



Full wwPDB NMR Structure Validation Report ⓘ

May 29, 2024 – 04:28 PM EDT

PDB ID : 8VU6
BMRB ID : 31141
Title : Wheat Germ Agglutinin (WGA) domain A
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Deposited on : 2024-01-29

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

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<https://www.wwpdb.org/validation/2017/NMRValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

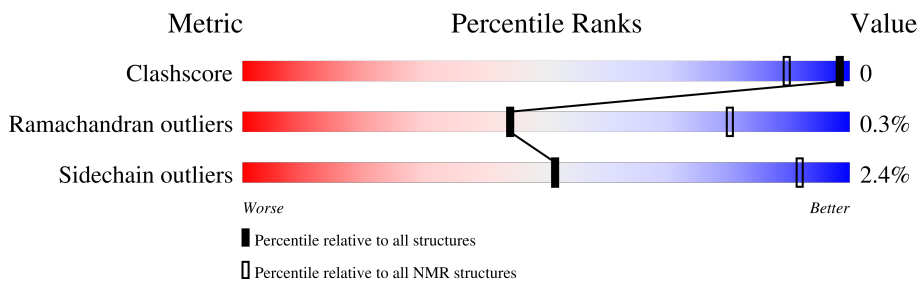
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 49%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	46	 85% 15%

2 Ensemble composition and analysis

This entry contains 20 models. Model 9 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

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

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:7-A:45 (39)	0.38	9

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

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

The models can be grouped into 4 clusters and 7 single-model clusters were found.

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

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 598 atoms, of which 274 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Agglutinin isolectin 1.

Mol	Chain	Residues	Atoms					Trace	
			Total	C	H	N	O		S
1	A	46	598	188	274	59	67	10	0

There are 3 discrepancies between the modelled and reference sequences:

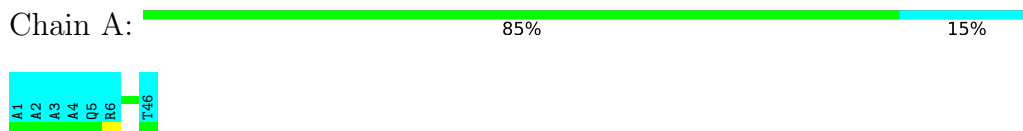
Chain	Residue	Modelled	Actual	Comment	Reference
A	1	ALA	-	expression tag	UNP P10968
A	2	ALA	-	expression tag	UNP P10968
A	3	ALA	-	expression tag	UNP P10968

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: Agglutinin isolectin 1

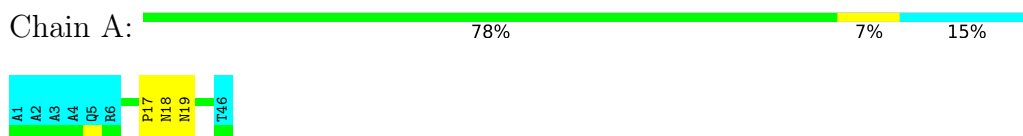


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

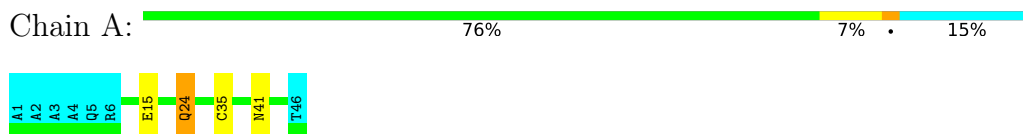
4.2.1 Score per residue for model 1

- Molecule 1: Agglutinin isolectin 1



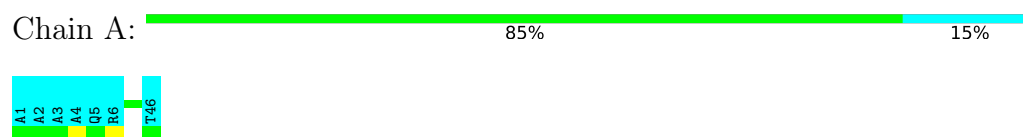
4.2.2 Score per residue for model 2

- Molecule 1: Agglutinin isolectin 1



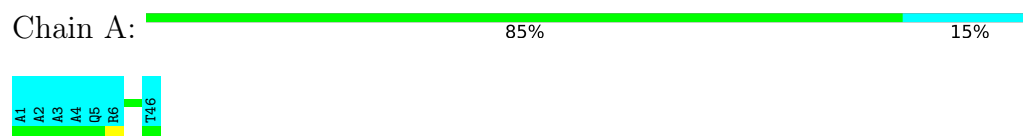
4.2.3 Score per residue for model 3

- Molecule 1: Agglutinin isolectin 1



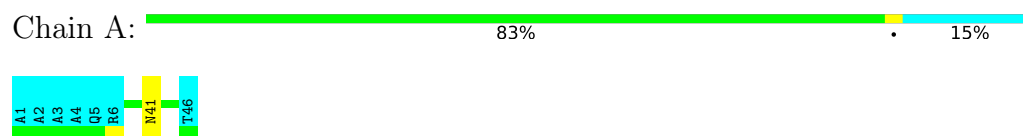
4.2.4 Score per residue for model 4

- Molecule 1: Agglutinin isolectin 1



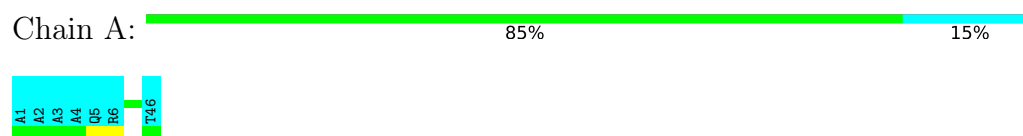
4.2.5 Score per residue for model 5

- Molecule 1: Agglutinin isolectin 1



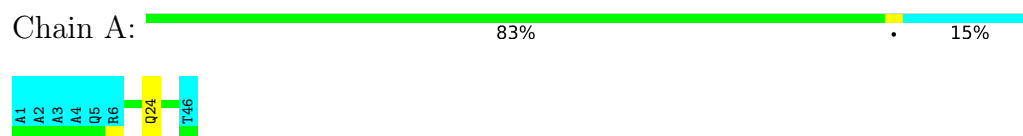
4.2.6 Score per residue for model 6

- Molecule 1: Agglutinin isolectin 1



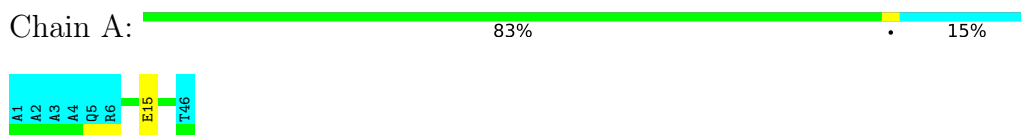
4.2.7 Score per residue for model 7

- Molecule 1: Agglutinin isolectin 1



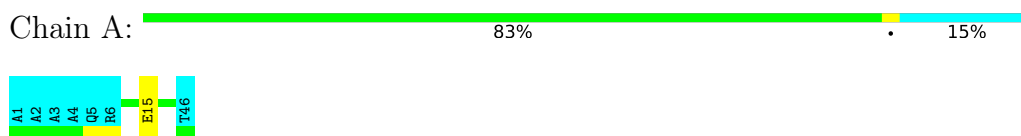
4.2.8 Score per residue for model 8

- Molecule 1: Agglutinin isolectin 1



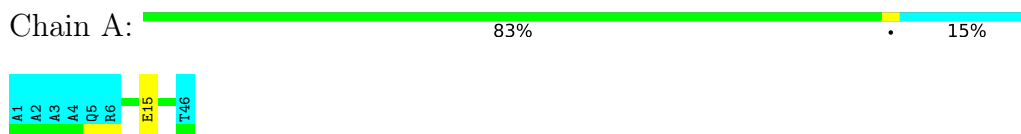
4.2.9 Score per residue for model 9 (medoid)

- Molecule 1: Agglutinin isolectin 1



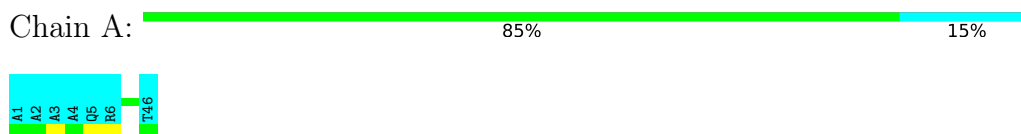
4.2.10 Score per residue for model 10

- Molecule 1: Agglutinin isolectin 1



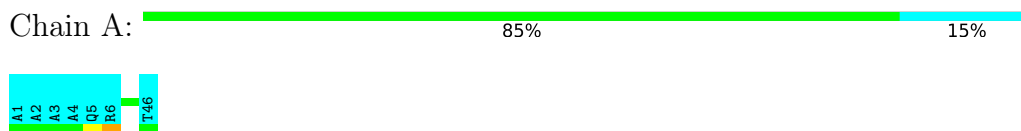
4.2.11 Score per residue for model 11

- Molecule 1: Agglutinin isolectin 1



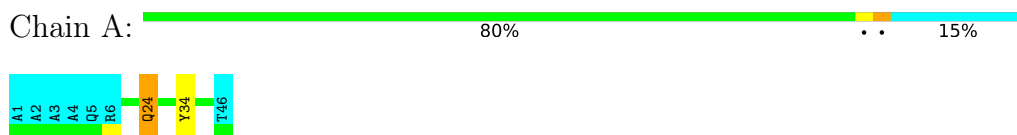
4.2.12 Score per residue for model 12

- Molecule 1: Agglutinin isolectin 1



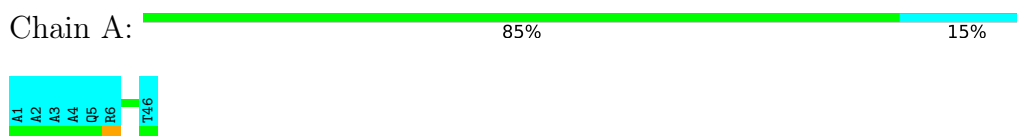
4.2.13 Score per residue for model 13

- Molecule 1: Agglutinin isolectin 1



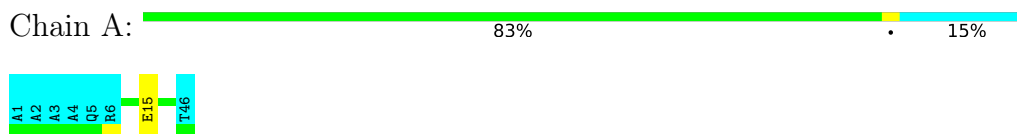
4.2.14 Score per residue for model 14

- Molecule 1: Agglutinin isolectin 1



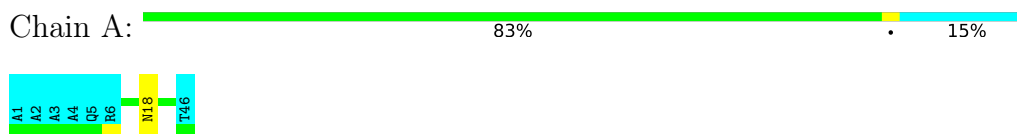
4.2.15 Score per residue for model 15

- Molecule 1: Agglutinin isolectin 1



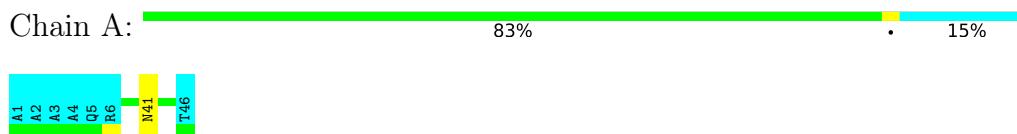
4.2.16 Score per residue for model 16

- Molecule 1: Agglutinin isolectin 1



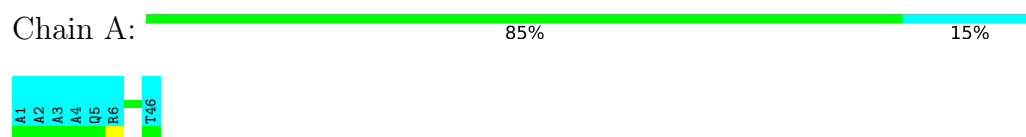
4.2.17 Score per residue for model 17

- Molecule 1: Agglutinin isolectin 1



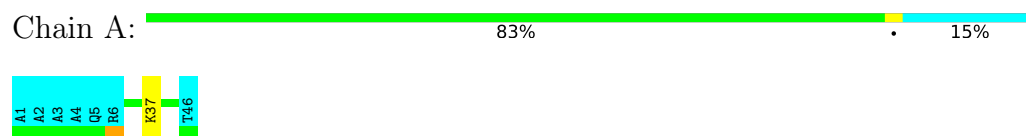
4.2.18 Score per residue for model 18

- Molecule 1: Agglutinin isolectin 1



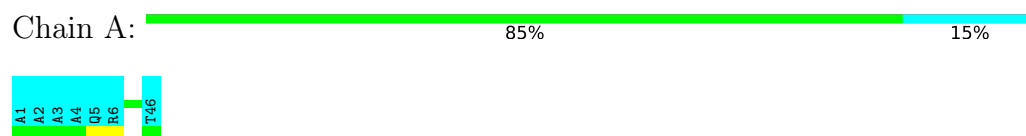
4.2.19 Score per residue for model 19

- Molecule 1: Agglutinin isolectin 1



4.2.20 Score per residue for model 20

- Molecule 1: Agglutinin isolectin 1



5 Refinement protocol and experimental data overview

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

Of the 200 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 calculation	2.1
Amber	refinement	

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

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	237
Number of shifts mapped to atoms	237
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	49%

6 Model quality [i](#)

6.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	0.72±0.01	0±0/282 (0.0± 0.0%)	1.00±0.03	0±0/378 (0.0± 0.1%)
All	All	0.72	0/5640 (0.0%)	1.00	1/7560 (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	0.1±0.2
All	All	0	1

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	17	PRO	C-N-CA	5.97	136.63	121.70	1	1

There are no chirality outliers.

All unique planar outliers are listed below.

Mol	Chain	Res	Type	Group	Models (Total)
1	A	34	TYR	Sidechain	1

6.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in each chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	276	224	224	0±0
All	All	5520	4480	4480	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 0.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:24:GLN:H	1:A:24:GLN:NE2	0.47	2.06	13	2

6.3 Torsion angles [i](#)

6.3.1 Protein backbone [i](#)

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	39/46 (85%)	37±1 (94±3%)	2±1 (6±3%)	0±0 (0±1%)	44 80
All	All	780/920 (85%)	732 (94%)	46 (6%)	2 (0%)	44 80

All 2 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	18	ASN	1
1	A	19	ASN	1

6.3.2 Protein sidechains [i](#)

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	29/32 (91%)	28±1 (98±3%)	1±1 (2±3%)	51 92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	580/640 (91%)	566 (98%)	14 (2%)	51 92

All 6 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	15	GLU	5
1	A	24	GLN	3
1	A	41	ASN	3
1	A	35	CYS	1
1	A	18	ASN	1
1	A	37	LYS	1

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation

The completeness of assignment taking into account all chemical shift lists is 49% for the well-defined parts and 47% for the entire structure.

7.1 Chemical shift list 1

File name: `working_cs.cif`

Chemical shift list name: `starch_output`

7.1.1 Bookkeeping

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	237
Number of shifts mapped to atoms	237
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	1

7.1.2 Chemical shift referencing

No chemical shift referencing corrections were calculated (not enough data).

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 49%, i.e. 205 atoms were assigned a chemical shift out of a possible 418. 0 out of 1 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Backbone	86/202 (43%)	86/86 (100%)	0/78 (0%)	0/38 (0%)
Sidechain	102/177 (58%)	102/112 (91%)	0/57 (0%)	0/8 (0%)
Aromatic	17/39 (44%)	17/18 (94%)	0/20 (0%)	0/1 (0%)
Overall	205/418 (49%)	205/216 (95%)	0/155 (0%)	0/47 (0%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 47%, i.e. 237 atoms were assigned a chemical shift out of a possible 503. 0 out of 1 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Backbone	96/237 (41%)	96/100 (96%)	0/92 (0%)	0/45 (0%)
Sidechain	124/227 (55%)	124/145 (86%)	0/70 (0%)	0/12 (0%)
Aromatic	17/39 (44%)	17/18 (94%)	0/20 (0%)	0/1 (0%)
Overall	237/503 (47%)	237/263 (90%)	0/182 (0%)	0/58 (0%)

7.1.4 Statistically unusual chemical shifts [i](#)

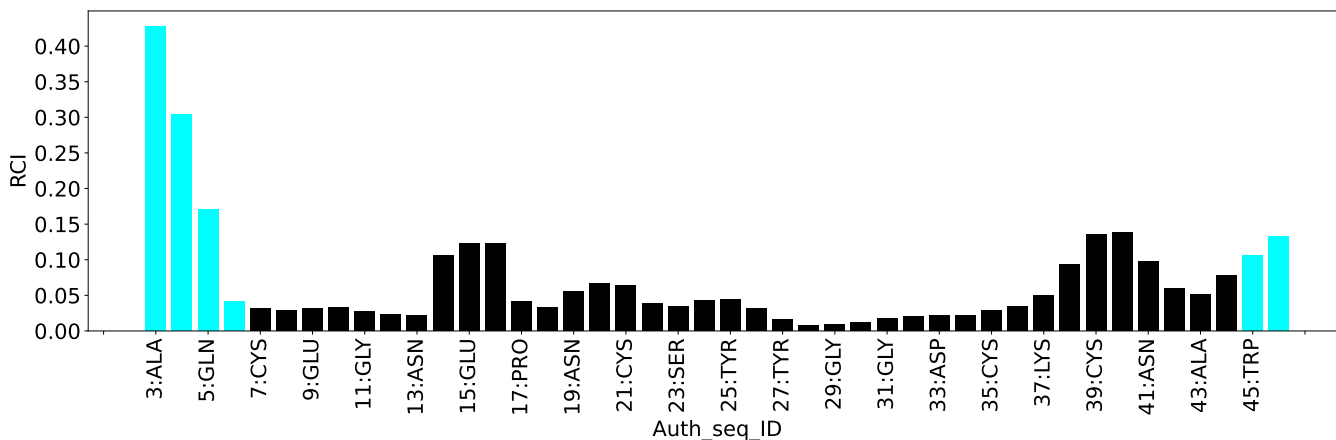
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

List Id	Chain	Res	Type	Atom	Shift, ppm	Expected range, ppm	Z-score
1	A	29	GLY	HA3	1.95	2.08 – 5.71	-5.4

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

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

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

Description	Value
Total distance restraints	646
Intra-residue ($ i-j =0$)	199
Sequential ($ i-j =1$)	172
Medium range ($ i-j >1$ and $ i-j <5$)	81
Long range ($ i-j \geq 5$)	194
Inter-chain	0
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	14.0
Number of long range restraints per residue ¹	4.2

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

8.2 Residual restraint violations

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

8.2.1 Average number of distance violations per model

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

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	13.4	0.2
0.2-0.5 (Medium)	2.0	0.37
>0.5 (Large)	None	None

8.2.2 Average number of dihedral-angle violations per model

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

9 Distance violation analysis i

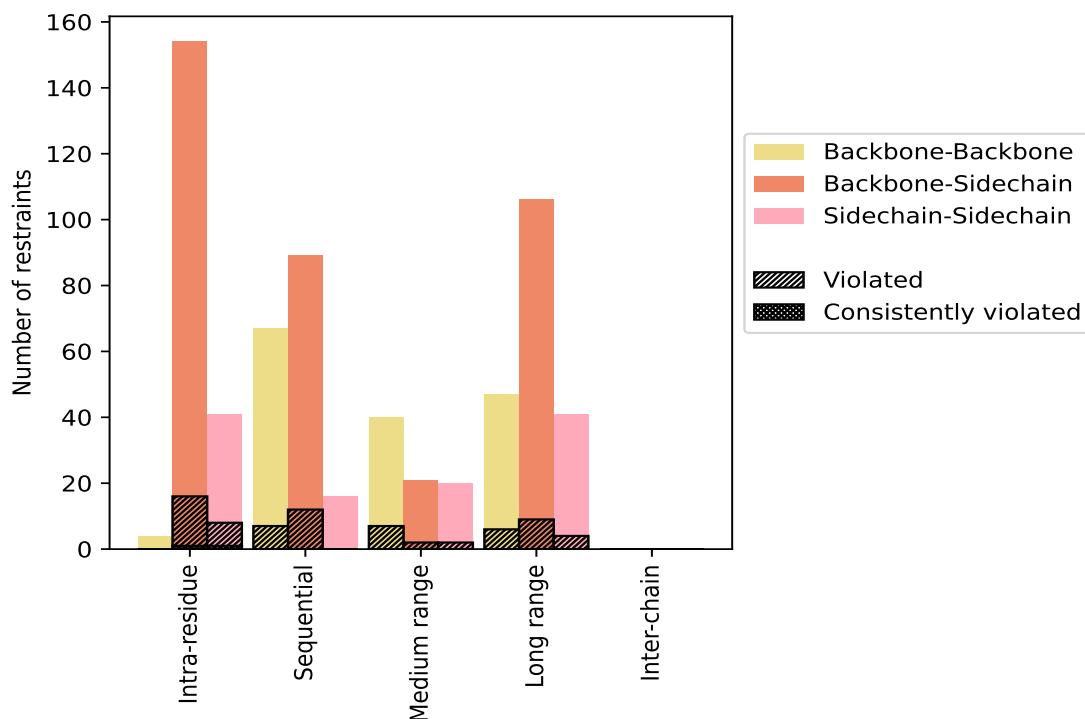
9.1 Summary of distance violations i

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

Restrains type	Count	% ¹	Violated ³			Consistently Violated ⁴		
			Count	% ²	% ¹	Count	% ²	% ¹
Intra-residue ($i-j =0$)	199	30.8	24	12.1	3.7	2	1.0	0.3
Backbone-Backbone	4	0.6	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	154	23.8	16	10.4	2.5	1	0.6	0.2
Sidechain-Sidechain	41	6.3	8	19.5	1.2	1	2.4	0.2
Sequential ($i-j =1$)	172	26.6	19	11.0	2.9	0	0.0	0.0
Backbone-Backbone	67	10.4	7	10.4	1.1	0	0.0	0.0
Backbone-Sidechain	89	13.8	12	13.5	1.9	0	0.0	0.0
Sidechain-Sidechain	16	2.5	0	0.0	0.0	0	0.0	0.0
Medium range ($i-j >1$ & $i-j <5$)	81	12.5	11	13.6	1.7	0	0.0	0.0
Backbone-Backbone	40	6.2	7	17.5	1.1	0	0.0	0.0
Backbone-Sidechain	21	3.3	2	9.5	0.3	0	0.0	0.0
Sidechain-Sidechain	20	3.1	2	10.0	0.3	0	0.0	0.0
Long range ($i-j \geq 5$)	194	30.0	19	9.8	2.9	0	0.0	0.0
Backbone-Backbone	47	7.3	6	12.8	0.9	0	0.0	0.0
Backbone-Sidechain	106	16.4	9	8.5	1.4	0	0.0	0.0
Sidechain-Sidechain	41	6.3	4	9.8	0.6	0	0.0	0.0
Inter-chain	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	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	646	100.0	73	11.3	11.3	2	0.3	0.3
Backbone-Backbone	158	24.5	20	12.7	3.1	0	0.0	0.0
Backbone-Sidechain	370	57.3	39	10.5	6.0	1	0.3	0.2
Sidechain-Sidechain	118	18.3	14	11.9	2.2	1	0.8	0.2

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

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



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

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

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

Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
1	8	7	1	6	0	22	0.16	0.3	0.06	0.14
2	9	8	4	3	0	24	0.15	0.24	0.04	0.15
3	9	4	3	3	0	19	0.16	0.31	0.05	0.14
4	7	5	2	2	0	16	0.17	0.34	0.06	0.15
5	6	5	3	6	0	20	0.15	0.34	0.06	0.13
6	7	5	2	3	0	17	0.16	0.34	0.05	0.13
7	6	4	3	3	0	16	0.16	0.32	0.06	0.15
8	6	5	4	4	0	19	0.14	0.35	0.06	0.12
9	8	2	3	1	0	14	0.16	0.36	0.06	0.14
10	5	6	5	0	0	16	0.15	0.34	0.07	0.13

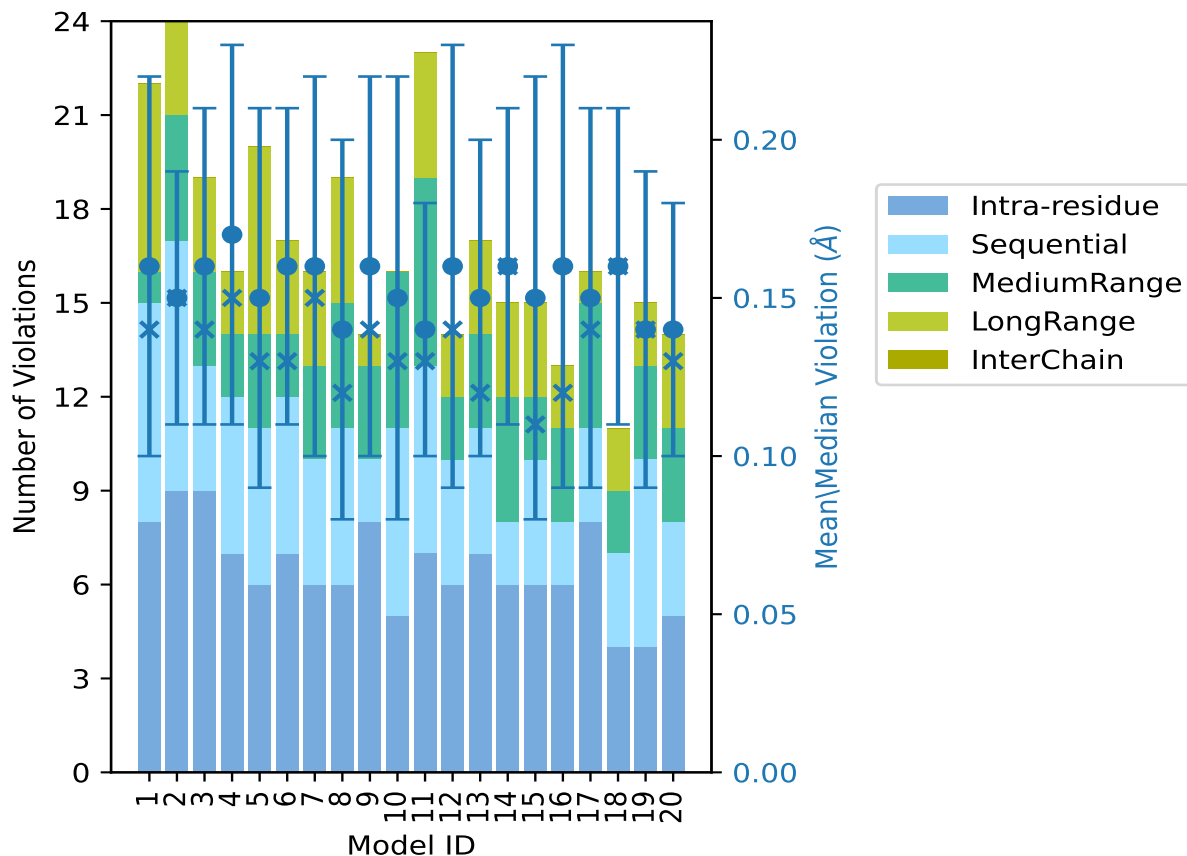
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Model ID	Number of violations					Total	Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵					
11	7	6	6	4	0	23	0.14	0.28	0.04	0.13
12	6	4	2	2	0	14	0.16	0.37	0.07	0.14
13	7	4	3	3	0	17	0.15	0.27	0.05	0.12
14	6	2	4	3	0	15	0.16	0.33	0.05	0.16
15	6	4	2	3	0	15	0.15	0.33	0.07	0.11
16	6	2	3	2	0	13	0.16	0.34	0.07	0.12
17	8	3	4	1	0	16	0.15	0.35	0.06	0.14
18	4	3	2	2	0	11	0.16	0.29	0.05	0.16
19	4	6	3	2	0	15	0.14	0.32	0.05	0.14
20	5	3	3	3	0	14	0.14	0.29	0.04	0.13

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

9.2.1 Bar graph : Distance Violation statistics for each model [i](#)



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

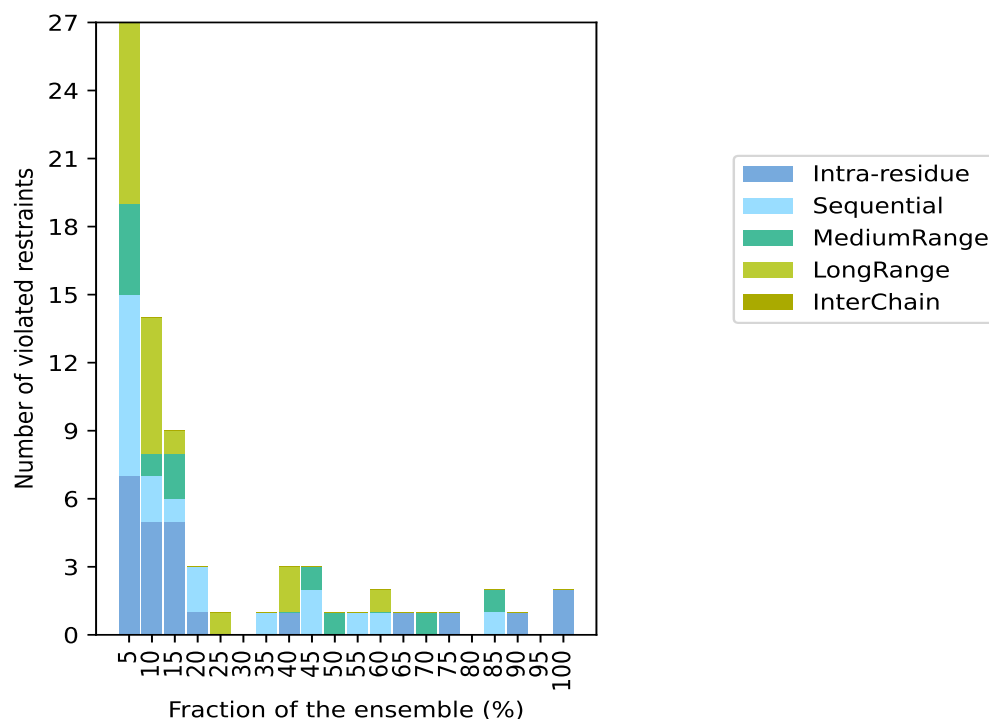
9.3 Distance violation statistics for the ensemble

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 573(IR:175, SQ:153, MR:70, LR:175, 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	%
7	8	4	8	0	27	1	5.0
5	2	1	6	0	14	2	10.0
5	1	2	1	0	9	3	15.0
1	2	0	0	0	3	4	20.0
0	0	0	1	0	1	5	25.0
0	0	0	0	0	0	6	30.0
0	1	0	0	0	1	7	35.0
1	0	0	2	0	3	8	40.0
0	2	1	0	0	3	9	45.0
0	0	1	0	0	1	10	50.0
0	1	0	0	0	1	11	55.0
0	1	0	1	0	2	12	60.0
1	0	0	0	0	1	13	65.0
0	0	1	0	0	1	14	70.0
1	0	0	0	0	1	15	75.0
0	0	0	0	0	0	16	80.0
0	1	1	0	0	2	17	85.0
1	0	0	0	0	1	18	90.0
0	0	0	0	0	0	19	95.0
2	0	0	0	0	2	20	100.0

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

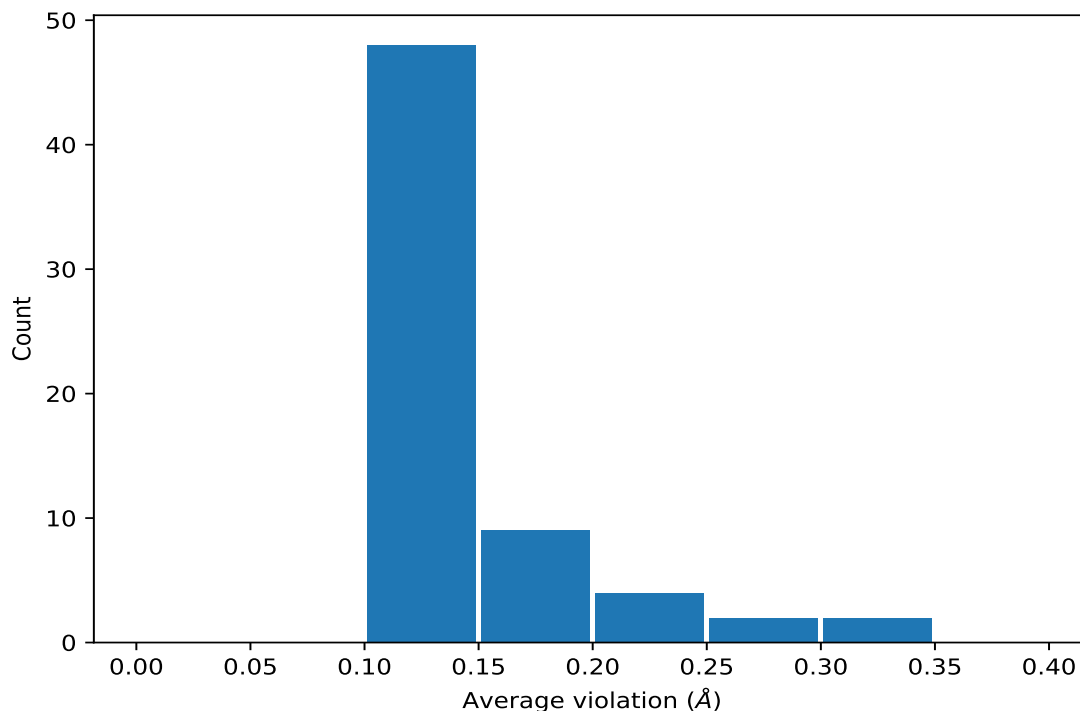
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



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

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

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



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

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

Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	20	0.32	0.03	0.32
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	20	0.32	0.03	0.32
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	20	0.14	0.02	0.14
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	18	0.15	0.03	0.14
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	17	0.14	0.03	0.14
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	17	0.14	0.03	0.13
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	15	0.15	0.01	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	15	0.15	0.01	0.15
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	14	0.12	0.02	0.12
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	13	0.14	0.02	0.14
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	12	0.15	0.03	0.15
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	12	0.12	0.01	0.12
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	11	0.14	0.04	0.13
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	10	0.14	0.03	0.14
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	10	0.14	0.03	0.14
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	10	0.14	0.03	0.14

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	10	0.14	0.03	0.14
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	9	0.15	0.05	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	9	0.13	0.01	0.13
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	9	0.13	0.02	0.12
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	8	0.16	0.04	0.18
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	8	0.16	0.04	0.18
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	8	0.15	0.04	0.14
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	8	0.14	0.03	0.12
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	8	0.14	0.03	0.12
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	7	0.14	0.02	0.14
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	5	0.16	0.05	0.13
(1,2)	1:4:A:ALA:HA	1:5:A:GLN:H	4	0.2	0.05	0.22
(1,477)	1:45:A:TRP:HB2	1:46:A:THR:H	4	0.12	0.02	0.12
(1,477)	1:45:A:TRP:HB3	1:46:A:THR:H	4	0.12	0.02	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE2	4	0.12	0.0	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE3	4	0.12	0.0	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE2	4	0.12	0.0	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE3	4	0.12	0.0	0.12
(1,494)	1:24:A:GLN:HA	1:24:A:GLN:HE21	3	0.24	0.07	0.19
(1,223)	1:6:A:ARG:HA	1:6:A:ARG:HE	3	0.23	0.05	0.25
(1,170)	1:5:A:GLN:HA	1:5:A:GLN:HE21	3	0.16	0.02	0.14
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD2	3	0.15	0.02	0.15
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD3	3	0.15	0.02	0.15
(1,374)	1:6:A:ARG:H	1:6:A:ARG:HE	3	0.14	0.01	0.14
(1,645)	1:44:A:CYS:HB2	1:45:A:TRP:H	3	0.14	0.02	0.13
(1,645)	1:44:A:CYS:HB3	1:45:A:TRP:H	3	0.14	0.02	0.13
(1,462)	1:8:A:GLY:H	1:11:A:GLY:HA3	3	0.12	0.01	0.13
(1,178)	1:22:A:CYS:HB2	1:40:A:GLN:H	3	0.11	0.01	0.11
(1,24)	1:7:A:CYS:H	1:11:A:GLY:HA2	3	0.11	0.0	0.11
(1,553)	1:10:A:GLN:HG2	1:10:A:GLN:HE21	2	0.26	0.02	0.26
(1,553)	1:10:A:GLN:HG3	1:10:A:GLN:HE21	2	0.26	0.02	0.26
(1,212)	1:10:A:GLN:HB3	1:10:A:GLN:HE21	2	0.21	0.01	0.21
(1,527)	1:5:A:GLN:HG2	1:6:A:ARG:H	2	0.18	0.0	0.18
(1,527)	1:5:A:GLN:HG3	1:6:A:ARG:H	2	0.18	0.0	0.18
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB2	2	0.17	0.01	0.17
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB3	2	0.17	0.01	0.17
(1,118)	1:37:A:LYS:HA	1:39:A:CYS:H	2	0.16	0.04	0.16
(1,140)	1:24:A:GLN:HA	1:40:A:GLN:HB3	2	0.15	0.03	0.15
(1,524)	1:5:A:GLN:HB2	1:5:A:GLN:HE21	2	0.14	0.02	0.14
(1,524)	1:5:A:GLN:HB3	1:5:A:GLN:HE21	2	0.14	0.02	0.14
(1,163)	1:10:A:GLN:H	1:11:A:GLY:HA3	2	0.14	0.02	0.14
(1,219)	1:6:A:ARG:HE	1:26:A:GLY:HA3	2	0.14	0.02	0.14

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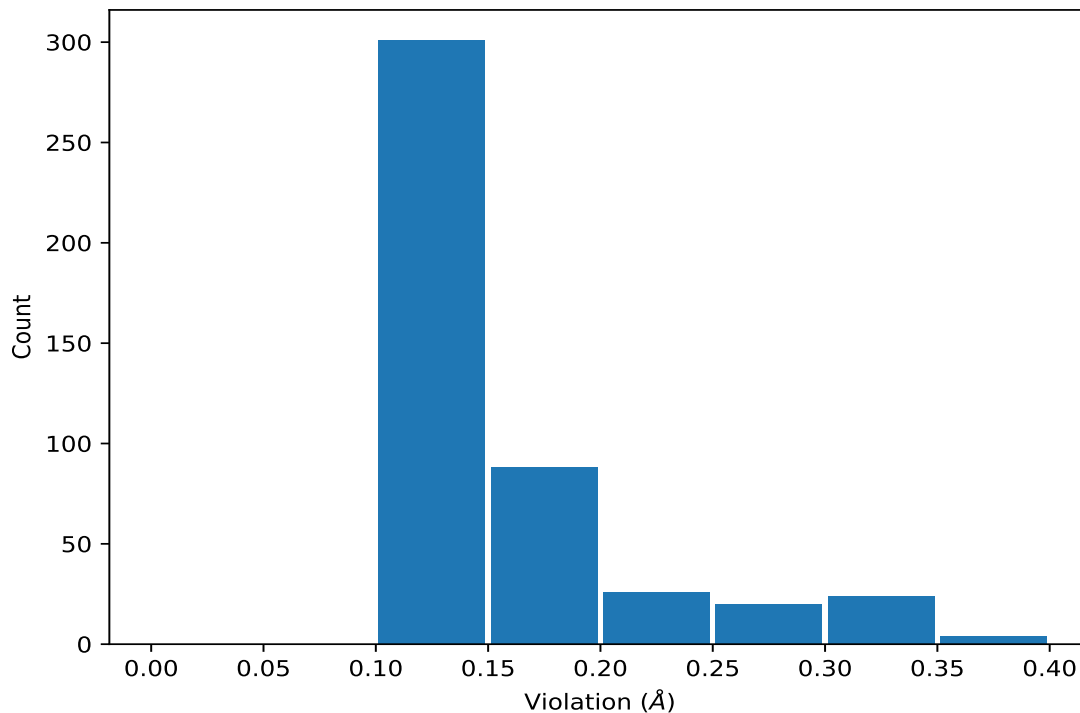
Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,209)	1:40:A:GLN:H	1:40:A:GLN:HE22	2	0.12	0.02	0.12
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD1	2	0.12	0.01	0.12
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD2	2	0.12	0.01	0.12
(1,458)	1:8:A:GLY:H	1:15:A:GLU:HA	2	0.12	0.0	0.12
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE1	2	0.12	0.02	0.12
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE2	2	0.12	0.02	0.12
(1,34)	1:20:A:LEU:H	1:42:A:GLY:HA2	2	0.11	0.0	0.11

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

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

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



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

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

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	12	0.37
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	12	0.37
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	9	0.36
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	9	0.36
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	8	0.35
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	8	0.35
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	17	0.35
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	17	0.35
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	4	0.34
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	4	0.34
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	5	0.34
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	5	0.34
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	6	0.34
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	6	0.34
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	10	0.34
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	10	0.34
(1,494)	1:24:A:GLN:HA	1:24:A:GLN:HE21	16	0.34
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	14	0.33
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	14	0.33
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	15	0.33
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	15	0.33
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	7	0.32
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	7	0.32
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	19	0.32
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	19	0.32
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	3	0.31
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	3	0.31
(1,368)	1:5:A:GLN:H	1:5:A:GLN:HE21	10	0.31
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	1	0.3
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	1	0.3
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	18	0.29
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	18	0.29
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	20	0.29
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	20	0.29
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	1	0.29
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	11	0.28
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	11	0.28
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	16	0.28
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	16	0.28
(1,553)	1:10:A:GLN:HG2	1:10:A:GLN:HE21	13	0.27
(1,553)	1:10:A:GLN:HG3	1:10:A:GLN:HE21	13	0.27
(1,223)	1:6:A:ARG:HA	1:6:A:ARG:HE	15	0.27
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	1	0.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	13	0.26
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	13	0.26
(1,544)	1:9:A:GLU:HA	1:9:A:GLU:HG2	9	0.25
(1,544)	1:9:A:GLU:HA	1:9:A:GLU:HG3	9	0.25
(1,223)	1:6:A:ARG:HA	1:6:A:ARG:HE	3	0.25
(1,556)	1:13:A:ASN:HB2	1:13:A:ASN:HD21	2	0.24
(1,556)	1:13:A:ASN:HB3	1:13:A:ASN:HD21	2	0.24
(1,553)	1:10:A:GLN:HG2	1:10:A:GLN:HE21	3	0.24
(1,553)	1:10:A:GLN:HG3	1:10:A:GLN:HE21	3	0.24
(1,2)	1:4:A:ALA:HA	1:5:A:GLN:H	4	0.24
(1,2)	1:4:A:ALA:HA	1:5:A:GLN:H	12	0.24
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	4	0.23
(1,280)	1:37:A:LYS:H	1:38:A:GLY:H	7	0.23
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	5	0.23
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	6	0.22
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	6	0.22
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	18	0.22
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	18	0.22
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	7	0.22
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	1	0.22
(1,212)	1:10:A:GLN:HB3	1:10:A:GLN:HE21	3	0.22
(1,2)	1:4:A:ALA:HA	1:5:A:GLN:H	2	0.21
(1,626)	1:37:A:LYS:HB2	1:37:A:LYS:HD2	18	0.2
(1,626)	1:37:A:LYS:HB2	1:37:A:LYS:HD3	18	0.2
(1,626)	1:37:A:LYS:HB3	1:37:A:LYS:HD2	18	0.2
(1,626)	1:37:A:LYS:HB3	1:37:A:LYS:HD3	18	0.2
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	4	0.2
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	4	0.2
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	7	0.2
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	1	0.2
(1,212)	1:10:A:GLN:HB3	1:10:A:GLN:HE21	13	0.2
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	8	0.19
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	8	0.19
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	8	0.19
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	8	0.19
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	18	0.19
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	18	0.19
(1,494)	1:24:A:GLN:HA	1:24:A:GLN:HE21	2	0.19
(1,494)	1:24:A:GLN:HA	1:24:A:GLN:HE21	13	0.19
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	2	0.19
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	6	0.19
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	2	0.19

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	14	0.19
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	11	0.19
(1,170)	1:5:A:GLN:HA	1:5:A:GLN:HE21	2	0.19
(1,118)	1:37:A:LYS:HA	1:39:A:CYS:H	5	0.19
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	8	0.18
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	8	0.18
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	12	0.18
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	12	0.18
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB2	15	0.18
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB3	15	0.18
(1,527)	1:5:A:GLN:HG2	1:6:A:ARG:H	2	0.18
(1,527)	1:5:A:GLN:HG3	1:6:A:ARG:H	2	0.18
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	10	0.18
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	15	0.18
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	3	0.18
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	6	0.18
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	9	0.18
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	2	0.18
(1,645)	1:44:A:CYS:HB2	1:45:A:TRP:H	14	0.17
(1,645)	1:44:A:CYS:HB3	1:45:A:TRP:H	14	0.17
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	5	0.17
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	5	0.17
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	17	0.17
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	17	0.17
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	16	0.17
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	16	0.17
(1,527)	1:5:A:GLN:HG2	1:6:A:ARG:H	7	0.17
(1,527)	1:5:A:GLN:HG3	1:6:A:ARG:H	7	0.17
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	8	0.17
(1,451)	1:15:A:GLU:HG3	1:41:A:ASN:HD21	11	0.17
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	5	0.17
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD2	4	0.17
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD3	4	0.17
(1,367)	1:5:A:GLN:H	1:6:A:ARG:H	10	0.17
(1,353)	1:18:A:ASN:H	1:18:A:ASN:HB3	1	0.17
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	10	0.17
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	20	0.17
(1,292)	1:24:A:GLN:H	1:24:A:GLN:HE22	7	0.17
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	4	0.17
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	6	0.17
(1,140)	1:24:A:GLN:HA	1:40:A:GLN:HB3	5	0.17
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	3	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	3	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	3	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	3	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	3	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	6	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	6	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	6	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	6	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	19	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	19	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	19	0.16
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	19	0.16
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	14	0.16
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	14	0.16
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	16	0.16
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	16	0.16
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB2	3	0.16
(1,537)	1:8:A:GLY:H	1:14:A:MET:HB3	3	0.16
(1,524)	1:5:A:GLN:HB2	1:5:A:GLN:HE21	18	0.16
(1,524)	1:5:A:GLN:HB3	1:5:A:GLN:HE21	18	0.16
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	4	0.16
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	14	0.16
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	11	0.16
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	13	0.16
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	18	0.16
(1,374)	1:6:A:ARG:H	1:6:A:ARG:HE	9	0.16
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	9	0.16
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	9	0.16
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	14	0.16
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	16	0.16
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	17	0.16
(1,223)	1:6:A:ARG:HA	1:6:A:ARG:HE	8	0.16
(1,219)	1:6:A:ARG:HE	1:26:A:GLY:HA3	14	0.16
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	2	0.16
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	14	0.16
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	4	0.15
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	4	0.15
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	4	0.15
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	4	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	2	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	2	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	4	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	4	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	7	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	7	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	12	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	12	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	15	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	15	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	20	0.15
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	20	0.15
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	2	0.15
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	2	0.15
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	1	0.15
(1,477)	1:45:A:TRP:HB2	1:46:A:THR:H	19	0.15
(1,477)	1:45:A:TRP:HB3	1:46:A:THR:H	19	0.15
(1,461)	1:20:A:LEU:HB3	1:21:A:CYS:H	1	0.15
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	6	0.15
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	19	0.15
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	3	0.15
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD2	17	0.15
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD3	17	0.15
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	19	0.15
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	1	0.15
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	1	0.15
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	4	0.15
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	11	0.15
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	11	0.15
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	12	0.15
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	2	0.15
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	4	0.15
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	19	0.15
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	20	0.15
(1,163)	1:10:A:GLN:H	1:11:A:GLY:HA3	11	0.15
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	5	0.15
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	8	0.15
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	19	0.15
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	17	0.15
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	6	0.15
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	7	0.15
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	1	0.14
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	1	0.14
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	9	0.14
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	9	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	11	0.14
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	11	0.14
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	3	0.14
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	19	0.14
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	4	0.14
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	17	0.14
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	19	0.14
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	3	0.14
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	13	0.14
(1,415)	1:31:A:GLY:H	1:34:A:TYR:H	9	0.14
(1,392)	1:35:A:CYS:H	1:45:A:TRP:HE1	14	0.14
(1,374)	1:6:A:ARG:H	1:6:A:ARG:HE	1	0.14
(1,358)	1:21:A:CYS:HA	1:43:A:ALA:H	1	0.14
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	17	0.14
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	18	0.14
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	2	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	3	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	8	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	10	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	11	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	12	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	14	0.14
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	15	0.14
(1,209)	1:40:A:GLN:H	1:40:A:GLN:HE22	14	0.14
(1,170)	1:5:A:GLN:HA	1:5:A:GLN:HE21	17	0.14
(1,170)	1:5:A:GLN:HA	1:5:A:GLN:HE21	20	0.14
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	12	0.14
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	4	0.14
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	7	0.14
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	11	0.14
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	16	0.14
(1,11)	1:10:A:GLN:H	1:12:A:SER:H	2	0.14
(1,645)	1:44:A:CYS:HB2	1:45:A:TRP:H	1	0.13
(1,645)	1:44:A:CYS:HB3	1:45:A:TRP:H	1	0.13
(1,615)	1:30:A:MET:HB2	1:31:A:GLY:H	10	0.13
(1,615)	1:30:A:MET:HB3	1:31:A:GLY:H	10	0.13
(1,550)	1:10:A:GLN:HB2	1:10:A:GLN:HE22	6	0.13
(1,550)	1:10:A:GLN:HB3	1:10:A:GLN:HE22	6	0.13
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	8	0.13
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	8	0.13
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	19	0.13
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	19	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	5	0.13
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	17	0.13
(1,477)	1:45:A:TRP:HB2	1:46:A:THR:H	5	0.13
(1,477)	1:45:A:TRP:HB3	1:46:A:THR:H	5	0.13
(1,462)	1:8:A:GLY:H	1:11:A:GLY:HA3	2	0.13
(1,462)	1:8:A:GLY:H	1:11:A:GLY:HA3	8	0.13
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	20	0.13
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	2	0.13
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	6	0.13
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	12	0.13
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD2	12	0.13
(1,387)	1:37:A:LYS:HA	1:37:A:LYS:HD3	12	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	2	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	3	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	6	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	11	0.13
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	18	0.13
(1,375)	1:5:A:GLN:HG2	1:6:A:ARG:H	10	0.13
(1,374)	1:6:A:ARG:H	1:6:A:ARG:HE	17	0.13
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	2	0.13
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	5	0.13
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	6	0.13
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	7	0.13
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	1	0.13
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	17	0.13
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	9	0.13
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	13	0.13
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD1	3	0.13
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD2	3	0.13
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	11	0.13
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE1	13	0.13
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE2	13	0.13
(1,103)	1:6:A:ARG:HA	1:28:A:CYS:H	20	0.13
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	9	0.13
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	14	0.13
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	6	0.13
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	3	0.13
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	5	0.13
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	10	0.13
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	20	0.13
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	9	0.13
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	11	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	12	0.13
(1,646)	1:44:A:CYS:HB2	1:46:A:THR:H	11	0.12
(1,646)	1:44:A:CYS:HB3	1:46:A:THR:H	11	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE2	3	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE3	3	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE2	3	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE3	3	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE2	6	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE3	6	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE2	6	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE3	6	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE2	10	0.12
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE3	10	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE2	10	0.12
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE3	10	0.12
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	11	0.12
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	11	0.12
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	11	0.12
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	11	0.12
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	7	0.12
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	7	0.12
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	3	0.12
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	3	0.12
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	16	0.12
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	16	0.12
(1,524)	1:5:A:GLN:HB2	1:5:A:GLN:HE21	3	0.12
(1,524)	1:5:A:GLN:HB3	1:5:A:GLN:HE21	3	0.12
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	13	0.12
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	16	0.12
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	20	0.12
(1,477)	1:45:A:TRP:HB2	1:46:A:THR:H	2	0.12
(1,477)	1:45:A:TRP:HB3	1:46:A:THR:H	2	0.12
(1,458)	1:8:A:GLY:H	1:15:A:GLU:HA	8	0.12
(1,458)	1:8:A:GLY:H	1:15:A:GLU:HA	19	0.12
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	9	0.12
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	10	0.12
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	12	0.12
(1,447)	1:5:A:GLN:HE21	1:6:A:ARG:H	6	0.12
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	5	0.12
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	7	0.12
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	8	0.12
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	17	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	8	0.12
(1,370)	1:17:A:PRO:HG2	1:18:A:ASN:H	1	0.12
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	16	0.12
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	8	0.12
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	5	0.12
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	7	0.12
(1,178)	1:22:A:CYS:HB2	1:40:A:GLN:H	20	0.12
(1,163)	1:10:A:GLN:H	1:11:A:GLY:HA3	4	0.12
(1,140)	1:24:A:GLN:HA	1:40:A:GLN:HB3	13	0.12
(1,122)	1:27:A:TYR:H	1:40:A:GLN:HE21	5	0.12
(1,118)	1:37:A:LYS:HA	1:39:A:CYS:H	17	0.12
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	1	0.12
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	4	0.12
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	11	0.12
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	12	0.12
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	20	0.12
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	7	0.12
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	11	0.12
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	13	0.12
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	16	0.12
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	1	0.12
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	14	0.12
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	15	0.12
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	2	0.12
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	10	0.12
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	16	0.12
(1,645)	1:44:A:CYS:HB2	1:45:A:TRP:H	2	0.11
(1,645)	1:44:A:CYS:HB3	1:45:A:TRP:H	2	0.11
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE2	2	0.11
(1,627)	1:37:A:LYS:HB2	1:37:A:LYS:HE3	2	0.11
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE2	2	0.11
(1,627)	1:37:A:LYS:HB3	1:37:A:LYS:HE3	2	0.11
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	9	0.11
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	9	0.11
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	9	0.11
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	9	0.11
(1,572)	1:15:A:GLU:HG2	1:41:A:ASN:HD21	13	0.11
(1,572)	1:15:A:GLU:HG2	1:41:A:ASN:HD22	13	0.11
(1,572)	1:15:A:GLU:HG3	1:41:A:ASN:HD21	13	0.11
(1,572)	1:15:A:GLU:HG3	1:41:A:ASN:HD22	13	0.11
(1,539)	1:8:A:GLY:H	1:15:A:GLU:HG2	15	0.11
(1,539)	1:8:A:GLY:H	1:15:A:GLU:HG3	15	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	7	0.11
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	7	0.11
(1,532)	1:6:A:ARG:HD2	1:26:A:GLY:HA3	13	0.11
(1,532)	1:6:A:ARG:HD3	1:26:A:GLY:HA3	13	0.11
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	8	0.11
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	9	0.11
(1,481)	1:13:A:ASN:H	1:13:A:ASN:HD21	11	0.11
(1,462)	1:8:A:GLY:H	1:11:A:GLY:HA3	19	0.11
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	3	0.11
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	15	0.11
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	16	0.11
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	18	0.11
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	20	0.11
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	13	0.11
(1,378)	1:14:A:MET:H	1:15:A:GLU:H	15	0.11
(1,345)	1:10:A:GLN:H	1:10:A:GLN:HE21	8	0.11
(1,317)	1:22:A:CYS:H	1:43:A:ALA:H	1	0.11
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	5	0.11
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	8	0.11
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	13	0.11
(1,279)	1:37:A:LYS:HD2	1:38:A:GLY:H	8	0.11
(1,279)	1:37:A:LYS:HD3	1:38:A:GLY:H	8	0.11
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	5	0.11
(1,243)	1:10:A:GLN:HE21	1:40:A:GLN:HE21	14	0.11
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	1	0.11
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD1	2	0.11
(1,221)	1:6:A:ARG:HE	1:27:A:TYR:HD2	2	0.11
(1,219)	1:6:A:ARG:HE	1:26:A:GLY:HA3	15	0.11
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	6	0.11
(1,215)	1:18:A:ASN:H	1:42:A:GLY:HA2	20	0.11
(1,209)	1:40:A:GLN:H	1:40:A:GLN:HE22	11	0.11
(1,178)	1:22:A:CYS:HB2	1:40:A:GLN:H	11	0.11
(1,165)	1:16:A:CYS:HB3	1:20:A:LEU:HB2	10	0.11
(1,139)	1:40:A:GLN:HB3	1:40:A:GLN:HE21	5	0.11
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	6	0.11
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	15	0.11
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	11	0.11
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	15	0.11
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	17	0.11
(1,34)	1:20:A:LEU:H	1:42:A:GLY:HA2	1	0.11
(1,24)	1:7:A:CYS:H	1:11:A:GLY:HA2	11	0.11
(1,24)	1:7:A:CYS:H	1:11:A:GLY:HA2	20	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2)	1:4:A:ALA:HA	1:5:A:GLN:H	18	0.11
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	2	0.1
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	2	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	2	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	2	0.1
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	10	0.1
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	10	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	10	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	10	0.1
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD1	14	0.1
(1,601)	1:24:A:GLN:HG2	1:27:A:TYR:HD2	14	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD1	14	0.1
(1,601)	1:24:A:GLN:HG3	1:27:A:TYR:HD2	14	0.1
(1,571)	1:15:A:GLU:HG2	1:16:A:CYS:H	10	0.1
(1,571)	1:15:A:GLU:HG3	1:16:A:CYS:H	10	0.1
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	1	0.1
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	1	0.1
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB2	5	0.1
(1,538)	1:8:A:GLY:H	1:15:A:GLU:HB3	5	0.1
(1,477)	1:45:A:TRP:HB2	1:46:A:THR:H	4	0.1
(1,477)	1:45:A:TRP:HB3	1:46:A:THR:H	4	0.1
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	7	0.1
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	16	0.1
(1,456)	1:21:A:CYS:H	1:22:A:CYS:HB2	17	0.1
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	10	0.1
(1,422)	1:31:A:GLY:H	1:35:A:CYS:HB3	11	0.1
(1,363)	1:5:A:GLN:H	1:5:A:GLN:HB3	12	0.1
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	15	0.1
(1,302)	1:21:A:CYS:HA	1:23:A:SER:H	19	0.1
(1,228)	1:33:A:ASP:H	1:33:A:ASP:HB3	18	0.1
(1,178)	1:22:A:CYS:HB2	1:40:A:GLN:H	5	0.1
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE1	19	0.1
(1,124)	1:34:A:TYR:H	1:34:A:TYR:HE2	19	0.1
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	8	0.1
(1,101)	1:27:A:TYR:H	1:28:A:CYS:H	13	0.1
(1,78)	1:18:A:ASN:H	1:19:A:ASN:H	5	0.1
(1,76)	1:17:A:PRO:HG3	1:18:A:ASN:H	19	0.1
(1,42)	1:10:A:GLN:HA	1:10:A:GLN:HE21	12	0.1
(1,34)	1:20:A:LEU:H	1:42:A:GLY:HA2	8	0.1
(1,24)	1:7:A:CYS:H	1:11:A:GLY:HA2	17	0.1
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	13	0.1
(1,7)	1:31:A:GLY:HA2	1:35:A:CYS:H	15	0.1

10 Dihedral-angle violation analysis

No dihedral-angle restraints found