:LEU:CB | 0.52 | 2.57 | 4 | 17 |
| 1:A:23:PHE:O | 1:A:23:PHE:CD1 | 0.52 | 2.62 | 20 | 5 |
| 1:A:34:ILE:CG2 | 1:A:147:LEU:HD13 | 0.52 | 2.34 | 14 | 5 |
| 1:A:33:LYS:HG2 | 1:A:151:TYR:CE1 | 0.52 | 2.40 | 6 | 1 |
| 1:A:99:ILE:CD1 | 1:A:121:TYR:CD2 | 0.52 | 2.92 | 14 | 2 |
| 1:A:92:LEU:HD23 | 1:A:92:LEU:N | 0.52 | 2.19 | 17 | 8 |
| 1:A:27:ALA:O | 1:A:31:ILE:CG1 | 0.52 | 2.58 | 17 | 6 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:100:ASP:N | 1:A:120:LYS:O | 0.52 | 2.43 | 8 | 5 |
| 1:A:3:VAL:HG21 | 1:A:122:HIS:CD2 | 0.52 | 2.38 | 3 | 1 |
| 1:A:50:GLY:N | 1:A:53:THR:OG1 | 0.52 | 2.43 | 16 | 10 |
| 1:A:12:SER:OG | 1:A:115:ILE:CD1 | 0.52 | 2.58 | 13 | 2 |
| 1:A:86:LEU:CD1 | 1:A:92:LEU:HD11 | 0.52 | 2.35 | 18 | 2 |
| 1:A:27:ALA:O | 1:A:31:ILE:CD1 | 0.52 | 2.57 | 20 | 14 |
| 1:A:5:THR:CG2 | 1:A:118:THR:HG22 | 0.52 | 2.35 | 14 | 8 |
| 1:A:87:ILE:O | 1:A:98:LYS:CD | 0.52 | 2.57 | 20 | 1 |
| 1:A:45:LEU:H | 1:A:45:LEU:HD12 | 0.52 | 1.65 | 1 | 2 |
| 1:A:68:VAL:CG1 | 1:A:88:GLU:O | 0.52 | 2.57 | 16 | 6 |
| 1:A:45:LEU:CD2 | 1:A:45:LEU:N | 0.52 | 2.73 | 6 | 1 |
| 1:A:84:TYR:CE1 | 1:A:101:TYR:HB3 | 0.51 | 2.40 | 15 | 9 |
| 1:A:84:TYR:CE2 | 1:A:101:TYR:CB | 0.51 | 2.94 | 20 | 6 |
| 1:A:84:TYR:CE2 | 1:A:101:TYR:HB2 | 0.51 | 2.40 | 17 | 4 |
| 1:A:99:ILE:CG2 | 1:A:101:TYR:CZ | 0.51 | 2.94 | 11 | 3 |
| 1:A:46:GLU:O | 1:A:53:THR:CG2 | 0.51 | 2.57 | 2 | 17 |
| 1:A:148:ILE:O | 1:A:152:LEU:CD1 | 0.51 | 2.58 | 20 | 6 |
| 1:A:144:LEU:CD1 | 1:A:144:LEU:N | 0.51 | 2.73 | 9 | 1 |
| 1:A:24:VAL:CG2 | 1:A:25:LEU:N | 0.51 | 2.74 | 11 | 4 |
| 1:A:52:GLY:N | 1:A:72:ILE:O | 0.51 | 2.44 | 6 | 6 |
| 1:A:34:ILE:HG21 | 1:A:147:LEU:CB | 0.51 | 2.35 | 2 | 2 |
| 1:A:12:SER:CB | 1:A:149:GLU:OE2 | 0.51 | 2.58 | 12 | 3 |
| 1:A:38:ALA:O | 1:A:59:PHE:CD2 | 0.51 | 2.64 | 19 | 1 |
| 1:A:44:ILE:HG21 | 1:A:53:THR:CG2 | 0.51 | 2.36 | 15 | 10 |
| 1:A:34:ILE:HG23 | 1:A:147:LEU:HD13 | 0.51 | 1.83 | 4 | 1 |
| 1:A:73:HIS:CD2 | 1:A:85:SER:HG | 0.51 | 2.23 | 12 | 1 |
| 1:A:23:PHE:CE1 | 1:A:145:PHE:CE1 | 0.50 | 2.99 | 17 | 2 |
| 1:A:57:ILE:HD11 | 1:A:70:HIS:NE2 | 0.50 | 2.21 | 17 | 1 |
| 1:A:45:LEU:N | 1:A:45:LEU:HD22 | 0.50 | 2.21 | 6 | 1 |
| 1:A:23:PHE:CD1 | 1:A:148:ILE:HD13 | 0.50 | 2.41 | 7 | 1 |
| 1:A:21:LYS:NZ | 1:A:25:LEU:HD23 | 0.50 | 2.22 | 8 | 1 |
| 1:A:19:LEU:HD12 | 1:A:152:LEU:CD1 | 0.50 | 2.36 | 6 | 1 |
| 1:A:19:LEU:HD13 | 1:A:152:LEU:CD1 | 0.50 | 2.36 | 11 | 2 |
| 1:A:109:PRO:O | 1:A:110:HIS:CD2 | 0.50 | 2.65 | 20 | 1 |
| 1:A:68:VAL:HG22 | 1:A:89:GLY:HA3 | 0.50 | 1.84 | 20 | 5 |
| 1:A:30:LEU:HD11 | 1:A:151:TYR:CD2 | 0.50 | 2.41 | 10 | 1 |
| 1:A:75:ILE:HG22 | 1:A:82:TYR:CD1 | 0.50 | 2.40 | 11 | 2 |
| 1:A:23:PHE:O | 1:A:27:ALA:CB | 0.50 | 2.59 | 18 | 1 |
| 1:A:31:ILE:HB | 1:A:32:PRO:CD | 0.50 | 2.37 | 14 | 14 |
| 1:A:71:LYS:O | 1:A:85:SER:N | 0.50 | 2.43 | 19 | 2 |
| 1:A:31:ILE:N | 1:A:32:PRO:HD2 | 0.50 | 2.22 | 1 | 18 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:97:GLU:N | 1:A:122:HIS:O | 0.50 | 2.44 | 17 | 2 |
| 1:A:152:LEU:HD12 | 1:A:152:LEU:H | 0.50 | 1.67 | 18 | 8 |
| 1:A:3:VAL:HG13 | 1:A:120:LYS:HE2 | 0.50 | 1.84 | 8 | 1 |
| 1:A:92:LEU:HD12 | 1:A:92:LEU:H | 0.49 | 1.67 | 4 | 2 |
| 1:A:39:VAL:CG2 | 1:A:57:ILE:CG2 | 0.49 | 2.90 | 20 | 10 |
| 1:A:86:LEU:CG | 1:A:92:LEU:HD11 | 0.49 | 2.37 | 17 | 1 |
| 1:A:120:LYS:CE | 1:A:122:HIS:CE1 | 0.49 | 2.94 | 1 | 1 |
| 1:A:121:TYR:N | 1:A:121:TYR:CD1 | 0.49 | 2.80 | 1 | 3 |
| 1:A:26:ASP:O | 1:A:30:LEU:N | 0.49 | 2.43 | 4 | 12 |
| 1:A:20:PHE:CD1 | 1:A:24:VAL:HG21 | 0.49 | 2.42 | 15 | 1 |
| 1:A:34:ILE:HD13 | 1:A:147:LEU:CB | 0.49 | 2.37 | 2 | 2 |
| 1:A:45:LEU:HD12 | 1:A:45:LEU:H | 0.49 | 1.68 | 8 | 7 |
| 1:A:3:VAL:HG11 | 1:A:122:HIS:CD2 | 0.49 | 2.42 | 13 | 1 |
| 1:A:55:LYS:CE | 1:A:72:ILE:HD11 | 0.49 | 2.37 | 20 | 3 |
| 1:A:25:LEU:HD12 | 1:A:25:LEU:N | 0.49 | 2.22 | 19 | 1 |
| 1:A:39:VAL:HG12 | 1:A:59:PHE:CZ | 0.49 | 2.42 | 19 | 1 |
| 1:A:99:ILE:HG21 | 1:A:101:TYR:CE2 | 0.49 | 2.42 | 6 | 1 |
| 1:A:30:LEU:C | 1:A:30:LEU:CD1 | 0.49 | 2.81 | 18 | 4 |
| 1:A:92:LEU:HD23 | 1:A:97:GLU:HA | 0.49 | 1.83 | 11 | 1 |
| 1:A:143:HIS:O | 1:A:147:LEU:CD2 | 0.49 | 2.61 | 19 | 5 |
| 1:A:34:ILE:HD12 | 1:A:147:LEU:HB2 | 0.49 | 1.82 | 6 | 1 |
| 1:A:53:THR:CB | 1:A:72:ILE:HD12 | 0.49 | 2.34 | 6 | 2 |
| 1:A:147:LEU:O | 1:A:151:TYR:N | 0.49 | 2.44 | 16 | 4 |
| 1:A:34:ILE:HG21 | 1:A:147:LEU:HD12 | 0.49 | 1.84 | 14 | 2 |
| 1:A:86:LEU:C | 1:A:86:LEU:CD2 | 0.49 | 2.81 | 1 | 9 |
| 1:A:28:ASP:OD1 | 1:A:55:LYS:NZ | 0.49 | 2.44 | 3 | 5 |
| 1:A:57:ILE:HD12 | 1:A:70:HIS:ND1 | 0.49 | 2.22 | 3 | 2 |
| 1:A:72:ILE:HD13 | 1:A:82:TYR:OH | 0.49 | 2.08 | 16 | 3 |
| 1:A:30:LEU:CD1 | 1:A:151:TYR:CE1 | 0.49 | 2.96 | 16 | 1 |
| 1:A:71:LYS:N | 1:A:85:SER:O | 0.49 | 2.45 | 7 | 2 |
| 1:A:147:LEU:O | 1:A:151:TYR:CD2 | 0.48 | 2.66 | 19 | 2 |
| 1:A:31:ILE:CB | 1:A:32:PRO:CD | 0.48 | 2.91 | 3 | 9 |
| 1:A:20:PHE:HD1 | 1:A:105:LEU:HD23 | 0.48 | 1.67 | 17 | 4 |
| 1:A:86:LEU:N | 1:A:99:ILE:O | 0.48 | 2.46 | 17 | 1 |
| 1:A:145:PHE:HA | 1:A:148:ILE:HD12 | 0.48 | 1.85 | 11 | 1 |
| 1:A:86:LEU:CD2 | 1:A:92:LEU:HD21 | 0.48 | 2.38 | 10 | 2 |
| 1:A:109:PRO:C | 1:A:110:HIS:CD2 | 0.48 | 2.87 | 20 | 1 |
| 1:A:68:VAL:CG1 | 1:A:86:LEU:HD21 | 0.48 | 2.38 | 18 | 2 |
| 1:A:27:ALA:C | 1:A:31:ILE:HD12 | 0.48 | 2.29 | 11 | 4 |
| 1:A:84:TYR:O | 1:A:101:TYR:N | 0.48 | 2.44 | 14 | 6 |
| 1:A:87:ILE:HG23 | 1:A:98:LYS:CE | 0.48 | 2.31 | 12 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:73:HIS:NE2 | 1:A:85:SER:CB | 0.48 | 2.77 | 19 | 1 |
| 1:A:39:VAL:HG13 | 1:A:57:ILE:CG2 | 0.48 | 2.38 | 4 | 1 |
| 1:A:86:LEU:CD2 | 1:A:86:LEU:C | 0.48 | 2.82 | 12 | 5 |
| 1:A:70:HIS:NE2 | 1:A:86:LEU:CD1 | 0.48 | 2.77 | 9 | 1 |
| 1:A:147:LEU:HG | 1:A:151:TYR:CE2 | 0.48 | 2.44 | 9 | 1 |
| 1:A:14:ILE:CG2 | 1:A:15:PRO:HD2 | 0.48 | 2.39 | 12 | 14 |
| 1:A:147:LEU:N | 1:A:147:LEU:CD2 | 0.48 | 2.77 | 17 | 9 |
| 1:A:20:PHE:HD2 | 1:A:105:LEU:HD23 | 0.48 | 1.69 | 12 | 1 |
| 1:A:109:PRO:C | 1:A:110:HIS:CG | 0.48 | 2.86 | 20 | 1 |
| 1:A:15:PRO:HG2 | 1:A:18:LYS:CG | 0.47 | 2.39 | 12 | 19 |
| 1:A:152:LEU:N | 1:A:152:LEU:CD1 | 0.47 | 2.76 | 14 | 6 |
| 1:A:40:LYS:CB | 1:A:58:THR:O | 0.47 | 2.61 | 13 | 1 |
| 1:A:30:LEU:HD22 | 1:A:33:LYS:HD2 | 0.47 | 1.86 | 15 | 1 |
| 1:A:59:PHE:HE2 | 1:A:68:VAL:HG23 | 0.47 | 1.70 | 1 | 2 |
| 1:A:73:HIS:NE2 | 1:A:85:SER:HB3 | 0.47 | 2.24 | 19 | 4 |
| 1:A:105:LEU:CD2 | 1:A:115:ILE:HG23 | 0.47 | 2.38 | 10 | 2 |
| 1:A:39:VAL:HG11 | 1:A:57:ILE:HG21 | 0.47 | 1.86 | 17 | 1 |
| 1:A:14:ILE:HG22 | 1:A:15:PRO:HD2 | 0.47 | 1.85 | 4 | 5 |
| 1:A:92:LEU:O | 1:A:93:SER:O | 0.47 | 2.33 | 6 | 5 |
| 1:A:99:ILE:HG21 | 1:A:101:TYR:OH | 0.47 | 2.08 | 11 | 1 |
| 1:A:33:LYS:HG2 | 1:A:151:TYR:CZ | 0.47 | 2.44 | 6 | 1 |
| 1:A:19:LEU:HD21 | 1:A:149:GLU:OE2 | 0.47 | 2.08 | 1 | 1 |
| 1:A:19:LEU:O | 1:A:23:PHE:CB | 0.47 | 2.62 | 2 | 1 |
| 1:A:69:LYS:HB2 | 1:A:87:ILE:CG2 | 0.47 | 2.40 | 17 | 1 |
| 1:A:3:VAL:HG13 | 1:A:121:TYR:O | 0.47 | 2.10 | 3 | 2 |
| 1:A:68:VAL:CG1 | 1:A:89:GLY:HA2 | 0.47 | 2.36 | 6 | 3 |
| 1:A:97:GLU:CB | 1:A:122:HIS:HB2 | 0.47 | 2.39 | 18 | 1 |
| 1:A:34:ILE:CG2 | 1:A:147:LEU:HD12 | 0.47 | 2.39 | 4 | 1 |
| 1:A:69:LYS:O | 1:A:87:ILE:N | 0.47 | 2.48 | 8 | 2 |
| 1:A:145:PHE:O | 1:A:149:GLU:OE1 | 0.47 | 2.33 | 1 | 4 |
| 1:A:82:TYR:O | 1:A:103:THR:N | 0.47 | 2.47 | 7 | 2 |
| 1:A:39:VAL:HG22 | 1:A:59:PHE:CE1 | 0.46 | 2.45 | 4 | 1 |
| 1:A:104:LYS:C | 1:A:105:LEU:HD22 | 0.46 | 2.30 | 4 | 2 |
| 1:A:15:PRO:HG2 | 1:A:18:LYS:CB | 0.46 | 2.39 | 18 | 1 |
| 1:A:28:ASP:CG | 1:A:44:ILE:HD11 | 0.46 | 2.30 | 3 | 1 |
| 1:A:36:PRO:O | 1:A:39:VAL:O | 0.46 | 2.34 | 7 | 16 |
| 1:A:106:VAL:O | 1:A:114:ILE:O | 0.46 | 2.33 | 12 | 3 |
| 1:A:97:GLU:HB2 | 1:A:122:HIS:CB | 0.46 | 2.40 | 4 | 10 |
| 1:A:28:ASP:OD1 | 1:A:42:ALA:HB3 | 0.46 | 2.10 | 13 | 1 |
| 1:A:92:LEU:O | 1:A:96:ILE:O | 0.46 | 2.33 | 13 | 1 |
| 1:A:44:ILE:HG21 | 1:A:48:ASP:CA | 0.46 | 2.40 | 16 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:69:LYS:N | 1:A:88:GLU:O | 0.46 | 2.48 | 11 | 4 |
| 1:A:92:LEU:O | 1:A:96:ILE:CG1 | 0.46 | 2.64 | 5 | 3 |
| 1:A:144:LEU:N | 1:A:144:LEU:HD12 | 0.46 | 2.25 | 9 | 1 |
| 1:A:39:VAL:HG23 | 1:A:58:THR:O | 0.46 | 2.11 | 18 | 1 |
| 1:A:15:PRO:CG | 1:A:18:LYS:HD2 | 0.46 | 2.41 | 15 | 16 |
| 1:A:3:VAL:HG21 | 1:A:122:HIS:HA | 0.46 | 1.87 | 6 | 1 |
| 1:A:70:HIS:CD2 | 1:A:86:LEU:HD13 | 0.46 | 2.45 | 15 | 1 |
| 1:A:31:ILE:HB | 1:A:32:PRO:HD3 | 0.45 | 1.89 | 3 | 17 |
| 1:A:13:ASP:O | 1:A:14:ILE:O | 0.45 | 2.34 | 15 | 5 |
| 1:A:40:LYS:HE2 | 1:A:58:THR:CG2 | 0.45 | 2.41 | 6 | 1 |
| 1:A:96:ILE:HG22 | 1:A:123:THR:HB | 0.45 | 1.89 | 11 | 2 |
| 1:A:24:VAL:N | 1:A:27:ALA:HB2 | 0.45 | 2.25 | 15 | 1 |
| 1:A:70:HIS:CE1 | 1:A:86:LEU:HG | 0.45 | 2.45 | 16 | 1 |
| 1:A:45:LEU:O | 1:A:46:GLU:HG3 | 0.45 | 2.12 | 10 | 6 |
| 1:A:13:ASP:CB | 1:A:14:ILE:HD12 | 0.45 | 2.42 | 12 | 1 |
| 1:A:21:LYS:O | 1:A:25:LEU:CB | 0.45 | 2.65 | 5 | 1 |
| 1:A:30:LEU:CD2 | 1:A:148:ILE:HG23 | 0.45 | 2.42 | 13 | 1 |
| 1:A:99:ILE:HG22 | 1:A:101:TYR:CE2 | 0.45 | 2.46 | 13 | 2 |
| 1:A:109:PRO:O | 1:A:110:HIS:HB3 | 0.45 | 2.12 | 19 | 1 |
| 1:A:102:GLU:N | 1:A:118:THR:O | 0.45 | 2.49 | 14 | 2 |
| 1:A:82:TYR:CE2 | 1:A:84:TYR:HB3 | 0.45 | 2.47 | 2 | 4 |
| 1:A:26:ASP:O | 1:A:30:LEU:HB2 | 0.45 | 2.12 | 6 | 5 |
| 1:A:13:ASP:O | 1:A:14:ILE:CB | 0.45 | 2.62 | 17 | 6 |
| 1:A:34:ILE:HG12 | 1:A:151:TYR:CE2 | 0.45 | 2.46 | 5 | 1 |
| 1:A:55:LYS:N | 1:A:70:HIS:O | 0.45 | 2.49 | 16 | 2 |
| 1:A:93:SER:OG | 1:A:94:GLU:N | 0.45 | 2.50 | 7 | 2 |
| 1:A:95:ASN:O | 1:A:96:ILE:CG2 | 0.45 | 2.65 | 11 | 1 |
| 1:A:23:PHE:HD2 | 1:A:24:VAL:HG13 | 0.45 | 1.72 | 18 | 1 |
| 1:A:57:ILE:HD11 | 1:A:70:HIS:ND1 | 0.45 | 2.27 | 18 | 1 |
| 1:A:84:TYR:O | 1:A:101:TYR:O | 0.44 | 2.34 | 17 | 5 |
| 1:A:56:LYS:HE3 | 1:A:67:TYR:CD2 | 0.44 | 2.48 | 11 | 1 |
| 1:A:19:LEU:O | 1:A:23:PHE:HB2 | 0.44 | 2.12 | 2 | 3 |
| 1:A:16:ALA:N | 1:A:17:PRO:CD | 0.44 | 2.81 | 12 | 7 |
| 1:A:15:PRO:HA | 1:A:113:THR:OG1 | 0.44 | 2.12 | 5 | 3 |
| 1:A:30:LEU:CD1 | 1:A:151:TYR:CD1 | 0.44 | 3.00 | 16 | 1 |
| 1:A:27:ALA:HB1 | 1:A:31:ILE:HD11 | 0.44 | 1.88 | 1 | 2 |
| 1:A:34:ILE:CG2 | 1:A:147:LEU:HG | 0.44 | 2.43 | 5 | 1 |
| 1:A:3:VAL:HG23 | 1:A:121:TYR:O | 0.44 | 2.11 | 9 | 1 |
| 1:A:19:LEU:CD1 | 1:A:152:LEU:HD11 | 0.44 | 2.42 | 19 | 2 |
| 1:A:59:PHE:CE2 | 1:A:68:VAL:HG23 | 0.44 | 2.47 | 1 | 1 |
| 1:A:120:LYS:HE3 | 1:A:122:HIS:NE2 | 0.44 | 2.28 | 1 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|------------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:20:PHE:O | 1:A:24:VAL:HG22 | 0.44 | 2.13 | 17 | 3 |
| 1:A:45:LEU:N | 1:A:54:ILE:O | 0.44 | 2.50 | 9 | 3 |
| 1:A:92:LEU:O | 1:A:96:ILE:HB | 0.44 | 2.13 | 5 | 10 |
| 1:A:14:ILE:O | 1:A:113:THR:OG1 | 0.44 | 2.35 | 7 | 1 |
| 1:A:75:ILE:CG2 | 1:A:82:TYR:CE1 | 0.44 | 3.01 | 11 | 2 |
| 1:A:12:SER:HB2 | 1:A:149:GLU:OE2 | 0.44 | 2.12 | 12 | 1 |
| 1:A:40:LYS:HB3 | 1:A:58:THR:O | 0.44 | 2.13 | 13 | 1 |
| 1:A:147:LEU:HB3 | 1:A:151:TYR:CE2 | 0.44 | 2.47 | 19 | 1 |
| 1:A:50:GLY:C | 1:A:53:THR:HG1 | 0.43 | 2.16 | 5 | 6 |
| 1:A:20:PHE:CE1 | 1:A:82:TYR:HB2 | 0.43 | 2.48 | 8 | 1 |
| 1:A:96:ILE:O | 1:A:96:ILE:CD1 | 0.43 | 2.58 | 11 | 1 |
| 1:A:68:VAL:HG23 | 1:A:70:HIS:CE1 | 0.43 | 2.48 | 4 | 1 |
| 1:A:71:LYS:HB2 | 1:A:87:ILE:CG1 | 0.43 | 2.43 | 9 | 1 |
| 1:A:15:PRO:O | 1:A:16:ALA:C | 0.43 | 2.56 | 1 | 10 |
| 1:A:106:VAL:O | 1:A:113:THR:CG2 | 0.43 | 2.66 | 14 | 1 |
| 1:A:34:ILE:HD12 | 1:A:144:LEU:CD1 | 0.43 | 2.43 | 17 | 1 |
| 1:A:98:LYS:HD3 | 1:A:122:HIS:CB | 0.43 | 2.43 | 6 | 1 |
| 1:A:34:ILE:HG21 | 1:A:147:LEU:HD13 | 0.43 | 1.90 | 18 | 1 |
| 1:A:92:LEU:CA | 1:A:96:ILE:HB | 0.43 | 2.44 | 18 | 2 |
| 1:A:108:ALA:HB1 | 1:A:109:PRO:CD | 0.43 | 2.37 | 17 | 1 |
| 1:A:13:ASP:N | 1:A:149:GLU:OE2 | 0.43 | 2.47 | 3 | 1 |
| 1:A:44:ILE:HG21 | 1:A:48:ASP:H | 0.43 | 1.73 | 16 | 1 |
| 1:A:99:ILE:HB | 1:A:101:TYR:CE2 | 0.43 | 2.48 | 17 | 1 |
| 1:A:21:LYS:O | 1:A:25:LEU:HB3 | 0.43 | 2.14 | 5 | 7 |
| 1:A:147:LEU:HD22 | 1:A:147:LEU:H | 0.43 | 1.74 | 6 | 3 |
| 1:A:95:ASN:O | 1:A:96:ILE:HG23 | 0.43 | 2.14 | 11 | 1 |
| 1:A:40:LYS:N | 1:A:58:THR:O | 0.43 | 2.45 | 13 | 1 |
| 1:A:92:LEU:HD11 | 1:A:99:ILE:HD11 | 0.43 | 1.89 | 13 | 1 |
| 1:A:45:LEU:O | 1:A:46:GLU:CD | 0.43 | 2.57 | 8 | 4 |
| 1:A:93:SER:O | 1:A:97:GLU:HG2 | 0.43 | 2.13 | 6 | 1 |
| 1:A:105:LEU:HD22 | 1:A:115:ILE:HG12 | 0.43 | 1.91 | 10 | 1 |
| 1:A:105:LEU:CD1 | 1:A:115:ILE:HG12 | 0.43 | 2.43 | 13 | 1 |
| 1:A:33:LYS:HD3 | 1:A:151:TYR:OH | 0.43 | 2.14 | 16 | 1 |
| 1:A:15:PRO:CD | 1:A:18:LYS:HD2 | 0.43 | 2.44 | 2 | 6 |
| 1:A:88:GLU:CA | 1:A:92:LEU:HD12 | 0.43 | 2.43 | 12 | 1 |
| 1:A:85:SER:CB | 1:A:100:ASP:HA | 0.43 | 2.44 | 17 | 1 |
| 1:A:28:ASP:OD2 | 1:A:44:ILE:CD1 | 0.42 | 2.64 | 3 | 1 |
| 1:A:26:ASP:OD1 | 1:A:26:ASP:C | 0.42 | 2.57 | 5 | 2 |
| 1:A:30:LEU:CD2 | 1:A:148:ILE:HD12 | 0.42 | 2.41 | 6 | 1 |
| 1:A:75:ILE:HG22 | 1:A:82:TYR:CE1 | 0.42 | 2.48 | 16 | 1 |
| 1:A:89:GLY:O | 1:A:92:LEU:N | 0.42 | 2.49 | 10 | 2 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:92:LEU:O | 1:A:93:SER:C | 0.42 | 2.57 | 12 | 1 |
| 1:A:50:GLY:O | 1:A:53:THR:OG1 | 0.42 | 2.35 | 14 | 3 |
| 1:A:120:LYS:HE3 | 1:A:122:HIS:CE1 | 0.42 | 2.49 | 1 | 1 |
| 1:A:34:ILE:HG23 | 1:A:147:LEU:CD1 | 0.42 | 2.44 | 4 | 1 |
| 1:A:4:TYR:CD2 | 1:A:5:THR:O | 0.42 | 2.72 | 12 | 1 |
| 1:A:13:ASP:O | 1:A:14:ILE:HB | 0.42 | 2.14 | 17 | 4 |
| 1:A:99:ILE:HD13 | 1:A:121:TYR:CD1 | 0.42 | 2.49 | 19 | 1 |
| 1:A:12:SER:OG | 1:A:149:GLU:CD | 0.42 | 2.57 | 20 | 1 |
| 1:A:21:LYS:HE2 | 1:A:25:LEU:CD2 | 0.42 | 2.44 | 8 | 1 |
| 1:A:19:LEU:CD2 | 1:A:149:GLU:OE2 | 0.42 | 2.68 | 16 | 1 |
| 1:A:57:ILE:HD11 | 1:A:70:HIS:CE1 | 0.42 | 2.48 | 18 | 2 |
| 1:A:59:PHE:CD1 | 1:A:59:PHE:N | 0.42 | 2.87 | 19 | 1 |
| 1:A:23:PHE:HD2 | 1:A:148:ILE:HD13 | 0.42 | 1.74 | 20 | 1 |
| 1:A:98:LYS:CG | 1:A:122:HIS:HB2 | 0.42 | 2.45 | 6 | 1 |
| 1:A:49:GLY:HA2 | 1:A:72:ILE:CD1 | 0.42 | 2.44 | 2 | 2 |
| 1:A:92:LEU:O | 1:A:96:ILE:CB | 0.42 | 2.68 | 5 | 1 |
| 1:A:54:ILE:HG23 | 1:A:87:ILE:CD1 | 0.42 | 2.44 | 19 | 1 |
| 1:A:73:HIS:CD2 | 1:A:85:SER:OG | 0.42 | 2.73 | 12 | 1 |
| 1:A:19:LEU:O | 1:A:19:LEU:HD23 | 0.42 | 2.14 | 13 | 1 |
| 1:A:19:LEU:O | 1:A:23:PHE:N | 0.42 | 2.53 | 15 | 1 |
| 1:A:57:ILE:HD12 | 1:A:70:HIS:NE2 | 0.42 | 2.30 | 14 | 2 |
| 1:A:120:LYS:HE2 | 1:A:122:HIS:CE1 | 0.42 | 2.49 | 1 | 1 |
| 1:A:3:VAL:CG2 | 1:A:122:HIS:HA | 0.42 | 2.45 | 3 | 1 |
| 1:A:39:VAL:HG22 | 1:A:59:PHE:HE1 | 0.42 | 1.75 | 4 | 1 |
| 1:A:84:TYR:CE2 | 1:A:101:TYR:CD2 | 0.42 | 3.07 | 6 | 1 |
| 1:A:12:SER:OG | 1:A:149:GLU:CG | 0.42 | 2.67 | 14 | 2 |
| 1:A:84:TYR:CE2 | 1:A:101:TYR:CG | 0.42 | 3.08 | 6 | 1 |
| 1:A:101:TYR:CE1 | 1:A:119:SER:OG | 0.42 | 2.60 | 14 | 1 |
| 1:A:97:GLU:OE1 | 1:A:122:HIS:HB3 | 0.42 | 2.15 | 20 | 1 |
| 1:A:21:LYS:O | 1:A:25:LEU:N | 0.42 | 2.50 | 5 | 2 |
| 1:A:34:ILE:HG23 | 1:A:147:LEU:HG | 0.42 | 1.92 | 8 | 1 |
| 1:A:21:LYS:HA | 1:A:25:LEU:HD13 | 0.42 | 1.92 | 11 | 1 |
| 1:A:87:ILE:O | 1:A:98:LYS:HD2 | 0.42 | 2.15 | 20 | 1 |
| 1:A:59:PHE:HE2 | 1:A:68:VAL:HG13 | 0.41 | 1.75 | 3 | 1 |
| 1:A:33:LYS:O | 1:A:33:LYS:CD | 0.41 | 2.68 | 5 | 1 |
| 1:A:30:LEU:HD21 | 1:A:148:ILE:HG12 | 0.41 | 1.91 | 17 | 1 |
| 1:A:27:ALA:O | 1:A:31:ILE:CB | 0.41 | 2.68 | 17 | 3 |
| 1:A:86:LEU:O | 1:A:98:LYS:HB2 | 0.41 | 2.14 | 17 | 3 |
| 1:A:71:LYS:HB2 | 1:A:87:ILE:CD1 | 0.41 | 2.46 | 20 | 2 |
| 1:A:14:ILE:HG22 | 1:A:18:LYS:HB3 | 0.41 | 1.90 | 18 | 1 |
| 1:A:99:ILE:HD13 | 1:A:121:TYR:CE1 | 0.41 | 2.50 | 11 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:96:ILE:O | 1:A:96:ILE:HG13 | 0.41 | 2.15 | 13 | 1 |
| 1:A:3:VAL:CG1 | 1:A:120:LYS:HE2 | 0.41 | 2.45 | 14 | 1 |
| 1:A:45:LEU:O | 1:A:46:GLU:HG2 | 0.41 | 2.16 | 8 | 4 |
| 1:A:24:VAL:HG11 | 1:A:82:TYR:CG | 0.41 | 2.51 | 5 | 1 |
| 1:A:79:ASN:O | 1:A:80:HIS:C | 0.41 | 2.58 | 13 | 2 |
| 1:A:5:THR:OG1 | 1:A:120:LYS:HE3 | 0.41 | 2.15 | 9 | 1 |
| 1:A:106:VAL:O | 1:A:113:THR:HG23 | 0.41 | 2.15 | 14 | 1 |
| 1:A:143:HIS:CE1 | 1:A:147:LEU:HD21 | 0.41 | 2.51 | 6 | 1 |
| 1:A:68:VAL:CG1 | 1:A:89:GLY:HA3 | 0.41 | 2.46 | 9 | 1 |
| 1:A:86:LEU:HG | 1:A:92:LEU:HD11 | 0.41 | 1.92 | 17 | 1 |
| 1:A:57:ILE:O | 1:A:67:TYR:HB2 | 0.41 | 2.16 | 9 | 2 |
| 1:A:44:ILE:CD1 | 1:A:55:LYS:HG2 | 0.41 | 2.45 | 16 | 1 |
| 1:A:55:LYS:HE3 | 1:A:72:ILE:HD11 | 0.41 | 1.92 | 20 | 1 |
| 1:A:68:VAL:HA | 1:A:88:GLU:O | 0.41 | 2.16 | 1 | 6 |
| 1:A:84:TYR:CD1 | 1:A:84:TYR:C | 0.41 | 2.93 | 4 | 1 |
| 1:A:20:PHE:CB | 1:A:105:LEU:HD12 | 0.41 | 2.38 | 10 | 1 |
| 1:A:73:HIS:NE2 | 1:A:85:SER:OG | 0.41 | 2.45 | 12 | 1 |
| 1:A:30:LEU:HD11 | 1:A:151:TYR:CD1 | 0.41 | 2.51 | 16 | 1 |
| 1:A:67:TYR:CE1 | 1:A:69:LYS:HE3 | 0.41 | 2.50 | 16 | 1 |
| 1:A:109:PRO:O | 1:A:110:HIS:HB2 | 0.41 | 2.14 | 20 | 1 |
| 1:A:86:LEU:CD2 | 1:A:92:LEU:HD22 | 0.41 | 2.44 | 1 | 1 |
| 1:A:84:TYR:CZ | 1:A:101:TYR:CG | 0.41 | 3.08 | 6 | 1 |
| 1:A:34:ILE:HD11 | 1:A:148:ILE:HG13 | 0.41 | 1.91 | 9 | 1 |
| 1:A:68:VAL:CG2 | 1:A:86:LEU:HD11 | 0.41 | 2.46 | 9 | 1 |
| 1:A:120:LYS:HE2 | 1:A:122:HIS:NE2 | 0.41 | 2.31 | 13 | 1 |
| 1:A:92:LEU:O | 1:A:93:SER:HB2 | 0.40 | 2.16 | 9 | 3 |
| 1:A:121:TYR:CD1 | 1:A:121:TYR:N | 0.40 | 2.89 | 4 | 1 |
| 1:A:27:ALA:O | 1:A:31:ILE:HG13 | 0.40 | 2.15 | 10 | 1 |
| 1:A:92:LEU:O | 1:A:96:ILE:HG13 | 0.40 | 2.16 | 5 | 1 |
| 1:A:85:SER:HB2 | 1:A:99:ILE:O | 0.40 | 2.16 | 10 | 3 |
| 1:A:19:LEU:HD23 | 1:A:19:LEU:C | 0.40 | 2.37 | 14 | 1 |
| 1:A:97:GLU:HB2 | 1:A:122:HIS:HB2 | 0.40 | 1.94 | 15 | 2 |
| 1:A:19:LEU:HD12 | 1:A:152:LEU:CD2 | 0.40 | 2.44 | 9 | 1 |
| 1:A:21:LYS:CG | 1:A:25:LEU:HD12 | 0.40 | 2.43 | 9 | 1 |
| 1:A:148:ILE:O | 1:A:152:LEU:HD12 | 0.40 | 2.16 | 9 | 1 |
| 1:A:17:PRO:HB3 | 1:A:80:HIS:NE2 | 0.40 | 2.32 | 5 | 1 |
| 1:A:14:ILE:HG22 | 1:A:18:LYS:HB2 | 0.40 | 1.92 | 6 | 1 |
| 1:A:73:HIS:O | 1:A:74:SER:HB3 | 0.40 | 2.17 | 7 | 1 |
| 1:A:100:ASP:O | 1:A:119:SER:HA | 0.40 | 2.16 | 19 | 1 |
| 1:A:149:GLU:HA | 1:A:149:GLU:OE1 | 0.40 | 2.17 | 4 | 1 |
| 1:A:3:VAL:HG11 | 1:A:122:HIS:ND1 | 0.40 | 2.31 | 10 | 1 |

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| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|------------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:29:ASN:O | 1:A:33:LYS:HG2 | 0.40 | 2.16 | 10 | 1 |
| 1:A:96:ILE:CG2 | 1:A:123:THR:HB | 0.40 | 2.47 | 11 | 1 |
| 1:A:30:LEU:CD1 | 1:A:148:ILE:CD1 | 0.40 | 2.99 | 12 | 1 |
| 1:A:95:ASN:OD1 | 1:A:95:ASN:N | 0.40 | 2.54 | 13 | 1 |
| 1:A:49:GLY:N | 1:A:53:THR:HG21 | 0.40 | 2.25 | 16 | 1 |
| 1:A:19:LEU:HD11 | 1:A:148:ILE:HG21 | 0.40 | 1.94 | 17 | 1 |
| 1:A:23:PHE:CD2 | 1:A:24:VAL:HG13 | 0.40 | 2.51 | 18 | 1 |
| 1:A:30:LEU:HD21 | 1:A:151:TYR:CE1 | 0.40 | 2.51 | 18 | 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 | 125/170 (74%) | 119±2 (95±1%) | 5±1 (4±1%) | 2±1 (1±1%) | 15 | 61 |
| All | All | 2500/3400 (74%) | 2371 (95%) | 95 (4%) | 34 (1%) | 15 | 61 |

All 4 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 | 14 | ILE | 20 |
| 1 | A | 93 | SER | 10 |
| 1 | A | 98 | LYS | 3 |
| 1 | A | 41 | CYS | 1 |

6.3.2 Protein sidechains [i](#)

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|---------------|------------|-------------|----|
| 1 | A | 108/144 (75%) | 106±1 (98±1%) | 2±1 (2±1%) | 64 | 94 |
| All | All | 2160/2880 (75%) | 2126 (98%) | 34 (2%) | 64 | 94 |

All 13 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 | 41 | CYS | 17 |
| 1 | A | 93 | SER | 3 |
| 1 | A | 14 | ILE | 3 |
| 1 | A | 107 | SER | 2 |
| 1 | A | 95 | ASN | 1 |
| 1 | A | 13 | ASP | 1 |
| 1 | A | 33 | LYS | 1 |
| 1 | A | 105 | LEU | 1 |
| 1 | A | 19 | LEU | 1 |
| 1 | A | 30 | LEU | 1 |
| 1 | A | 78 | VAL | 1 |
| 1 | A | 144 | LEU | 1 |
| 1 | A | 12 | SER | 1 |

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation i

The completeness of assignment taking into account all chemical shift lists is 87% for the well-defined parts and 82% 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 | 1735 |
| Number of shifts mapped to atoms | 1733 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 2 |
| Number of shifts with mapping warnings | 0 |
| Number of shift outliers (ShiftChecker) | 0 |

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

- No matching atom found in the structure. All 2 occurrences are reported below.

| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 1 | MET | HA | 4.79 | 0.03 | 1 |
| 1 | A | 1 | MET | CA | 55.07 | 0.20 | 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 |
|------------------------|----------|---------------------------------|----------------------------|
| $^{13}\text{C}_\alpha$ | 151 | -0.32 ± 0.08 | None needed (< 0.5 ppm) |
| $^{13}\text{C}_\beta$ | 135 | -0.03 ± 0.13 | None needed (< 0.5 ppm) |
| $^{13}\text{C}'$ | 132 | -0.07 ± 0.06 | None needed (< 0.5 ppm) |
| ^{15}N | 140 | 0.22 ± 0.35 | 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 87%, i.e. 1470 atoms were assigned a chemical shift out of a possible 1699. 0 out of 16 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹H | ¹³C | ¹⁵N |
|-----------|-----------------|----------------------|-----------------------|-----------------------|
| Backbone | 592/621 (95%) | 244/252 (97%) | 233/250 (93%) | 115/119 (97%) |
| Sidechain | 843/914 (92%) | 566/599 (94%) | 273/296 (92%) | 4/19 (21%) |
| Aromatic | 35/164 (21%) | 32/81 (40%) | 3/77 (4%) | 0/6 (0%) |
| Overall | 1470/1699 (87%) | 842/932 (90%) | 509/623 (82%) | 119/144 (83%) |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 82%, i.e. 1733 atoms were assigned a chemical shift out of a possible 2118. 0 out of 18 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹H | ¹³C | ¹⁵N |
|-----------|-----------------|----------------------|-----------------------|-----------------------|
| Backbone | 723/795 (91%) | 301/325 (93%) | 282/318 (89%) | 140/152 (92%) |
| Sidechain | 973/1120 (87%) | 647/728 (89%) | 322/366 (88%) | 4/26 (15%) |
| Aromatic | 37/203 (18%) | 33/101 (33%) | 4/93 (4%) | 0/9 (0%) |
| Overall | 1733/2118 (82%) | 981/1154 (85%) | 608/777 (78%) | 144/187 (77%) |

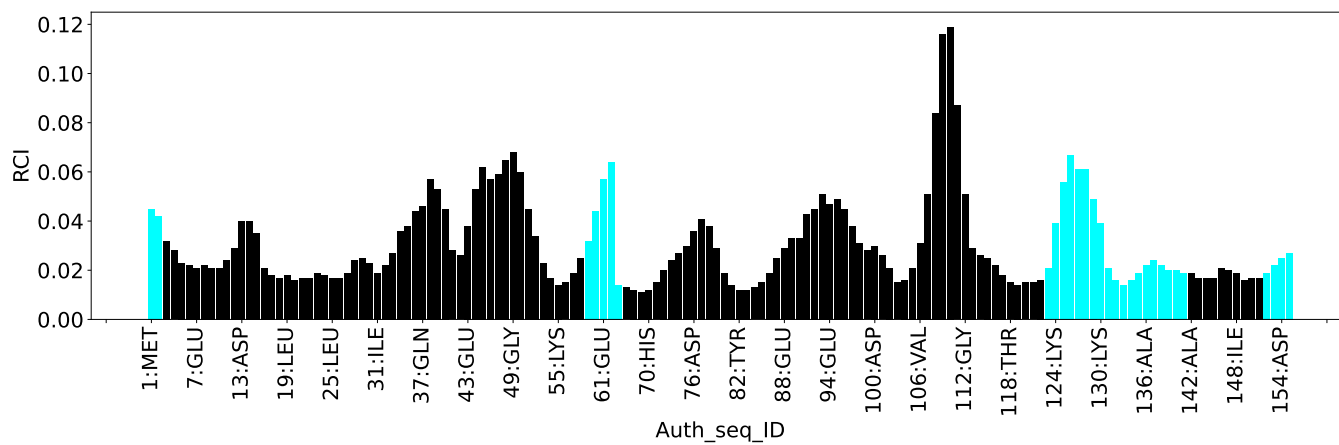
7.1.4 Statistically unusual chemical shifts [i](#)

There are no statistically unusual chemical shifts.

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

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

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

| Description | Value |
|----------------------------------------------------------|-------|
| Total distance restraints | 1465 |
| Intra-residue ($ i-j =0$) | 54 |
| Sequential ($ i-j =1$) | 313 |
| Medium range ($ i-j >1$ and $ i-j <5$) | 352 |
| Long range ($ i-j \geq 5$) | 624 |
| Inter-chain | 0 |
| Hydrogen bond restraints | 122 |
| Disulfide bond restraints | 0 |
| Total dihedral-angle restraints | 209 |
| Number of unmapped restraints | 0 |
| Number of restraints per residue | 9.8 |
| Number of long range restraints per residue ¹ | 4.1 |

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) | 5.8 | 0.2 |
| 0.2-0.5 (Medium) | 14.8 | 0.5 |
| >0.5 (Large) | 39.8 | 3.06 |

8.2.2 Average number of dihedral-angle violations per model

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) | 1.2 | 3.6 |
| 10.0-20.0 (Medium) | None | None |
| >20.0 (Large) | None | None |

9 Distance violation analysis

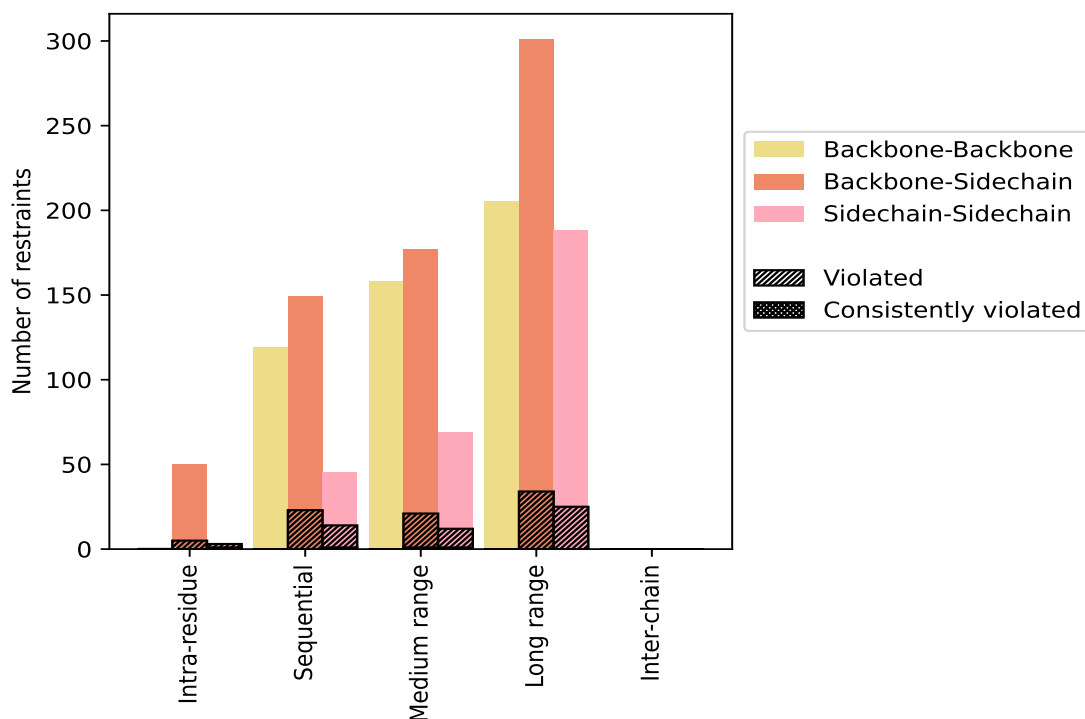
9.1 Summary of distance violations

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 ($i-j =0$) | 54 | 3.7 | 8 | 14.8 | 0.5 | 1 | 1.9 | 0.1 |
| Backbone-Backbone | 1 | 0.1 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 50 | 3.4 | 5 | 10.0 | 0.3 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 3 | 0.2 | 3 | 100.0 | 0.2 | 1 | 33.3 | 0.1 |
| Sequential ($i-j =1$) | 313 | 21.4 | 37 | 11.8 | 2.5 | 1 | 0.3 | 0.1 |
| Backbone-Backbone | 119 | 8.1 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 149 | 10.2 | 23 | 15.4 | 1.6 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 45 | 3.1 | 14 | 31.1 | 1.0 | 1 | 2.2 | 0.1 |
| Medium range ($i-j >1$ & $i-j <5$) | 352 | 24.0 | 33 | 9.4 | 2.3 | 2 | 0.6 | 0.1 |
| Backbone-Backbone | 106 | 7.2 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 177 | 12.1 | 21 | 11.9 | 1.4 | 1 | 0.6 | 0.1 |
| Sidechain-Sidechain | 69 | 4.7 | 12 | 17.4 | 0.8 | 1 | 1.4 | 0.1 |
| Long range ($i-j \geq 5$) | 624 | 42.6 | 59 | 9.5 | 4.0 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 135 | 9.2 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 301 | 20.5 | 34 | 11.3 | 2.3 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 188 | 12.8 | 25 | 13.3 | 1.7 | 0 | 0.0 | 0.0 |
| Inter-chain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Hydrogen bond | 122 | 8.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Disulfide bond | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Total | 1465 | 100.0 | 137 | 9.4 | 9.4 | 4 | 0.3 | 0.3 |
| Backbone-Backbone | 483 | 33.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 677 | 46.2 | 83 | 12.3 | 5.7 | 1 | 0.1 | 0.1 |
| Sidechain-Sidechain | 305 | 20.8 | 54 | 17.7 | 3.7 | 3 | 1.0 | 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 | 5 | 11 | 8 | 31 | 0 | 55 | 0.81 | 1.73 | 0.46 | 0.72 |
| 2 | 3 | 15 | 17 | 22 | 0 | 57 | 0.81 | 2.0 | 0.47 | 0.78 |
| 3 | 3 | 13 | 12 | 22 | 0 | 50 | 0.71 | 1.73 | 0.41 | 0.66 |
| 4 | 7 | 16 | 15 | 27 | 0 | 65 | 0.72 | 1.77 | 0.4 | 0.67 |
| 5 | 4 | 15 | 12 | 24 | 0 | 55 | 0.81 | 2.15 | 0.51 | 0.83 |
| 6 | 6 | 14 | 12 | 27 | 0 | 59 | 0.66 | 1.61 | 0.4 | 0.59 |
| 7 | 4 | 11 | 8 | 22 | 0 | 45 | 0.76 | 1.93 | 0.45 | 0.74 |
| 8 | 4 | 13 | 15 | 28 | 0 | 60 | 0.83 | 1.97 | 0.46 | 0.84 |
| 9 | 5 | 17 | 14 | 30 | 0 | 66 | 0.74 | 1.96 | 0.41 | 0.7 |
| 10 | 4 | 13 | 13 | 27 | 0 | 57 | 0.78 | 1.94 | 0.45 | 0.73 |
| 11 | 5 | 10 | 13 | 26 | 0 | 54 | 0.77 | 1.56 | 0.41 | 0.76 |

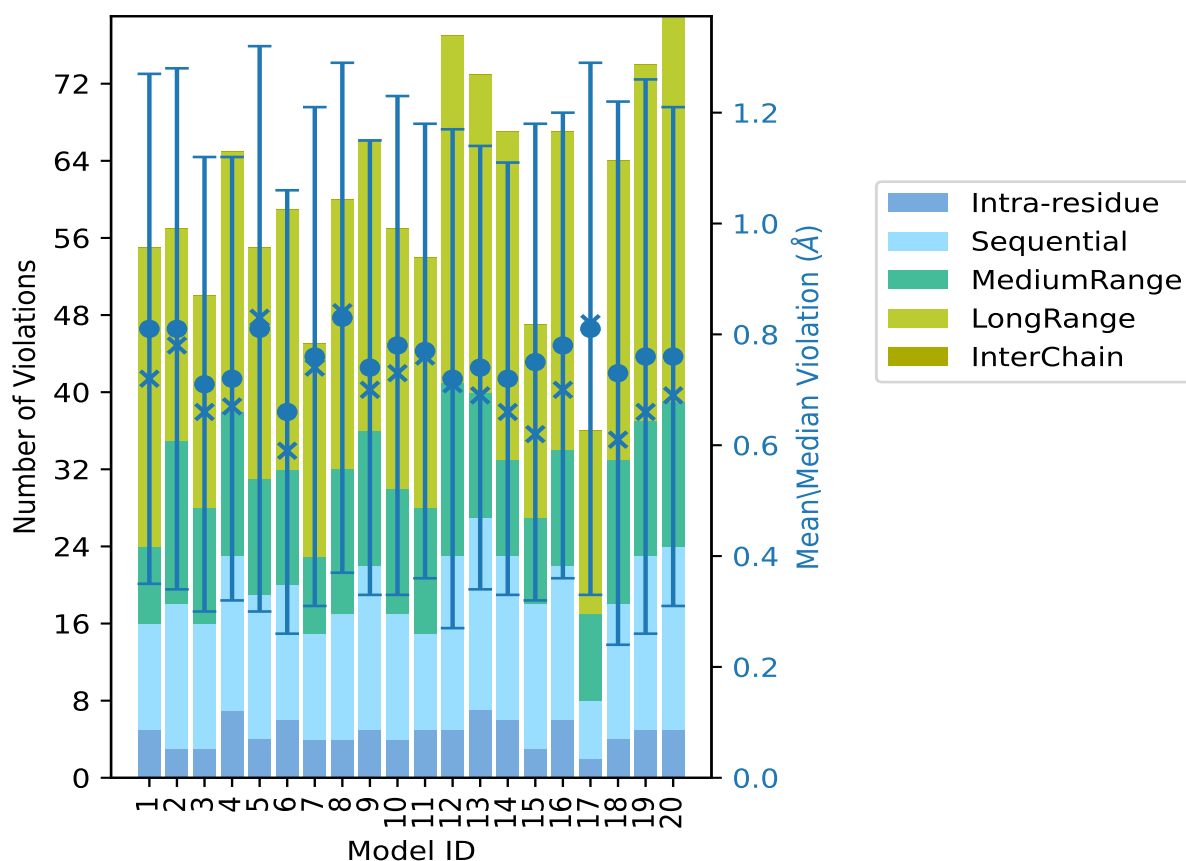
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| Model ID | Number of violations | | | | | Total | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | | | | | |
| 12 | 5 | 18 | 18 | 36 | 0 | 77 | 0.72 | 1.98 | 0.45 | 0.71 |
| 13 | 7 | 20 | 13 | 33 | 0 | 73 | 0.74 | 1.85 | 0.4 | 0.69 |
| 14 | 6 | 17 | 10 | 34 | 0 | 67 | 0.72 | 1.76 | 0.39 | 0.66 |
| 15 | 3 | 15 | 9 | 20 | 0 | 47 | 0.75 | 2.15 | 0.43 | 0.62 |
| 16 | 6 | 16 | 12 | 33 | 0 | 67 | 0.78 | 1.73 | 0.42 | 0.7 |
| 17 | 2 | 6 | 9 | 19 | 0 | 36 | 0.81 | 1.93 | 0.48 | 0.82 |
| 18 | 4 | 14 | 15 | 31 | 0 | 64 | 0.73 | 3.06 | 0.49 | 0.61 |
| 19 | 5 | 18 | 14 | 37 | 0 | 74 | 0.76 | 2.0 | 0.5 | 0.66 |
| 20 | 5 | 19 | 15 | 40 | 0 | 79 | 0.76 | 1.99 | 0.45 | 0.69 |

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

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



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

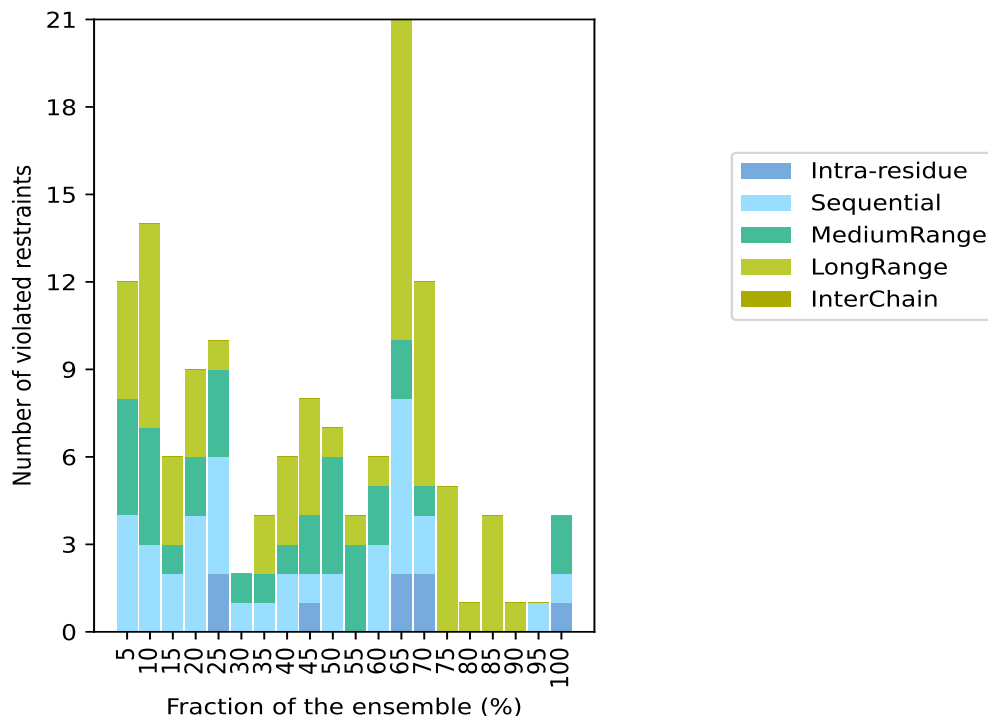
9.3 Distance violation statistics for the ensemble

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 1206(IR:46, SQ:276, MR:319, LR:565, IC:0) restraints are not violated in the ensemble.

| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|-------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 0 | 4 | 4 | 4 | 0 | 12 | 1 | 5.0 |
| 0 | 3 | 4 | 7 | 0 | 14 | 2 | 10.0 |
| 0 | 2 | 1 | 3 | 0 | 6 | 3 | 15.0 |
| 0 | 4 | 2 | 3 | 0 | 9 | 4 | 20.0 |
| 2 | 4 | 3 | 1 | 0 | 10 | 5 | 25.0 |
| 0 | 1 | 1 | 0 | 0 | 2 | 6 | 30.0 |
| 0 | 1 | 1 | 2 | 0 | 4 | 7 | 35.0 |
| 0 | 2 | 1 | 3 | 0 | 6 | 8 | 40.0 |
| 1 | 1 | 2 | 4 | 0 | 8 | 9 | 45.0 |
| 0 | 2 | 4 | 1 | 0 | 7 | 10 | 50.0 |
| 0 | 0 | 3 | 1 | 0 | 4 | 11 | 55.0 |
| 0 | 3 | 2 | 1 | 0 | 6 | 12 | 60.0 |
| 2 | 6 | 2 | 11 | 0 | 21 | 13 | 65.0 |
| 2 | 2 | 1 | 7 | 0 | 12 | 14 | 70.0 |
| 0 | 0 | 0 | 5 | 0 | 5 | 15 | 75.0 |
| 0 | 0 | 0 | 1 | 0 | 1 | 16 | 80.0 |
| 0 | 0 | 0 | 4 | 0 | 4 | 17 | 85.0 |
| 0 | 0 | 0 | 1 | 0 | 1 | 18 | 90.0 |
| 0 | 1 | 0 | 0 | 0 | 1 | 19 | 95.0 |
| 1 | 1 | 2 | 0 | 0 | 4 | 20 | 100.0 |

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

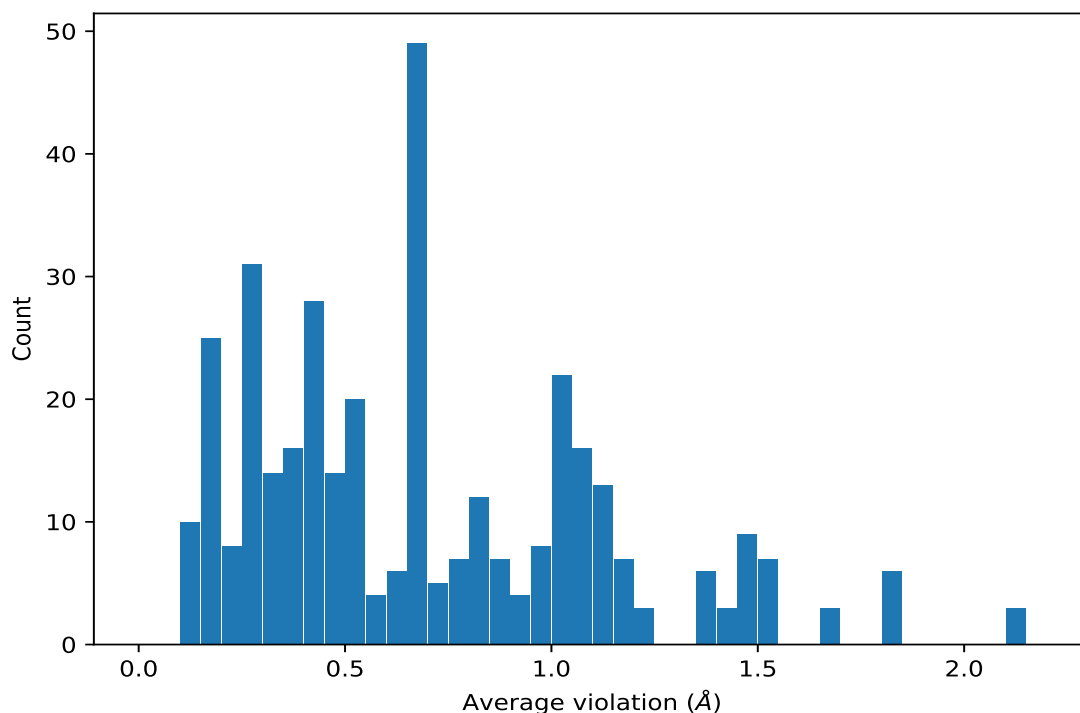
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



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) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 20 | 1.52 | 0.36 | 1.42 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 20 | 0.74 | 0.08 | 0.72 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 20 | 0.53 | 0.06 | 0.52 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 20 | 0.19 | 0.01 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 20 | 0.19 | 0.01 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 20 | 0.19 | 0.01 | 0.19 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 19 | 0.24 | 0.03 | 0.24 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 18 | 1.04 | 0.16 | 1.02 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 17 | 1.47 | 0.27 | 1.5 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 17 | 1.47 | 0.27 | 1.5 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 17 | 1.47 | 0.27 | 1.5 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 17 | 1.05 | 0.35 | 0.98 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 17 | 0.74 | 0.24 | 0.8 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 17 | 0.69 | 0.32 | 0.66 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 17 | 0.69 | 0.32 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 17 | 0.69 | 0.32 | 0.66 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 16 | 1.18 | 0.39 | 1.31 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 16 | 1.18 | 0.39 | 1.31 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 16 | 1.18 | 0.39 | 1.31 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 15 | 0.94 | 0.15 | 0.96 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 15 | 0.94 | 0.15 | 0.96 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 15 | 0.94 | 0.15 | 0.96 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 15 | 0.79 | 0.27 | 0.84 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 15 | 0.79 | 0.27 | 0.84 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 15 | 0.79 | 0.27 | 0.84 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 15 | 0.37 | 0.16 | 0.34 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 15 | 0.33 | 0.08 | 0.35 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 15 | 0.27 | 0.04 | 0.26 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 14 | 1.69 | 0.19 | 1.71 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 14 | 1.69 | 0.19 | 1.71 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 14 | 1.69 | 0.19 | 1.71 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 14 | 1.35 | 0.18 | 1.31 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 14 | 1.35 | 0.18 | 1.31 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 14 | 1.35 | 0.18 | 1.31 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 14 | 1.21 | 0.13 | 1.23 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 14 | 1.21 | 0.13 | 1.23 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 14 | 1.21 | 0.13 | 1.23 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 14 | 1.07 | 0.18 | 1.05 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 14 | 1.07 | 0.18 | 1.05 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 14 | 1.07 | 0.18 | 1.05 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 14 | 1.04 | 0.25 | 1.11 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 14 | 1.04 | 0.25 | 1.11 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 14 | 1.04 | 0.25 | 1.11 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 14 | 1.04 | 0.25 | 1.11 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 14 | 1.04 | 0.25 | 1.11 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 14 | 1.04 | 0.25 | 1.11 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 14 | 1.0 | 0.06 | 1.03 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 14 | 1.0 | 0.06 | 1.03 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 14 | 1.0 | 0.06 | 1.03 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 14 | 0.85 | 0.2 | 0.84 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 14 | 0.85 | 0.2 | 0.84 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 14 | 0.85 | 0.2 | 0.84 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 14 | 0.7 | 0.02 | 0.7 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 14 | 0.7 | 0.02 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 14 | 0.7 | 0.02 | 0.7 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 14 | 0.52 | 0.18 | 0.53 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 14 | 0.52 | 0.18 | 0.53 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 14 | 0.52 | 0.18 | 0.53 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 14 | 0.51 | 0.15 | 0.52 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 14 | 0.51 | 0.15 | 0.52 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 14 | 0.51 | 0.15 | 0.52 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 14 | 0.49 | 0.12 | 0.48 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 14 | 0.49 | 0.12 | 0.48 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 14 | 0.49 | 0.12 | 0.48 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 14 | 0.18 | 0.01 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 14 | 0.18 | 0.01 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 14 | 0.18 | 0.01 | 0.18 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 13 | 1.81 | 0.14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 13 | 1.81 | 0.14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 13 | 1.81 | 0.14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 13 | 1.81 | 0.14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 13 | 1.81 | 0.14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 13 | 1.81 | 0.14 | 1.76 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 13 | 1.52 | 0.34 | 1.57 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 13 | 1.52 | 0.34 | 1.57 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 13 | 1.52 | 0.34 | 1.57 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 13 | 1.46 | 0.01 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 13 | 1.46 | 0.01 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 13 | 1.46 | 0.01 | 1.46 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 13 | 1.41 | 0.17 | 1.39 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 13 | 1.41 | 0.17 | 1.39 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 13 | 1.41 | 0.17 | 1.39 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 13 | 1.09 | 0.11 | 1.07 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 13 | 1.09 | 0.11 | 1.07 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 13 | 1.09 | 0.11 | 1.07 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 13 | 1.06 | 0.17 | 1.02 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 13 | 1.06 | 0.17 | 1.02 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 13 | 1.06 | 0.17 | 1.02 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 13 | 0.87 | 0.24 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 13 | 0.87 | 0.24 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 13 | 0.87 | 0.24 | 0.94 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 13 | 0.85 | 0.02 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 13 | 0.85 | 0.02 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 13 | 0.85 | 0.02 | 0.85 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 13 | 0.85 | 0.02 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 13 | 0.85 | 0.02 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 13 | 0.85 | 0.02 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 13 | 0.75 | 0.14 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 13 | 0.75 | 0.14 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 13 | 0.75 | 0.14 | 0.79 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 13 | 0.73 | 0.07 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 13 | 0.73 | 0.07 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 13 | 0.73 | 0.07 | 0.74 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 13 | 0.7 | 0.13 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 13 | 0.7 | 0.13 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 13 | 0.7 | 0.13 | 0.63 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 13 | 0.67 | 0.02 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 13 | 0.67 | 0.02 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 13 | 0.67 | 0.02 | 0.68 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 13 | 0.5 | 0.12 | 0.5 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 13 | 0.5 | 0.12 | 0.5 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 13 | 0.5 | 0.12 | 0.5 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 13 | 0.48 | 0.11 | 0.45 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 13 | 0.48 | 0.11 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 13 | 0.48 | 0.11 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 13 | 0.48 | 0.11 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 13 | 0.48 | 0.11 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 13 | 0.48 | 0.11 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 13 | 0.41 | 0.03 | 0.41 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 13 | 0.41 | 0.03 | 0.41 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 13 | 0.41 | 0.03 | 0.41 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 13 | 0.41 | 0.09 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 13 | 0.41 | 0.09 | 0.44 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 13 | 0.41 | 0.01 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 13 | 0.41 | 0.01 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 13 | 0.41 | 0.01 | 0.41 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 13 | 0.35 | 0.1 | 0.37 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 13 | 0.35 | 0.1 | 0.37 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 13 | 0.35 | 0.1 | 0.37 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 12 | 1.54 | 0.05 | 1.54 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 12 | 1.54 | 0.05 | 1.54 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 12 | 1.54 | 0.05 | 1.54 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 12 | 1.4 | 0.27 | 1.38 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 12 | 1.4 | 0.27 | 1.38 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 12 | 1.4 | 0.27 | 1.38 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 12 | 1.18 | 0.36 | 1.12 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 12 | 1.18 | 0.36 | 1.12 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 12 | 1.18 | 0.36 | 1.12 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 12 | 0.69 | 0.13 | 0.72 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 12 | 0.69 | 0.13 | 0.72 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 12 | 0.69 | 0.13 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 12 | 0.69 | 0.13 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 12 | 0.69 | 0.13 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 12 | 0.69 | 0.13 | 0.72 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 12 | 0.51 | 0.13 | 0.5 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 11 | 1.49 | 0.44 | 1.5 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 11 | 1.49 | 0.44 | 1.5 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 11 | 1.49 | 0.44 | 1.5 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 11 | 1.12 | 0.18 | 1.1 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 11 | 1.12 | 0.18 | 1.1 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 11 | 1.12 | 0.18 | 1.1 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 11 | 1.12 | 0.18 | 1.1 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 11 | 1.12 | 0.18 | 1.1 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 11 | 1.12 | 0.18 | 1.1 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 11 | 0.64 | 0.18 | 0.58 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 11 | 0.64 | 0.18 | 0.58 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 11 | 0.64 | 0.18 | 0.58 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 11 | 0.36 | 0.12 | 0.34 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 11 | 0.36 | 0.12 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 11 | 0.36 | 0.12 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 11 | 0.36 | 0.12 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 11 | 0.36 | 0.12 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 11 | 0.36 | 0.12 | 0.34 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 10 | 1.05 | 0.08 | 1.04 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 10 | 1.05 | 0.08 | 1.04 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 10 | 1.05 | 0.08 | 1.04 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 10 | 1.04 | 0.1 | 1.02 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 10 | 1.04 | 0.1 | 1.02 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 10 | 1.04 | 0.1 | 1.02 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 10 | 1.04 | 0.12 | 1.01 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 10 | 1.04 | 0.12 | 1.01 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 10 | 1.04 | 0.12 | 1.01 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 10 | 1.04 | 0.12 | 1.01 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 10 | 1.04 | 0.12 | 1.01 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 10 | 1.04 | 0.12 | 1.01 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 10 | 0.96 | 0.05 | 0.96 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 10 | 0.96 | 0.05 | 0.96 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 10 | 0.96 | 0.05 | 0.96 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 10 | 0.68 | 0.06 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 10 | 0.68 | 0.06 | 0.7 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 10 | 0.52 | 0.11 | 0.54 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 10 | 0.52 | 0.11 | 0.54 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 10 | 0.52 | 0.11 | 0.54 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 10 | 0.26 | 0.07 | 0.26 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 10 | 0.26 | 0.07 | 0.26 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 10 | 0.26 | 0.07 | 0.26 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 10 | 0.26 | 0.07 | 0.26 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 10 | 0.26 | 0.07 | 0.26 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 10 | 0.26 | 0.07 | 0.26 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 9 | 1.07 | 0.05 | 1.08 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 9 | 1.07 | 0.05 | 1.08 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 9 | 1.07 | 0.05 | 1.08 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 9 | 0.97 | 0.12 | 1.04 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 9 | 0.86 | 0.03 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 9 | 0.86 | 0.03 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 9 | 0.86 | 0.03 | 0.87 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 9 | 0.83 | 0.16 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 9 | 0.83 | 0.16 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 9 | 0.83 | 0.16 | 0.89 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 9 | 0.6 | 0.02 | 0.6 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 9 | 0.6 | 0.02 | 0.6 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 9 | 0.6 | 0.02 | 0.6 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 9 | 0.49 | 0.21 | 0.48 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 9 | 0.27 | 0.12 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 9 | 0.27 | 0.12 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 9 | 0.27 | 0.12 | 0.2 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 9 | 0.24 | 0.06 | 0.21 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 8 | 0.87 | 0.36 | 0.87 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 8 | 0.51 | 0.27 | 0.36 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 8 | 0.51 | 0.27 | 0.36 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 8 | 0.51 | 0.27 | 0.36 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 8 | 0.46 | 0.08 | 0.5 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 8 | 0.25 | 0.14 | 0.2 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 8 | 0.25 | 0.14 | 0.2 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 8 | 0.25 | 0.14 | 0.2 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 8 | 0.25 | 0.14 | 0.2 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 8 | 0.25 | 0.14 | 0.2 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 8 | 0.25 | 0.14 | 0.2 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 8 | 0.18 | 0.02 | 0.18 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 8 | 0.13 | 0.02 | 0.14 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 8 | 0.13 | 0.02 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 8 | 0.13 | 0.02 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 8 | 0.13 | 0.02 | 0.14 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 8 | 0.13 | 0.02 | 0.14 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|------------------|---------------------|----------|---------------------|------------|
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 8 | 0.13 | 0.02 | 0.14 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 7 | 0.92 | 0.12 | 0.9 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 7 | 0.63 | 0.28 | 0.81 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 7 | 0.51 | 0.27 | 0.59 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 7 | 0.25 | 0.1 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 7 | 0.25 | 0.1 | 0.25 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 6 | 0.26 | 0.09 | 0.24 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 6 | 0.26 | 0.09 | 0.24 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 6 | 0.26 | 0.09 | 0.24 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 6 | 0.2 | 0.15 | 0.14 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 5 | 0.96 | 0.07 | 0.98 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 5 | 0.61 | 0.11 | 0.66 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 5 | 0.61 | 0.01 | 0.6 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 5 | 0.59 | 0.23 | 0.71 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 5 | 0.48 | 0.18 | 0.41 |
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 5 | 0.43 | 0.09 | 0.39 |
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 5 | 0.42 | 0.05 | 0.39 |
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 5 | 0.35 | 0.02 | 0.35 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 5 | 0.33 | 0.05 | 0.34 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 5 | 0.31 | 0.09 | 0.25 |
| (2,114) | 1:A:126:ASP:HB3 | 1:A:128:GLU:H | 4 | 1.19 | 0.07 | 1.2 |
| (2,453) | 1:A:45:LEU:H | 1:A:46:GLU:HG3 | 4 | 0.78 | 0.06 | 0.79 |
| (1,255) | 1:A:91:ALA:HA | 1:A:90:ASP:HB2 | 4 | 0.47 | 0.05 | 0.46 |
| (1,747) | 1:A:84:TYR:HE1 | 1:A:101:TYR:HD1 | 4 | 0.4 | 0.18 | 0.45 |
| (1,747) | 1:A:84:TYR:HE2 | 1:A:101:TYR:HD1 | 4 | 0.4 | 0.18 | 0.45 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB2 | 4 | 0.35 | 0.09 | 0.38 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB3 | 4 | 0.35 | 0.09 | 0.38 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG11 | 4 | 0.34 | 0.4 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG12 | 4 | 0.34 | 0.4 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG13 | 4 | 0.34 | 0.4 | 0.12 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD1 | 4 | 0.32 | 0.09 | 0.32 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD2 | 4 | 0.32 | 0.09 | 0.32 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD11 | 4 | 0.25 | 0.1 | 0.2 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD12 | 4 | 0.25 | 0.1 | 0.2 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD13 | 4 | 0.25 | 0.1 | 0.2 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,233) | 1:A:14:ILE:HG21 | 1:A:15:PRO:HD3 | 4 | 0.18 | 0.02 | 0.2 |
| (1,233) | 1:A:14:ILE:HG22 | 1:A:15:PRO:HD3 | 4 | 0.18 | 0.02 | 0.2 |
| (1,233) | 1:A:14:ILE:HG23 | 1:A:15:PRO:HD3 | 4 | 0.18 | 0.02 | 0.2 |
| (2,189) | 1:A:96:ILE:HG21 | 1:A:92:LEU:HB2 | 3 | 1.13 | 0.06 | 1.16 |
| (2,189) | 1:A:96:ILE:HG22 | 1:A:92:LEU:HB2 | 3 | 1.13 | 0.06 | 1.16 |
| (2,189) | 1:A:96:ILE:HG23 | 1:A:92:LEU:HB2 | 3 | 1.13 | 0.06 | 1.16 |
| (2,226) | 1:A:13:ASP:HA | 1:A:149:GLU:HG3 | 3 | 1.12 | 0.14 | 1.02 |
| (2,302) | 1:A:54:ILE:HA | 1:A:55:LYS:HD2 | 3 | 0.53 | 0.01 | 0.54 |
| (2,216) | 1:A:71:LYS:HA | 1:A:55:LYS:HD2 | 3 | 0.53 | 0.13 | 0.54 |
| (1,719) | 1:A:114:ILE:H | 1:A:107:SER:HB3 | 3 | 0.48 | 0.05 | 0.52 |
| (2,335) | 1:A:125:GLY:H | 1:A:126:ASP:HB2 | 3 | 0.22 | 0.06 | 0.24 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD21 | 2 | 2.12 | 0.02 | 2.12 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD22 | 2 | 2.12 | 0.02 | 2.12 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD23 | 2 | 2.12 | 0.02 | 2.12 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD21 | 2 | 1.11 | 0.34 | 1.11 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD22 | 2 | 1.11 | 0.34 | 1.11 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD23 | 2 | 1.11 | 0.34 | 1.11 |
| (2,314) | 1:A:105:LEU:HD21 | 1:A:104:LYS:HB3 | 2 | 1.02 | 0.01 | 1.02 |
| (2,314) | 1:A:105:LEU:HD22 | 1:A:104:LYS:HB3 | 2 | 1.02 | 0.01 | 1.02 |
| (2,314) | 1:A:105:LEU:HD23 | 1:A:104:LYS:HB3 | 2 | 1.02 | 0.01 | 1.02 |
| (1,399) | 1:A:105:LEU:HD21 | 1:A:103:THR:HB | 2 | 0.98 | 0.01 | 0.98 |
| (1,399) | 1:A:105:LEU:HD22 | 1:A:103:THR:HB | 2 | 0.98 | 0.01 | 0.98 |
| (1,399) | 1:A:105:LEU:HD23 | 1:A:103:THR:HB | 2 | 0.98 | 0.01 | 0.98 |
| (2,35) | 1:A:152:LEU:HG | 1:A:14:ILE:HG12 | 2 | 0.7 | 0.3 | 0.7 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD21 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD22 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD23 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD21 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD22 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD23 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD21 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD22 | 2 | 0.36 | 0.1 | 0.36 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD23 | 2 | 0.36 | 0.1 | 0.36 |
| (2,127) | 1:A:10:PHE:HB3 | 1:A:115:ILE:HG12 | 2 | 0.2 | 0.04 | 0.2 |
| (2,294) | 1:A:68:VAL:HG11 | 1:A:92:LEU:HB3 | 2 | 0.2 | 0.08 | 0.2 |
| (2,294) | 1:A:68:VAL:HG12 | 1:A:92:LEU:HB3 | 2 | 0.2 | 0.08 | 0.2 |
| (2,294) | 1:A:68:VAL:HG13 | 1:A:92:LEU:HB3 | 2 | 0.2 | 0.08 | 0.2 |
| (2,292) | 1:A:25:LEU:HD11 | 1:A:22:ALA:HA | 2 | 0.18 | 0.04 | 0.18 |
| (2,292) | 1:A:25:LEU:HD12 | 1:A:22:ALA:HA | 2 | 0.18 | 0.04 | 0.18 |
| (2,292) | 1:A:25:LEU:HD13 | 1:A:22:ALA:HA | 2 | 0.18 | 0.04 | 0.18 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG11 | 2 | 0.18 | 0.01 | 0.18 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG12 | 2 | 0.18 | 0.01 | 0.18 |

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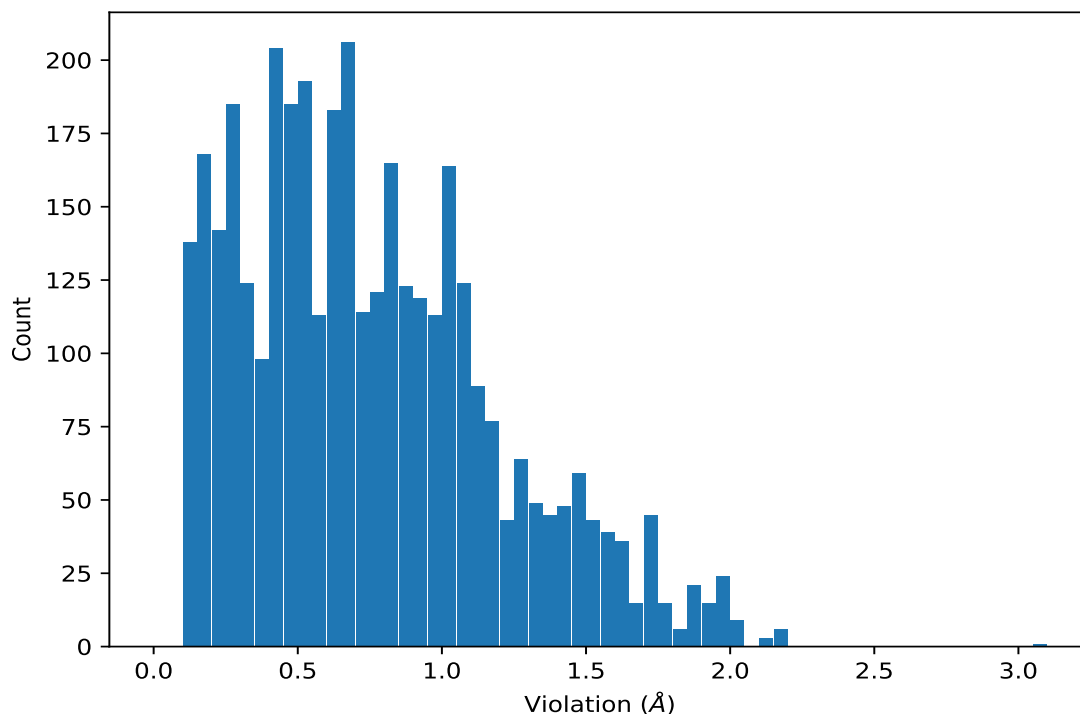
| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG13 | 2 | 0.18 | 0.01 | 0.18 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD11 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD12 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD13 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD11 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD12 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD13 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD11 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD12 | 2 | 0.16 | 0.05 | 0.16 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD13 | 2 | 0.16 | 0.05 | 0.16 |
| (1,28) | 1:A:87:ILE:HA | 1:A:88:GLU:HG2 | 2 | 0.15 | 0.02 | 0.15 |
| (1,111) | 1:A:81:THR:HB | 1:A:79:ASN:HB3 | 2 | 0.12 | 0.02 | 0.12 |
| (2,110) | 1:A:20:PHE:HB2 | 1:A:17:PRO:HG3 | 2 | 0.12 | 0.01 | 0.12 |
| (2,110) | 1:A:20:PHE:HB3 | 1:A:17:PRO:HG3 | 2 | 0.12 | 0.01 | 0.12 |

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) |
|---------|------------------|------------------|----------|---------------|
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 18 | 3.06 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 5 | 2.15 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 5 | 2.15 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 5 | 2.15 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD21 | 15 | 2.15 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD22 | 15 | 2.15 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD23 | 15 | 2.15 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD21 | 5 | 2.1 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD22 | 5 | 2.1 |
| (1,710) | 1:A:104:LYS:H | 1:A:105:LEU:HD23 | 5 | 2.1 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 2 | 2.0 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 2 | 2.0 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 2 | 2.0 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 19 | 2.0 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 19 | 2.0 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 19 | 2.0 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 19 | 2.0 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 19 | 2.0 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 19 | 2.0 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 2 | 1.99 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 2 | 1.99 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 2 | 1.99 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 20 | 1.99 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 20 | 1.99 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 20 | 1.99 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 20 | 1.99 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 20 | 1.99 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 20 | 1.99 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 12 | 1.98 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 12 | 1.98 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 12 | 1.98 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 8 | 1.97 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 8 | 1.97 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 8 | 1.97 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 9 | 1.96 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 9 | 1.96 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 9 | 1.96 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 8 | 1.94 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 8 | 1.94 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 8 | 1.94 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 10 | 1.94 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 10 | 1.94 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 10 | 1.94 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 10 | 1.94 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 10 | 1.94 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 10 | 1.94 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 7 | 1.93 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 7 | 1.93 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 7 | 1.93 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 17 | 1.93 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 17 | 1.93 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 17 | 1.93 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 12 | 1.9 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 12 | 1.9 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 12 | 1.9 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 19 | 1.9 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 19 | 1.9 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 19 | 1.9 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 10 | 1.88 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 10 | 1.88 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 10 | 1.88 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 8 | 1.85 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 13 | 1.85 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 13 | 1.85 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 13 | 1.85 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 13 | 1.85 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 13 | 1.85 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 13 | 1.85 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 19 | 1.82 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 19 | 1.82 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 19 | 1.82 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 19 | 1.8 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 19 | 1.8 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 19 | 1.8 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 9 | 1.78 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 9 | 1.78 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 9 | 1.78 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 5 | 1.78 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 5 | 1.78 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 5 | 1.78 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 4 | 1.77 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 4 | 1.77 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 4 | 1.77 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 14 | 1.76 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 14 | 1.76 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 20 | 1.73 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 20 | 1.73 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 20 | 1.73 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 15 | 1.73 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 15 | 1.73 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 15 | 1.73 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 18 | 1.73 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 18 | 1.73 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 18 | 1.73 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 1 | 1.73 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 16 | 1.73 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 16 | 1.73 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 16 | 1.73 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 16 | 1.73 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 16 | 1.73 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 16 | 1.73 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 3 | 1.73 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 3 | 1.73 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 3 | 1.73 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 17 | 1.72 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 17 | 1.72 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 17 | 1.72 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 17 | 1.72 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 17 | 1.72 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 17 | 1.72 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 1 | 1.71 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 1 | 1.71 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 1 | 1.71 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 5 | 1.71 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 12 | 1.71 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 12 | 1.71 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 12 | 1.71 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 12 | 1.71 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 12 | 1.71 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 12 | 1.71 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 1 | 1.69 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 1 | 1.69 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 1 | 1.69 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 8 | 1.69 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 8 | 1.69 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 8 | 1.69 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 19 | 1.68 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 19 | 1.68 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 19 | 1.68 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 7 | 1.67 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 7 | 1.67 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 7 | 1.67 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 9 | 1.67 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 9 | 1.67 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 9 | 1.67 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 12 | 1.65 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 12 | 1.65 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 12 | 1.65 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 10 | 1.65 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 10 | 1.65 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 10 | 1.65 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 7 | 1.65 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 7 | 1.65 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 7 | 1.65 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 3 | 1.64 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 3 | 1.64 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 3 | 1.64 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 16 | 1.63 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 16 | 1.63 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 16 | 1.63 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 2 | 1.63 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 3 | 1.62 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 17 | 1.62 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 17 | 1.62 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 17 | 1.62 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 19 | 1.62 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 19 | 1.62 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 19 | 1.62 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 20 | 1.62 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 16 | 1.61 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 16 | 1.61 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 16 | 1.61 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 6 | 1.61 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 6 | 1.61 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 6 | 1.61 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 5 | 1.6 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 5 | 1.6 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 5 | 1.6 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 19 | 1.6 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 19 | 1.6 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 19 | 1.6 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 8 | 1.59 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 8 | 1.59 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 8 | 1.59 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 4 | 1.59 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 4 | 1.59 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 4 | 1.59 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 13 | 1.58 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 13 | 1.58 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 13 | 1.58 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 9 | 1.58 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 9 | 1.58 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 9 | 1.58 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 3 | 1.58 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 3 | 1.58 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 3 | 1.58 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 7 | 1.57 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 20 | 1.57 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 20 | 1.57 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 20 | 1.57 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 8 | 1.56 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 9 | 1.56 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 1 | 1.56 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 1 | 1.56 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 1 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 2 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 2 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 2 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 11 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 11 | 1.56 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 11 | 1.56 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 16 | 1.55 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 16 | 1.55 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 16 | 1.55 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 9 | 1.55 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 9 | 1.55 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 9 | 1.55 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 1 | 1.55 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 1 | 1.55 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 1 | 1.55 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 11 | 1.54 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 11 | 1.54 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 11 | 1.54 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 1 | 1.54 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 1 | 1.54 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 1 | 1.54 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD1 | 18 | 1.53 |
| (1,373) | 1:A:68:VAL:HG11 | 1:A:59:PHE:HD2 | 18 | 1.53 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD1 | 18 | 1.53 |
| (1,373) | 1:A:68:VAL:HG12 | 1:A:59:PHE:HD2 | 18 | 1.53 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD1 | 18 | 1.53 |
| (1,373) | 1:A:68:VAL:HG13 | 1:A:59:PHE:HD2 | 18 | 1.53 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 15 | 1.53 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 15 | 1.53 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 15 | 1.53 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 20 | 1.53 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 20 | 1.53 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 20 | 1.53 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 19 | 1.52 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 19 | 1.52 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 19 | 1.52 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 16 | 1.52 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 16 | 1.52 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 16 | 1.52 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 2 | 1.51 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 18 | 1.51 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 18 | 1.51 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 18 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 6 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 6 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 6 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 19 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 19 | 1.51 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 19 | 1.51 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 20 | 1.5 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 20 | 1.5 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 20 | 1.5 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 11 | 1.5 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 11 | 1.5 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 11 | 1.5 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 10 | 1.5 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 10 | 1.5 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 10 | 1.5 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 11 | 1.49 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 11 | 1.49 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 11 | 1.49 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 13 | 1.49 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 13 | 1.49 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 13 | 1.49 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 20 | 1.48 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 20 | 1.48 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 20 | 1.48 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 19 | 1.47 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 4 | 1.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 4 | 1.47 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 4 | 1.47 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 11 | 1.47 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 11 | 1.47 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 11 | 1.47 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 13 | 1.47 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 13 | 1.47 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 13 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 1 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 1 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 1 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 16 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 16 | 1.47 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 16 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 15 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 15 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 15 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 20 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 20 | 1.47 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 20 | 1.47 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 6 | 1.46 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 14 | 1.46 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 14 | 1.46 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 14 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 2 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 2 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 2 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 5 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 5 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 5 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 8 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 8 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 8 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 10 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 10 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 10 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 12 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 12 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 12 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 13 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 13 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 13 | 1.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 17 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 17 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 17 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 20 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 20 | 1.46 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 20 | 1.46 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 5 | 1.45 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD21 | 20 | 1.45 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD22 | 20 | 1.45 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD23 | 20 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 14 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 14 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 14 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 18 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 18 | 1.45 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 18 | 1.45 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 10 | 1.44 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 10 | 1.44 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 10 | 1.44 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG11 | 19 | 1.44 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG12 | 19 | 1.44 |
| (1,318) | 1:A:67:TYR:HA | 1:A:68:VAL:HG13 | 19 | 1.44 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 19 | 1.44 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 1 | 1.44 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 1 | 1.44 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 1 | 1.44 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 20 | 1.43 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 18 | 1.43 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD21 | 3 | 1.43 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD22 | 3 | 1.43 |
| (1,254) | 1:A:91:ALA:HA | 1:A:92:LEU:HD23 | 3 | 1.43 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 4 | 1.43 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 11 | 1.42 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 12 | 1.42 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 14 | 1.42 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 1 | 1.42 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 12 | 1.41 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 12 | 1.41 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 12 | 1.41 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 12 | 1.41 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 12 | 1.41 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 12 | 1.41 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 7 | 1.41 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 7 | 1.41 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 7 | 1.41 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 7 | 1.41 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 7 | 1.41 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 7 | 1.41 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 17 | 1.41 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 17 | 1.41 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 17 | 1.41 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 17 | 1.41 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 17 | 1.41 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 17 | 1.41 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 1 | 1.4 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 10 | 1.4 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 4 | 1.39 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 4 | 1.39 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 4 | 1.39 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 4 | 1.39 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 7 | 1.39 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 7 | 1.39 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 7 | 1.39 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 4 | 1.38 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 13 | 1.38 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 13 | 1.38 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 13 | 1.38 |
| (2,310) | 1:A:105:LEU:HD21 | 1:A:113:THR:HB | 17 | 1.38 |
| (2,310) | 1:A:105:LEU:HD22 | 1:A:113:THR:HB | 17 | 1.38 |
| (2,310) | 1:A:105:LEU:HD23 | 1:A:113:THR:HB | 17 | 1.38 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 16 | 1.38 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 16 | 1.38 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 16 | 1.38 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 16 | 1.37 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 16 | 1.37 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 16 | 1.37 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 18 | 1.37 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 18 | 1.37 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 18 | 1.37 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 7 | 1.37 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 7 | 1.37 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 7 | 1.37 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 19 | 1.37 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 19 | 1.37 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 19 | 1.37 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 15 | 1.36 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 10 | 1.36 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 10 | 1.36 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 10 | 1.36 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 13 | 1.35 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 10 | 1.35 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 10 | 1.35 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 10 | 1.35 |
| (2,86) | 1:A:53:THR:HB | 1:A:44:ILE:HG12 | 16 | 1.34 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 16 | 1.34 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 10 | 1.34 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 10 | 1.34 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 10 | 1.34 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 20 | 1.34 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 20 | 1.34 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 20 | 1.34 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 15 | 1.33 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 15 | 1.33 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 15 | 1.33 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 9 | 1.33 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 9 | 1.33 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 9 | 1.33 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 9 | 1.33 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 9 | 1.33 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 9 | 1.33 |
| (2,42) | 1:A:17:PRO:HG3 | 1:A:18:LYS:HD3 | 17 | 1.32 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 16 | 1.32 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 16 | 1.32 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 16 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 4 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 4 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 4 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 5 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 5 | 1.32 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 5 | 1.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 14 | 1.32 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 14 | 1.32 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 14 | 1.32 |
| (2,226) | 1:A:13:ASP:HA | 1:A:149:GLU:HG3 | 13 | 1.31 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 14 | 1.31 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 14 | 1.31 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 14 | 1.31 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 13 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 13 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 13 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 14 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 14 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 14 | 1.3 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 8 | 1.3 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 8 | 1.3 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 8 | 1.3 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 8 | 1.3 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 8 | 1.3 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 8 | 1.3 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 1 | 1.3 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 1 | 1.3 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 1 | 1.3 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 12 | 1.29 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 12 | 1.29 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 12 | 1.29 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 6 | 1.29 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 6 | 1.29 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 6 | 1.29 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 18 | 1.29 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 18 | 1.29 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 18 | 1.29 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 4 | 1.29 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 4 | 1.29 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 4 | 1.29 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 3 | 1.28 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 2 | 1.28 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 2 | 1.28 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 2 | 1.28 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 18 | 1.28 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 18 | 1.28 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 18 | 1.28 |
| (2,114) | 1:A:126:ASP:HB3 | 1:A:128:GLU:H | 2 | 1.28 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 4 | 1.28 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 16 | 1.28 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 16 | 1.28 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 16 | 1.28 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 16 | 1.28 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 16 | 1.28 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 16 | 1.28 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 9 | 1.28 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 9 | 1.28 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 9 | 1.28 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 6 | 1.27 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 13 | 1.27 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 13 | 1.27 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 13 | 1.27 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 8 | 1.26 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 8 | 1.26 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 8 | 1.26 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 12 | 1.26 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 12 | 1.26 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 12 | 1.26 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 2 | 1.26 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 2 | 1.26 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 2 | 1.26 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 8 | 1.26 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 11 | 1.26 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 11 | 1.26 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 11 | 1.26 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 11 | 1.26 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 11 | 1.26 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 11 | 1.26 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 14 | 1.26 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 14 | 1.26 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 14 | 1.26 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 6 | 1.25 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 6 | 1.25 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 6 | 1.25 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 12 | 1.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 12 | 1.25 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 12 | 1.25 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 10 | 1.24 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 10 | 1.24 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 10 | 1.24 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 10 | 1.24 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 14 | 1.24 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 14 | 1.24 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 14 | 1.24 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 4 | 1.23 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 4 | 1.23 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 8 | 1.23 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 8 | 1.23 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 8 | 1.23 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 5 | 1.23 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 5 | 1.23 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 5 | 1.23 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 20 | 1.23 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 20 | 1.23 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 20 | 1.23 |
| (2,114) | 1:A:126:ASP:HB3 | 1:A:128:GLU:H | 11 | 1.22 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 6 | 1.22 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 6 | 1.22 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 6 | 1.22 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 6 | 1.22 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 6 | 1.22 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 6 | 1.22 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 6 | 1.22 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 6 | 1.22 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 6 | 1.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 3 | 1.21 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 3 | 1.21 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 3 | 1.21 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 5 | 1.2 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 5 | 1.2 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 5 | 1.2 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 5 | 1.2 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 5 | 1.2 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 5 | 1.2 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 8 | 1.2 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 8 | 1.2 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 8 | 1.2 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 5 | 1.19 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 5 | 1.19 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 5 | 1.19 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 10 | 1.19 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 10 | 1.19 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 10 | 1.19 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 19 | 1.19 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 19 | 1.19 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 19 | 1.19 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 7 | 1.19 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 7 | 1.19 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 7 | 1.19 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 7 | 1.19 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 7 | 1.19 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 7 | 1.19 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 13 | 1.19 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 13 | 1.19 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 13 | 1.19 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 13 | 1.19 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 13 | 1.19 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 13 | 1.19 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 6 | 1.18 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 6 | 1.18 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 6 | 1.18 |
| (2,189) | 1:A:96:ILE:HG21 | 1:A:92:LEU:HB2 | 11 | 1.18 |
| (2,189) | 1:A:96:ILE:HG22 | 1:A:92:LEU:HB2 | 11 | 1.18 |
| (2,189) | 1:A:96:ILE:HG23 | 1:A:92:LEU:HB2 | 11 | 1.18 |
| (2,114) | 1:A:126:ASP:HB3 | 1:A:128:GLU:H | 15 | 1.18 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 20 | 1.18 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 20 | 1.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 20 | 1.18 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 11 | 1.18 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 11 | 1.18 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 11 | 1.18 |
| (1,267) | 1:A:108:ALA:HB1 | 1:A:110:HIS:HB3 | 20 | 1.18 |
| (1,267) | 1:A:108:ALA:HB2 | 1:A:110:HIS:HB3 | 20 | 1.18 |
| (1,267) | 1:A:108:ALA:HB3 | 1:A:110:HIS:HB3 | 20 | 1.18 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 1 | 1.17 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 1 | 1.17 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 1 | 1.17 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 8 | 1.17 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 8 | 1.17 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 8 | 1.17 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 19 | 1.17 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 19 | 1.17 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 19 | 1.17 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 19 | 1.17 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 19 | 1.17 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 19 | 1.17 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 16 | 1.17 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 16 | 1.17 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 16 | 1.17 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 12 | 1.17 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 12 | 1.17 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 12 | 1.17 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 5 | 1.16 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 5 | 1.16 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 5 | 1.16 |
| (2,189) | 1:A:96:ILE:HG21 | 1:A:92:LEU:HB2 | 6 | 1.16 |
| (2,189) | 1:A:96:ILE:HG22 | 1:A:92:LEU:HB2 | 6 | 1.16 |
| (2,189) | 1:A:96:ILE:HG23 | 1:A:92:LEU:HB2 | 6 | 1.16 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 14 | 1.16 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 14 | 1.16 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 14 | 1.16 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 16 | 1.16 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 16 | 1.16 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 16 | 1.16 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 3 | 1.16 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 13 | 1.15 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 13 | 1.15 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 13 | 1.15 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 10 | 1.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 10 | 1.15 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 10 | 1.15 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 12 | 1.15 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 12 | 1.15 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 12 | 1.15 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 12 | 1.15 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 12 | 1.15 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 12 | 1.15 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 7 | 1.15 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 1 | 1.14 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 2 | 1.14 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 12 | 1.14 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 12 | 1.14 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 12 | 1.14 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 12 | 1.14 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 12 | 1.14 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 12 | 1.14 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 19 | 1.14 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 19 | 1.14 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 19 | 1.14 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 14 | 1.13 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 14 | 1.13 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 14 | 1.13 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 14 | 1.13 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 14 | 1.13 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 14 | 1.13 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 2 | 1.13 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 2 | 1.13 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 2 | 1.13 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 4 | 1.12 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 4 | 1.12 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 4 | 1.12 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 8 | 1.12 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 8 | 1.12 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 8 | 1.12 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 8 | 1.12 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 8 | 1.12 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 8 | 1.12 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 20 | 1.12 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 20 | 1.12 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 20 | 1.12 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 2 | 1.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 2 | 1.12 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 2 | 1.12 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 17 | 1.11 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 17 | 1.11 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 17 | 1.11 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 17 | 1.11 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 9 | 1.11 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 9 | 1.11 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 9 | 1.11 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 11 | 1.11 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 5 | 1.11 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 5 | 1.11 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 5 | 1.11 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 16 | 1.11 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 16 | 1.11 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 16 | 1.11 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 6 | 1.11 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 6 | 1.11 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 6 | 1.11 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 5 | 1.1 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 5 | 1.1 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 5 | 1.1 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 8 | 1.1 |
| (2,114) | 1:A:126:ASP:HB3 | 1:A:128:GLU:H | 18 | 1.1 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 20 | 1.1 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 14 | 1.1 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 14 | 1.1 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 14 | 1.1 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG11 | 15 | 1.1 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG12 | 15 | 1.1 |
| (1,49) | 1:A:20:PHE:HA | 1:A:24:VAL:HG13 | 15 | 1.1 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 20 | 1.1 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 20 | 1.1 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 20 | 1.1 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 20 | 1.1 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 20 | 1.1 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 20 | 1.1 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 11 | 1.1 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 11 | 1.1 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 11 | 1.1 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 11 | 1.1 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 11 | 1.1 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 11 | 1.1 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 14 | 1.09 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 14 | 1.09 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 14 | 1.09 |
| (2,271) | 1:A:147:LEU:HD21 | 1:A:146:LYS:HA | 9 | 1.09 |
| (2,271) | 1:A:147:LEU:HD22 | 1:A:146:LYS:HA | 9 | 1.09 |
| (2,271) | 1:A:147:LEU:HD23 | 1:A:146:LYS:HA | 9 | 1.09 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 7 | 1.09 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 7 | 1.09 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 7 | 1.09 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 9 | 1.09 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 9 | 1.09 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 9 | 1.09 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 4 | 1.09 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 20 | 1.09 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 11 | 1.09 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 11 | 1.09 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 13 | 1.09 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 13 | 1.09 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 13 | 1.09 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 20 | 1.09 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 20 | 1.09 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 20 | 1.09 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 5 | 1.09 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 5 | 1.09 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 5 | 1.09 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 11 | 1.09 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 11 | 1.09 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 11 | 1.09 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 18 | 1.08 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 18 | 1.08 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 18 | 1.08 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 20 | 1.08 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 20 | 1.08 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 20 | 1.08 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 7 | 1.08 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 7 | 1.08 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 7 | 1.08 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 8 | 1.08 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 8 | 1.08 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 8 | 1.08 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 14 | 1.07 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 14 | 1.07 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 14 | 1.07 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 16 | 1.07 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 16 | 1.07 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 16 | 1.07 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 1 | 1.07 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 1 | 1.07 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 1 | 1.07 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 13 | 1.07 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 13 | 1.07 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 13 | 1.07 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 16 | 1.07 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 16 | 1.07 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 16 | 1.07 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 19 | 1.06 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 19 | 1.06 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 19 | 1.06 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 11 | 1.06 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 20 | 1.06 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 20 | 1.06 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 20 | 1.06 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 5 | 1.06 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 5 | 1.06 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 5 | 1.06 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 5 | 1.06 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 5 | 1.06 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 5 | 1.06 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 12 | 1.06 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 12 | 1.06 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 12 | 1.06 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 7 | 1.06 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 7 | 1.06 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 7 | 1.06 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 13 | 1.06 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 13 | 1.06 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 13 | 1.06 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 14 | 1.06 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 14 | 1.06 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 14 | 1.06 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 15 | 1.06 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 10 | 1.05 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 4 | 1.05 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 4 | 1.05 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 4 | 1.05 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 12 | 1.05 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 14 | 1.05 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 14 | 1.05 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 14 | 1.05 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 16 | 1.05 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 1 | 1.05 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 1 | 1.05 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 1 | 1.05 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 4 | 1.05 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 4 | 1.05 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 4 | 1.05 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 16 | 1.05 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 16 | 1.05 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 16 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 5 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 5 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 5 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 18 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 18 | 1.05 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 18 | 1.05 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 2 | 1.05 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 2 | 1.05 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 2 | 1.05 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 11 | 1.05 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 11 | 1.05 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 11 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 5 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 5 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 5 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 19 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 19 | 1.05 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 19 | 1.05 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 3 | 1.04 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 14 | 1.04 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 14 | 1.04 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 14 | 1.04 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 9 | 1.04 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 9 | 1.04 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 9 | 1.04 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 11 | 1.04 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 11 | 1.04 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 11 | 1.04 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 20 | 1.04 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 20 | 1.04 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 20 | 1.04 |
| (2,189) | 1:A:96:ILE:HG21 | 1:A:92:LEU:HB2 | 13 | 1.04 |
| (2,189) | 1:A:96:ILE:HG22 | 1:A:92:LEU:HB2 | 13 | 1.04 |
| (2,189) | 1:A:96:ILE:HG23 | 1:A:92:LEU:HB2 | 13 | 1.04 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 8 | 1.04 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 19 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 18 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 18 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 18 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 20 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 20 | 1.04 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 20 | 1.04 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 1 | 1.04 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 1 | 1.04 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 1 | 1.04 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 1 | 1.04 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 1 | 1.04 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 1 | 1.04 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 20 | 1.04 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 20 | 1.04 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 20 | 1.04 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 16 | 1.04 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 16 | 1.04 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 16 | 1.04 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD11 | 2 | 1.04 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD12 | 2 | 1.04 |
| (1,21) | 1:A:87:ILE:HA | 1:A:92:LEU:HD13 | 2 | 1.04 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 8 | 1.04 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 8 | 1.04 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 8 | 1.04 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 18 | 1.04 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 18 | 1.04 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 18 | 1.04 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 20 | 1.04 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 20 | 1.04 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 20 | 1.04 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 16 | 1.03 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 16 | 1.03 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 16 | 1.03 |
| (2,314) | 1:A:105:LEU:HD21 | 1:A:104:LYS:HB3 | 5 | 1.03 |
| (2,314) | 1:A:105:LEU:HD22 | 1:A:104:LYS:HB3 | 5 | 1.03 |
| (2,314) | 1:A:105:LEU:HD23 | 1:A:104:LYS:HB3 | 5 | 1.03 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 4 | 1.03 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 4 | 1.03 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 4 | 1.03 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 16 | 1.03 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 16 | 1.03 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 16 | 1.03 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 16 | 1.03 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 16 | 1.03 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 16 | 1.03 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 5 | 1.03 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 13 | 1.03 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 13 | 1.03 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 13 | 1.03 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD11 | 19 | 1.03 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD12 | 19 | 1.03 |
| (1,542) | 1:A:69:LYS:H | 1:A:86:LEU:HD13 | 19 | 1.03 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 1 | 1.03 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 1 | 1.03 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 1 | 1.03 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 6 | 1.03 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 6 | 1.03 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 6 | 1.03 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 6 | 1.03 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 6 | 1.03 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 6 | 1.03 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG11 | 15 | 1.03 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG12 | 15 | 1.03 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG13 | 15 | 1.03 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 11 | 1.03 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 11 | 1.03 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 11 | 1.03 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 3 | 1.02 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 3 | 1.02 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 3 | 1.02 |
| (2,314) | 1:A:105:LEU:HD21 | 1:A:104:LYS:HB3 | 15 | 1.02 |
| (2,314) | 1:A:105:LEU:HD22 | 1:A:104:LYS:HB3 | 15 | 1.02 |
| (2,314) | 1:A:105:LEU:HD23 | 1:A:104:LYS:HB3 | 15 | 1.02 |
| (2,290) | 1:A:68:VAL:HG11 | 1:A:66:GLY:HA2 | 19 | 1.02 |
| (2,290) | 1:A:68:VAL:HG12 | 1:A:66:GLY:HA2 | 19 | 1.02 |
| (2,290) | 1:A:68:VAL:HG13 | 1:A:66:GLY:HA2 | 19 | 1.02 |
| (2,226) | 1:A:13:ASP:HA | 1:A:149:GLU:HG3 | 12 | 1.02 |
| (2,226) | 1:A:13:ASP:HA | 1:A:149:GLU:HG3 | 15 | 1.02 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 1 | 1.02 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 1 | 1.02 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 1 | 1.02 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 18 | 1.02 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 18 | 1.02 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 18 | 1.02 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 18 | 1.02 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 18 | 1.02 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 18 | 1.02 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 5 | 1.02 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 5 | 1.02 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 5 | 1.02 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 17 | 1.02 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 18 | 1.02 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 18 | 1.02 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 18 | 1.02 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 2 | 1.02 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 2 | 1.02 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 2 | 1.02 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 6 | 1.02 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 6 | 1.02 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 6 | 1.02 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 10 | 1.01 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 10 | 1.01 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 10 | 1.01 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 18 | 1.01 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 13 | 1.01 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 13 | 1.01 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 13 | 1.01 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 1 | 1.01 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 17 | 1.01 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 17 | 1.01 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 17 | 1.01 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 9 | 1.01 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 9 | 1.01 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 9 | 1.01 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 10 | 1.01 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 10 | 1.01 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 10 | 1.01 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 18 | 1.01 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 18 | 1.01 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 18 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 8 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 8 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 8 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 12 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 12 | 1.01 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 12 | 1.01 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 13 | 1.0 |
| (2,35) | 1:A:152:LEU:HG | 1:A:14:ILE:HG12 | 18 | 1.0 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 20 | 1.0 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 20 | 1.0 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 20 | 1.0 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 20 | 1.0 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 5 | 1.0 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 5 | 1.0 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 5 | 1.0 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 19 | 1.0 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 19 | 1.0 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 19 | 1.0 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 19 | 1.0 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 19 | 1.0 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 19 | 1.0 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 9 | 0.99 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 9 | 0.99 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 9 | 0.99 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 3 | 0.99 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 3 | 0.99 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 3 | 0.99 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 14 | 0.99 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 14 | 0.99 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 14 | 0.99 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 6 | 0.99 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 6 | 0.99 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 13 | 0.99 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 13 | 0.99 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 13 | 0.99 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 13 | 0.99 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 13 | 0.99 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 13 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 10 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 10 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 10 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 18 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 18 | 0.99 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 18 | 0.99 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 19 | 0.99 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 19 | 0.99 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 19 | 0.99 |
| (1,399) | 1:A:105:LEU:HD21 | 1:A:103:THR:HB | 15 | 0.99 |
| (1,399) | 1:A:105:LEU:HD22 | 1:A:103:THR:HB | 15 | 0.99 |
| (1,399) | 1:A:105:LEU:HD23 | 1:A:103:THR:HB | 15 | 0.99 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 17 | 0.99 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 17 | 0.99 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 17 | 0.99 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 11 | 0.99 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 11 | 0.99 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 11 | 0.99 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 2 | 0.98 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 12 | 0.98 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 12 | 0.98 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 12 | 0.98 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 3 | 0.98 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 3 | 0.98 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 3 | 0.98 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 12 | 0.98 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 16 | 0.98 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 16 | 0.98 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 16 | 0.98 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD21 | 9 | 0.98 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD22 | 9 | 0.98 |
| (1,518) | 1:A:155:HIS:H | 1:A:152:LEU:HD23 | 9 | 0.98 |
| (1,399) | 1:A:105:LEU:HD21 | 1:A:103:THR:HB | 5 | 0.98 |
| (1,399) | 1:A:105:LEU:HD22 | 1:A:103:THR:HB | 5 | 0.98 |
| (1,399) | 1:A:105:LEU:HD23 | 1:A:103:THR:HB | 5 | 0.98 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 2 | 0.98 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 2 | 0.98 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 2 | 0.98 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 2 | 0.98 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 2 | 0.98 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 2 | 0.98 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 3 | 0.98 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 3 | 0.98 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 20 | 0.98 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 20 | 0.98 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 20 | 0.98 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 8 | 0.98 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 9 | 0.97 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 19 | 0.97 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 13 | 0.97 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 13 | 0.97 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 13 | 0.97 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 17 | 0.97 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 8 | 0.97 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 8 | 0.97 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 8 | 0.97 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 8 | 0.97 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 8 | 0.97 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 8 | 0.97 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 20 | 0.97 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 20 | 0.97 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 20 | 0.97 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 11 | 0.96 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 4 | 0.96 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 4 | 0.96 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 4 | 0.96 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 1 | 0.96 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 1 | 0.96 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 1 | 0.96 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 11 | 0.96 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 11 | 0.96 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 11 | 0.96 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 1 | 0.96 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 1 | 0.96 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 1 | 0.96 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 5 | 0.96 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG21 | 8 | 0.95 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG22 | 8 | 0.95 |
| (2,354) | 1:A:37:GLN:H | 1:A:39:VAL:HG23 | 8 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 2 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 2 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 2 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 8 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 8 | 0.95 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 8 | 0.95 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 9 | 0.95 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 9 | 0.95 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 9 | 0.95 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 9 | 0.95 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 9 | 0.95 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 9 | 0.95 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 16 | 0.95 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 16 | 0.95 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 16 | 0.95 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 9 | 0.95 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 9 | 0.95 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 9 | 0.95 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 9 | 0.95 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 9 | 0.95 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 9 | 0.95 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 12 | 0.95 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 12 | 0.95 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 12 | 0.95 |
| (2,284) | 1:A:19:LEU:HD11 | 1:A:105:LEU:HA | 17 | 0.94 |
| (2,284) | 1:A:19:LEU:HD12 | 1:A:105:LEU:HA | 17 | 0.94 |
| (2,284) | 1:A:19:LEU:HD13 | 1:A:105:LEU:HA | 17 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 5 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 5 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 5 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 17 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 17 | 0.94 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 17 | 0.94 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 8 | 0.94 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 8 | 0.94 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 8 | 0.94 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG11 | 13 | 0.94 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG12 | 13 | 0.94 |
| (1,341) | 1:A:90:ASP:HA | 1:A:68:VAL:HG13 | 13 | 0.94 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 7 | 0.93 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 7 | 0.93 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 7 | 0.93 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 1 | 0.93 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 1 | 0.93 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 1 | 0.93 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 11 | 0.93 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 11 | 0.93 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 11 | 0.93 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 19 | 0.93 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 19 | 0.93 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 19 | 0.93 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 12 | 0.93 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 12 | 0.93 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 12 | 0.93 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 17 | 0.93 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 17 | 0.93 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 17 | 0.93 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 9 | 0.93 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 8 | 0.92 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 8 | 0.92 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 8 | 0.92 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 7 | 0.92 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 3 | 0.92 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 3 | 0.92 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 3 | 0.92 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 13 | 0.92 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 13 | 0.92 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 13 | 0.92 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 17 | 0.92 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 17 | 0.92 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 17 | 0.92 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 8 | 0.91 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 12 | 0.91 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 12 | 0.91 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 12 | 0.91 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 18 | 0.91 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 2 | 0.91 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 2 | 0.91 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 2 | 0.91 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 4 | 0.9 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 4 | 0.9 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 18 | 0.9 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 18 | 0.9 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 18 | 0.9 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 2 | 0.9 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 14 | 0.9 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 14 | 0.9 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 8 | 0.9 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 8 | 0.9 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 8 | 0.9 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 12 | 0.9 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 12 | 0.9 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 12 | 0.9 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 15 | 0.9 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 8 | 0.9 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 8 | 0.9 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 8 | 0.9 |
| (1,25) | 1:A:86:LEU:HD11 | 1:A:71:LYS:H | 4 | 0.9 |
| (1,25) | 1:A:86:LEU:HD12 | 1:A:71:LYS:H | 4 | 0.9 |
| (1,25) | 1:A:86:LEU:HD13 | 1:A:71:LYS:H | 4 | 0.9 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 14 | 0.9 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 14 | 0.9 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 2 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 2 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 2 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 19 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 19 | 0.89 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 19 | 0.89 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 10 | 0.89 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 15 | 0.89 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 15 | 0.89 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 15 | 0.89 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 2 | 0.89 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 2 | 0.89 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 2 | 0.89 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG21 | 9 | 0.89 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG22 | 9 | 0.89 |
| (1,661) | 1:A:38:ALA:H | 1:A:39:VAL:HG23 | 9 | 0.89 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 3 | 0.89 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 16 | 0.89 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 16 | 0.89 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 16 | 0.89 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 15 | 0.89 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 15 | 0.89 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 15 | 0.89 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 2 | 0.89 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 2 | 0.89 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 2 | 0.89 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 1 | 0.89 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 1 | 0.89 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 1 | 0.89 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 5 | 0.88 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 13 | 0.88 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 13 | 0.88 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 13 | 0.88 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 1 | 0.88 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 20 | 0.88 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 20 | 0.88 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 20 | 0.88 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 16 | 0.88 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 16 | 0.88 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 16 | 0.88 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 11 | 0.88 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 11 | 0.88 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 11 | 0.88 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 13 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 7 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 7 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 7 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 14 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 14 | 0.88 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 14 | 0.88 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 16 | 0.88 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 16 | 0.88 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 16 | 0.88 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 11 | 0.88 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 11 | 0.88 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 11 | 0.88 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD11 | 4 | 0.88 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD12 | 4 | 0.88 |
| (1,128) | 1:A:87:ILE:HB | 1:A:86:LEU:HD13 | 4 | 0.88 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 10 | 0.88 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 16 | 0.87 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 16 | 0.87 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 16 | 0.87 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 6 | 0.87 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 3 | 0.87 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 3 | 0.87 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 3 | 0.87 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 13 | 0.87 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 13 | 0.87 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 13 | 0.87 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG21 | 12 | 0.87 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG22 | 12 | 0.87 |
| (1,62) | 1:A:36:PRO:HA | 1:A:39:VAL:HG23 | 12 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 4 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 4 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 4 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 10 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 10 | 0.87 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 10 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 3 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 3 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 3 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 13 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 13 | 0.87 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 13 | 0.87 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 12 | 0.86 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 14 | 0.86 |
| (2,379) | 1:A:144:LEU:H | 1:A:146:LYS:HB3 | 12 | 0.86 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 12 | 0.86 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 12 | 0.86 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 12 | 0.86 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 13 | 0.86 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 13 | 0.86 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 13 | 0.86 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 1 | 0.86 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 1 | 0.86 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 1 | 0.86 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 12 | 0.86 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 12 | 0.86 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 12 | 0.86 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 15 | 0.86 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 15 | 0.86 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 19 | 0.86 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 19 | 0.86 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 19 | 0.86 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 9 | 0.86 |
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 14 | 0.86 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 8 | 0.86 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 8 | 0.86 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 8 | 0.86 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 19 | 0.86 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 19 | 0.86 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 19 | 0.86 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 15 | 0.86 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 15 | 0.86 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 15 | 0.86 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 17 | 0.85 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 16 | 0.85 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 16 | 0.85 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 16 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 8 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 8 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 8 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 16 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 16 | 0.85 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 16 | 0.85 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 10 | 0.85 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 10 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 12 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 12 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 12 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 14 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 14 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 14 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 20 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 20 | 0.85 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 20 | 0.85 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,648) | 1:A:71:LYS:H | 1:A:84:TYR:HB3 | 10 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 12 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 12 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 12 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 14 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 14 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 14 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 20 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 20 | 0.85 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 20 | 0.85 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 14 | 0.85 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 14 | 0.85 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 14 | 0.85 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 14 | 0.85 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 14 | 0.85 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 14 | 0.85 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 3 | 0.85 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 3 | 0.85 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 3 | 0.85 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 10 | 0.85 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 10 | 0.85 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 7 | 0.84 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 20 | 0.84 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 20 | 0.84 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 20 | 0.84 |
| (2,453) | 1:A:45:LEU:H | 1:A:46:GLU:HG3 | 8 | 0.84 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 11 | 0.84 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 11 | 0.84 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 11 | 0.84 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 1 | 0.84 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 1 | 0.84 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 1 | 0.84 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 20 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 4 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 4 | 0.84 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 4 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 6 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 6 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 6 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 9 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 9 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 9 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 10 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 10 | 0.84 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 10 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 4 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 4 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 4 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 6 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 6 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 6 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 9 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 9 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 9 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 10 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 10 | 0.84 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 10 | 0.84 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 8 | 0.83 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 12 | 0.83 |
| (2,453) | 1:A:45:LEU:H | 1:A:46:GLU:HG3 | 5 | 0.83 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 15 | 0.83 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 5 | 0.83 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG21 | 12 | 0.83 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG22 | 12 | 0.83 |
| (1,86) | 1:A:36:PRO:HB2 | 1:A:39:VAL:HG23 | 12 | 0.83 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG21 | 12 | 0.83 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG22 | 12 | 0.83 |
| (1,86) | 1:A:36:PRO:HB3 | 1:A:39:VAL:HG23 | 12 | 0.83 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 11 | 0.83 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 11 | 0.83 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 11 | 0.83 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 6 | 0.82 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 13 | 0.82 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 13 | 0.82 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 13 | 0.82 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 7 | 0.82 |
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 7 | 0.82 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,831) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 7 | 0.82 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 13 | 0.82 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 13 | 0.82 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 13 | 0.82 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 11 | 0.82 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 11 | 0.82 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 11 | 0.82 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG11 | 7 | 0.82 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG12 | 7 | 0.82 |
| (1,462) | 1:A:24:VAL:H | 1:A:24:VAL:HG13 | 7 | 0.82 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 14 | 0.82 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 14 | 0.82 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 14 | 0.82 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 2 | 0.82 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 2 | 0.82 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 2 | 0.82 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 9 | 0.81 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 9 | 0.81 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 9 | 0.81 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 1 | 0.81 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 12 | 0.81 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG21 | 9 | 0.81 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG22 | 9 | 0.81 |
| (1,571) | 1:A:3:VAL:H | 1:A:3:VAL:HG23 | 9 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 12 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 12 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 12 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 16 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 16 | 0.81 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 16 | 0.81 |
| (1,377) | 1:A:68:VAL:HG11 | 1:A:90:ASP:H | 13 | 0.81 |
| (1,377) | 1:A:68:VAL:HG12 | 1:A:90:ASP:H | 13 | 0.81 |
| (1,377) | 1:A:68:VAL:HG13 | 1:A:90:ASP:H | 13 | 0.81 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 19 | 0.8 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 19 | 0.8 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 19 | 0.8 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 2 | 0.8 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 9 | 0.8 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 14 | 0.8 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 14 | 0.8 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 14 | 0.8 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 15 | 0.8 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 15 | 0.8 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 15 | 0.8 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 15 | 0.8 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 15 | 0.8 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 15 | 0.8 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 2 | 0.8 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 2 | 0.8 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 2 | 0.8 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 7 | 0.8 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 7 | 0.8 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 7 | 0.8 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 7 | 0.79 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 7 | 0.79 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 7 | 0.79 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 15 | 0.79 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 15 | 0.79 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 15 | 0.79 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 17 | 0.79 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 17 | 0.79 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 17 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 17 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 17 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 17 | 0.79 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 9 | 0.79 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 9 | 0.79 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 2 | 0.78 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 2 | 0.78 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 2 | 0.78 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 2 | 0.78 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 10 | 0.78 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 10 | 0.78 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 10 | 0.78 |
| (1,400) | 1:A:105:LEU:HD21 | 1:A:16:ALA:HA | 13 | 0.78 |
| (1,400) | 1:A:105:LEU:HD22 | 1:A:16:ALA:HA | 13 | 0.78 |
| (1,400) | 1:A:105:LEU:HD23 | 1:A:16:ALA:HA | 13 | 0.78 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 12 | 0.78 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 18 | 0.77 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD21 | 17 | 0.77 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD22 | 17 | 0.77 |
| (2,28) | 1:A:34:ILE:HA | 1:A:144:LEU:HD23 | 17 | 0.77 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 18 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 4 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 4 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 4 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 9 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 9 | 0.77 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 9 | 0.77 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 3 | 0.77 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 3 | 0.77 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 3 | 0.77 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 13 | 0.77 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 13 | 0.77 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 13 | 0.77 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 4 | 0.77 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 4 | 0.77 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 4 | 0.77 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 9 | 0.77 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 9 | 0.77 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 9 | 0.77 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 15 | 0.76 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 6 | 0.76 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 6 | 0.76 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 6 | 0.76 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 8 | 0.76 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 8 | 0.76 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 8 | 0.76 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 18 | 0.76 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 18 | 0.76 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 3 | 0.76 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 3 | 0.76 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 3 | 0.76 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 4 | 0.76 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 4 | 0.76 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 4 | 0.76 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 10 | 0.75 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 14 | 0.75 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 16 | 0.75 |
| (2,49) | 1:A:107:SER:HB2 | 1:A:111:GLY:H | 2 | 0.75 |
| (2,453) | 1:A:45:LEU:H | 1:A:46:GLU:HG3 | 3 | 0.75 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 14 | 0.75 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 14 | 0.75 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 4 | 0.75 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 4 | 0.75 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 6 | 0.75 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 6 | 0.75 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 6 | 0.75 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 7 | 0.75 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 7 | 0.75 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 7 | 0.75 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 4 | 0.75 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 4 | 0.75 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 4 | 0.75 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 9 | 0.74 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 9 | 0.74 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 9 | 0.74 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 9 | 0.74 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 7 | 0.74 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 7 | 0.74 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 7 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 13 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 13 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 13 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 20 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 20 | 0.74 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 20 | 0.74 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 7 | 0.74 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 7 | 0.74 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 7 | 0.74 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 6 | 0.74 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 6 | 0.74 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 6 | 0.74 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 9 | 0.73 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 9 | 0.73 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 9 | 0.73 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 12 | 0.73 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 12 | 0.73 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 6 | 0.73 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 6 | 0.73 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 6 | 0.73 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 6 | 0.73 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 6 | 0.73 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 6 | 0.73 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB2 | 10 | 0.73 |
| (1,348) | 1:A:147:LEU:HD11 | 1:A:144:LEU:HB3 | 10 | 0.73 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB2 | 10 | 0.73 |
| (1,348) | 1:A:147:LEU:HD12 | 1:A:144:LEU:HB3 | 10 | 0.73 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB2 | 10 | 0.73 |
| (1,348) | 1:A:147:LEU:HD13 | 1:A:144:LEU:HB3 | 10 | 0.73 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 8 | 0.73 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 8 | 0.73 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 8 | 0.73 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 18 | 0.73 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 18 | 0.73 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 18 | 0.73 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 19 | 0.73 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 19 | 0.73 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 19 | 0.73 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 12 | 0.73 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 12 | 0.73 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 8 | 0.72 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 19 | 0.72 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 19 | 0.72 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 19 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 19 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 19 | 0.72 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 19 | 0.72 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 1 | 0.72 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 1 | 0.72 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 1 | 0.72 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 19 | 0.72 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 19 | 0.72 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 19 | 0.72 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 20 | 0.72 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 20 | 0.72 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 20 | 0.72 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 8 | 0.72 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 2 | 0.71 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 11 | 0.71 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 5 | 0.71 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 5 | 0.71 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 9 | 0.71 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 9 | 0.71 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 9 | 0.71 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 16 | 0.71 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 16 | 0.71 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 16 | 0.71 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 14 | 0.71 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 14 | 0.71 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 14 | 0.71 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 2 | 0.71 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 12 | 0.71 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 4 | 0.7 |
| (2,453) | 1:A:45:LEU:H | 1:A:46:GLU:HG3 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 16 | 0.7 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 16 | 0.7 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 16 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 10 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 10 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 10 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 15 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 15 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 15 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 20 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 20 | 0.7 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 20 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 6 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 6 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 6 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 14 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 14 | 0.7 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 14 | 0.7 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 4 | 0.7 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 4 | 0.7 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 4 | 0.7 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 19 | 0.7 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 19 | 0.7 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 19 | 0.7 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 1 | 0.7 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 1 | 0.7 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 1 | 0.7 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 1 | 0.7 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 1 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 1 | 0.7 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 5 | 0.7 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 5 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 5 | 0.7 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 6 | 0.7 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 6 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 6 | 0.7 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 11 | 0.7 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 11 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 11 | 0.7 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 20 | 0.7 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 20 | 0.7 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 20 | 0.7 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 2 | 0.69 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 13 | 0.69 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 9 | 0.69 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 19 | 0.69 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 20 | 0.69 |
| (2,144) | 1:A:111:GLY:HA2 | 1:A:107:SER:HB2 | 11 | 0.69 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 2 | 0.69 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 2 | 0.69 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 19 | 0.69 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 19 | 0.69 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 19 | 0.69 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 12 | 0.69 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 12 | 0.69 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 12 | 0.69 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 13 | 0.69 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 13 | 0.69 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 13 | 0.69 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 16 | 0.69 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 16 | 0.69 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 16 | 0.69 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD11 | 4 | 0.69 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD12 | 4 | 0.69 |
| (1,120) | 1:A:88:GLU:HG2 | 1:A:92:LEU:HD13 | 4 | 0.69 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 20 | 0.68 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 8 | 0.68 |
| (2,216) | 1:A:71:LYS:HA | 1:A:55:LYS:HD2 | 18 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 3 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 3 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 3 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 6 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 6 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 6 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 7 | 0.68 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 7 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 7 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 9 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 9 | 0.68 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 9 | 0.68 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 16 | 0.68 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 16 | 0.68 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 13 | 0.68 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 13 | 0.68 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 13 | 0.68 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 3 | 0.68 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 18 | 0.68 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 2 | 0.68 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 2 | 0.68 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 2 | 0.68 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 8 | 0.68 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 8 | 0.68 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 8 | 0.68 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 16 | 0.68 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 16 | 0.68 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 1 | 0.67 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 5 | 0.67 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 1 | 0.67 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 4 | 0.67 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 4 | 0.67 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 4 | 0.67 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 13 | 0.67 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 13 | 0.67 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 13 | 0.67 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 1 | 0.67 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 14 | 0.67 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 14 | 0.67 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 14 | 0.67 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 18 | 0.67 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 18 | 0.67 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 18 | 0.67 |
| (1,183) | 1:A:44:ILE:HD11 | 1:A:48:ASP:HB2 | 16 | 0.67 |
| (1,183) | 1:A:44:ILE:HD12 | 1:A:48:ASP:HB2 | 16 | 0.67 |
| (1,183) | 1:A:44:ILE:HD13 | 1:A:48:ASP:HB2 | 16 | 0.67 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 4 | 0.67 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 3 | 0.66 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 14 | 0.66 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 8 | 0.66 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 11 | 0.66 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 11 | 0.66 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 11 | 0.66 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 12 | 0.66 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 12 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 12 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 12 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 12 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 14 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 14 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 14 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 19 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 19 | 0.66 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 19 | 0.66 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 13 | 0.66 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 13 | 0.66 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 13 | 0.66 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 19 | 0.66 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 19 | 0.66 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 19 | 0.66 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 3 | 0.66 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 3 | 0.66 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 3 | 0.66 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 3 | 0.66 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 3 | 0.66 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 3 | 0.66 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 2 | 0.66 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 4 | 0.65 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 12 | 0.65 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 12 | 0.65 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 12 | 0.65 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 19 | 0.65 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 19 | 0.65 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 19 | 0.65 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 3 | 0.65 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 3 | 0.65 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 3 | 0.65 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 3 | 0.65 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 3 | 0.65 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 3 | 0.65 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 19 | 0.65 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 19 | 0.65 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 19 | 0.65 |
| (1,20) | 1:A:86:LEU:HD11 | 1:A:86:LEU:HA | 4 | 0.65 |
| (1,20) | 1:A:86:LEU:HD12 | 1:A:86:LEU:HA | 4 | 0.65 |
| (1,20) | 1:A:86:LEU:HD13 | 1:A:86:LEU:HA | 4 | 0.65 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 6 | 0.64 |
| (2,52) | 1:A:17:PRO:HG3 | 1:A:15:PRO:HD2 | 19 | 0.64 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 1 | 0.64 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 1 | 0.64 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 1 | 0.64 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 16 | 0.64 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 16 | 0.64 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 16 | 0.64 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 13 | 0.64 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 13 | 0.64 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 13 | 0.64 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 13 | 0.64 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 13 | 0.64 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 13 | 0.64 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 5 | 0.64 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 5 | 0.64 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 5 | 0.64 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 17 | 0.64 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 18 | 0.64 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 9 | 0.63 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 9 | 0.63 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 9 | 0.63 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 20 | 0.63 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 20 | 0.63 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 20 | 0.63 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 6 | 0.63 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 6 | 0.63 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG11 | 16 | 0.63 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG12 | 16 | 0.63 |
| (2,113) | 1:A:23:PHE:HB2 | 1:A:24:VAL:HG13 | 16 | 0.63 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 9 | 0.63 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 9 | 0.63 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 9 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 19 | 0.63 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 19 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 20 | 0.63 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 20 | 0.63 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 19 | 0.63 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 19 | 0.63 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 19 | 0.63 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 1 | 0.63 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 1 | 0.63 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 1 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 19 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 20 | 0.63 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 20 | 0.63 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 20 | 0.62 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 20 | 0.62 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 20 | 0.62 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 20 | 0.62 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 20 | 0.62 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 13 | 0.62 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 13 | 0.62 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 15 | 0.62 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 15 | 0.62 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 15 | 0.62 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 18 | 0.62 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 18 | 0.62 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 18 | 0.62 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 4 | 0.62 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 15 | 0.62 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 15 | 0.62 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 15 | 0.62 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 8 | 0.62 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 8 | 0.62 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 8 | 0.62 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 13 | 0.62 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 13 | 0.62 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 1 | 0.62 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 9 | 0.62 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 18 | 0.61 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 18 | 0.61 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 8 | 0.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 8 | 0.61 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 8 | 0.61 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 15 | 0.61 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 15 | 0.61 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 9 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 15 | 0.61 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 15 | 0.61 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 2 | 0.61 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 2 | 0.61 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 2 | 0.61 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 2 | 0.61 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 2 | 0.61 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 2 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 9 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 15 | 0.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 15 | 0.61 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 15 | 0.61 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 3 | 0.6 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 3 | 0.6 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 5 | 0.6 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 5 | 0.6 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 5 | 0.6 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 13 | 0.6 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 13 | 0.6 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 13 | 0.6 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 16 | 0.6 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 16 | 0.6 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 16 | 0.6 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 5 | 0.6 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 5 | 0.6 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 5 | 0.6 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 18 | 0.6 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 18 | 0.6 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 18 | 0.6 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 5 | 0.6 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 11 | 0.6 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 7 | 0.59 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 19 | 0.59 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 18 | 0.59 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 18 | 0.59 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 18 | 0.59 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 18 | 0.59 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 18 | 0.59 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 18 | 0.59 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 10 | 0.59 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 10 | 0.59 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 10 | 0.59 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 18 | 0.59 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 18 | 0.59 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 18 | 0.59 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 14 | 0.59 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 9 | 0.59 |
| (1,531) | 1:A:79:ASN:HD22 | 1:A:78:VAL:HG11 | 15 | 0.59 |
| (1,531) | 1:A:79:ASN:HD22 | 1:A:78:VAL:HG12 | 15 | 0.59 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,531) | 1:A:79:ASN:HD22 | 1:A:78:VAL:HG13 | 15 | 0.59 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB2 | 17 | 0.59 |
| (1,404) | 1:A:105:LEU:HD21 | 1:A:19:LEU:HB3 | 17 | 0.59 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB2 | 17 | 0.59 |
| (1,404) | 1:A:105:LEU:HD22 | 1:A:19:LEU:HB3 | 17 | 0.59 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB2 | 17 | 0.59 |
| (1,404) | 1:A:105:LEU:HD23 | 1:A:19:LEU:HB3 | 17 | 0.59 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 14 | 0.59 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 14 | 0.59 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 14 | 0.59 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 16 | 0.59 |
| (1,123) | 1:A:95:ASN:HB2 | 1:A:95:ASN:HD21 | 6 | 0.59 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 13 | 0.58 |
| (2,276) | 1:A:152:LEU:HD21 | 1:A:151:TYR:HA | 14 | 0.58 |
| (2,276) | 1:A:152:LEU:HD22 | 1:A:151:TYR:HA | 14 | 0.58 |
| (2,276) | 1:A:152:LEU:HD23 | 1:A:151:TYR:HA | 14 | 0.58 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 2 | 0.58 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 2 | 0.58 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 2 | 0.58 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 9 | 0.57 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 17 | 0.57 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 7 | 0.57 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 7 | 0.57 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 7 | 0.57 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 7 | 0.57 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 13 | 0.57 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 13 | 0.57 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 13 | 0.57 |
| (1,747) | 1:A:84:TYR:HE1 | 1:A:101:TYR:HD1 | 9 | 0.57 |
| (1,747) | 1:A:84:TYR:HE2 | 1:A:101:TYR:HD1 | 9 | 0.57 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 13 | 0.57 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 13 | 0.57 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 13 | 0.57 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 13 | 0.57 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 13 | 0.57 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 13 | 0.57 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 7 | 0.57 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 7 | 0.57 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 8 | 0.56 |
| (2,56) | 1:A:146:LYS:HD2 | 1:A:147:LEU:HD21 | 9 | 0.56 |
| (2,56) | 1:A:146:LYS:HD2 | 1:A:147:LEU:HD22 | 9 | 0.56 |
| (2,56) | 1:A:146:LYS:HD2 | 1:A:147:LEU:HD23 | 9 | 0.56 |
| (2,56) | 1:A:146:LYS:HD3 | 1:A:147:LEU:HD21 | 9 | 0.56 |
| (2,56) | 1:A:146:LYS:HD3 | 1:A:147:LEU:HD22 | 9 | 0.56 |
| (2,56) | 1:A:146:LYS:HD3 | 1:A:147:LEU:HD23 | 9 | 0.56 |
| (1,747) | 1:A:84:TYR:HE1 | 1:A:101:TYR:HD1 | 17 | 0.56 |
| (1,747) | 1:A:84:TYR:HE2 | 1:A:101:TYR:HD1 | 17 | 0.56 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 11 | 0.55 |
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 18 | 0.55 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 14 | 0.55 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 14 | 0.55 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 14 | 0.55 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 14 | 0.55 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 14 | 0.55 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 14 | 0.55 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 10 | 0.55 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 10 | 0.55 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 10 | 0.55 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 10 | 0.55 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 10 | 0.55 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 10 | 0.55 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 11 | 0.54 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 12 | 0.54 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 11 | 0.54 |
| (2,302) | 1:A:54:ILE:HA | 1:A:55:LYS:HD2 | 11 | 0.54 |
| (2,302) | 1:A:54:ILE:HA | 1:A:55:LYS:HD2 | 12 | 0.54 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD11 | 7 | 0.54 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD12 | 7 | 0.54 |
| (2,260) | 1:A:97:GLU:HA | 1:A:92:LEU:HD13 | 7 | 0.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,216) | 1:A:71:LYS:HA | 1:A:55:LYS:HD2 | 11 | 0.54 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD11 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD12 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD11 | 1:A:86:LEU:HD13 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD11 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD12 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD12 | 1:A:86:LEU:HD13 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD11 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD12 | 2 | 0.54 |
| (2,170) | 1:A:87:ILE:HD13 | 1:A:86:LEU:HD13 | 2 | 0.54 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 12 | 0.54 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 12 | 0.54 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 12 | 0.54 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD11 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD12 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HD13 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD11 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD12 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HD13 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD11 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD12 | 6 | 0.54 |
| (1,864) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HD13 | 6 | 0.54 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 10 | 0.54 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 10 | 0.54 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 16 | 0.54 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 16 | 0.54 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 16 | 0.54 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 18 | 0.54 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 18 | 0.54 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 18 | 0.54 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 14 | 0.54 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 14 | 0.54 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 14 | 0.54 |
| (1,255) | 1:A:91:ALA:HA | 1:A:90:ASP:HB2 | 18 | 0.54 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 10 | 0.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 10 | 0.54 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 10 | 0.54 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 20 | 0.54 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 20 | 0.54 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 20 | 0.54 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG21 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG22 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD11 | 1:A:24:VAL:HG23 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG21 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG22 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD12 | 1:A:24:VAL:HG23 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG21 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG22 | 6 | 0.54 |
| (1,193) | 1:A:75:ILE:HD13 | 1:A:24:VAL:HG23 | 6 | 0.54 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 16 | 0.53 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 13 | 0.53 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 14 | 0.53 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 13 | 0.53 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 3 | 0.53 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 1 | 0.53 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 7 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 8 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 8 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 8 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 18 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 18 | 0.53 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 18 | 0.53 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 14 | 0.53 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 14 | 0.53 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 14 | 0.53 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 4 | 0.53 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 4 | 0.53 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 4 | 0.53 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 8 | 0.52 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 1 | 0.52 |
| (2,302) | 1:A:54:ILE:HA | 1:A:55:LYS:HD2 | 18 | 0.52 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 3 | 0.52 |
| (2,269) | 1:A:147:LEU:HD21 | 1:A:151:TYR:HA | 9 | 0.52 |
| (2,269) | 1:A:147:LEU:HD22 | 1:A:151:TYR:HA | 9 | 0.52 |
| (2,269) | 1:A:147:LEU:HD23 | 1:A:151:TYR:HA | 9 | 0.52 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 6 | 0.52 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 6 | 0.52 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 6 | 0.52 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 12 | 0.52 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 12 | 0.52 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 12 | 0.52 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 12 | 0.52 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 14 | 0.52 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 14 | 0.52 |
| (1,719) | 1:A:114:ILE:H | 1:A:107:SER:HB3 | 10 | 0.52 |
| (1,719) | 1:A:114:ILE:H | 1:A:107:SER:HB3 | 17 | 0.52 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG11 | 15 | 0.52 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG12 | 15 | 0.52 |
| (1,420) | 1:A:23:PHE:H | 1:A:24:VAL:HG13 | 15 | 0.52 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 20 | 0.52 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 16 | 0.52 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 16 | 0.52 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 16 | 0.52 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 10 | 0.52 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 10 | 0.52 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 10 | 0.52 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 10 | 0.52 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 10 | 0.52 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 10 | 0.52 |
| (1,26) | 1:A:86:LEU:HD11 | 1:A:88:GLU:H | 18 | 0.52 |
| (1,26) | 1:A:86:LEU:HD12 | 1:A:88:GLU:H | 18 | 0.52 |
| (1,26) | 1:A:86:LEU:HD13 | 1:A:88:GLU:H | 18 | 0.52 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 14 | 0.52 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 14 | 0.52 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 11 | 0.52 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 11 | 0.52 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 11 | 0.52 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 14 | 0.51 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 18 | 0.51 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 5 | 0.51 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 5 | 0.51 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 5 | 0.51 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 10 | 0.51 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 10 | 0.51 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 10 | 0.51 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG11 | 10 | 0.51 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG12 | 10 | 0.51 |
| (2,201) | 1:A:91:ALA:HA | 1:A:68:VAL:HG13 | 10 | 0.51 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 4 | 0.51 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 4 | 0.51 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 4 | 0.51 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 2 | 0.51 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 2 | 0.51 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 2 | 0.51 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 4 | 0.51 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 4 | 0.51 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 4 | 0.51 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 16 | 0.51 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 16 | 0.51 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 16 | 0.51 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 10 | 0.5 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 7 | 0.5 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 20 | 0.5 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 15 | 0.5 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 8 | 0.5 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 8 | 0.5 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 8 | 0.5 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 4 | 0.5 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 7 | 0.5 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 7 | 0.5 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 7 | 0.5 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 7 | 0.5 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 7 | 0.5 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 7 | 0.5 |
| (1,255) | 1:A:91:ALA:HA | 1:A:90:ASP:HB2 | 14 | 0.5 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 13 | 0.49 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 18 | 0.49 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 6 | 0.49 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 4 | 0.49 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 4 | 0.49 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 1 | 0.49 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 1 | 0.49 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 1 | 0.49 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 1 | 0.49 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 1 | 0.49 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 1 | 0.49 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 4 | 0.49 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 4 | 0.49 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 4 | 0.49 |
| (1,127) | 1:A:92:LEU:HB2 | 1:A:97:GLU:HA | 14 | 0.49 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 9 | 0.48 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 5 | 0.48 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 15 | 0.48 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 4 | 0.48 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD11 | 5 | 0.48 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD12 | 5 | 0.48 |
| (2,329) | 1:A:81:THR:H | 1:A:105:LEU:HD13 | 5 | 0.48 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 19 | 0.48 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 19 | 0.48 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 19 | 0.48 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 13 | 0.48 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 13 | 0.48 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 13 | 0.48 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 13 | 0.48 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 13 | 0.48 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 13 | 0.48 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 4 | 0.48 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 4 | 0.48 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 4 | 0.48 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 6 | 0.47 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 16 | 0.47 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 19 | 0.47 |
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 2 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 12 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 15 | 0.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 15 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 16 | 0.47 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 16 | 0.47 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 18 | 0.47 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 18 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 12 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 15 | 0.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 15 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 16 | 0.47 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 16 | 0.47 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 15 | 0.47 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 15 | 0.47 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 15 | 0.47 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 19 | 0.46 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 4 | 0.46 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 20 | 0.46 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 13 | 0.46 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 13 | 0.46 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD21 | 20 | 0.46 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD22 | 20 | 0.46 |
| (1,800) | 1:A:93:SER:H | 1:A:92:LEU:HD23 | 20 | 0.46 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 2 | 0.46 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 2 | 0.46 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 2 | 0.46 |
| (1,361) | 1:A:92:LEU:HD21 | 1:A:93:SER:H | 20 | 0.46 |
| (1,361) | 1:A:92:LEU:HD22 | 1:A:93:SER:H | 20 | 0.46 |
| (1,361) | 1:A:92:LEU:HD23 | 1:A:93:SER:H | 20 | 0.46 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 6 | 0.46 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 6 | 0.46 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 6 | 0.46 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 6 | 0.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 6 | 0.46 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 6 | 0.46 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 3 | 0.46 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 3 | 0.46 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 3 | 0.46 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 12 | 0.46 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 12 | 0.46 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 12 | 0.46 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 13 | 0.46 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 13 | 0.46 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 13 | 0.46 |
| (2,45) | 1:A:107:SER:HB2 | 1:A:15:PRO:HB2 | 8 | 0.45 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 10 | 0.45 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 17 | 0.45 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 17 | 0.45 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 17 | 0.45 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 3 | 0.45 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 14 | 0.45 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 14 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 14 | 0.45 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 14 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 14 | 0.45 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 14 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 10 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 10 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 10 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 20 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 20 | 0.45 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 20 | 0.45 |
| (2,382) | 1:A:20:PHE:H | 1:A:17:PRO:HG3 | 2 | 0.44 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 10 | 0.44 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 5 | 0.44 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 5 | 0.44 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 5 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 3 | 0.44 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 3 | 0.44 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 1 | 0.44 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 1 | 0.44 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 1 | 0.44 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 10 | 0.44 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 10 | 0.44 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 10 | 0.44 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 3 | 0.44 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 3 | 0.44 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB2 | 3 | 0.43 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB3 | 3 | 0.43 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 4 | 0.43 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 14 | 0.43 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 14 | 0.43 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 14 | 0.43 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD11 | 3 | 0.43 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD12 | 3 | 0.43 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD13 | 3 | 0.43 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 9 | 0.43 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 9 | 0.43 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 9 | 0.43 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 9 | 0.43 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 9 | 0.43 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 9 | 0.43 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 19 | 0.42 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 11 | 0.42 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 15 | 0.42 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 9 | 0.42 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 9 | 0.42 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 9 | 0.42 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 20 | 0.42 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 20 | 0.42 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 20 | 0.42 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 20 | 0.42 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 20 | 0.42 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 20 | 0.42 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 10 | 0.42 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 10 | 0.42 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 10 | 0.42 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 19 | 0.42 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 19 | 0.42 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 19 | 0.42 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 19 | 0.42 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 19 | 0.42 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 19 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 13 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 13 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 13 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 14 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 14 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 14 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 20 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 20 | 0.42 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 12 | 0.42 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 19 | 0.42 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 19 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 19 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 19 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 19 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 19 | 0.42 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 20 | 0.42 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 20 | 0.42 |
| (1,255) | 1:A:91:ALA:HA | 1:A:90:ASP:HB2 | 6 | 0.42 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 20 | 0.42 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 20 | 0.42 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 20 | 0.42 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD1 | 10 | 0.42 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD2 | 10 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 3 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 3 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 3 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 6 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 6 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 6 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 9 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 9 | 0.42 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 9 | 0.42 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 7 | 0.41 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 1 | 0.41 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 16 | 0.41 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 11 | 0.41 |
| (1,719) | 1:A:114:ILE:H | 1:A:107:SER:HB3 | 11 | 0.41 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 20 | 0.41 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 20 | 0.41 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 20 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 4 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 4 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 4 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 9 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 9 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 9 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 10 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 10 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 10 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 16 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 16 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 16 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 19 | 0.41 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 19 | 0.41 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 19 | 0.41 |
| (1,255) | 1:A:91:ALA:HA | 1:A:90:ASP:HB2 | 11 | 0.41 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 13 | 0.41 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 13 | 0.41 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 13 | 0.41 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB2 | 18 | 0.4 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB3 | 18 | 0.4 |
| (2,35) | 1:A:152:LEU:HG | 1:A:14:ILE:HG12 | 13 | 0.4 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 14 | 0.4 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 18 | 0.4 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 4 | 0.4 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 4 | 0.4 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 4 | 0.4 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 4 | 0.4 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 4 | 0.4 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 4 | 0.4 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 9 | 0.4 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 9 | 0.4 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 17 | 0.4 |
| (1,383) | 1:A:143:HIS:HA | 1:A:146:LYS:HB3 | 12 | 0.4 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 15 | 0.4 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 15 | 0.4 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 15 | 0.4 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 15 | 0.4 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 15 | 0.4 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 15 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 3 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 3 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 3 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 6 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 6 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 6 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 7 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 7 | 0.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 7 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 12 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 12 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 12 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG21 | 15 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG22 | 15 | 0.4 |
| (1,355) | 1:A:25:LEU:HA | 1:A:24:VAL:HG23 | 15 | 0.4 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 9 | 0.4 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 9 | 0.4 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 6 | 0.4 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 6 | 0.4 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 6 | 0.4 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 11 | 0.4 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 11 | 0.4 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 11 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 7 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 7 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 7 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 19 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 19 | 0.4 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 19 | 0.4 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 15 | 0.39 |
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 2 | 0.39 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 7 | 0.39 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 7 | 0.39 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 7 | 0.39 |
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 4 | 0.39 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 8 | 0.39 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 8 | 0.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 8 | 0.39 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 13 | 0.39 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 13 | 0.39 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 13 | 0.39 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 9 | 0.39 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 9 | 0.39 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 9 | 0.39 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 9 | 0.39 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 9 | 0.39 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 9 | 0.39 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 1 | 0.39 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 1 | 0.39 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 1 | 0.39 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 14 | 0.39 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 14 | 0.39 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 14 | 0.39 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 17 | 0.38 |
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 18 | 0.38 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 3 | 0.38 |
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 12 | 0.38 |
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 18 | 0.38 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 5 | 0.38 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 5 | 0.38 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 5 | 0.38 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 12 | 0.38 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 12 | 0.38 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 12 | 0.38 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 16 | 0.38 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 16 | 0.38 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 16 | 0.38 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 5 | 0.38 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 5 | 0.38 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 5 | 0.38 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD1 | 9 | 0.38 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD2 | 9 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 4 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 4 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 4 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 12 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 12 | 0.38 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 12 | 0.38 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB2 | 2 | 0.37 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB3 | 2 | 0.37 |
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 3 | 0.37 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 10 | 0.37 |
| (2,266) | 1:A:147:LEU:HD11 | 1:A:144:LEU:H | 19 | 0.37 |
| (2,266) | 1:A:147:LEU:HD12 | 1:A:144:LEU:H | 19 | 0.37 |
| (2,266) | 1:A:147:LEU:HD13 | 1:A:144:LEU:H | 19 | 0.37 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 20 | 0.37 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 20 | 0.37 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 13 | 0.37 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 13 | 0.37 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 13 | 0.37 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 20 | 0.37 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 20 | 0.37 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 14 | 0.37 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 14 | 0.37 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 14 | 0.37 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 20 | 0.36 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 4 | 0.36 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 9 | 0.36 |
| (2,216) | 1:A:71:LYS:HA | 1:A:55:LYS:HD2 | 12 | 0.36 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 6 | 0.36 |
| (2,147) | 1:A:125:GLY:HA2 | 1:A:126:ASP:HB2 | 9 | 0.36 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 20 | 0.36 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 20 | 0.36 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 20 | 0.36 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG11 | 16 | 0.36 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG12 | 16 | 0.36 |
| (1,132) | 1:A:23:PHE:HB3 | 1:A:24:VAL:HG13 | 16 | 0.36 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 12 | 0.35 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 20 | 0.35 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 9 | 0.35 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 10 | 0.35 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 13 | 0.35 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 12 | 0.35 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 12 | 0.35 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 12 | 0.35 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 8 | 0.35 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 2 | 0.34 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 1 | 0.34 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 5 | 0.34 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 5 | 0.34 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 5 | 0.34 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 5 | 0.34 |
| (1,747) | 1:A:84:TYR:HE1 | 1:A:101:TYR:HD1 | 19 | 0.34 |
| (1,747) | 1:A:84:TYR:HE2 | 1:A:101:TYR:HD1 | 19 | 0.34 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 1 | 0.34 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 6 | 0.34 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 11 | 0.34 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 11 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 11 | 0.34 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 11 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 11 | 0.34 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 11 | 0.34 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 8 | 0.34 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 8 | 0.34 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 8 | 0.34 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 19 | 0.34 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 19 | 0.34 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 19 | 0.34 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 8 | 0.33 |
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 2 | 0.33 |
| (2,366) | 1:A:145:PHE:H | 1:A:146:LYS:HB3 | 4 | 0.33 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 8 | 0.33 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 14 | 0.33 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 14 | 0.33 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 14 | 0.33 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 16 | 0.33 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 16 | 0.33 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 19 | 0.33 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 19 | 0.33 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 19 | 0.33 |
| (1,22) | 1:A:86:LEU:HD11 | 1:A:87:ILE:H | 2 | 0.33 |
| (1,22) | 1:A:86:LEU:HD12 | 1:A:87:ILE:H | 2 | 0.33 |
| (1,22) | 1:A:86:LEU:HD13 | 1:A:87:ILE:H | 2 | 0.33 |
| (2,274) | 1:A:144:LEU:HA | 1:A:146:LYS:HB3 | 4 | 0.32 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG11 | 10 | 0.32 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG12 | 10 | 0.32 |
| (1,9) | 1:A:57:ILE:HA | 1:A:39:VAL:HG13 | 10 | 0.32 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 8 | 0.32 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 8 | 0.32 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 8 | 0.32 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 5 | 0.32 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 19 | 0.31 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 19 | 0.31 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 19 | 0.31 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 19 | 0.31 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 19 | 0.31 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 19 | 0.31 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 20 | 0.31 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 20 | 0.31 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 20 | 0.31 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 20 | 0.31 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 20 | 0.31 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 20 | 0.31 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 16 | 0.31 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 16 | 0.31 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 16 | 0.31 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 11 | 0.31 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 11 | 0.31 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 11 | 0.31 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 11 | 0.31 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 11 | 0.31 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 11 | 0.31 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 13 | 0.31 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 13 | 0.31 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 16 | 0.31 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 16 | 0.31 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 16 | 0.31 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 13 | 0.31 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 13 | 0.31 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 16 | 0.31 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 5 | 0.3 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 2 | 0.3 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 6 | 0.3 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 14 | 0.3 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 9 | 0.3 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 9 | 0.3 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 9 | 0.3 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 18 | 0.3 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 18 | 0.3 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 18 | 0.3 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 18 | 0.3 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 18 | 0.3 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 18 | 0.3 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD1 | 16 | 0.3 |
| (1,317) | 1:A:24:VAL:HG11 | 1:A:23:PHE:HD2 | 16 | 0.3 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD1 | 16 | 0.3 |
| (1,317) | 1:A:24:VAL:HG12 | 1:A:23:PHE:HD2 | 16 | 0.3 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD1 | 16 | 0.3 |
| (1,317) | 1:A:24:VAL:HG13 | 1:A:23:PHE:HD2 | 16 | 0.3 |
| (2,92) | 1:A:129:ILE:HB | 1:A:128:GLU:HB2 | 10 | 0.29 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 6 | 0.29 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 6 | 0.29 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 19 | 0.29 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 19 | 0.29 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 19 | 0.29 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 12 | 0.29 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 12 | 0.29 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 12 | 0.29 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 1 | 0.29 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 1 | 0.29 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 6 | 0.29 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 6 | 0.29 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 1 | 0.29 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 15 | 0.29 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 11 | 0.28 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 4 | 0.28 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 9 | 0.28 |
| (2,294) | 1:A:68:VAL:HG11 | 1:A:92:LEU:HB3 | 4 | 0.28 |
| (2,294) | 1:A:68:VAL:HG12 | 1:A:92:LEU:HB3 | 4 | 0.28 |
| (2,294) | 1:A:68:VAL:HG13 | 1:A:92:LEU:HB3 | 4 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 1 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 6 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 20 | 0.28 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 20 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 20 | 0.28 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 20 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 20 | 0.28 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 20 | 0.28 |
| (2,187) | 1:A:76:ASP:HA | 1:A:78:VAL:HG11 | 15 | 0.28 |
| (2,187) | 1:A:76:ASP:HA | 1:A:78:VAL:HG12 | 15 | 0.28 |
| (2,187) | 1:A:76:ASP:HA | 1:A:78:VAL:HG13 | 15 | 0.28 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 1 | 0.28 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 1 | 0.28 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 1 | 0.28 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 18 | 0.28 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 12 | 0.28 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 12 | 0.28 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 12 | 0.28 |
| (1,379) | 1:A:68:VAL:HG11 | 1:A:91:ALA:H | 12 | 0.28 |
| (1,379) | 1:A:68:VAL:HG12 | 1:A:91:ALA:H | 12 | 0.28 |
| (1,379) | 1:A:68:VAL:HG13 | 1:A:91:ALA:H | 12 | 0.28 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 18 | 0.28 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 6 | 0.27 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 3 | 0.27 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 12 | 0.27 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 13 | 0.27 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 16 | 0.27 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 18 | 0.27 |
| (2,335) | 1:A:125:GLY:H | 1:A:126:ASP:HB2 | 15 | 0.27 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 10 | 0.27 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 10 | 0.27 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 10 | 0.27 |
| (2,20) | 1:A:127:VAL:HA | 1:A:95:ASN:HB2 | 3 | 0.27 |
| (1,23) | 1:A:86:LEU:HD11 | 1:A:68:VAL:HA | 2 | 0.27 |
| (1,23) | 1:A:86:LEU:HD12 | 1:A:68:VAL:HA | 2 | 0.27 |
| (1,23) | 1:A:86:LEU:HD13 | 1:A:68:VAL:HA | 2 | 0.27 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 10 | 0.27 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 7 | 0.26 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 7 | 0.26 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 19 | 0.26 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 12 | 0.26 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG11 | 18 | 0.26 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG12 | 18 | 0.26 |
| (2,123) | 1:A:90:ASP:HB3 | 1:A:68:VAL:HG13 | 18 | 0.26 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 3 | 0.26 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 3 | 0.26 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 3 | 0.26 |
| (1,669) | 1:A:14:ILE:H | 1:A:14:ILE:HG13 | 4 | 0.26 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD21 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD22 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD21 | 1:A:86:LEU:HD23 | 14 | 0.26 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD21 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD22 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD22 | 1:A:86:LEU:HD23 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD21 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD22 | 14 | 0.26 |
| (1,359) | 1:A:92:LEU:HD23 | 1:A:86:LEU:HD23 | 14 | 0.26 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 7 | 0.26 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 7 | 0.26 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 7 | 0.26 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 4 | 0.26 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 4 | 0.26 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD1 | 20 | 0.26 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD2 | 20 | 0.26 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 14 | 0.26 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 9 | 0.25 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 12 | 0.25 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 8 | 0.25 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 8 | 0.25 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 8 | 0.25 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 8 | 0.25 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 8 | 0.25 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 8 | 0.25 |
| (2,127) | 1:A:10:PHE:HB3 | 1:A:115:ILE:HG12 | 15 | 0.25 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG21 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG22 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD21 | 1:A:68:VAL:HG23 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG21 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG22 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD22 | 1:A:68:VAL:HG23 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG21 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG22 | 17 | 0.25 |
| (1,876) | 1:A:92:LEU:HD23 | 1:A:68:VAL:HG23 | 17 | 0.25 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 9 | 0.25 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 9 | 0.25 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 9 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 19 | 0.25 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 19 | 0.25 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 19 | 0.25 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 14 | 0.25 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 14 | 0.25 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 6 | 0.25 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 9 | 0.25 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 11 | 0.25 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 5 | 0.24 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 10 | 0.24 |
| (2,356) | 1:A:12:SER:H | 1:A:149:GLU:HG3 | 18 | 0.24 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 6 | 0.24 |
| (2,335) | 1:A:125:GLY:H | 1:A:126:ASP:HB2 | 13 | 0.24 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 2 | 0.24 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 2 | 0.24 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 2 | 0.24 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 2 | 0.24 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 2 | 0.24 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 2 | 0.24 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG21 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG22 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HG23 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG21 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG22 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HG23 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG21 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG22 | 7 | 0.24 |
| (1,863) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HG23 | 7 | 0.24 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD21 | 5 | 0.24 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD22 | 5 | 0.24 |
| (1,545) | 1:A:91:ALA:H | 1:A:86:LEU:HD23 | 5 | 0.24 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG21 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG22 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG21 | 1:A:24:VAL:HG23 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG21 | 7 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG22 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG22 | 1:A:24:VAL:HG23 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG21 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG22 | 7 | 0.24 |
| (1,248) | 1:A:75:ILE:HG23 | 1:A:24:VAL:HG23 | 7 | 0.24 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 20 | 0.24 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 11 | 0.23 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 20 | 0.23 |
| (2,292) | 1:A:25:LEU:HD11 | 1:A:22:ALA:HA | 3 | 0.23 |
| (2,292) | 1:A:25:LEU:HD12 | 1:A:22:ALA:HA | 3 | 0.23 |
| (2,292) | 1:A:25:LEU:HD13 | 1:A:22:ALA:HA | 3 | 0.23 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 6 | 0.23 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 6 | 0.23 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 6 | 0.23 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 6 | 0.23 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 6 | 0.23 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 6 | 0.23 |
| (2,244) | 1:A:3:VAL:HG11 | 1:A:99:ILE:HA | 4 | 0.23 |
| (2,244) | 1:A:3:VAL:HG12 | 1:A:99:ILE:HA | 4 | 0.23 |
| (2,244) | 1:A:3:VAL:HG13 | 1:A:99:ILE:HA | 4 | 0.23 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 16 | 0.23 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 16 | 0.23 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 16 | 0.23 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 16 | 0.23 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 16 | 0.23 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 16 | 0.23 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 3 | 0.23 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 2 | 0.22 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 6 | 0.22 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 17 | 0.22 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 20 | 0.22 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 11 | 0.22 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 9 | 0.22 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 9 | 0.22 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 9 | 0.22 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 12 | 0.22 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 20 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 20 | 0.22 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 20 | 0.22 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 20 | 0.22 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 20 | 0.22 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 20 | 0.22 |
| (1,310) | 1:A:106:VAL:HG11 | 1:A:107:SER:HB3 | 2 | 0.22 |
| (1,310) | 1:A:106:VAL:HG12 | 1:A:107:SER:HB3 | 2 | 0.22 |
| (1,310) | 1:A:106:VAL:HG13 | 1:A:107:SER:HB3 | 2 | 0.22 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 6 | 0.22 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 6 | 0.22 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 6 | 0.22 |
| (1,290) | 1:A:24:VAL:HG21 | 1:A:75:ILE:HB | 15 | 0.22 |
| (1,290) | 1:A:24:VAL:HG22 | 1:A:75:ILE:HB | 15 | 0.22 |
| (1,290) | 1:A:24:VAL:HG23 | 1:A:75:ILE:HB | 15 | 0.22 |
| (2,449) | 1:A:150:GLY:H | 1:A:151:TYR:HB3 | 19 | 0.21 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 19 | 0.21 |
| (2,345) | 1:A:95:ASN:H | 1:A:92:LEU:HB2 | 2 | 0.21 |
| (2,293) | 1:A:19:LEU:HD11 | 1:A:12:SER:H | 6 | 0.21 |
| (2,293) | 1:A:19:LEU:HD12 | 1:A:12:SER:H | 6 | 0.21 |
| (2,293) | 1:A:19:LEU:HD13 | 1:A:12:SER:H | 6 | 0.21 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 14 | 0.21 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 14 | 0.21 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 14 | 0.21 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 14 | 0.21 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 14 | 0.21 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 14 | 0.21 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD11 | 13 | 0.21 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD12 | 13 | 0.21 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD13 | 13 | 0.21 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 19 | 0.21 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 19 | 0.21 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD1 | 6 | 0.21 |
| (1,175) | 1:A:66:GLY:HA2 | 1:A:59:PHE:HD2 | 6 | 0.21 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 4 | 0.21 |
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 4 | 0.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,134) | 1:A:84:TYR:HB3 | 1:A:72:ILE:HA | 12 | 0.21 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 6 | 0.2 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 1 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 8 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 8 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 8 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 18 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 18 | 0.2 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 18 | 0.2 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD11 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD12 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD13 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD11 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD12 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD13 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD11 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD12 | 20 | 0.2 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD13 | 20 | 0.2 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 16 | 0.2 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 16 | 0.2 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 16 | 0.2 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 20 | 0.2 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 20 | 0.2 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 20 | 0.2 |
| (1,233) | 1:A:14:ILE:HG21 | 1:A:15:PRO:HD3 | 5 | 0.2 |
| (1,233) | 1:A:14:ILE:HG22 | 1:A:15:PRO:HD3 | 5 | 0.2 |
| (1,233) | 1:A:14:ILE:HG23 | 1:A:15:PRO:HD3 | 5 | 0.2 |
| (1,233) | 1:A:14:ILE:HG21 | 1:A:15:PRO:HD3 | 20 | 0.2 |
| (1,233) | 1:A:14:ILE:HG22 | 1:A:15:PRO:HD3 | 20 | 0.2 |
| (1,233) | 1:A:14:ILE:HG23 | 1:A:15:PRO:HD3 | 20 | 0.2 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 9 | 0.2 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB2 | 4 | 0.19 |
| (2,77) | 1:A:146:LYS:HB3 | 1:A:143:HIS:HB3 | 4 | 0.19 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG11 | 10 | 0.19 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG12 | 10 | 0.19 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG13 | 10 | 0.19 |
| (2,396) | 1:A:127:VAL:H | 1:A:95:ASN:HB2 | 19 | 0.19 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 8 | 0.19 |
| (2,390) | 1:A:78:VAL:H | 1:A:79:ASN:HB3 | 14 | 0.19 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD11 | 14 | 0.19 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD12 | 14 | 0.19 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD13 | 14 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 1 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 1 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 1 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 2 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 2 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 2 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 4 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 4 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 4 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 5 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 5 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 5 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 6 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 6 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 6 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 7 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 7 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 7 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 8 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 8 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 8 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 9 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 9 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 9 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 10 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 10 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 10 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 11 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 11 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 11 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 12 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 12 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 12 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 14 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 14 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 14 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 18 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 18 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 18 | 0.19 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 19 | 0.19 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 19 | 0.19 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 19 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,233) | 1:A:14:ILE:HG21 | 1:A:15:PRO:HD3 | 13 | 0.19 |
| (1,233) | 1:A:14:ILE:HG22 | 1:A:15:PRO:HD3 | 13 | 0.19 |
| (1,233) | 1:A:14:ILE:HG23 | 1:A:15:PRO:HD3 | 13 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 18 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 18 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 18 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 19 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 19 | 0.19 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 19 | 0.19 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 9 | 0.18 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 13 | 0.18 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 18 | 0.18 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 20 | 0.18 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 20 | 0.18 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 20 | 0.18 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD11 | 19 | 0.18 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD12 | 19 | 0.18 |
| (1,55) | 1:A:20:PHE:HA | 1:A:105:LEU:HD13 | 19 | 0.18 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 7 | 0.18 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD1 | 16 | 0.18 |
| (1,368) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HD2 | 16 | 0.18 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD1 | 16 | 0.18 |
| (1,368) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HD2 | 16 | 0.18 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD1 | 16 | 0.18 |
| (1,368) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HD2 | 16 | 0.18 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 3 | 0.18 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 3 | 0.18 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 3 | 0.18 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 13 | 0.18 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 13 | 0.18 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 13 | 0.18 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 15 | 0.18 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 15 | 0.18 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 15 | 0.18 |
| (1,246) | 1:A:75:ILE:HG21 | 1:A:75:ILE:HG13 | 17 | 0.18 |
| (1,246) | 1:A:75:ILE:HG22 | 1:A:75:ILE:HG13 | 17 | 0.18 |
| (1,246) | 1:A:75:ILE:HG23 | 1:A:75:ILE:HG13 | 17 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 1 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 1 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 1 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 5 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 5 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|-----------------|----------|---------------|
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 5 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 6 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 6 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 6 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 11 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 11 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 11 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 12 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 12 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 12 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 13 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 13 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 13 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 14 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 14 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 14 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 20 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 20 | 0.18 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 20 | 0.18 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 12 | 0.18 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 16 | 0.18 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG11 | 20 | 0.17 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG12 | 20 | 0.17 |
| (2,452) | 1:A:60:GLY:H | 1:A:39:VAL:HG13 | 20 | 0.17 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 1 | 0.17 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 20 | 0.17 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 20 | 0.17 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 20 | 0.17 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 5 | 0.17 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 5 | 0.17 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 5 | 0.17 |
| (1,28) | 1:A:87:ILE:HA | 1:A:88:GLU:HG2 | 13 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 2 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 2 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 2 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 4 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 4 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 4 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 8 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 8 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 8 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD21 | 16 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD22 | 16 | 0.17 |
| (1,162) | 1:A:86:LEU:HB2 | 1:A:86:LEU:HD23 | 16 | 0.17 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 3 | 0.17 |
| (2,423) | 1:A:82:TYR:H | 1:A:104:LYS:HG2 | 5 | 0.16 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 15 | 0.16 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 16 | 0.16 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 16 | 0.16 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 16 | 0.16 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 16 | 0.16 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 16 | 0.16 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 16 | 0.16 |
| (2,127) | 1:A:10:PHE:HB3 | 1:A:115:ILE:HG12 | 3 | 0.16 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD11 | 13 | 0.16 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD12 | 13 | 0.16 |
| (1,766) | 1:A:89:GLY:H | 1:A:92:LEU:HD13 | 13 | 0.16 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG11 | 14 | 0.16 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG12 | 14 | 0.16 |
| (1,641) | 1:A:58:THR:H | 1:A:39:VAL:HG13 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 14 | 0.16 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 14 | 0.16 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 15 | 0.16 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 18 | 0.16 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 1 | 0.15 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 1 | 0.15 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 1 | 0.15 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG21 | 18 | 0.15 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG22 | 18 | 0.15 |
| (2,47) | 1:A:75:ILE:HG12 | 1:A:24:VAL:HG23 | 18 | 0.15 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 7 | 0.15 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 7 | 0.15 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 7 | 0.15 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 7 | 0.15 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 7 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 7 | 0.15 |
| (2,118) | 1:A:90:ASP:HB3 | 1:A:66:GLY:HA3 | 12 | 0.15 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 3 | 0.15 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 5 | 0.15 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 5 | 0.15 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 5 | 0.15 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 5 | 0.15 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 5 | 0.15 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 5 | 0.15 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 11 | 0.15 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 11 | 0.15 |
| (1,233) | 1:A:14:ILE:HG21 | 1:A:15:PRO:HD3 | 19 | 0.15 |
| (1,233) | 1:A:14:ILE:HG22 | 1:A:15:PRO:HD3 | 19 | 0.15 |
| (1,233) | 1:A:14:ILE:HG23 | 1:A:15:PRO:HD3 | 19 | 0.15 |
| (1,135) | 1:A:76:ASP:HB2 | 1:A:79:ASN:HA | 19 | 0.15 |
| (2,335) | 1:A:125:GLY:H | 1:A:126:ASP:HB2 | 11 | 0.14 |
| (2,292) | 1:A:25:LEU:HD11 | 1:A:22:ALA:HA | 6 | 0.14 |
| (2,292) | 1:A:25:LEU:HD12 | 1:A:22:ALA:HA | 6 | 0.14 |
| (2,292) | 1:A:25:LEU:HD13 | 1:A:22:ALA:HA | 6 | 0.14 |
| (2,116) | 1:A:121:TYR:HB2 | 1:A:3:VAL:HG11 | 7 | 0.14 |
| (2,116) | 1:A:121:TYR:HB2 | 1:A:3:VAL:HG12 | 7 | 0.14 |
| (2,116) | 1:A:121:TYR:HB2 | 1:A:3:VAL:HG13 | 7 | 0.14 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 8 | 0.14 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 10 | 0.14 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 18 | 0.14 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 18 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 18 | 0.14 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 18 | 0.14 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 18 | 0.14 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 18 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD21 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD22 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB1 | 1:A:86:LEU:HD23 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD21 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD22 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB2 | 1:A:86:LEU:HD23 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD21 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD22 | 6 | 0.14 |
| (1,272) | 1:A:91:ALA:HB3 | 1:A:86:LEU:HD23 | 6 | 0.14 |
| (1,111) | 1:A:81:THR:HB | 1:A:79:ASN:HB3 | 18 | 0.14 |
| (2,338) | 1:A:74:SER:H | 1:A:84:TYR:HB2 | 17 | 0.13 |
| (2,294) | 1:A:68:VAL:HG11 | 1:A:92:LEU:HB3 | 11 | 0.13 |
| (2,294) | 1:A:68:VAL:HG12 | 1:A:92:LEU:HB3 | 11 | 0.13 |
| (2,294) | 1:A:68:VAL:HG13 | 1:A:92:LEU:HB3 | 11 | 0.13 |
| (2,110) | 1:A:20:PHE:HB2 | 1:A:17:PRO:HG3 | 17 | 0.13 |
| (2,110) | 1:A:20:PHE:HB3 | 1:A:17:PRO:HG3 | 17 | 0.13 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 14 | 0.13 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 19 | 0.13 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 20 | 0.13 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 20 | 0.13 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 20 | 0.13 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 20 | 0.13 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 20 | 0.13 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 20 | 0.13 |
| (1,28) | 1:A:87:ILE:HA | 1:A:88:GLU:HG2 | 5 | 0.13 |
| (2,305) | 1:A:104:LYS:HG2 | 1:A:81:THR:H | 12 | 0.12 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE1 | 1 | 0.12 |
| (2,283) | 1:A:19:LEU:HD11 | 1:A:145:PHE:HE2 | 1 | 0.12 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE1 | 1 | 0.12 |
| (2,283) | 1:A:19:LEU:HD12 | 1:A:145:PHE:HE2 | 1 | 0.12 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE1 | 1 | 0.12 |
| (2,283) | 1:A:19:LEU:HD13 | 1:A:145:PHE:HE2 | 1 | 0.12 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE1 | 12 | 0.12 |
| (2,24) | 1:A:86:LEU:HD21 | 1:A:84:TYR:HE2 | 12 | 0.12 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE1 | 12 | 0.12 |
| (2,24) | 1:A:86:LEU:HD22 | 1:A:84:TYR:HE2 | 12 | 0.12 |
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE1 | 12 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|------------------|----------|---------------|
| (2,24) | 1:A:86:LEU:HD23 | 1:A:84:TYR:HE2 | 12 | 0.12 |
| (2,110) | 1:A:20:PHE:HB2 | 1:A:17:PRO:HG3 | 8 | 0.12 |
| (2,110) | 1:A:20:PHE:HB3 | 1:A:17:PRO:HG3 | 8 | 0.12 |
| (1,97) | 1:A:3:VAL:HB | 1:A:2:GLY:HA2 | 16 | 0.12 |
| (1,747) | 1:A:84:TYR:HE1 | 1:A:101:TYR:HD1 | 13 | 0.12 |
| (1,747) | 1:A:84:TYR:HE2 | 1:A:101:TYR:HD1 | 13 | 0.12 |
| (1,14) | 1:A:106:VAL:HA | 1:A:107:SER:HB3 | 17 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG11 | 2 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG12 | 2 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG13 | 2 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG11 | 5 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG12 | 5 | 0.12 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG13 | 5 | 0.12 |
| (2,70) | 1:A:12:SER:HB2 | 1:A:115:ILE:HG12 | 12 | 0.11 |
| (2,303) | 1:A:104:LYS:HG2 | 1:A:81:THR:HB | 10 | 0.11 |
| (1,556) | 1:A:78:VAL:H | 1:A:76:ASP:HB2 | 4 | 0.11 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 12 | 0.11 |
| (1,410) | 1:A:111:GLY:H | 1:A:110:HIS:HB3 | 13 | 0.11 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 8 | 0.11 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD1 | 12 | 0.11 |
| (1,375) | 1:A:68:VAL:HG11 | 1:A:67:TYR:HD2 | 12 | 0.11 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD1 | 12 | 0.11 |
| (1,375) | 1:A:68:VAL:HG12 | 1:A:67:TYR:HD2 | 12 | 0.11 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD1 | 12 | 0.11 |
| (1,375) | 1:A:68:VAL:HG13 | 1:A:67:TYR:HD2 | 12 | 0.11 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD11 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD12 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG21 | 1:A:57:ILE:HD13 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD11 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD12 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG22 | 1:A:57:ILE:HD13 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD11 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD12 | 19 | 0.11 |
| (1,265) | 1:A:68:VAL:HG23 | 1:A:57:ILE:HD13 | 19 | 0.11 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG11 | 17 | 0.11 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG12 | 17 | 0.11 |
| (1,122) | 1:A:79:ASN:HB3 | 1:A:78:VAL:HG13 | 17 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,111) | 1:A:81:THR:HB | 1:A:79:ASN:HB3 | 19 | 0.11 |

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

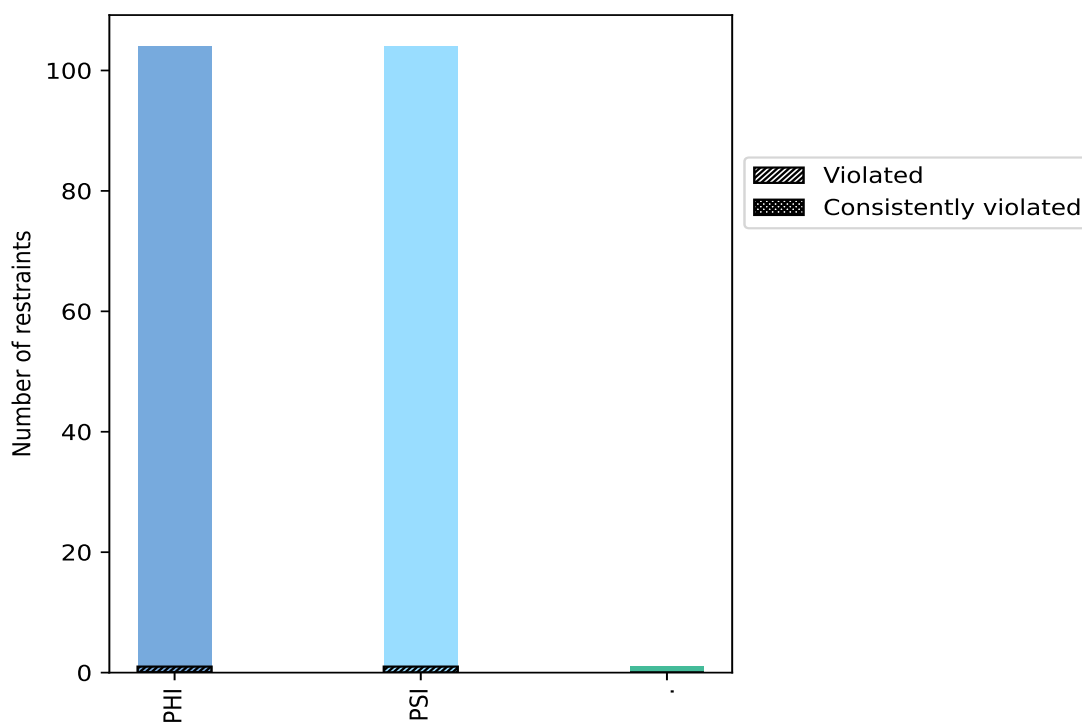
10.1 Summary of dihedral-angle violations [i](#)

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

| Angle type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|------------|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| PHI | 104 | 49.8 | 1 | 1.0 | 0.5 | 0 | 0.0 | 0.0 |
| PSI | 104 | 49.8 | 1 | 1.0 | 0.5 | 0 | 0.0 | 0.0 |
| . | 1 | 0.5 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Total | 209 | 100.0 | 2 | 1.0 | 1.0 | 0 | 0.0 | 0.0 |

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

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



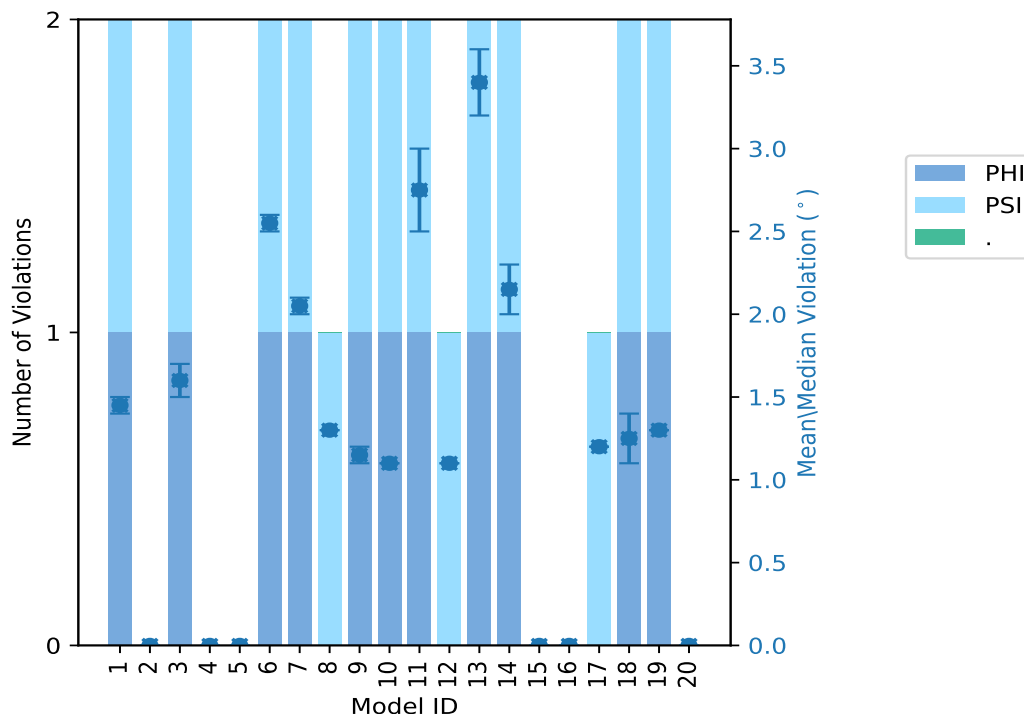
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

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

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

| Model ID | Number of violations | | | | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|---|-------|----------|---------|--------|------------|
| | PHI | PSI | . | Total | | | | |
| 1 | 1 | 1 | 0 | 2 | 1.45 | 1.5 | 0.05 | 1.45 |
| 2 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 1 | 1 | 0 | 2 | 1.6 | 1.7 | 0.1 | 1.6 |
| 4 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 1 | 1 | 0 | 2 | 2.55 | 2.6 | 0.05 | 2.55 |
| 7 | 1 | 1 | 0 | 2 | 2.05 | 2.1 | 0.05 | 2.05 |
| 8 | 0 | 1 | 0 | 1 | 1.3 | 1.3 | 0.0 | 1.3 |
| 9 | 1 | 1 | 0 | 2 | 1.15 | 1.2 | 0.05 | 1.15 |
| 10 | 1 | 1 | 0 | 2 | 1.1 | 1.1 | 0.0 | 1.1 |
| 11 | 1 | 1 | 0 | 2 | 2.75 | 3.0 | 0.25 | 2.75 |
| 12 | 0 | 1 | 0 | 1 | 1.1 | 1.1 | 0.0 | 1.1 |
| 13 | 1 | 1 | 0 | 2 | 3.4 | 3.6 | 0.2 | 3.4 |
| 14 | 1 | 1 | 0 | 2 | 2.15 | 2.3 | 0.15 | 2.15 |
| 15 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 16 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 17 | 0 | 1 | 0 | 1 | 1.2 | 1.2 | 0.0 | 1.2 |
| 18 | 1 | 1 | 0 | 2 | 1.25 | 1.4 | 0.15 | 1.25 |
| 19 | 1 | 1 | 0 | 2 | 1.3 | 1.3 | 0.0 | 1.3 |
| 20 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |

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 | % |
| 0 | 0 | 0 | 0 | 1 | 5.0 |
| 0 | 0 | 0 | 0 | 2 | 10.0 |
| 0 | 0 | 0 | 0 | 3 | 15.0 |
| 0 | 0 | 0 | 0 | 4 | 20.0 |
| 0 | 0 | 0 | 0 | 5 | 25.0 |
| 0 | 0 | 0 | 0 | 6 | 30.0 |
| 0 | 0 | 0 | 0 | 7 | 35.0 |
| 0 | 0 | 0 | 0 | 8 | 40.0 |
| 0 | 0 | 0 | 0 | 9 | 45.0 |
| 0 | 0 | 0 | 0 | 10 | 50.0 |
| 1 | 0 | 0 | 1 | 11 | 55.0 |

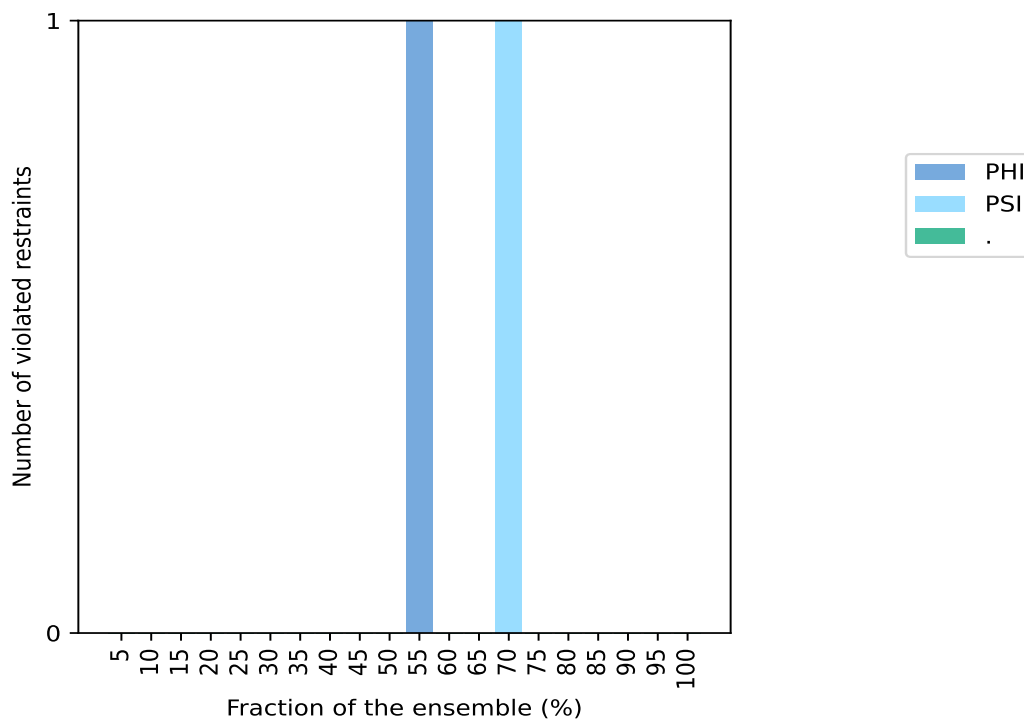
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| Number of violated restraints | | | | Fraction of the ensemble | |
|-------------------------------|-----|---|-------|--------------------------|-------|
| PHI | PSI | . | Total | Count ¹ | % |
| 0 | 0 | 0 | 0 | 12 | 60.0 |
| 0 | 0 | 0 | 0 | 13 | 65.0 |
| 0 | 1 | 0 | 1 | 14 | 70.0 |
| 0 | 0 | 0 | 0 | 15 | 75.0 |
| 0 | 0 | 0 | 0 | 16 | 80.0 |
| 0 | 0 | 0 | 0 | 17 | 85.0 |
| 0 | 0 | 0 | 0 | 18 | 90.0 |
| 0 | 0 | 0 | 0 | 19 | 95.0 |
| 0 | 0 | 0 | 0 | 20 | 100.0 |

¹ Number of models with violations

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

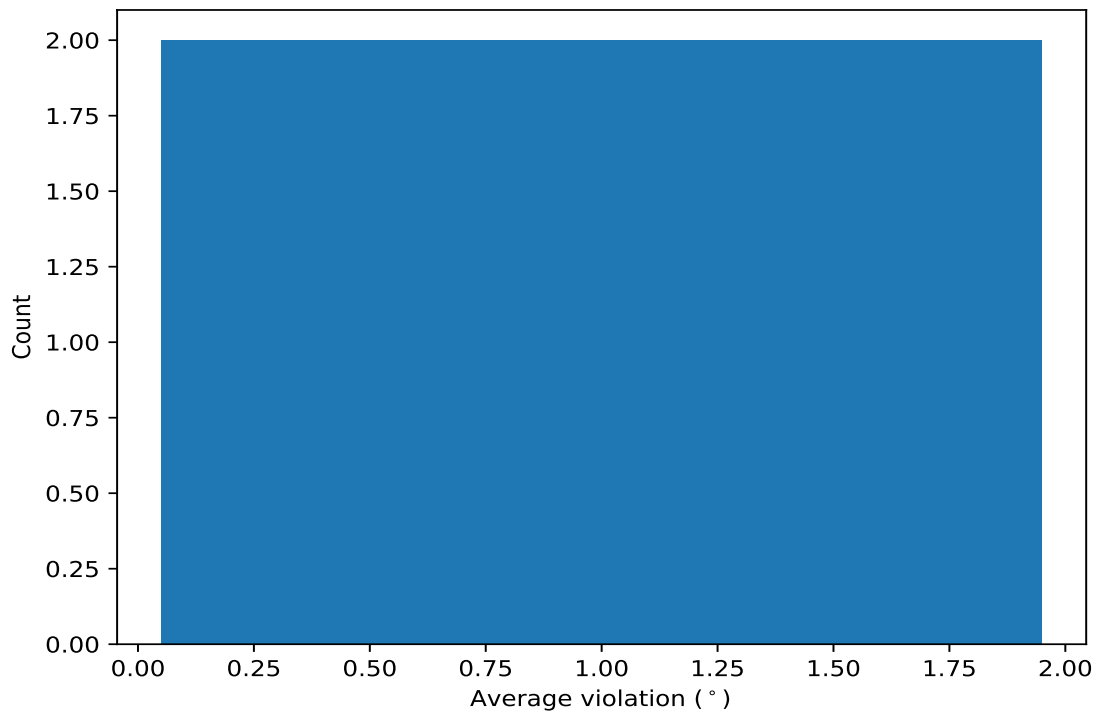


10.4 Most violated dihedral-angle restraints in the ensemble [i](#)

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.

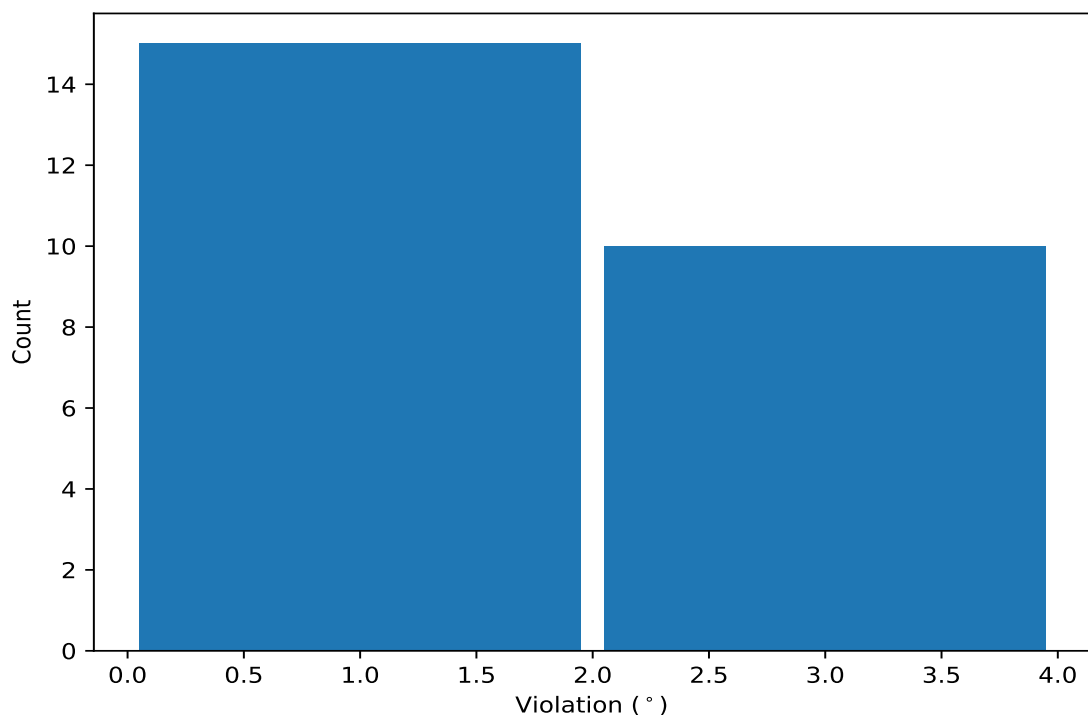
| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Models ¹ | Mean | SD ² | Median |
|---------|--------------|---------------|---------------|--------------|---------------------|------|-----------------|--------|
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 14 | 1.81 | 0.75 | 1.45 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 11 | 1.8 | 0.68 | 1.5 |

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 (°) |
|---------|--------------|---------------|---------------|--------------|----------|---------------|
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 13 | 3.6 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 13 | 3.2 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 11 | 3.0 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 6 | 2.6 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 11 | 2.5 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 6 | 2.5 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 14 | 2.3 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 7 | 2.1 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 7 | 2.0 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 14 | 2.0 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 3 | 1.7 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 3 | 1.5 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 1 | 1.5 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 1 | 1.4 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 18 | 1.4 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 19 | 1.3 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 8 | 1.3 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 19 | 1.3 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 9 | 1.2 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 17 | 1.2 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 9 | 1.1 |

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| Key | Atom-1 | Atom-2 | Atom-3 | Atom-4 | Model ID | Violation (°) |
|------------|---------------|---------------|---------------|---------------|-----------------|----------------------|
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 10 | 1.1 |
| (1,60) | 1:A:97:GLU:C | 1:A:98:LYS:N | 1:A:98:LYS:CA | 1:A:98:LYS:C | 18 | 1.1 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 10 | 1.1 |
| (1,163) | 1:A:97:GLU:N | 1:A:97:GLU:CA | 1:A:97:GLU:C | 1:A:98:LYS:N | 12 | 1.1 |