Full wwPDB NMR Structure Validation Report ⓘ

Nov 17, 2025 – 06:14 PM JST

PDB ID	:	9LS6 / pdb_00009ls6
BMRB ID	:	36729
Title	:	Solution structure of holo Acyl carrier protein 1 (ApeE) of aryl polyene biosynthesis from Acinetobacter baumannii
Authors	:	Yoo, S.; Lee, C.; Choi, S.; Kim, Y.
Deposited on	:	2025-02-03

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

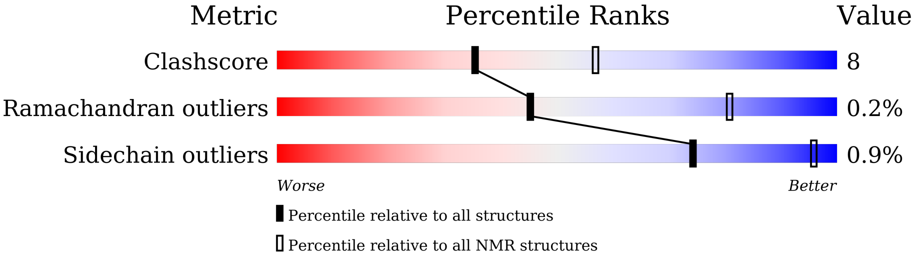
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
BMRB Restraints Analysis	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

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 86%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	86	

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: *lowest energy*.

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

Well-defined (core) protein residues			
Well-defined core	**Residue range (total)**	**Backbone RMSD (Å)**	**Medoid model**
1	A:3-A:32, A:38-A:84 (77)	0.19	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 2 clusters. No single-model clusters were found.

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

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 1337 atoms, of which 674 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Acyl carrier protein.

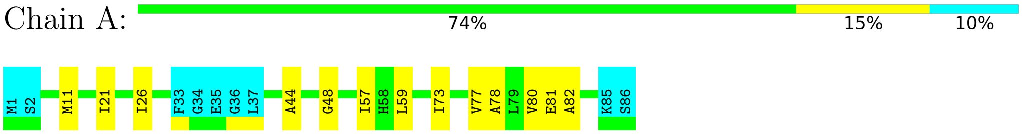
Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	86	1337	417	674	107	137	2	0

4 Residue-property plots ⓘ

4.1 Average score per residue in the NMR ensemble

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

- Molecule 1: Acyl carrier protein

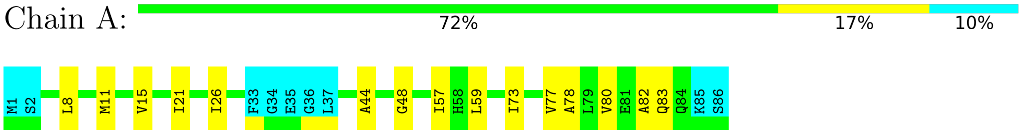


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

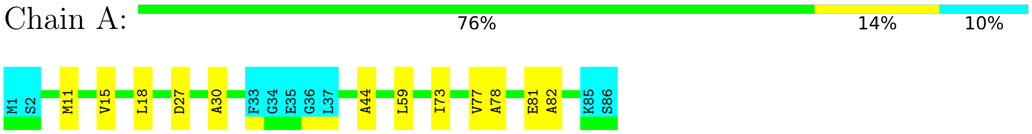
4.2.1 Score per residue for model 1

- Molecule 1: Acyl carrier protein



4.2.2 Score per residue for model 2

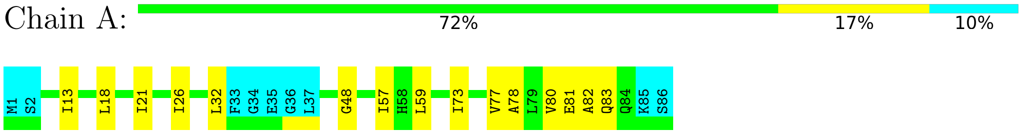
- Molecule 1: Acyl carrier protein



4.2.3 Score per residue for model 3

- Molecule 1: Acyl carrier protein

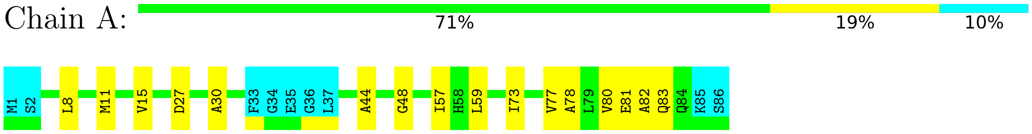
Chain A:



4.2.4 Score per residue for model 4

- Molecule 1: Acyl carrier protein

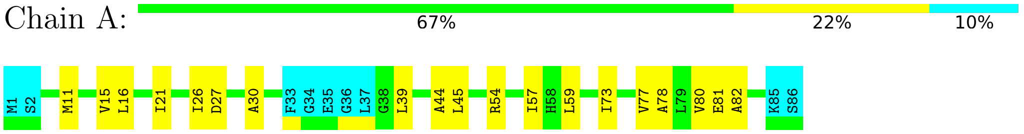
Chain A:



4.2.5 Score per residue for model 5 (medoid)

- Molecule 1: Acyl carrier protein

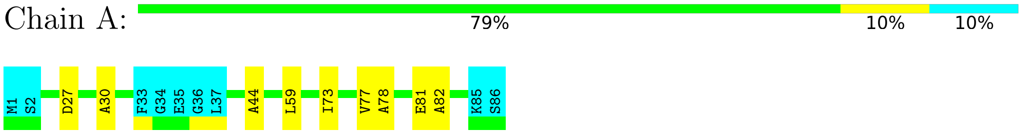
Chain A:



4.2.6 Score per residue for model 6

- Molecule 1: Acyl carrier protein

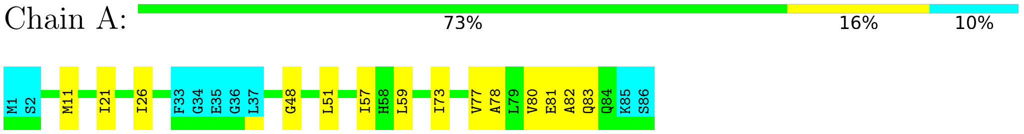
Chain A:



4.2.7 Score per residue for model 7

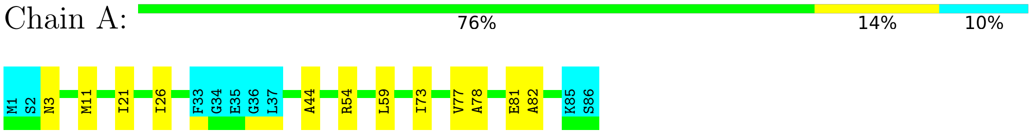
- Molecule 1: Acyl carrier protein

Chain A:



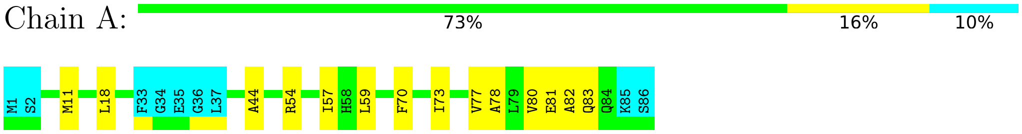
4.2.8 Score per residue for model 8

- Molecule 1: Acyl carrier protein



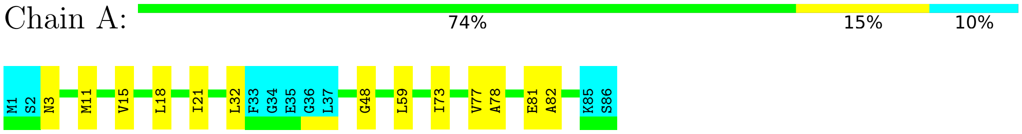
4.2.9 Score per residue for model 9

- Molecule 1: Acyl carrier protein



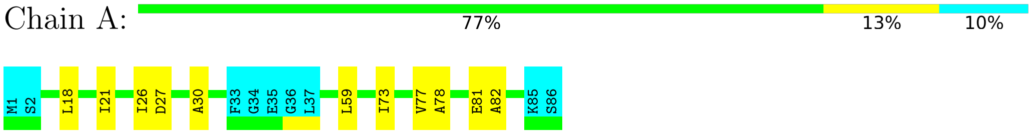
4.2.10 Score per residue for model 10

- Molecule 1: Acyl carrier protein



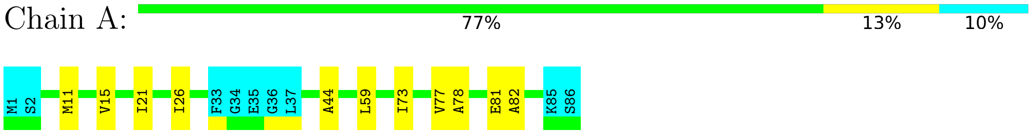
4.2.11 Score per residue for model 11

- Molecule 1: Acyl carrier protein



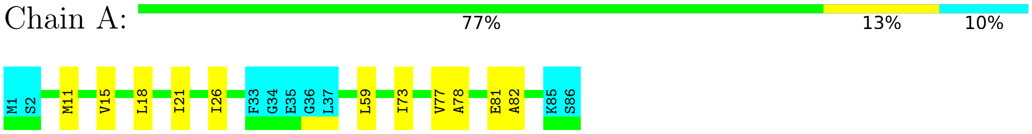
4.2.12 Score per residue for model 12

- Molecule 1: Acyl carrier protein



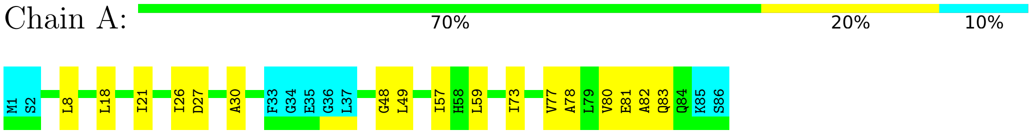
4.2.13 Score per residue for model 13

- Molecule 1: Acyl carrier protein



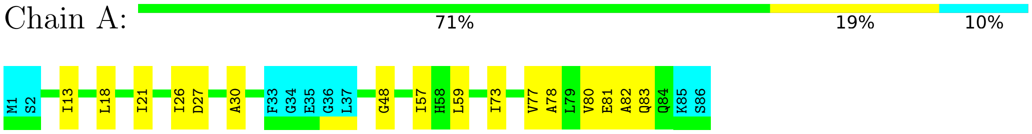
4.2.14 Score per residue for model 14

- Molecule 1: Acyl carrier protein



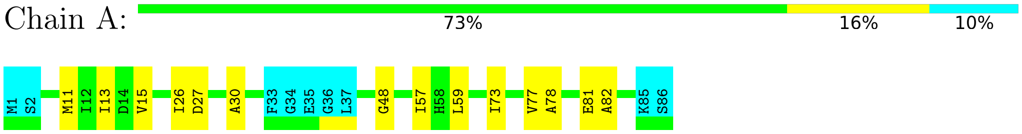
4.2.15 Score per residue for model 15

- Molecule 1: Acyl carrier protein



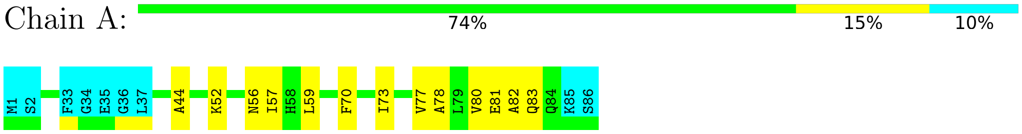
4.2.16 Score per residue for model 16

- Molecule 1: Acyl carrier protein



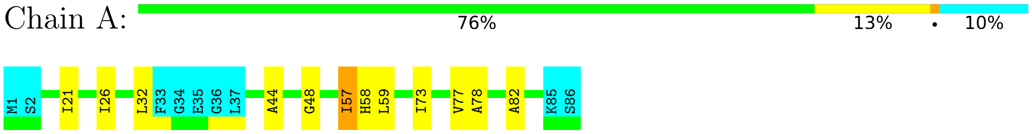
4.2.17 Score per residue for model 17

- Molecule 1: Acyl carrier protein



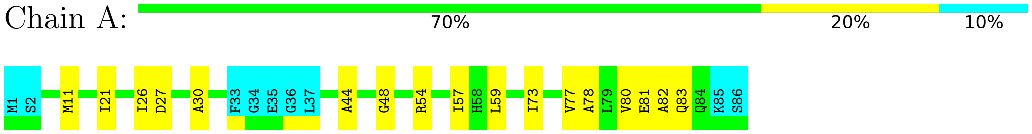
4.2.18 Score per residue for model 18

- Molecule 1: Acyl carrier protein



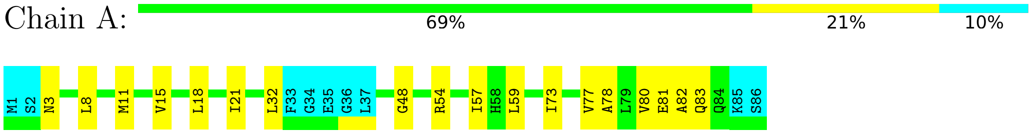
4.2.19 Score per residue for model 19

- Molecule 1: Acyl carrier protein



4.2.20 Score per residue for model 20

- Molecule 1: Acyl carrier protein



5 Refinement protocol and experimental data overview (i)

The models were refined using the following method: *na*.

Of the 20 calculated structures, 20 were deposited, based on the following criterion: *all calculated structures submitted*.

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

Software name	**Classification**	**Version**
PONDEROSA-C/S	refinement	
X-PLOR NIH	structure calculation	

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	992
Number of shifts mapped to atoms	991
Number of unparsed shifts	0
Number of shifts with mapping errors	1
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	86%

6 Model quality ⓘ

6.1 Standard geometry ⓘ

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

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 Too-close contacts ⓘ

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	597	608	608	9±3
All	All	11940	12160	12160	186

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 8.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:57:ILE:HD13	1:A:80:VAL:HG22	0.85	1.47	17	10
1:A:11:MET:HE3	1:A:15:VAL:CG2	0.69	2.17	1	7
1:A:59:LEU:O	1:A:59:LEU:HD12	0.65	1.92	5	16
1:A:57:ILE:CD1	1:A:80:VAL:HG22	0.64	2.22	17	10
1:A:57:ILE:HD12	1:A:80:VAL:HG22	0.59	1.73	5	1
1:A:27:ASP:HB2	1:A:30:ALA:HB2	0.55	1.79	15	9
1:A:48:GLY:HA3	1:A:59:LEU:HD11	0.54	1.79	19	8
1:A:21:ILE:HG21	1:A:26:ILE:HD11	0.53	1.81	15	11
1:A:11:MET:HE2	1:A:54:ARG:HG3	0.51	1.83	8	5
1:A:21:ILE:CG2	1:A:26:ILE:HD11	0.50	2.35	15	1
1:A:49:LEU:HD13	1:A:49:LEU:C	0.49	2.32	14	1
1:A:13:ILE:HD11	1:A:26:ILE:CG1	0.47	2.39	15	1
1:A:78:ALA:O	1:A:82:ALA:HB2	0.47	2.09	20	20
1:A:57:ILE:HD13	1:A:58:HIS:N	0.45	2.26	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:73:ILE:HD12	1:A:73:ILE:N	0.44	2.28	2	15
1:A:73:ILE:O	1:A:77:VAL:HG23	0.44	2.12	15	15
1:A:13:ILE:HD11	1:A:26:ILE:HG13	0.43	1.88	15	1
1:A:59:LEU:HD13	1:A:70:PHE:CZ	0.43	2.48	9	2
1:A:49:LEU:HD13	1:A:49:LEU:O	0.43	2.14	14	1
1:A:18:LEU:HB3	1:A:21:ILE:HD12	0.43	1.90	10	6
1:A:77:VAL:O	1:A:81:GLU:CB	0.43	2.67	15	18
1:A:11:MET:HE1	1:A:51:LEU:HA	0.42	1.91	7	1
1:A:48:GLY:CA	1:A:59:LEU:HD21	0.42	2.44	16	3
1:A:59:LEU:HD12	1:A:59:LEU:C	0.42	2.40	16	1
1:A:11:MET:O	1:A:15:VAL:HG23	0.41	2.15	5	2
1:A:8:LEU:HD12	1:A:77:VAL:HG22	0.41	1.91	20	4
1:A:13:ILE:CG1	1:A:26:ILE:HD12	0.41	2.45	16	1
1:A:13:ILE:HD11	1:A:26:ILE:HD12	0.41	1.93	3	1
1:A:73:ILE:HD12	1:A:73:ILE:H	0.40	1.76	19	6
1:A:45:LEU:C	1:A:45:LEU:HD23	0.40	2.41	5	1
1:A:48:GLY:HA2	1:A:59:LEU:HD21	0.40	1.92	16	1
1:A:73:ILE:N	1:A:73:ILE:HD12	0.40	2.31	13	1
1:A:48:GLY:CA	1:A:59:LEU:HD11	0.40	2.47	15	2
1:A:59:LEU:HD12	1:A:59:LEU:O	0.40	2.16	3	1
1:A:52:LYS:O	1:A:56:ASN:HA	0.40	2.16	17	1
1:A:16:LEU:HD13	1:A:39:LEU:HD21	0.40	1.92	5	1

6.3 Torsion angles

6.3.1 Protein backbone

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	77/86 (90%)	76±1 (98±1%)	1±1 (2±1%)	0±0 (0±0%)	45	81
All	All	1540/1720 (90%)	1510 (98%)	27 (2%)	3 (0%)	45	81

All 1 unique Ramachandran outliers are listed below.

Mol	Chain	Res	Type	Models (Total)
1	A	3	ASN	3

6.3.2 Protein sidechains ⓘ

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	66/73 (90%)	65±0 (99±1%)	1±0 (1±1%)	74 96
All	All	1320/1460 (90%)	1308 (99%)	12 (1%)	74 96

All 2 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	83	GLN	10
1	A	57	ILE	2

6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

6.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

6.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.6 Ligand geometry ⓘ

There are no ligands in this entry.

6.7 Other polymers ⓘ

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 ⓘ

The completeness of assignment taking into account all chemical shift lists is 86% for the well-defined parts and 85% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *starch_ output*

7.1.1 Bookkeeping ⓘ

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	992
Number of shifts mapped to atoms	991
Number of unparsed shifts	0
Number of shifts with mapping errors	1
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

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

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

List ID	**Chain**	**Res**	**Type**	**Atom**	**Shift Data**		
					Value	Uncertainty	Ambiguity
1	A	1	MET	H	8.568	0.002	1

7.1.2 Chemical shift referencing ⓘ

The following table shows the suggested chemical shift referencing corrections.

Nucleus	**# values**	**Correction ± precision, *ppm***	**Suggested action**
$^{13}C_{\alpha}$	86	-0.35 ± 0.17	None needed (< 0.5 ppm)
$^{13}C_{\beta}$	82	0.10 ± 0.14	None needed (< 0.5 ppm)
$^{13}C'$	84	-0.32 ± 0.22	None needed (< 0.5 ppm)
^{15}N	85	-0.04 ± 0.65	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 86%, i.e. 903 atoms were assigned a chemical shift out of a possible 1053. 0 out of 16 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}**H**	^{13}**C**	^{15}**N**
Backbone	384/385 (100%)	155/155 (100%)	153/154 (99%)	76/76 (100%)
Sidechain	512/635 (81%)	337/415 (81%)	175/204 (86%)	0/16 (0%)
Aromatic	7/33 (21%)	7/17 (41%)	0/14 (0%)	0/2 (0%)
Overall	903/1053 (86%)	499/587 (85%)	328/372 (88%)	76/94 (81%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 85%, i.e. 992 atoms were assigned a chemical shift out of a possible 1162. 0 out of 17 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}**H**	^{13}**C**	^{15}**N**
Backbone	430/432 (100%)	175/175 (100%)	170/172 (99%)	85/85 (100%)
Sidechain	553/687 (80%)	363/449 (81%)	190/221 (86%)	0/17 (0%)
Aromatic	9/43 (21%)	9/22 (41%)	0/19 (0%)	0/2 (0%)
Overall	992/1162 (85%)	547/646 (85%)	360/412 (87%)	85/104 (82%)

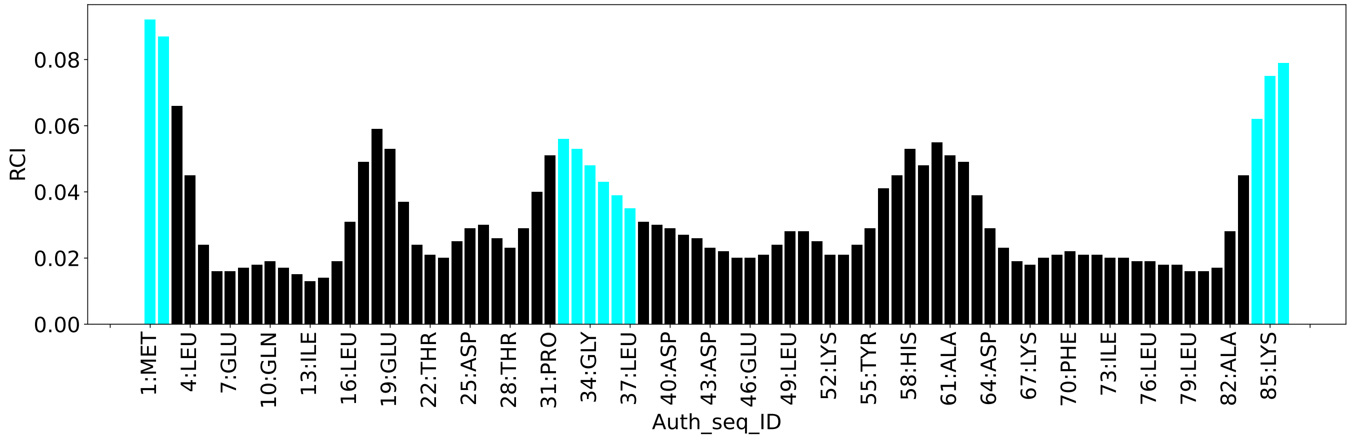
7.1.4 Statistically unusual chemical shifts (i)

There are no statistically unusual chemical shifts.

7.1.5 Random Coil Index (RCI) plots (i)

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

Random coil index (RCI) for chain A:


RCI
0.00
0.02
0.04
0.06
0.08
1:MET
4:LEU
7:GLU
10:GLN
13:ILE
16:LEU
19:GLU
22:THR
25:ASP
28:THR
31:PRO
34:GLY
37:LEU
40:ASP
43:ASP
46:GLU
49:LEU
52:LYS
55:TYR
58:HIS
61:ALA
64:ASP
67:LYS
70:PHE
73:ILE
76:LEU
79:LEU
82:ALA
85:LYS
Auth_seq_ID

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	1307
Intra-residue ($\lvert i-j\rvert=0$)	2
Sequential ($\lvert i-j\rvert=1$)	268
Medium range ($\lvert i-j\rvert>1$ and $\lvert i-j\rvert<5$)	615
Long range ($\lvert i-j\rvert\geq5$)	346
Inter-chain	0
Hydrogen bond restraints	76
Disulfide bond restraints	0
Total dihedral-angle restraints	145
Number of unmapped restraints	0
Number of restraints per residue	16.9
Number of long range restraints per residue[1]	4.1

[1] Long 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)	91.2	0.2
0.2-0.5 (Medium)	5.0	0.45
>0.5 (Large)	0.1	0.78

8.2.2 Average number of dihedral-angle violations per model ⓘ

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

Bins (°)	**Average number of violations per model**	**Max (°)**
1.0-10.0 (Small)	5.3	5.06
10.0-20.0 (Medium)	None	None
>20.0 (Large)	None	None

9 Distance violation analysis (i)

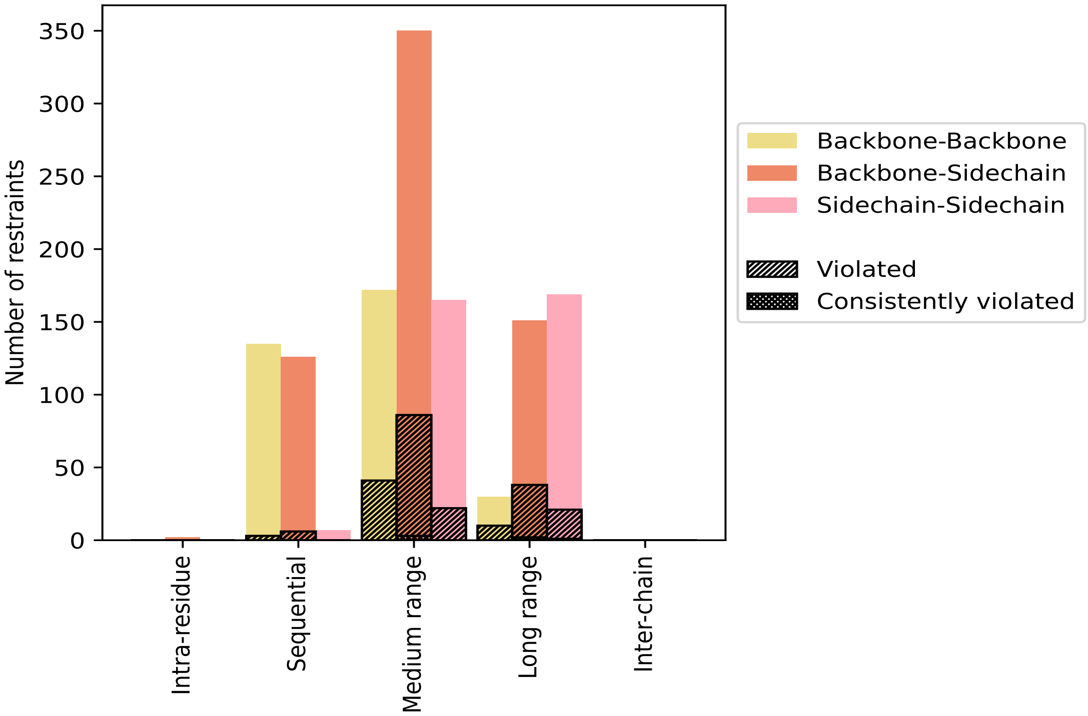
9.1 Summary of distance violations (i)

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

Restraints type	**Count**	%[1]	**Violated**[3] Count	%[2]	%[1]	**Consistently Violated**[4] Count	%[2]	%[1]
Intra-residue (|i-j|=0)	2	0.2	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	2	0.2	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
Sequential (|i-j|=1)	268	20.5	9	3.4	0.7	0	0.0	0.0
Backbone-Backbone	135	10.3	3	2.2	0.2	0	0.0	0.0
Backbone-Sidechain	126	9.6	6	4.8	0.5	0	0.0	0.0
Sidechain-Sidechain	7	0.5	0	0.0	0.0	0	0.0	0.0
Medium range (|i-j|>1 & |i-j|<5)	615	47.1	134	21.8	10.3	0	0.0	0.0
Backbone-Backbone	172	13.2	41	23.8	3.1	0	0.0	0.0
Backbone-Sidechain	278	21.3	71	25.5	5.4	0	0.0	0.0
Sidechain-Sidechain	165	12.6	22	13.3	1.7	0	0.0	0.0
Long range (|i-j|≥5)	346	26.5	69	19.9	5.3	3	0.9	0.2
Backbone-Backbone	30	2.3	10	33.3	0.8	0	0.0	0.0
Backbone-Sidechain	147	11.2	38	25.9	2.9	2	1.4	0.2
Sidechain-Sidechain	169	12.9	21	12.4	1.6	1	0.6	0.1
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	76	5.8	15	19.7	1.1	3	3.9	0.2
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	1307	100.0	227	17.4	17.4	6	0.5	0.5
Backbone-Backbone	337	25.8	54	16.0	4.1	0	0.0	0.0
Backbone-Sidechain	629	48.1	130	20.7	9.9	5	0.8	0.4
Sidechain-Sidechain	341	26.1	43	12.6	3.3	1	0.3	0.1

[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 ⓘ



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

9.2 Distance violation statistics for each model ⓘ

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	0	3	83	36	0	122	0.13	0.41	0.04	0.12
2	0	2	80	34	0	116	0.13	0.33	0.04	0.12
3	0	3	78	34	0	115	0.13	0.44	0.05	0.12
4	0	2	75	35	0	112	0.13	0.43	0.04	0.12
5	0	3	85	33	0	121	0.13	0.78	0.07	0.12
6	0	1	90	36	0	127	0.13	0.35	0.03	0.11
7	0	2	77	32	0	111	0.13	0.45	0.05	0.12
8	0	3	79	28	0	110	0.12	0.29	0.03	0.12
9	0	2	79	33	0	114	0.13	0.68	0.07	0.11
10	0	4	82	35	0	121	0.13	0.34	0.04	0.11

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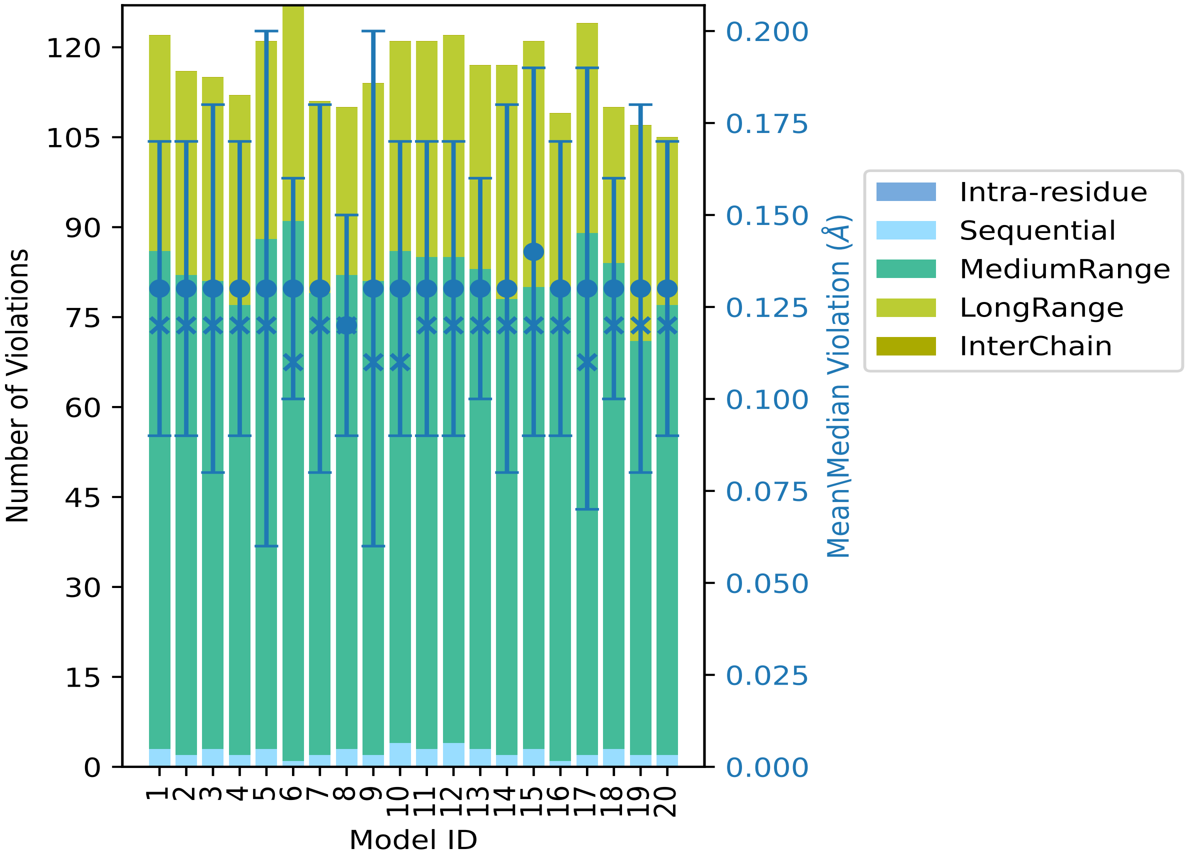
Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
11	0	3	82	36	0	121	0.13	0.34	0.04	0.12
12	0	4	81	37	0	122	0.13	0.33	0.04	0.12
13	0	3	80	34	0	117	0.13	0.3	0.03	0.12
14	0	2	76	39	0	117	0.13	0.43	0.05	0.12
15	0	3	77	41	0	121	0.14	0.45	0.05	0.12
16	0	1	79	29	0	109	0.13	0.35	0.04	0.12
17	0	2	87	35	0	124	0.13	0.63	0.06	0.11
18	0	3	81	26	0	110	0.13	0.28	0.03	0.12
19	0	2	69	36	0	107	0.13	0.42	0.05	0.12
20	0	2	75	28	0	105	0.13	0.45	0.04	0.12

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

9.2.1 Bar graph : Distance Violation statistics for each model ⓘ



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

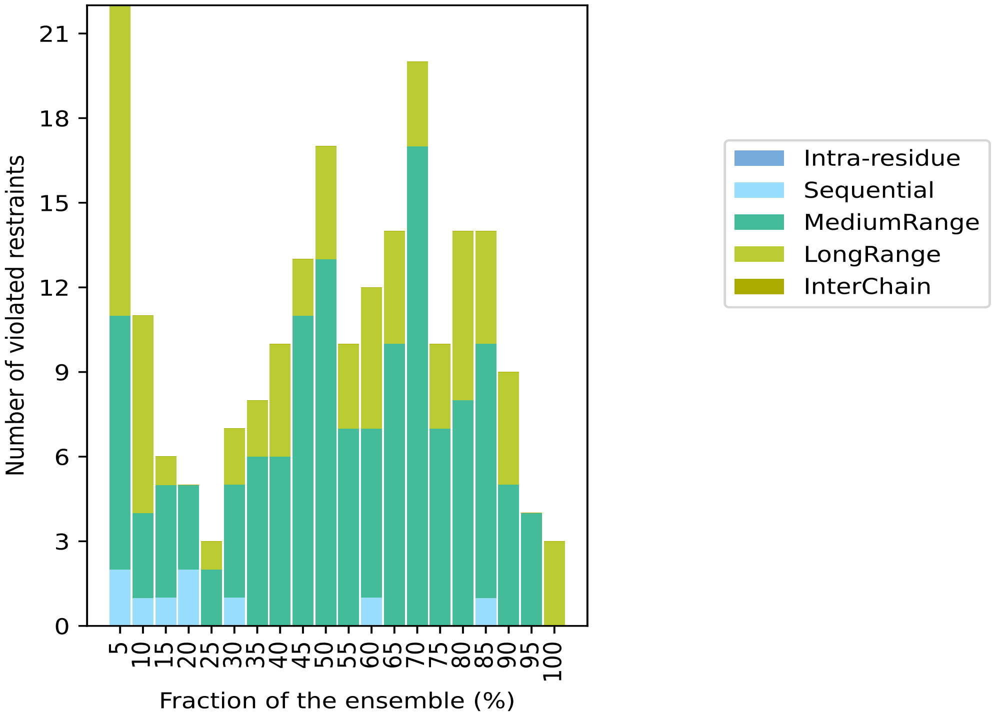
9.3 Distance violation statistics for the ensemble

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, 1019(IR:2, SQ:259, MR:481, LR:277, IC:0) restraints are not violated in the ensemble.

Number of violated restraints						Fraction of the ensemble	
IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total	Count[6]	%
0	2	9	11	0	22	1	5.0
0	1	3	7	0	11	2	10.0
0	1	4	1	0	6	3	15.0
0	2	3	0	0	5	4	20.0
0	0	2	1	0	3	5	25.0
0	1	4	2	0	7	6	30.0
0	0	6	2	0	8	7	35.0
0	0	6	4	0	10	8	40.0
0	0	11	2	0	13	9	45.0
0	0	13	4	0	17	10	50.0
0	0	7	3	0	10	11	55.0
0	1	6	5	0	12	12	60.0
0	0	10	4	0	14	13	65.0
0	0	17	3	0	20	14	70.0
0	0	7	3	0	10	15	75.0
0	0	8	6	0	14	16	80.0
0	1	9	4	0	14	17	85.0
0	0	5	4	0	9	18	90.0
0	0	4	0	0	4	19	95.0
0	0	0	3	0	3	20	100.0

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

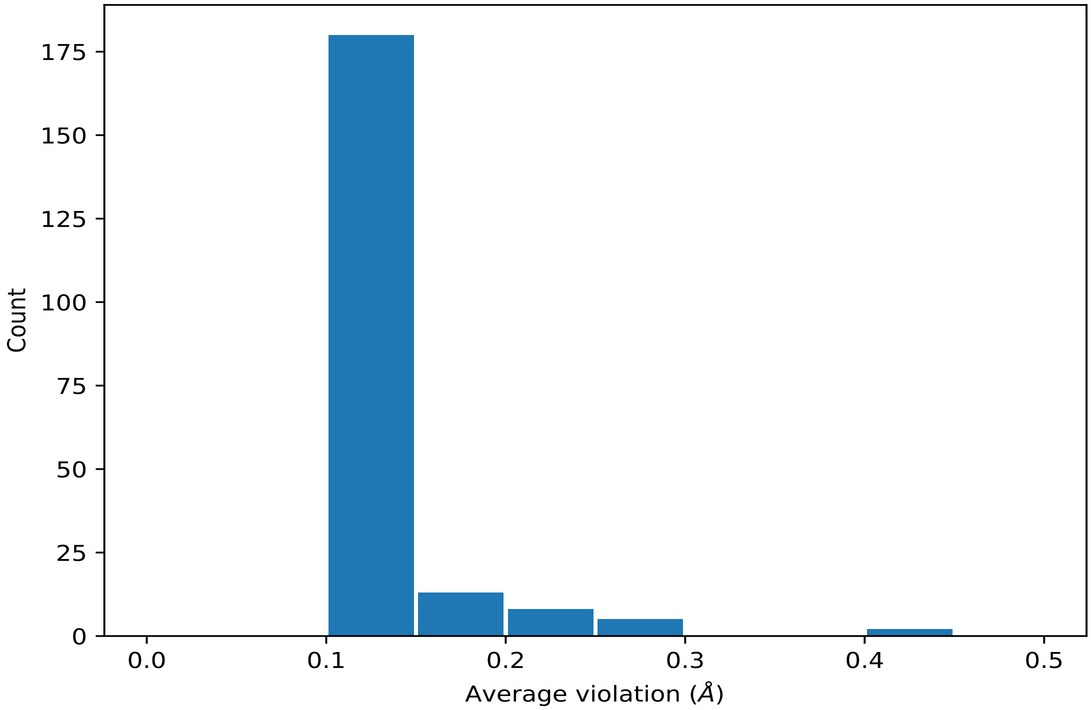
9.3.1 Bar graph : Distance violation statistics for the ensemble (i)



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

The following table provides the mean and the standard deviation of theviolation 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)
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	20	0.21	0.05	0.19
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	20	0.17	0.04	0.18
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	20	0.14	0.0	0.14
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	20	0.13	0.01	0.13
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	20	0.12	0.01	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	20	0.12	0.0	0.12
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	19	0.14	0.02	0.14
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	19	0.13	0.02	0.12
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	19	0.11	0.01	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	19	0.11	0.0	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	19	0.11	0.0	0.11
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	18	0.27	0.04	0.26
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	18	0.14	0.02	0.14
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	18	0.13	0.03	0.12
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	18	0.12	0.01	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	18	0.12	0.01	0.12

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	18	0.12	0.01	0.12
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	18	0.12	0.01	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	18	0.11	0.01	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	18	0.11	0.0	0.11
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	17	0.17	0.06	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	17	0.15	0.02	0.15
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	17	0.14	0.02	0.14
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	17	0.14	0.02	0.13
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	17	0.13	0.02	0.13
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	17	0.13	0.02	0.12
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	17	0.13	0.02	0.13
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	17	0.12	0.02	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	17	0.12	0.01	0.12
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	17	0.12	0.01	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	17	0.11	0.01	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	17	0.11	0.01	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	17	0.11	0.0	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	17	0.11	0.01	0.11
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	16	0.15	0.03	0.15
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	16	0.15	0.03	0.15
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	16	0.14	0.02	0.14
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	16	0.13	0.04	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	16	0.13	0.01	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	16	0.12	0.01	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	16	0.12	0.01	0.12
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	16	0.12	0.01	0.12
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	16	0.12	0.01	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	16	0.12	0.01	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	16	0.11	0.01	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	16	0.11	0.01	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	16	0.11	0.01	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	16	0.1	0.0	0.1
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	15	0.15	0.04	0.15
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	15	0.13	0.05	0.12
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	15	0.13	0.03	0.12
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	15	0.13	0.01	0.13
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	15	0.12	0.02	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	15	0.12	0.01	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	15	0.12	0.01	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	15	0.11	0.01	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	15	0.11	0.01	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	15	0.11	0.01	0.11

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	15	0.11	0.01	0.11
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	14	0.3	0.08	0.34
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	14	0.16	0.02	0.16
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	14	0.16	0.04	0.15
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	14	0.14	0.02	0.14
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	14	0.14	0.03	0.12
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	14	0.13	0.02	0.13
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	14	0.13	0.01	0.13
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	14	0.13	0.01	0.12
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	14	0.13	0.02	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	14	0.12	0.02	0.12
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	14	0.12	0.01	0.12
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	14	0.11	0.01	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	14	0.11	0.01	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	14	0.11	0.01	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	14	0.11	0.01	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	14	0.11	0.01	0.11
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	14	0.11	0.01	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	14	0.11	0.01	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	14	0.11	0.01	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	14	0.11	0.01	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	13	0.12	0.02	0.11
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	13	0.12	0.01	0.12
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	13	0.12	0.02	0.13
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	13	0.12	0.02	0.12
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	13	0.12	0.02	0.12
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	13	0.12	0.02	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	13	0.12	0.01	0.12
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	13	0.11	0.01	0.11
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	13	0.11	0.01	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	13	0.11	0.01	0.11
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	13	0.11	0.01	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	13	0.11	0.01	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	13	0.11	0.01	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	13	0.11	0.01	0.11
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	13	0.1	0.0	0.1
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	12	0.16	0.08	0.12
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	12	0.13	0.03	0.12
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	12	0.13	0.02	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	12	0.13	0.02	0.12
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	12	0.12	0.02	0.12
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	12	0.12	0.01	0.12

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Key	Atom-1	Atom-2	Models^1	Mean (Å)	SD^1 (Å)	Median (Å)
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	12	0.12	0.02	0.12
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	12	0.12	0.01	0.12
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	12	0.11	0.01	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	12	0.11	0.01	0.11
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	12	0.11	0.01	0.11
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	12	0.11	0.01	0.1
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	11	0.2	0.07	0.22
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	11	0.15	0.03	0.14
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	11	0.13	0.03	0.14
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	11	0.13	0.02	0.12
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	11	0.12	0.03	0.12
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	11	0.12	0.01	0.11
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	11	0.12	0.01	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	11	0.11	0.01	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	11	0.11	0.01	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	11	0.11	0.01	0.11
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	10	0.42	0.03	0.43
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	10	0.24	0.21	0.13
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	10	0.16	0.02	0.16
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	10	0.15	0.01	0.16
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	10	0.13	0.01	0.13
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	10	0.13	0.03	0.12
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	10	0.13	0.02	0.12
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	10	0.12	0.02	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	10	0.12	0.01	0.12
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	10	0.12	0.02	0.11
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	10	0.11	0.01	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	10	0.11	0.0	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	10	0.11	0.01	0.11
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	10	0.11	0.01	0.11
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	10	0.1	0.0	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	10	0.1	0.0	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	10	0.1	0.0	0.1
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	9	0.25	0.06	0.24
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	9	0.19	0.01	0.19
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	9	0.17	0.04	0.18
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	9	0.16	0.03	0.15
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	9	0.14	0.01	0.14
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	9	0.14	0.03	0.15
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	9	0.13	0.01	0.13
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	9	0.12	0.02	0.12
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	9	0.12	0.01	0.12

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	9	0.12	0.01	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	9	0.12	0.01	0.12
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	9	0.1	0.0	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	9	0.1	0.0	0.1
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	8	0.17	0.02	0.16
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	8	0.15	0.04	0.15
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	8	0.12	0.01	0.12
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	8	0.12	0.02	0.12
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	8	0.12	0.02	0.12
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	8	0.12	0.01	0.12
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	8	0.12	0.02	0.11
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	8	0.11	0.01	0.11
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	8	0.11	0.0	0.11
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	8	0.1	0.0	0.1
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	7	0.13	0.04	0.11
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	7	0.13	0.02	0.12
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	7	0.12	0.01	0.12
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	7	0.12	0.02	0.12
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	7	0.11	0.01	0.11
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	7	0.11	0.01	0.11
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	7	0.11	0.01	0.11
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	7	0.11	0.01	0.11
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	6	0.42	0.16	0.35
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	6	0.12	0.01	0.12
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	6	0.12	0.01	0.12
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	6	0.11	0.01	0.11
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	6	0.11	0.01	0.11
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	6	0.11	0.01	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	6	0.11	0.0	0.11
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	6	0.1	0.0	0.11
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	5	0.18	0.01	0.18
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	5	0.18	0.01	0.18
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	5	0.18	0.01	0.18
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	5	0.12	0.01	0.12
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	5	0.11	0.01	0.11
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	5	0.1	0.0	0.1
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG2	4	0.3	0.03	0.3
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG3	4	0.3	0.03	0.3
(1,859)	1:60:A:ASN:HB2	1:63:A:SER:HA	4	0.14	0.05	0.12
(1,1227)	1:84:A:GLN:H	1:85:A:LYS:HB2	4	0.11	0.01	0.11
(1,95)	1:6:A:ASP:HB2	1:8:A:LEU:H	4	0.11	0.01	0.1
(2,40)	1:47:A:LEU:O	1:51:A:LEU:N	4	0.11	0.01	0.1

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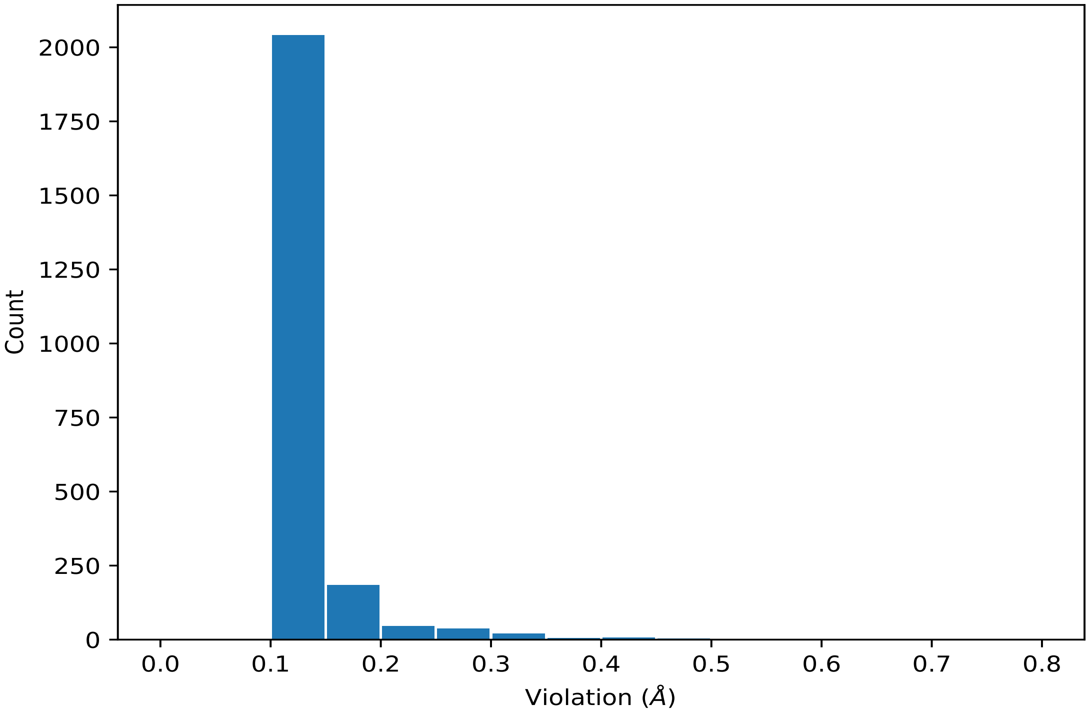
Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,741)	1:51:A:LEU:H	1:52:A:LYS:HA	4	0.1	0.0	0.11
(1,505)	1:31:A:PRO:HB3	1:34:A:GLY:HA2	3	0.13	0.02	0.13
(1,559)	1:37:A:LEU:HB2	1:39:A:LEU:HA	3	0.13	0.01	0.12
(1,503)	1:31:A:PRO:HB2	1:35:A:GLU:HB3	3	0.12	0.02	0.12
(1,545)	1:33:A:PHE:HE1	1:40:A:ASP:H	3	0.12	0.01	0.12
(2,9)	1:8:A:LEU:O	1:12:A:ILE:N	3	0.11	0.0	0.11
(2,15)	1:11:A:MET:O	1:15:A:VAL:N	3	0.11	0.0	0.11
(1,601)	1:41:A:SER:HA	1:44:A:ALA:HA	3	0.1	0.0	0.1
(1,1221)	1:83:A:GLN:HB3	1:84:A:GLN:H	3	0.1	0.0	0.1
(1,765)	1:52:A:LYS:HG2	1:57:A:ILE:HA	2	0.22	0.01	0.22
(1,711)	1:49:A:LEU:HA	1:53:A:LYS:HG2	2	0.21	0.07	0.21
(1,464)	1:28:A:THR:HG23	1:74:A:GLN:HA	2	0.21	0.1	0.21
(1,830)	1:57:A:ILE:HG12	1:83:A:GLN:HB2	2	0.2	0.0	0.2
(1,830)	1:57:A:ILE:HG13	1:83:A:GLN:HB2	2	0.2	0.0	0.2
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG12	2	0.13	0.01	0.13
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG13	2	0.13	0.01	0.13
(1,850)	1:59:A:LEU:HB2	1:61:A:ALA:HA	2	0.13	0.01	0.13
(1,70)	1:5:A:ALA:H	1:77:A:VAL:HA	2	0.12	0.01	0.12
(1,193)	1:9:A:LYS:HA	1:26:A:ILE:HB	2	0.12	0.01	0.12
(1,536)	1:33:A:PHE:HE1	1:39:A:LEU:H	2	0.12	0.01	0.12
(1,740)	1:51:A:LEU:H	1:52:A:LYS:HB3	2	0.11	0.01	0.11
(1,763)	1:52:A:LYS:HA	1:59:A:LEU:H	2	0.11	0.0	0.11
(2,55)	1:65:A:GLU:O	1:69:A:HIS:H	2	0.1	0.0	0.1
(2,73)	1:79:A:LEU:O	1:83:A:GLN:H	2	0.1	0.0	0.1

[1] Number of violated models, [2] Standard 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 ⓘ

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)
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	5	0.78
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	9	0.68
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	17	0.63
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	7	0.45
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	15	0.45
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	20	0.45
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	3	0.44
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	4	0.43
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	14	0.43
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	19	0.42
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	1	0.41
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	9	0.41
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	17	0.4
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	14	0.37
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	14	0.37
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	9	0.36

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	15	0.36
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	19	0.36
(1,834)	1:57:A:ILE:HB	1:80:A:VAL:HA	17	0.36
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	7	0.35
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	6	0.35
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	16	0.35
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	1	0.34
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	3	0.34
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG2	10	0.34
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG3	10	0.34
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	11	0.34
(1,365)	1:16:A:LEU:HG	1:39:A:LEU:HB3	15	0.34
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	5	0.34
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	12	0.33
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	2	0.33
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	20	0.32
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	2	0.32
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	9	0.32
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	19	0.32
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	4	0.31
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	11	0.31
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG2	17	0.31
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG3	17	0.31
(1,464)	1:28:A:THR:HG23	1:74:A:GLN:HA	19	0.31
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	5	0.3
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	12	0.3
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	5	0.3
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	11	0.3
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	13	0.3
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	4	0.29
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	8	0.29
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	1	0.29
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	7	0.29
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	3	0.28
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG2	16	0.28
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG3	16	0.28
(1,711)	1:49:A:LEU:HA	1:53:A:LYS:HG2	18	0.28
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	14	0.28
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	15	0.27
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	10	0.27
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	11	0.27
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG2	14	0.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,727)	1:50:A:ALA:HA	1:54:A:ARG:HG3	14	0.27
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	7	0.27
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	15	0.27
(1,1229)	1:84:A:GLN:H	1:85:A:LYS:HG3	5	0.26
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	3	0.26
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	7	0.26
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	20	0.26
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	10	0.26
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	2	0.26
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	12	0.26
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	9	0.26
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	4	0.26
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	12	0.25
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	8	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	1	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	6	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	12	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	16	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	17	0.25
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	18	0.25
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	5	0.24
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	13	0.24
(1,463)	1:28:A:THR:HG1	1:74:A:GLN:HG2	19	0.24
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	18	0.23
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	17	0.23
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	6	0.23
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	8	0.23
(1,859)	1:60:A:ASN:HB2	1:63:A:SER:HA	5	0.22
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	18	0.22
(1,765)	1:52:A:LYS:HG2	1:57:A:ILE:HA	17	0.22
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	7	0.22
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	15	0.22
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	5	0.22
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	14	0.22
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	13	0.21
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	15	0.21
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	18	0.21
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	11	0.21
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	15	0.21
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	20	0.21
(1,918)	1:65:A:GLU:HG2	1:69:A:HIS:H	13	0.21
(1,918)	1:65:A:GLU:HG3	1:69:A:HIS:H	13	0.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,765)	1:52:A:LYS:HG2	1:57:A:ILE:HA	15	0.21
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	16	0.21
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	5	0.21
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	1	0.21
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	13	0.21
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	15	0.21
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	16	0.21
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	6	0.2
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	8	0.2
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	18	0.2
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	3	0.2
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	17	0.2
(1,830)	1:57:A:ILE:HG12	1:83:A:GLN:HB2	6	0.2
(1,830)	1:57:A:ILE:HG13	1:83:A:GLN:HB2	6	0.2
(1,830)	1:57:A:ILE:HG12	1:83:A:GLN:HB2	13	0.2
(1,830)	1:57:A:ILE:HG13	1:83:A:GLN:HB2	13	0.2
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	10	0.2
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	3	0.2
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	1	0.2
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	14	0.2
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	19	0.2
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	2	0.2
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	19	0.2
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	12	0.2
(1,1194)	1:80:A:VAL:HA	1:83:A:GLN:HE21	4	0.19
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	7	0.19
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	15	0.19
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	10	0.19
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	16	0.19
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	9	0.19
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	2	0.19
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	10	0.19
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	16	0.19
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	7	0.19
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	8	0.19
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	10	0.19
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	9	0.19
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	1	0.19
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	17	0.19
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	1	0.19
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	3	0.19
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	7	0.19

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	20	0.19
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	20	0.19
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	5	0.19
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	12	0.19
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	20	0.19
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	14	0.19
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	6	0.19
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	10	0.19
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	14	0.19
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	14	0.19
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	14	0.19
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	15	0.19
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	15	0.19
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	15	0.19
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	1	0.19
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	6	0.19
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	3	0.18
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	11	0.18
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	18	0.18
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	17	0.18
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	14	0.18
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	19	0.18
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	11	0.18
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	18	0.18
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	3	0.18
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	5	0.18
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	17	0.18
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	5	0.18
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	6	0.18
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	15	0.18
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	10	0.18
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	1	0.18
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	3	0.18
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	20	0.18
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	4	0.18
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	9	0.18
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	17	0.18
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	3	0.18
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	7	0.18
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	4	0.18
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	6	0.18
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	6	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	17	0.18
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	18	0.18
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	15	0.18
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	16	0.18
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	16	0.18
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	16	0.18
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	11	0.18
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	2	0.18
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	10	0.18
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	19	0.18
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	11	0.18
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	4	0.18
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	13	0.18
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	15	0.18
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	2	0.17
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	8	0.17
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	10	0.17
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	7	0.17
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	9	0.17
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	2	0.17
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	11	0.17
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	15	0.17
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	11	0.17
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	14	0.17
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	9	0.17
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	13	0.17
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	2	0.17
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	17	0.17
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	12	0.17
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	20	0.17
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	4	0.17
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	10	0.17
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	1	0.17
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	9	0.17
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	13	0.17
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	11	0.17
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	13	0.17
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	10	0.17
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	4	0.17
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	7	0.17
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	19	0.17
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	13	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	3	0.17
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	9	0.17
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	6	0.17
(1,649)	1:45:A:LEU:HB2	1:49:A:LEU:HB3	18	0.17
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	6	0.17
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	17	0.17
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	14	0.17
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	11	0.17
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	11	0.17
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	11	0.17
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	11	0.17
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	14	0.17
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	14	0.17
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	15	0.17
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	15	0.17
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	6	0.17
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	15	0.17
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	1	0.17
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	5	0.16
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	12	0.16
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	1	0.16
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	6	0.16
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	5	0.16
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	18	0.16
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	3	0.16
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	12	0.16
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	3	0.16
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	13	0.16
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	16	0.16
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	19	0.16
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	1	0.16
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	9	0.16
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	17	0.16
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	6	0.16
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	13	0.16
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	16	0.16
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	9	0.16
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	7	0.16
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	5	0.16
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	12	0.16
(1,847)	1:58:A:HIS:H	1:83:A:GLN:HE22	4	0.16
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	6	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	10	0.16
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	13	0.16
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	1	0.16
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	14	0.16
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	17	0.16
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	10	0.16
(1,772)	1:52:A:LYS:H	1:53:A:LYS:HG2	19	0.16
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	14	0.16
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	2	0.16
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	8	0.16
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	12	0.16
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	15	0.16
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	11	0.16
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	15	0.16
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	15	0.16
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	15	0.16
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	10	0.16
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	11	0.16
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	15	0.16
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	14	0.16
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	1	0.16
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	8	0.16
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	16	0.16
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	17	0.16
(1,505)	1:31:A:PRO:HB3	1:34:A:GLY:HA2	11	0.16
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	15	0.16
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	8	0.16
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	11	0.16
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	7	0.16
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	5	0.16
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	4	0.16
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	10	0.16
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	15	0.16
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	16	0.16
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	18	0.16
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	9	0.16
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	20	0.16
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	2	0.16
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	16	0.16
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	13	0.16
(1,1198)	1:81:A:GLU:HA	1:83:A:GLN:HG2	16	0.15
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	5	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	14	0.15
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	6	0.15
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	13	0.15
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	16	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	4	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	13	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	14	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	17	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	19	0.15
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	20	0.15
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	12	0.15
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	12	0.15
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	5	0.15
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	20	0.15
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	5	0.15
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	7	0.15
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	20	0.15
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	2	0.15
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	6	0.15
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	8	0.15
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	3	0.15
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	6	0.15
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	1	0.15
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	10	0.15
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	4	0.15
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	17	0.15
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	6	0.15
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	19	0.15
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	9	0.15
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	17	0.15
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	6	0.15
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	11	0.15
(1,890)	1:63:A:SER:H	1:65:A:GLU:HB2	13	0.15
(1,890)	1:63:A:SER:H	1:65:A:GLU:HB3	13	0.15
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	5	0.15
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	9	0.15
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	16	0.15
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	15	0.15
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	17	0.15
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	17	0.15
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	3	0.15
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	4	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	7	0.15
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	19	0.15
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	20	0.15
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	13	0.15
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	2	0.15
(1,738)	1:51:A:LEU:HA	1:57:A:ILE:HB	18	0.15
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	18	0.15
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	19	0.15
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	12	0.15
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	2	0.15
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	12	0.15
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	1	0.15
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	7	0.15
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	15	0.15
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	10	0.15
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	18	0.15
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	10	0.15
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	2	0.15
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	11	0.15
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	1	0.15
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	2	0.15
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	3	0.15
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	8	0.15
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	10	0.15
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	13	0.15
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	3	0.15
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	5	0.15
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	15	0.15
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	13	0.15
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	6	0.15
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	12	0.15
(1,499)	1:29:A:GLU:HG3	1:74:A:GLN:HA	3	0.15
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	4	0.15
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	9	0.15
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	7	0.15
(1,364)	1:16:A:LEU:HD11	1:43:A:ASP:HA	6	0.15
(1,364)	1:16:A:LEU:HD12	1:43:A:ASP:HA	6	0.15
(1,364)	1:16:A:LEU:HD13	1:43:A:ASP:HA	6	0.15
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	7	0.15
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	8	0.15
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	12	0.15
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	11	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	16	0.15
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	7	0.15
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	3	0.15
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	5	0.15
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	8	0.15
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	12	0.15
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	13	0.15
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	15	0.15
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	17	0.15
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	20	0.15
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	6	0.15
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	2	0.15
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	9	0.15
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	11	0.15
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	10	0.15
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	12	0.15
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	2	0.15
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	3	0.15
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	7	0.15
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	9	0.14
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	11	0.14
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	14	0.14
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	16	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	2	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	5	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	7	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	8	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	9	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	12	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	13	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	14	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	17	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	18	0.14
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	19	0.14
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	3	0.14
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	10	0.14
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	11	0.14
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	13	0.14
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	17	0.14
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	3	0.14
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	16	0.14
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	4	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1159)	1:79:A:LEU:HA	1:83:A:GLN:HB3	8	0.14
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	11	0.14
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	13	0.14
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	7	0.14
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	15	0.14
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	12	0.14
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	12	0.14
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	1	0.14
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	4	0.14
(1,1079)	1:75:A:SER:HA	1:79:A:LEU:HB2	10	0.14
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	7	0.14
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	10	0.14
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	16	0.14
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	6	0.14
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	9	0.14
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	17	0.14
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	16	0.14
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	18	0.14
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	3	0.14
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	12	0.14
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	20	0.14
(1,960)	1:69:A:HIS:HB2	1:79:A:LEU:HA	1	0.14
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	14	0.14
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	3	0.14
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	10	0.14
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	19	0.14
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	20	0.14
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	2	0.14
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	8	0.14
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	10	0.14
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	12	0.14
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	6	0.14
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	3	0.14
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	12	0.14
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	6	0.14
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	14	0.14
(1,850)	1:59:A:LEU:HB2	1:61:A:ALA:HA	9	0.14
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	5	0.14
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	8	0.14
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	18	0.14
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG12	6	0.14
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG13	6	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	14	0.14
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	16	0.14
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	5	0.14
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	14	0.14
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	18	0.14
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	2	0.14
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	3	0.14
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	5	0.14
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	6	0.14
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	14	0.14
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	3	0.14
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	12	0.14
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	2	0.14
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	11	0.14
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	14	0.14
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	15	0.14
(1,711)	1:49:A:LEU:HA	1:53:A:LYS:HG2	19	0.14
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	14	0.14
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	20	0.14
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	3	0.14
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	8	0.14
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	7	0.14
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	15	0.14
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	15	0.14
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	4	0.14
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	5	0.14
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	17	0.14
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	20	0.14
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	16	0.14
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	1	0.14
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	10	0.14
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	16	0.14
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	13	0.14
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	9	0.14
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	17	0.14
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	5	0.14
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	1	0.14
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	9	0.14
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	15	0.14
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	17	0.14
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	7	0.14
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	16	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	3	0.14
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	19	0.14
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	4	0.14
(1,559)	1:37:A:LEU:HB2	1:39:A:LEU:HA	12	0.14
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	9	0.14
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	7	0.14
(1,503)	1:31:A:PRO:HB2	1:35:A:GLU:HB3	18	0.14
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	12	0.14
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	16	0.14
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	9	0.14
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	13	0.14
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	1	0.14
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	4	0.14
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	14	0.14
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	15	0.14
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	15	0.14
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	12	0.14
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	2	0.14
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	4	0.14
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	9	0.14
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	12	0.14
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	20	0.14
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	12	0.14
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	13	0.14
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	16	0.14
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	2	0.14
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	1	0.14
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	2	0.14
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	9	0.14
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	17	0.14
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	19	0.14
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	4	0.14
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	20	0.14
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	9	0.14
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	17	0.14
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	1	0.14
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	7	0.14
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	14	0.14
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	19	0.14
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	1	0.14
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	2	0.14
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	19	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	5	0.14
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	11	0.14
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	13	0.14
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	15	0.14
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	7	0.14
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	4	0.14
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	9	0.14
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	19	0.14
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	11	0.14
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	16	0.14
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	1	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	2	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	4	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	6	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	7	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	8	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	10	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	13	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	15	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	17	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	18	0.13
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	19	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	1	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	3	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	4	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	6	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	10	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	11	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	15	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	16	0.13
(2,61)	1:73:A:ILE:O	1:77:A:VAL:N	20	0.13
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	5	0.13
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	7	0.13
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	2	0.13
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	8	0.13
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	1	0.13
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	2	0.13
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	8	0.13
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	11	0.13
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	12	0.13
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	5	0.13
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	8	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	20	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	2	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	6	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	10	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	11	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	16	0.13
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	18	0.13
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	2	0.13
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	4	0.13
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	8	0.13
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	11	0.13
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	4	0.13
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	20	0.13
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	12	0.13
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	20	0.13
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	16	0.13
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	5	0.13
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	8	0.13
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	12	0.13
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	18	0.13
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	19	0.13
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	1	0.13
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	16	0.13
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	15	0.13
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	16	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	2	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	10	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	11	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	13	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	14	0.13
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	19	0.13
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	10	0.13
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	16	0.13
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	14	0.13
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	8	0.13
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	9	0.13
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	17	0.13
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	5	0.13
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	7	0.13
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	13	0.13
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	15	0.13
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	1	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	4	0.13
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	9	0.13
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	17	0.13
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	3	0.13
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	4	0.13
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	7	0.13
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	19	0.13
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	17	0.13
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	1	0.13
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	13	0.13
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	20	0.13
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	5	0.13
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	14	0.13
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	16	0.13
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	1	0.13
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	13	0.13
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	3	0.13
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	17	0.13
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	20	0.13
(1,859)	1:60:A:ASN:HB2	1:63:A:SER:HA	9	0.13
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	1	0.13
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	6	0.13
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	17	0.13
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	20	0.13
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	5	0.13
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	17	0.13
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	11	0.13
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	1	0.13
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	10	0.13
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	9	0.13
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	10	0.13
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	7	0.13
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	13	0.13
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	8	0.13
(1,759)	1:52:A:LYS:HG2	1:58:A:HIS:H	18	0.13
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	13	0.13
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	20	0.13
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	18	0.13
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	2	0.13
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	11	0.13
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	13	0.13
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	15	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	17	0.13
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	10	0.13
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	18	0.13
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	1	0.13
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	3	0.13
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	4	0.13
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	2	0.13
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	6	0.13
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	15	0.13
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	9	0.13
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	3	0.13
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	20	0.13
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	13	0.13
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	7	0.13
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	18	0.13
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	1	0.13
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	5	0.13
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	19	0.13
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	14	0.13
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	9	0.13
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	17	0.13
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	13	0.13
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	19	0.13
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	4	0.13
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	3	0.13
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	7	0.13
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	12	0.13
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	18	0.13
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	20	0.13
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	16	0.13
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	18	0.13
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	20	0.13
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	18	0.13
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	10	0.13
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	1	0.13
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	7	0.13
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	13	0.13
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	18	0.13
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	6	0.13
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	9	0.13
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	17	0.13
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	2	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	12	0.13
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	20	0.13
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	15	0.13
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	10	0.13
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	17	0.13
(1,545)	1:33:A:PHE:HE1	1:40:A:ASP:H	15	0.13
(1,536)	1:33:A:PHE:HE1	1:39:A:LEU:H	13	0.13
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	8	0.13
(1,505)	1:31:A:PRO:HB3	1:34:A:GLY:HA2	13	0.13
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	2	0.13
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	3	0.13
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	5	0.13
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	9	0.13
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	20	0.13
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	10	0.13
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	14	0.13
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	1	0.13
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	5	0.13
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	12	0.13
(1,389)	1:18:A:LEU:HG	1:37:A:LEU:HB3	10	0.13
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	4	0.13
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	16	0.13
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	17	0.13
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	16	0.13
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	13	0.13
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	18	0.13
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	19	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	6	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	13	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	16	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	17	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	18	0.13
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	20	0.13
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	4	0.13
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	16	0.13
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	1	0.13
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	18	0.13
(1,260)	1:11:A:MET:HE1	1:15:A:VAL:HA	7	0.13
(1,260)	1:11:A:MET:HE2	1:15:A:VAL:HA	7	0.13
(1,260)	1:11:A:MET:HE3	1:15:A:VAL:HA	7	0.13
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	6	0.13
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	6	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	11	0.13
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	14	0.13
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	16	0.13
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	3	0.13
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	2	0.13
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	12	0.13
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	18	0.13
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	2	0.13
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	4	0.13
(1,193)	1:9:A:LYS:HA	1:26:A:ILE:HB	19	0.13
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	16	0.13
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	7	0.13
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	4	0.13
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	19	0.13
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	15	0.13
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	19	0.13
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	12	0.13
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	2	0.13
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	4	0.13
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	3	0.13
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	8	0.13
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	17	0.13
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	4	0.13
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	5	0.13
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	9	0.13
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	4	0.13
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	19	0.13
(1,70)	1:5:A:ALA:H	1:77:A:VAL:HA	15	0.13
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	4	0.13
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	6	0.13
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	7	0.13
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	14	0.13
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	3	0.13
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	5	0.13
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	9	0.13
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	17	0.13
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	14	0.13
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	19	0.13
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	4	0.13
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	15	0.13
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	19	0.13
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	3	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	8	0.13
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	18	0.13
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	4	0.13
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	7	0.13
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	16	0.13
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	10	0.13
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	12	0.13
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	16	0.13
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	6	0.13
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	13	0.13
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	15	0.13
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	5	0.13
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	10	0.13
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	14	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	2	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	11	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	14	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	16	0.13
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	20	0.13
(1,3)	1:2:A:SER:HB2	1:81:A:GLU:HG2	18	0.13
(1,3)	1:2:A:SER:HB2	1:81:A:GLU:HG3	18	0.13
(1,3)	1:2:A:SER:HB3	1:81:A:GLU:HG2	18	0.13
(1,3)	1:2:A:SER:HB3	1:81:A:GLU:HG3	18	0.13
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	5	0.13
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	12	0.13
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	14	0.13
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	17	0.13
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	20	0.12
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	3	0.12
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	5	0.12
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	12	0.12
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	8	0.12
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	1	0.12
(2,40)	1:47:A:LEU:O	1:51:A:LEU:N	3	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	1	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	2	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	3	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	4	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	5	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	7	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	8	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	10	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	11	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	13	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	14	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	15	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	16	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	19	0.12
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	20	0.12
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	3	0.12
(1,1227)	1:84:A:GLN:H	1:85:A:LYS:HB2	13	0.12
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	12	0.12
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	18	0.12
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	6	0.12
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	13	0.12
(1,1178)	1:80:A:VAL:HA	1:83:A:GLN:HB2	5	0.12
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	9	0.12
(1,1170)	1:80:A:VAL:HB	1:82:A:ALA:H	5	0.12
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	11	0.12
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	2	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	2	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	4	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	7	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	15	0.12
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	18	0.12
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	5	0.12
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	8	0.12
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	19	0.12
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	10	0.12
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	12	0.12
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	8	0.12
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	9	0.12
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	11	0.12
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	14	0.12
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	19	0.12
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	3	0.12
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	3	0.12
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	15	0.12
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	15	0.12
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	16	0.12
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	1	0.12
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	4	0.12
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	11	0.12
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	14	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	19	0.12
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	3	0.12
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	20	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	3	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	9	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	11	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	14	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	17	0.12
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	20	0.12
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	1	0.12
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	3	0.12
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	5	0.12
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	7	0.12
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	15	0.12
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	8	0.12
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	10	0.12
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	12	0.12
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	17	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	4	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	8	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	9	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	11	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	12	0.12
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	13	0.12
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	2	0.12
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	8	0.12
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	11	0.12
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	18	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	4	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	7	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	8	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	15	0.12
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	18	0.12
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	2	0.12
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	11	0.12
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	13	0.12
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	14	0.12
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	18	0.12
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	2	0.12
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	4	0.12
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	11	0.12
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	14	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	19	0.12
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	6	0.12
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	11	0.12
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	13	0.12
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	1	0.12
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	4	0.12
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	15	0.12
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	2	0.12
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	10	0.12
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	11	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	1	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	2	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	8	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	12	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	14	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	15	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	16	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	18	0.12
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	20	0.12
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	3	0.12
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	15	0.12
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	8	0.12
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	12	0.12
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	15	0.12
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	17	0.12
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	18	0.12
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	4	0.12
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	9	0.12
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	15	0.12
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	18	0.12
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	5	0.12
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	6	0.12
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	11	0.12
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	16	0.12
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	1	0.12
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	2	0.12
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	8	0.12
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	9	0.12
(1,859)	1:60:A:ASN:HB2	1:63:A:SER:HA	17	0.12
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	9	0.12
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	13	0.12
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	2	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	7	0.12
(1,850)	1:59:A:LEU:HB2	1:61:A:ALA:HA	17	0.12
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	6	0.12
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	16	0.12
(1,832)	1:57:A:ILE:HB	1:59:A:LEU:HG	2	0.12
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	9	0.12
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	3	0.12
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	7	0.12
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	14	0.12
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG12	13	0.12
(1,797)	1:55:A:TYR:HB2	1:57:A:ILE:HG13	13	0.12
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	1	0.12
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	7	0.12
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	1	0.12
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	3	0.12
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	7	0.12
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	13	0.12
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	16	0.12
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	19	0.12
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	9	0.12
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	5	0.12
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	11	0.12
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	12	0.12
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	9	0.12
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	2	0.12
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	8	0.12
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	11	0.12
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	12	0.12
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	16	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	1	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	3	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	4	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	7	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	8	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	12	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	16	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	18	0.12
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	19	0.12
(1,740)	1:51:A:LEU:H	1:52:A:LYS:HB3	15	0.12
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	12	0.12
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	8	0.12
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	13	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	19	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	10	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	14	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	16	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	18	0.12
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	19	0.12
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	7	0.12
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	10	0.12
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	16	0.12
(1,710)	1:49:A:LEU:HA	1:52:A:LYS:HG2	19	0.12
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	8	0.12
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	13	0.12
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	16	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	3	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	4	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	10	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	14	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	16	0.12
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	20	0.12
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	1	0.12
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	5	0.12
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	11	0.12
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	3	0.12
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	14	0.12
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	19	0.12
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	20	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	1	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	4	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	7	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	14	0.12
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	19	0.12
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	6	0.12
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	11	0.12
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	18	0.12
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	6	0.12
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	8	0.12
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	12	0.12
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	13	0.12
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	19	0.12
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	4	0.12
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	6	0.12
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	8	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	18	0.12
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	7	0.12
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	14	0.12
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	19	0.12
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	20	0.12
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	9	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	2	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	11	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	12	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	13	0.12
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	17	0.12
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	5	0.12
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	12	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	5	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	6	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	7	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	11	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	12	0.12
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	18	0.12
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	2	0.12
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	8	0.12
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	16	0.12
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	5	0.12
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	6	0.12
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	18	0.12
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	19	0.12
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	6	0.12
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	11	0.12
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	3	0.12
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	12	0.12
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	13	0.12
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	20	0.12
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	4	0.12
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	12	0.12
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	18	0.12
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	12	0.12
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	14	0.12
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	16	0.12
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	20	0.12
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	3	0.12
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	11	0.12
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	11	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	4	0.12
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	7	0.12
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	10	0.12
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	18	0.12
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	3	0.12
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	17	0.12
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	20	0.12
(1,559)	1:37:A:LEU:HB2	1:39:A:LEU:HA	1	0.12
(1,559)	1:37:A:LEU:HB2	1:39:A:LEU:HA	5	0.12
(1,545)	1:33:A:PHE:HE1	1:40:A:ASP:H	14	0.12
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	1	0.12
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	10	0.12
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	13	0.12
(1,503)	1:31:A:PRO:HB2	1:35:A:GLU:HB3	2	0.12
(1,482)	1:29:A:GLU:H	1:74:A:GLN:H	15	0.12
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	15	0.12
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	19	0.12
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	11	0.12
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	13	0.12
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	17	0.12
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	19	0.12
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	3	0.12
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	8	0.12
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	20	0.12
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	4	0.12
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	18	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	1	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	2	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	3	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	5	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	6	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	12	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	15	0.12
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	20	0.12
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	6	0.12
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	10	0.12
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	17	0.12
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	18	0.12
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	8	0.12
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	20	0.12
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	3	0.12
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	6	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	12	0.12
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	15	0.12
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	20	0.12
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	3	0.12
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	11	0.12
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	1	0.12
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	8	0.12
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	15	0.12
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	18	0.12
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	10	0.12
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	11	0.12
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	14	0.12
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	1	0.12
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	7	0.12
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	12	0.12
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	19	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	8	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	11	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	13	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	14	0.12
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	17	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	2	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	6	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	9	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	11	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	13	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	15	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	16	0.12
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	18	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	1	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	4	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	5	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	8	0.12
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	14	0.12
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	3	0.12
(1,189)	1:9:A:LYS:HB3	1:26:A:ILE:HD11	15	0.12
(1,189)	1:9:A:LYS:HB3	1:26:A:ILE:HD12	15	0.12
(1,189)	1:9:A:LYS:HB3	1:26:A:ILE:HD13	15	0.12
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	1	0.12
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	12	0.12
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	1	0.12
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	12	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	15	0.12
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	2	0.12
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	15	0.12
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	19	0.12
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	2	0.12
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	5	0.12
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	5	0.12
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	14	0.12
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	2	0.12
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	14	0.12
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	13	0.12
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	2	0.12
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	5	0.12
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	9	0.12
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	3	0.12
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	4	0.12
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	7	0.12
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	9	0.12
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	12	0.12
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	7	0.12
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	12	0.12
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	20	0.12
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	6	0.12
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	20	0.12
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	5	0.12
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	19	0.12
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	4	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	3	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	6	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	10	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	11	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	14	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	15	0.12
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	20	0.12
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	6	0.12
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	15	0.12
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	1	0.12
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	7	0.12
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	8	0.12
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	12	0.12
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	4	0.12
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	8	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	18	0.12
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	19	0.12
(1,95)	1:6:A:ASP:HB2	1:8:A:LEU:H	20	0.12
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	20	0.12
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	7	0.12
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	8	0.12
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	15	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	1	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	4	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	6	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	7	0.12
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	13	0.12
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	20	0.12
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	1	0.12
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	2	0.12
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	16	0.12
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	6	0.12
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	11	0.12
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	4	0.12
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	6	0.12
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	16	0.12
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	19	0.12
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	3	0.12
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	13	0.12
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	17	0.12
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	4	0.12
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	17	0.12
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	19	0.12
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	7	0.12
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	9	0.12
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	10	0.12
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	4	0.12
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	17	0.12
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	19	0.12
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	1	0.12
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	5	0.12
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	6	0.12
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	8	0.12
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	18	0.12
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	1	0.12
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	3	0.12
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	7	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	11	0.12
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	15	0.12
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	6	0.12
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	2	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	4	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	6	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	8	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	10	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	11	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	13	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	18	0.11
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	19	0.11
(2,69)	1:77:A:VAL:O	1:81:A:GLU:N	20	0.11
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	11	0.11
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	13	0.11
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	16	0.11
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	4	0.11
(2,49)	1:52:A:LYS:O	1:56:A:ASN:N	18	0.11
(2,33)	1:44:A:ALA:O	1:48:A:GLY:N	10	0.11
(2,15)	1:11:A:MET:O	1:15:A:VAL:N	4	0.11
(2,15)	1:11:A:MET:O	1:15:A:VAL:N	7	0.11
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	6	0.11
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	9	0.11
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	12	0.11
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	17	0.11
(2,14)	1:10:A:GLN:O	1:14:A:ASP:N	18	0.11
(2,9)	1:8:A:LEU:O	1:12:A:ILE:N	4	0.11
(2,9)	1:8:A:LEU:O	1:12:A:ILE:N	19	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	4	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	7	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	10	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	12	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	17	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	19	0.11
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	20	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	1	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	3	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	5	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	6	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	7	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	9	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	10	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	11	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	12	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	13	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	14	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	16	0.11
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	17	0.11
(1,1227)	1:84:A:GLN:H	1:85:A:LYS:HB2	8	0.11
(1,1227)	1:84:A:GLN:H	1:85:A:LYS:HB2	10	0.11
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	17	0.11
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	3	0.11
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	10	0.11
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	14	0.11
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	16	0.11
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	6	0.11
(1,1175)	1:80:A:VAL:HA	1:84:A:GLN:HG2	19	0.11
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	12	0.11
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	5	0.11
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	18	0.11
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	20	0.11
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	3	0.11
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	9	0.11
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	10	0.11
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	19	0.11
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	1	0.11
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	4	0.11
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	9	0.11
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	14	0.11
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	17	0.11
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	1	0.11
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	6	0.11
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	13	0.11
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	18	0.11
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	19	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	2	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	5	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	8	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	10	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	15	0.11
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	18	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	1	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	2	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	6	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	10	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	17	0.11
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	18	0.11
(1,1126)	1:77:A:VAL:HA	1:81:A:GLU:HA	12	0.11
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	7	0.11
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	5	0.11
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	7	0.11
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	8	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	1	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	9	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	10	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	11	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	14	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	17	0.11
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	19	0.11
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	6	0.11
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	9	0.11
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	17	0.11
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	5	0.11
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	7	0.11
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	8	0.11
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	10	0.11
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	2	0.11
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	10	0.11
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	13	0.11
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	15	0.11
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	19	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	2	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	4	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	10	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	12	0.11
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	20	0.11
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	11	0.11
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	15	0.11
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	17	0.11
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	7	0.11
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	12	0.11
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	17	0.11
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	20	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	3	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	9	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	13	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	14	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	18	0.11
(1,1034)	1:73:A:ILE:HB	1:77:A:VAL:HB	20	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	2	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	5	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	6	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	14	0.11
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	18	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	1	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	4	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	5	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	9	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	12	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	13	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	14	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	15	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	16	0.11
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	19	0.11
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	9	0.11
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	17	0.11
(1,986)	1:70:A:PHE:HB3	1:75:A:SER:HB2	1	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	3	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	4	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	5	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	7	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	8	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	15	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	19	0.11
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	20	0.11
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	7	0.11
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	15	0.11
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	19	0.11
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	6	0.11
(1,962)	1:69:A:HIS:HB2	1:76:A:LEU:HG	13	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	1	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	2	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	4	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	8	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	10	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	14	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	16	0.11
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	18	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,959)	1:69:A:HIS:HB2	1:79:A:LEU:H	17	0.11
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	15	0.11
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	16	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	2	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	6	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	8	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	10	0.11
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	11	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	2	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	6	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	7	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	8	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	11	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	13	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	14	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	16	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	17	0.11
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	19	0.11
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	5	0.11
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	11	0.11
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	12	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	6	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	8	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	15	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	16	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	18	0.11
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	19	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	1	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	2	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	3	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	4	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	5	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	6	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	7	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	9	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	10	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	12	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	14	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	15	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	17	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	19	0.11
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	20	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	6	0.11
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	8	0.11
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	12	0.11
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	14	0.11
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	18	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	1	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	3	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	4	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	5	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	8	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	9	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	11	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	12	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	14	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	15	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	16	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	18	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	19	0.11
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	20	0.11
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	6	0.11
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	9	0.11
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	10	0.11
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	11	0.11
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	2	0.11
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	9	0.11
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	10	0.11
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	13	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	1	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	2	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	4	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	7	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	10	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	12	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	14	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	16	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	18	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	19	0.11
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	20	0.11
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	14	0.11
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	16	0.11
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	2	0.11
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	9	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	18	0.11
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	16	0.11
(1,877)	1:61:A:ALA:HA	1:66:A:THR:H	18	0.11
(1,876)	1:60:A:ASN:HB3	1:66:A:THR:H	10	0.11
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	15	0.11
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	4	0.11
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	8	0.11
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	15	0.11
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	19	0.11
(1,839)	1:57:A:ILE:H	1:83:A:GLN:HG3	4	0.11
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	5	0.11
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	13	0.11
(1,833)	1:57:A:ILE:HA	1:59:A:LEU:H	18	0.11
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	5	0.11
(1,829)	1:57:A:ILE:HA	1:80:A:VAL:HA	7	0.11
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	17	0.11
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	9	0.11
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	15	0.11
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	20	0.11
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	6	0.11
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	12	0.11
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	15	0.11
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	18	0.11
(1,795)	1:55:A:TYR:HB3	1:57:A:ILE:HA	19	0.11
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	12	0.11
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	2	0.11
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	4	0.11
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	11	0.11
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	12	0.11
(1,766)	1:52:A:LYS:HB3	1:59:A:LEU:H	11	0.11
(1,763)	1:52:A:LYS:HA	1:59:A:LEU:H	2	0.11
(1,763)	1:52:A:LYS:HA	1:59:A:LEU:H	11	0.11
(1,761)	1:52:A:LYS:HA	1:56:A:ASN:HB3	15	0.11
(1,760)	1:52:A:LYS:HA	1:56:A:ASN:HB2	18	0.11
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	2	0.11
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	5	0.11
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	6	0.11
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	10	0.11
(1,758)	1:52:A:LYS:HG3	1:57:A:ILE:H	11	0.11
(1,742)	1:51:A:LEU:HB2	1:59:A:LEU:HB2	12	0.11
(1,741)	1:51:A:LEU:H	1:52:A:LYS:HA	16	0.11
(1,741)	1:51:A:LEU:H	1:52:A:LYS:HA	17	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,739)	1:51:A:LEU:HB3	1:54:A:ARG:HB3	4	0.11
(1,737)	1:51:A:LEU:HA	1:57:A:ILE:H	8	0.11
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	5	0.11
(1,736)	1:51:A:LEU:HB3	1:59:A:LEU:HG	13	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	2	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	5	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	6	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	8	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	10	0.11
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	12	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	2	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	3	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	4	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	5	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	6	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	7	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	8	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	11	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	12	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	14	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	15	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	18	0.11
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	20	0.11
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	4	0.11
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	6	0.11
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	11	0.11
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	1	0.11
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	6	0.11
(1,708)	1:49:A:LEU:HB2	1:52:A:LYS:H	7	0.11
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	4	0.11
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	6	0.11
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	7	0.11
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	1	0.11
(1,693)	1:48:A:GLY:HA3	1:51:A:LEU:HG	4	0.11
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	6	0.11
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	13	0.11
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	2	0.11
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	9	0.11
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	15	0.11
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	2	0.11
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	14	0.11
(1,689)	1:48:A:GLY:HA3	1:52:A:LYS:HB2	16	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	10	0.11
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	12	0.11
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	13	0.11
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	3	0.11
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	4	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	5	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	6	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	7	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	15	0.11
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	18	0.11
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	9	0.11
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	1	0.11
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	6	0.11
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	1	0.11
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	2	0.11
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	14	0.11
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	15	0.11
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	16	0.11
(1,667)	1:46:A:GLU:HB3	1:49:A:LEU:HB2	14	0.11
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	1	0.11
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	12	0.11
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	18	0.11
(1,652)	1:45:A:LEU:HA	1:49:A:LEU:HB3	4	0.11
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	10	0.11
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	12	0.11
(1,648)	1:45:A:LEU:HB2	1:49:A:LEU:H	14	0.11
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	5	0.11
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	7	0.11
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	1	0.11
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	4	0.11
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	5	0.11
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	11	0.11
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	16	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	1	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	2	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	7	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	17	0.11
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	20	0.11
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	6	0.11
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	10	0.11
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	13	0.11
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	20	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	2	0.11
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	10	0.11
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	12	0.11
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	14	0.11
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	15	0.11
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	20	0.11
(1,601)	1:41:A:SER:HA	1:44:A:ALA:HA	11	0.11
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	5	0.11
(1,600)	1:41:A:SER:HA	1:45:A:LEU:H	9	0.11
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	7	0.11
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	9	0.11
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	11	0.11
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	3	0.11
(1,571)	1:39:A:LEU:HB2	1:43:A:ASP:H	19	0.11
(1,536)	1:33:A:PHE:HE1	1:39:A:LEU:H	7	0.11
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	10	0.11
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	3	0.11
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	20	0.11
(1,505)	1:31:A:PRO:HB3	1:34:A:GLY:HA2	10	0.11
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	16	0.11
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	4	0.11
(1,464)	1:28:A:THR:HG23	1:74:A:GLN:HA	9	0.11
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	1	0.11
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	12	0.11
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	19	0.11
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	7	0.11
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	3	0.11
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	7	0.11
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	11	0.11
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	20	0.11
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	18	0.11
(1,387)	1:18:A:LEU:HB2	1:21:A:ILE:HG12	19	0.11
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	1	0.11
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	12	0.11
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	14	0.11
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	15	0.11
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	2	0.11
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	4	0.11
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	9	0.11
(1,360)	1:16:A:LEU:HB2	1:37:A:LEU:HG	17	0.11
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	3	0.11
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	12	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	18	0.11
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	5	0.11
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	2	0.11
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	8	0.11
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	11	0.11
(1,308)	1:13:A:ILE:HA	1:18:A:LEU:HA	19	0.11
(1,291)	1:12:A:ILE:HG12	1:47:A:LEU:HA	12	0.11
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	3	0.11
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	5	0.11
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	15	0.11
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	1	0.11
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	7	0.11
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	9	0.11
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	12	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	2	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	5	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	6	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	7	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	8	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	9	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	10	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	13	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	14	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	15	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	16	0.11
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	17	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	1	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	2	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	8	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	10	0.11
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	20	0.11
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	9	0.11
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	17	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	1	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	6	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	7	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	16	0.11
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	20	0.11
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	8	0.11
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	11	0.11
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	13	0.11
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	19	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	4	0.11
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	6	0.11
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	14	0.11
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	6	0.11
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	14	0.11
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	15	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	1	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	5	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	6	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	13	0.11
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	20	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	1	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	5	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	7	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	9	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	10	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	18	0.11
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	19	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	4	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	6	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	9	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	15	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	19	0.11
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	20	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	5	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	7	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	8	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	12	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	14	0.11
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	17	0.11
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	1	0.11
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	12	0.11
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	18	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	3	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	7	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	10	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	11	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	12	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	13	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	17	0.11
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	19	0.11
(1,193)	1:9:A:LYS:HA	1:26:A:ILE:HB	4	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	3	0.11
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	4	0.11
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	5	0.11
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	7	0.11
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	10	0.11
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	18	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	5	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	6	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	10	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	11	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	16	0.11
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	20	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	1	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	4	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	5	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	12	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	16	0.11
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	18	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	6	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	7	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	12	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	13	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	14	0.11
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	17	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	4	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	6	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	7	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	8	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	11	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	12	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	13	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	17	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	18	0.11
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	20	0.11
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	3	0.11
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	6	0.11
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	10	0.11
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	20	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	1	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	2	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	6	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	7	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	8	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	9	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	11	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	15	0.11
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	18	0.11
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	6	0.11
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	14	0.11
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	17	0.11
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	1	0.11
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	8	0.11
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	9	0.11
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	18	0.11
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	5	0.11
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	19	0.11
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	20	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	1	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	3	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	5	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	13	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	17	0.11
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	20	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	3	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	4	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	5	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	9	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	13	0.11
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	17	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	2	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	3	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	7	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	10	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	13	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	14	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	15	0.11
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	19	0.11
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	1	0.11
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	7	0.11
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	10	0.11
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	14	0.11
(1,128)	1:8:A:LEU:HA	1:76:A:LEU:HB3	18	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	2	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	6	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	7	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	13	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	14	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	15	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	19	0.11
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	20	0.11
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	2	0.11
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	17	0.11
(1,125)	1:8:A:LEU:HB3	1:77:A:VAL:HA	19	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	5	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	8	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	9	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	11	0.11
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	14	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	3	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	5	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	6	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	10	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	11	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	13	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	15	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	17	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	18	0.11
(1,112)	1:7:A:GLU:HB3	1:10:A:GLN:HB2	20	0.11
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	1	0.11
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	2	0.11
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	11	0.11
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	14	0.11
(1,70)	1:5:A:ALA:H	1:77:A:VAL:HA	1	0.11
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	14	0.11
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	20	0.11
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	1	0.11
(1,66)	1:5:A:ALA:HA	1:73:A:ILE:HG13	16	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	6	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	10	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	12	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	13	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	14	0.11
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	19	0.11
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	3	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	1	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	3	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	7	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	8	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	10	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	15	0.11
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	18	0.11
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	9	0.11
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	14	0.11
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	17	0.11
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	2	0.11
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	8	0.11
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	13	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	1	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	3	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	5	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	7	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	9	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	11	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	14	0.11
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	17	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	5	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	6	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	10	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	11	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	12	0.11
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	14	0.11
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	1	0.11
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	3	0.11
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	7	0.11
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	8	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	1	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	2	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	3	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	4	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	5	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	11	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	12	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	14	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	16	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	17	0.11
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	19	0.11
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	1	0.11
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	12	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	15	0.11
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	17	0.11
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	2	0.11
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	5	0.11
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	14	0.11
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	17	0.11
(2,73)	1:79:A:LEU:O	1:83:A:GLN:H	14	0.1
(2,73)	1:79:A:LEU:O	1:83:A:GLN:H	19	0.1
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	1	0.1
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	3	0.1
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	5	0.1
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	9	0.1
(2,71)	1:78:A:ALA:O	1:82:A:ALA:H	16	0.1
(2,58)	1:66:A:THR:O	1:70:A:PHE:N	1	0.1
(2,55)	1:65:A:GLU:O	1:69:A:HIS:H	7	0.1
(2,55)	1:65:A:GLU:O	1:69:A:HIS:H	19	0.1
(2,51)	1:63:A:SER:O	1:67:A:LYS:H	1	0.1
(2,40)	1:47:A:LEU:O	1:51:A:LEU:N	4	0.1
(2,40)	1:47:A:LEU:O	1:51:A:LEU:N	14	0.1
(2,40)	1:47:A:LEU:O	1:51:A:LEU:N	20	0.1
(2,15)	1:11:A:MET:O	1:15:A:VAL:N	19	0.1
(2,9)	1:8:A:LEU:O	1:12:A:ILE:N	2	0.1
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	1	0.1
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	5	0.1
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	8	0.1
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	9	0.1
(2,8)	1:7:A:GLU:O	1:11:A:MET:N	14	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	2	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	4	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	8	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	15	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	18	0.1
(2,1)	1:4:A:LEU:O	1:8:A:LEU:N	19	0.1
(1,1227)	1:84:A:GLN:H	1:85:A:LYS:HB2	17	0.1
(1,1221)	1:83:A:GLN:HB3	1:84:A:GLN:H	10	0.1
(1,1221)	1:83:A:GLN:HB3	1:84:A:GLN:H	11	0.1
(1,1221)	1:83:A:GLN:HB3	1:84:A:GLN:H	12	0.1
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	4	0.1
(1,1217)	1:83:A:GLN:H	1:85:A:LYS:H	15	0.1
(1,1213)	1:82:A:ALA:HA	1:84:A:GLN:H	17	0.1
(1,1169)	1:80:A:VAL:HB	1:84:A:GLN:HG2	5	0.1
(1,1168)	1:80:A:VAL:HA	1:83:A:GLN:HA	10	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1158)	1:79:A:LEU:HB3	1:82:A:ALA:H	17	0.1
(1,1157)	1:79:A:LEU:H	1:81:A:GLU:H	12	0.1
(1,1156)	1:79:A:LEU:HB2	1:82:A:ALA:H	16	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	3	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	6	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	11	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	13	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	16	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	17	0.1
(1,1149)	1:78:A:ALA:H	1:82:A:ALA:H	20	0.1
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	13	0.1
(1,1145)	1:78:A:ALA:H	1:80:A:VAL:H	16	0.1
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	4	0.1
(1,1121)	1:77:A:VAL:HA	1:80:A:VAL:HA	15	0.1
(1,1118)	1:77:A:VAL:HB	1:81:A:GLU:H	17	0.1
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	2	0.1
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	4	0.1
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	13	0.1
(1,1113)	1:77:A:VAL:HB	1:79:A:LEU:H	18	0.1
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	8	0.1
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	9	0.1
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	10	0.1
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	16	0.1
(1,1094)	1:76:A:LEU:HB3	1:79:A:LEU:H	17	0.1
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	2	0.1
(1,1091)	1:76:A:LEU:HG	1:79:A:LEU:HB2	13	0.1
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	1	0.1
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	6	0.1
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	11	0.1
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	13	0.1
(1,1080)	1:75:A:SER:HB3	1:79:A:LEU:HG	17	0.1
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	6	0.1
(1,1078)	1:75:A:SER:HB2	1:79:A:LEU:H	16	0.1
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	6	0.1
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	16	0.1
(1,1064)	1:74:A:GLN:H	1:77:A:VAL:HB	17	0.1
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	10	0.1
(1,1039)	1:73:A:ILE:HB	1:76:A:LEU:HG	18	0.1
(1,1035)	1:73:A:ILE:HG12	1:76:A:LEU:HB2	9	0.1
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	3	0.1
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	10	0.1
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	17	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1033)	1:73:A:ILE:HA	1:77:A:VAL:HA	19	0.1
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	6	0.1
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	7	0.1
(1,1032)	1:73:A:ILE:H	1:76:A:LEU:HG	17	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	1	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	3	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	5	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	10	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	12	0.1
(1,988)	1:70:A:PHE:HB2	1:76:A:LEU:HG	18	0.1
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	1	0.1
(1,985)	1:70:A:PHE:HB2	1:75:A:SER:HB2	12	0.1
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	13	0.1
(1,963)	1:69:A:HIS:HA	1:76:A:LEU:HA	16	0.1
(1,961)	1:69:A:HIS:H	1:75:A:SER:HB2	19	0.1
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	1	0.1
(1,951)	1:67:A:LYS:HA	1:71:A:LYS:H	6	0.1
(1,943)	1:66:A:THR:HB	1:69:A:HIS:H	5	0.1
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	9	0.1
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	10	0.1
(1,942)	1:66:A:THR:HB	1:68:A:GLN:H	20	0.1
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	6	0.1
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	8	0.1
(1,941)	1:66:A:THR:H	1:68:A:GLN:HG2	9	0.1
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	2	0.1
(1,940)	1:66:A:THR:H	1:70:A:PHE:H	14	0.1
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	8	0.1
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	11	0.1
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	16	0.1
(1,939)	1:66:A:THR:H	1:68:A:GLN:H	18	0.1
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	1	0.1
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	3	0.1
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	7	0.1
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	16	0.1
(1,938)	1:66:A:THR:H	1:69:A:HIS:H	20	0.1
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	6	0.1
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	7	0.1
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	10	0.1
(1,937)	1:66:A:THR:H	1:68:A:GLN:HG3	17	0.1
(1,917)	1:65:A:GLU:HA	1:68:A:GLN:HA	5	0.1
(1,905)	1:64:A:ASP:HA	1:67:A:LYS:HA	2	0.1
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	6	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	12	0.1
(1,903)	1:64:A:ASP:H	1:67:A:LYS:H	18	0.1
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	6	0.1
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	9	0.1
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	11	0.1
(1,897)	1:64:A:ASP:H	1:68:A:GLN:H	13	0.1
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	5	0.1
(1,892)	1:63:A:SER:HA	1:67:A:LYS:HG2	19	0.1
(1,891)	1:63:A:SER:H	1:65:A:GLU:H	6	0.1
(1,886)	1:62:A:GLU:HA	1:67:A:LYS:HG2	20	0.1
(1,859)	1:60:A:ASN:HB2	1:63:A:SER:HA	6	0.1
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	10	0.1
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	11	0.1
(1,858)	1:60:A:ASN:HA	1:66:A:THR:H	14	0.1
(1,857)	1:60:A:ASN:HB2	1:66:A:THR:HA	11	0.1
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	9	0.1
(1,800)	1:55:A:TYR:HB3	1:80:A:VAL:HA	15	0.1
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	2	0.1
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	3	0.1
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	11	0.1
(1,796)	1:55:A:TYR:HB2	1:83:A:GLN:HB3	19	0.1
(1,794)	1:55:A:TYR:HB2	1:84:A:GLN:HG2	9	0.1
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	8	0.1
(1,789)	1:54:A:ARG:H	1:55:A:TYR:HA	15	0.1
(1,784)	1:53:A:LYS:HA	1:55:A:TYR:H	6	0.1
(1,741)	1:51:A:LEU:H	1:52:A:LYS:HA	10	0.1
(1,741)	1:51:A:LEU:H	1:52:A:LYS:HA	14	0.1
(1,740)	1:51:A:LEU:H	1:52:A:LYS:HB3	10	0.1
(1,724)	1:50:A:ALA:H	1:52:A:LYS:HB3	20	0.1
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	1	0.1
(1,723)	1:50:A:ALA:H	1:51:A:LEU:HA	9	0.1
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	2	0.1
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	8	0.1
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	17	0.1
(1,722)	1:50:A:ALA:HA	1:52:A:LYS:HB3	20	0.1
(1,709)	1:49:A:LEU:HA	1:59:A:LEU:HG	12	0.1
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	15	0.1
(1,707)	1:49:A:LEU:HA	1:53:A:LYS:H	20	0.1
(1,706)	1:48:A:GLY:H	1:50:A:ALA:H	10	0.1
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	11	0.1
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	17	0.1
(1,692)	1:48:A:GLY:HA2	1:51:A:LEU:HA	18	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	1	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	3	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	4	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	5	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	12	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	16	0.1
(1,691)	1:48:A:GLY:HA3	1:51:A:LEU:HB3	17	0.1
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	2	0.1
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	11	0.1
(1,688)	1:48:A:GLY:HA2	1:59:A:LEU:HB3	14	0.1
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	5	0.1
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	8	0.1
(1,687)	1:48:A:GLY:HA2	1:59:A:LEU:HB2	18	0.1
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	3	0.1
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	11	0.1
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	12	0.1
(1,676)	1:47:A:LEU:HA	1:49:A:LEU:H	17	0.1
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	8	0.1
(1,675)	1:47:A:LEU:HA	1:51:A:LEU:HA	16	0.1
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	3	0.1
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	7	0.1
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	8	0.1
(1,674)	1:47:A:LEU:HG	1:51:A:LEU:HB3	16	0.1
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	8	0.1
(1,673)	1:47:A:LEU:HB3	1:51:A:LEU:HG	20	0.1
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	3	0.1
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	5	0.1
(1,665)	1:46:A:GLU:H	1:47:A:LEU:HB2	20	0.1
(1,651)	1:45:A:LEU:HA	1:48:A:GLY:HA2	14	0.1
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	6	0.1
(1,647)	1:45:A:LEU:HA	1:49:A:LEU:HA	12	0.1
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	2	0.1
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	8	0.1
(1,631)	1:44:A:ALA:HA	1:47:A:LEU:HG	14	0.1
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	3	0.1
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	5	0.1
(1,629)	1:44:A:ALA:H	1:47:A:LEU:HB2	8	0.1
(1,628)	1:44:A:ALA:HA	1:48:A:GLY:HA3	4	0.1
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	7	0.1
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	8	0.1
(1,618)	1:43:A:ASP:HB3	1:46:A:GLU:H	9	0.1
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	1	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,616)	1:43:A:ASP:HA	1:46:A:GLU:HA	3	0.1
(1,601)	1:41:A:SER:HA	1:44:A:ALA:HA	4	0.1
(1,601)	1:41:A:SER:HA	1:44:A:ALA:HA	7	0.1
(1,572)	1:39:A:LEU:HA	1:43:A:ASP:H	5	0.1
(1,545)	1:33:A:PHE:HE1	1:40:A:ASP:H	6	0.1
(1,535)	1:33:A:PHE:HA	1:39:A:LEU:HB3	3	0.1
(1,517)	1:32:A:LEU:HB2	1:39:A:LEU:H	18	0.1
(1,503)	1:31:A:PRO:HB2	1:35:A:GLU:HB3	9	0.1
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	13	0.1
(1,480)	1:29:A:GLU:H	1:74:A:GLN:HB3	14	0.1
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	6	0.1
(1,479)	1:29:A:GLU:HA	1:72:A:SER:H	16	0.1
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	4	0.1
(1,414)	1:21:A:ILE:HG13	1:25:A:ASP:HB2	7	0.1
(1,406)	1:19:A:GLU:HB3	1:21:A:ILE:H	11	0.1
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	1	0.1
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	8	0.1
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	9	0.1
(1,388)	1:18:A:LEU:HB3	1:21:A:ILE:HA	18	0.1
(1,362)	1:16:A:LEU:HG	1:43:A:ASP:HB2	11	0.1
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	1	0.1
(1,357)	1:16:A:LEU:HB2	1:18:A:LEU:HA	4	0.1
(1,337)	1:15:A:VAL:HB	1:51:A:LEU:HG	15	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	1	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	6	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	9	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	10	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	13	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	17	0.1
(1,289)	1:12:A:ILE:HG13	1:15:A:VAL:H	20	0.1
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	8	0.1
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	13	0.1
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	15	0.1
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	17	0.1
(1,286)	1:12:A:ILE:H	1:14:A:ASP:H	18	0.1
(1,263)	1:11:A:MET:HB3	1:15:A:VAL:H	12	0.1
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	3	0.1
(1,258)	1:11:A:MET:HB2	1:15:A:VAL:HB	12	0.1
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	10	0.1
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	12	0.1
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	13	0.1
(1,257)	1:11:A:MET:HA	1:15:A:VAL:HA	20	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	9	0.1
(1,232)	1:10:A:GLN:HG3	1:23:A:ILE:HG13	17	0.1
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	5	0.1
(1,231)	1:10:A:GLN:HA	1:12:A:ILE:HB	9	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	2	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	5	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	11	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	15	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	16	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	19	0.1
(1,230)	1:10:A:GLN:HB2	1:14:A:ASP:H	20	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	5	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	10	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	11	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	16	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	18	0.1
(1,229)	1:10:A:GLN:H	1:14:A:ASP:HB3	19	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	2	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	3	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	4	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	9	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	10	0.1
(1,228)	1:10:A:GLN:HG3	1:22:A:THR:HA	15	0.1
(1,227)	1:10:A:GLN:HG2	1:14:A:ASP:HA	3	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	2	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	7	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	8	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	11	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	12	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	13	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	14	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	16	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	17	0.1
(1,226)	1:10:A:GLN:HB3	1:14:A:ASP:H	18	0.1
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	1	0.1
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	4	0.1
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	19	0.1
(1,225)	1:10:A:GLN:HA	1:13:A:ILE:HA	20	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	2	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	4	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	5	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	8	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	10	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	11	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	13	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	16	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	17	0.1
(1,224)	1:10:A:GLN:H	1:12:A:ILE:HA	19	0.1
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	2	0.1
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	9	0.1
(1,223)	1:10:A:GLN:HB2	1:22:A:THR:HB	20	0.1
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	10	0.1
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	15	0.1
(1,191)	1:9:A:LYS:HA	1:13:A:ILE:HA	16	0.1
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	6	0.1
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	10	0.1
(1,190)	1:9:A:LYS:HA	1:73:A:ILE:HB	14	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	3	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	5	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	8	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	13	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	15	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	17	0.1
(1,187)	1:9:A:LYS:H	1:12:A:ILE:HB	20	0.1
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	8	0.1
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	9	0.1
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	13	0.1
(1,186)	1:9:A:LYS:H	1:11:A:MET:HB2	17	0.1
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	8	0.1
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	11	0.1
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	13	0.1
(1,185)	1:9:A:LYS:HB3	1:12:A:ILE:H	17	0.1
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	3	0.1
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	8	0.1
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	10	0.1
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	16	0.1
(1,184)	1:9:A:LYS:HB2	1:13:A:ILE:HG13	20	0.1
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	9	0.1
(1,183)	1:9:A:LYS:HB2	1:13:A:ILE:H	19	0.1
(1,182)	1:9:A:LYS:HA	1:13:A:ILE:HB	16	0.1
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	3	0.1
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	12	0.1
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	14	0.1
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	17	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,143)	1:8:A:LEU:HA	1:12:A:ILE:HA	20	0.1
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	11	0.1
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	13	0.1
(1,142)	1:8:A:LEU:HA	1:11:A:MET:HA	19	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	6	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	11	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	13	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	14	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	15	0.1
(1,138)	1:8:A:LEU:HB2	1:11:A:MET:H	17	0.1
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	9	0.1
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	10	0.1
(1,137)	1:8:A:LEU:HA	1:76:A:LEU:HB2	17	0.1
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	2	0.1
(1,136)	1:8:A:LEU:HB3	1:12:A:ILE:HA	10	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	1	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	2	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	6	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	8	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	10	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	14	0.1
(1,133)	1:8:A:LEU:HB2	1:12:A:ILE:HG13	18	0.1
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	5	0.1
(1,131)	1:8:A:LEU:HA	1:12:A:ILE:HG12	8	0.1
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	3	0.1
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	5	0.1
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	9	0.1
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	10	0.1
(1,127)	1:8:A:LEU:HA	1:12:A:ILE:HB	17	0.1
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	13	0.1
(1,113)	1:7:A:GLU:HA	1:11:A:MET:HB3	20	0.1
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	5	0.1
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	9	0.1
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	13	0.1
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	16	0.1
(1,111)	1:7:A:GLU:H	1:10:A:GLN:HB2	17	0.1
(1,95)	1:6:A:ASP:HB2	1:8:A:LEU:H	2	0.1
(1,95)	1:6:A:ASP:HB2	1:8:A:LEU:H	3	0.1
(1,95)	1:6:A:ASP:HB2	1:8:A:LEU:H	15	0.1
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	6	0.1
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	11	0.1
(1,68)	1:5:A:ALA:HA	1:9:A:LYS:HB2	17	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,27)	1:4:A:LEU:HB2	1:84:A:GLN:HG3	18	0.1
(1,26)	1:4:A:LEU:HB3	1:81:A:GLU:HA	16	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	6	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	9	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	11	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	13	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	14	0.1
(1,23)	1:4:A:LEU:HA	1:8:A:LEU:HB2	16	0.1
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	6	0.1
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	11	0.1
(1,22)	1:4:A:LEU:HB2	1:77:A:VAL:HA	13	0.1
(1,19)	1:4:A:LEU:HG	1:81:A:GLU:HA	12	0.1
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	2	0.1
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	10	0.1
(1,18)	1:4:A:LEU:HA	1:8:A:LEU:HA	15	0.1
(1,16)	1:4:A:LEU:HB2	1:77:A:VAL:HB	9	0.1
(1,15)	1:4:A:LEU:HG	1:7:A:GLU:HB2	18	0.1
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	8	0.1
(1,14)	1:4:A:LEU:HB2	1:8:A:LEU:HB2	18	0.1
(1,13)	1:4:A:LEU:HG	1:8:A:LEU:HA	8	0.1
(1,12)	1:4:A:LEU:HA	1:7:A:GLU:HA	12	0.1
(1,7)	1:3:A:ASN:H	1:84:A:GLN:HE22	13	0.1
(1,2)	1:2:A:SER:H	1:4:A:LEU:HB3	9	0.1

10 Dihedral-angle violation analysis ⓘ

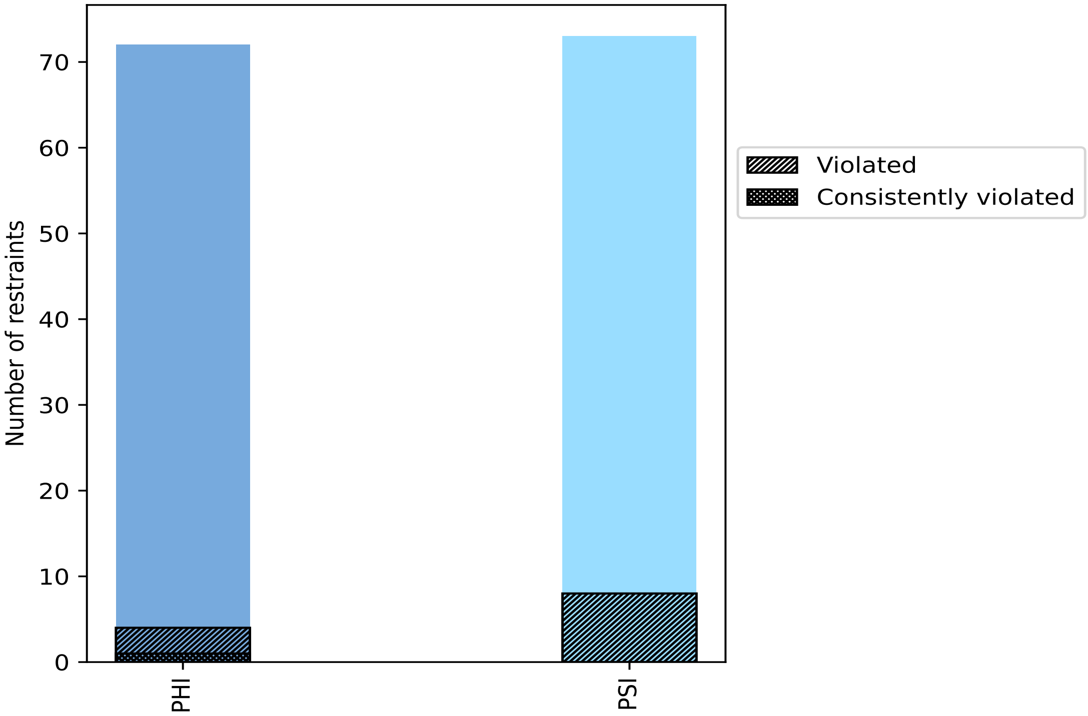
10.1 Summary of dihedral-angle violations ⓘ

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

Angle type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
PHI	72	49.7	4	5.6	2.8	1	1.4	0.7
PSI	73	50.3	8	11.0	5.5	0	0.0	0.0
Total	145	100.0	12	8.3	8.3	1	0.7	0.7

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

10.1.1 Bar chart : Distribution of dihedral-angles and violations ⓘ



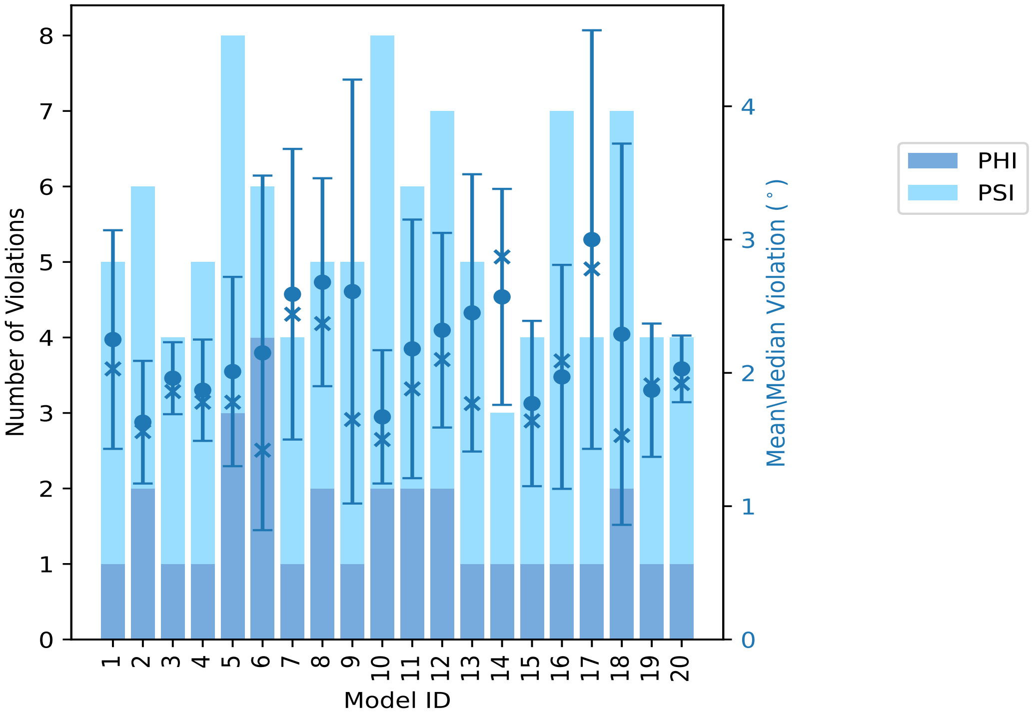
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

10.2 Dihedral-angle violation statistics for each model ⓘ

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

Model ID	**Number of violations**			**Mean (°)**	**Max (°)**	**SD (°)**	**Median (°)**
	PHI	PSI	Total				
1	1	4	5	2.25	3.37	0.82	2.03
2	2	4	6	1.63	2.37	0.46	1.56
3	1	3	4	1.96	2.38	0.27	1.86
4	1	4	5	1.87	2.44	0.38	1.78
5	3	5	8	2.01	3.45	0.71	1.78
6	4	2	6	2.15	4.58	1.33	1.42
7	1	3	4	2.59	3.98	1.09	2.44
8	2	3	5	2.68	3.87	0.78	2.37
9	1	4	5	2.61	5.06	1.59	1.65
10	2	6	8	1.67	2.48	0.5	1.5
11	2	4	6	2.18	3.82	0.97	1.88
12	2	5	7	2.32	3.71	0.73	2.1
13	1	4	5	2.45	4.02	1.04	1.77
14	1	2	3	2.57	3.37	0.81	2.87
15	1	3	4	1.77	2.76	0.62	1.64
16	1	6	7	1.97	3.62	0.84	2.09
17	1	3	4	3.0	5.01	1.57	2.78
18	2	5	7	2.29	4.92	1.43	1.53
19	1	3	4	1.87	2.51	0.5	1.91
20	1	3	4	2.03	2.45	0.25	1.92

10.2.1 Bar graph : Dihedral violation statistics for each model ⓘ



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

10.3 Dihedral-angle violation statistics for the ensemble ⓘ

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

Number of violated restraints			Fraction of the ensemble	
PHI	PSI	Total	Count[1]	%
1	0	1	1	5.0
1	1	2	2	10.0
0	1	1	3	15.0
0	0	0	4	20.0
0	2	2	5	25.0
0	0	0	6	30.0
0	0	0	7	35.0
1	0	1	8	40.0
0	1	1	9	45.0
0	0	0	10	50.0
0	0	0	11	55.0

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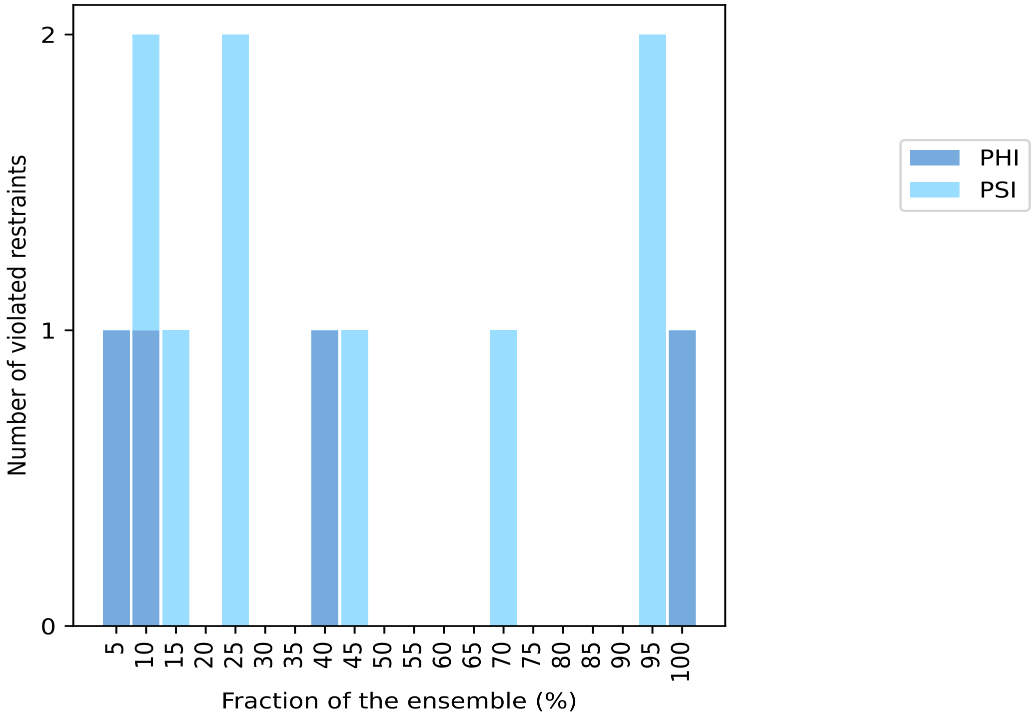
Number of violated restraints			Fraction of the ensemble	
PHI	PSI	Total	Count[1]	%
0	0	0	12	60.0
0	0	0	13	65.0
0	1	1	14	70.0
0	0	0	15	75.0
0	0	0	16	80.0
0	0	0	17	85.0
0	0	0	18	90.0
0	2	2	19	95.0
1	0	1	20	100.0

[1] Number of models with violations

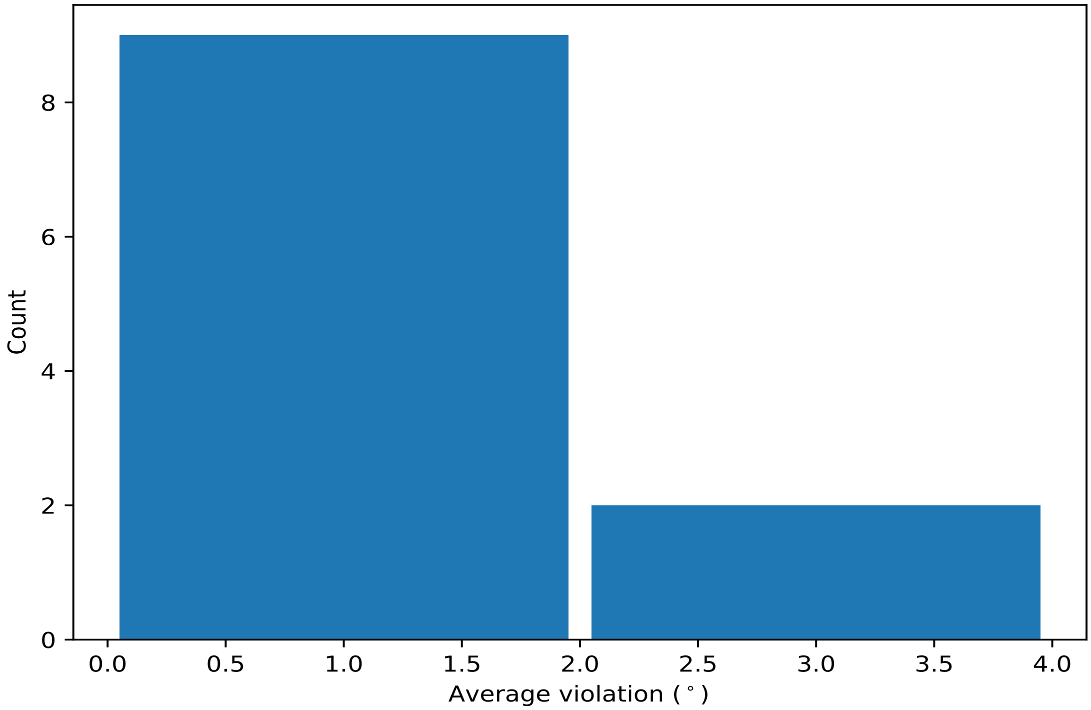
10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble ⓘ



10.4 Most violated dihedral-angle restraints in the ensemble ⓘ

10.4.1 Histogram : Distribution of mean dihedral-angle violations ⓘ

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



10.4.2 Table: Most violated dihedral-angle restraints ⓘ

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

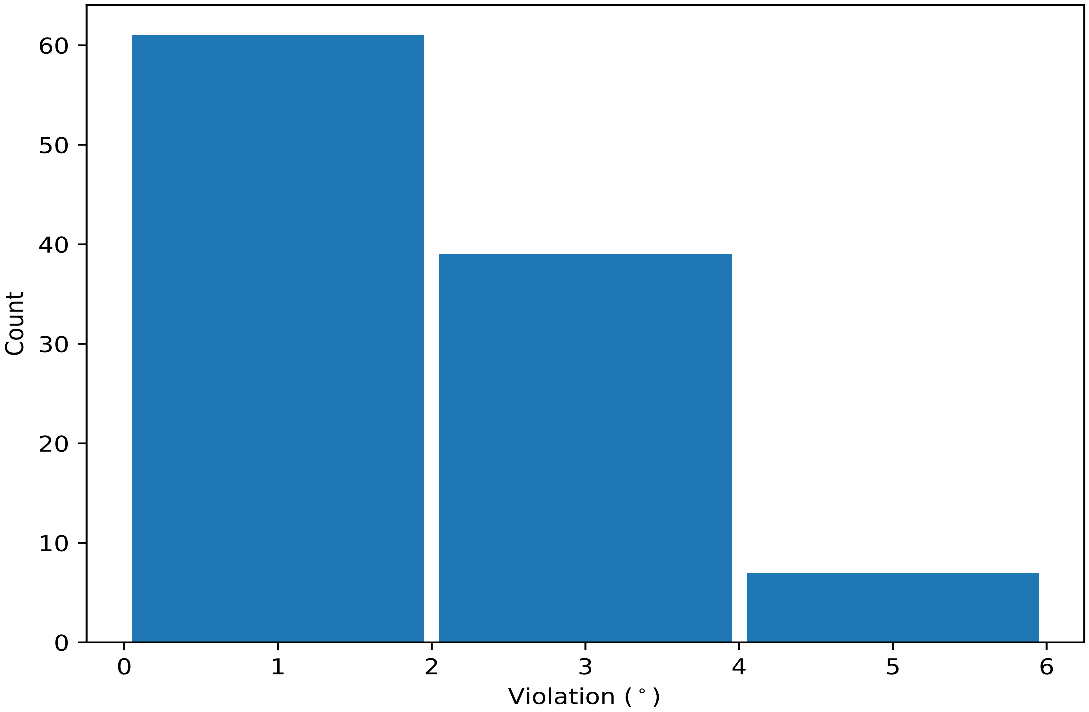
Key	Atom-1	Atom-2	Atom-3	Atom-4	Models[1]	Mean	SD[2]	Median
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	20	2.67	0.89	2.9
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	19	3.51	0.96	3.62
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	19	1.75	0.3	1.8
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	14	1.58	0.32	1.63
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	9	1.78	0.33	1.76
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	8	1.86	0.54	2.1
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	5	1.77	0.6	1.56
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	5	1.32	0.12	1.35
(1,81)	1:53:A:LYS:N	1:53:A:LYS:CA	1:53:A:LYS:C	1:54:A:ARG:N	3	1.24	0.03	1.25
(1,94)	1:59:A:LEU:C	1:60:A:ASN:N	1:60:A:ASN:CA	1:60:A:ASN:C	2	1.12	0.01	1.12
(1,85)	1:55:A:TYR:N	1:55:A:TYR:CA	1:55:A:TYR:C	1:56:A:ASN:N	2	1.06	0.01	1.06

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

10.5 All violated dihedral-angle restraints ⓘ

10.5.1 Histogram : Distribution of violations ⓘ

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



10.5.2 Table: All violated dihedral-angle restraints ⓘ

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

Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	9	5.06
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	17	5.01
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	18	4.92
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	6	4.58
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	17	4.07
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	18	4.05
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	13	4.02
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	7	3.98
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	9	3.94
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	8	3.87
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	11	3.82
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	12	3.71
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	16	3.62
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	5	3.45

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	1	3.37
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	14	3.37
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	13	3.35
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	7	3.32
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	8	3.31
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	6	3.27
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	11	2.99
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	1	2.96
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	12	2.94
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	14	2.87
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	5	2.83
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	15	2.76
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	19	2.51
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	10	2.48
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	20	2.45
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	4	2.44
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	16	2.41
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	3	2.38
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	2	2.37
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	8	2.37
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	12	2.34
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	11	2.33
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	10	2.25
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	16	2.17
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	4	2.16
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	19	2.11
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	12	2.1
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	16	2.09
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	10	2.09
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	1	2.03
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	12	2.02
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	2	2.02
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	3	1.99
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	20	1.99
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	8	1.96
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	8	1.89
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	5	1.88
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	20	1.86
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	5	1.86
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	18	1.83
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	20	1.83
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	1	1.8
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	4	1.78
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	13	1.77
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	13	1.76
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	12	1.75
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	3	1.74
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	15	1.73
(1,40)	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	1:26:A:ILE:N	2	1.73
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	5	1.71
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	3	1.71

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	19	1.71
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	9	1.65
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	5	1.64
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	6	1.63
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	10	1.63
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	4	1.61
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	7	1.57
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	5	1.56
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	15	1.54
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	18	1.53
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	17	1.5
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	7	1.49
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	14	1.46
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	11	1.44
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	17	1.43
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	2	1.38
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	10	1.38
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	4	1.38
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	11	1.36
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	13	1.36
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	18	1.36
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	12	1.35
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	9	1.35
(1,81)	1:53:A:LYS:N	1:53:A:LYS:CA	1:53:A:LYS:C	1:54:A:ARG:N	16	1.27
(1,81)	1:53:A:LYS:N	1:53:A:LYS:CA	1:53:A:LYS:C	1:54:A:ARG:N	10	1.25
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	10	1.23
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	2	1.23
(1,39)	1:24:A:ALA:C	1:25:A:ASP:N	1:25:A:ASP:CA	1:25:A:ASP:C	6	1.22
(1,81)	1:53:A:LYS:N	1:53:A:LYS:CA	1:53:A:LYS:C	1:54:A:ARG:N	18	1.19
(1,44)	1:27:A:ASP:N	1:27:A:ASP:CA	1:27:A:ASP:C	1:28:A:THR:N	19	1.16
(1,97)	1:61:A:ALA:N	1:61:A:ALA:CA	1:61:A:ALA:C	1:62:A:GLU:N	11	1.14
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	16	1.14
(1,94)	1:59:A:LEU:C	1:60:A:ASN:N	1:60:A:ASN:CA	1:60:A:ASN:C	5	1.13
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	18	1.12
(1,38)	1:24:A:ALA:N	1:24:A:ALA:CA	1:24:A:ALA:C	1:25:A:ASP:N	16	1.11
(1,94)	1:59:A:LEU:C	1:60:A:ASN:N	1:60:A:ASN:CA	1:60:A:ASN:C	6	1.1
(1,91)	1:58:A:HIS:N	1:58:A:HIS:CA	1:58:A:HIS:C	1:59:A:LEU:N	1	1.09
(1,88)	1:56:A:ASN:C	1:57:A:ILE:N	1:57:A:ILE:CA	1:57:A:ILE:C	6	1.08
(1,85)	1:55:A:TYR:N	1:55:A:TYR:CA	1:55:A:TYR:C	1:56:A:ASN:N	9	1.07
(1,85)	1:55:A:TYR:N	1:55:A:TYR:CA	1:55:A:TYR:C	1:56:A:ASN:N	15	1.06
(1,46)	1:28:A:THR:N	1:28:A:THR:CA	1:28:A:THR:C	1:29:A:GLU:N	10	1.04
(1,41)	1:25:A:ASP:C	1:26:A:ILE:N	1:26:A:ILE:CA	1:26:A:ILE:C	2	1.04