



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 27, 2014 – 02:44 PM GMT

PDB ID : 1OIB
Title : PHOSPHATE-BINDING PROTEIN MUTANT T141D
Authors : Yao, N.; Choudhary, A.; Ledvina, P.S.; Quiocho, F.A.
Deposited on : 1995-11-25
Resolution : 2.40 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

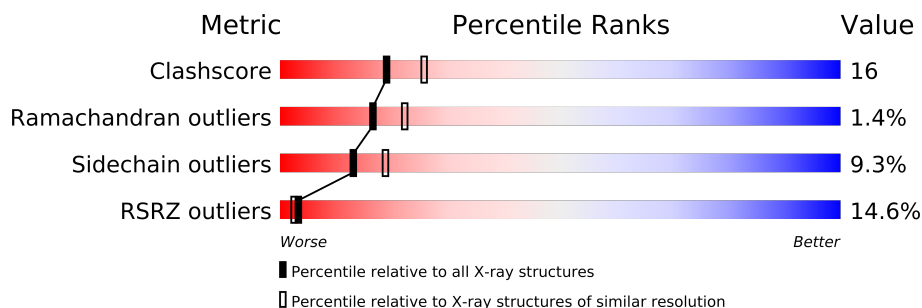
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 2.40 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))
Clashscore	79885	2789 (2.40-2.40)
Ramachandran outliers	78287	2736 (2.40-2.40)
Sidechain outliers	78261	2737 (2.40-2.40)
RSRZ outliers	66119	2210 (2.40-2.40)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	321	
1	B	321	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 4915 atoms, of which 0 are hydrogen and 0 are deuterium.

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 PHOSPHATE-BINDING PROTEIN.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
1	A	321	Total	C	N	O	0	0	0
			2439	1558	405	476			
1	B	321	Total	C	N	O	0	0	0
			2439	1558	405	476			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	141	ASP	THR	ENGINEERED	UNP P06128
B	141	ASP	THR	ENGINEERED	UNP P06128

- Molecule 2 is water.

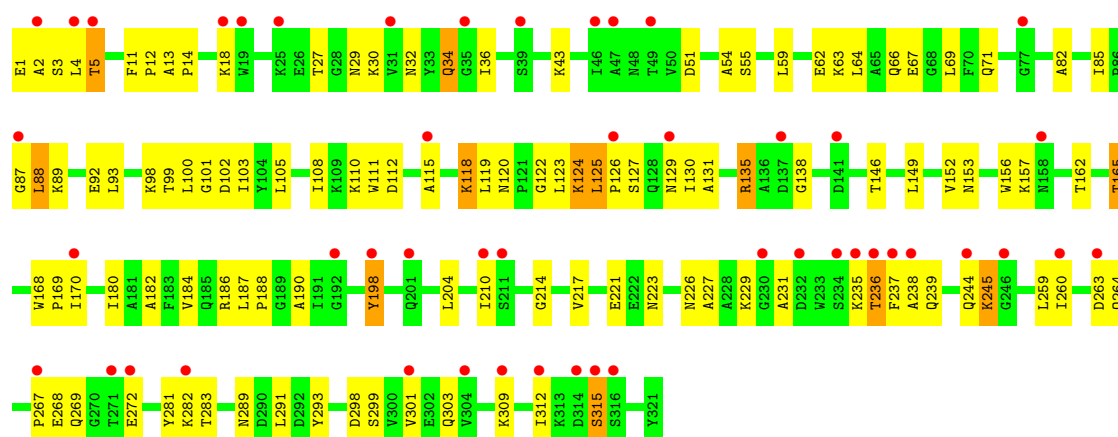
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	19	Total	O	0	0
			19	19		
2	B	18	Total	O	0	0
			18	18		

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

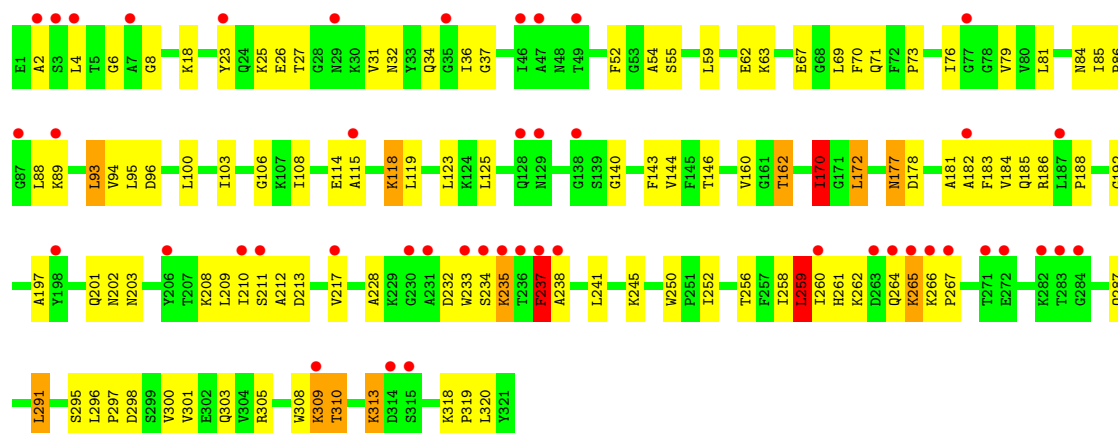
• Molecule 1: PHOSPHATE-BINDING PROTEIN

Chain A: 



• Molecule 1: PHOSPHATE-BINDING PROTEIN

Chain B: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	73.22Å 39.59Å 113.61Å 90.00° 92.80° 90.00°	Depositor
Resolution (Å)	8.00 – 2.40 12.01 – 1.90	Depositor EDS
% Data completeness (in resolution range)	(Not available) (8.00-2.40) 67.6 (12.01-1.90)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.00 (at 1.90Å)	Xtriage
Refinement program	X-PLOR	Depositor
R, R_{free}	0.166 , (Not available) 0.335 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	DCC
Wilson B-factor (Å ²)	15.5	Xtriage
Anisotropy	0.483	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 80.6	EDS
Estimated twinning fraction	0.024 for h,-k,-l	Xtriage
L-test for twinning	$\langle L \rangle = 0.40$, $\langle L^2 \rangle = 0.24$	Xtriage
Outliers	8 of 35706 reflections (0.022%)	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	4915	wwPDB-VP
Average B, all atoms (Å ²)	18.0	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 96.11 % 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 7.5446e-10. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

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	0.62	0/2494	0.84	0/3385
1	B	0.59	0/2494	0.84	6/3385 (0.2%)
All	All	0.60	0/4988	0.84	6/6770 (0.1%)

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	259	LEU	CA-CB-CG	7.57	132.70	115.30
1	B	95	LEU	CA-CB-CG	5.22	127.31	115.30
1	B	170	ILE	CB-CA-C	-5.21	101.18	111.60
1	B	232	ASP	N-CA-C	5.21	125.06	111.00
1	B	93	LEU	CA-CB-CG	5.18	127.22	115.30
1	B	237	PHE	N-CA-C	5.17	124.95	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2439	0	2414	85	0
1	B	2439	0	2414	75	0
2	A	19	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	18	0	0	1	0
All	All	4915	0	4828	160	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 16.

All (160) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:211:SER:HB2	1:B:217:VAL:HG21	1.49	0.93
1:A:82:ALA:HB1	1:A:204:LEU:HD12	1.57	0.86
1:A:236:THR:HG23	1:A:237:PHE:H	1.46	0.81
1:A:120:ASN:HB3	1:A:123:LEU:HD22	1.63	0.79
1:B:182:ALA:HB1	1:B:186:ARG:HH11	1.46	0.79
1:A:198:TYR:HB3	2:A:414:HOH:O	1.83	0.76
1:B:118:LYS:HD2	1:B:119:LEU:HG	1.69	0.74
1:A:245:LYS:H	1:A:245:LYS:HD2	1.54	0.72
1:A:64:LEU:HD11	1:A:71:GLN:HE21	1.55	0.71
1:A:263:ASP:OD1	1:A:315:SER:HA	1.91	0.70
1:B:265:LYS:HD3	1:B:266:LYS:HZ3	1.55	0.70
1:A:182:ALA:O	1:A:186:ARG:HD3	1.91	0.70
1:A:2:ALA:HB1	1:A:272:GLU:HG2	1.73	0.70
1:A:227:ALA:O	1:A:244:GLN:HG2	1.92	0.69
1:B:181:ALA:O	1:B:185:GLN:HG3	1.93	0.69
1:B:103:ILE:HG13	1:B:108:ILE:HD12	1.75	0.69
1:B:309:LYS:NZ	1:B:309:LYS:HB2	2.08	0.67
1:A:236:THR:HG23	1:A:237:PHE:N	2.08	0.67
1:B:34:GLN:HB3	1:B:36:ILE:HG23	1.77	0.66
1:B:211:SER:HB2	1:B:217:VAL:CG2	2.25	0.66
1:B:76:ILE:HD13	1:B:228:ALA:HB2	1.78	0.66
1:A:281:TYR:CD2	1:A:301:VAL:HG13	2.31	0.65
1:B:88:LEU:HD21	1:B:123:LEU:HD21	1.77	0.65
1:B:115:ALA:O	1:B:118:LYS:HE3	1.97	0.65
1:B:209:LEU:HD23	1:B:250:TRP:CH2	2.33	0.63
1:B:59:LEU:H	1:B:71:GLN:HE22	1.44	0.63
1:B:18:LYS:HG3	1:B:287:GLN:HE21	1.63	0.63
1:B:298:ASP:O	1:B:301:VAL:HG22	2.00	0.62
1:A:62:GLU:O	1:A:66:GLN:HG3	2.01	0.61
1:B:305:ARG:O	1:B:308:TRP:HB2	2.03	0.58
1:A:226:ASN:O	1:A:229:LYS:HB3	2.04	0.58
1:A:210:ILE:HG23	1:A:214:GLY:O	2.03	0.58
1:A:85:ILE:HD11	1:A:111:TRP:CD2	2.40	0.57
1:A:11:PHE:HB3	1:A:12:PRO:HD3	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:234:SER:O	1:B:235:LYS:HB2	2.06	0.56
1:B:96:ASP:HB3	1:B:210:ILE:HD12	1.87	0.56
1:A:231:ALA:HB2	1:A:244:GLN:NE2	2.21	0.56
1:B:146:THR:HB	1:B:162:THR:HA	1.87	0.56
1:A:63:LYS:HG2	1:A:67:GLU:OE1	2.06	0.55
1:B:197:ALA:O	1:B:201:GLN:HG3	2.07	0.55
1:B:23:TYR:O	1:B:27:THR:N	2.40	0.55
1:B:63:LYS:O	1:B:67:GLU:HG2	2.07	0.55
1:B:94:VAL:HG22	1:B:208:LYS:HB2	1.89	0.54
1:A:64:LEU:HD11	1:A:71:GLN:NE2	2.22	0.54
1:B:233:TRP:HD1	1:B:303:GLN:HE22	1.56	0.54
1:A:13:ALA:N	1:A:14:PRO:HD2	2.22	0.54
1:B:313:LYS:HB3	1:B:313:LYS:NZ	2.22	0.54
1:B:318:LYS:HD3	1:B:319:PRO:O	2.08	0.54
1:A:103:ILE:HG23	1:A:130:ILE:HG21	1.89	0.53
1:A:217:VAL:HG12	1:A:223:ASN:HD22	1.74	0.52
1:B:298:ASP:HA	1:B:301:VAL:HG22	1.91	0.52
1:A:236:THR:CG2	1:A:237:PHE:H	2.18	0.52
1:B:265:LYS:HD3	1:B:266:LYS:HG3	1.91	0.52
1:A:102:ASP:HB3	1:A:108:ILE:HG13	1.92	0.52
1:A:312:ILE:HD12	1:A:312:ILE:N	2.24	0.52
1:A:180:ILE:O	1:A:184:VAL:HG23	2.10	0.52
1:A:85:ILE:HD11	1:A:111:TRP:CE3	2.44	0.52
1:A:88:LEU:HD13	1:A:92:GLU:HB3	1.91	0.51
1:A:299:SER:O	1:A:303:GLN:HG3	2.11	0.51
1:B:4:LEU:O	1:B:31:VAL:HA	2.11	0.51
1:B:79:VAL:HB	1:B:252:ILE:CG2	2.40	0.51
1:A:118:LYS:HD2	1:A:119:LEU:HG	1.92	0.51
1:A:59:LEU:HD13	1:A:259:LEU:HD21	1.92	0.51
1:A:99:THR:O	1:A:103:ILE:HG13	2.11	0.51
1:A:264:GLN:O	1:A:267:PRO:HD3	2.11	0.51
1:A:146:THR:HG22	1:A:156:TRP:HZ2	1.75	0.50
1:B:182:ALA:HB1	1:B:186:ARG:NH1	2.22	0.50
1:B:94:VAL:HA	1:B:208:LYS:O	2.12	0.50
1:A:282:LYS:HG3	1:A:283:THR:HG23	1.93	0.50
1:A:82:ALA:CB	1:A:204:LEU:HD12	2.36	0.49
1:A:59:LEU:HD23	1:A:63:LYS:HD3	1.93	0.49
1:A:5:THR:HB	1:A:32:ASN:HB3	1.95	0.49
1:A:187:LEU:HD12	1:A:188:PRO:HD2	1.95	0.49
1:A:122:GLY:O	1:A:123:LEU:HD12	2.12	0.49
1:B:209:LEU:HD23	1:B:250:TRP:HH2	1.77	0.49
1:A:245:LYS:CD	1:A:245:LYS:H	2.17	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:231:ALA:HB1	1:A:239:GLN:NE2	2.27	0.49
1:A:112:ASP:HB3	1:A:126:PRO:O	2.12	0.49
1:A:269:GLN:N	1:A:269:GLN:HE21	2.11	0.48
1:A:217:VAL:CG1	1:A:223:ASN:ND2	2.76	0.48
1:A:112:ASP:HA	1:A:125:LEU:HB3	1.96	0.48
1:B:182:ALA:O	1:B:186:ARG:HD3	2.13	0.48
1:A:198:TYR:H	1:A:198:TYR:HD1	1.61	0.48
1:B:234:SER:OG	1:B:303:GLN:HB3	2.14	0.48
1:A:115:ALA:O	1:A:118:LYS:HE3	2.14	0.48
1:B:106:GLY:N	1:B:170:ILE:HD11	2.29	0.47
1:B:4:LEU:HB3	1:B:31:VAL:HG22	1.96	0.47
1:A:100:LEU:HG	1:A:149:LEU:HD21	1.96	0.47
1:A:27:THR:OG1	1:A:29:ASN:HB2	2.15	0.47
1:A:131:ALA:HB3	1:A:190:ALA:HA	1.97	0.47
1:A:93:LEU:HD12	1:A:120:ASN:OD1	2.14	0.47
1:B:309:LYS:O	1:B:309:LYS:HG3	2.13	0.47
1:B:309:LYS:HZ2	1:B:309:LYS:HB2	1.79	0.46
1:B:233:TRP:CG	1:B:300:VAL:HG13	2.49	0.46
1:A:221:GLU:OE2	1:A:289:ASN:O	2.33	0.46
1:A:98:LYS:HD3	1:A:153:ASN:ND2	2.29	0.46
1:A:1:GLU:OE2	1:A:3:SER:HB2	2.16	0.46
1:A:14:PRO:HG2	1:A:293:TYR:OH	2.16	0.46
1:B:6:GLY:HA3	1:B:52:PHE:CZ	2.50	0.46
1:B:8:GLY:O	1:B:37:GLY:N	2.48	0.46
1:B:73:PRO:HG2	1:B:296:LEU:HD21	1.97	0.45
1:B:123:LEU:HD23	1:B:125:LEU:HD21	1.97	0.45
1:B:211:SER:O	1:B:213:ASP:N	2.49	0.45
1:A:18:LYS:HE3	1:A:291:LEU:HD11	1.98	0.45
1:B:84:ASN:HB2	1:B:184:VAL:O	2.16	0.45
1:A:138:GLY:HA2	1:A:165:THR:HG23	1.98	0.45
1:B:143:PHE:CD1	1:B:143:PHE:C	2.90	0.45
1:B:291:LEU:HA	1:B:291:LEU:HD12	1.87	0.45
1:A:235:LYS:O	1:A:236:THR:HB	2.17	0.45
1:A:110:LYS:HE3	1:A:112:ASP:OD1	2.17	0.44
1:A:110:LYS:HB3	1:A:112:ASP:OD1	2.17	0.44
1:A:129:ASN:N	1:A:129:ASN:HD22	2.16	0.44
1:A:217:VAL:CG1	1:A:223:ASN:HD22	2.31	0.44
1:A:88:LEU:CD1	1:A:92:GLU:HB3	2.48	0.44
1:A:198:TYR:N	1:A:198:TYR:CD1	2.86	0.44
1:A:124:LYS:HB2	1:A:124:LYS:NZ	2.32	0.44
1:B:23:TYR:CE1	1:B:27:THR:HG21	2.53	0.43
1:A:168:TRP:HA	1:A:169:PRO:HD3	1.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:34:GLN:HB3	1:A:36:ILE:HG23	2.00	0.43
1:A:87:GLY:O	1:A:89:LYS:HD3	2.18	0.43
1:B:81:LEU:HA	1:B:192:GLY:O	2.19	0.43
1:A:236:THR:CG2	1:A:237:PHE:N	2.77	0.43
1:B:182:ALA:C	1:B:186:ARG:HD3	2.38	0.43
1:B:266:LYS:N	1:B:267:PRO:HD3	2.34	0.43
1:A:146:THR:HG22	1:A:156:TRP:CZ2	2.53	0.43
1:A:269:GLN:CA	1:A:269:GLN:NE2	2.81	0.43
1:B:70:PHE:CE1	1:B:237:PHE:CE1	3.07	0.43
1:A:54:ALA:HB1	2:A:401:HOH:O	2.19	0.43
1:A:239:GLN:HB3	1:A:239:GLN:HE21	1.60	0.43
1:A:260:ILE:CD1	1:A:312:ILE:HG12	2.49	0.43
1:A:135:ARG:HD3	1:A:180:ILE:HD11	2.00	0.43
1:B:264:GLN:HG3	1:B:320:LEU:CD1	2.49	0.42
1:A:269:GLN:HA	1:A:269:GLN:NE2	2.34	0.42
1:A:2:ALA:CB	1:A:272:GLU:HG2	2.47	0.42
1:B:233:TRP:CD1	1:B:300:VAL:HG13	2.55	0.42
1:B:217:VAL:O	1:B:250:TRP:HZ3	2.03	0.42
1:B:118:LYS:HD2	1:B:119:LEU:CG	2.46	0.42
1:B:245:LYS:HB2	1:B:245:LYS:HE3	1.79	0.41
1:A:182:ALA:HB1	1:A:186:ARG:HH11	1.85	0.41
1:B:297:PRO:O	1:B:301:VAL:HG13	2.20	0.41
1:B:69:LEU:O	1:B:262:LYS:HE3	2.20	0.41
1:B:18:LYS:HG3	1:B:287:GLN:NE2	2.31	0.41
1:B:85:ILE:HA	1:B:86:PRO:HD2	1.95	0.41
1:B:309:LYS:HZ3	1:B:309:LYS:HB2	1.84	0.41
1:A:291:LEU:HD23	1:A:291:LEU:HA	1.94	0.41
1:A:43:LYS:HE2	1:A:43:LYS:HB2	1.86	0.41
1:B:265:LYS:HG2	1:B:265:LYS:O	2.20	0.41
1:A:149:LEU:HA	1:A:152:VAL:HG22	2.01	0.41
1:A:236:THR:C	1:A:238:ALA:H	2.24	0.40
1:B:228:ALA:HA	1:B:241:LEU:CD2	2.52	0.40
1:A:101:GLY:O	1:A:105:LEU:HG	2.21	0.40
1:B:32:ASN:OD1	1:B:34:GLN:NE2	2.54	0.40
1:B:177:ASN:HD22	1:B:177:ASN:HA	1.59	0.40
1:B:54:ALA:HB1	2:B:422:HOH:O	2.20	0.40
1:B:59:LEU:HD22	1:B:259:LEU:HD11	2.03	0.40
1:B:71:GLN:HA	1:B:258:ILE:O	2.21	0.40
1:B:73:PRO:HA	1:B:256:THR:O	2.21	0.40
1:B:69:LEU:HD21	1:B:261:HIS:CE1	2.56	0.40
1:B:140:GLY:O	1:B:144:VAL:HG23	2.21	0.40
1:B:172:LEU:HD23	1:B:183:PHE:CD1	2.57	0.40

There are no symmetry-related clashes.

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	319/321 (99%)	294 (92%)	24 (8%)	1 (0%)	50	68
1	B	319/321 (99%)	293 (92%)	18 (6%)	8 (2%)	9	8
All	All	638/642 (99%)	587 (92%)	42 (7%)	9 (1%)	16	22

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	235	LYS
1	B	310	THR
1	A	236	THR
1	B	203	ASN
1	B	2	ALA
1	B	212	ALA
1	B	238	ALA
1	B	114	GLU
1	B	237	PHE

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	252/252 (100%)	229 (91%)	23 (9%)	14	20
1	B	252/252 (100%)	228 (90%)	24 (10%)	12	18
All	All	504/504 (100%)	457 (91%)	47 (9%)	13	19

All (47) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	LEU
1	A	5	THR
1	A	30	LYS
1	A	34	GLN
1	A	51	ASP
1	A	55	SER
1	A	69	LEU
1	A	88	LEU
1	A	118	LYS
1	A	124	LYS
1	A	125	LEU
1	A	127	SER
1	A	135	ARG
1	A	157	LYS
1	A	162	THR
1	A	165	THR
1	A	170	ILE
1	A	198	TYR
1	A	245	LYS
1	A	268	GLU
1	A	298	ASP
1	A	309	LYS
1	A	315	SER
1	B	25	LYS
1	B	26	GLU
1	B	55	SER
1	B	62	GLU
1	B	89	LYS
1	B	93	LEU
1	B	100	LEU
1	B	118	LYS
1	B	160	VAL
1	B	162	THR
1	B	170	ILE
1	B	172	LEU
1	B	177	ASN
1	B	178	ASP
1	B	188	PRO
1	B	202	ASN
1	B	259	LEU
1	B	260	ILE
1	B	265	LYS

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Mol	Chain	Res	Type
1	B	291	LEU
1	B	295	SER
1	B	309	LYS
1	B	310	THR
1	B	313	LYS

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

Mol	Chain	Res	Type
1	A	66	GLN
1	A	129	ASN
1	A	202	ASN
1	A	223	ASN
1	A	269	GLN
1	A	303	GLN
1	B	34	GLN
1	B	44	GLN
1	B	71	GLN
1	B	128	GLN
1	B	158	ASN
1	B	177	ASN
1	B	239	GLN
1	B	264	GLN
1	B	287	GLN
1	B	289	ASN
1	B	303	GLN

5.3.3 RNA ⓘ

There are no RNA chains 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 carbohydrates 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, 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	321/321 (100%)	1.16	48 (14%) 3 2	3, 16, 36, 58	0
1	B	321/321 (100%)	1.12	46 (14%) 3 3	3, 16, 37, 57	0
All	All	642/642 (100%)	1.14	94 (14%) 3 2	3, 16, 37, 58	0

All (94) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	234	SER	15.2
1	B	236	THR	8.8
1	A	235	LYS	4.9
1	B	238	ALA	4.8
1	A	232	ASP	4.8
1	A	230	GLY	4.5
1	B	233	TRP	4.4
1	B	272	GLU	4.4
1	B	235	LYS	4.4
1	B	237	PHE	4.3
1	A	315	SER	4.3
1	B	230	GLY	4.0
1	B	314	ASP	3.9
1	B	49	THR	3.9
1	A	201	GLN	3.9
1	A	126	PRO	3.7
1	A	237	PHE	3.7
1	A	314	ASP	3.7
1	A	282	LYS	3.4
1	A	267	PRO	3.4
1	B	309	LYS	3.3
1	A	129	ASN	3.3
1	A	49	THR	3.3
1	B	89	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	315	SER	3.2
1	A	316	SER	3.2
1	B	87	GLY	3.2
1	B	182	ALA	3.1
1	A	77	GLY	3.1
1	A	246	GLY	3.1
1	B	231	ALA	3.0
1	B	35	GLY	3.0
1	A	31	VAL	3.0
1	A	211	SER	2.9
1	B	282	LYS	2.7
1	B	271	THR	2.7
1	A	158	ASN	2.7
1	A	236	THR	2.7
1	A	301	VAL	2.6
1	B	4	LEU	2.6
1	B	187	LEU	2.6
1	B	266	LYS	2.6
1	A	260	ILE	2.6
1	A	5	THR	2.6
1	A	4	LEU	2.5
1	A	39	SER	2.5
1	A	170	ILE	2.5
1	B	3	SER	2.5
1	B	284	GLY	2.5
1	B	47	ALA	2.5
1	A	47	ALA	2.5
1	B	129	ASN	2.5
1	A	198	TYR	2.4
1	B	211	SER	2.4
1	A	312	ILE	2.4
1	A	2	ALA	2.4
1	A	234	SER	2.4
1	A	115	ALA	2.3
1	A	244	GLN	2.3
1	B	77	GLY	2.3
1	A	263	ASP	2.3
1	B	115	ALA	2.3
1	B	217	VAL	2.3
1	B	138	GLY	2.3
1	B	128	GLN	2.3
1	A	238	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	206	TYR	2.3
1	A	271	THR	2.2
1	A	141	ASP	2.2
1	A	46	ILE	2.2
1	B	198	TYR	2.2
1	A	19	TRP	2.2
1	A	18	LYS	2.2
1	B	264	GLN	2.2
1	A	25	LYS	2.2
1	A	87	GLY	2.2
1	B	29	ASN	2.2
1	B	267	PRO	2.2
1	B	23	TYR	2.1
1	B	283	THR	2.1
1	B	2	ALA	2.1
1	B	46	ILE	2.1
1	A	304	VAL	2.1
1	A	35	GLY	2.1
1	A	272	GLU	2.1
1	B	263	ASP	2.1
1	A	309	LYS	2.0
1	B	260	ILE	2.0
1	B	265	LYS	2.0
1	B	7	ALA	2.0
1	A	210	ILE	2.0
1	B	210	ILE	2.0
1	A	137	ASP	2.0
1	A	192	GLY	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 carbohydrates 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.