



Full wwPDB NMR Structure Validation Report ⓘ

Mar 5, 2026 – 02:34 PM UTC

PDB ID : 2MZT / pdb_00002mzt
BMRB ID : 25499
Title : NMR structure of the RRM3 domain of Hrb1
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Deposited on : 2015-02-23

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with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
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) : 2.49

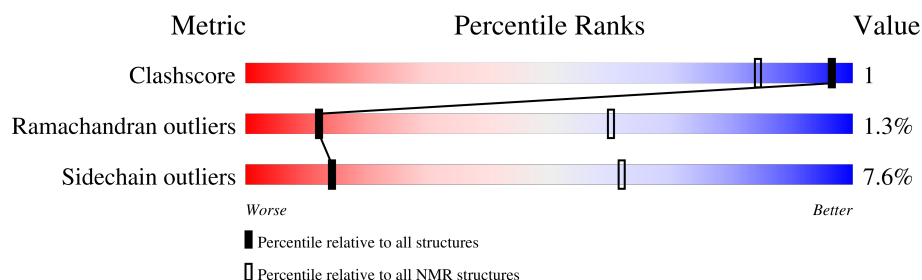
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 82%.

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	229148	14424
Ramachandran outliers	224038	12848
Sidechain outliers	223484	12823

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

Mol	Chain	Length	Quality of chain
1	A	100	70% 8% 22%

2 Ensemble composition and analysis

This entry contains 20 models. Model 6 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *closest to the average*.

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

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:363-A:408, A:416-A:441, A:446-A:451 (78)	0.20	6

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 4 single-model clusters were found.

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

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 1523 atoms, of which 743 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Protein HRB1.

Mol	Chain	Residues	Atoms						Trace
1	A	100	Total	C	H	N	O	S	0
			1523	482	743	133	162	3	

There are 2 discrepancies between the modelled and reference sequences:

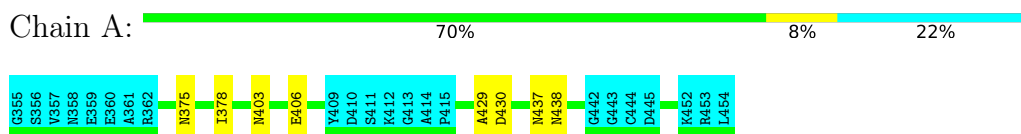
Chain	Residue	Modelled	Actual	Comment	Reference
A	355	GLY	-	expression tag	UNP P38922
A	356	SER	-	expression tag	UNP P38922

4 Residue-property plots [i](#)

4.1 Average score per residue in the NMR ensemble

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

- Molecule 1: Protein HRB1

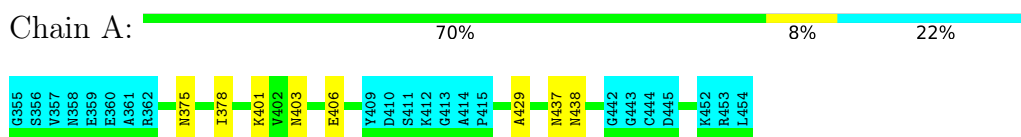


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

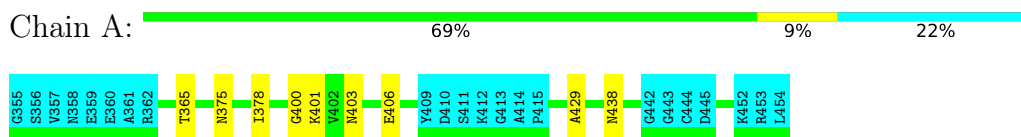
4.2.1 Score per residue for model 1

- Molecule 1: Protein HRB1



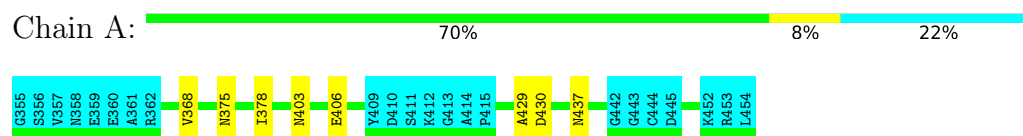
4.2.2 Score per residue for model 2

- Molecule 1: Protein HRB1



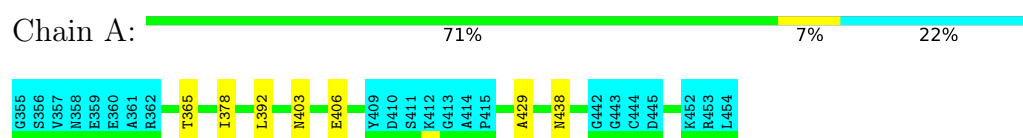
4.2.3 Score per residue for model 3

- Molecule 1: Protein HRB1



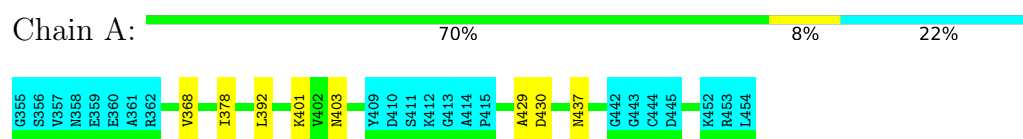
4.2.4 Score per residue for model 4

- Molecule 1: Protein HRB1



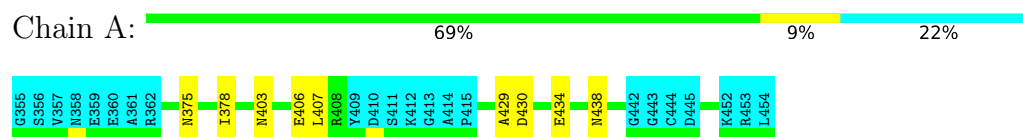
4.2.5 Score per residue for model 5

- Molecule 1: Protein HRB1



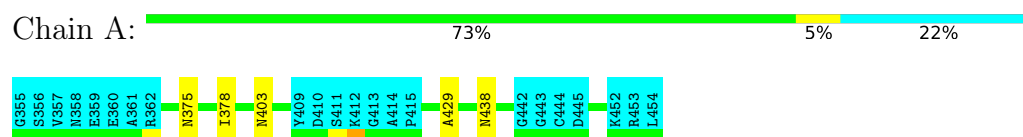
4.2.6 Score per residue for model 6 (medoid)

- Molecule 1: Protein HRB1



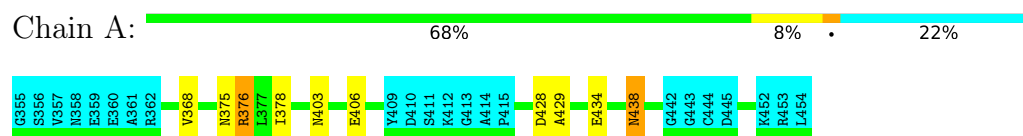
4.2.7 Score per residue for model 7

- Molecule 1: Protein HRB1



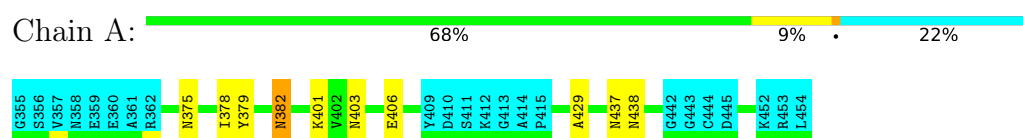
4.2.8 Score per residue for model 8

- Molecule 1: Protein HRB1



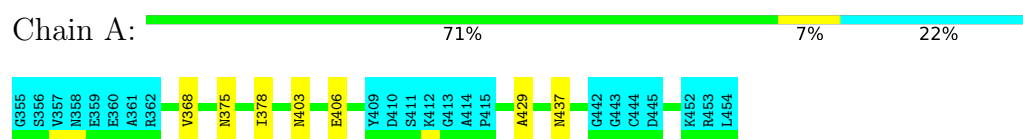
4.2.9 Score per residue for model 9

- Molecule 1: Protein HRB1



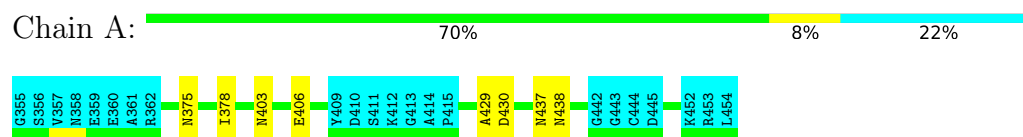
4.2.10 Score per residue for model 10

- Molecule 1: Protein HRB1



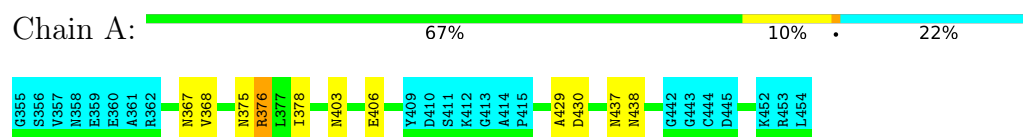
4.2.11 Score per residue for model 11

- Molecule 1: Protein HRB1



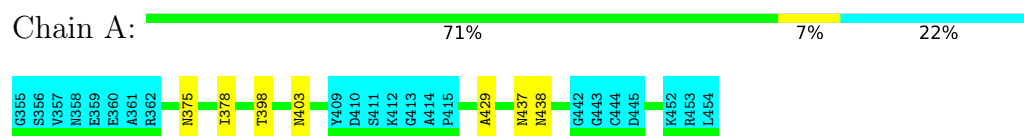
4.2.12 Score per residue for model 12

- Molecule 1: Protein HRB1



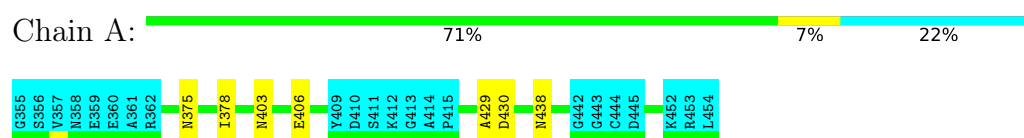
4.2.13 Score per residue for model 13

- Molecule 1: Protein HRB1



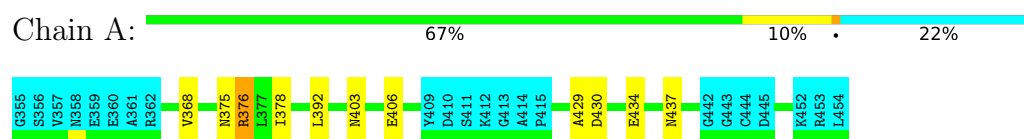
4.2.14 Score per residue for model 14

- Molecule 1: Protein HRB1



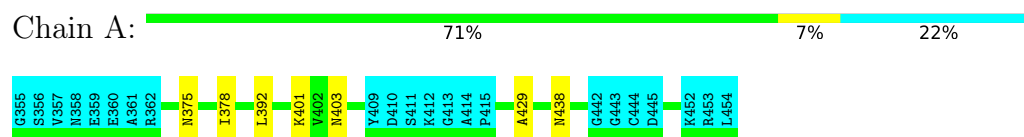
4.2.15 Score per residue for model 15

- Molecule 1: Protein HRB1



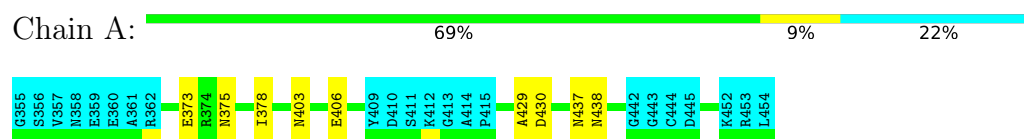
4.2.16 Score per residue for model 16

- Molecule 1: Protein HRB1



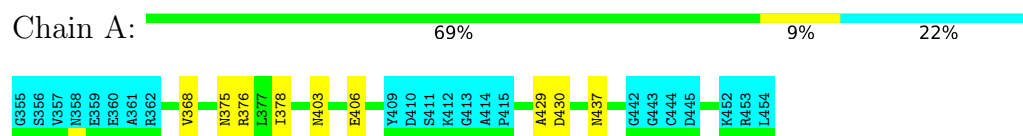
4.2.17 Score per residue for model 17

- Molecule 1: Protein HRB1



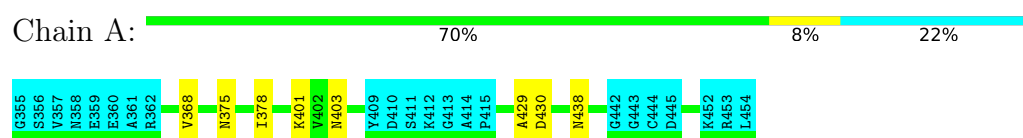
4.2.18 Score per residue for model 18

- Molecule 1: Protein HRB1



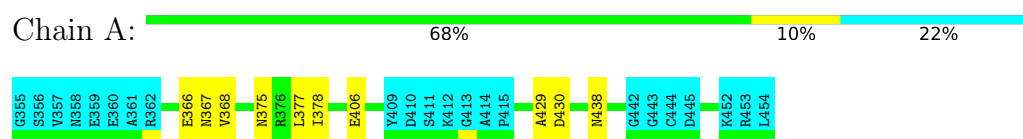
4.2.19 Score per residue for model 19

- Molecule 1: Protein HRB1



4.2.20 Score per residue for model 20

- Molecule 1: Protein HRB1



5 Refinement protocol and experimental data overview

Of the 100 calculated structures, 20 were deposited, based on the following criterion: *target function*.

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

Software name	Classification	Version
CYANA	structure solution	
Amber	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	1066
Number of shifts mapped to atoms	1066
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	82%

6 Model quality

6.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	0.80±0.01	0±0/629 (0.0± 0.0%)	1.30±0.02	0±0/855 (0.0± 0.1%)
All	All	0.80	0/12580 (0.0%)	1.30	3/17100 (0.0%)

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

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

There are no bond-length outliers.

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	437	ASN	CA-C-N	5.63	129.87	120.70	18	1
1	A	437	ASN	C-N-CA	5.63	129.87	120.70	18	1
1	A	382	ASN	CA-CB-CG	5.36	117.96	112.60	9	1

There are no chirality outliers.

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

Mol	Chain	Res	Type	Group	Models (Total)
1	A	437	ASN	Peptide	6
1	A	379	TYR	Sidechain	1

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	619	590	590	1±0
All	All	12380	11800	11800	20

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 1.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:378:ILE:HD11	1:A:429:ALA:HB1	0.73	1.59	2	20

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	78/100 (78%)	72±2 (93±2%)	4±2 (6±2%)	1±1 (1±1%)	12	60
All	All	1560/2000 (78%)	1449 (93%)	90 (6%)	21 (1%)	12	60

All 4 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	438	ASN	15
1	A	376	ARG	3
1	A	401	LYS	2
1	A	400	GLY	1

6.3.2 Protein sidechains [i](#)

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	68/84 (81%)	63±2 (92±2%)	5±2 (8±2%)	14 62
All	All	1360/1680 (81%)	1257 (92%)	103 (8%)	14 62

All 20 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	403	ASN	19
1	A	375	ASN	18
1	A	406	GLU	15
1	A	430	ASP	11
1	A	368	VAL	9
1	A	401	LYS	4
1	A	437	ASN	4
1	A	392	LEU	4
1	A	376	ARG	4
1	A	434	GLU	3
1	A	365	THR	2
1	A	367	ASN	2
1	A	407	LEU	1
1	A	428	ASP	1
1	A	438	ASN	1
1	A	382	ASN	1
1	A	398	THR	1
1	A	373	GLU	1
1	A	366	GLU	1
1	A	377	LEU	1

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation

The completeness of assignment taking into account all chemical shift lists is 82% 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	1066
Number of shifts mapped to atoms	1066
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	4

7.1.2 Chemical shift referencing

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction $\pm$ precision, ppm	Suggested action
$^{13}\text{C}_\alpha$	100	-0.77 ± 0.18	Should be checked
$^{13}\text{C}_\beta$	91	0.21 ± 0.13	None needed (< 0.5 ppm)
$^{13}\text{C}'$	0	—	None (insufficient data)
^{15}N	96	0.11 ± 0.52	None needed (< 0.5 ppm)

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 82%, i.e. 859 atoms were assigned a chemical shift out of a possible 1045. 0 out of 14 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^1H	^{13}C	^{15}N
Backbone	315/393 (80%)	160/160 (100%)	78/156 (50%)	77/77 (100%)
Sidechain	505/568 (89%)	340/366 (93%)	151/178 (85%)	14/24 (58%)

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	Total	¹H	¹³C	¹⁵N
Aromatic	39/84 (46%)	39/39 (100%)	0/45 (0%)	0/0 (—%)
Overall	859/1045 (82%)	539/565 (95%)	229/379 (60%)	91/101 (90%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 81%, i.e. 1060 atoms were assigned a chemical shift out of a possible 1309. 0 out of 16 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹H	¹³C	¹⁵N
Backbone	400/505 (79%)	204/207 (99%)	100/200 (50%)	96/98 (98%)
Sidechain	617/711 (87%)	412/456 (90%)	188/222 (85%)	17/33 (52%)
Aromatic	43/93 (46%)	43/43 (100%)	0/50 (0%)	0/0 (—%)
Overall	1060/1309 (81%)	659/706 (93%)	288/472 (61%)	113/131 (86%)

7.1.4 Statistically unusual chemical shifts ⓘ

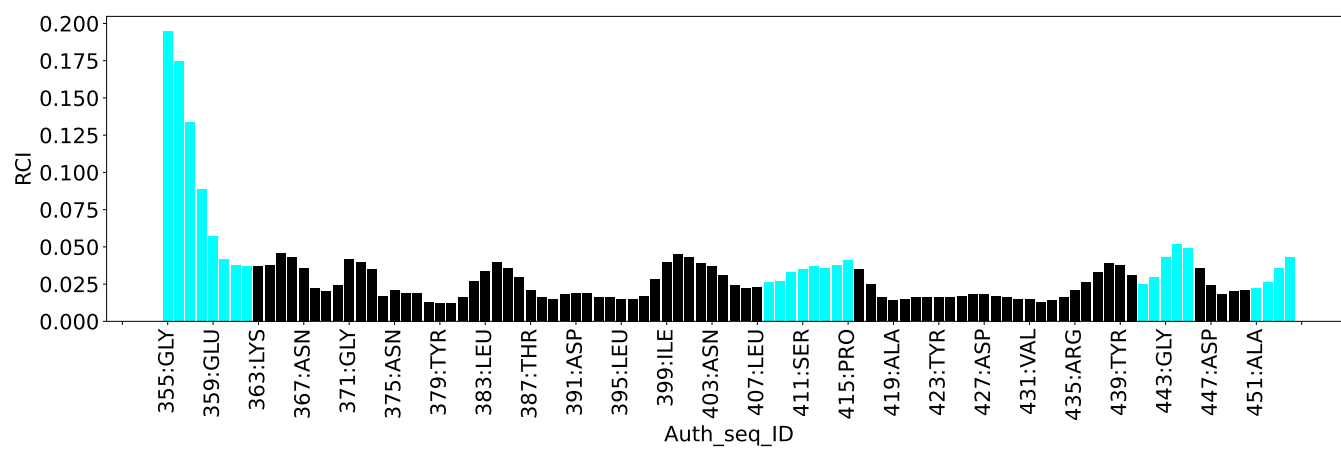
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

List Id	Chain	Res	Type	Atom	Shift, ppm	Expected range, ppm	Z-score
1	A	387	THR	HG1	6.18	0.08 – 2.19	23.9
1	A	398	THR	HG1	5.43	0.08 – 2.19	20.4
1	A	416	THR	HG1	4.80	0.08 – 2.19	17.4
1	A	374	ARG	HA	1.39	2.06 – 6.51	-6.5

7.1.5 Random Coil Index (RCI) plots ⓘ

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

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

Description	Value
Total distance restraints	2396
Intra-residue ($ i-j =0$)	519
Sequential ($ i-j =1$)	493
Medium range ($ i-j >1$ and $ i-j <5$)	380
Long range ($ i-j \geq 5$)	1004
Inter-chain	0
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	24.0
Number of long range restraints per residue ¹	10.0

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

8.2 Residual restraint violations

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

8.2.1 Average number of distance violations per model

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

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	9.9	0.2
0.2-0.5 (Medium)	1.6	0.5
>0.5 (Large)	7.2	3.55

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 ⓘ

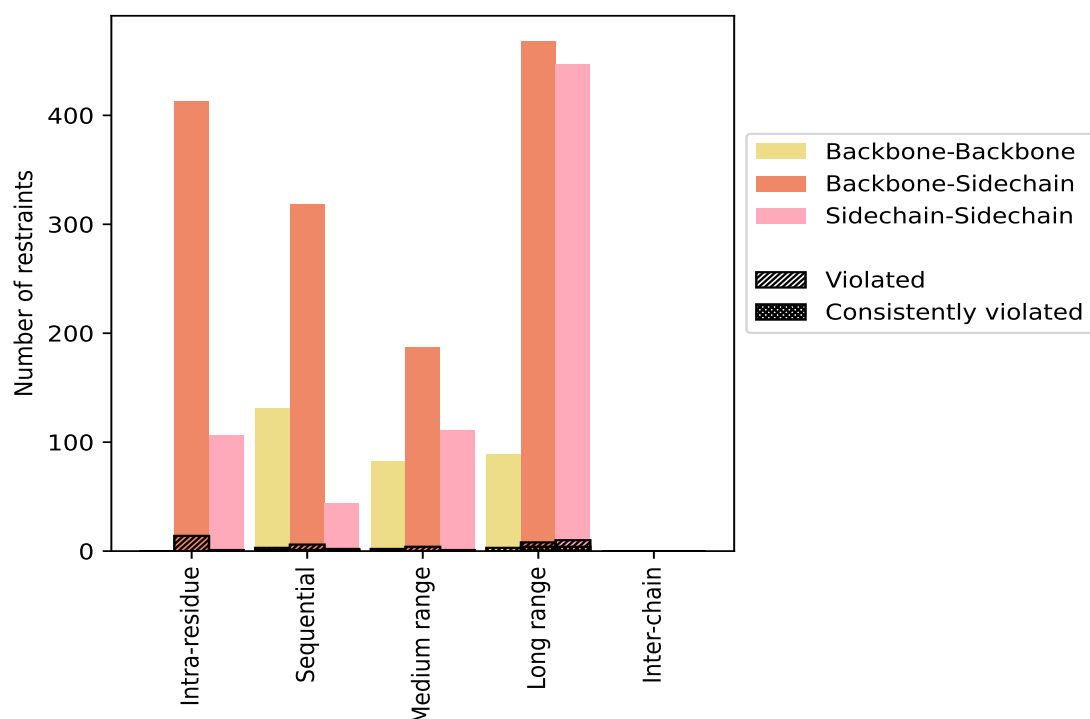
9.1 Summary of distance violations ⓘ

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

Restrains type	Count	% ¹	Violated ³			Consistently Violated ⁴		
			Count	% ²	% ¹	Count	% ²	% ¹
Intra-residue ($i-j =0$)	519	21.7	15	2.9	0.6	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	413	17.2	14	3.4	0.6	0	0.0	0.0
Sidechain-Sidechain	106	4.4	1	0.9	0.0	0	0.0	0.0
Sequential ($i-j =1$)	493	20.6	11	2.2	0.5	3	0.6	0.1
Backbone-Backbone	131	5.5	3	2.3	0.1	1	0.8	0.0
Backbone-Sidechain	318	13.3	6	1.9	0.3	1	0.3	0.0
Sidechain-Sidechain	44	1.8	2	4.5	0.1	1	2.3	0.0
Medium range ($i-j >1$ & $i-j <5$)	380	15.9	7	1.8	0.3	0	0.0	0.0
Backbone-Backbone	82	3.4	2	2.4	0.1	0	0.0	0.0
Backbone-Sidechain	187	7.8	4	2.1	0.2	0	0.0	0.0
Sidechain-Sidechain	111	4.6	1	0.9	0.0	0	0.0	0.0
Long range ($i-j \geq 5$)	1004	41.9	21	2.1	0.9	8	0.8	0.3
Backbone-Backbone	89	3.7	3	3.4	0.1	0	0.0	0.0
Backbone-Sidechain	468	19.5	8	1.7	0.3	4	0.9	0.2
Sidechain-Sidechain	447	18.7	10	2.2	0.4	4	0.9	0.2
Inter-chain	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	2396	100.0	54	2.3	2.3	11	0.5	0.5
Backbone-Backbone	302	12.6	8	2.6	0.3	1	0.3	0.0
Backbone-Sidechain	1386	57.8	32	2.3	1.3	5	0.4	0.2
Sidechain-Sidechain	708	29.5	14	2.0	0.6	5	0.7	0.2

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

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



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

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

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

Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
1	5	3	1	11	0	20	0.69	3.18	0.88	0.2
2	5	4	3	12	0	24	0.64	3.55	0.9	0.15
3	3	4	1	11	0	19	0.72	3.25	0.91	0.2
4	5	4	1	10	0	20	0.69	3.35	0.92	0.16
5	3	5	2	12	0	22	0.66	3.49	0.92	0.15
6	3	5	2	10	0	20	0.7	3.35	0.92	0.17
7	7	5	1	11	0	24	0.6	3.24	0.85	0.13
8	3	4	3	11	0	21	0.61	2.37	0.77	0.14
9	3	4	2	13	0	22	0.63	3.16	0.86	0.15
10	2	5	0	10	0	17	0.8	3.26	0.94	0.21

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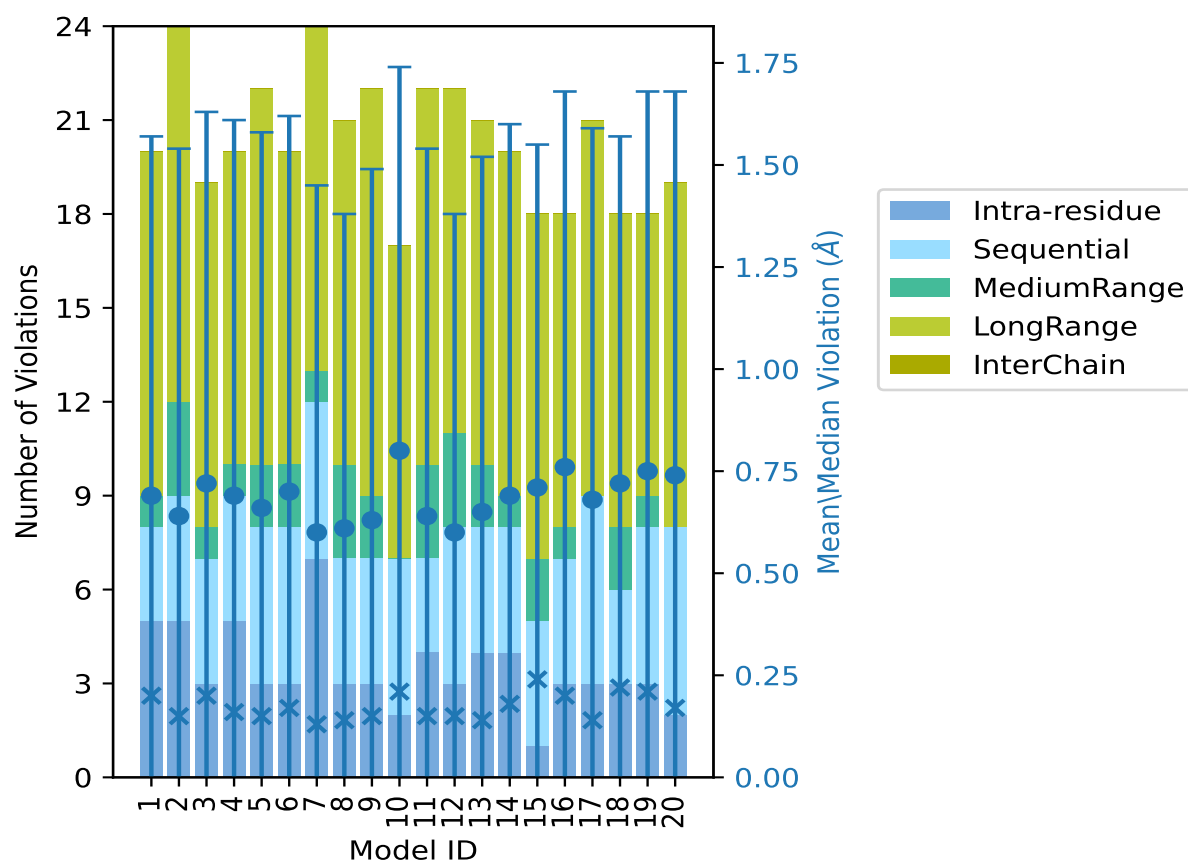
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Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
11	4	3	3	12	0	22	0.64	3.4	0.9	0.15
12	3	5	3	11	0	22	0.6	2.58	0.78	0.15
13	4	4	2	11	0	21	0.65	3.14	0.87	0.14
14	4	4	1	11	0	20	0.69	3.33	0.91	0.18
15	1	4	2	11	0	18	0.71	2.64	0.84	0.24
16	3	4	1	10	0	18	0.76	3.21	0.92	0.2
17	3	6	0	12	0	21	0.68	3.38	0.91	0.14
18	3	3	2	10	0	18	0.72	2.74	0.85	0.22
19	3	5	1	9	0	18	0.75	3.26	0.93	0.21
20	2	6	0	11	0	19	0.74	3.41	0.94	0.17

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints,

⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model ⓘ



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

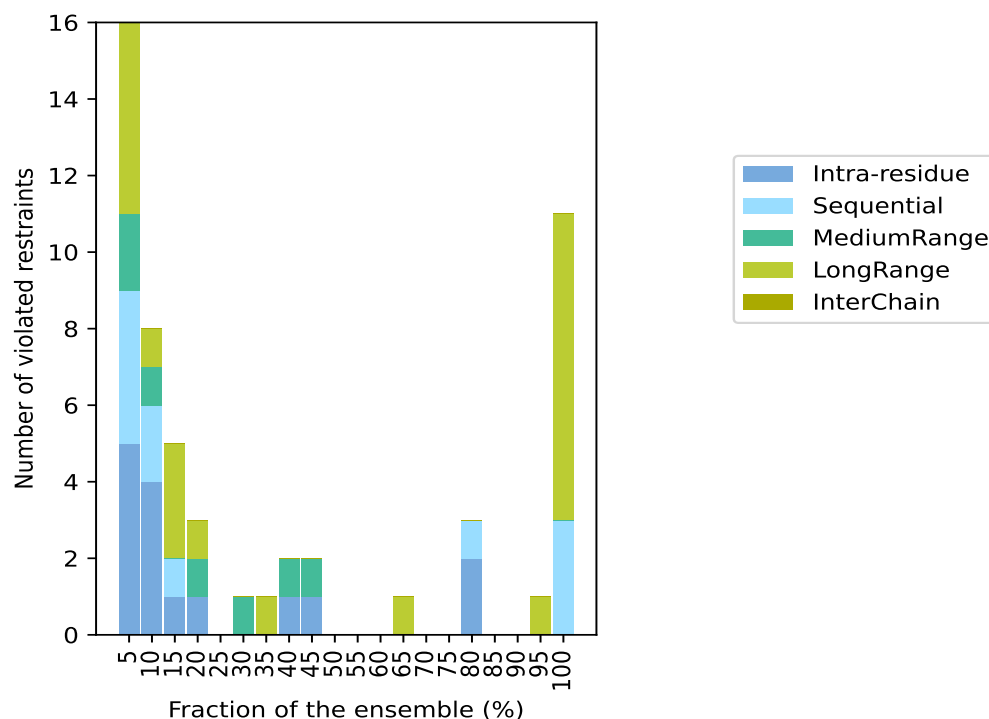
Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 2342(IR:504, SQ:482, MR:373, LR:983, IC:0) restraints are 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	%
5	4	2	5	0	16	1	5.0
4	2	1	1	0	8	2	10.0
1	1	0	3	0	5	3	15.0
1	0	1	1	0	3	4	20.0
0	0	0	0	0	0	5	25.0
0	0	1	0	0	1	6	30.0
0	0	0	1	0	1	7	35.0
1	0	1	0	0	2	8	40.0
1	0	1	0	0	2	9	45.0
0	0	0	0	0	0	10	50.0
0	0	0	0	0	0	11	55.0
0	0	0	0	0	0	12	60.0
0	0	0	1	0	1	13	65.0
0	0	0	0	0	0	14	70.0
0	0	0	0	0	0	15	75.0
2	1	0	0	0	3	16	80.0
0	0	0	0	0	0	17	85.0
0	0	0	0	0	0	18	90.0
0	0	0	1	0	1	19	95.0
0	3	0	8	0	11	20	100.0

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints,

⁵Inter-chain restraints, ⁶ Number of models with violations

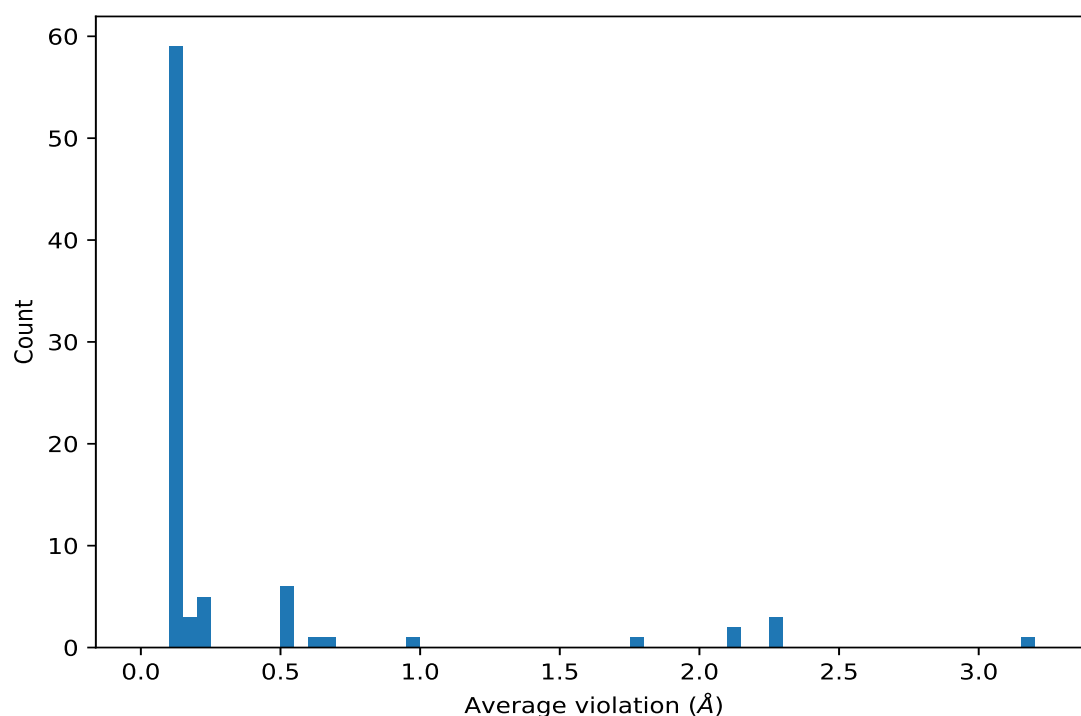
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



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

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

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



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

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

Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	20	3.16	0.31	3.26
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	20	2.26	0.05	2.26
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	20	2.26	0.05	2.26
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	20	2.26	0.05	2.26
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	20	2.14	0.07	2.11
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	20	2.14	0.07	2.11
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	20	1.78	0.05	1.78
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	20	0.98	0.01	0.98
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	20	0.66	0.12	0.63
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	20	0.62	0.09	0.62
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	20	0.52	0.12	0.48
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	20	0.52	0.12	0.48
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	20	0.52	0.12	0.48
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	20	0.52	0.12	0.48
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	20	0.52	0.12	0.48
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	20	0.52	0.12	0.48

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	20	0.22	0.04	0.22
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	20	0.22	0.04	0.22
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	20	0.22	0.04	0.22
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	20	0.19	0.01	0.19
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	20	0.19	0.01	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	20	0.19	0.01	0.19
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	20	0.13	0.01	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	19	0.13	0.01	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	16	0.14	0.01	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	16	0.13	0.01	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	16	0.13	0.01	0.13
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	13	0.11	0.01	0.11
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	9	0.14	0.03	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	9	0.14	0.03	0.14
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	9	0.11	0.01	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	8	0.11	0.01	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	8	0.11	0.01	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	8	0.11	0.01	0.11
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	8	0.11	0.0	0.11
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	7	0.11	0.01	0.11
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	6	0.12	0.01	0.12
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	6	0.12	0.01	0.12
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG21	4	0.15	0.0	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG22	4	0.15	0.0	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG23	4	0.15	0.0	0.15
(1,484)	1:399:A:ILE:HD11	1:401:A:LYS:H	4	0.12	0.01	0.12
(1,484)	1:399:A:ILE:HD12	1:401:A:LYS:H	4	0.12	0.01	0.12
(1,484)	1:399:A:ILE:HD13	1:401:A:LYS:H	4	0.12	0.01	0.12
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG11	4	0.11	0.01	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG12	4	0.11	0.01	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG13	4	0.11	0.01	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG21	4	0.11	0.01	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG22	4	0.11	0.01	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG23	4	0.11	0.01	0.11
(1,398)	1:450:A:TYR:H	1:450:A:TYR:HD1	3	0.14	0.01	0.15
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG2	3	0.14	0.02	0.12
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG3	3	0.14	0.02	0.12
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG2	3	0.13	0.01	0.13
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG3	3	0.13	0.01	0.13
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE1	3	0.11	0.0	0.11
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE2	3	0.11	0.0	0.11
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB1	3	0.1	0.0	0.1

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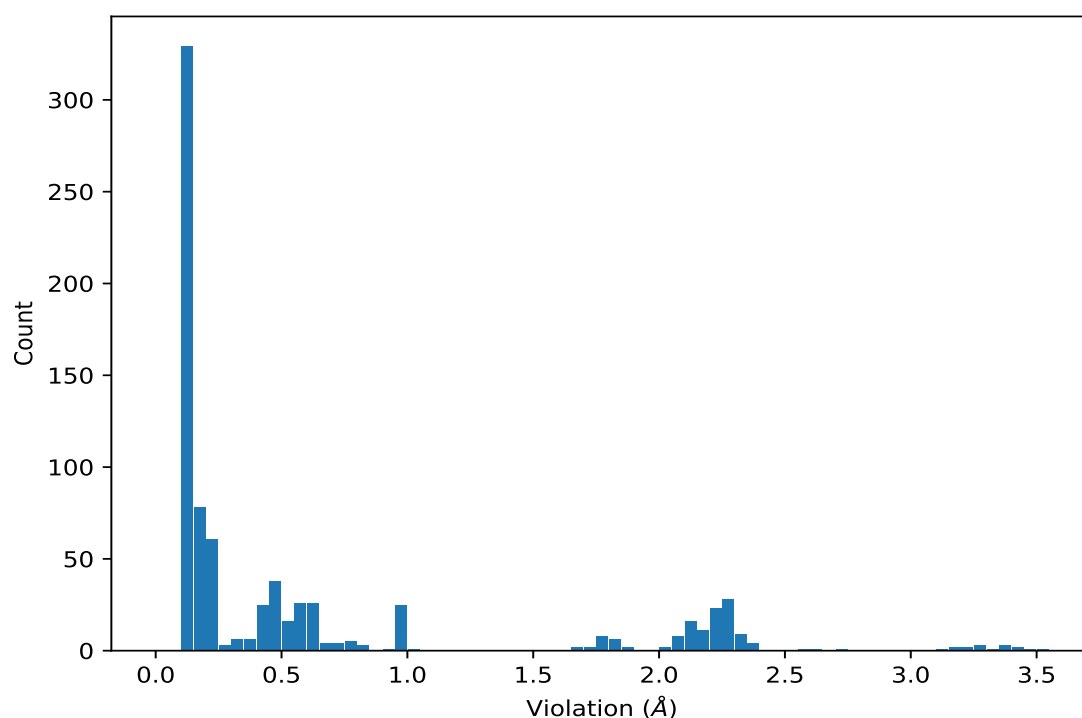
Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB2	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB3	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB1	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB2	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB3	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB1	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB2	3	0.1	0.0	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB3	3	0.1	0.0	0.1
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB2	2	0.2	0.02	0.2
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB3	2	0.2	0.02	0.2
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG2	2	0.14	0.0	0.14
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG3	2	0.14	0.0	0.14
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG2	2	0.12	0.01	0.12
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG3	2	0.12	0.01	0.12
(1,1036)	1:453:A:ARG:HB2	1:453:A:ARG:HD3	2	0.12	0.0	0.12
(1,875)	1:403:A:ASN:HB3	1:404:A:ASN:H	2	0.11	0.01	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG11	2	0.11	0.0	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG12	2	0.11	0.0	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG13	2	0.11	0.0	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG21	2	0.11	0.0	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG22	2	0.11	0.0	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG23	2	0.11	0.0	0.11
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG2	2	0.11	0.0	0.11
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG3	2	0.11	0.0	0.11
(1,191)	1:408:A:ARG:HB2	1:409:A:TYR:H	2	0.11	0.0	0.11

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

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

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



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

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

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	2	3.55
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	5	3.49
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	20	3.41
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	11	3.4
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	17	3.38
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	4	3.35
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	6	3.35
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	14	3.33
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	10	3.26
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	19	3.26
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	3	3.25
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	7	3.24
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	16	3.21
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	1	3.18
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	9	3.16
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	13	3.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	18	2.74
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	15	2.64
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	12	2.58
(1,127)	1:376:A:ARG:HA	1:450:A:TYR:HE2	8	2.37
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	13	2.37
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	13	2.37
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	13	2.37
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	1	2.31
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	1	2.31
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	1	2.31
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	7	2.31
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	7	2.31
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	7	2.31
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	8	2.31
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	8	2.31
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	8	2.31
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	2	2.29
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	2	2.29
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	19	2.29
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	19	2.29
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	19	2.29
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	5	2.28
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	5	2.28
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	9	2.28
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	9	2.28
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	9	2.28
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	16	2.28
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	16	2.28
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	16	2.28
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	6	2.27
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	6	2.27
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	6	2.27
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	12	2.27
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	12	2.27
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	12	2.27
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	17	2.27
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	17	2.27
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	17	2.27
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	11	2.26
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	11	2.26
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	11	2.26
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	15	2.26

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	15	2.26
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	15	2.26
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	3	2.24
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	3	2.24
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	3	2.24
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	4	2.23
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	4	2.23
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	4	2.23
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	4	2.23
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	4	2.23
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	20	2.23
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	20	2.23
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	20	2.23
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	10	2.22
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	10	2.22
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	10	2.22
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	2	2.21
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	2	2.21
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	2	2.21
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	5	2.21
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	5	2.21
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	5	2.21
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	14	2.21
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	14	2.21
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	14	2.21
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	17	2.19
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	17	2.19
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	6	2.17
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	6	2.17
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	11	2.17
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	11	2.17
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	20	2.17
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	20	2.17
(1,37)	1:433:A:ILE:HG21	1:450:A:TYR:HE1	18	2.15
(1,37)	1:433:A:ILE:HG22	1:450:A:TYR:HE1	18	2.15
(1,37)	1:433:A:ILE:HG23	1:450:A:TYR:HE1	18	2.15
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	3	2.13
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	3	2.13
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	18	2.12
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	18	2.12
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	7	2.11
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	7	2.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	13	2.11
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	13	2.11
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	14	2.11
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	14	2.11
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	19	2.11
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	19	2.11
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	1	2.1
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	1	2.1
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	16	2.1
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	16	2.1
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	15	2.09
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	15	2.09
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	9	2.08
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	9	2.08
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	10	2.08
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	10	2.08
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	8	2.05
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	8	2.05
(1,2255)	1:449:A:SER:HB2	1:450:A:TYR:HD1	12	2.04
(1,2255)	1:449:A:SER:HB3	1:450:A:TYR:HD1	12	2.04
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	10	1.87
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	2	1.85
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	14	1.84
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	18	1.83
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	5	1.82
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	20	1.81
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	16	1.8
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	19	1.8
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	3	1.79
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	11	1.78
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	12	1.78
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	4	1.77
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	6	1.76
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	9	1.76
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	15	1.76
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	17	1.76
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	7	1.73
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	1	1.72
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	13	1.67
(1,714)	1:378:A:ILE:HA	1:450:A:TYR:HD2	8	1.65
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	20	1.0
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	1	0.99

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	3	0.99
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	6	0.99
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	10	0.99
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	14	0.99
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	16	0.99
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	2	0.98
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	5	0.98
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	13	0.98
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	19	0.98
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	4	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	7	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	9	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	11	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	12	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	15	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	17	0.97
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	18	0.96
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	2	0.95
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	2	0.95
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	2	0.95
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	2	0.95
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	2	0.95
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	2	0.95
(1,548)	1:450:A:TYR:HD2	1:451:A:ALA:H	8	0.95
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	7	0.9
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	8	0.84
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	9	0.83
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	2	0.8
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	13	0.78
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	10	0.77
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	2	0.76
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	5	0.76
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	4	0.75
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	1	0.74
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	18	0.72
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	12	0.7
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	20	0.7
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	16	0.69
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	17	0.69
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	11	0.66
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	10	0.65
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	16	0.64

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	17	0.63
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	17	0.63
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	17	0.63
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	17	0.63
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	17	0.63
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	17	0.63
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	15	0.63
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	19	0.63
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	6	0.63
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	18	0.62
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	1	0.62
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	7	0.62
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	20	0.61
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	6	0.6
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	6	0.6
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	6	0.6
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	6	0.6
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	6	0.6
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	6	0.6
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	3	0.6
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	3	0.59
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	5	0.58
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	5	0.58
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	5	0.58
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	5	0.58
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	5	0.58
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	5	0.58
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	17	0.58
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	15	0.58
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	11	0.57
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	11	0.57
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	11	0.57
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	11	0.57
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	11	0.57
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	11	0.57
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	6	0.57
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	20	0.56

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	9	0.56
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	3	0.55
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	3	0.55
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	3	0.55
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	3	0.55
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	3	0.55
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	3	0.55
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	11	0.55
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	14	0.55
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	7	0.54
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	14	0.52
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	14	0.52
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	14	0.52
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	14	0.52
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	14	0.52
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	14	0.52
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	13	0.51
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	14	0.51
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	5	0.5
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	19	0.5
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	12	0.49
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	1	0.48
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	18	0.47
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	19	0.47
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	19	0.47
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	19	0.47
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	19	0.47

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	19	0.47
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	19	0.47
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	9	0.46
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	10	0.46
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	10	0.46
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	10	0.46
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	10	0.46
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	10	0.46
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	10	0.46
(1,748)	1:375:A:ASN:H	1:450:A:TYR:HE2	8	0.46
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	13	0.45
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	4	0.44
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	16	0.44
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	16	0.44
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	16	0.44
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	16	0.44
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	16	0.44
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	16	0.44
(1,905)	1:430:A:ASP:HA	1:450:A:TYR:HE1	4	0.43
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	15	0.41
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	12	0.4
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	12	0.4

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	12	0.4
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	12	0.4
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	12	0.4
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	12	0.4
(1,2107)	1:426:A:VAL:HG11	1:450:A:TYR:HD2	8	0.39
(1,2107)	1:426:A:VAL:HG12	1:450:A:TYR:HD2	8	0.39
(1,2107)	1:426:A:VAL:HG13	1:450:A:TYR:HD2	8	0.39
(1,2107)	1:426:A:VAL:HG21	1:450:A:TYR:HD2	8	0.39
(1,2107)	1:426:A:VAL:HG22	1:450:A:TYR:HD2	8	0.39
(1,2107)	1:426:A:VAL:HG23	1:450:A:TYR:HD2	8	0.39
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	8	0.34
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	8	0.34
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	8	0.34
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	12	0.32
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	12	0.32
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	12	0.32
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	15	0.28
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	15	0.28
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	15	0.28
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	13	0.24
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	13	0.24
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	13	0.24
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	14	0.24
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	14	0.24
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	14	0.24
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	18	0.24
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	18	0.24
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	18	0.24
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	1	0.23
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	1	0.23
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	7	0.23
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	7	0.23
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	7	0.23
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	19	0.23
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	19	0.23
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	19	0.23
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB2	3	0.22
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB3	3	0.22
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	1	0.22
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	1	0.22
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	1	0.22
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	6	0.22

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	6	0.22
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	6	0.22
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	11	0.22
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	11	0.22
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	11	0.22
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	16	0.22
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	16	0.22
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	16	0.22
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	11	0.21
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	11	0.21
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	11	0.21
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	10	0.21
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	10	0.21
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	10	0.21
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	5	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	5	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	5	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	6	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	6	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	6	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	14	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	14	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	14	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	15	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	15	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	15	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	17	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	17	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	17	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	18	0.2
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	18	0.2
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	18	0.2
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	3	0.2
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	3	0.2
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	3	0.2
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	5	0.2
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	5	0.2
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	5	0.2
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	3	0.19
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	3	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	3	0.19
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	4	0.19

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	4	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	4	0.19
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	12	0.19
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	12	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	12	0.19
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	19	0.19
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	19	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	19	0.19
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	20	0.19
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	20	0.19
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	20	0.19
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	4	0.19
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	4	0.19
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	4	0.19
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	9	0.19
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	9	0.19
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	9	0.19
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	17	0.19
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	17	0.19
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	17	0.19
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	8	0.18
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	8	0.18
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	8	0.18
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	16	0.18
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	16	0.18
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	16	0.18
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB2	14	0.17
(1,1499)	1:369:A:VAL:H	1:453:A:ARG:HB3	14	0.17
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG2	20	0.17
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG3	20	0.17
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	1	0.17
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	1	0.17
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	1	0.17
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	2	0.17
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	2	0.17
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	2	0.17
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	10	0.17
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	10	0.17
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	10	0.17
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	13	0.17
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	13	0.17
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	13	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	10	0.17
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	20	0.17
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	20	0.17
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	20	0.17
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	7	0.16
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	7	0.16
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	7	0.16
(1,1335)	1:429:A:ALA:HB1	1:450:A:TYR:HE2	9	0.16
(1,1335)	1:429:A:ALA:HB2	1:450:A:TYR:HE2	9	0.16
(1,1335)	1:429:A:ALA:HB3	1:450:A:TYR:HE2	9	0.16
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	16	0.16
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	19	0.16
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	16	0.16
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	19	0.15
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	19	0.15
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	16	0.15
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	16	0.15
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	5	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG21	2	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG22	2	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG23	2	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG21	9	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG22	9	0.15
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG23	9	0.15
(1,512)	1:429:A:ALA:HB1	1:450:A:TYR:HD2	2	0.15
(1,512)	1:429:A:ALA:HB2	1:450:A:TYR:HD2	2	0.15
(1,512)	1:429:A:ALA:HB3	1:450:A:TYR:HD2	2	0.15
(1,398)	1:450:A:TYR:H	1:450:A:TYR:HD1	2	0.15
(1,398)	1:450:A:TYR:H	1:450:A:TYR:HD1	5	0.15
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	2	0.15
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	11	0.15
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	12	0.15
(1,2205)	1:438:A:ASN:HB2	1:439:A:TYR:H	10	0.14
(1,2205)	1:438:A:ASN:HB3	1:439:A:TYR:H	10	0.14
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG2	1	0.14
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG3	1	0.14
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG2	14	0.14
(1,2159)	1:435:A:ARG:H	1:435:A:ARG:HG3	14	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	12	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	12	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	18	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	18	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	20	0.14
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	20	0.14
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG2	17	0.14
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG3	17	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG21	4	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG22	4	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG23	4	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG21	17	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG22	17	0.14
(1,975)	1:368:A:VAL:H	1:368:A:VAL:HG23	17	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	1	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	2	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	3	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	7	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	11	0.14
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	20	0.14
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	1	0.14
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	5	0.14
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	8	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	3	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	4	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	5	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	6	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	8	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	13	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	15	0.14
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	20	0.14
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	9	0.14
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	10	0.14
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	14	0.14
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG2	13	0.13
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG3	13	0.13
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	8	0.13
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	8	0.13
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	17	0.13
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	17	0.13
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG2	7	0.13
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG3	7	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	2	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	3	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	4	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	9	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	10	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	12	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	13	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	15	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	17	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	19	0.13
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	20	0.13
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	13	0.13
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	13	0.13
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	13	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	4	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	6	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	9	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	13	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	14	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	16	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	17	0.13
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	19	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	2	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	3	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	6	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	17	0.13
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	20	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	7	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	11	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	12	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	14	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	17	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	18	0.13
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	19	0.13
(1,484)	1:399:A:ILE:HD11	1:401:A:LYS:H	1	0.13
(1,484)	1:399:A:ILE:HD12	1:401:A:LYS:H	1	0.13
(1,484)	1:399:A:ILE:HD13	1:401:A:LYS:H	1	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	4	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	8	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	15	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	18	0.13
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	19	0.13
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG11	13	0.12
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG12	13	0.12
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG13	13	0.12
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG21	13	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG22	13	0.12
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG23	13	0.12
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	3	0.12
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	3	0.12
(1,1505)	1:369:A:VAL:HG11	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG11	1:452:A:LYS:HB3	15	0.12
(1,1505)	1:369:A:VAL:HG12	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG12	1:452:A:LYS:HB3	15	0.12
(1,1505)	1:369:A:VAL:HG13	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG13	1:452:A:LYS:HB3	15	0.12
(1,1505)	1:369:A:VAL:HG21	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG21	1:452:A:LYS:HB3	15	0.12
(1,1505)	1:369:A:VAL:HG22	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG22	1:452:A:LYS:HB3	15	0.12
(1,1505)	1:369:A:VAL:HG23	1:452:A:LYS:HB2	15	0.12
(1,1505)	1:369:A:VAL:HG23	1:452:A:LYS:HB3	15	0.12
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG2	15	0.12
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG3	15	0.12
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG2	16	0.12
(1,1455)	1:365:A:THR:HB	1:408:A:ARG:HG3	16	0.12
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG2	20	0.12
(1,1395)	1:361:A:ALA:HA	1:362:A:ARG:HG3	20	0.12
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	2	0.12
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	2	0.12
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	8	0.12
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	8	0.12
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	12	0.12
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	12	0.12
(1,1365)	1:358:A:ASN:HB2	1:360:A:GLU:HA	13	0.12
(1,1365)	1:358:A:ASN:HB3	1:360:A:GLU:HA	13	0.12
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	16	0.12
(1,1077)	1:435:A:ARG:H	1:435:A:ARG:HG3	14	0.12
(1,1036)	1:453:A:ARG:HB2	1:453:A:ARG:HD3	4	0.12
(1,875)	1:403:A:ASN:HB3	1:404:A:ASN:H	19	0.12
(1,830)	1:376:A:ARG:HA	1:376:A:ARG:HE	5	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	4	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	9	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	10	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	11	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	12	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	14	0.12
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	18	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	1	0.12
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	2	0.12
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	9	0.12
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	10	0.12
(1,676)	1:374:A:ARG:H	1:375:A:ASN:HA	16	0.12
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	1	0.12
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	12	0.12
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	17	0.12
(1,484)	1:399:A:ILE:HD11	1:401:A:LYS:H	19	0.12
(1,484)	1:399:A:ILE:HD12	1:401:A:LYS:H	19	0.12
(1,484)	1:399:A:ILE:HD13	1:401:A:LYS:H	19	0.12
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	4	0.12
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	11	0.12
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	8	0.12
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	10	0.12
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	12	0.12
(1,398)	1:450:A:TYR:H	1:450:A:TYR:HD1	4	0.12
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	1	0.12
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	6	0.12
(1,63)	1:412:A:LYS:H	1:412:A:LYS:HB3	7	0.12
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG2	11	0.11
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG3	11	0.11
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG2	18	0.11
(1,2150)	1:434:A:GLU:H	1:434:A:GLU:HG3	18	0.11
(1,2010)	1:409:A:TYR:HA	1:415:A:PRO:HG2	7	0.11
(1,2010)	1:409:A:TYR:HA	1:415:A:PRO:HG3	7	0.11
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG2	7	0.11
(1,1967)	1:406:A:GLU:H	1:406:A:GLU:HG3	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG11	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG12	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG13	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG21	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG22	7	0.11
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG23	7	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG11	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG12	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG13	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG21	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG22	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG23	8	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG11	13	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG12	13	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG13	13	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG21	13	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG22	13	0.11
(1,1453)	1:365:A:THR:HB	1:368:A:VAL:HG23	13	0.11
(1,1404)	1:362:A:ARG:HA	1:362:A:ARG:HD2	7	0.11
(1,1404)	1:362:A:ARG:HA	1:362:A:ARG:HD3	7	0.11
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	9	0.11
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	9	0.11
(1,1384)	1:360:A:GLU:HB2	1:362:A:ARG:H	11	0.11
(1,1384)	1:360:A:GLU:HB3	1:362:A:ARG:H	11	0.11
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	7	0.11
(1,1137)	1:407:A:LEU:HA	1:407:A:LEU:HD11	7	0.11
(1,1137)	1:407:A:LEU:HA	1:407:A:LEU:HD12	7	0.11
(1,1137)	1:407:A:LEU:HA	1:407:A:LEU:HD13	7	0.11
(1,1036)	1:453:A:ARG:HB2	1:453:A:ARG:HD3	5	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	6	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	6	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	6	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	7	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	7	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	7	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	8	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	8	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	8	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	11	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	11	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	11	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	12	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	12	0.11
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	12	0.11
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	7	0.11
(1,735)	1:404:A:ASN:H	1:421:A:VAL:HA	13	0.11
(1,713)	1:374:A:ARG:HA	1:450:A:TYR:HE2	5	0.11
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	2	0.11
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	5	0.11
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	7	0.11
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	8	0.11
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE1	2	0.11
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE2	2	0.11
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE1	9	0.11
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE2	9	0.11
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	9	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,484)	1:399:A:ILE:HD11	1:401:A:LYS:H	2	0.11
(1,484)	1:399:A:ILE:HD12	1:401:A:LYS:H	2	0.11
(1,484)	1:399:A:ILE:HD13	1:401:A:LYS:H	2	0.11
(1,484)	1:399:A:ILE:HD11	1:401:A:LYS:H	18	0.11
(1,484)	1:399:A:ILE:HD12	1:401:A:LYS:H	18	0.11
(1,484)	1:399:A:ILE:HD13	1:401:A:LYS:H	18	0.11
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	6	0.11
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	9	0.11
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	12	0.11
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	14	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	3	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	5	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	6	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	9	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	11	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	14	0.11
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	15	0.11
(1,451)	1:369:A:VAL:H	1:370:A:GLY:H	14	0.11
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	3	0.11
(1,223)	1:362:A:ARG:H	1:362:A:ARG:HB3	13	0.11
(1,191)	1:408:A:ARG:HB2	1:409:A:TYR:H	12	0.11
(1,2029)	1:412:A:LYS:H	1:412:A:LYS:HG2	7	0.1
(1,2029)	1:412:A:LYS:H	1:412:A:LYS:HG3	7	0.1
(1,1946)	1:403:A:ASN:HD21	1:404:A:ASN:HB2	17	0.1
(1,1946)	1:403:A:ASN:HD21	1:404:A:ASN:HB3	17	0.1
(1,1946)	1:403:A:ASN:HD22	1:404:A:ASN:HB2	17	0.1
(1,1946)	1:403:A:ASN:HD22	1:404:A:ASN:HB3	17	0.1
(1,1945)	1:403:A:ASN:HB2	1:422:A:GLU:HG2	20	0.1
(1,1945)	1:403:A:ASN:HB2	1:422:A:GLU:HG3	20	0.1
(1,1945)	1:403:A:ASN:HB3	1:422:A:GLU:HG2	20	0.1
(1,1945)	1:403:A:ASN:HB3	1:422:A:GLU:HG3	20	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG11	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG12	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG13	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG21	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG22	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG23	5	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG11	9	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG12	9	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG13	9	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG21	9	0.1
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG22	9	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1898)	1:401:A:LYS:H	1:421:A:VAL:HG23	9	0.1
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG2	2	0.1
(1,1896)	1:401:A:LYS:H	1:401:A:LYS:HG3	2	0.1
(1,1398)	1:361:A:ALA:HB1	1:406:A:GLU:HB2	4	0.1
(1,1398)	1:361:A:ALA:HB1	1:406:A:GLU:HB3	4	0.1
(1,1398)	1:361:A:ALA:HB2	1:406:A:GLU:HB2	4	0.1
(1,1398)	1:361:A:ALA:HB2	1:406:A:GLU:HB3	4	0.1
(1,1398)	1:361:A:ALA:HB3	1:406:A:GLU:HB2	4	0.1
(1,1398)	1:361:A:ALA:HB3	1:406:A:GLU:HB3	4	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB1	2	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB2	2	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB3	2	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB1	2	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB2	2	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB3	2	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB1	2	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB2	2	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB3	2	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB1	11	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB2	11	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB3	11	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB1	11	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB2	11	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB3	11	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB1	11	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB2	11	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB3	11	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB1	17	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB2	17	0.1
(1,1350)	1:378:A:ILE:HG21	1:429:A:ALA:HB3	17	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB1	17	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB2	17	0.1
(1,1350)	1:378:A:ILE:HG22	1:429:A:ALA:HB3	17	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB1	17	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB2	17	0.1
(1,1350)	1:378:A:ILE:HG23	1:429:A:ALA:HB3	17	0.1
(1,1343)	1:358:A:ASN:HA	1:361:A:ALA:HB1	6	0.1
(1,1343)	1:358:A:ASN:HA	1:361:A:ALA:HB2	6	0.1
(1,1343)	1:358:A:ASN:HA	1:361:A:ALA:HB3	6	0.1
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	6	0.1
(1,1324)	1:434:A:GLU:H	1:435:A:ARG:HA	8	0.1
(1,1153)	1:361:A:ALA:HB1	1:362:A:ARG:HA	5	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1153)	1:361:A:ALA:HB2	1:362:A:ARG:HA	5	0.1
(1,1153)	1:361:A:ALA:HB3	1:362:A:ARG:HA	5	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	1	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	1	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	1	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG11	16	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG12	16	0.1
(1,968)	1:368:A:VAL:H	1:368:A:VAL:HG13	16	0.1
(1,875)	1:403:A:ASN:HB3	1:404:A:ASN:H	20	0.1
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	3	0.1
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	11	0.1
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	12	0.1
(1,576)	1:444:A:CYS:H	1:446:A:LEU:H	15	0.1
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE1	17	0.1
(1,504)	1:368:A:VAL:HB	1:379:A:TYR:HE2	17	0.1
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	8	0.1
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	11	0.1
(1,498)	1:438:A:ASN:H	1:448:A:ILE:H	13	0.1
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	5	0.1
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	15	0.1
(1,483)	1:403:A:ASN:H	1:405:A:ALA:H	18	0.1
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	1	0.1
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	2	0.1
(1,479)	1:406:A:GLU:H	1:421:A:VAL:HA	18	0.1
(1,191)	1:408:A:ARG:HB2	1:409:A:TYR:H	6	0.1

10 Dihedral-angle violation analysis ⓘ

No dihedral-angle restraints found