Full wwPDB X-ray Structure Validation Report ⓘ

Sep 25, 2023 – 12:28 AM EDT

PDB ID	:	5VK3
Title	:	Apo ctPRC2 with E840A and K852D mutations in Ezh2
Authors	:	Bratkowski, M.A.; Liu, X.
Deposited on	:	2017-04-20
Resolution	:	2.11 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:

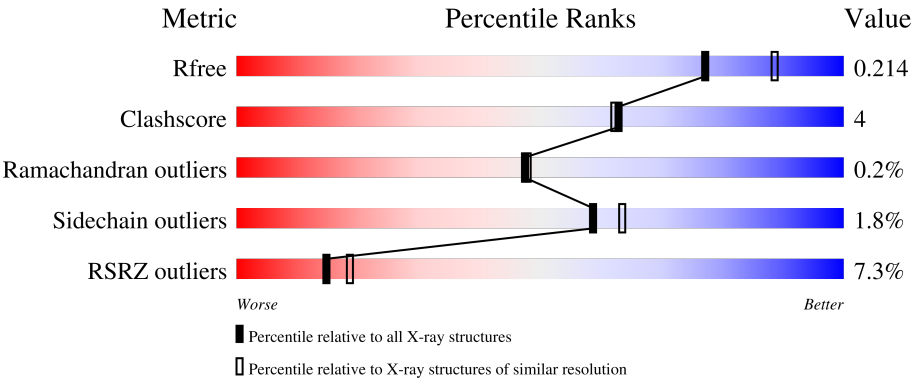
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation 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 2.11 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	6241 (2.14-2.10)
Clashscore	141614	6778 (2.14-2.10)
Ramachandran outliers	138981	6705 (2.14-2.10)
Sidechain outliers	138945	6706 (2.14-2.10)
RSRZ outliers	127900	6112 (2.14-2.10)

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	605	5% 70% 7% 23%
2	B	937	7% 75% 9% 15%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 10990 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 Polycomb Protein EED.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	468	3692	2359	637	677	19	0	2	0

There are 40 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-39	MET	-	initiating methionine	UNP G0S8H7
A	-38	ALA	-	expression tag	UNP G0S8H7
A	-37	SER	-	expression tag	UNP G0S8H7
A	-36	ALA	-	expression tag	UNP G0S8H7
A	-35	TRP	-	expression tag	UNP G0S8H7
A	-34	SER	-	expression tag	UNP G0S8H7
A	-33	HIS	-	expression tag	UNP G0S8H7
A	-32	PRO	-	expression tag	UNP G0S8H7
A	-31	GLN	-	expression tag	UNP G0S8H7
A	-30	PHE	-	expression tag	UNP G0S8H7
A	-29	GLU	-	expression tag	UNP G0S8H7
A	-28	LYS	-	expression tag	UNP G0S8H7
A	-27	GLY	-	expression tag	UNP G0S8H7
A	-26	GLY	-	expression tag	UNP G0S8H7
A	-25	GLY	-	expression tag	UNP G0S8H7
A	-24	SER	-	expression tag	UNP G0S8H7
A	-23	GLY	-	expression tag	UNP G0S8H7
A	-22	GLY	-	expression tag	UNP G0S8H7
A	-21	GLY	-	expression tag	UNP G0S8H7
A	-20	SER	-	expression tag	UNP G0S8H7
A	-19	GLY	-	expression tag	UNP G0S8H7
A	-18	GLY	-	expression tag	UNP G0S8H7
A	-17	SER	-	expression tag	UNP G0S8H7
A	-16	ALA	-	expression tag	UNP G0S8H7
A	-15	TRP	-	expression tag	UNP G0S8H7
A	-14	SER	-	expression tag	UNP G0S8H7
A	-13	HIS	-	expression tag	UNP G0S8H7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-12	PRO	-	expression tag	UNP G0S8H7
A	-11	GLN	-	expression tag	UNP G0S8H7
A	-10	PHE	-	expression tag	UNP G0S8H7
A	-9	GLU	-	expression tag	UNP G0S8H7
A	-8	LYS	-	expression tag	UNP G0S8H7
A	-7	LEU	-	expression tag	UNP G0S8H7
A	-6	GLU	-	expression tag	UNP G0S8H7
A	-5	VAL	-	expression tag	UNP G0S8H7
A	-4	LEU	-	expression tag	UNP G0S8H7
A	-3	PHE	-	expression tag	UNP G0S8H7
A	-2	GLN	-	expression tag	UNP G0S8H7
A	-1	GLY	-	expression tag	UNP G0S8H7
A	0	PRO	-	expression tag	UNP G0S8H7

- Molecule 2 is a protein called Histone-lysine N-methyltransferase EZH2,Polycomb protein SUZ12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	794	Total	C	N	O	S	0	0	0
			6390	4022	1161	1166	41			

There are 17 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	182	SER	-	expression tag	UNP G0SDW4
B	183	ASN	-	expression tag	UNP G0SDW4
B	184	HIS	-	expression tag	UNP G0SDW4
B	185	HIS	-	expression tag	UNP G0SDW4
B	186	HIS	-	expression tag	UNP G0SDW4
B	187	HIS	-	expression tag	UNP G0SDW4
B	188	HIS	-	expression tag	UNP G0SDW4
B	189	HIS	-	expression tag	UNP G0SDW4
B	190	ALA	-	expression tag	UNP G0SDW4
B	840	ALA	GLU	engineered mutation	UNP G0SDW4
B	852	ASP	LYS	engineered mutation	UNP G0SDW4
B	2524	LEU	-	linker	UNP G0SDW4
B	2525	VAL	-	linker	UNP G0SDW4
B	2526	PRO	-	linker	UNP G0SDW4
B	2527	ARG	-	linker	UNP G0SDW4
B	2528	GLY	-	linker	UNP G0SDW4
B	2529	SER	-	linker	UNP G0SDW4

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	8	Total Zn 8 8	0	0

- Molecule 4 is water.

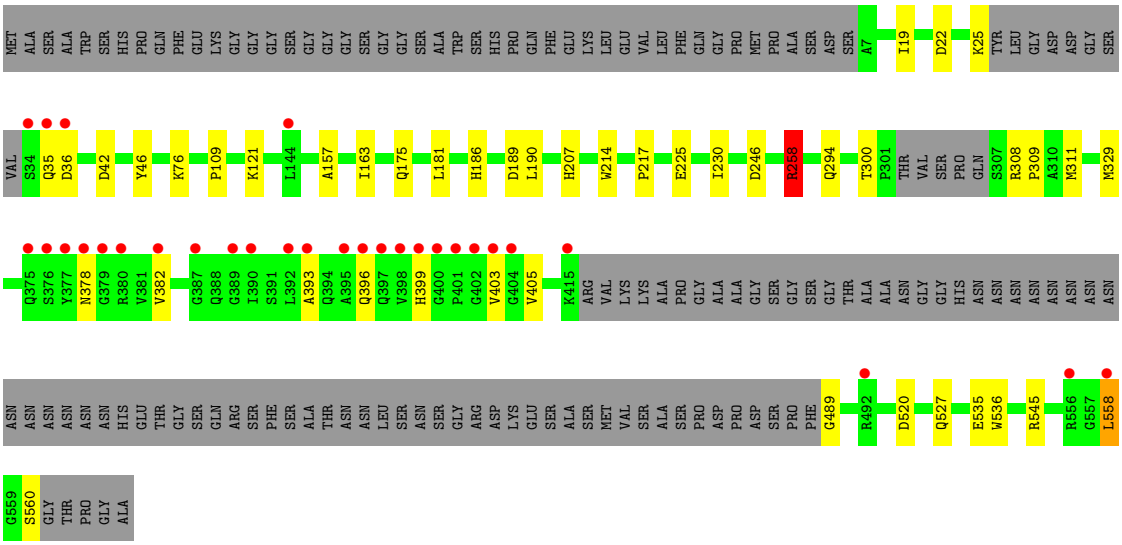
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	351	Total O 351 351	0	0
4	B	549	Total O 549 549	0	0

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.

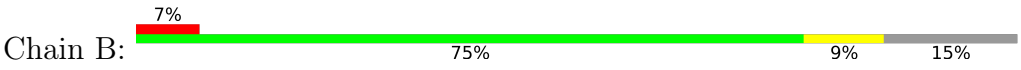
• Molecule 1: Polycomb Protein EED

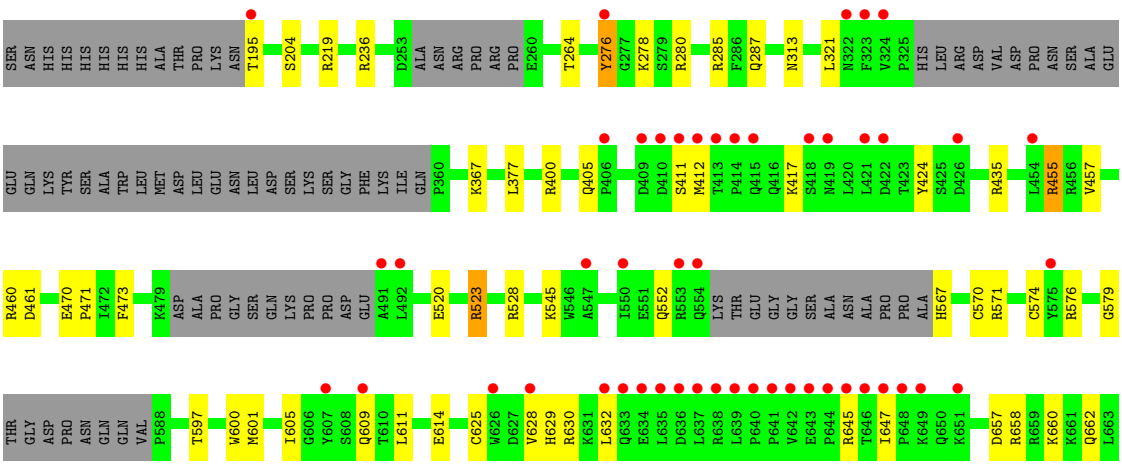
Chain A:

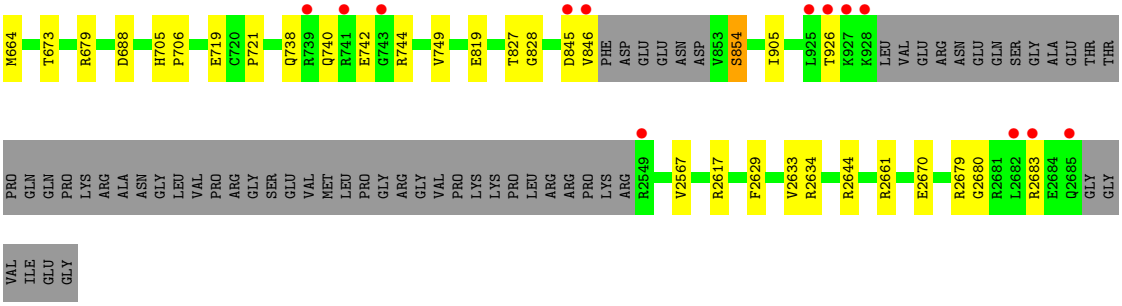


• Molecule 2: Histone-lysine N-methyltransferase EZH2,Polycomb protein SUZ12

Chain B:






M664 T673 R679 D688 H705 P706 E719 C720 P721 Q738 R739 Q740 R741 E742 G743 R744 V749 E819 T827 G828 D845 V846 PHE ASP GLU GLU ASN ASP V853 S854 I905 L925 T926 K927 K928 LEU VAL GLU ARG ASN GLU GLN SER GLY ALA GLU THR THR
PRO GLN GLN PRO LYS ARG ALA ASN GLY LEU VAL PRO ARG GLY SER GLU VAL MET LEU PRO GLY ARG GLY VAL PRO LYS LYS PRO LEU ARG ARG PRO LYS ARG R2549 V2567 R2617 F2629 V2633 R2634 R2644 R2661 E2670 R2679 G2680 R2681 L2682 R2683 E2684 Q2685 GLY GLY
VAL ILE GLU GLY

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	117.59Å 138.00Å 224.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	44.75 – 2.11 44.75 – 2.11	Depositor EDS
% Data completeness (in resolution range)	94.8 (44.75-2.11) 94.8 (44.75-2.11)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.23 (at 2.12Å)	Xtriage
Refinement program	PHENIX (1.11.1_2575: ???)	Depositor
R, R_{free}	0.168 , 0.214 0.168 , 0.214	Depositor DCC
R_{free} test set	4899 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å^2)	25.9	Xtriage
Anisotropy	0.071	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 60.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	10990	wwPDB-VP
Average B, all atoms (Å^2)	37.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.20% 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: 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	0.42	0/3804	0.59	2/5176 (0.0%)
2	B	0.39	0/6537	0.54	0/8834
All	All	0.40	0/10341	0.56	2/14010 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	258	ARG	NE-CZ-NH1	5.76	123.18	120.30
1	A	258	ARG	NE-CZ-NH2	-5.33	117.64	120.30

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	3692	0	3565	25	0
2	B	6390	0	6290	62	0
3	B	8	0	0	0	0
4	A	351	0	0	3	0
4	B	549	0	0	9	0
All	All	10990	0	9855	86	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 (86) 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:660:LYS:O	2:B:744:ARG:NH1	1.92	1.01
2:B:2680:GLY:HA2	2:B:2683:ARG:HH11	1.26	0.99
2:B:579:GLY:O	2:B:630:ARG:NH1	2.11	0.83
2:B:2679:ARG:O	2:B:2683:ARG:HD2	1.79	0.82
2:B:662:GLN:HB2	2:B:744:ARG:HH22	1.51	0.74
2:B:2679:ARG:O	2:B:2683:ARG:CD	2.36	0.74
2:B:470:GLU:HG3	2:B:471:PRO:HD3	1.68	0.74
2:B:2680:GLY:HA2	2:B:2683:ARG:NH1	2.03	0.72
1:A:246:ASP:OD1	1:A:258:ARG:HD3	1.88	0.72
2:B:2634:ARG:NH2	2:B:2670:GLU:OE2	2.26	0.69
2:B:520:GLU:OE2	2:B:528:ARG:NH2	2.25	0.69
2:B:845:ASP:OD2	2:B:854:SER:HB2	1.93	0.68
1:A:76:LYS:HG2	2:B:280:ARG:HE	1.59	0.67
2:B:614:GLU:OE1	2:B:632:LEU:HD23	1.97	0.64
1:A:25:LYS:HD2	1:A:35:GLN:OE1	1.97	0.64
1:A:489:GLY:N	4:A:602:HOH:O	2.30	0.64
2:B:523:ARG:H	2:B:523:ARG:HD2	1.63	0.64
1:A:294:GLN:NE2	4:A:605:HOH:O	2.35	0.60
2:B:313:ASN:HD21	2:B:827:THR:HA	1.67	0.59
2:B:460:ARG:NH2	4:B:8112:HOH:O	2.33	0.59
1:A:22:ASP:OD1	1:A:36:ASP:HA	2.04	0.58
2:B:645:ARG:NH2	2:B:719:GLU:OE2	2.38	0.56
2:B:412:MET:HE2	2:B:417:LYS:HG2	1.87	0.56
2:B:455:ARG:NH2	4:B:8122:HOH:O	2.37	0.56
1:A:22:ASP:OD2	1:A:25:LYS:HG2	2.06	0.56
2:B:219:ARG:NH2	4:B:8121:HOH:O	2.36	0.56
1:A:396:GLN:HG2	1:A:405:VAL:HG11	1.88	0.55
2:B:276:TYR:HD1	2:B:278:LYS:H	1.54	0.54
2:B:574:CYS:HA	2:B:625:CYS:HB3	1.89	0.54
2:B:313:ASN:HD22	2:B:828:GLY:H	1.54	0.54
1:A:186:HIS:CG	1:A:190:LEU:HD21	2.44	0.53
2:B:2680:GLY:HA2	2:B:2683:ARG:HD3	1.91	0.53
2:B:455:ARG:NH2	4:B:8111:HOH:O	2.32	0.52
1:A:558:LEU:HD23	1:A:560:SER:H	1.74	0.52
2:B:400:ARG:HD3	2:B:424:TYR:O	2.10	0.51
2:B:601:MET:O	2:B:605:ILE:HG12	2.11	0.51
2:B:236:ARG:NH1	4:B:8110:HOH:O	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:740:GLN:HG2	2:B:742:GLU:HB2	1.93	0.51
2:B:313:ASN:ND2	2:B:827:THR:HA	2.26	0.50
2:B:552:GLN:HB3	2:B:609:GLN:HE22	1.77	0.49
2:B:597:THR:HA	2:B:600:TRP:CE2	2.47	0.49
1:A:19:ILE:HG12	1:A:545:ARG:HG2	1.94	0.49
2:B:435:ARG:NE	4:B:8123:HOH:O	2.38	0.49
1:A:42:ASP:OD1	1:A:527:GLN:HG2	2.12	0.48
1:A:189:ASP:HB2	1:A:207:HIS:CD2	2.49	0.48
2:B:377:LEU:HD12	2:B:457:VAL:HG11	1.95	0.47
2:B:412:MET:HG2	2:B:473:PHE:CE1	2.50	0.47
2:B:2680:GLY:CA	2:B:2683:ARG:NH1	2.75	0.47
2:B:285:ARG:HH22	2:B:287:GLN:HE21	1.62	0.46
2:B:313:ASN:ND2	2:B:828:GLY:H	2.14	0.46
2:B:470:GLU:HG3	2:B:471:PRO:CD	2.43	0.46
2:B:528:ARG:HH11	2:B:528:ARG:HG2	1.80	0.46
2:B:195:THR:HG22	4:B:8442:HOH:O	2.16	0.45
2:B:705:HIS:HB3	2:B:706:PRO:HD2	1.97	0.45
2:B:614:GLU:HG2	2:B:629:HIS:HB2	1.99	0.45
2:B:567:HIS:O	2:B:576:ARG:NH2	2.46	0.45
2:B:846:VAL:HG11	2:B:926:THR:HG21	1.98	0.45
1:A:46:TYR:CE1	1:A:109:PRO:HB3	2.51	0.45
1:A:225:GLU:HG3	4:A:782:HOH:O	2.15	0.45
1:A:189:ASP:HB2	1:A:207:HIS:HD2	1.82	0.44
2:B:673:THR:HA	2:B:679:ARG:HH21	1.82	0.44
1:A:181:LEU:HD13	1:A:214:TRP:CG	2.53	0.44
2:B:412:MET:HG2	2:B:473:PHE:HE1	1.83	0.44
1:A:535:GLU:HG2	1:A:536:TRP:CD1	2.53	0.44
1:A:382:VAL:HG13	1:A:405:VAL:HA	2.00	0.43
1:A:399:HIS:HB2	1:A:403:VAL:HG11	2.00	0.43
2:B:657:ASP:OD2	2:B:660:LYS:HG2	2.18	0.43
2:B:2629:PHE:O	2:B:2633:VAL:HG23	2.18	0.43
2:B:738:GLN:HA	2:B:749:VAL:HG11	2.01	0.43
2:B:545:LYS:HB2	2:B:2661:ARG:HD2	2.02	0.42
2:B:2680:GLY:CA	2:B:2683:ARG:HH11	2.11	0.42
1:A:258:ARG:HD2	1:A:329:MET:O	2.20	0.42
2:B:405:GLN:NE2	4:B:8139:HOH:O	2.51	0.42
2:B:435:ARG:NH2	4:B:8123:HOH:O	2.52	0.42
1:A:308:ARG:HA	1:A:309:PRO:HD3	1.92	0.41
2:B:647:ILE:HG13	2:B:647:ILE:O	2.20	0.41
2:B:658:ARG:HD3	2:B:721:PRO:HA	2.02	0.41
2:B:455:ARG:HG3	2:B:455:ARG:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:523:ARG:HD2	2:B:523:ARG:N	2.30	0.41
2:B:457:VAL:HG23	2:B:461:ASP:HB2	2.03	0.41
2:B:605:ILE:HD12	2:B:611:LEU:HG	2.03	0.41
2:B:321:LEU:HD12	2:B:321:LEU:HA	1.90	0.40
2:B:819:GLU:HG3	2:B:905:ILE:C	2.42	0.40
1:A:157:ALA:HA	1:A:163:ILE:HD13	2.04	0.40
1:A:217:PRO:HD3	1:A:230:ILE:HD11	2.04	0.40
1:A:300:THR:HG22	1:A:311:MET:HG2	2.04	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	462/605 (76%)	443 (96%)	17 (4%)	2 (0%)	34	32
2	B	778/937 (83%)	745 (96%)	32 (4%)	1 (0%)	51	53
All	All	1240/1542 (80%)	1188 (96%)	49 (4%)	3 (0%)	47	48

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	393	ALA
1	A	558	LEU
2	B	411	SER

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	394/495 (80%)	389 (99%)	5 (1%)	69	74
2	B	695/815 (85%)	680 (98%)	15 (2%)	52	55
All	All	1089/1310 (83%)	1069 (98%)	20 (2%)	59	63

All (20) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	121	LYS
1	A	175	GLN
1	A	258	ARG
1	A	378	ASN
1	A	520	ASP
2	B	204	SER
2	B	264	THR
2	B	276	TYR
2	B	367	LYS
2	B	455	ARG
2	B	523	ARG
2	B	570	CYS
2	B	571	ARG
2	B	628	VAL
2	B	664	MET
2	B	688	ASP
2	B	854	SER
2	B	2567	VAL
2	B	2617	ARG
2	B	2644	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	397	GLN
2	B	313	ASN
2	B	609	GLN

5.3.3 RNA

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 (i)

Of 8 ligands modelled in this entry, 8 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 (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	468/605 (77%)	0.14	30 (6%)	19	23	12, 25, 79, 107	0
2	B	794/937 (84%)	0.08	62 (7%)	13	16	15, 34, 81, 134	0
All	All	1262/1542 (81%)	0.10	92 (7%)	15	19	12, 30, 80, 134	0

All (92) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	403	VAL	7.6
2	B	741	ARG	6.5
1	A	392	LEU	6.4
2	B	638	ARG	5.9
2	B	635	LEU	5.8
2	B	628	VAL	5.4
2	B	846	VAL	5.2
2	B	646	THR	5.1
2	B	644	PRO	4.8
2	B	927	LYS	4.7
2	B	632	LEU	4.7
2	B	645	ARG	4.7
2	B	414	PRO	4.6
1	A	558	LEU	4.6
2	B	2685	GLN	4.5
2	B	276	TYR	4.5
2	B	926	THR	4.4
2	B	418	SER	4.4
2	B	637	LEU	4.3
2	B	419	ASN	4.3
2	B	928	LYS	4.2
2	B	323	PHE	4.2
2	B	2683	ARG	4.2
2	B	410	ASP	4.1

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Mol	Chain	Res	Type	RSRZ
2	B	626	TRP	4.1
2	B	641	PRO	4.0
2	B	643	GLU	3.9
2	B	409	ASP	3.9
1	A	401	PRO	3.9
2	B	550	ILE	3.8
2	B	633	GLN	3.8
1	A	378	ASN	3.7
1	A	389	GLY	3.6
1	A	34	SER	3.5
2	B	636	ASP	3.5
2	B	845	ASP	3.5
2	B	642	VAL	3.4
1	A	36	ASP	3.3
1	A	397	GLN	3.2
1	A	380	ARG	3.2
2	B	651	LYS	3.2
1	A	35	GLN	3.2
1	A	492	ARG	3.1
2	B	647	ILE	3.1
2	B	649	LYS	3.1
2	B	634	GLU	3.1
2	B	553	ARG	3.1
2	B	411	SER	3.1
1	A	556	ARG	3.1
2	B	492	LEU	3.0
1	A	393	ALA	3.0
2	B	322	ASN	3.0
2	B	415	GLN	3.0
2	B	640	PRO	3.0
2	B	2549	ARG	3.0
2	B	454	LEU	2.9
2	B	422	ASP	2.9
1	A	387	GLY	2.8
2	B	609	GLN	2.8
1	A	399	HIS	2.8
2	B	648	PRO	2.8
1	A	415	LYS	2.8
1	A	377	TYR	2.8
1	A	382	VAL	2.7
2	B	547	ALA	2.7
2	B	743	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
2	B	554	GLN	2.7
2	B	421	LEU	2.7
2	B	2682	LEU	2.7
2	B	607	TYR	2.6
1	A	402	GLY	2.6
1	A	398	VAL	2.5
2	B	413	THR	2.5
2	B	925	LEU	2.5
1	A	400	GLY	2.5
2	B	575	TYR	2.5
1	A	395	ALA	2.4
2	B	426	ASP	2.4
2	B	639	LEU	2.4
1	A	379	GLY	2.4
2	B	195	THR	2.4
2	B	412	MET	2.3
2	B	491	ALA	2.3
1	A	390	ILE	2.3
1	A	404	GLY	2.3
2	B	324	VAL	2.2
2	B	739	ARG	2.2
1	A	144	LEU	2.1
2	B	406	PRO	2.1
1	A	375	GLN	2.1
1	A	376	SER	2.0
1	A	396	GLN	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
3	ZN	B	8008	1/1	0.94	0.04	55,55,55,55	0
3	ZN	B	8005	1/1	0.99	0.07	32,32,32,32	0
3	ZN	B	8004	1/1	0.99	0.06	32,32,32,32	0
3	ZN	B	8001	1/1	1.00	0.10	21,21,21,21	0
3	ZN	B	8002	1/1	1.00	0.11	21,21,21,21	0
3	ZN	B	8006	1/1	1.00	0.10	30,30,30,30	0
3	ZN	B	8007	1/1	1.00	0.11	18,18,18,18	0
3	ZN	B	8003	1/1	1.00	0.10	21,21,21,21	0

6.5 Other polymers (i)

There are no such residues in this entry.