



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 01:28 PM UTC

PDB ID : 6GJT / pdb_00006gjt
Title : Chlamydia protein Pgp3 studied at high resolution in a new crystal form
Authors : Helliwell, J.R.
Deposited on : 2018-05-17
Resolution : 1.98 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:

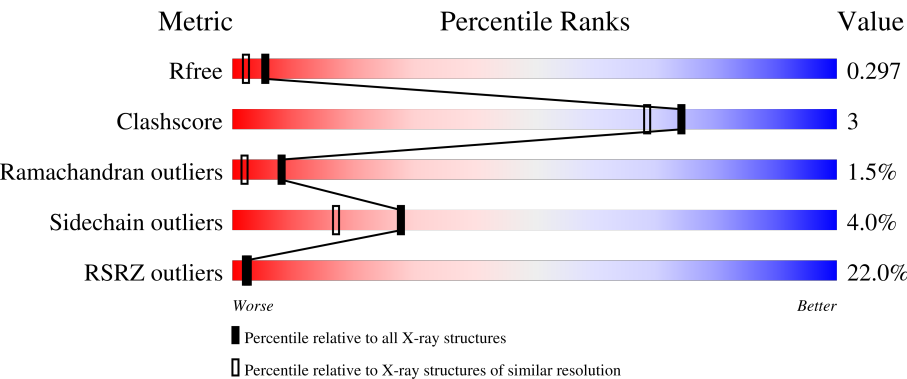
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)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

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 1.98 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.



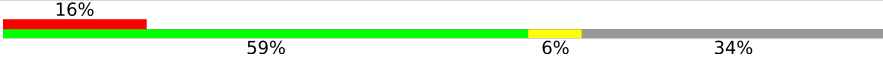
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1506 (1.98-1.98)
Clashscore	190562	1534 (1.98-1.98)
Ramachandran outliers	187476	1518 (1.98-1.98)
Sidechain outliers	187428	1518 (1.98-1.98)
RSRZ outliers	180081	1506 (1.98-1.98)

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	264	18% 59% 7% • 32%
1	B	264	11% 58% 9% • 33%
1	C	264	16% 56% 7% • 36%
1	D	264	14% 58% 7% • 33%
1	E	264	15% 59% 9% • 31%

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Mol	Chain	Length	Quality of chain
1	F	264	 A horizontal bar chart showing the quality of chain F. The bar is divided into four segments: 16% (red), 59% (green), 6% (yellow), and 34% (grey). The segments are labeled with their respective percentages: 16%, 59%, 6%, and 34%.

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 8249 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 Virulence plasmid protein pGP3-D.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	179	Total	C	N	O	S	0	1	0
			1354	857	227	265	5			
1	B	178	Total	C	N	O	S	0	2	0
			1355	858	228	264	5			
1	C	169	Total	C	N	O	S	0	1	0
			1279	810	215	249	5			
1	D	177	Total	C	N	O	S	0	4	0
			1368	862	233	268	5			
1	E	181	Total	C	N	O	S	0	2	0
			1380	872	231	271	6			
1	F	175	Total	C	N	O	S	0	1	0
			1324	839	221	259	5			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	90	GLN	GLY	conflict	UNP P0CE18
B	90	GLN	GLY	conflict	UNP P0CE18
C	90	GLN	GLY	conflict	UNP P0CE18
D	90	GLN	GLY	conflict	UNP P0CE18
E	90	GLN	GLY	conflict	UNP P0CE18
F	90	GLN	GLY	conflict	UNP P0CE18

- Molecule 2 is BROMIDE ION (CCD ID: BR) (formula: Br).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	3	Total	Br	0	0
			3	3		
2	B	6	Total	Br	0	0
			6	6		
2	C	5	Total	Br	0	0
			5	5		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	D	3	Total 3	Br 3	0	0
2	E	7	Total 7	Br 7	0	0
2	F	4	Total 4	Br 4	0	0

- Molecule 3 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	3	Total 3	K 3	0	0
3	D	2	Total 2	K 2	0	0
3	F	1	Total 1	K 1	0	0

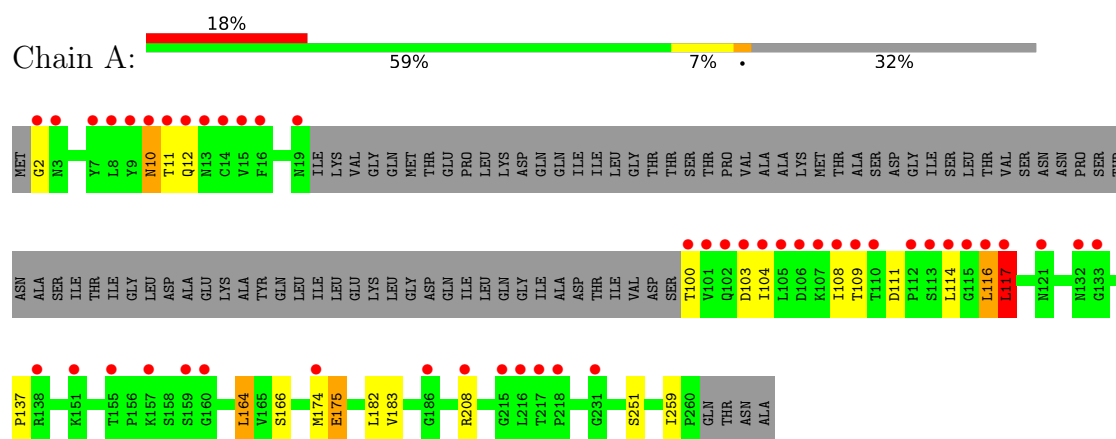
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	26	Total 26	O 26	0	0
4	B	28	Total 28	O 28	0	0
4	C	23	Total 23	O 23	0	0
4	D	31	Total 31	O 31	0	0
4	E	29	Total 29	O 29	0	0
4	F	18	Total 18	O 18	0	0

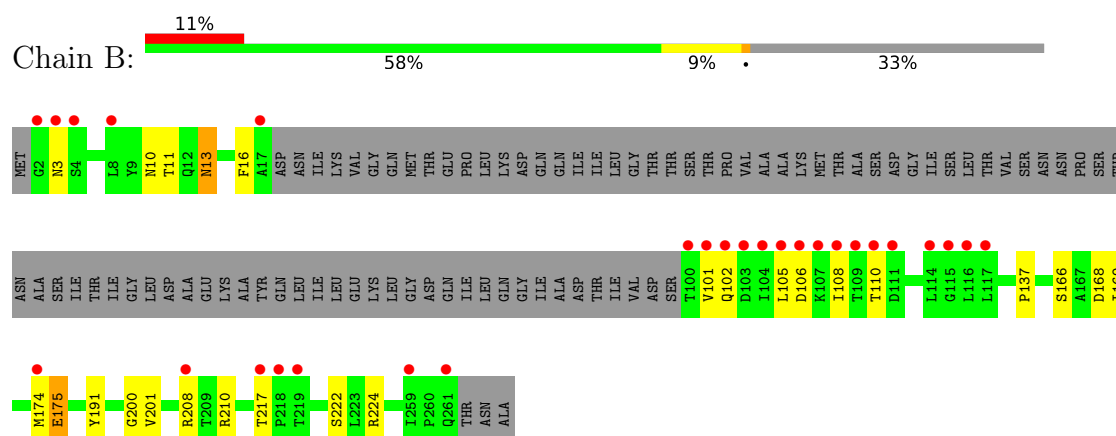
3 Residue-property plots [i](#)

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.

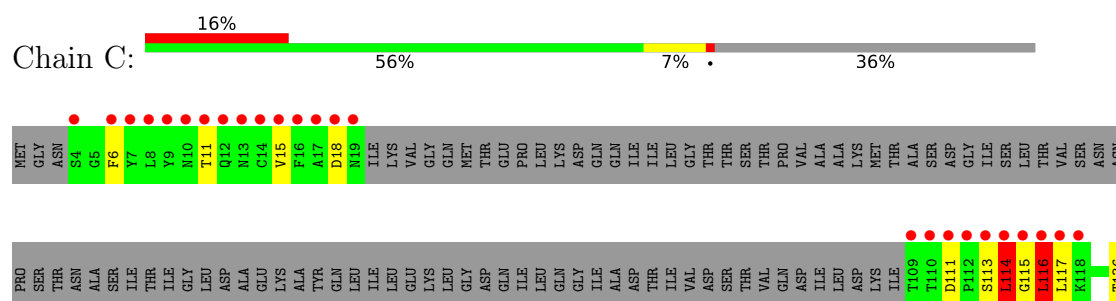
• Molecule 1: Virulence plasmid protein pGP3-D

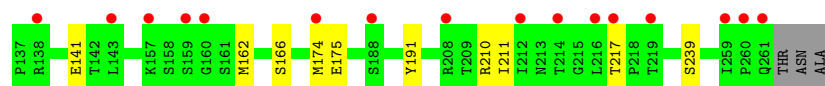


• Molecule 1: Virulence plasmid protein pGP3-D

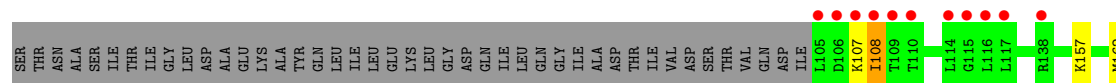
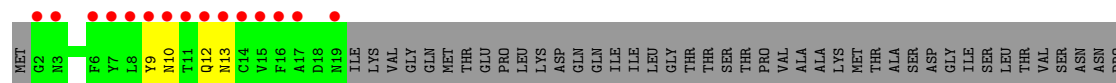


• Molecule 1: Virulence plasmid protein pGP3-D

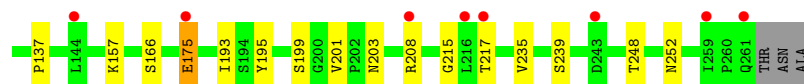
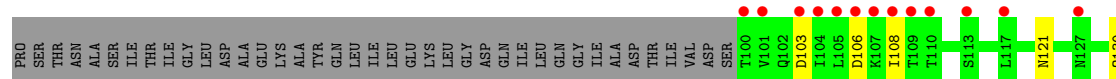
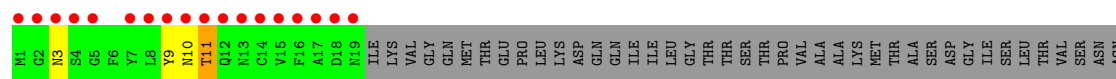




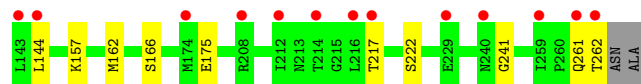
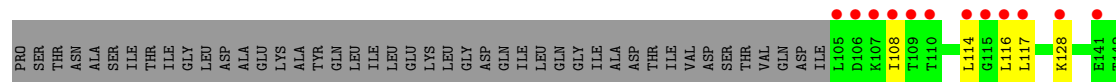
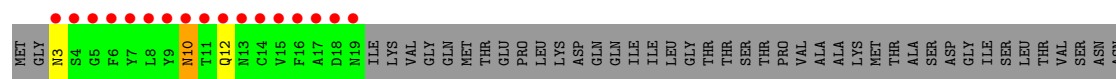
• Molecule 1: Virulence plasmid protein pGP3-D



• Molecule 1: Virulence plasmid protein pGP3-D



• Molecule 1: Virulence plasmid protein pGP3-D



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	85.41Å 108.25Å 207.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	42.62 – 1.98 42.62 – 1.98	Depositor EDS
% Data completeness (in resolution range)	97.8 (42.62-1.98) 97.8 (42.62-1.98)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.95 (at 1.98Å)	Xtriage
Refinement program	REFMAC 5.7.0032	Depositor
R, R_{free}	0.273 , 0.292 0.277 , 0.297	Depositor DCC
R_{free} test set	6594 reflections (4.93%)	wwPDB-VP
Wilson B-factor (Å ²)	26.9	Xtriage
Anisotropy	0.256	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 31.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	8249	wwPDB-VP
Average B, all atoms (Å ²)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 39.80 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 3.0059e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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

5.1 Standard geometry

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

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	1.23	3/1376 (0.2%)	1.08	7/1871 (0.4%)
1	B	1.29	5/1377 (0.4%)	1.04	1/1872 (0.1%)
1	C	1.24	1/1301 (0.1%)	1.09	3/1769 (0.2%)
1	D	1.26	3/1390 (0.2%)	1.04	3/1888 (0.2%)
1	E	1.34	8/1402 (0.6%)	1.02	1/1905 (0.1%)
1	F	1.21	0/1346	1.07	2/1831 (0.1%)
All	All	1.26	20/8192 (0.2%)	1.06	17/11136 (0.2%)

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	195	TYR	N-CA	8.89	1.57	1.45
1	E	195	TYR	CA-C	-8.39	1.42	1.52
1	D	165	VAL	N-CA	7.38	1.54	1.46
1	C	136	THR	N-CA	7.20	1.56	1.46
1	E	130	GLN	N-CA	-6.06	1.38	1.46
1	A	182	LEU	N-CA	-6.05	1.38	1.46
1	B	224	ARG	CA-C	6.00	1.59	1.52
1	E	235	VAL	N-CA	-5.89	1.39	1.46
1	B	201	VAL	CA-C	5.80	1.58	1.52
1	A	183	VAL	N-CA	5.79	1.53	1.46
1	E	252	ASN	N-CA	5.78	1.53	1.45
1	D	183	VAL	N-CA	5.77	1.53	1.46
1	B	169	ILE	CA-CB	-5.48	1.47	1.54
1	E	201	VAL	N-CA	-5.44	1.39	1.46
1	D	165	VAL	CA-CB	-5.42	1.47	1.54
1	A	117	LEU	CA-C	5.42	1.60	1.52
1	E	203	ASN	N-CA	-5.40	1.39	1.45
1	B	191	TYR	C-O	-5.33	1.17	1.24
1	E	193	ILE	N-CA	-5.09	1.40	1.46
1	B	200	GLY	C-O	-5.04	1.17	1.23

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	114	LEU	N-CA-C	17.30	129.59	111.07
1	A	117	LEU	N-CA-C	8.47	128.85	110.80
1	D	251	SER	N-CA-C	-7.06	99.19	110.14
1	E	239	SER	CB-CA-C	-6.25	97.13	110.32
1	A	114	LEU	N-CA-C	-6.06	100.12	109.76
1	C	116	LEU	N-CA-C	-6.06	97.88	110.80
1	A	117	LEU	CA-C-O	6.01	129.10	120.51
1	C	18	ASP	CB-CA-C	5.86	120.96	109.72
1	A	116	LEU	N-CA-C	-5.77	102.77	110.55
1	D	215	GLY	N-CA-C	5.57	121.94	111.80
1	A	251	SER	N-CA-C	-5.46	101.95	110.42
1	A	111	ASP	CA-C-O	5.46	122.84	119.29
1	B	222	SER	N-CA-CB	-5.42	101.44	111.53
1	A	259	ILE	CB-CA-C	-5.40	104.53	110.52
1	C	11	THR	N-CA-C	5.29	118.84	112.38
1	D	108	ILE	CB-CA-C	-5.20	105.12	112.14
1	F	114	LEU	O-C-N	-5.15	116.77	122.07

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	1354	0	1359	9	0
1	B	1355	0	1361	11	0
1	C	1279	0	1280	7	0
1	D	1368	0	1365	16	0
1	E	1380	0	1384	8	0
1	F	1324	0	1325	9	0
2	A	3	0	0	2	0
2	B	6	0	0	1	0
2	C	5	0	0	0	0
2	D	3	0	0	1	0
2	E	7	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	F	4	0	0	1	0
3	A	3	0	0	0	0
3	D	2	0	0	0	0
3	F	1	0	0	0	0
4	A	26	0	0	0	0
4	B	28	0	0	0	0
4	C	23	0	0	0	0
4	D	31	0	0	0	0
4	E	29	0	0	0	0
4	F	18	0	0	0	0
All	All	8249	0	8074	50	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 3.

All (50) 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:B:106:ASP:O	1:B:110:THR:HG22	1.76	0.83
1:F:117:LEU:HB3	1:F:157:LYS:HE2	1.66	0.77
1:C:6:PHE:CE2	1:C:15:VAL:HG22	2.26	0.71
1:F:128:LYS:HE2	1:F:241:GLY:O	1.92	0.69
1:E:103:ASP:O	1:E:106:ASP:OD1	2.13	0.67
1:D:9:TYR:O	1:D:12:GLN:OE1	2.13	0.65
1:B:137:PRO:HD2	2:B:306:BR:BR	2.52	0.65
1:A:104:ILE:CD1	1:B:101:VAL:HG22	2.29	0.63
1:C:115:GLY:C	1:C:116:LEU:O	2.39	0.62
1:D:261[B]:GLN:OE1	1:E:121:ASN:OD1	2.18	0.62
1:D:208[B]:ARG:HE	1:E:208[B]:ARG:NH2	1.98	0.61
1:D:163:PHE:HB2	1:D:211:ILE:CG1	2.31	0.60
1:D:163:PHE:HB2	1:D:211:ILE:HG12	1.83	0.60
1:C:6:PHE:CE2	1:C:15:VAL:CG2	2.89	0.56
1:D:261[A]:GLN:O	1:D:262:THR:HG23	2.06	0.55
1:A:104:ILE:HD11	1:B:101:VAL:HG22	1.90	0.53
1:A:137:PRO:HD2	2:A:303:BR:BR	2.64	0.53
1:D:261[B]:GLN:O	1:D:262:THR:HG23	2.08	0.53
2:A:302:BR:BR	1:C:162:MET:HE1	2.64	0.52
1:E:175[B]:GLU:HG3	1:E:199:SER:O	2.10	0.52
1:A:104:ILE:HD12	1:B:101:VAL:HG22	1.92	0.52
1:A:108:ILE:HD12	1:A:116:LEU:HD22	1.91	0.52
1:B:3:ASN:OD1	1:B:16:PHE:CZ	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3:ASN:OD1	1:B:16:PHE:HZ	1.93	0.51
1:F:108:ILE:O	1:F:117:LEU:HD11	2.11	0.50
1:A:109:THR:O	1:A:109:THR:HG22	2.11	0.50
1:D:166:SER:OG	1:D:208[B]:ARG:NH1	2.45	0.50
1:D:157:LYS:HD2	1:F:261[A]:GLN:CD	2.36	0.49
1:E:137:PRO:HD2	2:E:307:BR:BR	2.68	0.48
1:E:9:TYR:O	1:E:11:THR:N	2.46	0.48
1:B:105:LEU:HA	1:B:108:ILE:HG12	1.96	0.47
1:F:128:LYS:O	1:F:128:LYS:HG2	2.14	0.47
1:D:168:ASP:OD1	1:D:208[B]:ARG:NH2	2.44	0.47
1:A:164:LEU:HD22	1:A:208:ARG:HH12	1.80	0.47
1:D:13:ASN:HD22	1:F:3:ASN:HA	1.81	0.45
1:B:168:ASP:OD1	1:B:208[B]:ARG:NH1	2.41	0.44
1:C:174:MET:HE2	1:C:239:SER:OG	2.18	0.44
1:F:222:SER:HB3	2:F:301:BR:BR	2.74	0.43
1:C:111:ASP:HB3	1:C:114:LEU:HD22	2.00	0.43
1:A:174:MET:O	1:A:175:GLU:C	2.62	0.42
1:A:2:GLY:HA2	1:B:13:ASN:OD1	2.20	0.42
1:D:108:ILE:HG21	1:F:116:LEU:HD21	2.01	0.41
1:C:191:TYR:CE1	1:C:211:ILE:HD12	2.55	0.41
1:D:261[A]:GLN:OE1	1:E:157:LYS:NZ	2.48	0.41
2:D:302:BR:BR	1:F:162:MET:HE1	2.75	0.41
1:E:215:GLY:HA2	2:E:304:BR:BR	2.76	0.41
1:B:174:MET:O	1:B:175:GLU:C	2.64	0.40
1:D:174:MET:O	1:D:175:GLU:C	2.64	0.40
1:D:162:MET:HA	1:D:211:ILE:O	2.22	0.40
1:D:211:ILE:HD12	1:D:221:TYR:CZ	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 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 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	176/264 (67%)	170 (97%)	3 (2%)	3 (2%)	7	1
1	B	176/264 (67%)	171 (97%)	3 (2%)	2 (1%)	11	4
1	C	166/264 (63%)	157 (95%)	5 (3%)	4 (2%)	4	1
1	D	177/264 (67%)	167 (94%)	7 (4%)	3 (2%)	7	1
1	E	179/264 (68%)	170 (95%)	6 (3%)	3 (2%)	7	1
1	F	172/264 (65%)	163 (95%)	7 (4%)	2 (1%)	10	3
All	All	1046/1584 (66%)	998 (95%)	31 (3%)	17 (2%)	8	2

All (17) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	117	LEU
1	A	10	ASN
1	A	117	LEU
1	C	116	LEU
1	D	10	ASN
1	E	10	ASN
1	F	10	ASN
1	A	175	GLU
1	B	175	GLU
1	C	175	GLU
1	D	175	GLU
1	E	175[A]	GLU
1	E	175[B]	GLU
1	F	175	GLU
1	B	10	ASN
1	D	262	THR
1	C	114	LEU

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	154/224 (69%)	146 (95%)	8 (5%)	21	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	154/224 (69%)	148 (96%)	6 (4%)	28	17
1	C	145/224 (65%)	138 (95%)	7 (5%)	23	11
1	D	155/224 (69%)	152 (98%)	3 (2%)	50	44
1	E	157/224 (70%)	151 (96%)	6 (4%)	29	19
1	F	151/224 (67%)	145 (96%)	6 (4%)	28	17
All	All	916/1344 (68%)	880 (96%)	36 (4%)	28	17

All (36) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	ASN
1	A	11	THR
1	A	12	GLN
1	A	100	THR
1	A	103	ASP
1	A	117	LEU
1	A	164	LEU
1	A	166	SER
1	B	11	THR
1	B	13	ASN
1	B	102	GLN
1	B	166	SER
1	B	210	ARG
1	B	217	THR
1	C	113	SER
1	C	114	LEU
1	C	116	LEU
1	C	141	GLU
1	C	166	SER
1	C	210	ARG
1	C	217	THR
1	D	107	LYS
1	D	166	SER
1	D	217	THR
1	E	3	ASN
1	E	11	THR
1	E	108	ILE
1	E	166	SER
1	E	217	THR
1	E	248	THR

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Mol	Chain	Res	Type
1	F	10	ASN
1	F	12	GLN
1	F	144	LEU
1	F	166	SER
1	F	217	THR
1	F	262	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	102	GLN
1	B	261	GLN
1	C	10	ASN
1	C	132	ASN
1	D	13	ASN
1	E	12	GLN
1	E	121	ASN

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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 34 ligands modelled in this entry, 34 are 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

There are no such residues in this entry.

5.8 Polymer linkage issues

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	179/264 (67%)	1.51	47 (26%) 1 1	13, 31, 83, 92	1 (0%)
1	B	178/264 (67%)	0.95	28 (15%) 5 6	13, 29, 71, 96	2 (1%)
1	C	169/264 (64%)	1.29	41 (24%) 2 2	17, 30, 76, 111	1 (0%)
1	D	177/264 (67%)	1.14	36 (20%) 3 3	14, 28, 77, 101	4 (2%)
1	E	181/264 (68%)	1.15	39 (21%) 2 2	13, 28, 72, 102	2 (1%)
1	F	175/264 (66%)	1.42	42 (24%) 2 2	18, 30, 75, 103	1 (0%)
All	All	1059/1584 (66%)	1.24	233 (22%) 2 2	13, 30, 77, 111	11 (1%)

All (233) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	8	LEU	10.4
1	F	261[A]	GLN	10.4
1	A	9	TYR	10.2
1	D	7	TYR	9.0
1	F	262	THR	9.0
1	E	16	PHE	8.5
1	B	101	VAL	7.8
1	F	11	THR	7.4
1	B	2	GLY	7.4
1	C	8	LEU	7.0
1	D	262	THR	7.0
1	E	1	MET	6.9
1	E	100	THR	6.9
1	C	14	CYS	6.8
1	F	105	LEU	6.8
1	D	11	THR	6.8
1	E	15	VAL	6.7
1	C	109	THR	6.7
1	F	16	PHE	6.7

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Mol	Chain	Res	Type	RSRZ
1	F	8	LEU	6.5
1	E	17	ALA	6.5
1	F	3	ASN	6.5
1	A	7	TYR	6.2
1	B	261	GLN	6.2
1	D	10	ASN	6.2
1	D	8	LEU	6.1
1	D	208[A]	ARG	6.1
1	A	104	ILE	6.0
1	F	7	TYR	6.0
1	D	9	TYR	5.9
1	A	109	THR	5.8
1	A	117	LEU	5.7
1	C	18	ASP	5.7
1	A	100	THR	5.7
1	C	11	THR	5.7
1	D	15	VAL	5.6
1	F	15	VAL	5.6
1	F	19	ASN	5.5
1	E	9	TYR	5.4
1	A	101	VAL	5.4
1	C	114	LEU	5.3
1	C	19	ASN	5.3
1	A	115	GLY	5.2
1	D	6	PHE	5.2
1	F	114	LEU	5.1
1	A	10	ASN	5.1
1	E	19	ASN	5.1
1	C	15	VAL	5.0
1	C	111	ASP	5.0
1	F	107	LYS	4.8
1	F	17	ALA	4.8
1	D	261[A]	GLN	4.8
1	A	108	ILE	4.8
1	B	100	THR	4.8
1	B	3	ASN	4.7
1	A	14	CYS	4.7
1	D	12	GLN	4.6
1	D	2	GLY	4.6
1	E	101	VAL	4.6
1	D	14	CYS	4.6
1	E	8	LEU	4.6

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Mol	Chain	Res	Type	RSRZ
1	F	115	GLY	4.6
1	D	109	THR	4.6
1	A	15	VAL	4.6
1	C	13	ASN	4.5
1	A	116	LEU	4.5
1	C	261	GLN	4.5
1	F	14	CYS	4.4
1	C	117	LEU	4.4
1	C	116	LEU	4.4
1	F	12	GLN	4.3
1	B	110	THR	4.3
1	A	217	THR	4.3
1	F	9	TYR	4.3
1	A	2	GLY	4.3
1	C	9	TYR	4.2
1	D	105	LEU	4.2
1	E	14	CYS	4.2
1	A	159	SER	4.2
1	F	117	LEU	4.2
1	C	7	TYR	4.1
1	E	261	GLN	4.1
1	B	117	LEU	4.1
1	E	3	ASN	4.1
1	F	144	LEU	4.1
1	B	105	LEU	4.0
1	B	104	ILE	4.0
1	E	109	THR	4.0
1	C	138[A]	ARG	4.0
1	C	10	ASN	4.0
1	E	11	THR	3.9
1	A	114	LEU	3.9
1	D	263	ASN	3.8
1	E	2	GLY	3.8
1	F	5	GLY	3.8
1	E	12	GLN	3.8
1	E	13	ASN	3.8
1	C	259	ILE	3.8
1	D	108	ILE	3.8
1	D	13	ASN	3.7
1	E	7	TYR	3.7
1	A	11	THR	3.6
1	C	17	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	3	ASN	3.6
1	B	208[A]	ARG	3.6
1	F	108	ILE	3.5
1	F	6	PHE	3.5
1	A	13	ASN	3.5
1	D	16	PHE	3.5
1	C	159	SER	3.4
1	C	260	PRO	3.4
1	E	243	ASP	3.4
1	C	214	THR	3.4
1	B	116	LEU	3.3
1	C	143	LEU	3.3
1	C	6	PHE	3.3
1	A	113	SER	3.3
1	C	174	MET	3.3
1	D	107	LYS	3.3
1	F	214	THR	3.3
1	B	218	PRO	3.3
1	C	112	PRO	3.3
1	D	19	ASN	3.3
1	E	104	ILE	3.2
1	B	8	LEU	3.2
1	A	12	GLN	3.2
1	A	102	GLN	3.2
1	E	103	ASP	3.2
1	A	105	LEU	3.2
1	E	5	GLY	3.2
1	F	217	THR	3.1
1	E	105	LEU	3.1
1	E	175[A]	GLU	3.1
1	C	118	LYS	3.1
1	A	121	ASN	3.1
1	D	138	ARG	3.1
1	B	219	THR	3.1
1	C	208	ARG	3.1
1	D	114	LEU	3.1
1	A	174	MET	3.1
1	F	10	ASN	3.1
1	D	214	THR	3.1
1	F	116	LEU	3.0
1	E	208[A]	ARG	3.0
1	F	229	GLU	3.0

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Mol	Chain	Res	Type	RSRZ
1	F	174	MET	3.0
1	E	217	THR	3.0
1	F	106	ASP	3.0
1	A	138	ARG	3.0
1	C	110	THR	3.0
1	C	219	THR	3.0
1	D	106	ASP	3.0
1	D	117	LEU	2.9
1	B	217	THR	2.9
1	B	108	ILE	2.9
1	A	106	ASP	2.9
1	F	216	LEU	2.9
1	D	110	THR	2.8
1	D	211	ILE	2.8
1	C	115	GLY	2.8
1	B	114	LEU	2.8
1	B	259	ILE	2.8
1	A	155	THR	2.8
1	B	107	LYS	2.8
1	F	110	THR	2.8
1	F	208	ARG	2.8
1	A	157	LYS	2.8
1	F	4	SER	2.7
1	C	16	PHE	2.7
1	D	115	GLY	2.7
1	B	109	THR	2.7
1	E	110	THR	2.7
1	C	12	GLN	2.7
1	D	3	ASN	2.7
1	C	217	THR	2.7
1	E	106	ASP	2.7
1	F	212	ILE	2.7
1	B	17	ALA	2.7
1	B	111	ASP	2.6
1	A	103	ASP	2.6
1	F	13	ASN	2.6
1	A	110	THR	2.6
1	A	216	LEU	2.5
1	B	4	SER	2.5
1	F	141	GLU	2.5
1	D	17	ALA	2.5
1	A	215	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
1	E	144	LEU	2.4
1	C	212	ILE	2.4
1	C	113	SER	2.4
1	A	160	GLY	2.4
1	E	107	LYS	2.4
1	B	106	ASP	2.4
1	E	18	ASP	2.4
1	A	112	PRO	2.4
1	A	132	ASN	2.4
1	D	174	MET	2.4
1	A	151	LYS	2.4
1	C	157	LYS	2.4
1	A	218	PRO	2.3
1	F	143	LEU	2.3
1	D	259	ILE	2.3
1	A	133	GLY	2.3
1	A	231	GLY	2.3
1	E	117	LEU	2.3
1	A	19	ASN	2.3
1	A	16	PHE	2.3
1	E	108	ILE	2.3
1	B	103	ASP	2.3
1	E	10	ASN	2.3
1	C	160	GLY	2.2
1	E	127	ASN	2.2
1	A	107	LYS	2.2
1	F	109	THR	2.2
1	C	188	SER	2.2
1	F	18	ASP	2.2
1	E	259	ILE	2.2
1	E	216	LEU	2.2
1	A	186	GLY	2.2
1	F	128	LYS	2.2
1	C	4	SER	2.2
1	D	116	LEU	2.2
1	F	259	ILE	2.1
1	E	4	SER	2.1
1	E	113	SER	2.1
1	A	208	ARG	2.1
1	D	224[A]	ARG	2.1
1	C	216	LEU	2.1
1	B	174	MET	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	102	GLN	2.1
1	D	175	GLU	2.0
1	F	240	ASN	2.0
1	B	115	GLY	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 oligosaccharides 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. 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
2	BR	C	305	1/1	0.91	0.23	80,80,80,80	0
2	BR	F	302	1/1	0.92	0.24	76,76,76,76	0
2	BR	E	304	1/1	0.93	0.15	87,87,87,87	0
2	BR	D	303	1/1	0.93	0.35	69,69,69,69	0
2	BR	D	302	1/1	0.94	0.20	66,66,66,66	0
2	BR	B	306	1/1	0.94	0.20	77,77,77,77	0
2	BR	E	303	1/1	0.94	0.29	73,73,73,73	0
2	BR	C	303	1/1	0.94	0.26	59,59,59,59	0
2	BR	B	303	1/1	0.94	0.21	72,72,72,72	0
2	BR	F	303	1/1	0.94	0.20	72,72,72,72	0
2	BR	F	304	1/1	0.94	0.21	76,76,76,76	0
2	BR	C	304	1/1	0.95	0.16	71,71,71,71	0
2	BR	B	302	1/1	0.95	0.16	57,57,57,57	0
2	BR	A	302	1/1	0.95	0.20	65,65,65,65	0
2	BR	F	301	1/1	0.96	0.22	66,66,66,66	0
2	BR	E	302	1/1	0.96	0.17	50,50,50,50	0
2	BR	A	303	1/1	0.96	0.16	90,90,90,90	0
2	BR	B	304	1/1	0.96	0.19	69,69,69,69	0
3	K	A	304	1/1	0.96	0.09	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	K	A	305	1/1	0.96	0.08	49,49,49,49	0
3	K	D	305	1/1	0.96	0.06	44,44,44,44	0
2	BR	C	301	1/1	0.97	0.30	64,64,64,64	0
2	BR	E	306	1/1	0.97	0.23	80,80,80,80	0
2	BR	E	307	1/1	0.97	0.18	71,71,71,71	0
2	BR	C	302	1/1	0.97	0.19	63,63,63,63	0
3	K	A	306	1/1	0.97	0.26	55,55,55,55	0
3	K	D	304	1/1	0.97	0.12	47,47,47,47	0
2	BR	B	305	1/1	0.97	0.21	64,64,64,64	0
2	BR	E	305	1/1	0.98	0.14	64,64,64,64	0
2	BR	A	301	1/1	0.98	0.07	32,32,32,32	0
3	K	F	305	1/1	0.98	0.15	52,52,52,52	0
2	BR	D	301	1/1	0.99	0.06	28,28,28,28	0
2	BR	E	301	1/1	0.99	0.10	49,49,49,49	0
2	BR	B	301	1/1	0.99	0.05	41,41,41,41	0

6.5 Other polymers [i](#)

There are no such residues in this entry.