



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 10:56 AM EDT

PDB ID : 2VEQ / pdb_00002veq
Title : Insights into kinetochore-DNA interactions from the structure of Cep3p
Authors : Purvis, A.; Singleton, M.R.
Deposited on : 2007-10-26
Resolution : 2.49 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 : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

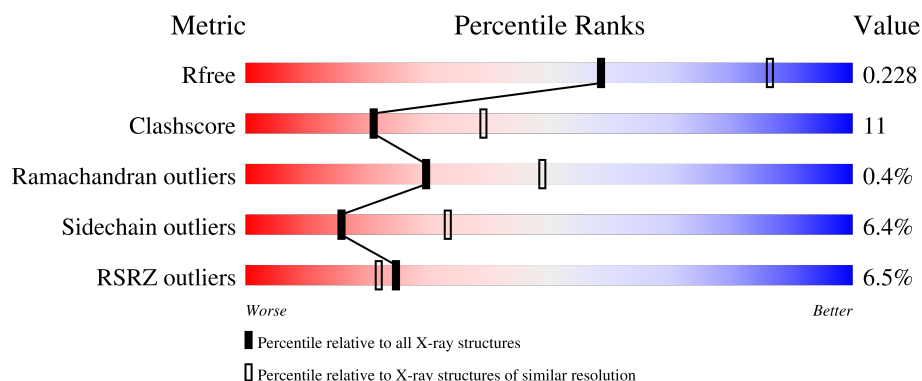
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.49 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}	180053	5829 (2.50-2.50)
Clashscore	190562	6492 (2.50-2.50)
Ramachandran outliers	187476	6378 (2.50-2.50)
Sidechain outliers	187428	6380 (2.50-2.50)
RSRZ outliers	180081	5833 (2.50-2.50)

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 $\leq 5\%$. 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	565	 6% 67% 21% 8%

2 Entry composition [i](#)

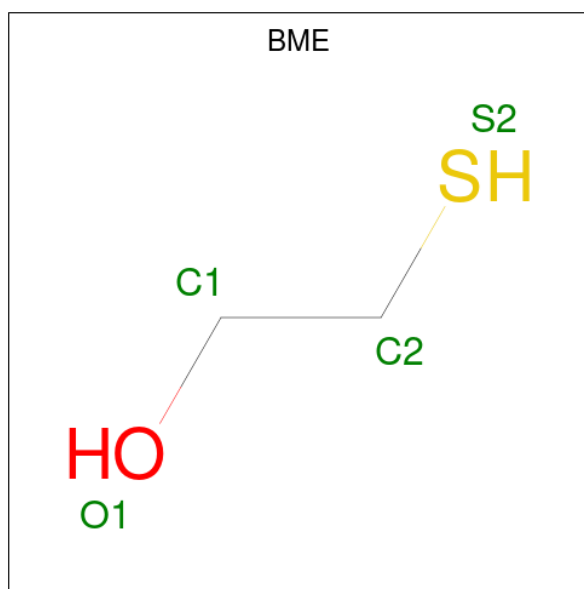
There are 4 unique types of molecules in this entry. The entry contains 4405 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 CENTROMERE DNA-BINDING PROTEIN COMPLEX CBF3 SUBUNIT B.

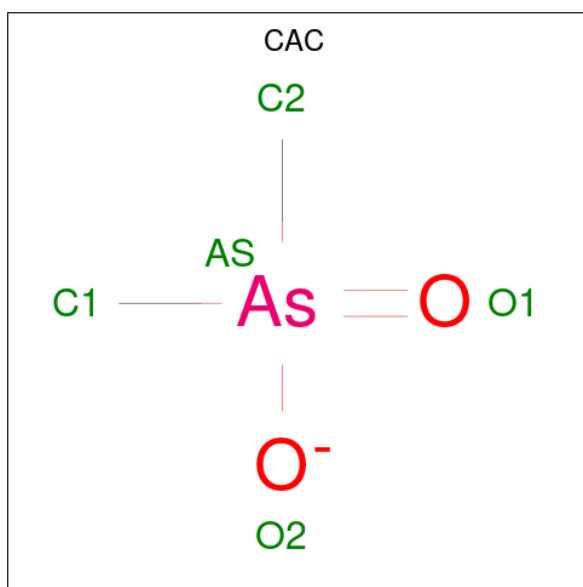
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	520	4318	2808	697	792	21	65	0	0

- Molecule 2 is BETA-MERCAPTOETHANOL (CCD ID: BME) (formula: C_2H_6OS).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	O	S		
2	A	1	4	2	1	1	0	0

- Molecule 3 is CACODYLATE ION (CCD ID: CAC) (formula: $C_2H_6AsO_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	As	C	O	0	0
			5	1	2	2		

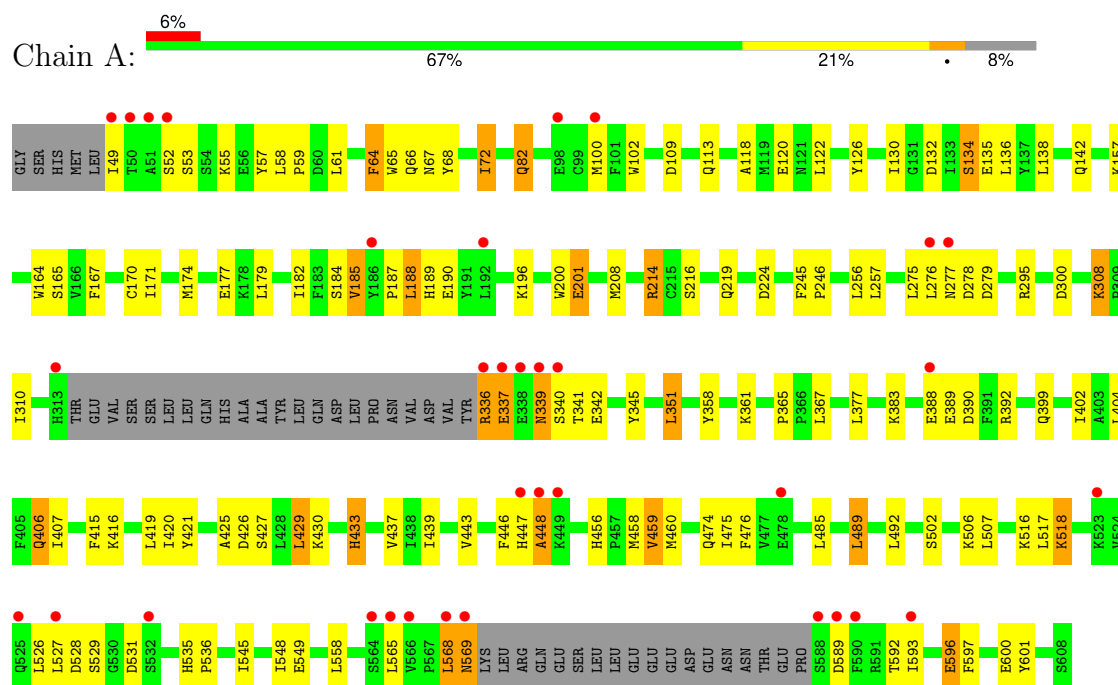
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	78	Total	O	0	0
			78	78		

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: CENTROMERE DNA-BINDING PROTEIN COMPLEX CBF3 SUBUNIT B



4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	83.74Å 83.74Å 231.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	41.20 – 2.49 41.20 – 2.49	Depositor EDS
% Data completeness (in resolution range)	99.5 (41.20-2.49) 99.5 (41.20-2.49)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.38 (at 2.48Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.220 , 0.246 0.211 , 0.228	Depositor DCC
R_{free} test set	1497 reflections (5.07%)	wwPDB-VP
Wilson B-factor (Å ²)	39.6	Xtriage
Anisotropy	0.463	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 31.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	4405	wwPDB-VP
Average B, all atoms (Å ²)	42.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.24% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: BME, CAC

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	0.47	0/4423	0.95	19/5989 (0.3%)

There are no bond length outliers.

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	308	LYS	CA-C-N	7.42	127.05	119.56
1	A	308	LYS	C-N-CA	7.42	127.05	119.56
1	A	122	LEU	N-CA-C	7.29	121.03	112.72
1	A	224	ASP	N-CA-C	-6.93	101.81	111.52
1	A	420	ILE	N-CA-C	6.87	117.01	110.42
1	A	100	MET	N-CA-C	-6.86	103.74	111.14
1	A	416	LYS	N-CA-C	-6.40	104.38	111.36
1	A	279	ASP	N-CA-C	-6.27	101.87	109.83
1	A	295	ARG	N-CA-C	-6.10	104.74	111.82
1	A	165	SER	N-CA-C	-5.97	104.90	111.82
1	A	134	SER	N-CA-C	5.73	117.53	111.28
1	A	182	ILE	N-CA-C	5.48	116.53	111.81
1	A	72	ILE	N-CA-C	5.33	115.59	110.74
1	A	433	HIS	CA-C-O	-5.24	115.30	120.70
1	A	216	SER	N-CA-C	-5.18	105.71	111.36
1	A	174	MET	N-CA-C	5.10	116.83	109.48
1	A	64	PHE	CA-C-O	-5.05	114.16	119.97
1	A	518	LYS	N-CA-C	-5.02	105.72	111.14
1	A	53	SER	N-CA-C	-5.01	105.87	112.94

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	4318	0	4285	93	0
2	A	4	0	5	0	0
3	A	5	0	0	0	0
4	A	78	0	0	1	0
All	All	4405	0	4290	93	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 11.

All (93) 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:406:GLN:HE21	1:A:406:GLN:HA	1.28	0.96
1:A:439:ILE:HD11	1:A:489:LEU:HD13	1.51	0.91
1:A:171:ILE:HD12	1:A:208:MET:HE3	1.61	0.80
1:A:336:ARG:O	1:A:337:GLU:HB2	1.86	0.74
1:A:336:ARG:HB3	1:A:339:ASN:HD21	1.52	0.72
1:A:49:ILE:HA	1:A:529:SER:HA	1.69	0.72
1:A:308:LYS:O	1:A:308:LYS:HE2	1.92	0.70
1:A:439:ILE:HD11	1:A:489:LEU:CD1	2.26	0.62
1:A:569:ASN:ND2	1:A:569:ASN:H	1.96	0.62
1:A:456:HIS:O	1:A:459:VAL:HG13	2.02	0.60
1:A:517:LEU:HD13	1:A:597:PHE:CZ	2.35	0.60
1:A:402:ILE:HA	1:A:458:MET:HE1	1.85	0.59
1:A:592:THR:O	1:A:596:GLU:HB2	2.03	0.58
1:A:214:ARG:HB2	1:A:214:ARG:HH11	1.68	0.58
1:A:308:LYS:HE3	1:A:310:ILE:O	2.04	0.57
1:A:164:TRP:CD1	1:A:219:GLN:HE22	2.23	0.57
1:A:517:LEU:HD13	1:A:597:PHE:CE2	2.41	0.56
1:A:68:TYR:CZ	1:A:72:ILE:HG13	2.42	0.55
1:A:406:GLN:HA	1:A:406:GLN:NE2	2.10	0.54
1:A:474:GLN:HE21	1:A:474:GLN:HA	1.71	0.53
1:A:485:LEU:HG	1:A:489:LEU:HD22	1.90	0.53
1:A:433:HIS:O	1:A:437:VAL:HG23	2.09	0.52
1:A:447:HIS:O	1:A:448:ALA:O	2.28	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:184:SER:O	1:A:187:PRO:HD2	2.09	0.51
1:A:214:ARG:HH11	1:A:214:ARG:CB	2.23	0.51
1:A:456:HIS:ND1	1:A:458:MET:HG2	2.25	0.51
1:A:475:ILE:HG12	1:A:518:LYS:HB2	1.93	0.51
1:A:82:GLN:NE2	1:A:82:GLN:HA	2.26	0.50
1:A:164:TRP:CG	1:A:219:GLN:HE22	2.30	0.50
1:A:358:TYR:CE2	1:A:365:PRO:HB3	2.48	0.49
1:A:102:TRP:HH2	1:A:188:LEU:HD13	1.78	0.49
1:A:336:ARG:CB	1:A:339:ASN:HD21	2.23	0.49
1:A:425:ALA:O	1:A:426:ASP:HB2	2.13	0.49
1:A:339:ASN:C	1:A:339:ASN:HD22	2.20	0.49
1:A:415:PHE:CE1	1:A:430:LYS:HG2	2.48	0.48
1:A:502:SER:O	1:A:506:LYS:HG3	2.14	0.48
1:A:55:LYS:HA	1:A:57:TYR:CE2	2.48	0.48
1:A:132:ASP:OD2	1:A:134:SER:HB2	2.13	0.48
1:A:339:ASN:HA	1:A:342:GLU:HG2	1.94	0.48
1:A:419:LEU:HB2	1:A:427:SER:HB3	1.96	0.48
1:A:345:TYR:OH	1:A:399:GLN:HG3	2.14	0.47
1:A:102:TRP:CH2	1:A:188:LEU:HD13	2.50	0.47
1:A:460:MET:HE3	1:A:507:LEU:HD22	1.97	0.47
1:A:339:ASN:ND2	1:A:339:ASN:H	2.12	0.46
1:A:201:GLU:H	1:A:201:GLU:CD	2.23	0.46
1:A:589:ASP:O	1:A:593:ILE:HG13	2.16	0.46
1:A:61:LEU:HD21	1:A:476:PHE:CZ	2.51	0.46
1:A:185:VAL:HG22	1:A:200:TRP:CE2	2.51	0.46
1:A:126:TYR:C	1:A:126:TYR:CD1	2.94	0.45
1:A:377:LEU:HD12	1:A:407:ILE:HD11	1.99	0.45
1:A:390:ASP:OD1	1:A:392:ARG:HB2	2.17	0.45
1:A:177:GLU:H	1:A:177:GLU:CD	2.25	0.45
1:A:58:LEU:HB3	1:A:59:PRO:HD3	1.98	0.44
1:A:109:ASP:O	1:A:113:GLN:HG3	2.16	0.44
1:A:135:GLU:HG2	4:A:2012:HOH:O	2.17	0.44
1:A:138:LEU:O	1:A:142:GLN:HG3	2.17	0.44
1:A:351:LEU:HD12	1:A:351:LEU:HA	1.85	0.44
1:A:443:VAL:HA	1:A:446:PHE:CD2	2.52	0.44
1:A:66:GLN:HG3	1:A:421:TYR:OH	2.18	0.44
1:A:257:LEU:HD21	1:A:300:ASP:HA	1.99	0.44
1:A:389:GLU:O	1:A:389:GLU:HG3	2.17	0.44
1:A:167:PHE:O	1:A:171:ILE:HG12	2.17	0.44
1:A:130:ILE:HD12	1:A:136:LEU:HD22	2.00	0.44
1:A:275:LEU:O	1:A:278:ASP:HB2	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:535:HIS:ND1	1:A:536:PRO:HD2	2.33	0.44
1:A:61:LEU:HD21	1:A:476:PHE:CE1	2.52	0.43
1:A:64:PHE:O	1:A:65:TRP:C	2.61	0.43
1:A:568:LEU:HB2	1:A:569:ASN:H	1.72	0.43
1:A:118:ALA:HB2	1:A:170:CYS:SG	2.59	0.43
1:A:529:SER:C	1:A:531:ASP:H	2.27	0.43
1:A:568:LEU:O	1:A:569:ASN:C	2.61	0.42
1:A:68:TYR:CE2	1:A:72:ILE:HG13	2.54	0.42
1:A:474:GLN:HA	1:A:474:GLN:NE2	2.34	0.42
1:A:545:ILE:O	1:A:549:GLU:HG3	2.20	0.42
1:A:68:TYR:O	1:A:72:ILE:HG12	2.20	0.42
1:A:339:ASN:HD22	1:A:340:SER:N	2.17	0.42
1:A:68:TYR:CE1	1:A:72:ILE:HG13	2.54	0.42
1:A:402:ILE:O	1:A:406:GLN:HG2	2.19	0.42
1:A:339:ASN:ND2	1:A:339:ASN:N	2.67	0.42
1:A:189:HIS:HB3	1:A:196:LYS:HD3	2.01	0.42
1:A:72:ILE:HD13	1:A:548:ILE:HD12	2.01	0.41
1:A:55:LYS:C	1:A:57:TYR:H	2.28	0.41
1:A:439:ILE:HG23	1:A:492:LEU:HD13	2.02	0.41
1:A:569:ASN:ND2	1:A:569:ASN:N	2.67	0.41
1:A:185:VAL:HG22	1:A:200:TRP:NE1	2.36	0.41
1:A:57:TYR:CD1	1:A:57:TYR:C	2.98	0.41
1:A:341:THR:HG21	1:A:399:GLN:NE2	2.35	0.41
1:A:516:LYS:HG2	1:A:601:TYR:CZ	2.55	0.41
1:A:429:LEU:HD12	1:A:429:LEU:HA	1.82	0.41
1:A:526:LEU:C	1:A:527:LEU:HD12	2.46	0.41
1:A:245:PHE:HB3	1:A:246:PRO:HD3	2.03	0.40
1:A:52:SER:HB2	1:A:528:ASP:HB3	2.03	0.40
1:A:82:GLN:NE2	1:A:82:GLN:CA	2.82	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	514/565 (91%)	496 (96%)	16 (3%)	2 (0%)	30	49

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	337	GLU
1	A	448	ALA

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	485/527 (92%)	454 (94%)	31 (6%)	16	33

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	67	ASN
1	A	82	GLN
1	A	120	GLU
1	A	157	LYS
1	A	179	LEU
1	A	185	VAL
1	A	188	LEU
1	A	190	GLU
1	A	201	GLU
1	A	214	ARG
1	A	256	LEU
1	A	276	LEU
1	A	277	ASN
1	A	336	ARG
1	A	339	ASN
1	A	351	LEU
1	A	361	LYS
1	A	367	LEU
1	A	383	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	388	GLU
1	A	404	LEU
1	A	406	GLN
1	A	429	LEU
1	A	459	VAL
1	A	489	LEU
1	A	558	LEU
1	A	565	LEU
1	A	568	LEU
1	A	569	ASN
1	A	596	GLU
1	A	600	GLU

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

Mol	Chain	Res	Type
1	A	67	ASN
1	A	82	GLN
1	A	151	ASN
1	A	205	GLN
1	A	303	GLN
1	A	339	ASN
1	A	381	GLN
1	A	399	GLN
1	A	406	GLN
1	A	447	HIS
1	A	543	ASN
1	A	552	ASN
1	A	569	ASN
1	A	598	GLN
1	A	602	ASN

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 [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

2 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
3	CAC	A	1610	-	2,4,4	3.88	2 (100%)	4,6,6	1.56	0
2	BME	A	1609	1	3,3,3	0.37	0	2,2,2	0.34	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	BME	A	1609	1	-	0/1/1/1	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1610	CAC	AS-C1	3.89	1.99	1.90
3	A	1610	CAC	AS-C2	3.87	1.99	1.90

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, 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	520/565 (92%)	0.24	34 (6%)	25 22	19, 38, 72, 95	17 (3%)

All (34) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	336	ARG	6.0
1	A	589	ASP	5.0
1	A	51	ALA	4.9
1	A	339	ASN	4.9
1	A	569	ASN	4.8
1	A	49	ILE	4.5
1	A	340	SER	4.4
1	A	313	HIS	4.2
1	A	568	LEU	4.2
1	A	50	THR	3.9
1	A	447	HIS	3.6
1	A	338	GLU	3.5
1	A	565	LEU	3.5
1	A	532	SER	3.2
1	A	186	TYR	3.2
1	A	590	PHE	3.1
1	A	337	GLU	2.9
1	A	52	SER	2.8
1	A	564	SER	2.7
1	A	523	LYS	2.7
1	A	277	ASN	2.7
1	A	566	VAL	2.5
1	A	448	ALA	2.4
1	A	100	MET	2.4
1	A	593	ILE	2.3
1	A	449	LYS	2.3
1	A	98	GLU	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	276	LEU	2.3
1	A	388	GLU	2.3
1	A	478	GLU	2.3
1	A	527	LEU	2.1
1	A	192	LEU	2.1
1	A	525	GLN	2.0
1	A	588	SER	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 oligosaccharides 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, 95th 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($\text{\AA}^2$)	Q<0.9
2	BME	A	1609	4/4	0.80	0.22	66,70,73,82	0
3	CAC	A	1610	5/5	0.96	0.30	42,50,51,51	0

6.5 Other polymers [i](#)

There are no such residues in this entry.