Full wwPDB X-ray Structure Validation Report ⓘ

Sep 25, 2025 – 02:05 PM EDT

PDB ID	:	9PKC / pdb_00009pkc
Title	:	Mur35 Fab with HBV c18V pMHC
Authors	:	Mortenson, D.E.
Deposited on	:	2025-07-14
Resolution	:	2.50 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:

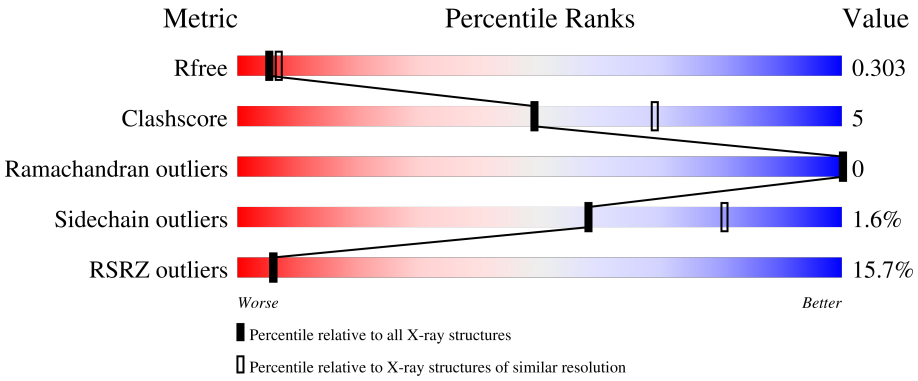
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

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 2.50 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}	164625	5504 (2.50-2.50)
Clashscore	180529	6282 (2.50-2.50)
Ramachandran outliers	177936	6191 (2.50-2.50)
Sidechain outliers	177891	6193 (2.50-2.50)
RSRZ outliers	164620	5504 (2.50-2.50)

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	301	8% 75% 11% 14%
2	H	237	18% 72% 12% 16%
3	L	215	23% 81% 15%
4	P	10	100%
5	B	100	6% 85% 14%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 6087 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 MHC class I antigen.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	259	Total	C	N	O	S	0	1	0
			2068	1301	375	383	9			

There are 25 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	MET	-	initiating methionine	UNP Q8WLS4
A	277	GLY	-	expression tag	UNP Q8WLS4
A	278	SER	-	expression tag	UNP Q8WLS4
A	279	GLY	-	expression tag	UNP Q8WLS4
A	280	GLY	-	expression tag	UNP Q8WLS4
A	281	SER	-	expression tag	UNP Q8WLS4
A	282	GLY	-	expression tag	UNP Q8WLS4
A	283	GLY	-	expression tag	UNP Q8WLS4
A	284	SER	-	expression tag	UNP Q8WLS4
A	285	ALA	-	expression tag	UNP Q8WLS4
A	286	GLY	-	expression tag	UNP Q8WLS4
A	287	GLY	-	expression tag	UNP Q8WLS4
A	288	GLY	-	expression tag	UNP Q8WLS4
A	289	LEU	-	expression tag	UNP Q8WLS4
A	290	ASN	-	expression tag	UNP Q8WLS4
A	291	ASP	-	expression tag	UNP Q8WLS4
A	292	ILE	-	expression tag	UNP Q8WLS4
A	293	PHE	-	expression tag	UNP Q8WLS4
A	294	GLU	-	expression tag	UNP Q8WLS4
A	295	ALA	-	expression tag	UNP Q8WLS4
A	296	GLN	-	expression tag	UNP Q8WLS4
A	297	LYS	-	expression tag	UNP Q8WLS4
A	298	ILE	-	expression tag	UNP Q8WLS4
A	299	GLU	-	expression tag	UNP Q8WLS4
A	300	TRP	-	expression tag	UNP Q8WLS4

- Molecule 2 is a protein called Mur35 Heavy Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	200	Total	C	N	O	S	0	2	0
			1455	915	244	291	5			

- Molecule 3 is a protein called Mur35 Light Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	L	209	Total	C	N	O	S	0	1	0
			1520	940	258	317	5			

- Molecule 4 is a protein called c18V peptide.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	P	10	Total	C	N	O	0	0	0
			83	58	10	15			

- Molecule 5 is a protein called Beta-2-microglobulin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	B	99	Total	C	N	O	S	0	1	0
			809	515	136	155	3			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	0	MET	-	initiating methionine	UNP P61769

- Molecule 6 is water.

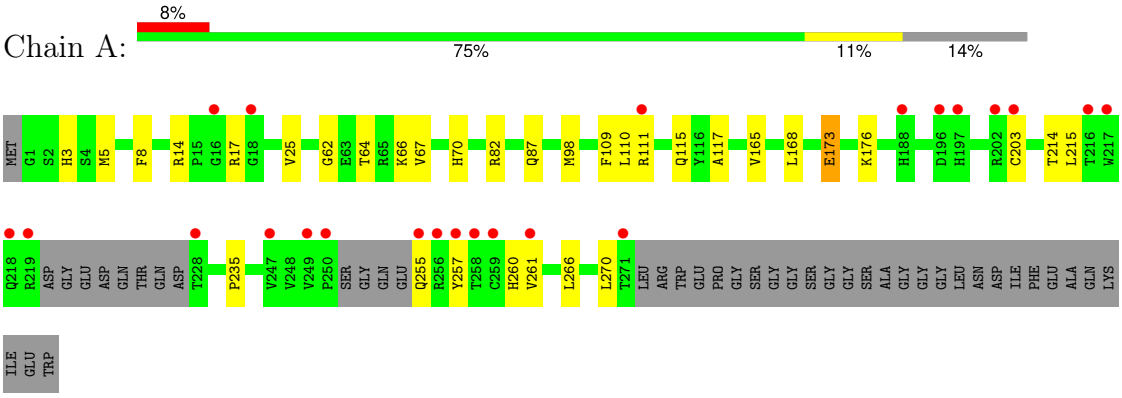
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	76	Total	O	0	0
			76	76		
6	H	35	Total	O	0	0
			35	35		
6	L	22	Total	O	0	0
			22	22		
6	P	2	Total	O	0	0
			2	2		
6	B	17	Total	O	0	0
			17	17		

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.

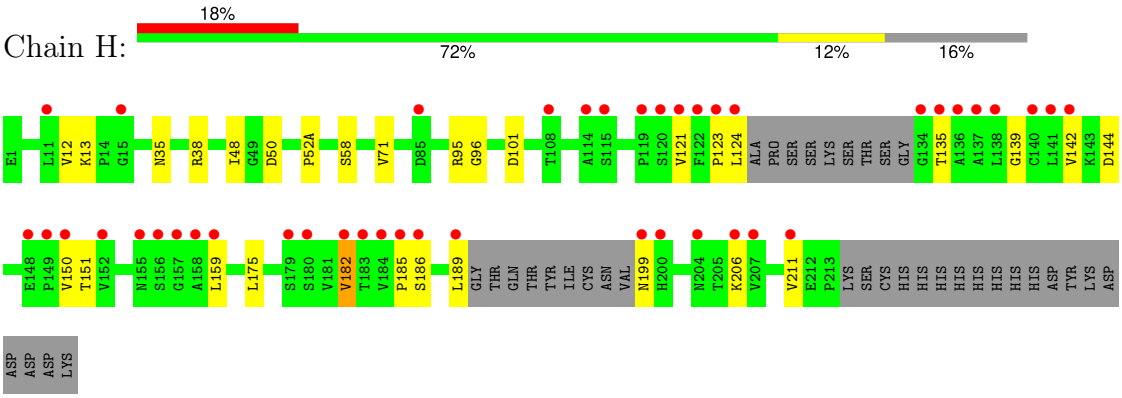
• Molecule 1: MHC class I antigen

Chain A:



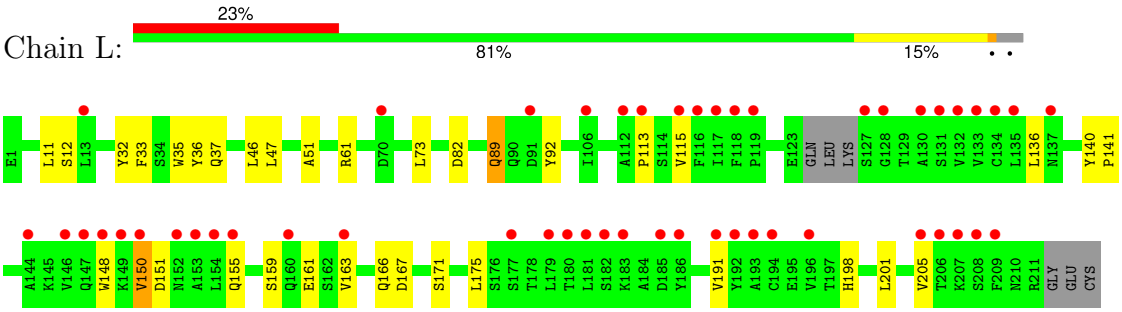
• Molecule 2: Mur35 Heavy Chain

Chain H:



• Molecule 3: Mur35 Light Chain

Chain L:



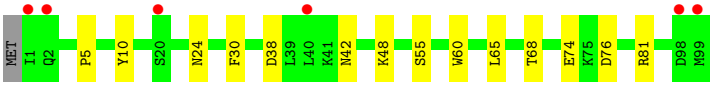
• Molecule 4: c18V peptide

Chain P:

There are no outlier residues recorded for this chain.

• Molecule 5: Beta-2-microglobulin

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 2 21 21	Depositor
Cell constants a, b, c, α, β, γ	72.53Å 72.81Å 173.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	55.76 – 2.50 55.76 – 2.50	Depositor EDS
% Data completeness (in resolution range)	95.4 (55.76-2.50) 95.5 (55.76-2.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.14	Depositor
$< I/\sigma(I) >$ [1]	1.28 (at 2.51Å)	Xtriage
Refinement program	PHENIX 1.21_5207	Depositor
R, R_{free}	0.258 , 0.302 0.257 , 0.303	Depositor DCC
R_{free} test set	1574 reflections (4.82%)	wwPDB-VP
Wilson B-factor (Å^2)	51.9	Xtriage
Anisotropy	0.578	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 64.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.021 for k,h,-l	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	6087	wwPDB-VP
Average B, all atoms (Å^2)	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.52% of the height of the origin peak. No significant pseudotranslation is detected.*

[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

5.1 Standard geometry

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	0.09	0/2131	0.25	0/2898
2	H	0.09	0/1496	0.25	0/2041
3	L	0.09	0/1554	0.26	0/2126
4	P	0.14	0/87	0.26	0/117
5	B	0.08	0/835	0.23	0/1135
All	All	0.09	0/6103	0.25	0/8317

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

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	2068	0	1910	18	0
2	H	1455	0	1326	17	0
3	L	1520	0	1393	21	0
4	P	83	0	77	0	0
5	B	809	0	749	8	0
6	A	76	0	0	2	0
6	B	17	0	0	0	0
6	H	35	0	0	0	0
6	L	22	0	0	0	0
6	P	2	0	0	0	0
All	All	6087	0	5455	60	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 5.

All (60) 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:H:135:THR:HA	2:H:185:PRO:HA	1.76	0.66
3:L:36:TYR:HE1	3:L:89:GLN:HG2	1.62	0.65
3:L:163:VAL:HG22	3:L:175:LEU:HD13	1.79	0.64
2:H:52(A):PRO:HA	2:H:71:VAL:HG11	1.80	0.64
3:L:161:GLU:HB3	3:L:175:LEU:HD11	1.80	0.63
1:A:215:LEU:HD21	1:A:261:VAL:HG22	1.81	0.61
1:A:110:LEU:HG	1:A:111[A]:ARG:HG2	1.84	0.60
3:L:141:PRO:HD2	3:L:198:HIS:HE1	1.67	0.59
1:A:115:GLN:NE2	6:A:404:HOH:O	2.35	0.58
1:A:117:ALA:HB2	5:B:60:TRP:CE2	2.40	0.56
2:H:144:ASP:HB3	2:H:175:LEU:HD13	1.87	0.56
3:L:148:TRP:CD1	3:L:159:SER:HG	2.24	0.56
5:B:24:ASN:HB3	5:B:65:LEU:HD11	1.89	0.54
2:H:124:LEU:HB2	2:H:139:GLY:HA3	1.90	0.54
1:A:82:ARG:NH1	1:A:87:GLN:O	2.40	0.54
1:A:3:HIS:NE2	6:A:403:HOH:O	2.33	0.53
1:A:66:LYS:O	1:A:70:HIS:ND1	2.35	0.53
2:H:96:GLY:HA2	2:H:101:ASP:OD2	2.08	0.52
5:B:38:ASP:OD2	5:B:81:ARG:NH2	2.42	0.52
3:L:33:PHE:HB3	3:L:51:ALA:HB2	1.92	0.51
2:H:38:ARG:HB2	2:H:48:ILE:HD11	1.92	0.51
2:H:199:ASN:HB2	2:H:206:LYS:HD2	1.93	0.50
1:A:5:MET:HB2	1:A:168:LEU:HD13	1.94	0.49
3:L:150:VAL:HG12	3:L:155:GLN:HB2	1.96	0.48
2:H:35:ASN:HD21	2:H:95:ARG:HB2	1.79	0.47
1:A:25:VAL:HG21	5:B:55[A]:SER:HB3	1.97	0.47
3:L:37:GLN:HB2	3:L:47:LEU:HD11	1.97	0.47
3:L:113:PRO:HD2	3:L:201:LEU:HD21	1.97	0.47
5:B:5:PRO:HB3	5:B:30:PHE:HB3	1.97	0.47
1:A:62:GLY:O	1:A:66:LYS:HG2	2.15	0.47
1:A:266:LEU:HD13	1:A:270:LEU:HD13	1.97	0.46
3:L:166:GLN:HE21	3:L:171:SER:HB3	1.79	0.46
3:L:113:PRO:HD3	3:L:198:HIS:CD2	2.51	0.46
2:H:151:THR:O	2:H:199:ASN:N	2.49	0.45
1:A:109:PHE:HB2	1:A:165:VAL:HG21	1.99	0.45
3:L:136:LEU:HD23	3:L:175:LEU:HB3	1.97	0.45
3:L:12:SER:OG	3:L:140:TYR:OH	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:151:ASP:HA	3:L:191:VAL:HB	1.98	0.45
2:H:159:LEU:HG	2:H:182:VAL:HG11	1.98	0.44
3:L:61:ARG:NE	3:L:82:ASP:OD2	2.49	0.44
1:A:255:GLN:NE2	1:A:257:TYR:O	2.51	0.44
2:H:123:PRO:HB3	2:H:211:VAL:HG22	1.99	0.43
2:H:199:ASN:N	2:H:206:LYS:HZ2	2.16	0.43
5:B:42:ASN:HD21	5:B:76:ASP:HA	1.83	0.43
3:L:115:VAL:HG11	3:L:205:VAL:HG21	2.00	0.43
2:H:186:SER:HA	2:H:189:LEU:HD13	2.00	0.43
2:H:50:ASP:OD1	2:H:58:SER:OG	2.28	0.42
2:H:121:VAL:HG22	2:H:142:VAL:HG22	2.01	0.42
3:L:32:TYR:HB2	3:L:92:TYR:HB2	2.01	0.42
3:L:33:PHE:HE1	3:L:35:TRP:NE1	2.16	0.42
1:A:235:PRO:O	5:B:10:TYR:OH	2.25	0.42
2:H:12:VAL:HG12	2:H:13:LYS:O	2.19	0.42
1:A:8:PHE:CE2	1:A:98:MET:HG3	2.55	0.42
1:A:173:GLU:O	1:A:176:LYS:HE3	2.19	0.42
3:L:167:ASP:HB3	3:L:171:SER:N	2.35	0.41
2:H:101:ASP:HA	3:L:46:LEU:HD22	2.03	0.41
1:A:64:THR:O	1:A:67:VAL:HG12	2.22	0.40
5:B:48:LYS:O	5:B:68:THR:OG1	2.33	0.40
1:A:14:ARG:HB2	1:A:17:ARG:HB2	2.04	0.40
3:L:35:TRP:CE2	3:L:73:LEU:HB2	2.57	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	254/301 (84%)	246 (97%)	8 (3%)	0	100	100
2	H	196/237 (83%)	178 (91%)	18 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	L	206/215 (96%)	189 (92%)	17 (8%)	0	100	100
4	P	8/10 (80%)	7 (88%)	1 (12%)	0	100	100
5	B	98/100 (98%)	95 (97%)	3 (3%)	0	100	100
All	All	762/863 (88%)	715 (94%)	47 (6%)	0	100	100

There are no Ramachandran outliers to report.

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	206/247 (83%)	202 (98%)	4 (2%)	52	77
2	H	151/205 (74%)	149 (99%)	2 (1%)	65	85
3	L	162/186 (87%)	159 (98%)	3 (2%)	52	77
4	P	10/10 (100%)	10 (100%)	0	100	100
5	B	89/95 (94%)	88 (99%)	1 (1%)	70	87
All	All	618/743 (83%)	608 (98%)	10 (2%)	58	80

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	173	GLU
1	A	203	CYS
1	A	214	THR
1	A	260	HIS
2	H	150	VAL
2	H	182	VAL
3	L	11	LEU
3	L	89	GLN
3	L	150	VAL
5	B	74	GLU

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

sidechains are listed below:

Mol	Chain	Res	Type
1	A	155	GLN
1	A	192	HIS
2	H	52	ASN
3	L	42	GLN
3	L	152	ASN
5	B	13	HIS
5	B	42	ASN

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 oligosaccharides 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

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, 95^{th} 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	259/301 (86%)	0.62	23 (8%) 17 16	28, 52, 106, 122	1 (0%)
2	H	200/237 (84%)	1.16	43 (21%) 3 3	43, 67, 122, 138	2 (1%)
3	L	209/215 (97%)	1.25	50 (23%) 2 2	44, 83, 128, 141	1 (0%)
4	P	10/10 (100%)	0.74	0 100 100	41, 45, 50, 54	0
5	B	99/100 (99%)	0.89	6 (6%) 28 26	32, 69, 95, 103	1 (1%)
All	All	777/863 (90%)	0.96	122 (15%) 6 6	28, 64, 122, 141	5 (0%)

All (122) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	L	192	TYR	5.4
3	L	154	LEU	5.0
1	A	217	TRP	4.6
5	B	98	ASP	4.5
3	L	118	PHE	4.2
3	L	194	CYS	4.1
3	L	134	CYS	3.9
3	L	115	VAL	3.9
1	A	256	ARG	3.8
2	H	200	HIS	3.7
3	L	186	TYR	3.7
3	L	117	ILE	3.6
2	H	122	PHE	3.5
2	H	124	LEU	3.5
5	B	20	SER	3.5
1	A	228	THR	3.5
2	H	159	LEU	3.4
5	B	1	ILE	3.4
1	A	247	VAL	3.4
5	B	99	MET	3.3

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Mol	Chain	Res	Type	RSRZ
5	B	40	LEU	3.3
2	H	142	VAL	3.2
1	A	258	THR	3.2
3	L	148	TRP	3.2
2	H	155	ASN	3.2
3	L	132	VAL	3.1
3	L	112	ALA	3.1
1	A	271	THR	3.1
3	L	116	PHE	3.1
3	L	133	VAL	3.1
2	H	180	SER	3.1
1	A	259	CYS	3.1
2	H	185	PRO	3.0
3	L	150	VAL	3.0
2	H	141	LEU	3.0
1	A	16	GLY	3.0
3	L	70	ASP	2.9
2	H	179[A]	SER	2.9
2	H	186	SER	2.9
2	H	85	ASP	2.9
1	A	218	GLN	2.9
2	H	148	GLU	2.9
2	H	121	VAL	2.9
2	H	182	VAL	2.9
2	H	184	VAL	2.9
2	H	11	LEU	2.8
2	H	120	SER	2.8
3	L	160	GLN	2.8
3	L	119[A]	PRO	2.8
2	H	115	SER	2.8
3	L	128	GLY	2.8
2	H	137	ALA	2.8
3	L	181	LEU	2.7
1	A	219	ARG	2.7
3	L	180	THR	2.7
2	H	207	VAL	2.6
2	H	204	ASN	2.6
2	H	136	ALA	2.6
3	L	130	ALA	2.6
3	L	193	ALA	2.6
3	L	185	ASP	2.6
3	L	179	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
3	L	131	SER	2.6
2	H	123	PRO	2.6
2	H	183	THR	2.6
1	A	18	GLY	2.6
3	L	146	VAL	2.5
3	L	147	GLN	2.5
3	L	127	SER	2.5
2	H	135	THR	2.5
3	L	191	VAL	2.5
2	H	156	SER	2.5
3	L	208	SER	2.5
1	A	202	ARG	2.5
3	L	149	LYS	2.5
1	A	203	CYS	2.5
2	H	189	LEU	2.5
1	A	216	THR	2.5
2	H	150	VAL	2.4
3	L	205	VAL	2.4
2	H	114	ALA	2.4
3	L	177	SER	2.4
3	L	207	LYS	2.4
2	H	138	LEU	2.4
2	H	140	CYS	2.4
2	H	119	PRO	2.4
2	H	211	VAL	2.4
3	L	153	ALA	2.4
2	H	157	GLY	2.4
3	L	209	PHE	2.3
3	L	137	ASN	2.3
2	H	158	ALA	2.3
3	L	135	LEU	2.3
3	L	183	LYS	2.3
1	A	250	PRO	2.3
2	H	134	GLY	2.3
1	A	255	GLN	2.3
1	A	188	HIS	2.2
1	A	197	HIS	2.2
2	H	206	LYS	2.2
2	H	199	ASN	2.2
1	A	261	VAL	2.2
3	L	196	VAL	2.2
3	L	144	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
3	L	152	ASN	2.2
2	H	149	PRO	2.2
5	B	2	GLN	2.2
3	L	206	THR	2.1
3	L	91	ASP	2.1
1	A	249	VAL	2.1
3	L	163	VAL	2.1
2	H	108	THR	2.1
3	L	113	PRO	2.1
3	L	182	SER	2.1
3	L	155	GLN	2.1
1	A	257	TYR	2.1
1	A	196	ASP	2.1
3	L	106	ILE	2.1
3	L	13	LEU	2.0
1	A	111[A]	ARG	2.0
2	H	152	VAL	2.0
2	H	15	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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.