wwPDB NMR Structure Validation Summary Report

Jun 3, 2023 – 03:23 PM EDT

PDB ID	:	6W4F
BMRB ID	:	30735
Title	:	NMR-driven structure of KRAS4B-GDP homodimer on a lipid bilayer nanodisc
Authors	:	Lee, K.; Fang, Z.; Enomoto, M.; Gasmi-Seabrook, G.M.; Zheng, L.; Marshall, C.B.; Ikura, M.
Deposited on	:	2020-03-10

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

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

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

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

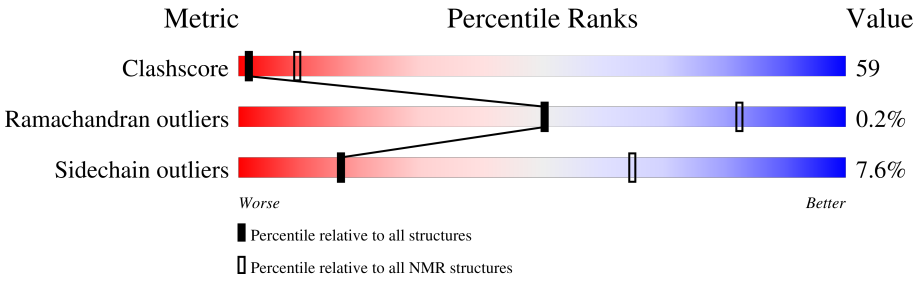
MolProbity	:	4.02b-467
Mogul	:	FAILED
buster-report	:	FAILED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
BMRB Restraints Analysis	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.33

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
SOLUTION NMR

The overall completeness of chemical shifts assignment is 2%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	200	78% 12% · 6% ·
1	D	200	84% 14% ·
2	B	184	81% 7% 10% ·
2	C	184	83% 8% 8% ·

2 Ensemble composition and analysis (i)

This entry contains 20 models. Model 7 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:214-A:398, D:399-D:595 (382)	0.35	7
2	B:2-B:61, B:65-B:166, C:2-C:61, C:65-C:170 (328)	1.05	15

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

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

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

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

3 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 12018 atoms, of which 1522 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Apolipoprotein A-I.

Mol	Chain	Residues	Atoms						Trace
1	A	198	Total	C	H	N	O	S	0
			2004	1019	381	287	314	3	
1	D	198	Total	C	H	N	O	S	0
			2002	1019	379	287	314	3	

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	199	GLY	-	expression tag	UNP P02647
A	200	PRO	-	expression tag	UNP P02647
D	397	GLY	-	expression tag	UNP P02647
D	398	PRO	-	expression tag	UNP P02647

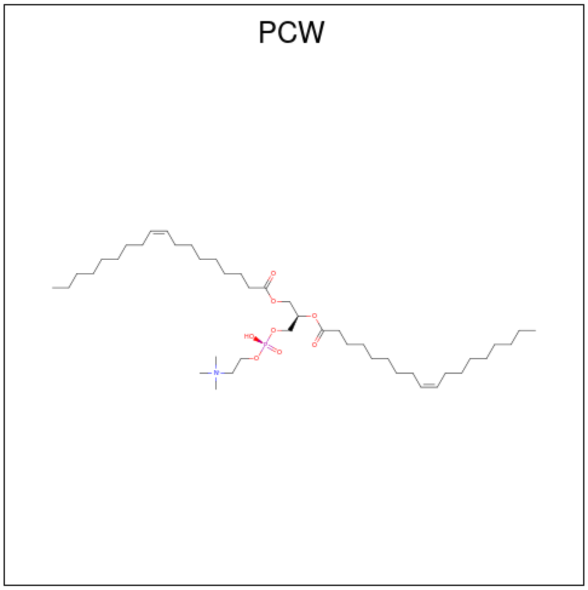
- Molecule 2 is a protein called GTPase KRas.

Mol	Chain	Residues	Atoms						Trace
2	B	180	Total	C	H	N	O	S	0
			1788	898	352	252	279	7	
2	C	180	Total	C	H	N	O	S	0
			1788	898	352	252	279	7	

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	12	ASP	GLY	conflict	UNP P01116
C	12	ASP	GLY	conflict	UNP P01116

- Molecule 3 is 1,2-DIOLEOYL-SN-GLYCERO-3-PHOSPHOCHOLINE (three-letter code: PCW) (formula: $C_{44}H_{85}NO_8P$).



Mol	Chain	Residues	Atoms
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1
3	A	1	Total C N O P 54 44 1 8 1

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Mol	Chain	Residues	Atoms				
3	A	1	Total 54	C 44	N 1	O 8	P 1
3	A	1	Total 54	C 44	N 1	O 8	P 1
3	A	1	Total 54	C 44	N 1	O 8	P 1
3	A	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1
3	D	1	Total 54	C 44	N 1	O 8	P 1

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Mol	Chain	Residues	Atoms				
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	D	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1
3	B	1	Total	C	N	O	P
			54	44	1	8	1

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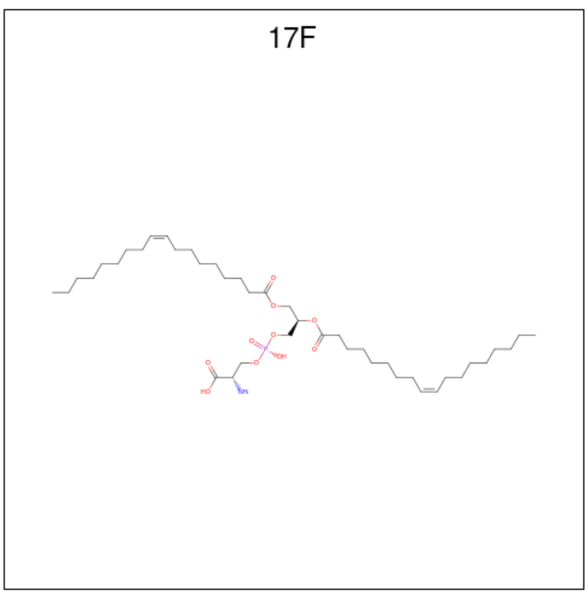
Mol	Chain	Residues	Atoms
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1
3	C	1	Total C N O P 54 44 1 8 1

- Molecule 4 is O-[(S)-({(2R)-2,3-bis[(9Z)-octadec-9-enoyloxy]propyl}oxy)(hydroxy)phosphoryl]-L-serine (three-letter code: 17F) (formula: $C_{42}H_{78}NO_{10}P$).



Mol	Chain	Residues	Atoms
4	A	1	Total C H N O P 57 42 3 1 10 1
4	A	1	Total C H N O P 57 42 3 1 10 1
4	D	1	Total C H N O P 57 42 3 1 10 1

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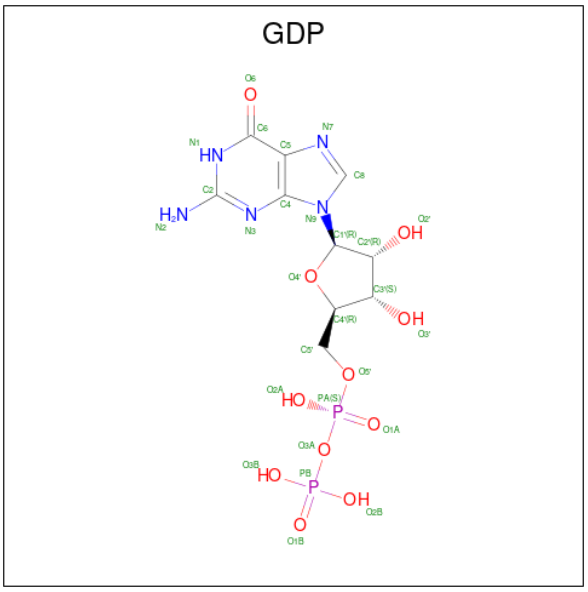
Mol	Chain	Residues	Atoms					
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	D	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	B	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	B	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	B	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	B	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	C	1	Total 57	C 42	H 3	N 1	O 10	P 1
4	C	1	Total 57	C 42	H 3	N 1	O 10	P 1

- Molecule 5 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms					
5	B	1	Total	C	H	N	O	P
			33	10	5	5	11	2
5	C	1	Total	C	H	N	O	P
			33	10	5	5	11	2

- Molecule 6 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	
6	B	1	Total	Mg
			1	1
6	C	1	Total	Mg
			1	1

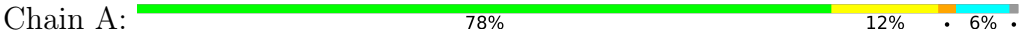
4 Residue-property plots

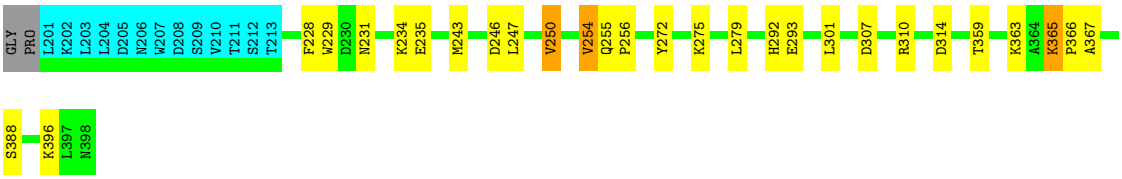
4.1 Average score per residue in the NMR ensemble

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: Apolipoprotein A-I

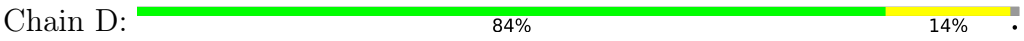
Chain A:





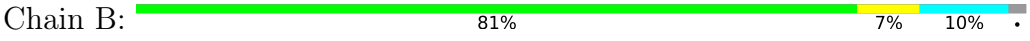
• Molecule 1: Apolipoprotein A-I

Chain D:



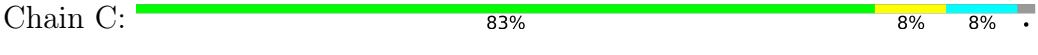
• Molecule 2: GTPase KRas

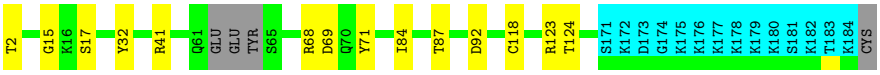
Chain B:



• Molecule 2: GTPase KRas

Chain C:



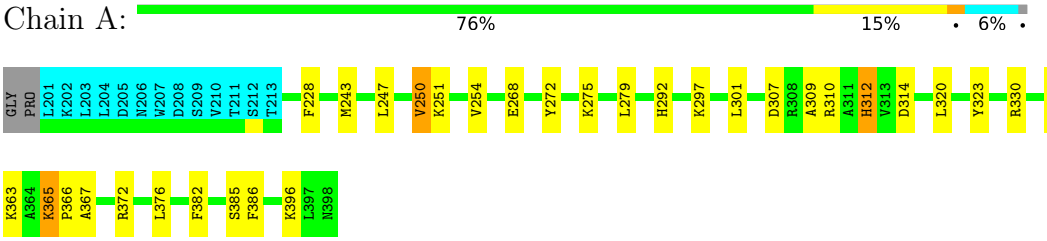


4.2 Residue scores for the representative (medoid) model from the NMR ensemble

The representative model is number 7. Colouring as in section 4.1 above.

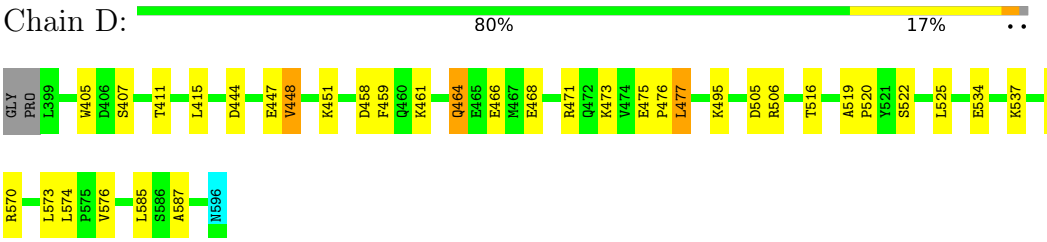
• Molecule 1: Apolipoprotein A-I

Chain A:



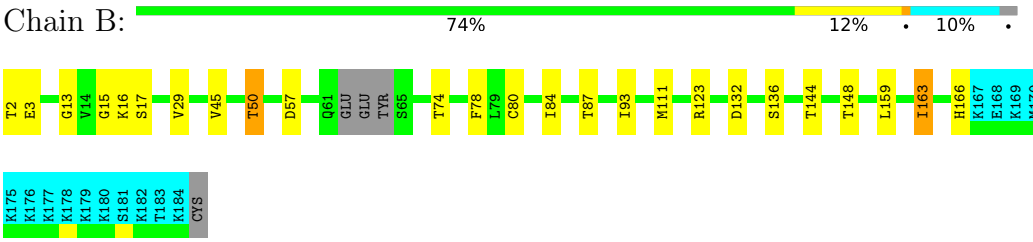
• Molecule 1: Apolipoprotein A-I

Chain D:



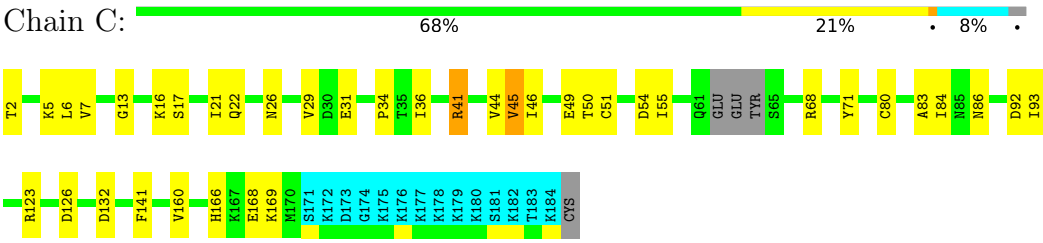
• Molecule 2: GTPase KRas

Chain B:



• Molecule 2: GTPase KRas

Chain C:



5 Refinement protocol and experimental data overview

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

Of the 200 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy.*

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

Software name	Classification	Version
HADDOCK	refinement	
HADDOCK	structure calculation	

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	190
Number of shifts mapped to atoms	70
Number of unparsed shifts	0
Number of shifts with mapping errors	120
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	2%

6 Model quality

6.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, GDP, PCW, 17F

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	1519	358	1524	23±4
1	D	1615	376	1620	20±4
2	B	1289	298	1268	13±4
2	C	1324	308	1309	14±5
3	A	972	0	1440	360±23
3	B	594	0	880	276±18
3	C	432	0	640	202±22
3	D	1458	0	2160	555±25
4	A	108	6	152	33±8
4	B	216	12	304	85±11
4	C	108	6	152	49±8
4	D	432	24	608	164±12
5	B	28	5	12	7±2
5	C	28	5	12	6±3
6	B	1	0	0	1±0
6	C	1	0	0	1±0
All	All	202500	27960	241622	26238

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 59.

5 of 9661 unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
3:A:411:PCW:C19	3:A:411:PCW:H142	1.18	1.69	6	20
3:B:209:PCW:C27	3:B:209:PCW:H222	1.17	1.70	7	3
3:A:401:PCW:H62	3:B:209:PCW:H131	1.16	1.17	19	1
3:B:209:PCW:H272	3:B:209:PCW:C22	1.15	1.72	4	3
3:D:614:PCW:H461	3:D:614:PCW:H421	1.14	1.18	7	20

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	184/200 (92%)	179±1 (97±1%)	4±1 (2±1%)	1±0 (1±0%)	32	76
1	D	196/200 (98%)	190±2 (97±1%)	6±2 (3±1%)	0±0 (0±0%)	100	100
2	B	159/184 (86%)	154±2 (97±1%)	5±2 (3±1%)	0±0 (0±0%)	50	82
2	C	163/184 (89%)	157±2 (96±1%)	6±2 (3±1%)	0±0 (0±0%)	54	85
All	All	14040/15360 (91%)	13600 (97%)	411 (3%)	29 (0%)	50	82

5 of 8 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	365	LYS	20
2	B	34	PRO	2
2	C	110	PRO	2
2	B	163	ILE	1
2	C	34	PRO	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	161/175 (92%)	150±3 (93±2%)	11±3 (7±2%)	19	68
1	D	173/175 (99%)	160±2 (92±1%)	13±2 (8±1%)	16	64
2	B	143/164 (87%)	132±3 (92±2%)	11±3 (8±2%)	16	64
2	C	147/164 (90%)	135±3 (92±2%)	12±3 (8±2%)	15	63
All	All	12480/13560 (92%)	11533 (92%)	947 (8%)	17	65

5 of 224 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	D	516	THR	18
1	A	254	VAL	17
1	D	550	LYS	17
1	D	561	LYS	17
2	B	87	THR	17

6.3.3 RNA (i)

There are no RNA molecules in this entry.

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

Mogul failed to run properly - this section will have to be empty.

6.5 Carbohydrates (i)

Mogul failed to run properly - this section will have to be empty.

6.6 Ligand geometry (i)

Mogul failed to run properly - this section will have to be empty.

6.7 Other polymers (i)

Mogul failed to run properly - this section will have to be empty.

6.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

7 Chemical shift validation

The completeness of assignment taking into account all chemical shift lists is 2% for the well-defined parts and 2% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_0*

7.1.1 Bookkeeping

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

Total number of shifts	190
Number of shifts mapped to atoms	70
Number of unparsed shifts	0
Number of shifts with mapping errors	120
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

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

- No matching atom found in the structure. First 5 (of 120) occurrences are reported below.

List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	B	6	LEU	HD11	0.7649	.	2
1	B	6	LEU	HD12	0.7649	.	2
1	B	6	LEU	HD13	0.7649	.	2
1	B	6	LEU	HD21	0.4933	.	2
1	B	6	LEU	HD22	0.4933	.	2
1	B	6	LEU	HD23	0.4933	.	2
1	B	8	VAL	HG11	0.7753	.	2
1	B	8	VAL	HG12	0.7753	.	2
1	B	8	VAL	HG13	0.7753	.	2
1	B	14	VAL	HG11	0.9972	.	2
1	B	14	VAL	HG12	0.9972	.	2
1	B	14	VAL	HG13	0.9972	.	2
1	B	19	LEU	HD11	0.4324	.	2
1	B	19	LEU	HD12	0.4324	.	2

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	B	19	LEU	HD13	0.4324	.	2
1	B	19	LEU	HD21	0.5838	.	2
1	B	19	LEU	HD22	0.5838	.	2
1	B	19	LEU	HD23	0.5838	.	2
1	B	21	ILE	HD11	-0.1199	.	1
1	B	21	ILE	HD12	-0.1199	.	1
1	B	21	ILE	HD13	-0.1199	.	1
1	B	23	LEU	HD11	-0.4194	.	2
1	B	23	LEU	HD12	-0.4194	.	2
1	B	23	LEU	HD13	-0.4194	.	2
1	B	24	ILE	HD11	0.2711	.	1
1	B	24	ILE	HD12	0.2711	.	1
1	B	24	ILE	HD13	0.2711	.	1
1	B	29	VAL	HG21	0.5738	.	2
1	B	29	VAL	HG22	0.5738	.	2
1	B	29	VAL	HG23	0.5738	.	2
1	B	29	VAL	HG11	0.4389	.	2
1	B	29	VAL	HG12	0.4389	.	2
1	B	29	VAL	HG13	0.4389	.	2
1	B	36	ILE	HD11	0.5128	.	1
1	B	36	ILE	HD12	0.5128	.	1
1	B	36	ILE	HD13	0.5128	.	1
1	B	44	VAL	HG11	0.5439	.	2
1	B	44	VAL	HG12	0.5439	.	2
1	B	44	VAL	HG13	0.5439	.	2
1	B	45	VAL	HG11	0.4386	.	2
1	B	45	VAL	HG12	0.4386	.	2
1	B	45	VAL	HG13	0.4386	.	2
1	B	46	ILE	HD11	0.2688	.	1
1	B	46	ILE	HD12	0.2688	.	1
1	B	46	ILE	HD13	0.2688	.	1
1	B	55	ILE	HD11	0.3484	.	1
1	B	55	ILE	HD12	0.3484	.	1
1	B	55	ILE	HD13	0.3484	.	1
1	B	56	LEU	HD11	0.3279	.	2
1	B	56	LEU	HD12	0.3279	.	2
1	B	56	LEU	HD13	0.3279	.	2
1	B	79	LEU	HD11	-0.0802	.	2
1	B	79	LEU	HD12	-0.0802	.	2
1	B	79	LEU	HD13	-0.0802	.	2
1	B	79	LEU	HD21	-0.0067	.	2

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	B	79	LEU	HD22	-0.0067	.	2
1	B	79	LEU	HD23	-0.0067	.	2
1	B	81	VAL	HG21	0.4788	.	2
1	B	81	VAL	HG22	0.4788	.	2
1	B	81	VAL	HG23	0.4788	.	2
1	B	81	VAL	HG11	0.3718	.	2
1	B	81	VAL	HG12	0.3718	.	2
1	B	81	VAL	HG13	0.3718	.	2
1	B	84	ILE	HD11	0.5835	.	1
1	B	84	ILE	HD12	0.5835	.	1
1	B	84	ILE	HD13	0.5835	.	1
1	B	93	ILE	HD11	0.6278	.	1
1	B	93	ILE	HD12	0.6278	.	1
1	B	93	ILE	HD13	0.6278	.	1
1	B	100	ILE	HD11	0.2013	.	1
1	B	100	ILE	HD12	0.2013	.	1
1	B	100	ILE	HD13	0.2013	.	1
1	B	103	VAL	HG21	0.7641	.	2
1	B	103	VAL	HG22	0.7641	.	2
1	B	103	VAL	HG23	0.7641	.	2
1	B	103	VAL	HG11	0.8609	.	2
1	B	103	VAL	HG12	0.8609	.	2
1	B	103	VAL	HG13	0.8609	.	2
1	B	109	VAL	HG11	0.5231	.	2
1	B	109	VAL	HG12	0.5231	.	2
1	B	109	VAL	HG13	0.5231	.	2
1	B	112	VAL	HG11	0.5984	.	2
1	B	112	VAL	HG12	0.5984	.	2
1	B	112	VAL	HG13	0.5984	.	2
1	B	113	LEU	HD11	0.8924	.	2
1	B	113	LEU	HD12	0.8924	.	2
1	B	113	LEU	HD13	0.8924	.	2
1	B	114	VAL	HG11	0.511	.	2
1	B	114	VAL	HG12	0.511	.	2
1	B	114	VAL	HG13	0.511	.	2
1	B	120	LEU	HD11	0.7114	.	2
1	B	120	LEU	HD12	0.7114	.	2
1	B	120	LEU	HD13	0.7114	.	2
1	B	125	VAL	HG21	0.4923	.	2
1	B	125	VAL	HG22	0.4923	.	2
1	B	125	VAL	HG23	0.4923	.	2

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	B	125	VAL	HG11	-0.35	.	2
1	B	125	VAL	HG12	-0.35	.	2
1	B	125	VAL	HG13	-0.35	.	2
1	B	133	LEU	HD11	0.2492	.	2
1	B	133	LEU	HD12	0.2492	.	2
1	B	133	LEU	HD13	0.2492	.	2
1	B	139	ILE	HD11	0.7014	.	1
1	B	139	ILE	HD12	0.7014	.	1
1	B	139	ILE	HD13	0.7014	.	1
1	B	142	ILE	HD11	0.5153	.	1
1	B	142	ILE	HD12	0.5153	.	1
1	B	142	ILE	HD13	0.5153	.	1
1	B	159	LEU	HD11	0.5167	.	2
1	B	159	LEU	HD12	0.5167	.	2
1	B	159	LEU	HD13	0.5167	.	2
1	B	160	VAL	HG21	0.4847	.	2
1	B	160	VAL	HG22	0.4847	.	2
1	B	160	VAL	HG23	0.4847	.	2
1	B	160	VAL	HG11	-0.146	.	2
1	B	160	VAL	HG12	-0.146	.	2
1	B	160	VAL	HG13	-0.146	.	2
1	B	163	ILE	HD11	0.4805	.	1
1	B	163	ILE	HD12	0.4805	.	1
1	B	163	ILE	HD13	0.4805	.	1

7.1.2 Chemical shift referencing

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

7.1.3 Completeness of resonance assignments

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 2%, i.e. 174 atoms were assigned a chemical shift out of a possible 9964. 0 out of 130 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	14/3540 (0%)	7/1432 (0%)	0/1420 (0%)	7/688 (1%)
Sidechain	160/5800 (3%)	120/3731 (3%)	40/1812 (2%)	0/257 (0%)
Aromatic	0/624 (0%)	0/308 (0%)	0/291 (0%)	0/25 (0%)
Overall	174/9964 (2%)	127/5471 (2%)	40/3523 (1%)	7/970 (1%)

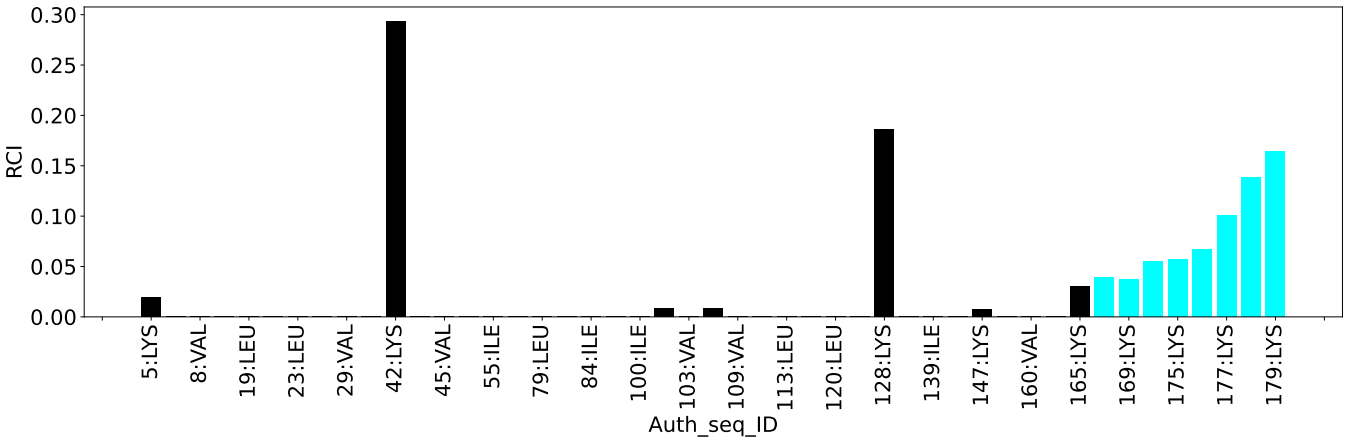
7.1.4 Statistically unusual chemical shifts (i)

There are no statistically unusual chemical shifts.

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 B:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

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

Description	Value
Total distance restraints	226
Intra-residue (|i-j|=0)	0
Sequential (|i-j|=1)	0
Medium range (|i-j|>1 and |i-j|<5)	0
Long range (|i-j|≥5)	0
Inter-chain	156
Hydrogen bond restraints	0
Disulfide bond restraints	70
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	0.3
Number of long range restraints per residue[1]	0.0

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

8.2 Residual restraint violations

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

8.2.1 Average number of distance violations per model

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

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	0.6	0.19
0.2-0.5 (Medium)	1.2	0.5
>0.5 (Large)	8.7	5.49

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

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

9 Distance violation analysis (i)

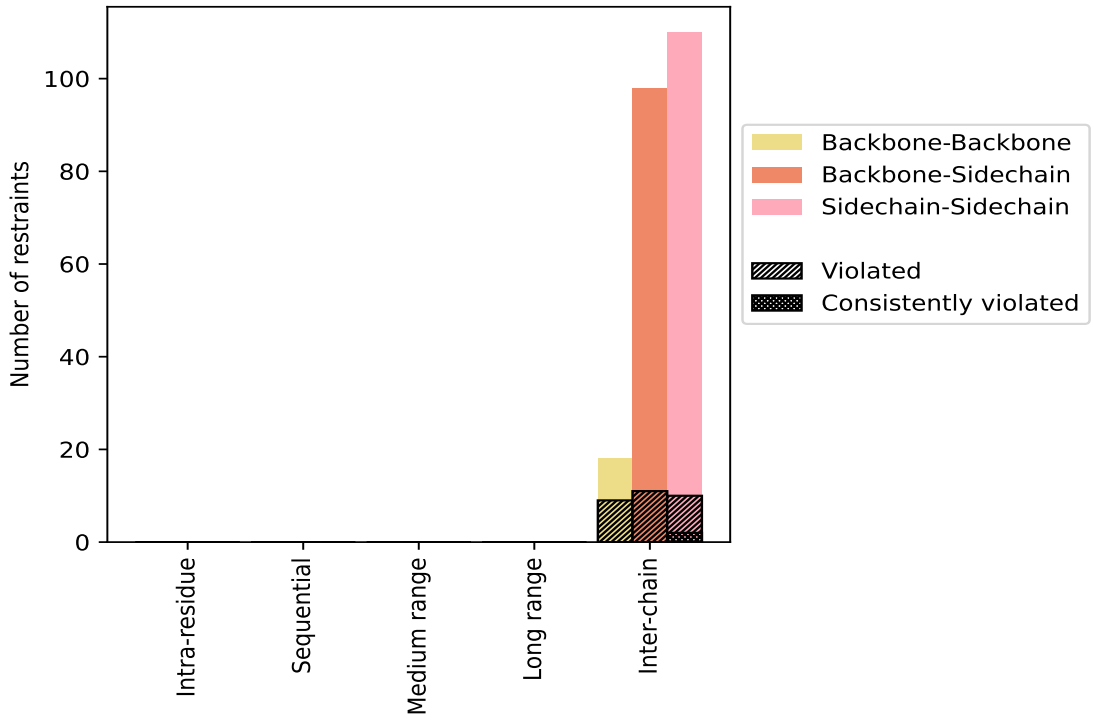
9.1 Summary of distance violations (i)

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

Restraints type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
Intra-residue (|i-j|=0)	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
Sequential (|i-j|=1)	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
Medium range (|i-j|>1 & |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
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	156	69.0	27	17.3	11.9	2	1.3	0.9
Backbone-Backbone	18	8.0	9	50.0	4.0	0	0.0	0.0
Backbone-Sidechain	68	30.1	11	16.2	4.9	0	0.0	0.0
Sidechain-Sidechain	70	31.0	7	10.0	3.1	2	2.9	0.9
Hydrogen bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Disulfide bond	70	31.0	3	4.3	1.3	0	0.0	0.0
Total	226	100.0	30	13.3	13.3	2	0.9	0.9
Backbone-Backbone	18	8.0	9	50.0	4.0	0	0.0	0.0
Backbone-Sidechain	98	43.4	11	11.2	4.9	0	0.0	0.0
Sidechain-Sidechain	110	48.7	10	9.1	4.4	2	1.8	0.9

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

9.1.1 Bar chart : Distribution of distance restraints and violations



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

9.2 Distance violation statistics for each model

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

Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
1	0	0	0	0	12	12	1.2	3.08	0.92	1.02
2	0	0	0	0	11	11	1.78	3.16	1.03	2.04
3	0	0	0	0	9	9	1.69	2.23	0.67	1.96
4	0	0	0	0	10	10	1.02	2.78	0.84	0.71
5	0	0	0	0	17	17	1.62	5.49	1.7	0.65
6	0	0	0	0	11	11	1.61	4.41	1.33	1.13
7	0	0	0	0	7	7	1.46	2.09	0.53	1.63
8	0	0	0	0	4	4	1.39	2.3	0.77	1.39
9	0	0	0	0	12	12	1.87	3.72	1.18	1.95
10	0	0	0	0	9	9	1.69	2.98	0.69	1.87
11	0	0	0	0	10	10	2.7	5.32	1.08	2.68

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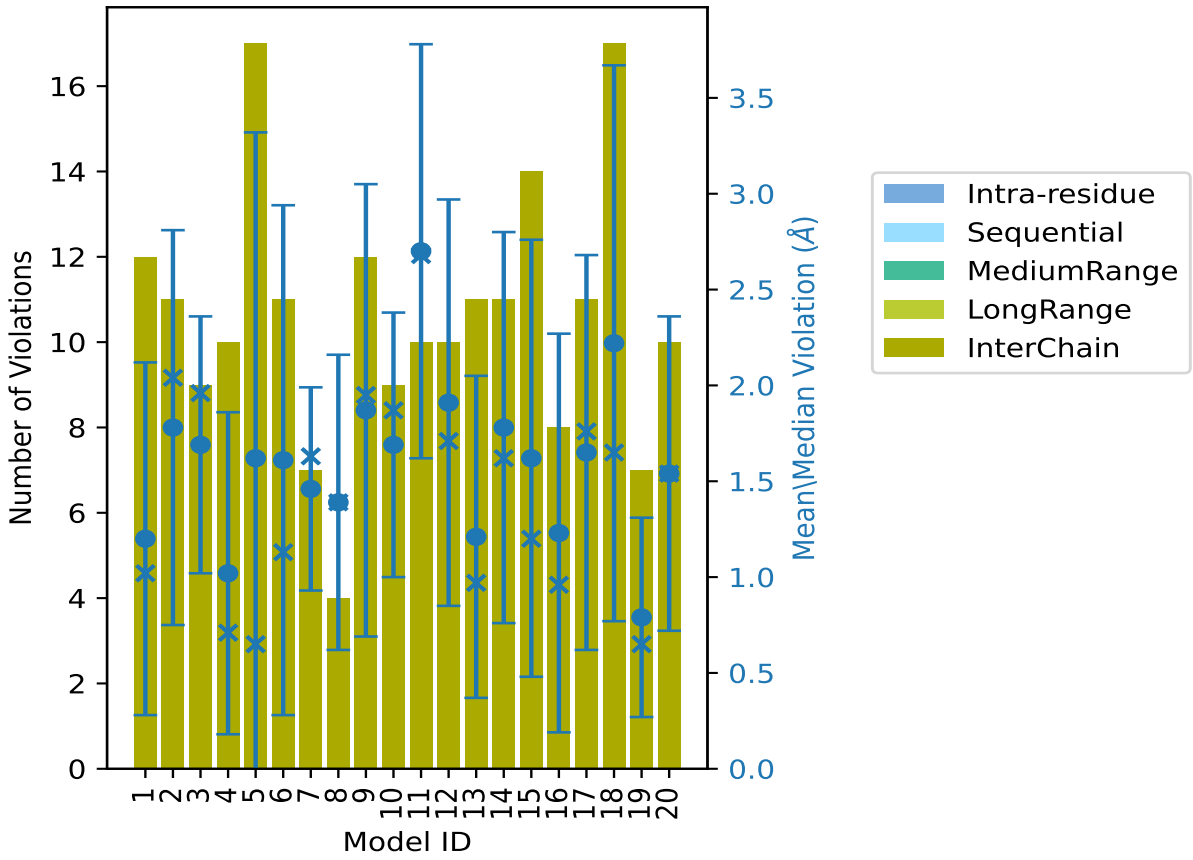
Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
12	0	0	0	0	10	10	1.91	4.31	1.06	1.71
13	0	0	0	0	11	11	1.21	3.52	0.84	0.97
14	0	0	0	0	11	11	1.78	4.17	1.02	1.62
15	0	0	0	0	14	14	1.62	4.03	1.14	1.2
16	0	0	0	0	8	8	1.23	3.07	1.04	0.96
17	0	0	0	0	11	11	1.65	3.46	1.03	1.76
18	0	0	0	0	17	17	2.22	5.06	1.45	1.65
19	0	0	0	0	7	7	0.79	1.88	0.52	0.65
20	0	0	0	0	10	10	1.54	2.97	0.82	1.54

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

9.2.1 Bar graph : Distance Violation statistics for each model



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

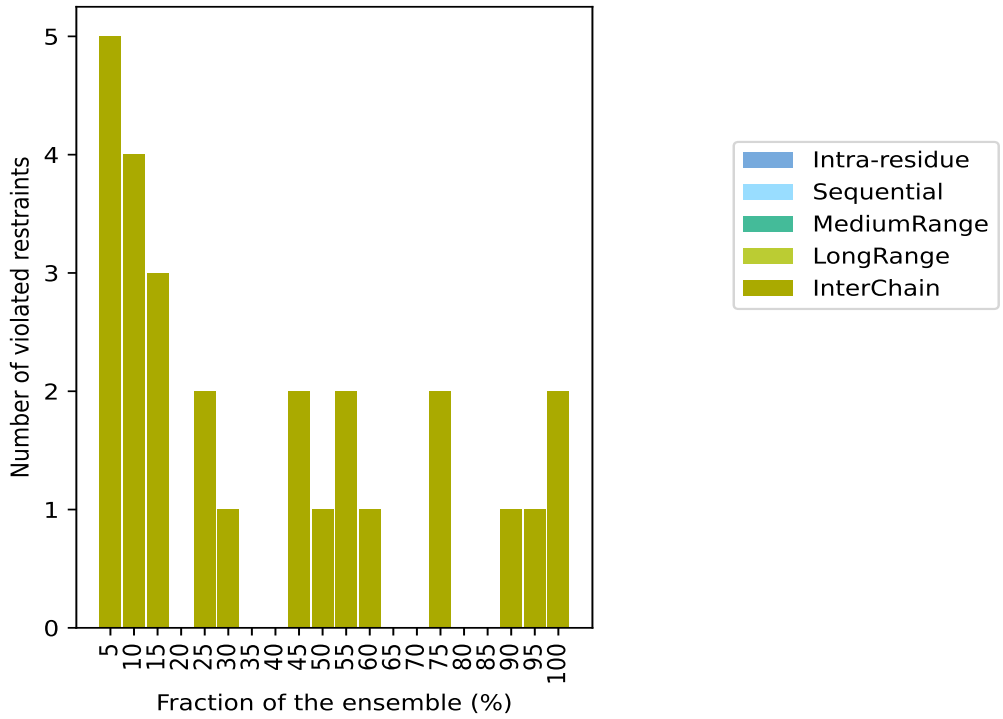
9.3 Distance violation statistics for the ensemble (i)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 129(IR:0, SQ:0, MR:0, LR:0, IC:129) restraints are not violated in the ensemble.

Number of violated restraints						Fraction of the ensemble	
IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total	Count[6]	%
0	0	0	0	5	5	1	5.0
0	0	0	0	4	4	2	10.0
0	0	0	0	3	3	3	15.0
0	0	0	0	0	0	4	20.0
0	0	0	0	2	2	5	25.0
0	0	0	0	1	1	6	30.0
0	0	0	0	0	0	7	35.0
0	0	0	0	0	0	8	40.0
0	0	0	0	2	2	9	45.0
0	0	0	0	1	1	10	50.0
0	0	0	0	2	2	11	55.0
0	0	0	0	1	1	12	60.0
0	0	0	0	0	0	13	65.0
0	0	0	0	0	0	14	70.0
0	0	0	0	2	2	15	75.0
0	0	0	0	0	0	16	80.0
0	0	0	0	0	0	17	85.0
0	0	0	0	1	1	18	90.0
0	0	0	0	1	1	19	95.0
0	0	0	0	2	2	20	100.0

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

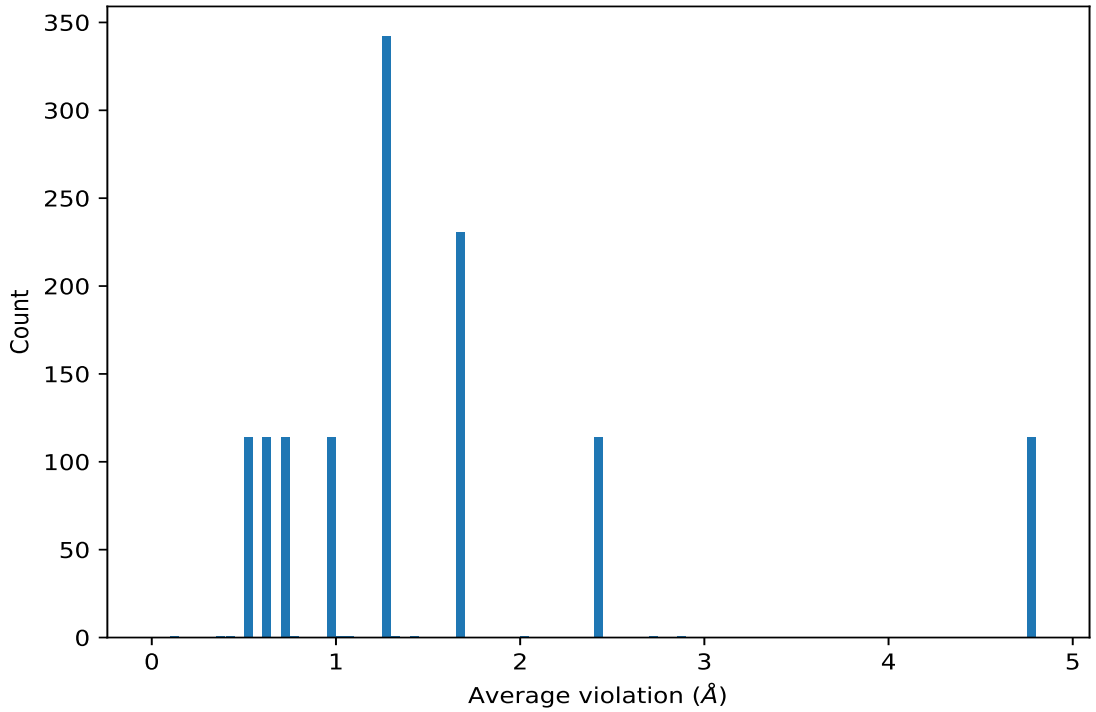
9.3.1 Bar graph : Distance violation statistics for the ensemble



9.4 Most violated distance restraints in the ensemble

9.4.1 Histogram : Distribution of mean distance violations

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



9.4.2 Table: Most violated distance restraints (i)

The following table provides the mean and the standard deviation of the violations for the 10 worst performing restraints, sorted by number of violated models and the mean violation 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)
(1,24)	2:B:170:MET:CG	2:C:163:ILE:CD1	20	2.86	1.02	2.79
(1,9)	2:C:170:MET:CG	2:B:163:ILE:CD1	20	2.73	1.28	2.84
(1,12)	2:C:170:MET:CG	2:B:170:MET:N	19	1.66	0.89	1.83
(1,27)	2:B:170:MET:CG	2:C:170:MET:N	18	1.68	0.71	1.85
(1,13)	2:C:170:MET:CG	2:B:173:ASP:N	15	2.03	0.98	1.97
(1,28)	2:B:170:MET:CG	2:C:173:ASP:N	15	1.69	0.71	1.66
(1,8)	2:C:170:MET:CG	2:B:160:VAL:CG1	12	1.06	0.86	0.71
(1,33)	2:C:45:VAL:CG1	1:A:201:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:202:LYS:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:203:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:204:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:205:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:206:ASN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:207:TRP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:208:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:209:SER:N	11	1.66	1.23	0.97

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG1	1:A:210:VAL:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:211:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:212:SER:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:213:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:214:PHE:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:215:SER:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:216:LYS:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:217:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:218:ARG:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:219:GLU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:220:GLN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:221:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:222:GLY:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:223:PRO:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:224:VAL:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:225:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:226:GLN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:227:GLU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:228:PHE:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:229:TRP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	1:A:230:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C6	11	1.66	1.23	0.97

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C6	11	1.66	1.23	0.97

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C2	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C3	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:N1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:O4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:O5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C2	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C3	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:N1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:O4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:O5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:201:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:202:LYS:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:203:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:204:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:205:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:206:ASN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:207:TRP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:208:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:209:SER:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:210:VAL:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:211:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:212:SER:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:213:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:214:PHE:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:215:SER:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:216:LYS:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:217:LEU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:218:ARG:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:219:GLU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:220:GLN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:221:LEU:N	11	1.66	1.23	0.97

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG2	1:A:222:GLY:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:223:PRO:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:224:VAL:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:225:THR:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:226:GLN:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:227:GLU:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:228:PHE:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:229:TRP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	1:A:230:ASP:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C6	11	1.66	1.23	0.97

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C6	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C7	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C8	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:N	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C2	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C3	11	1.66	1.23	0.97

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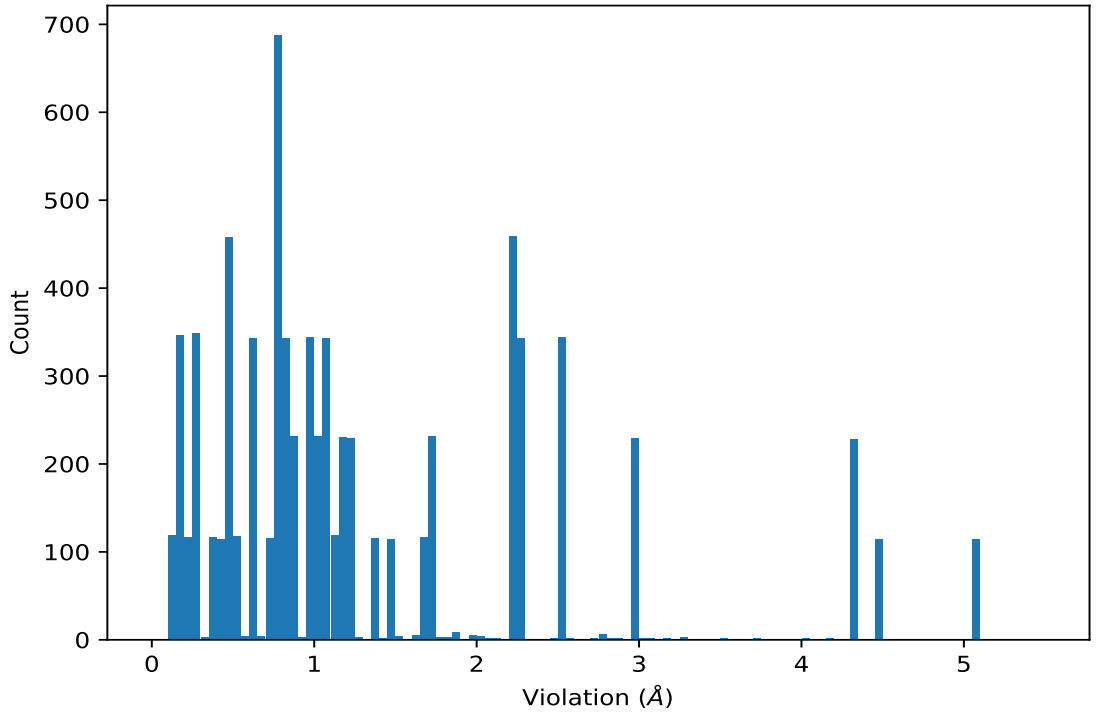
Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:N1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:O4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:O5	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C2	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C3	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:N1	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:O4	11	1.66	1.23	0.97
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:O5	11	1.66	1.23	0.97
(1,7)	2:C:170:MET:CG	2:B:46:ILE:CD1	11	1.3	0.83	1.18
(1,22)	2:B:170:MET:CG	2:C:46:ILE:CD1	10	1.42	1.01	1.11

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

9.5 All violated distance restraints

9.5.1 Histogram : Distribution of distance violations

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



9.5.2 Table : All distance violations (i)

The following table provides the 10 worst performing restraints, sorted by the violation 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)
(1,24)	2:B:170:MET:CG	2:C:163:ILE:CD1	5	5.49
(1,9)	2:C:170:MET:CG	2:B:163:ILE:CD1	11	5.32
(1,43)	2:C:180:LYS:N	1:A:201:LEU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:202:LYS:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:203:LEU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:204:LEU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:205:ASP:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:206:ASN:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:207:TRP:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:208:ASP:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:209:SER:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:210:VAL:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:211:THR:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:212:SER:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:213:THR:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:214:PHE:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:215:SER:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:216:LYS:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:217:LEU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:218:ARG:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:219:GLU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:220:GLN:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:221:LEU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:222:GLY:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:223:PRO:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:224:VAL:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:225:THR:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:226:GLN:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:227:GLU:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:228:PHE:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:229:TRP:N	18	5.06
(1,43)	2:C:180:LYS:N	1:A:230:ASP:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:402:PCW:N	18	5.06

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:403:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:404:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:405:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:406:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:407:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:408:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:409:PCW:N	18	5.06

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:410:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:411:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:412:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C4	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C5	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C6	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C7	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C8	18	5.06
(1,43)	2:C:180:LYS:N	3:A:413:PCW:N	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:C1	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:C2	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:C3	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:N1	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:O4	18	5.06
(1,43)	2:C:180:LYS:N	4:A:414:17F:O5	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:C1	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:C2	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:C3	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:N1	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:O4	18	5.06
(1,43)	2:C:180:LYS:N	4:A:415:17F:O5	18	5.06
(1,43)	2:C:180:LYS:N	1:A:201:LEU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:202:LYS:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:203:LEU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:204:LEU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:205:ASP:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:206:ASN:N	5	4.49

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,43)	2:C:180:LYS:N	1:A:207:TRP:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:208:ASP:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:209:SER:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:210:VAL:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:211:THR:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:212:SER:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:213:THR:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:214:PHE:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:215:SER:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:216:LYS:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:217:LEU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:218:ARG:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:219:GLU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:220:GLN:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:221:LEU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:222:GLY:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:223:PRO:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:224:VAL:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:225:THR:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:226:GLN:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:227:GLU:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:228:PHE:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:229:TRP:N	5	4.49
(1,43)	2:C:180:LYS:N	1:A:230:ASP:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:402:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:403:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:404:PCW:N	5	4.49

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:405:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:405:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:406:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:407:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:408:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:409:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:410:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:411:PCW:N	5	4.49

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:412:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:412:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C4	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C5	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C6	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C7	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:C8	5	4.49
(1,43)	2:C:180:LYS:N	3:A:413:PCW:N	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:C1	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:C2	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:C3	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:N1	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:O4	5	4.49
(1,43)	2:C:180:LYS:N	4:A:414:17F:O5	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:C1	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:C2	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:C3	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:N1	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:O4	5	4.49
(1,43)	2:C:180:LYS:N	4:A:415:17F:O5	5	4.49
(1,9)	2:C:170:MET:CG	2:B:163:ILE:CD1	6	4.41
(1,33)	2:C:45:VAL:CG1	1:A:201:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:202:LYS:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:203:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:204:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:205:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:206:ASN:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:207:TRP:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:208:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:209:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:210:VAL:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:211:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:212:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:213:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:214:PHE:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:215:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:216:LYS:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:217:LEU:N	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG1	1:A:218:ARG:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:219:GLU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:220:GLN:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:221:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:222:GLY:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:223:PRO:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:224:VAL:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:225:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:226:GLN:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:227:GLU:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:228:PHE:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:229:TRP:N	12	4.31
(1,33)	2:C:45:VAL:CG1	1:A:230:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:402:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:403:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:404:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:405:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:C8	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG1	3:A:406:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:407:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:408:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:409:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:410:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:411:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:412:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:C8	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG1	3:A:413:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C1	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C2	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:C3	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:N1	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:O4	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:414:17F:O5	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C1	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C2	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:C3	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:N1	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:O4	12	4.31
(1,33)	2:C:45:VAL:CG1	4:A:415:17F:O5	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:201:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:202:LYS:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:203:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:204:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:205:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:206:ASN:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:207:TRP:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:208:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:209:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:210:VAL:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:211:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:212:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:213:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:214:PHE:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:215:SER:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:216:LYS:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:217:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:218:ARG:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:219:GLU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:220:GLN:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:221:LEU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:222:GLY:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:223:PRO:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:224:VAL:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:225:THR:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:226:GLN:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:227:GLU:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:228:PHE:N	12	4.31
(1,33)	2:C:45:VAL:CG2	1:A:229:TRP:N	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG2	1:A:230:ASP:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:402:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:403:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:404:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:405:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:406:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:407:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:C8	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG2	3:A:408:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:409:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:410:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:411:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:412:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C4	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C5	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C6	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C7	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:C8	12	4.31
(1,33)	2:C:45:VAL:CG2	3:A:413:PCW:N	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C1	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C2	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:C3	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:N1	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:O4	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:414:17F:O5	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C1	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C2	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:C3	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:N1	12	4.31
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:O4	12	4.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,33)	2:C:45:VAL:CG2	4:A:415:17F:O5	12	4.31
(1,24)	2:B:170:MET:CG	2:C:163:ILE:CD1	18	4.21
(1,9)	2:C:170:MET:CG	2:B:163:ILE:CD1	14	4.17
(1,9)	2:C:170:MET:CG	2:B:163:ILE:CD1	18	4.16
(1,22)	2:B:170:MET:CG	2:C:46:ILE:CD1	5	4.04

10 Dihedral-angle violation analysis (i)

No dihedral-angle restraints found