Full wwPDB NMR Structure Validation Report (i)

Jun 11, 2024 – 11:14 PM EDT

PDB ID	:	2K7B
BMRB ID	:	15197
Title	:	NMR structure of Mg2+-bound CaBP1 N-domain
Authors	:	Ames, J.
Deposited on	:	2008-08-08

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

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

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

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

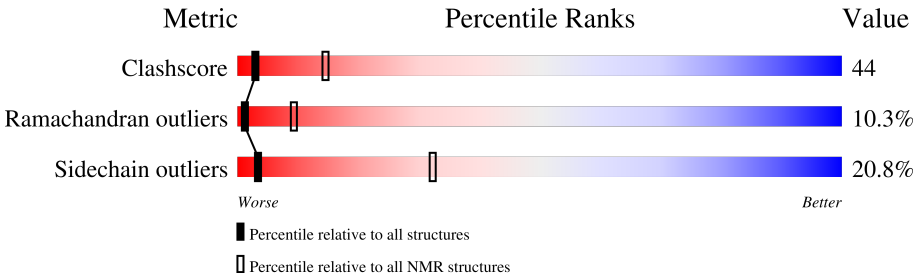
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson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

1 Overall quality at a glance

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

The overall completeness of chemical shifts assignment is 74%.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	76	21% 62% 12% 5%

2 Ensemble composition and analysis

This entry contains 15 models. Model 13 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *closest to the average*.

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:20-A:91 (72)	1.27	13

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 2 single-model clusters were found.

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

3 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 1214 atoms, of which 592 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Calcium-binding protein 1.

Mol	Chain	Residues	Atoms						Trace
1	A	76	Total	C	H	N	O	S	0
			1213	384	592	105	124	8	

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

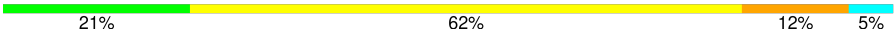
Mol	Chain	Residues	Atoms	
2	A	1	Total	Mg
			1	1

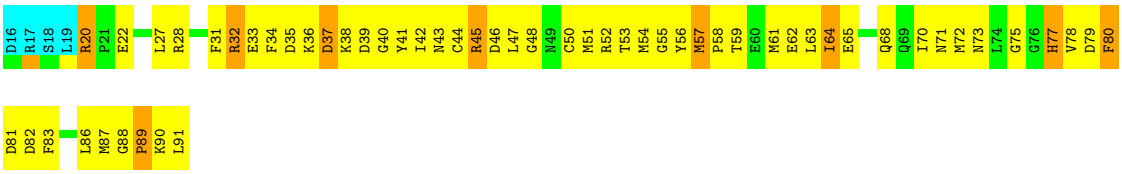
4 Residue-property plots

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

• Molecule 1: Calcium-binding protein 1

Chain A: 

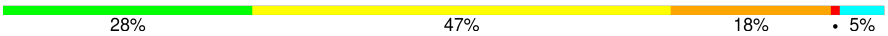


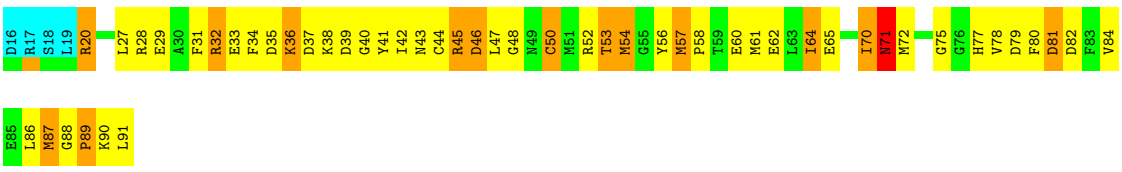
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

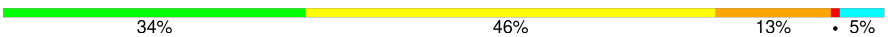
• Molecule 1: Calcium-binding protein 1

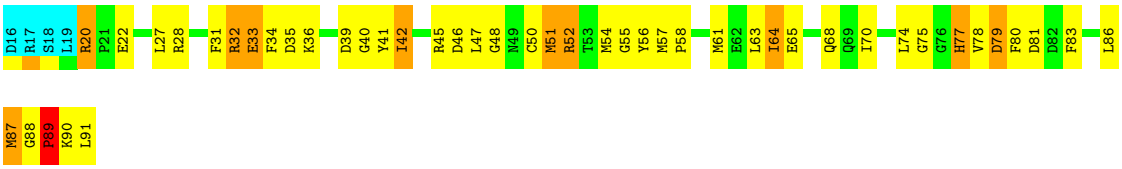
Chain A: 



4.2.2 Score per residue for model 2

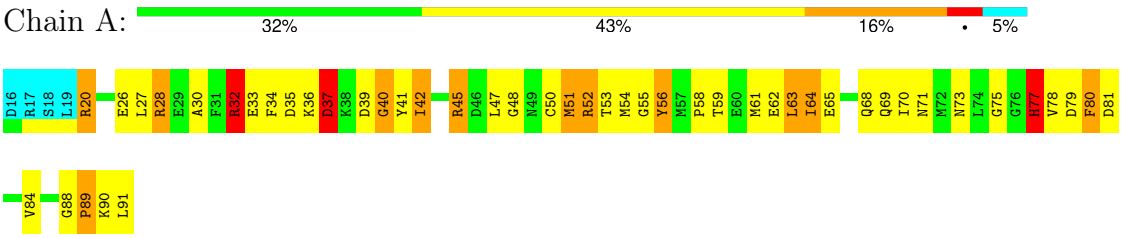
• Molecule 1: Calcium-binding protein 1

Chain A: 



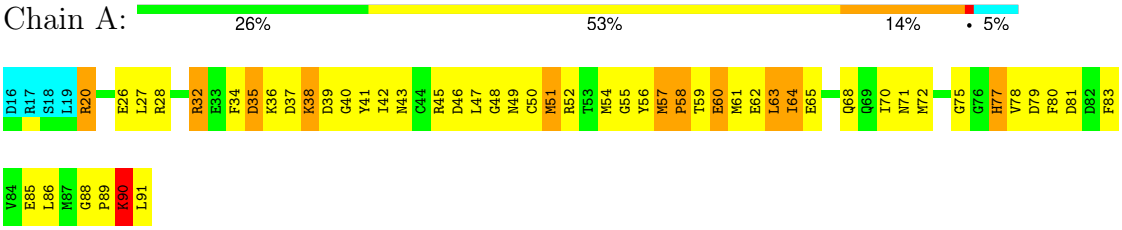
4.2.3 Score per residue for model 3

• Molecule 1: Calcium-binding protein 1



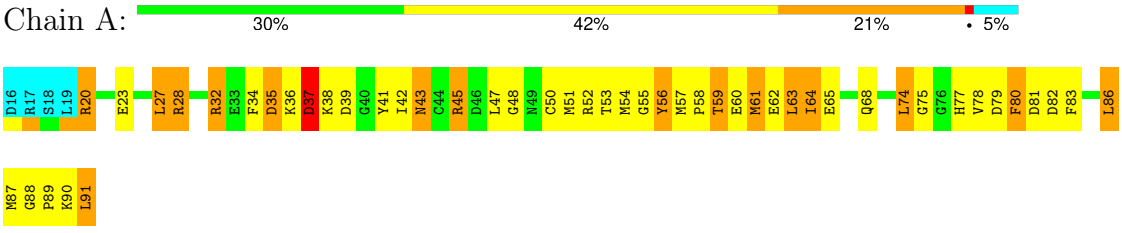
4.2.4 Score per residue for model 4

• Molecule 1: Calcium-binding protein 1



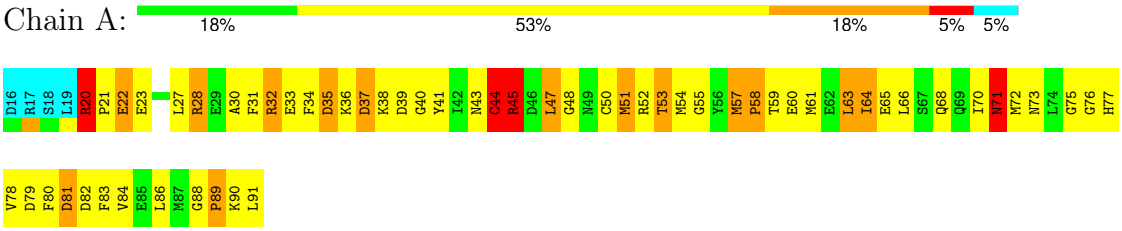
4.2.5 Score per residue for model 5

• Molecule 1: Calcium-binding protein 1



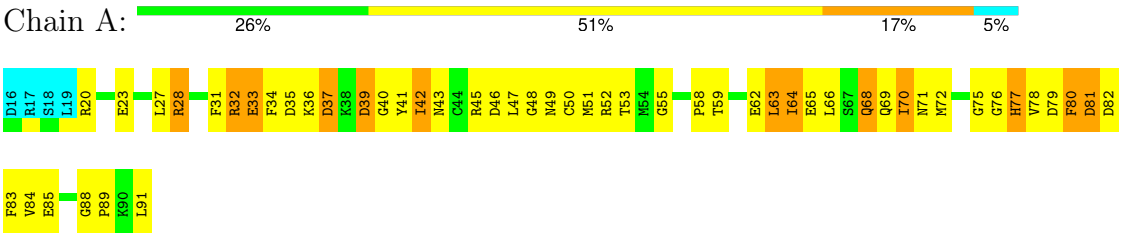
4.2.6 Score per residue for model 6

• Molecule 1: Calcium-binding protein 1



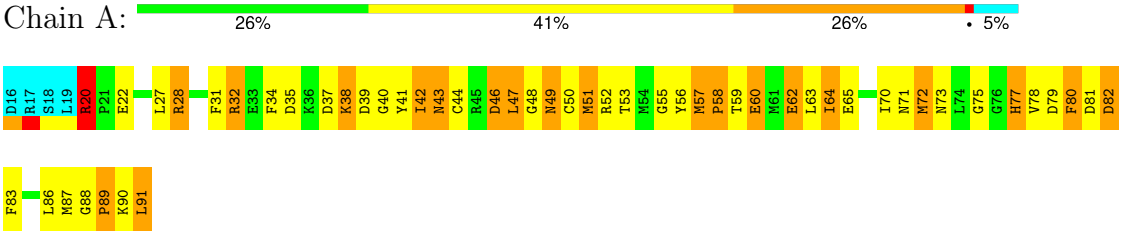
4.2.7 Score per residue for model 7

• Molecule 1: Calcium-binding protein 1



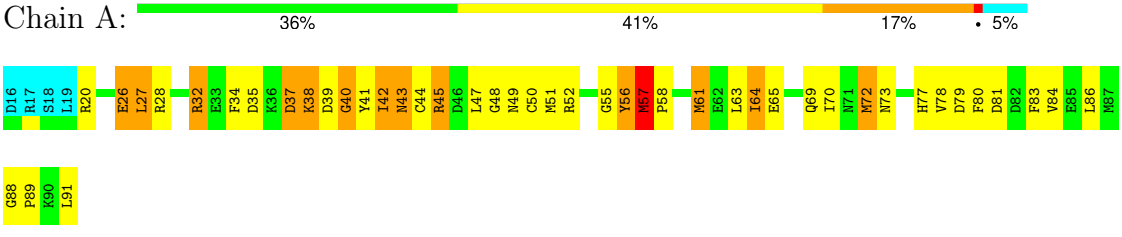
4.2.8 Score per residue for model 8

• Molecule 1: Calcium-binding protein 1



4.2.9 Score per residue for model 9

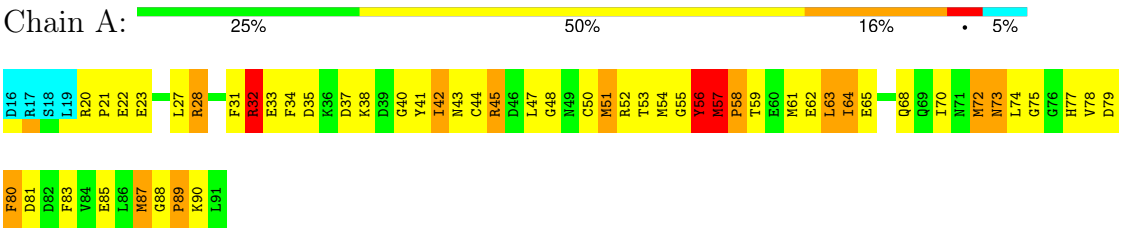
• Molecule 1: Calcium-binding protein 1



4.2.10 Score per residue for model 10

• Molecule 1: Calcium-binding protein 1

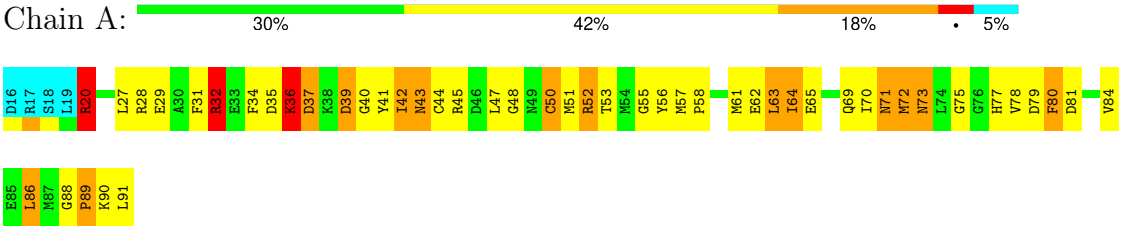
Chain A:



4.2.11 Score per residue for model 11

• Molecule 1: Calcium-binding protein 1

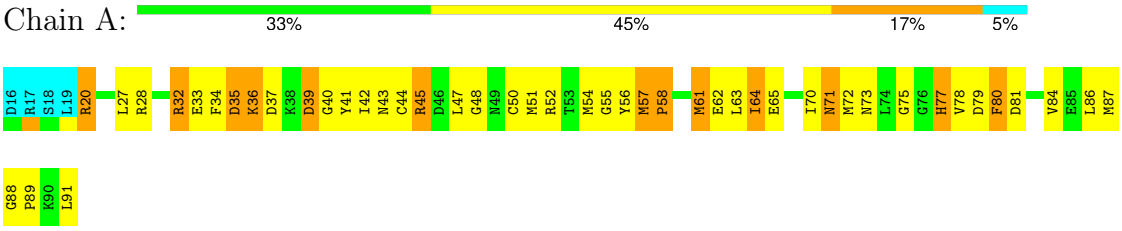
Chain A:



4.2.12 Score per residue for model 12

• Molecule 1: Calcium-binding protein 1

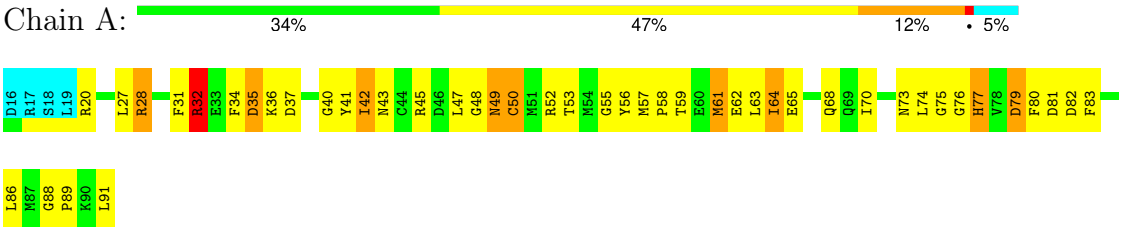
Chain A:



4.2.13 Score per residue for model 13 (medoid)

• Molecule 1: Calcium-binding protein 1

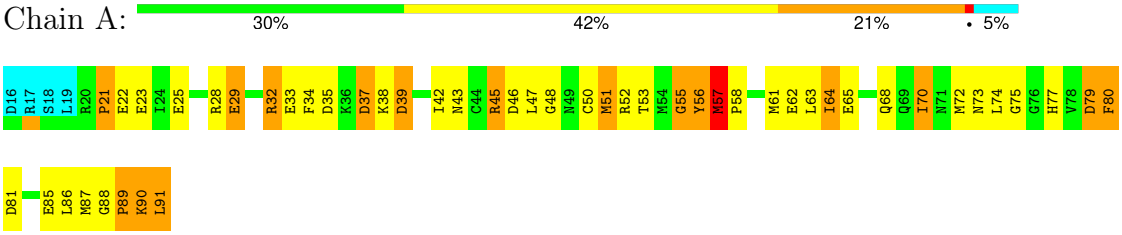
Chain A:



4.2.14 Score per residue for model 14

• Molecule 1: Calcium-binding protein 1

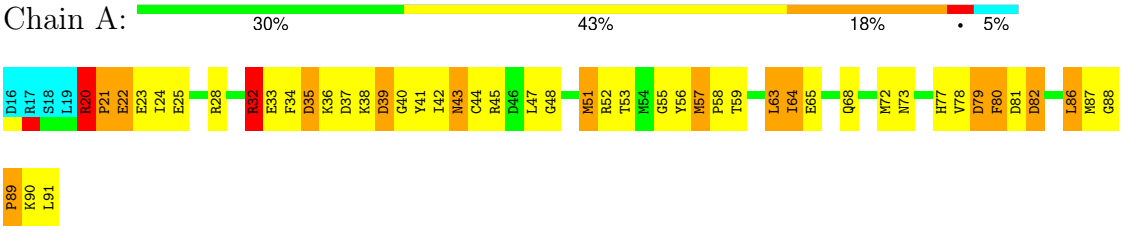
Chain A:



4.2.15 Score per residue for model 15

• Molecule 1: Calcium-binding protein 1

Chain A:



5 Refinement protocol and experimental data overview

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

Of the 50 calculated structures, 15 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
X-PLOR	refinement	3.1

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

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	1577
Number of shifts mapped to atoms	782
Number of unparsed shifts	0
Number of shifts with mapping errors	795
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	74%

6 Model quality

6.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	1.07±0.01	1±0/597 (0.2± 0.0%)	1.19±0.01	0±0/798 (0.0± 0.0%)
All	All	1.07	15/8955 (0.2%)	1.19	0/11970 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	Chirality	Planarity
1	A	0.0±0.0	4.5±0.6
All	All	0	67

All unique bond outliers are listed below.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	77	HIS	CG-ND1	-6.25	1.25	1.38	14	15

There are no bond-angle outliers.

There are no chirality outliers.

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

Mol	Chain	Res	Type	Group	Models (Total)
1	A	32	ARG	Sidechain	15
1	A	52	ARG	Sidechain	14
1	A	28	ARG	Sidechain	13
1	A	45	ARG	Sidechain	13
1	A	20	ARG	Sidechain	12

6.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	588	559	559	51±6
All	All	8835	8385	8385	758

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 44.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:63:LEU:H	1:A:63:LEU:HD13	1.01	1.15	5	1
1:A:59:THR:HG22	1:A:60:GLU:H	0.88	1.28	8	3
1:A:59:THR:HG22	1:A:60:GLU:N	0.86	1.85	4	2
1:A:63:LEU:HD23	1:A:64:ILE:H	0.83	1.33	8	1
1:A:91:LEU:N	1:A:91:LEU:HD22	0.82	1.89	9	2
1:A:57:MET:H	1:A:58:PRO:CD	0.81	1.88	9	6
1:A:43:ASN:ND2	1:A:43:ASN:N	0.79	2.30	8	3
1:A:74:LEU:HD12	1:A:74:LEU:O	0.78	1.78	5	1
1:A:34:PHE:CG	1:A:50:CYS:SG	0.78	2.76	8	2
1:A:42:ILE:HD12	1:A:47:LEU:HD11	0.78	1.54	5	8
1:A:57:MET:N	1:A:58:PRO:CD	0.77	2.48	10	10
1:A:63:LEU:HD23	1:A:64:ILE:N	0.76	1.96	8	1
1:A:42:ILE:HD12	1:A:47:LEU:CD2	0.75	2.11	8	6
1:A:57:MET:H	1:A:58:PRO:HD2	0.74	1.41	1	6
1:A:74:LEU:HD12	1:A:74:LEU:C	0.74	2.03	5	1
1:A:20:ARG:H	1:A:21:PRO:CD	0.74	1.95	15	1
1:A:88:GLY:N	1:A:89:PRO:CD	0.74	2.50	1	9
1:A:31:PHE:CD2	1:A:42:ILE:HD11	0.74	2.18	11	3
1:A:20:ARG:N	1:A:21:PRO:CD	0.74	2.50	15	1
1:A:34:PHE:CD2	1:A:50:CYS:SG	0.73	2.78	8	7
1:A:63:LEU:N	1:A:63:LEU:HD23	0.73	1.98	2	4
1:A:91:LEU:C	1:A:91:LEU:HD12	0.73	2.03	15	1
1:A:63:LEU:HD22	1:A:64:ILE:N	0.70	2.01	5	1
1:A:43:ASN:ND2	1:A:43:ASN:H	0.70	1.83	9	3
1:A:43:ASN:N	1:A:43:ASN:HD22	0.69	1.84	8	2
1:A:86:LEU:O	1:A:86:LEU:HD13	0.69	1.87	15	3
1:A:42:ILE:HD12	1:A:47:LEU:HD21	0.69	1.63	10	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:91:LEU:N	1:A:91:LEU:CD2	0.68	2.56	9	3
1:A:64:ILE:HG22	1:A:65:GLU:N	0.68	2.04	5	15
1:A:56:TYR:CD1	1:A:56:TYR:N	0.68	2.58	3	1
1:A:59:THR:CG2	1:A:60:GLU:N	0.67	2.55	8	2
1:A:91:LEU:CD1	1:A:91:LEU:N	0.67	2.57	4	2
1:A:31:PHE:CE2	1:A:42:ILE:HD11	0.67	2.24	11	2
1:A:49:ASN:HD22	1:A:49:ASN:N	0.67	1.88	13	1
1:A:43:ASN:HD22	1:A:43:ASN:N	0.66	1.86	5	1
1:A:40:GLY:C	1:A:41:TYR:CD1	0.66	2.69	3	3
1:A:41:TYR:CD1	1:A:79:ASP:OD1	0.65	2.50	7	1
1:A:63:LEU:HD13	1:A:63:LEU:N	0.64	2.00	5	1
1:A:63:LEU:H	1:A:63:LEU:CD1	0.64	1.96	5	1
1:A:62:GLU:CD	1:A:63:LEU:N	0.64	2.51	11	1
1:A:54:MET:SD	1:A:87:MET:SD	0.64	2.95	10	1
1:A:64:ILE:CG2	1:A:65:GLU:N	0.63	2.62	5	9
1:A:41:TYR:CE2	1:A:79:ASP:OD2	0.63	2.51	3	1
1:A:59:THR:CG2	1:A:60:GLU:H	0.63	2.03	4	2
1:A:81:ASP:OD1	1:A:82:ASP:N	0.62	2.33	6	2
1:A:43:ASN:N	1:A:43:ASN:ND2	0.62	2.46	5	1
1:A:37:ASP:OD1	1:A:38:LYS:N	0.62	2.32	15	1
1:A:39:ASP:OD1	1:A:39:ASP:N	0.62	2.32	11	4
1:A:39:ASP:OD1	1:A:41:TYR:N	0.61	2.33	12	1
1:A:42:ILE:HD12	1:A:47:LEU:CD1	0.61	2.25	5	8
1:A:87:MET:HA	1:A:91:LEU:HD21	0.61	1.73	8	2
1:A:41:TYR:CD1	1:A:41:TYR:N	0.61	2.68	15	3
1:A:57:MET:N	1:A:58:PRO:HD2	0.61	2.11	13	7
1:A:63:LEU:HD23	1:A:63:LEU:H	0.60	1.55	12	2
1:A:57:MET:N	1:A:58:PRO:HD3	0.60	2.11	10	3
1:A:74:LEU:C	1:A:74:LEU:CD1	0.60	2.70	5	1
1:A:37:ASP:CG	1:A:38:LYS:N	0.60	2.52	9	1
1:A:28:ARG:HH12	1:A:32:ARG:NE	0.60	1.94	3	1
1:A:74:LEU:HD12	1:A:77:HIS:O	0.59	1.97	13	1
1:A:37:ASP:N	1:A:37:ASP:OD1	0.59	2.35	3	3
1:A:79:ASP:O	1:A:81:ASP:N	0.59	2.35	8	15
1:A:79:ASP:OD1	1:A:80:PHE:N	0.59	2.35	8	1
1:A:37:ASP:OD1	1:A:37:ASP:N	0.59	2.32	13	4
1:A:64:ILE:O	1:A:68:GLN:N	0.58	2.36	2	9
1:A:55:GLY:O	1:A:57:MET:N	0.58	2.36	9	5
1:A:88:GLY:O	1:A:90:LYS:N	0.58	2.37	10	7
1:A:47:LEU:O	1:A:50:CYS:N	0.58	2.36	12	14
1:A:49:ASN:N	1:A:49:ASN:ND2	0.58	2.50	13	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:87:MET:SD	1:A:87:MET:N	0.57	2.77	2	1
1:A:34:PHE:CE2	1:A:50:CYS:SG	0.57	2.96	3	1
1:A:41:TYR:CB	1:A:77:HIS:CE1	0.57	2.87	3	1
1:A:39:ASP:C	1:A:41:TYR:H	0.57	2.02	9	4
1:A:42:ILE:CD1	1:A:47:LEU:HD11	0.57	2.30	5	6
1:A:91:LEU:N	1:A:91:LEU:HD12	0.57	2.14	4	2
1:A:55:GLY:O	1:A:56:TYR:CD1	0.57	2.57	9	1
1:A:79:ASP:C	1:A:81:ASP:N	0.56	2.58	2	15
1:A:35:ASP:C	1:A:37:ASP:H	0.56	2.04	6	4
1:A:71:ASN:ND2	1:A:71:ASN:C	0.56	2.57	1	2
1:A:51:MET:O	1:A:55:GLY:N	0.56	2.38	15	8
1:A:88:GLY:C	1:A:90:LYS:H	0.56	2.04	6	7
1:A:37:ASP:OD2	1:A:38:LYS:N	0.56	2.38	9	1
1:A:91:LEU:C	1:A:91:LEU:CD1	0.56	2.74	15	1
1:A:52:ARG:NH2	1:A:60:GLU:OE2	0.56	2.39	1	1
1:A:88:GLY:N	1:A:89:PRO:HD2	0.56	2.13	1	14
1:A:35:ASP:O	1:A:37:ASP:N	0.56	2.38	6	4
1:A:41:TYR:CE1	1:A:79:ASP:OD2	0.56	2.59	6	2
1:A:42:ILE:HD12	1:A:47:LEU:HD23	0.56	1.76	8	1
1:A:27:LEU:HD13	1:A:84:VAL:HG22	0.55	1.76	3	6
1:A:70:ILE:O	1:A:72:MET:N	0.55	2.40	4	9
1:A:34:PHE:O	1:A:36:LYS:N	0.55	2.39	5	3
1:A:32:ARG:C	1:A:34:PHE:N	0.55	2.59	6	15
1:A:63:LEU:N	1:A:63:LEU:CD2	0.55	2.68	2	3
1:A:40:GLY:O	1:A:41:TYR:CD1	0.55	2.59	8	8
1:A:34:PHE:C	1:A:36:LYS:H	0.55	2.03	4	2
1:A:86:LEU:O	1:A:91:LEU:HD22	0.55	2.00	6	1
1:A:81:ASP:CG	1:A:82:ASP:N	0.55	2.60	7	2
1:A:61:MET:SD	1:A:61:MET:N	0.55	2.80	13	1
1:A:89:PRO:O	1:A:91:LEU:N	0.55	2.40	4	3
1:A:56:TYR:CD2	1:A:56:TYR:O	0.55	2.60	9	2
1:A:56:TYR:O	1:A:56:TYR:CG	0.55	2.58	1	3
1:A:32:ARG:O	1:A:35:ASP:N	0.55	2.39	13	14
1:A:32:ARG:O	1:A:34:PHE:N	0.55	2.40	2	14
1:A:43:ASN:O	1:A:45:ARG:N	0.55	2.40	9	6
1:A:35:ASP:C	1:A:37:ASP:N	0.54	2.59	7	4
1:A:70:ILE:O	1:A:74:LEU:N	0.54	2.40	14	1
1:A:79:ASP:OD1	1:A:79:ASP:N	0.54	2.40	12	3
1:A:32:ARG:CG	1:A:32:ARG:HH11	0.54	2.16	3	1
1:A:63:LEU:CD2	1:A:64:ILE:N	0.54	2.71	5	2
1:A:71:ASN:ND2	1:A:72:MET:N	0.54	2.56	1	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:56:TYR:O	1:A:57:MET:CB	0.54	2.55	10	2
1:A:31:PHE:CE2	1:A:42:ILE:CD1	0.54	2.90	11	2
1:A:62:GLU:CG	1:A:63:LEU:N	0.54	2.71	11	1
1:A:63:LEU:HD12	1:A:64:ILE:H	0.54	1.63	3	1
1:A:21:PRO:O	1:A:23:GLU:N	0.54	2.41	6	4
1:A:39:ASP:OD1	1:A:40:GLY:N	0.54	2.40	11	3
1:A:20:ARG:N	1:A:23:GLU:OE1	0.53	2.41	5	1
1:A:71:ASN:C	1:A:73:ASN:H	0.53	2.07	11	2
1:A:82:ASP:O	1:A:86:LEU:HD23	0.53	2.03	8	2
1:A:71:ASN:HD22	1:A:72:MET:N	0.53	2.02	1	1
1:A:89:PRO:C	1:A:91:LEU:H	0.53	2.07	8	1
1:A:90:LYS:C	1:A:91:LEU:HD12	0.53	2.24	1	1
1:A:70:ILE:O	1:A:73:ASN:N	0.53	2.40	8	6
1:A:39:ASP:O	1:A:41:TYR:CD2	0.53	2.62	2	2
1:A:43:ASN:C	1:A:45:ARG:N	0.52	2.63	10	6
1:A:39:ASP:C	1:A:41:TYR:N	0.52	2.62	8	4
1:A:48:GLY:HA2	1:A:63:LEU:HD22	0.52	1.80	6	1
1:A:71:ASN:O	1:A:71:ASN:ND2	0.52	2.42	12	1
1:A:52:ARG:O	1:A:56:TYR:N	0.52	2.42	11	1
1:A:46:ASP:O	1:A:50:CYS:N	0.52	2.42	14	2
1:A:43:ASN:ND2	1:A:76:GLY:O	0.52	2.42	6	2
1:A:20:ARG:N	1:A:21:PRO:HD2	0.52	2.20	15	1
1:A:32:ARG:HG3	1:A:33:GLU:N	0.52	2.19	15	1
1:A:79:ASP:C	1:A:81:ASP:H	0.52	2.08	8	9
1:A:27:LEU:CD2	1:A:83:PHE:CE2	0.52	2.92	5	5
1:A:70:ILE:HG23	1:A:73:ASN:HD21	0.52	1.65	10	1
1:A:20:ARG:H	1:A:21:PRO:HD2	0.52	1.65	15	1
1:A:63:LEU:HD22	1:A:64:ILE:H	0.51	1.63	5	1
1:A:70:ILE:CG1	1:A:82:ASP:OD2	0.51	2.59	1	1
1:A:43:ASN:OD1	1:A:43:ASN:N	0.51	2.44	11	1
1:A:63:LEU:H	1:A:63:LEU:CD2	0.51	2.18	12	1
1:A:85:GLU:O	1:A:89:PRO:CG	0.51	2.58	4	1
1:A:84:VAL:O	1:A:88:GLY:N	0.51	2.44	6	1
1:A:62:GLU:CD	1:A:62:GLU:C	0.51	2.69	11	2
1:A:35:ASP:OD2	1:A:36:LYS:N	0.51	2.44	12	1
1:A:91:LEU:H	1:A:91:LEU:HD23	0.51	1.66	14	1
1:A:71:ASN:ND2	1:A:71:ASN:O	0.51	2.44	6	1
1:A:88:GLY:C	1:A:90:LYS:N	0.51	2.64	14	6
1:A:87:MET:O	1:A:87:MET:SD	0.51	2.68	1	1
1:A:36:LYS:O	1:A:38:LYS:N	0.51	2.44	6	1
1:A:76:GLY:O	1:A:77:HIS:CD2	0.51	2.64	13	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:47:LEU:O	1:A:51:MET:N	0.50	2.38	15	7
1:A:37:ASP:CG	1:A:38:LYS:H	0.50	2.09	15	2
1:A:56:TYR:O	1:A:57:MET:SD	0.50	2.68	14	1
1:A:91:LEU:HD23	1:A:91:LEU:N	0.50	2.20	14	1
1:A:85:GLU:O	1:A:88:GLY:N	0.50	2.42	14	3
1:A:36:LYS:O	1:A:37:ASP:CB	0.50	2.60	11	3
1:A:38:LYS:C	1:A:39:ASP:CG	0.50	2.70	14	1
1:A:20:ARG:H	1:A:21:PRO:HD3	0.50	1.66	15	1
1:A:59:THR:OG1	1:A:62:GLU:CB	0.50	2.59	7	2
1:A:73:ASN:ND2	1:A:74:LEU:H	0.50	2.03	10	1
1:A:39:ASP:O	1:A:41:TYR:N	0.50	2.45	9	3
1:A:72:MET:CG	1:A:73:ASN:N	0.50	2.75	15	1
1:A:48:GLY:HA2	1:A:63:LEU:HD11	0.50	1.82	9	1
1:A:81:ASP:OD1	1:A:81:ASP:C	0.49	2.51	7	1
1:A:70:ILE:C	1:A:72:MET:N	0.49	2.64	4	9
1:A:63:LEU:HD12	1:A:64:ILE:N	0.49	2.22	3	1
1:A:51:MET:O	1:A:55:GLY:CA	0.49	2.61	12	1
1:A:47:LEU:O	1:A:48:GLY:C	0.49	2.51	12	15
1:A:35:ASP:OD2	1:A:37:ASP:C	0.49	2.51	3	1
1:A:28:ARG:HH12	1:A:32:ARG:HE	0.49	1.48	3	1
1:A:35:ASP:CG	1:A:36:LYS:N	0.49	2.64	12	1
1:A:37:ASP:O	1:A:38:LYS:CB	0.49	2.61	6	2
1:A:36:LYS:C	1:A:37:ASP:CG	0.49	2.71	3	1
1:A:26:GLU:CD	1:A:54:MET:SD	0.49	2.91	4	1
1:A:85:GLU:O	1:A:89:PRO:CD	0.48	2.61	4	1
1:A:47:LEU:CD2	1:A:47:LEU:N	0.48	2.76	9	1
1:A:34:PHE:CD1	1:A:50:CYS:SG	0.48	2.99	5	2
1:A:41:TYR:CD1	1:A:79:ASP:CG	0.48	2.87	7	1
1:A:57:MET:H	1:A:58:PRO:HD3	0.48	1.65	8	4
1:A:32:ARG:NH1	1:A:35:ASP:O	0.48	2.47	2	1
1:A:71:ASN:C	1:A:73:ASN:N	0.48	2.66	11	1
1:A:43:ASN:OD1	1:A:46:ASP:N	0.48	2.43	4	1
1:A:55:GLY:C	1:A:57:MET:N	0.48	2.66	13	5
1:A:37:ASP:OD2	1:A:39:ASP:OD1	0.48	2.32	14	1
1:A:79:ASP:OD2	1:A:81:ASP:CG	0.47	2.52	10	1
1:A:40:GLY:C	1:A:41:TYR:CG	0.47	2.88	10	6
1:A:34:PHE:C	1:A:36:LYS:N	0.47	2.68	4	2
1:A:37:ASP:O	1:A:39:ASP:N	0.47	2.48	4	1
1:A:54:MET:SD	1:A:54:MET:C	0.47	2.92	1	1
1:A:37:ASP:C	1:A:39:ASP:OD1	0.47	2.53	14	1
1:A:34:PHE:CE2	1:A:50:CYS:CA	0.47	2.97	1	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:27:LEU:O	1:A:30:ALA:N	0.47	2.48	3	2
1:A:36:LYS:O	1:A:36:LYS:CG	0.47	2.63	5	1
1:A:59:THR:O	1:A:63:LEU:CD2	0.47	2.63	15	1
1:A:43:ASN:C	1:A:45:ARG:H	0.47	2.13	10	3
1:A:63:LEU:CD2	1:A:63:LEU:H	0.47	2.22	2	1
1:A:27:LEU:HD22	1:A:83:PHE:CE2	0.47	2.45	13	2
1:A:56:TYR:O	1:A:56:TYR:CD1	0.47	2.68	10	1
1:A:41:TYR:HB2	1:A:77:HIS:CE1	0.46	2.45	3	1
1:A:62:GLU:C	1:A:64:ILE:N	0.46	2.65	5	5
1:A:63:LEU:HD12	1:A:63:LEU:N	0.46	2.25	3	3
1:A:36:LYS:N	1:A:36:LYS:HD2	0.46	2.25	11	1
1:A:31:PHE:C	1:A:31:PHE:CD1	0.46	2.88	1	2
1:A:70:ILE:C	1:A:72:MET:H	0.46	2.14	4	3
1:A:63:LEU:HD22	1:A:63:LEU:N	0.46	2.26	5	1
1:A:43:ASN:ND2	1:A:44:CYS:N	0.46	2.64	6	1
1:A:36:LYS:C	1:A:38:LYS:N	0.46	2.67	6	2
1:A:51:MET:C	1:A:53:THR:N	0.46	2.69	7	1
1:A:66:LEU:CD1	1:A:66:LEU:N	0.46	2.78	6	1
1:A:38:LYS:O	1:A:39:ASP:CB	0.46	2.61	15	1
1:A:53:THR:O	1:A:53:THR:CG2	0.46	2.64	8	3
1:A:89:PRO:C	1:A:91:LEU:N	0.46	2.68	8	2
1:A:86:LEU:C	1:A:87:MET:SD	0.46	2.94	2	1
1:A:79:ASP:O	1:A:80:PHE:C	0.45	2.55	3	7
1:A:21:PRO:C	1:A:23:GLU:N	0.45	2.67	6	1
1:A:31:PHE:HB2	1:A:83:PHE:CE2	0.45	2.46	2	5
1:A:21:PRO:O	1:A:22:GLU:C	0.45	2.55	14	2
1:A:31:PHE:CD1	1:A:31:PHE:O	0.45	2.70	1	2
1:A:72:MET:O	1:A:72:MET:SD	0.45	2.74	6	1
1:A:61:MET:SD	1:A:62:GLU:N	0.45	2.90	12	1
1:A:63:LEU:HG	1:A:64:ILE:N	0.44	2.28	2	2
1:A:70:ILE:O	1:A:73:ASN:ND2	0.44	2.50	10	1
1:A:32:ARG:C	1:A:34:PHE:H	0.44	2.15	10	4
1:A:41:TYR:CZ	1:A:79:ASP:OD2	0.44	2.71	3	1
1:A:57:MET:SD	1:A:57:MET:O	0.44	2.75	9	2
1:A:79:ASP:OD2	1:A:81:ASP:N	0.44	2.42	10	1
1:A:38:LYS:O	1:A:39:ASP:CG	0.44	2.55	15	1
1:A:87:MET:O	1:A:88:GLY:C	0.44	2.56	15	3
1:A:64:ILE:O	1:A:68:GLN:CB	0.44	2.65	13	3
1:A:72:MET:N	1:A:72:MET:SD	0.44	2.90	9	1
1:A:34:PHE:CE2	1:A:50:CYS:HA	0.43	2.48	1	2
1:A:62:GLU:O	1:A:65:GLU:N	0.43	2.51	4	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:50:CYS:SG	1:A:51:MET:N	0.43	2.90	11	1
1:A:51:MET:CE	1:A:86:LEU:HD12	0.43	2.43	15	1
1:A:47:LEU:O	1:A:49:ASN:N	0.43	2.51	9	1
1:A:59:THR:C	1:A:60:GLU:CG	0.43	2.86	5	1
1:A:56:TYR:O	1:A:56:TYR:CD2	0.43	2.71	1	1
1:A:70:ILE:CG2	1:A:73:ASN:HD21	0.43	2.26	10	1
1:A:32:ARG:O	1:A:33:GLU:C	0.43	2.57	1	4
1:A:88:GLY:C	1:A:91:LEU:HD11	0.43	2.34	1	1
1:A:55:GLY:O	1:A:56:TYR:C	0.43	2.55	14	4
1:A:53:THR:O	1:A:53:THR:HG22	0.43	2.13	8	1
1:A:59:THR:HG21	1:A:62:GLU:OE1	0.43	2.14	3	1
1:A:63:LEU:O	1:A:66:LEU:N	0.43	2.52	7	1
1:A:31:PHE:CE2	1:A:42:ILE:HG12	0.43	2.49	8	3
1:A:88:GLY:O	1:A:91:LEU:HD11	0.43	2.14	1	1
1:A:39:ASP:OD1	1:A:39:ASP:C	0.43	2.58	12	1
1:A:25:GLU:OE2	1:A:29:GLU:OE1	0.43	2.37	14	1
1:A:83:PHE:CE1	1:A:87:MET:CE	0.43	3.02	5	1
1:A:46:ASP:O	1:A:49:ASN:N	0.43	2.51	8	1
1:A:82:ASP:O	1:A:86:LEU:N	0.42	2.52	1	2
1:A:34:PHE:CZ	1:A:50:CYS:HA	0.42	2.49	5	1
1:A:88:GLY:O	1:A:91:LEU:CD2	0.42	2.67	5	1
1:A:31:PHE:CE2	1:A:42:ILE:CG1	0.42	3.02	7	1
1:A:20:ARG:CG	1:A:20:ARG:O	0.42	2.66	8	1
1:A:28:ARG:CG	1:A:32:ARG:HH12	0.42	2.26	10	1
1:A:31:PHE:CD2	1:A:42:ILE:CD1	0.42	2.99	11	1
1:A:59:THR:HG1	1:A:62:GLU:H	0.42	1.57	13	1
1:A:63:LEU:N	1:A:63:LEU:HD12	0.42	2.29	11	1
1:A:74:LEU:HG	1:A:75:GLY:N	0.42	2.29	5	1
1:A:47:LEU:C	1:A:49:ASN:N	0.42	2.70	7	1
1:A:32:ARG:HG2	1:A:32:ARG:NH1	0.42	2.30	3	1
1:A:35:ASP:OD1	1:A:35:ASP:C	0.42	2.57	15	1
1:A:28:ARG:HA	1:A:80:PHE:CE1	0.42	2.50	8	3
1:A:26:GLU:OE1	1:A:26:GLU:CA	0.42	2.67	9	1
1:A:63:LEU:N	1:A:63:LEU:CD1	0.42	2.72	5	1
1:A:68:GLN:O	1:A:69:GLN:C	0.42	2.58	7	1
1:A:36:LYS:CB	1:A:36:LYS:NZ	0.42	2.83	7	1
1:A:59:THR:HG21	1:A:62:GLU:HB2	0.42	1.90	7	1
1:A:90:LYS:CB	1:A:90:LYS:NZ	0.42	2.82	14	1
1:A:37:ASP:O	1:A:38:LYS:C	0.41	2.57	4	1
1:A:79:ASP:CG	1:A:80:PHE:N	0.41	2.73	8	1
1:A:20:ARG:C	1:A:22:GLU:H	0.41	2.18	2	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:79:ASP:OD1	1:A:82:ASP:OD1	0.41	2.38	15	1
1:A:91:LEU:N	1:A:91:LEU:HD23	0.41	2.29	8	1
1:A:87:MET:O	1:A:91:LEU:N	0.41	2.54	12	1
1:A:55:GLY:O	1:A:56:TYR:CB	0.41	2.68	5	1
1:A:71:ASN:O	1:A:73:ASN:N	0.41	2.53	11	1
1:A:22:GLU:HG3	1:A:23:GLU:N	0.41	2.31	15	1
1:A:70:ILE:HG22	1:A:71:ASN:N	0.41	2.30	1	1
1:A:54:MET:SD	1:A:54:MET:O	0.41	2.78	5	1
1:A:43:ASN:O	1:A:44:CYS:C	0.41	2.56	8	1
1:A:20:ARG:O	1:A:24:ILE:CG1	0.41	2.68	15	1
1:A:46:ASP:O	1:A:47:LEU:C	0.41	2.58	14	1
1:A:27:LEU:HD23	1:A:83:PHE:CE2	0.41	2.50	4	3
1:A:64:ILE:O	1:A:65:GLU:C	0.41	2.59	5	1
1:A:63:LEU:H	1:A:63:LEU:HD23	0.41	1.75	15	1
1:A:62:GLU:O	1:A:63:LEU:C	0.41	2.58	4	2
1:A:87:MET:O	1:A:90:LYS:N	0.41	2.54	5	2
1:A:79:ASP:OD2	1:A:81:ASP:CB	0.41	2.69	10	1
1:A:20:ARG:NH1	1:A:91:LEU:HD23	0.41	2.31	11	1
1:A:45:ARG:CG	1:A:46:ASP:N	0.41	2.84	2	1
1:A:61:MET:O	1:A:61:MET:CG	0.41	2.68	5	1
1:A:27:LEU:C	1:A:27:LEU:HD13	0.40	2.36	2	1
1:A:62:GLU:CD	1:A:62:GLU:O	0.40	2.59	8	1
1:A:43:ASN:N	1:A:46:ASP:OD2	0.40	2.41	7	1
1:A:69:GLN:O	1:A:70:ILE:C	0.40	2.60	11	1
1:A:63:LEU:CD2	1:A:63:LEU:C	0.40	2.90	5	1
1:A:37:ASP:OD1	1:A:37:ASP:C	0.40	2.60	1	1
1:A:89:PRO:O	1:A:90:LYS:C	0.40	2.60	4	1

6.3 Torsion angles (i)

6.3.1 Protein backbone (i)

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	71/76 (93%)	51±2 (72±3%)	13±2 (18±3%)	7±2 (10±2%)	1	9
All	All	1065/1140 (93%)	762 (72%)	193 (18%)	110 (10%)	1	9

All 22 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	80	PHE	15
1	A	75	GLY	12
1	A	89	PRO	9
1	A	61	MET	8
1	A	58	PRO	8
1	A	57	MET	7
1	A	71	ASN	6
1	A	33	GLU	6
1	A	35	ASP	6
1	A	44	CYS	5
1	A	37	ASP	5
1	A	38	LYS	4
1	A	40	GLY	3
1	A	56	TYR	3
1	A	55	GLY	2
1	A	22	GLU	2
1	A	36	LYS	2
1	A	39	ASP	2
1	A	21	PRO	2
1	A	60	GLU	1
1	A	90	LYS	1
1	A	73	ASN	1

6.3.2 Protein sidechains (i)

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	65/69 (94%)	51±2 (79±4%)	14±2 (21±4%)	3	32
All	All	975/1035 (94%)	772 (79%)	203 (21%)	3	32

All 50 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	64	ILE	15
1	A	78	VAL	13

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Mol	Chain	Res	Type	Models (Total)
1	A	20	ARG	10
1	A	53	THR	9
1	A	51	MET	9
1	A	63	LEU	9
1	A	42	ILE	8
1	A	86	LEU	7
1	A	54	MET	5
1	A	61	MET	5
1	A	77	HIS	5
1	A	32	ARG	5
1	A	37	ASP	5
1	A	57	MET	5
1	A	43	ASN	5
1	A	72	MET	5
1	A	36	LYS	4
1	A	70	ILE	4
1	A	28	ARG	4
1	A	79	ASP	4
1	A	56	TYR	4
1	A	91	LEU	4
1	A	29	GLU	3
1	A	50	CYS	3
1	A	71	ASN	3
1	A	81	ASP	3
1	A	87	MET	3
1	A	90	LYS	3
1	A	45	ARG	3
1	A	49	ASN	3
1	A	22	GLU	3
1	A	44	CYS	3
1	A	39	ASP	3
1	A	46	ASP	2
1	A	52	ARG	2
1	A	74	LEU	2
1	A	26	GLU	2
1	A	69	GLN	2
1	A	27	LEU	2
1	A	47	LEU	2
1	A	82	ASP	2
1	A	73	ASN	2
1	A	89	PRO	1
1	A	59	THR	1

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Mol	Chain	Res	Type	Models (Total)
1	A	23	GLU	1
1	A	68	GLN	1
1	A	60	GLU	1
1	A	62	GLU	1
1	A	38	LYS	1
1	A	25	GLU	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

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

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

The completeness of assignment taking into account all chemical shift lists is 74% for the well-defined parts and 74% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping

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

Total number of shifts	1577
Number of shifts mapped to atoms	782
Number of unparsed shifts	0
Number of shifts with mapping errors	795
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	1

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

- No matching atom found in the structure. All 795 occurrences are reported below.

List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	12	LEU	H	8.31	0.04	1
1	A	12	LEU	HA	4.35	0.04	1
1	A	12	LEU	HB2	1.63	0.04	2
1	A	12	LEU	HD11	0.84	0.04	2
1	A	12	LEU	HD12	0.84	0.04	2
1	A	12	LEU	HD13	0.84	0.04	2
1	A	12	LEU	HD21	0.89	0.04	2
1	A	12	LEU	HD22	0.89	0.04	2
1	A	12	LEU	HD23	0.89	0.04	2
1	A	12	LEU	CA	55.83	0.2	1
1	A	12	LEU	CB	42.37	0.2	1
1	A	12	LEU	CG	26.71	0.2	1
1	A	12	LEU	CD1	23.54	0.2	1
1	A	12	LEU	CD2	25.32	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	12	LEU	N	122.66	0.2	1
1	A	13	SER	H	8.26	0.04	1
1	A	13	SER	HA	4.43	0.04	1
1	A	13	SER	HB2	3.87	0.04	2
1	A	13	SER	C	174.72	0.2	1
1	A	13	SER	CA	58.67	0.2	1
1	A	13	SER	CB	64.03	0.2	1
1	A	13	SER	N	115.72	0.2	1
1	A	14	ARG	H	8.22	0.04	1
1	A	14	ARG	HA	4.06	0.04	1
1	A	14	ARG	HB2	2.02	0.04	2
1	A	14	ARG	CA	56.4	0.2	1
1	A	14	ARG	CB	32.64	0.2	1
1	A	14	ARG	N	122.72	0.2	1
1	A	15	LYS	HA	4.29	0.04	1
1	A	15	LYS	HB2	1.76	0.04	2
1	A	15	LYS	HG2	1.42	0.04	2
1	A	15	LYS	HD2	1.68	0.04	2
1	A	15	LYS	HE2	3.01	0.04	2
1	A	15	LYS	C	176.14	0.2	1
1	A	15	LYS	CA	56.43	0.2	1
1	A	15	LYS	CB	32.91	0.2	1
1	A	15	LYS	CG	24.8	0.2	1
1	A	15	LYS	CD	29.02	0.2	1
1	A	15	LYS	CE	42.25	0.2	1
1	A	16	ASP	H	8.28	0.04	1
1	A	92	LEU	H	7.86	0.04	1
1	A	92	LEU	HA	4.17	0.04	1
1	A	92	LEU	HB2	1.63	0.04	2
1	A	92	LEU	HG	1.6	0.04	1
1	A	92	LEU	HD11	0.73	0.04	2
1	A	92	LEU	HD12	0.73	0.04	2
1	A	92	LEU	HD13	0.73	0.04	2
1	A	92	LEU	HD21	0.75	0.04	2
1	A	92	LEU	HD22	0.75	0.04	2
1	A	92	LEU	HD23	0.75	0.04	2
1	A	92	LEU	C	177.44	0.2	1
1	A	92	LEU	CA	55.82	0.2	1
1	A	92	LEU	CB	41.99	0.2	1
1	A	92	LEU	CG	27.0	0.2	1
1	A	92	LEU	CD1	23.03	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	92	LEU	CD2	25.29	0.2	1
1	A	92	LEU	N	118.11	0.2	1
1	A	93	ALA	H	7.44	0.04	1
1	A	93	ALA	HA	4.26	0.04	1
1	A	93	ALA	HB1	1.49	0.04	1
1	A	93	ALA	HB2	1.49	0.04	1
1	A	93	ALA	HB3	1.49	0.04	1
1	A	93	ALA	C	177.96	0.2	1
1	A	93	ALA	CA	53.17	0.2	1
1	A	93	ALA	CB	19.13	0.2	1
1	A	93	ALA	N	121.93	0.2	1
1	A	94	GLU	H	8.12	0.04	1
1	A	94	GLU	HA	4.4	0.04	1
1	A	94	GLU	HB2	2.37	0.04	2
1	A	94	GLU	HG2	2.36	0.04	2
1	A	94	GLU	C	176.9	0.2	1
1	A	94	GLU	CA	56.88	0.2	1
1	A	94	GLU	CB	30.45	0.2	1
1	A	94	GLU	CG	36.45	0.2	1
1	A	94	GLU	N	118.94	0.2	1
1	A	95	THR	H	8.02	0.04	1
1	A	95	THR	HA	4.4	0.04	1
1	A	95	THR	HB	4.33	0.04	1
1	A	95	THR	HG21	1.24	0.04	1
1	A	95	THR	HG22	1.24	0.04	1
1	A	95	THR	HG23	1.24	0.04	1
1	A	95	THR	C	174.65	0.2	1
1	A	95	THR	CA	62.08	0.2	1
1	A	95	THR	CB	69.99	0.2	1
1	A	95	THR	CG2	21.86	0.2	1
1	A	95	THR	N	113.59	0.2	1
1	A	96	ALA	H	8.3	0.04	1
1	A	96	ALA	HA	4.32	0.04	1
1	A	96	ALA	HB1	1.42	0.04	1
1	A	96	ALA	HB2	1.42	0.04	1
1	A	96	ALA	HB3	1.42	0.04	1
1	A	96	ALA	C	177.46	0.2	1
1	A	96	ALA	CA	53.07	0.2	1
1	A	96	ALA	CB	19.44	0.2	1
1	A	96	ALA	N	125.55	0.2	1
1	A	97	ASP	H	8.29	0.04	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	97	ASP	HA	4.61	0.04	1
1	A	97	ASP	HB2	2.6	0.04	2
1	A	97	ASP	HB3	2.75	0.04	2
1	A	97	ASP	C	176.06	0.2	1
1	A	97	ASP	CA	54.86	0.2	1
1	A	97	ASP	CB	41.13	0.2	1
1	A	97	ASP	N	118.64	0.2	1
1	A	98	MET	H	8.11	0.04	1
1	A	98	MET	HA	4.49	0.04	1
1	A	98	MET	HB2	2.07	0.04	2
1	A	98	MET	HG2	2.61	0.04	2
1	A	98	MET	C	176.22	0.2	1
1	A	98	MET	CA	55.87	0.2	1
1	A	98	MET	CB	33.36	0.2	1
1	A	98	MET	CG	32.07	0.2	1
1	A	98	MET	N	119.8	0.2	1
1	A	99	ILE	H	8.21	0.04	1
1	A	99	ILE	HA	4.06	0.04	1
1	A	99	ILE	HB	1.82	0.04	1
1	A	99	ILE	HG12	1.56	0.04	1
1	A	99	ILE	HG13	1.17	0.04	1
1	A	99	ILE	HG21	0.96	0.04	1
1	A	99	ILE	HG22	0.96	0.04	1
1	A	99	ILE	HG23	0.96	0.04	1
1	A	99	ILE	HD11	0.84	0.04	1
1	A	99	ILE	HD12	0.84	0.04	1
1	A	99	ILE	HD13	0.84	0.04	1
1	A	99	ILE	C	176.02	0.2	1
1	A	99	ILE	CA	62.14	0.2	1
1	A	99	ILE	CB	38.57	0.2	1
1	A	99	ILE	CG1	27.77	0.2	1
1	A	99	ILE	CG2	17.98	0.2	1
1	A	99	ILE	CD1	13.45	0.2	1
1	A	99	ILE	N	122.28	0.2	1
1	A	100	GLY	H	8.61	0.04	1
1	A	100	GLY	HA2	4.0	0.04	2
1	A	100	GLY	HA3	4.27	0.04	2
1	A	100	GLY	C	174.55	0.2	1
1	A	100	GLY	CA	45.31	0.2	1
1	A	100	GLY	N	113.55	0.2	1
1	A	101	VAL	H	8.27	0.04	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	101	VAL	HA	3.86	0.04	1
1	A	101	VAL	HB	2.19	0.04	1
1	A	101	VAL	HG11	1.12	0.04	2
1	A	101	VAL	HG12	1.12	0.04	2
1	A	101	VAL	HG13	1.12	0.04	2
1	A	101	VAL	HG21	1.07	0.04	2
1	A	101	VAL	HG22	1.07	0.04	2
1	A	101	VAL	HG23	1.07	0.04	2
1	A	101	VAL	C	177.42	0.2	1
1	A	101	VAL	CA	66.17	0.2	1
1	A	101	VAL	CB	31.8	0.2	1
1	A	101	VAL	CG1	22.35	0.2	1
1	A	101	VAL	CG2	21.36	0.2	1
1	A	101	VAL	N	119.81	0.2	1
1	A	102	LYS	H	8.49	0.04	1
1	A	102	LYS	HA	4.01	0.04	1
1	A	102	LYS	HB2	1.84	0.04	2
1	A	102	LYS	HB3	1.96	0.04	2
1	A	102	LYS	HG2	1.47	0.04	2
1	A	102	LYS	HE2	2.61	0.04	2
1	A	102	LYS	C	178.27	0.2	1
1	A	102	LYS	CA	60.37	0.2	1
1	A	102	LYS	CB	32.21	0.2	1
1	A	102	LYS	CG	25.08	0.2	1
1	A	102	LYS	CD	29.28	0.2	1
1	A	102	LYS	CE	42.27	0.2	1
1	A	102	LYS	N	121.87	0.2	1
1	A	103	GLU	H	8.21	0.04	1
1	A	103	GLU	HA	4.19	0.04	1
1	A	103	GLU	HB2	2.02	0.04	2
1	A	103	GLU	HB3	2.37	0.04	2
1	A	103	GLU	HG2	2.93	0.04	2
1	A	103	GLU	HG3	2.84	0.04	2
1	A	103	GLU	C	180.47	0.2	1
1	A	103	GLU	CA	60.54	0.2	1
1	A	103	GLU	CB	29.05	0.2	1
1	A	103	GLU	CG	37.72	0.2	1
1	A	103	GLU	N	118.76	0.2	1
1	A	104	LEU	H	8.19	0.04	1
1	A	104	LEU	HA	4.34	0.04	1
1	A	104	LEU	HB2	2.32	0.04	2

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	104	LEU	HB3	1.58	0.04	2
1	A	104	LEU	HG	1.62	0.04	1
1	A	104	LEU	HD11	0.7	0.04	2
1	A	104	LEU	HD12	0.7	0.04	2
1	A	104	LEU	HD13	0.7	0.04	2
1	A	104	LEU	HD21	0.76	0.04	2
1	A	104	LEU	HD22	0.76	0.04	2
1	A	104	LEU	HD23	0.76	0.04	2
1	A	104	LEU	C	178.81	0.2	1
1	A	104	LEU	CA	58.59	0.2	1
1	A	104	LEU	CB	41.94	0.2	1
1	A	104	LEU	CG	26.72	0.2	1
1	A	104	LEU	CD1	24.18	0.2	1
1	A	104	LEU	CD2	26.75	0.2	1
1	A	104	LEU	N	120.09	0.2	1
1	A	105	ARG	H	8.89	0.04	1
1	A	105	ARG	HA	3.9	0.04	1
1	A	105	ARG	HB2	1.91	0.04	2
1	A	105	ARG	HG2	1.39	0.04	2
1	A	105	ARG	HD2	2.93	0.04	2
1	A	105	ARG	HD3	2.84	0.04	2
1	A	105	ARG	C	178.68	0.2	1
1	A	105	ARG	CA	60.06	0.2	1
1	A	105	ARG	CB	29.45	0.2	1
1	A	105	ARG	CG	27.23	0.2	1
1	A	105	ARG	CD	42.99	0.2	1
1	A	105	ARG	N	121.3	0.2	1
1	A	106	ASP	H	8.44	0.04	1
1	A	106	ASP	HA	4.41	0.04	1
1	A	106	ASP	HB2	2.82	0.04	2
1	A	106	ASP	C	179.01	0.2	1
1	A	106	ASP	CA	57.42	0.2	1
1	A	106	ASP	CB	40.06	0.2	1
1	A	106	ASP	N	119.61	0.2	1
1	A	107	ALA	H	7.99	0.04	1
1	A	107	ALA	HA	4.36	0.04	1
1	A	107	ALA	HB1	1.8	0.04	1
1	A	107	ALA	HB2	1.8	0.04	1
1	A	107	ALA	HB3	1.8	0.04	1
1	A	107	ALA	C	178.48	0.2	1
1	A	107	ALA	CA	55.05	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	107	ALA	CB	18.48	0.2	1
1	A	107	ALA	N	122.25	0.2	1
1	A	108	PHE	H	8.61	0.04	1
1	A	108	PHE	HA	3.54	0.04	1
1	A	108	PHE	HB2	3.19	0.04	2
1	A	108	PHE	HB3	3.04	0.04	2
1	A	108	PHE	HD1	7.09	0.04	3
1	A	108	PHE	HE1	7.42	0.04	3
1	A	108	PHE	C	177.02	0.2	1
1	A	108	PHE	CA	62.12	0.2	1
1	A	108	PHE	CB	40.21	0.2	1
1	A	108	PHE	N	118.51	0.2	1
1	A	109	ARG	H	8.33	0.04	1
1	A	109	ARG	HA	3.97	0.04	1
1	A	109	ARG	HB2	1.93	0.04	2
1	A	109	ARG	HG2	1.78	0.04	2
1	A	109	ARG	HD2	3.21	0.04	2
1	A	109	ARG	C	178.2	0.2	1
1	A	109	ARG	CA	59.07	0.2	1
1	A	109	ARG	CB	30.03	0.2	1
1	A	109	ARG	CG	27.73	0.2	1
1	A	109	ARG	CD	43.69	0.2	1
1	A	109	ARG	N	115.26	0.2	1
1	A	110	GLU	H	7.52	0.04	1
1	A	110	GLU	HA	3.73	0.04	1
1	A	110	GLU	HB2	1.95	0.04	2
1	A	110	GLU	HB3	1.4	0.04	2
1	A	110	GLU	HG3	1.95	0.04	2
1	A	110	GLU	C	177.46	0.2	1
1	A	110	GLU	CA	58.78	0.2	1
1	A	110	GLU	CB	29.06	0.2	1
1	A	110	GLU	CG	35.57	0.2	1
1	A	110	GLU	N	117.7	0.2	1
1	A	111	PHE	H	7.19	0.04	1
1	A	111	PHE	HA	4.34	0.04	1
1	A	111	PHE	HB2	2.39	0.04	2
1	A	111	PHE	HB3	3.0	0.04	2
1	A	111	PHE	HD1	7.41	0.04	3
1	A	111	PHE	C	175.69	0.2	1
1	A	111	PHE	CA	60.23	0.2	1
1	A	111	PHE	CB	39.7	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	111	PHE	N	114.23	0.2	1
1	A	112	ASP	H	7.7	0.04	1
1	A	112	ASP	HA	5.29	0.04	1
1	A	112	ASP	HB2	2.61	0.04	2
1	A	112	ASP	HB3	1.77	0.04	2
1	A	112	ASP	C	179.33	0.2	1
1	A	112	ASP	CA	52.12	0.2	1
1	A	112	ASP	CB	38.8	0.2	1
1	A	112	ASP	N	120.32	0.2	1
1	A	113	THR	H	8.03	0.04	1
1	A	113	THR	HA	4.0	0.04	1
1	A	113	THR	HB	4.35	0.04	1
1	A	113	THR	HG21	1.27	0.04	1
1	A	113	THR	HG22	1.27	0.04	1
1	A	113	THR	HG23	1.27	0.04	1
1	A	113	THR	C	175.34	0.2	1
1	A	113	THR	CA	64.49	0.2	1
1	A	113	THR	CB	68.67	0.2	1
1	A	113	THR	CG2	22.45	0.2	1
1	A	113	THR	N	114.63	0.2	1
1	A	114	ASN	H	7.81	0.04	1
1	A	114	ASN	HA	4.78	0.04	1
1	A	114	ASN	HB2	3.27	0.04	2
1	A	114	ASN	HB3	2.86	0.04	2
1	A	114	ASN	C	176.25	0.2	1
1	A	114	ASN	CA	51.54	0.2	1
1	A	114	ASN	CB	36.77	0.2	1
1	A	114	ASN	N	115.05	0.2	1
1	A	115	GLY	H	7.74	0.04	1
1	A	115	GLY	HA2	3.85	0.04	2
1	A	115	GLY	C	174.45	0.2	1
1	A	115	GLY	CA	47.74	0.2	1
1	A	115	GLY	N	108.95	0.2	1
1	A	116	ASP	H	8.32	0.04	1
1	A	116	ASP	HA	4.68	0.04	1
1	A	116	ASP	HB2	1.85	0.04	2
1	A	116	ASP	C	177.28	0.2	1
1	A	116	ASP	CA	53.03	0.2	1
1	A	116	ASP	CB	40.62	0.2	1
1	A	116	ASP	N	117.82	0.2	1
1	A	117	GLY	H	10.54	0.04	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	117	GLY	HA2	4.36	0.04	2
1	A	117	GLY	HA3	3.73	0.04	2
1	A	117	GLY	C	173.52	0.2	1
1	A	117	GLY	CA	45.79	0.2	1
1	A	117	GLY	N	113.21	0.2	1
1	A	118	GLU	H	7.91	0.04	1
1	A	118	GLU	HA	5.51	0.04	1
1	A	118	GLU	HB2	2.11	0.04	2
1	A	118	GLU	HB3	1.78	0.04	2
1	A	118	GLU	HG2	2.17	0.04	2
1	A	118	GLU	HG3	2.07	0.04	2
1	A	118	GLU	C	174.78	0.2	1
1	A	118	GLU	CA	54.0	0.2	1
1	A	118	GLU	CB	34.52	0.2	1
1	A	118	GLU	CG	36.54	0.2	1
1	A	118	GLU	N	117.13	0.2	1
1	A	119	ILE	H	9.36	0.04	1
1	A	119	ILE	HA	5.01	0.04	1
1	A	119	ILE	HB	2.28	0.04	1
1	A	119	ILE	HG12	1.36	0.04	1
1	A	119	ILE	HG13	0.99	0.04	1
1	A	119	ILE	HG21	0.12	0.04	1
1	A	119	ILE	HG22	0.12	0.04	1
1	A	119	ILE	HG23	0.12	0.04	1
1	A	119	ILE	HD11	0.3	0.04	1
1	A	119	ILE	HD12	0.3	0.04	1
1	A	119	ILE	HD13	0.3	0.04	1
1	A	119	ILE	C	174.37	0.2	1
1	A	119	ILE	CA	59.47	0.2	1
1	A	119	ILE	CB	40.85	0.2	1
1	A	119	ILE	CG1	23.97	0.2	1
1	A	119	ILE	CG2	16.0	0.2	1
1	A	119	ILE	CD1	13.15	0.2	1
1	A	119	ILE	N	119.36	0.2	1
1	A	120	SER	H	9.05	0.04	1
1	A	120	SER	HA	5.03	0.04	1
1	A	120	SER	HB2	4.7	0.04	2
1	A	120	SER	C	175.83	0.2	1
1	A	120	SER	CA	56.78	0.2	1
1	A	120	SER	CB	65.98	0.2	1
1	A	120	SER	N	117.9	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	121	THR	H	8.67	0.04	1
1	A	121	THR	HA	3.88	0.04	1
1	A	121	THR	HB	4.22	0.04	1
1	A	121	THR	HG21	1.23	0.04	1
1	A	121	THR	HG22	1.23	0.04	1
1	A	121	THR	HG23	1.23	0.04	1
1	A	121	THR	C	176.9	0.2	1
1	A	121	THR	CA	66.38	0.2	1
1	A	121	THR	CB	67.9	0.2	1
1	A	121	THR	CG2	23.8	0.2	1
1	A	121	THR	N	112.12	0.2	1
1	A	122	SER	H	8.17	0.04	1
1	A	122	SER	HA	4.23	0.04	1
1	A	122	SER	HB2	3.9	0.04	2
1	A	122	SER	C	177.19	0.2	1
1	A	122	SER	CA	61.12	0.2	1
1	A	122	SER	CB	61.95	0.2	1
1	A	122	SER	N	116.87	0.2	1
1	A	123	GLU	H	7.48	0.04	1
1	A	123	GLU	HA	4.02	0.04	1
1	A	123	GLU	HB2	1.93	0.04	2
1	A	123	GLU	HG2	2.32	0.04	2
1	A	123	GLU	C	177.94	0.2	1
1	A	123	GLU	CA	58.83	0.2	1
1	A	123	GLU	CB	29.93	0.2	1
1	A	123	GLU	CG	37.25	0.2	1
1	A	123	GLU	N	124.62	0.2	1
1	A	124	LEU	H	8.72	0.04	1
1	A	124	LEU	HA	3.83	0.04	1
1	A	124	LEU	HB2	1.38	0.04	2
1	A	124	LEU	HG	1.6	0.04	1
1	A	124	LEU	HD11	1.07	0.04	2
1	A	124	LEU	HD12	1.07	0.04	2
1	A	124	LEU	HD13	1.07	0.04	2
1	A	124	LEU	HD21	0.94	0.04	2
1	A	124	LEU	HD22	0.94	0.04	2
1	A	124	LEU	HD23	0.94	0.04	2
1	A	124	LEU	C	177.73	0.2	1
1	A	124	LEU	CA	57.98	0.2	1
1	A	124	LEU	CB	41.65	0.2	1
1	A	124	LEU	CG	27.16	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	124	LEU	CD1	24.14	0.2	1
1	A	124	LEU	CD2	26.93	0.2	1
1	A	124	LEU	N	120.01	0.2	1
1	A	125	ARG	H	7.99	0.04	1
1	A	125	ARG	HA	3.66	0.04	1
1	A	125	ARG	HB2	1.91	0.04	2
1	A	125	ARG	HG2	1.41	0.04	2
1	A	125	ARG	HG3	1.63	0.04	2
1	A	125	ARG	HD2	3.22	0.04	2
1	A	125	ARG	C	178.29	0.2	1
1	A	125	ARG	CA	60.6	0.2	1
1	A	125	ARG	CB	30.03	0.2	1
1	A	125	ARG	CG	28.92	0.2	1
1	A	125	ARG	CD	42.77	0.2	1
1	A	125	ARG	N	118.42	0.2	1
1	A	126	GLU	H	7.19	0.04	1
1	A	126	GLU	HA	3.94	0.04	1
1	A	126	GLU	HB2	1.84	0.04	2
1	A	126	GLU	HG2	2.33	0.04	2
1	A	126	GLU	HG3	2.43	0.04	2
1	A	126	GLU	C	178.84	0.2	1
1	A	126	GLU	CA	58.74	0.2	1
1	A	126	GLU	CB	29.04	0.2	1
1	A	126	GLU	CG	36.03	0.2	1
1	A	126	GLU	N	116.99	0.2	1
1	A	127	ALA	H	8.11	0.04	1
1	A	127	ALA	HA	3.53	0.04	1
1	A	127	ALA	HB1	1.01	0.04	1
1	A	127	ALA	HB2	1.01	0.04	1
1	A	127	ALA	HB3	1.01	0.04	1
1	A	127	ALA	C	179.65	0.2	1
1	A	127	ALA	CA	55.07	0.2	1
1	A	127	ALA	CB	17.47	0.2	1
1	A	127	ALA	N	123.88	0.2	1
1	A	128	MET	H	8.6	0.04	1
1	A	128	MET	HA	3.94	0.04	1
1	A	128	MET	HB2	2.5	0.04	2
1	A	128	MET	HG2	2.15	0.04	2
1	A	128	MET	C	178.23	0.2	1
1	A	128	MET	CA	59.86	0.2	1
1	A	128	MET	CB	33.3	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	128	MET	CG	33.08	0.2	1
1	A	128	MET	N	115.47	0.2	1
1	A	129	ARG	H	8.05	0.04	1
1	A	129	ARG	HA	3.87	0.04	1
1	A	129	ARG	HB2	1.9	0.04	2
1	A	129	ARG	HG2	1.8	0.04	2
1	A	129	ARG	HG3	1.53	0.04	2
1	A	129	ARG	HD2	3.12	0.04	2
1	A	129	ARG	C	179.01	0.2	1
1	A	129	ARG	CA	59.81	0.2	1
1	A	129	ARG	CB	29.98	0.2	1
1	A	129	ARG	CG	27.88	0.2	1
1	A	129	ARG	CD	37.09	0.2	1
1	A	129	ARG	N	118.98	0.2	1
1	A	130	LYS	H	7.83	0.04	1
1	A	130	LYS	HA	4.12	0.04	1
1	A	130	LYS	HB2	2.1	0.04	2
1	A	130	LYS	HD2	1.67	0.04	2
1	A	130	LYS	HD3	1.52	0.04	2
1	A	130	LYS	HE2	3.08	0.04	2
1	A	130	LYS	C	178.5	0.2	1
1	A	130	LYS	CA	59.26	0.2	1
1	A	130	LYS	CB	32.73	0.2	1
1	A	130	LYS	CG	21.48	0.2	1
1	A	130	LYS	CD	25.57	0.2	1
1	A	130	LYS	CE	40.87	0.2	1
1	A	130	LYS	N	119.17	0.2	1
1	A	131	LEU	H	8.04	0.04	1
1	A	131	LEU	HA	4.28	0.04	1
1	A	131	LEU	HB2	1.82	0.04	2
1	A	131	LEU	HB3	1.5	0.04	2
1	A	131	LEU	HG	1.63	0.04	1
1	A	131	LEU	HD11	0.97	0.04	2
1	A	131	LEU	HD12	0.97	0.04	2
1	A	131	LEU	HD13	0.97	0.04	2
1	A	131	LEU	HD21	1.0	0.04	2
1	A	131	LEU	HD22	1.0	0.04	2
1	A	131	LEU	HD23	1.0	0.04	2
1	A	131	LEU	C	178.35	0.2	1
1	A	131	LEU	CA	57.01	0.2	1
1	A	131	LEU	CB	43.47	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	131	LEU	CG	26.86	0.2	1
1	A	131	LEU	CD1	23.26	0.2	1
1	A	131	LEU	CD2	26.19	0.2	1
1	A	131	LEU	N	117.21	0.2	1
1	A	132	LEU	H	8.36	0.04	1
1	A	132	LEU	HA	4.44	0.04	1
1	A	132	LEU	HB2	1.42	0.04	2
1	A	132	LEU	HB3	1.76	0.04	2
1	A	132	LEU	HD11	0.8	0.04	2
1	A	132	LEU	HD12	0.8	0.04	2
1	A	132	LEU	HD13	0.8	0.04	2
1	A	132	LEU	HD21	0.8	0.04	2
1	A	132	LEU	HD22	0.8	0.04	2
1	A	132	LEU	HD23	0.8	0.04	2
1	A	132	LEU	C	178.63	0.2	1
1	A	132	LEU	CA	55.18	0.2	1
1	A	132	LEU	CB	42.88	0.2	1
1	A	132	LEU	CD1	22.64	0.2	1
1	A	132	LEU	CD2	25.74	0.2	1
1	A	132	LEU	N	115.8	0.2	1
1	A	133	GLY	H	7.83	0.04	1
1	A	133	GLY	HA2	4.09	0.04	2
1	A	133	GLY	HA3	3.88	0.04	2
1	A	133	GLY	CA	46.52	0.2	1
1	A	133	GLY	N	107.88	0.2	1
1	A	134	HIS	HA	4.61	0.04	1
1	A	134	HIS	HB2	3.16	0.04	2
1	A	134	HIS	HD2	7.008	0.04	1
1	A	134	HIS	C	175.7	0.2	1
1	A	134	HIS	CA	56.86	0.2	1
1	A	134	HIS	CB	30.29	0.2	1
1	A	135	GLN	H	8.09	0.04	1
1	A	135	GLN	HA	4.36	0.04	1
1	A	135	GLN	HB2	2.11	0.04	2
1	A	135	GLN	HB3	1.97	0.04	2
1	A	135	GLN	HG2	2.18	0.04	2
1	A	135	GLN	C	175.71	0.2	1
1	A	135	GLN	CA	56.48	0.2	1
1	A	135	GLN	CB	29.63	0.2	1
1	A	135	GLN	CG	33.7	0.2	1
1	A	135	GLN	N	119.42	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	136	VAL	H	7.92	0.04	1
1	A	136	VAL	HA	4.14	0.04	1
1	A	136	VAL	HB	2.07	0.04	1
1	A	136	VAL	HG11	0.92	0.04	2
1	A	136	VAL	HG12	0.92	0.04	2
1	A	136	VAL	HG13	0.92	0.04	2
1	A	136	VAL	HG21	0.93	0.04	2
1	A	136	VAL	HG22	0.93	0.04	2
1	A	136	VAL	HG23	0.93	0.04	2
1	A	136	VAL	C	176.08	0.2	1
1	A	136	VAL	CA	62.38	0.2	1
1	A	136	VAL	CB	32.86	0.2	1
1	A	136	VAL	CG1	21.0	0.2	1
1	A	136	VAL	CG2	21.58	0.2	1
1	A	136	VAL	N	119.06	0.2	1
1	A	137	GLY	H	8.61	0.04	1
1	A	137	GLY	HA2	4.03	0.04	2
1	A	137	GLY	HA3	3.95	0.04	2
1	A	137	GLY	CA	45.37	0.2	1
1	A	137	GLY	N	111.75	0.2	1
1	A	138	HIS	HA	4.11	0.04	1
1	A	138	HIS	HB2	3.12	0.04	2
1	A	138	HIS	HB3	3.34	0.04	2
1	A	138	HIS	HD2	7.023	0.04	1
1	A	138	HIS	C	179.51	0.2	1
1	A	138	HIS	CA	53.94	0.2	1
1	A	138	HIS	CB	30.11	0.2	1
1	A	139	ARG	H	8.24	0.04	1
1	A	139	ARG	HA	4.05	0.04	1
1	A	139	ARG	HB2	1.73	0.04	2
1	A	139	ARG	CA	58.38	0.2	1
1	A	139	ARG	CB	33.24	0.2	1
1	A	139	ARG	N	117.77	0.2	1
1	A	140	ASP	HA	4.53	0.04	1
1	A	140	ASP	HB2	2.7	0.04	2
1	A	140	ASP	C	178.02	0.2	1
1	A	140	ASP	CA	55.51	0.2	1
1	A	140	ASP	CB	41.05	0.2	1
1	A	141	ILE	H	8.02	0.04	1
1	A	141	ILE	HA	3.74	0.04	1
1	A	141	ILE	HB	1.96	0.04	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	141	ILE	HG12	1.72	0.04	1
1	A	141	ILE	HG21	0.91	0.04	1
1	A	141	ILE	HG22	0.91	0.04	1
1	A	141	ILE	HG23	0.91	0.04	1
1	A	141	ILE	HD11	0.78	0.04	1
1	A	141	ILE	HD12	0.78	0.04	1
1	A	141	ILE	HD13	0.78	0.04	1
1	A	141	ILE	C	177.1	0.2	1
1	A	141	ILE	CA	64.38	0.2	1
1	A	141	ILE	CB	38.05	0.2	1
1	A	141	ILE	CG1	28.98	0.2	1
1	A	141	ILE	CG2	17.85	0.2	1
1	A	141	ILE	CD1	13.33	0.2	1
1	A	141	ILE	N	121.75	0.2	1
1	A	142	GLU	H	8.1	0.04	1
1	A	142	GLU	HA	3.96	0.04	1
1	A	142	GLU	HB2	2.06	0.04	2
1	A	142	GLU	HG2	2.35	0.04	2
1	A	142	GLU	C	179.24	0.2	1
1	A	142	GLU	CA	58.92	0.2	1
1	A	142	GLU	CB	28.62	0.2	1
1	A	142	GLU	CG	36.07	0.2	1
1	A	142	GLU	N	118.1	0.2	1
1	A	143	GLU	H	7.71	0.04	1
1	A	143	GLU	HA	3.98	0.04	1
1	A	143	GLU	HB2	2.12	0.04	2
1	A	143	GLU	HB3	2.32	0.04	2
1	A	143	GLU	HG2	2.33	0.04	2
1	A	143	GLU	C	178.5	0.2	1
1	A	143	GLU	CA	58.89	0.2	1
1	A	143	GLU	CB	29.49	0.2	1
1	A	143	GLU	CG	36.52	0.2	1
1	A	143	GLU	N	118.3	0.2	1
1	A	144	ILE	H	7.5	0.04	1
1	A	144	ILE	HA	3.78	0.04	1
1	A	144	ILE	HB	1.94	0.04	1
1	A	144	ILE	HG12	1.72	0.04	1
1	A	144	ILE	HG21	0.87	0.04	1
1	A	144	ILE	HG22	0.87	0.04	1
1	A	144	ILE	HG23	0.87	0.04	1
1	A	144	ILE	HD11	0.77	0.04	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	144	ILE	HD12	0.77	0.04	1
1	A	144	ILE	HD13	0.77	0.04	1
1	A	144	ILE	C	178.19	0.2	1
1	A	144	ILE	CA	64.61	0.2	1
1	A	144	ILE	CB	38.24	0.2	1
1	A	144	ILE	CG1	28.82	0.2	1
1	A	144	ILE	CG2	17.63	0.2	1
1	A	144	ILE	CD1	13.6	0.2	1
1	A	144	ILE	N	119.83	0.2	1
1	A	145	ILE	H	7.92	0.04	1
1	A	145	ILE	HA	3.7	0.04	1
1	A	145	ILE	HB	1.85	0.04	1
1	A	145	ILE	HG12	1.75	0.04	1
1	A	145	ILE	HG21	0.68	0.04	1
1	A	145	ILE	HG22	0.68	0.04	1
1	A	145	ILE	HG23	0.68	0.04	1
1	A	145	ILE	HD11	0.73	0.04	1
1	A	145	ILE	HD12	0.73	0.04	1
1	A	145	ILE	HD13	0.73	0.04	1
1	A	145	ILE	C	177.29	0.2	1
1	A	145	ILE	CA	64.36	0.2	1
1	A	145	ILE	CB	37.62	0.2	1
1	A	145	ILE	CG1	28.7	0.2	1
1	A	145	ILE	CG2	17.57	0.2	1
1	A	145	ILE	CD1	13.27	0.2	1
1	A	145	ILE	N	116.95	0.2	1
1	A	146	ARG	H	7.73	0.04	1
1	A	146	ARG	HA	4.12	0.04	1
1	A	146	ARG	HB2	1.9	0.04	2
1	A	146	ARG	HG2	1.66	0.04	2
1	A	146	ARG	HD2	3.25	0.04	2
1	A	146	ARG	C	178.62	0.2	1
1	A	146	ARG	CA	58.87	0.2	1
1	A	146	ARG	CB	30.41	0.2	1
1	A	146	ARG	CG	27.05	0.2	1
1	A	146	ARG	CD	43.29	0.2	1
1	A	146	ARG	N	119.6	0.2	1
1	A	147	ASP	H	8.37	0.04	1
1	A	147	ASP	HA	4.66	0.04	1
1	A	147	ASP	HB2	2.81	0.04	2
1	A	147	ASP	CA	56.75	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	147	ASP	CB	41.48	0.2	1
1	A	147	ASP	N	119.49	0.2	1
1	A	148	VAL	HA	4.12	0.04	1
1	A	148	VAL	HB	1.97	0.04	1
1	A	148	VAL	HG11	0.82	0.04	2
1	A	148	VAL	HG12	0.82	0.04	2
1	A	148	VAL	HG13	0.82	0.04	2
1	A	148	VAL	HG21	0.9	0.04	2
1	A	148	VAL	HG22	0.9	0.04	2
1	A	148	VAL	HG23	0.9	0.04	2
1	A	148	VAL	C	175.85	0.2	1
1	A	148	VAL	CA	62.51	0.2	1
1	A	148	VAL	CB	34.4	0.2	1
1	A	148	VAL	CG1	21.61	0.2	1
1	A	148	VAL	CG2	21.0	0.2	1
1	A	149	ASP	H	8.6	0.04	1
1	A	149	ASP	HA	4.27	0.04	1
1	A	149	ASP	HB2	1.69	0.04	2
1	A	149	ASP	CA	55.86	0.2	1
1	A	149	ASP	CB	42.05	0.2	1
1	A	149	ASP	N	122.62	0.2	1
1	A	150	LEU	HA	4.41	0.04	1
1	A	150	LEU	HB2	1.61	0.04	2
1	A	150	LEU	C	176.35	0.2	1
1	A	150	LEU	CA	54.95	0.2	1
1	A	150	LEU	CB	42.52	0.2	1
1	A	151	ASN	H	8.03	0.04	1
1	A	151	ASN	HA	4.48	0.04	1
1	A	151	ASN	HB2	2.82	0.04	2
1	A	151	ASN	CA	55.17	0.2	1
1	A	151	ASN	N	124.94	0.2	1
1	A	152	GLY	HA2	4.22	0.04	2
1	A	152	GLY	HA3	3.92	0.04	2
1	A	152	GLY	CA	46.34	0.2	1
1	A	153	ASP	H	8.22	0.04	1
1	A	153	ASP	HA	4.7	0.04	1
1	A	153	ASP	HB2	2.66	0.04	2
1	A	153	ASP	CA	54.35	0.2	1
1	A	153	ASP	CB	41.41	0.2	1
1	A	153	ASP	N	118.37	0.2	1
1	A	154	GLY	HA2	4.12	0.04	2

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	154	GLY	HA3	3.78	0.04	2
1	A	154	GLY	C	173.83	0.2	1
1	A	154	GLY	CA	46.43	0.2	1
1	A	155	ARG	H	7.77	0.04	1
1	A	155	ARG	HA	5.02	0.04	1
1	A	155	ARG	HB2	1.69	0.04	2
1	A	155	ARG	C	176.09	0.2	1
1	A	155	ARG	CA	54.85	0.2	1
1	A	155	ARG	CB	34.25	0.2	1
1	A	155	ARG	N	118.55	0.2	1
1	A	156	VAL	H	9.0	0.04	1
1	A	156	VAL	HA	4.68	0.04	1
1	A	156	VAL	HB	2.25	0.04	1
1	A	156	VAL	HG11	1.08	0.04	2
1	A	156	VAL	HG12	1.08	0.04	2
1	A	156	VAL	HG13	1.08	0.04	2
1	A	156	VAL	HG21	0.92	0.04	2
1	A	156	VAL	HG22	0.92	0.04	2
1	A	156	VAL	HG23	0.92	0.04	2
1	A	156	VAL	C	175.05	0.2	1
1	A	156	VAL	CA	61.0	0.2	1
1	A	156	VAL	CB	34.93	0.2	1
1	A	156	VAL	CG1	22.15	0.2	1
1	A	156	VAL	CG2	21.36	0.2	1
1	A	156	VAL	N	118.17	0.2	1
1	A	157	ASP	H	8.31	0.04	1
1	A	157	ASP	HA	5.54	0.04	1
1	A	157	ASP	HB2	2.85	0.04	2
1	A	157	ASP	HB3	3.33	0.04	2
1	A	157	ASP	C	176.1	0.2	1
1	A	157	ASP	CA	51.93	0.2	1
1	A	157	ASP	CB	41.97	0.2	1
1	A	157	ASP	N	124.52	0.2	1
1	A	158	PHE	H	8.4	0.04	1
1	A	158	PHE	HA	3.41	0.04	1
1	A	158	PHE	HB2	2.24	0.04	2
1	A	158	PHE	HB3	2.58	0.04	2
1	A	158	PHE	C	176.29	0.2	1
1	A	158	PHE	CA	61.85	0.2	1
1	A	158	PHE	CB	38.76	0.2	1
1	A	158	PHE	N	119.14	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	159	GLU	H	8.12	0.04	1
1	A	159	GLU	HA	3.62	0.04	1
1	A	159	GLU	HB2	2.08	0.04	2
1	A	159	GLU	HB3	2.31	0.04	2
1	A	159	GLU	HG2	2.32	0.04	2
1	A	159	GLU	C	179.53	0.2	1
1	A	159	GLU	CA	59.88	0.2	1
1	A	159	GLU	CB	28.93	0.2	1
1	A	159	GLU	CG	37.14	0.2	1
1	A	159	GLU	N	117.53	0.2	1
1	A	160	GLU	H	8.21	0.04	1
1	A	160	GLU	HA	4.19	0.04	1
1	A	160	GLU	HB2	2.02	0.04	2
1	A	160	GLU	HG2	2.39	0.04	2
1	A	160	GLU	C	178.2	0.2	1
1	A	160	GLU	CA	60.26	0.2	1
1	A	160	GLU	CB	29.43	0.2	1
1	A	160	GLU	CG	35.85	0.2	1
1	A	160	GLU	N	120.94	0.2	1
1	A	161	PHE	H	8.4	0.04	1
1	A	161	PHE	HA	4.11	0.04	1
1	A	161	PHE	HB2	3.35	0.04	2
1	A	161	PHE	HB3	3.12	0.04	2
1	A	161	PHE	HD1	7.08	0.04	3
1	A	161	PHE	HE1	6.94	0.04	3
1	A	161	PHE	C	176.37	0.2	1
1	A	161	PHE	CA	61.13	0.2	1
1	A	161	PHE	CB	39.64	0.2	1
1	A	161	PHE	N	122.01	0.2	1
1	A	162	VAL	H	8.23	0.04	1
1	A	162	VAL	HA	2.97	0.04	1
1	A	162	VAL	HB	1.73	0.04	1
1	A	162	VAL	HG11	0.26	0.04	2
1	A	162	VAL	HG12	0.26	0.04	2
1	A	162	VAL	HG13	0.26	0.04	2
1	A	162	VAL	HG21	0.62	0.04	2
1	A	162	VAL	HG22	0.62	0.04	2
1	A	162	VAL	HG23	0.62	0.04	2
1	A	162	VAL	C	179.09	0.2	1
1	A	162	VAL	CA	66.89	0.2	1
1	A	162	VAL	CB	31.28	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	162	VAL	CG1	23.64	0.2	1
1	A	162	VAL	CG2	21.3	0.2	1
1	A	162	VAL	N	117.76	0.2	1
1	A	163	ARG	H	7.66	0.04	1
1	A	163	ARG	HA	3.86	0.04	1
1	A	163	ARG	HB2	1.91	0.04	2
1	A	163	ARG	C	179.64	0.2	1
1	A	163	ARG	CA	60.21	0.2	1
1	A	163	ARG	CB	30.09	0.2	1
1	A	163	ARG	N	120.57	0.2	1
1	A	164	MET	H	8.29	0.04	1
1	A	164	MET	HA	4.05	0.04	1
1	A	164	MET	HB2	2.0	0.04	2
1	A	164	MET	HB3	2.18	0.04	2
1	A	164	MET	HG2	2.59	0.04	2
1	A	164	MET	C	177.54	0.2	1
1	A	164	MET	CA	58.29	0.2	1
1	A	164	MET	CB	32.87	0.2	1
1	A	164	MET	CG	32.49	0.2	1
1	A	164	MET	N	120.87	0.2	1
1	A	165	MET	H	7.49	0.04	1
1	A	165	MET	HA	4.47	0.04	1
1	A	165	MET	HB2	1.63	0.04	2
1	A	165	MET	HB3	1.89	0.04	2
1	A	165	MET	C	176.89	0.2	1
1	A	165	MET	CA	54.48	0.2	1
1	A	165	MET	CB	31.29	0.2	1
1	A	165	MET	CG	31.98	0.2	1
1	A	165	MET	N	114.48	0.2	1
1	A	166	SER	H	7.46	0.04	1
1	A	166	SER	HA	4.53	0.04	1
1	A	166	SER	HB2	3.87	0.04	2
1	A	166	SER	C	173.18	0.2	1
1	A	166	SER	CA	58.68	0.2	1
1	A	166	SER	CB	64.0	0.2	1
1	A	166	SER	N	114.61	0.2	1
1	A	167	ARG	H	7.49	0.04	1
1	A	167	ARG	HA	4.12	0.04	1
1	A	167	ARG	HB2	1.8	0.04	2
1	A	167	ARG	HD2	3.17	0.04	2
1	A	167	ARG	CA	57.8	0.2	1

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List ID	Chain	Res	Type	Atom	Shift Data		
					Value	Uncertainty	Ambiguity
1	A	167	ARG	CB	31.3	0.2	1
1	A	167	ARG	N	127.14	0.2	1

7.1.2 Chemical shift referencing (i)

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction ± precision, *ppm*	Suggested action
$^{13}C_{\alpha}$	156	-0.38 ± 0.14	None needed (< 0.5 ppm)
$^{13}C_{\beta}$	142	0.11 ± 0.17	None needed (< 0.5 ppm)
$^{13}C'$	140	-0.31 ± 0.15	None needed (< 0.5 ppm)
^{15}N	145	0.51 ± 0.26	None needed (imprecise)

7.1.3 Completeness of resonance assignments (i)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 74%, i.e. 739 atoms were assigned a chemical shift out of a possible 996. 0 out of 9 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	355/360 (99%)	147/147 (100%)	139/144 (97%)	69/69 (100%)
Sidechain	363/571 (64%)	230/365 (63%)	133/182 (73%)	0/24 (0%)
Aromatic	21/65 (32%)	17/32 (53%)	4/32 (12%)	0/1 (0%)
Overall	739/996 (74%)	394/544 (72%)	276/358 (77%)	69/94 (73%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 74%, i.e. 783 atoms were assigned a chemical shift out of a possible 1054. 0 out of 10 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	375/380 (99%)	155/155 (100%)	147/152 (97%)	73/73 (100%)
Sidechain	387/609 (64%)	245/389 (63%)	142/193 (74%)	0/27 (0%)
Aromatic	21/65 (32%)	17/32 (53%)	4/32 (12%)	0/1 (0%)
Overall	783/1054 (74%)	417/576 (72%)	293/377 (78%)	73/101 (72%)

7.1.4 Statistically unusual chemical shifts (i)

The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules con-

taining 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	129	ARG	CD	37.09	38.57 – 47.75	-6.6

7.1.5 Random Coil Index (RCI) plots (i)

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

Random coil index (RCI) for chain A: