Preliminary Full wwPDB X-ray Structure Validation Report (i)

Aug 30, 2021 – 06:05 PM JST

Deposition ID : D_1300024351

This is a Preliminary Full wwPDB X-ray Structure Validation Report.

This report is produced by the wwPDB Deposition System during initial deposition but before annotation of the structure.

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 (i) symbol.

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

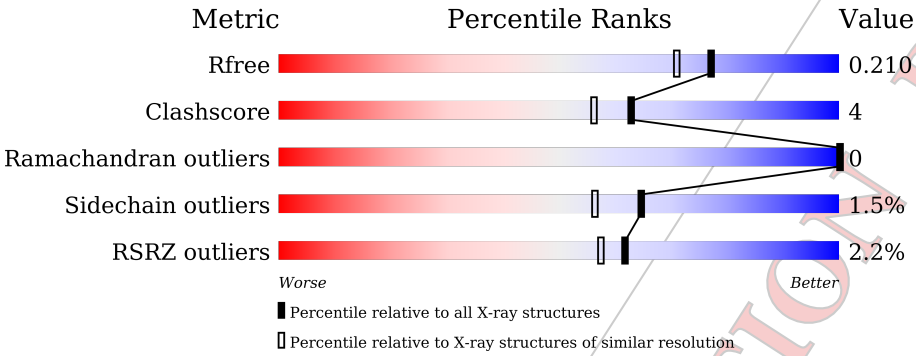
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.23.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.23.1

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 1.80 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	5950 (1.80-1.80)
Clashscore	141614	6793 (1.80-1.80)
Ramachandran outliers	138981	6697 (1.80-1.80)
Sidechain outliers	138945	6696 (1.80-1.80)
RSRZ outliers	127900	5850 (1.80-1.80)

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	884	2% 87% 8%
1	B	884	2% 85% 10%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 14378 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 Alanine aminopeptidase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	850	Total	C	N	O	S	0	5	0
			6689	4215	1172	1284	18			
1	B	845	Total	C	N	O	S	0	3	0
			6629	4180	1161	1271	17			

There are 50 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-23	MET	-	initiating methionine	UNP A4F9D7
A	-22	GLY	-	expression tag	UNP A4F9D7
A	-21	SER	-	expression tag	UNP A4F9D7
A	-20	SER	-	expression tag	UNP A4F9D7
A	-19	HIS	-	expression tag	UNP A4F9D7
A	-18	HIS	-	expression tag	UNP A4F9D7
A	-17	HIS	-	expression tag	UNP A4F9D7
A	-16	HIS	-	expression tag	UNP A4F9D7
A	-15	HIS	-	expression tag	UNP A4F9D7
A	-14	HIS	-	expression tag	UNP A4F9D7
A	-13	HIS	-	expression tag	UNP A4F9D7
A	-12	HIS	-	expression tag	UNP A4F9D7
A	-11	HIS	-	expression tag	UNP A4F9D7
A	-10	HIS	-	expression tag	UNP A4F9D7
A	-9	SER	-	expression tag	UNP A4F9D7
A	-8	SER	-	expression tag	UNP A4F9D7
A	-7	GLY	-	expression tag	UNP A4F9D7
A	-6	LEU	-	expression tag	UNP A4F9D7
A	-5	VAL	-	expression tag	UNP A4F9D7
A	-4	PRO	-	expression tag	UNP A4F9D7
A	-3	ARG	-	expression tag	UNP A4F9D7
A	-2	GLY	-	expression tag	UNP A4F9D7
A	-1	SER	-	expression tag	UNP A4F9D7
A	0	HIS	-	expression tag	UNP A4F9D7
A	1	VAL	-	expression tag	UNP A4F9D7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-23	MET	-	initiating methionine	UNP A4F9D7
B	-22	GLY	-	expression tag	UNP A4F9D7
B	-21	SER	-	expression tag	UNP A4F9D7
B	-20	SER	-	expression tag	UNP A4F9D7
B	-19	HIS	-	expression tag	UNP A4F9D7
B	-18	HIS	-	expression tag	UNP A4F9D7
B	-17	HIS	-	expression tag	UNP A4F9D7
B	-16	HIS	-	expression tag	UNP A4F9D7
B	-15	HIS	-	expression tag	UNP A4F9D7
B	-14	HIS	-	expression tag	UNP A4F9D7
B	-13	HIS	-	expression tag	UNP A4F9D7
B	-12	HIS	-	expression tag	UNP A4F9D7
B	-11	HIS	-	expression tag	UNP A4F9D7
B	-10	HIS	-	expression tag	UNP A4F9D7
B	-9	SER	-	expression tag	UNP A4F9D7
B	-8	SER	-	expression tag	UNP A4F9D7
B	-7	GLY	-	expression tag	UNP A4F9D7
B	-6	LEU	-	expression tag	UNP A4F9D7
B	-5	VAL	-	expression tag	UNP A4F9D7
B	-4	PRO	-	expression tag	UNP A4F9D7
B	-3	ARG	-	expression tag	UNP A4F9D7
B	-2	GLY	-	expression tag	UNP A4F9D7
B	-1	SER	-	expression tag	UNP A4F9D7
B	0	HIS	-	expression tag	UNP A4F9D7
B	1	VAL	-	expression tag	UNP A4F9D7

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	1	Total Zn 1 1	0	0
2	C	1	Total Zn 1 1	0	0

- Molecule 3 is water.

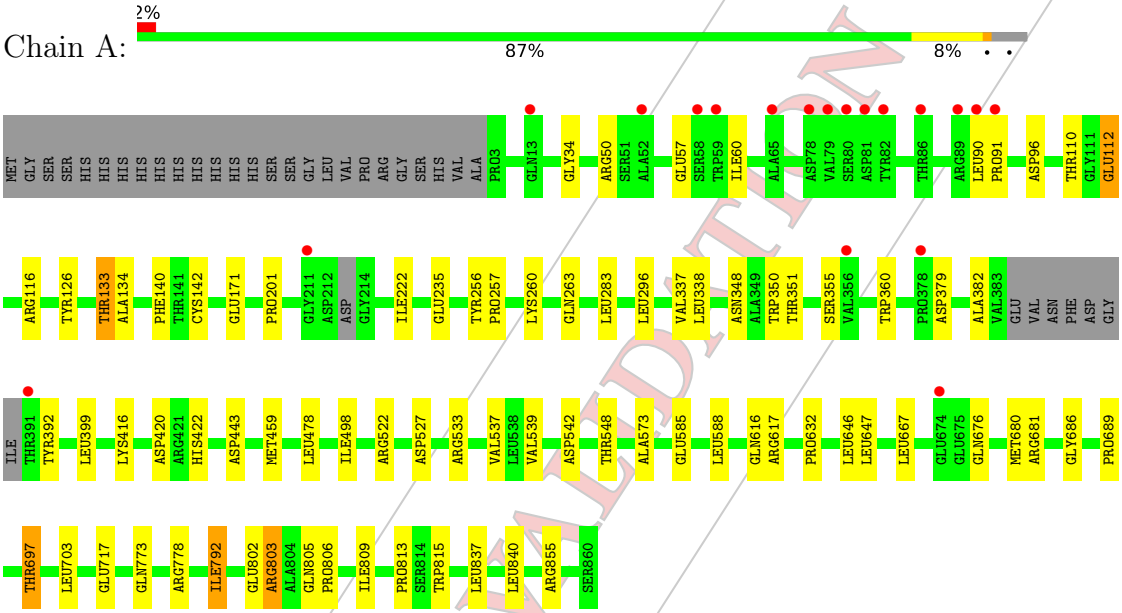
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	S	1058	Total O 1058 1058	0	0

3 Residue-property plots

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.

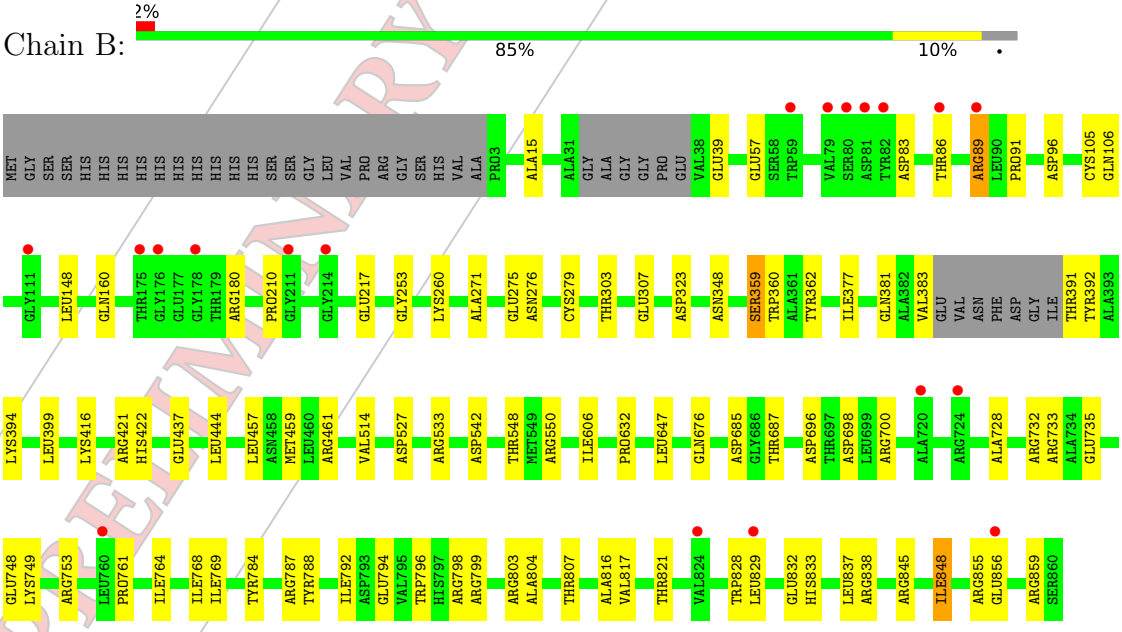
• Molecule 1: Alanine aminopeptidase

Chain A:



• Molecule 1: Alanine aminopeptidase

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	91.42Å 66.63Å 153.74Å 90.00° 93.41° 90.00°	Depositor
Resolution (Å)	31.06 – 1.80 37.74 – 1.80	Depositor EDS
% Data completeness (in resolution range)	97.9 (31.06-1.80) 92.8 (37.74-1.80)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.27 (at 1.81Å)	Xtriage
Refinement program	PHENIX 1.18.2_3874	Depositor
R, R_{free}	0.190 , 0.210 0.190 , 0.210	Depositor DCC
R_{free} test set	1989 reflections (1.19%)	wwPDB-VP
Wilson B-factor (Å^2)	30.9	Xtriage
Anisotropy	0.549	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 40.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	14378	wwPDB-VP
Average B, all atoms (Å^2)	42.0	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 22.16 % 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 6.0383e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[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: ZN

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	0.72	3/6846 (0.0%)	0.66	5/9325 (0.1%)
1	B	0.77	4/6785 (0.1%)	0.69	2/9246 (0.0%)
All	All	0.74	7/13631 (0.1%)	0.68	7/18571 (0.0%)

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	360	TRP	CB-CG	-8.06	1.35	1.50
1	B	360	TRP	CB-CG	-7.62	1.36	1.50
1	A	355	SER	CB-OG	-6.64	1.33	1.42
1	B	275	GLU	CD-OE1	-6.38	1.18	1.25
1	B	359	SER	CB-OG	-5.91	1.34	1.42
1	A	392	TYR	C-O	-5.22	1.13	1.23
1	B	784	TYR	CG-CD2	-5.06	1.32	1.39

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	778	ARG	NE-CZ-NH2	7.16	123.88	120.30
1	A	443	ASP	CB-CG-OD1	6.62	124.26	118.30
1	A	778	ARG	NE-CZ-NH1	-6.45	117.08	120.30
1	A	283	LEU	CB-CG-CD1	-5.56	101.54	111.00
1	A	112	GLU	N-CA-C	-5.45	96.27	111.00
1	B	383	VAL	CB-CA-C	-5.44	101.06	111.40
1	B	271	ALA	N-CA-C	5.43	125.65	111.00

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	6689	0	6433	48	0
1	B	6629	0	6363	65	0
2	C	2	0	0	0	0
3	S	1058	0	0	16	0
All	All	14378	0	12796	113	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 4.

All (113) 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:B:829:LEU:O	1:B:838:ARG:NH1	1.60	1.31
1:B:748:GLU:OE1	1:B:787:ARG:NH2	1.98	0.96
1:B:392:TYR:HB2	3:S:1180:HOH:O	1.69	0.92
1:A:50:ARG:HG2	1:A:96:ASP:OD1	1.70	0.91
1:A:235:GLU:HG3	3:S:254:HOH:O	1.72	0.89
1:B:817:VAL:HA	1:B:848:ILE:CD1	2.05	0.86
1:A:697:THR:HG23	3:S:1166:HOH:O	1.82	0.78
1:B:788:TYR:O	1:B:792:ILE:HG12	1.83	0.78
1:B:548:THR:HG23	3:S:385:HOH:O	1.84	0.77
1:B:748:GLU:CD	1:B:787:ARG:HH22	1.87	0.76
1:B:391:THR:HG22	1:B:394:LYS:H	1.51	0.74
1:A:338:LEU:HD12	3:S:339:HOH:O	1.87	0.72
1:B:828:TRP:O	1:B:833:HIS:NE2	2.26	0.69
1:B:761:PRO:HG2	1:B:764:ILE:CG2	2.23	0.68
1:A:379:ASP:OD1	1:A:382:ALA:HB2	1.94	0.68
1:A:809:ILE:HD11	1:A:840:LEU:HD22	1.75	0.67
1:B:761:PRO:O	1:B:764:ILE:HG22	1.96	0.66
1:B:391:THR:HG23	3:S:909:HOH:O	1.96	0.65
1:A:34:GLY:O	1:A:116:ARG:NH1	2.29	0.65
1:B:253:GLY:HA3	1:B:416:LYS:HD3	1.79	0.63
1:B:459:MET:HG2	1:B:548:THR:HB	1.82	0.62
1:B:57:GLU:OE1	1:B:89:ARG:CD	2.47	0.62
1:B:788:TYR:CE1	1:B:792:ILE:HD11	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:761:PRO:HG2	1:B:764:ILE:HG22	1.82	0.59
1:A:498:ILE:HD12	1:A:537:VAL:HG22	1.84	0.59
1:A:647:LEU:HD22	1:A:676:GLN:HG3	1.86	0.58
1:A:585[A]:GLU:OE2	1:A:585[A]:GLU:HA	2.03	0.58
1:B:749:LYS:O	1:B:753:ARG:HG3	2.03	0.57
1:A:133:THR:HG22	1:A:134:ALA:N	2.18	0.57
1:A:680[A]:MET:HG3	1:A:703:LEU:HD22	1.87	0.57
1:B:348[B]:ASN:ND2	1:B:348[B]:ASN:H	2.02	0.56
1:B:57:GLU:OE1	1:B:89:ARG:CG	2.54	0.56
1:A:616:GLN:NE2	3:S:545:HOH:O	2.37	0.54
1:A:792:ILE:HG23	1:A:837:LEU:HD21	1.90	0.54
1:B:792:ILE:HG22	1:B:837:LEU:HD21	1.89	0.53
1:A:422:HIS:HE1	3:S:902:HOH:O	1.91	0.53
1:B:794:GLU:O	1:B:798:ARG:HG3	2.08	0.53
1:B:348[B]:ASN:H	1:B:348[B]:ASN:HD22	1.57	0.53
1:A:681:ARG:NH2	1:A:717:GLU:OE1	2.35	0.52
1:A:416:LYS:HE3	1:A:420:ASP:OD2	2.10	0.52
1:A:459:MET:HG2	1:A:548:THR:HB	1.90	0.51
1:B:15:ALA:HA	1:B:148:LEU:HD21	1.92	0.51
1:B:57:GLU:HG3	1:B:91:PRO:HA	1.93	0.51
1:A:646:LEU:HB3	1:A:667:LEU:HG	1.93	0.51
1:A:57:GLU:HG3	1:A:91:PRO:HA	1.94	0.50
1:B:817:VAL:HA	1:B:848:ILE:HD12	1.93	0.50
1:B:698[B]:ASP:OD1	1:B:733:ARG:NH1	2.45	0.50
1:B:362:TYR:CD1	1:B:457:LEU:HD21	2.48	0.49
1:B:799:ARG:HB2	1:B:804:ALA:HB2	1.93	0.49
1:B:461:ARG:HB3	1:B:550:ARG:HB2	1.95	0.49
1:B:845:ARG:NH1	3:S:837:HOH:O	2.34	0.49
1:A:539:VAL:HG22	3:S:89:HOH:O	2.13	0.49
1:A:478:LEU:HD22	1:A:522:ARG:HG3	1.94	0.49
1:A:478:LEU:CD2	1:A:522:ARG:HG3	2.43	0.49
1:B:210:PRO:HA	1:B:217:GLU:HG2	1.94	0.48
1:A:50:ARG:CG	1:A:96:ASP:OD1	2.54	0.47
1:B:848:ILE:O	1:B:848:ILE:HG13	2.14	0.47
1:A:60:ILE:HB	1:A:90:LEU:HD11	1.97	0.47
1:B:816:ALA:CB	1:B:821:THR:HG21	2.45	0.47
1:B:422:HIS:HE1	3:S:1168:HOH:O	1.98	0.46
1:A:140:PHE:CE2	1:A:142:CYS:HB3	2.51	0.46
1:B:514:VAL:HG21	1:B:527:ASP:HB3	1.98	0.46
1:B:728:ALA:O	1:B:732:ARG:HG3	2.16	0.46
1:A:805:GLN:HB3	1:A:806:PRO:HD3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:83:ASP:O	1:B:86:THR:HG22	2.15	0.46
1:B:647:LEU:HD22	1:B:676:GLN:HG3	1.98	0.46
1:A:802:GLU:HG3	1:A:803:ARG:N	2.32	0.45
1:A:773:GLN:NE2	3:S:706:HOH:O	2.48	0.45
1:A:676:GLN:O	1:A:680[B]:MET:HG3	2.17	0.45
1:A:813:PRO:HA	1:A:815:TRP:CE3	2.52	0.45
1:A:686:GLY:O	1:A:689:PRO:HD3	2.17	0.45
1:A:813:PRO:HA	1:A:815:TRP:CZ3	2.51	0.45
1:B:391:THR:CG2	1:B:394:LYS:H	2.26	0.45
1:A:296:LEU:HD23	1:A:296:LEU:HA	1.67	0.45
1:A:459:MET:HE3	1:A:459:MET:HB3	1.88	0.45
1:B:817:VAL:HA	1:B:848:ILE:HD11	1.97	0.45
1:B:685:ASP:OD1	1:B:687:THR:HB	2.17	0.45
1:A:110:THR:HG23	1:A:112:GLU:HB2	1.99	0.44
1:B:548:THR:HG22	1:B:550:ARG:NH1	2.32	0.44
1:B:856:GLU:OE2	1:B:859:ARG:NH1	2.45	0.44
1:B:816:ALA:HB3	1:B:821:THR:HG21	2.00	0.44
1:B:769:ILE:HD13	1:B:807:THR:HA	2.00	0.44
1:A:527:ASP:HB2	3:S:1184:HOH:O	2.18	0.43
1:B:57:GLU:OE1	1:B:89:ARG:HD3	2.18	0.43
1:B:794:GLU:HB3	1:B:798:ARG:NH1	2.34	0.43
1:B:39:GLU:O	1:B:106:GLN:HA	2.18	0.43
1:B:816:ALA:O	1:B:821:THR:HG21	2.18	0.43
1:A:337:VAL:HG11	1:A:350:TRP:CE3	2.54	0.43
1:B:845:ARG:O	1:B:848:ILE:CG2	2.66	0.43
1:A:126:TYR:CZ	1:A:201:PRO:HG2	2.53	0.43
1:B:799:ARG:NH1	1:B:803:ARG:O	2.51	0.43
1:B:606:ILE:HD12	1:B:606:ILE:HA	1.92	0.42
1:B:796:TRP:CE3	1:B:837:LEU:HD13	2.54	0.42
1:A:256:TYR:HA	1:A:257:PRO:HD3	1.81	0.42
1:B:323:ASP:HA	1:B:377:ILE:HG13	2.01	0.42
1:B:735:GLU:HG2	1:B:764:ILE:HG13	2.02	0.42
1:B:437:GLU:HG3	1:B:444:LEU:HD12	2.01	0.42
1:B:696:ASP:O	1:B:700:ARG:HG3	2.19	0.42
1:A:792:ILE:HA	1:A:792:ILE:HD12	1.75	0.42
1:B:105:CYS:HB3	3:S:612:HOH:O	2.20	0.42
1:A:351:THR:HG23	1:A:573:ALA:HB2	2.02	0.42
1:A:588:LEU:HD12	3:S:120:HOH:O	2.20	0.41
1:A:348:ASN:HB2	3:S:1161:HOH:O	2.20	0.41
1:B:735:GLU:HG3	1:B:768:ILE:HG12	2.02	0.41
1:B:735:GLU:HG3	1:B:768:ILE:CG1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:160:GLN:HA	1:B:180:ARG:HG3	2.02	0.41
1:B:303:THR:O	1:B:307:GLU:HG2	2.21	0.41
1:A:632:PRO:HG3	1:A:855:ARG:NH1	2.36	0.41
1:B:632:PRO:HG3	1:B:855:ARG:NH1	2.35	0.41
1:A:379:ASP:OD1	1:A:379:ASP:N	2.54	0.41
1:A:498:ILE:CD1	1:A:537:VAL:HG22	2.50	0.41
1:B:276:ASN:HB2	1:B:279:CYS:O	2.21	0.40
1:A:222:ILE:HA	1:A:263:GLN:O	2.22	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	849/884 (96%)	838 (99%)	11 (1%)	0	100	100
1	B	842/884 (95%)	824 (98%)	18 (2%)	0	100	100
All	All	1691/1768 (96%)	1662 (98%)	29 (2%)	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	690/717 (96%)	680 (99%)	10 (1%)	67	59

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	682/717 (95%)	671 (98%)	11 (2%)	62	54
All	All	1372/1434 (96%)	1351 (98%)	21 (2%)	65	56

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

Mol	Chain	Res	Type
1	A	133	THR
1	A	171	GLU
1	A	260	LYS
1	A	399	LEU
1	A	533	ARG
1	A	542	ASP
1	A	617	ARG
1	A	697	THR
1	A	792	ILE
1	A	803	ARG
1	B	89	ARG
1	B	96	ASP
1	B	260	LYS
1	B	359	SER
1	B	381	GLN
1	B	399	LEU
1	B	421	ARG
1	B	533	ARG
1	B	542	ASP
1	B	832	GLU
1	B	848	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	276	ASN
1	A	422	HIS
1	A	759	GLN
1	A	773	GLN
1	B	276	ASN
1	B	340	GLN
1	B	752	GLN
1	B	797	HIS

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 monosaccharides in this entry.

5.6 Ligand geometry

Of 2 ligands modelled in this entry, 2 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	850/884 (96%)	-0.02	19 (2%) 62 57	24, 38, 62, 79	0
1	B	845/884 (95%)	0.12	19 (2%) 62 57	24, 42, 68, 83	0
All	All	1695/1768 (95%)	0.05	38 (2%) 62 57	24, 40, 66, 83	0

All (38) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	81	ASP	6.1
1	A	82	TYR	5.5
1	A	86	THR	5.4
1	B	81	ASP	4.8
1	B	80	SER	4.5
1	A	80	SER	4.4
1	B	175	THR	4.2
1	A	79	VAL	4.1
1	B	89	ARG	3.5
1	B	59	TRP	3.4
1	A	58	SER	3.3
1	B	760	LEU	3.2
1	A	59	TRP	3.0
1	B	86	THR	3.0
1	A	391	THR	2.9
1	B	82	TYR	2.9
1	B	211	GLY	2.9
1	B	79	VAL	2.8
1	B	111	GLY	2.7
1	B	178	GLY	2.6
1	A	78	ASP	2.6
1	A	91	PRO	2.6
1	A	356	VAL	2.6
1	A	13	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	378	PRO	2.4
1	A	90	LEU	2.3
1	B	720	ALA	2.3
1	B	724	ARG	2.3
1	A	674	GLU	2.2
1	A	52	ALA	2.2
1	A	65	ALA	2.2
1	B	824	VAL	2.2
1	A	89	ARG	2.1
1	B	829	LEU	2.1
1	B	176	GLY	2.1
1	B	214	GLY	2.1
1	B	856	GLU	2.0
1	A	211	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 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	ZN	C	1	1/?	0.86	0.17	37,37,37,37	1
2	ZN	C	2	1/?	0.91	0.11	37,37,37,37	1

6.5 Other polymers (i)

There are no such residues in this entry.