Full wwPDB NMR Structure Validation Report (i)

Dec 24, 2024 – 03:31 PM EST

PDB ID	:	2LF6
BMRB ID	:	17739
Title	:	Solution NMR structure of HopABPph1448_220_320 from Pseudomonas syringae pv. phaseolicola str. 1448A, Midwest Center for Structural Genomics target APC40132.4 and Northeast Structural Genomics Consortium target PsT3A
Authors	:	Wu, B.; Yee, A.; Houliston, S.; Semesi, A.; Garcia, M.; Singer, A.U.; Savchenko, A.; Montelione, G.T.; Joachimiak, A.; Arrowsmith, C.H.; Northeast Structural Genomics Consortium (NESG); Midwest Center for Structural Genomics (MCSG); Ontario Centre for Structural Proteomics (OCSP)
Deposited on	:	2011-06-28

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/NMRValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references (1)) were used in the production of this report:

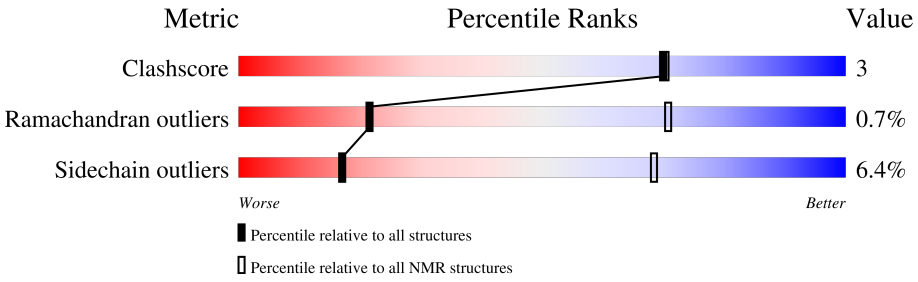
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
BMRB Restraints Analysis	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)

1 Overall quality at a glance (i)

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	101	71% 14% 15%

Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

2 Ensemble composition and analysis

This entry contains 20 models. Model 15 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:222-A:236 (15)	1.36	9
2	A:240-A:267, A:273-A:315 (71)	0.42	15

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

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

The models can be grouped into 4 clusters and 1 single-model cluster was found.

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

3 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 1587 atoms, of which 797 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Effector protein hopAB1.

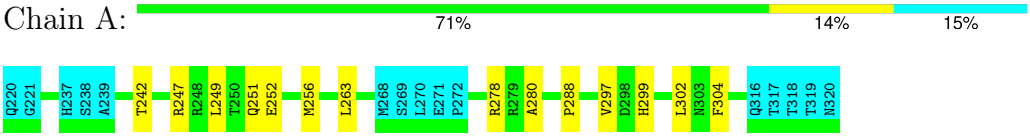
Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	101	1587	483	797	151	153	3	0

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: Effector protein hopAB1

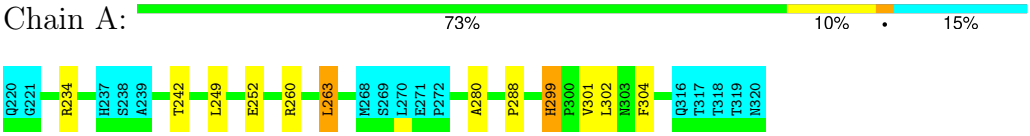


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

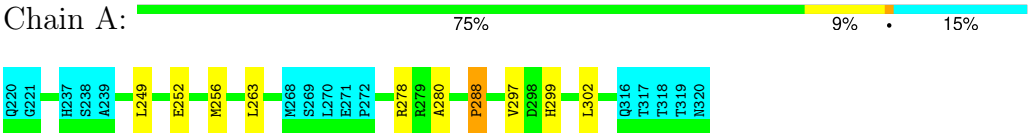
4.2.1 Score per residue for model 1

• Molecule 1: Effector protein hopAB1



4.2.2 Score per residue for model 2

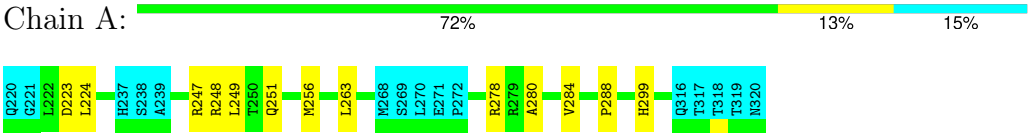
• Molecule 1: Effector protein hopAB1



4.2.3 Score per residue for model 3

• Molecule 1: Effector protein hopAB1

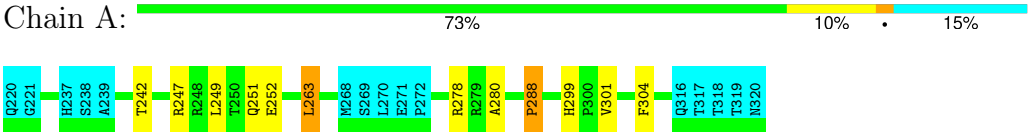
Chain A:



4.2.4 Score per residue for model 4

• Molecule 1: Effector protein hopAB1

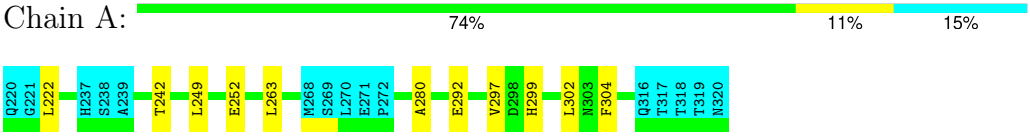
Chain A:



4.2.5 Score per residue for model 5

• Molecule 1: Effector protein hopAB1

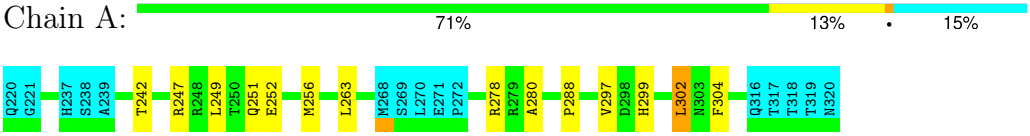
Chain A:



4.2.6 Score per residue for model 6

• Molecule 1: Effector protein hopAB1

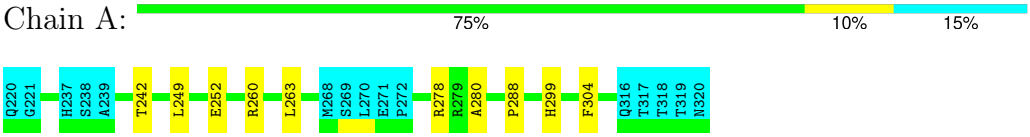
Chain A:



4.2.7 Score per residue for model 7

• Molecule 1: Effector protein hopAB1

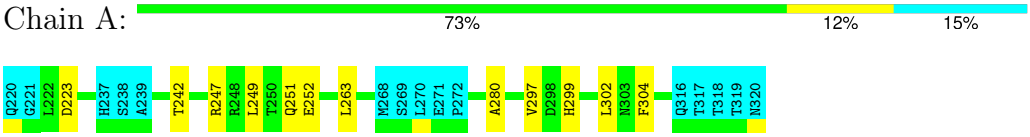
Chain A:



4.2.8 Score per residue for model 8

• Molecule 1: Effector protein hopAB1

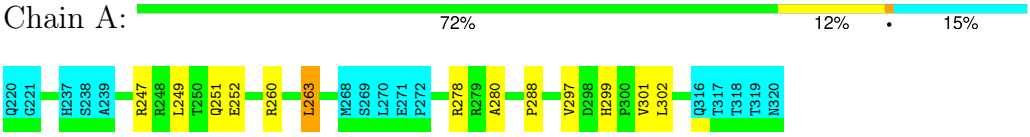
Chain A:



4.2.9 Score per residue for model 9

• Molecule 1: Effector protein hopAB1

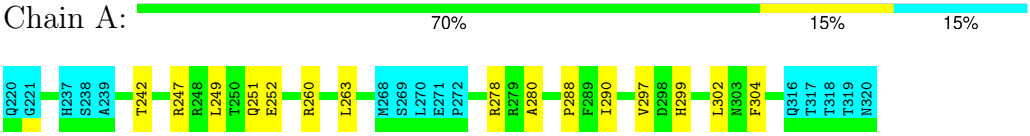
Chain A:



4.2.10 Score per residue for model 10

• Molecule 1: Effector protein hopAB1

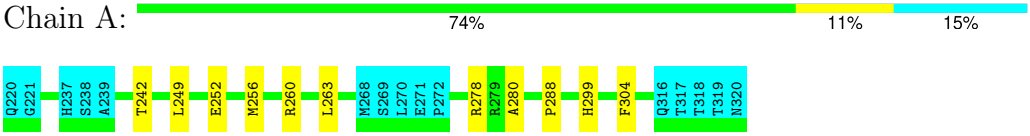
Chain A:



4.2.11 Score per residue for model 11

• Molecule 1: Effector protein hopAB1

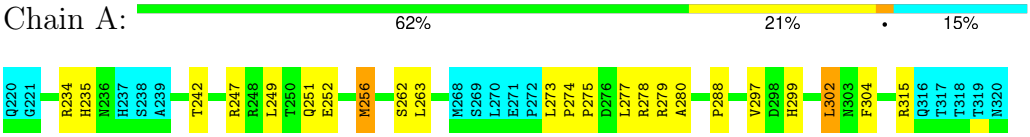
Chain A:



4.2.12 Score per residue for model 12

• Molecule 1: Effector protein hopAB1

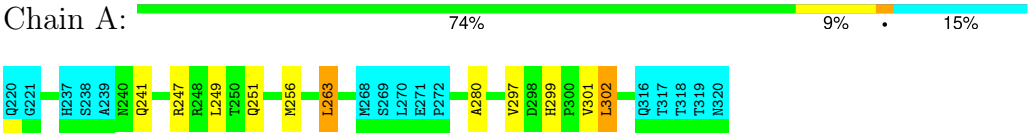
Chain A:



4.2.13 Score per residue for model 13

• Molecule 1: Effector protein hopAB1

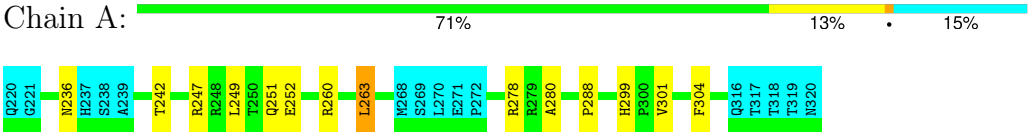
Chain A:



4.2.14 Score per residue for model 14

• Molecule 1: Effector protein hopAB1

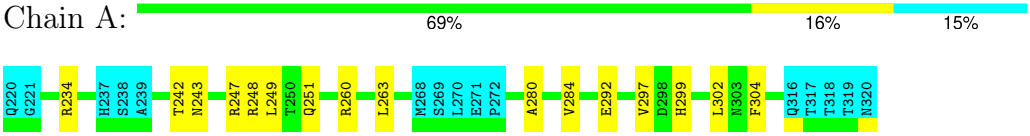
Chain A:



4.2.15 Score per residue for model 15 (medoid)

• Molecule 1: Effector protein hopAB1

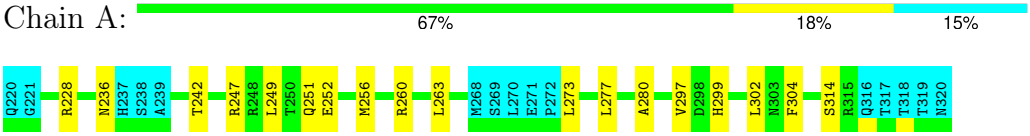
Chain A:



4.2.16 Score per residue for model 16

• Molecule 1: Effector protein hopAB1

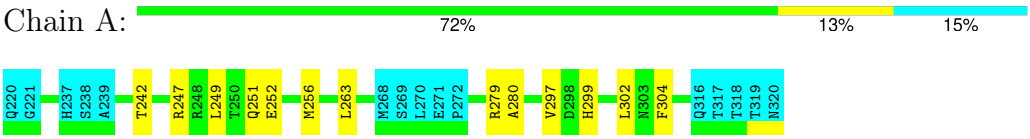
Chain A:



4.2.17 Score per residue for model 17

• Molecule 1: Effector protein hopAB1

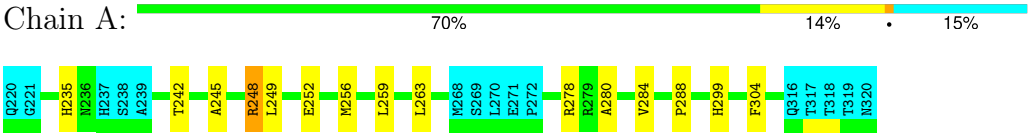
Chain A:



4.2.18 Score per residue for model 18

• Molecule 1: Effector protein hopAB1

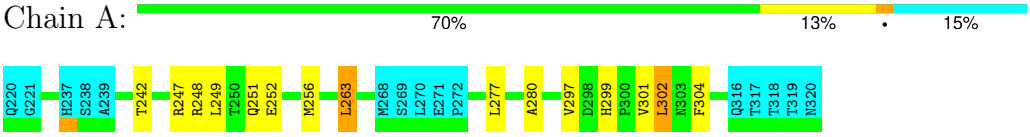
Chain A:



4.2.19 Score per residue for model 19

• Molecule 1: Effector protein hopAB1

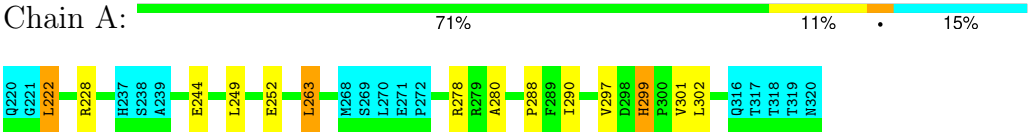
Chain A:



4.2.20 Score per residue for model 20

• Molecule 1: Effector protein hopAB1

Chain A:



5 Refinement protocol and experimental data overview

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

Of the 100 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy.*

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

Software name	Classification	Version
CYANA	structure solution	3.0
CNS	refinement	

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

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	1135
Number of shifts mapped to atoms	1135
Number of unparsed shifts	0
Number of shifts with mapping errors	0
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	679	693	691	5±1
All	All	13580	13860	13820	94

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 3.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:242:THR:HG23	1:A:304:PHE:HA	0.57	1.76	7	15
1:A:278:ARG:HA	1:A:288:PRO:HG3	0.54	1.79	18	11
1:A:249:LEU:HD22	1:A:280:ALA:HB1	0.51	1.83	5	20
1:A:297:VAL:O	1:A:302:LEU:HD12	0.48	2.08	13	13
1:A:263:LEU:HD11	1:A:301:VAL:HG12	0.47	1.87	1	7
1:A:299:HIS:NE2	1:A:302:LEU:HG	0.46	2.24	1	1
1:A:248:ARG:HH11	1:A:284:VAL:HG22	0.46	1.70	15	2
1:A:247:ARG:O	1:A:251:GLN:HG2	0.43	2.13	8	13
1:A:273:LEU:HD12	1:A:277:LEU:HB3	0.43	1.91	12	2
1:A:262:SER:HB3	1:A:274:PRO:HD2	0.43	1.91	12	1
1:A:278:ARG:HA	1:A:288:PRO:HG2	0.42	1.91	12	1
1:A:222:LEU:HD13	1:A:222:LEU:H	0.42	1.74	20	1
1:A:256:MET:SD	1:A:315:ARG:NH1	0.41	2.91	12	1
1:A:290:ILE:HG12	1:A:299:HIS:HB2	0.41	1.91	20	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:248:ARG:HD2	1:A:284:VAL:HG22	0.41	1.92	18	1
1:A:279:ARG:HG3	1:A:280:ALA:N	0.41	2.31	17	1
1:A:275:PRO:O	1:A:279:ARG:HG2	0.40	2.16	12	1
1:A:245:ALA:HB2	1:A:284:VAL:HG11	0.40	1.92	18	1
1:A:273:LEU:HD23	1:A:273:LEU:H	0.40	1.76	12	1

6.3 Torsion angles (i)

6.3.1 Protein backbone (i)

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	86/101 (85%)	81±2 (95±2%)	4±2 (5±2%)	1±1 (1±1%)	21	71
All	All	1720/2020 (85%)	1629 (95%)	79 (5%)	12 (1%)	21	71

All 5 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	234	ARG	3
1	A	288	PRO	3
1	A	223	ASP	2
1	A	235	HIS	2
1	A	236	ASN	2

6.3.2 Protein sidechains (i)

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	74/87 (85%)	69±1 (94±1%)	5±1 (6±1%)	17	68
All	All	1480/1740 (85%)	1386 (94%)	94 (6%)	17	68

All 17 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	263	LEU	20
1	A	299	HIS	20
1	A	252	GLU	17
1	A	256	MET	10
1	A	260	ARG	8
1	A	302	LEU	4
1	A	222	LEU	2
1	A	292	GLU	2
1	A	228	ARG	2
1	A	248	ARG	2
1	A	224	LEU	1
1	A	290	ILE	1
1	A	241	GLN	1
1	A	243	ASN	1
1	A	259	LEU	1
1	A	277	LEU	1
1	A	244	GLU	1

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 81% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping

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	1135
Number of shifts mapped to atoms	1135
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	1

7.1.2 Chemical shift referencing

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction ± precision, *ppm*	Suggested action
$^{13}C_{\alpha}$	92	-0.14 ± 0.14	None needed (< 0.5 ppm)
$^{13}C_{\beta}$	90	0.41 ± 0.06	None needed (< 0.5 ppm)
$^{13}C'$	80	-0.16 ± 0.07	None needed (< 0.5 ppm)
^{15}N	81	-0.52 ± 0.23	Should be applied

7.1.3 Completeness of resonance assignments

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. 1045 atoms were assigned a chemical shift out of a possible 1222. 0 out of 19 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	396/423 (94%)	162/170 (95%)	159/172 (92%)	75/81 (93%)
Sidechain	623/754 (83%)	426/490 (87%)	189/223 (85%)	8/41 (20%)

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	Total	^{1}H	^{13}C	^{15}N
Aromatic	26/45 (58%)	16/22 (73%)	10/19 (53%)	0/4 (0%)
Overall	1045/1222 (86%)	604/682 (89%)	358/414 (86%)	83/126 (66%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 81%, i.e. 1134 atoms were assigned a chemical shift out of a possible 1401. 0 out of 20 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	429/497 (86%)	176/200 (88%)	172/202 (85%)	81/95 (85%)
Sidechain	679/851 (80%)	464/553 (84%)	206/254 (81%)	9/44 (20%)
Aromatic	26/53 (49%)	16/26 (62%)	10/21 (48%)	0/6 (0%)
Overall	1134/1401 (81%)	656/779 (84%)	388/477 (81%)	90/145 (62%)

7.1.4 Statistically unusual chemical shifts (i)

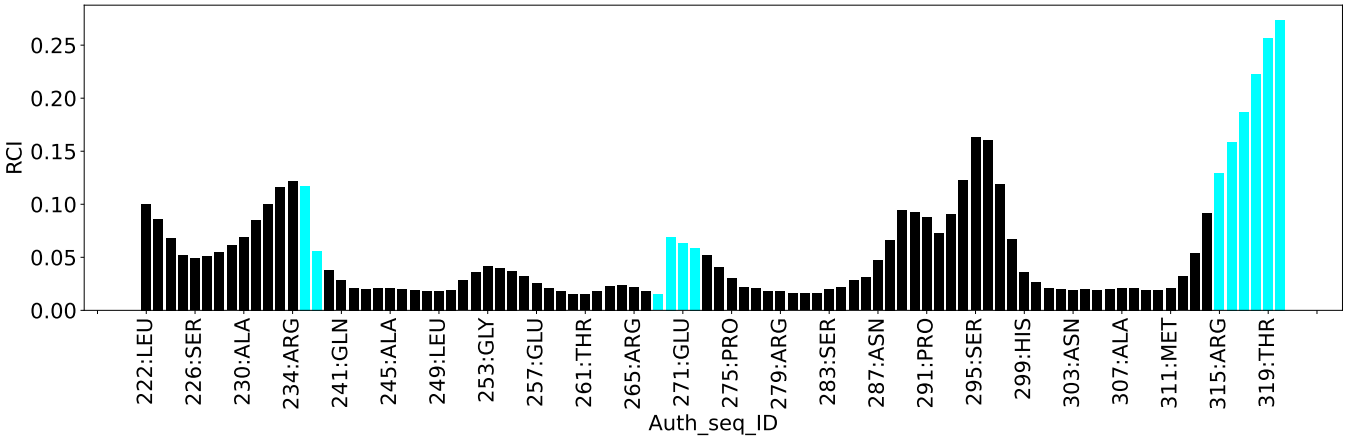
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

List Id	Chain	Res	Type	Atom	Shift, *ppm*	Expected range, *ppm*	Z-score
1	A	250	THR	HG1	4.92	0.08 – 2.19	17.9

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
0.25
0.20
0.15
0.10
0.05
0.00
222:LEU
226:SER
230:ALA
234:ARG
241:GLN
245:ALA
249:LEU
253:GLY
257:GLU
261:THR
265:ARG
271:GLU
275:PRO
279:ARG
283:SER
287:ASN
291:PRO
295:SER
299:HIS
303:ASN
307:ALA
311:MET
315:ARG
319:THR
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	2316
Intra-residue (|i-j|=0)	493
Sequential (|i-j|=1)	509
Medium range (|i-j|>1 and |i-j|<5)	678
Long range (|i-j|≥5)	582
Inter-chain	0
Hydrogen bond restraints	54
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	22.9
Number of long range restraints per residue[1]	5.8

[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)	17.1	0.2
0.2-0.5 (Medium)	1.9	0.29
>0.5 (Large)	None	None

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

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

9 Distance violation analysis (i)

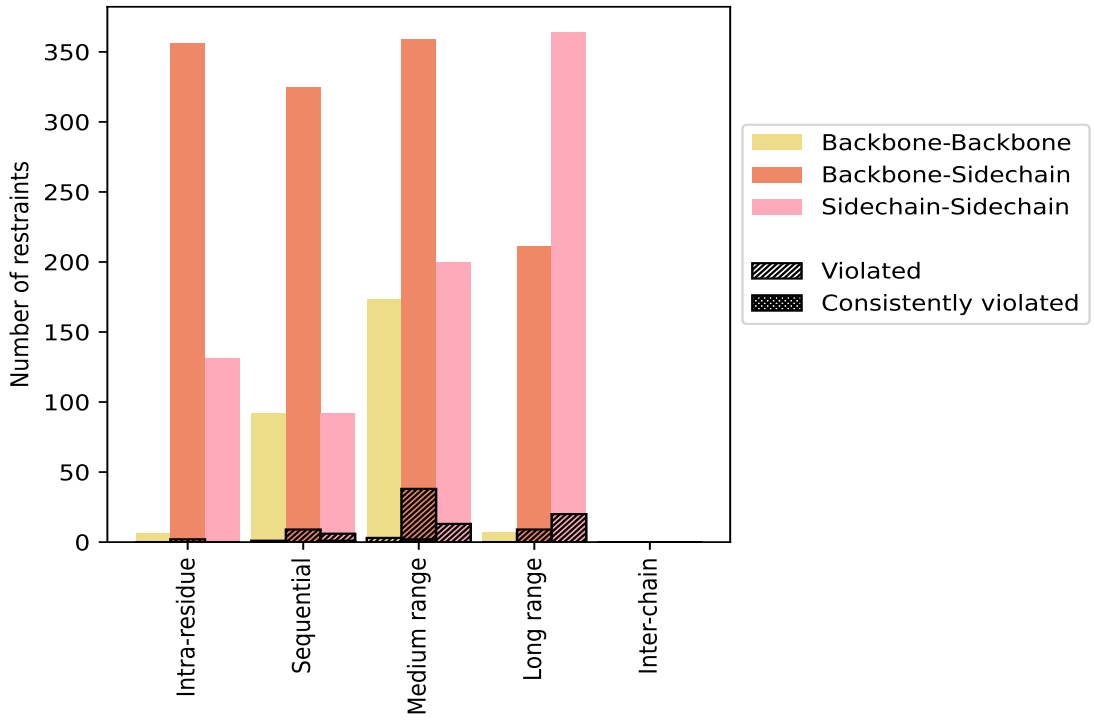
9.1 Summary of distance violations (i)

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

Restraints type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
Intra-residue (|i-j|=0)	493	21.3	2	0.4	0.1	0	0.0	0.0
Backbone-Backbone	6	0.3	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	356	15.4	2	0.6	0.1	0	0.0	0.0
Sidechain-Sidechain	131	5.7	0	0.0	0.0	0	0.0	0.0
Sequential (|i-j|=1)	509	22.0	16	3.1	0.7	1	0.2	0.0
Backbone-Backbone	92	4.0	1	1.1	0.0	0	0.0	0.0
Backbone-Sidechain	325	14.0	9	2.8	0.4	0	0.0	0.0
Sidechain-Sidechain	92	4.0	6	6.5	0.3	1	1.1	0.0
Medium range (|i-j|>1 & |i-j|<5)	678	29.3	37	5.5	1.6	0	0.0	0.0
Backbone-Backbone	173	7.5	3	1.7	0.1	0	0.0	0.0
Backbone-Sidechain	305	13.2	21	6.9	0.9	0	0.0	0.0
Sidechain-Sidechain	200	8.6	13	6.5	0.6	0	0.0	0.0
Long range (|i-j|≥5)	582	25.1	29	5.0	1.3	0	0.0	0.0
Backbone-Backbone	7	0.3	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	211	9.1	9	4.3	0.4	0	0.0	0.0
Sidechain-Sidechain	364	15.7	20	5.5	0.9	0	0.0	0.0
Inter-chain	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	54	2.3	17	31.5	0.7	2	3.7	0.1
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	2316	100.0	101	4.4	4.4	3	0.1	0.1
Backbone-Backbone	278	12.0	4	1.4	0.2	0	0.0	0.0
Backbone-Sidechain	1251	54.0	58	4.6	2.5	2	0.2	0.1
Sidechain-Sidechain	787	34.0	39	5.0	1.7	1	0.1	0.0

[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	1	5	6	4	0	16	0.14	0.19	0.02	0.15
2	1	3	11	6	0	21	0.14	0.24	0.04	0.13
3	0	2	12	7	0	21	0.15	0.24	0.04	0.14
4	0	3	8	5	0	16	0.13	0.2	0.03	0.12
5	1	3	15	6	0	25	0.14	0.28	0.04	0.12
6	0	4	12	6	0	22	0.13	0.2	0.03	0.13
7	0	4	13	5	0	22	0.14	0.25	0.04	0.13
8	0	2	13	5	0	20	0.15	0.29	0.05	0.15
9	0	7	6	5	0	18	0.15	0.27	0.04	0.14
10	0	5	13	10	0	28	0.14	0.22	0.04	0.13

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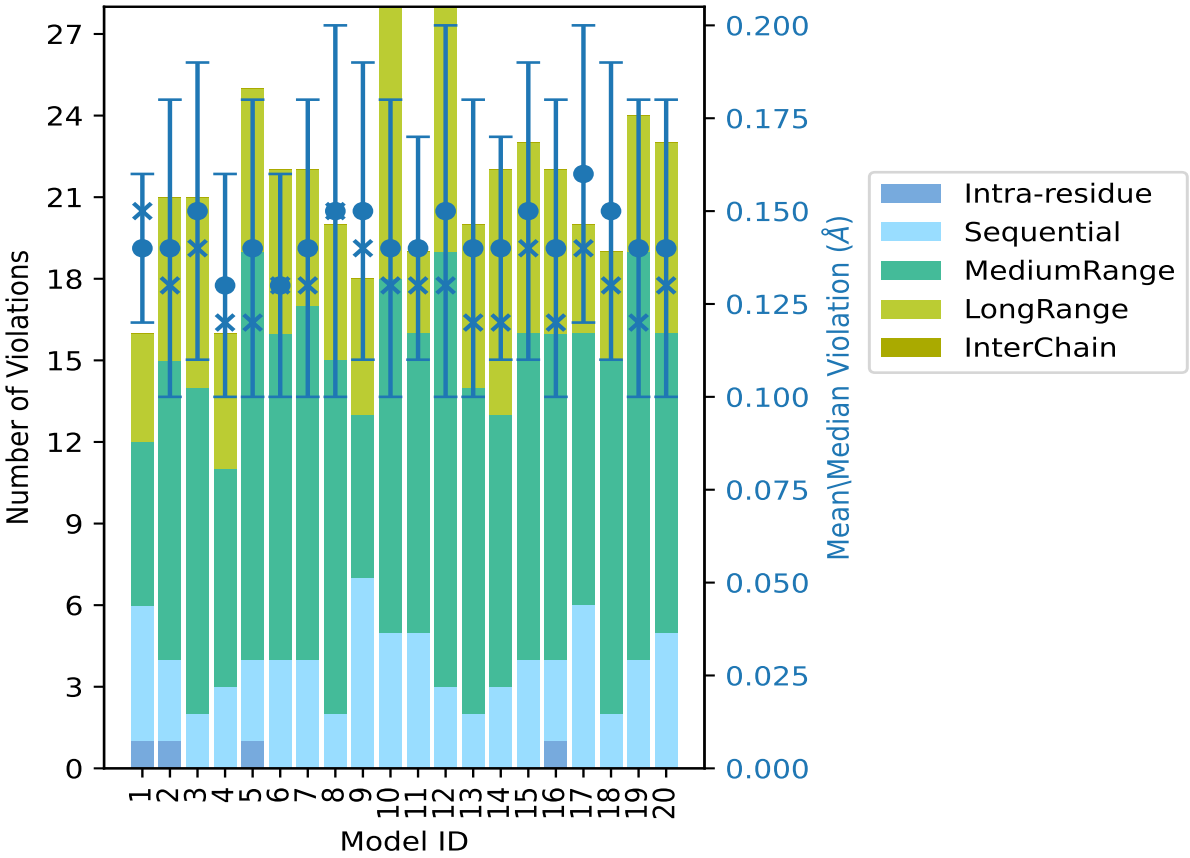
Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
11	0	5	11	3	0	19	0.14	0.23	0.03	0.13
12	0	3	16	9	0	28	0.15	0.29	0.05	0.13
13	0	2	12	6	0	20	0.14	0.24	0.04	0.12
14	0	3	10	9	0	22	0.14	0.22	0.03	0.12
15	0	4	12	7	0	23	0.15	0.25	0.04	0.14
16	1	3	12	6	0	22	0.14	0.23	0.04	0.12
17	0	6	10	4	0	20	0.16	0.26	0.04	0.14
18	0	2	13	4	0	19	0.15	0.25	0.04	0.13
19	0	4	15	5	0	24	0.14	0.25	0.04	0.12
20	0	5	11	7	0	23	0.14	0.26	0.04	0.13

[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

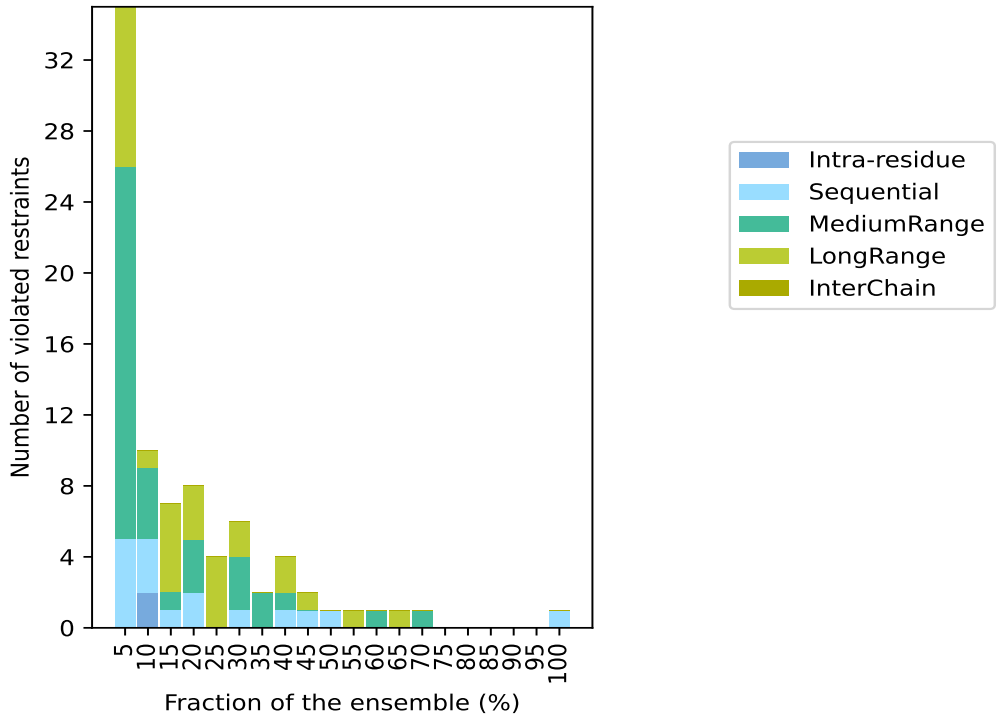
9.3 Distance violation statistics for the ensemble (i)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 2178(IR:491, SQ:493, MR:641, LR:553, 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	5	21	9	0	35	1	5.0
2	3	4	1	0	10	2	10.0
0	1	1	5	0	7	3	15.0
0	2	3	3	0	8	4	20.0
0	0	0	4	0	4	5	25.0
0	1	3	2	0	6	6	30.0
0	0	2	0	0	2	7	35.0
0	1	1	2	0	4	8	40.0
0	1	0	1	0	2	9	45.0
0	1	0	0	0	1	10	50.0
0	0	0	1	0	1	11	55.0
0	0	1	0	0	1	12	60.0
0	0	0	1	0	1	13	65.0
0	0	1	0	0	1	14	70.0
0	0	0	0	0	0	15	75.0
0	0	0	0	0	0	16	80.0
0	0	0	0	0	0	17	85.0
0	0	0	0	0	0	18	90.0
0	0	0	0	0	0	19	95.0
0	1	0	0	0	1	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

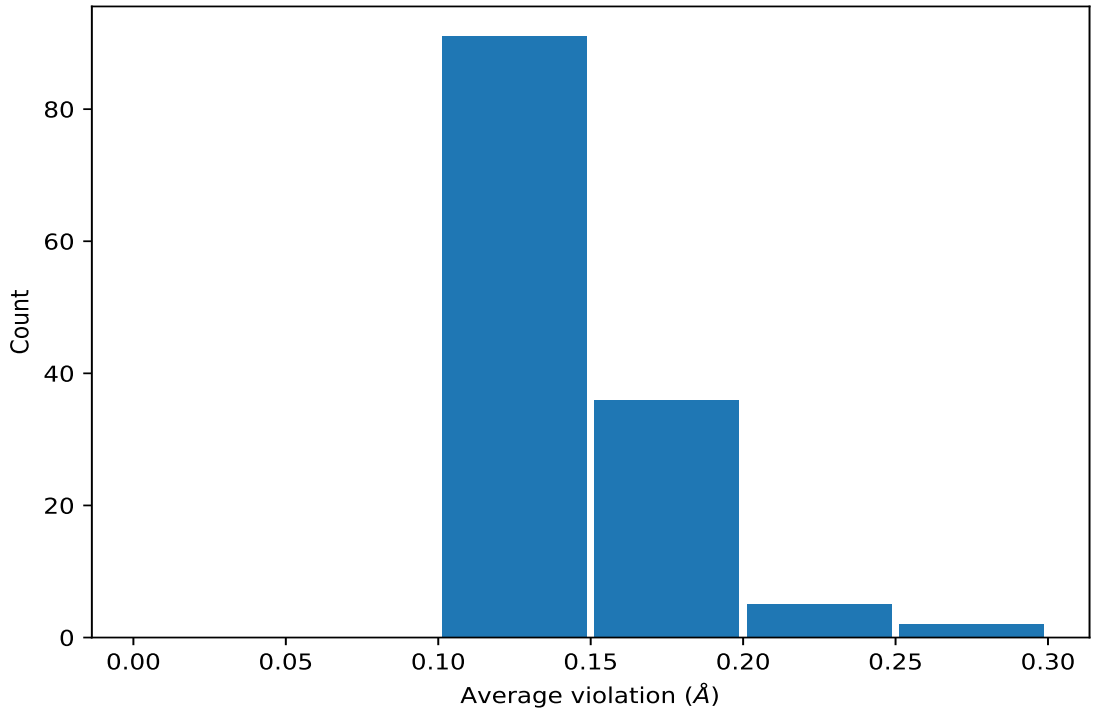
9.3.1 Bar graph : Distance violation statistics for the ensemble



9.4 Most violated distance restraints in the ensemble

9.4.1 Histogram : Distribution of mean distance 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



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)
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	20	0.22	0.03	0.22
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	20	0.19	0.04	0.19
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	20	0.14	0.02	0.14
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	17	0.14	0.04	0.12
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	14	0.15	0.03	0.14
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	14	0.12	0.02	0.12
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	13	0.13	0.02	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	13	0.13	0.02	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	13	0.13	0.02	0.13
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	12	0.16	0.03	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	12	0.16	0.03	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	12	0.16	0.03	0.16
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	11	0.14	0.02	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	11	0.13	0.02	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	11	0.13	0.02	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	11	0.13	0.02	0.13

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	10	0.13	0.02	0.14
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	10	0.13	0.02	0.12
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	9	0.15	0.03	0.15
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	9	0.13	0.01	0.14
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	9	0.13	0.01	0.14
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	9	0.13	0.01	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	8	0.15	0.04	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	8	0.15	0.04	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	8	0.15	0.04	0.14
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	8	0.15	0.04	0.14
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	8	0.15	0.04	0.14
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	8	0.15	0.04	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	8	0.13	0.02	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	8	0.13	0.02	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	8	0.13	0.02	0.14
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	8	0.12	0.01	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	8	0.12	0.01	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	8	0.12	0.01	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	8	0.12	0.01	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	8	0.12	0.01	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	8	0.12	0.01	0.12
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	7	0.13	0.03	0.12
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	7	0.12	0.01	0.12
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	7	0.12	0.01	0.12
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	7	0.12	0.01	0.12
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	6	0.17	0.06	0.16
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	6	0.15	0.02	0.14
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	6	0.14	0.03	0.14
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	6	0.14	0.03	0.14
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	6	0.14	0.03	0.14
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	6	0.13	0.02	0.12
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	6	0.12	0.02	0.12
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	6	0.12	0.02	0.12
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	6	0.12	0.02	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	6	0.11	0.01	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	6	0.11	0.01	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	6	0.11	0.01	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	5	0.16	0.06	0.15

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	5	0.16	0.06	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	5	0.16	0.06	0.15
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	5	0.13	0.03	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	5	0.13	0.03	0.12
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	5	0.12	0.01	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	5	0.12	0.01	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	5	0.12	0.01	0.13
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	5	0.12	0.02	0.12
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	5	0.12	0.01	0.12
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	5	0.11	0.0	0.11
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	5	0.11	0.0	0.11
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	5	0.11	0.0	0.11
(1,163)	1:240:A:ASN:HB2	1:241:A:GLN:HG2	4	0.25	0.02	0.26
(1,163)	1:240:A:ASN:HB3	1:241:A:GLN:HG2	4	0.25	0.02	0.26
(1,320)	1:244:A:GLU:HG2	1:248:A:ARG:H	4	0.16	0.04	0.17
(1,1546)	1:286:A:ILE:HG21	1:288:A:PRO:HD2	4	0.16	0.03	0.16
(1,1546)	1:286:A:ILE:HG22	1:288:A:PRO:HD2	4	0.16	0.03	0.16
(1,1546)	1:286:A:ILE:HG23	1:288:A:PRO:HD2	4	0.16	0.03	0.16
(1,773)	1:254:A:VAL:HG21	1:279:A:ARG:HG3	4	0.15	0.01	0.15
(1,773)	1:254:A:VAL:HG22	1:279:A:ARG:HG3	4	0.15	0.01	0.15
(1,773)	1:254:A:VAL:HG23	1:279:A:ARG:HG3	4	0.15	0.01	0.15
(1,1763)	1:294:A:LEU:HG	1:297:A:VAL:HB	4	0.14	0.03	0.13
(1,1692)	1:291:A:PRO:HG3	1:292:A:GLU:H	4	0.13	0.02	0.13
(1,1018)	1:260:A:ARG:HD2	1:312:A:LEU:H	4	0.12	0.01	0.12
(1,1018)	1:260:A:ARG:HD3	1:312:A:LEU:H	4	0.12	0.01	0.12
(1,1597)	1:287:A:ASN:HB2	1:300:A:PRO:HG3	4	0.12	0.01	0.12
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG2	3	0.2	0.03	0.21
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG3	3	0.2	0.03	0.21
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG2	3	0.2	0.03	0.21
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG3	3	0.2	0.03	0.21
(1,540)	1:248:A:ARG:HD2	1:284:A:VAL:HB	3	0.18	0.03	0.19
(1,298)	1:244:A:GLU:HB3	1:245:A:ALA:H	3	0.17	0.05	0.19
(1,984)	1:260:A:ARG:HG2	1:305:A:SER:HA	3	0.15	0.02	0.14

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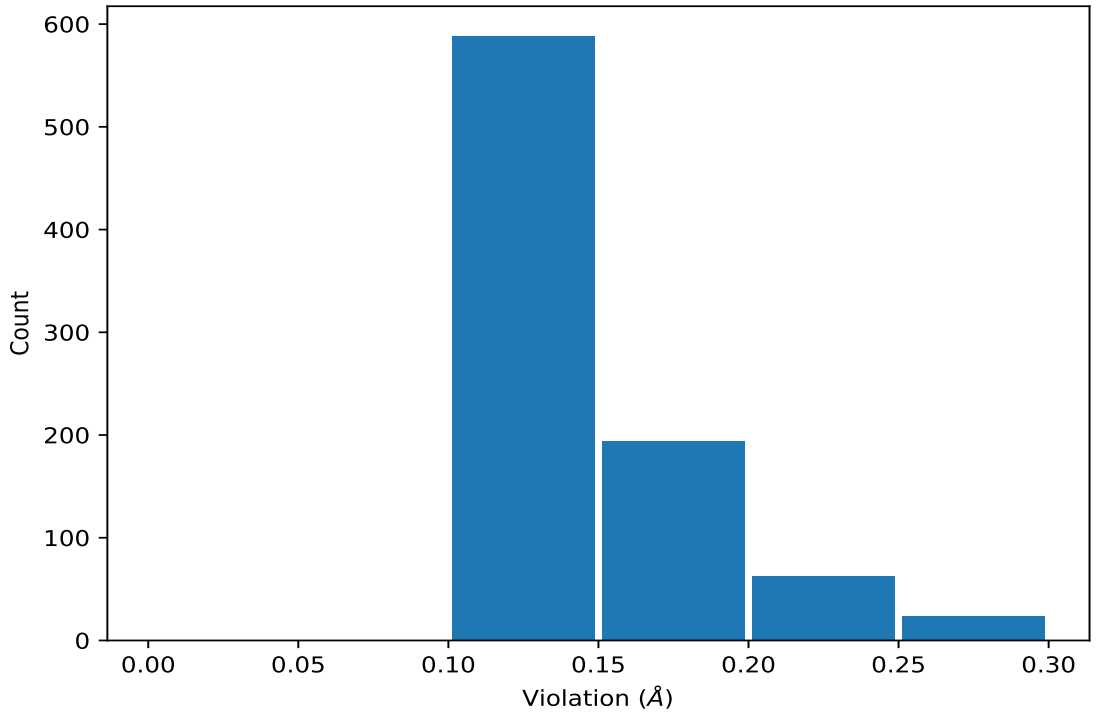
Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(2,15)	1:247:A:ARG:O	1:251:A:GLN:H	3	0.13	0.02	0.13
(1,1477)	1:282:A:GLU:HB2	1:287:A:ASN:HD22	3	0.12	0.01	0.12
(2,8)	1:243:A:ASN:O	1:247:A:ARG:N	3	0.12	0.0	0.12
(1,404)	1:246:A:LEU:HD21	1:263:A:LEU:HG	3	0.11	0.01	0.1
(1,404)	1:246:A:LEU:HD22	1:263:A:LEU:HG	3	0.11	0.01	0.1
(1,404)	1:246:A:LEU:HD23	1:263:A:LEU:HG	3	0.11	0.01	0.1
(1,1771)	1:294:A:LEU:HD11	1:299:A:HIS:HA	3	0.11	0.01	0.11
(1,1771)	1:294:A:LEU:HD12	1:299:A:HIS:HA	3	0.11	0.01	0.11
(1,1771)	1:294:A:LEU:HD13	1:299:A:HIS:HA	3	0.11	0.01	0.11
(2,30)	1:276:A:ASP:O	1:280:A:ALA:N	3	0.1	0.0	0.1
(1,136)	1:233:A:ALA:HB1	1:234:A:ARG:H	2	0.18	0.04	0.18
(1,136)	1:233:A:ALA:HB2	1:234:A:ARG:H	2	0.18	0.04	0.18
(1,136)	1:233:A:ALA:HB3	1:234:A:ARG:H	2	0.18	0.04	0.18
(1,1813)	1:296:A:LEU:HB2	1:299:A:HIS:H	2	0.14	0.02	0.14
(1,1813)	1:296:A:LEU:HB3	1:299:A:HIS:H	2	0.14	0.02	0.14
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD2	2	0.12	0.01	0.12
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD3	2	0.12	0.01	0.12
(1,169)	1:240:A:ASN:HA	1:243:A:ASN:HB3	2	0.12	0.02	0.12
(1,332)	1:245:A:ALA:HA	1:248:A:ARG:HD2	2	0.12	0.0	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD21	2	0.12	0.0	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD22	2	0.12	0.0	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD23	2	0.12	0.0	0.12
(2,39)	1:303:A:ASN:O	1:307:A:ALA:H	2	0.12	0.01	0.12
(1,518)	1:248:A:ARG:HG2	1:249:A:LEU:H	2	0.12	0.02	0.12
(1,576)	1:249:A:LEU:H	1:252:A:GLU:HG3	2	0.11	0.01	0.11
(2,46)	1:306:A:ALA:O	1:310:A:ARG:N	2	0.11	0.0	0.11
(2,50)	1:308:A:LEU:O	1:312:A:LEU:N	2	0.11	0.01	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD11	2	0.11	0.0	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD12	2	0.11	0.0	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD13	2	0.11	0.0	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD21	2	0.11	0.0	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD22	2	0.11	0.0	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD23	2	0.11	0.0	0.11
(2,31)	1:277:A:LEU:O	1:281:A:LEU:H	2	0.11	0.0	0.11

[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 (i)

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

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	8	0.29
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	12	0.29
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	5	0.28
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	9	0.27
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	9	0.27
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	9	0.27
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	9	0.27
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	9	0.27
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	9	0.27
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	9	0.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	9	0.27
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	9	0.27
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	20	0.26
(1,163)	1:240:A:ASN:HB2	1:241:A:GLN:HG2	17	0.26
(1,163)	1:240:A:ASN:HB3	1:241:A:GLN:HG2	17	0.26
(1,163)	1:240:A:ASN:HB2	1:241:A:GLN:HG2	20	0.26
(1,163)	1:240:A:ASN:HB3	1:241:A:GLN:HG2	20	0.26
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	19	0.25
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	19	0.25
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	19	0.25
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	7	0.25
(1,338)	1:245:A:ALA:H	1:248:A:ARG:HG3	18	0.25
(1,163)	1:240:A:ASN:HB2	1:241:A:GLN:HG2	15	0.25
(1,163)	1:240:A:ASN:HB3	1:241:A:GLN:HG2	15	0.25
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	2	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	3	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	12	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	13	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	15	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	17	0.24
(1,61)	1:225:A:GLU:HA	1:228:A:ARG:HD2	8	0.24
(1,61)	1:225:A:GLU:HA	1:228:A:ARG:HD3	8	0.24
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	9	0.23
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	16	0.23
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	3	0.23
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	15	0.23
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	2	0.23
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	11	0.23
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	11	0.23
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	11	0.23
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG2	12	0.23
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG3	12	0.23
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG2	12	0.23
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG3	12	0.23
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	19	0.22
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	19	0.22
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	19	0.22
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	19	0.22
(1,298)	1:244:A:GLU:HB3	1:245:A:ALA:H	7	0.22
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	14	0.22
(1,163)	1:240:A:ASN:HB2	1:241:A:GLN:HG2	10	0.22
(1,163)	1:240:A:ASN:HB3	1:241:A:GLN:HG2	10	0.22

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,136)	1:233:A:ALA:HB1	1:234:A:ARG:H	13	0.22
(1,136)	1:233:A:ALA:HB2	1:234:A:ARG:H	13	0.22
(1,136)	1:233:A:ALA:HB3	1:234:A:ARG:H	13	0.22
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	7	0.21
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	18	0.21
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	17	0.21
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	8	0.21
(1,540)	1:248:A:ARG:HD2	1:284:A:VAL:HB	16	0.21
(1,320)	1:244:A:GLU:HG2	1:248:A:ARG:H	15	0.21
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG2	17	0.21
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG3	17	0.21
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG2	17	0.21
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG3	17	0.21
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	8	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	4	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	5	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	6	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	10	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	14	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	19	0.2
(1,1546)	1:286:A:ILE:HG21	1:288:A:PRO:HD2	15	0.2
(1,1546)	1:286:A:ILE:HG22	1:288:A:PRO:HD2	15	0.2
(1,1546)	1:286:A:ILE:HG23	1:288:A:PRO:HD2	15	0.2
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	4	0.2
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	9	0.2
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	20	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	3	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	3	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	3	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	10	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	10	0.2
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	10	0.2
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	10	0.2
(1,320)	1:244:A:GLU:HG2	1:248:A:ARG:H	14	0.2
(1,311)	1:244:A:GLU:HA	1:248:A:ARG:HG3	18	0.2
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	11	0.19
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	18	0.19
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	12	0.19
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	12	0.19
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	12	0.19
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	1	0.19
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	5	0.19

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	6	0.19
(1,540)	1:248:A:ARG:HD2	1:284:A:VAL:HB	8	0.19
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	3	0.19
(1,298)	1:244:A:GLU:HB3	1:245:A:ALA:H	17	0.19
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	8	0.18
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	11	0.18
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	13	0.18
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	13	0.18
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	13	0.18
(1,1763)	1:294:A:LEU:HG	1:297:A:VAL:HB	20	0.18
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	10	0.18
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	14	0.18
(1,984)	1:260:A:ARG:HG2	1:305:A:SER:HA	18	0.18
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	1	0.18
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	16	0.18
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	16	0.18
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	13	0.18
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	13	0.18
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	13	0.18
(1,489)	1:247:A:ARG:HG2	1:250:A:THR:H	12	0.18
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	2	0.17
(1,1546)	1:286:A:ILE:HG21	1:288:A:PRO:HD2	12	0.17
(1,1546)	1:286:A:ILE:HG22	1:288:A:PRO:HD2	12	0.17
(1,1546)	1:286:A:ILE:HG23	1:288:A:PRO:HD2	12	0.17
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	2	0.17
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	16	0.17
(1,782)	1:255:A:ASP:HA	1:256:A:MET:HG3	9	0.17
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	10	0.17
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	14	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	4	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	4	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	4	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	6	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	6	0.17
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	6	0.17
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	2	0.17
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	3	0.17
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	3	0.17
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	3	0.17
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	10	0.17
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	10	0.17
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	10	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	10	0.17
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	10	0.17
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	10	0.17
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	10	0.17
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	10	0.17
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	10	0.17
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	2	0.17
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	5	0.16
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	8	0.16
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	6	0.16
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	12	0.16
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	20	0.16
(2,37)	1:280:A:ALA:O	1:284:A:VAL:H	1	0.16
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	12	0.16
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	15	0.16
(2,15)	1:247:A:ARG:O	1:251:A:GLN:H	7	0.16
(2,14)	1:246:A:LEU:O	1:250:A:THR:N	18	0.16
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	3	0.16
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	17	0.16
(1,1825)	1:297:A:VAL:H	1:298:A:ASP:HA	16	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	5	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	5	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	5	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	12	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	12	0.16
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	12	0.16
(1,1692)	1:291:A:PRO:HG3	1:292:A:GLU:H	1	0.16
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	18	0.16
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	18	0.16
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	18	0.16
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	17	0.16
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	19	0.16
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	3	0.16
(1,969)	1:260:A:ARG:HD2	1:261:A:THR:HA	11	0.16
(1,969)	1:260:A:ARG:HD3	1:261:A:THR:HA	11	0.16
(1,773)	1:254:A:VAL:HG21	1:279:A:ARG:HG3	16	0.16
(1,773)	1:254:A:VAL:HG22	1:279:A:ARG:HG3	16	0.16
(1,773)	1:254:A:VAL:HG23	1:279:A:ARG:HG3	16	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	1	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	1	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	1	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	14	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	14	0.16
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	14	0.16
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	15	0.16
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	15	0.16
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	15	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	3	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	3	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	3	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	5	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	5	0.16
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	5	0.16
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	9	0.16
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	7	0.16
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	7	0.16
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	7	0.16
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	8	0.16
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	17	0.16
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	17	0.16
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	17	0.16
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	14	0.15
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	13	0.15
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	20	0.15
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	2	0.15
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	7	0.15
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	8	0.15
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	12	0.15
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	13	0.15
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	13	0.15
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	13	0.15
(1,1813)	1:296:A:LEU:HB2	1:299:A:HIS:H	7	0.15
(1,1813)	1:296:A:LEU:HB3	1:299:A:HIS:H	7	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	7	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	7	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	7	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	7	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	7	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	7	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	7	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	7	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	7	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	10	0.15
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	10	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	10	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	10	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	10	0.15
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	10	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	10	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	10	0.15
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	10	0.15
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	14	0.15
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	14	0.15
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	14	0.15
(1,1763)	1:294:A:LEU:HG	1:297:A:VAL:HB	4	0.15
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	1	0.15
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	1	0.15
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	1	0.15
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	18	0.15
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	7	0.15
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	10	0.15
(1,773)	1:254:A:VAL:HG21	1:279:A:ARG:HG3	1	0.15
(1,773)	1:254:A:VAL:HG22	1:279:A:ARG:HG3	1	0.15
(1,773)	1:254:A:VAL:HG23	1:279:A:ARG:HG3	1	0.15
(1,717)	1:252:A:GLU:HB3	1:254:A:VAL:HB	3	0.15
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	4	0.15
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	14	0.15
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	14	0.15
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	14	0.15
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	14	0.15
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	14	0.15
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	14	0.15
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	5	0.15
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	5	0.15
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	5	0.15
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	5	0.15
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	5	0.15
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	5	0.15
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	5	0.15
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	5	0.15
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	5	0.15
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	10	0.15
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	10	0.15
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	10	0.15
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	19	0.15
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	1	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	1	0.15
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	1	0.15
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	8	0.15
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	8	0.15
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	8	0.15
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	15	0.15
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	11	0.15
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	11	0.15
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	11	0.15
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG2	15	0.15
(1,58)	1:225:A:GLU:HG2	1:228:A:ARG:HG3	15	0.15
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG2	15	0.15
(1,58)	1:225:A:GLU:HG3	1:228:A:ARG:HG3	15	0.15
(1,45)	1:224:A:LEU:HD11	1:228:A:ARG:HB3	9	0.15
(1,45)	1:224:A:LEU:HD12	1:228:A:ARG:HB3	9	0.15
(1,45)	1:224:A:LEU:HD13	1:228:A:ARG:HB3	9	0.15
(1,45)	1:224:A:LEU:HD21	1:228:A:ARG:HB3	9	0.15
(1,45)	1:224:A:LEU:HD22	1:228:A:ARG:HB3	9	0.15
(1,45)	1:224:A:LEU:HD23	1:228:A:ARG:HB3	9	0.15
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	2	0.14
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	3	0.14
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	9	0.14
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	4	0.14
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	9	0.14
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	10	0.14
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	15	0.14
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	17	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	6	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	6	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	6	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	10	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	10	0.14
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	10	0.14
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	8	0.14
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	8	0.14
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	8	0.14
(1,1692)	1:291:A:PRO:HG3	1:292:A:GLU:H	17	0.14
(1,1546)	1:286:A:ILE:HG21	1:288:A:PRO:HD2	20	0.14
(1,1546)	1:286:A:ILE:HG22	1:288:A:PRO:HD2	20	0.14
(1,1546)	1:286:A:ILE:HG23	1:288:A:PRO:HD2	20	0.14
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	2	0.14
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	2	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	2	0.14
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	10	0.14
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	10	0.14
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	10	0.14
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	11	0.14
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	11	0.14
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	11	0.14
(1,1477)	1:282:A:GLU:HB2	1:287:A:ASN:HD22	12	0.14
(1,1466)	1:282:A:GLU:HA	1:286:A:ILE:H	11	0.14
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	11	0.14
(1,1449)	1:282:A:GLU:HB3	1:283:A:SER:HB2	13	0.14
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	6	0.14
(1,1018)	1:260:A:ARG:HD2	1:312:A:LEU:H	15	0.14
(1,1018)	1:260:A:ARG:HD3	1:312:A:LEU:H	15	0.14
(1,984)	1:260:A:ARG:HG2	1:305:A:SER:HA	14	0.14
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	15	0.14
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	15	0.14
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	15	0.14
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	15	0.14
(1,773)	1:254:A:VAL:HG21	1:279:A:ARG:HG3	5	0.14
(1,773)	1:254:A:VAL:HG22	1:279:A:ARG:HG3	5	0.14
(1,773)	1:254:A:VAL:HG23	1:279:A:ARG:HG3	5	0.14
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	3	0.14
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	7	0.14
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	8	0.14
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	11	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	2	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	2	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	2	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	13	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	13	0.14
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	13	0.14
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	12	0.14
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	12	0.14
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	12	0.14
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	17	0.14
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	17	0.14
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	17	0.14
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	1	0.14
(1,540)	1:248:A:ARG:HD2	1:284:A:VAL:HB	17	0.14
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	6	0.14
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	6	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	6	0.14
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	18	0.14
(1,320)	1:244:A:GLU:HG2	1:248:A:ARG:H	5	0.14
(1,307)	1:244:A:GLU:H	1:247:A:ARG:HD2	17	0.14
(1,307)	1:244:A:GLU:H	1:247:A:ARG:HD3	17	0.14
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	17	0.14
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	17	0.14
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	17	0.14
(1,169)	1:240:A:ASN:HA	1:243:A:ASN:HB3	12	0.14
(1,136)	1:233:A:ALA:HB1	1:234:A:ARG:H	19	0.14
(1,136)	1:233:A:ALA:HB2	1:234:A:ARG:H	19	0.14
(1,136)	1:233:A:ALA:HB3	1:234:A:ARG:H	19	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	1	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	1	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	1	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	8	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	8	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	8	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	9	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	9	0.14
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	9	0.14
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	19	0.13
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	11	0.13
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	12	0.13
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	17	0.13
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	19	0.13
(2,39)	1:303:A:ASN:O	1:307:A:ALA:H	6	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	3	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	9	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	10	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	13	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	15	0.13
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	17	0.13
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	3	0.13
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	16	0.13
(2,15)	1:247:A:ARG:O	1:251:A:GLN:H	3	0.13
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	13	0.13
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	20	0.13
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	7	0.13
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	18	0.13
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	5	0.13
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	6	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	6	0.13
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	6	0.13
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	20	0.13
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	20	0.13
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	20	0.13
(1,1666)	1:290:A:ILE:HG12	1:294:A:LEU:HD11	7	0.13
(1,1666)	1:290:A:ILE:HG12	1:294:A:LEU:HD12	7	0.13
(1,1666)	1:290:A:ILE:HG12	1:294:A:LEU:HD13	7	0.13
(1,1597)	1:287:A:ASN:HB2	1:300:A:PRO:HG3	7	0.13
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	17	0.13
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	17	0.13
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	17	0.13
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	16	0.13
(1,1043)	1:262:A:SER:HB2	1:265:A:ARG:HD2	19	0.13
(1,1043)	1:262:A:SER:HB2	1:265:A:ARG:HD3	19	0.13
(1,1043)	1:262:A:SER:HB3	1:265:A:ARG:HD2	19	0.13
(1,1043)	1:262:A:SER:HB3	1:265:A:ARG:HD3	19	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	17	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	17	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	17	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	20	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	20	0.13
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	20	0.13
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	20	0.13
(1,884)	1:257:A:GLU:HG2	1:312:A:LEU:HD11	12	0.13
(1,884)	1:257:A:GLU:HG2	1:312:A:LEU:HD12	12	0.13
(1,884)	1:257:A:GLU:HG2	1:312:A:LEU:HD13	12	0.13
(1,884)	1:257:A:GLU:HG3	1:312:A:LEU:HD11	12	0.13
(1,884)	1:257:A:GLU:HG3	1:312:A:LEU:HD12	12	0.13
(1,884)	1:257:A:GLU:HG3	1:312:A:LEU:HD13	12	0.13
(1,799)	1:255:A:ASP:HB3	1:258:A:ARG:HD2	16	0.13
(1,799)	1:255:A:ASP:HB3	1:258:A:ARG:HD3	16	0.13
(1,793)	1:255:A:ASP:H	1:258:A:ARG:HB3	6	0.13
(1,773)	1:254:A:VAL:HG21	1:279:A:ARG:HG3	14	0.13
(1,773)	1:254:A:VAL:HG22	1:279:A:ARG:HG3	14	0.13
(1,773)	1:254:A:VAL:HG23	1:279:A:ARG:HG3	14	0.13
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	6	0.13
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	18	0.13
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	19	0.13
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	5	0.13
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	5	0.13
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	5	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	7	0.13
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	10	0.13
(1,570)	1:249:A:LEU:H	1:252:A:GLU:HG2	20	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	1	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	1	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	1	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	1	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	1	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	1	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	9	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	9	0.13
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	9	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	9	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	9	0.13
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	9	0.13
(1,518)	1:248:A:ARG:HG2	1:249:A:LEU:H	12	0.13
(1,404)	1:246:A:LEU:HD21	1:263:A:LEU:HG	18	0.13
(1,404)	1:246:A:LEU:HD22	1:263:A:LEU:HG	18	0.13
(1,404)	1:246:A:LEU:HD23	1:263:A:LEU:HG	18	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	9	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	9	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	9	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	15	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	15	0.13
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	15	0.13
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	5	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	5	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	5	0.13
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	6	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	6	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	6	0.13
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	11	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	11	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	11	0.13
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	12	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	12	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	12	0.13
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	15	0.13
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	15	0.13
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	15	0.13
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD2	2	0.13
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD3	2	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	20	0.13
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	20	0.13
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	20	0.13
(2,50)	1:308:A:LEU:O	1:312:A:LEU:N	14	0.12
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	6	0.12
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	16	0.12
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	12	0.12
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	10	0.12
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	18	0.12
(2,38)	1:280:A:ALA:O	1:284:A:VAL:N	16	0.12
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	18	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	1	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	2	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	11	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	14	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	16	0.12
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	19	0.12
(2,8)	1:243:A:ASN:O	1:247:A:ARG:N	7	0.12
(2,8)	1:243:A:ASN:O	1:247:A:ARG:N	18	0.12
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	5	0.12
(1,2250)	1:316:A:GLN:HG2	1:317:A:THR:H	1	0.12
(1,2250)	1:316:A:GLN:HG3	1:317:A:THR:H	1	0.12
(1,1911)	1:302:A:LEU:HB3	1:304:A:PHE:H	1	0.12
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	2	0.12
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	13	0.12
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	5	0.12
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	5	0.12
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	5	0.12
(1,1813)	1:296:A:LEU:HB2	1:299:A:HIS:H	10	0.12
(1,1813)	1:296:A:LEU:HB3	1:299:A:HIS:H	10	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD21	6	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD22	6	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD23	6	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD21	7	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD22	7	0.12
(1,1777)	1:295:A:SER:HB2	1:296:A:LEU:HD23	7	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	4	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	4	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	4	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	19	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	19	0.12
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	19	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1771)	1:294:A:LEU:HD11	1:299:A:HIS:HA	14	0.12
(1,1771)	1:294:A:LEU:HD12	1:299:A:HIS:HA	14	0.12
(1,1771)	1:294:A:LEU:HD13	1:299:A:HIS:HA	14	0.12
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	13	0.12
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	13	0.12
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	13	0.12
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	15	0.12
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	15	0.12
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	15	0.12
(1,1692)	1:291:A:PRO:HG3	1:292:A:GLU:H	6	0.12
(1,1597)	1:287:A:ASN:HB2	1:300:A:PRO:HG3	12	0.12
(1,1546)	1:286:A:ILE:HG21	1:288:A:PRO:HD2	18	0.12
(1,1546)	1:286:A:ILE:HG22	1:288:A:PRO:HD2	18	0.12
(1,1546)	1:286:A:ILE:HG23	1:288:A:PRO:HD2	18	0.12
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	16	0.12
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	16	0.12
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	16	0.12
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	20	0.12
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	20	0.12
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	20	0.12
(1,1477)	1:282:A:GLU:HB2	1:287:A:ASN:HD22	20	0.12
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	11	0.12
(1,1018)	1:260:A:ARG:HD2	1:312:A:LEU:H	2	0.12
(1,1018)	1:260:A:ARG:HD3	1:312:A:LEU:H	2	0.12
(1,1018)	1:260:A:ARG:HD2	1:312:A:LEU:H	20	0.12
(1,1018)	1:260:A:ARG:HD3	1:312:A:LEU:H	20	0.12
(1,984)	1:260:A:ARG:HG2	1:305:A:SER:HA	3	0.12
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	12	0.12
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	12	0.12
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	12	0.12
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	2	0.12
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	4	0.12
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	5	0.12
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	19	0.12
(1,699)	1:251:A:GLN:H	1:254:A:VAL:H	13	0.12
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	7	0.12
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	7	0.12
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	7	0.12
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	5	0.12
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	5	0.12
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	5	0.12
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	14	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	14	0.12
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	14	0.12
(1,576)	1:249:A:LEU:H	1:252:A:GLU:HG3	15	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	3	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	3	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	3	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	3	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	3	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	3	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	6	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	6	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	6	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	6	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	6	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	6	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	15	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	15	0.12
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	15	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	15	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	15	0.12
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	15	0.12
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	6	0.12
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	6	0.12
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	6	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	6	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	6	0.12
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	6	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	6	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	6	0.12
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	6	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	2	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	2	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	2	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	18	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	18	0.12
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	18	0.12
(1,333)	1:245:A:ALA:HA	1:248:A:ARG:HD3	5	0.12
(1,332)	1:245:A:ALA:HA	1:248:A:ARG:HD2	16	0.12
(1,332)	1:245:A:ALA:HA	1:248:A:ARG:HD2	19	0.12
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	13	0.12
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	14	0.12
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	14	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	14	0.12
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	16	0.12
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	16	0.12
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	16	0.12
(1,221)	1:242:A:THR:HG21	1:246:A:LEU:HB2	3	0.12
(1,221)	1:242:A:THR:HG22	1:246:A:LEU:HB2	3	0.12
(1,221)	1:242:A:THR:HG23	1:246:A:LEU:HB2	3	0.12
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD2	1	0.12
(1,140)	1:234:A:ARG:H	1:234:A:ARG:HD3	1	0.12
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	4	0.11
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	16	0.11
(2,46)	1:306:A:ALA:O	1:310:A:ARG:N	6	0.11
(2,46)	1:306:A:ALA:O	1:310:A:ARG:N	20	0.11
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	2	0.11
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	7	0.11
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	11	0.11
(2,39)	1:303:A:ASN:O	1:307:A:ALA:H	10	0.11
(2,31)	1:277:A:LEU:O	1:281:A:LEU:H	13	0.11
(2,30)	1:276:A:ASP:O	1:280:A:ALA:N	19	0.11
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	4	0.11
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	5	0.11
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	9	0.11
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	10	0.11
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	13	0.11
(2,15)	1:247:A:ARG:O	1:251:A:GLN:H	2	0.11
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	5	0.11
(2,13)	1:246:A:LEU:O	1:250:A:THR:H	6	0.11
(2,8)	1:243:A:ASN:O	1:247:A:ARG:N	5	0.11
(1,2206)	1:312:A:LEU:H	1:315:A:ARG:HB2	15	0.11
(1,2206)	1:312:A:LEU:H	1:315:A:ARG:HB3	15	0.11
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	4	0.11
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	4	0.11
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	4	0.11
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	14	0.11
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	14	0.11
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	14	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	6	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	6	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	6	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	9	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	9	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	9	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	15	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	15	0.11
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	15	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	4	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	4	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	4	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	4	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	4	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	4	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	4	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	4	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	4	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD11	15	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD12	15	0.11
(1,1773)	1:294:A:LEU:HD21	1:302:A:LEU:HD13	15	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD11	15	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD12	15	0.11
(1,1773)	1:294:A:LEU:HD22	1:302:A:LEU:HD13	15	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD11	15	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD12	15	0.11
(1,1773)	1:294:A:LEU:HD23	1:302:A:LEU:HD13	15	0.11
(1,1771)	1:294:A:LEU:HD11	1:299:A:HIS:HA	8	0.11
(1,1771)	1:294:A:LEU:HD12	1:299:A:HIS:HA	8	0.11
(1,1771)	1:294:A:LEU:HD13	1:299:A:HIS:HA	8	0.11
(1,1763)	1:294:A:LEU:HG	1:297:A:VAL:HB	5	0.11
(1,1763)	1:294:A:LEU:HG	1:297:A:VAL:HB	19	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD21	10	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD22	10	0.11
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD23	10	0.11
(1,1597)	1:287:A:ASN:HB2	1:300:A:PRO:HG3	1	0.11
(1,1539)	1:286:A:ILE:HG21	1:287:A:ASN:HB2	9	0.11
(1,1539)	1:286:A:ILE:HG22	1:287:A:ASN:HB2	9	0.11
(1,1539)	1:286:A:ILE:HG23	1:287:A:ASN:HB2	9	0.11
(1,1477)	1:282:A:GLU:HB2	1:287:A:ASN:HD22	7	0.11
(1,1221)	1:274:A:PRO:HB3	1:276:A:ASP:HB3	12	0.11
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	12	0.11
(1,1114)	1:263:A:LEU:HB3	1:305:A:SER:H	19	0.11
(1,1078)	1:263:A:LEU:HA	1:277:A:LEU:HD11	20	0.11
(1,1078)	1:263:A:LEU:HA	1:277:A:LEU:HD12	20	0.11
(1,1078)	1:263:A:LEU:HA	1:277:A:LEU:HD13	20	0.11
(1,1018)	1:260:A:ARG:HD2	1:312:A:LEU:H	19	0.11
(1,1018)	1:260:A:ARG:HD3	1:312:A:LEU:H	19	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,980)	1:260:A:ARG:HA	1:263:A:LEU:HD21	19	0.11
(1,980)	1:260:A:ARG:HA	1:263:A:LEU:HD22	19	0.11
(1,980)	1:260:A:ARG:HA	1:263:A:LEU:HD23	19	0.11
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	2	0.11
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	2	0.11
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	2	0.11
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	3	0.11
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	3	0.11
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	3	0.11
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	10	0.11
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	10	0.11
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	10	0.11
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	19	0.11
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	19	0.11
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	19	0.11
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	12	0.11
(1,821)	1:256:A:MET:HE1	1:257:A:GLU:H	9	0.11
(1,821)	1:256:A:MET:HE2	1:257:A:GLU:H	9	0.11
(1,821)	1:256:A:MET:HE3	1:257:A:GLU:H	9	0.11
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG21	19	0.11
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG22	19	0.11
(1,660)	1:250:A:THR:HA	1:254:A:VAL:HG23	19	0.11
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	11	0.11
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	11	0.11
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	11	0.11
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	19	0.11
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	19	0.11
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	19	0.11
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	11	0.11
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	11	0.11
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	11	0.11
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	12	0.11
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	12	0.11
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	12	0.11
(1,564)	1:249:A:LEU:HD21	1:252:A:GLU:HB2	14	0.11
(1,564)	1:249:A:LEU:HD22	1:252:A:GLU:HB2	14	0.11
(1,564)	1:249:A:LEU:HD23	1:252:A:GLU:HB2	14	0.11
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	4	0.11
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	4	0.11
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	4	0.11
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	4	0.11
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	4	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	4	0.11
(1,498)	1:247:A:ARG:HA	1:251:A:GLN:HE22	20	0.11
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	13	0.11
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	13	0.11
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	13	0.11
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	13	0.11
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	13	0.11
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	13	0.11
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	13	0.11
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	13	0.11
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	13	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	12	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	12	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	12	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	13	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	13	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	13	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD11	14	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD12	14	0.11
(1,402)	1:246:A:LEU:HB3	1:259:A:LEU:HD13	14	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD11	5	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD12	5	0.11
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD13	5	0.11
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	4	0.11
(1,324)	1:244:A:GLU:HG3	1:284:A:VAL:HB	20	0.11
(1,323)	1:244:A:GLU:HG2	1:284:A:VAL:HB	8	0.11
(1,320)	1:244:A:GLU:HG2	1:248:A:ARG:H	8	0.11
(1,298)	1:244:A:GLU:HB3	1:245:A:ALA:H	11	0.11
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	4	0.11
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	4	0.11
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	4	0.11
(1,232)	1:242:A:THR:HB	1:303:A:ASN:HB2	10	0.11
(1,232)	1:242:A:THR:HB	1:303:A:ASN:HB3	10	0.11
(1,169)	1:240:A:ASN:HA	1:243:A:ASN:HB3	5	0.11
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	10	0.11
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	10	0.11
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	10	0.11
(2,50)	1:308:A:LEU:O	1:312:A:LEU:N	19	0.1
(2,49)	1:308:A:LEU:O	1:312:A:LEU:H	7	0.1
(2,47)	1:307:A:ALA:O	1:311:A:MET:H	10	0.1
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	3	0.1
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	8	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(2,45)	1:306:A:ALA:O	1:310:A:ARG:H	16	0.1
(2,40)	1:303:A:ASN:O	1:307:A:ALA:N	6	0.1
(2,31)	1:277:A:LEU:O	1:281:A:LEU:H	20	0.1
(2,30)	1:276:A:ASP:O	1:280:A:ALA:N	8	0.1
(2,30)	1:276:A:ASP:O	1:280:A:ALA:N	17	0.1
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	6	0.1
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	7	0.1
(2,29)	1:276:A:ASP:O	1:280:A:ALA:H	11	0.1
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	8	0.1
(2,7)	1:243:A:ASN:O	1:247:A:ARG:H	12	0.1
(1,2023)	1:307:A:ALA:HB1	1:310:A:ARG:HD2	10	0.1
(1,2023)	1:307:A:ALA:HB2	1:310:A:ARG:HD2	10	0.1
(1,2023)	1:307:A:ALA:HB3	1:310:A:ARG:HD2	10	0.1
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	8	0.1
(1,1866)	1:299:A:HIS:H	1:302:A:LEU:HG	12	0.1
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD11	18	0.1
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD12	18	0.1
(1,1860)	1:299:A:HIS:HB2	1:302:A:LEU:HD13	18	0.1
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD11	2	0.1
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD12	2	0.1
(1,1816)	1:296:A:LEU:HA	1:302:A:LEU:HD13	2	0.1
(1,1815)	1:296:A:LEU:H	1:299:A:HIS:H	20	0.1
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD21	3	0.1
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD22	3	0.1
(1,1776)	1:295:A:SER:HB3	1:296:A:LEU:HD23	3	0.1
(1,1771)	1:294:A:LEU:HD11	1:299:A:HIS:HA	11	0.1
(1,1771)	1:294:A:LEU:HD12	1:299:A:HIS:HA	11	0.1
(1,1771)	1:294:A:LEU:HD13	1:299:A:HIS:HA	11	0.1
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	3	0.1
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	3	0.1
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	3	0.1
(1,1770)	1:294:A:LEU:HD21	1:299:A:HIS:HD2	20	0.1
(1,1770)	1:294:A:LEU:HD22	1:299:A:HIS:HD2	20	0.1
(1,1770)	1:294:A:LEU:HD23	1:299:A:HIS:HD2	20	0.1
(1,1692)	1:291:A:PRO:HG3	1:292:A:GLU:H	14	0.1
(1,1681)	1:290:A:ILE:HD11	1:299:A:HIS:HD2	2	0.1
(1,1681)	1:290:A:ILE:HD12	1:299:A:HIS:HD2	2	0.1
(1,1681)	1:290:A:ILE:HD13	1:299:A:HIS:HD2	2	0.1
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD21	4	0.1
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD22	4	0.1
(1,1672)	1:290:A:ILE:HG13	1:296:A:LEU:HD23	4	0.1
(1,1597)	1:287:A:ASN:HB2	1:300:A:PRO:HG3	10	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,957)	1:259:A:LEU:HD11	1:308:A:LEU:HB3	9	0.1
(1,957)	1:259:A:LEU:HD12	1:308:A:LEU:HB3	9	0.1
(1,957)	1:259:A:LEU:HD13	1:308:A:LEU:HB3	9	0.1
(1,952)	1:259:A:LEU:HD11	1:304:A:PHE:HE1	17	0.1
(1,952)	1:259:A:LEU:HD11	1:304:A:PHE:HE2	17	0.1
(1,952)	1:259:A:LEU:HD12	1:304:A:PHE:HE1	17	0.1
(1,952)	1:259:A:LEU:HD12	1:304:A:PHE:HE2	17	0.1
(1,952)	1:259:A:LEU:HD13	1:304:A:PHE:HE1	17	0.1
(1,952)	1:259:A:LEU:HD13	1:304:A:PHE:HE2	17	0.1
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD21	16	0.1
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD22	16	0.1
(1,938)	1:259:A:LEU:HB2	1:277:A:LEU:HD23	16	0.1
(1,898)	1:258:A:ARG:H	1:259:A:LEU:HG	14	0.1
(1,881)	1:257:A:GLU:HA	1:312:A:LEU:HB3	7	0.1
(1,659)	1:250:A:THR:HG21	1:253:A:GLY:H	15	0.1
(1,659)	1:250:A:THR:HG22	1:253:A:GLY:H	15	0.1
(1,659)	1:250:A:THR:HG23	1:253:A:GLY:H	15	0.1
(1,606)	1:249:A:LEU:HD21	1:280:A:ALA:HB1	16	0.1
(1,606)	1:249:A:LEU:HD21	1:280:A:ALA:HB2	16	0.1
(1,606)	1:249:A:LEU:HD21	1:280:A:ALA:HB3	16	0.1
(1,606)	1:249:A:LEU:HD22	1:280:A:ALA:HB1	16	0.1
(1,606)	1:249:A:LEU:HD22	1:280:A:ALA:HB2	16	0.1
(1,606)	1:249:A:LEU:HD22	1:280:A:ALA:HB3	16	0.1
(1,606)	1:249:A:LEU:HD23	1:280:A:ALA:HB1	16	0.1
(1,606)	1:249:A:LEU:HD23	1:280:A:ALA:HB2	16	0.1
(1,606)	1:249:A:LEU:HD23	1:280:A:ALA:HB3	16	0.1
(1,605)	1:249:A:LEU:HB3	1:280:A:ALA:HA	5	0.1
(1,576)	1:249:A:LEU:H	1:252:A:GLU:HG3	16	0.1
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD11	10	0.1
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD12	10	0.1
(1,543)	1:248:A:ARG:HB2	1:286:A:ILE:HD13	10	0.1
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD11	10	0.1
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD12	10	0.1
(1,543)	1:248:A:ARG:HB3	1:286:A:ILE:HD13	10	0.1
(1,518)	1:248:A:ARG:HG2	1:249:A:LEU:H	9	0.1
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD11	12	0.1
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD12	12	0.1
(1,441)	1:246:A:LEU:HD11	1:308:A:LEU:HD13	12	0.1
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD11	12	0.1
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD12	12	0.1
(1,441)	1:246:A:LEU:HD12	1:308:A:LEU:HD13	12	0.1
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD11	12	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD12	12	0.1
(1,441)	1:246:A:LEU:HD13	1:308:A:LEU:HD13	12	0.1
(1,404)	1:246:A:LEU:HD21	1:263:A:LEU:HG	13	0.1
(1,404)	1:246:A:LEU:HD22	1:263:A:LEU:HG	13	0.1
(1,404)	1:246:A:LEU:HD23	1:263:A:LEU:HG	13	0.1
(1,404)	1:246:A:LEU:HD21	1:263:A:LEU:HG	14	0.1
(1,404)	1:246:A:LEU:HD22	1:263:A:LEU:HG	14	0.1
(1,404)	1:246:A:LEU:HD23	1:263:A:LEU:HG	14	0.1
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD11	16	0.1
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD12	16	0.1
(1,379)	1:246:A:LEU:H	1:246:A:LEU:HD13	16	0.1
(1,237)	1:242:A:THR:HG21	1:304:A:PHE:HA	10	0.1
(1,237)	1:242:A:THR:HG22	1:304:A:PHE:HA	10	0.1
(1,237)	1:242:A:THR:HG23	1:304:A:PHE:HA	10	0.1
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	13	0.1
(1,213)	1:242:A:THR:H	1:244:A:GLU:HG2	18	0.1
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB1	5	0.1
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB2	5	0.1
(1,112)	1:229:A:LEU:HG	1:230:A:ALA:HB3	5	0.1

10 Dihedral-angle violation analysis (i)

No dihedral-angle restraints found