Full wwPDB NMR Structure Validation Report ⓘ

Dec 13, 2023 – 06:20 PM EST

PDB ID	:	2JOZ
BMRB ID	:	15211
Title	:	Solution NMR structure of protein yxeF, Northeast Structural Genomics Consortium target Sr500a
Authors	:	Wu, Y.; Liu, G.; Zhang, Q.; Bhatnagar, S.; Chen, C.; Nwosu, C.; Xiao, R.; Cunningham, K.; Locke, J.; Ma, L.; Swapna, G.; Baran, M.; Acton, T.; Montelione, G.; Szyperski, T.; Northeast Structural Genomics Consortium (NESG)
Deposited on	:	2007-04-10

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

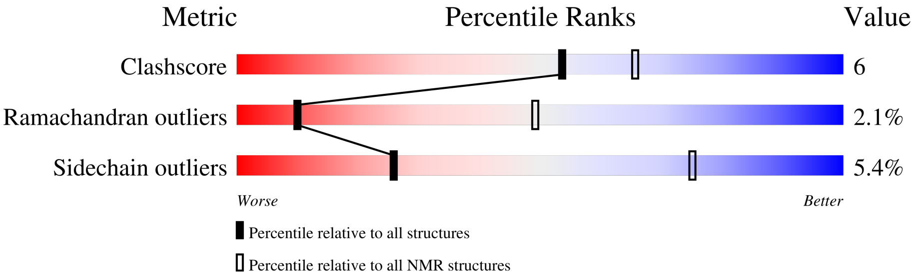
Cyrange : Kirchner and Güntert (2011)
NmrClust : Kelley et al. (1996)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

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 91%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	135	 69% • • 26%

2 Ensemble composition and analysis ⓘ

This entry contains 20 models. Model 17 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *fewest violations*.

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:14-A:113 (100)	1.18	17

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

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

The models can be grouped into 3 clusters and 4 single-model clusters were found.

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

3 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 2126 atoms, of which 1043 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Hypothetical protein yxeF.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	135	2126	672	1043	187	218	6	0

There are 9 discrepancies between the modelled and reference sequences:

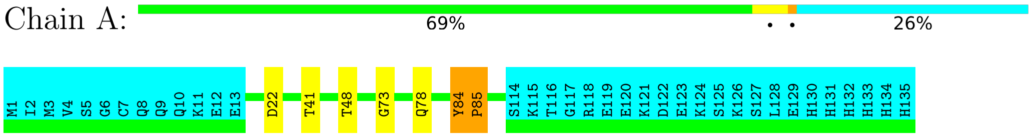
Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP P54945
A	128	LEU	-	cloning artifact	UNP P54945
A	129	GLU	-	cloning artifact	UNP P54945
A	130	HIS	-	expression tag	UNP P54945
A	131	HIS	-	expression tag	UNP P54945
A	132	HIS	-	expression tag	UNP P54945
A	133	HIS	-	expression tag	UNP P54945
A	134	HIS	-	expression tag	UNP P54945
A	135	HIS	-	expression tag	UNP P54945

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: Hypothetical protein yxeF

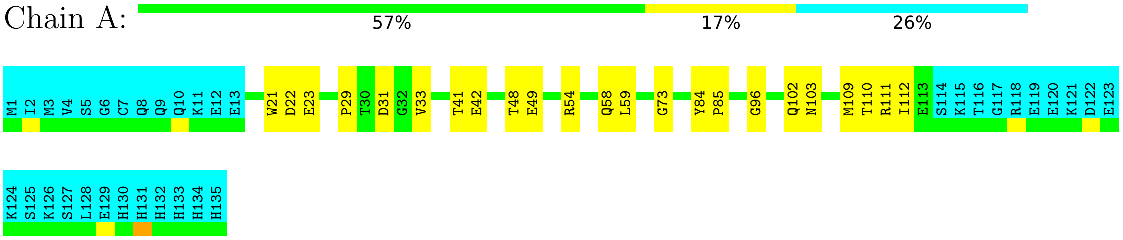


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

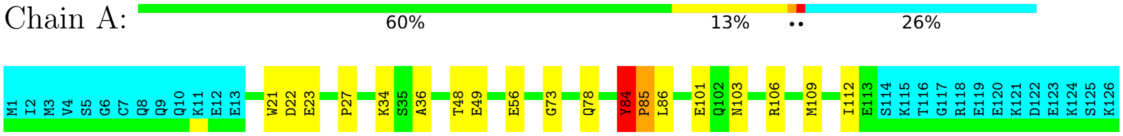
4.2.1 Score per residue for model 1

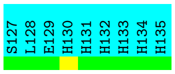
- Molecule 1: Hypothetical protein yxeF



4.2.2 Score per residue for model 2

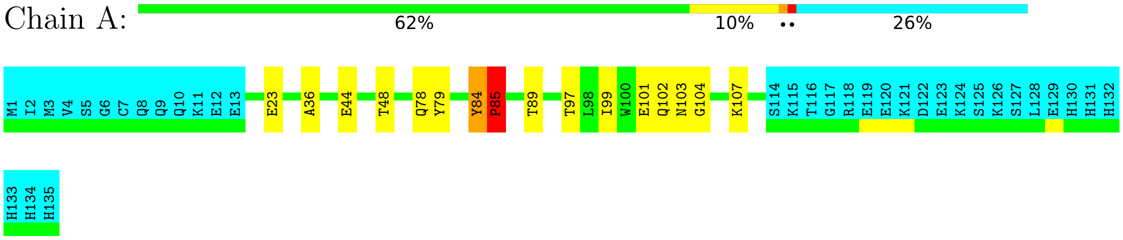
- Molecule 1: Hypothetical protein yxeF





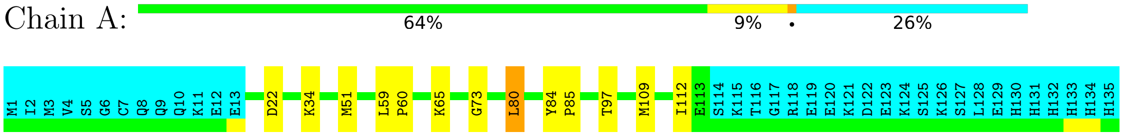
4.2.3 Score per residue for model 3

- Molecule 1: Hypothetical protein yxeF



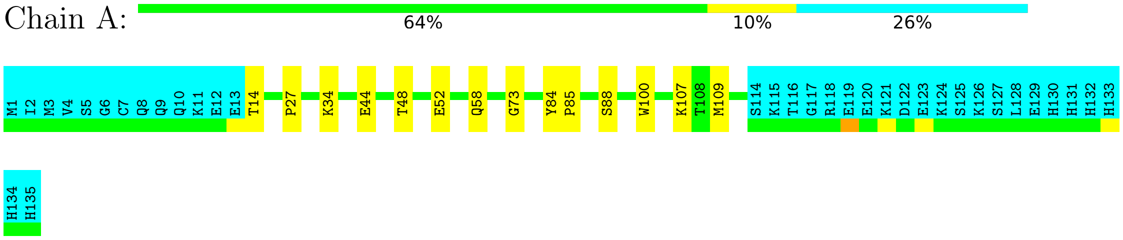
4.2.4 Score per residue for model 4

- Molecule 1: Hypothetical protein yxeF



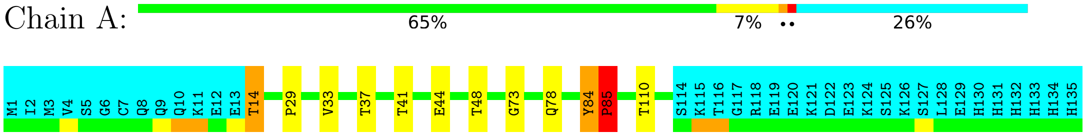
4.2.5 Score per residue for model 5

- Molecule 1: Hypothetical protein yxeF



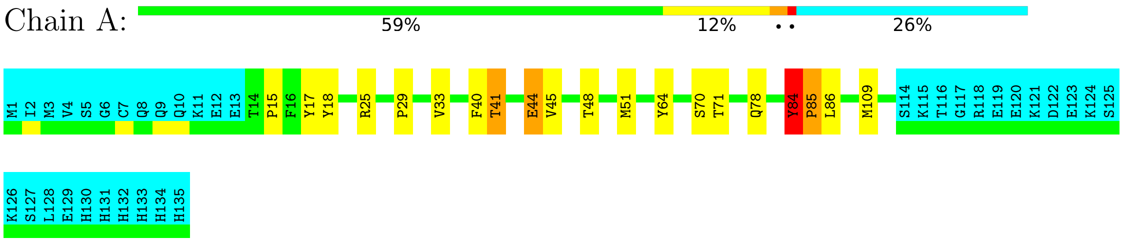
4.2.6 Score per residue for model 6

- Molecule 1: Hypothetical protein yxeF



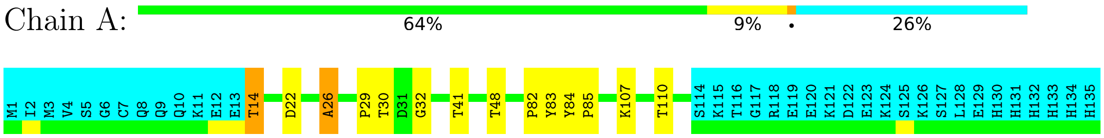
4.2.7 Score per residue for model 7

- Molecule 1: Hypothetical protein yxeF



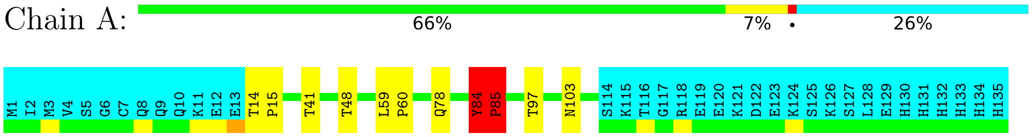
4.2.8 Score per residue for model 8

- Molecule 1: Hypothetical protein yxeF



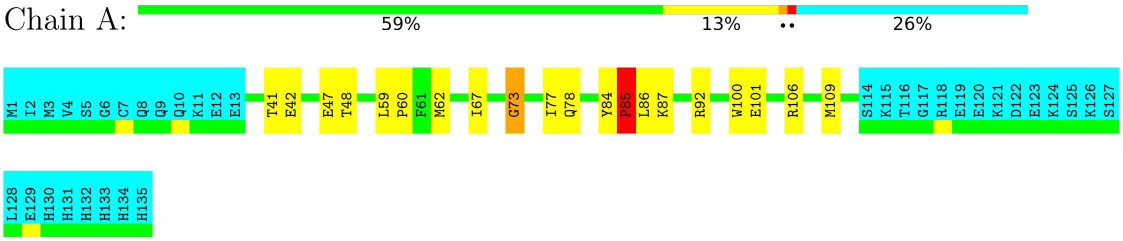
4.2.9 Score per residue for model 9

- Molecule 1: Hypothetical protein yxeF



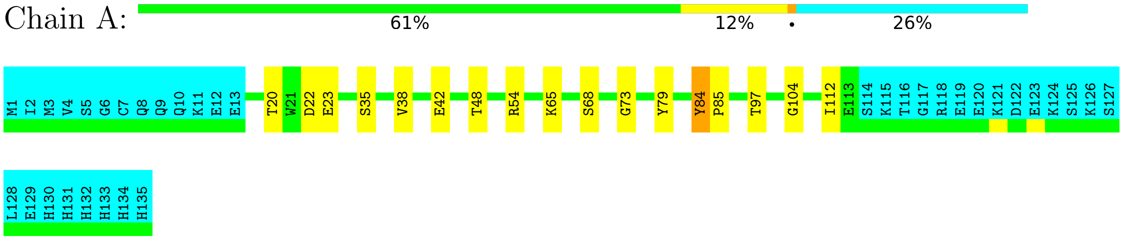
4.2.10 Score per residue for model 10

- Molecule 1: Hypothetical protein yxeF



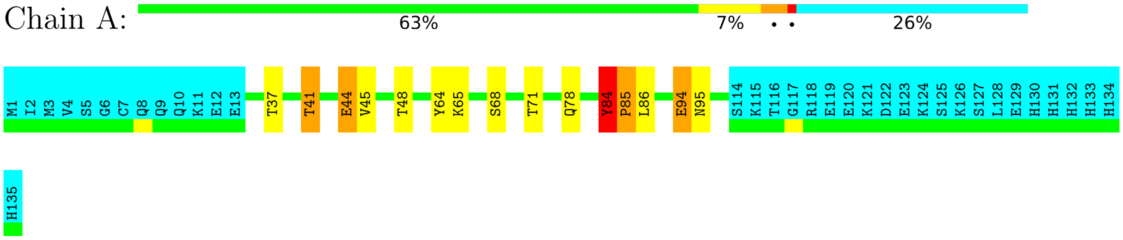
4.2.11 Score per residue for model 11

- Molecule 1: Hypothetical protein yxeF



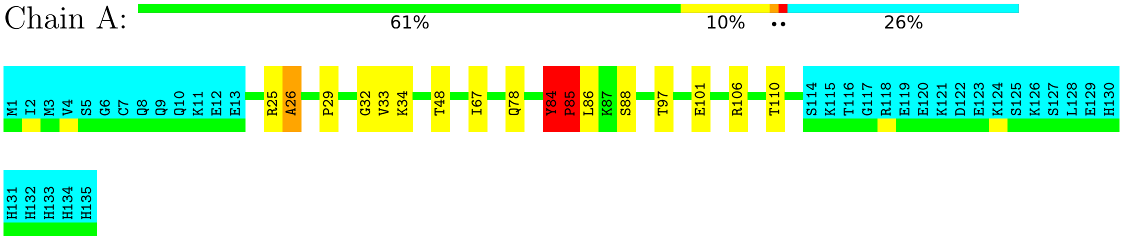
4.2.12 Score per residue for model 12

- Molecule 1: Hypothetical protein yxeF



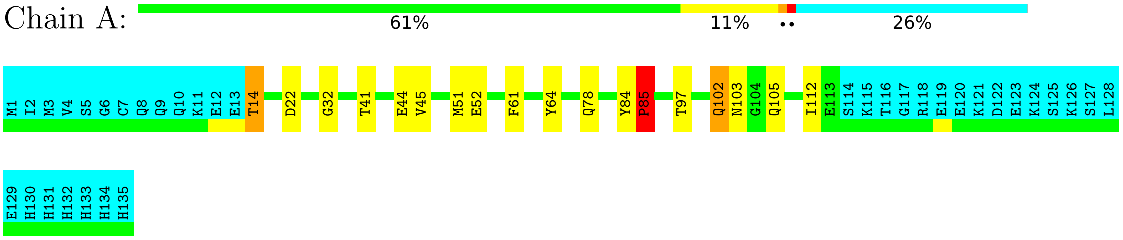
4.2.13 Score per residue for model 13

- Molecule 1: Hypothetical protein yxeF



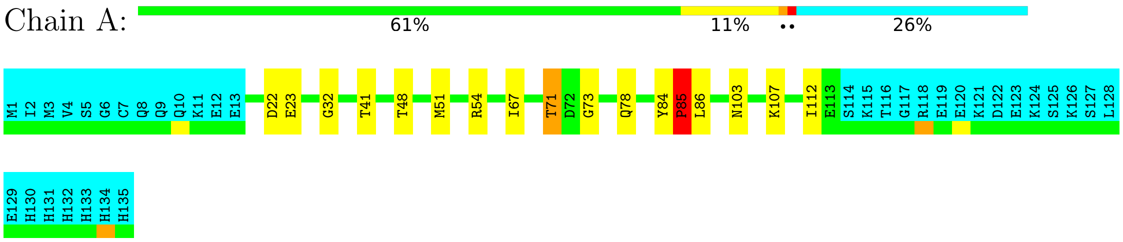
4.2.14 Score per residue for model 14

- Molecule 1: Hypothetical protein yxeF



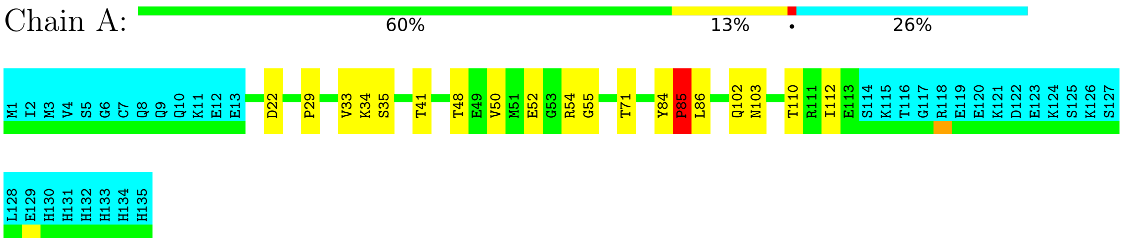
4.2.15 Score per residue for model 15

- Molecule 1: Hypothetical protein yxeF



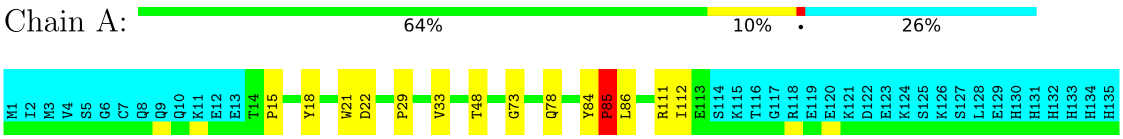
4.2.16 Score per residue for model 16

- Molecule 1: Hypothetical protein yxeF



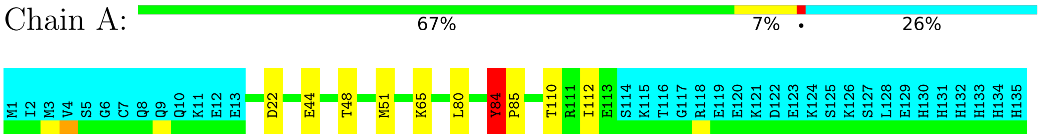
4.2.17 Score per residue for model 17 (medoid)

- Molecule 1: Hypothetical protein yxeF



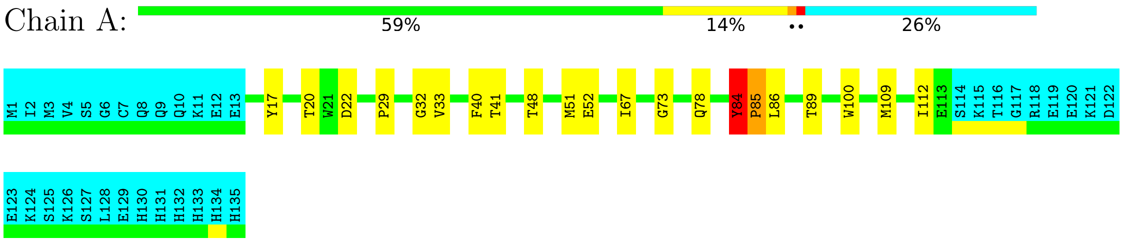
4.2.18 Score per residue for model 18

- Molecule 1: Hypothetical protein yxeF



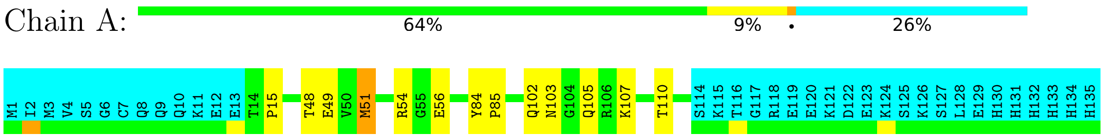
4.2.19 Score per residue for model 19

- Molecule 1: Hypothetical protein yxeF



4.2.20 Score per residue for model 20

- Molecule 1: Hypothetical protein yxeF



5 Refinement protocol and experimental data overview (i)

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	2.1
AutoStructure	structure solution	1.0
CNS	refinement	1.1

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	1559
Number of shifts mapped to atoms	1559
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	91%

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	0.36±0.01	0±0/812 (0.0± 0.0%)	0.47±0.03	0±0/1103 (0.0± 0.0%)
All	All	0.36	0/16240 (0.0%)	0.47	9/22060 (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	0.4±0.5
All	All	0	8

There are no bond-length outliers.

All unique angle outliers are listed below.

Mol	**Chain**	**Res**	**Type**	**Atoms**	**Z**	**Observed(°)**	**Ideal(°)**	**Models**	
								Worst	Total
1	A	85	PRO	CA-N-CD	-5.48	103.83	111.50	6	9

There are no chirality outliers.

All unique planar outliers are listed below.

Mol	**Chain**	**Res**	**Type**	**Group**	**Models (Total)**
1	A	84	TYR	Peptide	8

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	793	764	764	9±3
All	All	15860	15280	15280	172

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 6.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:84:TYR:HB2	1:A:85:PRO:HD2	0.82	1.47	16	12
1:A:78:GLN:NE2	1:A:85:PRO:HA	0.78	1.93	7	10
1:A:34:LYS:HE2	1:A:34:LYS:HA	0.71	1.63	13	2
1:A:23:GLU:O	1:A:23:GLU:HG3	0.66	1.91	1	1
1:A:14:THR:HB	1:A:15:PRO:HD3	0.66	1.66	9	1
1:A:84:TYR:HB2	1:A:85:PRO:CD	0.63	2.23	7	9
1:A:34:LYS:HE3	1:A:52:GLU:HB3	0.63	1.71	16	1
1:A:86:LEU:HG	1:A:102:GLN:HE22	0.63	1.53	16	1
1:A:100:TRP:HB2	1:A:109:MET:SD	0.62	2.33	10	1
1:A:35:SER:HB2	1:A:50:VAL:HB	0.60	1.73	16	1
1:A:79:TYR:O	1:A:84:TYR:HA	0.59	1.97	11	2
1:A:84:TYR:CB	1:A:85:PRO:HD2	0.59	2.26	9	12
1:A:29:PRO:HG2	1:A:33:VAL:HB	0.58	1.73	16	1
1:A:22:ASP:HB2	1:A:112:ILE:HD11	0.56	1.78	1	8
1:A:33:VAL:HG11	1:A:49:GLU:HB3	0.56	1.77	1	1
1:A:29:PRO:HD2	1:A:33:VAL:HB	0.53	1.80	17	2
1:A:84:TYR:N	1:A:85:PRO:CD	0.53	2.72	18	7
1:A:34:LYS:HE3	1:A:52:GLU:HB2	0.52	1.81	5	1
1:A:100:TRP:HE3	1:A:109:MET:HE1	0.52	1.64	5	1
1:A:78:GLN:CD	1:A:85:PRO:HA	0.52	2.24	3	4
1:A:25:ARG:HH11	1:A:26:ALA:HB2	0.51	1.66	13	1
1:A:15:PRO:HB2	1:A:18:TYR:HB2	0.50	1.82	7	2
1:A:49:GLU:O	1:A:56:GLU:HA	0.50	2.06	20	2
1:A:62:MET:CE	1:A:62:MET:HA	0.49	2.37	10	1
1:A:84:TYR:CD2	1:A:85:PRO:HD2	0.49	2.42	6	3
1:A:65:LYS:HG3	1:A:80:LEU:HD11	0.48	1.83	4	1
1:A:73:GLY:HA3	1:A:92:ARG:HH11	0.48	1.68	10	1
1:A:84:TYR:CG	1:A:85:PRO:CD	0.48	2.96	19	1
1:A:86:LEU:HD13	1:A:87:LYS:N	0.47	2.24	10	1
1:A:107:LYS:HE2	1:A:107:LYS:HA	0.47	1.86	5	3
1:A:22:ASP:CB	1:A:112:ILE:HD11	0.47	2.40	15	2
1:A:84:TYR:CD1	1:A:85:PRO:HD3	0.47	2.44	1	2
1:A:102:GLN:OE1	1:A:103:ASN:HB2	0.46	2.09	3	1
1:A:77:ILE:O	1:A:87:LYS:HB2	0.46	2.11	10	1

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Atom-1	**Atom-2**	**Clash(Å)**	**Distance(Å)**	**Models**	
				Worst	Total
1:A:84:TYR:O	1:A:86:LEU:N	0.46	2.48	19	9
1:A:21:TRP:CZ3	1:A:111:ARG:HB2	0.46	2.44	17	2
1:A:101:GLU:HG2	1:A:106:ARG:HB3	0.46	1.87	13	2
1:A:23:GLU:HB2	1:A:35:SER:HB3	0.46	1.86	11	1
1:A:45:VAL:HG23	1:A:64:TYR:CD1	0.45	2.45	12	3
1:A:67:ILE:HD11	1:A:78:GLN:HB2	0.45	1.88	15	4
1:A:41:THR:HG22	1:A:42:GLU:H	0.45	1.71	10	2
1:A:41:THR:HB	1:A:44:GLU:HB2	0.45	1.88	6	1
1:A:17:TYR:O	1:A:40:PHE:HB2	0.45	2.12	7	2
1:A:101:GLU:HG2	1:A:106:ARG:HG2	0.45	1.87	10	1
1:A:84:TYR:C	1:A:86:LEU:H	0.45	2.15	12	4
1:A:26:ALA:HB3	1:A:107:LYS:HE2	0.45	1.87	8	1
1:A:29:PRO:O	1:A:30:THR:HB	0.44	2.13	8	1
1:A:20:THR:HA	1:A:38:VAL:O	0.44	2.11	11	1
1:A:51:MET:HB3	1:A:54:ARG:HG2	0.44	1.90	20	1
1:A:21:TRP:HB3	1:A:109:MET:HB3	0.44	1.89	1	2
1:A:41:THR:HB	1:A:44:GLU:OE2	0.44	2.13	12	2
1:A:29:PRO:HG2	1:A:33:VAL:HG21	0.43	1.91	6	1
1:A:84:TYR:CB	1:A:85:PRO:CD	0.43	2.96	9	3
1:A:59:LEU:HB3	1:A:60:PRO:HD2	0.43	1.89	4	3
1:A:29:PRO:HD2	1:A:33:VAL:HG21	0.43	1.88	13	1
1:A:78:GLN:HE21	1:A:85:PRO:HA	0.43	1.74	19	1
1:A:22:ASP:HB2	1:A:112:ILE:HG12	0.42	1.90	2	1
1:A:84:TYR:CG	1:A:85:PRO:HD2	0.42	2.49	12	1
1:A:37:THR:OG1	1:A:48:THR:HB	0.42	2.14	12	1
1:A:23:GLU:CD	1:A:107:LYS:HD3	0.42	2.35	15	1
1:A:100:TRP:HB2	1:A:109:MET:CE	0.42	2.45	19	1
1:A:99:ILE:HA	1:A:107:LYS:O	0.42	2.14	3	1
1:A:27:PRO:HA	1:A:34:LYS:O	0.42	2.15	2	1
1:A:47:GLU:HB2	1:A:59:LEU:HB2	0.42	1.92	10	1
1:A:34:LYS:CE	1:A:52:GLU:HB3	0.42	2.42	16	1
1:A:22:ASP:HB3	1:A:112:ILE:HD11	0.41	1.91	15	1
1:A:102:GLN:O	1:A:105:GLN:HG2	0.41	2.15	14	2
1:A:89:THR:HB	1:A:101:GLU:HB2	0.41	1.92	3	1
1:A:82:PRO:HG2	1:A:83:TYR:CE2	0.41	2.50	8	1
1:A:51:MET:SD	1:A:54:ARG:HG3	0.41	2.56	15	1
1:A:29:PRO:HG2	1:A:33:VAL:CG2	0.41	2.45	6	1
1:A:33:VAL:HG22	1:A:51:MET:HG2	0.41	1.91	19	1
1:A:94:GLU:HG2	1:A:95:ASN:ND2	0.40	2.31	12	1
1:A:44:GLU:HB2	1:A:61:PHE:HB2	0.40	1.93	14	1
1:A:54:ARG:HG3	1:A:55:GLY:N	0.40	2.31	16	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:23:GLU:HG3	1:A:36:ALA:O	0.40	2.16	2	1
1:A:23:GLU:HG2	1:A:36:ALA:O	0.40	2.17	3	1
1:A:94:GLU:H	1:A:94:GLU:CD	0.40	2.19	12	1
1:A:65:LYS:HG2	1:A:80:LEU:HD11	0.40	1.93	18	1

6.3 Torsion angles ⓘ

6.3.1 Protein backbone ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	100/135 (74%)	91±1 (91±1%)	7±2 (7±2%)	2±1 (2±1%)	10	49
All	All	2000/2700 (74%)	1811 (91%)	146 (7%)	43 (2%)	10	49

All 11 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	85	PRO	13
1	A	73	GLY	10
1	A	32	GLY	5
1	A	14	THR	4
1	A	29	PRO	2
1	A	104	GLY	2
1	A	26	ALA	2
1	A	84	TYR	2
1	A	96	GLY	1
1	A	80	LEU	1
1	A	27	PRO	1

6.3.2 Protein sidechains ⓘ

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	86/119 (72%)	81±2 (95±2%)	5±2 (5±2%)	26	75
All	All	1720/2380 (72%)	1627 (95%)	93 (5%)	26	75

All 23 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	48	THR	17
1	A	41	THR	8
1	A	103	ASN	7
1	A	110	THR	7
1	A	84	TYR	7
1	A	85	PRO	7
1	A	97	THR	6
1	A	44	GLU	5
1	A	51	MET	5
1	A	71	THR	4
1	A	54	ARG	2
1	A	102	GLN	2
1	A	109	MET	2
1	A	88	SER	2
1	A	65	LYS	2
1	A	68	SER	2
1	A	52	GLU	2
1	A	37	THR	1
1	A	25	ARG	1
1	A	22	ASP	1
1	A	42	GLU	1
1	A	94	GLU	1
1	A	89	THR	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 (i)

There are no monosaccharides in this entry.

6.6 Ligand geometry (i)

There are no ligands in this entry.

6.7 Other polymers (i)

There are no such molecules in this entry.

6.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

7 Chemical shift validation ⓘ

The completeness of assignment taking into account all chemical shift lists is 91% for the well-defined parts and 86% 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	1559
Number of shifts mapped to atoms	1559
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	5

7.1.2 Chemical shift referencing ⓘ

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction ± precision, *ppm*	Suggested action
$^{13}C_{\alpha}$	128	-0.23 ± 0.09	None needed (< 0.5 ppm)
$^{13}C_{\beta}$	115	0.02 ± 0.10	None needed (< 0.5 ppm)
$^{13}C'$	121	-0.13 ± 0.14	None needed (< 0.5 ppm)
^{15}N	122	-0.45 ± 0.35	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 91%, i.e. 1220 atoms were assigned a chemical shift out of a possible 1335. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	493/499 (99%)	205/205 (100%)	194/200 (97%)	94/94 (100%)
Sidechain	644/728 (88%)	436/470 (93%)	201/231 (87%)	7/27 (26%)

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	Total	^{1}H	^{13}C	^{15}N
Aromatic	83/108 (77%)	51/51 (100%)	30/55 (55%)	2/2 (100%)
Overall	1220/1335 (91%)	692/726 (95%)	425/486 (87%)	103/123 (84%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 86%, i.e. 1556 atoms were assigned a chemical shift out of a possible 1814. 0 out of 14 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	634/676 (94%)	263/277 (95%)	249/270 (92%)	122/129 (95%)
Sidechain	839/982 (85%)	569/630 (90%)	263/314 (84%)	7/38 (18%)
Aromatic	83/156 (53%)	51/75 (68%)	30/67 (45%)	2/14 (14%)
Overall	1556/1814 (86%)	883/982 (90%)	542/651 (83%)	131/181 (72%)

7.1.4 Statistically unusual chemical shifts ⓘ

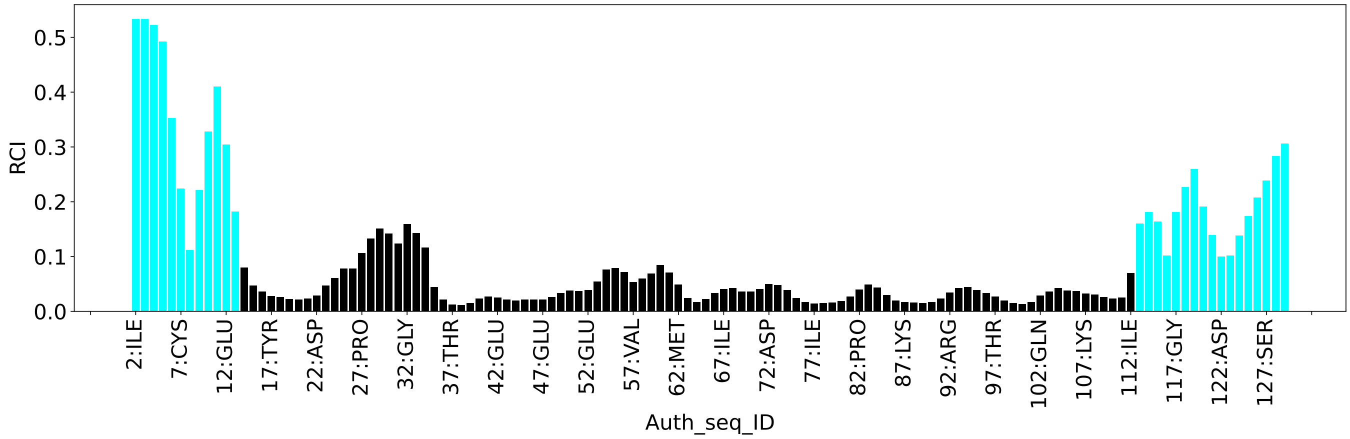
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

List Id	Chain	Res	Type	Atom	Shift, *ppm*	Expected range, *ppm*	Z-score
1	A	15	PRO	HB2	0.03	0.37 – 3.78	-6.0
1	A	98	LEU	HB2	-0.41	-0.07 – 3.30	-6.0
1	A	98	LEU	HD21	-0.67	-0.65 – 2.13	-5.1
1	A	98	LEU	HD22	-0.67	-0.65 – 2.13	-5.1
1	A	98	LEU	HD23	-0.67	-0.65 – 2.13	-5.1

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:


RCI
0.0
0.1
0.2
0.3
0.4
0.5
2:ILE
7:CYS
12:GLU
17:TYR
22:ASP
27:PRO
32:GLY
37:THR
42:GLU
47:GLU
52:GLU
57:VAL
62:MET
67:ILE
72:ASP
77:ILE
82:PRO
87:LYS
92:ARG
97:THR
102:GLN
107:LYS
112:ILE
117:GLY
122:ASP
127:SER
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	1666
Intra-residue (|i-j|=0)	439
Sequential (|i-j|=1)	507
Medium range (|i-j|>1 and |i-j|<5)	132
Long range (|i-j|≥5)	588
Inter-chain	0
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	202
Number of unmapped restraints	0
Number of restraints per residue	13.8
Number of long range restraints per residue[1]	4.4

[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)	19.1	0.2
0.2-0.5 (Medium)	16.1	0.5
>0.5 (Large)	10.7	2.65

8.2.2 Average number of dihedral-angle violations per model ⓘ

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

Bins (°)	Average number of violations per model	Max (°)
1.0-10.0 (Small)	15.6	9.86
10.0-20.0 (Medium)	0.3	19.62
>20.0 (Large)	1.1	146.65

9 Distance violation analysis ⓘ

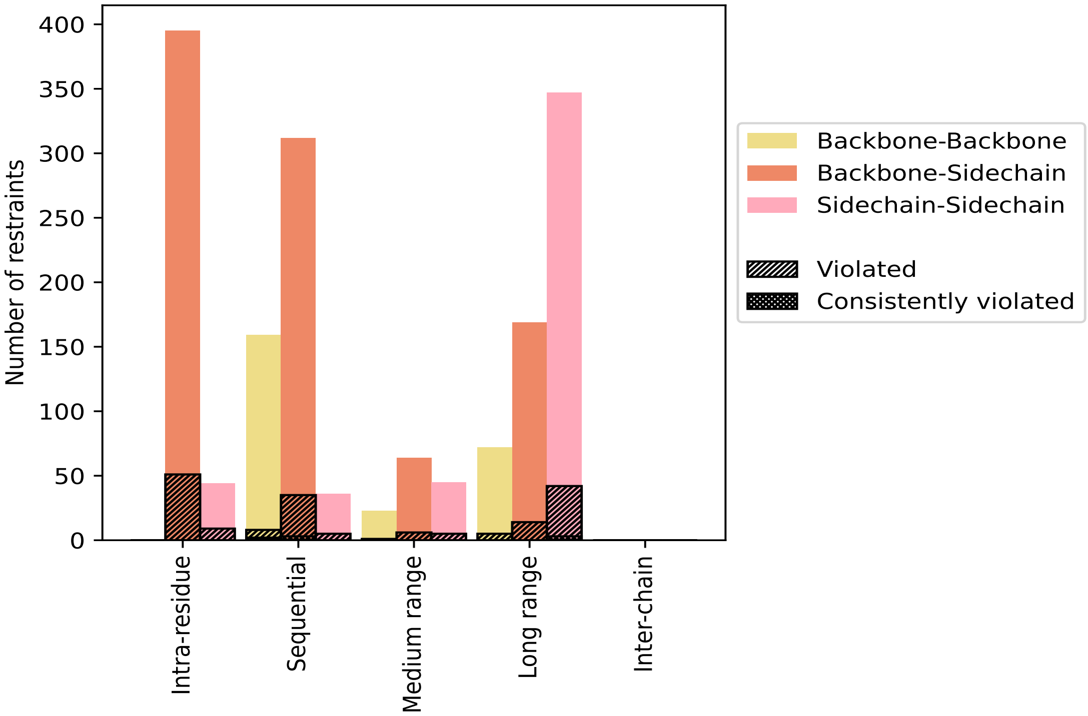
9.1 Summary of distance violations ⓘ

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.

Restraints type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
Intra-residue (|i-j|=0)	439	26.4	60	13.7	3.6	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	395	23.7	51	12.9	3.1	0	0.0	0.0
Sidechain-Sidechain	44	2.6	9	20.5	0.5	0	0.0	0.0
Sequential (|i-j|=1)	507	30.4	48	9.5	2.9	5	1.0	0.3
Backbone-Backbone	159	9.5	8	5.0	0.5	2	1.3	0.1
Backbone-Sidechain	312	18.7	35	11.2	2.1	3	1.0	0.2
Sidechain-Sidechain	36	2.2	5	13.9	0.3	0	0.0	0.0
Medium range (|i-j|>1 & |i-j|<5)	132	7.9	12	9.1	0.7	0	0.0	0.0
Backbone-Backbone	23	1.4	1	4.3	0.1	0	0.0	0.0
Backbone-Sidechain	64	3.8	6	9.4	0.4	0	0.0	0.0
Sidechain-Sidechain	45	2.7	5	11.1	0.3	0	0.0	0.0
Long range (|i-j|≥5)	588	35.3	61	10.4	3.7	3	0.5	0.2
Backbone-Backbone	72	4.3	5	6.9	0.3	0	0.0	0.0
Backbone-Sidechain	169	10.1	14	8.3	0.8	0	0.0	0.0
Sidechain-Sidechain	347	20.8	42	12.1	2.5	3	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	1666	100.0	181	10.9	10.9	8	0.5	0.5
Backbone-Backbone	254	15.2	14	5.5	0.8	2	0.8	0.1
Backbone-Sidechain	940	56.4	106	11.3	6.4	3	0.3	0.2
Sidechain-Sidechain	472	28.3	61	12.9	3.7	3	0.6	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 ⓘ



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	17	14	3	21	0	55	0.43	1.81	0.44	0.24
2	10	13	5	12	0	40	0.46	2.15	0.5	0.23
3	11	14	3	11	0	39	0.45	1.59	0.43	0.23
4	14	9	5	12	0	40	0.42	2.12	0.49	0.24
5	11	13	3	16	0	43	0.39	1.81	0.41	0.2
6	15	15	2	16	0	48	0.4	1.95	0.4	0.24
7	9	12	5	22	0	48	0.41	2.65	0.5	0.22
8	17	17	5	16	0	55	0.45	1.89	0.48	0.2
9	18	13	3	19	0	53	0.39	2.04	0.39	0.21
10	18	19	2	24	0	63	0.4	2.08	0.43	0.21
11	10	13	4	17	0	44	0.43	1.8	0.46	0.21

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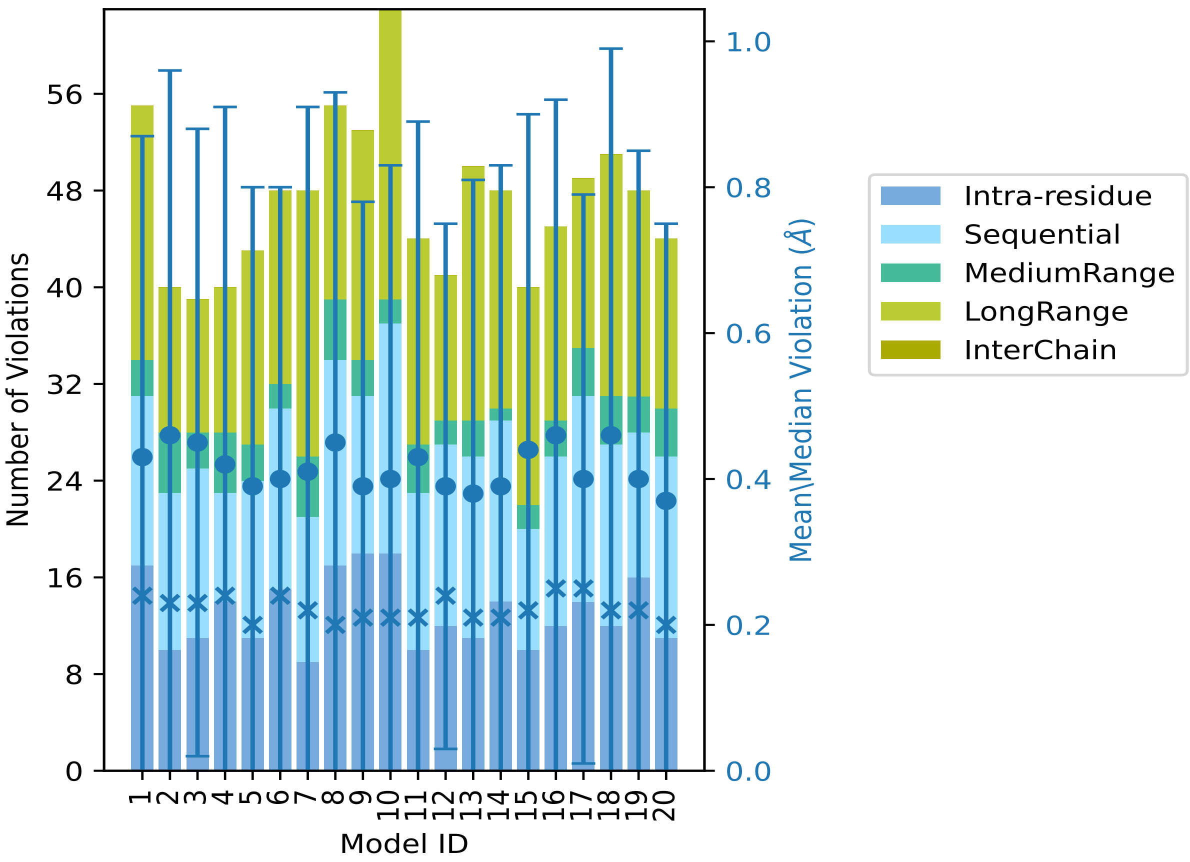
Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
12	12	15	2	12	0	41	0.39	1.6	0.36	0.24
13	11	15	3	21	0	50	0.38	2.13	0.43	0.21
14	14	15	1	18	0	48	0.39	2.22	0.44	0.21
15	10	10	2	18	0	40	0.44	1.83	0.46	0.22
16	12	14	3	16	0	45	0.46	1.98	0.46	0.25
17	14	17	4	14	0	49	0.4	1.82	0.39	0.25
18	12	15	4	20	0	51	0.46	2.57	0.53	0.22
19	16	12	3	17	0	48	0.4	1.78	0.45	0.22
20	11	15	4	14	0	44	0.37	1.57	0.38	0.2

[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

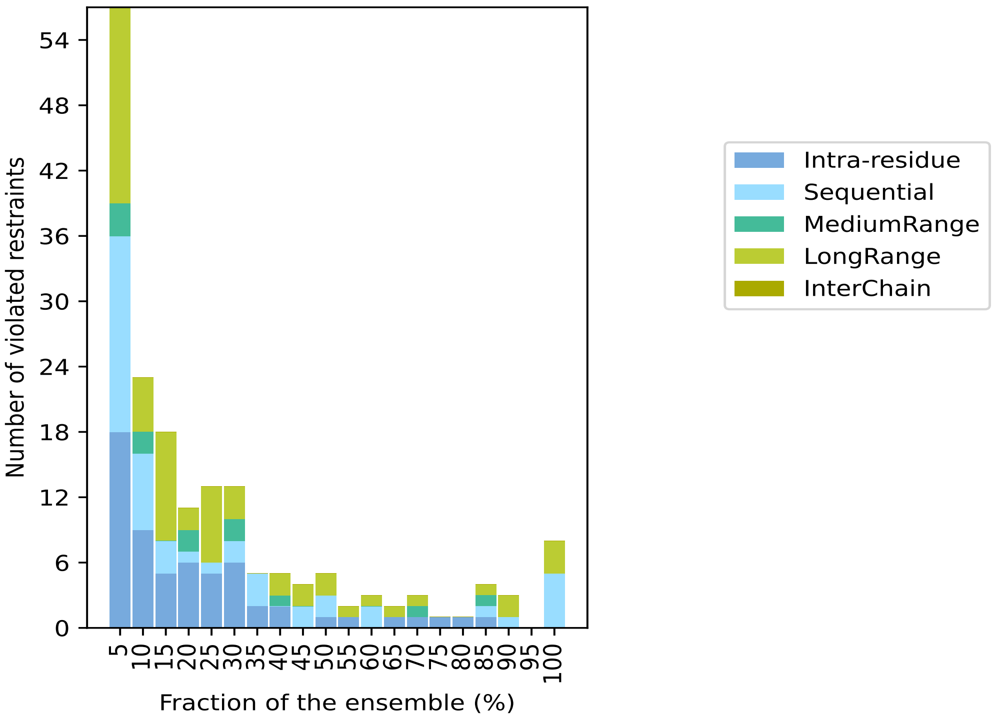
9.3 Distance violation statistics for the ensemble (i)

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, 1485(IR:379, SQ:459, MR:120, LR:527, 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]	%
18	18	3	18	0	57	1	5.0
9	7	2	5	0	23	2	10.0
5	3	0	10	0	18	3	15.0
6	1	2	2	0	11	4	20.0
5	1	0	7	0	13	5	25.0
6	2	2	3	0	13	6	30.0
2	3	0	0	0	5	7	35.0
2	0	1	2	0	5	8	40.0
0	2	0	2	0	4	9	45.0
1	2	0	2	0	5	10	50.0
1	0	0	1	0	2	11	55.0
0	2	0	1	0	3	12	60.0
1	0	0	1	0	2	13	65.0
1	0	1	1	0	3	14	70.0
1	0	0	0	0	1	15	75.0
1	0	0	0	0	1	16	80.0
1	1	1	1	0	4	17	85.0
0	1	0	2	0	3	18	90.0
0	0	0	0	0	0	19	95.0
0	5	0	3	0	8	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

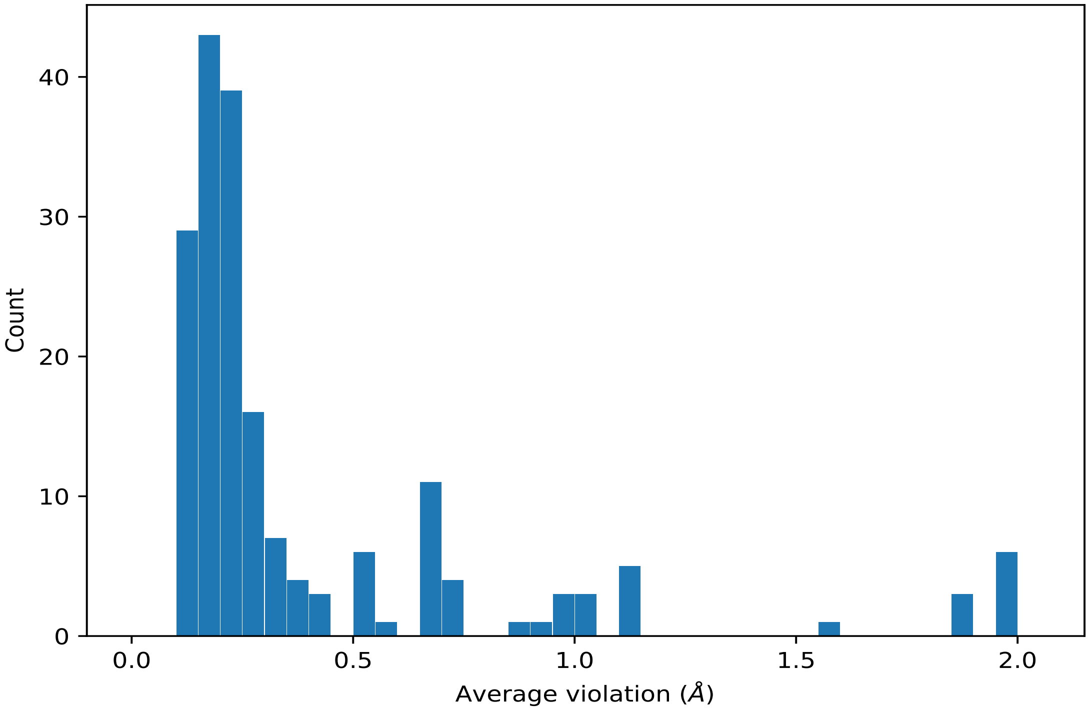
9.3.1 Bar graph : Distance violation statistics for the ensemble ⓘ



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 (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)
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	20	1.85	0.26	1.87
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	20	1.85	0.26	1.87
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	20	1.85	0.26	1.87
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	20	1.59	0.07	1.57
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	20	1.13	0.24	1.0
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	20	0.96	0.09	0.94
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	20	0.96	0.09	0.94
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	20	0.93	0.56	1.32
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	20	0.86	0.12	0.83
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	20	0.74	0.23	0.75
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	20	0.74	0.23	0.75
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	20	0.74	0.23	0.75
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	20	0.68	0.2	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	20	0.68	0.2	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	20	0.68	0.2	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	20	0.68	0.2	0.71

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Key	Atom-1	Atom-2	Models^1	Mean (Å)	SD^1 (Å)	Median (Å)
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	20	0.68	0.2	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	20	0.68	0.2	0.71
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	18	0.34	0.05	0.34
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	18	0.24	0.03	0.24
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	18	0.19	0.03	0.2
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	17	0.24	0.05	0.23
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	17	0.23	0.03	0.23
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	17	0.2	0.04	0.19
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	17	0.2	0.04	0.19
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	17	0.19	0.05	0.17
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	16	0.19	0.05	0.18
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	15	0.2	0.03	0.2
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	14	0.69	0.31	0.6
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	14	0.41	0.16	0.45
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	14	0.26	0.11	0.22
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	13	0.36	0.17	0.35
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	13	0.12	0.02	0.11
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	12	0.28	0.04	0.27
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	12	0.25	0.04	0.26
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	12	0.21	0.04	0.21
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	11	0.25	0.1	0.22
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	11	0.2	0.02	0.2
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	10	0.27	0.12	0.26
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	10	0.27	0.12	0.26
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	10	0.22	0.05	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	10	0.2	0.02	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	10	0.2	0.02	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	10	0.2	0.02	0.2
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	10	0.16	0.03	0.16
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	10	0.16	0.03	0.16
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	10	0.16	0.03	0.16
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	10	0.14	0.02	0.14
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	9	0.66	0.32	0.62
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	9	0.66	0.32	0.62
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	9	0.66	0.32	0.62
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	9	0.18	0.02	0.18
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	9	0.17	0.03	0.17
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	9	0.15	0.02	0.15
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	9	0.15	0.02	0.15
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	9	0.15	0.02	0.15
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	8	1.96	0.46	1.94
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	8	1.96	0.46	1.94

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	8	1.96	0.46	1.94
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	8	1.96	0.46	1.94
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	8	1.96	0.46	1.94
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	8	1.96	0.46	1.94
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	8	0.2	0.09	0.16
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	8	0.15	0.03	0.15
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	8	0.15	0.03	0.15
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	8	0.15	0.03	0.15
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	8	0.13	0.02	0.13
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	8	0.12	0.01	0.12
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	7	0.36	0.15	0.39
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	7	0.21	0.01	0.21
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	7	0.21	0.08	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	7	0.21	0.08	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	7	0.21	0.08	0.2
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	7	0.18	0.04	0.17
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	7	0.14	0.04	0.12
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	6	1.14	0.4	1.08
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	6	0.98	0.44	0.96
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	6	0.51	0.3	0.46
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	6	0.51	0.3	0.46
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	6	0.51	0.3	0.46
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	6	0.44	0.16	0.5
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	6	0.32	0.04	0.33
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	6	0.25	0.06	0.26
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	6	0.23	0.08	0.25
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	6	0.2	0.03	0.22
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	6	0.2	0.07	0.18
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	6	0.2	0.07	0.18
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	6	0.19	0.15	0.12
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	6	0.19	0.08	0.15
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	6	0.19	0.08	0.15
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	6	0.19	0.08	0.15
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	6	0.14	0.03	0.14
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	6	0.12	0.0	0.12
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	5	1.14	0.44	1.13
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	5	1.14	0.44	1.13
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	5	1.14	0.44	1.13
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	5	1.0	0.35	1.04
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	5	1.0	0.35	1.04
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	5	1.0	0.35	1.04
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	5	0.66	0.43	0.46

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	5	0.53	0.33	0.51
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	5	0.53	0.33	0.51
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	5	0.53	0.33	0.51
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	5	0.39	0.05	0.42
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	5	0.32	0.05	0.32
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	5	0.27	0.06	0.3
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	5	0.27	0.06	0.3
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	5	0.27	0.06	0.3
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	5	0.24	0.07	0.24
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	5	0.22	0.03	0.21
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	5	0.17	0.01	0.16
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	5	0.14	0.01	0.14
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	5	0.13	0.02	0.14
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	5	0.13	0.02	0.14
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	5	0.13	0.02	0.14
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	5	0.13	0.03	0.11
(1,624)	1:54:A:ARG:HB2	1:55:A:GLY:H	4	0.36	0.13	0.42
(1,763)	1:62:A:MET:H	1:62:A:MET:HG3	4	0.29	0.13	0.29
(1,810)	1:107:A:LYS:HA	1:107:A:LYS:HD3	4	0.22	0.05	0.2
(1,871)	1:51:A:MET:HB2	1:54:A:ARG:HG3	4	0.19	0.03	0.2
(1,566)	1:106:A:ARG:H	1:106:A:ARG:HB2	4	0.16	0.02	0.16
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD11	4	0.16	0.02	0.16
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD12	4	0.16	0.02	0.16
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD13	4	0.16	0.02	0.16
(1,1325)	1:17:A:TYR:HE1	1:75:A:ILE:HG12	4	0.14	0.01	0.14
(1,1325)	1:17:A:TYR:HE2	1:75:A:ILE:HG12	4	0.14	0.01	0.14
(1,826)	1:115:A:LYS:HA	1:115:A:LYS:HG3	4	0.14	0.03	0.14
(1,354)	1:54:A:ARG:H	1:54:A:ARG:HG3	4	0.13	0.01	0.13
(1,550)	1:74:A:SER:H	1:74:A:SER:HB3	4	0.12	0.02	0.11
(1,706)	1:70:A:SER:HB2	1:73:A:GLY:H	4	0.11	0.01	0.12
(1,809)	1:107:A:LYS:HA	1:107:A:LYS:HD2	3	0.29	0.07	0.25
(1,886)	1:74:A:SER:HB3	1:91:A:LYS:HG3	3	0.26	0.18	0.14
(1,1358)	1:88:A:SER:HG	1:100:A:TRP:HD1	3	0.26	0.1	0.33
(1,836)	1:54:A:ARG:HG2	1:55:A:GLY:H	3	0.25	0.03	0.25
(1,679)	1:116:A:THR:HB	1:117:A:GLY:H	3	0.24	0.04	0.22
(1,907)	1:88:A:SER:HB2	1:102:A:GLN:HG3	3	0.23	0.04	0.23
(1,846)	1:78:A:GLN:HE21	1:85:A:PRO:HB2	3	0.23	0.03	0.21
(1,1281)	1:99:A:ILE:HD11	1:109:A:MET:H	3	0.2	0.01	0.2
(1,1281)	1:99:A:ILE:HD12	1:109:A:MET:H	3	0.2	0.01	0.2
(1,1281)	1:99:A:ILE:HD13	1:109:A:MET:H	3	0.2	0.01	0.2
(1,1094)	1:46:A:VAL:HG21	1:59:A:LEU:H	3	0.19	0.04	0.21
(1,1094)	1:46:A:VAL:HG22	1:59:A:LEU:H	3	0.19	0.04	0.21

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1094)	1:46:A:VAL:HG23	1:59:A:LEU:H	3	0.19	0.04	0.21
(1,938)	1:75:A:ILE:H	1:75:A:ILE:HG12	3	0.18	0.05	0.15
(1,1055)	1:38:A:VAL:HG21	1:100:A:TRP:HH2	3	0.17	0.01	0.17
(1,1055)	1:38:A:VAL:HG22	1:100:A:TRP:HH2	3	0.17	0.01	0.17
(1,1055)	1:38:A:VAL:HG23	1:100:A:TRP:HH2	3	0.17	0.01	0.17
(1,820)	1:111:A:ARG:HA	1:111:A:ARG:HG3	3	0.16	0.03	0.15
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD21	3	0.16	0.01	0.16
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD22	3	0.16	0.01	0.16
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD23	3	0.16	0.01	0.16
(1,531)	1:52:A:GLU:H	1:52:A:GLU:HB2	3	0.16	0.01	0.16
(1,818)	1:107:A:LYS:HG3	1:107:A:LYS:HE3	3	0.14	0.04	0.14
(1,413)	1:78:A:GLN:HE21	1:85:A:PRO:HB3	3	0.12	0.02	0.13
(1,415)	1:78:A:GLN:HE22	1:85:A:PRO:HB2	3	0.12	0.01	0.12
(1,674)	1:110:A:THR:HB	1:111:A:ARG:H	3	0.12	0.0	0.12
(1,940)	1:74:A:SER:HB3	1:91:A:LYS:HG2	2	0.73	0.62	0.73
(1,733)	1:23:A:GLU:HA	1:23:A:GLU:HG2	2	0.56	0.12	0.56
(1,766)	1:65:A:LYS:H	1:65:A:LYS:HG3	2	0.42	0.14	0.42
(1,792)	1:92:A:ARG:HB2	1:92:A:ARG:HD3	2	0.34	0.01	0.34
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG11	2	0.3	0.02	0.3
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG12	2	0.3	0.02	0.3
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG13	2	0.3	0.02	0.3
(1,503)	1:13:A:GLU:H	1:13:A:GLU:HB2	2	0.29	0.04	0.29
(1,1049)	1:38:A:VAL:HG21	1:47:A:GLU:HB2	2	0.24	0.03	0.24
(1,1049)	1:38:A:VAL:HG22	1:47:A:GLU:HB2	2	0.24	0.03	0.24
(1,1049)	1:38:A:VAL:HG23	1:47:A:GLU:HB2	2	0.24	0.03	0.24
(1,906)	1:88:A:SER:HB2	1:102:A:GLN:HG2	2	0.22	0.02	0.22
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG21	2	0.22	0.02	0.22
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG22	2	0.22	0.02	0.22
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG23	2	0.22	0.02	0.22
(1,739)	1:34:A:LYS:H	1:34:A:LYS:HG3	2	0.2	0.02	0.2
(1,835)	1:47:A:GLU:HG2	1:48:A:THR:H	2	0.2	0.02	0.2
(1,219)	1:118:A:ARG:H	1:119:A:GLU:H	2	0.18	0.0	0.18
(1,400)	1:29:A:PRO:HG2	1:32:A:GLY:H	2	0.18	0.0	0.18
(1,400)	1:29:A:PRO:HG3	1:32:A:GLY:H	2	0.18	0.0	0.18
(1,684)	1:121:A:LYS:HB2	1:122:A:ASP:H	2	0.18	0.03	0.18
(1,734)	1:23:A:GLU:HA	1:23:A:GLU:HG3	2	0.16	0.02	0.16
(1,1327)	1:21:A:TRP:HA	1:21:A:TRP:HE3	2	0.15	0.04	0.15
(1,814)	1:107:A:LYS:HG3	1:107:A:LYS:HE2	2	0.14	0.01	0.14
(1,641)	1:74:A:SER:HB3	1:75:A:ILE:H	2	0.14	0.02	0.14
(1,913)	1:89:A:THR:HB	1:101:A:GLU:HB2	2	0.13	0.02	0.13
(1,669)	1:103:A:ASN:HA	1:104:A:GLY:H	2	0.12	0.01	0.12
(1,625)	1:54:A:ARG:HB3	1:55:A:GLY:H	2	0.12	0.0	0.12

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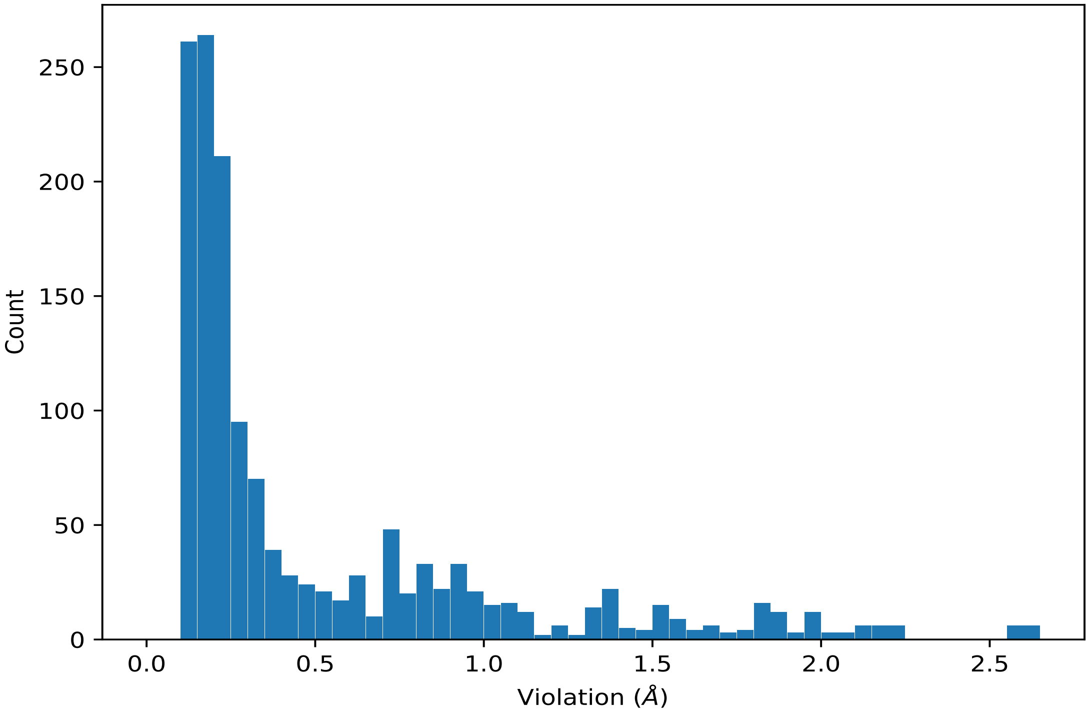
Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,861)	1:65:A:LYS:HG2	1:66:A:VAL:H	2	0.11	0.01	0.11
(1,567)	1:106:A:ARG:H	1:106:A:ARG:HB3	2	0.11	0.0	0.11

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

9.5 All violated distance restraints ⓘ

9.5.1 Histogram : Distribution of distance violations ⓘ

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



9.5.2 Table : All distance violations ⓘ

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

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	7	2.65
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	7	2.65

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	7	2.65
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	7	2.65
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	7	2.65
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	7	2.65
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	18	2.57
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	18	2.57
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	18	2.57
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	18	2.57
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	18	2.57
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	18	2.57
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	14	2.22
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	14	2.22
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	14	2.22
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	18	2.22
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	18	2.22
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	18	2.22
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	2	2.15
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	2	2.15
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	2	2.15
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	2	2.15
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	2	2.15
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	2	2.15
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	13	2.13
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	13	2.13
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	13	2.13
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	4	2.12
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	4	2.12
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	4	2.12
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	10	2.08
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	10	2.08
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	10	2.08
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	9	2.04
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	9	2.04
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	9	2.04
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	7	1.99
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	7	1.99
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	7	1.99
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	16	1.98
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	16	1.98
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	16	1.98
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	16	1.98
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	16	1.98

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	16	1.98
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	6	1.95
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	6	1.95
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	6	1.95
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	2	1.92
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	2	1.92
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	2	1.92
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	4	1.89
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	4	1.89
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	4	1.89
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	4	1.89
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	4	1.89
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	4	1.89
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	8	1.89
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	8	1.89
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	8	1.89
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	16	1.85
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	16	1.85
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	16	1.85
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	15	1.83
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	17	1.82
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	17	1.82
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	17	1.82
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	1	1.81
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	1	1.81
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	1	1.81
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	1	1.81
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	1	1.81
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	1	1.81
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	5	1.81
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	5	1.81
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	5	1.81
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	11	1.8
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	11	1.8
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	11	1.8
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	8	1.79
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	19	1.78
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	19	1.78
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	19	1.78
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	15	1.71
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	15	1.71
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	15	1.71

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	19	1.67
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	19	1.67
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	19	1.67
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	1	1.67
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	11	1.67
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	16	1.65
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	13	1.63
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	17	1.61
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	10	1.6
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	12	1.6
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	3	1.59
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	2	1.57
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	15	1.57
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	18	1.57
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	20	1.57
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	14	1.56
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	11	1.55
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	6	1.55
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	19	1.55
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	9	1.54
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	12	1.53
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	12	1.53
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	12	1.53
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	1	1.53
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	8	1.52
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	8	1.52
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	8	1.52
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	5	1.52
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	7	1.52
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	20	1.52
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	20	1.51
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	20	1.51
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	20	1.51
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	8	1.5
(1,757)	1:58:A:GLN:HG3	1:59:A:LEU:H	4	1.49
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	1	1.48
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	10	1.48
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	5	1.46
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	3	1.44
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	3	1.44
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	3	1.44
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	1	1.4

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	6	1.4
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	11	1.38
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	19	1.38
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	19	1.38
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	19	1.38
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	4	1.37
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	8	1.37
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	8	1.37
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	8	1.37
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	13	1.37
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	15	1.37
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	17	1.37
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	14	1.36
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	8	1.35
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	8	1.35
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	8	1.35
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	8	1.35
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	8	1.35
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	8	1.35
(1,940)	1:74:A:SER:HB3	1:91:A:LYS:HG2	3	1.35
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	3	1.35
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	10	1.35
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	16	1.35
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	18	1.34
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	9	1.33
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG21	10	1.32
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG22	10	1.32
(1,1129)	1:65:A:LYS:HE2	1:67:A:ILE:HG23	10	1.32
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG21	10	1.32
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG22	10	1.32
(1,1129)	1:65:A:LYS:HE3	1:67:A:ILE:HG23	10	1.32
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	2	1.32
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	7	1.32
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	11	1.31
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	11	1.31
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	11	1.31
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	12	1.3
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	19	1.28
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	1	1.25
(1,1111)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	1	1.24
(1,1111)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	1	1.24
(1,1111)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	1	1.24

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	14	1.22
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	14	1.22
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	14	1.22
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	8	1.16
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	8	1.16
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	3	1.14
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	13	1.13
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	13	1.13
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	18	1.13
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	18	1.13
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	18	1.13
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	14	1.1
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	14	1.1
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	14	1.1
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	14	1.1
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	14	1.1
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	14	1.1
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	8	1.09
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	13	1.09
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	20	1.08
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	13	1.08
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	6	1.07
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	5	1.05
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	5	1.05
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	6	1.05
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	6	1.05
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	6	1.05
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	8	1.05
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	8	1.05
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	8	1.05
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	8	1.05
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	11	1.05
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	17	1.05
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	2	1.04
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	2	1.04
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	18	1.04
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	18	1.04
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	18	1.04
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	10	1.03
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	10	1.03
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	18	1.03
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	18	1.03

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	18	1.03
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	9	1.03
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	3	1.02
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	3	1.02
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	5	1.02
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	17	1.02
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	18	0.99
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	18	0.99
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	19	0.99
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	19	0.99
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	2	0.99
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	10	0.98
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	10	0.98
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	10	0.98
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	18	0.97
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	18	0.97
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	18	0.97
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	18	0.97
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	18	0.97
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	18	0.97
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	14	0.97
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	15	0.97
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	11	0.96
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	11	0.96
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	17	0.95
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	17	0.95
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	10	0.95
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	9	0.94
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	9	0.94
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	12	0.94
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	12	0.94
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	3	0.94
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	3	0.94
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	7	0.94
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	19	0.94
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	2	0.93
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	12	0.93
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	16	0.92
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	16	0.92
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	19	0.92
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	19	0.92
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	19	0.92

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	10	0.92
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	6	0.91
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	6	0.91
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	18	0.91
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	19	0.91
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	16	0.91
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	8	0.9
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	8	0.9
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	8	0.9
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	8	0.9
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	8	0.9
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	8	0.9
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	4	0.9
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	4	0.9
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	4	0.9
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	16	0.9
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	16	0.9
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	16	0.9
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	14	0.89
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	14	0.89
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	15	0.89
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	15	0.89
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	20	0.89
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	20	0.89
(1,554)	1:84:A:TYR:HA	1:85:A:PRO:HA	9	0.89
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	3	0.88
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	3	0.88
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	3	0.88
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	7	0.86
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	7	0.86
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	13	0.86
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	13	0.86
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	13	0.86
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	4	0.85
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	4	0.85
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	4	0.85
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	4	0.85
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	4	0.85
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	4	0.85
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	9	0.85
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	10	0.84
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	10	0.84

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	10	0.84
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	11	0.84
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	11	0.84
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	11	0.84
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	8	0.84
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	8	0.84
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	8	0.84
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	5	0.84
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	16	0.84
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	1	0.83
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	1	0.83
(1,1489)	1:58:A:GLN:HG2	1:59:A:LEU:H	4	0.83
(1,1489)	1:58:A:GLN:HG3	1:59:A:LEU:H	4	0.83
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	13	0.83
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	13	0.83
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	13	0.83
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	13	0.83
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	13	0.83
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	13	0.83
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	11	0.83
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	17	0.83
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	12	0.82
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	10	0.81
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	10	0.81
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	10	0.81
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	16	0.8
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	16	0.8
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	16	0.8
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	16	0.8
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	16	0.8
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	16	0.8
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	6	0.79
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	5	0.79
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	10	0.78
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	10	0.78
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	10	0.78
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	10	0.78
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	10	0.78
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	10	0.78
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	16	0.78
(1,306)	1:74:A:SER:HA	1:92:A:ARG:H	9	0.78
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	6	0.78

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	17	0.77
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	17	0.77
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	17	0.77
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	20	0.77
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	2	0.76
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	2	0.76
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	2	0.76
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	14	0.75
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	15	0.75
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	11	0.74
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	11	0.74
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	11	0.74
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	11	0.74
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	11	0.74
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	11	0.74
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	7	0.74
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	7	0.74
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	7	0.74
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	1	0.73
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	1	0.73
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	1	0.73
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	9	0.73
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	9	0.73
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	9	0.73
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	7	0.72
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	2	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	2	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	2	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	2	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	2	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	2	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	7	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	7	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	7	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	7	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	7	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	7	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	9	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	9	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	9	0.71
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	9	0.71
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	9	0.71

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	9	0.71
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	17	0.7
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	17	0.7
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	17	0.7
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	17	0.7
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	17	0.7
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	17	0.7
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	18	0.7
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	18	0.7
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	18	0.7
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	15	0.7
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	15	0.7
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	15	0.7
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	15	0.7
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	8	0.7
(1,939)	1:74:A:SER:HB2	1:91:A:LYS:HG2	10	0.69
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	4	0.69
(1,733)	1:23:A:GLU:HA	1:23:A:GLU:HG2	1	0.69
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	5	0.67
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	5	0.67
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	5	0.67
(1,755)	1:58:A:GLN:HG2	1:59:A:LEU:H	1	0.65
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	10	0.65
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	10	0.65
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	10	0.65
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	4	0.64
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	5	0.63
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	5	0.63
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	5	0.63
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	5	0.63
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	5	0.63
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	5	0.63
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	2	0.62
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	2	0.62
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	2	0.62
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	6	0.61
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	6	0.61
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	6	0.61
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	15	0.61
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	15	0.61
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	15	0.61
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	20	0.61

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	9	0.61
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	6	0.6
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	6	0.6
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	6	0.6
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	6	0.6
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	6	0.6
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	6	0.6
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	8	0.6
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	8	0.6
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	8	0.6
(1,862)	1:23:A:GLU:HG3	1:37:A:THR:HA	13	0.6
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	17	0.59
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	14	0.59
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	18	0.59
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	11	0.57
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	15	0.56
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	15	0.56
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	15	0.56
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	15	0.56
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	15	0.56
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	15	0.56
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	12	0.56
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	12	0.56
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	12	0.56
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	8	0.56
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	16	0.56
(1,766)	1:65:A:LYS:H	1:65:A:LYS:HG3	9	0.55
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	10	0.55
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG21	16	0.54
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG22	16	0.54
(1,500)	1:98:A:LEU:H	1:108:A:THR:HG23	16	0.54
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	3	0.53
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	15	0.53
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	1	0.52
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	1	0.52
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	1	0.52
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	1	0.52
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	1	0.52
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	1	0.52
(1,886)	1:74:A:SER:HB3	1:91:A:LYS:HG3	10	0.52
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	18	0.52
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	2	0.52

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	8	0.51
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	8	0.51
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	8	0.51
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	12	0.5
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	17	0.5
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	1	0.5
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	20	0.5
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	19	0.49
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	19	0.49
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	19	0.49
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	19	0.49
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	19	0.49
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	19	0.49
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	19	0.49
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	19	0.49
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	19	0.49
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	20	0.49
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	16	0.49
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	9	0.49
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	3	0.48
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	17	0.46
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	17	0.46
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	17	0.46
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	18	0.46
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	16	0.46
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	12	0.46
(1,624)	1:54:A:ARG:HB2	1:55:A:GLY:H	20	0.46
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	7	0.45
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	7	0.45
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	6	0.45
(1,624)	1:54:A:ARG:HB2	1:55:A:GLY:H	2	0.45
(1,763)	1:62:A:MET:H	1:62:A:MET:HG3	6	0.44
(1,733)	1:23:A:GLU:HA	1:23:A:GLU:HG2	13	0.44
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	5	0.44
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	13	0.43
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	13	0.43
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	14	0.43
(1,344)	1:23:A:GLU:H	1:23:A:GLU:HG2	1	0.43
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	9	0.43
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	20	0.43
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG21	16	0.42
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG22	16	0.42

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1320)	1:97:A:THR:HB	1:108:A:THR:HG23	16	0.42
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	7	0.42
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	7	0.42
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	7	0.42
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	5	0.42
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	8	0.42
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	12	0.41
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	12	0.41
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	12	0.41
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	14	0.41
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	9	0.4
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	9	0.4
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	14	0.4
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	14	0.4
(1,735)	1:23:A:GLU:HB2	1:23:A:GLU:HG3	1	0.4
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	19	0.4
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	6	0.4
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	12	0.39
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	12	0.39
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	12	0.39
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	12	0.39
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	12	0.39
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	12	0.39
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	1	0.39
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	6	0.39
(1,763)	1:62:A:MET:H	1:62:A:MET:HG3	9	0.39
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	18	0.39
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	13	0.38
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	17	0.38
(1,809)	1:107:A:LYS:HA	1:107:A:LYS:HD2	10	0.38
(1,624)	1:54:A:ARG:HB2	1:55:A:GLY:H	13	0.38
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	18	0.38
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	17	0.38
(1,899)	1:79:A:TYR:HB3	1:83:A:TYR:HB3	17	0.37
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	8	0.37
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	9	0.37
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	1	0.37
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	2	0.37
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	10	0.37
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	17	0.36
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	17	0.36
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	17	0.36

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	12	0.36
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	3	0.36
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	12	0.36
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	17	0.36
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	13	0.36
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	1	0.35
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	1	0.35
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	1	0.35
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	3	0.35
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	6	0.35
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	15	0.35
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	16	0.35
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	1	0.35
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	15	0.35
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	3	0.34
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	3	0.34
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	3	0.34
(1,1108)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	20	0.34
(1,1108)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	20	0.34
(1,1108)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	20	0.34
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	7	0.34
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	9	0.34
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	14	0.34
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	16	0.34
(1,792)	1:92:A:ARG:HB2	1:92:A:ARG:HD3	14	0.34
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	9	0.34
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	12	0.34
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	5	0.34
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	5	0.34
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	20	0.33
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	20	0.33
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	20	0.33
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	20	0.33
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	20	0.33
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	20	0.33
(1,1358)	1:88:A:SER:HG	1:100:A:TRP:HD1	5	0.33
(1,1358)	1:88:A:SER:HG	1:100:A:TRP:HD1	7	0.33
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	18	0.33
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	18	0.33
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	18	0.33
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	3	0.33
(1,792)	1:92:A:ARG:HB2	1:92:A:ARG:HD3	6	0.33

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	1	0.33
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	4	0.33
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG2	3	0.32
(1,1448)	1:46:A:VAL:HG21	1:58:A:GLN:HG3	3	0.32
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG2	3	0.32
(1,1448)	1:46:A:VAL:HG22	1:58:A:GLN:HG3	3	0.32
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG2	3	0.32
(1,1448)	1:46:A:VAL:HG23	1:58:A:GLN:HG3	3	0.32
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	16	0.32
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	16	0.32
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG11	1	0.32
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG12	1	0.32
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG13	1	0.32
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	12	0.32
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	17	0.32
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	20	0.32
(1,503)	1:13:A:GLU:H	1:13:A:GLU:HB2	9	0.32
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	20	0.32
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	20	0.32
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	18	0.32
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	6	0.31
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	6	0.31
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	6	0.31
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	19	0.31
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	19	0.31
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	19	0.31
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	6	0.31
(1,847)	1:91:A:LYS:HG2	1:92:A:ARG:H	10	0.31
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	5	0.31
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	18	0.31
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	19	0.31
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	19	0.31
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	18	0.3
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	18	0.3
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	17	0.3
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	17	0.3
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	17	0.3
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	2	0.3
(1,885)	1:74:A:SER:HB2	1:91:A:LYS:HG3	11	0.3
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	17	0.3
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	5	0.3
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	14	0.3

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	6	0.29
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	6	0.29
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	12	0.29
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	12	0.29
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	4	0.29
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	4	0.29
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	4	0.29
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	3	0.29
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	20	0.29
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	16	0.29
(1,810)	1:107:A:LYS:HA	1:107:A:LYS:HD3	4	0.29
(1,679)	1:116:A:THR:HB	1:117:A:GLY:H	2	0.29
(1,504)	1:14:A:THR:H	1:14:A:THR:HB	12	0.29
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	13	0.29
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	15	0.29
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	15	0.29
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	12	0.29
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	12	0.28
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	12	0.28
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG11	2	0.28
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG12	2	0.28
(1,1046)	1:23:A:GLU:HG2	1:38:A:VAL:HG13	2	0.28
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	7	0.28
(1,907)	1:88:A:SER:HB2	1:102:A:GLN:HG3	10	0.28
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	17	0.28
(1,836)	1:54:A:ARG:HG2	1:55:A:GLY:H	4	0.28
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	3	0.28
(1,766)	1:65:A:LYS:H	1:65:A:LYS:HG3	18	0.28
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	9	0.28
(1,511)	1:23:A:GLU:HA	1:23:A:GLU:HB3	1	0.28
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	7	0.28
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	17	0.28
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	11	0.28
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	13	0.28
(1,1049)	1:38:A:VAL:HG21	1:47:A:GLU:HB2	6	0.27
(1,1049)	1:38:A:VAL:HG22	1:47:A:GLU:HB2	6	0.27
(1,1049)	1:38:A:VAL:HG23	1:47:A:GLU:HB2	6	0.27
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	17	0.27
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	5	0.27
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	6	0.27
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	14	0.27
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	10	0.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	14	0.27
(1,846)	1:78:A:GLN:HE21	1:85:A:PRO:HB2	7	0.27
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	7	0.27
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	8	0.27
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	12	0.27
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	19	0.27
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	4	0.27
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	1	0.27
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	6	0.27
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	10	0.27
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	4	0.26
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	8	0.26
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	17	0.26
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	10	0.26
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	11	0.26
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	14	0.26
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	8	0.26
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	16	0.26
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	4	0.26
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	7	0.26
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	7	0.26
(1,333)	1:101:A:GLU:HG3	1:102:A:GLN:H	11	0.26
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	1	0.26
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	9	0.26
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	18	0.26
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	20	0.26
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	6	0.25
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	6	0.25
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	19	0.25
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	19	0.25
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	13	0.25
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	13	0.25
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	13	0.25
(1,938)	1:75:A:ILE:H	1:75:A:ILE:HG12	1	0.25
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	15	0.25
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	3	0.25
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	13	0.25
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	16	0.25
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	18	0.25
(1,850)	1:111:A:ARG:HG2	1:112:A:ILE:H	11	0.25
(1,836)	1:54:A:ARG:HG2	1:55:A:GLY:H	1	0.25
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	9	0.25

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	4	0.25
(1,809)	1:107:A:LYS:HA	1:107:A:LYS:HD2	6	0.25
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	10	0.25
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	15	0.25
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	16	0.25
(1,686)	1:122:A:ASP:HB3	1:123:A:GLU:H	8	0.25
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	11	0.25
(1,503)	1:13:A:GLU:H	1:13:A:GLU:HB2	1	0.25
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	17	0.25
(1,321)	1:86:A:LEU:HG	1:87:A:LYS:H	10	0.25
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	16	0.25
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	13	0.24
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	19	0.24
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	19	0.24
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	19	0.24
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG21	4	0.24
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG22	4	0.24
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG23	4	0.24
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	13	0.24
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	13	0.24
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	13	0.24
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	14	0.24
(1,906)	1:88:A:SER:HB2	1:102:A:GLN:HG2	7	0.24
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	2	0.24
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	10	0.24
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	11	0.24
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	2	0.24
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	4	0.24
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	7	0.24
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	12	0.24
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	15	0.24
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	4	0.24
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	6	0.24
(1,374)	1:105:A:GLN:H	1:105:A:GLN:HG3	1	0.24
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	6	0.24
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	1	0.24
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	6	0.24
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	11	0.24
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	2	0.23
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	2	0.23
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	6	0.23
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	6	0.23

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	16	0.23
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	16	0.23
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	16	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	1	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	1	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	1	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	18	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	18	0.23
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	18	0.23
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	8	0.23
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	8	0.23
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	8	0.23
(1,933)	1:21:A:TRP:HA	1:112:A:ILE:HG13	7	0.23
(1,915)	1:90:A:LEU:HG	1:100:A:TRP:HD1	1	0.23
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	19	0.23
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	19	0.23
(1,907)	1:88:A:SER:HB2	1:102:A:GLN:HG3	13	0.23
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	12	0.23
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	15	0.23
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	20	0.23
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	8	0.23
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	9	0.23
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	11	0.23
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	11	0.23
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	7	0.23
(1,809)	1:107:A:LYS:HA	1:107:A:LYS:HD2	4	0.23
(1,805)	1:105:A:GLN:HA	1:105:A:GLN:HG3	3	0.23
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	1	0.23
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	16	0.23
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	8	0.23
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	2	0.23
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	13	0.23
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	19	0.23
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	20	0.23
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	2	0.23
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	17	0.22
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	17	0.22
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	7	0.22
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	18	0.22
(1,1281)	1:99:A:ILE:HD11	1:109:A:MET:H	9	0.22
(1,1281)	1:99:A:ILE:HD12	1:109:A:MET:H	9	0.22
(1,1281)	1:99:A:ILE:HD13	1:109:A:MET:H	9	0.22

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1094)	1:46:A:VAL:HG21	1:59:A:LEU:H	14	0.22
(1,1094)	1:46:A:VAL:HG22	1:59:A:LEU:H	14	0.22
(1,1094)	1:46:A:VAL:HG23	1:59:A:LEU:H	14	0.22
(1,924)	1:101:A:GLU:HG2	1:106:A:ARG:HG2	19	0.22
(1,924)	1:101:A:GLU:HG2	1:106:A:ARG:HG3	19	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	1	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	3	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	5	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	6	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	13	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	17	0.22
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	18	0.22
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	18	0.22
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	1	0.22
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	19	0.22
(1,871)	1:51:A:MET:HB2	1:54:A:ARG:HG3	2	0.22
(1,863)	1:21:A:TRP:H	1:37:A:THR:HB	6	0.22
(1,835)	1:47:A:GLU:HG2	1:48:A:THR:H	1	0.22
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	2	0.22
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	16	0.22
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	17	0.22
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	2	0.22
(1,739)	1:34:A:LYS:H	1:34:A:LYS:HG3	6	0.22
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	5	0.22
(1,679)	1:116:A:THR:HB	1:117:A:GLY:H	19	0.22
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	7	0.22
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	10	0.22
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	19	0.22
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	13	0.22
(1,391)	1:102:A:GLN:HG2	1:102:A:GLN:HE22	4	0.22
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	10	0.22
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	18	0.22
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	10	0.22
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	14	0.22
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	2	0.21
(1,1094)	1:46:A:VAL:HG21	1:59:A:LEU:H	13	0.21
(1,1094)	1:46:A:VAL:HG22	1:59:A:LEU:H	13	0.21
(1,1094)	1:46:A:VAL:HG23	1:59:A:LEU:H	13	0.21
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	18	0.21
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	18	0.21
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	18	0.21
(1,1049)	1:38:A:VAL:HG21	1:47:A:GLU:HB2	10	0.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1049)	1:38:A:VAL:HG22	1:47:A:GLU:HB2	10	0.21
(1,1049)	1:38:A:VAL:HG23	1:47:A:GLU:HB2	10	0.21
(1,918)	1:94:A:GLU:HB2	1:95:A:ASN:HD22	16	0.21
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	7	0.21
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	11	0.21
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	12	0.21
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	8	0.21
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	17	0.21
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	18	0.21
(1,865)	1:18:A:TYR:HA	1:40:A:PHE:HB3	14	0.21
(1,846)	1:78:A:GLN:HE21	1:85:A:PRO:HB2	12	0.21
(1,836)	1:54:A:ARG:HG2	1:55:A:GLY:H	17	0.21
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	19	0.21
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	11	0.21
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	3	0.21
(1,810)	1:107:A:LYS:HA	1:107:A:LYS:HD3	10	0.21
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	20	0.21
(1,785)	1:92:A:ARG:H	1:92:A:ARG:HG2	20	0.21
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	4	0.21
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	7	0.21
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	14	0.21
(1,693)	1:33:A:VAL:HA	1:51:A:MET:HA	1	0.21
(1,684)	1:121:A:LYS:HB2	1:122:A:ASP:H	11	0.21
(1,679)	1:116:A:THR:HB	1:117:A:GLY:H	1	0.21
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	9	0.21
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	14	0.21
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	15	0.21
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	18	0.21
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	5	0.21
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	9	0.21
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	10	0.21
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	16	0.21
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	14	0.21
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	8	0.21
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	12	0.21
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	19	0.21
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	17	0.21
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	5	0.21
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	7	0.21
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	13	0.21
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	4	0.21
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	3	0.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	3	0.2
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	8	0.2
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	8	0.2
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	16	0.2
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	16	0.2
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	17	0.2
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	17	0.2
(1,1502)	1:65:A:LYS:H	1:65:A:LYS:HG2	9	0.2
(1,1502)	1:65:A:LYS:H	1:65:A:LYS:HG3	9	0.2
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	5	0.2
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	5	0.2
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	5	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	4	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	4	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	4	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	9	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	9	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	9	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	11	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	11	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	11	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	15	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	15	0.2
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	15	0.2
(1,1281)	1:99:A:ILE:HD11	1:109:A:MET:H	18	0.2
(1,1281)	1:99:A:ILE:HD12	1:109:A:MET:H	18	0.2
(1,1281)	1:99:A:ILE:HD13	1:109:A:MET:H	18	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	5	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	5	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	5	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	10	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	10	0.2
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	10	0.2
(1,922)	1:89:A:THR:HB	1:101:A:GLU:HG2	11	0.2
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	4	0.2
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	12	0.2
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	5	0.2
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	12	0.2
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	9	0.2
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	16	0.2
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	1	0.2
(1,871)	1:51:A:MET:HB2	1:54:A:ARG:HG3	17	0.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,846)	1:78:A:GLN:HE21	1:85:A:PRO:HB2	9	0.2
(1,837)	1:54:A:ARG:HG3	1:55:A:GLY:H	19	0.2
(1,820)	1:111:A:ARG:HA	1:111:A:ARG:HG3	8	0.2
(1,793)	1:92:A:ARG:HB3	1:92:A:ARG:HD3	6	0.2
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	20	0.2
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	3	0.2
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	10	0.2
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	18	0.2
(1,549)	1:74:A:SER:H	1:74:A:SER:HB2	9	0.2
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	14	0.2
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	16	0.2
(1,3)	1:13:A:GLU:HB2	1:14:A:THR:H	12	0.2
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	7	0.19
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	7	0.19
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	11	0.19
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	11	0.19
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	14	0.19
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	14	0.19
(1,1327)	1:21:A:TRP:HA	1:21:A:TRP:HE3	5	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	7	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	7	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	7	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	14	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	14	0.19
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	14	0.19
(1,1281)	1:99:A:ILE:HD11	1:109:A:MET:H	14	0.19
(1,1281)	1:99:A:ILE:HD12	1:109:A:MET:H	14	0.19
(1,1281)	1:99:A:ILE:HD13	1:109:A:MET:H	14	0.19
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG21	9	0.19
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG22	9	0.19
(1,1240)	1:95:A:ASN:HB3	1:97:A:THR:HG23	9	0.19
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD11	13	0.19
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD12	13	0.19
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD13	13	0.19
(1,1030)	1:29:A:PRO:HB3	1:30:A:THR:HG21	8	0.19
(1,1030)	1:29:A:PRO:HB3	1:30:A:THR:HG22	8	0.19
(1,1030)	1:29:A:PRO:HB3	1:30:A:THR:HG23	8	0.19
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	20	0.19
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	3	0.19
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	7	0.19
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	10	0.19
(1,906)	1:88:A:SER:HB2	1:102:A:GLN:HG2	5	0.19

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	6	0.19
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	15	0.19
(1,871)	1:51:A:MET:HB2	1:54:A:ARG:HG3	7	0.19
(1,851)	1:111:A:ARG:HG3	1:112:A:ILE:H	8	0.19
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	4	0.19
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	18	0.19
(1,818)	1:107:A:LYS:HG3	1:107:A:LYS:HE3	15	0.19
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	8	0.19
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	1	0.19
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	2	0.19
(1,810)	1:107:A:LYS:HA	1:107:A:LYS:HD3	12	0.19
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	16	0.19
(1,790)	1:92:A:ARG:HB3	1:92:A:ARG:HD2	9	0.19
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	10	0.19
(1,763)	1:62:A:MET:H	1:62:A:MET:HG3	11	0.19
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	12	0.19
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	9	0.19
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	12	0.19
(1,739)	1:34:A:LYS:H	1:34:A:LYS:HG3	10	0.19
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	13	0.19
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	6	0.19
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	17	0.19
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	3	0.19
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	9	0.19
(1,520)	1:42:A:GLU:H	1:42:A:GLU:HB3	15	0.19
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	4	0.19
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	17	0.19
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	10	0.18
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	10	0.18
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	15	0.18
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	15	0.18
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	10	0.18
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	10	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	1	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	1	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	1	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	14	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	14	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	14	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	17	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	17	0.18
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	17	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	17	0.18
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	17	0.18
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	17	0.18
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD21	7	0.18
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD22	7	0.18
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD23	7	0.18
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	13	0.18
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	13	0.18
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	13	0.18
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	14	0.18
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	14	0.18
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	14	0.18
(1,1055)	1:38:A:VAL:HG21	1:100:A:TRP:HH2	7	0.18
(1,1055)	1:38:A:VAL:HG22	1:100:A:TRP:HH2	7	0.18
(1,1055)	1:38:A:VAL:HG23	1:100:A:TRP:HH2	7	0.18
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	9	0.18
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	10	0.18
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	14	0.18
(1,909)	1:88:A:SER:HB3	1:102:A:GLN:HG2	20	0.18
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	6	0.18
(1,908)	1:88:A:SER:HB3	1:102:A:GLN:HG3	13	0.18
(1,907)	1:88:A:SER:HB2	1:102:A:GLN:HG3	7	0.18
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	12	0.18
(1,882)	1:68:A:SER:HB3	1:76:A:GLU:HB2	16	0.18
(1,804)	1:105:A:GLN:HA	1:105:A:GLN:HG2	14	0.18
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	1	0.18
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	5	0.18
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	11	0.18
(1,734)	1:23:A:GLU:HA	1:23:A:GLU:HG3	16	0.18
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	9	0.18
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	1	0.18
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	19	0.18
(1,604)	1:37:A:THR:HB	1:38:A:VAL:H	6	0.18
(1,566)	1:106:A:ARG:H	1:106:A:ARG:HB2	2	0.18
(1,566)	1:106:A:ARG:H	1:106:A:ARG:HB2	3	0.18
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	8	0.18
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	12	0.18
(1,400)	1:29:A:PRO:HG2	1:32:A:GLY:H	5	0.18
(1,400)	1:29:A:PRO:HG3	1:32:A:GLY:H	5	0.18
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	5	0.18
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	8	0.18
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	2	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,219)	1:118:A:ARG:H	1:119:A:GLU:H	20	0.18
(1,134)	1:122:A:ASP:HB2	1:123:A:GLU:H	8	0.18
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	13	0.17
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	13	0.17
(1,1533)	1:74:A:SER:HB2	1:91:A:LYS:HG2	10	0.17
(1,1533)	1:74:A:SER:HB2	1:91:A:LYS:HG3	10	0.17
(1,1533)	1:74:A:SER:HB3	1:91:A:LYS:HG2	10	0.17
(1,1533)	1:74:A:SER:HB3	1:91:A:LYS:HG3	10	0.17
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	10	0.17
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	10	0.17
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	10	0.17
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD11	15	0.17
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD12	15	0.17
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD13	15	0.17
(1,1126)	1:65:A:LYS:HG3	1:80:A:LEU:HD21	9	0.17
(1,1126)	1:65:A:LYS:HG3	1:80:A:LEU:HD22	9	0.17
(1,1126)	1:65:A:LYS:HG3	1:80:A:LEU:HD23	9	0.17
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	11	0.17
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	11	0.17
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	11	0.17
(1,1055)	1:38:A:VAL:HG21	1:100:A:TRP:HH2	15	0.17
(1,1055)	1:38:A:VAL:HG22	1:100:A:TRP:HH2	15	0.17
(1,1055)	1:38:A:VAL:HG23	1:100:A:TRP:HH2	15	0.17
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	20	0.17
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	20	0.17
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	20	0.17
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	16	0.17
(1,884)	1:68:A:SER:HB3	1:76:A:GLU:H	15	0.17
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	20	0.17
(1,835)	1:47:A:GLU:HG2	1:48:A:THR:H	16	0.17
(1,826)	1:115:A:LYS:HA	1:115:A:LYS:HG3	5	0.17
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	6	0.17
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	13	0.17
(1,810)	1:107:A:LYS:HA	1:107:A:LYS:HD3	17	0.17
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	4	0.17
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	13	0.17
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	14	0.17
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	6	0.17
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	8	0.17
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	13	0.17
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	2	0.17
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	3	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	19	0.17
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	10	0.17
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	12	0.17
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	13	0.17
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	5	0.17
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	5	0.17
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	7	0.17
(1,531)	1:52:A:GLU:H	1:52:A:GLU:HB2	19	0.17
(1,400)	1:29:A:PRO:HG2	1:32:A:GLY:H	20	0.17
(1,400)	1:29:A:PRO:HG3	1:32:A:GLY:H	20	0.17
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	9	0.17
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	5	0.17
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	11	0.17
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	20	0.17
(1,219)	1:118:A:ARG:H	1:119:A:GLU:H	3	0.17
(1,181)	1:118:A:ARG:H	1:118:A:ARG:HB2	10	0.17
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	4	0.16
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	4	0.16
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	20	0.16
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	20	0.16
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	12	0.16
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	15	0.16
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	15	0.16
(1,1325)	1:17:A:TYR:HE1	1:75:A:ILE:HG12	13	0.16
(1,1325)	1:17:A:TYR:HE2	1:75:A:ILE:HG12	13	0.16
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD11	8	0.16
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD12	8	0.16
(1,1268)	1:91:A:LYS:HB3	1:99:A:ILE:HD13	8	0.16
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	4	0.16
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	4	0.16
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	4	0.16
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD21	16	0.16
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD22	16	0.16
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD23	16	0.16
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	4	0.16
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	4	0.16
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	4	0.16
(1,1055)	1:38:A:VAL:HG21	1:100:A:TRP:HH2	11	0.16
(1,1055)	1:38:A:VAL:HG22	1:100:A:TRP:HH2	11	0.16
(1,1055)	1:38:A:VAL:HG23	1:100:A:TRP:HH2	11	0.16
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	11	0.16
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	14	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	19	0.16
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	11	0.16
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	11	0.16
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	19	0.16
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	20	0.16
(1,713)	1:80:A:LEU:HA	1:84:A:TYR:HB3	19	0.16
(1,531)	1:52:A:GLU:H	1:52:A:GLU:HB2	10	0.16
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	9	0.16
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	3	0.16
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	9	0.16
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	15	0.16
(1,337)	1:107:A:LYS:HG3	1:108:A:THR:H	20	0.16
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	8	0.16
(1,304)	1:71:A:THR:HA	1:73:A:GLY:H	12	0.16
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	8	0.16
(1,1359)	1:17:A:TYR:HA	1:21:A:TRP:HZ2	8	0.15
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	7	0.15
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	7	0.15
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	7	0.15
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD11	5	0.15
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD12	5	0.15
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD13	5	0.15
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD21	9	0.15
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD22	9	0.15
(1,1125)	1:65:A:LYS:HG2	1:80:A:LEU:HD23	9	0.15
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	8	0.15
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	8	0.15
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	8	0.15
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	7	0.15
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	7	0.15
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	7	0.15
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	9	0.15
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	9	0.15
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	9	0.15
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	10	0.15
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	10	0.15
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	10	0.15
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	20	0.15
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	20	0.15
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	20	0.15
(1,938)	1:75:A:ILE:H	1:75:A:ILE:HG12	18	0.15
(1,913)	1:89:A:THR:HB	1:101:A:GLU:HB2	8	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	15	0.15
(1,826)	1:115:A:LYS:HA	1:115:A:LYS:HG3	11	0.15
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	1	0.15
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	5	0.15
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	10	0.15
(1,820)	1:111:A:ARG:HA	1:111:A:ARG:HG3	12	0.15
(1,814)	1:107:A:LYS:HG3	1:107:A:LYS:HE2	10	0.15
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	8	0.15
(1,764)	1:62:A:MET:HA	1:62:A:MET:HG3	13	0.15
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	2	0.15
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	14	0.15
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	15	0.15
(1,641)	1:74:A:SER:HB3	1:75:A:ILE:H	18	0.15
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	1	0.15
(1,637)	1:71:A:THR:HB	1:72:A:ASP:H	3	0.15
(1,624)	1:54:A:ARG:HB2	1:55:A:GLY:H	6	0.15
(1,569)	1:110:A:THR:H	1:110:A:THR:HB	10	0.15
(1,566)	1:106:A:ARG:H	1:106:A:ARG:HB2	16	0.15
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	8	0.15
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	11	0.15
(1,534)	1:54:A:ARG:H	1:54:A:ARG:HB3	17	0.15
(1,531)	1:52:A:GLU:H	1:52:A:GLU:HB2	7	0.15
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	1	0.15
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	18	0.15
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	4	0.14
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	4	0.14
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	14	0.14
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	14	0.14
(1,1548)	1:78:A:GLN:HG2	1:80:A:LEU:HG	9	0.14
(1,1548)	1:78:A:GLN:HG3	1:80:A:LEU:HG	9	0.14
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	14	0.14
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	14	0.14
(1,1325)	1:17:A:TYR:HE1	1:75:A:ILE:HG12	1	0.14
(1,1325)	1:17:A:TYR:HE2	1:75:A:ILE:HG12	1	0.14
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	9	0.14
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	9	0.14
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	9	0.14
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD11	10	0.14
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD12	10	0.14
(1,1290)	1:38:A:VAL:H	1:112:A:ILE:HD13	10	0.14
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG21	13	0.14
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG22	13	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1287)	1:97:A:THR:HA	1:110:A:THR:HG23	13	0.14
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	20	0.14
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	20	0.14
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	20	0.14
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	9	0.14
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	9	0.14
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	9	0.14
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	2	0.14
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	2	0.14
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	2	0.14
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	2	0.14
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	2	0.14
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	2	0.14
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	7	0.14
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	7	0.14
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	7	0.14
(1,938)	1:75:A:ILE:H	1:75:A:ILE:HG12	19	0.14
(1,886)	1:74:A:SER:HB3	1:91:A:LYS:HG3	1	0.14
(1,871)	1:51:A:MET:HB2	1:54:A:ARG:HG3	18	0.14
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	19	0.14
(1,820)	1:111:A:ARG:HA	1:111:A:ARG:HG3	9	0.14
(1,818)	1:107:A:LYS:HG3	1:107:A:LYS:HE3	16	0.14
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	17	0.14
(1,734)	1:23:A:GLU:HA	1:23:A:GLU:HG3	13	0.14
(1,684)	1:121:A:LYS:HB2	1:122:A:ASP:H	5	0.14
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	11	0.14
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	12	0.14
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	18	0.14
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	12	0.14
(1,582)	1:8:A:GLN:HA	1:9:A:GLN:H	10	0.14
(1,550)	1:74:A:SER:H	1:74:A:SER:HB3	7	0.14
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	19	0.14
(1,413)	1:78:A:GLN:HE21	1:85:A:PRO:HB3	1	0.14
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	17	0.14
(1,354)	1:54:A:ARG:H	1:54:A:ARG:HG3	17	0.14
(1,354)	1:54:A:ARG:H	1:54:A:ARG:HG3	18	0.14
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	1	0.14
(1,310)	1:47:A:GLU:HG3	1:48:A:THR:H	11	0.14
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	1	0.14
(1,275)	1:84:A:TYR:H	1:85:A:PRO:HA	18	0.14
(1,1325)	1:17:A:TYR:HE1	1:75:A:ILE:HG12	5	0.13
(1,1325)	1:17:A:TYR:HE2	1:75:A:ILE:HG12	5	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1325)	1:17:A:TYR:HE1	1:75:A:ILE:HG12	12	0.13
(1,1325)	1:17:A:TYR:HE2	1:75:A:ILE:HG12	12	0.13
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG21	13	0.13
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG22	13	0.13
(1,1321)	1:99:A:ILE:HA	1:108:A:THR:HG23	13	0.13
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	6	0.13
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	6	0.13
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	6	0.13
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD11	16	0.13
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD12	16	0.13
(1,1156)	1:69:A:GLN:HB3	1:75:A:ILE:HD13	16	0.13
(1,1094)	1:46:A:VAL:HG21	1:59:A:LEU:H	4	0.13
(1,1094)	1:46:A:VAL:HG22	1:59:A:LEU:H	4	0.13
(1,1094)	1:46:A:VAL:HG23	1:59:A:LEU:H	4	0.13
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	10	0.13
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	10	0.13
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	10	0.13
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB1	13	0.13
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB2	13	0.13
(1,1043)	1:23:A:GLU:HB3	1:36:A:ALA:HB3	13	0.13
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	20	0.13
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	20	0.13
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	20	0.13
(1,931)	1:22:A:ASP:HB2	1:112:A:ILE:HG12	8	0.13
(1,896)	1:67:A:ILE:HG12	1:77:A:ILE:HA	4	0.13
(1,849)	1:105:A:GLN:HG2	1:106:A:ARG:H	2	0.13
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	7	0.13
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	1	0.13
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	14	0.13
(1,815)	1:107:A:LYS:HA	1:107:A:LYS:HE3	16	0.13
(1,814)	1:107:A:LYS:HG3	1:107:A:LYS:HE2	5	0.13
(1,813)	1:107:A:LYS:HG2	1:107:A:LYS:HE2	7	0.13
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	6	0.13
(1,795)	1:99:A:ILE:HA	1:99:A:ILE:HG12	19	0.13
(1,763)	1:62:A:MET:H	1:62:A:MET:HG3	19	0.13
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	14	0.13
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	2	0.13
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	18	0.13
(1,737)	1:34:A:LYS:H	1:34:A:LYS:HG2	20	0.13
(1,724)	1:29:A:PRO:HB3	1:31:A:ASP:H	3	0.13
(1,678)	1:116:A:THR:HA	1:117:A:GLY:H	4	0.13
(1,669)	1:103:A:ASN:HA	1:104:A:GLY:H	3	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	18	0.13
(1,566)	1:106:A:ARG:H	1:106:A:ARG:HB2	13	0.13
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	15	0.13
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	17	0.13
(1,532)	1:52:A:GLU:H	1:52:A:GLU:HB3	17	0.13
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	3	0.13
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	18	0.13
(1,415)	1:78:A:GLN:HE22	1:85:A:PRO:HB2	20	0.13
(1,413)	1:78:A:GLN:HE21	1:85:A:PRO:HB3	18	0.13
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	19	0.13
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	20	0.13
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	13	0.13
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	10	0.13
(1,185)	1:123:A:GLU:H	1:123:A:GLU:HB3	8	0.13
(1,143)	1:13:A:GLU:H	1:13:A:GLU:HB3	17	0.13
(1,1357)	1:84:A:TYR:HE1	1:85:A:PRO:HA	2	0.12
(1,1357)	1:84:A:TYR:HE2	1:85:A:PRO:HA	2	0.12
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	15	0.12
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	15	0.12
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	15	0.12
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	5	0.12
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	5	0.12
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	5	0.12
(1,1205)	1:86:A:LEU:HD11	1:103:A:ASN:HD22	13	0.12
(1,1205)	1:86:A:LEU:HD12	1:103:A:ASN:HD22	13	0.12
(1,1205)	1:86:A:LEU:HD13	1:103:A:ASN:HD22	13	0.12
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	14	0.12
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	14	0.12
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	14	0.12
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	6	0.12
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	6	0.12
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	6	0.12
(1,1073)	1:45:A:VAL:HG11	1:100:A:TRP:HH2	16	0.12
(1,1073)	1:45:A:VAL:HG12	1:100:A:TRP:HH2	16	0.12
(1,1073)	1:45:A:VAL:HG13	1:100:A:TRP:HH2	16	0.12
(1,1070)	1:45:A:VAL:HG11	1:100:A:TRP:HZ2	11	0.12
(1,1070)	1:45:A:VAL:HG12	1:100:A:TRP:HZ2	11	0.12
(1,1070)	1:45:A:VAL:HG13	1:100:A:TRP:HZ2	11	0.12
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	15	0.12
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	15	0.12
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	15	0.12
(1,912)	1:89:A:THR:HB	1:101:A:GLU:HB3	2	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,904)	1:88:A:SER:HB3	1:102:A:GLN:HA	14	0.12
(1,886)	1:74:A:SER:HB3	1:91:A:LYS:HG3	14	0.12
(1,861)	1:65:A:LYS:HG2	1:66:A:VAL:H	18	0.12
(1,826)	1:115:A:LYS:HA	1:115:A:LYS:HG3	13	0.12
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	8	0.12
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	15	0.12
(1,761)	1:62:A:MET:H	1:62:A:MET:HG2	18	0.12
(1,747)	1:54:A:ARG:HA	1:54:A:ARG:HG3	1	0.12
(1,706)	1:70:A:SER:HB2	1:73:A:GLY:H	15	0.12
(1,706)	1:70:A:SER:HB2	1:73:A:GLY:H	19	0.12
(1,674)	1:110:A:THR:HB	1:111:A:ARG:H	3	0.12
(1,674)	1:110:A:THR:HB	1:111:A:ARG:H	6	0.12
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	17	0.12
(1,641)	1:74:A:SER:HB3	1:75:A:ILE:H	19	0.12
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	17	0.12
(1,625)	1:54:A:ARG:HB3	1:55:A:GLY:H	6	0.12
(1,550)	1:74:A:SER:H	1:74:A:SER:HB3	4	0.12
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	6	0.12
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	10	0.12
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	19	0.12
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	3	0.12
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	5	0.12
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	9	0.12
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	3	0.12
(1,429)	1:102:A:GLN:HG3	1:103:A:ASN:HD21	18	0.12
(1,415)	1:78:A:GLN:HE22	1:85:A:PRO:HB2	13	0.12
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	11	0.12
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	16	0.12
(1,367)	1:91:A:LYS:H	1:91:A:LYS:HG3	3	0.12
(1,354)	1:54:A:ARG:H	1:54:A:ARG:HG3	8	0.12
(1,326)	1:91:A:LYS:HG3	1:92:A:ARG:H	6	0.12
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	16	0.12
(1,305)	1:65:A:LYS:H	1:80:A:LEU:H	7	0.12
(1,198)	1:49:A:GLU:H	1:59:A:LEU:H	14	0.12
(1,1358)	1:88:A:SER:HG	1:100:A:TRP:HD1	13	0.11
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD11	18	0.11
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD12	18	0.11
(1,1300)	1:37:A:THR:HB	1:112:A:ILE:HD13	18	0.11
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG21	18	0.11
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG22	18	0.11
(1,1210)	1:76:A:GLU:HG2	1:89:A:THR:HG23	18	0.11
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG21	19	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG22	19	0.11
(1,1029)	1:29:A:PRO:HB2	1:30:A:THR:HG23	19	0.11
(1,940)	1:74:A:SER:HB3	1:91:A:LYS:HG2	10	0.11
(1,913)	1:89:A:THR:HB	1:101:A:GLU:HB2	19	0.11
(1,824)	1:112:A:ILE:H	1:112:A:ILE:HG13	17	0.11
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	14	0.11
(1,765)	1:65:A:LYS:H	1:65:A:LYS:HG2	8	0.11
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	10	0.11
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	18	0.11
(1,728)	1:43:A:ASP:HA	1:64:A:TYR:H	1	0.11
(1,706)	1:70:A:SER:HB2	1:73:A:GLY:H	4	0.11
(1,674)	1:110:A:THR:HB	1:111:A:ARG:H	7	0.11
(1,669)	1:103:A:ASN:HA	1:104:A:GLY:H	11	0.11
(1,660)	1:94:A:GLU:HA	1:95:A:ASN:H	8	0.11
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	6	0.11
(1,644)	1:76:A:GLU:HB3	1:77:A:ILE:H	13	0.11
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	2	0.11
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	14	0.11
(1,625)	1:54:A:ARG:HB3	1:55:A:GLY:H	2	0.11
(1,622)	1:51:A:MET:HB2	1:52:A:GLU:H	16	0.11
(1,592)	1:29:A:PRO:HA	1:30:A:THR:H	8	0.11
(1,567)	1:106:A:ARG:H	1:106:A:ARG:HB3	8	0.11
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	4	0.11
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	8	0.11
(1,546)	1:71:A:THR:HA	1:71:A:THR:HB	9	0.11
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	7	0.11
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	9	0.11
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	13	0.11
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	19	0.11
(1,527)	1:48:A:THR:H	1:48:A:THR:HB	8	0.11
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	8	0.11
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	11	0.11
(1,425)	1:94:A:GLU:HB3	1:95:A:ASN:HD22	10	0.11
(1,415)	1:78:A:GLN:HE22	1:85:A:PRO:HB2	19	0.11
(1,398)	1:22:A:ASP:H	1:112:A:ILE:HG13	6	0.11
(1,354)	1:54:A:ARG:H	1:54:A:ARG:HG3	15	0.11
(1,314)	1:65:A:LYS:HG3	1:66:A:VAL:H	20	0.11
(1,312)	1:56:A:GLU:HG2	1:57:A:VAL:H	20	0.11
(1,309)	1:44:A:GLU:HG3	1:45:A:VAL:H	10	0.11
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE2	19	0.1
(1,1634)	1:107:A:LYS:HA	1:107:A:LYS:HE3	19	0.1
(1,1362)	1:17:A:TYR:HE1	1:75:A:ILE:HG13	9	0.1

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1362)	1:17:A:TYR:HE2	1:75:A:ILE:HG13	9	0.1
(1,1327)	1:21:A:TRP:HA	1:21:A:TRP:HE3	10	0.1
(1,1297)	1:22:A:ASP:HB2	1:112:A:ILE:HD11	1	0.1
(1,1297)	1:22:A:ASP:HB2	1:112:A:ILE:HD12	1	0.1
(1,1297)	1:22:A:ASP:HB2	1:112:A:ILE:HD13	1	0.1
(1,1084)	1:46:A:VAL:HG11	1:58:A:GLN:HG3	7	0.1
(1,1084)	1:46:A:VAL:HG12	1:58:A:GLN:HG3	7	0.1
(1,1084)	1:46:A:VAL:HG13	1:58:A:GLN:HG3	7	0.1
(1,1040)	1:36:A:ALA:HB1	1:49:A:GLU:HG3	10	0.1
(1,1040)	1:36:A:ALA:HB2	1:49:A:GLU:HG3	10	0.1
(1,1040)	1:36:A:ALA:HB3	1:49:A:GLU:HG3	10	0.1
(1,861)	1:65:A:LYS:HG2	1:66:A:VAL:H	14	0.1
(1,826)	1:115:A:LYS:HA	1:115:A:LYS:HG3	17	0.1
(1,818)	1:107:A:LYS:HG3	1:107:A:LYS:HE3	20	0.1
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	2	0.1
(1,817)	1:107:A:LYS:HG2	1:107:A:LYS:HE3	13	0.1
(1,811)	1:107:A:LYS:HA	1:107:A:LYS:HE2	9	0.1
(1,751)	1:56:A:GLU:H	1:56:A:GLU:HG2	20	0.1
(1,712)	1:80:A:LEU:HA	1:84:A:TYR:HB2	7	0.1
(1,710)	1:69:A:GLN:HA	1:70:A:SER:HB3	10	0.1
(1,706)	1:70:A:SER:HB2	1:73:A:GLY:H	11	0.1
(1,640)	1:74:A:SER:HB2	1:75:A:ILE:H	5	0.1
(1,567)	1:106:A:ARG:H	1:106:A:ARG:HB3	10	0.1
(1,550)	1:74:A:SER:H	1:74:A:SER:HB3	5	0.1
(1,550)	1:74:A:SER:H	1:74:A:SER:HB3	15	0.1
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	1	0.1
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	10	0.1
(1,536)	1:56:A:GLU:H	1:56:A:GLU:HB3	12	0.1
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	2	0.1
(1,516)	1:34:A:LYS:H	1:34:A:LYS:HB3	20	0.1
(1,413)	1:78:A:GLN:HE21	1:85:A:PRO:HB3	5	0.1
(1,370)	1:99:A:ILE:H	1:99:A:ILE:HG13	4	0.1
(1,345)	1:23:A:GLU:H	1:23:A:GLU:HG3	3	0.1

10 Dihedral-angle violation analysis ⓘ

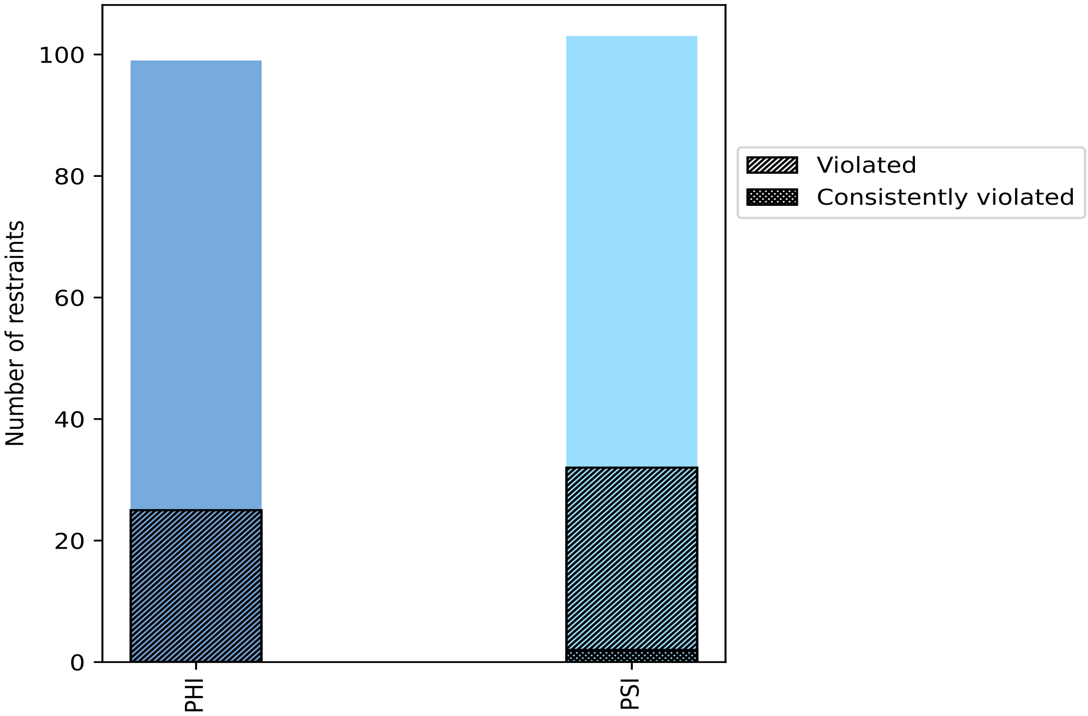
10.1 Summary of dihedral-angle violations ⓘ

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

Angle type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
PHI	99	49.0	25	25.3	12.4	0	0.0	0.0
PSI	103	51.0	32	31.1	15.8	2	1.9	1.0
Total	202	100.0	57	28.2	28.2	2	1.0	1.0

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

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



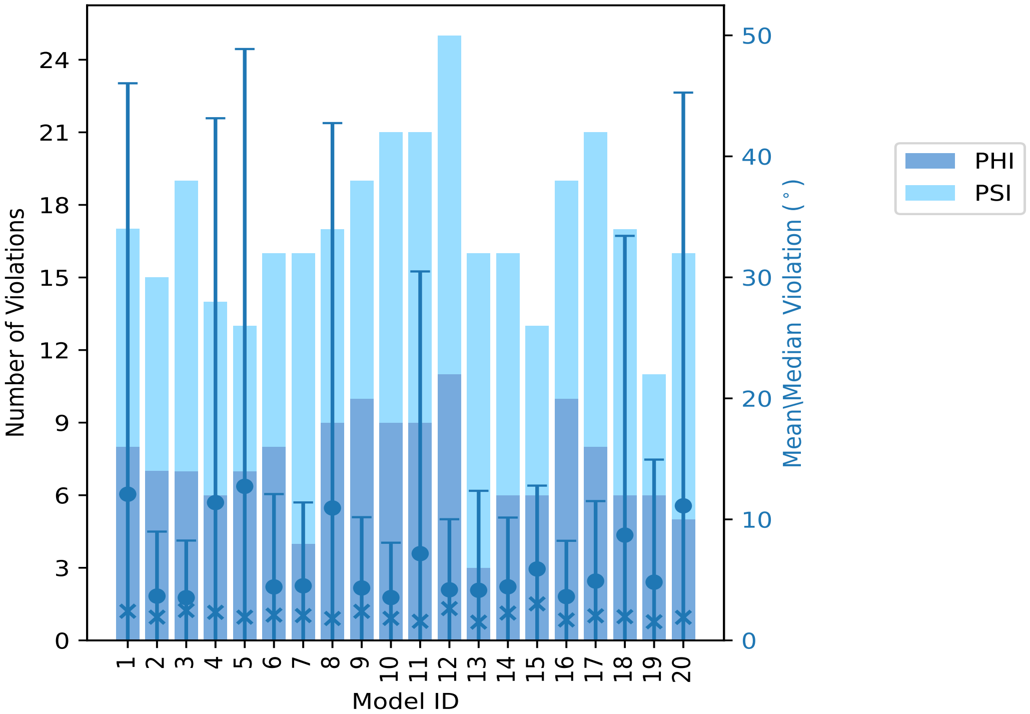
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

10.2 Dihedral-angle violation statistics for each model ⓘ

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

Model ID	Number of violations			Mean (°)	Max (°)	SD (°)	Median (°)
	PHI	PSI	Total				
1	8	9	17	12.08	146.65	33.96	2.41
2	7	8	15	3.66	23.17	5.33	1.92
3	7	12	19	3.53	23.07	4.72	2.47
4	6	8	14	11.39	125.81	31.76	2.32
5	7	6	13	12.73	137.78	36.14	1.92
6	8	8	16	4.42	33.69	7.67	2.09
7	4	12	16	4.51	29.71	6.89	2.05
8	9	8	17	10.94	137.45	31.81	1.81
9	10	9	19	4.33	27.22	5.85	2.4
10	9	12	21	3.54	22.63	4.53	1.82
11	9	12	21	7.17	111.24	23.32	1.58
12	11	14	25	4.18	31.07	5.83	2.63
13	3	13	16	4.14	35.7	8.22	1.51
14	6	10	16	4.43	25.27	5.72	2.26
15	6	7	13	5.9	23.81	6.89	3.02
16	10	9	19	3.62	19.51	4.61	1.69
17	8	13	21	4.9	26.48	6.61	2.03
18	6	11	17	8.7	107.46	24.73	1.96
19	6	5	11	4.81	36.81	10.13	1.54
20	5	11	16	11.12	143.26	34.15	1.9

10.2.1 Bar graph : Dihedral violation statistics for each model ⓘ



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

10.3 Dihedral-angle violation statistics for the ensemble ⓘ

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

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

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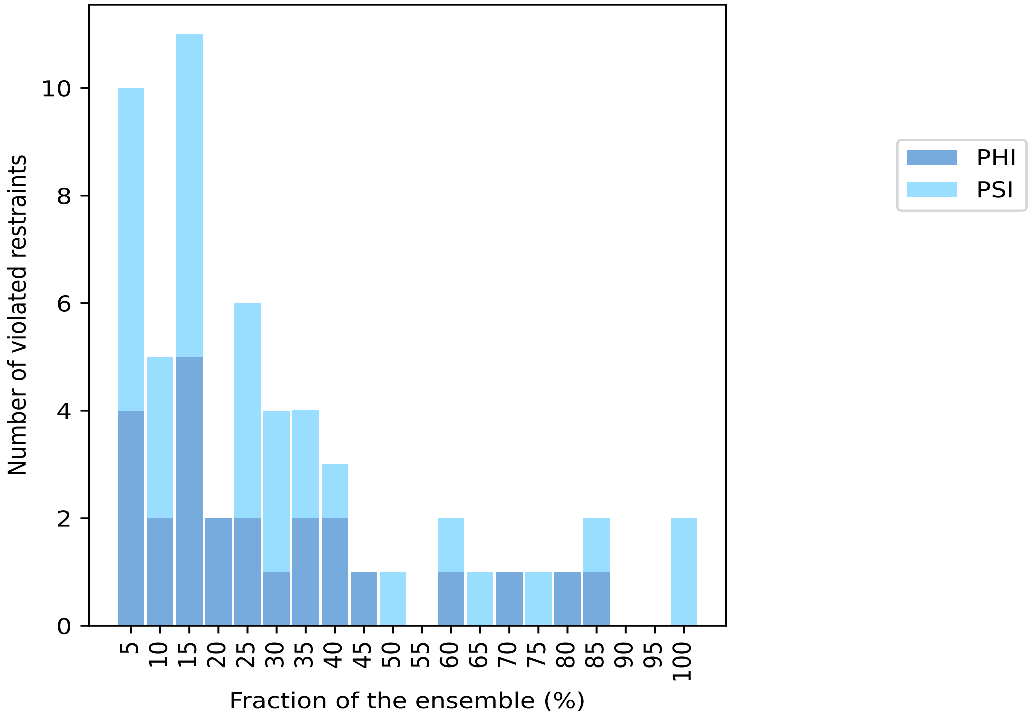
Number of violated restraints			Fraction of the ensemble	
PHI	PSI	Total	Count[1]	%
1	1	2	12	60.0
0	1	1	13	65.0
1	0	1	14	70.0
0	1	1	15	75.0
1	0	1	16	80.0
1	1	2	17	85.0
0	0	0	18	90.0
0	0	0	19	95.0
0	2	2	20	100.0

[1] Number of models with violations

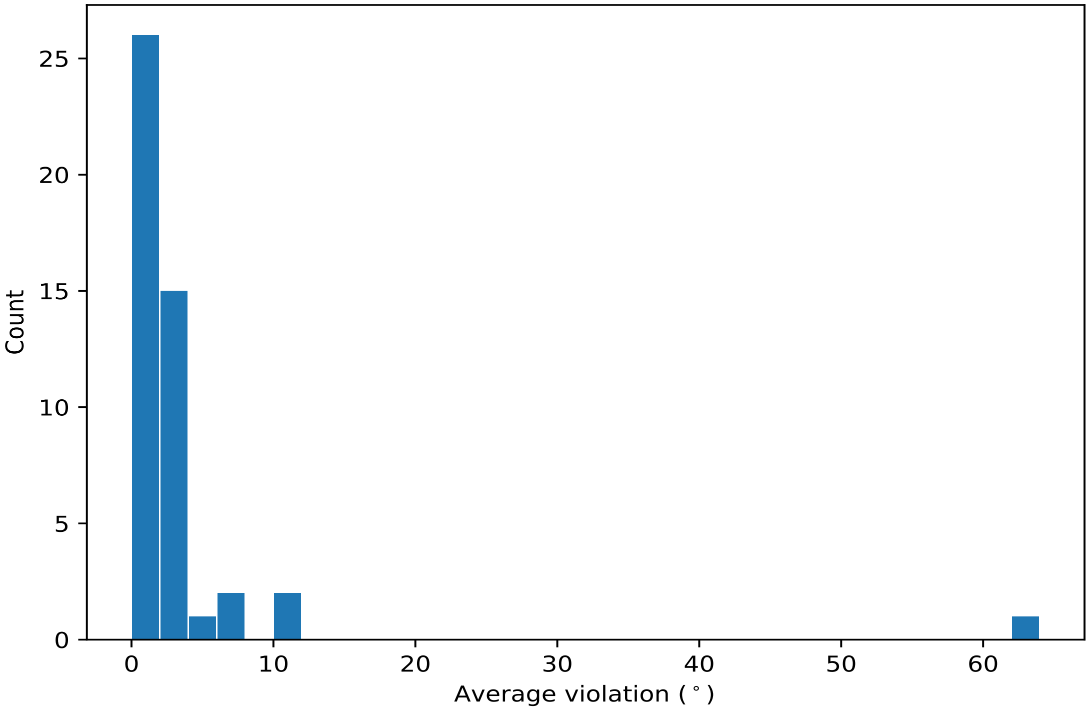
10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble ⓘ



10.4 Most violated dihedral-angle restraints in the ensemble ⓘ

10.4.1 Histogram : Distribution of mean dihedral-angle violations ⓘ

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



10.4.2 Table: Most violated dihedral-angle restraints ⓘ

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

Key	Atom-1	Atom-2	Atom-3	Atom-4	Models[1]	Mean	SD[2]	Median
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	20	63.39	49.76	32.38
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	20	3.35	1.69	3.07
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	17	3.4	1.29	4.1
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	17	1.89	0.49	1.75
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	16	2.88	1.07	2.76
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	15	7.08	6.03	5.01
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	14	2.06	0.49	2.12
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	13	1.72	0.52	1.52
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	12	2.73	0.85	2.57
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	12	1.85	0.74	1.85
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	10	2.44	0.84	2.18
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	9	4.18	2.08	3.5
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	8	2.51	0.8	2.78
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	8	2.01	0.89	1.62
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	8	1.43	0.35	1.26
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	7	3.86	1.94	3.2
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	7	1.99	0.81	1.8
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	7	1.67	0.43	1.71
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	7	1.39	0.38	1.13
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	6	1.97	0.81	1.7

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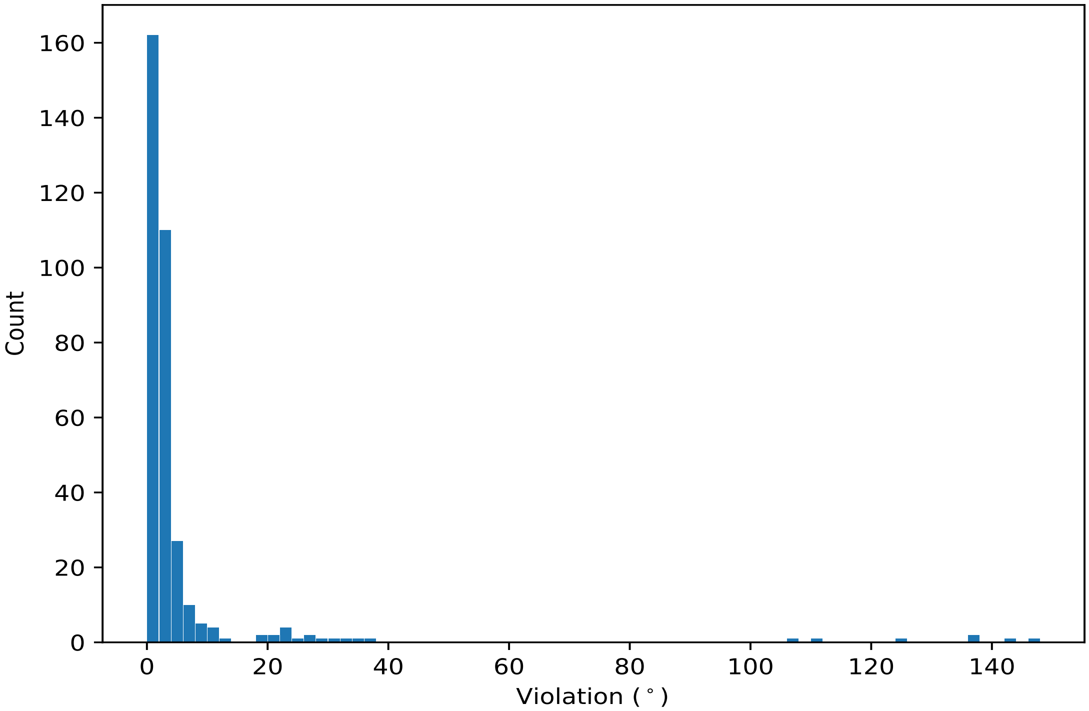
Key	Atom-1	Atom-2	Atom-3	Atom-4	Models[1]	Mean	SD[2]	Median
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	6	1.84	0.87	1.54
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	6	1.77	0.57	1.74
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	6	1.73	0.62	1.47
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	5	10.27	1.3	10.76
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	5	7.69	2.62	6.43
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	5	2.09	0.34	1.93
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	5	1.85	0.54	2.06
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	5	1.61	0.38	1.71
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	5	1.32	0.15	1.35
(1,33)	1:56:A:GLU:C	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	4	1.68	0.17	1.68
(1,27)	1:47:A:GLU:C	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	4	1.32	0.24	1.32
(1,91)	1:33:A:VAL:C	1:34:A:LYS:N	1:34:A:LYS:CA	1:34:A:LYS:C	3	11.2	7.44	8.45
(1,90)	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	1:18:A:TYR:N	3	3.82	0.51	3.63
(1,82)	1:107:A:LYS:N	1:107:A:LYS:CA	1:107:A:LYS:C	1:108:A:THR:N	3	2.23	0.16	2.28
(1,26)	1:47:A:GLU:N	1:47:A:GLU:CA	1:47:A:GLU:C	1:48:A:THR:N	3	2.1	0.63	2.15
(1,28)	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	1:49:A:GLU:N	3	2.07	0.4	2.02
(1,43)	1:64:A:TYR:C	1:65:A:LYS:N	1:65:A:LYS:CA	1:65:A:LYS:C	3	1.64	0.46	1.31
(1,87)	1:109:A:MET:C	1:110:A:THR:N	1:110:A:THR:CA	1:110:A:THR:C	3	1.58	0.29	1.67
(1,49)	1:74:A:SER:C	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	3	1.56	0.23	1.64
(1,11)	1:37:A:THR:C	1:38:A:VAL:N	1:38:A:VAL:CA	1:38:A:VAL:C	3	1.55	0.28	1.69
(1,98)	1:92:A:ARG:N	1:92:A:ARG:CA	1:92:A:ARG:C	1:93:A:GLY:N	3	1.54	0.33	1.33
(1,50)	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	1:76:A:GLU:N	3	1.31	0.22	1.44
(1,7)	1:35:A:SER:C	1:36:A:ALA:N	1:36:A:ALA:CA	1:36:A:ALA:C	2	2.0	0.96	2.0
(1,70)	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	1:100:A:TRP:N	2	1.8	0.22	1.8
(1,86)	1:109:A:MET:N	1:109:A:MET:CA	1:109:A:MET:C	1:110:A:THR:N	2	1.7	0.15	1.7
(1,65)	1:96:A:GLY:C	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	2	1.42	0.42	1.42
(1,72)	1:100:A:TRP:N	1:100:A:TRP:CA	1:100:A:TRP:C	1:101:A:GLU:N	2	1.14	0.09	1.14

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

10.5 All violated dihedral-angle restraints

10.5.1 Histogram : Distribution of violations

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



10.5.2 Table: All violated dihedral-angle restraints ⓘ

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

Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	1	146.65
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	20	143.26
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	5	137.78
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	8	137.45
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	4	125.81
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	11	111.24
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	18	107.46
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	19	36.81
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	13	35.7
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	6	33.69
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	12	31.07
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	7	29.71
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	9	27.22
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	17	26.48
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	14	25.27
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	15	23.81
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	2	23.17
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	3	23.07
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	10	22.63
(1,91)	1:33:A:VAL:C	1:34:A:LYS:N	1:34:A:LYS:CA	1:34:A:LYS:C	1	21.37
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	17	20.61

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	15	19.62
(1,96)	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	1:85:A:PRO:N	16	19.51
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	8	13.36
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	16	11.86
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	17	11.76
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	8	10.87
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	9	10.76
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	12	9.86
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	14	9.5
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	7	8.96
(1,91)	1:33:A:VAL:C	1:34:A:LYS:N	1:34:A:LYS:CA	1:34:A:LYS:C	17	8.45
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	7	8.07
(1,186)	1:111:A:ARG:C	1:112:A:ILE:N	1:112:A:ILE:CA	1:112:A:ILE:C	11	7.99
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	16	7.96
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	5	7.74
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	20	7.73
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	10	7.49
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	12	7.3
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	1	6.49
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	6	6.43
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	9	6.41
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	18	6.06
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	15	5.01
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	14	5.01
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	4	4.9
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	2	4.89
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	9	4.78
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	18	4.76
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	15	4.73
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	14	4.7
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	15	4.68
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	12	4.65
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	12	4.58
(1,90)	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	1:18:A:TYR:N	12	4.52
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	3	4.47
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	9	4.44
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	10	4.41
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	4	4.35
(1,175)	1:94:A:GLU:N	1:94:A:GLU:CA	1:94:A:GLU:C	1:95:A:ASN:N	13	4.34
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	10	4.23
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	13	4.21
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	16	4.2
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	17	4.16
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	6	4.15
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	3	4.14
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	10	4.1
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	12	4.09
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	18	4.05
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	4	4.04
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	16	3.94
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	10	3.8

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,91)	1:33:A:VAL:C	1:34:A:LYS:N	1:34:A:LYS:CA	1:34:A:LYS:C	4	3.78
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	7	3.75
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	9	3.71
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	2	3.67
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	13	3.65
(1,90)	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	1:18:A:TYR:N	1	3.63
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	2	3.61
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	14	3.58
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	3	3.56
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	1	3.54
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	12	3.52
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	20	3.52
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	17	3.5
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	3	3.47
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	11	3.46
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	2	3.41
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	3	3.4
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	6	3.35
(1,90)	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	1:18:A:TYR:N	18	3.32
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1	3.31
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	10	3.28
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	18	3.22
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	12	3.21
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	10	3.2
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	17	3.2
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	6	3.1
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	3	3.09
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	15	3.02
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	15	3.02
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	18	3.0
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	18	2.97
(1,7)	1:35:A:SER:C	1:36:A:ALA:N	1:36:A:ALA:CA	1:36:A:ALA:C	12	2.96
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	5	2.94
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	9	2.92
(1,26)	1:47:A:GLU:N	1:47:A:GLU:CA	1:47:A:GLU:C	1:48:A:THR:N	1	2.84
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	7	2.84
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	12	2.8
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	3	2.78
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	13	2.77
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	3	2.77
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	15	2.76
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	1	2.76
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	9	2.75
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	20	2.75
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	15	2.74
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	12	2.72
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	4	2.7
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	17	2.7
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	8	2.7
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	6	2.67
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	14	2.64

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	12	2.63
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	9	2.59
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	19	2.58
(1,28)	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	1:49:A:GLU:N	10	2.58
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	14	2.57
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	11	2.48
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	3	2.47
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	17	2.46
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	4	2.44
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	3	2.43
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	20	2.43
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1	2.41
(1,82)	1:107:A:LYS:N	1:107:A:LYS:CA	1:107:A:LYS:C	1:108:A:THR:N	9	2.4
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	8	2.39
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	8	2.39
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	15	2.39
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	15	2.35
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	2	2.35
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	20	2.34
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	16	2.33
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	9	2.32
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	7	2.3
(1,43)	1:64:A:TYR:C	1:65:A:LYS:N	1:65:A:LYS:CA	1:65:A:LYS:C	8	2.29
(1,82)	1:107:A:LYS:N	1:107:A:LYS:CA	1:107:A:LYS:C	1:108:A:THR:N	10	2.28
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	14	2.28
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	2	2.26
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	17	2.25
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	5	2.24
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	14	2.24
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	12	2.23
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	14	2.23
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	7	2.21
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	4	2.2
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	5	2.19
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	5	2.18
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	9	2.17
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	6	2.15
(1,26)	1:47:A:GLU:N	1:47:A:GLU:CA	1:47:A:GLU:C	1:48:A:THR:N	20	2.15
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	1	2.13
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	13	2.13
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	6	2.11
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	6	2.07
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	11	2.07
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	12	2.07
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	16	2.07
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	7	2.06
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	16	2.06
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	12	2.04
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	7	2.04
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	14	2.03
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	7	2.03

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,70)	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	1:100:A:TRP:N	17	2.03
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	6	2.03
(1,28)	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	1:49:A:GLU:N	13	2.02
(1,82)	1:107:A:LYS:N	1:107:A:LYS:CA	1:107:A:LYS:C	1:108:A:THR:N	4	2.01
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	4	2.01
(1,98)	1:92:A:ARG:N	1:92:A:ARG:CA	1:92:A:ARG:C	1:93:A:GLY:N	14	2.0
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	17	1.99
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	14	1.97
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	14	1.97
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	9	1.96
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	18	1.96
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	7	1.93
(1,95)	1:83:A:TYR:C	1:84:A:TYR:N	1:84:A:TYR:CA	1:84:A:TYR:C	2	1.92
(1,33)	1:56:A:GLU:C	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	5	1.92
(1,177)	1:95:A:ASN:N	1:95:A:ASN:CA	1:95:A:ASN:C	1:96:A:GLY:N	20	1.91
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	19	1.91
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	8	1.91
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	19	1.91
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	20	1.89
(1,87)	1:109:A:MET:C	1:110:A:THR:N	1:110:A:THR:CA	1:110:A:THR:C	6	1.88
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	11	1.87
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	17	1.87
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	2	1.86
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	18	1.86
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	5	1.86
(1,86)	1:109:A:MET:N	1:109:A:MET:CA	1:109:A:MET:C	1:110:A:THR:N	20	1.85
(1,83)	1:107:A:LYS:C	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	12	1.84
(1,65)	1:96:A:GLY:C	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	12	1.83
(1,94)	1:51:A:MET:N	1:51:A:MET:CA	1:51:A:MET:C	1:52:A:GLU:N	12	1.82
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	1	1.82
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	10	1.82
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	8	1.81
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	8	1.8
(1,11)	1:37:A:THR:C	1:38:A:VAL:N	1:38:A:VAL:CA	1:38:A:VAL:C	20	1.8
(1,49)	1:74:A:SER:C	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	3	1.79
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	1	1.79
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	10	1.78
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	3	1.76
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	19	1.75
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	12	1.74
(1,89)	1:16:A:PHE:C	1:17:A:TYR:N	1:17:A:TYR:CA	1:17:A:TYR:C	17	1.73
(1,33)	1:56:A:GLU:C	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	11	1.73
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	6	1.72
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	16	1.71
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	11	1.71
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	1	1.71
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	4	1.71
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	2	1.7
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	8	1.69
(1,11)	1:37:A:THR:C	1:38:A:VAL:N	1:38:A:VAL:CA	1:38:A:VAL:C	16	1.69
(1,87)	1:109:A:MET:C	1:110:A:THR:N	1:110:A:THR:CA	1:110:A:THR:C	11	1.67

Continued on next page...

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	9	1.67
(1,49)	1:74:A:SER:C	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	10	1.64
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	17	1.64
(1,27)	1:47:A:GLU:C	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	3	1.63
(1,33)	1:56:A:GLU:C	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	8	1.62
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	12	1.61
(1,28)	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	1:49:A:GLU:N	11	1.6
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	17	1.6
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	18	1.6
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	17	1.59
(1,85)	1:108:A:THR:C	1:109:A:MET:N	1:109:A:MET:CA	1:109:A:MET:C	6	1.58
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	11	1.58
(1,70)	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	1:100:A:TRP:N	6	1.58
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	12	1.58
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	10	1.57
(1,86)	1:109:A:MET:N	1:109:A:MET:CA	1:109:A:MET:C	1:110:A:THR:N	10	1.56
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	12	1.56
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	11	1.55
(1,75)	1:101:A:GLU:C	1:102:A:GLN:N	1:102:A:GLN:CA	1:102:A:GLN:C	16	1.55
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	19	1.54
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	18	1.53
(1,22)	1:45:A:VAL:N	1:45:A:VAL:CA	1:45:A:VAL:C	1:46:A:VAL:N	13	1.53
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	10	1.52
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	11	1.51
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	16	1.51
(1,78)	1:105:A:GLN:N	1:105:A:GLN:CA	1:105:A:GLN:C	1:106:A:ARG:N	17	1.5
(1,50)	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	1:76:A:GLU:N	13	1.49
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	11	1.49
(1,27)	1:47:A:GLU:C	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	14	1.47
(1,33)	1:56:A:GLU:C	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	19	1.46
(1,50)	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	1:76:A:GLU:N	15	1.44
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	5	1.43
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	11	1.43
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	11	1.43
(1,79)	1:105:A:GLN:C	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	10	1.41
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	3	1.41
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	3	1.41
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	20	1.4
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	5	1.4
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	14	1.4
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	18	1.38
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	10	1.38
(1,18)	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1:42:A:GLU:N	1	1.36
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	9	1.36
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	13	1.36
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	20	1.36
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	19	1.35
(1,32)	1:50:A:VAL:N	1:50:A:VAL:CA	1:50:A:VAL:C	1:51:A:MET:N	13	1.35
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	1	1.35
(1,98)	1:92:A:ARG:N	1:92:A:ARG:CA	1:92:A:ARG:C	1:93:A:GLY:N	20	1.33
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	9	1.33

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	16	1.33
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	5	1.33
(1,55)	1:77:A:ILE:C	1:78:A:GLN:N	1:78:A:GLN:CA	1:78:A:GLN:C	9	1.32
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	16	1.31
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	11	1.31
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	16	1.31
(1,43)	1:64:A:TYR:C	1:65:A:LYS:N	1:65:A:LYS:CA	1:65:A:LYS:C	5	1.31
(1,43)	1:64:A:TYR:C	1:65:A:LYS:N	1:65:A:LYS:CA	1:65:A:LYS:C	18	1.31
(1,26)	1:47:A:GLU:N	1:47:A:GLU:CA	1:47:A:GLU:C	1:48:A:THR:N	7	1.31
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	8	1.31
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	2	1.3
(1,17)	1:40:A:PHE:C	1:41:A:THR:N	1:41:A:THR:CA	1:41:A:THR:C	10	1.29
(1,98)	1:92:A:ARG:N	1:92:A:ARG:CA	1:92:A:ARG:C	1:93:A:GLY:N	7	1.28
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	1	1.28
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	2	1.28
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	20	1.26
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	10	1.26
(1,19)	1:43:A:ASP:C	1:44:A:GLU:N	1:44:A:GLU:CA	1:44:A:GLU:C	19	1.26
(1,5)	1:21:A:TRP:C	1:22:A:ASP:N	1:22:A:ASP:CA	1:22:A:ASP:C	2	1.26
(1,47)	1:68:A:SER:C	1:69:A:GLN:N	1:69:A:GLN:CA	1:69:A:GLN:C	18	1.25
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	13	1.24
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	6	1.24
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	19	1.24
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	7	1.24
(1,49)	1:74:A:SER:C	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	7	1.24
(1,72)	1:100:A:TRP:N	1:100:A:TRP:CA	1:100:A:TRP:C	1:101:A:GLU:N	3	1.23
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	9	1.22
(1,80)	1:106:A:ARG:N	1:106:A:ARG:CA	1:106:A:ARG:C	1:107:A:LYS:N	4	1.2
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	17	1.2
(1,87)	1:109:A:MET:C	1:110:A:THR:N	1:110:A:THR:CA	1:110:A:THR:C	16	1.19
(1,56)	1:78:A:GLN:N	1:78:A:GLN:CA	1:78:A:GLN:C	1:79:A:TYR:N	11	1.19
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	16	1.19
(1,167)	1:85:A:PRO:N	1:85:A:PRO:CA	1:85:A:PRO:C	1:86:A:LEU:N	4	1.18
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	12	1.17
(1,68)	1:98:A:LEU:N	1:98:A:LEU:CA	1:98:A:LEU:C	1:99:A:ILE:N	13	1.17
(1,169)	1:86:A:LEU:N	1:86:A:LEU:CA	1:86:A:LEU:C	1:87:A:LYS:N	2	1.16
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	7	1.16
(1,27)	1:47:A:GLU:C	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	10	1.16
(1,136)	1:54:A:ARG:N	1:54:A:ARG:CA	1:54:A:ARG:C	1:55:A:GLY:N	13	1.15
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	8	1.15
(1,11)	1:37:A:THR:C	1:38:A:VAL:N	1:38:A:VAL:CA	1:38:A:VAL:C	18	1.15
(1,54)	1:77:A:ILE:N	1:77:A:ILE:CA	1:77:A:ILE:C	1:78:A:GLN:N	11	1.14
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	8	1.13
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	5	1.13
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	15	1.13
(1,69)	1:98:A:LEU:C	1:99:A:ILE:N	1:99:A:ILE:CA	1:99:A:ILE:C	8	1.11
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	13	1.11
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	11	1.11
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	19	1.1
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	3	1.09
(1,84)	1:108:A:THR:N	1:108:A:THR:CA	1:108:A:THR:C	1:109:A:MET:N	17	1.09

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Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,10)	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	1:38:A:VAL:N	4	1.09
(1,29)	1:48:A:THR:C	1:49:A:GLU:N	1:49:A:GLU:CA	1:49:A:GLU:C	2	1.08
(1,62)	1:90:A:LEU:N	1:90:A:LEU:CA	1:90:A:LEU:C	1:91:A:LYS:N	12	1.07
(1,116)	1:28:A:GLY:N	1:28:A:GLY:CA	1:28:A:GLY:C	1:29:A:PRO:N	11	1.05
(1,72)	1:100:A:TRP:N	1:100:A:TRP:CA	1:100:A:TRP:C	1:101:A:GLU:N	17	1.05
(1,34)	1:57:A:VAL:N	1:57:A:VAL:CA	1:57:A:VAL:C	1:58:A:GLN:N	16	1.05
(1,27)	1:47:A:GLU:C	1:48:A:THR:N	1:48:A:THR:CA	1:48:A:THR:C	9	1.03
(1,15)	1:39:A:THR:C	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	16	1.03
(1,7)	1:35:A:SER:C	1:36:A:ALA:N	1:36:A:ALA:CA	1:36:A:ALA:C	8	1.03
(1,16)	1:40:A:PHE:N	1:40:A:PHE:CA	1:40:A:PHE:C	1:41:A:THR:N	3	1.02
(1,60)	1:89:A:THR:N	1:89:A:THR:CA	1:89:A:THR:C	1:90:A:LEU:N	18	1.01
(1,50)	1:75:A:ILE:N	1:75:A:ILE:CA	1:75:A:ILE:C	1:76:A:GLU:N	20	1.01
(1,66)	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	1:98:A:LEU:N	13	1.0
(1,65)	1:96:A:GLY:C	1:97:A:THR:N	1:97:A:THR:CA	1:97:A:THR:C	6	1.0
(1,9)	1:36:A:ALA:C	1:37:A:THR:N	1:37:A:THR:CA	1:37:A:THR:C	1	1.0