Full wwPDB X-ray Structure Validation Report ⓘ

Aug 4, 2025 – 05:24 PM JST

PDB ID	:	9UL1 / pdb_00009ul1
Title	:	Crystal structure of Tibetan wild boar SLA-1*Z0301 for 2.32 angstrom
Authors	:	Fan, S.; Wang, Y.
Deposited on	:	2025-04-18
Resolution	:	2.32 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:

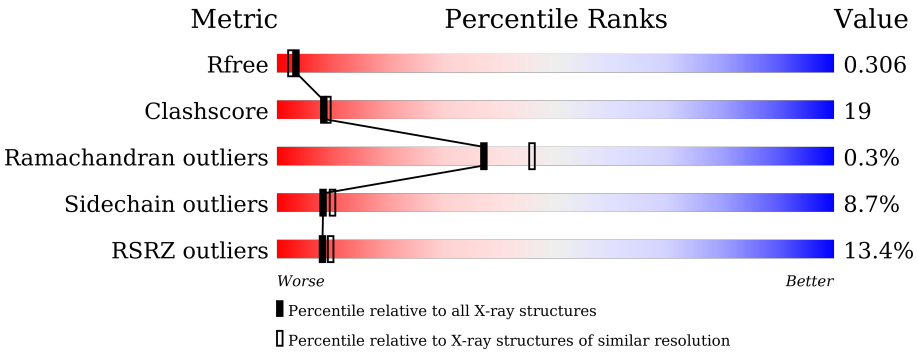
MolProbity	:	4-5-2 with Phenix2.0rc1
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

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 2.32 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	7250 (2.34-2.30)
Clashscore	180529	8063 (2.34-2.30)
Ramachandran outliers	177936	7993 (2.34-2.30)
Sidechain outliers	177891	7993 (2.34-2.30)
RSRZ outliers	164620	7250 (2.34-2.30)

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	276	12% 62% 33% 5%
2	B	97	13% 70% 26% . .
3	C	9	67% 67% 22% 11%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 3118 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	276	Total	C	N	O	S	0	0	0
			2255	1415	400	430	10			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP A0A286S063
A	71	ALA	THR	conflict	UNP A0A286S063

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	97	Total	C	N	O	S	0	0	0
			800	510	140	147	3			

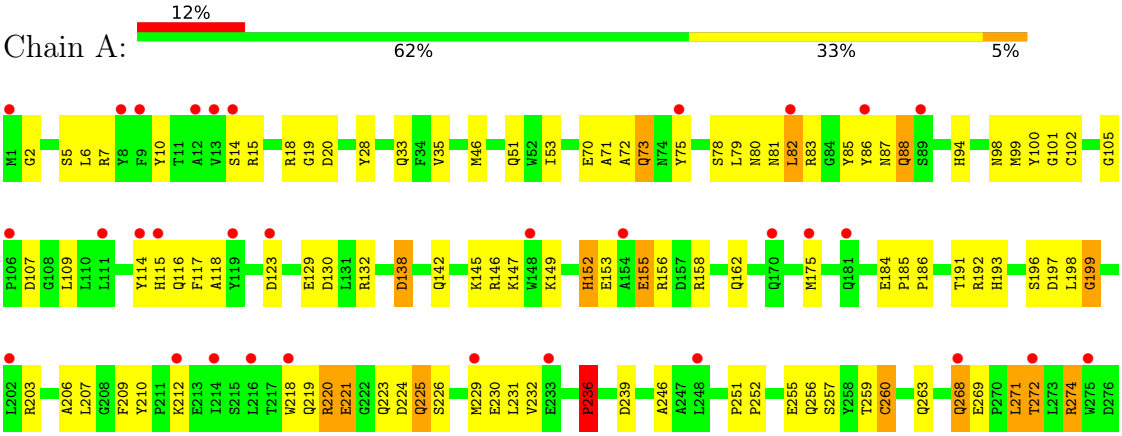
- Molecule 3 is a protein called ALA-LEU-LEU-SER-SER-LYS-THR-SER-VAL.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	C	9	Total	C	N	O	0	0	0
			63	39	10	14			

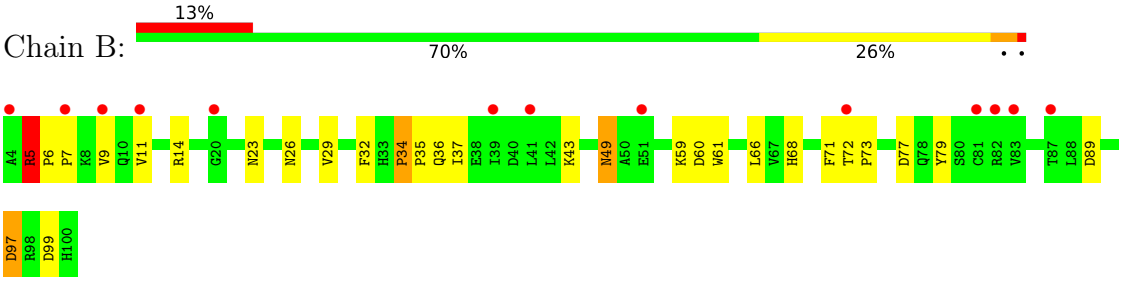
3 Residue-property plots (i)

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.

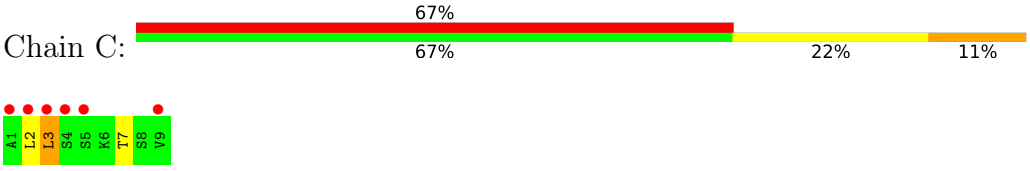
• Molecule 1: MHC class I antigen



• Molecule 2: Beta-2-microglobulin



• Molecule 3: ALA-LEU-LEU-SER-SER-LYS-THR-SER-VAL



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	156.81Å 48.43Å 53.42Å 90.00° 100.47° 90.00°	Depositor
Resolution (Å)	46.25 – 2.32 46.25 – 2.32	Depositor EDS
% Data completeness (in resolution range)	92.7 (46.25-2.32) 92.7 (46.25-2.32)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.47 (at 2.32Å)	Xtriage
Refinement program	REFMAC 5.8.0430	Depositor
R, R_{free}	0.278 , 0.294 0.281 , 0.306	Depositor DCC
R_{free} test set	860 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	31.3	Xtriage
Anisotropy	1.279	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 48.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	3118	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.06% 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	0.65	1/2319 (0.0%)	1.11	13/3144 (0.4%)
2	B	0.72	1/825 (0.1%)	1.13	6/1119 (0.5%)
3	C	0.34	0/62	0.87	0/81
All	All	0.66	2/3206 (0.1%)	1.11	19/4344 (0.4%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	236	PRO	CA-C	5.43	1.59	1.52
2	B	5	ARG	C-N	5.13	1.39	1.33

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	184	GLU	CA-C-N	12.13	128.39	119.66
1	A	184	GLU	C-N-CA	12.13	128.39	119.66
2	B	34	PRO	CA-C-N	10.18	129.92	119.64
2	B	34	PRO	C-N-CA	10.18	129.92	119.64
1	A	251	PRO	CA-C-N	7.08	127.50	119.93
1	A	251	PRO	C-N-CA	7.08	127.50	119.93
1	A	210	TYR	C-N-CD	6.57	135.06	120.60
2	B	5	ARG	CA-C-N	-6.30	113.89	120.38
2	B	5	ARG	C-N-CA	-6.30	113.89	120.38
1	A	2	GLY	CA-C-N	-6.08	113.71	119.85
1	A	2	GLY	C-N-CA	-6.08	113.71	119.85
1	A	185	PRO	O-C-N	6.04	123.99	121.15
1	A	271	LEU	N-CA-C	5.91	118.05	108.41
1	A	212	LYS	N-CA-C	5.45	117.22	111.28
1	A	70	GLU	N-CA-C	-5.40	105.39	111.28
1	A	138	ASP	N-CA-C	5.37	115.64	108.23
1	A	129	GLU	N-CA-C	5.36	117.12	111.28
2	B	6	PRO	CA-C-N	-5.04	113.53	119.84
2	B	6	PRO	C-N-CA	-5.04	113.53	119.84

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	2255	0	2110	92	0
2	B	800	0	770	26	0
3	C	63	0	73	3	0
All	All	3118	0	2953	114	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 19.

All (114) 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:34:PRO:HB2	2:B:35:PRO:HD2	1.30	1.08
1:A:18:ARG:NH1	1:A:20:ASP:OD2	1.89	1.06
1:A:73:GLN:HE21	1:A:73:GLN:HA	1.27	1.00
2:B:5:ARG:NH2	2:B:60:ASP:O	1.94	1.00
1:A:268:GLN:HA	1:A:268:GLN:OE1	1.60	0.98
1:A:153:GLU:OE2	3:C:7:THR:OG1	1.84	0.95
1:A:85:TYR:OH	1:A:147:LYS:NZ	2.02	0.91
1:A:88:GLN:HG2	1:A:94:HIS:CE1	2.06	0.90
1:A:98:ASN:HD21	1:A:115:HIS:CD2	1.95	0.84
2:B:34:PRO:CB	2:B:35:PRO:HD2	2.08	0.83
1:A:15:ARG:O	1:A:19:GLY:N	2.13	0.82
1:A:142:GLN:O	1:A:146:ARG:HG2	1.80	0.82
2:B:34:PRO:HB2	2:B:35:PRO:CD	2.08	0.81
1:A:221:GLU:N	1:A:221:GLU:OE2	2.14	0.81
2:B:7:PRO:HB3	2:B:32:PHE:HB3	1.65	0.77
1:A:220:ARG:HE	1:A:221:GLU:HG2	1.47	0.77
1:A:274:ARG:HB2	1:A:274:ARG:HH11	1.51	0.76
1:A:220:ARG:HH22	1:A:223:GLN:HG3	1.51	0.75
1:A:88:GLN:HG2	1:A:94:HIS:NE2	2.03	0.74
1:A:158:ARG:O	1:A:162:GLN:HG3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:34:PRO:CB	2:B:35:PRO:CD	2.66	0.73
1:A:145:LYS:O	1:A:149:LYS:HB2	1.87	0.73
1:A:220:ARG:HG2	1:A:221:GLU:HG2	1.71	0.71
1:A:220:ARG:HH11	1:A:221:GLU:HB2	1.57	0.70
1:A:80:ASN:ND2	1:A:83:ARG:HH21	1.90	0.69
1:A:152:HIS:O	1:A:155:GLU:HB2	1.93	0.69
1:A:268:GLN:OE1	1:A:268:GLN:CA	2.40	0.68
1:A:81:ASN:O	1:A:85:TYR:HD1	1.76	0.68
1:A:223:GLN:OE1	1:A:223:GLN:HA	1.92	0.68
1:A:239:ASP:HB3	2:B:14:ARG:NH1	2.10	0.66
1:A:220:ARG:HE	1:A:221:GLU:CG	2.08	0.66
1:A:81:ASN:O	1:A:85:TYR:CD1	2.49	0.64
2:B:77:ASP:HB3	2:B:79:TYR:CE1	2.33	0.64
1:A:73:GLN:HE21	1:A:73:GLN:CA	2.05	0.64
2:B:97:ASP:OD1	2:B:97:ASP:C	2.41	0.63
1:A:83:ARG:HA	1:A:88:GLN:HB2	1.81	0.63
1:A:191:THR:OG1	1:A:193:HIS:HE1	1.80	0.62
2:B:26:ASN:HB3	2:B:66:LEU:HD11	1.83	0.60
1:A:220:ARG:NH2	1:A:223:GLN:HG3	2.16	0.60
1:A:99:MET:HE2	1:A:116:GLN:NE2	2.17	0.59
1:A:5:SER:HA	1:A:102:CYS:O	2.04	0.58
2:B:43:LYS:HD2	2:B:79:TYR:CZ	2.39	0.57
1:A:138:ASP:O	1:A:142:GLN:HG2	2.04	0.57
1:A:259:THR:HB	1:A:272:THR:HG22	1.86	0.57
2:B:49:ASN:HD22	2:B:49:ASN:N	2.03	0.56
1:A:220:ARG:NH1	1:A:221:GLU:HB2	2.21	0.56
1:A:80:ASN:HD22	1:A:83:ARG:HH21	1.53	0.56
1:A:53:ILE:HD12	1:A:175:MET:HE1	1.86	0.55
1:A:78:SER:O	1:A:82:LEU:HD22	2.06	0.55
1:A:118:ALA:HB2	2:B:61:TRP:CE2	2.42	0.55
1:A:231:LEU:HD12	1:A:246:ALA:HB2	1.88	0.55
1:A:191:THR:OG1	1:A:193:HIS:CE1	2.59	0.55
2:B:26:ASN:HD22	2:B:68:HIS:HB3	1.73	0.54
1:A:197:ASP:N	1:A:197:ASP:OD1	2.41	0.54
1:A:7:ARG:HG2	1:A:114:TYR:OH	2.08	0.53
1:A:192:ARG:NH1	1:A:255:GLU:OE2	2.40	0.53
1:A:220:ARG:HE	1:A:221:GLU:HB2	1.74	0.52
1:A:219:GLN:HA	1:A:223:GLN:O	2.10	0.52
1:A:83:ARG:HA	1:A:88:GLN:HE21	1.74	0.52
1:A:130:ASP:OD1	1:A:132:ARG:HB2	2.10	0.52
1:A:220:ARG:NE	1:A:221:GLU:HG2	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:203:ARG:NH2	2:B:99:ASP:O	2.43	0.52
1:A:186:PRO:HB3	1:A:209:PHE:HB3	1.92	0.52
1:A:73:GLN:HA	1:A:73:GLN:NE2	2.10	0.51
1:A:15:ARG:CB	1:A:18:ARG:HB2	2.40	0.51
1:A:220:ARG:NH2	1:A:223:GLN:CG	2.74	0.51
1:A:7:ARG:HD2	1:A:114:TYR:OH	2.11	0.51
2:B:23:ASN:HB3	2:B:71:PHE:CE1	2.46	0.51
1:A:15:ARG:HB3	1:A:18:ARG:HB2	1.93	0.50
1:A:107:ASP:OD2	1:A:109:LEU:HB2	2.12	0.50
1:A:220:ARG:HE	1:A:221:GLU:CB	2.25	0.50
1:A:259:THR:HG22	1:A:274:ARG:HG3	1.94	0.50
1:A:236:PRO:HG2	2:B:66:LEU:HD22	1.93	0.50
2:B:77:ASP:HB3	2:B:79:TYR:HE1	1.74	0.49
1:A:71:ALA:O	1:A:72:ALA:C	2.53	0.49
1:A:14:SER:HB3	1:A:79:LEU:HD13	1.94	0.49
1:A:100:TYR:HB3	1:A:115:HIS:CD2	2.48	0.48
1:A:85:TYR:HH	1:A:147:LYS:NZ	2.10	0.47
2:B:60:ASP:C	2:B:60:ASP:OD1	2.57	0.47
1:A:100:TYR:CZ	3:C:3:LEU:HB3	2.50	0.46
1:A:196:SER:HB3	1:A:199:GLY:HA3	1.98	0.46
1:A:28:TYR:CE1	1:A:33:GLN:HB2	2.50	0.46
1:A:105:GLY:C	1:A:107:ASP:H	2.24	0.46
1:A:105:GLY:HA3	1:A:107:ASP:OD1	2.16	0.46
1:A:10:TYR:OH	3:C:2:LEU:HD22	2.16	0.45
1:A:220:ARG:O	1:A:223:GLN:HB2	2.17	0.45
2:B:43:LYS:HD2	2:B:79:TYR:OH	2.16	0.45
1:A:83:ARG:O	1:A:87:ASN:N	2.50	0.45
1:A:218:TRP:H	1:A:229:MET:HE1	1.80	0.45
1:A:81:ASN:HB3	1:A:85:TYR:CE1	2.52	0.45
2:B:43:LYS:HD2	2:B:79:TYR:CE2	2.52	0.45
1:A:116:GLN:C	1:A:117:PHE:CD1	2.96	0.44
1:A:6:LEU:O	1:A:101:GLY:HA3	2.17	0.44
1:A:80:ASN:ND2	1:A:83:ARG:NH2	2.61	0.43
1:A:115:HIS:CE1	1:A:117:PHE:HZ	2.36	0.43
1:A:224:ASP:OD1	1:A:225:GLN:N	2.51	0.43
1:A:198:LEU:HA	1:A:252:PRO:HG2	2.00	0.43
1:A:86:TYR:HB2	1:A:88:GLN:NE2	2.34	0.43
1:A:260:CYS:O	1:A:272:THR:HA	2.19	0.42
2:B:49:ASN:N	2:B:49:ASN:ND2	2.67	0.42
2:B:11:VAL:O	2:B:11:VAL:HG13	2.19	0.42
1:A:35:VAL:HG21	1:A:46:MET:HE1	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:GLY:C	1:A:107:ASP:N	2.78	0.42
1:A:230:GLU:O	1:A:246:ALA:HA	2.20	0.42
1:A:115:HIS:CE1	1:A:117:PHE:CZ	3.08	0.41
1:A:218:TRP:HB2	1:A:229:MET:HE2	2.02	0.41
1:A:220:ARG:NE	1:A:221:GLU:HB2	2.35	0.41
2:B:36:GLN:O	2:B:37:ILE:HB	2.20	0.41
1:A:206:ALA:C	1:A:207:LEU:HD12	2.46	0.41
2:B:9:VAL:HG22	2:B:29:VAL:HG22	2.02	0.41
1:A:10:TYR:HD2	1:A:75:TYR:CZ	2.39	0.41
2:B:72:THR:HA	2:B:73:PRO:HD2	1.94	0.41
1:A:15:ARG:N	1:A:20:ASP:O	2.39	0.41
1:A:7:ARG:CG	1:A:114:TYR:OH	2.69	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	274/276 (99%)	258 (94%)	15 (6%)	1 (0%)	30 37
2	B	95/97 (98%)	89 (94%)	6 (6%)	0	100 100
3	C	7/9 (78%)	7 (100%)	0	0	100 100
All	All	376/382 (98%)	354 (94%)	21 (6%)	1 (0%)	37 46

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	199	GLY

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	234/234 (100%)	211 (90%)	23 (10%)	6 7
2	B	90/90 (100%)	85 (94%)	5 (6%)	17 25
3	C	8/8 (100%)	7 (88%)	1 (12%)	3 4
All	All	332/332 (100%)	303 (91%)	29 (9%)	8 10

All (29) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	51	GLN
1	A	73	GLN
1	A	82	LEU
1	A	88	GLN
1	A	123	ASP
1	A	152	HIS
1	A	155	GLU
1	A	156	ARG
1	A	220	ARG
1	A	221	GLU
1	A	225	GLN
1	A	226	SER
1	A	232	VAL
1	A	236	PRO
1	A	256	GLN
1	A	257	SER
1	A	260	CYS
1	A	263	GLN
1	A	268	GLN
1	A	269	GLU
1	A	271	LEU
1	A	272	THR
1	A	274	ARG
2	B	5	ARG
2	B	49	ASN
2	B	59	LYS

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Mol	Chain	Res	Type
2	B	89	ASP
2	B	97	ASP
3	C	3	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	55	GLN
1	A	73	GLN
1	A	74	ASN
1	A	80	ASN
1	A	88	GLN
1	A	97	GLN
1	A	98	ASN
1	A	116	GLN
1	A	159	ASN
1	A	189	HIS
1	A	193	HIS
1	A	225	GLN
1	A	227	GLN
1	A	256	GLN
1	A	263	GLN
2	B	26	ASN
2	B	49	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 (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, 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	276/276 (100%)	1.04	32 (11%) 11 12	37, 65, 104, 119	0
2	B	97/97 (100%)	0.96	13 (13%) 8 9	44, 60, 86, 95	0
3	C	9/9 (100%)	3.18	6 (66%) 0 0	107, 118, 125, 127	0
All	All	382/382 (100%)	1.07	51 (13%) 8 9	37, 64, 108, 127	0

All (51) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	C	9	VAL	4.8
1	A	181	GLN	4.8
2	B	7	PRO	4.7
3	C	2	LEU	4.6
1	A	170	GLN	4.5
3	C	1	ALA	4.3
3	C	3	LEU	4.2
2	B	81	CYS	4.0
1	A	175	MET	3.8
1	A	114	TYR	3.3
2	B	41	LEU	3.3
1	A	8	TYR	3.2
2	B	82	ARG	3.1
1	A	12	ALA	3.1
2	B	83	VAL	3.1
2	B	4	ALA	3.1
1	A	148	TRP	3.1
1	A	82	LEU	3.0
2	B	9	VAL	2.9
3	C	4	SER	2.9
2	B	20	GLY	2.8
1	A	216	LEU	2.8
1	A	14	SER	2.8

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Mol	Chain	Res	Type	RSRZ
1	A	214	ILE	2.8
1	A	202	LEU	2.8
1	A	233	GLU	2.5
1	A	154	ALA	2.5
1	A	119	TYR	2.5
1	A	115	HIS	2.5
3	C	5	SER	2.5
1	A	1	MET	2.4
1	A	123	ASP	2.4
2	B	87	THR	2.4
1	A	13	VAL	2.4
1	A	106	PRO	2.4
2	B	11	VAL	2.2
1	A	89	SER	2.2
1	A	218	TRP	2.2
1	A	275	TRP	2.2
1	A	248	LEU	2.2
1	A	75	TYR	2.2
1	A	86	TYR	2.2
1	A	272	THR	2.2
2	B	72	THR	2.2
1	A	111	LEU	2.1
1	A	229	MET	2.1
2	B	51	GLU	2.1
1	A	9	PHE	2.1
1	A	268	GLN	2.0
1	A	212	LYS	2.0
2	B	39	ILE	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.