



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 02:11 AM UTC

PDB ID : 2C9I / pdb_00002c9i
Title : Structure of the fluorescent protein asFP499 from *Anemonia sulcata*
Authors : Renzi, F.; Nienhaus, K.; Wiedenmann, J.; Vallone, B.; Nienhaus, G.U.
Deposited on : 2005-12-12
Resolution : 1.82 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

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

with specific help available everywhere you see the ⓘ 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 ⓘ](#)) were used in the production of this report:

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

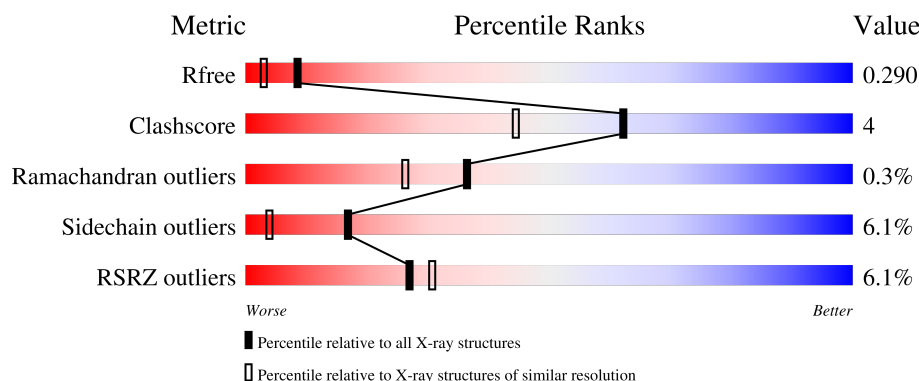
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.82 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}	180053	1112 (1.82-1.82)
Clashscore	190562	1148 (1.82-1.82)
Ramachandran outliers	187476	1140 (1.82-1.82)
Sidechain outliers	187428	1140 (1.82-1.82)
RSRZ outliers	180081	1112 (1.82-1.82)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. 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	226	6% 85% 13% .
1	B	226	7% 85% 11% .
1	C	226	8% 88% 10% .
1	D	226	8% 88% 11% .
1	E	226	4% 87% 11% .

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Mol	Chain	Length	Quality of chain
1	F	226	4% 83% 14%
1	G	226	8% 85% 13%
1	H	226	5% 84% 13%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 15798 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 GREEN FLUORESCENT PROTEIN ASFP499.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	226	Total	C	N	O	S	0	0	0
			1781	1137	296	336	12			
1	B	225	Total	C	N	O	S	0	0	0
			1773	1132	295	335	11			
1	C	226	Total	C	N	O	S	0	0	0
			1781	1137	296	336	12			
1	D	226	Total	C	N	O	S	0	0	0
			1781	1137	296	336	12			
1	E	226	Total	C	N	O	S	0	0	0
			1781	1137	296	336	12			
1	F	225	Total	C	N	O	S	0	1	0
			1784	1138	299	336	11			
1	G	226	Total	C	N	O	S	0	0	0
			1781	1137	296	336	12			
1	H	225	Total	C	N	O	S	0	0	0
			1773	1132	295	335	11			

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	63	CRQ	GLN	chromophore	UNP Q9GPI6
A	63	CRQ	TYR	chromophore	UNP Q9GPI6
A	63	CRQ	GLY	chromophore	UNP Q9GPI6
B	63	CRQ	GLN	chromophore	UNP Q9GPI6
B	63	CRQ	TYR	chromophore	UNP Q9GPI6
B	63	CRQ	GLY	chromophore	UNP Q9GPI6
C	63	CRQ	GLN	chromophore	UNP Q9GPI6
C	63	CRQ	TYR	chromophore	UNP Q9GPI6
C	63	CRQ	GLY	chromophore	UNP Q9GPI6
D	63	CRQ	GLN	chromophore	UNP Q9GPI6
D	63	CRQ	TYR	chromophore	UNP Q9GPI6
D	63	CRQ	GLY	chromophore	UNP Q9GPI6
E	63	CRQ	GLN	chromophore	UNP Q9GPI6

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Chain	Residue	Modelled	Actual	Comment	Reference
E	63	CRQ	TYR	chromophore	UNP Q9GPI6
E	63	CRQ	GLY	chromophore	UNP Q9GPI6
F	63	CRQ	GLN	chromophore	UNP Q9GPI6
F	63	CRQ	TYR	chromophore	UNP Q9GPI6
F	63	CRQ	GLY	chromophore	UNP Q9GPI6
G	63	CRQ	GLN	chromophore	UNP Q9GPI6
G	63	CRQ	TYR	chromophore	UNP Q9GPI6
G	63	CRQ	GLY	chromophore	UNP Q9GPI6
H	63	CRQ	GLN	chromophore	UNP Q9GPI6
H	63	CRQ	TYR	chromophore	UNP Q9GPI6
H	63	CRQ	GLY	chromophore	UNP Q9GPI6

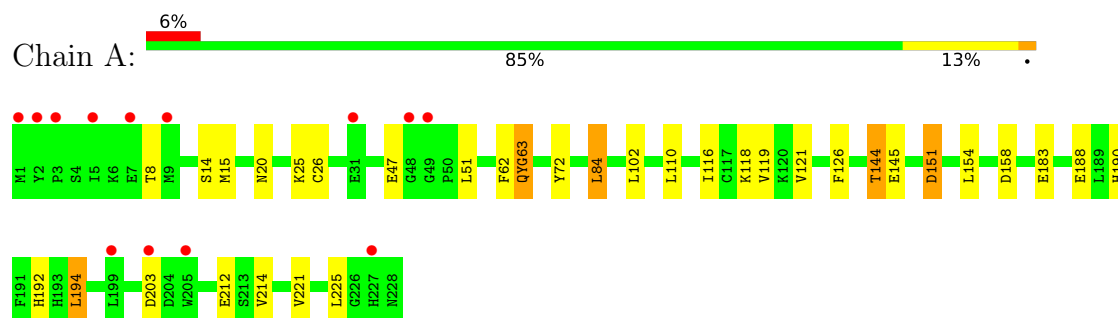
- Molecule 2 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	236	Total O 236 236	0	0
2	B	212	Total O 212 212	0	0
2	C	176	Total O 176 176	0	0
2	D	179	Total O 179 179	0	0
2	E	202	Total O 202 202	0	0
2	F	201	Total O 201 201	0	0
2	G	168	Total O 168 168	0	0
2	H	189	Total O 189 189	0	0

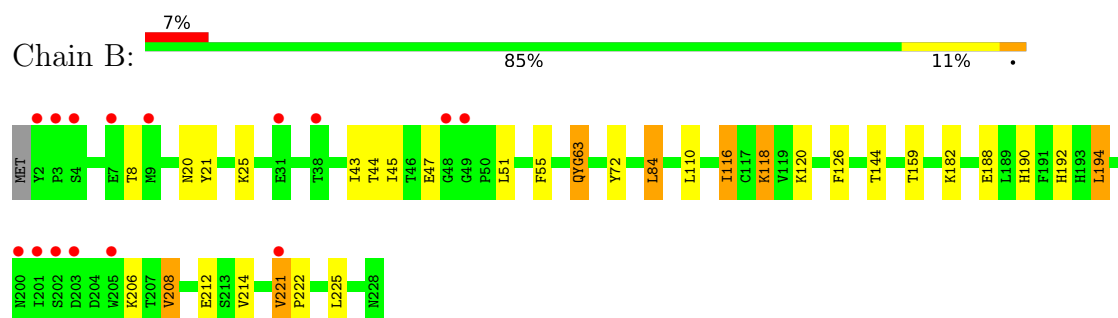
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes 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.

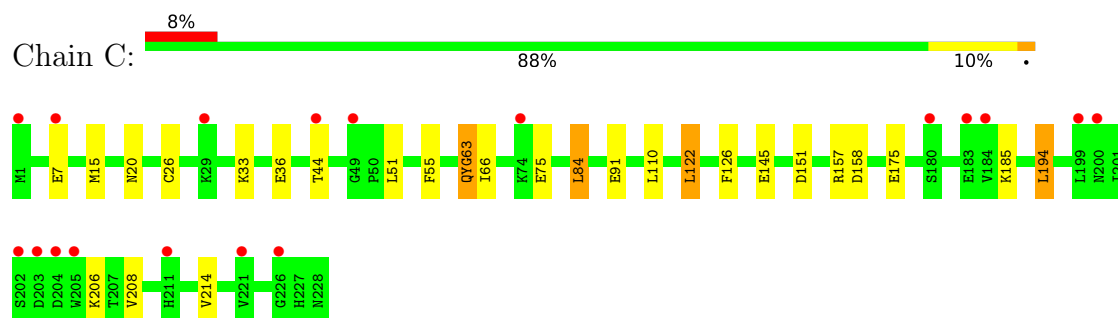
• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499



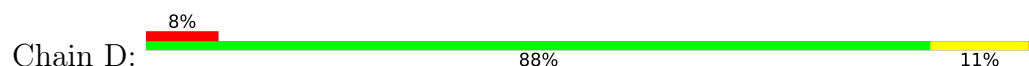
• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499

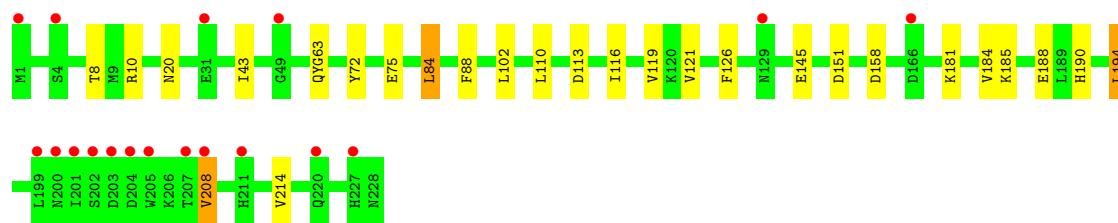


• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499

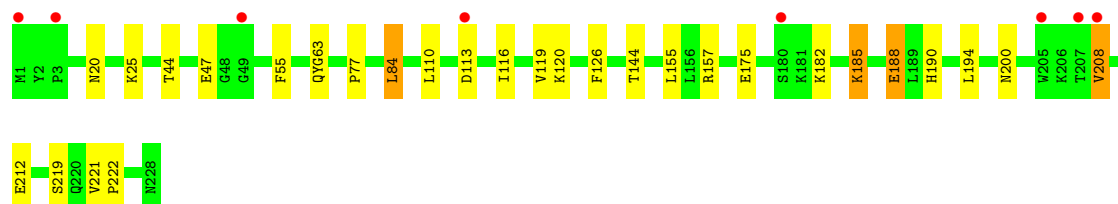
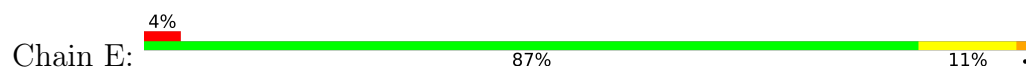


• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499

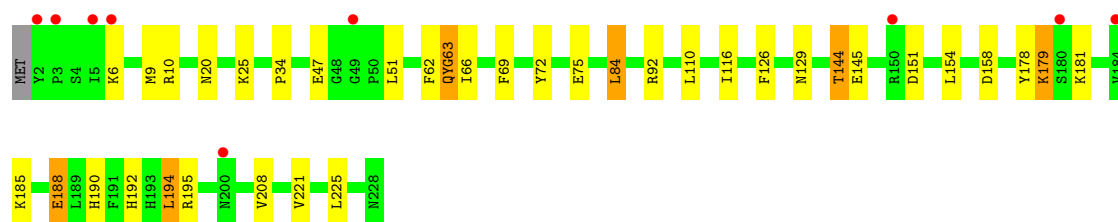
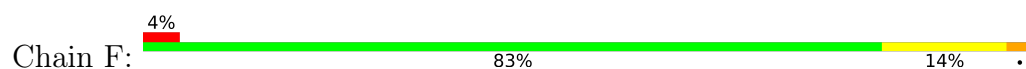




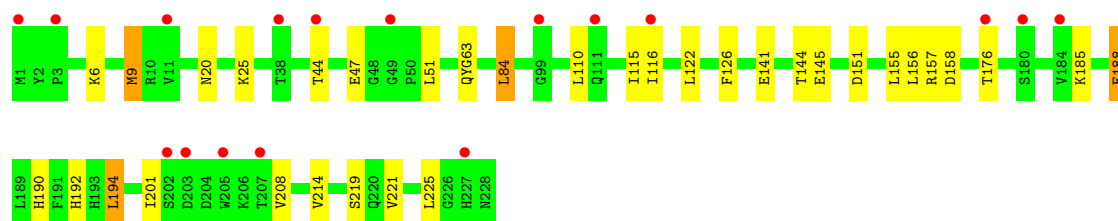
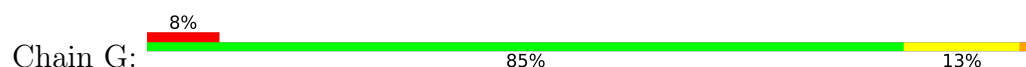
• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499



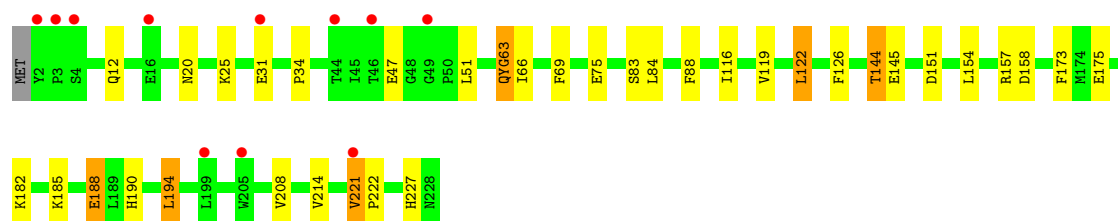
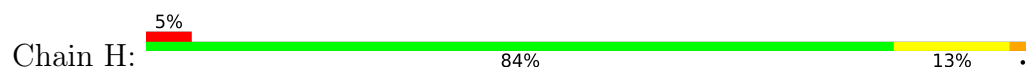
• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499



• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499



• Molecule 1: GREEN FLUORESCENT PROTEIN ASFP499



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	71.88Å 135.13Å 95.07Å 90.00° 106.93° 90.00°	Depositor
Resolution (Å)	50.00 – 1.82 50.00 – 1.82	Depositor EDS
% Data completeness (in resolution range)	87.3 (50.00-1.82) 87.2 (50.00-1.82)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.40 (at 1.82Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.245 , 0.292 0.244 , 0.290	Depositor DCC
R_{free} test set	6741 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	21.9	Xtriage
Anisotropy	0.104	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 34.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	15798	wwPDB-VP
Average B, all atoms (Å ²)	23.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.67% 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, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.43	0/1801	0.71	0/2433
1	B	0.43	0/1793	0.71	0/2423
1	C	0.42	0/1801	0.71	0/2433
1	D	0.42	0/1801	0.71	0/2433
1	E	0.42	0/1801	0.71	0/2433
1	F	0.43	0/1804	0.74	0/2437
1	G	0.43	0/1801	0.73	0/2433
1	H	0.42	0/1793	0.72	0/2423
All	All	0.43	0/14395	0.72	0/19448

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 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 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	1781	0	1748	16	0
1	B	1773	0	1736	18	0
1	C	1781	0	1748	12	0
1	D	1781	0	1748	11	0
1	E	1781	0	1748	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	1784	0	1748	23	0
1	G	1781	0	1748	16	0
1	H	1773	0	1736	17	0
2	A	236	0	0	1	0
2	B	212	0	0	0	0
2	C	176	0	0	0	0
2	D	179	0	0	2	0
2	E	202	0	0	1	0
2	F	201	0	0	2	0
2	G	168	0	0	2	0
2	H	189	0	0	0	0
All	All	15798	0	13960	116	0

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 4.

All (116) 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)
1:F:63:CRQ:C3	1:F:66:ILE:N	2.21	1.02
1:A:62:PHE:C	1:A:63:CRQ:N1	2.24	0.95
1:C:63:CRQ:C3	1:C:66:ILE:N	2.38	0.87
1:A:183:GLU:H	1:F:129:ASN:HD21	1.23	0.86
1:E:144:THR:HG21	1:F:144:THR:HG21	1.67	0.76
1:G:144:THR:HG21	1:H:144:THR:HG21	1.74	0.69
1:H:63:CRQ:C3	1:H:66:ILE:N	2.60	0.65
1:E:212:GLU:HG3	2:E:2168:HOH:O	1.97	0.65
1:F:179:LYS:NZ	2:F:2137:HOH:O	2.09	0.65
1:F:62:PHE:C	1:F:63:CRQ:N1	2.56	0.63
1:E:219:SER:OG	1:E:221:VAL:HG12	1.98	0.63
1:G:192:HIS:HB3	1:G:194:LEU:HD11	1.85	0.59
1:G:25:LYS:HB2	1:G:47:GLU:HB2	1.85	0.59
1:D:84:LEU:HD22	1:D:110:LEU:HB2	1.84	0.58
1:B:116:ILE:HD11	1:B:118:LYS:HE2	1.85	0.58
1:F:188:GLU:O	1:F:190:HIS:HD2	1.87	0.56
1:F:63:CRQ:CA3	1:F:66:ILE:N	2.68	0.56
1:C:33:LYS:HB2	1:C:36:GLU:HB2	1.89	0.53
1:F:25:LYS:HB2	1:F:47:GLU:HB2	1.90	0.53
1:F:145:GLU:HG3	1:F:158:ASP:HB2	1.90	0.53
1:A:183:GLU:H	1:F:129:ASN:ND2	2.01	0.53
1:C:145:GLU:HG3	1:C:158:ASP:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:145:GLU:HG3	1:G:158:ASP:HB2	1.92	0.52
1:F:6:LYS:HB2	1:F:9:MET:HE3	1.92	0.52
2:G:2123:HOH:O	1:H:173:PHE:HZ	1.92	0.52
1:D:102:LEU:HD21	1:D:121:VAL:HG13	1.91	0.51
1:B:43:ILE:HB	1:B:208:VAL:HG13	1.92	0.51
1:E:25:LYS:HB2	1:E:47:GLU:HB2	1.92	0.51
1:F:20:ASN:HD21	1:F:126:PHE:H	1.58	0.50
1:G:84:LEU:HD22	1:G:110:LEU:HB2	1.94	0.50
1:H:63:CRQ:CA3	1:H:66:ILE:N	2.74	0.50
1:H:188:GLU:O	1:H:190:HIS:HD2	1.95	0.50
1:B:84:LEU:HD13	1:B:110:LEU:HD22	1.94	0.50
1:F:34:PRO:HA	1:F:69:PHE:HA	1.94	0.50
1:G:6:LYS:HB2	1:G:9:MET:HE3	1.94	0.50
1:H:25:LYS:HB2	1:H:47:GLU:HB2	1.95	0.49
2:A:2164:HOH:O	1:B:159:THR:HB	2.12	0.48
1:A:194:LEU:HD13	1:A:214:VAL:HG13	1.93	0.48
1:C:15:MET:HB3	1:C:26:CYS:HB2	1.94	0.48
1:C:84:LEU:HD22	1:C:110:LEU:HB2	1.94	0.48
1:D:84:LEU:HD13	1:D:110:LEU:HD22	1.94	0.48
1:E:84:LEU:HD22	1:E:110:LEU:HB2	1.94	0.48
1:B:188:GLU:O	1:B:190:HIS:HD2	1.95	0.48
1:H:20:ASN:HD21	1:H:126:PHE:H	1.62	0.47
1:E:188:GLU:O	1:E:190:HIS:HD2	1.97	0.47
1:B:25:LYS:HB2	1:B:47:GLU:HB2	1.97	0.47
1:A:102:LEU:HD21	1:A:121:VAL:HG13	1.94	0.47
1:B:116:ILE:HD11	1:B:118:LYS:CE	2.45	0.47
1:D:113:ASP:HB2	2:D:2007:HOH:O	2.15	0.47
1:G:194:LEU:HD12	1:G:214:VAL:HG22	1.97	0.47
1:E:157:ARG:HG2	1:E:175:GLU:HG2	1.97	0.46
1:D:88:PHE:HZ	2:D:2048:HOH:O	1.97	0.46
1:A:63:CRQ:HB12	1:A:212:GLU:OE1	2.15	0.46
1:G:157:ARG:HG2	2:G:2123:HOH:O	2.15	0.46
1:E:55:PHE:CZ	1:E:208:VAL:HG11	2.51	0.46
1:H:221:VAL:HA	1:H:222:PRO:HD3	1.84	0.46
1:A:188:GLU:O	1:A:190:HIS:HD2	1.99	0.45
1:G:84:LEU:HD11	1:G:115:ILE:HG12	1.99	0.45
1:G:156:LEU:HB2	1:G:176:THR:HG23	1.98	0.45
1:C:55:PHE:CZ	1:C:208:VAL:HG11	2.52	0.45
1:E:20:ASN:HD21	1:E:126:PHE:H	1.65	0.45
1:B:55:PHE:CZ	1:B:208:VAL:HG11	2.51	0.45
1:H:12:GLN:HB3	1:H:116:ILE:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:63:CRQ:CE1	1:F:194:LEU:HG	2.47	0.45
1:B:20:ASN:HD21	1:B:126:PHE:H	1.64	0.45
1:G:219:SER:OG	1:G:221:VAL:HG12	2.17	0.45
1:G:20:ASN:HD21	1:G:126:PHE:H	1.63	0.44
1:A:25:LYS:HB2	1:A:47:GLU:HB2	1.99	0.44
1:H:157:ARG:HG2	1:H:175:GLU:HG2	2.00	0.44
1:D:188:GLU:O	1:D:190:HIS:HD2	2.01	0.44
1:A:72:TYR:OH	1:A:190:HIS:HE1	2.01	0.44
1:D:194:LEU:HD13	1:D:214:VAL:HG13	1.99	0.44
1:E:221:VAL:HG13	1:F:195:ARG:HB2	2.00	0.44
1:A:84:LEU:HD13	1:A:110:LEU:HD22	1.99	0.44
1:B:45:ILE:HD13	1:B:51:LEU:HD13	2.00	0.44
1:B:221:VAL:HA	1:B:222:PRO:HD3	1.87	0.44
1:B:72:TYR:OH	1:B:190:HIS:HE1	2.01	0.43
1:G:201:ILE:HG23	1:G:208:VAL:HG22	1.98	0.43
1:D:43:ILE:HB	1:D:208:VAL:HG13	2.01	0.43
1:C:63:CRQ:CA3	1:C:66:ILE:N	2.81	0.43
1:F:154:LEU:HB2	1:F:178:TYR:HB2	2.00	0.43
1:D:145:GLU:HG3	1:D:158:ASP:HB2	1.99	0.43
1:H:34:PRO:HA	1:H:69:PHE:HA	2.01	0.43
1:A:145:GLU:HG3	1:A:158:ASP:HB2	2.01	0.43
1:F:188:GLU:HG2	2:F:2197:HOH:O	2.18	0.43
1:D:72:TYR:OH	1:D:190:HIS:HE1	2.02	0.42
1:E:221:VAL:HA	1:E:222:PRO:HD3	1.94	0.42
1:F:84:LEU:HD22	1:F:110:LEU:HB2	2.00	0.42
1:C:20:ASN:HD21	1:C:126:PHE:H	1.68	0.42
1:D:20:ASN:HD21	1:D:126:PHE:H	1.68	0.42
1:B:84:LEU:HD22	1:B:110:LEU:HB2	2.02	0.42
1:B:192:HIS:HB3	1:B:194:LEU:HD11	2.01	0.42
1:G:141:GLU:OE1	1:H:227:HIS:HE1	2.03	0.42
1:F:72:TYR:OH	1:F:190:HIS:HE1	2.03	0.42
1:G:188:GLU:O	1:G:190:HIS:HD2	2.03	0.42
1:B:120:LYS:HD2	1:C:122:LEU:HD23	2.02	0.42
1:H:145:GLU:HG3	1:H:158:ASP:HB2	2.02	0.42
1:C:157:ARG:HG2	1:C:175:GLU:HG2	2.02	0.41
1:E:221:VAL:CG1	1:F:195:ARG:HB2	2.49	0.41
1:C:194:LEU:HD12	1:C:214:VAL:HG22	2.02	0.41
1:B:63:CRQ:HB11	1:B:212:GLU:OE1	2.20	0.41
1:A:144:THR:HA	1:A:192:HIS:O	2.20	0.41
1:F:63:CRQ:O2	1:F:92:ARG:NH1	2.52	0.41
1:E:77:PRO:HG3	1:E:185:LYS:HE3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:14:SER:OG	1:A:118:LYS:HD3	2.21	0.41
1:A:63:CRQ:CE1	1:A:194:LEU:HG	2.51	0.41
1:B:21:TYR:CE2	1:C:91:GLU:HG3	2.56	0.41
1:E:120:LYS:HD2	1:H:122:LEU:HD23	2.03	0.41
1:F:63:CRQ:O3	1:F:66:ILE:N	2.51	0.41
1:H:83:SER:HB3	1:H:88:PHE:HB3	2.03	0.41
1:A:20:ASN:HD21	1:A:126:PHE:H	1.68	0.40
1:A:15:MET:HB3	1:A:26:CYS:HB2	2.03	0.40
1:H:194:LEU:HD13	1:H:214:VAL:HG13	2.03	0.40
1:B:194:LEU:HD12	1:B:214:VAL:HG22	2.03	0.40
1:F:144:THR:HA	1:F:192:HIS:O	2.20	0.40
1:G:144:THR:CG2	1:H:144:THR:HG21	2.48	0.40

There are no symmetry-related clashes.

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	221/226 (98%)	218 (99%)	2 (1%)	1 (0%)	24	14
1	B	220/226 (97%)	218 (99%)	2 (1%)	0	100	100
1	C	221/226 (98%)	219 (99%)	1 (0%)	1 (0%)	24	14
1	D	221/226 (98%)	219 (99%)	1 (0%)	1 (0%)	24	14
1	E	221/226 (98%)	219 (99%)	2 (1%)	0	100	100
1	F	221/226 (98%)	218 (99%)	2 (1%)	1 (0%)	24	14
1	G	221/226 (98%)	218 (99%)	3 (1%)	0	100	100
1	H	220/226 (97%)	218 (99%)	1 (0%)	1 (0%)	24	14
All	All	1766/1808 (98%)	1747 (99%)	14 (1%)	5 (0%)	36	26

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	151	ASP
1	F	151	ASP
1	H	151	ASP
1	A	151	ASP
1	C	151	ASP

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	196/196 (100%)	184 (94%)	12 (6%)	17	4
1	B	195/196 (100%)	183 (94%)	12 (6%)	16	4
1	C	196/196 (100%)	187 (95%)	9 (5%)	24	8
1	D	196/196 (100%)	185 (94%)	11 (6%)	19	4
1	E	196/196 (100%)	184 (94%)	12 (6%)	17	4
1	F	196/196 (100%)	182 (93%)	14 (7%)	13	2
1	G	196/196 (100%)	184 (94%)	12 (6%)	17	4
1	H	195/196 (100%)	181 (93%)	14 (7%)	13	2
All	All	1566/1568 (100%)	1470 (94%)	96 (6%)	17	4

All (96) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	8	THR
1	A	51	LEU
1	A	84	LEU
1	A	116	ILE
1	A	119	VAL
1	A	144	THR
1	A	151	ASP
1	A	154	LEU
1	A	194	LEU
1	A	203	ASP
1	A	221	VAL

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Mol	Chain	Res	Type
1	A	225	LEU
1	B	8	THR
1	B	44	THR
1	B	84	LEU
1	B	116	ILE
1	B	118	LYS
1	B	144	THR
1	B	182	LYS
1	B	194	LEU
1	B	206	LYS
1	B	208	VAL
1	B	221	VAL
1	B	225	LEU
1	C	7	GLU
1	C	44	THR
1	C	51	LEU
1	C	75	GLU
1	C	84	LEU
1	C	122	LEU
1	C	185	LYS
1	C	194	LEU
1	C	206	LYS
1	D	8	THR
1	D	10	ARG
1	D	75	GLU
1	D	84	LEU
1	D	116	ILE
1	D	119	VAL
1	D	181	LYS
1	D	184	VAL
1	D	185	LYS
1	D	194	LEU
1	D	208	VAL
1	E	44	THR
1	E	84	LEU
1	E	113	ASP
1	E	116	ILE
1	E	119	VAL
1	E	155	LEU
1	E	182	LYS
1	E	185	LYS
1	E	188	GLU

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Mol	Chain	Res	Type
1	E	194	LEU
1	E	200	ASN
1	E	208	VAL
1	F	10	ARG
1	F	51	LEU
1	F	75	GLU
1	F	84	LEU
1	F	116	ILE
1	F	144	THR
1	F	179	LYS
1	F	181	LYS
1	F	185	LYS
1	F	188	GLU
1	F	194	LEU
1	F	208	VAL
1	F	221	VAL
1	F	225	LEU
1	G	9	MET
1	G	44	THR
1	G	51	LEU
1	G	84	LEU
1	G	116	ILE
1	G	122	LEU
1	G	151	ASP
1	G	155	LEU
1	G	185	LYS
1	G	188	GLU
1	G	194	LEU
1	G	225	LEU
1	H	31	GLU
1	H	51	LEU
1	H	75	GLU
1	H	84	LEU
1	H	119	VAL
1	H	122	LEU
1	H	144	THR
1	H	154	LEU
1	H	182	LYS
1	H	185	LYS
1	H	188	GLU
1	H	194	LEU
1	H	208	VAL

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Mol	Chain	Res	Type
1	H	221	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	20	ASN
1	A	22	HIS
1	A	190	HIS
1	A	210	GLN
1	A	228	ASN
1	B	12	GLN
1	B	20	ASN
1	B	42	ASN
1	B	125	ASN
1	B	129	ASN
1	B	190	HIS
1	B	210	GLN
1	C	12	GLN
1	C	20	ASN
1	C	125	ASN
1	C	190	HIS
1	C	193	HIS
1	C	210	GLN
1	C	228	ASN
1	D	20	ASN
1	D	42	ASN
1	D	190	HIS
1	D	210	GLN
1	D	211	HIS
1	E	20	ASN
1	E	22	HIS
1	E	42	ASN
1	E	190	HIS
1	E	210	GLN
1	E	227	HIS
1	F	20	ASN
1	F	129	ASN
1	F	190	HIS
1	F	210	GLN
1	F	227	HIS
1	F	228	ASN
1	G	20	ASN

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Mol	Chain	Res	Type
1	G	190	HIS
1	G	210	GLN
1	G	227	HIS
1	G	228	ASN
1	H	20	ASN
1	H	22	HIS
1	H	190	HIS
1	H	200	ASN
1	H	210	GLN
1	H	227	HIS
1	H	228	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

8 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	CRQ	E	63	1	25,25,26	3.32	9 (36%)	28,34,36	2.60	10 (35%)
1	CRQ	B	63	1	25,25,26	3.20	8 (32%)	28,34,36	2.28	7 (25%)
1	CRQ	F	63	-	25,25,26	3.45	8 (32%)	28,34,36	2.73	11 (39%)
1	CRQ	D	63	1	25,25,26	3.30	8 (32%)	28,34,36	2.79	10 (35%)
1	CRQ	C	63	1	25,25,26	3.34	8 (32%)	28,34,36	2.81	12 (42%)
1	CRQ	A	63	1	25,25,26	3.44	9 (36%)	28,34,36	1.97	7 (25%)
1	CRQ	G	63	1	25,25,26	3.50	11 (44%)	28,34,36	2.39	9 (32%)
1	CRQ	H	63	1	25,25,26	3.24	9 (36%)	28,34,36	2.62	9 (32%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	CRQ	E	63	1	-	2/10/32/33	0/2/2/2
1	CRQ	B	63	1	-	2/10/32/33	0/2/2/2
1	CRQ	F	63	-	-	5/10/32/33	0/2/2/2
1	CRQ	D	63	1	-	3/10/32/33	0/2/2/2
1	CRQ	C	63	1	-	4/10/32/33	0/2/2/2
1	CRQ	A	63	1	-	1/10/32/33	0/2/2/2
1	CRQ	G	63	1	-	2/10/32/33	0/2/2/2
1	CRQ	H	63	1	-	2/10/32/33	0/2/2/2

All (70) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	63	CRQ	CA2-C2	-11.24	1.36	1.48
1	C	63	CRQ	CA2-C2	-10.69	1.37	1.48
1	E	63	CRQ	CA2-C2	-10.37	1.37	1.48
1	D	63	CRQ	CA2-C2	-10.31	1.37	1.48
1	B	63	CRQ	CA2-C2	-9.97	1.37	1.48
1	G	63	CRQ	CA2-C2	-9.94	1.37	1.48
1	A	63	CRQ	CA2-C2	-9.81	1.37	1.48
1	H	63	CRQ	CA2-C2	-9.79	1.38	1.48
1	F	63	CRQ	CG2-CB2	-9.59	1.29	1.46
1	E	63	CRQ	CG2-CB2	-9.20	1.29	1.46
1	D	63	CRQ	CG2-CB2	-9.18	1.30	1.46
1	H	63	CRQ	CG2-CB2	-9.11	1.30	1.46
1	A	63	CRQ	CG2-CB2	-9.05	1.30	1.46
1	G	63	CRQ	CG2-CB2	-8.99	1.30	1.46
1	B	63	CRQ	CG2-CB2	-8.94	1.30	1.46
1	C	63	CRQ	CG2-CB2	-8.91	1.30	1.46
1	A	63	CRQ	CA1-N1	6.89	1.43	1.27
1	G	63	CRQ	CA1-N1	5.31	1.39	1.27
1	D	63	CRQ	CA3-N3	-5.28	1.37	1.47
1	E	63	CRQ	CA3-N3	-5.27	1.37	1.47
1	G	63	CRQ	CA3-N3	-5.25	1.37	1.47
1	A	63	CRQ	CA3-N3	-5.21	1.37	1.47
1	B	63	CRQ	CA3-N3	-5.08	1.37	1.47
1	F	63	CRQ	CA3-N3	-5.07	1.37	1.47
1	C	63	CRQ	CA3-N3	-5.03	1.37	1.47
1	H	63	CRQ	CA3-N3	-4.97	1.38	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	63	CRQ	C2-N3	-3.83	1.31	1.40
1	A	63	CRQ	C2-N3	-3.60	1.31	1.40
1	C	63	CRQ	C2-N3	-3.60	1.31	1.40
1	D	63	CRQ	C2-N3	-3.50	1.32	1.40
1	E	63	CRQ	C2-N3	-3.45	1.32	1.40
1	B	63	CRQ	C2-N3	-3.29	1.32	1.40
1	G	63	CRQ	C2-N3	-3.18	1.32	1.40
1	C	63	CRQ	CA1-N1	3.12	1.34	1.27
1	H	63	CRQ	C2-N3	-3.09	1.32	1.40
1	H	63	CRQ	CA1-N1	3.07	1.34	1.27
1	G	63	CRQ	C1-N2	3.04	1.39	1.33
1	C	63	CRQ	C1-N2	2.97	1.39	1.33
1	E	63	CRQ	O2-C2	2.94	1.29	1.23
1	H	63	CRQ	O2-C2	2.93	1.29	1.23
1	G	63	CRQ	O2-C2	2.91	1.29	1.23
1	F	63	CRQ	OH-CZ	-2.90	1.30	1.37
1	F	63	CRQ	O2-C2	2.90	1.29	1.23
1	D	63	CRQ	C1-N2	2.90	1.39	1.33
1	E	63	CRQ	CA1-N1	2.88	1.33	1.27
1	D	63	CRQ	O2-C2	2.87	1.28	1.23
1	E	63	CRQ	OH-CZ	-2.86	1.30	1.37
1	H	63	CRQ	OH-CZ	-2.86	1.30	1.37
1	G	63	CRQ	OH-CZ	-2.85	1.30	1.37
1	G	63	CRQ	CG1-CB1	2.85	1.61	1.51
1	D	63	CRQ	OH-CZ	-2.84	1.30	1.37
1	C	63	CRQ	O2-C2	2.81	1.28	1.23
1	E	63	CRQ	C1-N2	2.81	1.39	1.33
1	B	63	CRQ	O2-C2	2.80	1.28	1.23
1	B	63	CRQ	CA1-N1	2.79	1.33	1.27
1	C	63	CRQ	OH-CZ	-2.79	1.30	1.37
1	A	63	CRQ	OH-CZ	-2.78	1.30	1.37
1	D	63	CRQ	CA1-N1	2.75	1.33	1.27
1	B	63	CRQ	OH-CZ	-2.74	1.30	1.37
1	G	63	CRQ	C1-CA1	2.69	1.51	1.48
1	A	63	CRQ	O2-C2	2.68	1.28	1.23
1	F	63	CRQ	CA1-N1	2.65	1.33	1.27
1	F	63	CRQ	C1-N2	2.65	1.38	1.33
1	B	63	CRQ	C1-N2	2.63	1.38	1.33
1	A	63	CRQ	C1-N3	-2.46	1.33	1.38
1	H	63	CRQ	C1-N3	-2.45	1.33	1.38
1	H	63	CRQ	C1-N2	2.45	1.38	1.33
1	G	63	CRQ	OE1-CD3	2.38	1.31	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	63	CRQ	C1-N2	2.34	1.38	1.33
1	E	63	CRQ	C1-N3	-2.17	1.34	1.38

All (75) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	63	CRQ	O2-C2-CA2	-8.65	125.50	131.02
1	E	63	CRQ	O2-C2-CA2	-7.21	126.42	131.02
1	D	63	CRQ	O2-C2-CA2	-7.02	126.54	131.02
1	C	63	CRQ	O2-C2-CA2	-6.74	126.72	131.02
1	B	63	CRQ	O2-C2-CA2	-6.72	126.73	131.02
1	F	63	CRQ	O2-C2-CA2	-6.65	126.78	131.02
1	G	63	CRQ	O2-C2-CA2	-6.50	126.87	131.02
1	D	63	CRQ	CG1-CB1-CA1	6.18	132.23	113.51
1	A	63	CRQ	O2-C2-CA2	-6.06	127.15	131.02
1	E	63	CRQ	CG1-CB1-CA1	5.65	130.63	113.51
1	F	63	CRQ	CG1-CB1-CA1	5.64	130.61	113.51
1	G	63	CRQ	N3-C1-N2	-5.61	105.96	112.62
1	C	63	CRQ	CA2-C2-N3	5.49	108.11	103.50
1	C	63	CRQ	N3-C1-N2	-5.48	106.11	112.62
1	F	63	CRQ	N3-C1-N2	-4.97	106.72	112.62
1	C	63	CRQ	CG1-CB1-CA1	4.94	128.48	113.51
1	D	63	CRQ	CG2-CB2-CA2	4.94	135.73	129.87
1	B	63	CRQ	CG1-CB1-CA1	4.94	128.47	113.51
1	F	63	CRQ	CA2-C2-N3	4.85	107.57	103.50
1	D	63	CRQ	N3-C1-N2	-4.63	107.12	112.62
1	G	63	CRQ	CG1-CB1-CA1	4.63	127.54	113.51
1	H	63	CRQ	CA3-N3-C1	-4.63	119.26	128.39
1	C	63	CRQ	CG2-CB2-CA2	4.57	135.30	129.87
1	E	63	CRQ	N3-C1-N2	-4.44	107.35	112.62
1	G	63	CRQ	CB1-CG1-CD3	4.41	136.25	114.16
1	B	63	CRQ	N3-C1-N2	-4.28	107.54	112.62
1	D	63	CRQ	CA2-C2-N3	4.16	107.00	103.50
1	H	63	CRQ	CB1-CG1-CD3	4.15	134.95	114.16
1	C	63	CRQ	C3-CA3-N3	4.03	121.60	112.43
1	B	63	CRQ	CA2-C2-N3	4.02	106.88	103.50
1	D	63	CRQ	CB1-CG1-CD3	4.00	134.22	114.16
1	G	63	CRQ	CA2-C2-N3	3.94	106.81	103.50
1	F	63	CRQ	C3-CA3-N3	3.90	121.30	112.43
1	E	63	CRQ	CB1-CG1-CD3	3.80	133.23	114.16
1	A	63	CRQ	CA2-C2-N3	3.80	106.69	103.50
1	E	63	CRQ	CG2-CB2-CA2	3.78	134.36	129.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	63	CRQ	CB1-CG1-CD3	3.75	132.94	114.16
1	E	63	CRQ	CA2-C2-N3	3.65	106.57	103.50
1	F	63	CRQ	CA3-N3-C2	-3.62	115.72	123.67
1	H	63	CRQ	N3-C1-N2	-3.58	108.37	112.62
1	A	63	CRQ	CB1-CG1-CD3	3.53	131.85	114.16
1	H	63	CRQ	CG1-CB1-CA1	3.43	123.89	113.51
1	C	63	CRQ	CA3-N3-C2	-3.42	116.15	123.67
1	A	63	CRQ	N3-C1-N2	-3.38	108.61	112.62
1	H	63	CRQ	CA2-C2-N3	3.34	106.30	103.50
1	D	63	CRQ	C3-CA3-N3	3.24	119.81	112.43
1	B	63	CRQ	CB1-CG1-CD3	3.21	130.25	114.16
1	C	63	CRQ	CB1-CG1-CD3	3.07	129.57	114.16
1	H	63	CRQ	CA3-N3-C2	2.93	130.10	123.67
1	D	63	CRQ	CB2-CA2-C2	-2.91	118.83	122.36
1	B	63	CRQ	CG2-CB2-CA2	2.83	133.23	129.87
1	F	63	CRQ	CA3-N3-C1	2.80	133.91	128.39
1	E	63	CRQ	CA3-N3-C1	-2.78	122.90	128.39
1	A	63	CRQ	C3-CA3-N3	2.68	118.53	112.43
1	E	63	CRQ	CB2-CA2-C2	-2.67	119.12	122.36
1	H	63	CRQ	CG2-CB2-CA2	2.61	132.97	129.87
1	H	63	CRQ	C3-CA3-N3	2.60	118.35	112.43
1	G	63	CRQ	CA3-N3-C1	-2.55	123.36	128.39
1	F	63	CRQ	CB2-CA2-C2	-2.52	119.30	122.36
1	D	63	CRQ	CB2-CA2-N2	2.52	132.18	128.76
1	C	63	CRQ	CA3-N3-C1	2.50	133.32	128.39
1	A	63	CRQ	CA3-N3-C1	-2.42	123.62	128.39
1	C	63	CRQ	CB2-CA2-N2	2.42	132.04	128.76
1	F	63	CRQ	O3-C3-CA3	-2.38	114.75	125.47
1	F	63	CRQ	CG2-CB2-CA2	2.35	132.65	129.87
1	E	63	CRQ	O3-C3-CA3	-2.25	115.34	125.47
1	C	63	CRQ	CB2-CA2-C2	-2.23	119.65	122.36
1	D	63	CRQ	O3-C3-CA3	-2.22	115.48	125.47
1	C	63	CRQ	O3-C3-CA3	-2.15	115.81	125.47
1	A	63	CRQ	O3-C3-CA3	-2.14	115.86	125.47
1	B	63	CRQ	CA3-N3-C1	-2.13	124.18	128.39
1	G	63	CRQ	O3-C3-CA3	-2.09	116.06	125.47
1	E	63	CRQ	CB2-CA2-N2	2.05	131.54	128.76
1	G	63	CRQ	C3-CA3-N3	2.03	117.05	112.43
1	G	63	CRQ	CG2-CB2-CA2	2.02	132.26	129.87

There are no chirality outliers.

All (21) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	63	CRQ	C1-CA1-CB1-CG1
1	B	63	CRQ	C1-CA1-CB1-CG1
1	C	63	CRQ	C1-CA1-CB1-CG1
1	C	63	CRQ	CA1-CB1-CG1-CD3
1	C	63	CRQ	C3-CA3-N3-C1
1	C	63	CRQ	C3-CA3-N3-C2
1	E	63	CRQ	CA1-CB1-CG1-CD3
1	F	63	CRQ	C3-CA3-N3-C1
1	F	63	CRQ	C3-CA3-N3-C2
1	G	63	CRQ	CA1-CB1-CG1-CD3
1	H	63	CRQ	C3-CA3-N3-C1
1	H	63	CRQ	C3-CA3-N3-C2
1	B	63	CRQ	CA1-CB1-CG1-CD3
1	E	63	CRQ	OE1-CD3-CG1-CB1
1	D	63	CRQ	CA1-CB1-CG1-CD3
1	D	63	CRQ	NE1-CD3-CG1-CB1
1	F	63	CRQ	NE1-CD3-CG1-CB1
1	G	63	CRQ	C1-CA1-CB1-CG1
1	F	63	CRQ	CA1-CB1-CG1-CD3
1	D	63	CRQ	OE1-CD3-CG1-CB1
1	F	63	CRQ	OE1-CD3-CG1-CB1

There are no ring outliers.

5 monomers are involved in 14 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	B	63	CRQ	1	0
1	F	63	CRQ	6	0
1	C	63	CRQ	2	0
1	A	63	CRQ	3	0
1	H	63	CRQ	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	F	2
1	H	1
1	C	1
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	H	63:CRQ	C3	66:ILE	N	2.60
1	F	62:PHE	C	63:CRQ	N1	2.56
1	C	63:CRQ	C3	66:ILE	N	2.38
1	A	62:PHE	C	63:CRQ	N1	2.24
1	F	63:CRQ	C3	66:ILE	N	2.21

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	225/226 (99%)	0.50	13 (5%)	29	32	14, 19, 28, 36	0
1	B	224/226 (99%)	0.45	15 (6%)	24	27	13, 19, 26, 31	0
1	C	225/226 (99%)	0.73	18 (8%)	18	20	17, 23, 34, 38	0
1	D	225/226 (99%)	0.76	18 (8%)	18	20	16, 22, 31, 37	0
1	E	225/226 (99%)	0.70	8 (3%)	46	53	17, 21, 28, 37	0
1	F	224/226 (99%)	0.74	9 (4%)	42	48	12, 23, 32, 37	1 (0%)
1	G	225/226 (99%)	0.84	17 (7%)	20	22	19, 25, 35, 42	0
1	H	224/226 (99%)	0.59	11 (4%)	35	41	16, 21, 29, 32	0
All	All	1797/1808 (99%)	0.66	109 (6%)	27	31	12, 22, 31, 42	1 (0%)

All (109) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	3	PRO	6.3
1	A	203	ASP	5.4
1	B	205	TRP	5.4
1	E	49	GLY	5.3
1	A	49	GLY	5.2
1	B	49	GLY	4.6
1	H	49	GLY	4.4
1	A	205	TRP	4.4
1	D	49	GLY	4.3
1	B	203	ASP	4.0
1	C	205	TRP	4.0
1	H	199	LEU	3.9
1	C	49	GLY	3.6
1	F	49	GLY	3.6
1	F	3	PRO	3.5
1	E	1	MET	3.5

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Mol	Chain	Res	Type	RSRZ
1	H	2	TYR	3.4
1	D	203	ASP	3.4
1	G	205	TRP	3.4
1	A	9	MET	3.2
1	H	205	TRP	3.2
1	G	49	GLY	3.2
1	G	180	SER	3.1
1	A	5	ILE	3.0
1	B	200	ASN	3.0
1	G	3	PRO	3.0
1	B	2	TYR	3.0
1	E	113	ASP	3.0
1	C	1	MET	2.9
1	D	205	TRP	2.9
1	C	29	LYS	2.9
1	G	38	THR	2.9
1	E	205	TRP	2.9
1	D	211	HIS	2.8
1	G	44	THR	2.8
1	G	202	SER	2.8
1	D	227	HIS	2.8
1	B	201	ILE	2.8
1	E	207	THR	2.8
1	A	3	PRO	2.8
1	E	208	VAL	2.8
1	E	180	SER	2.7
1	B	48	GLY	2.7
1	H	46	THR	2.7
1	C	226	GLY	2.7
1	C	203	ASP	2.7
1	F	184	VAL	2.7
1	F	6	LYS	2.6
1	D	208	VAL	2.6
1	C	180	SER	2.6
1	A	48	GLY	2.6
1	D	31	GLU	2.6
1	C	183	GLU	2.5
1	G	99	GLY	2.5
1	C	200	ASN	2.5
1	G	111	GLN	2.5
1	C	221	VAL	2.5
1	D	1	MET	2.5

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Mol	Chain	Res	Type	RSRZ
1	D	201	ILE	2.5
1	G	227	HIS	2.4
1	B	202	SER	2.4
1	B	38	THR	2.4
1	H	221	VAL	2.4
1	D	200	ASN	2.4
1	D	199	LEU	2.4
1	B	221	VAL	2.3
1	F	180	SER	2.3
1	H	16	GLU	2.3
1	H	44	THR	2.3
1	G	1	MET	2.3
1	C	74	LYS	2.3
1	D	202	SER	2.3
1	A	199	LEU	2.3
1	B	3	PRO	2.3
1	H	4	SER	2.3
1	D	166	ASP	2.3
1	C	44	THR	2.3
1	G	176	THR	2.3
1	H	31	GLU	2.2
1	F	5	ILE	2.2
1	A	31	GLU	2.2
1	F	2	TYR	2.2
1	B	9	MET	2.2
1	B	7	GLU	2.2
1	D	220	GLN	2.2
1	C	204	ASP	2.2
1	A	1	MET	2.2
1	D	129	ASN	2.2
1	C	184	VAL	2.2
1	G	11	VAL	2.2
1	E	3	PRO	2.2
1	A	2	TYR	2.1
1	A	227	HIS	2.1
1	B	31	GLU	2.1
1	G	116	ILE	2.1
1	D	204	ASP	2.1
1	B	4	SER	2.1
1	A	7	GLU	2.1
1	C	199	LEU	2.1
1	G	203	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	G	207	THR	2.1
1	C	211	HIS	2.1
1	G	184	VAL	2.1
1	F	150[A]	ARG	2.1
1	C	7	GLU	2.0
1	D	4	SER	2.0
1	D	207	THR	2.0
1	C	202	SER	2.0
1	F	200	ASN	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [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. 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	B-factors(Å ²)	Q<0.9
1	CRQ	F	63	24/25	0.76	0.14	25,26,27,27	0
1	CRQ	C	63	24/25	0.83	0.13	20,21,23,24	0
1	CRQ	E	63	24/25	0.84	0.12	19,19,21,21	0
1	CRQ	D	63	24/25	0.84	0.12	18,19,21,21	0
1	CRQ	G	63	24/25	0.84	0.12	21,23,23,24	0
1	CRQ	H	63	24/25	0.84	0.14	18,20,21,22	0
1	CRQ	A	63	24/25	0.85	0.11	16,17,17,18	0
1	CRQ	B	63	24/25	0.86	0.11	15,16,18,19	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.