



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 19, 2016 – 08:37 PM GMT

PDB ID : 4YXK
Title : Crystal structure of Elk prion protein complexed with POM1 FAB
Authors : Baral, P.K.; Swayampakula, M.; James, M.N.G.
Deposited on : 2015-03-23
Resolution : 2.81 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
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:

MolProbity : 4.02b-467
Mogul : unknown
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026982
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20026982

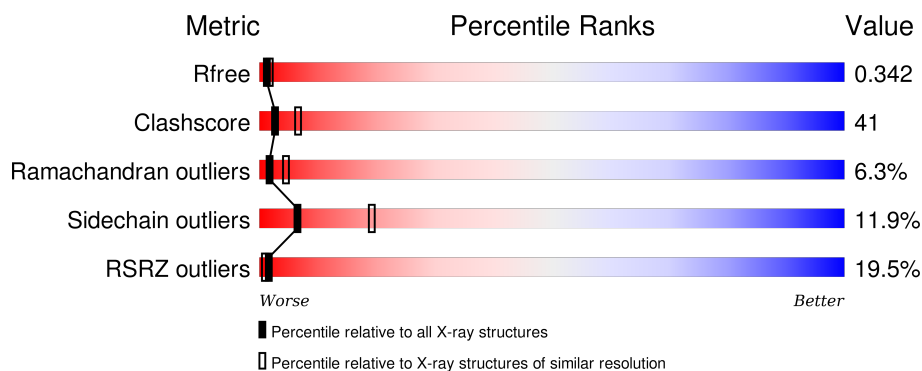
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.81 Å.

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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	2393 (2.80-2.80)
Clashscore	102246	2827 (2.80-2.80)
Ramachandran outliers	100387	2782 (2.80-2.80)
Sidechain outliers	100360	2784 (2.80-2.80)
RSRZ outliers	91569	2404 (2.80-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	135	
2	H	218	
3	L	213	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	NA	L	301	-	-	-	X

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 4208 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Major prion protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	101	Total	C	N	O	S	0	0	0
			840	521	146	165	8			

There are 27 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	93	MET	-	expression tag	UNP P67986
A	94	GLY	-	expression tag	UNP P67986
A	95	SER	-	expression tag	UNP P67986
A	96	SER	-	expression tag	UNP P67986
A	97	HIS	-	expression tag	UNP P67986
A	98	HIS	-	expression tag	UNP P67986
A	99	HIS	-	expression tag	UNP P67986
A	100	HIS	-	expression tag	UNP P67986
A	101	HIS	-	expression tag	UNP P67986
A	102	HIS	-	expression tag	UNP P67986
A	103	SER	-	expression tag	UNP P67986
A	104	SER	-	expression tag	UNP P67986
A	105	GLY	-	expression tag	UNP P67986
A	106	LEU	-	expression tag	UNP P67986
A	107	VAL	-	expression tag	UNP P67986
A	108	PRO	-	expression tag	UNP P67986
A	109	ARG	-	expression tag	UNP P67986
A	110	GLY	-	expression tag	UNP P67986
A	111	SER	-	expression tag	UNP P67986
A	112	HIS	-	expression tag	UNP P67986
A	113	MET	-	expression tag	UNP P67986
A	114	LEU	-	expression tag	UNP P67986
A	115	GLU	-	expression tag	UNP P67986
A	116	ASP	-	expression tag	UNP P67986
A	117	PRO	-	expression tag	UNP P67986
A	118	HIS	-	expression tag	UNP P67986
A	119	MET	-	expression tag	UNP P67986

- Molecule 2 is a protein called POM1 FAB HEAVY CHAIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	218	Total	C	N	O	S	0	0	0
			1642	1037	265	330	10			

- Molecule 3 is a protein called POM1 FAB LIGHT CHAIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	L	213	Total	C	N	O	S	0	0	0
			1652	1022	280	345	5			

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	L	1	Total	Na	0	0
			1	1		

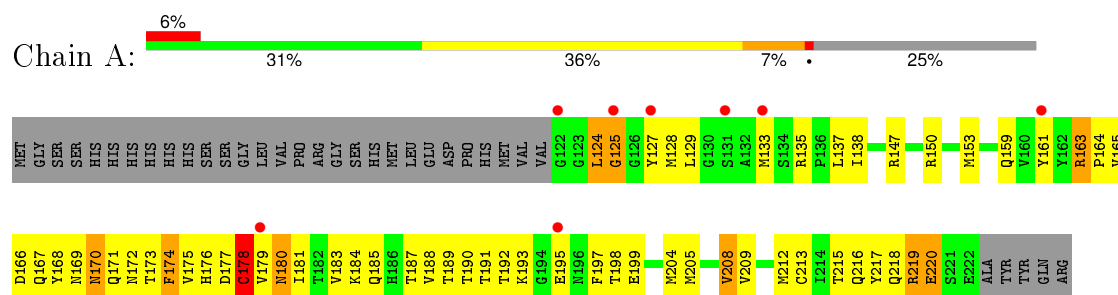
- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	23	Total	O	0	0
			23	23		
5	H	28	Total	O	0	0
			28	28		
5	L	22	Total	O	0	0
			22	22		

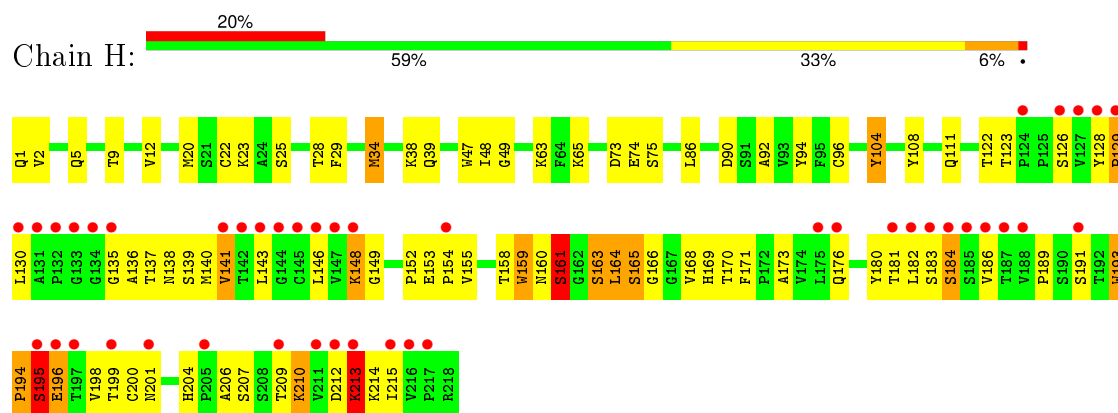
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-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. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

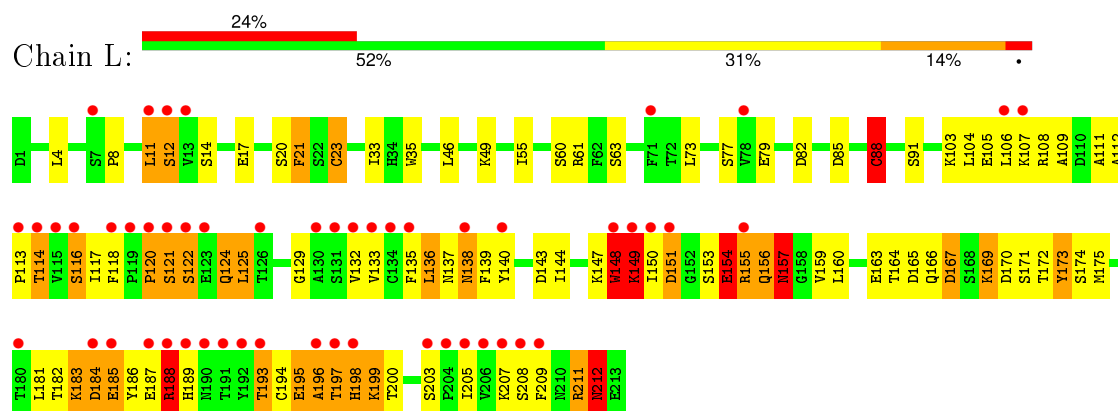
• Molecule 1: Major prion protein



• Molecule 2: POM1 FAB HEAVY CHAIN



• Molecule 3: POM1 FAB LIGHT CHAIN



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	84.67Å 105.51Å 76.11Å 90.00° 95.22° 90.00°	Depositor
Resolution (Å)	42.16 – 2.81 42.16 – 2.80	Depositor EDS
% Data completeness (in resolution range)	97.4 (42.16-2.81) 97.6 (42.16-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.11	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.70 (at 2.81Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.9_1692)	Depositor
R, R_{free}	0.300 , 0.353 0.305 , 0.342	Depositor DCC
R_{free} test set	809 reflections (5.07%)	DCC
Wilson B-factor (Å ²)	58.7	Xtriage
Anisotropy	0.808	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 59.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	1 of 15985 reflections (0.006%)	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	4208	wwPDB-VP
Average B, all atoms (Å ²)	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.70% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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 root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.86	0/858	0.98	1/1159 (0.1%)
2	H	0.84	1/1688 (0.1%)	1.06	2/2306 (0.1%)
3	L	0.65	0/1687	1.02	3/2291 (0.1%)
All	All	0.78	1/4233 (0.0%)	1.03	6/5756 (0.1%)

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 outliers	#Planarity outliers
3	L	0	4

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	104	TYR	CD1-CE1	-5.38	1.31	1.39

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L	88	CYS	CA-CB-SG	6.68	126.03	114.00
2	H	213	LYS	N-CA-C	-6.39	93.74	111.00
2	H	210	LYS	N-CA-C	6.26	127.89	111.00
1	A	124	LEU	CA-CB-CG	5.91	128.89	115.30
3	L	4	LEU	CA-CB-CG	5.87	128.81	115.30
3	L	196	ALA	N-CA-C	-5.46	96.26	111.00

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	L	148	TRP	Peptide
3	L	149	LYS	Peptide
3	L	154	GLU	Peptide
3	L	188	ARG	Sidechain

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the 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 within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	840	0	784	68	0
2	H	1642	0	1580	112	0
3	L	1652	0	1577	156	0
4	L	1	0	0	0	0
5	A	23	0	0	5	0
5	H	28	0	0	2	1
5	L	22	0	0	0	0
All	All	4208	0	3941	327	1

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 41.

All (327) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:198:HIS:CE1	3:L:199:LYS:HD2	1.48	1.47
3:L:198:HIS:ND1	3:L:199:LYS:CD	1.95	1.30
1:A:180:ASN:ND2	1:A:181:ILE:HD12	1.42	1.29
3:L:198:HIS:ND1	3:L:199:LYS:HD2	0.98	1.29
3:L:198:HIS:CE1	3:L:199:LYS:CD	2.16	1.26
3:L:198:HIS:HE1	3:L:199:LYS:CE	1.51	1.22
2:H:164:LEU:HD23	2:H:165:SER:N	1.57	1.19
2:H:160:ASN:HA	2:H:198:VAL:HG23	1.26	1.18
1:A:178:CYS:SG	1:A:213:CYS:SG	1.28	1.18
3:L:136:LEU:HD22	3:L:175:MET:HB2	1.21	1.17
3:L:33:ILE:HD11	3:L:88:CYS:SG	1.86	1.15
3:L:198:HIS:HE1	3:L:199:LYS:NZ	1.45	1.14
2:H:138:ASN:OD1	2:H:140:MET:HB2	1.45	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:198:HIS:CE1	3:L:199:LYS:NZ	2.16	1.12
3:L:198:HIS:CE1	3:L:199:LYS:CE	2.30	1.11
2:H:164:LEU:HD23	2:H:165:SER:H	0.94	1.08
2:H:164:LEU:CD2	2:H:165:SER:N	2.16	1.07
3:L:185:GLU:N	3:L:185:GLU:OE1	1.89	1.05
2:H:160:ASN:HB3	2:H:163:SER:CB	1.89	1.03
2:H:160:ASN:HA	2:H:198:VAL:CG2	1.91	1.01
1:A:180:ASN:HD21	1:A:181:ILE:HD12	1.21	1.00
2:H:129:PRO:HG2	3:L:124:GLN:OE1	1.62	0.98
1:A:180:ASN:HD22	1:A:181:ILE:H	1.11	0.98
1:A:180:ASN:ND2	1:A:181:ILE:CD1	2.28	0.96
1:A:180:ASN:HD22	1:A:181:ILE:HD12	1.27	0.95
1:A:178:CYS:SG	1:A:213:CYS:CB	2.56	0.94
2:H:20:MET:HE3	2:H:94:TYR:HB2	1.48	0.94
2:H:193:TRP:CD1	2:H:194:PRO:HA	2.03	0.94
3:L:198:HIS:ND1	3:L:199:LYS:N	2.16	0.93
1:A:133:MET:HE2	5:A:316:HOH:O	1.69	0.92
3:L:181:LEU:HD23	3:L:186:TYR:CE2	2.05	0.91
1:A:180:ASN:HD21	1:A:181:ILE:CD1	1.81	0.91
1:A:180:ASN:HD22	1:A:181:ILE:N	1.68	0.90
3:L:196:ALA:O	3:L:197:THR:OG1	1.91	0.89
2:H:138:ASN:OD1	2:H:140:MET:CB	2.20	0.89
2:H:164:LEU:CD2	2:H:166:GLY:H	1.86	0.88
3:L:133:VAL:HG13	3:L:135:PHE:CE2	2.09	0.87
1:A:170:ASN:OD1	1:A:173:THR:HG23	1.73	0.87
3:L:198:HIS:CE1	3:L:199:LYS:HZ1	1.90	0.86
1:A:133:MET:CE	5:A:316:HOH:O	2.23	0.86
2:H:199:THR:HG23	2:H:214:LYS:HB2	1.58	0.85
1:A:174:PHE:HD2	1:A:217:TYR:HD2	1.23	0.85
3:L:149:LYS:NZ	3:L:150:ILE:O	2.11	0.83
2:H:158:THR:CG2	2:H:201:ASN:O	2.27	0.83
3:L:182:THR:O	3:L:183:LYS:O	1.97	0.82
3:L:194:CYS:SG	3:L:195:GLU:N	2.54	0.81
3:L:23:CYS:SG	3:L:88:CYS:HB3	2.20	0.81
3:L:46:LEU:HG	3:L:55:ILE:HG12	1.64	0.80
3:L:33:ILE:CD1	3:L:88:CYS:SG	2.68	0.80
2:H:160:ASN:HB3	2:H:163:SER:OG	1.84	0.78
3:L:136:LEU:CD2	3:L:175:MET:HB2	2.11	0.78
2:H:163:SER:OG	2:H:164:LEU:N	2.17	0.77
3:L:113:PRO:HA	3:L:138:ASN:HB3	1.66	0.76
2:H:160:ASN:HB3	2:H:163:SER:HB3	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:198:HIS:CE1	3:L:199:LYS:HA	2.19	0.76
3:L:23:CYS:SG	3:L:88:CYS:CB	2.73	0.76
3:L:198:HIS:CG	3:L:199:LYS:N	2.54	0.75
3:L:133:VAL:CG1	3:L:135:PHE:CE2	2.70	0.75
3:L:198:HIS:HE1	3:L:199:LYS:HZ1	1.26	0.75
3:L:184:ASP:HB3	3:L:185:GLU:OE1	1.87	0.75
1:A:197:PHE:HB2	5:A:308:HOH:O	1.87	0.74
2:H:63:LYS:HD2	2:H:63:LYS:O	1.87	0.74
3:L:183:LYS:HG3	3:L:184:ASP:N	2.02	0.74
2:H:129:PRO:HG2	3:L:124:GLN:CD	2.07	0.73
2:H:138:ASN:O	2:H:140:MET:HG3	1.88	0.73
3:L:85:ASP:OD1	3:L:103:LYS:HG2	1.88	0.72
2:H:213:LYS:O	2:H:214:LYS:HD3	1.89	0.72
3:L:139:PHE:CE2	3:L:199:LYS:HG3	2.25	0.72
2:H:22:CYS:CB	2:H:96:CYS:HG	2.01	0.72
3:L:137:ASN:OD1	3:L:174:SER:HA	1.90	0.71
2:H:20:MET:CE	2:H:94:TYR:HB2	2.20	0.71
3:L:124:GLN:N	3:L:124:GLN:OE1	2.24	0.71
2:H:164:LEU:HD23	2:H:166:GLY:H	1.55	0.71
1:A:183:VAL:O	1:A:187:THR:HG23	1.90	0.71
3:L:108:ARG:NH1	3:L:171:SER:HB2	2.07	0.70
2:H:193:TRP:HA	2:H:194:PRO:O	1.92	0.70
3:L:136:LEU:HD23	3:L:137:ASN:N	2.07	0.69
3:L:114:THR:N	3:L:137:ASN:O	2.25	0.69
3:L:23:CYS:HG	3:L:88:CYS:CB	2.04	0.69
1:A:174:PHE:CD2	1:A:217:TYR:HD2	2.08	0.69
3:L:181:LEU:HD23	3:L:186:TYR:HE2	1.56	0.69
1:A:218:GLN:O	1:A:220:GLU:N	2.26	0.69
2:H:213:LYS:HD3	2:H:213:LYS:C	2.12	0.68
3:L:61:ARG:HD2	3:L:77:SER:O	1.92	0.68
3:L:133:VAL:HG13	3:L:135:PHE:HE2	1.58	0.68
3:L:198:HIS:CE1	3:L:199:LYS:HZ2	2.12	0.68
3:L:212:ASN:N	3:L:212:ASN:OD1	2.27	0.67
3:L:139:PHE:N	3:L:173:TYR:HD2	1.92	0.67
2:H:160:ASN:CB	2:H:163:SER:H	2.07	0.67
2:H:164:LEU:HD22	2:H:165:SER:N	2.07	0.67
2:H:38:LYS:HB2	2:H:48:ILE:HD11	1.75	0.67
2:H:22:CYS:CB	2:H:96:CYS:SG	2.82	0.67
3:L:120:PRO:HD3	3:L:132:VAL:HG22	1.75	0.67
2:H:22:CYS:HB2	2:H:96:CYS:SG	2.34	0.67
3:L:153:SER:OG	3:L:154:GLU:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:128:TYR:CZ	2:H:130:LEU:HD13	2.30	0.67
3:L:108:ARG:NH1	3:L:171:SER:O	2.28	0.67
3:L:149:LYS:HG3	3:L:154:GLU:HA	1.77	0.67
2:H:158:THR:HG22	2:H:201:ASN:O	1.96	0.66
2:H:160:ASN:O	2:H:161:SER:HB3	1.95	0.65
2:H:12:VAL:HG11	2:H:86:LEU:HD12	1.78	0.65
2:H:160:ASN:HB2	2:H:163:SER:H	1.62	0.65
1:A:135:ARG:NH1	1:A:153:MET:O	2.31	0.64
1:A:171:GLN:HB2	1:A:217:TYR:CZ	2.32	0.64
3:L:23:CYS:HB2	3:L:35:TRP:CH2	2.33	0.64
2:H:160:ASN:ND2	2:H:164:LEU:O	2.32	0.63
3:L:113:PRO:HA	3:L:137:ASN:O	1.98	0.62
2:H:140:MET:HG2	2:H:189:PRO:HA	1.81	0.62
3:L:136:LEU:C	3:L:136:LEU:HD23	2.19	0.62
2:H:2:VAL:HA	2:H:25:SER:O	2.00	0.62
2:H:171:PHE:CZ	3:L:174:SER:HB3	2.35	0.61
3:L:198:HIS:ND1	3:L:199:LYS:CA	2.63	0.61
3:L:185:GLU:H	3:L:185:GLU:CD	2.00	0.61
1:A:170:ASN:CG	1:A:173:THR:HG23	2.21	0.61
2:H:164:LEU:HD23	2:H:166:GLY:N	2.15	0.61
1:A:170:ASN:OD1	1:A:172:ASN:HB2	2.00	0.61
2:H:212:ASP:HB2	2:H:214:LYS:HG2	1.83	0.60
3:L:184:ASP:O	3:L:186:TYR:N	2.34	0.60
1:A:181:ILE:H	1:A:181:ILE:HD12	1.65	0.60
3:L:61:ARG:NH1	3:L:79:GLU:OE2	2.35	0.60
3:L:111:ALA:O	3:L:139:PHE:HD1	1.84	0.60
2:H:164:LEU:HD21	2:H:166:GLY:H	1.67	0.60
2:H:138:ASN:OD1	2:H:140:MET:N	2.35	0.60
2:H:129:PRO:O	3:L:124:GLN:NE2	2.35	0.60
1:A:171:GLN:O	1:A:175:VAL:HG23	2.02	0.60
3:L:137:ASN:O	3:L:138:ASN:HB3	2.01	0.59
2:H:148:LYS:HA	2:H:181:THR:HG22	1.84	0.59
3:L:143:ASP:O	3:L:199:LYS:HD3	2.02	0.59
3:L:198:HIS:CG	3:L:199:LYS:H	2.20	0.59
3:L:113:PRO:CA	3:L:137:ASN:O	2.50	0.59
3:L:114:THR:O	3:L:137:ASN:HB2	2.03	0.59
3:L:181:LEU:CD2	3:L:186:TYR:HE2	2.15	0.59
3:L:139:PHE:CD2	3:L:199:LYS:HG3	2.38	0.58
1:A:165:VAL:HG13	1:A:166:ASP:H	1.67	0.58
3:L:167:ASP:OD1	3:L:171:SER:N	2.37	0.58
3:L:108:ARG:HH12	3:L:171:SER:C	2.06	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:174:PHE:HE2	1:A:217:TYR:HA	1.67	0.58
1:A:166:ASP:C	1:A:166:ASP:OD1	2.42	0.58
3:L:198:HIS:HE1	3:L:199:LYS:HE3	1.60	0.58
3:L:197:THR:O	3:L:197:THR:HG22	2.03	0.57
3:L:155:ARG:CD	3:L:156:GLN:HB3	2.34	0.57
1:A:177:ASP:HA	1:A:181:ILE:CD1	2.34	0.57
1:A:168:TYR:OH	1:A:177:ASP:OD2	2.21	0.57
1:A:127:TYR:CE1	1:A:181:ILE:HG21	2.40	0.57
3:L:121:SER:OG	3:L:122:SER:N	2.36	0.57
2:H:135:GLY:O	2:H:136:ALA:HB2	2.05	0.57
2:H:138:ASN:O	2:H:139:SER:C	2.40	0.57
1:A:165:VAL:HG13	1:A:166:ASP:N	2.20	0.57
2:H:164:LEU:CD2	2:H:166:GLY:N	2.64	0.56
1:A:161:TYR:CE2	1:A:185:GLN:HG2	2.41	0.56
2:H:29:PHE:HE1	2:H:34:MET:HE1	1.70	0.56
3:L:183:LYS:HG3	3:L:184:ASP:H	1.70	0.56
2:H:159:TRP:HZ2	2:H:168:VAL:HG11	1.70	0.56
1:A:188:VAL:O	1:A:192:THR:HG23	2.06	0.56
1:A:178:CYS:N	1:A:181:ILE:HD13	2.20	0.55
3:L:23:CYS:CB	3:L:88:CYS:SG	2.94	0.55
1:A:215:THR:HB	5:A:316:HOH:O	2.07	0.55
1:A:173:THR:OG1	1:A:174:PHE:N	2.39	0.55
3:L:155:ARG:HD2	3:L:156:GLN:HB3	1.88	0.55
1:A:188:VAL:O	1:A:191:THR:HG22	2.07	0.54
2:H:160:ASN:CA	2:H:198:VAL:CG2	2.78	0.54
2:H:12:VAL:HG11	2:H:86:LEU:CD1	2.38	0.54
3:L:136:LEU:HG	3:L:137:ASN:H	1.72	0.54
3:L:198:HIS:ND1	3:L:199:LYS:HA	2.23	0.54
2:H:168:VAL:HG12	2:H:186:VAL:HG13	1.90	0.53
2:H:158:THR:HG23	2:H:201:ASN:O	2.05	0.53
2:H:2:VAL:HG21	2:H:108:TYR:CE2	2.43	0.53
3:L:33:ILE:CG1	3:L:88:CYS:SG	2.96	0.53
2:H:128:TYR:CZ	2:H:146:LEU:HB2	2.44	0.53
1:A:195:GLU:OE1	1:A:195:GLU:HA	2.08	0.52
3:L:137:ASN:O	3:L:138:ASN:CB	2.57	0.52
3:L:139:PHE:N	3:L:173:TYR:CD2	2.75	0.52
3:L:173:TYR:O	3:L:174:SER:OG	2.14	0.52
2:H:164:LEU:CD2	2:H:165:SER:H	1.81	0.52
3:L:108:ARG:HB3	3:L:140:TYR:CD2	2.45	0.52
1:A:179:VAL:O	1:A:183:VAL:HG23	2.08	0.52
2:H:204:HIS:HD1	2:H:207:SER:CB	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:136:LEU:CD2	3:L:137:ASN:N	2.73	0.52
3:L:149:LYS:CG	3:L:154:GLU:HA	2.39	0.52
2:H:152:PRO:HD2	2:H:204:HIS:NE2	2.25	0.52
1:A:204:MET:O	1:A:208:VAL:HG13	2.10	0.52
3:L:12:SER:HB2	3:L:107:LYS:HG2	1.93	0.52
1:A:147:ARG:HD2	5:A:317:HOH:O	2.11	0.51
2:H:160:ASN:CA	2:H:198:VAL:HG23	2.18	0.51
1:A:174:PHE:HD2	1:A:217:TYR:CD2	2.15	0.51
3:L:149:LYS:CG	3:L:150:ILE:H	2.22	0.51
2:H:5:GLN:HB2	2:H:23:LYS:HB3	1.91	0.51
3:L:182:THR:O	3:L:183:LYS:C	2.48	0.50
2:H:160:ASN:CB	2:H:163:SER:N	2.72	0.50
3:L:163:GLU:HG2	3:L:164:THR:H	1.76	0.50
1:A:177:ASP:HA	1:A:181:ILE:HD11	1.94	0.50
2:H:153:GLU:HB3	2:H:154:PRO:HA	1.94	0.50
2:H:195:SER:O	2:H:196:GLU:HB2	2.11	0.50
1:A:171:GLN:HB2	1:A:217:TYR:CE2	2.45	0.49
3:L:196:ALA:C	3:L:197:THR:HG1	2.05	0.49
2:H:159:TRP:CE3	2:H:160:ASN:OD1	2.65	0.49
3:L:150:ILE:HG22	3:L:151:ASP:CG	2.33	0.49
3:L:20:SER:HA	3:L:73:LEU:O	2.13	0.49
3:L:166:GLN:NE2	3:L:172:THR:O	2.45	0.49
2:H:160:ASN:HB3	2:H:163:SER:CA	2.42	0.49
1:A:208:VAL:HG23	1:A:212:MET:CE	2.42	0.49
2:H:130:LEU:HD23	3:L:118:PHE:HB3	1.95	0.49
3:L:11:LEU:HD11	3:L:21:PHE:HD1	1.77	0.49
2:H:164:LEU:O	2:H:165:SER:HB2	2.13	0.49
3:L:136:LEU:HG	3:L:137:ASN:N	2.28	0.49
2:H:161:SER:O	2:H:161:SER:OG	2.28	0.49
3:L:136:LEU:CG	3:L:137:ASN:N	2.76	0.49
3:L:148:TRP:CD1	3:L:154:GLU:HG2	2.47	0.49
2:H:155:VAL:HG11	2:H:182:LEU:HD21	1.95	0.49
3:L:8:PRO:HG2	3:L:11:LEU:CD2	2.43	0.48
2:H:158:THR:O	2:H:159:TRP:HB3	2.13	0.48
3:L:181:LEU:CD2	3:L:186:TYR:CE2	2.85	0.48
3:L:188:ARG:HG3	3:L:189:HIS:N	2.29	0.48
3:L:133:VAL:CG1	3:L:135:PHE:HE2	2.19	0.48
3:L:125:LEU:HD22	3:L:129:GLY:O	2.14	0.48
3:L:187:GLU:O	3:L:188:ARG:HB3	2.13	0.48
1:A:208:VAL:HG23	1:A:212:MET:HE2	1.94	0.48
2:H:29:PHE:CE1	2:H:34:MET:HE1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:169:HIS:O	2:H:184:SER:HA	2.14	0.48
1:A:124:LEU:CG	1:A:125:GLY:H	2.27	0.47
3:L:108:ARG:HB3	3:L:140:TYR:HD2	1.79	0.47
3:L:184:ASP:O	3:L:187:GLU:HB3	2.14	0.47
3:L:133:VAL:HG11	3:L:135:PHE:CE2	2.47	0.47
2:H:209:THR:O	2:H:210:LYS:HG2	2.13	0.47
1:A:179:VAL:HG22	1:A:209:VAL:HG23	1.95	0.47
3:L:173:TYR:N	3:L:173:TYR:CD1	2.79	0.47
2:H:86:LEU:HA	2:H:90:ASP:OD2	2.15	0.47
2:H:104:TYR:HB2	3:L:91:SER:OG	2.14	0.47
3:L:82:ASP:O	3:L:104:LEU:HD23	2.15	0.47
3:L:105:GLU:HG2	3:L:106:LEU:N	2.29	0.47
3:L:207:LYS:HZ1	3:L:209:PHE:HD1	1.63	0.47
2:H:138:ASN:OD1	2:H:140:MET:CA	2.63	0.47
1:A:124:LEU:HG	1:A:125:GLY:H	1.80	0.47
1:A:216:GLN:O	1:A:219:ARG:CG	2.62	0.47
3:L:150:ILE:HG23	3:L:193:THR:OG1	2.15	0.47
2:H:1:GLN:N	2:H:1:GLN:CD	2.69	0.47
2:H:2:VAL:HG21	2:H:108:TYR:CZ	2.50	0.46
2:H:159:TRP:HB3	2:H:200:CYS:CB	2.45	0.46
3:L:193:THR:HG23	3:L:208:SER:HB2	1.98	0.46
2:H:149:GLY:N	2:H:180:TYR:O	2.48	0.46
2:H:204:HIS:HB3	2:H:209:THR:OG1	2.15	0.46
2:H:163:SER:HG	2:H:164:LEU:H	1.58	0.46
2:H:128:TYR:CE2	2:H:130:LEU:HD13	2.50	0.46
2:H:28:THR:HA	5:H:310:HOH:O	2.16	0.46
3:L:147:LYS:HG3	3:L:197:THR:HG21	1.97	0.46
3:L:166:GLN:NE2	3:L:171:SER:C	2.69	0.46
1:A:170:ASN:OD1	1:A:172:ASN:N	2.48	0.46
2:H:47:TRP:CZ2	2:H:49:GLY:HA2	2.50	0.46
1:A:173:THR:O	1:A:176:HIS:N	2.45	0.46
2:H:159:TRP:O	2:H:161:SER:N	2.42	0.45
1:A:198:THR:HG22	1:A:199:GLU:N	2.30	0.45
1:A:169:ASN:O	1:A:170:ASN:HB2	2.16	0.45
2:H:146:LEU:HD11	3:L:133:VAL:HB	1.98	0.45
2:H:153:GLU:OE2	2:H:173:ALA:HB3	2.17	0.45
2:H:204:HIS:CE1	2:H:206:ALA:HB3	2.51	0.45
1:A:177:ASP:C	1:A:181:ILE:HD13	2.37	0.45
3:L:149:LYS:CD	3:L:150:ILE:H	2.30	0.45
3:L:133:VAL:HG11	3:L:135:PHE:CZ	2.51	0.45
1:A:174:PHE:CD1	1:A:174:PHE:O	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:108:ARG:HG3	3:L:109:ALA:H	1.81	0.45
2:H:39:GLN:O	2:H:92:ALA:HB1	2.17	0.45
3:L:166:GLN:NE2	3:L:171:SER:O	2.51	0.44
3:L:184:ASP:O	3:L:187:GLU:N	2.50	0.44
2:H:164:LEU:CD2	2:H:165:SER:CA	2.95	0.44
2:H:193:TRP:CG	2:H:194:PRO:HA	2.48	0.44
3:L:207:LYS:NZ	3:L:209:PHE:HD1	2.14	0.44
3:L:149:LYS:HD2	3:L:150:ILE:H	1.83	0.44
3:L:169:LYS:HG3	3:L:170:ASP:OD1	2.18	0.44
2:H:160:ASN:HB2	2:H:163:SER:N	2.30	0.44
3:L:14:SER:O	3:L:17:GLU:HG2	2.18	0.44
2:H:164:LEU:CD2	2:H:164:LEU:C	2.84	0.44
3:L:184:ASP:C	3:L:186:TYR:N	2.72	0.44
2:H:20:MET:CE	2:H:94:TYR:CB	2.95	0.44
3:L:46:LEU:HD11	3:L:49:LYS:HB3	2.00	0.44
2:H:73:ASP:OD1	2:H:75:SER:OG	2.23	0.44
1:A:189:THR:O	1:A:193:LYS:NZ	2.36	0.44
3:L:198:HIS:ND1	3:L:198:HIS:C	2.71	0.43
3:L:149:LYS:HA	3:L:195:GLU:OE1	2.18	0.43
2:H:176:GLN:OE1	2:H:181:THR:HG21	2.17	0.43
1:A:198:THR:HG22	1:A:199:GLU:H	1.83	0.43
1:A:129:LEU:HA	1:A:129:LEU:HD12	1.70	0.43
3:L:183:LYS:CG	3:L:184:ASP:H	2.30	0.43
2:H:129:PRO:O	2:H:130:LEU:HD12	2.18	0.43
2:H:146:LEU:HD23	2:H:146:LEU:HA	1.78	0.43
3:L:148:TRP:CD1	3:L:148:TRP:N	2.86	0.43
1:A:180:ASN:ND2	1:A:181:ILE:H	1.95	0.43
2:H:159:TRP:CZ2	2:H:168:VAL:HG11	2.53	0.43
3:L:11:LEU:CD1	3:L:21:PHE:HD1	2.31	0.43
3:L:138:ASN:HA	3:L:173:TYR:CD2	2.53	0.43
1:A:150:ARG:NH2	1:A:150:ARG:HB3	2.34	0.43
3:L:150:ILE:HG22	3:L:151:ASP:OD2	2.19	0.43
3:L:112:ALA:HA	3:L:113:PRO:HD3	1.82	0.43
1:A:180:ASN:O	1:A:184:LYS:HG3	2.18	0.43
2:H:159:TRP:C	2:H:161:SER:N	2.72	0.43
2:H:122:THR:HG22	2:H:152:PRO:HD3	2.00	0.43
3:L:166:GLN:HE21	3:L:171:SER:C	2.22	0.43
3:L:116:SER:O	3:L:135:PHE:HD2	2.02	0.42
1:A:174:PHE:C	1:A:174:PHE:CD1	2.85	0.42
2:H:1:GLN:H1	2:H:1:GLN:CD	2.23	0.42
3:L:167:ASP:O	3:L:171:SER:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:137:LEU:HD12	1:A:138:ILE:N	2.34	0.42
3:L:139:PHE:HE1	3:L:200:THR:HG23	1.85	0.42
3:L:197:THR:O	3:L:198:HIS:CB	2.67	0.42
2:H:28:THR:HB	5:H:301:HOH:O	2.19	0.42
3:L:167:ASP:OD1	3:L:170:ASP:N	2.53	0.42
1:A:170:ASN:O	1:A:173:THR:OG1	2.31	0.42
1:A:187:THR:HA	1:A:190:THR:HB	2.01	0.42
2:H:171:PHE:CE2	3:L:174:SER:HB3	2.54	0.42
1:A:170:ASN:OD1	1:A:173:THR:N	2.53	0.42
1:A:205:MET:O	1:A:209:VAL:HG13	2.20	0.42
3:L:138:ASN:HA	3:L:173:TYR:HD2	1.85	0.41
3:L:197:THR:O	3:L:198:HIS:HB3	2.20	0.41
2:H:158:THR:OG1	2:H:159:TRP:N	2.53	0.41
3:L:23:CYS:HB2	3:L:35:TRP:CZ2	2.54	0.41
3:L:155:ARG:NH1	3:L:157:ASN:O	2.53	0.41
3:L:167:ASP:HB3	3:L:172:THR:N	2.36	0.41
2:H:164:LEU:O	2:H:165:SER:CB	2.66	0.41
3:L:155:ARG:HD3	3:L:156:GLN:HB3	2.01	0.41
3:L:187:GLU:CG	3:L:187:GLU:O	2.69	0.41
3:L:160:LEU:HD12	3:L:160:LEU:HA	1.91	0.41
3:L:63:SER:O	3:L:73:LEU:HD12	2.20	0.41
3:L:140:TYR:CE1	3:L:173:TYR:CE1	3.09	0.40
2:H:158:THR:O	2:H:159:TRP:CB	2.68	0.40
1:A:163:ARG:O	1:A:168:TYR:HE2	2.05	0.40
2:H:129:PRO:HD2	3:L:124:GLN:HG3	2.03	0.40
3:L:91:SER:O	3:L:91:SER:OG	2.39	0.40
2:H:141:VAL:O	2:H:143:LEU:HD12	2.21	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:H:303:HOH:O	5:H:311:HOH:O[2_555]	2.04	0.16

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries

of similar resolution.

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	99/135 (73%)	90 (91%)	4 (4%)	5 (5%)	2	8
2	H	216/218 (99%)	193 (89%)	13 (6%)	10 (5%)	3	9
3	L	211/213 (99%)	174 (82%)	19 (9%)	18 (8%)	1	2
All	All	526/566 (93%)	457 (87%)	36 (7%)	33 (6%)	2	4

All (33) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	170	ASN
1	A	219	ARG
2	H	129	PRO
2	H	161	SER
2	H	165	SER
2	H	194	PRO
2	H	195	SER
2	H	196	GLU
2	H	215	ILE
3	L	120	PRO
3	L	121	SER
3	L	149	LYS
3	L	156	GLN
3	L	183	LYS
3	L	185	GLU
3	L	198	HIS
3	L	199	LYS
3	L	211	ARG
3	L	212	ASN
1	A	178	CYS
2	H	159	TRP
2	H	191	SER
3	L	154	GLU
3	L	157	ASN
3	L	169	LYS
1	A	164	PRO
3	L	122	SER
3	L	138	ASN
3	L	188	ARG
3	L	197	THR

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Mol	Chain	Res	Type
2	H	126	SER
3	L	151	ASP
1	A	125	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	93/123 (76%)	84 (90%)	9 (10%)	10	29
2	H	187/187 (100%)	169 (90%)	18 (10%)	10	29
3	L	191/191 (100%)	162 (85%)	29 (15%)	3	10
All	All	471/501 (94%)	415 (88%)	56 (12%)	6	19

All (56) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	128	MET
1	A	159	GLN
1	A	163	ARG
1	A	167	GLN
1	A	174	PHE
1	A	178	CYS
1	A	180	ASN
1	A	208	VAL
1	A	220	GLU
2	H	9	THR
2	H	34	MET
2	H	65	LYS
2	H	74	GLU
2	H	111	GLN
2	H	123	THR
2	H	137	THR
2	H	141	VAL
2	H	148	LYS
2	H	161	SER

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Mol	Chain	Res	Type
2	H	163	SER
2	H	164	LEU
2	H	170	THR
2	H	183	SER
2	H	184	SER
2	H	193	TRP
2	H	195	SER
2	H	213	LYS
3	L	11	LEU
3	L	12	SER
3	L	21	PHE
3	L	23	CYS
3	L	60	SER
3	L	88	CYS
3	L	114	THR
3	L	116	SER
3	L	117	ILE
3	L	124	GLN
3	L	125	LEU
3	L	136	LEU
3	L	144	ILE
3	L	148	TRP
3	L	149	LYS
3	L	154	GLU
3	L	155	ARG
3	L	157	ASN
3	L	159	VAL
3	L	165	ASP
3	L	167	ASP
3	L	173	TYR
3	L	184	ASP
3	L	193	THR
3	L	195	GLU
3	L	203	SER
3	L	205	ILE
3	L	211	ARG
3	L	212	ASN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	139	HIS

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Mol	Chain	Res	Type
1	A	180	ASN
2	H	160	ASN
3	L	198	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	101/135 (74%)	0.55	8 (7%) 15 8	29, 68, 108, 120	0
2	H	218/218 (100%)	1.09	44 (20%) 1 1	23, 49, 163, 187	0
3	L	213/213 (100%)	1.54	52 (24%) 1 0	31, 90, 159, 165	0
All	All	532/566 (93%)	1.17	104 (19%) 1 1	23, 73, 158, 187	0

All (104) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	L	206	VAL	27.7
2	H	141	VAL	17.5
3	L	133	VAL	12.0
3	L	121	SER	11.5
3	L	122	SER	11.0
3	L	189	HIS	10.7
2	H	130	LEU	10.5
3	L	196	ALA	10.0
2	H	131	ALA	9.1
2	H	211	VAL	8.6
3	L	135	PHE	8.6
3	L	205	ILE	8.4
2	H	144	GLY	7.6
2	H	142	THR	7.6
2	H	143	LEU	7.4
2	H	216	VAL	7.3
2	H	134	GLY	7.1
3	L	116	SER	7.0
3	L	207	LYS	7.0
3	L	132	VAL	6.8
3	L	208	SER	6.6
3	L	118	PHE	6.4
2	H	215	ILE	6.3

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Mol	Chain	Res	Type	RSRZ
2	H	147	VAL	5.9
2	H	191	SER	5.8
3	L	192	TYR	5.7
2	H	145	CYS	5.4
2	H	217	PRO	4.9
3	L	126	THR	4.9
2	H	126	SER	4.7
3	L	184	ASP	4.6
2	H	176	GLN	4.5
2	H	146	LEU	4.5
3	L	115	VAL	4.4
3	L	130	ALA	4.4
3	L	119	PRO	4.4
2	H	184	SER	4.3
3	L	123	GLU	4.3
3	L	149	LYS	4.2
2	H	129	PRO	4.1
2	H	196	GLU	4.0
3	L	114	THR	3.9
2	H	182	LEU	3.9
2	H	135	GLY	3.9
3	L	120	PRO	3.8
1	A	122	GLY	3.8
1	A	161	TYR	3.8
3	L	12	SER	3.8
3	L	151	ASP	3.7
2	H	128	TYR	3.7
3	L	190	ASN	3.7
3	L	106	LEU	3.7
3	L	191	THR	3.6
2	H	197	THR	3.5
2	H	132	PRO	3.5
3	L	198	HIS	3.4
2	H	209	THR	3.4
3	L	204	PRO	3.3
3	L	13	VAL	3.1
2	H	213	LYS	3.1
2	H	124	PRO	3.1
3	L	180	THR	3.1
3	L	187	GLU	3.1
2	H	127	VAL	3.0
3	L	113	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
2	H	133	GLY	3.0
2	H	188	VAL	2.9
2	H	183	SER	2.9
3	L	155	ARG	2.9
2	H	212	ASP	2.8
3	L	203	SER	2.7
1	A	195	GLU	2.7
3	L	131	SER	2.7
2	H	205	PRO	2.7
3	L	185	GLU	2.5
3	L	11	LEU	2.5
2	H	185	SER	2.5
3	L	188	ARG	2.5
2	H	199	THR	2.4
1	A	179	VAL	2.4
2	H	181	THR	2.4
2	H	148	LYS	2.3
1	A	127	TYR	2.3
3	L	71	PHE	2.3
2	H	195	SER	2.2
3	L	7	SER	2.2
1	A	125	GLY	2.2
3	L	193	THR	2.2
3	L	197	THR	2.2
3	L	148	TRP	2.2
2	H	186	VAL	2.2
3	L	78	VAL	2.2
2	H	175	LEU	2.2
2	H	187	THR	2.1
1	A	133	MET	2.1
3	L	134	CYS	2.1
3	L	138	ASN	2.1
3	L	209	PHE	2.1
2	H	154	PRO	2.1
2	H	201	ASN	2.1
3	L	140	TYR	2.1
3	L	150	ILE	2.0
3	L	107	LYS	2.0
1	A	131	SER	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	NA	L	301	1/1	0.55	0.66	2.00	99,99,99,99	0

6.5 Other polymers [i](#)

There are no such residues in this entry.