Full wwPDB NMR Structure Validation Report (i)

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PDB ID	:	7XX9
BMRB ID	:	36491
Title	:	Solution structure of RRM2 of Human SART3
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Deposited on	:	2022-05-29

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

|		
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
BMRB Restraints Analysis	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 89%.

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	Percentile Ranks	Value
Clashscore		71
Ramachandran outliers		0.4%
Sidechain outliers		4.1%

Worse   *Better*

▌ Percentile relative to all structures
▯ Percentile relative to all NMR structures
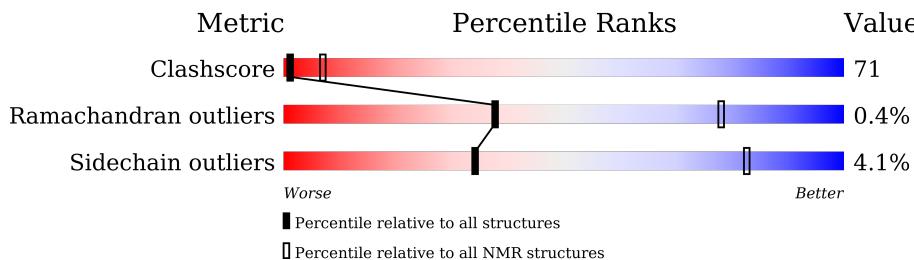
Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

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	84	21% 69% • 8%

2 Ensemble composition and analysis ⓘ

This entry contains 20 models. Model 14 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:801-A:877 (77)	0.58	14

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

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

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

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

3 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 1318 atoms, of which 668 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Squamous cell carcinoma antigen recognized by T-cells 3.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	84	1318	408	668	112	124	6	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	794	GLY	-	expression tag	UNP Q15020
A	795	SER	-	expression tag	UNP Q15020
A	796	HIS	-	expression tag	UNP Q15020
A	797	MET	-	expression tag	UNP Q15020

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: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
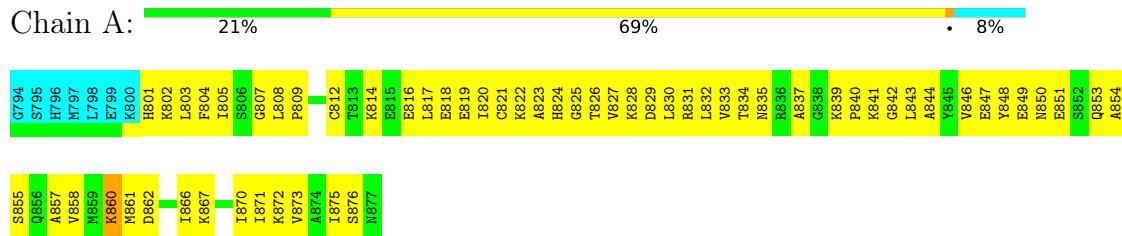
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
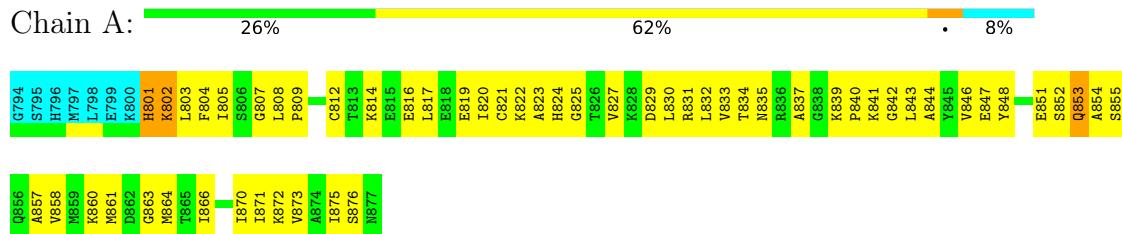
4.2.2 Score per residue for model 2

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:

4.2.3 Score per residue for model 3

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
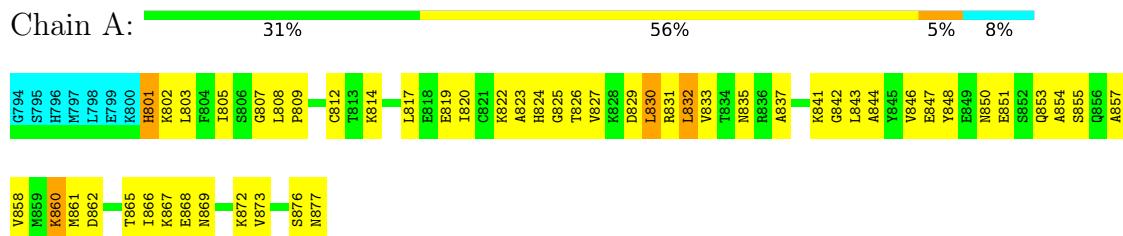
4.2.4 Score per residue for model 4

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
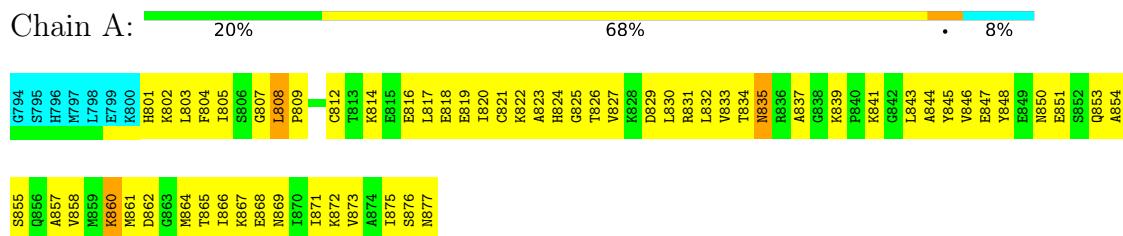
4.2.5 Score per residue for model 5

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
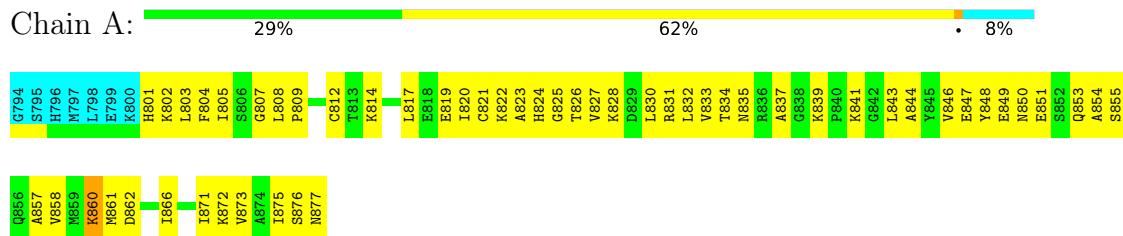
4.2.6 Score per residue for model 6

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A: 23% 64% 5% 8%

G794 S795 H796 M797 L798 E799 K800 H801 K802 L803 F804 I805 S806 G807 L808 P809 F810 S811 C812 T813 K814 E815 E816 L817 E818 E819 I820 C821 K822 A823 H824 G825 T826 V827 K828 D829 L830 R831 L832 V833 T834 N835 R836 A837 G838 K839 P840 K841 G842 L843 A844 Y845 V846 E847 Y848 E849 N850 E851 S852 Q853

A854 S855 Q856 A857 V858 M859 K860 M861 D862 G863 I866 K867 I870 I871 K872 V873 A874 I875 S876 N877
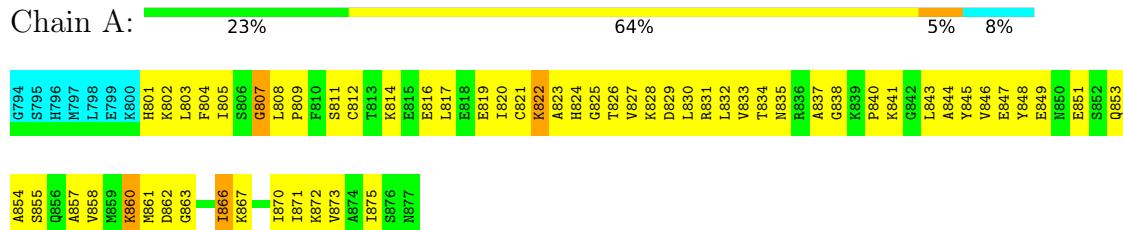
4.2.7 Score per residue for model 7

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A: 24% 63% 5% 8%

G794 S795 H796 M797 L798 E799 K800 H801 K802 L803 F804 I805 S806 G807 L808 P809 F810 S811 C812 T813 K814 E815 E816 L817 E818 E819 I820 C821 K822 A823 H824 G825 T826 V827 K828 D829 L830 R831 L832 V833 T834 N835 R836 A837 G838 K839 P840 K841 G842 L843 A844 Y845 V846 E847 Y848 E849 N850 E851 S852 Q853

A854 S855 Q856 A857 V858 M859 K860 M861 D862 G863 M864 T865 I866 K867 I870 I871 K872 V873 A874 I875 S876 N877
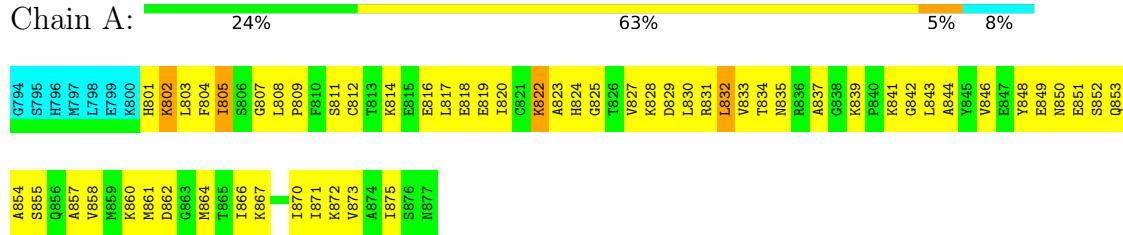
### 4.2.8 Score per residue for model 8

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A: 20% 71% 8%

G794 S795 H796 M797 L798 E799 K800 H801 K802 L803 F804 I805 S806 G807 L808 P809 F810 S811 C812 T813 K814 L817 E818 E819 I820 C821 K822 A823 H824 G825 T826 V827 K828 D829 L830 R831 L832 V833 T834 N835 R836 A837 G838 K839 P840 K841 G842 L843 A844 Y845 V846 E847 Y848 E849 N850 E851 S852 Q853 A854

S855 Q856 A857 V858 M859 K860 M861 D862 I866 K867 I870 I871 K872 V873 A874 I875 S876 N877
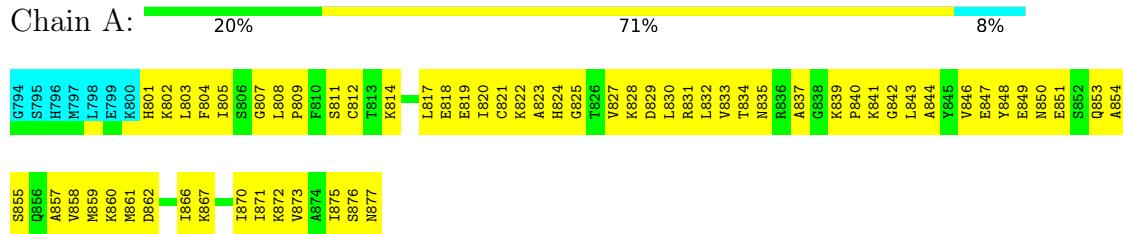
4.2.9 Score per residue for model 9

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A: 21% 67% • 8%

G794 S795 H796 M797 L798 E799 K800 H801 K802 L803 F804 I805 S806 G807 L808 P809 C812 E816 L817 E818 E819 I820 C821 K822 A823 H824 G825 T826 V827 K828 D829 L830 R831 L832 V833 T834 N835 R836 A837 G838 K839 P840 K841 G842 L843 A844 Y845 V846 E847 Y848 E849 N850 E851 S852 Q853 A854 S855 Q856

A857 V858 M859 K860 M861 D862 T865 I866 K867 E868 N869 K872 V873 A874 I875 S876 N877
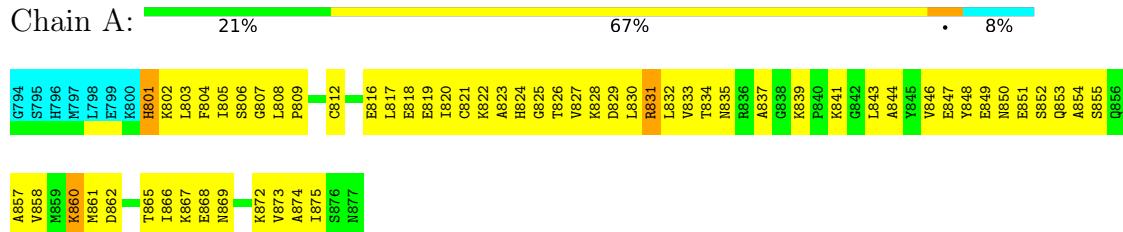
4.2.10　Score per residue for model 10

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
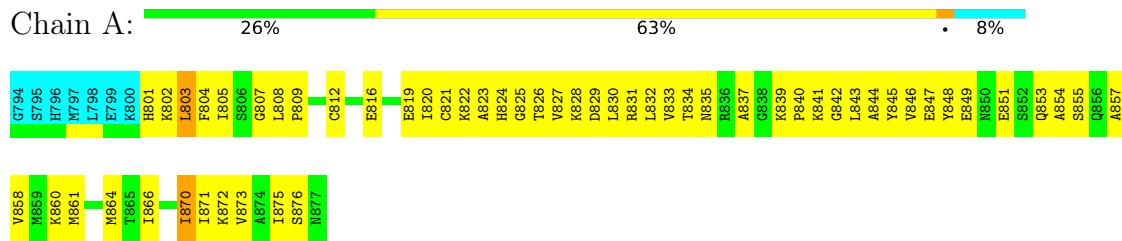
4.2.11　Score per residue for model 11

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
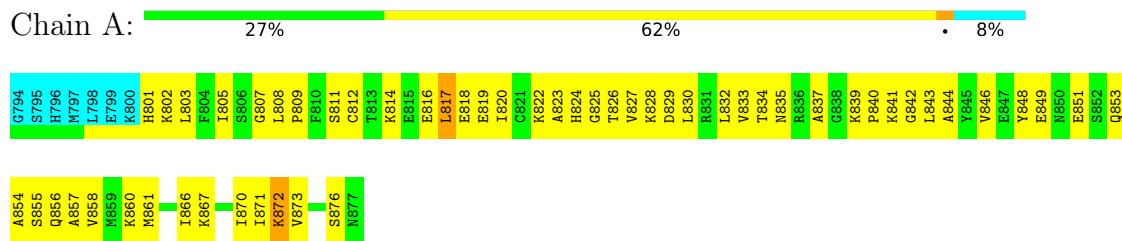
#### 4.2.12　Score per residue for model 12

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
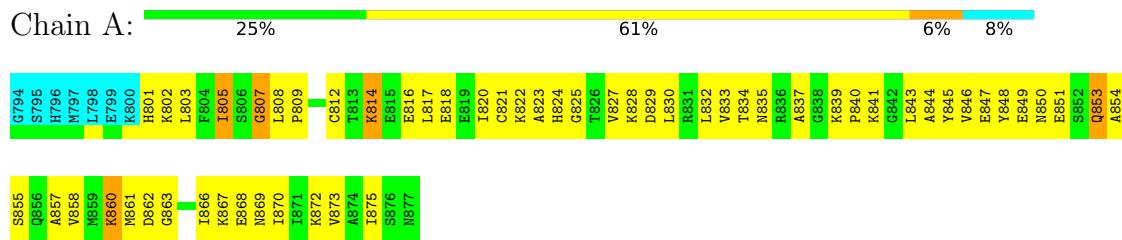
4.2.13　Score per residue for model 13

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
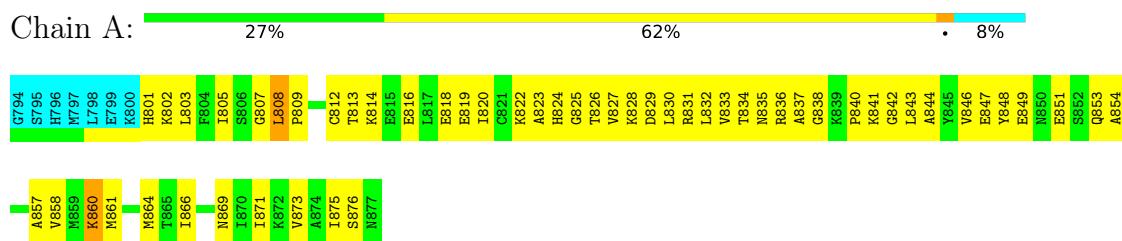
4.2.14 Score per residue for model 14 (medoid)

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
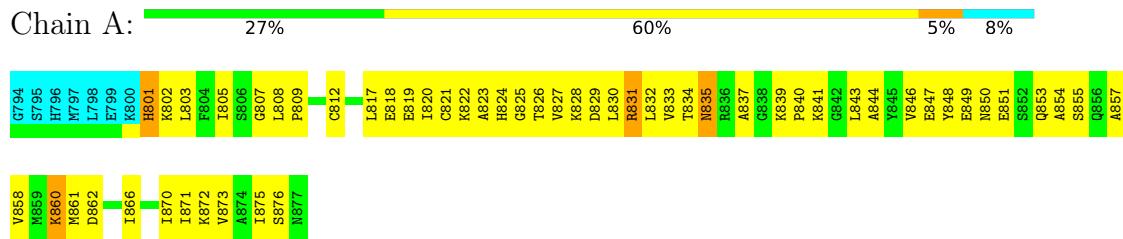
4.2.15 Score per residue for model 15

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
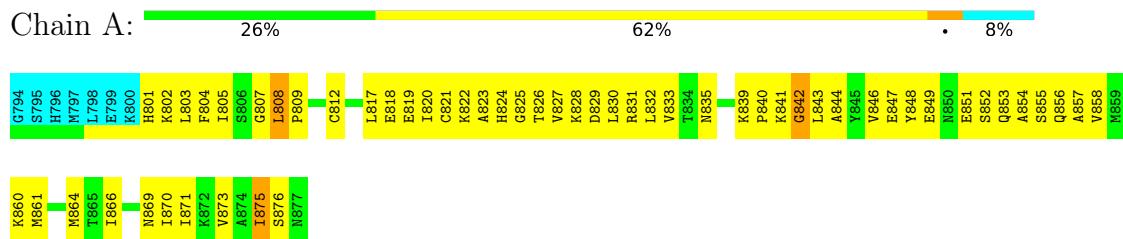
4.2.16 Score per residue for model 16

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
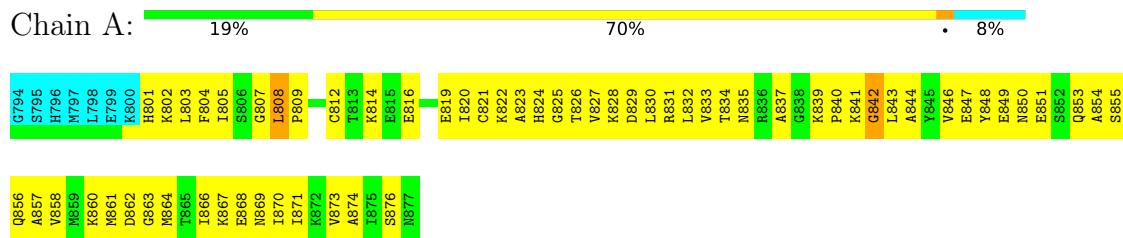
4.2.17 Score per residue for model 17

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
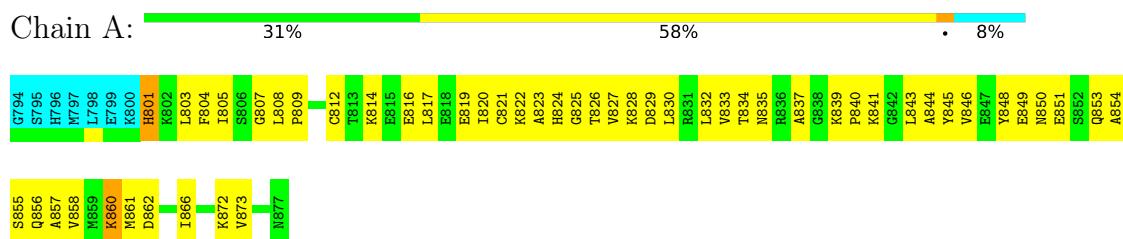
4.2.18 Score per residue for model 18

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
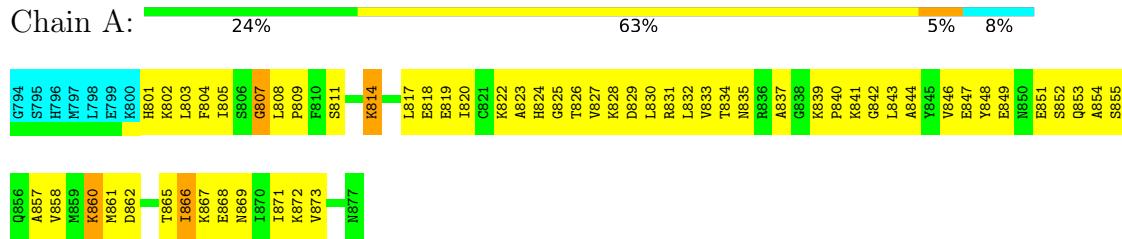
4.2.19 Score per residue for model 19

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
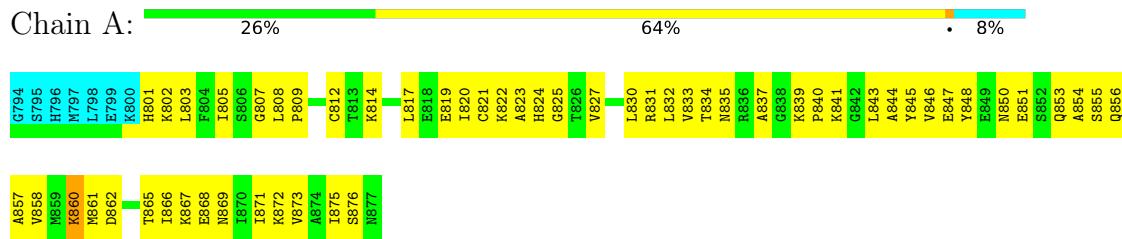
4.2.20 Score per residue for model 20

• Molecule 1: Squamous cell carcinoma antigen recognized by T-cells 3

Chain A:
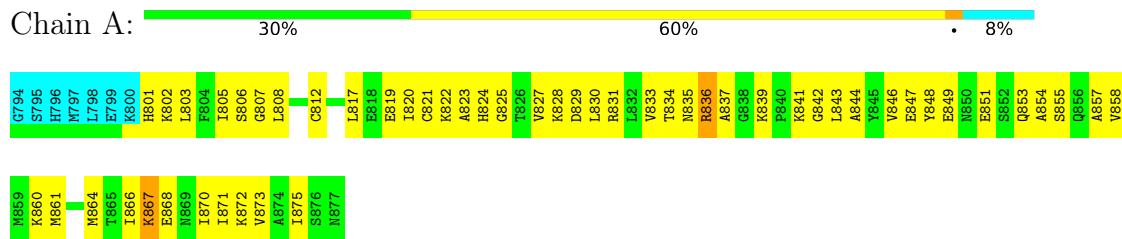
5 Refinement protocol and experimental data overview ⓘ

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

Of the 1000 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	
X-PLOR NIH	refinement	

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

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	1076
Number of shifts mapped to atoms	1076
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	89%

6 Model quality ⓘ

6.1 Standard geometry ⓘ

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	596	615	615	86±9
All	All	11920	12300	12300	1728

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 71.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:807:GLY:C	1:A:808:LEU:HD22	1.03	1.74	6	2
1:A:807:GLY:C	1:A:808:LEU:HD12	1.00	1.76	12	9
1:A:803:LEU:HD21	1:A:854:ALA:HB1	0.99	1.32	16	2
1:A:829:ASP:O	1:A:846:VAL:HG23	0.97	1.60	2	17
1:A:857:ALA:HB1	1:A:861:MET:HE2	0.97	1.35	3	12
1:A:817:LEU:HD12	1:A:830:LEU:HD11	0.93	1.38	11	1
1:A:854:ALA:O	1:A:858:VAL:HG13	0.92	1.64	18	20
1:A:803:LEU:HD12	1:A:848:TYR:CE1	0.90	2.00	8	7
1:A:832:LEU:HD12	1:A:844:ALA:HB2	0.90	1.44	14	7
1:A:817:LEU:HD22	1:A:820:ILE:HD11	0.89	1.42	11	1
1:A:866:ILE:HD12	1:A:871:ILE:HG21	0.89	1.44	1	8
1:A:832:LEU:HD11	1:A:841:LYS:O	0.88	1.69	18	13
1:A:817:LEU:CD2	1:A:830:LEU:HD11	0.87	1.99	7	8
1:A:832:LEU:HD13	1:A:833:VAL:N	0.87	1.84	3	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:831:ARG:O	1:A:844:ALA:HB1	0.86	1.70	16	15
1:A:818:GLU:OE2	1:A:827:VAL:HG11	0.86	1.70	13	3
1:A:805:ILE:HG22	1:A:873:VAL:HA	0.85	1.45	1	19
1:A:808:LEU:HD23	1:A:812:CYS:SG	0.85	2.11	12	6
1:A:848:TYR:CG	1:A:854:ALA:HB2	0.84	2.06	17	18
1:A:804:PHE:O	1:A:874:ALA:HB3	0.84	1.71	16	2
1:A:832:LEU:HD22	1:A:844:ALA:HB2	0.84	1.50	3	3
1:A:843:LEU:HD13	1:A:844:ALA:N	0.84	1.88	7	2
1:A:803:LEU:HD11	1:A:854:ALA:HB1	0.82	1.49	13	8
1:A:803:LEU:HD22	1:A:803:LEU:N	0.82	1.90	10	5
1:A:805:ILE:H	1:A:805:ILE:HD13	0.82	1.34	7	1
1:A:803:LEU:HD12	1:A:875:ILE:HD12	0.82	1.51	10	1
1:A:803:LEU:CD1	1:A:875:ILE:HD12	0.81	2.06	10	3
1:A:804:PHE:CE1	1:A:843:LEU:HD11	0.81	2.11	16	3
1:A:835:ASN:ND2	1:A:837:ALA:HB3	0.81	1.90	14	2
1:A:832:LEU:HD22	1:A:844:ALA:CB	0.81	2.06	3	3
1:A:808:LEU:HD12	1:A:842:GLY:HA2	0.80	1.53	3	6
1:A:802:LYS:C	1:A:803:LEU:HD22	0.79	1.98	15	3
1:A:818:GLU:OE2	1:A:827:VAL:HG21	0.79	1.76	8	2
1:A:835:ASN:OD1	1:A:837:ALA:HB3	0.78	1.79	19	16
1:A:863:GLY:HA2	1:A:870:ILE:HD11	0.78	1.55	12	5
1:A:833:VAL:HG12	1:A:841:LYS:HD3	0.77	1.56	11	10
1:A:805:ILE:HD13	1:A:805:ILE:N	0.77	1.92	7	2
1:A:830:LEU:HD13	1:A:830:LEU:C	0.77	2.00	5	1
1:A:804:PHE:CE1	1:A:843:LEU:HD21	0.77	2.15	8	2
1:A:817:LEU:HG	1:A:830:LEU:HD11	0.77	1.55	14	10
1:A:801:HIS:CE1	1:A:803:LEU:HD11	0.77	2.15	10	1
1:A:817:LEU:HD13	1:A:817:LEU:O	0.77	1.79	11	1
1:A:803:LEU:CD2	1:A:875:ILE:HD12	0.76	2.10	12	8
1:A:870:ILE:HD12	1:A:871:ILE:N	0.76	1.95	10	1
1:A:803:LEU:N	1:A:803:LEU:HD12	0.76	1.95	16	1
1:A:801:HIS:CE1	1:A:854:ALA:HB3	0.75	2.16	9	7
1:A:857:ALA:HB1	1:A:861:MET:CE	0.75	2.10	3	13
1:A:803:LEU:HD23	1:A:875:ILE:HD12	0.75	1.58	8	6
1:A:855:SER:O	1:A:858:VAL:HG22	0.74	1.81	18	17
1:A:824:HIS:O	1:A:857:ALA:HB2	0.74	1.83	5	5
1:A:817:LEU:HD23	1:A:830:LEU:HD21	0.74	1.58	15	7
1:A:857:ALA:HB1	1:A:861:MET:SD	0.74	2.22	15	3
1:A:854:ALA:O	1:A:858:VAL:HG22	0.72	1.84	13	10
1:A:832:LEU:HD21	1:A:840:PRO:CB	0.71	2.15	8	7
1:A:824:HIS:CD2	1:A:861:MET:SD	0.71	2.84	5	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:817:LEU:HD21	1:A:830:LEU:HD11	0.71	1.61	7	1
1:A:820:ILE:O	1:A:823:ALA:HB3	0.71	1.84	4	20
1:A:824:HIS:CE1	1:A:861:MET:SD	0.71	2.83	7	4
1:A:809:PRO:HG2	1:A:866:ILE:HG22	0.70	1.62	1	2
1:A:803:LEU:HD13	1:A:858:VAL:CG1	0.70	2.15	5	3
1:A:801:HIS:ND1	1:A:875:ILE:HD11	0.69	2.01	14	4
1:A:818:GLU:HA	1:A:830:LEU:HD13	0.69	1.63	11	3
1:A:824:HIS:NE2	1:A:861:MET:SD	0.68	2.66	1	3
1:A:824:HIS:CG	1:A:861:MET:SD	0.68	2.86	4	5
1:A:848:TYR:CB	1:A:854:ALA:HB2	0.68	2.18	17	16
1:A:830:LEU:HD12	1:A:846:VAL:HG21	0.68	1.64	18	8
1:A:870:ILE:HD12	1:A:870:ILE:C	0.68	2.08	10	1
1:A:863:GLY:CA	1:A:870:ILE:HD11	0.68	2.18	12	5
1:A:801:HIS:CE1	1:A:851:GLU:N	0.67	2.62	5	8
1:A:866:ILE:HD12	1:A:871:ILE:CG2	0.67	2.19	10	7
1:A:803:LEU:HD13	1:A:858:VAL:HG12	0.67	1.67	5	4
1:A:821:CYS:SG	1:A:830:LEU:CD1	0.67	2.83	14	9
1:A:833:VAL:HG23	1:A:844:ALA:HA	0.67	1.66	18	16
1:A:812:CYS:SG	1:A:866:ILE:HD13	0.67	2.30	17	2
1:A:866:ILE:CD1	1:A:871:ILE:HG23	0.66	2.20	6	5
1:A:808:LEU:CD2	1:A:812:CYS:SG	0.66	2.83	4	4
1:A:824:HIS:CD2	1:A:861:MET:CG	0.66	2.78	20	10
1:A:817:LEU:HD23	1:A:830:LEU:HD11	0.66	1.66	9	4
1:A:808:LEU:HD23	1:A:871:ILE:HG22	0.66	1.66	14	1
1:A:824:HIS:CG	1:A:861:MET:CG	0.65	2.79	10	6
1:A:807:GLY:O	1:A:808:LEU:HD12	0.65	1.92	16	10
1:A:820:ILE:CG2	1:A:824:HIS:CE1	0.65	2.79	8	1
1:A:843:LEU:C	1:A:843:LEU:HD23	0.65	2.12	11	14
1:A:866:ILE:HD13	1:A:871:ILE:CG2	0.65	2.21	2	4
1:A:857:ALA:CB	1:A:861:MET:HE2	0.65	2.19	9	11
1:A:821:CYS:SG	1:A:830:LEU:HD13	0.64	2.32	4	4
1:A:843:LEU:HD13	1:A:843:LEU:C	0.64	2.12	7	2
1:A:820:ILE:HG22	1:A:824:HIS:CE1	0.64	2.28	8	1
1:A:801:HIS:NE2	1:A:854:ALA:HB3	0.64	2.06	1	4
1:A:821:CYS:SG	1:A:830:LEU:HD12	0.64	2.31	14	6
1:A:808:LEU:HD22	1:A:812:CYS:SG	0.64	2.33	3	3
1:A:809:PRO:O	1:A:812:CYS:SG	0.64	2.54	15	2
1:A:808:LEU:HD13	1:A:842:GLY:HA2	0.64	1.70	16	2
1:A:827:VAL:HG13	1:A:827:VAL:O	0.64	1.93	12	20
1:A:801:HIS:HD1	1:A:875:ILE:HD11	0.63	1.52	1	1
1:A:808:LEU:HD23	1:A:871:ILE:CG2	0.63	2.24	14	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:833:VAL:HG12	1:A:841:LYS:HE2	0.63	1.70	15	1
1:A:866:ILE:HD11	1:A:871:ILE:CD1	0.63	2.24	20	1
1:A:801:HIS:HE1	1:A:854:ALA:HB3	0.63	1.54	12	1
1:A:826:THR:N	1:A:853:GLN:NE2	0.63	2.47	4	6
1:A:804:PHE:CE1	1:A:843:LEU:CD1	0.62	2.83	6	3
1:A:808:LEU:HD22	1:A:808:LEU:N	0.62	2.09	2	2
1:A:807:GLY:O	1:A:808:LEU:CD1	0.62	2.48	16	10
1:A:832:LEU:HD21	1:A:840:PRO:HA	0.62	1.69	17	3
1:A:805:ILE:HG22	1:A:872:LYS:O	0.62	1.95	6	7
1:A:801:HIS:NE2	1:A:851:GLU:N	0.62	2.47	7	1
1:A:804:PHE:CZ	1:A:843:LEU:HD21	0.61	2.30	7	2
1:A:803:LEU:CD1	1:A:848:TYR:CE1	0.61	2.82	11	5
1:A:830:LEU:HA	1:A:846:VAL:HG23	0.61	1.71	12	2
1:A:824:HIS:ND1	1:A:861:MET:SD	0.61	2.73	18	5
1:A:808:LEU:HD13	1:A:842:GLY:O	0.61	1.94	8	3
1:A:824:HIS:CD2	1:A:860:LYS:NZ	0.61	2.69	20	1
1:A:817:LEU:CG	1:A:830:LEU:HD11	0.61	2.26	6	9
1:A:826:THR:O	1:A:853:GLN:NE2	0.61	2.33	4	3
1:A:821:CYS:O	1:A:825:GLY:O	0.61	2.19	15	9
1:A:828:LYS:CG	1:A:849:GLU:N	0.61	2.63	16	2
1:A:860:LYS:CB	1:A:860:LYS:NZ	0.61	2.64	18	2
1:A:833:VAL:HG12	1:A:841:LYS:HD2	0.61	1.71	14	4
1:A:803:LEU:CD2	1:A:875:ILE:CD1	0.61	2.79	7	4
1:A:805:ILE:N	1:A:805:ILE:CD1	0.61	2.64	7	1
1:A:866:ILE:CD1	1:A:871:ILE:CG2	0.60	2.79	19	5
1:A:818:GLU:OE2	1:A:827:VAL:CG1	0.60	2.48	8	3
1:A:817:LEU:CG	1:A:830:LEU:HD21	0.60	2.26	7	1
1:A:832:LEU:HD21	1:A:840:PRO:HB2	0.60	1.73	15	9
1:A:834:THR:OG1	1:A:839:LYS:N	0.60	2.34	18	4
1:A:822:LYS:O	1:A:825:GLY:O	0.60	2.20	18	7
1:A:855:SER:O	1:A:858:VAL:CG2	0.59	2.49	18	17
1:A:866:ILE:HD13	1:A:871:ILE:HG21	0.59	1.73	20	2
1:A:850:ASN:OD1	1:A:851:GLU:N	0.59	2.35	3	6
1:A:811:SER:OG	1:A:867:LYS:NZ	0.59	2.34	8	3
1:A:847:GLU:OE2	1:A:848:TYR:O	0.59	2.21	3	6
1:A:843:LEU:HD21	1:A:845:TYR:CE1	0.59	2.32	12	5
1:A:817:LEU:HG	1:A:830:LEU:HD21	0.59	1.74	7	1
1:A:832:LEU:CD2	1:A:840:PRO:CB	0.59	2.80	13	8
1:A:826:THR:N	1:A:853:GLN:OE1	0.59	2.35	2	1
1:A:848:TYR:HB2	1:A:854:ALA:HB2	0.59	1.72	4	11
1:A:867:LYS:C	1:A:868:GLU:OE1	0.59	2.41	12	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:863:GLY:O	1:A:870:ILE:CD1	0.59	2.51	1	4
1:A:830:LEU:HD13	1:A:831:ARG:N	0.59	2.12	5	1
1:A:876:SER:OG	1:A:877:ASN:ND2	0.59	2.36	5	1
1:A:817:LEU:HD13	1:A:817:LEU:C	0.59	2.18	11	1
1:A:819:GLU:OE2	1:A:822:LYS:NZ	0.59	2.35	1	1
1:A:876:SER:O	1:A:877:ASN:C	0.59	2.40	3	2
1:A:808:LEU:CD1	1:A:842:GLY:O	0.59	2.51	15	4
1:A:826:THR:OG1	1:A:828:LYS:NZ	0.58	2.36	10	1
1:A:833:VAL:HB	1:A:843:LEU:O	0.58	1.99	2	20
1:A:829:ASP:OD1	1:A:830:LEU:N	0.58	2.36	7	1
1:A:872:LYS:N	1:A:872:LYS:CD	0.58	2.66	11	1
1:A:801:HIS:CE1	1:A:854:ALA:CB	0.58	2.87	8	4
1:A:854:ALA:O	1:A:858:VAL:CG1	0.58	2.50	20	19
1:A:805:ILE:O	1:A:843:LEU:HD12	0.58	1.99	13	2
1:A:824:HIS:O	1:A:856:GLN:NE2	0.58	2.35	17	1
1:A:807:GLY:O	1:A:808:LEU:CG	0.58	2.51	13	13
1:A:866:ILE:CD1	1:A:871:ILE:HD13	0.58	2.28	20	2
1:A:818:GLU:OE2	1:A:827:VAL:CG2	0.58	2.50	8	1
1:A:822:LYS:HA	1:A:825:GLY:O	0.58	1.98	11	19
1:A:807:GLY:O	1:A:808:LEU:HD13	0.58	1.99	6	2
1:A:803:LEU:N	1:A:803:LEU:CD2	0.58	2.63	10	4
1:A:866:ILE:HD11	1:A:871:ILE:HD13	0.58	1.73	1	6
1:A:817:LEU:O	1:A:821:CYS:SG	0.58	2.57	17	10
1:A:824:HIS:O	1:A:853:GLN:OE1	0.58	2.22	7	1
1:A:803:LEU:CD1	1:A:875:ILE:CD1	0.58	2.81	10	1
1:A:870:ILE:C	1:A:870:ILE:CD1	0.58	2.71	10	1
1:A:846:VAL:HG13	1:A:846:VAL:O	0.58	1.99	5	13
1:A:834:THR:CB	1:A:839:LYS:O	0.58	2.51	4	8
1:A:826:THR:O	1:A:853:GLN:OE1	0.57	2.22	6	4
1:A:834:THR:OG1	1:A:839:LYS:O	0.57	2.23	4	15
1:A:843:LEU:HD23	1:A:844:ALA:N	0.57	2.14	19	5
1:A:804:PHE:CB	1:A:876:SER:OG	0.57	2.52	15	1
1:A:825:GLY:CA	1:A:853:GLN:CD	0.57	2.73	10	2
1:A:832:LEU:HD13	1:A:832:LEU:C	0.57	2.18	7	3
1:A:809:PRO:HG3	1:A:866:ILE:CG2	0.57	2.30	12	13
1:A:849:GLU:O	1:A:849:GLU:CD	0.57	2.43	18	1
1:A:834:THR:HG1	1:A:838:GLY:C	0.56	2.02	13	2
1:A:851:GLU:OE2	1:A:855:SER:OG	0.56	2.22	14	1
1:A:819:GLU:OE2	1:A:822:LYS:CE	0.56	2.54	1	1
1:A:824:HIS:CD2	1:A:861:MET:HG2	0.56	2.36	10	5
1:A:809:PRO:HG2	1:A:812:CYS:SG	0.56	2.40	9	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:807:GLY:O	1:A:808:LEU:HD22	0.56	2.00	6	2
1:A:835:ASN:OD1	1:A:837:ALA:CB	0.56	2.52	19	7
1:A:851:GLU:O	1:A:855:SER:CB	0.56	2.54	6	4
1:A:820:ILE:O	1:A:823:ALA:CB	0.56	2.53	2	9
1:A:824:HIS:HB2	1:A:861:MET:SD	0.56	2.41	10	3
1:A:802:LYS:O	1:A:876:SER:O	0.56	2.23	16	3
1:A:802:LYS:O	1:A:803:LEU:HD22	0.56	2.00	15	1
1:A:803:LEU:CD1	1:A:858:VAL:CG1	0.56	2.84	5	1
1:A:830:LEU:HD23	1:A:846:VAL:HB	0.56	1.76	5	1
1:A:819:GLU:O	1:A:822:LYS:HG2	0.56	2.01	2	18
1:A:848:TYR:CD2	1:A:853:GLN:NE2	0.56	2.74	12	2
1:A:830:LEU:HD23	1:A:831:ARG:N	0.56	2.16	19	2
1:A:866:ILE:HD13	1:A:871:ILE:HG23	0.55	1.76	2	1
1:A:825:GLY:C	1:A:853:GLN:OE1	0.55	2.44	2	2
1:A:864:MET:HB3	1:A:871:ILE:HD11	0.55	1.78	7	6
1:A:824:HIS:CE1	1:A:861:MET:HG3	0.55	2.37	8	2
1:A:801:HIS:NE2	1:A:854:ALA:CB	0.55	2.70	1	2
1:A:818:GLU:HA	1:A:830:LEU:HD22	0.55	1.78	7	1
1:A:814:LYS:HG3	1:A:830:LEU:HD22	0.55	1.79	19	1
1:A:829:ASP:O	1:A:846:VAL:CG2	0.55	2.51	10	4
1:A:802:LYS:CG	1:A:846:VAL:O	0.55	2.55	7	1
1:A:818:GLU:CD	1:A:827:VAL:HG21	0.55	2.21	8	1
1:A:875:ILE:CD1	1:A:876:SER:N	0.55	2.69	15	1
1:A:804:PHE:HE1	1:A:843:LEU:HD11	0.54	1.62	5	3
1:A:828:LYS:HG2	1:A:849:GLU:N	0.54	2.17	7	3
1:A:863:GLY:C	1:A:870:ILE:HD11	0.54	2.23	12	3
1:A:817:LEU:C	1:A:817:LEU:CD1	0.54	2.76	11	1
1:A:824:HIS:CD2	1:A:860:LYS:HE3	0.54	2.38	8	4
1:A:808:LEU:HB3	1:A:812:CYS:SG	0.54	2.43	7	3
1:A:857:ALA:O	1:A:861:MET:CB	0.54	2.56	15	4
1:A:824:HIS:CB	1:A:861:MET:SD	0.54	2.96	2	3
1:A:808:LEU:HD13	1:A:871:ILE:CG2	0.54	2.33	6	1
1:A:854:ALA:O	1:A:858:VAL:CG2	0.54	2.56	20	3
1:A:807:GLY:O	1:A:808:LEU:HG	0.54	2.03	13	17
1:A:813:THR:HG23	1:A:816:GLU:H	0.54	1.63	2	1
1:A:830:LEU:C	1:A:830:LEU:CD1	0.53	2.74	5	1
1:A:809:PRO:CG	1:A:812:CYS:SG	0.53	2.97	19	2
1:A:832:LEU:CD2	1:A:840:PRO:HB3	0.53	2.34	6	5
1:A:848:TYR:CE2	1:A:853:GLN:OE1	0.53	2.62	1	2
1:A:808:LEU:HD23	1:A:842:GLY:CA	0.53	2.34	2	1
1:A:843:LEU:C	1:A:843:LEU:CD1	0.53	2.76	7	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:830:LEU:HD23	1:A:846:VAL:CG2	0.53	2.34	5	1
1:A:828:LYS:CD	1:A:849:GLU:OE1	0.53	2.57	20	1
1:A:860:LYS:NZ	1:A:860:LYS:HB3	0.53	2.19	18	2
1:A:820:ILE:O	1:A:823:ALA:N	0.53	2.42	4	9
1:A:802:LYS:NZ	1:A:847:GLU:HB2	0.53	2.19	13	3
1:A:824:HIS:CD2	1:A:861:MET:HG3	0.53	2.38	16	7
1:A:833:VAL:CG2	1:A:843:LEU:O	0.53	2.57	15	6
1:A:857:ALA:O	1:A:861:MET:N	0.53	2.40	15	6
1:A:818:GLU:N	1:A:830:LEU:CD2	0.53	2.72	7	1
1:A:817:LEU:O	1:A:820:ILE:CG1	0.52	2.57	11	1
1:A:805:ILE:CB	1:A:872:LYS:O	0.52	2.58	3	6
1:A:832:LEU:C	1:A:832:LEU:CD1	0.52	2.77	3	2
1:A:803:LEU:HD11	1:A:854:ALA:CB	0.52	2.33	8	1
1:A:858:VAL:O	1:A:873:VAL:HG11	0.52	2.04	9	1
1:A:803:LEU:N	1:A:803:LEU:CD1	0.52	2.68	16	1
1:A:818:GLU:CA	1:A:830:LEU:HD13	0.52	2.35	12	3
1:A:848:TYR:CD1	1:A:854:ALA:HB2	0.52	2.39	18	1
1:A:808:LEU:CD1	1:A:871:ILE:HG21	0.52	2.34	6	1
1:A:809:PRO:HD2	1:A:812:CYS:SG	0.52	2.45	19	2
1:A:802:LYS:O	1:A:876:SER:N	0.52	2.39	16	1
1:A:808:LEU:CD1	1:A:871:ILE:CG2	0.52	2.88	6	1
1:A:875:ILE:CG2	1:A:875:ILE:O	0.52	2.58	15	1
1:A:808:LEU:HD13	1:A:812:CYS:SG	0.51	2.45	14	2
1:A:853:GLN:OE1	1:A:857:ALA:HB2	0.51	2.05	7	1
1:A:801:HIS:CE1	1:A:851:GLU:HA	0.51	2.40	18	3
1:A:817:LEU:O	1:A:820:ILE:HG12	0.51	2.06	11	1
1:A:804:PHE:HB2	1:A:876:SER:OG	0.51	2.06	15	1
1:A:818:GLU:HB2	1:A:830:LEU:HD23	0.51	1.81	9	1
1:A:857:ALA:O	1:A:861:MET:CG	0.51	2.58	15	2
1:A:832:LEU:HA	1:A:844:ALA:HB1	0.51	1.82	12	2
1:A:803:LEU:HD12	1:A:858:VAL:HG11	0.51	1.83	4	1
1:A:834:THR:OG1	1:A:838:GLY:C	0.51	2.49	13	2
1:A:824:HIS:CE1	1:A:861:MET:CG	0.51	2.93	8	2
1:A:832:LEU:C	1:A:832:LEU:HD23	0.51	2.26	17	3
1:A:811:SER:OG	1:A:867:LYS:CD	0.51	2.58	7	1
1:A:824:HIS:NE2	1:A:861:MET:HG2	0.51	2.21	20	2
1:A:803:LEU:CD1	1:A:858:VAL:HG11	0.51	2.36	4	2
1:A:875:ILE:HD13	1:A:876:SER:N	0.51	2.19	15	1
1:A:833:VAL:HG21	1:A:843:LEU:HD22	0.51	1.83	19	2
1:A:803:LEU:HD22	1:A:858:VAL:HG11	0.50	1.82	11	4
1:A:802:LYS:CB	1:A:846:VAL:O	0.50	2.59	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:824:HIS:HB3	1:A:857:ALA:CB	0.50	2.36	11	6
1:A:826:THR:OG1	1:A:853:GLN:NE2	0.50	2.44	3	3
1:A:805:ILE:CG2	1:A:872:LYS:O	0.50	2.60	6	5
1:A:824:HIS:O	1:A:853:GLN:CG	0.50	2.59	1	1
1:A:809:PRO:HG3	1:A:866:ILE:HG22	0.50	1.84	3	2
1:A:803:LEU:HD13	1:A:875:ILE:HD12	0.50	1.84	20	1
1:A:858:VAL:O	1:A:862:ASP:HB2	0.50	2.07	19	13
1:A:817:LEU:CD2	1:A:830:LEU:HD21	0.50	2.37	5	1
1:A:805:ILE:HB	1:A:872:LYS:O	0.50	2.07	19	12
1:A:866:ILE:CD1	1:A:871:ILE:HG21	0.50	2.31	16	2
1:A:863:GLY:C	1:A:870:ILE:CD1	0.50	2.80	12	2
1:A:813:THR:OG1	1:A:814:LYS:N	0.50	2.45	13	1
1:A:833:VAL:O	1:A:841:LYS:N	0.50	2.44	13	2
1:A:811:SER:OG	1:A:867:LYS:HD2	0.49	2.07	7	1
1:A:809:PRO:CG	1:A:866:ILE:CG2	0.49	2.90	3	1
1:A:875:ILE:HG23	1:A:875:ILE:O	0.49	2.07	1	1
1:A:808:LEU:HD12	1:A:842:GLY:CA	0.49	2.34	3	1
1:A:851:GLU:O	1:A:855:SER:N	0.49	2.43	7	4
1:A:857:ALA:O	1:A:860:LYS:HG2	0.49	2.07	6	10
1:A:851:GLU:O	1:A:855:SER:HB2	0.49	2.07	11	4
1:A:828:LYS:CD	1:A:849:GLU:HA	0.49	2.38	17	3
1:A:832:LEU:HD23	1:A:840:PRO:HB3	0.49	1.85	6	2
1:A:824:HIS:CE1	1:A:861:MET:HG2	0.49	2.42	16	2
1:A:850:ASN:OD1	1:A:852:SER:OG	0.49	2.24	7	1
1:A:818:GLU:OE1	1:A:830:LEU:HB3	0.49	2.08	8	2
1:A:834:THR:OG1	1:A:839:LYS:C	0.49	2.51	18	3
1:A:826:THR:N	1:A:853:GLN:HE22	0.49	2.05	10	1
1:A:808:LEU:CD1	1:A:842:GLY:HA2	0.48	2.37	16	2
1:A:862:ASP:HA	1:A:873:VAL:HG21	0.48	1.83	9	1
1:A:833:VAL:HG21	1:A:843:LEU:CD2	0.48	2.38	11	1
1:A:808:LEU:HD12	1:A:842:GLY:O	0.48	2.08	13	2
1:A:830:LEU:HD23	1:A:830:LEU:C	0.48	2.29	19	1
1:A:830:LEU:HD23	1:A:846:VAL:CB	0.48	2.38	5	1
1:A:848:TYR:CD2	1:A:854:ALA:HB2	0.48	2.43	7	2
1:A:826:THR:H	1:A:853:GLN:NE2	0.48	2.07	15	6
1:A:867:LYS:N	1:A:867:LYS:HD2	0.48	2.23	20	1
1:A:818:GLU:HA	1:A:821:CYS:SG	0.48	2.48	15	3
1:A:832:LEU:HD23	1:A:840:PRO:CB	0.48	2.37	13	2
1:A:818:GLU:CA	1:A:830:LEU:CD2	0.48	2.91	7	1
1:A:824:HIS:ND1	1:A:860:LYS:HE3	0.48	2.23	1	1
1:A:875:ILE:O	1:A:875:ILE:CG2	0.48	2.61	1	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:866:ILE:O	1:A:867:LYS:HB2	0.48	2.09	18	2
1:A:807:GLY:C	1:A:808:LEU:CD1	0.48	2.68	12	1
1:A:801:HIS:CE1	1:A:803:LEU:HD21	0.48	2.44	1	2
1:A:801:HIS:CE1	1:A:851:GLU:CA	0.48	2.97	2	1
1:A:824:HIS:CD2	1:A:860:LYS:HG3	0.48	2.43	3	5
1:A:809:PRO:HG2	1:A:866:ILE:CG2	0.48	2.38	1	3
1:A:825:GLY:HA3	1:A:853:GLN:CG	0.48	2.39	15	6
1:A:808:LEU:HD13	1:A:871:ILE:HG22	0.48	1.85	6	1
1:A:851:GLU:O	1:A:855:SER:OG	0.48	2.31	8	2
1:A:805:ILE:CG2	1:A:873:VAL:HG13	0.48	2.38	4	1
1:A:805:ILE:O	1:A:843:LEU:HD22	0.48	2.09	8	1
1:A:858:VAL:HB	1:A:873:VAL:CG1	0.48	2.39	16	4
1:A:801:HIS:CE1	1:A:851:GLU:H	0.47	2.27	15	1
1:A:825:GLY:HA3	1:A:853:GLN:CD	0.47	2.30	1	6
1:A:833:VAL:O	1:A:841:LYS:HB2	0.47	2.09	20	6
1:A:824:HIS:ND1	1:A:860:LYS:HD3	0.47	2.23	19	2
1:A:808:LEU:HD12	1:A:808:LEU:N	0.47	2.20	12	1
1:A:803:LEU:HG	1:A:848:TYR:CE1	0.47	2.43	15	1
1:A:857:ALA:O	1:A:861:MET:HB2	0.47	2.09	2	5
1:A:814:LYS:NZ	1:A:831:ARG:HA	0.47	2.24	8	2
1:A:832:LEU:CD1	1:A:841:LYS:O	0.47	2.55	13	2
1:A:809:PRO:CG	1:A:866:ILE:HB	0.47	2.38	18	1
1:A:809:PRO:HG3	1:A:866:ILE:O	0.47	2.08	10	2
1:A:828:LYS:HD2	1:A:849:GLU:OE1	0.47	2.09	2	1
1:A:850:ASN:OD1	1:A:852:SER:N	0.47	2.46	7	1
1:A:812:CYS:SG	1:A:866:ILE:HG21	0.47	2.49	19	3
1:A:862:ASP:HA	1:A:873:VAL:CG2	0.47	2.40	9	2
1:A:808:LEU:N	1:A:808:LEU:CD2	0.47	2.77	6	2
1:A:828:LYS:HE3	1:A:849:GLU:CG	0.47	2.38	12	1
1:A:828:LYS:CE	1:A:849:GLU:HA	0.47	2.39	9	1
1:A:872:LYS:N	1:A:872:LYS:HD3	0.47	2.24	11	1
1:A:848:TYR:CE2	1:A:853:GLN:NE2	0.47	2.83	12	1
1:A:814:LYS:HD3	1:A:814:LYS:C	0.47	2.30	6	2
1:A:828:LYS:HD3	1:A:849:GLU:OE1	0.47	2.10	20	2
1:A:857:ALA:O	1:A:861:MET:HG3	0.47	2.10	15	2
1:A:828:LYS:CG	1:A:849:GLU:CA	0.47	2.93	16	1
1:A:830:LEU:HG	1:A:846:VAL:CG2	0.47	2.39	19	1
1:A:828:LYS:HE3	1:A:849:GLU:OE1	0.47	2.10	2	1
1:A:857:ALA:HA	1:A:860:LYS:CD	0.47	2.40	17	7
1:A:811:SER:HB3	1:A:867:LYS:NZ	0.47	2.25	6	1
1:A:817:LEU:HG	1:A:830:LEU:CD1	0.47	2.39	6	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:835:ASN:OD1	1:A:837:ALA:N	0.47	2.48	1	10
1:A:832:LEU:CD1	1:A:833:VAL:N	0.47	2.71	3	1
1:A:828:LYS:HE2	1:A:849:GLU:CB	0.47	2.40	9	1
1:A:825:GLY:HA2	1:A:853:GLN:OE1	0.47	2.09	11	2
1:A:856:GLN:OE1	1:A:860:LYS:HD2	0.47	2.10	17	1
1:A:801:HIS:NE2	1:A:848:TYR:O	0.47	2.48	19	1
1:A:801:HIS:C	1:A:802:LYS:HD2	0.46	2.31	2	2
1:A:870:ILE:O	1:A:870:ILE:HG13	0.46	2.10	10	2
1:A:867:LYS:O	1:A:868:GLU:HB2	0.46	2.11	19	5
1:A:849:GLU:OE1	1:A:850:ASN:HB2	0.46	2.10	5	1
1:A:839:LYS:NZ	1:A:841:LYS:HG2	0.46	2.25	7	1
1:A:830:LEU:C	1:A:830:LEU:HD23	0.46	2.31	12	3
1:A:824:HIS:CD2	1:A:860:LYS:HZ1	0.46	2.28	20	1
1:A:833:VAL:O	1:A:841:LYS:HG3	0.46	2.10	3	1
1:A:856:GLN:CD	1:A:860:LYS:HD2	0.46	2.31	17	1
1:A:856:GLN:O	1:A:860:LYS:HG2	0.46	2.10	15	6
1:A:802:LYS:CE	1:A:847:GLU:HB2	0.46	2.40	19	6
1:A:814:LYS:HE3	1:A:830:LEU:O	0.46	2.10	16	4
1:A:811:SER:OG	1:A:867:LYS:CE	0.46	2.63	7	1
1:A:832:LEU:CD2	1:A:840:PRO:HB2	0.46	2.41	13	1
1:A:866:ILE:HD11	1:A:871:ILE:CG2	0.46	2.40	18	1
1:A:824:HIS:CB	1:A:860:LYS:HE3	0.46	2.40	10	2
1:A:802:LYS:O	1:A:876:SER:HB2	0.46	2.11	15	1
1:A:848:TYR:CG	1:A:854:ALA:CB	0.46	2.94	11	1
1:A:828:LYS:HG3	1:A:849:GLU:N	0.46	2.25	16	1
1:A:801:HIS:NE2	1:A:851:GLU:HA	0.46	2.26	8	5
1:A:825:GLY:HA3	1:A:853:GLN:NE2	0.46	2.25	12	2
1:A:834:THR:HA	1:A:839:LYS:O	0.46	2.11	18	2
1:A:870:ILE:HG23	1:A:870:ILE:O	0.46	2.11	8	5
1:A:814:LYS:HG3	1:A:830:LEU:CD2	0.46	2.40	17	1
1:A:862:ASP:C	1:A:862:ASP:OD1	0.46	2.54	18	1
1:A:866:ILE:CD1	1:A:871:ILE:CD1	0.46	2.91	20	1
1:A:817:LEU:HG	1:A:830:LEU:CD2	0.46	2.40	7	1
1:A:843:LEU:C	1:A:843:LEU:CD2	0.46	2.84	11	2
1:A:833:VAL:CB	1:A:843:LEU:O	0.45	2.64	15	7
1:A:830:LEU:CD2	1:A:846:VAL:HB	0.45	2.42	5	1
1:A:828:LYS:NZ	1:A:849:GLU:HB2	0.45	2.26	10	1
1:A:818:GLU:CG	1:A:827:VAL:HG11	0.45	2.42	18	1
1:A:806:SER:OG	1:A:872:LYS:HE3	0.45	2.10	20	1
1:A:830:LEU:CD1	1:A:846:VAL:HB	0.45	2.41	9	2
1:A:802:LYS:HD2	1:A:802:LYS:N	0.45	2.27	20	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:855:SER:O	1:A:859:MET:HG2	0.45	2.12	8	1
1:A:853:GLN:O	1:A:856:GLN:HG2	0.45	2.11	11	1
1:A:856:GLN:NE2	1:A:860:LYS:CD	0.45	2.79	17	1
1:A:803:LEU:HD12	1:A:848:TYR:HE1	0.45	1.67	19	1
1:A:802:LYS:O	1:A:876:SER:HB3	0.45	2.11	8	9
1:A:818:GLU:OE2	1:A:827:VAL:CB	0.45	2.64	8	1
1:A:809:PRO:HG2	1:A:812:CYS:CB	0.45	2.42	13	1
1:A:875:ILE:HD13	1:A:876:SER:H	0.45	1.71	15	1
1:A:835:ASN:HD21	1:A:837:ALA:HB3	0.45	1.67	14	1
1:A:811:SER:OG	1:A:867:LYS:HE2	0.45	2.11	7	1
1:A:819:GLU:O	1:A:822:LYS:HG3	0.45	2.12	7	1
1:A:822:LYS:HG3	1:A:823:ALA:N	0.45	2.26	12	1
1:A:821:CYS:CB	1:A:827:VAL:HB	0.45	2.42	10	5
1:A:828:LYS:CE	1:A:849:GLU:HB2	0.45	2.42	10	2
1:A:816:GLU:O	1:A:820:ILE:HG12	0.45	2.11	10	4
1:A:827:VAL:O	1:A:827:VAL:CG1	0.45	2.65	17	7
1:A:818:GLU:HG3	1:A:827:VAL:HG21	0.45	1.89	18	1
1:A:801:HIS:O	1:A:847:GLU:HG3	0.44	2.12	15	6
1:A:814:LYS:HG3	1:A:830:LEU:CD1	0.44	2.41	5	1
1:A:801:HIS:NE2	1:A:848:TYR:HB2	0.44	2.27	11	2
1:A:833:VAL:O	1:A:841:LYS:HD3	0.44	2.11	11	2
1:A:812:CYS:HA	1:A:816:GLU:OE1	0.44	2.13	6	8
1:A:835:ASN:OD1	1:A:835:ASN:C	0.44	2.56	13	17
1:A:803:LEU:CD2	1:A:858:VAL:HG11	0.44	2.41	2	2
1:A:805:ILE:HG22	1:A:873:VAL:CA	0.44	2.36	4	1
1:A:806:SER:OG	1:A:872:LYS:HD2	0.44	2.11	9	1
1:A:864:MET:HB3	1:A:871:ILE:CD1	0.44	2.42	15	4
1:A:832:LEU:HD23	1:A:832:LEU:O	0.44	2.12	17	1
1:A:852:SER:HA	1:A:855:SER:OG	0.44	2.12	18	1
1:A:852:SER:O	1:A:855:SER:OG	0.44	2.24	9	3
1:A:851:GLU:O	1:A:852:SER:C	0.44	2.56	7	1
1:A:832:LEU:HD11	1:A:841:LYS:H	0.44	1.73	9	1
1:A:809:PRO:HB3	1:A:869:ASN:OD1	0.44	2.13	16	3
1:A:858:VAL:CA	1:A:873:VAL:HG11	0.44	2.42	16	1
1:A:814:LYS:HG2	1:A:830:LEU:CD2	0.44	2.43	6	2
1:A:846:VAL:O	1:A:846:VAL:CG1	0.44	2.66	5	1
1:A:803:LEU:HD22	1:A:803:LEU:H	0.44	1.68	10	1
1:A:804:PHE:CE1	1:A:843:LEU:HG	0.44	2.47	6	1
1:A:858:VAL:HB	1:A:873:VAL:HG12	0.44	1.89	19	2
1:A:809:PRO:HD2	1:A:812:CYS:CB	0.44	2.42	1	2
1:A:818:GLU:HA	1:A:830:LEU:CD2	0.44	2.42	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:857:ALA:C	1:A:861:MET:HE2	0.44	2.33	10	1
1:A:803:LEU:HD21	1:A:875:ILE:CD1	0.44	2.42	12	1
1:A:802:LYS:CD	1:A:802:LYS:N	0.43	2.81	2	1
1:A:841:LYS:C	1:A:843:LEU:H	0.43	2.16	16	4
1:A:848:TYR:CD2	1:A:853:GLN:OE1	0.43	2.71	6	3
1:A:877:ASN:N	1:A:877:ASN:OD1	0.43	2.49	8	1
1:A:804:PHE:CD1	1:A:804:PHE:C	0.43	2.90	18	1
1:A:801:HIS:HE1	1:A:851:GLU:N	0.43	2.10	5	2
1:A:816:GLU:OE2	1:A:820:ILE:CG1	0.43	2.66	7	1
1:A:824:HIS:HB3	1:A:857:ALA:HB1	0.43	1.89	20	2
1:A:808:LEU:CD2	1:A:871:ILE:CG2	0.43	2.96	14	1
1:A:808:LEU:HB3	1:A:812:CYS:CB	0.43	2.43	2	1
1:A:841:LYS:C	1:A:843:LEU:N	0.43	2.71	9	4
1:A:801:HIS:HE1	1:A:803:LEU:HD21	0.43	1.73	11	1
1:A:849:GLU:OE1	1:A:850:ASN:CB	0.43	2.66	12	1
1:A:807:GLY:C	1:A:808:LEU:HG	0.43	2.33	14	3
1:A:801:HIS:CE1	1:A:850:ASN:HA	0.43	2.48	7	1
1:A:801:HIS:HE1	1:A:854:ALA:CB	0.43	2.26	10	2
1:A:828:LYS:HG3	1:A:849:GLU:HA	0.43	1.90	16	3
1:A:832:LEU:HD21	1:A:841:LYS:H	0.43	1.72	19	2
1:A:801:HIS:NE2	1:A:850:ASN:C	0.43	2.72	7	1
1:A:870:ILE:O	1:A:870:ILE:HG23	0.43	2.14	15	2
1:A:801:HIS:O	1:A:847:GLU:HG2	0.43	2.14	5	2
1:A:804:PHE:HD1	1:A:845:TYR:CE2	0.43	2.31	10	1
1:A:802:LYS:NZ	1:A:847:GLU:CB	0.43	2.82	6	1
1:A:851:GLU:HG2	1:A:855:SER:OG	0.43	2.14	7	1
1:A:819:GLU:OE2	1:A:822:LYS:HE2	0.43	2.14	1	1
1:A:841:LYS:O	1:A:843:LEU:N	0.43	2.52	9	1
1:A:857:ALA:HB1	1:A:861:MET:HE1	0.43	1.89	13	1
1:A:830:LEU:HD22	1:A:831:ARG:N	0.42	2.28	5	1
1:A:875:ILE:CD1	1:A:875:ILE:C	0.42	2.86	15	1
1:A:864:MET:O	1:A:871:ILE:HG12	0.42	2.13	20	2
1:A:808:LEU:HD23	1:A:842:GLY:HA3	0.42	1.90	2	1
1:A:865:THR:HA	1:A:869:ASN:O	0.42	2.13	4	5
1:A:801:HIS:O	1:A:847:GLU:HA	0.42	2.14	6	1
1:A:814:LYS:HB2	1:A:832:LEU:CB	0.42	2.43	12	1
1:A:804:PHE:HD1	1:A:845:TYR:CZ	0.42	2.32	17	1
1:A:808:LEU:CD1	1:A:842:GLY:CA	0.42	2.97	16	1
1:A:877:ASN:H	1:A:877:ASN:ND2	0.42	2.13	2	1
1:A:851:GLU:OE2	1:A:855:SER:HB2	0.42	2.14	11	1
1:A:803:LEU:HD22	1:A:848:TYR:CE1	0.42	2.49	16	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:824:HIS:HD2	1:A:861:MET:SD	0.42	2.34	9	2
1:A:832:LEU:CD2	1:A:840:PRO:HA	0.42	2.40	17	1
1:A:840:PRO:C	1:A:841:LYS:HG3	0.42	2.35	13	1
1:A:866:ILE:O	1:A:869:ASN:HB2	0.42	2.15	9	5
1:A:853:GLN:OE1	1:A:853:GLN:O	0.42	2.37	7	1
1:A:851:GLU:OE2	1:A:855:SER:HB3	0.42	2.15	9	1
1:A:814:LYS:HE2	1:A:832:LEU:N	0.42	2.30	17	1
1:A:875:ILE:HG13	1:A:877:ASN:OD1	0.41	2.15	4	1
1:A:861:MET:C	1:A:873:VAL:HG21	0.41	2.35	16	1
1:A:858:VAL:O	1:A:862:ASP:N	0.41	2.53	19	2
1:A:850:ASN:OD1	1:A:852:SER:CB	0.41	2.68	7	1
1:A:802:LYS:HZ2	1:A:847:GLU:N	0.41	2.13	10	1
1:A:816:GLU:O	1:A:820:ILE:HG23	0.41	2.15	11	1
1:A:828:LYS:HD3	1:A:849:GLU:HA	0.41	1.90	11	1
1:A:832:LEU:HA	1:A:844:ALA:CB	0.41	2.45	17	1
1:A:848:TYR:CD1	1:A:854:ALA:CB	0.41	3.02	18	1
1:A:863:GLY:O	1:A:870:ILE:HD11	0.41	2.14	1	1
1:A:824:HIS:CD2	1:A:860:LYS:CE	0.41	3.03	20	2
1:A:855:SER:C	1:A:858:VAL:HG22	0.41	2.35	16	2
1:A:824:HIS:CB	1:A:857:ALA:CB	0.41	2.98	8	1
1:A:856:GLN:HG3	1:A:857:ALA:N	0.41	2.30	17	1
1:A:824:HIS:O	1:A:853:GLN:HG2	0.41	2.14	1	1
1:A:828:LYS:NZ	1:A:849:GLU:HG2	0.41	2.31	12	1
1:A:858:VAL:HA	1:A:873:VAL:HG11	0.41	1.91	14	1
1:A:819:GLU:CD	1:A:822:LYS:HE2	0.41	2.35	1	1
1:A:826:THR:N	1:A:853:GLN:CD	0.41	2.74	10	3
1:A:828:LYS:HG3	1:A:849:GLU:CA	0.41	2.46	16	1
1:A:826:THR:H	1:A:853:GLN:CD	0.41	2.18	6	1
1:A:803:LEU:HD23	1:A:875:ILE:CD1	0.41	2.37	7	1
1:A:814:LYS:NZ	1:A:832:LEU:H	0.41	2.13	7	1
1:A:822:LYS:CA	1:A:825:GLY:O	0.41	2.68	11	1
1:A:801:HIS:CE1	1:A:875:ILE:HD11	0.41	2.51	14	1
1:A:832:LEU:HD21	1:A:840:PRO:CA	0.41	2.43	17	1
1:A:848:TYR:HE2	1:A:853:GLN:OE1	0.41	1.98	1	1
1:A:808:LEU:HD13	1:A:842:GLY:CA	0.41	2.43	13	1
1:A:814:LYS:HG3	1:A:830:LEU:HD21	0.41	1.92	3	1
1:A:828:LYS:HD2	1:A:849:GLU:HA	0.41	1.92	6	1
1:A:817:LEU:CB	1:A:830:LEU:HD21	0.41	2.45	7	1
1:A:824:HIS:CG	1:A:861:MET:HG2	0.41	2.51	16	1
1:A:864:MET:O	1:A:870:ILE:HD12	0.41	2.16	16	1
1:A:818:GLU:HG3	1:A:827:VAL:HG11	0.41	1.93	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Models Total
1:A:836:ARG:HD3	1:A:836:ARG:C	0.41	2.35	20	1
1:A:877:ASN:ND2	1:A:877:ASN:N	0.41	2.69	2	1
1:A:809:PRO:HG2	1:A:812:CYS:HB2	0.41	1.93	13	2
1:A:809:PRO:CD	1:A:812:CYS:SG	0.41	3.09	19	1
1:A:824:HIS:HD2	1:A:860:LYS:CE	0.40	2.29	2	1
1:A:819:GLU:O	1:A:822:LYS:CG	0.40	2.68	18	1
1:A:817:LEU:HD12	1:A:830:LEU:CD1	0.40	2.29	11	1
1:A:828:LYS:HB2	1:A:847:GLU:O	0.40	2.15	2	1
1:A:804:PHE:CD1	1:A:845:TYR:CE2	0.40	3.09	4	1
1:A:805:ILE:HG22	1:A:873:VAL:HG13	0.40	1.93	4	1
1:A:824:HIS:CE1	1:A:864:MET:CE	0.40	3.03	16	1
1:A:804:PHE:CD1	1:A:805:ILE:N	0.40	2.89	18	1
1:A:853:GLN:O	1:A:857:ALA:CB	0.40	2.69	18	1
1:A:804:PHE:HE1	1:A:843:LEU:CD1	0.40	2.28	9	2
1:A:830:LEU:HD12	1:A:846:VAL:CG2	0.40	2.39	15	1

6.3　Torsion angles　ⓘ

6.3.1　Protein backbone　ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	76/84 (90%)	72±1 (95±1%)	4±1 (5±1%)	0±0 (0±1%)	38	78
All	All	1520/1680 (90%)	1438 (95%)	76 (5%)	6 (0%)	38	78

All 2 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	807	GLY	4
1	A	842	GLY	2

6.3.2　Protein sidechains　ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR

entries. The Analysed column shows the number of residues for which the sidechain conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	66/72 (92%)	63±1 (96±2%)	3±1 (4±2%)	34	82
All	All	1320/1440 (92%)	1266 (96%)	54 (4%)	34	82

All 22 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	860	LYS	12
1	A	801	HIS	5
1	A	808	LEU	4
1	A	802	LYS	3
1	A	814	LYS	3
1	A	836	ARG	3
1	A	853	GLN	2
1	A	867	LYS	2
1	A	832	LEU	2
1	A	835	ASN	2
1	A	822	LYS	2
1	A	866	ILE	2
1	A	805	ILE	2
1	A	831	ARG	2
1	A	830	LEU	1
1	A	803	LEU	1
1	A	870	ILE	1
1	A	817	LEU	1
1	A	872	LYS	1
1	A	839	LYS	1
1	A	875	ILE	1
1	A	828	LYS	1

6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.6 Ligand geometry ⓘ

There are no ligands in this entry.

6.7 Other polymers ⓘ

There are no such molecules in this entry.

6.8 Polymer linkage issues ⓘ

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 89% for the well-defined parts and 87% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *chem_shift_list_1*

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	1076
Number of shifts mapped to atoms	1076
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	2

The following errors were found when reading this chemical shift list.

- Chemical shift has been reported more than once. All 88 occurrences are reported below.

List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	798	LEU	HD12	0.912	0.01	.
1	A	798	LEU	HD13	0.912	0.01	.
1	A	798	LEU	HD22	0.855	0.01	.
1	A	798	LEU	HD23	0.855	0.01	.
1	A	803	LEU	HD12	0.994	0.01	.
1	A	803	LEU	HD13	0.994	0.01	.
1	A	803	LEU	HD22	0.871	0.00	.
1	A	803	LEU	HD23	0.871	0.00	.
1	A	805	ILE	HD12	0.659	0.01	.
1	A	805	ILE	HD13	0.659	0.01	.
1	A	805	ILE	HG22	0.759	0.01	.
1	A	805	ILE	HG23	0.759	0.01	.
1	A	808	LEU	HD12	0.826	0.01	.
1	A	808	LEU	HD13	0.826	0.01	.
1	A	808	LEU	HD22	0.566	0.01	.

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	808	LEU	HD23	0.566	0.01	.
1	A	817	LEU	HD12	0.762	0.01	.
1	A	817	LEU	HD13	0.762	0.01	.
1	A	817	LEU	HD22	0.635	0.00	.
1	A	817	LEU	HD23	0.635	0.00	.
1	A	820	ILE	HD12	0.865	0.01	.
1	A	820	ILE	HD13	0.865	0.01	.
1	A	820	ILE	HG22	1.029	0.00	.
1	A	820	ILE	HG23	1.029	0.00	.
1	A	823	ALA	HB2	0.925	0.01	.
1	A	823	ALA	HB3	0.925	0.01	.
1	A	827	VAL	HG12	0.596	0.01	.
1	A	827	VAL	HG13	0.596	0.01	.
1	A	827	VAL	HG22	0.533	0.01	.
1	A	827	VAL	HG23	0.533	0.01	.
1	A	830	LEU	HD12	0.771	0.00	.
1	A	830	LEU	HD13	0.771	0.00	.
1	A	830	LEU	HD22	0.782	0.01	.
1	A	830	LEU	HD23	0.782	0.01	.
1	A	832	LEU	HD12	0.851	0.01	.
1	A	832	LEU	HD13	0.851	0.01	.
1	A	832	LEU	HD22	0.745	0.01	.
1	A	832	LEU	HD23	0.745	0.01	.
1	A	833	VAL	HG12	1.048	0.01	.
1	A	833	VAL	HG13	1.048	0.01	.
1	A	833	VAL	HG22	1.027	0.01	.
1	A	833	VAL	HG23	1.027	0.01	.
1	A	834	THR	HG22	0.981	0.01	.
1	A	834	THR	HG23	0.981	0.01	.
1	A	837	ALA	HB2	1.432	0.01	.
1	A	837	ALA	HB3	1.432	0.01	.
1	A	843	LEU	HD12	1.028	0.00	.
1	A	843	LEU	HD13	1.028	0.00	.
1	A	843	LEU	HD22	0.972	0.01	.
1	A	843	LEU	HD23	0.972	0.01	.
1	A	844	ALA	HB2	1.088	0.01	.
1	A	844	ALA	HB3	1.088	0.01	.
1	A	846	VAL	HG12	0.816	0.01	.
1	A	846	VAL	HG13	0.816	0.01	.
1	A	846	VAL	HG22	0.741	0.01	.
1	A	846	VAL	HG23	0.741	0.01	.

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	854	ALA	HB2	1.500	0.01	.
1	A	854	ALA	HB3	1.500	0.01	.
1	A	857	ALA	HB2	1.327	0.01	.
1	A	857	ALA	HB3	1.327	0.01	.
1	A	858	VAL	HG12	0.982	0.01	.
1	A	858	VAL	HG13	0.982	0.01	.
1	A	858	VAL	HG22	0.982	0.01	.
1	A	858	VAL	HG23	0.982	0.01	.
1	A	865	THR	HG22	0.977	0.01	.
1	A	865	THR	HG23	0.977	0.01	.
1	A	866	ILE	HD12	0.764	0.01	.
1	A	866	ILE	HD13	0.764	0.01	.
1	A	866	ILE	HG22	0.771	0.01	.
1	A	866	ILE	HG23	0.771	0.01	.
1	A	870	ILE	HD12	0.795	0.01	.
1	A	870	ILE	HD13	0.795	0.01	.
1	A	870	ILE	HG22	0.765	0.00	.
1	A	870	ILE	HG23	0.765	0.00	.
1	A	871	ILE	HD12	0.636	0.01	.
1	A	871	ILE	HD13	0.636	0.01	.
1	A	871	ILE	HG22	0.696	0.01	.
1	A	871	ILE	HG23	0.696	0.01	.
1	A	873	VAL	HG12	0.917	0.01	.
1	A	873	VAL	HG13	0.917	0.01	.
1	A	873	VAL	HG22	0.876	0.01	.
1	A	873	VAL	HG23	0.876	0.01	.
1	A	874	ALA	HB2	1.454	0.03	.
1	A	874	ALA	HB3	1.454	0.03	.
1	A	875	ILE	HD12	0.825	0.01	.
1	A	875	ILE	HD13	0.825	0.01	.
1	A	875	ILE	HG22	1.006	0.01	.
1	A	875	ILE	HG23	1.006	0.01	.

7.1.2   Chemical shift referencing ⓘ

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction ± precision, *ppm*	Suggested action
$^{13}C_\alpha$	82	-0.70 ± 0.18	Should be applied
$^{13}C_\beta$	77	-0.59 ± 0.18	Should be applied
$^{13}C'$	82	2.74 ± 0.26	Should be applied

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Nucleus	# values	Correction ± precision, *ppm*	Suggested action
^{15}N	78	0.25 ± 0.42	None needed (< 0.5 ppm)

7.1.3 Completeness of resonance assignments ⓘ

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 89%, i.e. 925 atoms were assigned a chemical shift out of a possible 1044. 0 out of 11 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	384/386 (99%)	156/157 (99%)	154/154 (100%)	74/75 (99%)
Sidechain	516/606 (85%)	350/394 (89%)	160/191 (84%)	6/21 (29%)
Aromatic	25/52 (48%)	16/26 (62%)	9/24 (38%)	0/2 (0%)
Overall	925/1044 (89%)	522/577 (90%)	323/369 (88%)	80/98 (82%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 87%, i.e. 988 atoms were assigned a chemical shift out of a possible 1136. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	407/422 (96%)	165/172 (96%)	164/168 (98%)	78/82 (95%)
Sidechain	554/655 (85%)	377/426 (88%)	171/207 (83%)	6/22 (27%)
Aromatic	27/59 (46%)	17/30 (57%)	10/26 (38%)	0/3 (0%)
Overall	988/1136 (87%)	559/628 (89%)	345/401 (86%)	84/107 (79%)

7.1.4 Statistically unusual chemical shifts ⓘ

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

List Id	Chain	Res	Type	Atom	Shift, *ppm*	Expected range, *ppm*	Z-score
1	A	828	LYS	HE2	1.61	1.95 − 3.88	-6.8
1	A	828	LYS	HE3	1.61	1.92 − 3.89	-6.6

7.1.5 Random Coil Index (RCI) plots ⓘ

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-

defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition.If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain A:
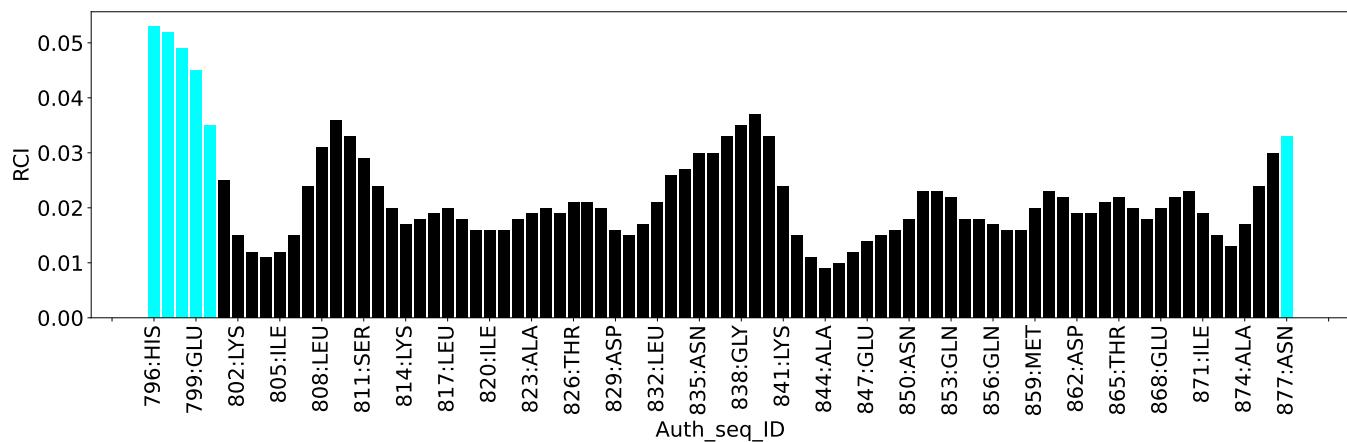
8 NMR restraints analysis ⓘ

8.1 Conformationally restricting restraints ⓘ

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

Description	Value
Total distance restraints	1215
Intra-residue ($|i-j|=0$)	304
Sequential ($|i-j|=1$)	362
Medium range ($|i-j|>1$ and $|i-j|<5$)	175
Long range ($|i-j|\geq 5$)	374
Inter-chain	0
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	14.5
Number of long range restraints per residue[1]	4.5

[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)	9.9	0.2
0.2-0.5 (Medium)	4.1	0.41
>0.5 (Large)	None	None

8.2.2 Average number of dihedral-angle violations per model ⓘ

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

9 Distance violation analysis (i)

9.1 Summary of distance violations (i)

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

Restraints type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
Intra-residue (|i-j|=0)	304	25.0	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	261	21.5	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	43	3.5	0	0.0	0.0	0	0.0	0.0
Sequential (|i-j|=1)	362	29.8	16	4.4	1.3	3	0.8	0.2
Backbone-Backbone	88	7.2	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	222	18.3	9	4.1	0.7	2	0.9	0.2
Sidechain-Sidechain	52	4.3	7	13.5	0.6	1	1.9	0.1
Medium range (|i-j|>1 & |i-j|<5)	175	14.4	10	5.7	0.8	0	0.0	0.0
Backbone-Backbone	31	2.6	1	3.2	0.1	0	0.0	0.0
Backbone-Sidechain	84	6.9	7	8.3	0.6	0	0.0	0.0
Sidechain-Sidechain	60	4.9	2	3.3	0.2	0	0.0	0.0
Long range (|i-j|≥5)	374	30.8	22	5.9	1.8	2	0.5	0.2
Backbone-Backbone	32	2.6	2	6.2	0.2	0	0.0	0.0
Backbone-Sidechain	174	14.3	12	6.9	1.0	1	0.6	0.1
Sidechain-Sidechain	168	13.8	8	4.8	0.7	1	0.6	0.1
Inter-chain	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	1215	100.0	48	4.0	4.0	5	0.4	0.4
Backbone-Backbone	151	12.4	3	2.0	0.2	0	0.0	0.0
Backbone-Sidechain	741	61.0	28	3.8	2.3	3	0.4	0.2
Sidechain-Sidechain	323	26.6	17	5.3	1.4	2	0.6	0.2

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

9.1.1   Bar chart : Distribution of distance restraints and violations ⓘ
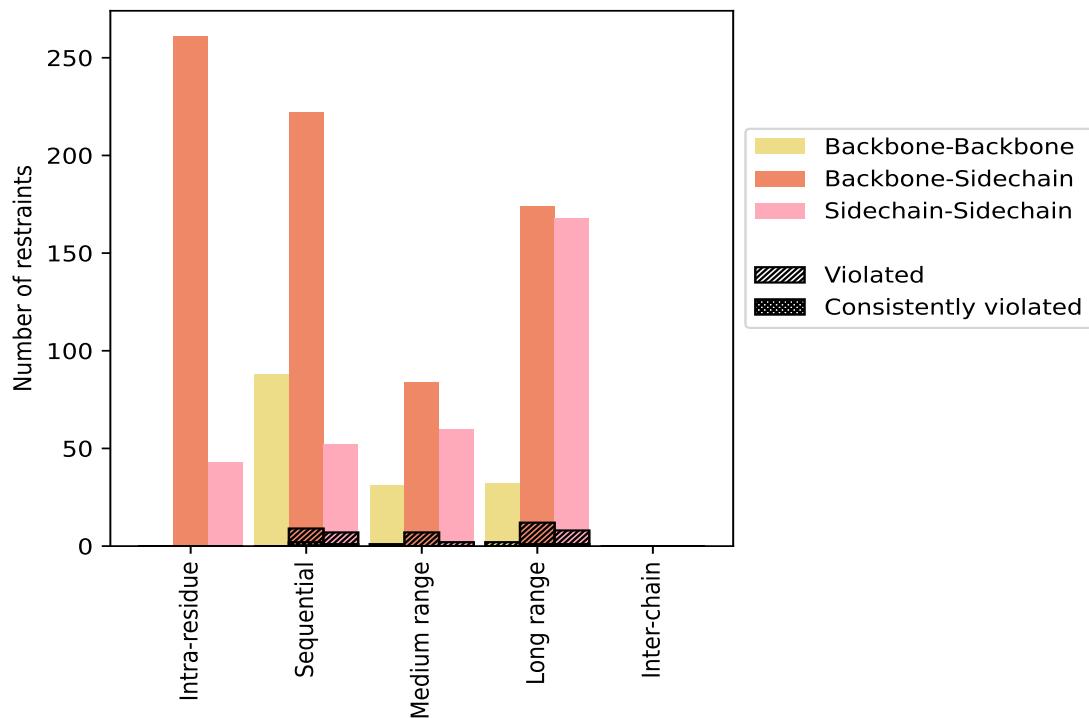
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfied bonds are counted in their appropriate category on the x-axis

9.2   Distance violation statistics for each model ⓘ

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

Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
1	0	5	4	8	0	17	0.19	0.38	0.08	0.17
2	0	6	3	8	0	17	0.17	0.41	0.08	0.15
3	0	4	5	5	0	14	0.19	0.39	0.07	0.17
4	0	4	4	5	0	13	0.19	0.37	0.08	0.16
5	0	6	3	5	0	14	0.17	0.38	0.07	0.16
6	0	5	2	6	0	13	0.17	0.37	0.07	0.14
7	0	3	5	7	0	15	0.18	0.41	0.08	0.15
8	0	4	5	8	0	17	0.17	0.38	0.07	0.16
9	0	4	3	7	0	14	0.18	0.38	0.08	0.15
10	0	4	5	6	0	15	0.19	0.38	0.08	0.16
11	0	5	5	5	0	15	0.2	0.38	0.07	0.17

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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	3	5	6	0	14	0.2	0.38	0.08	0.18
13	0	6	4	5	0	15	0.18	0.33	0.07	0.15
14	0	6	3	4	0	13	0.19	0.39	0.07	0.2
15	0	6	5	6	0	17	0.18	0.38	0.07	0.15
16	0	5	3	7	0	15	0.19	0.36	0.07	0.17
17	0	6	3	4	0	13	0.19	0.38	0.08	0.17
18	0	5	2	8	0	15	0.16	0.38	0.07	0.15
19	0	6	3	5	0	14	0.17	0.37	0.07	0.16
20	0	5	2	5	0	12	0.19	0.37	0.07	0.18

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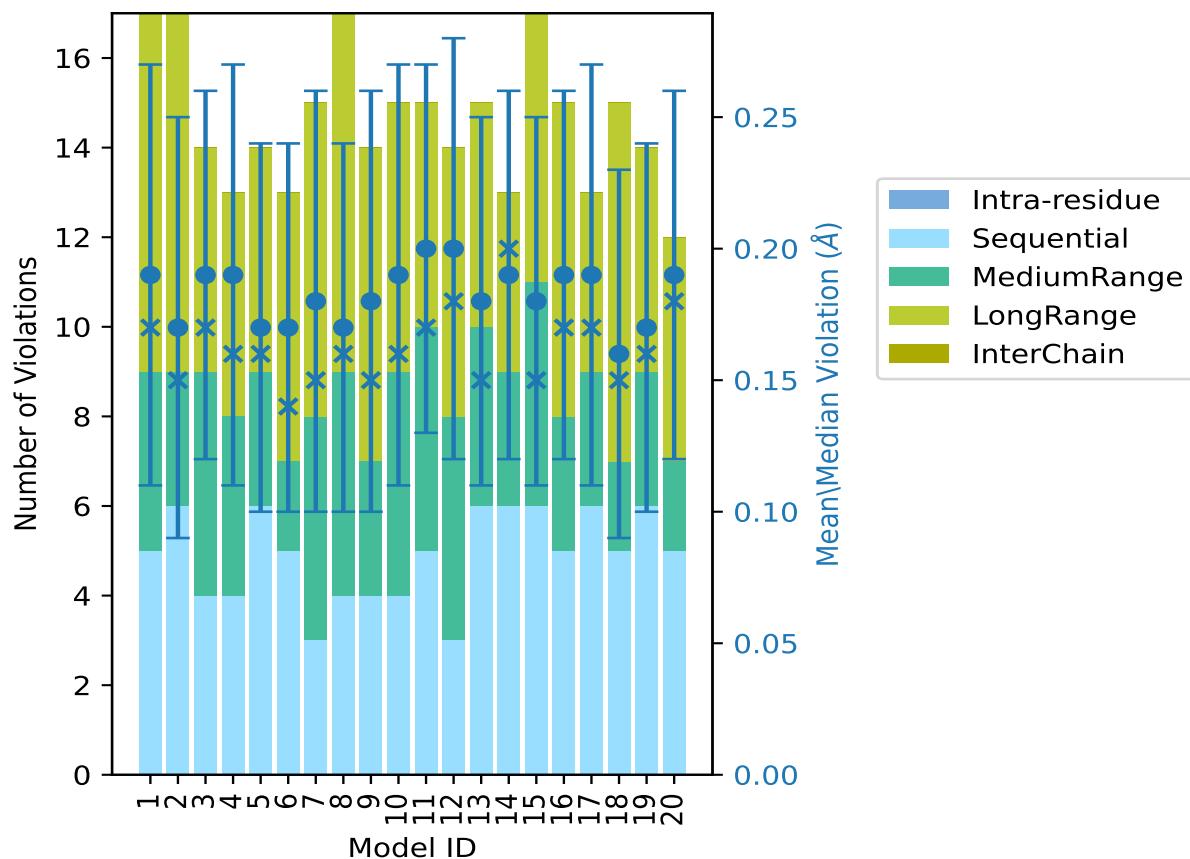
The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

9.3 Distance violation statistics for the ensemble ⓘ

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, 1167(IR:304, SQ:346, MR:165, LR:352, IC:0) restraints are not violated in the ensemble.

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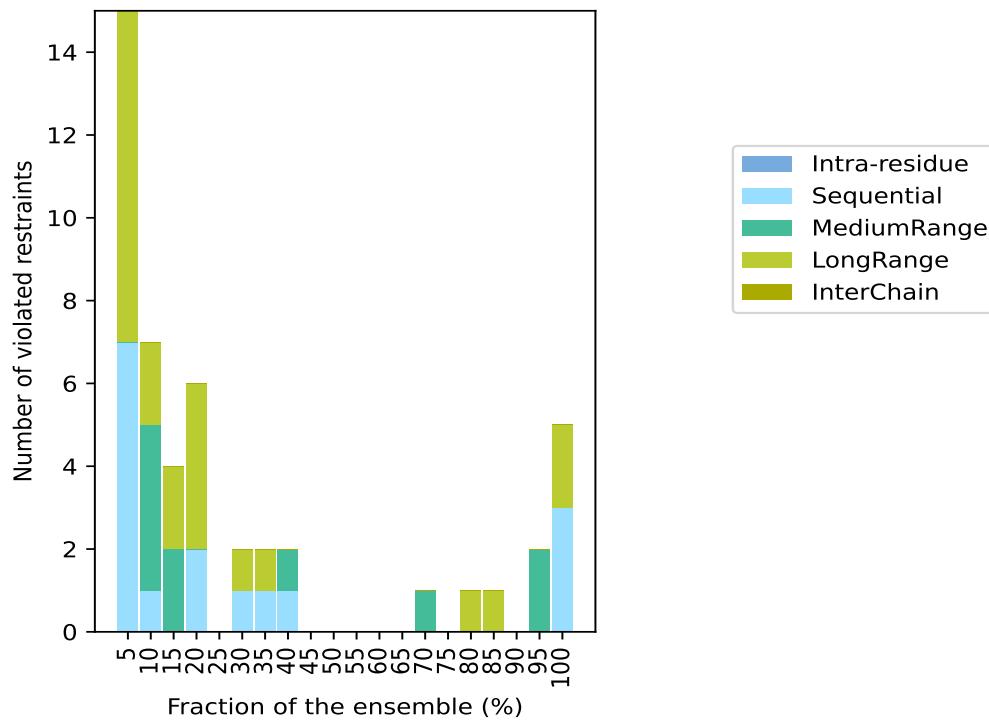
9.4   Most violated distance restraints in the ensemble ⓘ

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
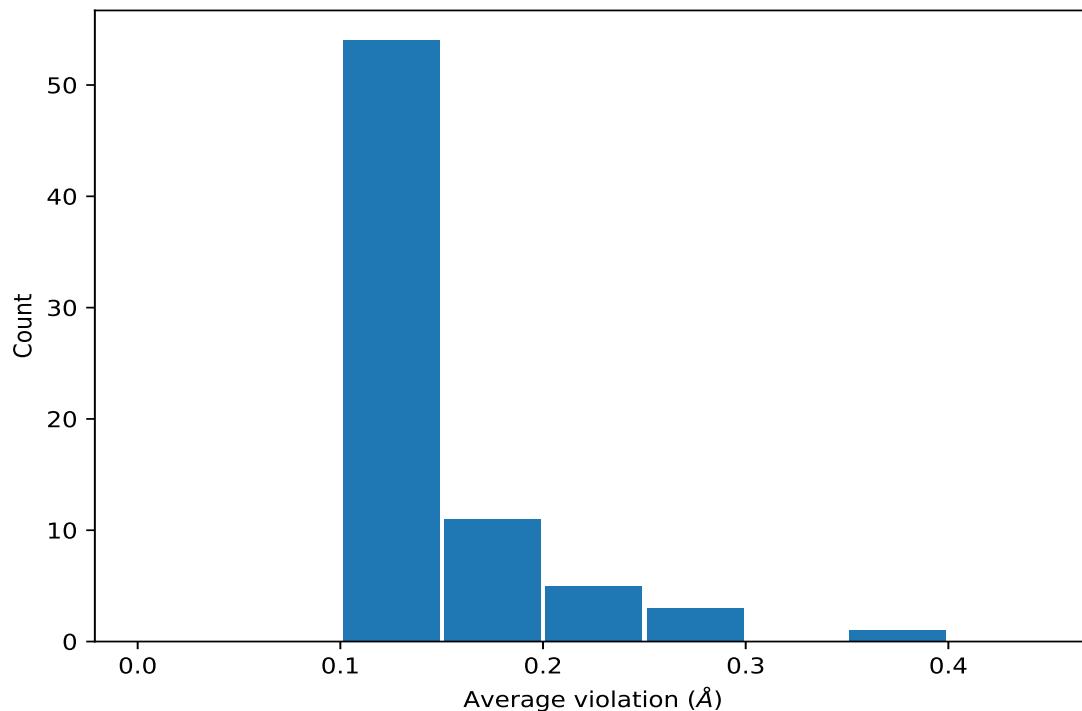
9.4.2   Table: Most violated distance restraints ⓘ

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)
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	20	0.38	0.02	0.38
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	20	0.24	0.03	0.24
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	20	0.24	0.03	0.24
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	20	0.24	0.03	0.24
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	20	0.2	0.04	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	20	0.2	0.04	0.22
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	20	0.19	0.02	0.2
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	20	0.18	0.04	0.17
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	20	0.18	0.04	0.17
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	19	0.28	0.06	0.29
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	19	0.28	0.06	0.29
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	19	0.28	0.06	0.29
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	19	0.15	0.02	0.14
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	17	0.14	0.03	0.14
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	16	0.14	0.02	0.13
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	16	0.14	0.02	0.13

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	16	0.14	0.02	0.13
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	16	0.14	0.02	0.13
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	16	0.14	0.02	0.13
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	16	0.14	0.02	0.13
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	14	0.15	0.03	0.15
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	14	0.15	0.03	0.15
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	14	0.15	0.03	0.15
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	8	0.19	0.03	0.2
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	8	0.19	0.03	0.2
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	8	0.15	0.02	0.16
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	8	0.15	0.02	0.16
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	7	0.14	0.02	0.14
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	7	0.12	0.01	0.12
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	6	0.13	0.02	0.14
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	6	0.13	0.02	0.14
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	6	0.12	0.01	0.11
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD11	4	0.19	0.02	0.19
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD12	4	0.19	0.02	0.19
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD13	4	0.19	0.02	0.19
(1,476)	1:823:A:ALA:HB1	1:861:A:MET:HG2	4	0.17	0.02	0.18
(1,476)	1:823:A:ALA:HB2	1:861:A:MET:HG2	4	0.17	0.02	0.18
(1,476)	1:823:A:ALA:HB3	1:861:A:MET:HG2	4	0.17	0.02	0.18
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG2	4	0.14	0.02	0.13
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG3	4	0.14	0.02	0.13
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG2	4	0.14	0.02	0.13
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG3	4	0.14	0.02	0.13
(1,608)	1:831:A:ARG:H	1:845:A:TYR:HA	4	0.13	0.02	0.12
(1,475)	1:823:A:ALA:HB1	1:861:A:MET:HG3	4	0.12	0.03	0.11
(1,475)	1:823:A:ALA:HB2	1:861:A:MET:HG3	4	0.12	0.03	0.11
(1,475)	1:823:A:ALA:HB3	1:861:A:MET:HG3	4	0.12	0.03	0.11
(1,89)	1:802:A:LYS:HG2	1:848:A:TYR:H	4	0.12	0.01	0.12
(1,89)	1:802:A:LYS:HG3	1:848:A:TYR:H	4	0.12	0.01	0.12
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB1	3	0.15	0.0	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB2	3	0.15	0.0	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB3	3	0.15	0.0	0.15
(1,462)	1:822:A:LYS:HD2	1:826:A:THR:HA	3	0.14	0.01	0.14
(1,462)	1:822:A:LYS:HD3	1:826:A:THR:HA	3	0.14	0.01	0.14
(1,679)	1:834:A:THR:HG21	1:840:A:PRO:HB2	3	0.12	0.01	0.11
(1,679)	1:834:A:THR:HG22	1:840:A:PRO:HB2	3	0.12	0.01	0.11
(1,679)	1:834:A:THR:HG23	1:840:A:PRO:HB2	3	0.12	0.01	0.11
(1,828)	1:848:A:TYR:HE1	1:858:A:VAL:H	3	0.1	0.0	0.1
(1,828)	1:848:A:TYR:HE2	1:858:A:VAL:H	3	0.1	0.0	0.1

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Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG2	2	0.15	0.02	0.15
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG3	2	0.15	0.02	0.15
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG2	2	0.15	0.02	0.15
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG3	2	0.15	0.02	0.15
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE1	2	0.15	0.03	0.15
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE2	2	0.15	0.03	0.15
(1,735)	1:840:A:PRO:HB2	1:842:A:GLY:H	2	0.14	0.02	0.14
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD11	2	0.12	0.01	0.12
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD12	2	0.12	0.01	0.12
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD13	2	0.12	0.01	0.12
(1,1124)	1:869:A:ASN:HA	1:870:A:ILE:HB	2	0.12	0.01	0.12
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD11	2	0.11	0.0	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD12	2	0.11	0.0	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD13	2	0.11	0.0	0.11
(1,465)	1:822:A:LYS:HD2	1:827:A:VAL:H	2	0.1	0.0	0.1
(1,465)	1:822:A:LYS:HD3	1:827:A:VAL:H	2	0.1	0.0	0.1

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

9.5 All violated distance restraints ⓘ

9.5.1 Histogram : Distribution of distance violations ⓘ

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.
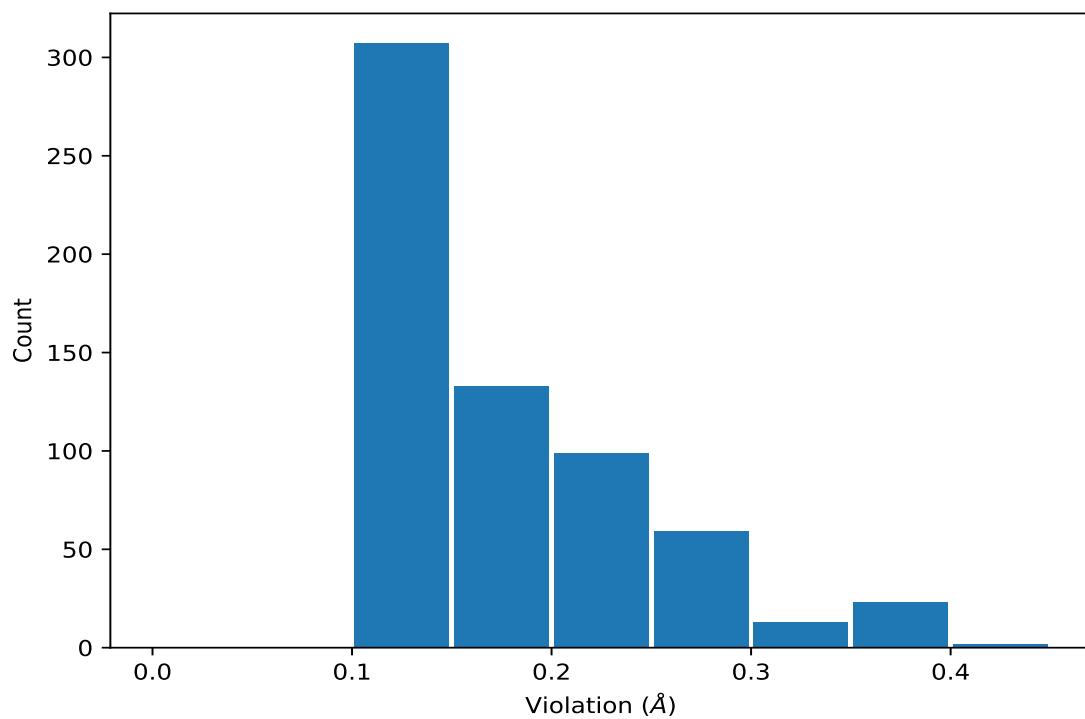
9.5.2 Table : All distance violations ⓘ

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

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	2	0.41
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	7	0.41
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	3	0.39
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	14	0.39
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	10	0.38
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	10	0.38
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	10	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	1	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	5	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	8	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	9	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	11	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	12	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	15	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	17	0.38
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	18	0.38

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	1	0.37
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	1	0.37
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	1	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	4	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	6	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	10	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	19	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	20	0.37
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	16	0.36
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	15	0.34
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	15	0.34
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	15	0.34
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	13	0.33
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	13	0.33
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	13	0.33
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	4	0.32
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	4	0.32
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	4	0.32
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	16	0.32
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	16	0.32
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	16	0.32
(1,266)	1:813:A:THR:HB	1:814:A:LYS:HA	13	0.32
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	3	0.3
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	3	0.3
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	3	0.3
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	11	0.3
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	11	0.3
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	11	0.3
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	20	0.3
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	20	0.3
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	20	0.3
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	7	0.29
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	7	0.29
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	7	0.29
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	17	0.29
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	17	0.29
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	17	0.29
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	8	0.28
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	8	0.28
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	8	0.28
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	4	0.28
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	4	0.28

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	11	0.28
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	11	0.28
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	11	0.28
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	9	0.27
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	9	0.27
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	9	0.27
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	9	0.27
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	9	0.27
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	2	0.27
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	2	0.27
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	2	0.27
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	5	0.27
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	5	0.27
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	5	0.27
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	12	0.27
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	12	0.27
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	12	0.27
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	19	0.27
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	19	0.27
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	19	0.27
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	2	0.26
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	2	0.26
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	2	0.26
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	12	0.26
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	12	0.26
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	12	0.26
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	8	0.26
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	8	0.26
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	7	0.26
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	7	0.26
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	7	0.26
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	10	0.26
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	10	0.26
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	10	0.26
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	12	0.26
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	12	0.26
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	4	0.25
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	4	0.25
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	4	0.25
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	14	0.24
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	14	0.24
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	14	0.24

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	14	0.24
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	14	0.24
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	17	0.24
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	17	0.24
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	16	0.24
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	16	0.24
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	16	0.24
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	17	0.23
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	17	0.23
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	17	0.23
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	14	0.23
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	14	0.23
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	17	0.23
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	17	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	2	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	2	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	7	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	7	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	12	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	12	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	19	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	19	0.23
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	3	0.23
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	3	0.23
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	3	0.23
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	8	0.23
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	8	0.23
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	8	0.23
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	14	0.23
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	14	0.23
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	14	0.23
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	12	0.23
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	11	0.23
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	1	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	1	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	3	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	3	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	20	0.22
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	20	0.22
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	1	0.22
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	1	0.22
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	1	0.22

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	13	0.22
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	13	0.22
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	13	0.22
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	15	0.22
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	15	0.22
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	15	0.22
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	20	0.22
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	20	0.22
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	20	0.22
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	1	0.22
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	1	0.22
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD11	9	0.21
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD12	9	0.21
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD13	9	0.21
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD11	16	0.21
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD12	16	0.21
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD13	16	0.21
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	6	0.21
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	6	0.21
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	6	0.21
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	3	0.21
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	3	0.21
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	12	0.21
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	12	0.21
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	13	0.21
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	13	0.21
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	6	0.21
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	6	0.21
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	6	0.21
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	18	0.21
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	18	0.21
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	18	0.21
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	5	0.21
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	9	0.21
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	11	0.21
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	1	0.2
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	1	0.2
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	1	0.2
(1,659)	1:833:A:VAL:HG11	1:844:A:ALA:H	9	0.2
(1,659)	1:833:A:VAL:HG12	1:844:A:ALA:H	9	0.2
(1,659)	1:833:A:VAL:HG13	1:844:A:ALA:H	9	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	1	0.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	3	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	6	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	10	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	14	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	19	0.2
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	20	0.2
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	8	0.2
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	8	0.2
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	10	0.2
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	10	0.2
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	14	0.2
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	14	0.2
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	15	0.19
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	15	0.19
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	15	0.19
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	5	0.19
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	5	0.19
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	5	0.19
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	8	0.19
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	10	0.19
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	7	0.19
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	13	0.19
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	15	0.19
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	16	0.19
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	17	0.19
(1,476)	1:823:A:ALA:HB1	1:861:A:MET:HG2	7	0.19
(1,476)	1:823:A:ALA:HB2	1:861:A:MET:HG2	7	0.19
(1,476)	1:823:A:ALA:HB3	1:861:A:MET:HG2	7	0.19
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	18	0.19
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	13	0.19
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	13	0.19
(1,381)	1:819:A:GLU:HG2	1:820:A:ILE:HD11	11	0.19
(1,381)	1:819:A:GLU:HG2	1:820:A:ILE:HD12	11	0.19
(1,381)	1:819:A:GLU:HG2	1:820:A:ILE:HD13	11	0.19
(1,381)	1:819:A:GLU:HG3	1:820:A:ILE:HD11	11	0.19
(1,381)	1:819:A:GLU:HG3	1:820:A:ILE:HD12	11	0.19
(1,381)	1:819:A:GLU:HG3	1:820:A:ILE:HD13	11	0.19
(1,1147)	1:870:A:ILE:HG12	1:871:A:ILE:HG12	13	0.18
(1,1147)	1:870:A:ILE:HG13	1:871:A:ILE:HG12	13	0.18
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	10	0.18
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	10	0.18
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	10	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	11	0.18
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	11	0.18
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	16	0.18
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	16	0.18
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	6	0.18
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	6	0.18
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	16	0.18
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	16	0.18
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	16	0.18
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	16	0.18
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	16	0.18
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	16	0.18
(1,476)	1:823:A:ALA:HB1	1:861:A:MET:HG2	1	0.18
(1,476)	1:823:A:ALA:HB2	1:861:A:MET:HG2	1	0.18
(1,476)	1:823:A:ALA:HB3	1:861:A:MET:HG2	1	0.18
(1,475)	1:823:A:ALA:HB1	1:861:A:MET:HG3	20	0.18
(1,475)	1:823:A:ALA:HB2	1:861:A:MET:HG3	20	0.18
(1,475)	1:823:A:ALA:HB3	1:861:A:MET:HG3	20	0.18
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD11	3	0.17
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD12	3	0.17
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD13	3	0.17
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD11	17	0.17
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD12	17	0.17
(1,1178)	1:874:A:ALA:HA	1:875:A:ILE:HD13	17	0.17
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	3	0.17
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	3	0.17
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	3	0.17
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	11	0.17
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	11	0.17
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	11	0.17
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	1	0.17
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	2	0.17
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	11	0.17
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG2	14	0.17
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG3	14	0.17
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG2	14	0.17
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG3	14	0.17
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	5	0.17
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	5	0.17
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	7	0.17
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	7	0.17
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	8	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	8	0.17
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	18	0.17
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	18	0.17
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	20	0.17
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	20	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	5	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	5	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	15	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	15	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	16	0.17
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	16	0.17
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	18	0.17
(1,476)	1:823:A:ALA:HB1	1:861:A:MET:HG2	11	0.17
(1,476)	1:823:A:ALA:HB2	1:861:A:MET:HG2	11	0.17
(1,476)	1:823:A:ALA:HB3	1:861:A:MET:HG2	11	0.17
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE1	1	0.17
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE2	1	0.17
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	19	0.17
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	19	0.17
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	8	0.16
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	8	0.16
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	8	0.16
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	16	0.16
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	16	0.16
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	16	0.16
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	10	0.16
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	10	0.16
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	15	0.16
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	15	0.16
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	19	0.16
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	19	0.16
(1,735)	1:840:A:PRO:HB2	1:842:A:GLY:H	3	0.16
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	9	0.16
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	9	0.16
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	16	0.16
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	16	0.16
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	15	0.16
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	15	0.16
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	15	0.16
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	15	0.16
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	15	0.16
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	15	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,608)	1:831:A:ARG:H	1:845:A:TYR:HA	5	0.16
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	4	0.16
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	8	0.16
(1,462)	1:822:A:LYS:HD2	1:826:A:THR:HA	11	0.16
(1,462)	1:822:A:LYS:HD3	1:826:A:THR:HA	11	0.16
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	20	0.16
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	2	0.16
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	2	0.16
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	4	0.16
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	4	0.16
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG2	19	0.16
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG3	19	0.16
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG2	19	0.16
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG3	19	0.16
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	17	0.16
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	1	0.16
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	1	0.16
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	4	0.16
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	4	0.16
(1,1200)	1:875:A:ILE:HG12	1:876:A:SER:HB2	15	0.15
(1,1200)	1:875:A:ILE:HG13	1:876:A:SER:HB2	15	0.15
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	19	0.15
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	20	0.15
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	1	0.15
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	1	0.15
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	2	0.15
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	2	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	10	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	10	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	11	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	11	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	18	0.15
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	18	0.15
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	2	0.15
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	2	0.15
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	3	0.15
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	5	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	5	0.15
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	5	0.15
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	5	0.15
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	5	0.15
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	5	0.15
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	19	0.15
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	19	0.15
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	19	0.15
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	19	0.15
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	19	0.15
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	19	0.15
(1,521)	1:827:A:VAL:HA	1:828:A:LYS:HB3	2	0.15
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	1	0.15
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	10	0.15
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	13	0.15
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	15	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB1	7	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB2	7	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB3	7	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB1	11	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB2	11	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB3	11	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB1	18	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB2	18	0.15
(1,422)	1:821:A:CYS:HB2	1:823:A:ALA:HB3	18	0.15
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD2	15	0.15
(1,406)	1:820:A:ILE:HA	1:822:A:LYS:HD3	15	0.15
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	12	0.15
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	18	0.15
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	18	0.15
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	7	0.14
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	7	0.14
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	7	0.14
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	9	0.14
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	9	0.14
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	9	0.14
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	14	0.14
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	14	0.14
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	14	0.14
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	3	0.14
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	6	0.14
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	7	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	15	0.14
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	18	0.14
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG2	15	0.14
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG3	15	0.14
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG2	15	0.14
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG3	15	0.14
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	6	0.14
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	6	0.14
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG2	4	0.14
(1,733)	1:840:A:PRO:HD3	1:841:A:LYS:HG3	4	0.14
(1,679)	1:834:A:THR:HG21	1:840:A:PRO:HB2	13	0.14
(1,679)	1:834:A:THR:HG22	1:840:A:PRO:HB2	13	0.14
(1,679)	1:834:A:THR:HG23	1:840:A:PRO:HB2	13	0.14
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	13	0.14
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	13	0.14
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	1	0.14
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	7	0.14
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	7	0.14
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	7	0.14
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	7	0.14
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	7	0.14
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	7	0.14
(1,462)	1:822:A:LYS:HD2	1:826:A:THR:HA	17	0.14
(1,462)	1:822:A:LYS:HD3	1:826:A:THR:HA	17	0.14
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	6	0.14
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	7	0.14
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	12	0.14
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	16	0.14
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	4	0.14
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	9	0.14
(1,19)	1:798:A:LEU:HG	1:799:A:GLU:HB2	15	0.14
(1,19)	1:798:A:LEU:HG	1:799:A:GLU:HB3	15	0.14
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	6	0.14
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	6	0.14
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	16	0.14
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	16	0.14
(1,1124)	1:869:A:ASN:HA	1:870:A:ILE:HB	14	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	4	0.13
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	4	0.13
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	4	0.13
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	13	0.13
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	13	0.13
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	13	0.13
(1,1082)	1:865:A:THR:HG21	1:867:A:LYS:H	19	0.13
(1,1082)	1:865:A:THR:HG22	1:867:A:LYS:H	19	0.13
(1,1082)	1:865:A:THR:HG23	1:867:A:LYS:H	19	0.13
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	1	0.13
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	8	0.13
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	4	0.13
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	12	0.13
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	16	0.13
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	15	0.13
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	15	0.13
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	9	0.13
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	10	0.13
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	18	0.13
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	18	0.13
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	18	0.13
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	18	0.13
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	18	0.13
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	18	0.13
(1,608)	1:831:A:ARG:H	1:845:A:TYR:HA	12	0.13
(1,476)	1:823:A:ALA:HB1	1:861:A:MET:HG2	8	0.13
(1,476)	1:823:A:ALA:HB2	1:861:A:MET:HG2	8	0.13
(1,476)	1:823:A:ALA:HB3	1:861:A:MET:HG2	8	0.13
(1,462)	1:822:A:LYS:HD2	1:826:A:THR:HA	3	0.13
(1,462)	1:822:A:LYS:HD3	1:826:A:THR:HA	3	0.13
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD11	10	0.13
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD12	10	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD13	10	0.13
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG2	5	0.13
(1,291)	1:814:A:LYS:HD2	1:818:A:GLU:HG3	5	0.13
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG2	5	0.13
(1,291)	1:814:A:LYS:HD3	1:818:A:GLU:HG3	5	0.13
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	3	0.13
(1,89)	1:802:A:LYS:HG2	1:848:A:TYR:H	15	0.13
(1,89)	1:802:A:LYS:HG3	1:848:A:TYR:H	15	0.13
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	5	0.13
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	18	0.13
(1,1124)	1:869:A:ASN:HA	1:870:A:ILE:HB	17	0.12
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	17	0.12
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	17	0.12
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	17	0.12
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	2	0.12
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	11	0.12
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	20	0.12
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	5	0.12
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	9	0.12
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	13	0.12
(1,905)	1:855:A:SER:HA	1:858:A:VAL:HA	14	0.12
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG2	5	0.12
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG3	5	0.12
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG2	5	0.12
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG3	5	0.12
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG2	10	0.12
(1,871)	1:852:A:SER:HB2	1:853:A:GLN:HG3	10	0.12
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG2	10	0.12
(1,871)	1:852:A:SER:HB3	1:853:A:GLN:HG3	10	0.12
(1,819)	1:848:A:TYR:HE1	1:853:A:GLN:HB3	13	0.12
(1,819)	1:848:A:TYR:HE2	1:853:A:GLN:HB3	13	0.12
(1,735)	1:840:A:PRO:HB2	1:842:A:GLY:H	7	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	2	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	4	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	4	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	4	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	4	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	4	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	4	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	8	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	11	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	12	0.12
(1,651)	1:833:A:VAL:HG11	1:842:A:GLY:H	20	0.12
(1,651)	1:833:A:VAL:HG12	1:842:A:GLY:H	20	0.12
(1,651)	1:833:A:VAL:HG13	1:842:A:GLY:H	20	0.12
(1,651)	1:833:A:VAL:HG21	1:842:A:GLY:H	20	0.12
(1,651)	1:833:A:VAL:HG22	1:842:A:GLY:H	20	0.12
(1,651)	1:833:A:VAL:HG23	1:842:A:GLY:H	20	0.12
(1,475)	1:823:A:ALA:HB1	1:861:A:MET:HG3	16	0.12
(1,475)	1:823:A:ALA:HB2	1:861:A:MET:HG3	16	0.12
(1,475)	1:823:A:ALA:HB3	1:861:A:MET:HG3	16	0.12
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE1	18	0.12
(1,468)	1:822:A:LYS:HA	1:848:A:TYR:HE2	18	0.12
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	3	0.12
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	8	0.12
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	14	0.12
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD11	12	0.12
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD12	12	0.12
(1,341)	1:817:A:LEU:HA	1:820:A:ILE:HD13	12	0.12
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	14	0.12
(1,89)	1:802:A:LYS:HG2	1:848:A:TYR:H	9	0.12
(1,89)	1:802:A:LYS:HG3	1:848:A:TYR:H	9	0.12
(1,1105)	1:866:A:ILE:HD11	1:869:A:ASN:H	12	0.11
(1,1105)	1:866:A:ILE:HD12	1:869:A:ASN:H	12	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1105)	1:866:A:ILE:HD13	1:869:A:ASN:H	12	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD11	8	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD12	8	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD13	8	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD11	15	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD12	15	0.11
(1,1058)	1:864:A:MET:HA	1:866:A:ILE:HD13	15	0.11
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	19	0.11
(1,1003)	1:860:A:LYS:HE3	1:861:A:MET:HA	17	0.11
(1,979)	1:858:A:VAL:HB	1:874:A:ALA:HB1	16	0.11
(1,979)	1:858:A:VAL:HB	1:874:A:ALA:HB2	16	0.11
(1,979)	1:858:A:VAL:HB	1:874:A:ALA:HB3	16	0.11
(1,885)	1:853:A:GLN:HE21	1:854:A:ALA:H	5	0.11
(1,885)	1:853:A:GLN:HE22	1:854:A:ALA:H	5	0.11
(1,828)	1:848:A:TYR:HE1	1:858:A:VAL:H	8	0.11
(1,828)	1:848:A:TYR:HE2	1:858:A:VAL:H	8	0.11
(1,679)	1:834:A:THR:HG21	1:840:A:PRO:HB2	5	0.11
(1,679)	1:834:A:THR:HG22	1:840:A:PRO:HB2	5	0.11
(1,679)	1:834:A:THR:HG23	1:840:A:PRO:HB2	5	0.11
(1,679)	1:834:A:THR:HG21	1:840:A:PRO:HB2	6	0.11
(1,679)	1:834:A:THR:HG22	1:840:A:PRO:HB2	6	0.11
(1,679)	1:834:A:THR:HG23	1:840:A:PRO:HB2	6	0.11
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	8	0.11
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	8	0.11
(1,608)	1:831:A:ARG:H	1:845:A:TYR:HA	9	0.11
(1,608)	1:831:A:ARG:H	1:845:A:TYR:HA	18	0.11
(1,552)	1:828:A:LYS:HG2	1:847:A:GLU:HG2	2	0.11
(1,552)	1:828:A:LYS:HG2	1:847:A:GLU:HG3	2	0.11
(1,552)	1:828:A:LYS:HG3	1:847:A:GLU:HG2	2	0.11
(1,552)	1:828:A:LYS:HG3	1:847:A:GLU:HG3	2	0.11
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	9	0.11
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	17	0.11
(1,249)	1:809:A:PRO:HD3	1:869:A:ASN:H	18	0.11
(1,231)	1:809:A:PRO:HD3	1:866:A:ILE:HA	10	0.11
(1,153)	1:804:A:PHE:HD1	1:876:A:SER:HA	2	0.11
(1,153)	1:804:A:PHE:HD2	1:876:A:SER:HA	2	0.11
(1,96)	1:802:A:LYS:HD2	1:876:A:SER:HB3	8	0.11
(1,96)	1:802:A:LYS:HD3	1:876:A:SER:HB3	8	0.11
(1,89)	1:802:A:LYS:HG2	1:848:A:TYR:H	18	0.11
(1,89)	1:802:A:LYS:HG3	1:848:A:TYR:H	18	0.11
(1,89)	1:802:A:LYS:HG2	1:848:A:TYR:H	19	0.11
(1,89)	1:802:A:LYS:HG3	1:848:A:TYR:H	19	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,86)	1:802:A:LYS:HA	1:848:A:TYR:HB2	6	0.11
(1,86)	1:802:A:LYS:HA	1:848:A:TYR:HB3	6	0.11
(1,44)	1:800:A:LYS:HE2	1:801:A:HIS:H	20	0.11
(1,44)	1:800:A:LYS:HE3	1:801:A:HIS:H	20	0.11
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	2	0.11
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	6	0.11
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	19	0.11
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB2	2	0.11
(1,13)	1:798:A:LEU:HB3	1:799:A:GLU:HB3	2	0.11
(1,1052)	1:864:A:MET:HA	1:865:A:THR:HB	13	0.1
(1,828)	1:848:A:TYR:HE1	1:858:A:VAL:H	1	0.1
(1,828)	1:848:A:TYR:HE2	1:858:A:VAL:H	1	0.1
(1,828)	1:848:A:TYR:HE1	1:858:A:VAL:H	10	0.1
(1,828)	1:848:A:TYR:HE2	1:858:A:VAL:H	10	0.1
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD1	1	0.1
(1,665)	1:833:A:VAL:HB	1:845:A:TYR:HD2	1	0.1
(1,591)	1:830:A:LEU:HB2	1:847:A:GLU:H	2	0.1
(1,475)	1:823:A:ALA:HB1	1:861:A:MET:HG3	6	0.1
(1,475)	1:823:A:ALA:HB2	1:861:A:MET:HG3	6	0.1
(1,475)	1:823:A:ALA:HB3	1:861:A:MET:HG3	6	0.1
(1,475)	1:823:A:ALA:HB1	1:861:A:MET:HG3	19	0.1
(1,475)	1:823:A:ALA:HB2	1:861:A:MET:HG3	19	0.1
(1,475)	1:823:A:ALA:HB3	1:861:A:MET:HG3	19	0.1
(1,465)	1:822:A:LYS:HD2	1:827:A:VAL:H	2	0.1
(1,465)	1:822:A:LYS:HD3	1:827:A:VAL:H	2	0.1
(1,465)	1:822:A:LYS:HD2	1:827:A:VAL:H	7	0.1
(1,465)	1:822:A:LYS:HD3	1:827:A:VAL:H	7	0.1
(1,424)	1:821:A:CYS:HA	1:827:A:VAL:HA	4	0.1
(1,172)	1:805:A:ILE:HG21	1:844:A:ALA:H	7	0.1
(1,172)	1:805:A:ILE:HG22	1:844:A:ALA:H	7	0.1
(1,172)	1:805:A:ILE:HG23	1:844:A:ALA:H	7	0.1
(1,41)	1:800:A:LYS:HA	1:801:A:HIS:HD2	13	0.1

10 Dihedral-angle violation analysis ⓘ

No dihedral-angle restraints found