



Full wwPDB NMR Structure Validation Report ⓘ

May 28, 2020 – 08:50 pm BST

PDB ID : 1WA7
Title : SH3 DOMAIN OF HUMAN LYN TYROSINE KINASE IN COMPLEX WITH
A HERPESVIRAL LIGAND
Authors : Bauer, F.; Schweimer, K.; Hoffmann, S.; Roesch, P.; Sticht, H.
Deposited on : 2004-10-25

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

Cyrange : Kirchner and Güntert (2011)
NmrClust : Kelley et al. (1996)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
ShiftChecker : 2.11
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

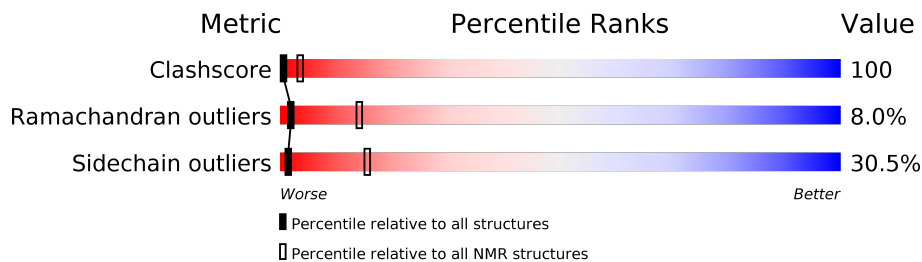
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment was not calculated.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	65	
2	B	22	

2 Ensemble composition and analysis i

This entry contains 20 models. Model 8 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative.

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:11-A:65, B:179-B:187 (64)	0.18	8

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. No single-model clusters were found.

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

3 Entry composition

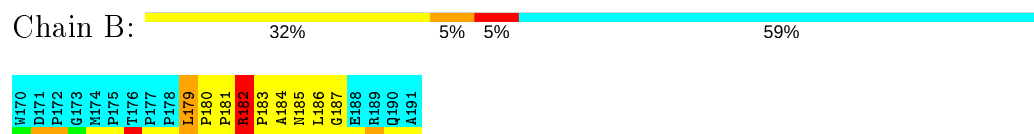
There are 2 unique types of molecules in this entry. The entry contains 1306 atoms, of which 651 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called TYROSINE-PROTEIN KINASE LYN.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	60	972	317	486	78	90	1	0

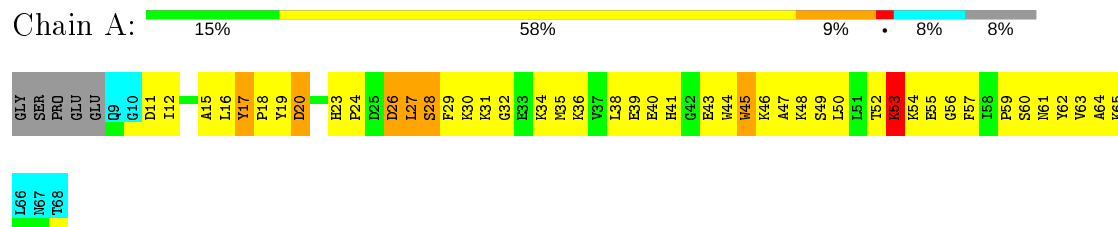
- Molecule 2 is a protein called HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1).

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
2	B	22	334	107	165	31	30	1	0

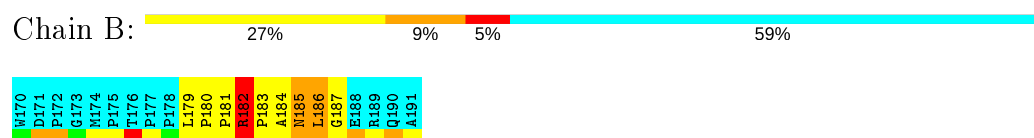


4.2.2 Score per residue for model 2

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

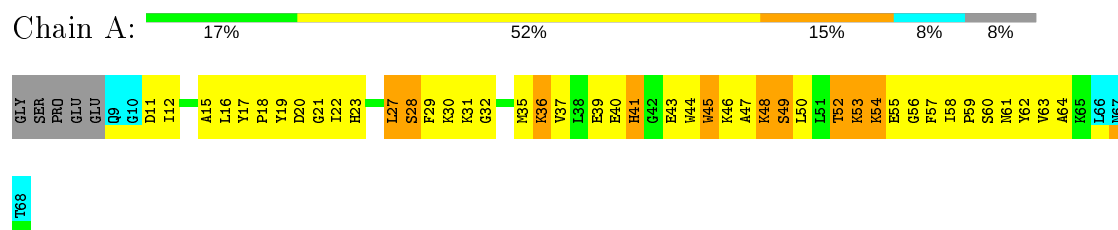


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

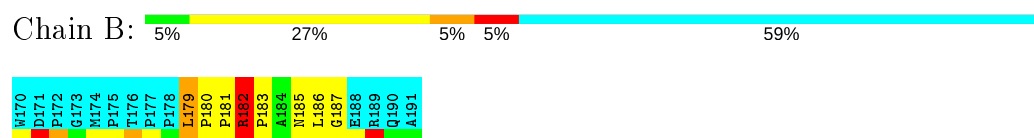


4.2.3 Score per residue for model 3

- Molecule 1: TYROSINE-PROTEIN KINASE LYN



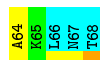
- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



4.2.4 Score per residue for model 4

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

Chain A:



- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

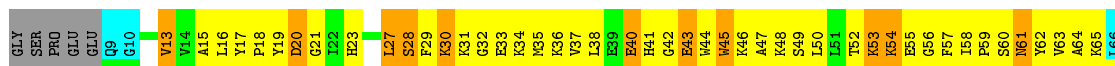
Chain B:



4.2.5 Score per residue for model 5

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

Chain A:



- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

Chain B:



4.2.6 Score per residue for model 6

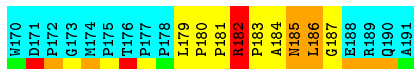
- Molecule 1: TYROSINE-PROTEIN KINASE LYN

Chain A:



- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

Chain B:



4.2.7 Score per residue for model 7

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

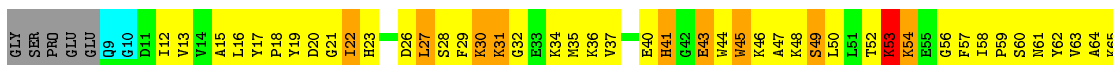
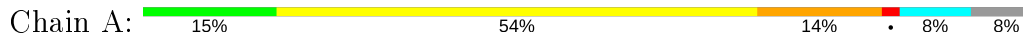


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



4.2.8 Score per residue for model 8 (medoid)

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

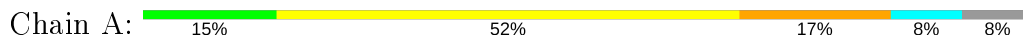


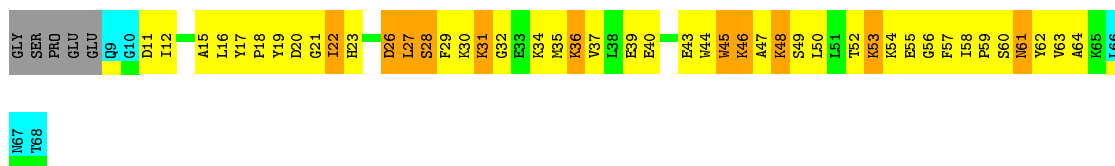
- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



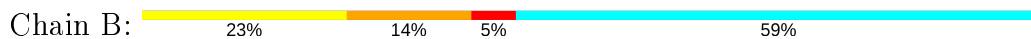
4.2.9 Score per residue for model 9

- Molecule 1: TYROSINE-PROTEIN KINASE LYN



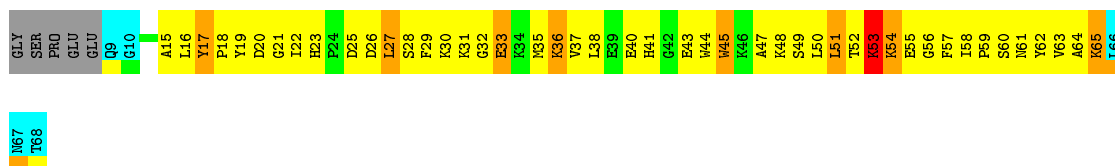
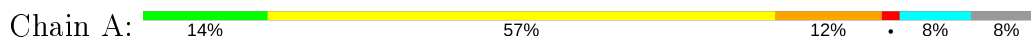


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



4.2.10 Score per residue for model 10

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

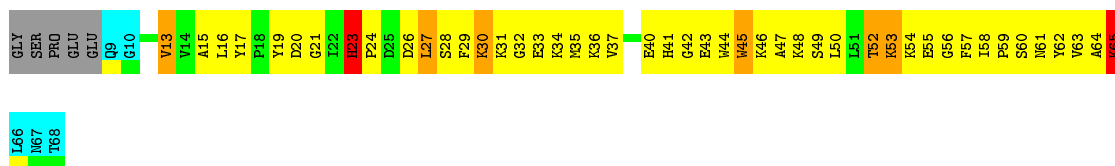
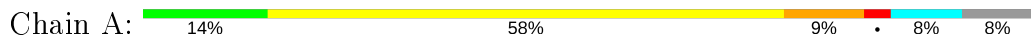


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



4.2.11 Score per residue for model 11

- Molecule 1: TYROSINE-PROTEIN KINASE LYN



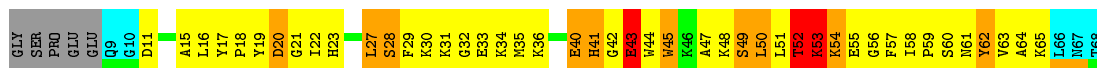
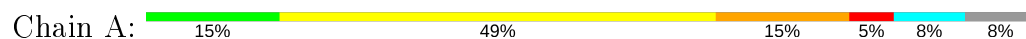
- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



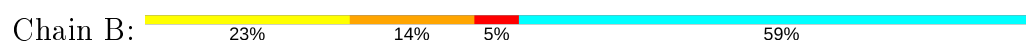


4.2.12 Score per residue for model 12

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

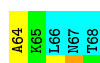
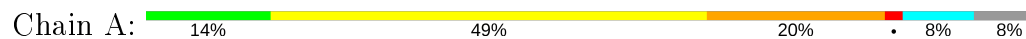


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

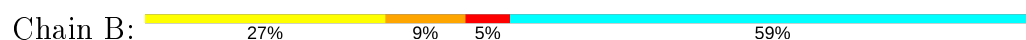


4.2.13 Score per residue for model 13

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

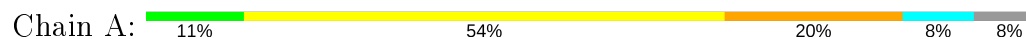


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)




4.2.14 Score per residue for model 14

- Molecule 1: TYROSINE-PROTEIN KINASE LYN



M67
M68

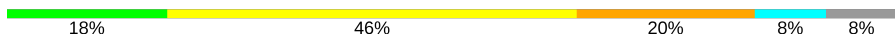
- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

Chain B: 

M170 M171 M172 M173 M174 M175 M176 M177 M178
D171 P172 G173 M174 P175 T176 P177 P178
L179 P180 P181 R182 P183 A184 N185 L186 G187 E188 R189 Q190 A191

4.2.15 Score per residue for model 15


- Molecule 1: TYROSINE-PROTEIN KINASE LYN

Chain A: 

GLY SER PRO GLU GLU G9 G10 D11 V14 A15 L16 Y17 P18 Y19 D20 D21 I22 H23 D26 L27 S28 S29 F29 K30 K31 G32 E33 K34 K35 K36 E39 E40 E41 H41 G42 E43 I44 W45 K46 A47 K48 S49 T52 K53 K54 K55 G56 F57 L58 P59 S60 M61 Y62 Y63 A64 K65 M66 M67

M68


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

Chain B: 

M170 M171 M172 M173 M174 M175 M176 M177 M178
D171 P172 G173 M174 P175 T176 P177 P178
L179 P180 P181 R182 P183 A184 N185 L186 G187 E188 R189 Q190 A191

4.2.16 Score per residue for model 16


- Molecule 1: TYROSINE-PROTEIN KINASE LYN

Chain A: 

GLY SER PRO GLU GLU G9 G10 D11 I12 V13 V14 A15 L16 Y17 P18 Y19 D20 D21 I22 H23 P24 P25 D26 L27 S28 S29 F29 K30 K31 G32 E33 K34 M35 M36 V37 E40 E41 H41 G42 E43 I44 W45 K46 A47 K48 S49 L50 L51 T52 K53 K54 E55 G56 F57 I58 P59 S60 M61 Y62 V63 A64

M65
L66 M67
M68

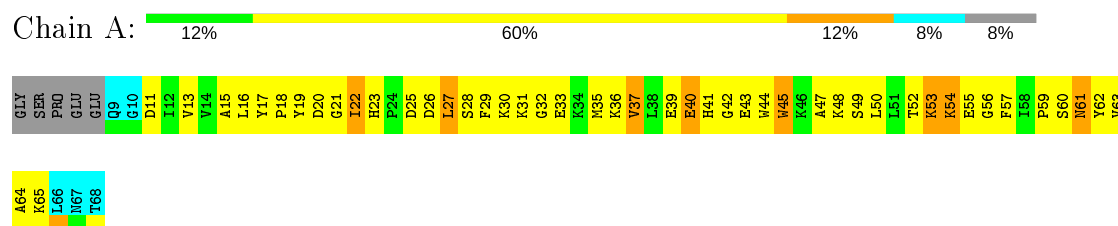
- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

Chain B: 

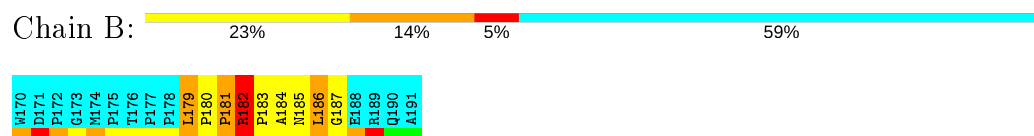
M170 M171 M172 M173 M174 M175 M176 M177 M178
D171 P172 G173 M174 P175 T176 P177 P178
L179 P180 P181 R182 P183 A184 N185 L186 G187 E188 R189 Q190 A191

4.2.17 Score per residue for model 17

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

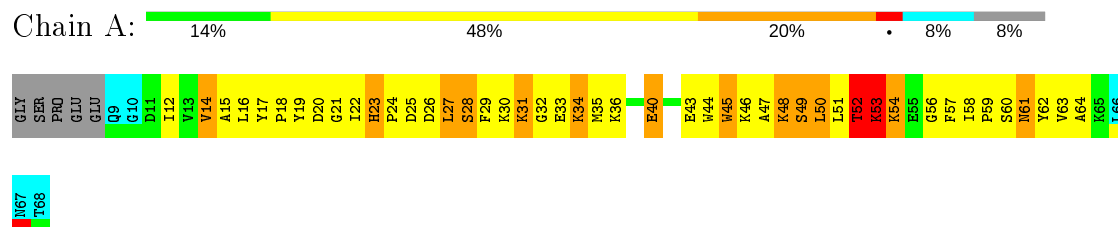


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

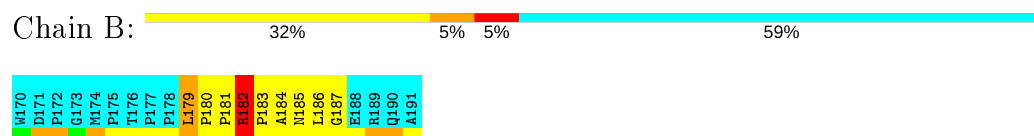


4.2.18 Score per residue for model 18

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

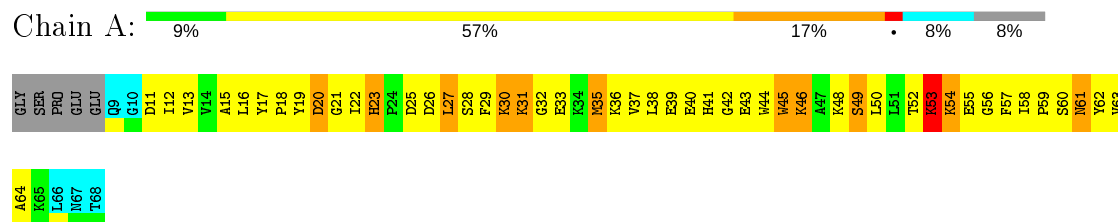


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

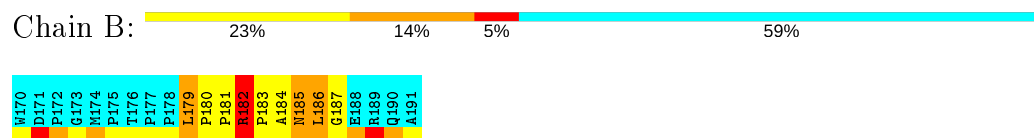


4.2.19 Score per residue for model 19

- Molecule 1: TYROSINE-PROTEIN KINASE LYN

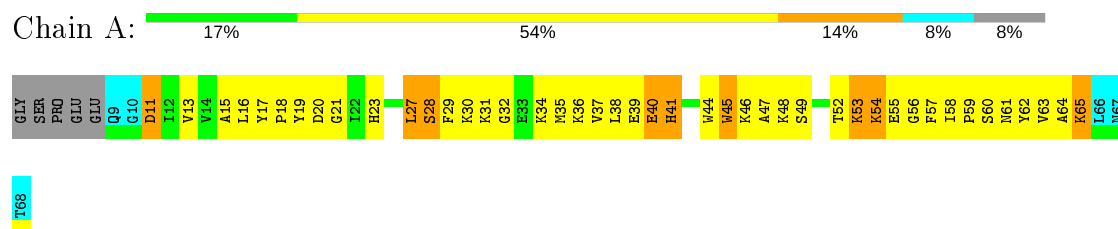


- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)

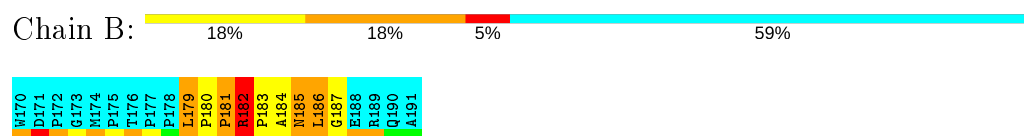


4.2.20 Score per residue for model 20

- Molecule 1: TYROSINE-PROTEIN KINASE LYN



- Molecule 2: HYPOTHETICAL 28.7 KDA PROTEIN IN DHFR 3'REGION (ORF1)



5 Refinement protocol and experimental data overview

The models were refined using the following method: *XPLOR*.

Of the 60 calculated structures, 20 were deposited, based on the following criterion: *LEAST RESTRAINT VIOLATION*.

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

Software name	Classification	Version
X-PLOR	refinement	3.851
NMRVIEW	structure solution	

No chemical shift data was provided. No validations of the models with respect to experimental NMR restraints is performed at this time.

6 Model quality [i](#)

6.1 Standard geometry [i](#)

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

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
2	B	0.0±0.0	0.9±0.3
All	All	0	18

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

All unique planar outliers are listed below.

Mol	Chain	Res	Type	Group	Models (Total)
2	B	182	ARG	Sidechain	18

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	449	451	451	92±7
2	B	65	70	70	42±3
All	All	10280	10420	10420	2069

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 100.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:16:LEU:HD11	1:A:64:ALA:HB2	1.09	1.13	17	20

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:62:TYR:CE2	2:B:179:LEU:HD21	1.07	1.84	13	6
1:A:62:TYR:CD2	2:B:179:LEU:HD21	0.99	1.92	13	6
2:B:186:LEU:HD23	2:B:187:GLY:N	0.98	1.73	20	1
1:A:16:LEU:HD11	1:A:64:ALA:CB	0.97	1.88	20	18
1:A:44:TRP:CE2	2:B:180:PRO:HG2	0.94	1.97	2	20
1:A:27:LEU:O	1:A:27:LEU:HD13	0.92	1.65	3	12
1:A:16:LEU:CD1	1:A:64:ALA:HB2	0.90	1.95	15	15
1:A:27:LEU:HD22	1:A:28:SER:N	0.90	1.82	11	20
1:A:57:PHE:CD1	2:B:186:LEU:HD21	0.89	2.03	20	1
1:A:27:LEU:HD13	1:A:27:LEU:O	0.88	1.69	1	8
1:A:19:TYR:HB2	1:A:29:PHE:CZ	0.85	2.07	15	20
1:A:44:TRP:CD1	2:B:182:ARG:HA	0.84	2.06	20	20
1:A:34:LYS:O	1:A:50:LEU:HD12	0.79	1.76	16	1
1:A:57:PHE:CG	2:B:187:GLY:HA2	0.79	2.12	6	20
1:A:44:TRP:HB2	2:B:186:LEU:HD23	0.78	1.53	19	18
1:A:11:ASP:O	1:A:37:VAL:HG23	0.78	1.76	3	6
1:A:27:LEU:C	1:A:27:LEU:HD13	0.78	1.99	12	12
1:A:27:LEU:HD13	1:A:27:LEU:C	0.78	1.99	9	8
1:A:38:LEU:HD12	1:A:46:LYS:O	0.77	1.78	2	2
1:A:13:VAL:HG12	1:A:65:LYS:HA	0.77	1.55	11	2
1:A:19:TYR:O	1:A:20:ASP:CB	0.77	2.31	2	4
2:B:181:PRO:O	2:B:182:ARG:HB2	0.75	1.81	17	20
1:A:37:VAL:HG11	1:A:40:GLU:OE2	0.74	1.82	5	1
1:A:52:THR:O	1:A:53:LYS:CB	0.74	2.36	12	20
1:A:19:TYR:CG	1:A:20:ASP:N	0.73	2.55	17	13
2:B:186:LEU:CD2	2:B:187:GLY:N	0.73	2.50	20	1
1:A:62:TYR:CE2	2:B:179:LEU:HD23	0.73	2.19	11	11
1:A:41:HIS:HB3	2:B:186:LEU:HD21	0.73	1.60	19	1
1:A:44:TRP:CE2	2:B:182:ARG:CG	0.71	2.74	3	9
2:B:181:PRO:O	2:B:182:ARG:CB	0.70	2.40	20	20
1:A:37:VAL:C	1:A:38:LEU:HD12	0.70	2.07	20	2
1:A:15:ALA:HB3	1:A:30:LYS:O	0.69	1.87	1	20
1:A:13:VAL:HG12	1:A:65:LYS:HD3	0.69	1.64	20	1
1:A:61:ASN:OD1	1:A:62:TYR:N	0.68	2.27	16	8
1:A:45:TRP:N	1:A:45:TRP:CD1	0.68	2.61	17	13
1:A:22:ILE:HD11	2:B:182:ARG:NH2	0.68	2.04	17	1
1:A:19:TYR:CZ	1:A:20:ASP:OD1	0.67	2.48	8	1
1:A:20:ASP:OD2	2:B:179:LEU:HD21	0.67	1.88	8	1
2:B:183:PRO:CG	2:B:186:LEU:HD22	0.67	2.20	10	5
1:A:18:PRO:HA	1:A:29:PHE:O	0.67	1.90	18	18
1:A:38:LEU:N	1:A:38:LEU:HD12	0.67	2.05	20	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:12:ILE:HD12	1:A:36:LYS:HG2	0.66	1.66	3	3
1:A:45:TRP:CZ2	1:A:60:SER:CB	0.66	2.79	11	20
1:A:41:HIS:HB2	2:B:186:LEU:HD21	0.66	1.68	12	16
1:A:44:TRP:CE3	2:B:182:ARG:CZ	0.66	2.79	5	2
1:A:57:PHE:CD2	2:B:187:GLY:HA2	0.66	2.25	20	2
1:A:40:GLU:CG	1:A:45:TRP:CD1	0.65	2.79	20	10
1:A:41:HIS:CG	2:B:186:LEU:HD11	0.65	2.25	2	11
1:A:27:LEU:C	1:A:27:LEU:HD22	0.65	2.12	16	11
1:A:44:TRP:CE3	2:B:182:ARG:NH2	0.65	2.64	5	3
1:A:44:TRP:NE1	2:B:182:ARG:CG	0.64	2.61	3	9
1:A:62:TYR:CE2	2:B:179:LEU:CD2	0.64	2.80	11	8
1:A:44:TRP:CZ3	2:B:182:ARG:NH1	0.64	2.65	14	3
1:A:18:PRO:HD3	1:A:31:LYS:HG3	0.64	1.69	13	2
1:A:27:LEU:CB	1:A:56:GLY:HA3	0.63	2.23	12	20
1:A:52:THR:O	1:A:53:LYS:HB3	0.63	1.93	12	4
1:A:19:TYR:O	1:A:20:ASP:HB2	0.63	1.92	19	4
1:A:45:TRP:CD1	1:A:45:TRP:N	0.63	2.66	10	6
1:A:59:PRO:HB3	2:B:180:PRO:HD2	0.63	1.70	9	19
1:A:44:TRP:CE3	2:B:182:ARG:NE	0.63	2.66	6	2
1:A:57:PHE:CD1	2:B:186:LEU:CD2	0.63	2.80	20	1
1:A:35:MET:CE	1:A:63:VAL:HG11	0.63	2.23	6	19
1:A:36:LYS:O	1:A:47:ALA:HA	0.63	1.94	17	19
1:A:49:SER:N	1:A:54:LYS:O	0.63	2.31	7	19
1:A:44:TRP:CE2	2:B:182:ARG:HG3	0.63	2.29	18	9
1:A:44:TRP:CZ3	2:B:182:ARG:NH2	0.63	2.66	3	10
1:A:27:LEU:HD22	1:A:27:LEU:C	0.62	2.14	19	9
1:A:35:MET:HE3	1:A:63:VAL:HG11	0.62	1.69	15	2
1:A:44:TRP:NE1	2:B:180:PRO:HG2	0.62	2.09	3	20
1:A:16:LEU:HB2	1:A:17:TYR:CE1	0.62	2.29	10	2
1:A:22:ILE:HD11	2:B:182:ARG:HH21	0.62	1.55	17	1
1:A:40:GLU:CG	1:A:45:TRP:CG	0.62	2.82	14	5
1:A:16:LEU:O	1:A:17:TYR:CD1	0.61	2.53	12	13
1:A:49:SER:OG	1:A:54:LYS:CB	0.61	2.48	12	1
1:A:44:TRP:CD2	2:B:182:ARG:HD2	0.61	2.31	19	2
1:A:15:ALA:O	1:A:32:GLY:N	0.61	2.34	11	20
1:A:44:TRP:CE2	2:B:182:ARG:HG2	0.61	2.30	3	9
2:B:179:LEU:CB	2:B:180:PRO:HD2	0.61	2.25	8	14
1:A:27:LEU:HB2	1:A:56:GLY:N	0.61	2.11	2	20
1:A:35:MET:CE	1:A:63:VAL:CG1	0.61	2.79	18	19
1:A:52:THR:O	1:A:53:LYS:CG	0.61	2.49	12	13
1:A:44:TRP:HB2	2:B:186:LEU:CD2	0.61	2.25	19	19

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:19:TYR:CE1	2:B:179:LEU:CD2	0.60	2.84	4	10
1:A:20:ASP:O	1:A:22:ILE:N	0.60	2.35	3	11
1:A:44:TRP:CZ3	2:B:182:ARG:CZ	0.60	2.84	6	2
1:A:40:GLU:HG3	1:A:45:TRP:CG	0.60	2.32	14	4
1:A:23:HIS:CB	1:A:24:PRO:CD	0.60	2.80	11	2
1:A:52:THR:O	1:A:53:LYS:HB2	0.59	1.96	10	16
1:A:19:TYR:HA	1:A:62:TYR:CE2	0.59	2.32	17	4
1:A:59:PRO:CB	2:B:180:PRO:CD	0.59	2.80	16	16
1:A:23:HIS:CD2	2:B:182:ARG:NH1	0.59	2.70	9	2
1:A:44:TRP:CD2	2:B:182:ARG:NE	0.59	2.70	5	2
1:A:19:TYR:CE1	1:A:20:ASP:OD1	0.59	2.56	8	2
1:A:23:HIS:CE1	2:B:182:ARG:NH2	0.59	2.69	14	2
1:A:57:PHE:CB	2:B:187:GLY:HA2	0.59	2.28	19	10
1:A:44:TRP:CE2	2:B:182:ARG:CD	0.59	2.86	19	3
1:A:41:HIS:CB	2:B:186:LEU:HD11	0.59	2.27	17	1
1:A:16:LEU:O	1:A:17:TYR:CG	0.59	2.55	18	6
1:A:12:ILE:HD12	1:A:36:LYS:HD3	0.59	1.75	8	1
1:A:13:VAL:HG22	1:A:37:VAL:CG2	0.59	2.28	11	7
1:A:36:LYS:HD3	1:A:38:LEU:HD23	0.59	1.75	10	1
1:A:45:TRP:CZ2	1:A:60:SER:OG	0.59	2.55	12	3
1:A:18:PRO:HD3	1:A:31:LYS:CG	0.59	2.28	9	2
1:A:19:TYR:HB2	1:A:29:PHE:CE2	0.58	2.31	19	16
1:A:19:TYR:CB	1:A:29:PHE:CZ	0.58	2.84	15	4
1:A:38:LEU:N	1:A:38:LEU:CD1	0.58	2.66	20	1
1:A:40:GLU:HG2	1:A:45:TRP:CD2	0.58	2.33	13	2
1:A:23:HIS:NE2	2:B:182:ARG:NH1	0.58	2.51	9	1
1:A:40:GLU:HG2	1:A:45:TRP:CD1	0.58	2.33	16	12
1:A:17:TYR:HA	1:A:31:LYS:CG	0.58	2.29	13	2
1:A:44:TRP:CD1	2:B:182:ARG:HG2	0.57	2.34	18	9
1:A:61:ASN:C	1:A:61:ASN:OD1	0.57	2.41	19	1
1:A:44:TRP:CD1	2:B:182:ARG:CA	0.57	2.87	10	20
1:A:45:TRP:CZ2	1:A:60:SER:HB2	0.57	2.34	12	18
1:A:57:PHE:CG	2:B:187:GLY:CA	0.57	2.87	5	3
1:A:27:LEU:HD23	1:A:54:LYS:HB3	0.57	1.77	5	10
2:B:180:PRO:HB2	2:B:181:PRO:HD2	0.57	1.77	20	10
1:A:41:HIS:O	2:B:186:LEU:HD21	0.57	1.99	19	1
2:B:182:ARG:NH1	2:B:187:GLY:O	0.57	2.37	20	4
1:A:41:HIS:CG	2:B:186:LEU:CD1	0.57	2.88	20	3
1:A:34:LYS:HD2	1:A:50:LEU:HD13	0.57	1.77	7	1
1:A:15:ALA:O	1:A:31:LYS:HA	0.57	1.98	15	1
1:A:41:HIS:CG	2:B:186:LEU:HD12	0.57	2.34	20	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:44:TRP:CE2	2:B:182:ARG:HD2	0.56	2.35	7	6
1:A:44:TRP:NE1	2:B:182:ARG:HG3	0.56	2.13	3	9
1:A:15:ALA:HB2	1:A:35:MET:HE3	0.56	1.75	18	3
1:A:59:PRO:HB2	2:B:180:PRO:CD	0.56	2.31	13	8
1:A:45:TRP:O	1:A:58:ILE:CG1	0.56	2.54	5	16
1:A:40:GLU:HA	1:A:45:TRP:CD1	0.56	2.35	17	1
2:B:186:LEU:HD23	2:B:186:LEU:C	0.56	2.19	20	1
1:A:16:LEU:CB	1:A:17:TYR:CE1	0.56	2.89	10	2
1:A:59:PRO:CB	2:B:180:PRO:HD2	0.56	2.29	12	14
1:A:51:LEU:O	1:A:51:LEU:HD13	0.56	2.00	10	1
1:A:19:TYR:CE2	2:B:179:LEU:CD2	0.56	2.88	11	1
1:A:59:PRO:HG3	2:B:179:LEU:CD2	0.56	2.31	2	6
1:A:23:HIS:CG	1:A:24:PRO:HD3	0.56	2.36	11	1
1:A:27:LEU:HD23	1:A:54:LYS:CD	0.56	2.31	1	1
2:B:180:PRO:HB2	2:B:181:PRO:CD	0.55	2.31	20	13
1:A:13:VAL:HG22	1:A:37:VAL:HG23	0.55	1.77	11	2
1:A:36:LYS:O	1:A:47:ALA:HB1	0.55	2.02	12	2
1:A:61:ASN:CG	1:A:62:TYR:N	0.55	2.60	14	8
1:A:13:VAL:CG2	1:A:37:VAL:CG2	0.55	2.84	11	2
1:A:62:TYR:CD2	2:B:179:LEU:CD2	0.55	2.83	13	1
1:A:49:SER:CB	1:A:54:LYS:HB2	0.55	2.31	5	14
1:A:27:LEU:HD22	1:A:28:SER:H	0.55	1.62	11	1
1:A:17:TYR:HB2	1:A:62:TYR:CD1	0.55	2.37	19	18
1:A:40:GLU:HG3	1:A:45:TRP:CD1	0.55	2.36	3	7
1:A:40:GLU:HG2	1:A:45:TRP:CG	0.55	2.37	10	4
1:A:27:LEU:HB2	1:A:56:GLY:CA	0.55	2.32	11	20
1:A:34:LYS:HB2	1:A:50:LEU:HD12	0.55	1.79	11	1
1:A:34:LYS:HB2	1:A:50:LEU:HD13	0.55	1.77	16	1
1:A:12:ILE:HD11	1:A:36:LYS:HG3	0.55	1.77	18	2
1:A:20:ASP:OD1	2:B:179:LEU:HD21	0.55	2.01	14	1
2:B:183:PRO:HG2	2:B:186:LEU:HD22	0.54	1.77	10	6
2:B:183:PRO:HG2	2:B:186:LEU:HB2	0.54	1.78	19	5
1:A:45:TRP:CE2	1:A:60:SER:HB3	0.54	2.38	10	4
1:A:62:TYR:HE2	2:B:179:LEU:HD23	0.54	1.62	18	4
1:A:48:LYS:HA	1:A:54:LYS:O	0.54	2.02	15	19
1:A:39:GLU:O	1:A:39:GLU:CG	0.54	2.55	3	1
1:A:44:TRP:CD2	2:B:182:ARG:HG2	0.53	2.39	18	9
1:A:27:LEU:C	1:A:27:LEU:CD1	0.53	2.75	11	10
1:A:16:LEU:HB2	1:A:17:TYR:CE2	0.53	2.39	13	3
1:A:44:TRP:N	2:B:186:LEU:HD23	0.53	2.19	8	12
1:A:15:ALA:HA	1:A:63:VAL:HG12	0.53	1.78	15	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:182:ARG:NH2	2:B:187:GLY:O	0.53	2.42	1	3
1:A:16:LEU:C	1:A:17:TYR:CG	0.53	2.81	18	10
1:A:19:TYR:CE1	2:B:179:LEU:HD22	0.53	2.38	4	12
1:A:12:ILE:HD13	1:A:36:LYS:HA	0.53	1.80	6	1
1:A:44:TRP:CG	2:B:182:ARG:HG2	0.53	2.39	18	5
1:A:18:PRO:CD	1:A:31:LYS:HG3	0.53	2.34	9	2
1:A:27:LEU:CB	1:A:56:GLY:CA	0.53	2.86	12	20
2:B:186:LEU:HD23	2:B:187:GLY:CA	0.53	2.33	20	1
1:A:11:ASP:O	1:A:37:VAL:CG2	0.53	2.56	3	1
1:A:20:ASP:OD1	2:B:179:LEU:CD2	0.53	2.57	14	1
1:A:59:PRO:HB3	2:B:180:PRO:CD	0.53	2.34	19	2
1:A:44:TRP:CD1	2:B:182:ARG:HG3	0.52	2.39	7	7
1:A:36:LYS:O	1:A:47:ALA:CA	0.52	2.58	12	14
1:A:15:ALA:CB	1:A:30:LYS:O	0.52	2.56	1	16
1:A:49:SER:HB3	1:A:54:LYS:HB2	0.52	1.81	3	15
1:A:35:MET:HE3	1:A:63:VAL:CG1	0.52	2.34	6	10
1:A:41:HIS:ND1	2:B:186:LEU:HD13	0.52	2.20	6	2
2:B:182:ARG:CZ	2:B:187:GLY:O	0.52	2.57	8	3
1:A:23:HIS:CG	1:A:24:PRO:CD	0.52	2.93	11	1
1:A:12:ILE:HD12	1:A:36:LYS:HA	0.52	1.81	18	1
1:A:44:TRP:H	2:B:186:LEU:HD23	0.52	1.65	8	8
1:A:25:ASP:OD1	1:A:25:ASP:N	0.52	2.43	6	1
2:B:185:ASN:ND2	2:B:185:ASN:N	0.52	2.56	12	5
1:A:30:LYS:CG	1:A:31:LYS:N	0.52	2.72	8	1
1:A:51:LEU:HD13	1:A:51:LEU:C	0.52	2.25	10	1
1:A:33:GLU:OE2	1:A:34:LYS:O	0.52	2.28	11	1
1:A:31:LYS:CE	1:A:31:LYS:O	0.52	2.58	18	1
1:A:44:TRP:HB2	2:B:186:LEU:CG	0.52	2.35	8	14
1:A:36:LYS:O	1:A:47:ALA:CB	0.52	2.58	12	2
1:A:19:TYR:CD2	1:A:20:ASP:N	0.52	2.78	17	6
1:A:22:ILE:O	1:A:22:ILE:HG22	0.52	2.03	16	2
1:A:19:TYR:OH	2:B:182:ARG:NH1	0.52	2.42	15	2
1:A:43:GLU:CB	2:B:181:PRO:HD2	0.52	2.35	19	2
1:A:41:HIS:HB3	2:B:186:LEU:CD1	0.52	2.35	17	1
1:A:19:TYR:O	1:A:20:ASP:CG	0.52	2.48	19	1
1:A:49:SER:HB2	1:A:54:LYS:CB	0.51	2.35	4	6
1:A:43:GLU:CG	2:B:181:PRO:HD2	0.51	2.36	14	6
1:A:35:MET:SD	1:A:58:ILE:HG21	0.51	2.45	16	1
2:B:182:ARG:CZ	2:B:187:GLY:C	0.51	2.79	10	5
1:A:27:LEU:CD1	1:A:27:LEU:C	0.51	2.73	3	10
1:A:52:THR:O	1:A:53:LYS:CD	0.51	2.59	8	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:183:PRO:O	2:B:184:ALA:C	0.51	2.49	6	16
1:A:65:LYS:O	1:A:65:LYS:CG	0.51	2.58	10	1
1:A:40:GLU:HA	1:A:45:TRP:HB3	0.51	1.83	18	4
1:A:22:ILE:HG22	1:A:22:ILE:O	0.51	2.05	3	1
1:A:43:GLU:OE2	2:B:181:PRO:CG	0.51	2.58	7	2
2:B:183:PRO:HD2	2:B:186:LEU:CB	0.51	2.36	10	16
1:A:64:ALA:O	1:A:65:LYS:O	0.51	2.29	11	1
1:A:40:GLU:CG	1:A:45:TRP:CD2	0.51	2.94	13	2
1:A:44:TRP:CG	2:B:182:ARG:HG3	0.51	2.41	13	8
1:A:23:HIS:HB3	1:A:24:PRO:CD	0.51	2.36	16	2
1:A:19:TYR:O	1:A:21:GLY:N	0.51	2.44	15	1
1:A:52:THR:C	1:A:53:LYS:CG	0.50	2.79	9	10
1:A:19:TYR:HA	1:A:62:TYR:CD2	0.50	2.41	1	2
1:A:62:TYR:CZ	2:B:179:LEU:HD21	0.50	2.36	16	1
1:A:55:GLU:O	1:A:55:GLU:CG	0.50	2.58	14	4
1:A:38:LEU:HD12	1:A:38:LEU:N	0.50	2.21	5	1
1:A:45:TRP:O	1:A:58:ILE:N	0.50	2.35	19	2
1:A:27:LEU:HB2	1:A:56:GLY:HA3	0.50	1.84	11	19
1:A:44:TRP:H	2:B:186:LEU:CD2	0.50	2.19	8	12
1:A:20:ASP:N	1:A:20:ASP:OD1	0.50	2.43	6	1
1:A:43:GLU:OE2	2:B:181:PRO:CD	0.50	2.60	19	1
1:A:20:ASP:OD2	1:A:22:ILE:HD12	0.50	2.06	14	1
2:B:179:LEU:CB	2:B:180:PRO:CD	0.50	2.89	8	14
1:A:41:HIS:CB	2:B:186:LEU:CD1	0.50	2.90	17	1
1:A:51:LEU:CD1	1:A:51:LEU:C	0.50	2.80	10	1
1:A:23:HIS:CD2	1:A:24:PRO:HD2	0.50	2.41	2	2
1:A:12:ILE:CD1	1:A:36:LYS:HG2	0.50	2.36	7	2
1:A:17:TYR:CD1	1:A:17:TYR:N	0.50	2.78	10	1
2:B:182:ARG:NH1	2:B:187:GLY:C	0.50	2.65	19	2
1:A:27:LEU:CD2	1:A:54:LYS:HD2	0.50	2.37	1	1
1:A:65:LYS:CG	1:A:65:LYS:O	0.50	2.59	17	1
1:A:40:GLU:OE1	1:A:45:TRP:CD2	0.50	2.64	6	1
2:B:183:PRO:O	2:B:186:LEU:N	0.49	2.45	20	6
1:A:15:ALA:HB2	1:A:35:MET:CE	0.49	2.37	18	7
1:A:43:GLU:O	2:B:180:PRO:HG3	0.49	2.07	8	5
1:A:40:GLU:HG2	1:A:45:TRP:CE2	0.49	2.42	13	1
1:A:44:TRP:CB	2:B:186:LEU:HD22	0.49	2.37	20	1
1:A:19:TYR:O	1:A:20:ASP:HB3	0.49	2.03	1	3
1:A:44:TRP:HB2	2:B:186:LEU:HG	0.49	1.84	14	13
2:B:179:LEU:HB3	2:B:180:PRO:HD2	0.49	1.82	11	4
1:A:27:LEU:CD1	1:A:27:LEU:O	0.49	2.57	2	7

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:31:LYS:CD	1:A:31:LYS:C	0.49	2.81	19	1
1:A:27:LEU:O	1:A:27:LEU:CD1	0.49	2.53	3	8
1:A:41:HIS:CD2	2:B:186:LEU:HD11	0.49	2.43	13	5
1:A:44:TRP:CH2	2:B:182:ARG:CZ	0.49	2.96	3	2
1:A:34:LYS:HB2	1:A:50:LEU:CD1	0.49	2.37	16	1
1:A:41:HIS:ND1	2:B:186:LEU:CD1	0.49	2.75	6	1
1:A:41:HIS:HB2	2:B:186:LEU:CD2	0.49	2.36	12	5
1:A:43:GLU:HG3	2:B:181:PRO:CG	0.49	2.38	2	1
1:A:41:HIS:O	1:A:42:GLY:C	0.49	2.51	19	1
2:B:183:PRO:HD2	2:B:186:LEU:CD2	0.48	2.38	15	3
1:A:20:ASP:O	1:A:20:ASP:OD1	0.48	2.31	8	1
2:B:185:ASN:N	2:B:185:ASN:ND2	0.48	2.60	19	2
1:A:46:LYS:HG3	1:A:57:PHE:CD1	0.48	2.43	20	4
1:A:19:TYR:CE2	2:B:179:LEU:HD22	0.48	2.41	11	1
1:A:61:ASN:ND2	2:B:179:LEU:HA	0.48	2.23	16	4
1:A:14:VAL:HG13	1:A:34:LYS:HG3	0.48	1.85	18	1
1:A:12:ILE:CD1	1:A:36:LYS:HG3	0.48	2.39	19	2
1:A:49:SER:HB2	1:A:54:LYS:HB3	0.48	1.85	9	10
1:A:27:LEU:N	1:A:56:GLY:HA3	0.48	2.22	15	11
1:A:19:TYR:OH	1:A:26:ASP:OD2	0.48	2.30	9	3
1:A:49:SER:OG	1:A:54:LYS:HB2	0.48	2.08	12	1
1:A:57:PHE:HB3	2:B:187:GLY:HA2	0.48	1.85	2	1
1:A:61:ASN:OD1	2:B:179:LEU:HD23	0.48	2.09	6	3
1:A:44:TRP:CZ2	2:B:182:ARG:NE	0.48	2.81	3	3
2:B:181:PRO:O	2:B:182:ARG:HD2	0.48	2.08	20	1
1:A:40:GLU:HG3	1:A:45:TRP:NE1	0.48	2.24	7	4
1:A:43:GLU:HG2	2:B:181:PRO:HD2	0.48	1.85	5	2
2:B:182:ARG:NE	2:B:187:GLY:C	0.48	2.67	6	2
1:A:44:TRP:CZ2	2:B:180:PRO:HG2	0.48	2.40	19	2
1:A:35:MET:CE	1:A:63:VAL:HG12	0.48	2.38	17	4
2:B:183:PRO:HG2	2:B:186:LEU:CB	0.48	2.39	20	1
1:A:44:TRP:CZ2	2:B:182:ARG:HD2	0.47	2.43	2	2
1:A:51:LEU:O	1:A:52:THR:CB	0.47	2.61	7	4
1:A:43:GLU:CG	2:B:183:PRO:HD3	0.47	2.39	12	1
1:A:12:ILE:CD1	1:A:36:LYS:CG	0.47	2.92	18	2
1:A:37:VAL:HG21	1:A:40:GLU:CD	0.47	2.30	13	1
1:A:45:TRP:O	1:A:58:ILE:HG12	0.47	2.09	18	9
2:B:182:ARG:NE	2:B:187:GLY:O	0.47	2.47	8	1
2:B:180:PRO:CB	2:B:181:PRO:CD	0.47	2.93	9	13
1:A:58:ILE:HD12	1:A:63:VAL:HG21	0.47	1.86	15	4
1:A:16:LEU:HD12	1:A:62:TYR:O	0.47	2.09	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:16:LEU:C	1:A:17:TYR:CD1	0.47	2.88	19	1
1:A:50:LEU:O	1:A:52:THR:N	0.47	2.48	4	4
2:B:182:ARG:HG2	2:B:187:GLY:N	0.47	2.25	7	1
1:A:30:LYS:O	1:A:33:GLU:HB2	0.47	2.10	11	3
1:A:30:LYS:HG2	1:A:31:LYS:N	0.47	2.25	8	1
1:A:65:LYS:HG3	1:A:65:LYS:O	0.47	2.10	17	1
2:B:184:ALA:O	2:B:185:ASN:C	0.46	2.52	6	14
1:A:19:TYR:CE1	1:A:44:TRP:CZ3	0.46	3.03	8	9
1:A:45:TRP:CZ2	1:A:60:SER:HB3	0.46	2.44	6	4
1:A:36:LYS:O	1:A:38:LEU:HD12	0.46	2.10	6	1
1:A:42:GLY:O	1:A:43:GLU:CD	0.46	2.54	6	3
1:A:59:PRO:HG3	2:B:179:LEU:HD22	0.46	1.86	13	2
1:A:33:GLU:OE1	1:A:35:MET:SD	0.46	2.74	11	1
1:A:59:PRO:HB2	1:A:61:ASN:OD1	0.46	2.10	6	3
1:A:52:THR:O	1:A:53:LYS:HG3	0.46	2.11	5	5
2:B:184:ALA:O	2:B:185:ASN:CG	0.46	2.54	18	2
1:A:41:HIS:O	2:B:186:LEU:CD2	0.46	2.63	19	1
1:A:49:SER:HB2	1:A:54:LYS:HB2	0.46	1.87	11	5
1:A:51:LEU:C	1:A:52:THR:HG22	0.46	2.31	7	3
1:A:20:ASP:O	1:A:22:ILE:HG12	0.46	2.11	17	4
1:A:52:THR:O	1:A:53:LYS:HG2	0.46	2.10	12	1
1:A:23:HIS:CG	1:A:24:PRO:HD2	0.46	2.45	2	1
1:A:36:LYS:O	1:A:48:LYS:N	0.46	2.48	4	2
1:A:50:LEU:C	1:A:52:THR:N	0.46	2.69	7	4
1:A:11:ASP:O	1:A:37:VAL:HG13	0.46	2.11	17	2
1:A:40:GLU:OE2	1:A:42:GLY:N	0.46	2.49	17	1
1:A:16:LEU:HB2	1:A:62:TYR:O	0.45	2.11	11	4
1:A:16:LEU:CG	1:A:62:TYR:O	0.45	2.65	9	1
1:A:45:TRP:O	1:A:58:ILE:HG13	0.45	2.11	19	3
1:A:27:LEU:HD23	1:A:54:LYS:HD2	0.45	1.87	1	2
1:A:37:VAL:O	1:A:37:VAL:HG22	0.45	2.11	13	1
1:A:16:LEU:O	1:A:31:LYS:HB2	0.45	2.12	19	1
1:A:26:ASP:OD1	2:B:187:GLY:O	0.45	2.34	18	1
1:A:59:PRO:HG3	1:A:62:TYR:CD2	0.45	2.46	3	2
1:A:19:TYR:O	1:A:20:ASP:C	0.45	2.54	15	1
1:A:27:LEU:CD2	1:A:54:LYS:HB3	0.45	2.41	4	4
1:A:42:GLY:C	1:A:43:GLU:CG	0.45	2.85	11	1
1:A:43:GLU:HG2	2:B:180:PRO:CB	0.45	2.42	14	1
1:A:35:MET:HE3	1:A:63:VAL:HG12	0.45	1.89	2	5
1:A:39:GLU:HG2	1:A:39:GLU:O	0.45	2.12	3	1
1:A:18:PRO:HA	1:A:30:LYS:HA	0.45	1.88	18	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:37:VAL:HG11	1:A:40:GLU:HG3	0.45	1.87	10	2
2:B:182:ARG:NH2	2:B:187:GLY:HA3	0.45	2.26	10	1
1:A:23:HIS:HB3	1:A:24:PRO:HD2	0.45	1.88	16	1
1:A:40:GLU:HG3	1:A:45:TRP:CE2	0.44	2.47	7	3
1:A:19:TYR:CD1	1:A:19:TYR:C	0.44	2.90	11	1
1:A:55:GLU:O	1:A:55:GLU:HG3	0.44	2.11	14	2
1:A:26:ASP:OD2	2:B:187:GLY:O	0.44	2.35	2	1
2:B:183:PRO:HD2	2:B:186:LEU:HB3	0.44	1.87	3	5
1:A:44:TRP:NE1	2:B:182:ARG:HG2	0.44	2.26	15	5
1:A:61:ASN:O	1:A:61:ASN:CG	0.44	2.54	12	1
1:A:59:PRO:CG	2:B:179:LEU:CD2	0.44	2.94	13	1
1:A:44:TRP:CZ2	2:B:182:ARG:HD3	0.44	2.47	19	1
1:A:34:LYS:O	1:A:50:LEU:CD1	0.44	2.60	16	2
1:A:22:ILE:CD1	2:B:182:ARG:NH2	0.44	2.80	17	1
1:A:57:PHE:CE1	2:B:186:LEU:HD21	0.44	2.47	20	1
1:A:51:LEU:O	1:A:52:THR:HB	0.44	2.12	12	4
1:A:16:LEU:CD1	1:A:64:ALA:CB	0.44	2.78	11	3
1:A:47:ALA:HB2	1:A:58:ILE:CD1	0.44	2.42	13	2
1:A:44:TRP:HB2	2:B:186:LEU:HD22	0.44	1.90	20	1
1:A:23:HIS:HB2	1:A:26:ASP:OD2	0.44	2.13	2	1
1:A:19:TYR:HE1	2:B:179:LEU:HD22	0.44	1.73	3	10
1:A:49:SER:CB	1:A:54:LYS:CB	0.44	2.96	4	6
1:A:11:ASP:N	1:A:37:VAL:HB	0.43	2.28	3	1
1:A:52:THR:OG1	1:A:52:THR:O	0.43	2.34	11	1
1:A:55:GLU:CG	1:A:55:GLU:O	0.43	2.67	10	2
1:A:26:ASP:OD2	2:B:182:ARG:NH2	0.43	2.51	8	1
1:A:17:TYR:HA	1:A:31:LYS:HG3	0.43	1.89	13	2
1:A:46:LYS:O	1:A:46:LYS:CG	0.43	2.66	19	1
2:B:184:ALA:O	2:B:185:ASN:HB2	0.43	2.14	1	1
1:A:23:HIS:CD2	2:B:182:ARG:NH2	0.43	2.86	16	1
1:A:43:GLU:OE2	2:B:181:PRO:HG3	0.43	2.13	16	1
1:A:43:GLU:HB3	2:B:180:PRO:HB2	0.43	1.90	18	1
1:A:34:LYS:CB	1:A:50:LEU:CD1	0.43	2.95	16	1
1:A:59:PRO:HB2	2:B:180:PRO:HD3	0.43	1.91	2	3
1:A:30:LYS:HG2	1:A:33:GLU:HB2	0.43	1.90	6	1
1:A:29:PHE:CE1	1:A:62:TYR:HB3	0.43	2.48	17	1
1:A:13:VAL:HG22	1:A:37:VAL:HG12	0.43	1.88	17	1
1:A:20:ASP:CG	1:A:20:ASP:O	0.43	2.57	14	1
1:A:19:TYR:C	1:A:19:TYR:CD1	0.43	2.92	16	1
1:A:19:TYR:HB2	1:A:29:PHE:CE1	0.43	2.49	11	2
1:A:43:GLU:OE2	2:B:181:PRO:HD3	0.43	2.14	19	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:29:PHE:HB2	1:A:35:MET:SD	0.43	2.54	1	2
1:A:46:LYS:HE3	1:A:55:GLU:CG	0.43	2.43	6	1
1:A:49:SER:HG	1:A:54:LYS:CB	0.43	2.26	12	1
1:A:58:ILE:HG13	1:A:58:ILE:O	0.43	2.13	4	4
1:A:27:LEU:C	1:A:27:LEU:CD2	0.43	2.84	1	2
1:A:36:LYS:HD3	1:A:38:LEU:CD2	0.43	2.42	10	1
1:A:15:ALA:N	1:A:33:GLU:O	0.43	2.43	17	1
1:A:23:HIS:CE1	2:B:182:ARG:CZ	0.43	3.01	14	2
1:A:25:ASP:O	1:A:25:ASP:OD1	0.43	2.37	7	1
1:A:41:HIS:CB	2:B:186:LEU:HD21	0.43	2.44	17	1
1:A:46:LYS:HG2	1:A:46:LYS:O	0.42	2.13	19	1
1:A:45:TRP:CE2	1:A:60:SER:HB2	0.42	2.48	14	2
1:A:16:LEU:HB2	1:A:17:TYR:CD2	0.42	2.48	13	2
1:A:12:ILE:HD12	1:A:36:LYS:HG3	0.42	1.91	16	1
1:A:29:PHE:CZ	1:A:59:PRO:HD2	0.42	2.48	15	2
1:A:59:PRO:CB	2:B:180:PRO:CG	0.42	2.98	19	1
1:A:20:ASP:OD2	2:B:179:LEU:CD2	0.42	2.66	8	1
1:A:39:GLU:O	1:A:39:GLU:HG3	0.42	2.15	15	1
1:A:61:ASN:OD1	1:A:61:ASN:C	0.42	2.56	15	1
1:A:14:VAL:CG1	1:A:34:LYS:HG3	0.42	2.44	18	1
2:B:182:ARG:NE	2:B:187:GLY:CA	0.42	2.83	6	2
1:A:42:GLY:O	1:A:43:GLU:HG2	0.42	2.14	11	1
2:B:179:LEU:HD12	2:B:179:LEU:H	0.42	1.75	17	2
1:A:13:VAL:CG1	1:A:65:LYS:HD3	0.42	2.40	20	1
1:A:52:THR:C	1:A:53:LYS:HG3	0.42	2.35	15	3
1:A:12:ILE:HD11	1:A:36:LYS:CG	0.42	2.43	18	1
1:A:31:LYS:HD2	1:A:31:LYS:O	0.42	2.15	19	1
1:A:43:GLU:HB2	2:B:183:PRO:HD3	0.42	1.91	9	1
1:A:44:TRP:O	1:A:57:PHE:CD2	0.42	2.73	2	2
1:A:18:PRO:HD3	1:A:31:LYS:CD	0.42	2.45	9	1
1:A:19:TYR:CE2	1:A:59:PRO:HD3	0.42	2.49	16	1
2:B:183:PRO:CG	2:B:186:LEU:HB2	0.42	2.45	19	3
1:A:52:THR:O	1:A:53:LYS:HD3	0.42	2.15	8	1
1:A:43:GLU:HG2	2:B:181:PRO:CD	0.42	2.45	8	1
2:B:182:ARG:NH2	2:B:187:GLY:C	0.42	2.74	10	1
1:A:44:TRP:CE2	2:B:182:ARG:HD3	0.42	2.49	19	1
1:A:44:TRP:O	2:B:186:LEU:HD21	0.41	2.15	6	1
1:A:23:HIS:CE1	2:B:182:ARG:NH1	0.41	2.87	10	1
1:A:12:ILE:CD1	1:A:12:ILE:N	0.41	2.83	14	1
1:A:43:GLU:OE1	2:B:180:PRO:HB3	0.41	2.16	3	1
1:A:42:GLY:C	1:A:43:GLU:CD	0.41	2.79	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:23:HIS:ND1	1:A:24:PRO:HD2	0.41	2.30	18	1
1:A:46:LYS:HA	1:A:56:GLY:O	0.41	2.16	14	1
2:B:183:PRO:HG2	2:B:186:LEU:HB3	0.41	1.93	20	1
1:A:46:LYS:HG2	1:A:56:GLY:C	0.41	2.35	1	1
1:A:22:ILE:CG2	1:A:22:ILE:O	0.41	2.68	16	1
1:A:46:LYS:HG3	1:A:57:PHE:CD2	0.41	2.50	7	1
1:A:50:LEU:O	1:A:51:LEU:C	0.41	2.58	12	3
1:A:19:TYR:CB	1:A:29:PHE:CE2	0.41	3.04	15	2
1:A:30:LYS:O	1:A:33:GLU:HB3	0.41	2.16	16	1
1:A:59:PRO:HG2	1:A:62:TYR:CD2	0.41	2.51	12	1
1:A:27:LEU:CD2	1:A:54:LYS:HD3	0.41	2.45	15	1
2:B:184:ALA:C	2:B:185:ASN:CG	0.41	2.79	18	1
2:B:182:ARG:HD3	2:B:187:GLY:C	0.41	2.36	9	1
1:A:57:PHE:CD1	2:B:187:GLY:HA2	0.41	2.51	16	1
1:A:19:TYR:CE2	1:A:20:ASP:O	0.41	2.74	17	1
1:A:15:ALA:HA	1:A:63:VAL:HA	0.41	1.93	1	1
2:B:179:LEU:H	2:B:179:LEU:HD12	0.40	1.76	15	1
1:A:43:GLU:HB3	2:B:181:PRO:HD2	0.40	1.91	6	1
1:A:52:THR:C	1:A:53:LYS:HG2	0.40	2.36	6	2
1:A:44:TRP:NE1	2:B:182:ARG:N	0.40	2.69	7	1
1:A:49:SER:OG	1:A:54:LYS:HB3	0.40	2.14	12	1
1:A:59:PRO:HA	2:B:180:PRO:HG3	0.40	1.92	16	1
1:A:65:LYS:O	1:A:65:LYS:HG3	0.40	2.15	10	1
1:A:40:GLU:HG3	1:A:45:TRP:CB	0.40	2.47	14	1
1:A:13:VAL:CG2	1:A:37:VAL:HG22	0.40	2.47	5	1
1:A:42:GLY:C	1:A:43:GLU:HG2	0.40	2.36	1	1
1:A:46:LYS:HG2	1:A:56:GLY:O	0.40	2.17	14	1
1:A:55:GLU:HG2	1:A:55:GLU:O	0.40	2.17	10	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	55/65 (85%)	47±1 (85±1%)	5±1 (9±1%)	3±1 (5±2%)	3	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	B	9/22 (41%)	4±1 (46±8%)	3±1 (31±9%)	2±1 (23±8%)	0 1
All	All	1280/1740 (74%)	1019 (80%)	159 (12%)	102 (8%)	2 14

All 12 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	53	LYS	20
2	B	182	ARG	19
1	A	21	GLY	18
2	B	186	LEU	17
1	A	41	HIS	9
1	A	20	ASP	5
1	A	52	THR	4
2	B	179	LEU	3
2	B	181	PRO	3
1	A	43	GLU	2
1	A	65	LYS	1
1	A	23	HIS	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	48/56 (86%)	33±3 (69±6%)	15±3 (31±6%)	1 14
2	B	7/18 (39%)	5±1 (75±9%)	2±1 (25±9%)	2 25
All	All	1100/1480 (74%)	764 (69%)	336 (31%)	1 15

All 39 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	27	LEU	20
1	A	45	TRP	20
1	A	31	LYS	19
1	A	46	LYS	15

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Mol	Chain	Res	Type	Models (Total)
2	B	179	LEU	14
1	A	54	LYS	14
1	A	50	LEU	13
1	A	61	ASN	12
1	A	49	SER	11
2	B	185	ASN	11
1	A	28	SER	10
1	A	40	GLU	10
1	A	65	LYS	10
1	A	34	LYS	10
1	A	11	ASP	10
2	B	182	ARG	10
1	A	43	GLU	9
1	A	48	LYS	9
1	A	53	LYS	9
1	A	26	ASP	8
1	A	33	GLU	8
1	A	39	GLU	8
1	A	30	LYS	8
1	A	55	GLU	7
1	A	25	ASP	7
1	A	13	VAL	7
1	A	23	HIS	6
1	A	20	ASP	6
1	A	52	THR	6
1	A	22	ILE	5
1	A	36	LYS	5
1	A	37	VAL	4
1	A	12	ILE	4
1	A	38	LEU	2
1	A	51	LEU	2
1	A	17	TYR	2
1	A	14	VAL	2
1	A	35	MET	2
1	A	62	TYR	1

6.3.3 RNA

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation

No chemical shift data were provided