WORLDWIDE PDB
PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

Sep 20, 2023 – 11:29 PM EDT

PDB ID	:	5JO5
Title	:	Crystal structure of 10E8 gHV-gLV antigen-binding fragment.
Authors	:	Joyce, M.G.; Mascola, J.R.; Kwong, P.D.
Deposited on	:	2016-05-02
Resolution	:	1.70 Å(reported)

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

|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

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 1.70 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.
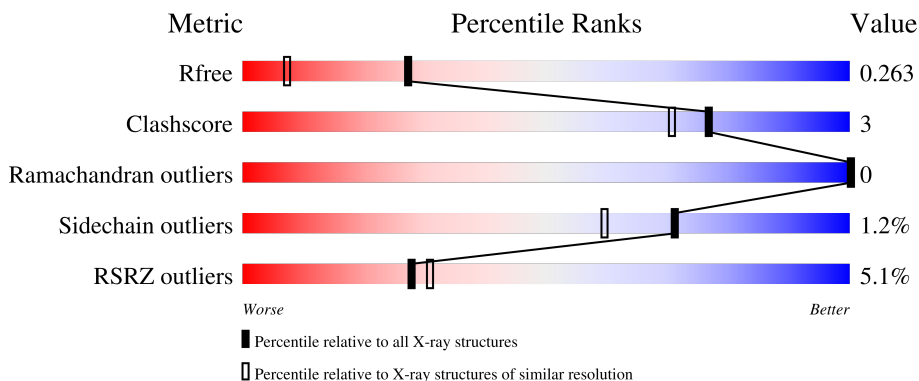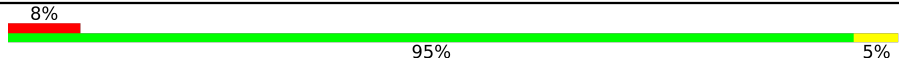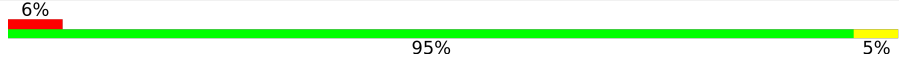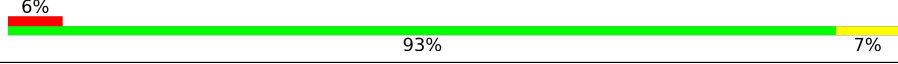

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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 <=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	232	3% / 92% / 5%
1	C	232	3% / 92% / 5%
1	E	232	4% / 90% / 5% 5%
1	H	232	4% / 91% / 5%
2	B	212	6% / 93% / 5%

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Mol	Chain	Length	Quality of chain
2	D	212	8% ████ 95% ████████████████████████████ 5%
2	F	212	6% ███ 95% ████████████████████████████ 5%
2	L	212	6% ███ 93% ████████████████████████████ 7%

2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 27369 atoms, of which 12668 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 10E8 gHV.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	H	221	Total 3287	C 1045	H 1629	N 282	O 325	S 6	0	1	0
1	A	221	Total 3284	C 1046	H 1626	N 281	O 325	S 6	0	0	0
1	C	221	Total 3270	C 1042	H 1618	N 281	O 323	S 6	0	0	0
1	E	221	Total 3276	C 1042	H 1623	N 281	O 324	S 6	0	0	0

- Molecule 2 is a protein called 10E8 gLV.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	L	212	Total 3127	C 986	H 1540	N 270	O 327	S 4	0	0	0
2	B	212	Total 3128	C 986	H 1541	N 270	O 327	S 4	0	0	0
2	D	212	Total 3147	C 991	H 1552	N 273	O 327	S 4	0	1	0
2	F	212	Total 3126	C 986	H 1539	N 270	O 327	S 4	0	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	H	222	Total 222	O 222	0	0
3	L	200	Total 200	O 200	0	0
3	A	211	Total 211	O 211	0	0
3	B	217	Total 217	O 217	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	C	220	Total 220	O 220	0	0
3	D	217	Total 217	O 217	0	0
3	E	222	Total 222	O 222	0	0
3	F	215	Total 215	O 215	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: 10E8 gHV
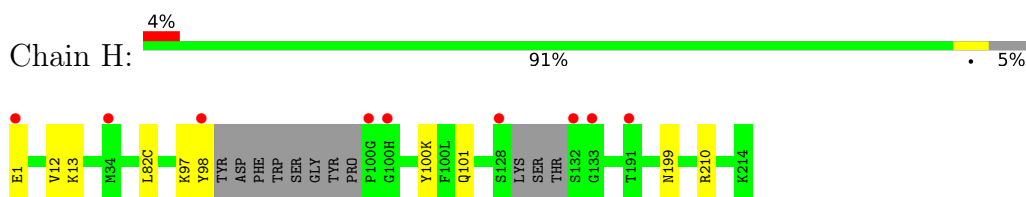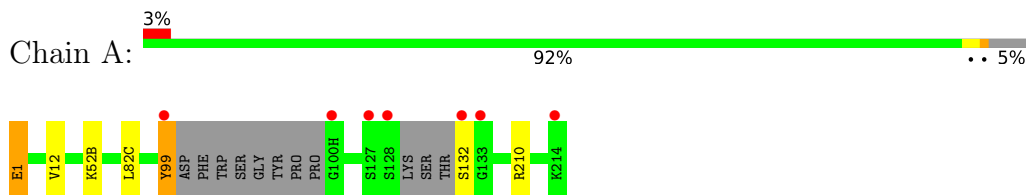
• Molecule 1: 10E8 gHV
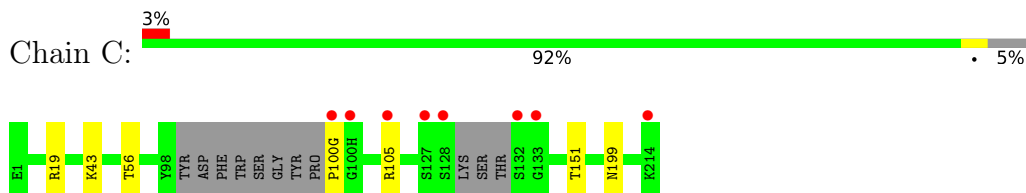
• Molecule 1: 10E8 gHV

• Molecule 1: 10E8 gHV
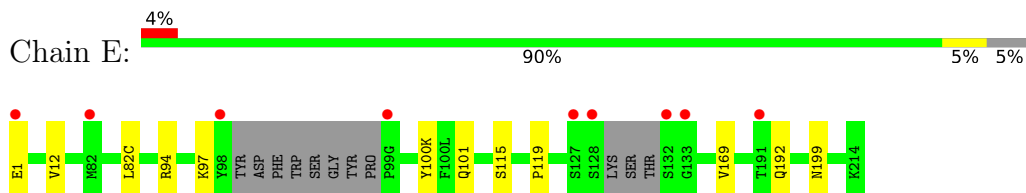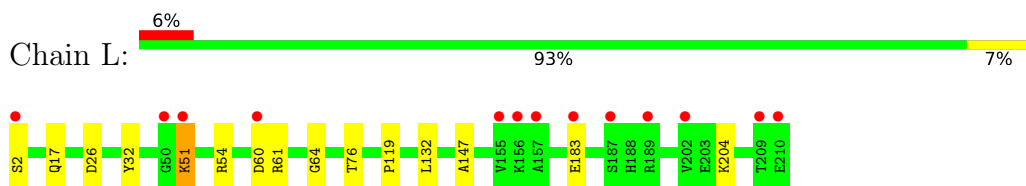
• Molecule 2: 10E8 gLV

• Molecule 2: 10E8 gLV

6%

Chain B:

93%   5% •

S2 E3 D7 L15 G16 Q17 D26 K51 D60 K93 S94 R95B P119 A127 L132 K156 Y172 T181 P182 E183 Q184 W185 K186 S187 H188 R189 V202 T209 E210

• Molecule 2: 10E8 gLV

8%

Chain D:

95%   5%

S2 E3 Y32 K51 R54 D60 R61 F62 K93 S94 R95B P119 L132 V155 K156 A157 Y172 T181 Q184 W185 K186 S187 H188 R189 Q194 V202 E203 T209 E210

• Molecule 2: 10E8 gLV

6%

Chain F:

95%   5%

S2 E3 Q17 V47 I48 K51 N52 N53 R54 P59 D60 S153 P154 V155 K156 A157 S168 S187 H188 R189 Q194 E203 T209 E210

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	115.62Å 65.51Å 128.48Å 90.00° 103.99° 90.00°	Depositor
Resolution (Å)	38.47 – 1.70 49.30 – 1.50	Depositor EDS
% Data completeness (in resolution range)	99.7 (38.47-1.70) 99.6 (49.30-1.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.42 (at 1.50Å)	Xtriage
Refinement program	PHENIX (1.10_2155: ???)	Depositor
R, R_{free}	0.233 , 0.263 0.236 , 0.263	Depositor DCC
R_{free} test set	14969 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å^2)	15.6	Xtriage
Anisotropy	0.031	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.43 , 58.7	EDS
L-test for twinning[2]	$< |L| > = 0.55$, $< L^2 > = 0.39$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	27369	wwPDB-VP
Average B, all atoms (Å^2)	27.0	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 90.70 % 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 2.0620e-08. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ 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)

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	0.29	0/1696	0.52	0/2303
1	C	0.30	0/1690	0.52	0/2294
1	E	0.29	0/1691	0.52	0/2296
1	H	0.29	0/1699	0.52	0/2307
2	B	0.28	0/1622	0.49	0/2211
2	D	0.29	0/1633	0.48	0/2225
2	F	0.27	0/1622	0.48	0/2211
2	L	0.28	0/1622	0.49	0/2211
All	All	0.29	0/13275	0.51	0/18058

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	1658	1626	1627	8	0
1	C	1652	1618	1626	5	0
1	E	1653	1623	1626	8	0
1	H	1658	1629	1632	8	0
2	B	1587	1541	1540	13	0
2	D	1595	1552	1553	12	0
2	F	1587	1539	1540	10	0
2	L	1587	1540	1540	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	A	211	0	0	7	4
3	B	217	0	0	10	1
3	C	220	0	0	5	3
3	D	217	0	0	7	0
3	E	222	0	0	6	3
3	F	215	0	0	6	1
3	H	222	0	0	6	3
3	L	200	0	0	7	1
All	All	14701	12668	12684	77	8

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 (77) 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)
2:L:54:ARG:NH2	3:L:301:HOH:O	1.95	0.98
1:A:132:SER:N	3:A:301:HOH:O	2.02	0.92
1:E:1:GLU:OE1	3:E:301:HOH:O	1.91	0.88
2:B:172:TYR:OH	3:B:301:HOH:O	1.93	0.85
2:B:2:SER:N	3:B:305:HOH:O	2.08	0.85
2:B:51:LYS:NZ	3:B:306:HOH:O	2.11	0.84
2:D:172:TYR:OH	3:D:301:HOH:O	1.95	0.84
1:E:192:GLN:OE1	3:E:302:HOH:O	1.96	0.82
2:B:26:ASP:OD1	3:B:302:HOH:O	1.97	0.82
2:D:60:ASP:OD1	3:D:302:HOH:O	1.97	0.81
1:E:199:ASN:ND2	3:E:304:HOH:O	2.14	0.81
1:E:119:PRO:O	3:E:303:HOH:O	2.00	0.79
2:B:60:ASP:OD1	3:B:303:HOH:O	2.01	0.79
1:H:199[A]:ASN:ND2	3:H:303:HOH:O	2.16	0.78
2:F:3:GLU:OE2	3:F:301:HOH:O	2.04	0.75
1:H:1:GLU:OE2	3:H:301:HOH:O	2.05	0.74
2:L:204:LYS:NZ	3:L:305:HOH:O	2.22	0.73
1:A:210:ARG:NH2	3:A:303:HOH:O	2.22	0.72
1:A:99:TYR:O	3:A:302:HOH:O	2.08	0.71
2:L:26:ASP:OD1	3:L:302:HOH:O	2.09	0.70
2:D:172:TYR:CZ	3:D:301:HOH:O	2.43	0.70
1:H:199[A]:ASN:OD1	3:H:302:HOH:O	2.11	0.69
2:B:172:TYR:CZ	3:B:301:HOH:O	2.44	0.69
2:F:17:GLN:NE2	3:F:302:HOH:O	2.26	0.66
2:D:3:GLU:CG	3:D:465:HOH:O	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:2:SER:HA	3:L:423:HOH:O	1.99	0.62
1:C:43:LYS:HD2	3:C:455:HOH:O	2.00	0.61
1:C:151:THR:CG2	3:C:488:HOH:O	2.51	0.58
2:L:17:GLN:NE2	3:L:308:HOH:O	2.29	0.58
2:B:17:GLN:NE2	3:B:310:HOH:O	2.22	0.56
2:B:127:ALA:O	3:B:307:HOH:O	2.18	0.55
1:C:151:THR:HG23	3:C:488:HOH:O	2.06	0.54
1:H:210:ARG:NH2	3:H:307:HOH:O	2.41	0.54
2:D:3:GLU:HG2	3:D:465:HOH:O	2.07	0.54
2:D:3:GLU:HG3	3:D:465:HOH:O	2.07	0.53
2:D:194:GLN:NE2	2:D:203:GLU:OE2	2.41	0.53
1:A:1:GLU:CA	3:A:314:HOH:O	2.58	0.51
1:C:19:ARG:NH2	3:C:304:HOH:O	2.43	0.51
2:F:3:GLU:CG	3:F:301:HOH:O	2.58	0.51
2:F:54:ARG:NH1	2:F:60:ASP:OD1	2.42	0.51
2:F:2:SER:N	3:F:309:HOH:O	2.44	0.49
2:F:52:ASN:N	3:F:307:HOH:O	2.43	0.49
2:L:51:LYS:HZ2	2:L:64:GLY:HA3	1.78	0.48
2:D:54:ARG:NH1	2:D:60:ASP:O	2.46	0.48
1:A:99:TYR:HB3	3:A:311:HOH:O	2.13	0.48
1:C:199:ASN:OD1	3:C:301:HOH:O	2.20	0.48
2:L:51:LYS:HE2	2:L:51:LYS:HA	1.94	0.48
2:L:32:TYR:CE1	2:L:51:LYS:HB2	2.50	0.47
2:B:181:THR:HG23	2:B:184:GLN:H	1.80	0.46
2:B:7:ASP:N	3:B:304:HOH:O	2.05	0.46
1:E:115:SER:OG	3:E:305:HOH:O	2.16	0.46
2:B:60:ASP:OD1	2:B:60:ASP:N	2.47	0.45
2:D:54:ARG:HD3	2:D:62:PHE:O	2.17	0.45
2:D:119:PRO:HA	2:D:132:LEU:HD23	1.98	0.44
2:D:3:GLU:CD	3:D:304:HOH:O	2.56	0.44
1:H:210:ARG:CZ	3:H:307:HOH:O	2.65	0.44
1:E:100(K):TYR:CE2	1:E:101:GLN:HG2	2.52	0.44
1:E:94:ARG:NH2	3:E:306:HOH:O	2.41	0.43
1:H:13:LYS:NZ	3:H:309:HOH:O	2.45	0.43
2:L:119:PRO:HA	2:L:132:LEU:HD23	2.00	0.43
2:D:181:THR:HG23	2:D:184:GLN:H	1.83	0.43
1:H:100(K):TYR:CE2	1:H:101:GLN:HG2	2.54	0.43
1:H:12:VAL:HG11	1:H:82(C):LEU:HD13	2.01	0.42
2:F:59:PRO:HD2	3:F:481:HOH:O	2.17	0.42
2:L:183:GLU:OE2	3:L:304:HOH:O	2.21	0.42
1:A:1:GLU:HA	3:A:314:HOH:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:194:GLN:NE2	2:F:203:GLU:OE2	2.48	0.42
1:A:12:VAL:HG11	1:A:82(C):LEU:HD13	2.02	0.42
2:F:47:VAL:HG12	2:F:48:ILE:HG12	2.02	0.41
2:B:119:PRO:HA	2:B:132:LEU:HD23	2.01	0.41
2:L:51:LYS:HA	2:L:51:LYS:CE	2.49	0.41
2:L:61:ARG:HB2	2:L:76:THR:O	2.20	0.41
2:B:3:GLU:OE1	3:B:309:HOH:O	2.22	0.41
1:E:12:VAL:HG11	1:E:82(C):LEU:HD13	2.02	0.41
2:L:147:ALA:HB1	3:L:390:HOH:O	2.21	0.41
1:A:99:TYR:CA	3:A:311:HOH:O	2.69	0.40
2:F:3:GLU:OE1	2:F:3:GLU:N	2.52	0.40

All (8) 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)
3:C:458:HOH:O	3:E:510:HOH:O[2_454]	1.88	0.32
3:A:397:HOH:O	3:B:503:HOH:O[2_555]	1.89	0.31
3:A:410:HOH:O	3:F:458:HOH:O[1_565]	1.99	0.21
3:A:426:HOH:O	3:E:427:HOH:O[1_565]	2.00	0.20
3:H:461:HOH:O	3:C:410:HOH:O[1_545]	2.01	0.19
3:H:404:HOH:O	3:L:461:HOH:O[2_544]	2.10	0.10
3:C:454:HOH:O	3:E:348:HOH:O[1_564]	2.12	0.08
3:H:482:HOH:O	3:A:435:HOH:O[1_544]	2.16	0.04

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	215/232 (93%)	213 (99%)	2 (1%)	0	100	100
1	C	215/232 (93%)	211 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	215/232 (93%)	211 (98%)	4 (2%)	0	100	100
1	H	216/232 (93%)	213 (99%)	3 (1%)	0	100	100
2	B	210/212 (99%)	208 (99%)	2 (1%)	0	100	100
2	D	211/212 (100%)	210 (100%)	1 (0%)	0	100	100
2	F	210/212 (99%)	208 (99%)	2 (1%)	0	100	100
2	L	210/212 (99%)	205 (98%)	5 (2%)	0	100	100
All	All	1702/1776 (96%)	1679 (99%)	23 (1%)	0	100	100

There are no Ramachandran outliers to report.

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	183/193 (95%)	180 (98%)	3 (2%)	62	48
1	C	183/193 (95%)	180 (98%)	3 (2%)	62	48
1	E	183/193 (95%)	181 (99%)	2 (1%)	73	63
1	H	184/193 (95%)	182 (99%)	2 (1%)	73	63
2	B	178/178 (100%)	174 (98%)	4 (2%)	52	34
2	D	179/178 (101%)	179 (100%)	0	100	100
2	F	178/178 (100%)	177 (99%)	1 (1%)	86	80
2	L	178/178 (100%)	176 (99%)	2 (1%)	73	63
All	All	1446/1484 (97%)	1429 (99%)	17 (1%)	71	59

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	97	LYS
1	H	98	TYR
2	L	51	LYS
2	L	60	ASP

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Mol	Chain	Res	Type
1	A	1	GLU
1	A	52(B)	LYS
1	A	99	TYR
2	B	2	SER
2	B	15	LEU
2	B	51	LYS
2	B	60	ASP
1	C	56	THR
1	C	100(G)	PRO
1	C	105	ARG
1	E	97	LYS
1	E	169	VAL
2	F	54	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

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	221/232 (95%)	0.10	7 (3%)	47	52	9, 18, 32, 69	0
1	C	221/232 (95%)	0.41	8 (3%)	42	47	11, 22, 34, 76	0
1	E	221/232 (95%)	0.52	9 (4%)	37	41	13, 23, 38, 79	0
1	H	221/232 (95%)	0.23	9 (4%)	37	41	9, 19, 34, 89	0
2	B	212/212 (100%)	0.30	13 (6%)	21	23	10, 20, 40, 67	0
2	D	212/212 (100%)	0.66	17 (8%)	12	14	14, 26, 42, 77	0
2	F	212/212 (100%)	0.64	12 (5%)	23	26	14, 25, 51, 107	0
2	L	212/212 (100%)	0.23	13 (6%)	21	23	10, 21, 43, 77	2 (0%)
All	All	1732/1776 (97%)	0.38	88 (5%)	28	31	9, 22, 42, 107	2 (0%)

All (88) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	133	GLY	18.9
1	E	98	TYR	15.6
1	H	98	TYR	13.9
1	A	133	GLY	13.3
1	H	128	SER	10.9
1	C	133	GLY	10.8
1	C	100(G)	PRO	9.0
1	E	128	SER	8.9
1	H	100(G)	PRO	8.3
1	A	99	TYR	8.1
2	F	210	GLU	6.8
1	A	128	SER	6.8
2	B	156	LYS	6.7
1	H	132	SER	6.6
1	C	127	SER	6.3
2	L	209	THR	6.2

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WORLDWIDE
wwPDB
PROTEIN DATA BANK

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Mol	Chain	Res	Type	RSRZ
1	C	132	SER	6.1
1	C	128	SER	6.1
2	D	2	SER	6.0
1	E	133	GLY	5.9
2	D	210	GLU	5.8
2	B	2	SER	5.5
1	E	99(G)	PRO	5.3
2	D	51	LYS	5.3
2	D	156	LYS	5.2
2	L	2	SER	5.1
2	D	209	THR	5.0
2	L	156	LYS	4.9
1	A	132	SER	4.9
2	F	2	SER	4.9
2	B	209	THR	4.7
2	L	51	LYS	4.7
2	D	60	ASP	4.6
1	E	127	SER	4.5
2	B	51	LYS	4.4
2	F	209	THR	4.1
2	L	155	VAL	3.9
2	L	210	GLU	3.9
2	B	187	SER	3.8
2	F	155	VAL	3.8
1	E	132	SER	3.7
2	L	183	GLU	3.6
2	D	155	VAL	3.6
2	F	189	ARG	3.4
2	F	60	ASP	3.3
2	B	183	GLU	3.2
2	D	93	LYS	3.2
2	L	189	ARG	3.1
2	L	202	VAL	3.1
2	F	51	LYS	3.1
1	A	100(H)	GLY	3.0
1	A	214	LYS	3.0
2	D	187	SER	2.9
2	F	168	SER	2.9
1	C	100(H)	GLY	2.9
2	L	187	SER	2.9
1	H	100(H)	GLY	2.8
2	D	32	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
2	F	157	ALA	2.8
2	B	94	SER	2.7
2	D	202	VAL	2.7
2	D	94	SER	2.7
2	B	60	ASP	2.7
1	H	191	THR	2.6
2	B	202	VAL	2.6
1	C	105	ARG	2.5
1	C	214	LYS	2.5
2	F	187	SER	2.4
2	D	189[A]	ARG	2.4
2	L	60	ASP	2.4
2	L	157	ALA	2.4
2	F	153	SER	2.4
2	B	186	LYS	2.4
2	D	157	ALA	2.3
2	F	156	LYS	2.3
1	A	127	SER	2.3
2	L	50	GLY	2.2
1	H	1	GLU	2.2
1	E	82	MET	2.2
2	B	95(B)	ARG	2.2
2	D	186	LYS	2.2
1	E	191	THR	2.1
2	D	181	THR	2.1
2	B	189	ARG	2.1
2	D	95(B)	ARG	2.1
1	E	1	GLU	2.1
1	H	34	MET	2.0
2	B	93	LYS	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.