



Full wwPDB NMR Structure Validation Report ⓘ

Jun 6, 2023 – 03:00 AM EDT

PDB ID : 2ME0
BMRB ID : 19511
Title : NMR Structure of the homeodomain transcription factor Gbx1 from Homo sapiens solved in the presence of the DNA sequence CGACTAATTAGTCG
Authors : Proudfoot, A.; Serrano, P.; Geralt, M.; Wuthrich, K.; Joint Center for Structural Genomics (JCSG); Partnership for Stem Cell Biology (STEMCELL)
Deposited on : 2013-09-20

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

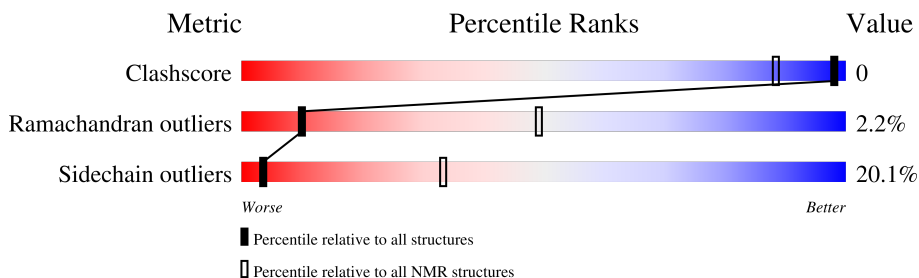
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 84%.

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 | 71 | |

2 Ensemble composition and analysis

This entry contains 20 models. Model 5 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *closest to the average*.

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

| Well-defined (core) protein residues | | | |
|--------------------------------------|-----------------------|-------------------|--------------|
| Well-defined core | Residue range (total) | Backbone RMSD (Å) | Medoid model |
| 1 | A:12-A:58 (47) | 0.88 | 5 |

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

3 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 1202 atoms, of which 615 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Homeobox protein GBX-1.

| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---|-------|
| | | | Total | C | H | N | O | S | |
| 1 | A | 71 | 1202 | 370 | 615 | 116 | 100 | 1 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------------|------------|
| A | 1 | SER | - | expression tag | UNP Q14549 |

4 Residue-property plots i

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: Homeobox protein GBX-1

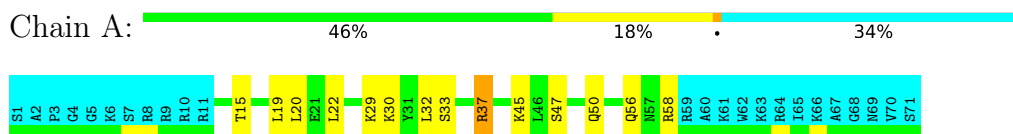


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

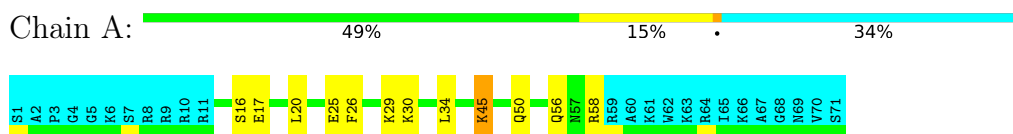
4.2.1 Score per residue for model 1

- Molecule 1: Homeobox protein GBX-1



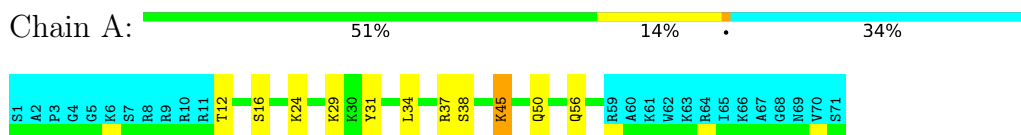
4.2.2 Score per residue for model 2

- Molecule 1: Homeobox protein GBX-1



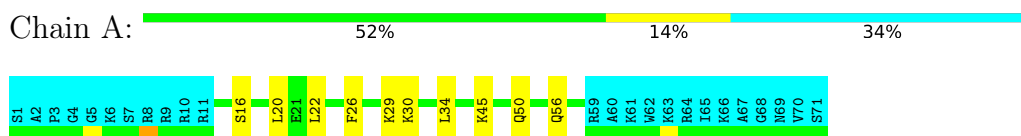
4.2.3 Score per residue for model 3

- Molecule 1: Homeobox protein GBX-1



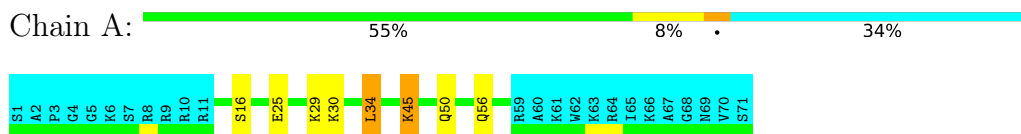
4.2.4 Score per residue for model 4

- Molecule 1: Homeobox protein GBX-1



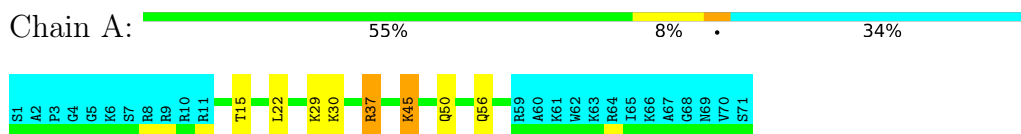
4.2.5 Score per residue for model 5 (medoid)

- Molecule 1: Homeobox protein GBX-1



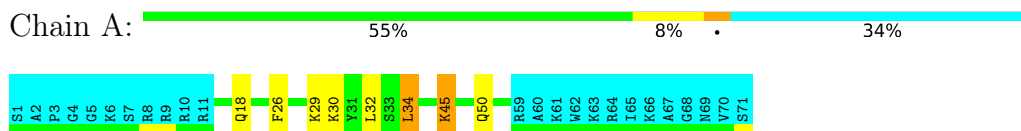
4.2.6 Score per residue for model 6

- Molecule 1: Homeobox protein GBX-1



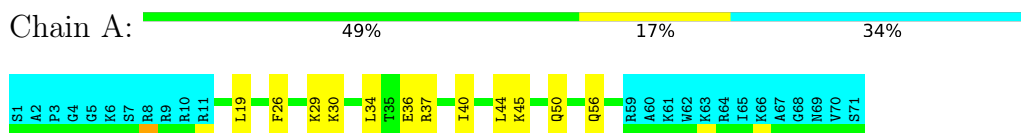
4.2.7 Score per residue for model 7

- Molecule 1: Homeobox protein GBX-1



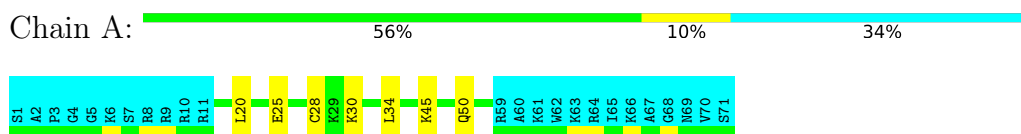
4.2.8 Score per residue for model 8

- Molecule 1: Homeobox protein GBX-1



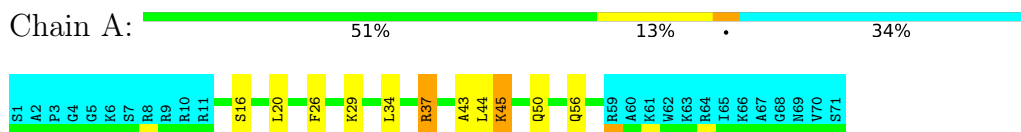
4.2.9 Score per residue for model 9

- Molecule 1: Homeobox protein GBX-1



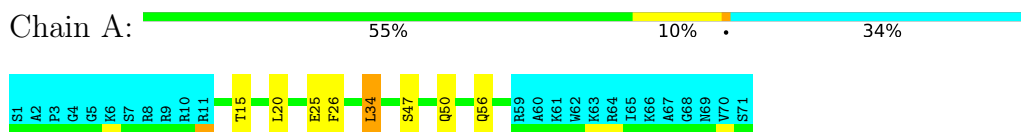
4.2.10 Score per residue for model 10

- Molecule 1: Homeobox protein GBX-1



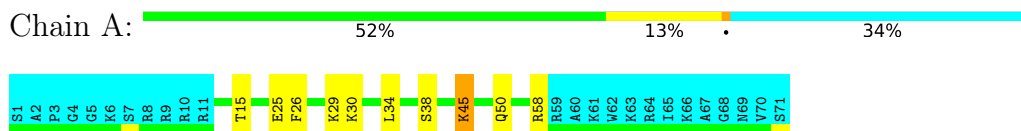
4.2.11 Score per residue for model 11

- Molecule 1: Homeobox protein GBX-1



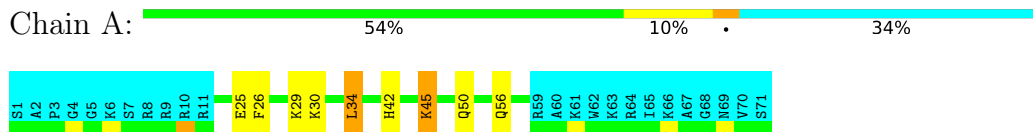
4.2.12 Score per residue for model 12

- Molecule 1: Homeobox protein GBX-1



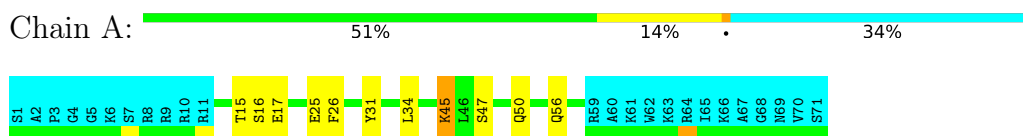
4.2.13 Score per residue for model 13

- Molecule 1: Homeobox protein GBX-1



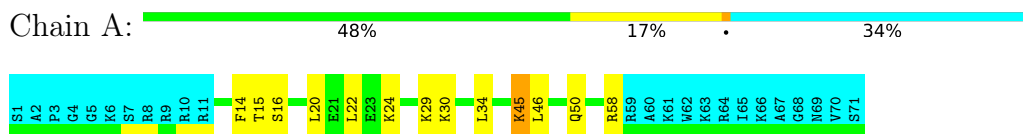
4.2.14 Score per residue for model 14

- Molecule 1: Homeobox protein GBX-1



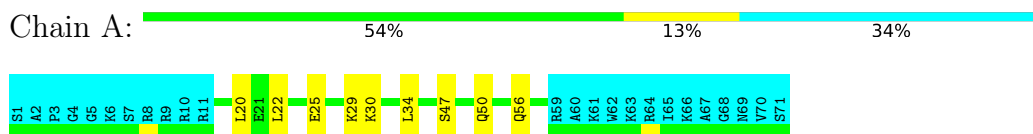
4.2.15 Score per residue for model 15

- Molecule 1: Homeobox protein GBX-1



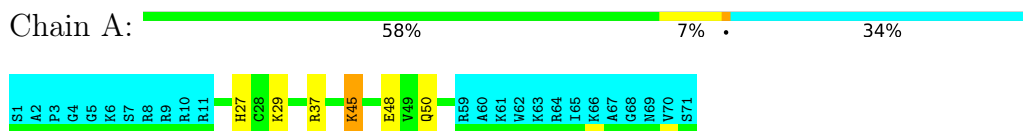
4.2.16 Score per residue for model 16

- Molecule 1: Homeobox protein GBX-1



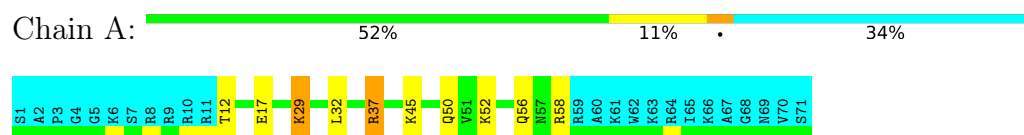
4.2.17 Score per residue for model 17

- Molecule 1: Homeobox protein GBX-1



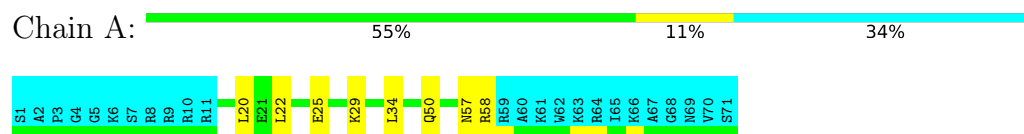
4.2.18 Score per residue for model 18

- Molecule 1: Homeobox protein GBX-1



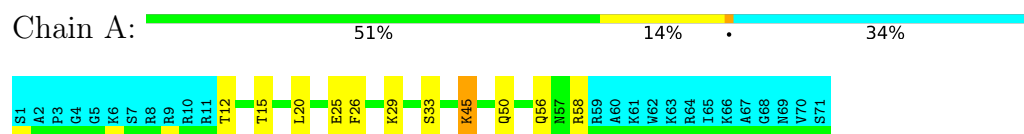
4.2.19 Score per residue for model 19

- Molecule 1: Homeobox protein GBX-1



4.2.20 Score per residue for model 20

- Molecule 1: Homeobox protein GBX-1



5 Refinement protocol and experimental data overview

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

Of the 40 calculated structures, 20 were deposited, based on the following criterion: *target function*.

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

| Software name | Classification | Version |
|---------------|--------------------|---------|
| CYANA | refinement | |
| CARA | refinement | |
| OPALp | refinement | |
| UNIO | structure solution | |

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 | 822 |
| Number of shifts mapped to atoms | 822 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 0 |
| Number of shifts with mapping warnings | 0 |
| Assignment completeness (well-defined parts) | 84% |

6 Model quality i

6.1 Standard geometry i

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

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|----------------------|-------------|----------------------|
| | | RMSZ | #Z>5 | RMSZ | #Z>5 |
| 1 | A | 0.60±0.01 | 0±0/404 (0.0± 0.0%) | 0.99±0.04 | 0±1/543 (0.0± 0.1%) |
| All | All | 0.60 | 0/8080 (0.0%) | 0.99 | 4/10860 (0.0%) |

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

| Mol | Chain | Chirality | Planarity |
|-----|-------|-----------|-----------|
| 1 | A | 0.0±0.0 | 0.3±0.6 |
| All | All | 0 | 7 |

There are no bond-length outliers.

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

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|-----------|-------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 1 | A | 58 | ARG | NE-CZ-NH1 | 7.36 | 123.98 | 120.30 | 18 | 1 |
| 1 | A | 58 | ARG | NE-CZ-NH2 | -7.22 | 116.69 | 120.30 | 18 | 1 |
| 1 | A | 37 | ARG | NE-CZ-NH2 | -5.62 | 117.49 | 120.30 | 8 | 1 |
| 1 | A | 37 | ARG | NE-CZ-NH1 | 5.26 | 122.93 | 120.30 | 10 | 1 |

There are no chirality outliers.

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

| Mol | Chain | Res | Type | Group | Models (Total) |
|-----|-------|-----|------|-----------|----------------|
| 1 | A | 37 | ARG | Sidechain | 4 |
| 1 | A | 31 | TYR | Sidechain | 2 |
| 1 | A | 14 | PHE | Sidechain | 1 |

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 | 396 | 403 | 403 | 0±0 |
| All | All | 7920 | 8060 | 8060 | 5 |

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 0.

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

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|-----------------|-----------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:A:34:LEU:O | 1:A:34:LEU:HD13 | 0.61 | 1.95 | 19 | 1 |
| 1:A:43:ALA:HB3 | 1:A:44:LEU:HD22 | 0.59 | 1.72 | 10 | 1 |
| 1:A:32:LEU:HD13 | 1:A:37:ARG:HD2 | 0.54 | 1.79 | 1 | 1 |
| 1:A:40:ILE:HG23 | 1:A:44:LEU:HD12 | 0.45 | 1.87 | 8 | 1 |
| 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 0.41 | 1.91 | 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 | 47/71 (66%) | 40±2 (85±4%) | 6±2 (13±3%) | 1±1 (2±1%) | 10 | 49 |
| All | All | 940/1420 (66%) | 799 (85%) | 120 (13%) | 21 (2%) | 10 | 49 |

All 3 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 | 45 | LYS | 14 |
| 1 | A | 34 | LEU | 6 |
| 1 | A | 58 | ARG | 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 | 44/62 (71%) | 35±2 (80±4%) | 9±2 (20±4%) | 3 33 |
| All | All | 880/1240 (71%) | 703 (80%) | 177 (20%) | 3 33 |

All 31 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 | 50 | GLN | 20 |
| 1 | A | 29 | LYS | 17 |
| 1 | A | 45 | LYS | 15 |
| 1 | A | 56 | GLN | 14 |
| 1 | A | 30 | LYS | 12 |
| 1 | A | 34 | LEU | 12 |
| 1 | A | 20 | LEU | 10 |
| 1 | A | 25 | GLU | 10 |
| 1 | A | 26 | PHE | 10 |
| 1 | A | 15 | THR | 7 |
| 1 | A | 16 | SER | 7 |
| 1 | A | 22 | LEU | 6 |
| 1 | A | 58 | ARG | 5 |
| 1 | A | 37 | ARG | 4 |
| 1 | A | 47 | SER | 4 |
| 1 | A | 17 | GLU | 3 |
| 1 | A | 12 | THR | 3 |
| 1 | A | 19 | LEU | 2 |
| 1 | A | 33 | SER | 2 |
| 1 | A | 24 | LYS | 2 |
| 1 | A | 38 | SER | 2 |
| 1 | A | 18 | GLN | 1 |
| 1 | A | 32 | LEU | 1 |
| 1 | A | 36 | GLU | 1 |
| 1 | A | 28 | CYS | 1 |
| 1 | A | 42 | HIS | 1 |
| 1 | A | 46 | LEU | 1 |
| 1 | A | 27 | HIS | 1 |
| 1 | A | 48 | GLU | 1 |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1 | A | 52 | LYS | 1 |
| 1 | A | 57 | ASN | 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 84% for the well-defined parts and 78% 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 | 822 |
| Number of shifts mapped to atoms | 822 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 0 |
| Number of shifts with mapping warnings | 0 |
| Number of shift outliers (ShiftChecker) | 18 |

The following errors were found when reading this chemical shift list.

- Chemical shift has been reported more than once. All 6 occurrences are reported below.

| List ID | Chain | Res | Type | Atom | Shift Data | | |
|---------|-------|-----|------|------|------------|-------------|-----------|
| | | | | | Value | Uncertainty | Ambiguity |
| 1 | A | 44 | LEU | HD11 | 0.784 | 0.000 | . |
| 1 | A | 44 | LEU | HD12 | 0.784 | 0.000 | . |
| 1 | A | 44 | LEU | HD13 | 0.784 | 0.000 | . |
| 1 | A | 34 | LEU | HD11 | 1.002 | 0.000 | . |
| 1 | A | 34 | LEU | HD12 | 1.002 | 0.000 | . |
| 1 | A | 34 | LEU | HD13 | 1.002 | 0.000 | . |

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 |
|------------------------|----------|---------------------------------|--------------------------|
| $^{13}\text{C}_\alpha$ | 68 | 1.90 ± 0.17 | Should be checked |
| $^{13}\text{C}_\beta$ | 65 | 2.48 ± 0.12 | Should be checked |
| $^{13}\text{C}'$ | 0 | — | None (insufficient data) |

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| Nucleus | # values | Correction \pm precision, ppm | Suggested action |
|-----------------|----------|---------------------------------|-------------------------|
| ¹⁵ N | 67 | 0.35 \pm 0.53 | 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 84%, i.e. 579 atoms were assigned a chemical shift out of a possible 693. 0 out of 9 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹ H | ¹³ C | ¹⁵ N |
|-----------|---------------|----------------|-----------------|-----------------|
| Backbone | 188/235 (80%) | 94/94 (100%) | 47/94 (50%) | 47/47 (100%) |
| Sidechain | 339/393 (86%) | 230/254 (91%) | 104/123 (85%) | 5/16 (31%) |
| Aromatic | 52/65 (80%) | 26/33 (79%) | 25/29 (86%) | 1/3 (33%) |
| Overall | 579/693 (84%) | 350/381 (92%) | 176/246 (72%) | 53/66 (80%) |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 78%, i.e. 816 atoms were assigned a chemical shift out of a possible 1049. 0 out of 10 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹ H | ¹³ C | ¹⁵ N |
|-----------|----------------|----------------|-----------------|-----------------|
| Backbone | 272/356 (76%) | 137/144 (95%) | 68/142 (48%) | 67/70 (96%) |
| Sidechain | 480/616 (78%) | 324/395 (82%) | 150/182 (82%) | 6/39 (15%) |
| Aromatic | 64/77 (83%) | 32/39 (82%) | 30/34 (88%) | 2/4 (50%) |
| Overall | 816/1049 (78%) | 493/578 (85%) | 248/358 (69%) | 75/113 (66%) |

7.1.4 Statistically unusual chemical shifts [i](#)

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

| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1 | A | 58 | ARG | HB2 | -0.46 | 0.52 – 3.08 | -8.8 |
| 1 | A | 58 | ARG | HG2 | -0.69 | 0.26 – 2.87 | -8.6 |
| 1 | A | 22 | LEU | HB2 | -1.02 | -0.07 – 3.30 | -7.8 |
| 1 | A | 33 | SER | HB3 | 1.92 | 2.49 – 5.20 | -7.1 |
| 1 | A | 38 | SER | HB2 | 2.12 | 2.61 – 5.13 | -6.9 |
| 1 | A | 30 | LYS | HE2 | 1.58 | 1.95 – 3.88 | -6.9 |
| 1 | A | 38 | SER | HB3 | 2.12 | 2.49 – 5.20 | -6.4 |
| 1 | A | 30 | LYS | HD2 | 0.30 | 0.58 – 2.64 | -6.4 |
| 1 | A | 58 | ARG | HG3 | -0.20 | 0.15 – 2.94 | -6.3 |

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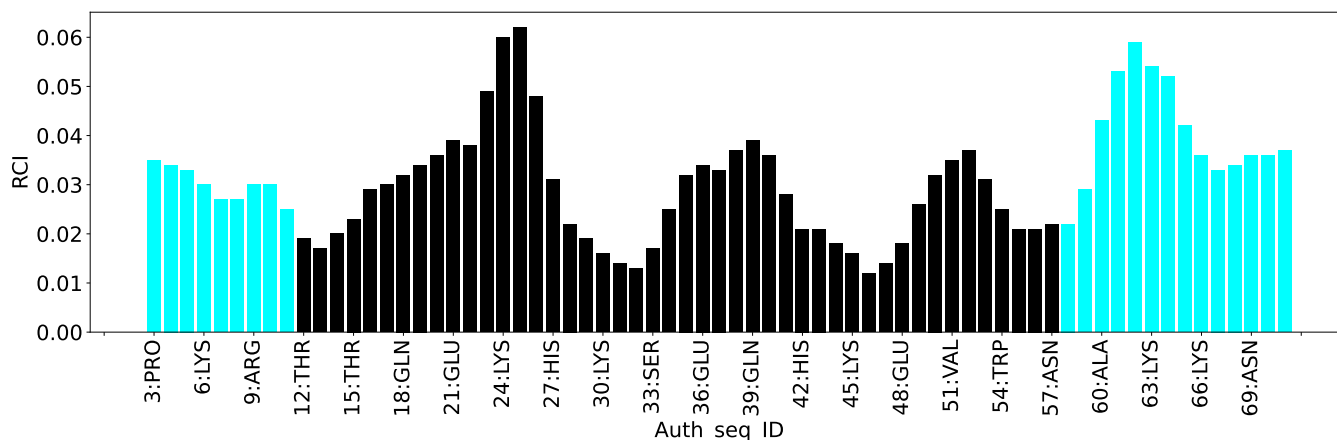
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| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1 | A | 33 | SER | HB2 | 2.29 | 2.61 – 5.13 | -6.3 |
| 1 | A | 30 | LYS | HD3 | 0.30 | 0.54 – 2.65 | -6.2 |
| 1 | A | 37 | ARG | HG2 | 0.12 | 0.26 – 2.87 | -5.5 |
| 1 | A | 30 | LYS | HE3 | 1.82 | 1.92 – 3.89 | -5.5 |
| 1 | A | 22 | LEU | HD21 | -0.78 | -0.65 – 2.13 | -5.5 |
| 1 | A | 22 | LEU | HD22 | -0.78 | -0.65 – 2.13 | -5.5 |
| 1 | A | 22 | LEU | HD23 | -0.78 | -0.65 – 2.13 | -5.5 |
| 1 | A | 58 | ARG | CG | 21.10 | 21.24 – 33.19 | -5.1 |
| 1 | A | 37 | ARG | HG3 | 0.12 | 0.15 – 2.94 | -5.1 |

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

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

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

| Description | Value |
|--|-------|
| Total distance restraints | 834 |
| Intra-residue ($ i-j =0$) | 289 |
| Sequential ($ i-j =1$) | 243 |
| Medium range ($ i-j >1$ and $ i-j <5$) | 194 |
| Long range ($ i-j \geq 5$) | 108 |
| Inter-chain | 0 |
| Hydrogen bond restraints | 0 |
| Disulfide bond restraints | 0 |
| Total dihedral-angle restraints | 0 |
| Number of unmapped restraints | 0 |
| Number of restraints per residue | 11.7 |
| Number of long range restraints per residue ¹ | 1.5 |

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) | 11.1 | 0.2 |
| 0.2-0.5 (Medium) | 16.8 | 0.5 |
| >0.5 (Large) | 37.6 | 3.54 |

8.2.2 Average number of dihedral-angle violations per model

Dihedral-angle violations less than 1° are not included in the calculation. There are no dihedral-angle violations

9 Distance violation analysis [\(i\)](#)

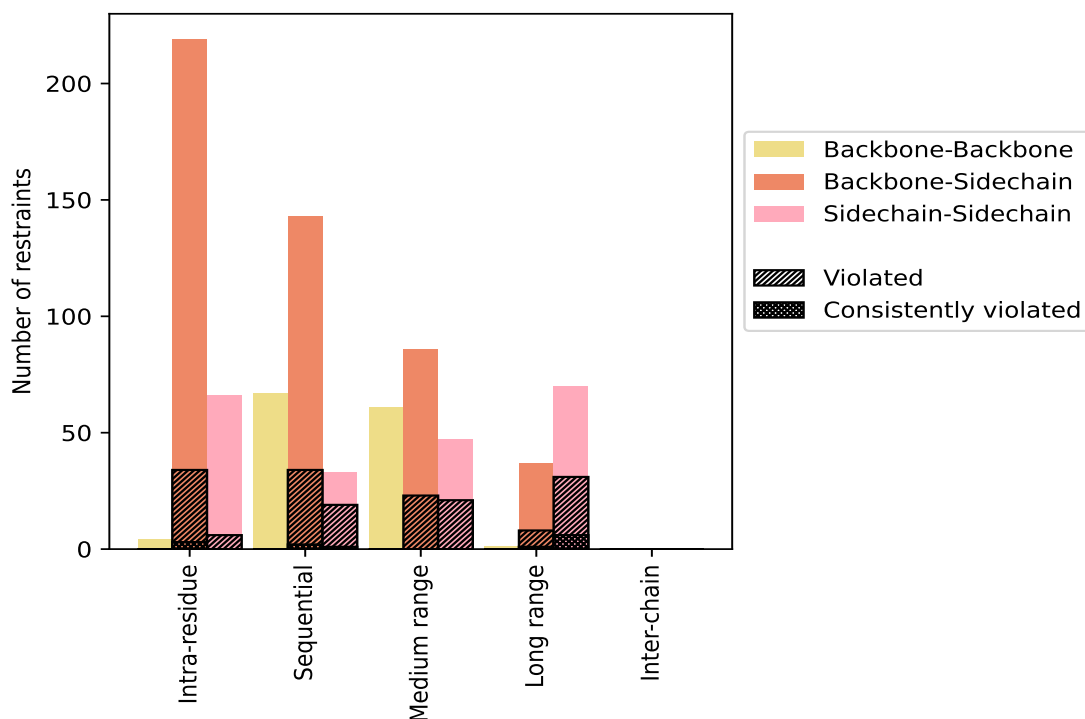
9.1 Summary of distance violations [\(i\)](#)

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

| Restrains type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|---|------------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| Intra-residue ($i-j =0$) | 289 | 34.7 | 40 | 13.8 | 4.8 | 3 | 1.0 | 0.4 |
| Backbone-Backbone | 4 | 0.5 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 219 | 26.3 | 34 | 15.5 | 4.1 | 3 | 1.4 | 0.4 |
| Sidechain-Sidechain | 66 | 7.9 | 6 | 9.1 | 0.7 | 0 | 0.0 | 0.0 |
| Sequential ($i-j =1$) | 243 | 29.1 | 53 | 21.8 | 6.4 | 3 | 1.2 | 0.4 |
| Backbone-Backbone | 67 | 8.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 143 | 17.1 | 34 | 23.8 | 4.1 | 2 | 1.4 | 0.2 |
| Sidechain-Sidechain | 33 | 4.0 | 19 | 57.6 | 2.3 | 1 | 3.0 | 0.1 |
| Medium range ($i-j >1$ & $i-j <5$) | 194 | 23.3 | 44 | 22.7 | 5.3 | 0 | 0.0 | 0.0 |
| Backbone-Backbone | 61 | 7.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 86 | 10.3 | 23 | 26.7 | 2.8 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 47 | 5.6 | 21 | 44.7 | 2.5 | 0 | 0.0 | 0.0 |
| Long range ($i-j \geq 5$) | 108 | 12.9 | 39 | 36.1 | 4.7 | 7 | 6.5 | 0.8 |
| Backbone-Backbone | 1 | 0.1 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 37 | 4.4 | 8 | 21.6 | 1.0 | 1 | 2.7 | 0.1 |
| Sidechain-Sidechain | 70 | 8.4 | 31 | 44.3 | 3.7 | 6 | 8.6 | 0.7 |
| 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 | 0 | 0.0 | 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 | 834 | 100.0 | 176 | 21.1 | 21.1 | 13 | 1.6 | 1.6 |
| Backbone-Backbone | 133 | 15.9 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 485 | 58.2 | 99 | 20.4 | 11.9 | 6 | 1.2 | 0.7 |
| Sidechain-Sidechain | 216 | 25.9 | 77 | 35.6 | 9.2 | 7 | 3.2 | 0.8 |

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 | 12 | 21 | 16 | 21 | 0 | 70 | 0.8 | 2.83 | 0.67 | 0.58 |
| 2 | 9 | 10 | 12 | 14 | 0 | 45 | 0.78 | 2.67 | 0.59 | 0.54 |
| 3 | 7 | 14 | 11 | 12 | 0 | 44 | 0.8 | 2.26 | 0.57 | 0.6 |
| 4 | 11 | 15 | 12 | 18 | 0 | 56 | 0.91 | 2.85 | 0.61 | 0.74 |
| 5 | 14 | 19 | 17 | 17 | 0 | 67 | 0.75 | 3.03 | 0.6 | 0.64 |
| 6 | 16 | 21 | 17 | 20 | 0 | 74 | 0.77 | 2.64 | 0.61 | 0.66 |
| 7 | 13 | 21 | 20 | 19 | 0 | 73 | 0.75 | 2.27 | 0.54 | 0.61 |
| 8 | 16 | 20 | 17 | 13 | 0 | 66 | 0.74 | 2.98 | 0.6 | 0.54 |
| 9 | 12 | 15 | 9 | 15 | 0 | 51 | 0.69 | 3.04 | 0.66 | 0.49 |
| 10 | 13 | 19 | 17 | 21 | 0 | 70 | 0.95 | 3.54 | 0.8 | 0.61 |
| 11 | 15 | 19 | 17 | 15 | 0 | 66 | 0.76 | 2.91 | 0.64 | 0.6 |

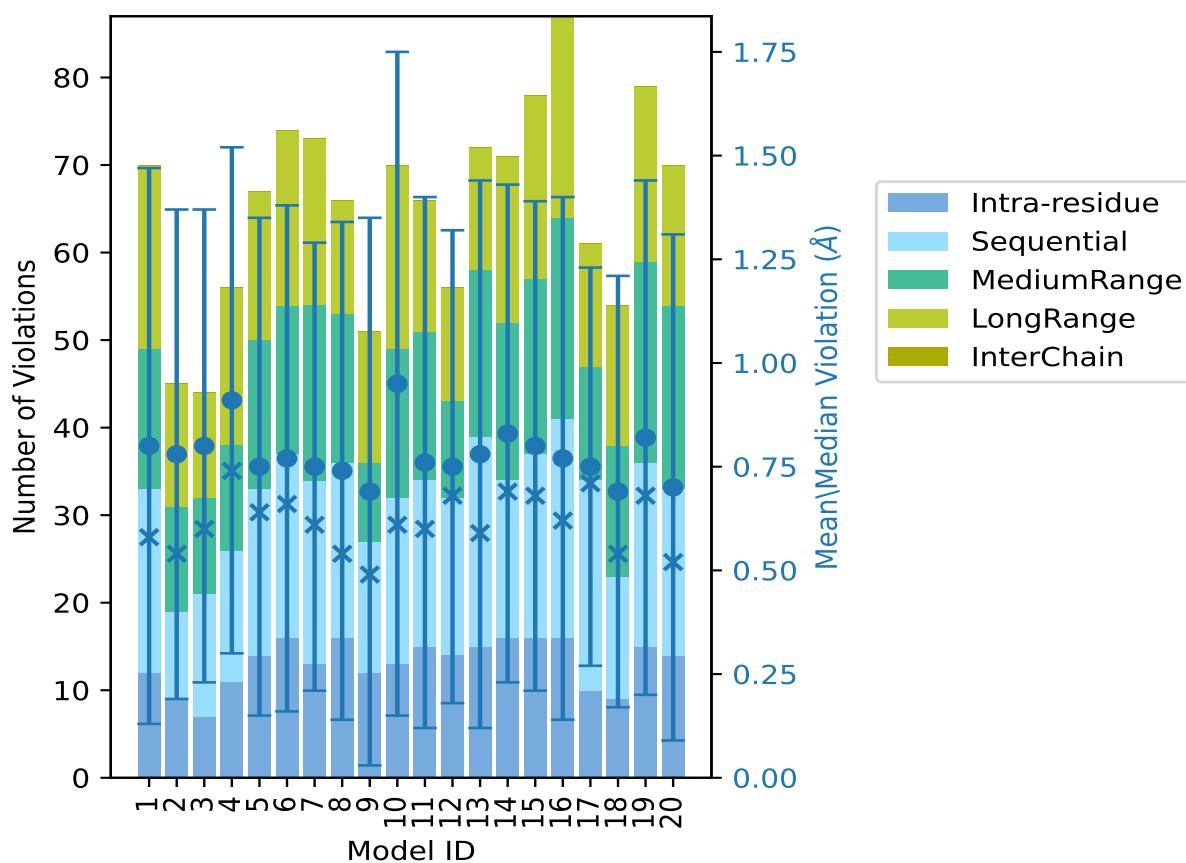
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| Model ID | Number of violations | | | | | Total | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | | | | | |
| 12 | 14 | 18 | 11 | 13 | 0 | 56 | 0.75 | 2.99 | 0.57 | 0.68 |
| 13 | 15 | 24 | 19 | 14 | 0 | 72 | 0.78 | 3.05 | 0.66 | 0.59 |
| 14 | 16 | 18 | 18 | 19 | 0 | 71 | 0.83 | 2.74 | 0.6 | 0.69 |
| 15 | 16 | 21 | 20 | 21 | 0 | 78 | 0.8 | 3.2 | 0.59 | 0.68 |
| 16 | 16 | 25 | 23 | 23 | 0 | 87 | 0.77 | 2.95 | 0.63 | 0.62 |
| 17 | 10 | 24 | 13 | 14 | 0 | 61 | 0.75 | 2.08 | 0.48 | 0.71 |
| 18 | 9 | 14 | 15 | 16 | 0 | 54 | 0.69 | 2.16 | 0.52 | 0.54 |
| 19 | 15 | 21 | 23 | 20 | 0 | 79 | 0.82 | 2.96 | 0.62 | 0.68 |
| 20 | 14 | 19 | 21 | 16 | 0 | 70 | 0.7 | 2.82 | 0.61 | 0.52 |

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

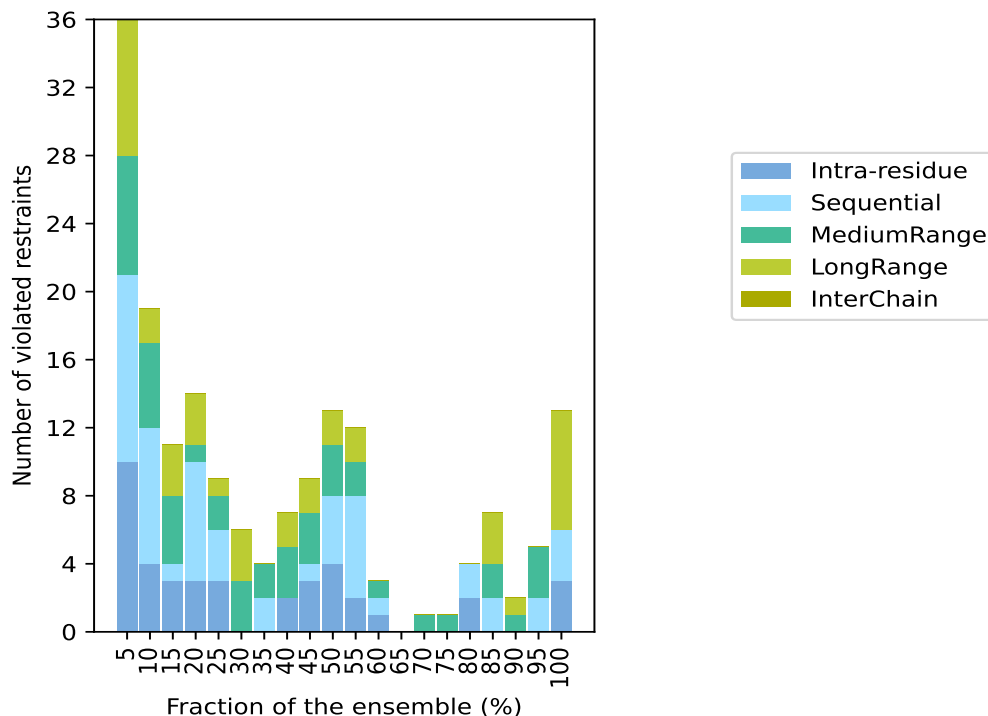
9.3 Distance violation statistics for the ensemble

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, 658(IR:249, SQ:190, MR:150, LR:69, 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 | % |
| 10 | 11 | 7 | 8 | 0 | 36 | 1 | 5.0 |
| 4 | 8 | 5 | 2 | 0 | 19 | 2 | 10.0 |
| 3 | 1 | 4 | 3 | 0 | 11 | 3 | 15.0 |
| 3 | 7 | 1 | 3 | 0 | 14 | 4 | 20.0 |
| 3 | 3 | 2 | 1 | 0 | 9 | 5 | 25.0 |
| 0 | 0 | 3 | 3 | 0 | 6 | 6 | 30.0 |
| 0 | 2 | 2 | 0 | 0 | 4 | 7 | 35.0 |
| 2 | 0 | 3 | 2 | 0 | 7 | 8 | 40.0 |
| 3 | 1 | 3 | 2 | 0 | 9 | 9 | 45.0 |
| 4 | 4 | 3 | 2 | 0 | 13 | 10 | 50.0 |
| 2 | 6 | 2 | 2 | 0 | 12 | 11 | 55.0 |
| 1 | 1 | 1 | 0 | 0 | 3 | 12 | 60.0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 13 | 65.0 |
| 0 | 0 | 1 | 0 | 0 | 1 | 14 | 70.0 |
| 0 | 0 | 1 | 0 | 0 | 1 | 15 | 75.0 |
| 2 | 2 | 0 | 0 | 0 | 4 | 16 | 80.0 |
| 0 | 2 | 2 | 3 | 0 | 7 | 17 | 85.0 |
| 0 | 0 | 1 | 1 | 0 | 2 | 18 | 90.0 |
| 0 | 2 | 3 | 0 | 0 | 5 | 19 | 95.0 |
| 3 | 3 | 0 | 7 | 0 | 13 | 20 | 100.0 |

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

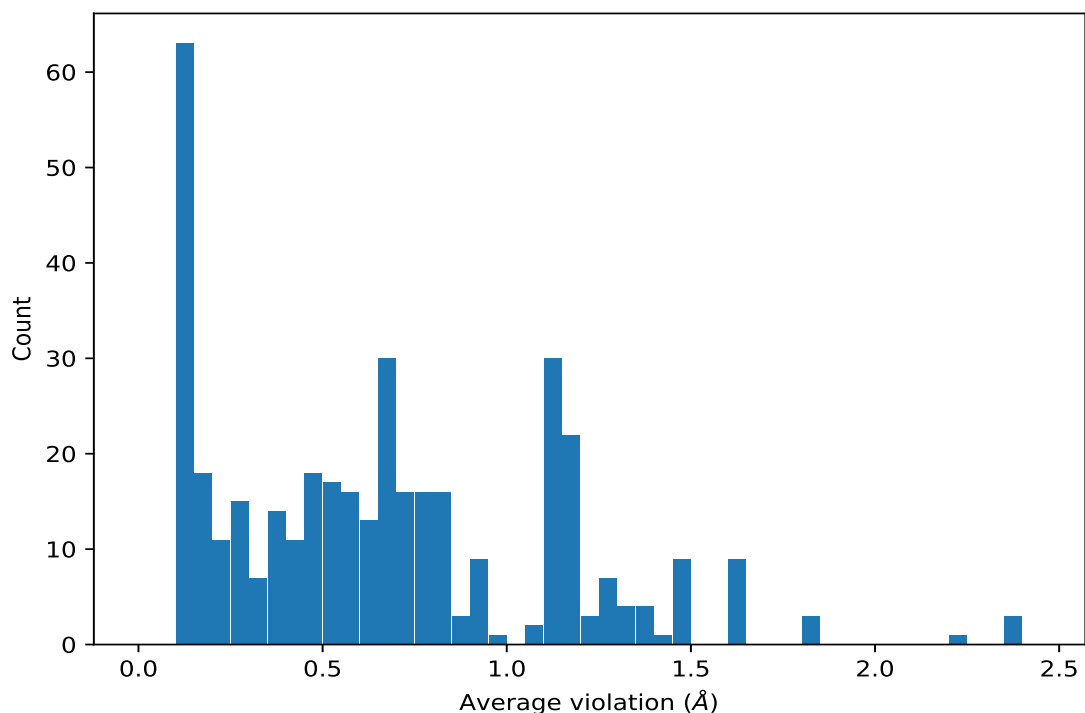
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



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) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 20 | 2.36 | 0.71 | 2.82 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 20 | 2.36 | 0.71 | 2.82 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 20 | 2.36 | 0.71 | 2.82 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 20 | 2.21 | 0.42 | 2.23 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 20 | 1.8 | 0.21 | 1.87 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 20 | 1.8 | 0.21 | 1.87 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 20 | 1.8 | 0.21 | 1.87 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 20 | 1.61 | 1.12 | 1.3 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 20 | 1.61 | 1.12 | 1.3 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 20 | 1.61 | 1.12 | 1.3 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 20 | 1.45 | 0.51 | 1.58 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 20 | 1.39 | 0.06 | 1.4 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 20 | 1.22 | 0.27 | 1.28 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 20 | 1.22 | 0.27 | 1.28 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 20 | 1.22 | 0.27 | 1.28 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 20 | 1.12 | 0.8 | 0.68 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 20 | 1.12 | 0.8 | 0.68 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 20 | 1.12 | 0.8 | 0.68 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 20 | 0.66 | 0.13 | 0.67 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 20 | 0.52 | 0.06 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 20 | 0.52 | 0.06 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 20 | 0.52 | 0.06 | 0.52 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 20 | 0.47 | 0.06 | 0.48 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 20 | 0.42 | 0.03 | 0.41 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 20 | 0.27 | 0.16 | 0.24 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 19 | 1.48 | 0.21 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 19 | 1.48 | 0.21 | 1.53 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 19 | 1.11 | 0.23 | 1.14 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 19 | 0.99 | 0.24 | 1.04 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 19 | 0.77 | 0.32 | 0.79 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 19 | 0.77 | 0.32 | 0.79 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 19 | 0.32 | 0.11 | 0.32 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 18 | 1.17 | 0.39 | 1.13 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 18 | 0.66 | 0.28 | 0.69 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 17 | 1.61 | 0.56 | 1.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 17 | 1.61 | 0.56 | 1.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 17 | 1.61 | 0.56 | 1.77 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 17 | 1.13 | 0.49 | 1.02 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 17 | 0.81 | 0.89 | 0.34 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 17 | 0.81 | 0.89 | 0.34 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 17 | 0.81 | 0.89 | 0.34 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 17 | 0.65 | 0.3 | 0.73 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 17 | 0.59 | 0.25 | 0.54 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 17 | 0.48 | 0.25 | 0.4 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 17 | 0.48 | 0.25 | 0.4 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 17 | 0.48 | 0.25 | 0.4 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 17 | 0.45 | 0.06 | 0.48 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 16 | 1.16 | 0.61 | 1.1 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 16 | 1.16 | 0.61 | 1.1 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 16 | 1.16 | 0.61 | 1.1 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 16 | 0.75 | 0.21 | 0.81 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 16 | 0.55 | 0.11 | 0.54 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 16 | 0.34 | 0.01 | 0.34 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 15 | 1.14 | 0.84 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 15 | 1.14 | 0.84 | 0.8 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 14 | 0.86 | 0.34 | 0.92 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 12 | 0.86 | 0.25 | 0.92 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 12 | 0.79 | 0.03 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 12 | 0.79 | 0.03 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 12 | 0.79 | 0.03 | 0.78 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 12 | 0.61 | 0.28 | 0.62 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 12 | 0.61 | 0.28 | 0.62 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 12 | 0.61 | 0.28 | 0.62 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 11 | 1.19 | 0.54 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 11 | 1.19 | 0.54 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 11 | 1.19 | 0.54 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 11 | 1.19 | 0.54 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 11 | 1.19 | 0.54 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 11 | 1.19 | 0.54 | 1.21 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 11 | 0.84 | 0.51 | 0.7 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 11 | 0.84 | 0.51 | 0.7 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 11 | 0.84 | 0.51 | 0.7 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 11 | 0.76 | 0.35 | 0.81 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 11 | 0.76 | 0.35 | 0.81 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 11 | 0.76 | 0.35 | 0.81 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 11 | 0.76 | 0.35 | 0.81 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 11 | 0.76 | 0.35 | 0.81 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 11 | 0.76 | 0.35 | 0.81 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 11 | 0.72 | 0.29 | 0.7 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 11 | 0.72 | 0.29 | 0.7 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 11 | 0.72 | 0.29 | 0.7 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 11 | 0.71 | 0.41 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 11 | 0.71 | 0.41 | 0.78 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 11 | 0.63 | 0.33 | 0.7 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 11 | 0.61 | 0.29 | 0.7 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 11 | 0.49 | 0.57 | 0.25 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 11 | 0.49 | 0.57 | 0.25 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 11 | 0.49 | 0.57 | 0.25 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 11 | 0.46 | 0.15 | 0.49 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 11 | 0.46 | 0.15 | 0.49 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 11 | 0.28 | 0.16 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 11 | 0.28 | 0.16 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 11 | 0.28 | 0.16 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 11 | 0.28 | 0.16 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 11 | 0.28 | 0.16 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 11 | 0.28 | 0.16 | 0.22 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 11 | 0.24 | 0.06 | 0.24 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 11 | 0.24 | 0.06 | 0.24 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 11 | 0.24 | 0.06 | 0.24 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 11 | 0.2 | 0.05 | 0.19 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 10 | 1.61 | 0.49 | 1.74 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 10 | 1.61 | 0.49 | 1.74 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 10 | 1.61 | 0.49 | 1.74 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 10 | 1.4 | 0.26 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 10 | 1.4 | 0.26 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 10 | 1.4 | 0.26 | 1.34 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 10 | 1.32 | 0.2 | 1.31 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 10 | 1.32 | 0.2 | 1.31 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 10 | 1.32 | 0.2 | 1.31 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 10 | 1.18 | 0.4 | 1.27 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 10 | 1.18 | 0.4 | 1.27 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 10 | 1.16 | 0.26 | 1.14 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 10 | 1.16 | 0.26 | 1.14 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 10 | 1.16 | 0.26 | 1.14 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 10 | 0.83 | 0.08 | 0.85 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 10 | 0.83 | 0.08 | 0.85 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 10 | 0.83 | 0.08 | 0.85 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 10 | 0.77 | 0.06 | 0.76 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 10 | 0.77 | 0.06 | 0.76 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 10 | 0.77 | 0.06 | 0.76 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 10 | 0.72 | 0.15 | 0.7 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 10 | 0.57 | 0.31 | 0.52 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 10 | 0.57 | 0.31 | 0.52 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 10 | 0.57 | 0.31 | 0.52 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 10 | 0.53 | 0.42 | 0.32 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 10 | 0.48 | 0.15 | 0.46 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 10 | 0.29 | 0.16 | 0.25 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 10 | 0.21 | 0.08 | 0.2 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 9 | 1.27 | 0.37 | 1.11 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 9 | 1.27 | 0.37 | 1.11 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 9 | 1.27 | 0.37 | 1.11 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 9 | 1.15 | 0.5 | 1.03 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 9 | 1.15 | 0.5 | 1.03 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 9 | 1.15 | 0.5 | 1.03 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 9 | 1.15 | 0.5 | 1.03 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 9 | 1.15 | 0.5 | 1.03 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 9 | 1.15 | 0.5 | 1.03 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 9 | 1.09 | 0.22 | 1.19 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 9 | 0.7 | 0.65 | 0.65 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 9 | 0.7 | 0.65 | 0.65 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 9 | 0.7 | 0.65 | 0.65 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 9 | 0.7 | 0.65 | 0.65 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 9 | 0.7 | 0.65 | 0.65 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 9 | 0.7 | 0.65 | 0.65 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 9 | 0.46 | 0.36 | 0.35 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 9 | 0.39 | 0.24 | 0.36 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 9 | 0.39 | 0.24 | 0.36 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 9 | 0.39 | 0.24 | 0.36 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 9 | 0.24 | 0.06 | 0.27 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 9 | 0.24 | 0.07 | 0.24 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 9 | 0.13 | 0.01 | 0.12 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 8 | 1.15 | 0.21 | 1.08 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 8 | 1.15 | 0.21 | 1.08 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 8 | 1.15 | 0.21 | 1.08 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 8 | 0.8 | 0.43 | 0.76 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 8 | 0.65 | 0.21 | 0.63 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 8 | 0.65 | 0.21 | 0.63 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 8 | 0.65 | 0.21 | 0.63 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 8 | 0.56 | 0.13 | 0.55 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 8 | 0.56 | 0.13 | 0.55 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 8 | 0.56 | 0.13 | 0.55 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 8 | 0.46 | 0.16 | 0.5 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 8 | 0.46 | 0.16 | 0.5 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 8 | 0.46 | 0.16 | 0.5 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 8 | 0.29 | 0.06 | 0.29 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 8 | 0.11 | 0.0 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 8 | 0.11 | 0.0 | 0.11 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 7 | 1.28 | 0.15 | 1.2 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 7 | 1.09 | 0.75 | 1.1 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 7 | 0.91 | 0.3 | 0.86 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 7 | 0.91 | 0.3 | 0.86 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 7 | 0.91 | 0.3 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 7 | 0.91 | 0.3 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 7 | 0.91 | 0.3 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 7 | 0.91 | 0.3 | 0.86 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 7 | 0.75 | 0.47 | 0.59 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 6 | 0.62 | 0.36 | 0.46 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 6 | 0.62 | 0.36 | 0.46 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 6 | 0.62 | 0.36 | 0.46 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 6 | 0.62 | 0.36 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 6 | 0.62 | 0.36 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 6 | 0.62 | 0.36 | 0.46 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 6 | 0.53 | 0.17 | 0.55 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 6 | 0.53 | 0.17 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 6 | 0.53 | 0.17 | 0.55 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 6 | 0.47 | 0.33 | 0.38 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 6 | 0.47 | 0.33 | 0.38 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 6 | 0.47 | 0.33 | 0.38 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 6 | 0.38 | 0.22 | 0.36 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 6 | 0.38 | 0.22 | 0.36 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 6 | 0.38 | 0.22 | 0.36 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 6 | 0.38 | 0.22 | 0.36 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 6 | 0.38 | 0.22 | 0.36 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 6 | 0.38 | 0.22 | 0.36 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 6 | 0.35 | 0.19 | 0.3 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 6 | 0.12 | 0.01 | 0.12 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 6 | 0.12 | 0.01 | 0.12 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 6 | 0.12 | 0.01 | 0.12 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 5 | 0.59 | 0.2 | 0.69 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 5 | 0.58 | 0.26 | 0.52 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 5 | 0.53 | 0.05 | 0.53 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 5 | 0.51 | 0.03 | 0.5 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 5 | 0.51 | 0.03 | 0.5 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 5 | 0.51 | 0.03 | 0.5 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 5 | 0.42 | 0.23 | 0.26 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 5 | 0.42 | 0.23 | 0.26 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 5 | 0.42 | 0.23 | 0.26 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 5 | 0.41 | 0.1 | 0.37 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 5 | 0.37 | 0.24 | 0.22 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 5 | 0.37 | 0.24 | 0.22 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 5 | 0.37 | 0.24 | 0.22 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 5 | 0.29 | 0.07 | 0.26 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 5 | 0.19 | 0.08 | 0.15 |
| (1,752) | 1:A:44:LEU:HA | 1:A:45:LYS:HB2 | 4 | 0.93 | 0.05 | 0.94 |
| (1,317) | 1:A:69:ASN:HD22 | 1:A:70:VAL:H | 4 | 0.88 | 0.42 | 0.74 |
| (1,549) | 1:A:32:LEU:HD21 | 1:A:37:ARG:HA | 4 | 0.74 | 0.27 | 0.66 |
| (1,549) | 1:A:32:LEU:HD22 | 1:A:37:ARG:HA | 4 | 0.74 | 0.27 | 0.66 |
| (1,549) | 1:A:32:LEU:HD23 | 1:A:37:ARG:HA | 4 | 0.74 | 0.27 | 0.66 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD2 | 4 | 0.4 | 0.49 | 0.12 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD3 | 4 | 0.4 | 0.49 | 0.12 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD2 | 4 | 0.4 | 0.49 | 0.12 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD3 | 4 | 0.4 | 0.49 | 0.12 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD2 | 4 | 0.4 | 0.49 | 0.12 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD3 | 4 | 0.4 | 0.49 | 0.12 |
| (1,3) | 1:A:13:ALA:H | 1:A:14:PHE:HD2 | 4 | 0.31 | 0.09 | 0.34 |
| (1,617) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HZ2 | 4 | 0.28 | 0.18 | 0.2 |
| (1,617) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HZ2 | 4 | 0.28 | 0.18 | 0.2 |
| (1,617) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HZ2 | 4 | 0.28 | 0.18 | 0.2 |
| (1,315) | 1:A:30:LYS:HB2 | 1:A:31:TYR:H | 4 | 0.19 | 0.02 | 0.2 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD11 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD12 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD13 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD11 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD12 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD13 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD11 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD12 | 4 | 0.17 | 0.02 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD13 | 4 | 0.17 | 0.02 | 0.18 |
| (1,416) | 1:A:52:LYS:HB2 | 1:A:53:ILE:H | 4 | 0.15 | 0.02 | 0.16 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG2 | 4 | 0.12 | 0.0 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG3 | 4 | 0.12 | 0.0 | 0.12 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB2 | 4 | 0.12 | 0.01 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB3 | 4 | 0.12 | 0.01 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB2 | 4 | 0.12 | 0.01 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB3 | 4 | 0.12 | 0.01 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG21 | 4 | 0.12 | 0.0 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG22 | 4 | 0.12 | 0.0 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG23 | 4 | 0.12 | 0.0 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE1 | 4 | 0.12 | 0.0 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE2 | 4 | 0.12 | 0.0 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE1 | 4 | 0.12 | 0.0 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE2 | 4 | 0.12 | 0.0 | 0.12 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG2 | 4 | 0.11 | 0.0 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG3 | 4 | 0.11 | 0.0 | 0.11 |
| (1,166) | 1:A:34:LEU:HD21 | 1:A:37:ARG:H | 3 | 1.26 | 0.36 | 1.26 |
| (1,166) | 1:A:34:LEU:HD22 | 1:A:37:ARG:H | 3 | 1.26 | 0.36 | 1.26 |
| (1,166) | 1:A:34:LEU:HD23 | 1:A:37:ARG:H | 3 | 1.26 | 0.36 | 1.26 |
| (1,704) | 1:A:18:GLN:HE21 | 1:A:45:LYS:HA | 3 | 0.91 | 0.49 | 1.19 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD11 | 3 | 0.7 | 0.82 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD12 | 3 | 0.7 | 0.82 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD13 | 3 | 0.7 | 0.82 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD11 | 3 | 0.7 | 0.82 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD12 | 3 | 0.7 | 0.82 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD13 | 3 | 0.7 | 0.82 | 0.12 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,698) | 1:A:35:THR:HG21 | 1:A:39:GLN:HG2 | 3 | 0.65 | 0.05 | 0.68 |
| (1,698) | 1:A:35:THR:HG22 | 1:A:39:GLN:HG2 | 3 | 0.65 | 0.05 | 0.68 |
| (1,698) | 1:A:35:THR:HG23 | 1:A:39:GLN:HG2 | 3 | 0.65 | 0.05 | 0.68 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD21 | 3 | 0.55 | 0.62 | 0.12 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD22 | 3 | 0.55 | 0.62 | 0.12 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD23 | 3 | 0.55 | 0.62 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD21 | 3 | 0.55 | 0.62 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD22 | 3 | 0.55 | 0.62 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD23 | 3 | 0.55 | 0.62 | 0.12 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD11 | 3 | 0.31 | 0.12 | 0.38 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD12 | 3 | 0.31 | 0.12 | 0.38 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD13 | 3 | 0.31 | 0.12 | 0.38 |
| (1,170) | 1:A:37:ARG:H | 1:A:37:ARG:HB2 | 3 | 0.21 | 0.04 | 0.19 |
| (1,333) | 1:A:32:LEU:HB2 | 1:A:37:ARG:HB3 | 3 | 0.19 | 0.05 | 0.18 |
| (1,333) | 1:A:32:LEU:HB3 | 1:A:37:ARG:HB3 | 3 | 0.19 | 0.05 | 0.18 |
| (1,285) | 1:A:46:LEU:HD11 | 1:A:47:SER:H | 3 | 0.15 | 0.03 | 0.15 |
| (1,285) | 1:A:46:LEU:HD12 | 1:A:47:SER:H | 3 | 0.15 | 0.03 | 0.15 |
| (1,285) | 1:A:46:LEU:HD13 | 1:A:47:SER:H | 3 | 0.15 | 0.03 | 0.15 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD11 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD12 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD13 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD11 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD12 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD13 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD11 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD12 | 3 | 0.12 | 0.01 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD13 | 3 | 0.12 | 0.01 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD1 | 3 | 0.12 | 0.0 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD2 | 3 | 0.12 | 0.0 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD1 | 3 | 0.12 | 0.0 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD2 | 3 | 0.12 | 0.0 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD1 | 3 | 0.12 | 0.0 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD2 | 3 | 0.12 | 0.0 | 0.12 |
| (1,105) | 1:A:17:GLU:H | 1:A:18:GLN:HB2 | 2 | 1.32 | 0.06 | 1.32 |
| (1,303) | 1:A:15:THR:H | 1:A:18:GLN:HB2 | 2 | 1.1 | 0.08 | 1.1 |
| (1,404) | 1:A:18:GLN:HB3 | 1:A:46:LEU:HG | 2 | 0.9 | 0.05 | 0.9 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD11 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD12 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD13 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD11 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD12 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD13 | 2 | 0.7 | 0.58 | 0.7 |

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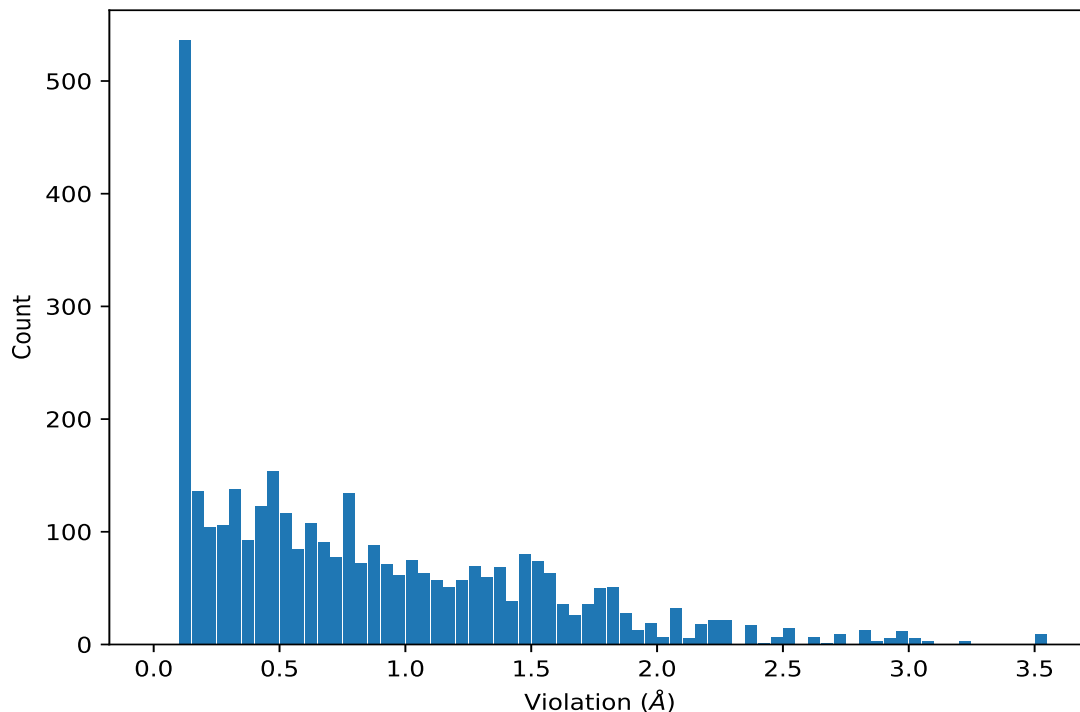
| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD11 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD12 | 2 | 0.7 | 0.58 | 0.7 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD13 | 2 | 0.7 | 0.58 | 0.7 |
| (1,248) | 1:A:18:GLN:HB2 | 1:A:19:LEU:H | 2 | 0.63 | 0.03 | 0.63 |
| (1,367) | 1:A:54:TRP:HA | 1:A:57:ASN:HB2 | 2 | 0.62 | 0.14 | 0.62 |
| (1,197) | 1:A:18:GLN:H | 1:A:18:GLN:HB2 | 2 | 0.38 | 0.09 | 0.38 |
| (1,354) | 1:A:45:LYS:HB2 | 1:A:45:LYS:HE3 | 2 | 0.36 | 0.26 | 0.36 |
| (1,55) | 1:A:21:GLU:HB3 | 1:A:22:LEU:H | 2 | 0.28 | 0.09 | 0.28 |
| (1,483) | 1:A:17:GLU:HB3 | 1:A:18:GLN:H | 2 | 0.26 | 0.04 | 0.26 |
| (1,694) | 1:A:15:THR:HG21 | 1:A:18:GLN:HB2 | 2 | 0.22 | 0.02 | 0.22 |
| (1,694) | 1:A:15:THR:HG22 | 1:A:18:GLN:HB2 | 2 | 0.22 | 0.02 | 0.22 |
| (1,694) | 1:A:15:THR:HG23 | 1:A:18:GLN:HB2 | 2 | 0.22 | 0.02 | 0.22 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD11 | 2 | 0.17 | 0.04 | 0.17 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD12 | 2 | 0.17 | 0.04 | 0.17 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD13 | 2 | 0.17 | 0.04 | 0.17 |
| (1,434) | 1:A:9:ARG:HB2 | 1:A:10:ARG:H | 2 | 0.16 | 0.03 | 0.16 |
| (1,515) | 1:A:53:ILE:HA | 1:A:56:GLN:HB2 | 2 | 0.16 | 0.0 | 0.16 |
| (1,464) | 1:A:27:HIS:H | 1:A:27:HIS:HB2 | 2 | 0.15 | 0.02 | 0.15 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB1 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB1 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB1 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB2 | 2 | 0.12 | 0.0 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB3 | 2 | 0.12 | 0.0 | 0.12 |
| (1,763) | 1:A:65:ILE:HG21 | 1:A:66:LYS:H | 2 | 0.12 | 0.0 | 0.12 |
| (1,763) | 1:A:65:ILE:HG22 | 1:A:66:LYS:H | 2 | 0.12 | 0.0 | 0.12 |
| (1,763) | 1:A:65:ILE:HG23 | 1:A:66:LYS:H | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD11 | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD12 | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD13 | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD11 | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD12 | 2 | 0.12 | 0.0 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD13 | 2 | 0.12 | 0.0 | 0.12 |
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB2 | 2 | 0.11 | 0.0 | 0.11 |
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB3 | 2 | 0.11 | 0.0 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB2 | 2 | 0.11 | 0.0 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB3 | 2 | 0.11 | 0.0 | 0.11 |

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

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

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



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

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

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 10 | 3.54 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 10 | 3.54 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 15 | 3.2 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|-----------------|----------|---------------|
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 15 | 3.2 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 15 | 3.2 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 13 | 3.05 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 13 | 3.05 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 13 | 3.05 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 9 | 3.04 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 9 | 3.04 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 9 | 3.04 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 5 | 3.03 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 5 | 3.03 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 5 | 3.03 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 12 | 2.99 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 12 | 2.99 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 12 | 2.99 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 8 | 2.98 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 8 | 2.98 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 8 | 2.98 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 19 | 2.96 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 19 | 2.96 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 19 | 2.96 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 16 | 2.95 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 16 | 2.95 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 16 | 2.95 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 10 | 2.93 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 10 | 2.93 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 10 | 2.93 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 11 | 2.91 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 11 | 2.91 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 11 | 2.91 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 4 | 2.85 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 4 | 2.85 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 4 | 2.85 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 1 | 2.83 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 1 | 2.83 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 1 | 2.83 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 20 | 2.82 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 20 | 2.82 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 20 | 2.82 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 1 | 2.81 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 1 | 2.81 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 1 | 2.81 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 10 | 2.81 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 10 | 2.81 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 10 | 2.81 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 9 | 2.81 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 14 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 14 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 14 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 19 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 19 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 19 | 2.74 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 11 | 2.73 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 11 | 2.73 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 11 | 2.73 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 2 | 2.67 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 6 | 2.64 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 6 | 2.64 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 6 | 2.64 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 16 | 2.64 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 16 | 2.64 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 16 | 2.64 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 6 | 2.63 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 8 | 2.54 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 20 | 2.54 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 14 | 2.52 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 14 | 2.52 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 14 | 2.52 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 10 | 2.51 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 10 | 2.51 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 16 | 2.51 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 19 | 2.48 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 13 | 2.47 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 13 | 2.47 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 13 | 2.47 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 13 | 2.47 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 13 | 2.47 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 13 | 2.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 5 | 2.41 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 10 | 2.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 10 | 2.39 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 8 | 2.39 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 8 | 2.39 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 8 | 2.39 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 10 | 2.37 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 4 | 2.36 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 16 | 2.35 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 16 | 2.35 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 16 | 2.35 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 11 | 2.29 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 16 | 2.28 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 16 | 2.28 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 7 | 2.27 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 7 | 2.27 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 7 | 2.27 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 3 | 2.26 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 1 | 2.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 1 | 2.24 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 19 | 2.24 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 19 | 2.24 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 5 | 2.23 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 5 | 2.23 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 5 | 2.23 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 7 | 2.2 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 10 | 2.19 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 13 | 2.19 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 10 | 2.18 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 10 | 2.18 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 10 | 2.18 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 11 | 2.17 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 11 | 2.17 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 11 | 2.17 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 20 | 2.17 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 20 | 2.17 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 20 | 2.17 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 16 | 2.17 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 16 | 2.17 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 16 | 2.17 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 18 | 2.16 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 10 | 2.15 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 10 | 2.15 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 10 | 2.15 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 1 | 2.14 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 1 | 2.14 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 1 | 2.14 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 1 | 2.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 1 | 2.14 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 1 | 2.14 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 17 | 2.08 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 7 | 2.07 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 7 | 2.07 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 7 | 2.07 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 6 | 2.07 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 6 | 2.07 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 13 | 2.07 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 13 | 2.07 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 13 | 2.07 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 13 | 2.05 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 13 | 2.05 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 13 | 2.05 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 4 | 2.05 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 4 | 2.05 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 13 | 2.05 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 13 | 2.05 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 13 | 2.05 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 12 | 2.05 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 17 | 2.03 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 17 | 2.03 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 17 | 2.03 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 13 | 2.02 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 4 | 2.01 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 4 | 2.01 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 4 | 2.01 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 5 | 1.98 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 5 | 1.98 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 5 | 1.98 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 19 | 1.98 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 19 | 1.98 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 17 | 1.97 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 17 | 1.97 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 17 | 1.97 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 16 | 1.97 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 16 | 1.97 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 16 | 1.97 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 14 | 1.97 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 15 | 1.94 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 6 | 1.93 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 6 | 1.93 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 6 | 1.93 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 3 | 1.93 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 3 | 1.93 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 3 | 1.93 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 20 | 1.93 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 19 | 1.91 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 19 | 1.91 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 19 | 1.91 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 3 | 1.91 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 9 | 1.91 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 8 | 1.89 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 8 | 1.89 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 8 | 1.89 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 10 | 1.89 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 10 | 1.88 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 10 | 1.88 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 10 | 1.88 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 11 | 1.88 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 11 | 1.88 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 11 | 1.88 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 5 | 1.88 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 5 | 1.88 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 5 | 1.88 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 2 | 1.88 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 5 | 1.88 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD11 | 10 | 1.87 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD12 | 10 | 1.87 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD13 | 10 | 1.87 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD11 | 10 | 1.87 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD12 | 10 | 1.87 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD13 | 10 | 1.87 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 9 | 1.86 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 9 | 1.86 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 9 | 1.86 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 1 | 1.86 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 1 | 1.86 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 1 | 1.86 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 1 | 1.85 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 19 | 1.84 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 19 | 1.84 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 19 | 1.84 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 1 | 1.84 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 1 | 1.84 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 19 | 1.84 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 19 | 1.84 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 19 | 1.84 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 2 | 1.83 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 2 | 1.83 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 2 | 1.83 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 14 | 1.83 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 14 | 1.83 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 14 | 1.83 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 3 | 1.82 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 13 | 1.82 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 13 | 1.82 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 13 | 1.82 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 13 | 1.82 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 13 | 1.82 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 13 | 1.82 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 12 | 1.82 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 12 | 1.82 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 15 | 1.82 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 15 | 1.81 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 15 | 1.81 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 15 | 1.81 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 2 | 1.81 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 20 | 1.8 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 20 | 1.8 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 20 | 1.8 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 11 | 1.79 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 4 | 1.79 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 4 | 1.79 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 4 | 1.79 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 15 | 1.79 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 15 | 1.79 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 15 | 1.79 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 18 | 1.77 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 18 | 1.77 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 18 | 1.77 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 7 | 1.77 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 7 | 1.77 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 7 | 1.77 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 7 | 1.77 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 7 | 1.77 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 7 | 1.77 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 16 | 1.77 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 16 | 1.77 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 14 | 1.77 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 14 | 1.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 10 | 1.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 10 | 1.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 10 | 1.77 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 8 | 1.77 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 1 | 1.76 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 1 | 1.76 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 1 | 1.76 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 4 | 1.75 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 4 | 1.75 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 3 | 1.74 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 9 | 1.74 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 6 | 1.73 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 6 | 1.73 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 6 | 1.73 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 6 | 1.73 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 6 | 1.73 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 6 | 1.73 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 15 | 1.73 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 15 | 1.73 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 15 | 1.73 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 4 | 1.73 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 4 | 1.73 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 4 | 1.73 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 4 | 1.72 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 14 | 1.71 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 14 | 1.71 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 18 | 1.7 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 18 | 1.7 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 18 | 1.7 |
| (1,166) | 1:A:34:LEU:HD21 | 1:A:37:ARG:H | 4 | 1.7 |
| (1,166) | 1:A:34:LEU:HD22 | 1:A:37:ARG:H | 4 | 1.7 |
| (1,166) | 1:A:34:LEU:HD23 | 1:A:37:ARG:H | 4 | 1.7 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 2 | 1.69 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 2 | 1.69 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 14 | 1.69 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 14 | 1.69 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 14 | 1.69 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 7 | 1.68 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 7 | 1.68 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 7 | 1.68 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 18 | 1.67 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 18 | 1.67 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 9 | 1.66 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 9 | 1.66 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 9 | 1.66 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 15 | 1.63 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 15 | 1.63 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 15 | 1.63 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 15 | 1.63 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 15 | 1.63 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 15 | 1.63 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 9 | 1.62 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 18 | 1.62 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 18 | 1.62 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 16 | 1.62 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 16 | 1.62 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 16 | 1.62 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 3 | 1.61 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 3 | 1.61 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 3 | 1.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 6 | 1.61 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 6 | 1.61 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 6 | 1.61 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 10 | 1.61 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 10 | 1.61 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 10 | 1.61 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 15 | 1.59 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 15 | 1.59 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 15 | 1.59 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 5 | 1.59 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 5 | 1.59 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 15 | 1.58 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 15 | 1.58 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 15 | 1.58 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 4 | 1.58 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 4 | 1.58 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 13 | 1.58 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 14 | 1.58 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 7 | 1.57 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 7 | 1.57 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 7 | 1.57 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 6 | 1.57 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 6 | 1.57 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 6 | 1.57 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 2 | 1.57 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 20 | 1.57 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 15 | 1.57 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 15 | 1.57 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 15 | 1.57 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 14 | 1.57 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 14 | 1.57 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 14 | 1.57 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 6 | 1.57 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 12 | 1.57 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 15 | 1.56 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 15 | 1.56 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 1 | 1.55 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 1 | 1.55 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 1 | 1.55 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 1 | 1.55 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 1 | 1.55 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 1 | 1.55 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 13 | 1.55 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 13 | 1.55 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 13 | 1.55 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 19 | 1.55 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 19 | 1.55 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 19 | 1.55 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 18 | 1.54 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 18 | 1.54 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 18 | 1.54 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 3 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 7 | 1.53 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 7 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 20 | 1.53 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 20 | 1.53 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 7 | 1.53 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 7 | 1.53 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 7 | 1.53 |
| (1,561) | 1:A:22:LEU:H | 1:A:44:LEU:HD11 | 10 | 1.53 |
| (1,561) | 1:A:22:LEU:H | 1:A:44:LEU:HD12 | 10 | 1.53 |
| (1,561) | 1:A:22:LEU:H | 1:A:44:LEU:HD13 | 10 | 1.53 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 6 | 1.53 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 6 | 1.53 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 8 | 1.52 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 8 | 1.52 |
| (1,317) | 1:A:69:ASN:HD22 | 1:A:70:VAL:H | 13 | 1.52 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 15 | 1.51 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 15 | 1.51 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 15 | 1.51 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 2 | 1.51 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 2 | 1.51 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 2 | 1.51 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 17 | 1.51 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 17 | 1.51 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 17 | 1.51 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 17 | 1.51 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 17 | 1.51 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 17 | 1.51 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 14 | 1.5 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 14 | 1.5 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 14 | 1.5 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 14 | 1.5 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 14 | 1.5 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 14 | 1.5 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 7 | 1.5 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 12 | 1.49 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 12 | 1.49 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 12 | 1.49 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 15 | 1.49 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 15 | 1.49 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 15 | 1.49 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 6 | 1.49 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 6 | 1.49 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 14 | 1.48 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 14 | 1.48 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 11 | 1.48 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 11 | 1.48 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 11 | 1.48 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 7 | 1.47 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 19 | 1.47 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 19 | 1.47 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 8 | 1.47 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 8 | 1.47 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 8 | 1.47 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 14 | 1.47 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 14 | 1.47 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 14 | 1.47 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 14 | 1.47 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 14 | 1.47 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 14 | 1.47 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 6 | 1.46 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 6 | 1.46 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 6 | 1.46 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 1 | 1.46 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 1 | 1.46 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 19 | 1.46 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 19 | 1.46 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 19 | 1.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 19 | 1.46 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 19 | 1.46 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 19 | 1.46 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 16 | 1.46 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 17 | 1.46 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 20 | 1.46 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 13 | 1.45 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 14 | 1.45 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 14 | 1.45 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 14 | 1.45 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 14 | 1.45 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 14 | 1.45 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 14 | 1.45 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 5 | 1.43 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD21 | 10 | 1.43 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD22 | 10 | 1.43 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD23 | 10 | 1.43 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD21 | 10 | 1.43 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD22 | 10 | 1.43 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD23 | 10 | 1.43 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 2 | 1.43 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 15 | 1.43 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 16 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 4 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 4 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 4 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 10 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 10 | 1.42 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 10 | 1.42 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 12 | 1.42 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 19 | 1.42 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 18 | 1.42 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 20 | 1.41 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 20 | 1.41 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 20 | 1.41 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 19 | 1.41 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 6 | 1.41 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 12 | 1.41 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 2 | 1.4 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 2 | 1.4 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 2 | 1.4 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG21 | 20 | 1.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG22 | 20 | 1.4 |
| (1,804) | 1:A:14:PHE:HD2 | 1:A:15:THR:HG23 | 20 | 1.4 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 8 | 1.4 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 8 | 1.4 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 8 | 1.4 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 1 | 1.4 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 1 | 1.4 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 1 | 1.4 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 8 | 1.4 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 19 | 1.4 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 7 | 1.39 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 7 | 1.39 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 13 | 1.39 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 13 | 1.39 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 4 | 1.39 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 4 | 1.39 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 4 | 1.39 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 1 | 1.39 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 5 | 1.39 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 12 | 1.38 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 12 | 1.38 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 12 | 1.38 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 12 | 1.38 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 17 | 1.38 |
| (1,105) | 1:A:17:GLU:H | 1:A:18:GLN:HB2 | 16 | 1.38 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 15 | 1.37 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 15 | 1.37 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 15 | 1.37 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 19 | 1.37 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 19 | 1.37 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 19 | 1.37 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 13 | 1.37 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 5 | 1.36 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 5 | 1.36 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 5 | 1.36 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 6 | 1.36 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 6 | 1.36 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 6 | 1.36 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 19 | 1.36 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 19 | 1.36 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 10 | 1.36 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 10 | 1.36 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 4 | 1.36 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 15 | 1.36 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 5 | 1.36 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 4 | 1.36 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 1 | 1.35 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 1 | 1.35 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 4 | 1.35 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 9 | 1.35 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 10 | 1.35 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 6 | 1.34 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 17 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 1 | 1.34 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 1 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 11 | 1.34 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 11 | 1.34 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 14 | 1.34 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 14 | 1.34 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 14 | 1.34 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 14 | 1.34 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 14 | 1.34 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 14 | 1.34 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 11 | 1.34 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 11 | 1.34 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 11 | 1.34 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 13 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 11 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 11 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 11 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 14 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 14 | 1.34 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 14 | 1.34 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 4 | 1.33 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 4 | 1.33 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 4 | 1.33 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 5 | 1.33 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 5 | 1.33 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 5 | 1.33 |
| (1,704) | 1:A:18:GLN:HE21 | 1:A:45:LYS:HA | 20 | 1.32 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 10 | 1.32 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 3 | 1.32 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 11 | 1.32 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 2 | 1.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 17 | 1.31 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 17 | 1.31 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 17 | 1.31 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 15 | 1.31 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 15 | 1.31 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 1 | 1.31 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 3 | 1.3 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 3 | 1.3 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 3 | 1.3 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 12 | 1.3 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 12 | 1.3 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 12 | 1.3 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 14 | 1.3 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 7 | 1.29 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 8 | 1.29 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD11 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD12 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD13 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD11 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD12 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD13 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD11 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD12 | 10 | 1.28 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD13 | 10 | 1.28 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 11 | 1.28 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 11 | 1.28 |
| (1,554) | 1:A:18:GLN:HB2 | 1:A:44:LEU:HD11 | 10 | 1.28 |
| (1,554) | 1:A:18:GLN:HB2 | 1:A:44:LEU:HD12 | 10 | 1.28 |
| (1,554) | 1:A:18:GLN:HB2 | 1:A:44:LEU:HD13 | 10 | 1.28 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 20 | 1.27 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 20 | 1.27 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 20 | 1.27 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 20 | 1.27 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 20 | 1.27 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 20 | 1.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 6 | 1.27 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 6 | 1.27 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 6 | 1.27 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 11 | 1.27 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 1 | 1.27 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 16 | 1.26 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 16 | 1.26 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 7 | 1.26 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 8 | 1.26 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 13 | 1.26 |
| (1,166) | 1:A:34:LEU:HD21 | 1:A:37:ARG:H | 19 | 1.26 |
| (1,166) | 1:A:34:LEU:HD22 | 1:A:37:ARG:H | 19 | 1.26 |
| (1,166) | 1:A:34:LEU:HD23 | 1:A:37:ARG:H | 19 | 1.26 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 9 | 1.25 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 9 | 1.25 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 9 | 1.25 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 5 | 1.25 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 5 | 1.25 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 5 | 1.25 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 5 | 1.25 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 5 | 1.25 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 5 | 1.25 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 16 | 1.25 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 16 | 1.25 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 16 | 1.25 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 14 | 1.25 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD2 | 10 | 1.25 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD3 | 10 | 1.25 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD2 | 10 | 1.25 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD3 | 10 | 1.25 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD2 | 10 | 1.25 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD3 | 10 | 1.25 |
| (1,105) | 1:A:17:GLU:H | 1:A:18:GLN:HB2 | 7 | 1.25 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 2 | 1.25 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 15 | 1.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 17 | 1.24 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 17 | 1.24 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 17 | 1.24 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 1 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 1 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 1 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 1 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 16 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 16 | 1.24 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 16 | 1.24 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 14 | 1.24 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 10 | 1.23 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 10 | 1.23 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 10 | 1.23 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 17 | 1.23 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 8 | 1.22 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 8 | 1.22 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 8 | 1.22 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 8 | 1.22 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 8 | 1.22 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 8 | 1.22 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 6 | 1.22 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 6 | 1.22 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 6 | 1.22 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 11 | 1.22 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 16 | 1.21 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 16 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 19 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 20 | 1.21 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 20 | 1.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 20 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 20 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 20 | 1.21 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 20 | 1.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 15 | 1.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 15 | 1.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 15 | 1.21 |
| (1,361) | 1:A:14:PHE:HB2 | 1:A:46:LEU:HG | 14 | 1.21 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 6 | 1.2 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 6 | 1.2 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 6 | 1.2 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 11 | 1.2 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 20 | 1.2 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 12 | 1.2 |
| (1,704) | 1:A:18:GLN:HE21 | 1:A:45:LYS:HA | 15 | 1.19 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 14 | 1.19 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 14 | 1.19 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 14 | 1.19 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 10 | 1.19 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 18 | 1.19 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 14 | 1.19 |
| (1,303) | 1:A:15:THR:H | 1:A:18:GLN:HB2 | 16 | 1.19 |
| (1,549) | 1:A:32:LEU:HD21 | 1:A:37:ARG:HA | 16 | 1.18 |
| (1,549) | 1:A:32:LEU:HD22 | 1:A:37:ARG:HA | 16 | 1.18 |
| (1,549) | 1:A:32:LEU:HD23 | 1:A:37:ARG:HA | 16 | 1.18 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 18 | 1.18 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 2 | 1.18 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 14 | 1.17 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 14 | 1.17 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 6 | 1.17 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 8 | 1.17 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 16 | 1.16 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 16 | 1.16 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 16 | 1.16 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 12 | 1.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 17 | 1.16 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 17 | 1.16 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 3 | 1.16 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 3 | 1.16 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 3 | 1.16 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 3 | 1.16 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 3 | 1.16 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 3 | 1.16 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 11 | 1.15 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 11 | 1.15 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 7 | 1.15 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 7 | 1.15 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 7 | 1.15 |
| (1,246) | 1:A:45:LYS:H | 1:A:46:LEU:HD21 | 15 | 1.15 |
| (1,246) | 1:A:45:LYS:H | 1:A:46:LEU:HD22 | 15 | 1.15 |
| (1,246) | 1:A:45:LYS:H | 1:A:46:LEU:HD23 | 15 | 1.15 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 15 | 1.14 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 15 | 1.14 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 12 | 1.14 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 17 | 1.14 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 6 | 1.14 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 18 | 1.14 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 1 | 1.13 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 1 | 1.13 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 1 | 1.13 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 15 | 1.13 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 15 | 1.13 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 15 | 1.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 15 | 1.13 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 15 | 1.13 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 15 | 1.13 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 14 | 1.13 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 8 | 1.13 |
| (1,278) | 1:A:14:PHE:HD2 | 1:A:47:SER:H | 11 | 1.13 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 20 | 1.13 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 4 | 1.12 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 4 | 1.12 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 4 | 1.12 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 20 | 1.12 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 20 | 1.12 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 20 | 1.12 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 13 | 1.12 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 13 | 1.12 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 13 | 1.12 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 12 | 1.12 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 12 | 1.12 |
| (1,449) | 1:A:49:VAL:HA | 1:A:52:LYS:HB2 | 7 | 1.12 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 7 | 1.12 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 8 | 1.11 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 16 | 1.11 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 16 | 1.11 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 16 | 1.11 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 10 | 1.11 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 3 | 1.11 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 11 | 1.1 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 11 | 1.1 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 11 | 1.1 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 17 | 1.1 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 17 | 1.1 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 17 | 1.1 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 7 | 1.1 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 7 | 1.1 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 7 | 1.1 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 9 | 1.1 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 9 | 1.1 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 15 | 1.1 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 4 | 1.09 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 4 | 1.09 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 4 | 1.09 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 19 | 1.09 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 16 | 1.09 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 3 | 1.09 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 12 | 1.08 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 12 | 1.08 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 12 | 1.08 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 18 | 1.08 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 18 | 1.08 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 18 | 1.08 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 9 | 1.08 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 14 | 1.07 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 14 | 1.07 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 14 | 1.07 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 13 | 1.07 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 16 | 1.07 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 16 | 1.07 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 20 | 1.07 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 20 | 1.06 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 20 | 1.06 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 20 | 1.06 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 20 | 1.06 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 20 | 1.06 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 20 | 1.06 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 17 | 1.06 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 17 | 1.06 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 17 | 1.06 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 1 | 1.06 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 1 | 1.06 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 1 | 1.06 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 1 | 1.06 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 1 | 1.06 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 1 | 1.06 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 7 | 1.06 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 17 | 1.06 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 19 | 1.06 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 19 | 1.06 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 19 | 1.06 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 11 | 1.06 |
| (1,665) | 1:A:32:LEU:HD11 | 1:A:33:SER:H | 19 | 1.05 |
| (1,665) | 1:A:32:LEU:HD12 | 1:A:33:SER:H | 19 | 1.05 |
| (1,665) | 1:A:32:LEU:HD13 | 1:A:33:SER:H | 19 | 1.05 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 7 | 1.05 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 7 | 1.05 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 7 | 1.05 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 2 | 1.05 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 2 | 1.05 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 2 | 1.05 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 6 | 1.04 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 6 | 1.04 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 6 | 1.04 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 6 | 1.04 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 6 | 1.04 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 6 | 1.04 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 19 | 1.04 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD21 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD22 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD21 | 1:A:46:LEU:HD23 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD21 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD22 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD22 | 1:A:46:LEU:HD23 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD21 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD22 | 1 | 1.03 |
| (1,662) | 1:A:44:LEU:HD23 | 1:A:46:LEU:HD23 | 1 | 1.03 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 10 | 1.03 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 10 | 1.03 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 10 | 1.03 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 17 | 1.03 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 17 | 1.03 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 17 | 1.03 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 20 | 1.03 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 20 | 1.03 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 20 | 1.03 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 20 | 1.03 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 20 | 1.03 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 20 | 1.03 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 11 | 1.03 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 3 | 1.03 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD21 | 7 | 1.03 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD22 | 7 | 1.03 |
| (1,247) | 1:A:19:LEU:H | 1:A:22:LEU:HD23 | 7 | 1.03 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 18 | 1.03 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 1 | 1.03 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 1 | 1.03 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 1 | 1.03 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 14 | 1.03 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 18 | 1.03 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 3 | 1.02 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 3 | 1.02 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 3 | 1.02 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 5 | 1.02 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 6 | 1.02 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 6 | 1.02 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 6 | 1.02 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 6 | 1.02 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 6 | 1.02 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 6 | 1.02 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 13 | 1.02 |
| (1,303) | 1:A:15:THR:H | 1:A:18:GLN:HB2 | 7 | 1.02 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 17 | 1.01 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 17 | 1.01 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 17 | 1.01 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 17 | 1.01 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 17 | 1.01 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 17 | 1.01 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 11 | 1.01 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 11 | 1.01 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 11 | 1.01 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 20 | 1.01 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 16 | 1.01 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 13 | 1.01 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 4 | 1.01 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 4 | 1.01 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 4 | 1.01 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 1 | 1.0 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 1 | 1.0 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 1 | 1.0 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 1 | 1.0 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 1 | 1.0 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 1 | 1.0 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 15 | 1.0 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 15 | 1.0 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 15 | 1.0 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 8 | 0.99 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 8 | 0.99 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 8 | 0.99 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 4 | 0.99 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 7 | 0.99 |
| (1,752) | 1:A:44:LEU:HA | 1:A:45:LYS:HB2 | 3 | 0.98 |
| (1,752) | 1:A:44:LEU:HA | 1:A:45:LYS:HB2 | 17 | 0.98 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 17 | 0.98 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 17 | 0.98 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 4 | 0.97 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 4 | 0.97 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 4 | 0.97 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 4 | 0.97 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 4 | 0.97 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 4 | 0.97 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 20 | 0.97 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 20 | 0.97 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 20 | 0.97 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 18 | 0.97 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 18 | 0.97 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 18 | 0.97 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 19 | 0.97 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 19 | 0.97 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 19 | 0.97 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 8 | 0.97 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 20 | 0.97 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 3 | 0.97 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 19 | 0.97 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 19 | 0.97 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 19 | 0.97 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 1 | 0.96 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 5 | 0.96 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 5 | 0.96 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 5 | 0.96 |
| (1,317) | 1:A:69:ASN:HD22 | 1:A:70:VAL:H | 8 | 0.96 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 4 | 0.96 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 4 | 0.95 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 4 | 0.95 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 4 | 0.95 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD21 | 7 | 0.95 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD22 | 7 | 0.95 |
| (1,810) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD23 | 7 | 0.95 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 12 | 0.95 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 12 | 0.95 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 12 | 0.95 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 12 | 0.95 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 12 | 0.95 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 12 | 0.95 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 6 | 0.95 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 18 | 0.95 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 15 | 0.95 |
| (1,404) | 1:A:18:GLN:HB3 | 1:A:46:LEU:HG | 7 | 0.95 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 13 | 0.95 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 16 | 0.95 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 16 | 0.95 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 16 | 0.95 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 5 | 0.95 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 5 | 0.94 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 5 | 0.94 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 5 | 0.94 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 16 | 0.94 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 16 | 0.94 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 16 | 0.94 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 15 | 0.94 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 15 | 0.94 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 15 | 0.94 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 16 | 0.94 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 2 | 0.94 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 6 | 0.94 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 6 | 0.94 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 19 | 0.94 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 6 | 0.94 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 6 | 0.94 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 6 | 0.94 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 9 | 0.93 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 9 | 0.93 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 9 | 0.93 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 7 | 0.93 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 13 | 0.93 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 12 | 0.93 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 8 | 0.93 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 12 | 0.92 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 16 | 0.92 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 16 | 0.92 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 15 | 0.92 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 17 | 0.92 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 17 | 0.92 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 17 | 0.92 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 15 | 0.92 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 15 | 0.92 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 1 | 0.92 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 14 | 0.92 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 13 | 0.91 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 13 | 0.91 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 13 | 0.91 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 15 | 0.91 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 15 | 0.91 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 15 | 0.91 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 12 | 0.91 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 12 | 0.91 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 12 | 0.91 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD11 | 4 | 0.91 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD12 | 4 | 0.91 |
| (1,569) | 1:A:14:PHE:HD1 | 1:A:19:LEU:HD13 | 4 | 0.91 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 18 | 0.91 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 17 | 0.91 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 13 | 0.9 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 1 | 0.9 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 1 | 0.9 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 1 | 0.9 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 17 | 0.9 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 19 | 0.9 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 19 | 0.9 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 8 | 0.9 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 7 | 0.9 |
| (1,752) | 1:A:44:LEU:HA | 1:A:45:LYS:HB2 | 12 | 0.89 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 7 | 0.89 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 7 | 0.89 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 7 | 0.89 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 14 | 0.89 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 14 | 0.89 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 14 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 5 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 5 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 5 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 16 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 16 | 0.89 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 16 | 0.89 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 19 | 0.89 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD11 | 6 | 0.89 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD12 | 6 | 0.89 |
| (1,585) | 1:A:29:LYS:HG2 | 1:A:32:LEU:HD13 | 6 | 0.89 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 19 | 0.89 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 13 | 0.88 |
| (1,752) | 1:A:44:LEU:HA | 1:A:45:LYS:HB2 | 7 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 1 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 1 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 1 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 6 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 6 | 0.88 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 6 | 0.88 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 12 | 0.88 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 18 | 0.88 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 18 | 0.88 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 18 | 0.88 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 5 | 0.88 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 8 | 0.88 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 10 | 0.88 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 20 | 0.87 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 19 | 0.87 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 19 | 0.87 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 16 | 0.87 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 16 | 0.87 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 16 | 0.87 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 16 | 0.87 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 16 | 0.87 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 16 | 0.87 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 16 | 0.87 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 4 | 0.86 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 17 | 0.86 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 17 | 0.86 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 17 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 17 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 17 | 0.86 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 17 | 0.86 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 5 | 0.86 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 5 | 0.86 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 17 | 0.85 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 17 | 0.85 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 17 | 0.85 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 17 | 0.85 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 6 | 0.85 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 6 | 0.85 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 6 | 0.85 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 1 | 0.85 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 1 | 0.85 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 1 | 0.85 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 5 | 0.85 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 5 | 0.85 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 5 | 0.85 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 5 | 0.85 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 5 | 0.85 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 5 | 0.85 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 16 | 0.85 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 16 | 0.85 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 6 | 0.85 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 6 | 0.85 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 6 | 0.85 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 6 | 0.85 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 5 | 0.85 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 6 | 0.84 |
| (1,404) | 1:A:18:GLN:HB3 | 1:A:46:LEU:HG | 16 | 0.84 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 12 | 0.84 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 12 | 0.84 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 12 | 0.84 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 16 | 0.83 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 3 | 0.83 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 3 | 0.83 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 3 | 0.83 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 3 | 0.83 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 3 | 0.83 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 19 | 0.83 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 9 | 0.83 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 5 | 0.83 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 8 | 0.83 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 17 | 0.82 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 5 | 0.82 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 5 | 0.82 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 5 | 0.82 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 5 | 0.82 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 5 | 0.82 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 5 | 0.82 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 17 | 0.82 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 17 | 0.82 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 17 | 0.82 |
| (1,658) | 1:A:44:LEU:HA | 1:A:44:LEU:HD21 | 10 | 0.82 |
| (1,658) | 1:A:44:LEU:HA | 1:A:44:LEU:HD22 | 10 | 0.82 |
| (1,658) | 1:A:44:LEU:HA | 1:A:44:LEU:HD23 | 10 | 0.82 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 14 | 0.82 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 14 | 0.82 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 14 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 1 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 1 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 1 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 8 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 8 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 8 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 19 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 19 | 0.82 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 19 | 0.82 |
| (1,166) | 1:A:34:LEU:HD21 | 1:A:37:ARG:H | 8 | 0.82 |
| (1,166) | 1:A:34:LEU:HD22 | 1:A:37:ARG:H | 8 | 0.82 |
| (1,166) | 1:A:34:LEU:HD23 | 1:A:37:ARG:H | 8 | 0.82 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 15 | 0.81 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 15 | 0.81 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 15 | 0.81 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 15 | 0.81 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 15 | 0.81 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 15 | 0.81 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 16 | 0.81 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 16 | 0.81 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 16 | 0.81 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 14 | 0.81 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 14 | 0.81 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 14 | 0.81 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 13 | 0.81 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 9 | 0.8 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 11 | 0.8 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 11 | 0.8 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 11 | 0.8 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 4 | 0.8 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 4 | 0.8 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 4 | 0.8 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 10 | 0.8 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 10 | 0.8 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 10 | 0.8 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 20 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 19 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 19 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 19 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 20 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 20 | 0.79 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 20 | 0.79 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 10 | 0.79 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 10 | 0.79 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 10 | 0.79 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 17 | 0.79 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 17 | 0.79 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 13 | 0.79 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 13 | 0.79 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 6 | 0.78 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 4 | 0.78 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 4 | 0.78 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 4 | 0.78 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 4 | 0.78 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 4 | 0.78 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 4 | 0.78 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 2 | 0.78 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 2 | 0.78 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 2 | 0.78 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 8 | 0.78 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 8 | 0.78 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 8 | 0.78 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 8 | 0.78 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 8 | 0.78 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 8 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 11 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 14 | 0.78 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 14 | 0.78 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 14 | 0.78 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 14 | 0.78 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 14 | 0.78 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 15 | 0.78 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 15 | 0.78 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 15 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 5 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 5 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 5 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 11 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 11 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 11 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 20 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 20 | 0.78 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 20 | 0.78 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 12 | 0.78 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 2 | 0.77 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 6 | 0.77 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 6 | 0.77 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 6 | 0.77 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 6 | 0.77 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 6 | 0.77 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 6 | 0.77 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 1 | 0.77 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 1 | 0.77 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 1 | 0.77 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 1 | 0.77 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 1 | 0.77 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 1 | 0.77 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 14 | 0.77 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 14 | 0.77 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 14 | 0.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 15 | 0.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 15 | 0.77 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 15 | 0.77 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 19 | 0.76 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 19 | 0.76 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 10 | 0.76 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 10 | 0.76 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 10 | 0.76 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 7 | 0.76 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 7 | 0.76 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 4 | 0.76 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 4 | 0.76 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 12 | 0.76 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 17 | 0.76 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 5 | 0.76 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 5 | 0.76 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 5 | 0.76 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 16 | 0.76 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 19 | 0.75 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 6 | 0.75 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 6 | 0.75 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 6 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 9 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 9 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 9 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 12 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 12 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 12 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD21 | 13 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD22 | 13 | 0.75 |
| (1,618) | 1:A:19:LEU:HA | 1:A:19:LEU:HD23 | 13 | 0.75 |
| (1,367) | 1:A:54:TRP:HA | 1:A:57:ASN:HB2 | 18 | 0.75 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 2 | 0.75 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 15 | 0.74 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 15 | 0.74 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 15 | 0.74 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 13 | 0.74 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 13 | 0.74 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 13 | 0.74 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 8 | 0.74 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 8 | 0.74 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 8 | 0.74 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 2 | 0.74 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 2 | 0.74 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 2 | 0.74 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 9 | 0.74 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 7 | 0.74 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 19 | 0.74 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 9 | 0.74 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 9 | 0.74 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 12 | 0.74 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 12 | 0.73 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 16 | 0.73 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 16 | 0.73 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 16 | 0.73 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 14 | 0.73 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 14 | 0.73 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 14 | 0.73 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 5 | 0.73 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 5 | 0.73 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 5 | 0.73 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 5 | 0.73 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 16 | 0.73 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 19 | 0.73 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 16 | 0.73 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 18 | 0.73 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 19 | 0.72 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 15 | 0.72 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 16 | 0.72 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 4 | 0.71 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 4 | 0.71 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 4 | 0.71 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 15 | 0.71 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 7 | 0.71 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 7 | 0.71 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 8 | 0.71 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD21 | 17 | 0.71 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD22 | 17 | 0.71 |
| (1,627) | 1:A:18:GLN:HE22 | 1:A:46:LEU:HD23 | 17 | 0.71 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 20 | 0.71 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 16 | 0.71 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 5 | 0.7 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 2 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 16 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 16 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 16 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD11 | 19 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD12 | 19 | 0.7 |
| (1,682) | 1:A:22:LEU:HA | 1:A:22:LEU:HD13 | 19 | 0.7 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 19 | 0.7 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 19 | 0.7 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 19 | 0.7 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 5 | 0.7 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 2 | 0.7 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 6 | 0.7 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 14 | 0.7 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 14 | 0.7 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 14 | 0.7 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 9 | 0.7 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 14 | 0.69 |
| (1,698) | 1:A:35:THR:HG21 | 1:A:39:GLN:HG2 | 2 | 0.69 |
| (1,698) | 1:A:35:THR:HG22 | 1:A:39:GLN:HG2 | 2 | 0.69 |
| (1,698) | 1:A:35:THR:HG23 | 1:A:39:GLN:HG2 | 2 | 0.69 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 11 | 0.69 |
| (1,549) | 1:A:32:LEU:HD21 | 1:A:37:ARG:HA | 5 | 0.69 |
| (1,549) | 1:A:32:LEU:HD22 | 1:A:37:ARG:HA | 5 | 0.69 |
| (1,549) | 1:A:32:LEU:HD23 | 1:A:37:ARG:HA | 5 | 0.69 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 13 | 0.69 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 13 | 0.69 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 13 | 0.69 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 13 | 0.69 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 13 | 0.69 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 13 | 0.69 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 20 | 0.69 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 20 | 0.69 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 12 | 0.69 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 16 | 0.69 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 20 | 0.69 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 17 | 0.69 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 17 | 0.69 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 1 | 0.69 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 7 | 0.69 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 15 | 0.69 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 15 | 0.69 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 15 | 0.69 |
| (1,698) | 1:A:35:THR:HG21 | 1:A:39:GLN:HG2 | 18 | 0.68 |
| (1,698) | 1:A:35:THR:HG22 | 1:A:39:GLN:HG2 | 18 | 0.68 |
| (1,698) | 1:A:35:THR:HG23 | 1:A:39:GLN:HG2 | 18 | 0.68 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD21 | 19 | 0.68 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD22 | 19 | 0.68 |
| (1,639) | 1:A:19:LEU:HA | 1:A:22:LEU:HD23 | 19 | 0.68 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 15 | 0.68 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 15 | 0.68 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 15 | 0.68 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 10 | 0.68 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 14 | 0.68 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 15 | 0.68 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 6 | 0.68 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 19 | 0.68 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 4 | 0.67 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 5 | 0.67 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 7 | 0.67 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD11 | 16 | 0.67 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD12 | 16 | 0.67 |
| (1,666) | 1:A:32:LEU:HA | 1:A:32:LEU:HD13 | 16 | 0.67 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 6 | 0.67 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 6 | 0.67 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 6 | 0.67 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 6 | 0.67 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 6 | 0.67 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 6 | 0.67 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 7 | 0.67 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 7 | 0.67 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 12 | 0.67 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 12 | 0.67 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 4 | 0.67 |
| (1,678) | 1:A:20:LEU:HA | 1:A:23:GLU:HB3 | 6 | 0.66 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 14 | 0.66 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 17 | 0.66 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 18 | 0.66 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 18 | 0.66 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 2 | 0.66 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 2 | 0.66 |
| (1,248) | 1:A:18:GLN:HB2 | 1:A:19:LEU:H | 7 | 0.66 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 13 | 0.66 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 11 | 0.65 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 13 | 0.65 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 13 | 0.65 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 13 | 0.65 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 20 | 0.65 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 20 | 0.65 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 20 | 0.65 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 20 | 0.65 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 20 | 0.65 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 20 | 0.65 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 5 | 0.65 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 12 | 0.65 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 12 | 0.65 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 12 | 0.65 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 11 | 0.65 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 11 | 0.65 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 11 | 0.65 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 6 | 0.65 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 4 | 0.64 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 19 | 0.64 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 11 | 0.64 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 11 | 0.64 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 11 | 0.64 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 3 | 0.64 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 3 | 0.64 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 4 | 0.64 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 9 | 0.64 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 9 | 0.64 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 9 | 0.64 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 11 | 0.64 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 11 | 0.64 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 11 | 0.64 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 8 | 0.64 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 8 | 0.64 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 5 | 0.64 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 10 | 0.64 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 10 | 0.64 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 10 | 0.64 |
| (1,549) | 1:A:32:LEU:HD21 | 1:A:37:ARG:HA | 6 | 0.63 |
| (1,549) | 1:A:32:LEU:HD22 | 1:A:37:ARG:HA | 6 | 0.63 |
| (1,549) | 1:A:32:LEU:HD23 | 1:A:37:ARG:HA | 6 | 0.63 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 19 | 0.63 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 19 | 0.63 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 19 | 0.63 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 18 | 0.62 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 1 | 0.62 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 1 | 0.62 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 1 | 0.62 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 15 | 0.62 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 15 | 0.62 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD1 | 16 | 0.62 |
| (1,544) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HD2 | 16 | 0.62 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD1 | 16 | 0.62 |
| (1,544) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HD2 | 16 | 0.62 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD1 | 16 | 0.62 |
| (1,544) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HD2 | 16 | 0.62 |
| (1,354) | 1:A:45:LYS:HB2 | 1:A:45:LYS:HE3 | 13 | 0.62 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 6 | 0.62 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 10 | 0.62 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 4 | 0.62 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 13 | 0.61 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 13 | 0.61 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 13 | 0.61 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 18 | 0.61 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 18 | 0.61 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 18 | 0.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 18 | 0.61 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 18 | 0.61 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 18 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 7 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 7 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 7 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 16 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 16 | 0.61 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 16 | 0.61 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 3 | 0.61 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 3 | 0.61 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 3 | 0.61 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 11 | 0.61 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 11 | 0.61 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 11 | 0.61 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 13 | 0.61 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 20 | 0.61 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 13 | 0.6 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 20 | 0.6 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 20 | 0.6 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 20 | 0.6 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 8 | 0.6 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 8 | 0.6 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 17 | 0.6 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 17 | 0.6 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 17 | 0.6 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 10 | 0.6 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 10 | 0.6 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 10 | 0.6 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 11 | 0.6 |
| (1,30) | 1:A:53:ILE:HA | 1:A:57:ASN:HD21 | 3 | 0.6 |
| (1,248) | 1:A:18:GLN:HB2 | 1:A:19:LEU:H | 16 | 0.6 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 11 | 0.6 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 1 | 0.59 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 3 | 0.59 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 15 | 0.59 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 8 | 0.59 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 8 | 0.59 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 8 | 0.59 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 9 | 0.59 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 9 | 0.59 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 9 | 0.59 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 1 | 0.59 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 1 | 0.59 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 1 | 0.59 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 11 | 0.59 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 15 | 0.59 |
| (1,366) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HA | 5 | 0.59 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 3 | 0.59 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 7 | 0.58 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 7 | 0.58 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 7 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 10 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 10 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 10 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 19 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 19 | 0.58 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 19 | 0.58 |
| (1,617) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HZ2 | 8 | 0.58 |
| (1,617) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HZ2 | 8 | 0.58 |
| (1,617) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HZ2 | 8 | 0.58 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 3 | 0.58 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 16 | 0.58 |
| (1,390) | 1:A:20:LEU:HA | 1:A:21:GLU:HG3 | 10 | 0.58 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 13 | 0.58 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 8 | 0.57 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 19 | 0.57 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 20 | 0.57 |
| (1,698) | 1:A:35:THR:HG21 | 1:A:39:GLN:HG2 | 9 | 0.57 |
| (1,698) | 1:A:35:THR:HG22 | 1:A:39:GLN:HG2 | 9 | 0.57 |
| (1,698) | 1:A:35:THR:HG23 | 1:A:39:GLN:HG2 | 9 | 0.57 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 4 | 0.57 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 4 | 0.57 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 4 | 0.57 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 16 | 0.57 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 16 | 0.57 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 16 | 0.57 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 8 | 0.57 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 8 | 0.57 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 8 | 0.57 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 1 | 0.57 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 1 | 0.57 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 19 | 0.57 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 19 | 0.57 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 19 | 0.57 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 19 | 0.57 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 19 | 0.57 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 5 | 0.57 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 11 | 0.57 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 7 | 0.56 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 7 | 0.56 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 7 | 0.56 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 19 | 0.56 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 1 | 0.56 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 1 | 0.56 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 11 | 0.56 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 18 | 0.56 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 11 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 1 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 1 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 1 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 3 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 3 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 3 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 6 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 6 | 0.55 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 6 | 0.55 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 12 | 0.55 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 12 | 0.55 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 4 | 0.55 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 18 | 0.55 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 3 | 0.54 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 19 | 0.54 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 3 | 0.54 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 3 | 0.54 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 18 | 0.54 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 18 | 0.54 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 18 | 0.54 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 4 | 0.54 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 2 | 0.54 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 19 | 0.54 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 10 | 0.54 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 16 | 0.54 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 17 | 0.54 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 3 | 0.54 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 10 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 12 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 12 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 12 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 18 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 18 | 0.53 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 18 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 4 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 4 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 4 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 4 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 4 | 0.53 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 4 | 0.53 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 14 | 0.53 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 14 | 0.53 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 14 | 0.53 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 20 | 0.53 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 20 | 0.53 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 20 | 0.53 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 16 | 0.53 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 16 | 0.53 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 16 | 0.53 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD11 | 2 | 0.53 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD12 | 2 | 0.53 |
| (1,564) | 1:A:16:SER:HB3 | 1:A:19:LEU:HD13 | 2 | 0.53 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 20 | 0.53 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 20 | 0.53 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 20 | 0.53 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 2 | 0.53 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 2 | 0.53 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 2 | 0.53 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 13 | 0.53 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 13 | 0.53 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 13 | 0.53 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 12 | 0.53 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 7 | 0.53 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 15 | 0.53 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 5 | 0.53 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 13 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 13 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 13 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 17 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 17 | 0.52 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 17 | 0.52 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 7 | 0.52 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 7 | 0.52 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 7 | 0.52 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 7 | 0.52 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 13 | 0.52 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 13 | 0.52 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 13 | 0.52 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 7 | 0.52 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 8 | 0.52 |
| (1,317) | 1:A:69:ASN:HD22 | 1:A:70:VAL:H | 19 | 0.52 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 20 | 0.52 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 20 | 0.52 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 20 | 0.52 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 4 | 0.51 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 9 | 0.51 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 17 | 0.51 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 10 | 0.51 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 10 | 0.51 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 10 | 0.51 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 9 | 0.51 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 9 | 0.51 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 9 | 0.51 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 2 | 0.51 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 2 | 0.51 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 2 | 0.51 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 19 | 0.51 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 2 | 0.51 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 7 | 0.51 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 13 | 0.51 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 7 | 0.5 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 15 | 0.5 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 15 | 0.5 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 2 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 8 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 8 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 8 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 18 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 18 | 0.5 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 18 | 0.5 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 5 | 0.5 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 5 | 0.5 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 5 | 0.5 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 20 | 0.5 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 9 | 0.5 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 9 | 0.5 |
| (1,317) | 1:A:69:ASN:HD22 | 1:A:70:VAL:H | 10 | 0.5 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 7 | 0.5 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 1 | 0.49 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 18 | 0.49 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 6 | 0.49 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 17 | 0.49 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 9 | 0.49 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 12 | 0.49 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 12 | 0.49 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 12 | 0.49 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 20 | 0.49 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 20 | 0.49 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 20 | 0.49 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 17 | 0.49 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 17 | 0.49 |
| (1,498) | 1:A:36:GLU:HA | 1:A:39:GLN:HB3 | 5 | 0.49 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 10 | 0.49 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 10 | 0.49 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 18 | 0.49 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 18 | 0.49 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 14 | 0.48 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 14 | 0.48 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 14 | 0.48 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 7 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 5 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 7 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 10 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 14 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 15 | 0.48 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 20 | 0.48 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 1 | 0.48 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 7 | 0.48 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 20 | 0.48 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 11 | 0.48 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 11 | 0.48 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 11 | 0.48 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 16 | 0.48 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 16 | 0.48 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 16 | 0.48 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 16 | 0.48 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 16 | 0.48 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 16 | 0.48 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 8 | 0.48 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 8 | 0.48 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 8 | 0.48 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 8 | 0.48 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 8 | 0.48 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 8 | 0.48 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 14 | 0.48 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 8 | 0.48 |
| (1,367) | 1:A:54:TRP:HA | 1:A:57:ASN:HB2 | 16 | 0.48 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 16 | 0.48 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 8 | 0.48 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 1 | 0.48 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 6 | 0.47 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 4 | 0.47 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 16 | 0.47 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 14 | 0.47 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 4 | 0.47 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 4 | 0.47 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG21 | 13 | 0.47 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG22 | 13 | 0.47 |
| (1,645) | 1:A:49:VAL:H | 1:A:49:VAL:HG23 | 13 | 0.47 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 14 | 0.47 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 14 | 0.47 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 14 | 0.47 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 1 | 0.47 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 11 | 0.47 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 9 | 0.47 |
| (1,197) | 1:A:18:GLN:H | 1:A:18:GLN:HB2 | 16 | 0.47 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 12 | 0.47 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 18 | 0.46 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 14 | 0.46 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 3 | 0.46 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 3 | 0.46 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 3 | 0.46 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 3 | 0.46 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 8 | 0.46 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 8 | 0.46 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 8 | 0.46 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 14 | 0.46 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 14 | 0.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 14 | 0.46 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 14 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 14 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 14 | 0.46 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 17 | 0.46 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 17 | 0.46 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 17 | 0.46 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 17 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 17 | 0.46 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 17 | 0.46 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 18 | 0.46 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 20 | 0.46 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 20 | 0.46 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 20 | 0.46 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 8 | 0.46 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 2 | 0.45 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 19 | 0.45 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 19 | 0.45 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 19 | 0.45 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 12 | 0.45 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 15 | 0.45 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD11 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD12 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD11 | 1:A:40:ILE:HD13 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD11 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD12 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD12 | 1:A:40:ILE:HD13 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD11 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD12 | 10 | 0.45 |
| (1,685) | 1:A:22:LEU:HD13 | 1:A:40:ILE:HD13 | 10 | 0.45 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 9 | 0.45 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 9 | 0.45 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 5 | 0.45 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 5 | 0.45 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 5 | 0.45 |
| (1,549) | 1:A:32:LEU:HD21 | 1:A:37:ARG:HA | 13 | 0.45 |
| (1,549) | 1:A:32:LEU:HD22 | 1:A:37:ARG:HA | 13 | 0.45 |
| (1,549) | 1:A:32:LEU:HD23 | 1:A:37:ARG:HA | 13 | 0.45 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 19 | 0.45 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 19 | 0.45 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 19 | 0.45 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 19 | 0.45 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 19 | 0.45 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 19 | 0.45 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 15 | 0.45 |
| (1,184) | 1:A:55:PHE:H | 1:A:55:PHE:HB2 | 18 | 0.45 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 11 | 0.45 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 10 | 0.44 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 18 | 0.44 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 18 | 0.44 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 19 | 0.44 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 13 | 0.44 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 18 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 14 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 14 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 14 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 15 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 15 | 0.44 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 15 | 0.44 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 8 | 0.44 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 8 | 0.44 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 16 | 0.44 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 16 | 0.44 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 16 | 0.44 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,490) | 1:A:40:ILE:HA | 1:A:44:LEU:HD11 | 10 | 0.44 |
| (1,490) | 1:A:40:ILE:HA | 1:A:44:LEU:HD12 | 10 | 0.44 |
| (1,490) | 1:A:40:ILE:HA | 1:A:44:LEU:HD13 | 10 | 0.44 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 5 | 0.44 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 5 | 0.44 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 5 | 0.44 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 6 | 0.44 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 14 | 0.44 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 15 | 0.44 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 2 | 0.43 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 17 | 0.43 |
| (1,445) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB3 | 15 | 0.43 |
| (1,445) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB3 | 15 | 0.43 |
| (1,445) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB3 | 15 | 0.43 |
| (1,417) | 1:A:10:ARG:HA | 1:A:11:ARG:HB3 | 4 | 0.43 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 20 | 0.43 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 8 | 0.43 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 8 | 0.42 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 13 | 0.42 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 16 | 0.42 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 8 | 0.42 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 12 | 0.42 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 17 | 0.42 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 8 | 0.42 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 10 | 0.42 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 5 | 0.42 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 5 | 0.42 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 5 | 0.42 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 10 | 0.42 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 10 | 0.42 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 10 | 0.42 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 10 | 0.42 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 10 | 0.42 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 10 | 0.42 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD11 | 19 | 0.42 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD12 | 19 | 0.42 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD13 | 19 | 0.42 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 2 | 0.42 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 2 | 0.42 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 2 | 0.42 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 16 | 0.42 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 4 | 0.42 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 8 | 0.42 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 8 | 0.42 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 8 | 0.42 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 3 | 0.41 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 12 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 7 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 7 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 7 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 7 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 7 | 0.41 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 7 | 0.41 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD21 | 4 | 0.41 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD22 | 4 | 0.41 |
| (1,772) | 1:A:46:LEU:HA | 1:A:46:LEU:HD23 | 4 | 0.41 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 20 | 0.41 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 20 | 0.41 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 9 | 0.41 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 9 | 0.41 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 2 | 0.41 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 13 | 0.41 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 10 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 5 | 0.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 9 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 10 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 11 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 13 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 14 | 0.4 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 16 | 0.4 |
| (1,800) | 1:A:14:PHE:HD1 | 1:A:50:GLN:HE22 | 16 | 0.4 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 14 | 0.4 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 14 | 0.4 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 14 | 0.4 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 11 | 0.4 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 11 | 0.4 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 11 | 0.4 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 5 | 0.4 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 1 | 0.4 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 14 | 0.39 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 14 | 0.39 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 14 | 0.39 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 14 | 0.39 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 14 | 0.39 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 14 | 0.39 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 16 | 0.39 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD11 | 19 | 0.39 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD12 | 19 | 0.39 |
| (1,667) | 1:A:29:LYS:HE2 | 1:A:32:LEU:HD13 | 19 | 0.39 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD11 | 19 | 0.39 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD12 | 19 | 0.39 |
| (1,667) | 1:A:29:LYS:HE3 | 1:A:32:LEU:HD13 | 19 | 0.39 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 5 | 0.39 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 5 | 0.39 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 7 | 0.39 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 7 | 0.39 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 7 | 0.39 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 17 | 0.39 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 17 | 0.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 18 | 0.39 |
| (1,3) | 1:A:13:ALA:H | 1:A:14:PHE:HD2 | 1 | 0.39 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 12 | 0.39 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 8 | 0.38 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 19 | 0.38 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 8 | 0.38 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD11 | 4 | 0.38 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD12 | 4 | 0.38 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD13 | 4 | 0.38 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 6 | 0.38 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 6 | 0.38 |
| (1,3) | 1:A:13:ALA:H | 1:A:14:PHE:HD2 | 11 | 0.38 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 3 | 0.38 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 10 | 0.37 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 10 | 0.37 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 10 | 0.37 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 2 | 0.37 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 4 | 0.37 |
| (1,806) | 1:A:14:PHE:HA | 1:A:14:PHE:HD2 | 6 | 0.37 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 5 | 0.37 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 13 | 0.37 |
| (1,55) | 1:A:21:GLU:HB3 | 1:A:22:LEU:H | 16 | 0.37 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 15 | 0.37 |
| (1,94) | 1:A:23:GLU:HB3 | 1:A:24:LYS:H | 15 | 0.36 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 11 | 0.36 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 11 | 0.36 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 11 | 0.36 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 15 | 0.36 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 15 | 0.36 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 15 | 0.36 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 5 | 0.36 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 5 | 0.36 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 5 | 0.36 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 5 | 0.36 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 5 | 0.36 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 5 | 0.36 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 13 | 0.36 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 13 | 0.36 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 13 | 0.36 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD21 | 6 | 0.36 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD22 | 6 | 0.36 |
| (1,637) | 1:A:19:LEU:HB3 | 1:A:22:LEU:HD23 | 6 | 0.36 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 1 | 0.36 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 1 | 0.36 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 1 | 0.36 |
| (1,24) | 1:A:9:ARG:H | 1:A:9:ARG:HB3 | 5 | 0.36 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 15 | 0.36 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 3 | 0.36 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 20 | 0.35 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 20 | 0.35 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 20 | 0.35 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 19 | 0.35 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 14 | 0.35 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 2 | 0.35 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 17 | 0.35 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 18 | 0.35 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 4 | 0.35 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 4 | 0.35 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 4 | 0.35 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 14 | 0.35 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 10 | 0.34 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 10 | 0.34 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 10 | 0.34 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 10 | 0.34 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 10 | 0.34 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 10 | 0.34 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 10 | 0.34 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 18 | 0.34 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 18 | 0.34 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 18 | 0.34 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 15 | 0.34 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 15 | 0.34 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 4 | 0.34 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 9 | 0.34 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 9 | 0.34 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 9 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 1 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 3 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 4 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 6 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 12 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 13 | 0.34 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 19 | 0.34 |
| (1,819) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HD1 | 9 | 0.33 |
| (1,819) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HD1 | 9 | 0.33 |
| (1,819) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HD1 | 9 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 17 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 17 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 17 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 20 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 20 | 0.33 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 20 | 0.33 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 9 | 0.33 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 16 | 0.33 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 16 | 0.33 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 16 | 0.33 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 11 | 0.33 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 7 | 0.33 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 8 | 0.33 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 11 | 0.33 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 14 | 0.33 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 12 | 0.33 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 9 | 0.33 |
| (1,808) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HG | 13 | 0.32 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 15 | 0.32 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 19 | 0.32 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 15 | 0.32 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 10 | 0.32 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 5 | 0.32 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 5 | 0.32 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 5 | 0.32 |
| (1,604) | 1:A:56:GLN:HA | 1:A:56:GLN:HE22 | 4 | 0.32 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 15 | 0.32 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 5 | 0.32 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 6 | 0.32 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 13 | 0.32 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 10 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 14 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 14 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 14 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 14 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 14 | 0.31 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 14 | 0.31 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 7 | 0.31 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 15 | 0.31 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 15 | 0.31 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 16 | 0.31 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 16 | 0.31 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 16 | 0.31 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 19 | 0.31 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 7 | 0.31 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 6 | 0.31 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 6 | 0.31 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 6 | 0.31 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 12 | 0.31 |
| (1,565) | 1:A:16:SER:HB2 | 1:A:17:GLU:HB2 | 1 | 0.31 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,483) | 1:A:17:GLU:HB3 | 1:A:18:GLN:H | 19 | 0.31 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 2 | 0.31 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 11 | 0.31 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 11 | 0.31 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 1 | 0.31 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 11 | 0.31 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 11 | 0.31 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 11 | 0.31 |
| (1,396) | 1:A:20:LEU:H | 1:A:21:GLU:HG3 | 20 | 0.31 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 10 | 0.31 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 2 | 0.31 |
| (1,833) | 1:A:61:LYS:HD3 | 1:A:62:TRP:HZ2 | 17 | 0.3 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 1 | 0.3 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 8 | 0.3 |
| (1,82) | 1:A:39:GLN:H | 1:A:39:GLN:HB3 | 5 | 0.3 |
| (1,732) | 1:A:59:ARG:HB2 | 1:A:60:ALA:HA | 11 | 0.3 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 14 | 0.3 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 14 | 0.3 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 14 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 5 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 5 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 5 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 19 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 19 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 19 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 20 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 20 | 0.3 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 20 | 0.3 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 8 | 0.3 |
| (1,352) | 1:A:28:CYS:HB2 | 1:A:29:LYS:HG3 | 17 | 0.3 |
| (1,352) | 1:A:28:CYS:HB3 | 1:A:29:LYS:HG3 | 17 | 0.3 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 14 | 0.3 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 14 | 0.3 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 14 | 0.3 |
| (1,3) | 1:A:13:ALA:H | 1:A:14:PHE:HD2 | 13 | 0.3 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 17 | 0.3 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 14 | 0.29 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 12 | 0.29 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 12 | 0.29 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 12 | 0.29 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 2 | 0.29 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 2 | 0.29 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 2 | 0.29 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 19 | 0.29 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 13 | 0.29 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 13 | 0.29 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 13 | 0.29 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 6 | 0.29 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 18 | 0.29 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 18 | 0.29 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 10 | 0.29 |
| (1,197) | 1:A:18:GLN:H | 1:A:18:GLN:HB2 | 7 | 0.29 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 17 | 0.28 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 17 | 0.28 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 17 | 0.28 |
| (1,513) | 1:A:56:GLN:HB2 | 1:A:57:ASN:H | 16 | 0.28 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 2 | 0.28 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 2 | 0.28 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 2 | 0.28 |
| (1,470) | 1:A:21:GLU:HB3 | 1:A:40:ILE:HG12 | 9 | 0.28 |
| (1,470) | 1:A:21:GLU:HB3 | 1:A:40:ILE:HG13 | 9 | 0.28 |
| (1,397) | 1:A:18:GLN:HB2 | 1:A:18:GLN:HE22 | 1 | 0.28 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 8 | 0.28 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 8 | 0.28 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 15 | 0.28 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 15 | 0.28 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 16 | 0.28 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 16 | 0.28 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 16 | 0.28 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 16 | 0.28 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 12 | 0.28 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 6 | 0.28 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 20 | 0.28 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 7 | 0.27 |
| (1,668) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HB2 | 6 | 0.27 |
| (1,668) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HB2 | 6 | 0.27 |
| (1,668) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HB2 | 6 | 0.27 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 11 | 0.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 6 | 0.27 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 6 | 0.27 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 6 | 0.27 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 7 | 0.27 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 7 | 0.27 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 17 | 0.27 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 7 | 0.27 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 7 | 0.27 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 7 | 0.27 |
| (1,170) | 1:A:37:ARG:H | 1:A:37:ARG:HB2 | 19 | 0.27 |
| (1,161) | 1:A:55:PHE:HB3 | 1:A:57:ASN:H | 11 | 0.27 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 19 | 0.26 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 15 | 0.26 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 15 | 0.26 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 15 | 0.26 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 12 | 0.26 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 1 | 0.26 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 1 | 0.26 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 1 | 0.26 |
| (1,642) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HG | 7 | 0.26 |
| (1,642) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HG | 7 | 0.26 |
| (1,642) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HG | 7 | 0.26 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 8 | 0.26 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 14 | 0.26 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 1 | 0.26 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 3 | 0.25 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 17 | 0.25 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 17 | 0.25 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 17 | 0.25 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 6 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 6 | 0.25 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 6 | 0.25 |
| (1,617) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HZ2 | 16 | 0.25 |
| (1,617) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HZ2 | 16 | 0.25 |
| (1,617) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HZ2 | 16 | 0.25 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 11 | 0.25 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 11 | 0.25 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 11 | 0.25 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 13 | 0.25 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 13 | 0.25 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 13 | 0.25 |
| (1,333) | 1:A:32:LEU:HB2 | 1:A:37:ARG:HB3 | 9 | 0.25 |
| (1,333) | 1:A:32:LEU:HB3 | 1:A:37:ARG:HB3 | 9 | 0.25 |
| (1,250) | 1:A:18:GLN:HE21 | 1:A:45:LYS:H | 15 | 0.25 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 5 | 0.24 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 14 | 0.24 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 20 | 0.24 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 16 | 0.24 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 8 | 0.24 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 8 | 0.24 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 8 | 0.24 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 9 | 0.24 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 9 | 0.24 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 9 | 0.24 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD11 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD12 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD11 | 1:A:46:LEU:HD13 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD11 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD12 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD12 | 1:A:46:LEU:HD13 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD11 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD12 | 13 | 0.24 |
| (1,533) | 1:A:22:LEU:HD13 | 1:A:46:LEU:HD13 | 13 | 0.24 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 18 | 0.24 |
| (1,426) | 1:A:58:ARG:HB3 | 1:A:59:ARG:HG3 | 6 | 0.24 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 11 | 0.24 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 7 | 0.24 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 7 | 0.24 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 7 | 0.24 |
| (1,385) | 1:A:14:PHE:HD2 | 1:A:50:GLN:HG3 | 1 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD11 | 15 | 0.24 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD12 | 15 | 0.24 |
| (1,316) | 1:A:31:TYR:H | 1:A:32:LEU:HD13 | 15 | 0.24 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 4 | 0.24 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 10 | 0.24 |
| (1,239) | 1:A:62:TRP:HB3 | 1:A:63:LYS:H | 17 | 0.24 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 17 | 0.23 |
| (1,694) | 1:A:15:THR:HG21 | 1:A:18:GLN:HB2 | 7 | 0.23 |
| (1,694) | 1:A:15:THR:HG22 | 1:A:18:GLN:HB2 | 7 | 0.23 |
| (1,694) | 1:A:15:THR:HG23 | 1:A:18:GLN:HB2 | 7 | 0.23 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 4 | 0.23 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 4 | 0.23 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 4 | 0.23 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 19 | 0.23 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 14 | 0.23 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 14 | 0.23 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 14 | 0.23 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD2 | 17 | 0.23 |
| (1,338) | 1:A:8:ARG:HB2 | 1:A:8:ARG:HD3 | 17 | 0.23 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 4 | 0.23 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 15 | 0.23 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 19 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 15 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 15 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 15 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 15 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 15 | 0.22 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 15 | 0.22 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 9 | 0.22 |
| (1,704) | 1:A:18:GLN:HE21 | 1:A:45:LYS:HA | 1 | 0.22 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 7 | 0.22 |
| (1,648) | 1:A:64:ARG:HA | 1:A:64:ARG:HG3 | 16 | 0.22 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 19 | 0.22 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 19 | 0.22 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 19 | 0.22 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 1 | 0.22 |
| (1,483) | 1:A:17:GLU:HB3 | 1:A:18:GLN:H | 6 | 0.22 |
| (1,405) | 1:A:23:GLU:H | 1:A:23:GLU:HG2 | 15 | 0.22 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 8 | 0.22 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 8 | 0.22 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 8 | 0.22 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 15 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 3 | 0.22 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD11 | 14 | 0.21 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD12 | 14 | 0.21 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD13 | 14 | 0.21 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 11 | 0.21 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 11 | 0.21 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 11 | 0.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD21 | 1 | 0.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD22 | 1 | 0.21 |
| (1,610) | 1:A:44:LEU:H | 1:A:46:LEU:HD23 | 1 | 0.21 |
| (1,315) | 1:A:30:LYS:HB2 | 1:A:31:TYR:H | 15 | 0.21 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 5 | 0.21 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 1 | 0.21 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 20 | 0.2 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD21 | 5 | 0.2 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD22 | 5 | 0.2 |
| (1,811) | 1:A:14:PHE:HD1 | 1:A:22:LEU:HD23 | 5 | 0.2 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 19 | 0.2 |
| (1,694) | 1:A:15:THR:HG21 | 1:A:18:GLN:HB2 | 16 | 0.2 |
| (1,694) | 1:A:15:THR:HG22 | 1:A:18:GLN:HB2 | 16 | 0.2 |
| (1,694) | 1:A:15:THR:HG23 | 1:A:18:GLN:HB2 | 16 | 0.2 |
| (1,672) | 1:A:32:LEU:HD11 | 1:A:36:GLU:HA | 19 | 0.2 |
| (1,672) | 1:A:32:LEU:HD12 | 1:A:36:GLU:HA | 19 | 0.2 |
| (1,672) | 1:A:32:LEU:HD13 | 1:A:36:GLU:HA | 19 | 0.2 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 5 | 0.2 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 5 | 0.2 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 5 | 0.2 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 3 | 0.2 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 3 | 0.2 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 3 | 0.2 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 13 | 0.2 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 9 | 0.2 |
| (1,45) | 1:A:10:ARG:H | 1:A:10:ARG:HB2 | 19 | 0.2 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 20 | 0.2 |
| (1,315) | 1:A:30:LYS:HB2 | 1:A:31:TYR:H | 14 | 0.2 |
| (1,315) | 1:A:30:LYS:HB2 | 1:A:31:TYR:H | 19 | 0.2 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 6 | 0.19 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 16 | 0.19 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 16 | 0.19 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 16 | 0.19 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 6 | 0.19 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD11 | 5 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD12 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD13 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD11 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD12 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD13 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD11 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD12 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD13 | 5 | 0.19 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD11 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD12 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD13 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD11 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD12 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD13 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD11 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD12 | 13 | 0.19 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD13 | 13 | 0.19 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 10 | 0.19 |
| (1,55) | 1:A:21:GLU:HB3 | 1:A:22:LEU:H | 9 | 0.19 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 7 | 0.19 |
| (1,448) | 1:A:61:LYS:HA | 1:A:64:ARG:HB3 | 16 | 0.19 |
| (1,437) | 1:A:37:ARG:HB2 | 1:A:51:VAL:HG11 | 12 | 0.19 |
| (1,437) | 1:A:37:ARG:HB2 | 1:A:51:VAL:HG12 | 12 | 0.19 |
| (1,437) | 1:A:37:ARG:HB2 | 1:A:51:VAL:HG13 | 12 | 0.19 |
| (1,434) | 1:A:9:ARG:HB2 | 1:A:10:ARG:H | 9 | 0.19 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 5 | 0.19 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 7 | 0.19 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 11 | 0.19 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 11 | 0.19 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 11 | 0.19 |
| (1,170) | 1:A:37:ARG:H | 1:A:37:ARG:HB2 | 20 | 0.19 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 8 | 0.18 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 15 | 0.18 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 6 | 0.18 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 6 | 0.18 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 6 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 16 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 16 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 16 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 16 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 16 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 16 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD11 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD12 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD13 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD11 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD12 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD13 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD11 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD12 | 6 | 0.18 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD13 | 6 | 0.18 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 12 | 0.18 |
| (1,391) | 1:A:20:LEU:HB2 | 1:A:21:GLU:HG3 | 14 | 0.18 |
| (1,333) | 1:A:32:LEU:HB2 | 1:A:37:ARG:HB3 | 18 | 0.18 |
| (1,333) | 1:A:32:LEU:HB3 | 1:A:37:ARG:HB3 | 18 | 0.18 |
| (1,322) | 1:A:53:ILE:HD11 | 1:A:56:GLN:HE22 | 13 | 0.18 |
| (1,322) | 1:A:53:ILE:HD12 | 1:A:56:GLN:HE22 | 13 | 0.18 |
| (1,322) | 1:A:53:ILE:HD13 | 1:A:56:GLN:HE22 | 13 | 0.18 |
| (1,285) | 1:A:46:LEU:HD11 | 1:A:47:SER:H | 6 | 0.18 |
| (1,285) | 1:A:46:LEU:HD12 | 1:A:47:SER:H | 6 | 0.18 |
| (1,285) | 1:A:46:LEU:HD13 | 1:A:47:SER:H | 6 | 0.18 |
| (1,281) | 1:A:47:SER:H | 1:A:47:SER:HB3 | 13 | 0.18 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 2 | 0.17 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 2 | 0.17 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 2 | 0.17 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 2 | 0.17 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 2 | 0.17 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 2 | 0.17 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 4 | 0.17 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 2 | 0.17 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 20 | 0.17 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 20 | 0.17 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 1 | 0.17 |
| (1,464) | 1:A:27:HIS:H | 1:A:27:HIS:HB2 | 5 | 0.17 |
| (1,416) | 1:A:52:LYS:HB2 | 1:A:53:ILE:H | 18 | 0.17 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 10 | 0.17 |
| (1,3) | 1:A:13:ALA:H | 1:A:14:PHE:HD2 | 17 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 7 | 0.17 |
| (1,170) | 1:A:37:ARG:H | 1:A:37:ARG:HB2 | 11 | 0.17 |
| (1,155) | 1:A:57:ASN:H | 1:A:57:ASN:HB2 | 16 | 0.17 |
| (1,650) | 1:A:64:ARG:HA | 1:A:64:ARG:HB3 | 1 | 0.16 |
| (1,617) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HZ2 | 9 | 0.16 |
| (1,617) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HZ2 | 9 | 0.16 |
| (1,617) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HZ2 | 9 | 0.16 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 20 | 0.16 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 20 | 0.16 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 20 | 0.16 |
| (1,515) | 1:A:53:ILE:HA | 1:A:56:GLN:HB2 | 6 | 0.16 |
| (1,515) | 1:A:53:ILE:HA | 1:A:56:GLN:HB2 | 16 | 0.16 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD2 | 2 | 0.16 |
| (1,458) | 1:A:62:TRP:HB3 | 1:A:63:LYS:HD3 | 2 | 0.16 |
| (1,416) | 1:A:52:LYS:HB2 | 1:A:53:ILE:H | 13 | 0.16 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 19 | 0.16 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 19 | 0.16 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 19 | 0.16 |
| (1,245) | 1:A:14:PHE:HB2 | 1:A:19:LEU:H | 10 | 0.16 |
| (1,2) | 1:A:13:ALA:H | 1:A:14:PHE:HB3 | 7 | 0.16 |
| (1,187) | 1:A:47:SER:HB2 | 1:A:49:VAL:H | 3 | 0.16 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 18 | 0.15 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 18 | 0.15 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD11 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD12 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD21 | 1:A:46:LEU:HD13 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD11 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD12 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD22 | 1:A:46:LEU:HD13 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD11 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD12 | 12 | 0.15 |
| (1,640) | 1:A:22:LEU:HD23 | 1:A:46:LEU:HD13 | 12 | 0.15 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD11 | 13 | 0.15 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD12 | 13 | 0.15 |
| (1,568) | 1:A:16:SER:HB2 | 1:A:19:LEU:HD13 | 13 | 0.15 |
| (1,416) | 1:A:52:LYS:HB2 | 1:A:53:ILE:H | 20 | 0.15 |
| (1,409) | 1:A:19:LEU:HB3 | 1:A:23:GLU:HG2 | 2 | 0.15 |
| (1,33) | 1:A:11:ARG:H | 1:A:11:ARG:HB3 | 7 | 0.15 |
| (1,315) | 1:A:30:LYS:HB2 | 1:A:31:TYR:H | 16 | 0.15 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 20 | 0.15 |
| (1,285) | 1:A:46:LEU:HD11 | 1:A:47:SER:H | 9 | 0.15 |
| (1,285) | 1:A:46:LEU:HD12 | 1:A:47:SER:H | 9 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,285) | 1:A:46:LEU:HD13 | 1:A:47:SER:H | 9 | 0.15 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 9 | 0.15 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 8 | 0.15 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 16 | 0.15 |
| (1,831) | 1:A:27:HIS:HB3 | 1:A:27:HIS:HD2 | 12 | 0.14 |
| (1,820) | 1:A:22:LEU:HD21 | 1:A:54:TRP:HD1 | 1 | 0.14 |
| (1,820) | 1:A:22:LEU:HD22 | 1:A:54:TRP:HD1 | 1 | 0.14 |
| (1,820) | 1:A:22:LEU:HD23 | 1:A:54:TRP:HD1 | 1 | 0.14 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 6 | 0.14 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 6 | 0.14 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 6 | 0.14 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 6 | 0.14 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 6 | 0.14 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 6 | 0.14 |
| (1,615) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HE1 | 9 | 0.14 |
| (1,615) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HE1 | 9 | 0.14 |
| (1,615) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HE1 | 9 | 0.14 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD11 | 8 | 0.14 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD12 | 8 | 0.14 |
| (1,614) | 1:A:34:LEU:HA | 1:A:34:LEU:HD13 | 8 | 0.14 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD21 | 9 | 0.14 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD22 | 9 | 0.14 |
| (1,612) | 1:A:46:LEU:H | 1:A:46:LEU:HD23 | 9 | 0.14 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 20 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 3 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 5 | 0.14 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 5 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 8 | 0.14 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG21 | 7 | 0.14 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG22 | 7 | 0.14 |
| (1,479) | 1:A:47:SER:HB2 | 1:A:51:VAL:HG23 | 7 | 0.14 |
| (1,333) | 1:A:32:LEU:HB2 | 1:A:37:ARG:HB3 | 10 | 0.14 |
| (1,333) | 1:A:32:LEU:HB3 | 1:A:37:ARG:HB3 | 10 | 0.14 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 13 | 0.14 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 15 | 0.14 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 5 | 0.13 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 5 | 0.13 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 5 | 0.13 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 5 | 0.13 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 5 | 0.13 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 5 | 0.13 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 11 | 0.13 |
| (1,79) | 1:A:37:ARG:HB2 | 1:A:39:GLN:H | 20 | 0.13 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD11 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD12 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD13 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD11 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD12 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD13 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD11 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD12 | 9 | 0.13 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD13 | 9 | 0.13 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD11 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD12 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD21 | 1:A:40:ILE:HD13 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD11 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD12 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD22 | 1:A:40:ILE:HD13 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD11 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD12 | 7 | 0.13 |
| (1,777) | 1:A:32:LEU:HD23 | 1:A:40:ILE:HD13 | 7 | 0.13 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD11 | 16 | 0.13 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD12 | 16 | 0.13 |
| (1,664) | 1:A:32:LEU:H | 1:A:32:LEU:HD13 | 16 | 0.13 |
| (1,628) | 1:A:25:GLU:HA | 1:A:29:LYS:HG2 | 20 | 0.13 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 16 | 0.13 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 16 | 0.13 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 16 | 0.13 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 5 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 17 | 0.13 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 12 | 0.13 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 12 | 0.13 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE1 | 20 | 0.13 |
| (1,545) | 1:A:32:LEU:HD21 | 1:A:55:PHE:HE2 | 20 | 0.13 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE1 | 20 | 0.13 |
| (1,545) | 1:A:32:LEU:HD22 | 1:A:55:PHE:HE2 | 20 | 0.13 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE1 | 20 | 0.13 |
| (1,545) | 1:A:32:LEU:HD23 | 1:A:55:PHE:HE2 | 20 | 0.13 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB2 | 1 | 0.13 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB3 | 1 | 0.13 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB2 | 1 | 0.13 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB3 | 1 | 0.13 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 13 | 0.13 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 16 | 0.13 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD2 | 17 | 0.13 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD3 | 17 | 0.13 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD2 | 17 | 0.13 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD3 | 17 | 0.13 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD2 | 17 | 0.13 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD3 | 17 | 0.13 |
| (1,464) | 1:A:27:HIS:H | 1:A:27:HIS:HB2 | 16 | 0.13 |
| (1,434) | 1:A:9:ARG:HB2 | 1:A:10:ARG:H | 5 | 0.13 |
| (1,15) | 1:A:11:ARG:HB3 | 1:A:12:THR:H | 13 | 0.13 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 9 | 0.13 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 18 | 0.13 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 9 | 0.12 |
| (1,93) | 1:A:23:GLU:HG2 | 1:A:24:LYS:H | 13 | 0.12 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD21 | 16 | 0.12 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD22 | 16 | 0.12 |
| (1,817) | 1:A:14:PHE:HE1 | 1:A:22:LEU:HD23 | 16 | 0.12 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD21 | 16 | 0.12 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD22 | 16 | 0.12 |
| (1,817) | 1:A:14:PHE:HE2 | 1:A:22:LEU:HD23 | 16 | 0.12 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 20 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 20 | 0.12 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 20 | 0.12 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 20 | 0.12 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 20 | 0.12 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 20 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD1 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD2 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD1 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD2 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD1 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD2 | 13 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD1 | 14 | 0.12 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD2 | 14 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD1 | 14 | 0.12 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD2 | 14 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD1 | 14 | 0.12 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD2 | 14 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE1 | 5 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE2 | 5 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE1 | 5 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE2 | 5 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE1 | 13 | 0.12 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE2 | 13 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE1 | 13 | 0.12 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE2 | 13 | 0.12 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD11 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD12 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD13 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD11 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD12 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD13 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD11 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD12 | 15 | 0.12 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD13 | 15 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD11 | 12 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD12 | 12 | 0.12 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD13 | 12 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD11 | 12 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD12 | 12 | 0.12 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD13 | 12 | 0.12 |
| (1,763) | 1:A:65:ILE:HG21 | 1:A:66:LYS:H | 8 | 0.12 |
| (1,763) | 1:A:65:ILE:HG22 | 1:A:66:LYS:H | 8 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,763) | 1:A:65:ILE:HG23 | 1:A:66:LYS:H | 8 | 0.12 |
| (1,751) | 1:A:43:ALA:HB1 | 1:A:44:LEU:HG | 10 | 0.12 |
| (1,751) | 1:A:43:ALA:HB2 | 1:A:44:LEU:HG | 10 | 0.12 |
| (1,751) | 1:A:43:ALA:HB3 | 1:A:44:LEU:HG | 10 | 0.12 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB1 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB2 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB3 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB1 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB2 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB3 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB1 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB2 | 18 | 0.12 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB3 | 18 | 0.12 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG2 | 11 | 0.12 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG3 | 11 | 0.12 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB2 | 3 | 0.12 |
| (1,703) | 1:A:70:VAL:HG11 | 1:A:71:SER:HB3 | 3 | 0.12 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB2 | 3 | 0.12 |
| (1,703) | 1:A:70:VAL:HG12 | 1:A:71:SER:HB3 | 3 | 0.12 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB2 | 3 | 0.12 |
| (1,703) | 1:A:70:VAL:HG13 | 1:A:71:SER:HB3 | 3 | 0.12 |
| (1,699) | 1:A:35:THR:HG21 | 1:A:36:GLU:HG2 | 19 | 0.12 |
| (1,699) | 1:A:35:THR:HG21 | 1:A:36:GLU:HG3 | 19 | 0.12 |
| (1,699) | 1:A:35:THR:HG22 | 1:A:36:GLU:HG2 | 19 | 0.12 |
| (1,699) | 1:A:35:THR:HG22 | 1:A:36:GLU:HG3 | 19 | 0.12 |
| (1,699) | 1:A:35:THR:HG23 | 1:A:36:GLU:HG2 | 19 | 0.12 |
| (1,699) | 1:A:35:THR:HG23 | 1:A:36:GLU:HG3 | 19 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG21 | 12 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG22 | 12 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG23 | 12 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG21 | 20 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG22 | 20 | 0.12 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG23 | 20 | 0.12 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 2 | 0.12 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 2 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD11 | 18 | 0.12 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD12 | 18 | 0.12 |
| (1,669) | 1:A:29:LYS:HD2 | 1:A:32:LEU:HD13 | 18 | 0.12 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD11 | 18 | 0.12 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD12 | 18 | 0.12 |
| (1,669) | 1:A:29:LYS:HD3 | 1:A:32:LEU:HD13 | 18 | 0.12 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD21 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD22 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD21 | 1:A:22:LEU:HD23 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD21 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD22 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD22 | 1:A:22:LEU:HD23 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD21 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD22 | 12 | 0.12 |
| (1,621) | 1:A:19:LEU:HD23 | 1:A:22:LEU:HD23 | 12 | 0.12 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 6 | 0.12 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 6 | 0.12 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 6 | 0.12 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 18 | 0.12 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 18 | 0.12 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 18 | 0.12 |
| (1,590) | 1:A:37:ARG:HA | 1:A:51:VAL:HG11 | 1 | 0.12 |
| (1,590) | 1:A:37:ARG:HA | 1:A:51:VAL:HG12 | 1 | 0.12 |
| (1,590) | 1:A:37:ARG:HA | 1:A:51:VAL:HG13 | 1 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG2 | 3 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG3 | 3 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG2 | 7 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG3 | 7 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG2 | 12 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG3 | 12 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG2 | 17 | 0.12 |
| (1,578) | 1:A:45:LYS:HA | 1:A:45:LYS:HG3 | 17 | 0.12 |
| (1,566) | 1:A:63:LYS:H | 1:A:63:LYS:HG2 | 4 | 0.12 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 8 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 8 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 17 | 0.12 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 17 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD11 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD12 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD13 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD11 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD12 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD13 | 1 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD11 | 20 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD12 | 20 | 0.12 |
| (1,559) | 1:A:40:ILE:HG12 | 1:A:44:LEU:HD13 | 20 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD11 | 20 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD12 | 20 | 0.12 |
| (1,559) | 1:A:40:ILE:HG13 | 1:A:44:LEU:HD13 | 20 | 0.12 |
| (1,516) | 1:A:64:ARG:H | 1:A:64:ARG:HG3 | 6 | 0.12 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 3 | 0.12 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD2 | 15 | 0.12 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD3 | 15 | 0.12 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD2 | 15 | 0.12 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD3 | 15 | 0.12 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD2 | 15 | 0.12 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD3 | 15 | 0.12 |
| (1,395) | 1:A:20:LEU:HB3 | 1:A:21:GLU:HG3 | 13 | 0.12 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD21 | 15 | 0.12 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD22 | 15 | 0.12 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD23 | 15 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD21 | 15 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD22 | 15 | 0.12 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD23 | 15 | 0.12 |
| (1,351) | 1:A:25:GLU:HA | 1:A:28:CYS:HB2 | 20 | 0.12 |
| (1,351) | 1:A:25:GLU:HA | 1:A:28:CYS:HB3 | 20 | 0.12 |
| (1,26) | 1:A:14:PHE:H | 1:A:14:PHE:HD1 | 8 | 0.12 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 1 | 0.12 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 2 | 0.12 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 11 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB2 | 1 | 0.11 |
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB3 | 1 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB2 | 1 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB3 | 1 | 0.11 |
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB2 | 10 | 0.11 |
| (1,815) | 1:A:26:PHE:HE1 | 1:A:32:LEU:HB3 | 10 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB2 | 10 | 0.11 |
| (1,815) | 1:A:26:PHE:HE2 | 1:A:32:LEU:HB3 | 10 | 0.11 |
| (1,812) | 1:A:12:THR:HG21 | 1:A:14:PHE:HD1 | 1 | 0.11 |
| (1,812) | 1:A:12:THR:HG22 | 1:A:14:PHE:HD1 | 1 | 0.11 |
| (1,812) | 1:A:12:THR:HG23 | 1:A:14:PHE:HD1 | 1 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD21 | 19 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD22 | 19 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD23 | 19 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD11 | 19 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD12 | 19 | 0.11 |
| (1,807) | 1:A:14:PHE:HD2 | 1:A:46:LEU:HD13 | 19 | 0.11 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD1 | 10 | 0.11 |
| (1,799) | 1:A:51:VAL:HG11 | 1:A:55:PHE:HD2 | 10 | 0.11 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD1 | 10 | 0.11 |
| (1,799) | 1:A:51:VAL:HG12 | 1:A:55:PHE:HD2 | 10 | 0.11 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD1 | 10 | 0.11 |
| (1,799) | 1:A:51:VAL:HG13 | 1:A:55:PHE:HD2 | 10 | 0.11 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE1 | 8 | 0.11 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE2 | 8 | 0.11 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE1 | 8 | 0.11 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE2 | 8 | 0.11 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE1 | 20 | 0.11 |
| (1,797) | 1:A:52:LYS:HG2 | 1:A:55:PHE:HE2 | 20 | 0.11 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE1 | 20 | 0.11 |
| (1,797) | 1:A:52:LYS:HG3 | 1:A:55:PHE:HE2 | 20 | 0.11 |
| (1,796) | 1:A:30:LYS:HG2 | 1:A:31:TYR:HD1 | 14 | 0.11 |
| (1,796) | 1:A:30:LYS:HG2 | 1:A:31:TYR:HD2 | 14 | 0.11 |
| (1,796) | 1:A:30:LYS:HG3 | 1:A:31:TYR:HD1 | 14 | 0.11 |
| (1,796) | 1:A:30:LYS:HG3 | 1:A:31:TYR:HD2 | 14 | 0.11 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD11 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD12 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG21 | 1:A:53:ILE:HD13 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD11 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD12 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG22 | 1:A:53:ILE:HD13 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD11 | 11 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD12 | 11 | 0.11 |
| (1,789) | 1:A:53:ILE:HG23 | 1:A:53:ILE:HD13 | 11 | 0.11 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD11 | 16 | 0.11 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD12 | 16 | 0.11 |
| (1,787) | 1:A:52:LYS:HE2 | 1:A:53:ILE:HD13 | 16 | 0.11 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD11 | 16 | 0.11 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD12 | 16 | 0.11 |
| (1,787) | 1:A:52:LYS:HE3 | 1:A:53:ILE:HD13 | 16 | 0.11 |
| (1,783) | 1:A:49:VAL:HA | 1:A:53:ILE:HD11 | 6 | 0.11 |
| (1,783) | 1:A:49:VAL:HA | 1:A:53:ILE:HD12 | 6 | 0.11 |
| (1,783) | 1:A:49:VAL:HA | 1:A:53:ILE:HD13 | 6 | 0.11 |
| (1,776) | 1:A:40:ILE:HG21 | 1:A:40:ILE:HD11 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG21 | 1:A:40:ILE:HD12 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG21 | 1:A:40:ILE:HD13 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG22 | 1:A:40:ILE:HD11 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG22 | 1:A:40:ILE:HD12 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG22 | 1:A:40:ILE:HD13 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG23 | 1:A:40:ILE:HD11 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG23 | 1:A:40:ILE:HD12 | 8 | 0.11 |
| (1,776) | 1:A:40:ILE:HG23 | 1:A:40:ILE:HD13 | 8 | 0.11 |
| (1,77) | 1:A:41:ALA:H | 1:A:51:VAL:HG21 | 1 | 0.11 |
| (1,77) | 1:A:41:ALA:H | 1:A:51:VAL:HG22 | 1 | 0.11 |
| (1,77) | 1:A:41:ALA:H | 1:A:51:VAL:HG23 | 1 | 0.11 |
| (1,763) | 1:A:65:ILE:HG21 | 1:A:66:LYS:H | 11 | 0.11 |
| (1,763) | 1:A:65:ILE:HG22 | 1:A:66:LYS:H | 11 | 0.11 |
| (1,763) | 1:A:65:ILE:HG23 | 1:A:66:LYS:H | 11 | 0.11 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD11 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD12 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG21 | 1:A:44:LEU:HD13 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD11 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD12 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG22 | 1:A:44:LEU:HD13 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD11 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD12 | 14 | 0.11 |
| (1,758) | 1:A:40:ILE:HG23 | 1:A:44:LEU:HD13 | 14 | 0.11 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB1 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB2 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG21 | 1:A:13:ALA:HB3 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB1 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB2 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG22 | 1:A:13:ALA:HB3 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB1 | 1 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB2 | 1 | 0.11 |
| (1,740) | 1:A:12:THR:HG23 | 1:A:13:ALA:HB3 | 1 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG2 | 9 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG3 | 9 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG2 | 10 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG3 | 10 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG2 | 14 | 0.11 |
| (1,735) | 1:A:11:ARG:HA | 1:A:11:ARG:HG3 | 14 | 0.11 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG21 | 11 | 0.11 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG22 | 11 | 0.11 |
| (1,722) | 1:A:69:ASN:HB3 | 1:A:70:VAL:HG23 | 11 | 0.11 |
| (1,720) | 1:A:30:LYS:HA | 1:A:30:LYS:HD2 | 9 | 0.11 |
| (1,720) | 1:A:30:LYS:HA | 1:A:30:LYS:HD3 | 9 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 1 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 6 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 18 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD2 | 19 | 0.11 |
| (1,711) | 1:A:49:VAL:HG11 | 1:A:52:LYS:HD3 | 19 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD2 | 19 | 0.11 |
| (1,711) | 1:A:49:VAL:HG12 | 1:A:52:LYS:HD3 | 19 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD2 | 19 | 0.11 |
| (1,711) | 1:A:49:VAL:HG13 | 1:A:52:LYS:HD3 | 19 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG21 | 6 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG22 | 6 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG23 | 6 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG21 | 15 | 0.11 |
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG22 | 15 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,693) | 1:A:15:THR:HA | 1:A:15:THR:HG23 | 15 | 0.11 |
| (1,692) | 1:A:14:PHE:HA | 1:A:15:THR:HG21 | 7 | 0.11 |
| (1,692) | 1:A:14:PHE:HA | 1:A:15:THR:HG22 | 7 | 0.11 |
| (1,692) | 1:A:14:PHE:HA | 1:A:15:THR:HG23 | 7 | 0.11 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG11 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG12 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD11 | 1:A:51:VAL:HG13 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG11 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG12 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD12 | 1:A:51:VAL:HG13 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG11 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG12 | 18 | 0.11 |
| (1,683) | 1:A:22:LEU:HD13 | 1:A:51:VAL:HG13 | 18 | 0.11 |
| (1,681) | 1:A:37:ARG:HG2 | 1:A:51:VAL:HG11 | 20 | 0.11 |
| (1,681) | 1:A:37:ARG:HG2 | 1:A:51:VAL:HG12 | 20 | 0.11 |
| (1,681) | 1:A:37:ARG:HG2 | 1:A:51:VAL:HG13 | 20 | 0.11 |
| (1,681) | 1:A:37:ARG:HG3 | 1:A:51:VAL:HG11 | 20 | 0.11 |
| (1,681) | 1:A:37:ARG:HG3 | 1:A:51:VAL:HG12 | 20 | 0.11 |
| (1,681) | 1:A:37:ARG:HG3 | 1:A:51:VAL:HG13 | 20 | 0.11 |
| (1,617) | 1:A:19:LEU:HD21 | 1:A:54:TRP:HZ2 | 19 | 0.11 |
| (1,617) | 1:A:19:LEU:HD22 | 1:A:54:TRP:HZ2 | 19 | 0.11 |
| (1,617) | 1:A:19:LEU:HD23 | 1:A:54:TRP:HZ2 | 19 | 0.11 |
| (1,603) | 1:A:24:LYS:HA | 1:A:27:HIS:HB3 | 10 | 0.11 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 3 | 0.11 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 3 | 0.11 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 3 | 0.11 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 7 | 0.11 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 7 | 0.11 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 7 | 0.11 |
| (1,599) | 1:A:53:ILE:HG21 | 1:A:56:GLN:HA | 11 | 0.11 |
| (1,599) | 1:A:53:ILE:HG22 | 1:A:56:GLN:HA | 11 | 0.11 |
| (1,599) | 1:A:53:ILE:HG23 | 1:A:56:GLN:HA | 11 | 0.11 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 18 | 0.11 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD11 | 20 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD12 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD21 | 1:A:44:LEU:HD13 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD11 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD12 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD22 | 1:A:44:LEU:HD13 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD11 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD12 | 20 | 0.11 |
| (1,560) | 1:A:22:LEU:HD23 | 1:A:44:LEU:HD13 | 20 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB2 | 5 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB3 | 5 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB2 | 5 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB3 | 5 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB2 | 11 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB3 | 11 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB2 | 11 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB3 | 11 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB2 | 15 | 0.11 |
| (1,520) | 1:A:30:LYS:HD2 | 1:A:31:TYR:HB3 | 15 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB2 | 15 | 0.11 |
| (1,520) | 1:A:30:LYS:HD3 | 1:A:31:TYR:HB3 | 15 | 0.11 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 10 | 0.11 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 12 | 0.11 |
| (1,481) | 1:A:23:GLU:HB2 | 1:A:24:LYS:HA | 20 | 0.11 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD2 | 16 | 0.11 |
| (1,469) | 1:A:44:LEU:HD21 | 1:A:45:LYS:HD3 | 16 | 0.11 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD2 | 16 | 0.11 |
| (1,469) | 1:A:44:LEU:HD22 | 1:A:45:LYS:HD3 | 16 | 0.11 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD2 | 16 | 0.11 |
| (1,469) | 1:A:44:LEU:HD23 | 1:A:45:LYS:HD3 | 16 | 0.11 |
| (1,431) | 1:A:8:ARG:HB2 | 1:A:9:ARG:H | 18 | 0.11 |
| (1,416) | 1:A:52:LYS:HB2 | 1:A:53:ILE:H | 7 | 0.11 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD21 | 1 | 0.11 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD22 | 1 | 0.11 |
| (1,398) | 1:A:18:GLN:HB2 | 1:A:19:LEU:HD23 | 1 | 0.11 |
| (1,382) | 1:A:17:GLU:HA | 1:A:17:GLU:HG2 | 6 | 0.11 |
| (1,382) | 1:A:17:GLU:HA | 1:A:17:GLU:HG3 | 6 | 0.11 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD21 | 14 | 0.11 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD22 | 14 | 0.11 |
| (1,380) | 1:A:17:GLU:HG2 | 1:A:44:LEU:HD23 | 14 | 0.11 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD21 | 14 | 0.11 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD22 | 14 | 0.11 |
| (1,380) | 1:A:17:GLU:HG3 | 1:A:44:LEU:HD23 | 14 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,354) | 1:A:45:LYS:HB2 | 1:A:45:LYS:HE3 | 12 | 0.11 |
| (1,309) | 1:A:37:ARG:HB2 | 1:A:38:SER:H | 17 | 0.11 |
| (1,300) | 1:A:12:THR:HG21 | 1:A:15:THR:H | 13 | 0.11 |
| (1,300) | 1:A:12:THR:HG22 | 1:A:15:THR:H | 13 | 0.11 |
| (1,300) | 1:A:12:THR:HG23 | 1:A:15:THR:H | 13 | 0.11 |
| (1,285) | 1:A:46:LEU:HD11 | 1:A:47:SER:H | 16 | 0.11 |
| (1,285) | 1:A:46:LEU:HD12 | 1:A:47:SER:H | 16 | 0.11 |
| (1,285) | 1:A:46:LEU:HD13 | 1:A:47:SER:H | 16 | 0.11 |
| (1,277) | 1:A:28:CYS:H | 1:A:29:LYS:HD2 | 13 | 0.11 |
| (1,277) | 1:A:28:CYS:H | 1:A:29:LYS:HD3 | 13 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 2 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 2 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 5 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 5 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 8 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 8 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 11 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 11 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 13 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 13 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 14 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 14 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 16 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 16 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG2 | 20 | 0.11 |
| (1,255) | 1:A:45:LYS:H | 1:A:45:LYS:HG3 | 20 | 0.11 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD21 | 20 | 0.11 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD22 | 20 | 0.11 |
| (1,205) | 1:A:21:GLU:H | 1:A:22:LEU:HD23 | 20 | 0.11 |
| (1,173) | 1:A:36:GLU:HB3 | 1:A:37:ARG:H | 4 | 0.11 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 6 | 0.11 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 10 | 0.11 |
| (1,149) | 1:A:65:ILE:H | 1:A:65:ILE:HG12 | 14 | 0.11 |
| (1,103) | 1:A:32:LEU:HB2 | 1:A:33:SER:H | 11 | 0.11 |
| (1,103) | 1:A:32:LEU:HB3 | 1:A:33:SER:H | 11 | 0.11 |
| (1,1) | 1:A:61:LYS:HG3 | 1:A:62:TRP:HE1 | 6 | 0.11 |

10 Dihedral-angle violation analysis

No dihedral-angle restraints found