



Full wwPDB NMR Structure Validation Report ⓘ

Jan 8, 2026 – 03:15 pm GMT

PDB ID : 9GSA / pdb_00009gsa
BMRB ID : 34959
Title : Lys9DabMC6*a 1-Delta
Authors : Maglio, O.; Lombardi, A.; Chino, M.; Pirro, F.
Deposited on : 2024-09-13

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 1.8.4, CSD as541be (2020)
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.47

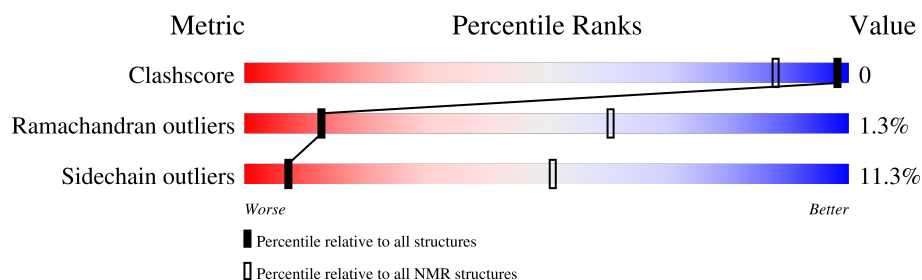
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 42%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	12	
2	B	16	

2 Ensemble composition and analysis

This entry contains 20 models. Model 11 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:4-A:6, A:8-A:8, A:10-A:10, B:1-B:14 (19)	0.65	11

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. No single-model clusters were found.

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

3 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 485 atoms, of which 241 are hydrogens and 0 are deuteriums.

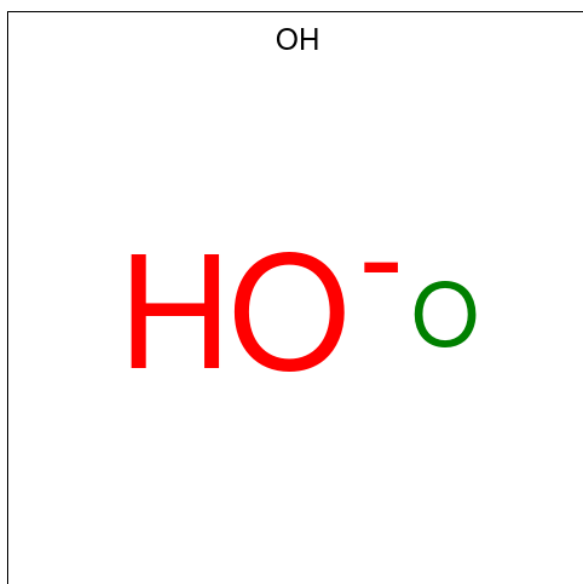
- Molecule 1 is a protein called ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2.

Mol	Chain	Residues	Atoms					Trace
1	A	12	Total	C	H	N	O	1
			164	48	81	17	18	

- Molecule 2 is a protein called ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2.

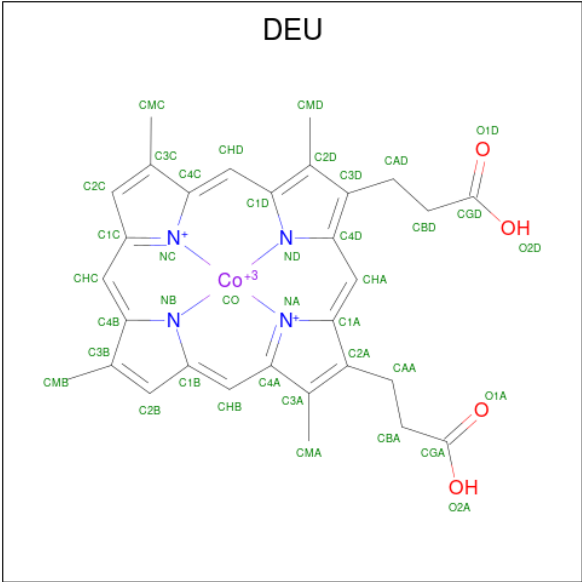
Mol	Chain	Residues	Atoms					Trace
2	B	16	Total	C	H	N	O	1
			256	76	133	25	22	

- Molecule 3 is HYDROXIDE ION (CCD ID: OH) (formula: HO).



Mol	Chain	Residues	Atoms		
3	A	1	Total	H	O
			2	1	1

- Molecule 4 is CO(III)-(DEUTEROPORPHYRIN IX) (CCD ID: DEU) (formula: C₃₀H₂₈CoN₄O₄) (labeled as "Ligand of Interest" by depositor).



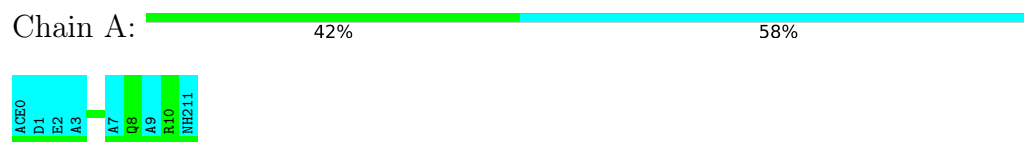
Mol	Chain	Residues	Atoms					
			Total	C	Co	H	N	O
4	A	1	63	30	1	26	4	2

4 Residue-property plots

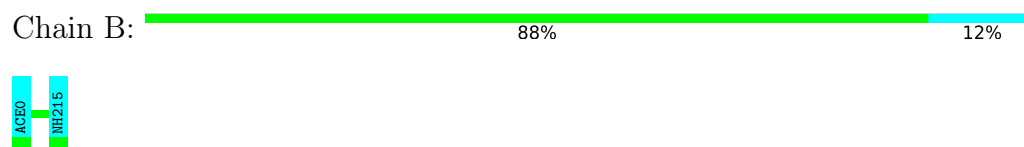
4.1 Average score per residue in the NMR ensemble

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: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

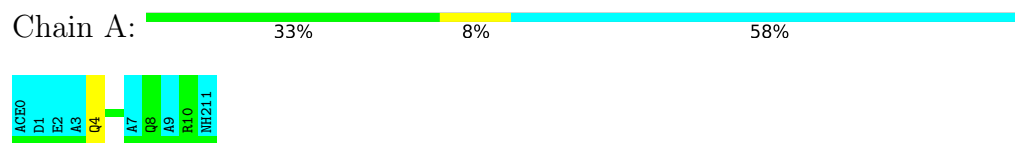


4.2 Scores per residue for each member of the ensemble

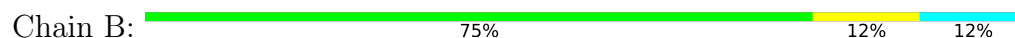
Colouring as in section 4.1 above.

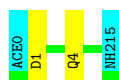
4.2.1 Score per residue for model 1

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2



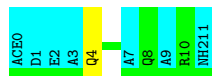
- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2



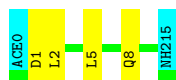


4.2.2 Score per residue for model 2

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

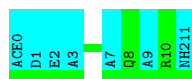


- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2



4.2.3 Score per residue for model 3

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

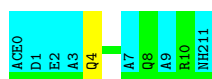


- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2



4.2.4 Score per residue for model 4

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

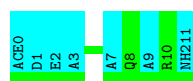
Chain B:  62% 25% 12%



4.2.5 Score per residue for model 5

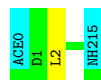
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  42% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

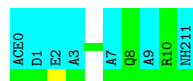
Chain B:  81% 6% 12%



4.2.6 Score per residue for model 6

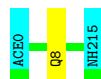
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  42% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

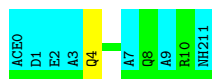
Chain B:  81% 6% 12%



4.2.7 Score per residue for model 7

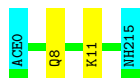
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  33% 8% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

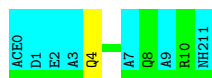
Chain B:  75% 12% 12%



4.2.8 Score per residue for model 8

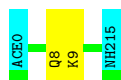
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

Chain A:  33% 8% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

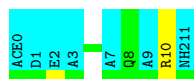
Chain B:  75% 12% 12%



4.2.9 Score per residue for model 9

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

Chain A:  33% 8% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

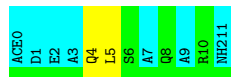
Chain B:  75% 12% 12%



4.2.10 Score per residue for model 10

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

Chain A:  25% 17% 58%



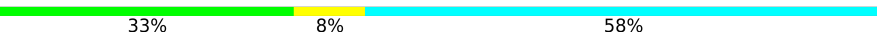
- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

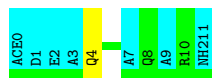
Chain B:  75% 12% 12%



4.2.11 Score per residue for model 11 (medoid)

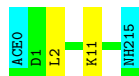
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

Chain A:  33% 8% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

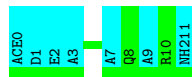
Chain B:  75% 12% 12%



4.2.12 Score per residue for model 12

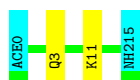
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

Chain A:  42% 58%



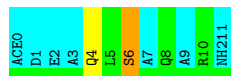
- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

Chain B:  75% 12% 12%

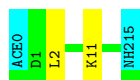
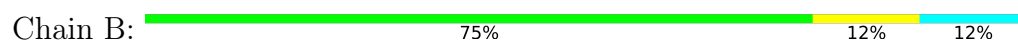


4.2.13 Score per residue for model 13

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

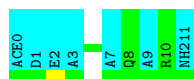


- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2

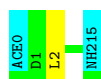
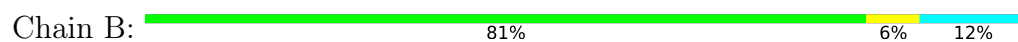


4.2.14 Score per residue for model 14

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2

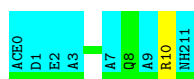


- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH2



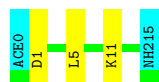
4.2.15 Score per residue for model 15

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH2



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

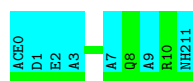
Chain B:  69% 19% 12%



4.2.16 Score per residue for model 16

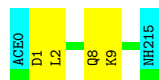
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  42% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

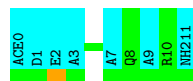
Chain B:  62% 25% 12%



4.2.17 Score per residue for model 17

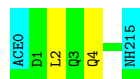
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  42% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

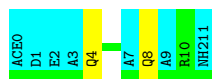
Chain B:  75% 12% 12%



4.2.18 Score per residue for model 18

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  25% 17% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

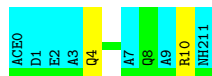
Chain B:  75% 12% 12%



4.2.19 Score per residue for model 19

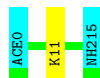
- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  25% 17% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

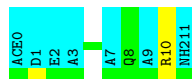
Chain B:  81% 6% 12%



4.2.20 Score per residue for model 20

- Molecule 1: ACE-ASP-GLU-AIB-GLN-LEU-SER-AIB-GLN-DAB-ARG-NH₂

Chain A:  33% 8% 58%



- Molecule 2: ACE-ASP-LEU-GLN-GLN-LEU-HIS-SER-GLN-LYS-ARG-LYS-ILE-THR-LEU-NH₂

Chain B:  62% 25% 12%



5 Refinement protocol and experimental data overview

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

Of the 400 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	10

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	167
Number of shifts mapped to atoms	165
Number of unparsed shifts	0
Number of shifts with mapping errors	2
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	42%

6 Model quality [i](#)

6.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ACE, DEU, AIB, NH2, OH, DAB

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±0.03	0±0/40 (0.0± 0.0%)	1.74±0.12	1±1/48 (1.9± 2.1%)
2	B	0.81±0.02	0±0/119 (0.0± 0.0%)	1.63±0.06	0±1/157 (0.3± 0.6%)
All	All	0.79	0/3180 (0.0%)	1.66	28/4100 (0.7%)

There are no bond-length outliers.

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	4	GLN	CA-C-N	6.58	129.39	120.38	1	9
1	A	4	GLN	C-N-CA	6.58	129.39	120.38	1	9
2	B	1	ASP	CA-C-N	5.66	127.87	120.28	20	5
2	B	1	ASP	C-N-CA	5.66	127.87	120.28	20	5

There are no chirality outliers.

There are no planarity outliers.

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	43	45	45	0±0
3	A	1	1	0	0±0
4	A	37	26	26	0±0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes
All	All	4000	4000	3972	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:10:ARG:HD3	4:A:102:DEU:HMD2	0.52	1.79	19	1
1:A:6:SER:OG	3:A:101:OH:O	0.42	2.37	13	1

6.3 Torsion angles [i](#)

6.3.1 Protein backbone [i](#)

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	5/12 (42%)	4±1 (85±19%)	1±1 (14±18%)	0±0 (1±4%)	16	65
2	B	14/16 (88%)	13±0 (95±3%)	0±0 (4±4%)	0±0 (1±3%)	12	59
All	All	380/560 (68%)	351 (92%)	24 (6%)	5 (1%)	13	60

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)
2	B	1	ASP	4
1	A	10	ARG	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	5/7 (71%)	5±1 (94±11%)	0±1 (6±11%)	18	70
2	B	14/14 (100%)	12±1 (87±5%)	2±1 (13±5%)	6	46
All	All	380/420 (90%)	337 (89%)	43 (11%)	7	51

All 13 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)
2	B	11	LYS	10
2	B	8	GLN	9
2	B	2	LEU	8
2	B	9	LYS	3
2	B	4	GLN	2
2	B	5	LEU	2
1	A	10	ARG	2
2	B	10	ARG	2
1	A	4	GLN	1
1	A	5	LEU	1
2	B	3	GLN	1
1	A	6	SER	1
1	A	8	GLN	1

6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

3 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	AIB	A	3	1	1,5,6	1.15±0.05	0±0 (0±0%)
1	AIB	A	7	1	1,5,6	1.25±0.04	0±0 (0±0%)

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	DAB	A	9	4,1	5,6,7	0.69±0.10	0±0 (0±0%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of angles that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
1	AIB	A	3	1	2,7,9	0.42±0.14	0±0 (0±0%)
1	AIB	A	7	1	2,7,9	0.80±0.17	0±0 (0±0%)
1	DAB	A	9	4,1	1,6,8	0.33±0.14	0±0 (0±0%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	AIB	A	3	1	-	0±0,2,3,6	-
1	DAB	A	9	4,1	-	0±0,4,5,7	-
1	AIB	A	7	1	-	0±0,2,3,6	-

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.6 Ligand geometry [i](#)

Of 2 ligands modelled in this entry, 1 is modelled with single atom - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
4	DEU	A	102	3,2,1	39,44,46	0.95±0.01	2±0 (4±0%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of angles that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
4	DEU	A	102	3,2,1	44,72,76	1.03±0.07	3±1 (6±2%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	DEU	A	102	3,2,1	-	0±0,7,84,86	-

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
4	A	102	DEU	O2D-CGD	3.59	1.23	1.42	17	20
4	A	102	DEU	CHA-C1A	2.11	1.40	1.35	19	18

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

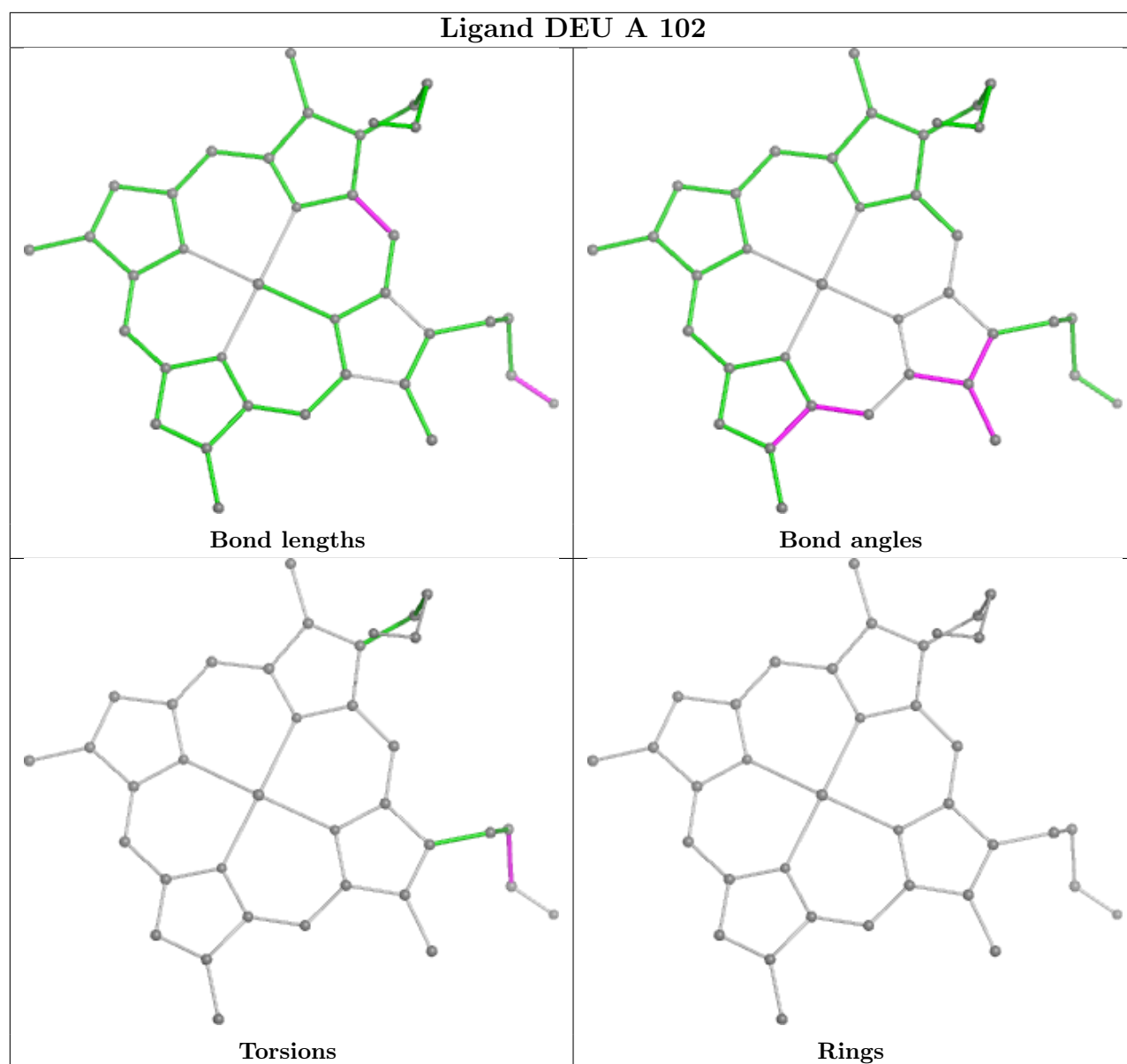
Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
4	A	102	DEU	CMD-C2D-C1D	3.63	122.89	128.46	7	18
4	A	102	DEU	CMD-C2D-C3D	2.69	130.01	124.94	7	13
4	A	102	DEU	CHD-C4C-C3C	2.46	123.91	129.77	14	18
4	A	102	DEU	C1C-C2C-C3C	2.28	106.37	108.89	13	9

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



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 [i](#)

The completeness of assignment taking into account all chemical shift lists is 42% for the well-defined parts and 42% 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 [i](#)

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	167
Number of shifts mapped to atoms	165
Number of unparsed shifts	0
Number of shifts with mapping errors	2
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	3

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

- No matching atom found in the structure. All 2 occurrences are reported below.

List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	B	9	LYS	HZ2	8.499	0.003	1
1	B	9	LYS	HZ3	8.499	0.003	1

7.1.2 Chemical shift referencing [i](#)

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

7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 42%, i.e. 125 atoms were assigned a chemical shift out of a possible 298. 0 out of 4 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Backbone	38/95 (40%)	38/38 (100%)	0/38 (0%)	0/19 (0%)
Sidechain	84/196 (43%)	84/125 (67%)	0/58 (0%)	0/13 (0%)
Aromatic	3/7 (43%)	3/4 (75%)	0/2 (0%)	0/1 (0%)
Overall	125/298 (42%)	125/167 (75%)	0/98 (0%)	0/33 (0%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 42%, i.e. 135 atoms were assigned a chemical shift out of a possible 319. 0 out of 4 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Backbone	42/105 (40%)	42/42 (100%)	0/42 (0%)	0/21 (0%)
Sidechain	90/207 (43%)	90/131 (69%)	0/63 (0%)	0/13 (0%)
Aromatic	3/7 (43%)	3/4 (75%)	0/2 (0%)	0/1 (0%)
Overall	135/319 (42%)	135/177 (76%)	0/107 (0%)	0/35 (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	B	6	HIS	HD2	-0.46	4.65 – 9.35	-15.9
1	B	6	HIS	HE1	-0.20	5.13 – 10.76	-14.5
1	B	6	HIS	HA	2.30	2.49 – 6.71	-5.5

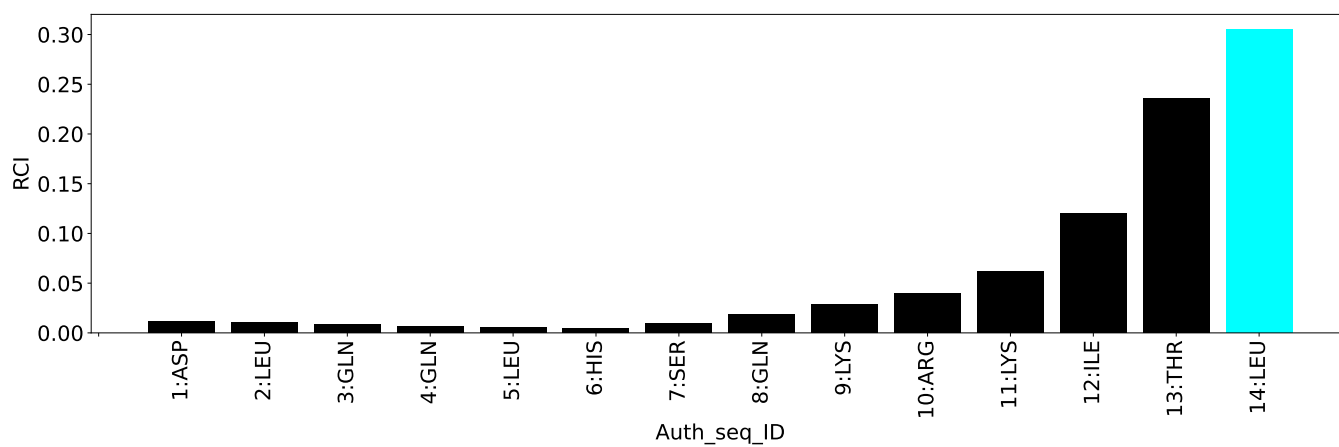
7.1.5 Random Coil Index (RCI) plots [i](#)

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:



Random coil index (RCI) for chain B:



8 NMR restraints analysis [i](#)

8.1 Conformationally restricting restraints [i](#)

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	270
Intra-residue ($ i-j =0$)	97
Sequential ($ i-j =1$)	85
Medium range ($ i-j >1$ and $ i-j <5$)	54
Long range ($ i-j \geq 5$)	0
Inter-chain	34
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	9.0
Number of long range restraints per residue ¹	0.0

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

8.2 Residual restraint violations [i](#)

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 [i](#)

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)	7.6	0.2
0.2-0.5 (Medium)	8.8	0.5
>0.5 (Large)	40.0	5.31

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

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

9 Distance violation analysis ⓘ

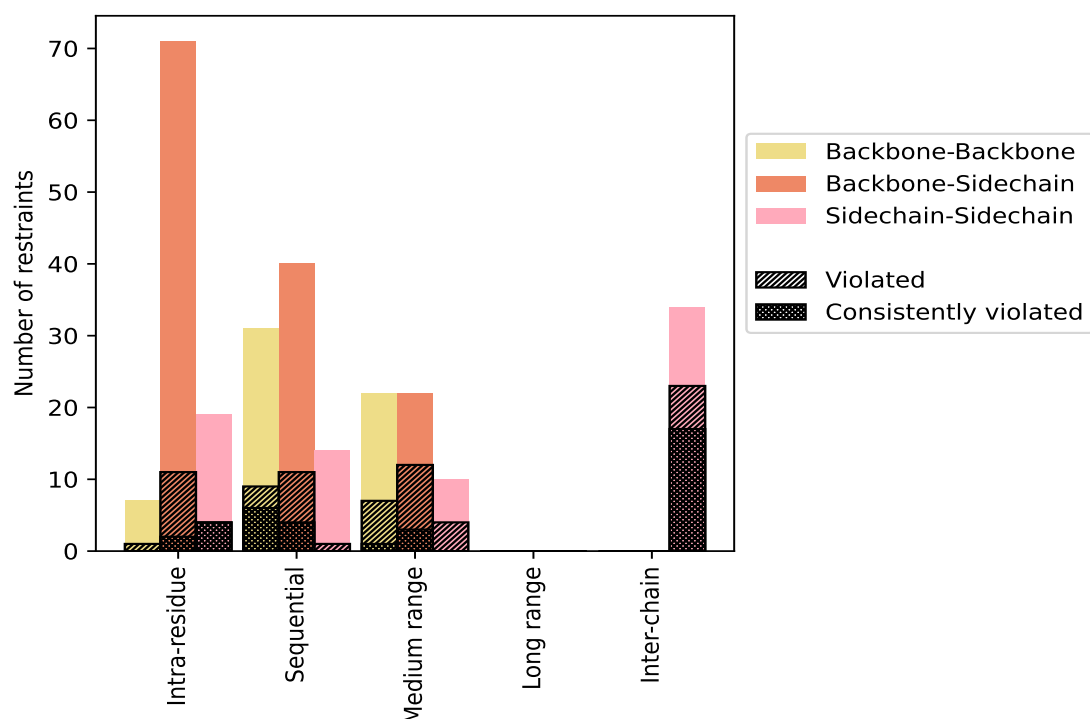
9.1 Summary of distance violations ⓘ

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

Restrains type	Count	% ¹	Violated ³			Consistently Violated ⁴		
			Count	% ²	% ¹	Count	% ²	% ¹
Intra-residue (i-j =0)	97	35.9	16	16.5	5.9	6	6.2	2.2
Backbone-Backbone	7	2.6	1	14.3	0.4	0	0.0	0.0
Backbone-Sidechain	71	26.3	11	15.5	4.1	2	2.8	0.7
Sidechain-Sidechain	19	7.0	4	21.1	1.5	4	21.1	1.5
Sequential (i-j =1)	85	31.5	21	24.7	7.8	10	11.8	3.7
Backbone-Backbone	31	11.5	9	29.0	3.3	6	19.4	2.2
Backbone-Sidechain	40	14.8	11	27.5	4.1	4	10.0	1.5
Sidechain-Sidechain	14	5.2	1	7.1	0.4	0	0.0	0.0
Medium range (i-j >1 & i-j <5)	54	20.0	23	42.6	8.5	4	7.4	1.5
Backbone-Backbone	22	8.1	7	31.8	2.6	1	4.5	0.4
Backbone-Sidechain	22	8.1	12	54.5	4.4	3	13.6	1.1
Sidechain-Sidechain	10	3.7	4	40.0	1.5	0	0.0	0.0
Long range (i-j ≥5)	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
Inter-chain	34	12.6	23	67.6	8.5	17	50.0	6.3
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	34	12.6	23	67.6	8.5	17	50.0	6.3
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	270	100.0	83	30.7	30.7	37	13.7	13.7
Backbone-Backbone	60	22.2	17	28.3	6.3	7	11.7	2.6
Backbone-Sidechain	133	49.3	34	25.6	12.6	9	6.8	3.3
Sidechain-Sidechain	77	28.5	32	41.6	11.9	21	27.3	7.8

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

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



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

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

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

Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
1	12	16	15	0	20	63	1.23	4.25	1.12	0.95
2	11	15	13	0	20	59	1.27	3.98	1.13	0.91
3	9	13	16	0	20	58	1.42	5.07	1.31	0.99
4	10	15	13	0	17	55	1.4	5.18	1.14	1.08
5	9	14	11	0	19	53	1.36	4.64	1.09	1.14
6	9	14	11	0	20	54	1.32	4.46	1.19	1.0
7	7	13	14	0	19	53	1.2	4.55	1.11	0.92
8	12	15	13	0	19	59	1.24	4.03	0.96	1.02
9	9	12	9	0	19	49	1.4	4.78	1.08	1.29
10	10	15	13	0	20	58	1.4	5.17	1.25	1.02

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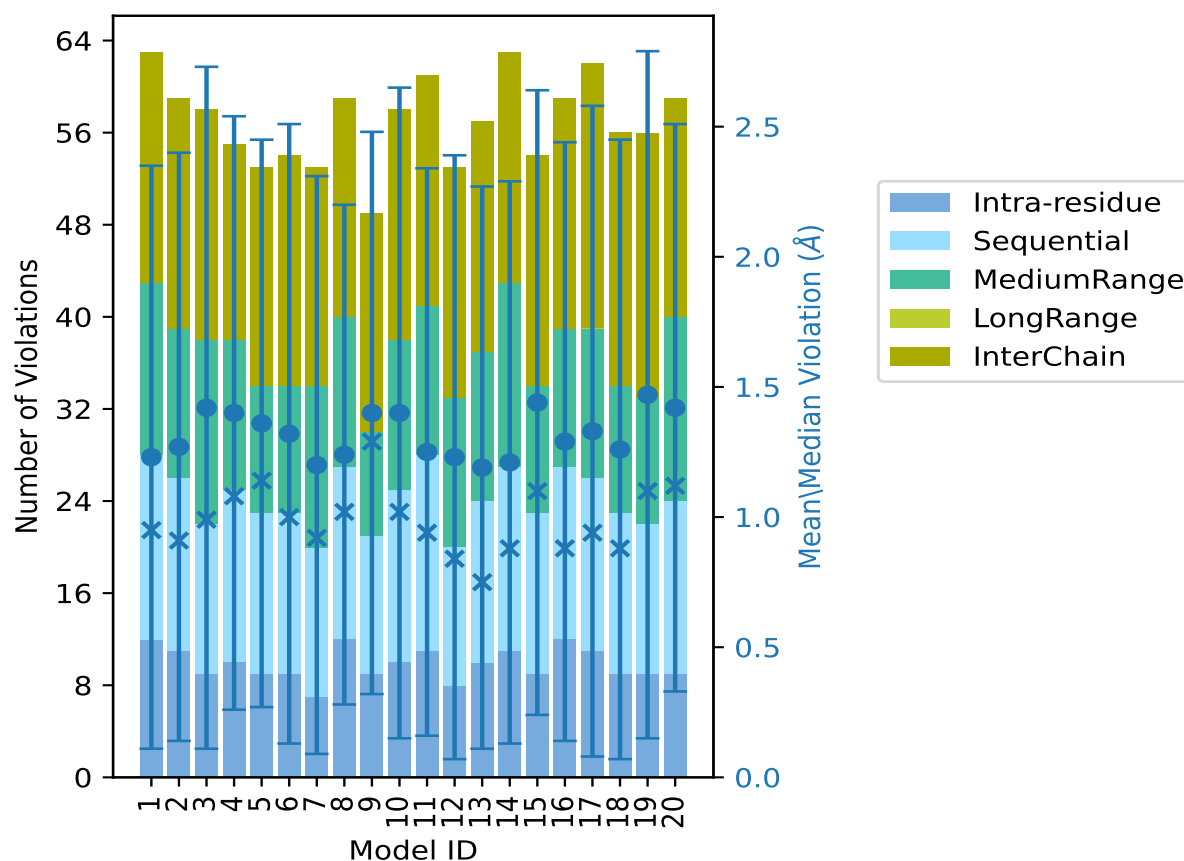
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Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
11	11	17	13	0	20	61	1.25	4.07	1.09	0.94
12	8	12	13	0	20	53	1.23	4.22	1.16	0.84
13	10	14	13	0	20	57	1.19	3.98	1.08	0.75
14	11	16	16	0	20	63	1.21	4.22	1.08	0.88
15	9	14	11	0	20	54	1.44	4.1	1.2	1.1
16	12	15	12	0	20	59	1.29	5.16	1.15	0.88
17	11	15	13	0	23	62	1.33	5.18	1.25	0.94
18	9	14	11	0	22	56	1.26	4.37	1.19	0.88
19	9	13	11	0	23	56	1.47	5.31	1.32	1.1
20	9	15	16	0	19	59	1.42	4.68	1.09	1.12

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

⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model ⓘ



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

9.3 Distance violation statistics for the ensemble

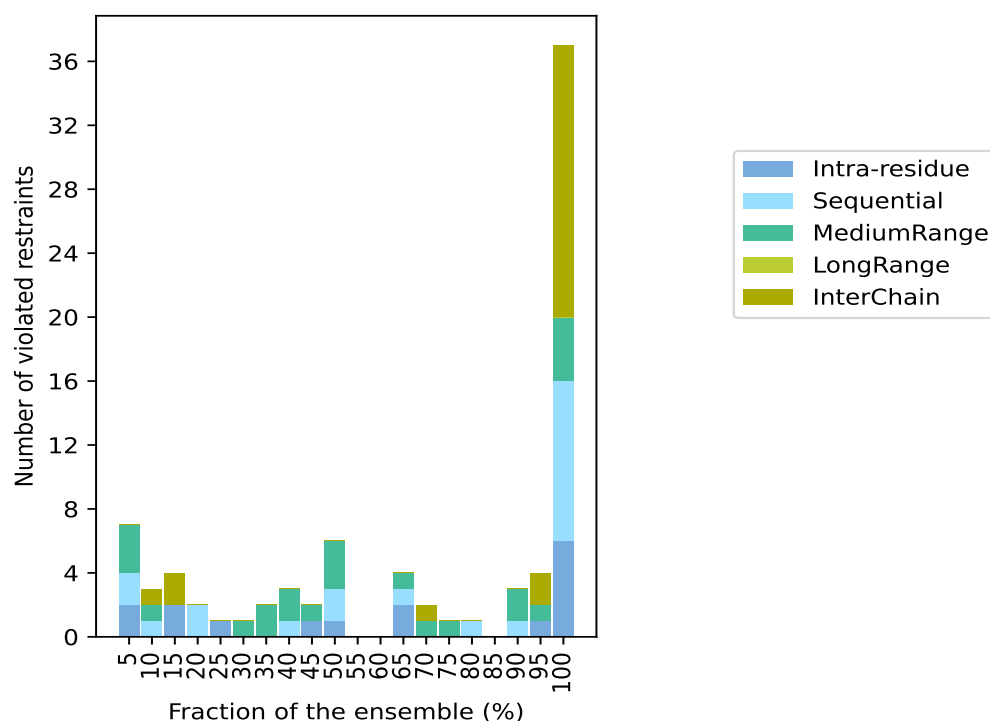
Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 187(IR:81, SQ:64, MR:31, LR:0, IC:11) restraints are not 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	%
2	2	3	0	0	7	1	5.0
0	1	1	0	1	3	2	10.0
2	0	0	0	2	4	3	15.0
0	2	0	0	0	2	4	20.0
1	0	0	0	0	1	5	25.0
0	0	1	0	0	1	6	30.0
0	0	2	0	0	2	7	35.0
0	1	2	0	0	3	8	40.0
1	0	1	0	0	2	9	45.0
1	2	3	0	0	6	10	50.0
0	0	0	0	0	0	11	55.0
0	0	0	0	0	0	12	60.0
2	1	1	0	0	4	13	65.0
0	0	1	0	1	2	14	70.0
0	0	1	0	0	1	15	75.0
0	1	0	0	0	1	16	80.0
0	0	0	0	0	0	17	85.0
0	1	2	0	0	3	18	90.0
1	0	1	0	2	4	19	95.0
6	10	4	0	17	37	20	100.0

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

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

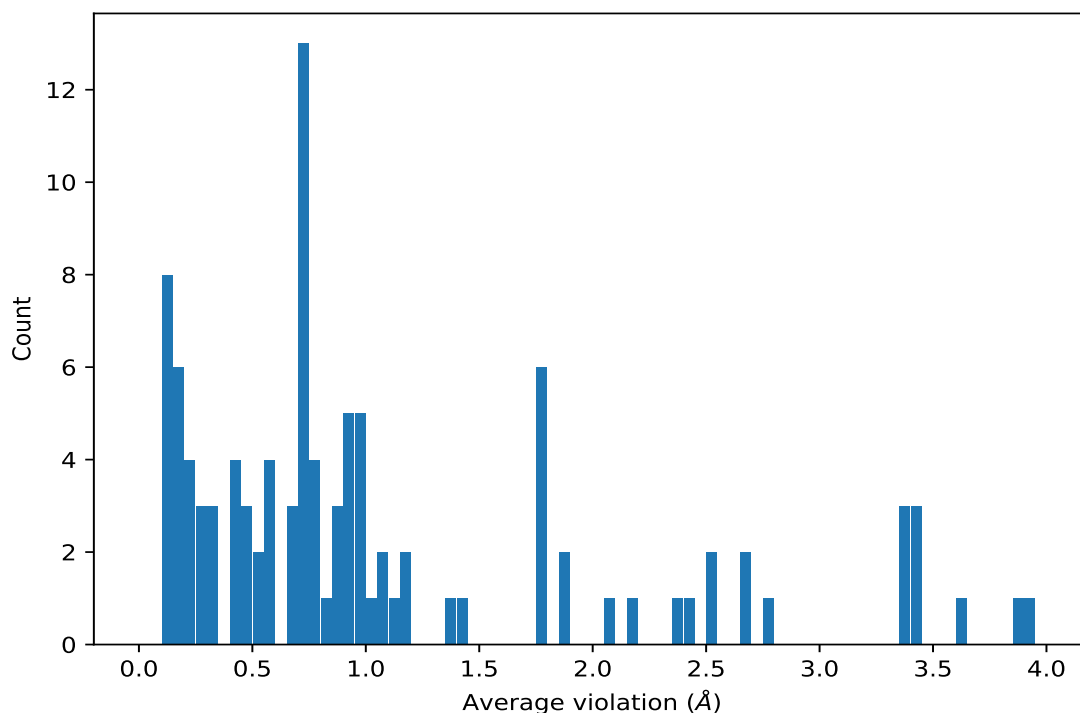
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



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)
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	20	3.93	0.45	3.92
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	20	3.85	0.02	3.85
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	20	3.63	1.2	3.46
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	20	3.44	0.71	3.39
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	20	3.43	0.89	4.0
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	20	3.43	0.89	4.0
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	20	3.35	1.08	4.07
(2,9)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	20	3.35	1.08	4.07
(2,9)	2:9:B:LYS:HD2	4:102:A:DEU:H2B	20	3.35	1.08	4.07
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	20	2.8	0.08	2.8
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	20	2.68	0.86	2.17
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	20	2.68	0.86	2.17
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	20	2.53	0.06	2.54
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	20	2.5	0.23	2.64
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	20	2.42	0.61	2.68
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	20	2.38	0.57	2.32

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	20	2.15	0.67	2.37
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	20	2.06	0.23	2.01
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	20	1.86	0.74	1.75
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	20	1.86	0.74	1.75
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	20	1.76	0.08	1.77
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	20	1.75	0.1	1.76
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	20	1.75	0.29	1.74
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	20	1.44	0.01	1.44
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	20	1.35	0.32	1.37
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	20	1.19	0.08	1.2
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	20	1.17	0.12	1.13
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	20	1.11	0.1	1.12
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	20	1.04	0.03	1.03
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	20	0.91	0.11	0.9
(2,30)	2:6:B:HIS:HD1	4:102:A:DEU:H2B	20	0.91	0.11	0.9
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	20	0.88	0.37	0.84
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	20	0.81	0.2	0.74
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	20	0.7	0.06	0.71
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	20	0.6	0.24	0.52
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	20	0.53	0.21	0.44
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	20	0.46	0.11	0.45
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	20	0.46	0.14	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	20	0.43	0.01	0.44
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	20	0.25	0.02	0.25
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	20	0.22	0.02	0.21
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	20	0.19	0.03	0.18
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	20	0.17	0.03	0.17
(1,141)	2:13:B:THR:HG23	4:102:A:DEU:HHA	19	0.98	0.34	0.98
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	19	0.98	0.34	0.98
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	19	0.98	0.34	0.98
(1,141)	2:13:B:THR:HG21	4:102:A:DEU:HHA	19	0.98	0.34	0.98
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	19	0.78	0.31	0.68
(1,47)	2:13:B:THR:HG22	4:102:A:DEU:HAD2	19	0.78	0.31	0.68
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	19	0.46	0.17	0.45
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	19	0.15	0.03	0.15
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	18	1.05	0.71	1.08
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	18	0.16	0.03	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	18	0.14	0.02	0.14
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	16	0.93	0.41	1.04
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	15	0.72	0.65	0.58

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	15	0.72	0.65	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	15	0.72	0.65	0.58
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	14	1.77	1.56	1.38
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	14	1.77	1.56	1.38
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	14	0.89	0.26	0.93
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	14	0.89	0.26	0.93
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	13	0.78	0.54	1.08
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	13	0.78	0.54	1.08
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	13	0.58	0.15	0.58
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	13	0.57	0.02	0.57
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	13	0.57	0.38	0.31
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	10	1.76	0.08	1.78
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	10	1.08	0.1	1.04
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	10	0.92	0.02	0.92
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	10	0.92	0.32	0.96
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	10	0.73	0.07	0.7
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	10	0.66	0.02	0.66
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	10	0.66	0.02	0.66
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	9	0.15	0.01	0.15
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	9	0.12	0.01	0.12
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	8	0.96	0.19	1.0
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	8	0.13	0.03	0.12
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	8	0.11	0.01	0.11
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	7	0.4	0.15	0.35
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	7	0.2	0.04	0.21
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	6	0.29	0.14	0.29
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	5	0.52	0.03	0.51
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN1	4	0.41	0.33	0.32
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN2	4	0.41	0.33	0.32
(1,119)	1:4:A:GLN:HB2	1:5:A:LEU:H	4	0.13	0.03	0.12
(2,28)	1:7:A:AIB:HB13	4:102:A:DEU:H2C	3	0.32	0.1	0.27
(2,28)	1:7:A:AIB:HB11	4:102:A:DEU:H2C	3	0.32	0.1	0.27
(2,28)	1:7:A:AIB:HB12	4:102:A:DEU:H2C	3	0.32	0.1	0.27
(2,8)	1:7:A:AIB:HB22	4:102:A:DEU:H2C	3	0.3	0.02	0.31
(1,29)	2:9:B:LYS:H	2:9:B:LYS:HB3	3	0.19	0.07	0.19

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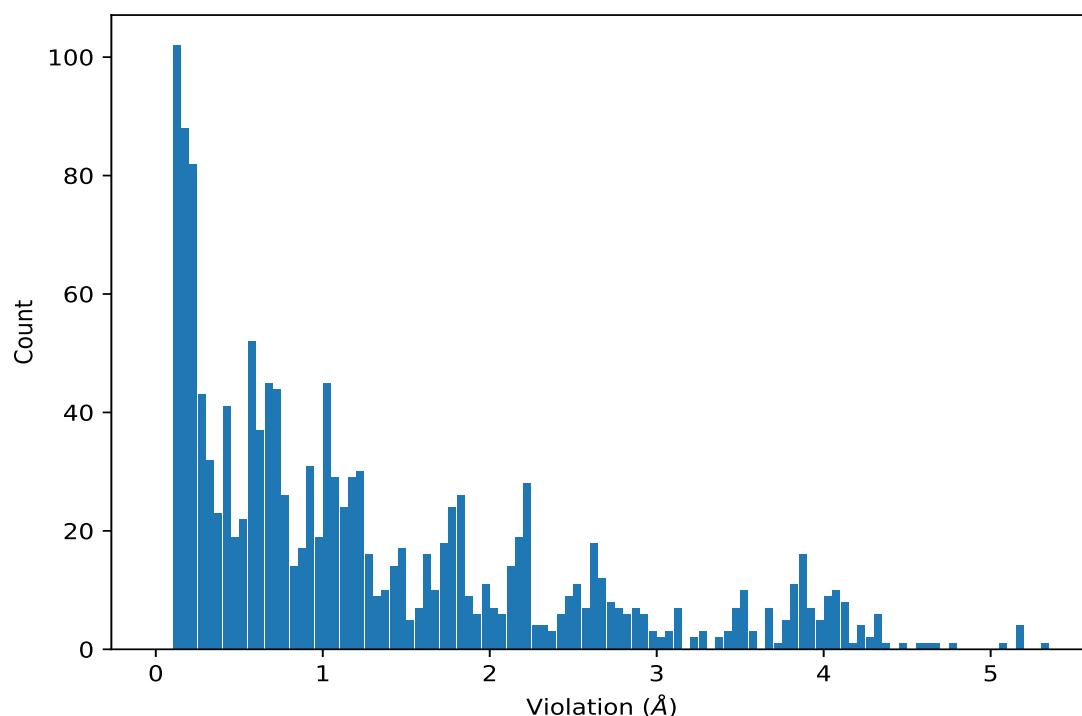
Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,17)	1:4:A:GLN:H	1:4:A:GLN:HB3	3	0.18	0.04	0.19
(2,17)	1:7:A:AIB:HB13	4:102:A:DEU:H2C	2	0.22	0.1	0.22
(2,17)	1:7:A:AIB:HB12	4:102:A:DEU:H2C	2	0.22	0.1	0.22
(1,2)	1:1:A:ASP:HA	1:2:A:GLU:H	2	0.19	0.09	0.19
(1,98)	1:4:A:GLN:H	1:6:A:SER:H	2	0.13	0.0	0.13

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)
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	19	5.31
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	4	5.18
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	17	5.18
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	10	5.17
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	16	5.16
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	3	5.07
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	9	4.78
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	20	4.68
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	5	4.64
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	7	4.55
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	6	4.46
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	18	4.37
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	19	4.34
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	18	4.32
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	18	4.32
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	19	4.3
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	19	4.3
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	3	4.3
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	18	4.29
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	1	4.25
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	20	4.24
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	3	4.23
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	12	4.22
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	14	4.22
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	19	4.19
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	1	4.14
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	10	4.14
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	3	4.14
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	3	4.14
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	12	4.14
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	12	4.14
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	15	4.1
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	17	4.1
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	14	4.08
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	17	4.08
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	6	4.07
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	11	4.07
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	10	4.06
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	10	4.06
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	17	4.06
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	17	4.06
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	1	4.05
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	1	4.05

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	6	4.04
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	6	4.04
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	11	4.04
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	11	4.04
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	8	4.03
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	14	4.01
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	14	4.01
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	15	4.01
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	5	4.0
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	11	3.99
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	2	3.98
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	13	3.98
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	15	3.98
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	15	3.98
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	2	3.94
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	2	3.94
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	2	3.94
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	19	3.92
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	19	3.92
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	15	3.9
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	3	3.9
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	13	3.89
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	13	3.89
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	7	3.88
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	5	3.87
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	16	3.87
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	4	3.86
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	9	3.86
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	12	3.86
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	14	3.86
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	15	3.86
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	1	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	2	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	3	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	8	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	10	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	17	3.85
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	20	3.84
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	11	3.84
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	6	3.83
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	13	3.83
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	19	3.83

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	18	3.82
(1,180)	4:102:A:DEU:H2C	4:102:A:DEU:H2B	11	3.81
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	10	3.8
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	10	3.8
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	17	3.8
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	17	3.8
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	4	3.79
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	4	3.79
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	16	3.79
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	16	3.79
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	4	3.76
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	2	3.74
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	3	3.69
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	3	3.69
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	13	3.69
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	1	3.67
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	15	3.66
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	15	3.66
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	15	3.66
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	19	3.57
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	19	3.57
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	14	3.56
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	16	3.54
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	16	3.54
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	6	3.52
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	10	3.52
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	12	3.51
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	3	3.51
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	3	3.51
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	4	3.51
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	4	3.51
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	12	3.51
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	20	3.49
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	20	3.49
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	7	3.47
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	2	3.46
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	13	3.45
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	17	3.45
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	17	3.45
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	18	3.43
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	10	3.42
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	10	3.42

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	6	3.38
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	9	3.37
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	16	3.29
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	7	3.26
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	7	3.26
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	5	3.23
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	19	3.22
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	18	3.13
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	20	3.13
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	20	3.13
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	10	3.1
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	10	3.1
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	17	3.1
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	17	3.1
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	9	3.09
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	8	3.08
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	9	3.05
(1,1)	1:9:A:DAB:HD1	4:102:A:DEU:HBA1	8	3.03
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	6	3.01
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	5	2.98
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	15	2.95
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	16	2.95
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	16	2.94
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	2	2.93
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	19	2.93
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	11	2.9
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	20	2.9
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	20	2.9
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	12	2.88
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	18	2.88
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	17	2.87
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	4	2.86
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	6	2.86
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	9	2.86
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	1	2.85
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	1	2.84
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	19	2.83
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	8	2.83
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	3	2.8
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	17	2.8
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	10	2.8
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	11	2.79

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	1	2.78
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	4	2.78
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	5	2.78
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	7	2.77
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	10	2.77
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	10	2.75
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	16	2.74
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	2	2.74
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	5	2.74
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	20	2.73
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	13	2.72
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	18	2.71
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	16	2.71
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	16	2.71
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	4	2.69
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	3	2.69
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	1	2.68
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	7	2.68
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	14	2.67
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	14	2.67
(1,182)	2:6:B:HIS:HD2	4:102:A:DEU:H2C	15	2.67
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	9	2.67
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	11	2.67
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	12	2.67
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	15	2.66
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	13	2.65
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	13	2.64
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	2	2.64
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	6	2.64
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	14	2.64
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	5	2.63
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	18	2.63
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	20	2.63
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	19	2.63
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	19	2.63
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	9	2.62
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	16	2.61
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	11	2.61
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	8	2.61
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	6	2.6
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	17	2.6
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	1	2.6

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	3	2.6
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	3	2.6
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	19	2.59
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	5	2.57
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	8	2.57
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	14	2.57
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	5	2.56
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	12	2.55
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	15	2.55
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	3	2.54
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	10	2.54
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	12	2.54
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	17	2.54
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	18	2.54
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	4	2.53
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	4	2.53
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	4	2.53
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	8	2.52
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	19	2.52
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	8	2.51
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	11	2.49
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	6	2.49
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	1	2.48
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	7	2.48
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	2	2.47
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	13	2.47
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	20	2.46
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	12	2.46
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	11	2.46
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	15	2.43
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	5	2.41
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	8	2.4
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	8	2.4
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	16	2.4
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	16	2.4
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	3	2.38
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	13	2.36
(1,178)	2:6:B:HIS:HD2	4:102:A:DEU:HHC	14	2.35
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	20	2.34
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	20	2.34
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	16	2.33
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	2	2.3

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	14	2.27
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	7	2.26
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	4	2.26
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	4	2.25
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	10	2.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	10	2.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	10	2.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	10	2.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	10	2.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	10	2.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	10	2.24
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	18	2.24
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	12	2.23
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	12	2.23
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	17	2.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	17	2.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	17	2.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	17	2.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	17	2.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	17	2.21
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	17	2.21
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	19	2.21
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	7	2.19
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	7	2.19
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	4	2.19
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	4	2.18
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	2	2.18
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	2	2.18
(1,169)	2:10:B:ARG:HD2	4:102:A:DEU:HHB	16	2.17
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	3	2.17
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	2	2.17
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	10	2.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	7	2.17
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	7	2.17
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	9	2.16
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	9	2.16
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	13	2.16
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	13	2.16
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	18	2.16
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	18	2.16
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	16	2.15
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	9	2.14
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	9	2.14
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	9	2.13
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	3	2.12
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	13	2.12
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	6	2.12
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	6	2.12
(2,9)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	8	2.11
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	3	2.11
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	1	2.11
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	1	2.11
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	14	2.1
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	14	2.1
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	14	2.1
(2,9)	2:9:B:LYS:HD2	4:102:A:DEU:H2B	16	2.09
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	4	2.07
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	4	2.07
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	17	2.07
(1,112)	2:14:B:LEU:HA	2:13:B:THR:H	10	2.06
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	9	2.05
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	20	2.04
(1,229)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	5	2.04
(1,229)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	5	2.04
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	7	2.04
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	19	2.02
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	15	2.01
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	15	2.01
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	12	1.99
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	1	1.98
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	11	1.98
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	5	1.97
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	8	1.96
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	6	1.96

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	15	1.96
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	20	1.96
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	12	1.96
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	12	1.96
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	15	1.95
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	19	1.94
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	9	1.93
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	16	1.92
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	19	1.92
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	18	1.91
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	12	1.91
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	20	1.89
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	20	1.89
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	11	1.87
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	3	1.87
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	13	1.87
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	8	1.86
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	9	1.86
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	19	1.86
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	2	1.85
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	3	1.84
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	5	1.84
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	12	1.84
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	20	1.83
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	15	1.83
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	9	1.83
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	18	1.83
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	7	1.82
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	10	1.82
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	6	1.82
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	16	1.82
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	4	1.82
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	18	1.82
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	9	1.82
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	1	1.81
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	18	1.81
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	9	1.81
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	12	1.81
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	6	1.81
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	17	1.81
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	10	1.81
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	10	1.81

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	8	1.8
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	14	1.8
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	11	1.8
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	10	1.8
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	9	1.79
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	2	1.79
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	1	1.79
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	17	1.79
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	11	1.78
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	7	1.78
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	11	1.78
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	4	1.77
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	17	1.77
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	3	1.77
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	3	1.77
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	11	1.77
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	12	1.77
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	13	1.77
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	15	1.77
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	15	1.77
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	18	1.77
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	18	1.77
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	4	1.76
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	8	1.76
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	20	1.76
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	1	1.76
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	17	1.75
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	14	1.75
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	5	1.74
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	2	1.74
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	14	1.74
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	8	1.74
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	8	1.74
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	14	1.73
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	14	1.73
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	1	1.72
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	16	1.72
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	20	1.72
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	1	1.72
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	1	1.72
(2,9)	2:9:B:LYS:HD2	4:102:A:DEU:H2C	4	1.71
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	5	1.71

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	15	1.71
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	17	1.71
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	9	1.7
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	10	1.7
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	6	1.69
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	14	1.69
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	1	1.69
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	2	1.68
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	2	1.68
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	15	1.67
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	16	1.67
(2,9)	2:9:B:LYS:HD3	4:102:A:DEU:H2C	5	1.66
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	20	1.65
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	14	1.65
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	9	1.64
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	14	1.64
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	2	1.64
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	2	1.64
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	15	1.63
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	7	1.63
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	8	1.63
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	15	1.63
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	15	1.63
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	13	1.62
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	1	1.62
(1,93)	2:6:B:HIS:HA	2:9:B:LYS:HB2	4	1.62
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	5	1.62
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	5	1.62
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	20	1.61
(1,46)	2:13:B:THR:HG1	4:102:A:DEU:HAD1	7	1.61
(1,218)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	7	1.59
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	7	1.58
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	7	1.58
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	7	1.57
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	5	1.57
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	13	1.56
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	13	1.56
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	8	1.54
(1,219)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	13	1.53
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	8	1.53
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	9	1.51
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	20	1.5

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,236)	1:10:A:ARG:HD3	4:102:A:DEU:H2C	8	1.49
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	9	1.49
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	9	1.49
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	19	1.48
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	5	1.48
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	20	1.46
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	11	1.46
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	18	1.46
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	19	1.46
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	1	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	3	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	4	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	10	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	17	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	20	1.45
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	6	1.45
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	6	1.45
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	2	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	5	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	6	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	7	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	8	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	9	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	12	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	15	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	16	1.44
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	6	1.44
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	13	1.43
(1,183)	4:102:A:DEU:HHD	4:102:A:DEU:H2C	14	1.43
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	8	1.43
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	2	1.4
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	13	1.39
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	18	1.39
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	11	1.38
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	18	1.38
(1,23)	2:15:B:NH2:HN1	2:12:B:ILE:H	11	1.38
(1,23)	2:15:B:NH2:HN2	2:12:B:ILE:H	11	1.38
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	20	1.37
(1,114)	2:15:B:NH2:HN2	2:12:B:ILE:H	8	1.37
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	3	1.36
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	19	1.36
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	17	1.34

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	5	1.34
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	9	1.34
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	20	1.34
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	5	1.33
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	15	1.33
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	6	1.32
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	19	1.3
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	4	1.3
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	8	1.29
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	9	1.29
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	19	1.29
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	20	1.29
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	10	1.28
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	17	1.28
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	16	1.28
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	19	1.28
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	18	1.27
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	8	1.27
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	14	1.26
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	15	1.26
(1,131)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD1	11	1.26
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	5	1.25
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	4	1.25
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	18	1.25
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	9	1.24
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	6	1.24
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	17	1.24
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	6	1.24
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	10	1.23
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	20	1.23
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	6	1.23
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	20	1.22
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	6	1.21
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	11	1.21
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	3	1.21
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	3	1.21
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	5	1.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	5	1.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	5	1.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	5	1.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	5	1.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	5	1.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	5	1.2
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	5	1.2
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	5	1.2
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	5	1.2
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	5	1.2
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	5	1.2
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	3	1.2
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	11	1.2
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	12	1.2
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	19	1.2
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	19	1.2
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	19	1.2
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	18	1.19
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	18	1.19
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	4	1.19
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	20	1.19
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	18	1.19
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	16	1.19
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	16	1.19
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	8	1.19
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	16	1.19
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	19	1.18
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	6	1.18
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	16	1.18
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	10	1.18
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	12	1.18
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	4	1.18
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	4	1.18
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	4	1.18
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	9	1.17
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	12	1.17
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	2	1.17
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	12	1.17
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	8	1.16
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	5	1.16
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	14	1.16
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	11	1.16
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	2	1.15
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	19	1.15
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	19	1.15
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	16	1.15
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	16	1.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	5	1.14
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	11	1.14
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	5	1.13
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	3	1.13
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	17	1.13
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	17	1.13
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	2	1.13
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	17	1.13
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	15	1.12
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	4	1.12
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	8	1.12
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	20	1.12
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	1	1.12
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	16	1.12
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	18	1.11
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	17	1.11
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	10	1.11
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	2	1.11
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	15	1.11
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	15	1.1
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	5	1.1
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	1	1.1
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	15	1.1
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	1	1.09
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	17	1.09
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	13	1.09
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	14	1.09
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	1	1.08
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	20	1.08
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	4	1.08
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	10	1.08
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	10	1.08
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	17	1.08
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	17	1.08
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	14	1.07
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	14	1.07
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	13	1.06
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	10	1.06
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	1	1.05
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	14	1.05
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	1	1.05
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	1	1.05

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	13	1.05
(1,154)	2:10:B:ARG:HD2	4:102:A:DEU:HHA	13	1.05
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	5	1.05
(1,141)	2:13:B:THR:HG23	4:102:A:DEU:HHA	3	1.05
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	20	1.05
(1,76)	2:7:B:SER:HA	2:10:B:ARG:HB2	20	1.05
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	1	1.05
(1,33)	2:10:B:ARG:HB2	2:11:B:LYS:H	20	1.05
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	5	1.05
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	6	1.05
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	11	1.04
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	11	1.04
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	18	1.04
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	19	1.04
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	11	1.03
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	15	1.03
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	15	1.03
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	8	1.03
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	17	1.03
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	3	1.03
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	4	1.03
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	14	1.03
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	20	1.03
(1,177)	2:6:B:HIS:HD1	4:102:A:DEU:HHC	7	1.02
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	3	1.02
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	19	1.02
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	6	1.02
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	19	1.02
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	1	1.02
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	18	1.02
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	10	1.02
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	13	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	1	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	7	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	8	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	9	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	10	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	12	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	16	1.02
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	17	1.02
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	10	1.01
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	10	1.01

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	14	1.01
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	14	1.01
(1,6)	2:5:B:LEU:HA	2:6:B:HIS:H	13	1.01
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	7	1.0
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	1	1.0
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	3	1.0
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	8	1.0
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	9	1.0
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	20	1.0
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	20	1.0
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	5	1.0
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	11	1.0
(1,43)	2:6:B:HIS:HA	2:9:B:LYS:HB3	2	1.0
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	6	0.99
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	9	0.99
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	7	0.99
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	9	0.99
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	11	0.98
(1,141)	2:13:B:THR:HG21	4:102:A:DEU:HHA	13	0.98
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	3	0.98
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	19	0.98
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	3	0.97
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	2	0.97
(1,113)	2:13:B:THR:HA	2:12:B:ILE:H	7	0.97
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	16	0.97
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	18	0.96
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	3	0.95
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	10	0.95
(1,141)	2:13:B:THR:HG21	4:102:A:DEU:HHA	6	0.95
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	4	0.95
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	17	0.95
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	1	0.95
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	7	0.94
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	11	0.94
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	11	0.94
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	12	0.94
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	12	0.94
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	11	0.94
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	5	0.93
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	20	0.93
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	20	0.93
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	20	0.93

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	8	0.93
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	10	0.93
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	11	0.92
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	3	0.92
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	3	0.92
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	2	0.92
(1,141)	2:13:B:THR:HG23	4:102:A:DEU:HHA	17	0.92
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	7	0.92
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	13	0.92
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	14	0.92
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	2	0.91
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	12	0.91
(1,141)	2:13:B:THR:HG23	4:102:A:DEU:HHA	10	0.91
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	2	0.91
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	11	0.91
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	17	0.91
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	2	0.9
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	8	0.9
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	8	0.9
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN1	15	0.9
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN2	15	0.9
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	1	0.89
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	12	0.89
(1,181)	2:6:B:HIS:HD1	4:102:A:DEU:H2C	13	0.89
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	8	0.89
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	8	0.89
(1,28)	2:9:B:LYS:H	2:9:B:LYS:HB2	4	0.89
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	16	0.88
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	4	0.88
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	14	0.88
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	14	0.88
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	20	0.88
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	15	0.86
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	19	0.86
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	17	0.85
(1,141)	2:13:B:THR:HG1	4:102:A:DEU:HHA	16	0.85
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	4	0.85
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	6	0.85
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	12	0.84
(2,1)	2:13:B:THR:HB	4:102:A:DEU:HHA	7	0.84
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	8	0.84
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	16	0.84

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	15	0.83
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	15	0.83
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	4	0.83
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	17	0.82
(2,30)	2:6:B:HIS:HD1	4:102:A:DEU:H2B	20	0.82
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	20	0.82
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	18	0.81
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	4	0.81
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	2	0.81
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	14	0.8
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	3	0.79
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	6	0.79
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	6	0.79
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	15	0.79
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	19	0.79
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	11	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	19	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	19	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	19	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	19	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	19	0.78
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	19	0.78
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	19	0.78
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	20	0.77
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	15	0.77
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	16	0.77
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	14	0.75
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	13	0.75
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	13	0.75
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	5	0.75
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	18	0.75
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	16	0.74
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	8	0.74
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	12	0.74
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	18	0.73
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	11	0.73
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	6	0.73

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	13	0.73
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	14	0.73
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	10	0.73
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	1	0.73
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	6	0.72
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	1	0.72
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	9	0.72
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	2	0.72
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	17	0.72
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	14	0.72
(2,30)	2:6:B:HIS:HD2	4:102:A:DEU:H2B	4	0.71
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	2	0.71
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	2	0.71
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	8	0.71
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	11	0.71
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	13	0.71
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	4	0.7
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	4	0.7
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	4	0.7
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	4	0.7
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	4	0.7
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	4	0.7
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	4	0.7
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	8	0.7
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	8	0.7
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	16	0.7
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	16	0.7
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	2	0.7
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	9	0.7
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	2	0.7
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	7	0.7
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	3	0.7
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	11	0.7
(1,235)	1:10:A:ARG:HD2	4:102:A:DEU:H2C	13	0.69
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	17	0.69
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	18	0.69
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	11	0.69

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	14	0.69
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	1	0.68
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	4	0.68
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	12	0.68
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	11	0.68
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	2	0.68
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	10	0.68
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	5	0.68
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	16	0.67
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	1	0.67
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	1	0.67
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	2	0.67
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	2	0.67
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	14	0.67
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	14	0.67
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	17	0.67
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	3	0.66
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	3	0.66
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	3	0.66
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	3	0.66
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	3	0.66
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	3	0.66
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	3	0.66
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	11	0.66
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	11	0.66
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	13	0.66
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	3	0.66
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	10	0.65
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	10	0.65
(1,220)	2:7:B:SER:HA	2:10:B:ARG:HB2	20	0.65
(1,220)	2:7:B:SER:HA	2:10:B:ARG:HB3	20	0.65
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	16	0.65
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	3	0.65
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	10	0.65
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	14	0.65
(1,57)	2:9:B:LYS:HB3	2:10:B:ARG:H	13	0.65
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	4	0.64

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	4	0.64
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	13	0.64
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	13	0.64
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	8	0.64
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	7	0.64
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	2	0.64
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	8	0.64
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	14	0.63
(1,224)	2:9:B:LYS:HB2	2:10:B:ARG:H	17	0.63
(1,224)	2:9:B:LYS:HB3	2:10:B:ARG:H	17	0.63
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	16	0.63
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	14	0.63
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	4	0.62
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	13	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	16	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	16	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	16	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	16	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	16	0.62
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	16	0.62
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	16	0.62
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	12	0.62
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	2	0.62
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	17	0.62
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	7	0.61
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	13	0.61
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	4	0.6
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	19	0.6
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	11	0.6
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	11	0.6
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	11	0.6
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	3	0.59
(1,90)	2:13:B:THR:HA	2:12:B:ILE:HB	1	0.59
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	4	0.59
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	15	0.59
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	15	0.59
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	17	0.59

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	19	0.59
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	1	0.59
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	8	0.59
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	10	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	20	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	20	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	20	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	20	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	20	0.58
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	20	0.58
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	20	0.58
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	10	0.58
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	5	0.58
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	6	0.58
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	9	0.58
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	13	0.58
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	14	0.58
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	15	0.58
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	17	0.57
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	12	0.57
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	1	0.57
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	3	0.57
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	4	0.57
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	20	0.57
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	10	0.57
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	6	0.56
(1,91)	2:14:B:LEU:HA	2:13:B:THR:HB	16	0.56
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	18	0.56
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	8	0.56
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	16	0.56
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	13	0.56
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	15	0.56
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	20	0.55
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	9	0.55
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	12	0.55
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	2	0.55
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	16	0.55

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	11	0.55
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	17	0.55
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	10	0.55
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	10	0.55
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	18	0.54
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	2	0.54
(1,58)	2:7:B:SER:H	2:7:B:SER:HB3	14	0.54
(1,141)	2:13:B:THR:HG23	4:102:A:DEU:HHA	1	0.53
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	3	0.53
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	6	0.53
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	19	0.53
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	12	0.53
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	1	0.53
(1,47)	2:13:B:THR:HG22	4:102:A:DEU:HAD2	7	0.53
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	16	0.52
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	19	0.52
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	11	0.52
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	14	0.52
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	2	0.51
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	13	0.51
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	8	0.51
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN1	20	0.51
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN2	20	0.51
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	10	0.5
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	18	0.5
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	10	0.5
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	18	0.49
(1,146)	2:6:B:HIS:HA	2:10:B:ARG:HD3	7	0.49
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	6	0.49
(1,59)	2:7:B:SER:H	2:7:B:SER:HB2	5	0.49
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	7	0.48
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	7	0.47
(2,28)	1:7:A:AIB:HB13	4:102:A:DEU:H2C	17	0.46
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	13	0.46
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	20	0.46
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	4	0.46
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	13	0.45
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	2	0.45
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	15	0.45
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	4	0.45
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	14	0.45
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	19	0.45

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	1	0.45
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	1	0.45
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	5	0.45
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	14	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	2	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	6	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	8	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	11	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	15	0.44
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	16	0.44
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	7	0.44
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	16	0.44
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	19	0.44
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	1	0.43
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	11	0.43
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	15	0.43
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	19	0.43
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	1	0.43
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	3	0.43
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	5	0.43
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	10	0.43
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	18	0.43
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	12	0.43
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	5	0.42
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	8	0.42
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	19	0.42
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	17	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	7	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	9	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	12	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	13	0.42
(1,100)	2:6:B:HIS:H	2:6:B:HIS:HB3	17	0.42
(1,40)	2:10:B:ARG:H	2:10:B:ARG:HB2	20	0.42
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	12	0.41
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	3	0.41
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	1	0.41
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	5	0.41
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	9	0.41
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	14	0.41
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	3	0.41
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	12	0.41
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	6	0.4

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	18	0.4
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	20	0.4
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	15	0.39
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	8	0.39
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	18	0.39
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	14	0.38
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	11	0.38
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	12	0.38
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	8	0.37
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	8	0.37
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	8	0.37
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	8	0.37
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	8	0.37
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	8	0.37
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	8	0.37
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	15	0.36
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	3	0.36
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	5	0.36
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	9	0.36
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	14	0.35
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	5	0.34
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	14	0.34
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	2	0.34
(1,135)	2:10:B:ARG:HA	2:10:B:ARG:HD2	4	0.34
(2,8)	1:7:A:AIB:HB22	4:102:A:DEU:H2C	19	0.33
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	9	0.33
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	1	0.33
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	17	0.32
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	17	0.32
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	19	0.32
(2,17)	1:7:A:AIB:HB13	4:102:A:DEU:H2C	17	0.31
(2,8)	1:7:A:AIB:HB22	4:102:A:DEU:H2C	17	0.31
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	8	0.31
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	10	0.31
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	6	0.31
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	1	0.3
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	9	0.3

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	9	0.3
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	9	0.3
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	9	0.3
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	9	0.3
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	9	0.3
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	9	0.3
(1,141)	2:13:B:THR:HG22	4:102:A:DEU:HHA	7	0.3
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	15	0.3
(1,56)	2:9:B:LYS:HB2	2:10:B:ARG:H	20	0.3
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	6	0.3
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	11	0.29
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	6	0.29
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	19	0.29
(1,47)	2:13:B:THR:HG1	4:102:A:DEU:HAD2	16	0.29
(2,32)	2:13:B:THR:HB	4:102:A:DEU:HAD2	12	0.28
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	5	0.28
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	13	0.28
(1,29)	2:9:B:LYS:H	2:9:B:LYS:HB3	16	0.28
(1,2)	1:1:A:ASP:HA	1:2:A:GLU:H	10	0.28
(2,28)	1:7:A:AIB:HB12	4:102:A:DEU:H2C	19	0.27
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	19	0.27
(2,8)	1:7:A:AIB:HB22	4:102:A:DEU:H2C	18	0.27
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	10	0.27
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	18	0.26
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	18	0.26
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	18	0.26
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	18	0.26
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	18	0.26
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	18	0.26
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	18	0.26
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	1	0.26
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	4	0.26

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	1	0.26
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	3	0.26
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	4	0.26
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	16	0.26
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	18	0.26
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	20	0.26
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN1	5	0.26
(1,41)	2:11:B:LYS:HA	2:15:B:NH2:HN2	5	0.26
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	12	0.25
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	6	0.25
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	9	0.25
(1,74)	2:10:B:ARG:HB3	2:11:B:LYS:H	7	0.25
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	13	0.25
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	7	0.25
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	8	0.25
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	9	0.25
(2,28)	1:7:A:AIB:HB11	4:102:A:DEU:H2C	18	0.24
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	6	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	15	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	15	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	15	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	15	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	15	0.24
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	15	0.24
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	15	0.24
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	18	0.24
(1,130)	4:102:A:DEU:HBA1	4:102:A:DEU:HAD2	11	0.24
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	19	0.24
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	2	0.24
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	11	0.24
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	12	0.24
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	1	0.23
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	8	0.23
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	7	0.23
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	7	0.23
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	5	0.23
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	9	0.23

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	20	0.23
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	5	0.23
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	10	0.23
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	12	0.23
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	15	0.23
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	17	0.23
(1,17)	1:4:A:GLN:H	1:4:A:GLN:HB3	9	0.23
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	2	0.22
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	2	0.22
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	2	0.22
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	2	0.22
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	2	0.22
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	2	0.22
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	2	0.22
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	7	0.22
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	13	0.22
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	1	0.22
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	1	0.22
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	7	0.22
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	9	0.22
(1,62)	2:10:B:ARG:HA	2:11:B:LYS:H	14	0.22
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	18	0.22
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	6	0.21
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	7	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	1	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	2	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	3	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	5	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	10	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	11	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	12	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	14	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	16	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	17	0.21
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	18	0.21
(1,89)	2:11:B:LYS:HA	2:14:B:LEU:H	18	0.21
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	4	0.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	15	0.21
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	4	0.21
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	11	0.21
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	2	0.21
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	3	0.2
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	15	0.2
(1,116)	2:12:B:ILE:HA	2:13:B:THR:H	20	0.2
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	2	0.2
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	17	0.2
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	19	0.2
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	1	0.2
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	16	0.2
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	2	0.2
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	14	0.2
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	13	0.19
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	13	0.19
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	13	0.19
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	13	0.19
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	13	0.19
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	13	0.19
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	13	0.19
(1,124)	2:10:B:ARG:H	2:10:B:ARG:HD3	18	0.19
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	13	0.19
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	8	0.19
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	7	0.19
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	7	0.19
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	6	0.19
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	8	0.19
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	13	0.19
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	17	0.19
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	4	0.19
(1,29)	2:9:B:LYS:H	2:9:B:LYS:HB3	8	0.19
(1,17)	1:4:A:GLN:H	1:4:A:GLN:HB3	13	0.19
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	14	0.18
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	12	0.18
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	12	0.18
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	6	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	10	0.18
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	12	0.18
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	13	0.18
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	2	0.18
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	4	0.18
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	10	0.18
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	1	0.18
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	14	0.18
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	16	0.18
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	1	0.18
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	6	0.18
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	2	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD11	6	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD12	6	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD13	6	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD21	6	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD22	6	0.17
(1,231)	2:10:B:ARG:HB2	2:14:B:LEU:HD23	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD11	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD12	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD13	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD21	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD22	6	0.17
(1,231)	2:10:B:ARG:HB3	2:14:B:LEU:HD23	6	0.17
(1,217)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	12	0.17
(1,119)	1:4:A:GLN:HB2	1:5:A:LEU:H	14	0.17
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	3	0.17
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	14	0.17
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	18	0.17
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	19	0.17
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	19	0.17
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	1	0.17
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	9	0.17
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	18	0.17
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	11	0.17
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	13	0.17
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	3	0.16
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	13	0.16
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	13	0.16
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	1	0.16
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	17	0.16
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	12	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	20	0.16
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	8	0.16
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	18	0.15
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	3	0.15
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	16	0.15
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	12	0.15
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	15	0.15
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	18	0.15
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	20	0.15
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	10	0.15
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	18	0.15
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	12	0.15
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	15	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	5	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	7	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	8	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	9	0.15
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	14	0.15
(2,11)	2:6:B:HIS:HD1	2:10:B:ARG:HD3	4	0.14
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	2	0.14
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	7	0.14
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	5	0.14
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	7	0.14
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	3	0.14
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	7	0.14
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	11	0.14
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	14	0.14
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	3	0.14
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	5	0.14
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	6	0.14
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	16	0.14
(1,49)	2:7:B:SER:H	2:9:B:LYS:H	3	0.14
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	5	0.14
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	6	0.14
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	9	0.14
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	19	0.14
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	12	0.14
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	20	0.14
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	1	0.13
(1,223)	2:9:B:LYS:HA	2:12:B:ILE:HB	11	0.13
(1,119)	1:4:A:GLN:HB2	1:5:A:LEU:H	6	0.13
(1,98)	1:4:A:GLN:H	1:6:A:SER:H	14	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,98)	1:4:A:GLN:H	1:6:A:SER:H	17	0.13
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	3	0.13
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	3	0.13
(1,80)	2:6:B:HIS:H	2:8:B:GLN:H	6	0.13
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	12	0.13
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	12	0.13
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	15	0.13
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	20	0.13
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	19	0.13
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	3	0.13
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	7	0.13
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	18	0.13
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	2	0.13
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	10	0.13
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	16	0.13
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	1	0.13
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	16	0.13
(1,17)	1:4:A:GLN:H	1:4:A:GLN:HB3	17	0.13
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	12	0.13
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	15	0.13
(2,17)	1:7:A:AIB:HB12	4:102:A:DEU:H2C	19	0.12
(2,10)	2:6:B:HIS:HD2	2:10:B:ARG:HD3	7	0.12
(1,168)	2:9:B:LYS:H	2:10:B:ARG:HD3	16	0.12
(1,166)	2:14:B:LEU:HG	2:15:B:NH2:HN2	11	0.12
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	13	0.12
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	13	0.12
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	8	0.12
(1,65)	2:8:B:GLN:HA	2:11:B:LYS:H	12	0.12
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	15	0.12
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	3	0.12
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	4	0.12
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	10	0.12
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	11	0.12
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	13	0.12
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	14	0.12
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN1	17	0.12
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN2	17	0.12
(1,179)	2:9:B:LYS:HD2	4:102:A:DEU:HHD	16	0.11
(1,179)	2:9:B:LYS:HD3	4:102:A:DEU:HHD	16	0.11
(1,119)	1:4:A:GLN:HB2	1:5:A:LEU:H	20	0.11
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	14	0.11
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	14	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	4	0.11
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	9	0.11
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	10	0.11
(1,84)	2:9:B:LYS:H	2:11:B:LYS:H	11	0.11
(1,54)	2:8:B:GLN:HA	2:9:B:LYS:H	7	0.11
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	10	0.11
(1,39)	2:10:B:ARG:H	2:10:B:ARG:HB3	17	0.11
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	13	0.11
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	17	0.11
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	18	0.11
(1,30)	1:8:A:GLN:HA	1:9:A:DAB:H	19	0.11
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	8	0.11
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	17	0.11
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN1	10	0.11
(1,12)	2:14:B:LEU:H	2:15:B:NH2:HN2	10	0.11
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	1	0.11
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	5	0.11
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	7	0.11
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	11	0.11
(1,222)	2:9:B:LYS:HA	2:9:B:LYS:HD2	16	0.1
(1,222)	2:9:B:LYS:HA	2:9:B:LYS:HD3	16	0.1
(1,167)	2:10:B:ARG:HD3	2:11:B:LYS:H	17	0.1
(1,119)	1:4:A:GLN:HB2	1:5:A:LEU:H	11	0.1
(1,109)	1:6:A:SER:HA	1:9:A:DAB:HD1	14	0.1
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN1	2	0.1
(1,102)	2:12:B:ILE:HA	2:15:B:NH2:HN2	2	0.1
(1,96)	1:5:A:LEU:HA	1:8:A:GLN:H	8	0.1
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	2	0.1
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	2	0.1
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN1	6	0.1
(1,72)	2:13:B:THR:H	2:15:B:NH2:HN2	6	0.1
(1,29)	2:9:B:LYS:H	2:9:B:LYS:HB3	1	0.1
(1,26)	2:9:B:LYS:H	2:9:B:LYS:HA	2	0.1
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	16	0.1
(1,10)	1:2:A:GLU:HA	1:3:A:AIB:H	18	0.1
(1,2)	1:1:A:ASP:HA	1:2:A:GLU:H	13	0.1

10 Dihedral-angle violation analysis ⓘ

No dihedral-angle restraints found