Full wwPDB X-ray Structure Validation Report ⓘ

Oct 11, 2023 – 06:49 AM EDT

PDB ID	:	7L4J
Title	:	Crystal structure of WT PPM1H phosphatase
Authors	:	Khan, A.R.; Waschbusch, D.
Deposited on	:	2020-12-19
Resolution	:	2.45 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:

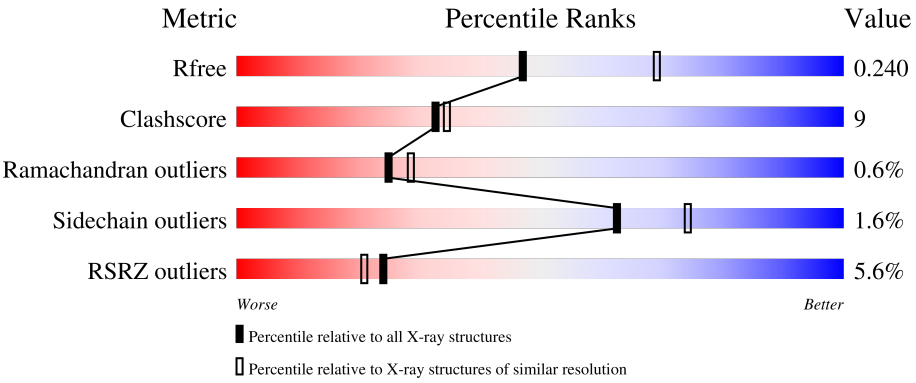
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.45 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	1544 (2.48-2.44)
Clashscore	141614	1613 (2.48-2.44)
Ramachandran outliers	138981	1598 (2.48-2.44)
Sidechain outliers	138945	1598 (2.48-2.44)
RSRZ outliers	127900	1523 (2.48-2.44)

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	451	4% 68% 18% · 12%
1	B	451	6% 71% 16% · 13%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 6381 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 Protein phosphatase 1H.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	395	Total	C	N	O	S	0	0	0
			3130	1981	548	587	14			
1	B	394	Total	C	N	O	S	0	1	0
			3132	1983	549	587	13			

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	29	GLY	-	expression tag	UNP Q9ULR3
A	30	SER	-	expression tag	UNP Q9ULR3
A	31	HIS	-	expression tag	UNP Q9ULR3
A	32	MET	-	expression tag	UNP Q9ULR3
A	56	ALA	CYS	engineered mutation	UNP Q9ULR3
A	223	GLY	-	linker	UNP Q9ULR3
A	224	SER	-	linker	UNP Q9ULR3
A	225	GLY	-	linker	UNP Q9ULR3
A	226	SER	-	linker	UNP Q9ULR3
B	29	GLY	-	expression tag	UNP Q9ULR3
B	30	SER	-	expression tag	UNP Q9ULR3
B	31	HIS	-	expression tag	UNP Q9ULR3
B	32	MET	-	expression tag	UNP Q9ULR3
B	56	ALA	CYS	engineered mutation	UNP Q9ULR3
B	223	GLY	-	linker	UNP Q9ULR3
B	224	SER	-	linker	UNP Q9ULR3
B	225	GLY	-	linker	UNP Q9ULR3
B	226	SER	-	linker	UNP Q9ULR3

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	2	Total	Mg	0	0
			2	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	B	2	Total Mg 2 2	0	0

- Molecule 3 is water.

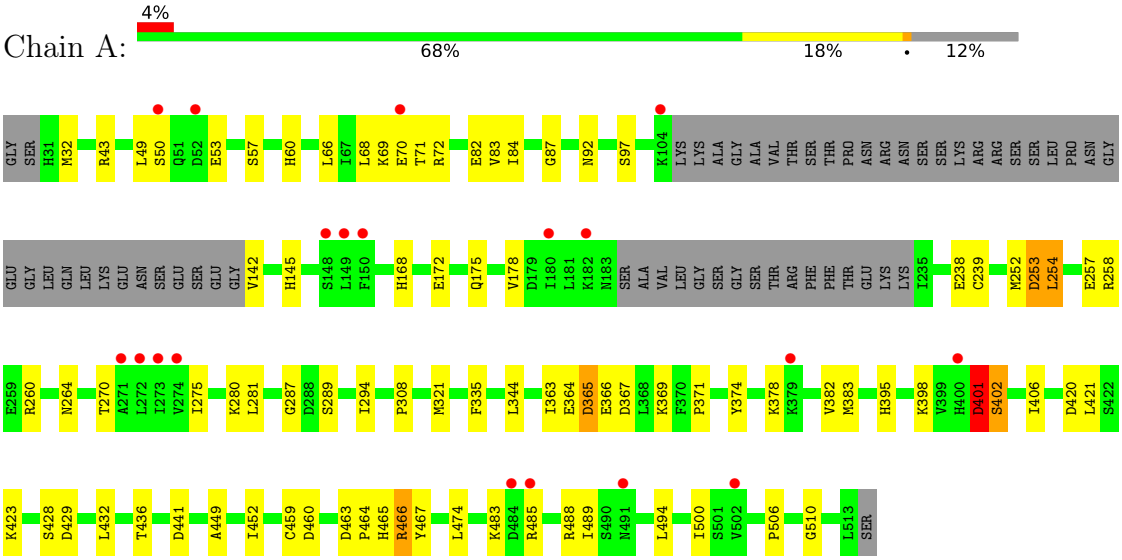
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	58	Total O 58 58	0	0
3	B	57	Total O 57 57	0	0

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.

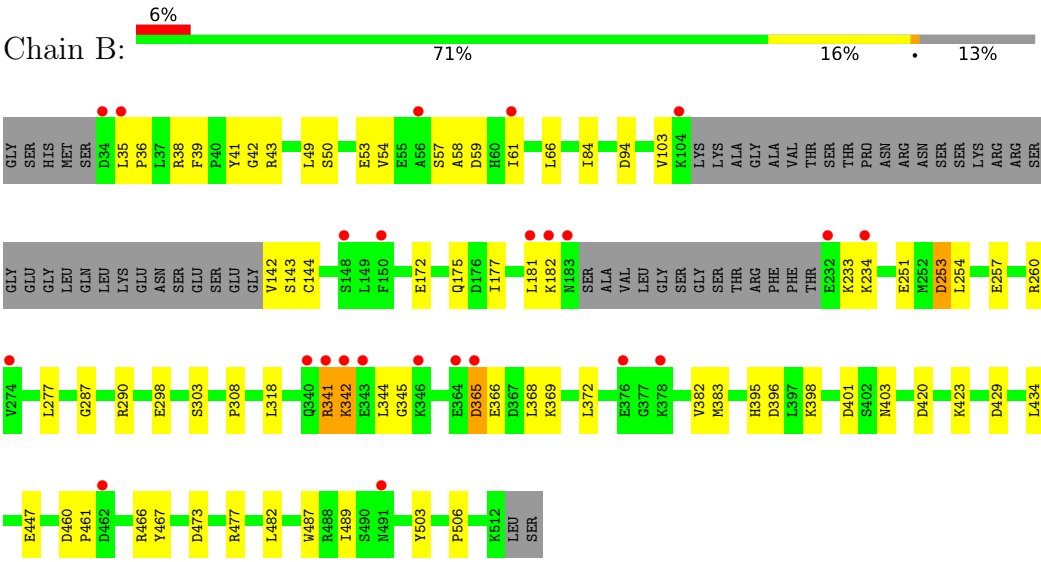
• Molecule 1: Protein phosphatase 1H

Chain A:



• Molecule 1: Protein phosphatase 1H

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	70.69Å 101.11Å 148.97Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	28.97 – 2.45 28.97 – 2.45	Depositor EDS
% Data completeness (in resolution range)	98.2 (28.97-2.45) 98.4 (28.97-2.45)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.54 (at 2.45Å)	Xtriage
Refinement program	PHENIX 1.16_3549	Depositor
R, R_{free}	0.190 , 0.240 0.190 , 0.240	Depositor DCC
R_{free} test set	1968 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	52.4	Xtriage
Anisotropy	0.283	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 39.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	6381	wwPDB-VP
Average B, all atoms (Å^2)	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.11% 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

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

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	0.43	0/3195	0.66	3/4325 (0.1%)
1	B	0.47	1/3200 (0.0%)	0.65	2/4330 (0.0%)
All	All	0.45	1/6395 (0.0%)	0.65	5/8655 (0.1%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	342	LYS	CB-CG	-8.57	1.29	1.52

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	401	ASP	CB-CG-OD1	11.01	128.20	118.30
1	A	401	ASP	CB-CG-OD2	-9.70	109.57	118.30
1	B	342	LYS	CD-CE-NZ	-8.37	92.46	111.70
1	B	342	LYS	CA-CB-CG	-7.72	96.42	113.40
1	A	254	LEU	CA-CB-CG	5.17	127.20	115.30

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	3130	0	3100	61	0
1	B	3132	0	3107	53	0
2	A	2	0	0	0	0
2	B	2	0	0	0	0
3	A	58	0	0	5	0
3	B	57	0	0	4	0
All	All	6381	0	6207	108	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 9.

All (108) 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:A:429:ASP:OD1	1:A:466:ARG:NH2	2.16	0.78
1:B:398:LYS:HE2	1:B:403:ASN:HA	1.69	0.75
1:B:429:ASP:OD1	1:B:466:ARG:NH2	2.20	0.73
1:A:258:ARG:HD3	3:A:743:HOH:O	1.88	0.72
1:A:239:CYS:SG	3:B:756:HOH:O	2.48	0.71
1:A:321:MET:HE2	1:B:318:LEU:CD1	2.22	0.70
1:B:308:PRO:HG3	1:B:382:VAL:HG23	1.74	0.69
1:A:172:GLU:OE2	3:A:701:HOH:O	2.10	0.69
1:A:32:MET:HG2	1:A:264:ASN:HA	1.75	0.68
1:A:253:ASP:O	1:A:254:LEU:HB2	1.92	0.68
1:A:401:ASP:O	1:A:402:SER:HB3	1.94	0.67
1:A:321:MET:CE	1:B:318:LEU:CD1	2.73	0.67
1:B:58:ALA:O	3:B:701:HOH:O	2.13	0.66
1:A:294:ILE:HD13	1:A:449:ALA:HA	1.79	0.65
1:A:321:MET:HE2	1:B:318:LEU:HD13	1.81	0.62
1:A:364:GLU:O	1:A:366:GLU:N	2.32	0.62
1:B:365:ASP:N	3:B:702:HOH:O	2.32	0.62
1:A:488:ARG:HH11	1:A:488:ARG:HG2	1.65	0.61
1:B:253:ASP:O	1:B:254:LEU:HB2	2.00	0.61
1:A:421:LEU:HD13	1:A:510:GLY:HA3	1.82	0.60
1:A:69:LYS:HB3	1:A:71:THR:HG22	1.85	0.59
1:B:103:VAL:HG13	1:B:175:GLN:HG3	1.84	0.58
1:A:383:MET:HE3	1:A:406:ILE:HD13	1.85	0.58
1:A:321:MET:CE	1:B:318:LEU:HD13	2.32	0.57
1:B:54:VAL:O	1:B:57:SER:OG	2.14	0.57
1:A:49:LEU:HD11	1:A:66:LEU:HD13	1.86	0.57
1:A:57:SER:HB2	1:A:66:LEU:HD11	1.87	0.57
1:A:344:LEU:HD21	1:A:365:ASP:H	1.70	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:SER:CB	1:A:66:LEU:HD11	2.38	0.54
1:A:459:CYS:HB2	1:A:466:ARG:HG3	1.89	0.54
1:A:175:GLN:O	1:A:178:VAL:HG12	2.09	0.53
1:B:142:VAL:N	3:B:703:HOH:O	2.41	0.53
1:A:257:GLU:HB2	1:A:395:HIS:CE1	2.44	0.52
1:B:372:LEU:HD12	1:B:383:MET:HG2	1.93	0.51
1:A:366:GLU:OE1	1:A:369:LYS:NZ	2.28	0.50
1:A:371:PRO:HG2	1:A:374:TYR:HB2	1.92	0.50
1:A:483:LYS:HG3	1:A:485:ARG:H	1.76	0.50
1:A:467:TYR:CZ	1:A:506:PRO:HB3	2.47	0.50
1:A:308:PRO:HG3	1:A:382:VAL:HG23	1.94	0.49
1:B:473:ASP:O	1:B:477:ARG:HG3	2.13	0.49
1:A:401:ASP:O	1:A:402:SER:CB	2.58	0.49
1:B:342:LYS:O	1:B:342:LYS:HG3	2.11	0.48
1:B:49:LEU:HD11	1:B:66:LEU:HD13	1.95	0.48
1:A:43:ARG:HD3	1:A:82:GLU:OE1	2.13	0.48
1:A:270:THR:HB	1:A:287:GLY:HA3	1.95	0.48
1:B:460:ASP:O	1:B:466:ARG:HD2	2.13	0.48
1:B:270:THR:HB	1:B:287:GLY:HA3	1.95	0.48
1:B:482:LEU:HB2	1:B:487:TRP:CE2	2.48	0.48
1:B:398:LYS:CE	1:B:403:ASN:HA	2.42	0.48
1:A:257:GLU:O	1:A:260:ARG:NH1	2.47	0.47
1:A:145:HIS:O	1:A:275:ILE:HA	2.14	0.47
1:B:434:LEU:HB2	1:B:503:TYR:HB2	1.95	0.47
1:A:168:HIS:HB3	3:A:701:HOH:O	2.14	0.47
1:B:366:GLU:OE2	1:B:369:LYS:NZ	2.37	0.47
1:A:83:VAL:HG12	1:A:500:ILE:HB	1.96	0.46
1:A:321:MET:CE	1:B:318:LEU:HD11	2.45	0.46
1:B:257:GLU:HB2	1:B:395:HIS:CE1	2.51	0.46
1:A:420:ASP:HB3	1:A:423:LYS:HD2	1.98	0.45
1:A:70:GLU:HG3	1:A:465:HIS:CE1	2.52	0.45
1:A:335:PHE:O	1:B:233:LYS:HE3	2.17	0.45
1:B:177:ILE:HD12	1:B:181:LEU:HD11	1.98	0.45
1:A:50:SER:OG	1:A:53:GLU:HG3	2.16	0.45
1:B:59:ASP:OD1	1:B:61:ILE:HG13	2.17	0.45
1:A:378:LYS:HD2	1:A:441:ASP:OD1	2.16	0.45
1:B:260:ARG:NH2	1:B:396:ASP:OD1	2.48	0.45
1:A:463:ASP:O	1:A:466:ARG:HB2	2.17	0.45
1:B:253:ASP:O	1:B:254:LEU:CB	2.65	0.44
1:A:289:SER:OG	1:A:436:THR:HA	2.18	0.44
1:B:365:ASP:O	1:B:368:LEU:HB2	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:467:TYR:CE1	1:B:506:PRO:HB3	2.54	0.43
1:B:251:GLU:HA	1:B:254:LEU:HD12	2.00	0.43
1:A:395:HIS:HD2	3:A:746:HOH:O	2.01	0.43
1:A:452:ILE:HD11	1:A:474:LEU:HD11	2.01	0.43
1:A:460:ASP:O	1:A:466:ARG:HD2	2.18	0.43
1:B:43:ARG:NH2	1:B:94:ASP:O	2.37	0.43
1:B:38:ARG:HG3	1:B:39:PHE:CE2	2.54	0.43
1:B:420:ASP:HB3	1:B:423:LYS:HG2	2.01	0.43
1:A:474:LEU:HD23	1:A:474:LEU:HA	1.90	0.43
1:B:35:LEU:HB3	1:B:36:PRO:HD2	2.01	0.42
1:B:50:SER:O	1:B:53:GLU:N	2.52	0.42
1:B:368:LEU:HD23	1:B:368:LEU:HA	1.81	0.42
1:A:84:ILE:HG13	1:A:92:ASN:HB2	2.01	0.42
1:B:257:GLU:O	1:B:260:ARG:HD3	2.18	0.42
1:A:142:VAL:N	3:A:706:HOH:O	2.52	0.42
1:B:344:LEU:HD23	1:B:345:GLY:N	2.35	0.42
1:A:281:LEU:HD13	1:A:432:LEU:HD22	2.00	0.42
1:A:398:LYS:HE3	1:A:402:SER:O	2.18	0.42
1:B:461:PRO:HA	1:B:466:ARG:HD2	2.01	0.42
1:B:477:ARG:HE	1:B:477:ARG:HB3	1.51	0.42
1:A:252:MET:C	1:A:253:ASP:O	2.57	0.42
1:B:234:LYS:HA	1:B:234:LYS:HD3	1.69	0.42
1:B:341:ARG:HG3	1:B:368:LEU:HD11	2.02	0.42
1:A:488:ARG:NH1	1:A:494:LEU:HD12	2.34	0.42
1:B:290:ARG:HB3	1:B:440:TRP:NE1	2.35	0.41
1:A:68:LEU:HD11	1:A:72:ARG:HG3	2.02	0.41
1:A:488:ARG:HG2	1:A:488:ARG:NH1	2.33	0.41
1:A:363:ILE:HG23	1:A:367:ASP:HB2	2.03	0.41
1:B:142:VAL:CG1	1:B:182:LYS:HD2	2.50	0.41
1:A:238:GLU:OE1	1:A:280:LYS:NZ	2.48	0.41
1:A:467:TYR:CE1	1:A:506:PRO:HB3	2.55	0.40
1:B:58:ALA:HA	1:B:84:ILE:HD12	2.04	0.40
1:B:142:VAL:HG13	1:B:182:LYS:HD2	2.04	0.40
1:A:428:SER:HB3	1:A:466:ARG:NH2	2.36	0.40
1:B:444:SER:OG	1:B:447:GLU:HG3	2.21	0.40
1:A:60:HIS:CD2	1:A:87:GLY:HA2	2.57	0.40
1:B:41:TYR:CG	1:B:42:GLY:N	2.89	0.40
1:B:144:CYS:HB2	1:B:277:LEU:HD21	2.03	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	389/451 (86%)	372 (96%)	14 (4%)	3 (1%)	19 22
1	B	389/451 (86%)	371 (95%)	16 (4%)	2 (0%)	29 34
All	All	778/902 (86%)	743 (96%)	30 (4%)	5 (1%)	25 29

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	365	ASP
1	A	401	ASP
1	B	365	ASP
1	A	489	ILE
1	B	489	ILE

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	339/385 (88%)	334 (98%)	5 (2%)	65 76
1	B	339/385 (88%)	333 (98%)	6 (2%)	59 71
All	All	678/770 (88%)	667 (98%)	11 (2%)	62 74

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	97	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	253	ASP
1	A	402	SER
1	A	464	PRO
1	A	466	ARG
1	B	143	SER
1	B	253	ASP
1	B	298	GLU
1	B	303	SER
1	B	341	ARG
1	B	401	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	60	HIS
1	A	95	GLN
1	A	173	GLN
1	A	395	HIS
1	A	400	HIS
1	A	491	ASN
1	B	95	GLN
1	B	173	GLN
1	B	296	ASN
1	B	328	ASN
1	B	395	HIS
1	B	400	HIS
1	B	454	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

Of 4 ligands modelled in this entry, 4 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, 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	395/451 (87%)	0.14	19 (4%)	30	28	37, 57, 86, 117	0
1	B	394/451 (87%)	0.11	25 (6%)	20	16	37, 56, 89, 113	0
All	All	789/902 (87%)	0.12	44 (5%)	24	21	37, 57, 88, 117	0

All (44) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	342	LYS	4.3
1	B	462	ASP	4.2
1	A	485	ARG	4.2
1	A	400	HIS	4.1
1	B	104	LYS	4.0
1	A	484	ASP	3.9
1	B	341	ARG	3.6
1	B	56	ALA	3.6
1	A	272	LEU	3.2
1	A	273	ILE	3.2
1	A	182	LYS	3.2
1	B	376	GLU	3.0
1	B	35	LEU	2.9
1	A	379	LYS	2.8
1	B	273	ILE	2.8
1	B	365	ASP	2.7
1	B	182	LYS	2.6
1	B	34	ASP	2.6
1	A	271	ALA	2.5
1	A	491	ASN	2.5
1	B	343	GLU	2.5
1	A	52	ASP	2.5
1	B	183	ASN	2.5
1	B	364	GLU	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	150	PHE	2.4
1	A	149	LEU	2.4
1	A	148	SER	2.3
1	A	104	LYS	2.3
1	B	232	GLU	2.3
1	B	148	SER	2.3
1	B	234	LYS	2.3
1	B	181	LEU	2.3
1	B	346	LYS	2.2
1	B	378	LYS	2.2
1	B	491	ASN	2.2
1	B	61	ILE	2.2
1	A	274	VAL	2.1
1	A	180	ILE	2.1
1	B	340	GLN	2.1
1	A	50	SER	2.1
1	A	70	GLU	2.1
1	A	502	VAL	2.0
1	B	274	VAL	2.0
1	A	150	PHE	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 monosaccharides 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, 95^{th} 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	MG	A	601	1/1	0.89	0.05	46,46,46,46	0
2	MG	A	600	1/1	0.96	0.18	39,39,39,39	0
2	MG	B	601	1/1	0.97	0.21	42,42,42,42	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	MG	B	600	1/1	0.99	0.12	51,51,51,51	0

6.5 Other polymers (i)

There are no such residues in this entry.