Full wwPDB X-ray Structure Validation Report ⓘ

Aug 29, 2020 – 04:24 PM BST

PDB ID	:	6H3A
Title	:	Crystal structure of the KAP1 RBCC domain in complex with the SMARCAD1 CUE1 domain.
Authors	:	Newman, J.A.; Aitkenhead, H.; Lim, M.; Williams, H.L.; Svejstrup, J.Q.; von Delft, F.; Arrowsmith, C.H.; Edwards, A.; Bountra, C.; Gileadi, O.
Deposited on	:	2018-07-17
Resolution	:	5.50 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 following versions of software and data (see references ①) were used in the production of this report:

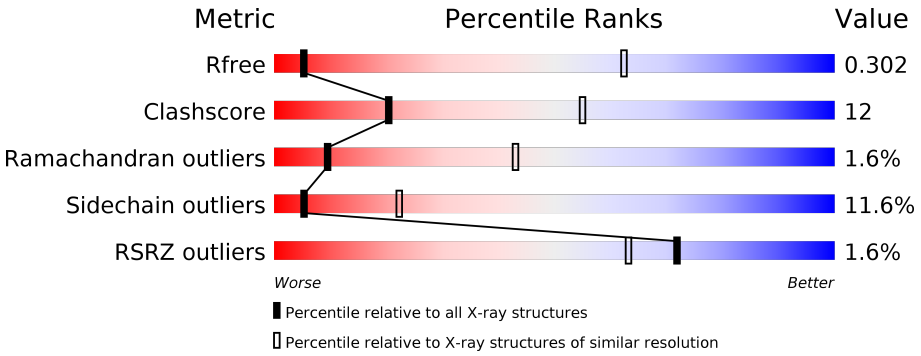
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.13
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.13

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 5.50 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	1019 (7.12-3.82)
Clashscore	141614	1010 (7.10-3.90)
Ramachandran outliers	138981	1014 (7.12-3.82)
Sidechain outliers	138945	1191 (7.20-3.80)
RSRZ outliers	127900	1023 (7.08-3.76)

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 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	B	253	11% 9% • 77%
1	D	253	9% 10% • 79%
2	A	382	% 49% 18% • 30%
2	F	382	% 49% 18% • 30%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 5063 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 SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A containing DEAD/H box 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	D	53	Total	C	N	O	S	0	0	0
			389	243	61	83	2			
1	B	57	Total	C	N	O	S	0	0	0
			425	264	65	94	2			

- Molecule 2 is a protein called Transcription intermediary factor 1-beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A	266	Total	C	N	O	S	0	0	0
			2115	1322	390	384	19			
2	F	268	Total	C	N	O	S	0	0	0
			2126	1329	392	386	19			

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

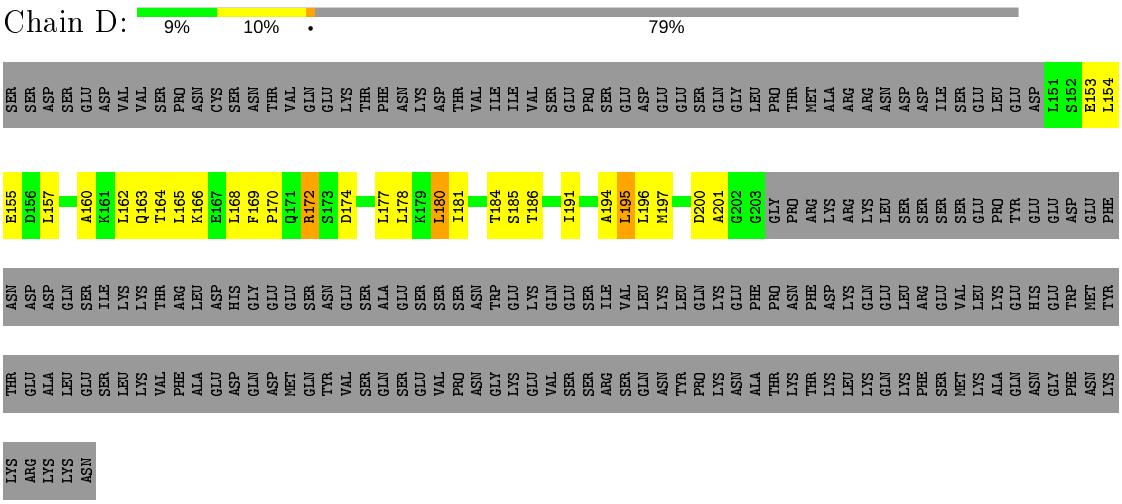
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	4	Total	Zn	0	0
			4	4		
3	F	4	Total	Zn	0	0
			4	4		

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.

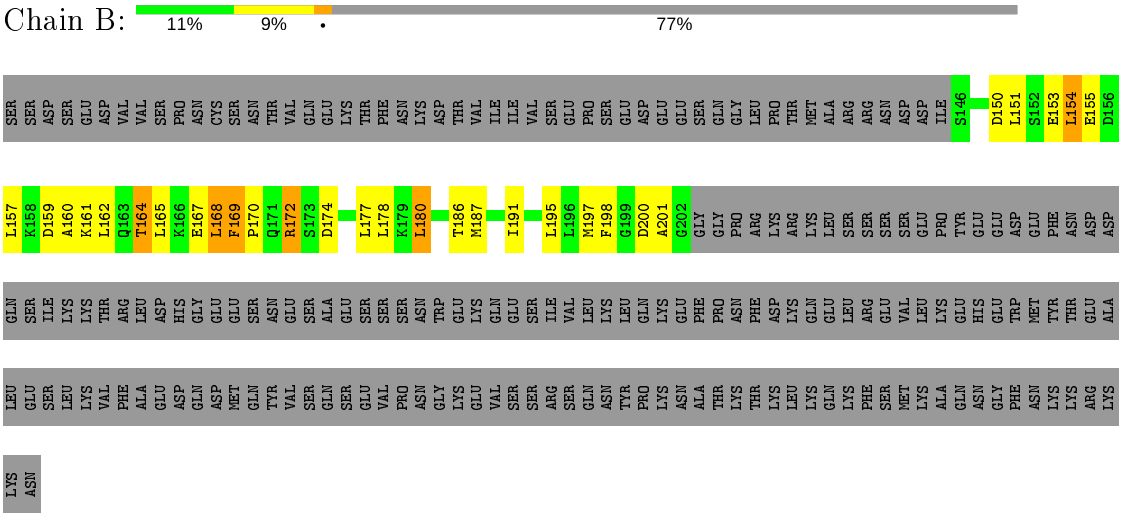
• Molecule 1: SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A containing DEAD/H box 1

Chain D:



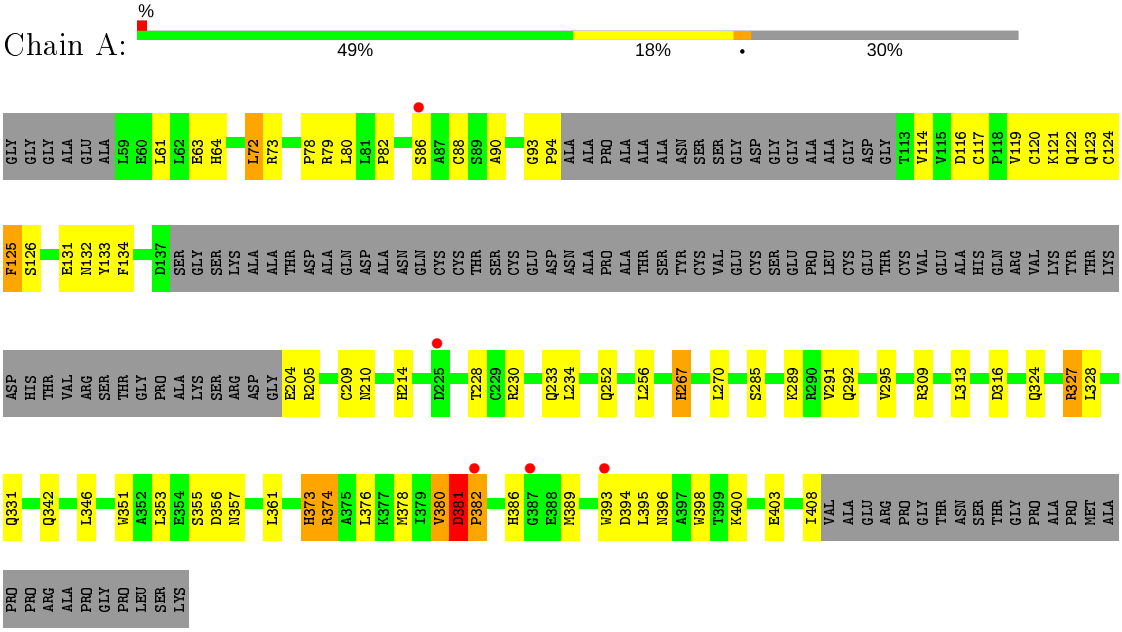
• Molecule 1: SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A containing DEAD/H box 1

Chain B:



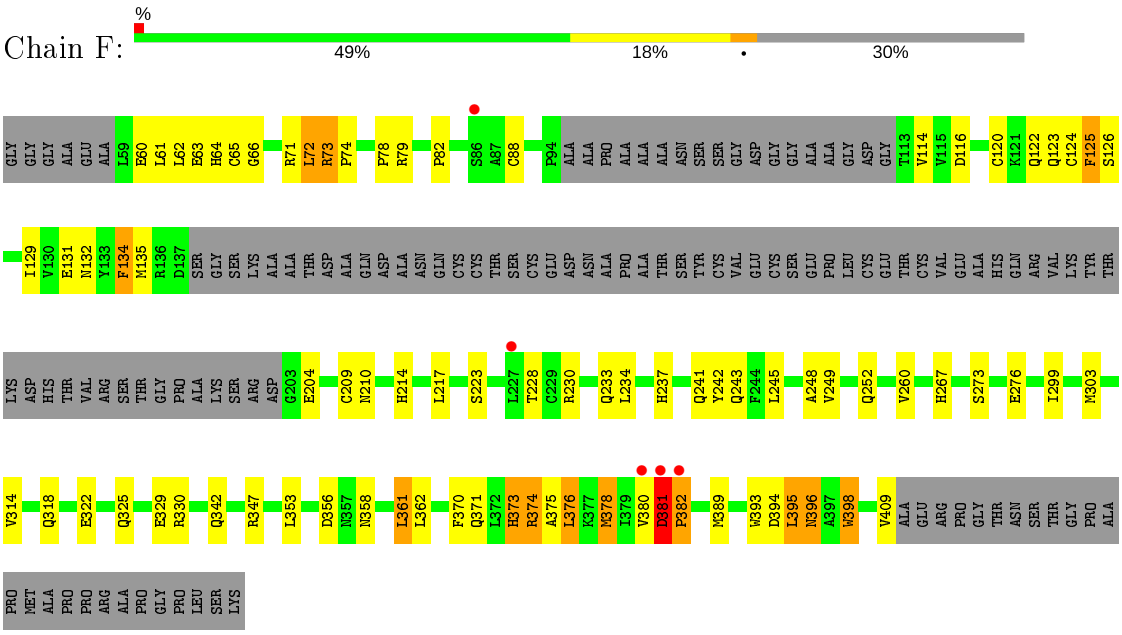
• Molecule 2: Transcription intermediary factor 1-beta

Chain A:



- Molecule 2: Transcription intermediary factor 1-beta

Chain F:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 2 3	Depositor
Cell constants a, b, c, α, β, γ	299.91Å 299.91Å 299.91Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	74.98 – 5.50 80.16 – 5.51	Depositor EDS
% Data completeness (in resolution range)	99.9 (74.98-5.50) 100.0 (80.16-5.51)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.14 (at 5.41Å)	Xtriage
Refinement program	PHENIX (1.13_2998: ???)	Depositor
R, R_{free}	0.279 , 0.303 0.278 , 0.302	Depositor DCC
R_{free} test set	713 reflections (4.84%)	wwPDB-VP
Wilson B-factor (Å^2)	276.3	Xtriage
Anisotropy	0.000	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 322.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.33$, $< L^2 > = 0.17$	Xtriage
Estimated twinning fraction	0.139 for -l,-k,-h	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	5063	wwPDB-VP
Average B, all atoms (Å^2)	321.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.12% 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	B	0.30	0/427	0.44	0/576
1	D	0.29	0/391	0.48	0/527
2	A	0.33	0/2151	0.54	0/2904
2	F	0.33	0/2162	0.51	0/2919
All	All	0.32	0/5131	0.52	0/6926

There are no bond length outliers.

There are no bond angle outliers.

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	B	425	0	410	13	0
1	D	389	0	381	19	0
2	A	2115	0	2077	51	0
2	F	2126	0	2089	55	0
3	A	4	0	0	0	0
3	F	4	0	0	0	0
All	All	5063	0	4957	124	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 12.

All (124) 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:F:374:ARG:O	2:F:378:MET:HB3	1.64	0.95
2:F:79:ARG:HA	2:F:131:GLU:HA	1.60	0.84
2:F:82:PRO:HG2	2:F:124:CYS:HB2	1.63	0.79
2:A:291:VAL:HG13	2:F:395:LEU:HD11	1.69	0.75
2:F:370:PHE:O	2:F:374:ARG:HB2	1.87	0.73
2:A:267:HIS:HA	2:A:270:LEU:HD12	1.70	0.73
2:A:82:PRO:HG2	2:A:124:CYS:HB2	1.74	0.70
1:D:169:PHE:HB2	1:D:195:LEU:HD11	1.74	0.68
1:B:177:LEU:HA	1:B:180:LEU:HD23	1.76	0.68
1:D:163:GLN:HB3	2:F:376:LEU:HD13	1.76	0.68
2:A:78:PRO:HA	2:A:88:CYS:HA	1.74	0.67
2:F:233:GLN:HA	2:F:237:HIS:HB2	1.77	0.67
2:F:228:THR:OG1	2:F:233:GLN:NE2	2.29	0.64
2:A:116:ASP:HA	2:A:122:GLN:HA	1.79	0.64
2:A:342:GLN:HE21	2:A:380:VAL:HG11	1.63	0.63
2:F:65:CYS:SG	2:F:66:GLY:N	2.67	0.63
2:F:116:ASP:HA	2:F:122:GLN:HA	1.82	0.62
2:F:78:PRO:HA	2:F:88:CYS:HA	1.81	0.62
1:B:186:THR:HA	1:B:191:ILE:HD11	1.80	0.61
2:F:273:SER:HA	2:F:276:GLU:HB2	1.83	0.61
2:A:205:ARG:HB3	2:F:358:ASN:HB3	1.83	0.60
2:A:79:ARG:HA	2:A:131:GLU:HA	1.82	0.60
1:D:165:LEU:HD22	1:D:195:LEU:HD13	1.82	0.60
2:A:285:SER:HA	2:F:325:GLN:HE22	1.66	0.60
2:A:79:ARG:HA	2:A:132:ASN:H	1.67	0.60
2:F:230:ARG:O	2:F:234:LEU:HG	2.04	0.57
2:A:380:VAL:C	2:A:382:PRO:HD3	2.24	0.57
1:D:169:PHE:CE1	1:D:200:ASP:HB3	2.40	0.57
1:D:194:ALA:HA	1:D:197:MET:HG3	1.84	0.57
1:B:200:ASP:OD1	1:B:201:ALA:N	2.24	0.57
2:F:375:ALA:HA	2:F:378:MET:SD	2.45	0.56
1:D:170:PRO:HB2	2:A:121:LYS:CB	2.36	0.56
2:A:327:ARG:HB2	2:A:327:ARG:HH11	1.71	0.56
2:F:361:LEU:H	2:F:361:LEU:HD23	1.69	0.56
2:A:61:LEU:HD11	2:F:347:ARG:NH1	2.22	0.55
2:A:204:GLU:N	2:A:204:GLU:OE1	2.41	0.53
2:F:342:GLN:HE21	2:F:380:VAL:HG11	1.72	0.53
1:D:196:LEU:HD22	1:D:201:ALA:HA	1.91	0.53
2:F:374:ARG:O	2:F:378:MET:CB	2.48	0.52
1:D:160:ALA:O	1:D:164:THR:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:114:VAL:HG12	2:A:125:PHE:HA	1.91	0.52
2:A:63:GLU:O	2:A:72:LEU:HG	2.10	0.52
2:F:126:SER:HA	2:F:129:ILE:HD12	1.92	0.51
1:D:186:THR:HA	1:D:191:ILE:HD11	1.92	0.51
1:D:169:PHE:HD2	1:D:195:LEU:HD21	1.74	0.51
2:F:74:PRO:HB3	2:F:135:MET:HG2	1.93	0.51
2:F:396:ASN:OD1	2:F:396:ASN:N	2.43	0.51
2:A:88:CYS:SG	2:A:90:ALA:HB3	2.51	0.50
2:F:373:HIS:HA	2:F:376:LEU:HB2	1.91	0.50
2:F:78:PRO:O	2:F:132:ASN:N	2.45	0.50
1:B:169:PHE:HB2	1:B:195:LEU:HD11	1.93	0.50
2:A:88:CYS:C	2:A:90:ALA:H	2.14	0.50
1:D:162:LEU:HD22	1:D:178:LEU:HD21	1.94	0.49
2:A:327:ARG:HB2	2:A:327:ARG:NH1	2.28	0.49
2:F:135:MET:HB2	2:F:204:GLU:HG3	1.95	0.49
1:B:153:GLU:O	1:B:157:LEU:HG	2.13	0.49
2:F:318:GLN:O	2:F:322:GLU:HG2	2.12	0.49
1:D:153:GLU:O	1:D:157:LEU:HG	2.13	0.48
2:F:356:ASP:OD1	2:F:356:ASP:N	2.45	0.48
2:A:295:VAL:HG11	2:F:314:VAL:HG22	1.95	0.48
2:A:373:HIS:HA	2:A:376:LEU:HB2	1.96	0.48
1:D:184:THR:O	1:D:185:SER:OG	2.30	0.48
2:F:209:CYS:SG	2:F:210:ASN:N	2.87	0.48
1:B:161:LYS:HA	1:B:164:THR:HG23	1.96	0.47
2:A:78:PRO:O	2:A:132:ASN:N	2.47	0.47
2:F:381:ASP:N	2:F:382:PRO:HD3	2.29	0.47
2:A:351:TRP:NE1	2:F:62:LEU:HD12	2.29	0.47
2:A:93:GLY:H	2:A:94:PRO:HD2	1.79	0.47
2:A:351:TRP:HE1	2:F:62:LEU:HD12	1.79	0.47
2:F:204:GLU:OE1	2:F:204:GLU:N	2.47	0.47
2:F:373:HIS:CD2	2:F:376:LEU:HG	2.50	0.47
2:A:396:ASN:HB2	2:F:409:VAL:HG22	1.97	0.47
2:A:125:PHE:HD1	2:A:126:SER:H	1.62	0.46
1:B:162:LEU:HD22	1:B:178:LEU:HD21	1.97	0.46
2:A:381:ASP:N	2:A:382:PRO:HD3	2.31	0.46
1:B:165:LEU:HD22	1:B:195:LEU:HD13	1.98	0.46
1:D:154:LEU:H	1:D:154:LEU:HD22	1.80	0.46
2:A:228:THR:OG1	2:A:233:GLN:NE2	2.47	0.45
1:D:166:LYS:O	1:D:170:PRO:HB3	2.16	0.45
2:A:209:CYS:SG	2:A:210:ASN:N	2.89	0.45
1:B:150:ASP:O	1:B:154:LEU:HD22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:177:LEU:HA	1:D:180:LEU:HD23	1.99	0.45
2:F:361:LEU:HG	2:F:362:LEU:H	1.81	0.45
2:F:63:GLU:H	2:F:63:GLU:HG2	1.57	0.45
2:A:309:ARG:O	2:A:313:LEU:HD13	2.17	0.44
2:A:355:SER:OG	2:A:355:SER:O	2.35	0.44
2:A:289:LYS:O	2:A:292:GLN:HB3	2.18	0.44
2:A:88:CYS:C	2:A:90:ALA:N	2.70	0.44
2:A:353:LEU:HD22	2:F:260:VAL:HG21	2.00	0.44
2:A:408:ILE:HB	2:F:398:TRP:HH2	1.83	0.43
2:F:116:ASP:HB3	2:F:122:GLN:HB3	2.00	0.43
2:F:125:PHE:HD1	2:F:126:SER:H	1.66	0.43
2:A:400:LYS:O	2:A:403:GLU:HG3	2.18	0.43
1:B:168:LEU:O	1:B:170:PRO:HD3	2.17	0.43
2:F:248:ALA:O	2:F:252:GLN:HB2	2.18	0.43
2:A:324:GLN:O	2:A:328:LEU:HG	2.18	0.43
2:A:252:GLN:O	2:A:256:LEU:HG	2.19	0.43
2:A:327:ARG:HG2	2:A:331:GLN:NE2	2.34	0.42
1:B:172:ARG:H	1:B:172:ARG:HG2	1.43	0.42
2:A:117:CYS:SG	2:A:119:VAL:N	2.81	0.42
2:A:230:ARG:O	2:A:234:LEU:HG	2.19	0.42
1:D:177:LEU:O	1:D:181:ILE:HG23	2.18	0.42
2:F:223:SER:OG	2:F:241:GLN:HB2	2.20	0.42
2:F:114:VAL:HG12	2:F:125:PHE:HA	2.01	0.42
2:F:299:ILE:O	2:F:303:MET:HG2	2.19	0.42
2:A:205:ARG:H	2:A:205:ARG:HG3	1.63	0.42
2:F:228:THR:HG21	2:F:237:HIS:NE2	2.35	0.42
2:A:133:TYR:O	2:F:362:LEU:HD22	2.19	0.41
2:F:233:GLN:HG3	2:F:242:TYR:CZ	2.55	0.41
1:B:160:ALA:O	1:B:164:THR:HG23	2.20	0.41
1:D:178:LEU:O	1:D:181:ILE:HG12	2.20	0.41
2:F:233:GLN:HG3	2:F:242:TYR:CE1	2.54	0.41
2:A:376:LEU:HD12	1:B:167:GLU:HG3	2.01	0.41
2:F:380:VAL:C	2:F:382:PRO:HD3	2.40	0.41
2:F:72:LEU:HD13	2:F:134:PHE:HB3	2.02	0.41
2:A:80:LEU:HD12	2:A:86:SER:OG	2.20	0.41
2:F:371:GLN:HA	2:F:374:ARG:HB2	2.02	0.41
2:F:71:ARG:O	2:F:73:ARG:N	2.53	0.41
2:A:120:CYS:HB3	2:A:121:LYS:H	1.70	0.41
2:F:245:LEU:O	2:F:249:VAL:N	2.44	0.40
2:A:356:ASP:OD1	2:A:356:ASP:N	2.52	0.40
2:A:374:ARG:O	2:A:378:MET:CB	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:63:GLU:HG2	2:A:63:GLU:H	1.66	0.40
1:D:172:ARG:HG2	1:D:172:ARG:H	1.47	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	B	55/253 (22%)	49 (89%)	4 (7%)	2 (4%)	3 25
1	D	51/253 (20%)	47 (92%)	3 (6%)	1 (2%)	7 37
2	A	260/382 (68%)	234 (90%)	23 (9%)	3 (1%)	13 49
2	F	262/382 (69%)	239 (91%)	19 (7%)	4 (2%)	10 45
All	All	628/1270 (49%)	569 (91%)	49 (8%)	10 (2%)	9 43

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	F	72	LEU
1	D	168	LEU
2	A	72	LEU
2	A	382	PRO
1	B	168	LEU
2	F	381	ASP
2	A	381	ASP
1	B	197	MET
2	F	120	CYS
2	F	382	PRO

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	B	46/232 (20%)	35 (76%)	11 (24%)	0 4
1	D	41/232 (18%)	36 (88%)	5 (12%)	5 21
2	A	231/325 (71%)	209 (90%)	22 (10%)	8 29
2	F	232/325 (71%)	206 (89%)	26 (11%)	6 23
All	All	550/1114 (49%)	486 (88%)	64 (12%)	5 22

All (64) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	155	GLU
1	D	172	ARG
1	D	174	ASP
1	D	180	LEU
1	D	195	LEU
2	A	64	HIS
2	A	73	ARG
2	A	123	GLN
2	A	125	PHE
2	A	134	PHE
2	A	214	HIS
2	A	267	HIS
2	A	316	ASP
2	A	327	ARG
2	A	346	LEU
2	A	357	ASN
2	A	361	LEU
2	A	373	HIS
2	A	374	ARG
2	A	380	VAL
2	A	381	ASP
2	A	386	HIS
2	A	389	MET
2	A	393	TRP

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Mol	Chain	Res	Type
2	A	394	ASP
2	A	395	LEU
2	A	398	TRP
1	B	151	LEU
1	B	154	LEU
1	B	155	GLU
1	B	159	ASP
1	B	164	THR
1	B	169	PHE
1	B	172	ARG
1	B	174	ASP
1	B	180	LEU
1	B	187	MET
1	B	198	PHE
2	F	60	GLU
2	F	61	LEU
2	F	64	HIS
2	F	73	ARG
2	F	123	GLN
2	F	125	PHE
2	F	134	PHE
2	F	214	HIS
2	F	217	LEU
2	F	243	GLN
2	F	267	HIS
2	F	329	GLU
2	F	330	ARG
2	F	353	LEU
2	F	361	LEU
2	F	373	HIS
2	F	374	ARG
2	F	376	LEU
2	F	378	MET
2	F	381	ASP
2	F	389	MET
2	F	393	TRP
2	F	394	ASP
2	F	395	LEU
2	F	396	ASN
2	F	398	TRP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	212	HIS
2	A	233	GLN
2	A	235	ASN
2	A	271	GLN
2	A	331	GLN
2	A	341	HIS
2	A	373	HIS
1	B	171	GLN
2	F	212	HIS
2	F	233	GLN
2	F	271	GLN
2	F	292	GLN
2	F	325	GLN
2	F	341	HIS
2	F	373	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 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

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	B	57/253 (22%)	-0.00	0 100 100	256, 297, 427, 446	0
1	D	53/253 (20%)	0.07	0 100 100	279, 316, 373, 384	0
2	A	266/382 (69%)	0.08	5 (1%) 66 58	230, 317, 374, 449	0
2	F	268/382 (70%)	-0.11	5 (1%) 66 58	196, 318, 406, 436	0
All	All	644/1270 (50%)	-0.01	10 (1%) 72 63	196, 316, 398, 449	0

All (10) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	F	381	ASP	4.7
2	F	380	VAL	3.9
2	A	393	TRP	3.4
2	F	382	PRO	3.1
2	A	382	PRO	2.9
2	A	86	SER	2.8
2	F	86	SER	2.5
2	A	225	ASP	2.3
2	A	387	GLY	2.3
2	F	227	LEU	2.1

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 monosaccharides in this entry.

6.4 Ligands

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	A	1004	1/1	0.96	0.12	346,346,346,346	0
3	ZN	A	1001	1/1	0.96	0.18	200,200,200,200	0
3	ZN	F	503	1/1	0.97	0.15	327,327,327,327	0
3	ZN	F	501	1/1	0.98	0.17	279,279,279,279	0
3	ZN	F	502	1/1	0.99	0.16	262,262,262,262	0
3	ZN	A	1003	1/1	0.99	0.16	225,225,225,225	0
3	ZN	A	1002	1/1	0.99	0.23	274,274,274,274	0
3	ZN	F	504	1/1	1.00	0.19	256,256,256,256	0

6.5 Other polymers

There are no such residues in this entry.