



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 2, 2024 – 10:19 am BST

PDB ID : 8PN0
Title : HEV gt3 P domain in complex with glycan-sensitive nAb p60.12
Authors : Ssebyatika, G.; Krey, T.
Deposited on : 2023-06-29
Resolution : 2.07 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 : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.37.1
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) : 2.37.1

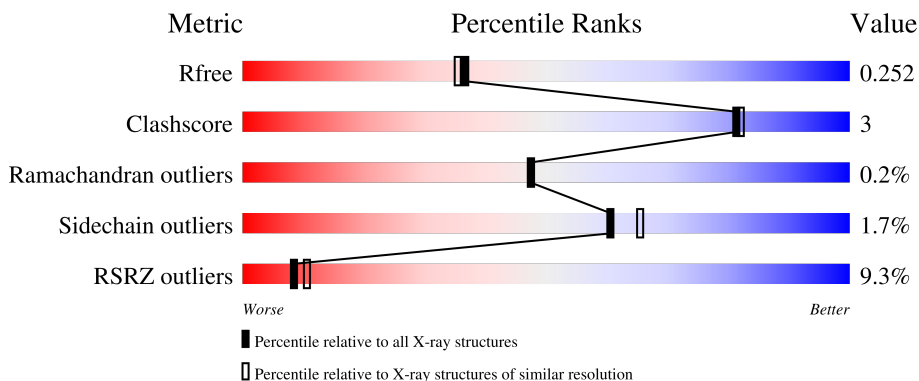
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.07 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.



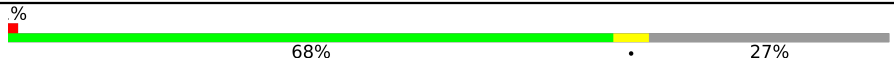


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	6189 (2.10-2.06)
Clashscore	141614	6738 (2.10-2.06)
Ramachandran outliers	138981	6663 (2.10-2.06)
Sidechain outliers	138945	6664 (2.10-2.06)
RSRZ outliers	127900	6057 (2.10-2.06)

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	233	
1	H	233	
2	B	217	
2	L	217	
3	C	211	

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Mol	Chain	Length	Quality of chain
3	D	211	 <p>% 68% 27%</p>
3	E	211	 <p>67% 30%</p>
3	F	211	 <p>% 66% 6% 27%</p>

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 11149 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 Fab_p60.12-HC.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	213	Total 1601	C 1013	N 269	O 312	S 7	0	0	0
1	H	218	Total 1632	C 1030	N 275	O 320	S 7	0	0	0

- Molecule 2 is a protein called Fab_p60.12-LC.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	213	Total 1582	C 988	N 261	O 328	S 5	0	1	0
2	L	213	Total 1582	C 988	N 261	O 328	S 5	0	1	0

- Molecule 3 is a protein called Capsid protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	150	Total 1135	C 721	N 190	O 223	S 1	0	0	0
3	D	153	Total 1155	C 735	N 193	O 226	S 1	0	0	0
3	E	148	Total 1123	C 713	N 188	O 221	S 1	0	0	0
3	F	153	Total 1155	C 735	N 193	O 226	S 1	0	0	0

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	450	GLY	-	expression tag	UNP A0A6C0PR31
C	451	ASP	-	expression tag	UNP A0A6C0PR31
C	452	ASP	-	expression tag	UNP A0A6C0PR31
C	453	ASP	-	expression tag	UNP A0A6C0PR31

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Chain	Residue	Modelled	Actual	Comment	Reference
C	454	ASP	-	expression tag	UNP A0A6C0PR31
C	455	LYS	-	expression tag	UNP A0A6C0PR31
C	500	PHE	LEU	conflict	UNP A0A6C0PR31
D	450	GLY	-	expression tag	UNP A0A6C0PR31
D	451	ASP	-	expression tag	UNP A0A6C0PR31
D	452	ASP	-	expression tag	UNP A0A6C0PR31
D	453	ASP	-	expression tag	UNP A0A6C0PR31
D	454	ASP	-	expression tag	UNP A0A6C0PR31
D	455	LYS	-	expression tag	UNP A0A6C0PR31
D	500	PHE	LEU	conflict	UNP A0A6C0PR31
E	450	GLY	-	expression tag	UNP A0A6C0PR31
E	451	ASP	-	expression tag	UNP A0A6C0PR31
E	452	ASP	-	expression tag	UNP A0A6C0PR31
E	453	ASP	-	expression tag	UNP A0A6C0PR31
E	454	ASP	-	expression tag	UNP A0A6C0PR31
E	455	LYS	-	expression tag	UNP A0A6C0PR31
E	500	PHE	LEU	conflict	UNP A0A6C0PR31
F	450	GLY	-	expression tag	UNP A0A6C0PR31
F	451	ASP	-	expression tag	UNP A0A6C0PR31
F	452	ASP	-	expression tag	UNP A0A6C0PR31
F	453	ASP	-	expression tag	UNP A0A6C0PR31
F	454	ASP	-	expression tag	UNP A0A6C0PR31
F	455	LYS	-	expression tag	UNP A0A6C0PR31
F	500	PHE	LEU	conflict	UNP A0A6C0PR31

- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	7	Total O 7 7	0	0
4	B	14	Total O 14 14	0	0
4	C	31	Total O 31 31	0	0
4	D	36	Total O 36 36	0	0
4	E	17	Total O 17 17	0	0
4	F	34	Total O 34 34	0	0
4	H	21	Total O 21 21	0	0

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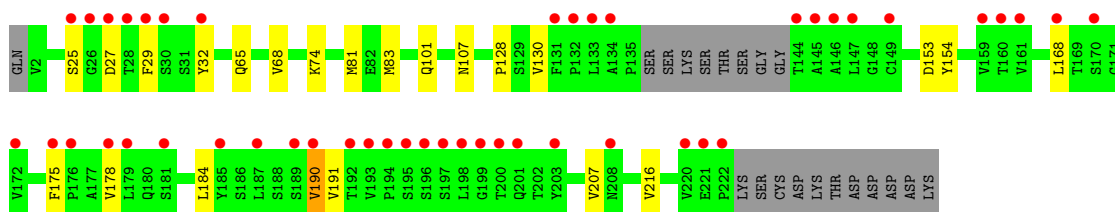
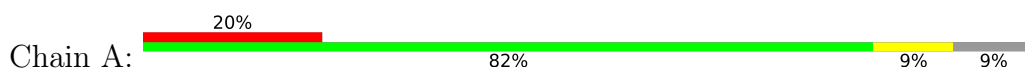
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	L	24	Total	O	0	0
			24	24		

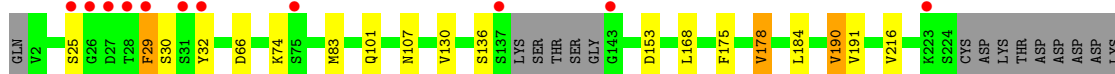
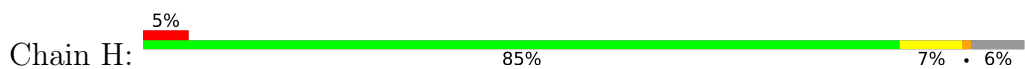
3 Residue-property plots [i](#)

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.

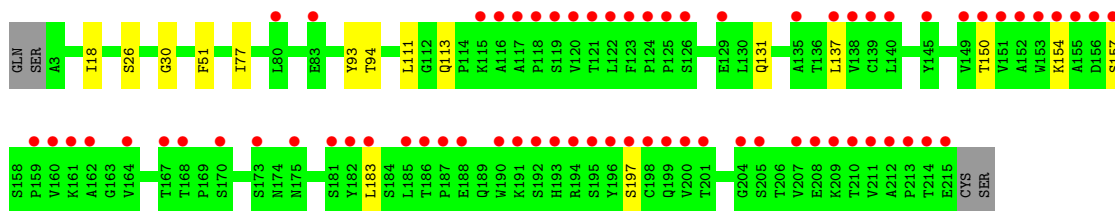
- Molecule 1: Fab_p60.12-HC



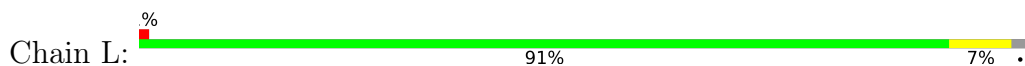
- Molecule 1: Fab_p60.12-HC



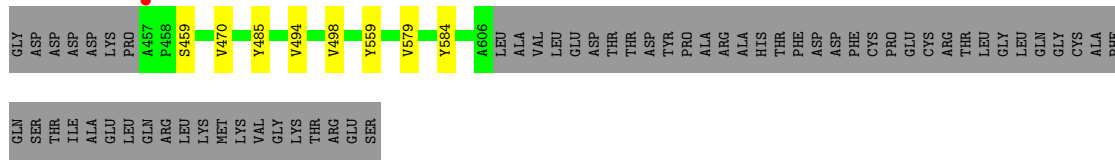
- Molecule 2: Fab_p60.12-LC



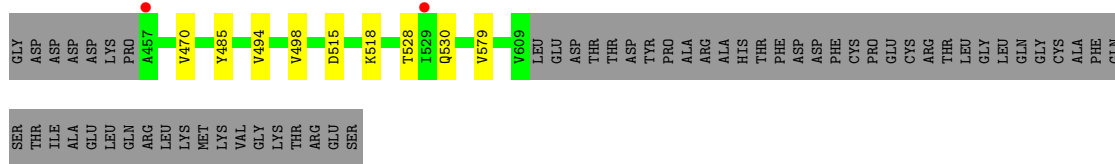
- Molecule 2: Fab_p60.12-LC



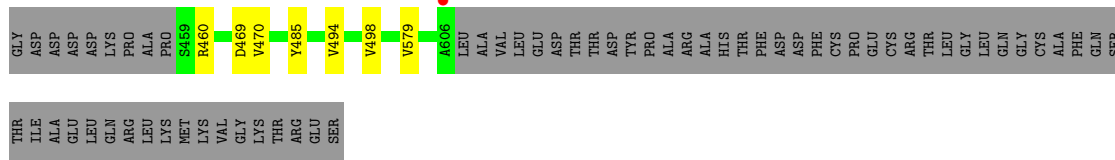
- Molecule 3: Capsid protein



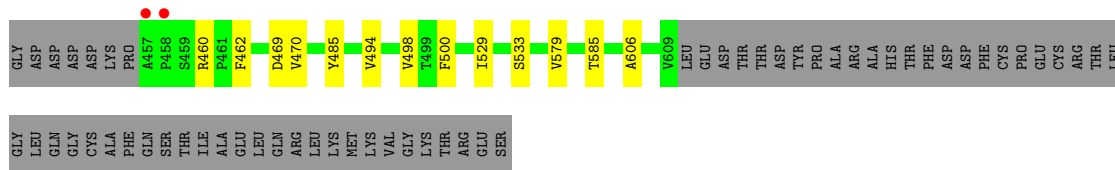
● Molecule 3: Capsid protein



● Molecule 3: Capsid protein



● Molecule 3: Capsid protein



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	88.43Å 94.48Å 91.25Å 90.00° 90.21° 90.00°	Depositor
Resolution (Å)	47.24 – 2.07 47.24 – 2.07	Depositor EDS
% Data completeness (in resolution range)	84.8 (47.24-2.07) 84.7 (47.24-2.07)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.02 (at 2.07Å)	Xtriage
Refinement program	BUSTER 2.10.4	Depositor
R, R_{free}	0.226 , 0.261 0.217 , 0.252	Depositor DCC
R_{free} test set	3868 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	38.9	Xtriage
Anisotropy	0.223	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 35.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.000 for l,k,-h 0.095 for h,-k,-l 0.008 for l,-k,h	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	11149	wwPDB-VP
Average B, all atoms (Å ²)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.09% 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](#)

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	0.39	0/1639	0.63	0/2238
1	H	0.43	0/1670	0.65	0/2278
2	B	0.37	0/1627	0.56	0/2223
2	L	0.43	0/1627	0.60	0/2223
3	C	0.43	0/1163	0.60	0/1596
3	D	0.44	0/1183	0.62	0/1624
3	E	0.41	0/1150	0.59	0/1577
3	F	0.45	0/1183	0.63	0/1624
All	All	0.42	0/11242	0.61	0/15383

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	1601	0	1581	13	0
1	H	1632	0	1612	14	0
2	B	1582	0	1524	8	0
2	L	1582	0	1524	14	0
3	C	1135	0	1112	4	0
3	D	1155	0	1137	7	0
3	E	1123	0	1100	4	0
3	F	1155	0	1137	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	7	0	0	0	0
4	B	14	0	0	0	0
4	C	31	0	0	0	0
4	D	36	0	0	0	0
4	E	17	0	0	0	0
4	F	34	0	0	0	0
4	H	21	0	0	0	0
4	L	24	0	0	0	0
All	All	11149	0	10727	57	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 (57) 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:B:154:LYS:HD3	2:B:157:SER:HA	1.55	0.87
3:D:530:GLN:HB2	3:F:529:ILE:HG22	1.74	0.68
1:A:168:LEU:HD21	1:A:191:VAL:HG21	1.81	0.63
1:H:178:VAL:HG21	2:L:165:GLU:HB3	1.84	0.60
2:B:154:LYS:CD	2:B:157:SER:HA	2.29	0.60
2:L:81:GLN:NE2	2:L:83:GLU:OE1	2.35	0.58
3:D:528:THR:HG21	3:F:606:ALA:HB2	1.86	0.58
1:A:29:PHE:HD1	1:A:32:TYR:HH	1.52	0.57
3:F:460:ARG:NH2	3:F:469:ASP:OD2	2.37	0.56
3:D:515:ASP:O	3:D:518:LYS:HG2	2.05	0.55
2:L:26:SER:HA	2:L:30:GLY:HA3	1.88	0.55
1:A:153:ASP:HB3	1:A:184:LEU:HD13	1.87	0.55
3:D:530:GLN:HB2	3:F:529:ILE:CG2	2.39	0.52
3:C:470:VAL:HG11	3:D:470:VAL:HG11	1.92	0.51
2:B:154:LYS:HB3	2:B:197:SER:HB2	1.93	0.51
1:H:130:VAL:HB	1:H:216:VAL:HG11	1.93	0.50
2:B:18:ILE:HD11	2:B:77:ILE:HD12	1.92	0.50
3:F:462:PHE:CZ	3:F:500:PHE:HB3	2.47	0.50
3:E:485:TYR:HB2	3:E:494:VAL:HG21	1.94	0.50
1:A:29:PHE:HD1	1:A:32:TYR:OH	1.95	0.49
3:C:485:TYR:HB2	3:C:494:VAL:HG21	1.93	0.49
3:F:498:VAL:HG21	3:F:579:VAL:HB	1.93	0.49
1:A:130:VAL:HG21	1:A:207:VAL:HG21	1.94	0.49
1:A:130:VAL:HB	1:A:216:VAL:HG11	1.95	0.49
3:E:498:VAL:HG21	3:E:579:VAL:HB	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:18:ILE:HD11	2:L:77:ILE:HD12	1.94	0.49
3:F:485:TYR:HB2	3:F:494:VAL:HG21	1.94	0.48
3:D:498:VAL:HG21	3:D:579:VAL:HB	1.95	0.48
3:D:485:TYR:HB2	3:D:494:VAL:HG21	1.95	0.48
1:H:190:VAL:CG1	2:L:140:LEU:CD1	2.92	0.48
3:C:498:VAL:HG21	3:C:579:VAL:HB	1.97	0.47
3:E:460:ARG:NH2	3:E:469:ASP:OD2	2.47	0.47
1:A:128:PRO:HB3	1:A:154:TYR:HB3	1.98	0.46
2:B:137:LEU:HB2	2:B:183:LEU:HB3	1.97	0.46
1:H:29:PHE:HD1	1:H:32:TYR:HH	1.62	0.46
1:H:153:ASP:HB3	1:H:184:LEU:HD13	1.98	0.46
1:H:175:PHE:HE2	1:H:190:VAL:HG22	1.81	0.46
1:A:68:VAL:HG11	1:A:81:MET:CE	2.46	0.46
1:A:175:PHE:HE2	1:A:190:VAL:HG22	1.82	0.45
1:H:29:PHE:HD2	1:H:74:LYS:HG2	1.80	0.45
1:H:168:LEU:HD21	1:H:191:VAL:HG21	1.99	0.45
1:H:107:ASN:HB3	2:L:93:TYR:CD1	2.53	0.44
1:A:107:ASN:HB3	2:B:93:TYR:CD1	2.53	0.44
1:H:190:VAL:HG13	2:L:140:LEU:CD1	2.47	0.44
1:A:29:PHE:HD2	1:A:74:LYS:HG2	1.83	0.44
3:E:470:VAL:HG11	3:F:470:VAL:HG11	2.00	0.43
2:L:137:LEU:HB2	2:L:183:LEU:HB3	1.99	0.43
2:B:26:SER:HA	2:B:30:GLY:HA3	2.01	0.43
3:C:559:TYR:HA	3:C:584:TYR:HA	2.01	0.43
1:H:190:VAL:CG1	2:L:140:LEU:HD13	2.49	0.43
3:F:533:SER:OG	2:L:27:SER:HB3	2.19	0.42
1:H:190:VAL:HG13	2:L:140:LEU:HD13	2.01	0.42
2:L:137:LEU:HD12	2:L:183:LEU:HD23	2.02	0.41
1:H:101:GLN:HG2	2:L:51:PHE:CE1	2.54	0.41
1:A:101:GLN:HG2	2:B:51:PHE:CE1	2.55	0.41
1:A:68:VAL:HG11	1:A:81:MET:HE1	2.03	0.40
1:H:190:VAL:HG11	2:L:140:LEU:CD1	2.51	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	209/233 (90%)	197 (94%)	12 (6%)	0	100	100
1	H	214/233 (92%)	202 (94%)	11 (5%)	1 (0%)	29	25
2	B	212/217 (98%)	205 (97%)	6 (3%)	1 (0%)	29	25
2	L	212/217 (98%)	205 (97%)	7 (3%)	0	100	100
3	C	148/211 (70%)	143 (97%)	5 (3%)	0	100	100
3	D	151/211 (72%)	146 (97%)	5 (3%)	0	100	100
3	E	146/211 (69%)	142 (97%)	4 (3%)	0	100	100
3	F	151/211 (72%)	146 (97%)	4 (3%)	1 (1%)	22	17
All	All	1443/1744 (83%)	1386 (96%)	54 (4%)	3 (0%)	47	47

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	29	PHE
3	F	585	THR
2	B	111	LEU

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	182/200 (91%)	176 (97%)	6 (3%)	38	39
1	H	186/200 (93%)	179 (96%)	7 (4%)	33	33
2	B	182/185 (98%)	178 (98%)	4 (2%)	52	55
2	L	182/185 (98%)	179 (98%)	3 (2%)	62	67
3	C	122/174 (70%)	121 (99%)	1 (1%)	81	85
3	D	124/174 (71%)	124 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	E	121/174 (70%)	121 (100%)	0	100	100
3	F	124/174 (71%)	124 (100%)	0	100	100
All	All	1223/1466 (83%)	1202 (98%)	21 (2%)	60	65

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	25	SER
1	A	27	ASP
1	A	65	GLN
1	A	83	MET
1	A	178	VAL
1	A	190	VAL
2	B	94	THR
2	B	113	GLN
2	B	131	GLN
2	B	150	THR
3	C	459	SER
1	H	25	SER
1	H	30	SER
1	H	66	ASP
1	H	83	MET
1	H	136	SER
1	H	178	VAL
1	H	190	VAL
2	L	65	SER
2	L	94	THR
2	L	188	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	H	59	ASN
2	L	199	GLN

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 monosaccharides 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](#)

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	213/233 (91%)	1.04	46 (21%) 0 0	27, 56, 110, 139	1 (0%)
1	H	218/233 (93%)	0.25	11 (5%) 28 33	26, 43, 66, 129	1 (0%)
2	B	213/217 (98%)	1.64	70 (32%) 0 0	31, 71, 135, 196	0
2	L	213/217 (98%)	0.02	3 (1%) 75 78	25, 42, 69, 88	0
3	C	150/211 (71%)	0.19	1 (0%) 87 89	25, 38, 58, 88	0
3	D	153/211 (72%)	0.17	2 (1%) 77 79	27, 37, 49, 65	0
3	E	148/211 (70%)	0.02	1 (0%) 87 89	30, 46, 62, 103	0
3	F	153/211 (72%)	0.14	2 (1%) 77 79	28, 38, 51, 86	0
All	All	1461/1744 (83%)	0.48	136 (9%) 8 10	25, 43, 101, 196	2 (0%)

All (136) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	140	LEU	11.0
2	B	196	TYR	10.1
2	B	161	LYS	8.8
2	B	200	VAL	8.5
2	B	159	PRO	7.9
2	B	191	LYS	7.8
1	A	200	THR	7.7
2	B	214	THR	7.6
2	B	192	SER	7.6
1	A	199	GLY	7.6
2	B	198	CYS	7.4
1	A	29	PHE	7.3
2	B	160	VAL	7.3
2	B	197	SER	6.9
1	A	198	LEU	6.9
2	B	210	THR	6.7

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Mol	Chain	Res	Type	RSRZ
2	B	173	SER	6.5
1	H	29	PHE	6.3
1	A	27	ASP	6.3
1	A	193	VAL	6.1
2	B	212	ALA	6.0
2	B	121	THR	6.0
2	B	190	TRP	5.8
2	B	211	VAL	5.8
1	A	196	SER	5.6
2	B	122	LEU	5.5
1	A	195	SER	5.5
2	B	137	LEU	5.4
1	A	28	THR	5.2
2	B	151	VAL	5.2
2	B	194	ARG	5.2
2	B	138	VAL	5.2
2	B	150	THR	5.1
2	B	162	ALA	5.1
1	H	26	GLY	4.9
2	B	139	CYS	4.9
3	C	457	ALA	4.8
2	B	135	ALA	4.7
2	B	181	SER	4.6
1	A	178	VAL	4.6
2	B	120	VAL	4.6
1	A	194	PRO	4.5
2	B	156	ASP	4.5
1	A	146	ALA	4.4
1	A	132	PRO	4.4
1	A	159	VAL	4.4
1	H	27	ASP	4.4
1	A	197	SER	4.4
1	H	28	THR	4.4
2	B	126	SER	4.3
2	B	149	VAL	4.3
2	B	193	HIS	4.2
1	A	145	ALA	4.2
2	B	124	PRO	4.1
1	A	176	PRO	4.1
1	A	133	LEU	4.0
2	B	186	THR	4.0
3	F	457	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
2	B	195	SER	4.0
1	A	222	PRO	3.9
1	A	131	PHE	3.9
1	A	147	LEU	3.8
2	B	164	VAL	3.8
2	B	153	TRP	3.8
1	A	161	VAL	3.8
2	B	119	SER	3.7
1	A	220	VAL	3.7
2	B	209	LYS	3.7
2	B	187	PRO	3.6
1	H	32	TYR	3.6
1	A	144	THR	3.6
2	B	182	TYR	3.5
2	B	213	PRO	3.5
1	A	203	TYR	3.5
2	B	204	GLY	3.5
2	B	201	THR	3.3
1	H	31	SER	3.2
2	B	116	ALA	3.2
3	D	457	ALA	3.1
2	B	152	ALA	3.0
2	B	157	SER	3.0
1	A	26	GLY	3.0
2	L	214	THR	3.0
1	A	32	TYR	2.9
2	B	188	GLU	2.9
2	B	155	ALA	2.9
1	A	221	GLU	2.9
2	B	83	GLU	2.8
2	B	207	VAL	2.8
2	L	194	ARG	2.8
2	B	154	LYS	2.8
1	A	187	LEU	2.7
1	A	179	LEU	2.7
1	A	170	SER	2.7
2	B	208	GLU	2.7
1	A	189	SER	2.6
2	B	118	PRO	2.6
2	B	168	THR	2.6
1	H	137	SER	2.6
2	B	175	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
2	B	205	SER	2.6
2	B	215	GLU	2.6
3	E	606	ALA	2.5
2	B	167	THR	2.5
2	B	170	SER	2.5
1	A	160	THR	2.5
1	A	149	CYS	2.5
1	A	201	GLN	2.5
1	A	181	SER	2.4
2	B	199	GLN	2.4
1	H	75	SER	2.4
1	A	208	ASN	2.4
1	A	30	SER	2.3
2	B	123	PHE	2.3
1	H	25	SER	2.3
2	B	183	LEU	2.3
1	A	168	LEU	2.3
1	A	185	TYR	2.3
2	B	185	LEU	2.3
1	A	175	PHE	2.3
2	L	215	GLU	2.2
3	F	458	PRO	2.2
1	A	190	VAL	2.2
1	A	134	ALA	2.2
1	H	223	LYS	2.2
2	B	117	ALA	2.1
2	B	115	LYS	2.1
3	D	529	ILE	2.1
2	B	145	TYR	2.1
1	H	143	GLY	2.1
1	A	172	VAL	2.1
2	B	125	PRO	2.1
1	A	25	SER	2.0
1	A	192	THR	2.0
2	B	129	GLU	2.0
2	B	80	LEU	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 [i](#)

There are no monosaccharides 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.