



wwPDB X-ray Structure Validation Summary Report ⓘ

Mar 21, 2016 – 05:06 PM EDT

PDB ID : 5EJ1
Title : Pre-translocation state of bacterial cellulose synthase
Authors : Moragn, J.L.W.; Zimmer, J.
Deposited on : 2015-10-30
Resolution : 3.40 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.1 (RC1), CSD as537be (2016)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20027107
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0122
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20027107

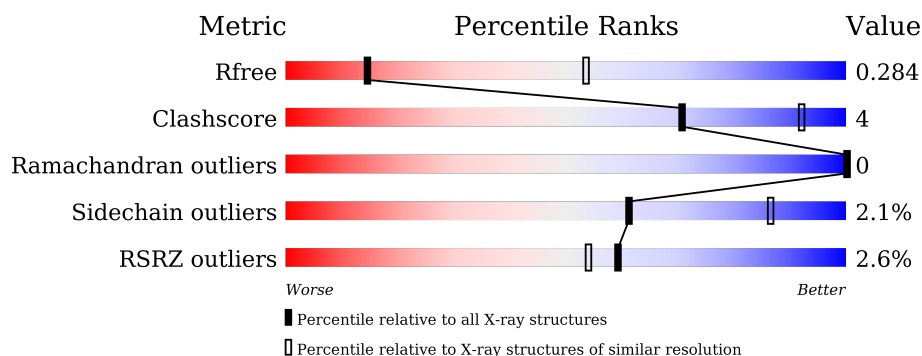
1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 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))
R_{free}	91344	1476 (3.50-3.30)
Clashscore	102246	1611 (3.50-3.30)
Ramachandran outliers	100387	1571 (3.50-3.30)
Sidechain outliers	100360	1571 (3.50-3.30)
RSRZ outliers	91569	1485 (3.50-3.30)

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. 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	728	<div> <div>3%</div> <div>85%</div> <div>14%</div> <div>.</div> </div>
2	B	669	<div> <div>2%</div> <div>90%</div> <div>7%</div> <div>..</div> </div>
3	D	7	<div> <div>100%</div> </div>

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	BGC	A	912	-	-	-	X
4	BGC	A	913	-	-	-	X
4	BGC	A	915	-	-	-	X
4	BGC	A	916	-	-	-	X

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 10978 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 Putative cellulose synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	721	Total	C	N	O	S	0	0	0
			5684	3691	992	970	31			

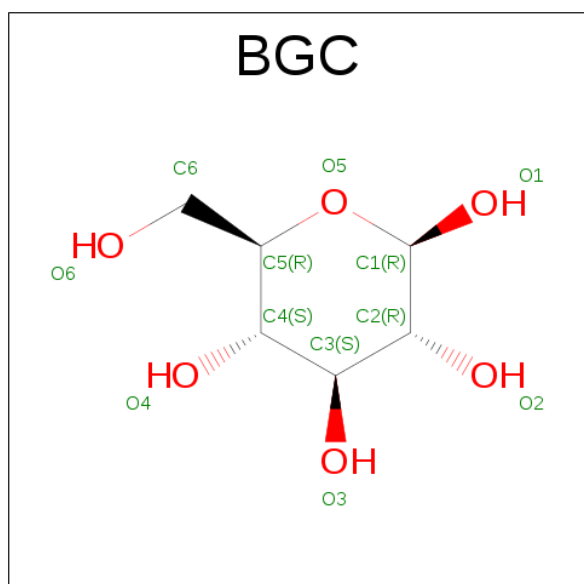
- Molecule 2 is a protein called Putative cellulose synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	657	Total	C	N	O	S	0	0	0
			4899	3108	866	909	16			

- Molecule 3 is a protein called poly(unk).

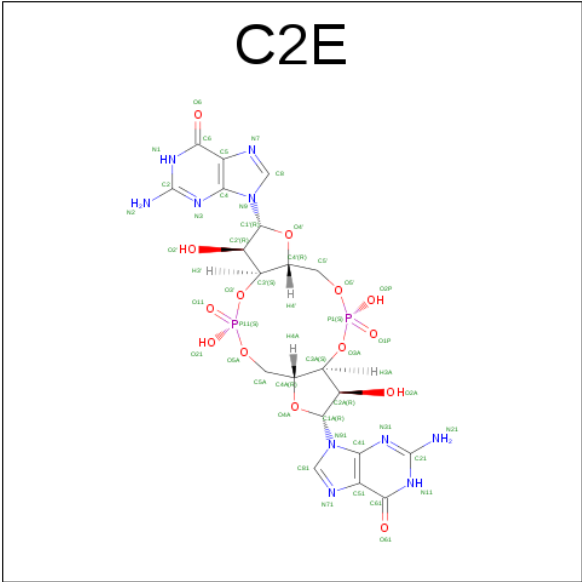
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	D	7	Total	C	N	O	0	0	0
			35	21	7	7			

- Molecule 4 is BETA-D-GLUCOSE (three-letter code: BGC) (formula: C₆H₁₂O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			12	6	6		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		
4	A	1	Total	C	O	0	0
			11	6	5		

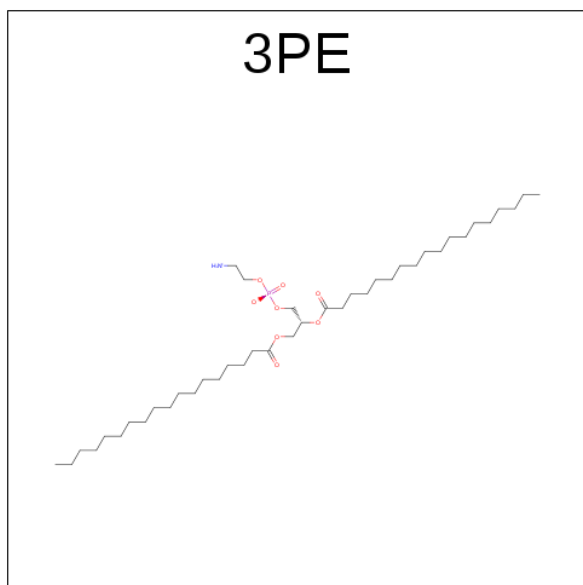
- Molecule 5 is 9,9'-[(2R,3R,3aS,5S,7aR,9R,10R,10aS,12S,14aR)-3,5,10,12-tetrahydroxy-5,12-dioxidooctahydro-2H,7H-difuro[3,2-d:3',2'-j][1,3,7,9,2,8]tetraoxadiphosphacyclododecine-2,9-diyl]bis(2-amino-1,9-dihydro-6H-purin-6-one) (three-letter code: C2E) (formula: C₂₀H₂₄N₁₀O₁₄P₂).



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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	B	1	Total	C	N	O	P	0	0
			19	10	1	7	1		

- Molecule 7 is 1,2-DIACYL-SN-GLYCERO-3-PHOSPHOETHANOLAMINE (three-letter code: 3PE) (formula: C₄₁H₈₂NO₈P).

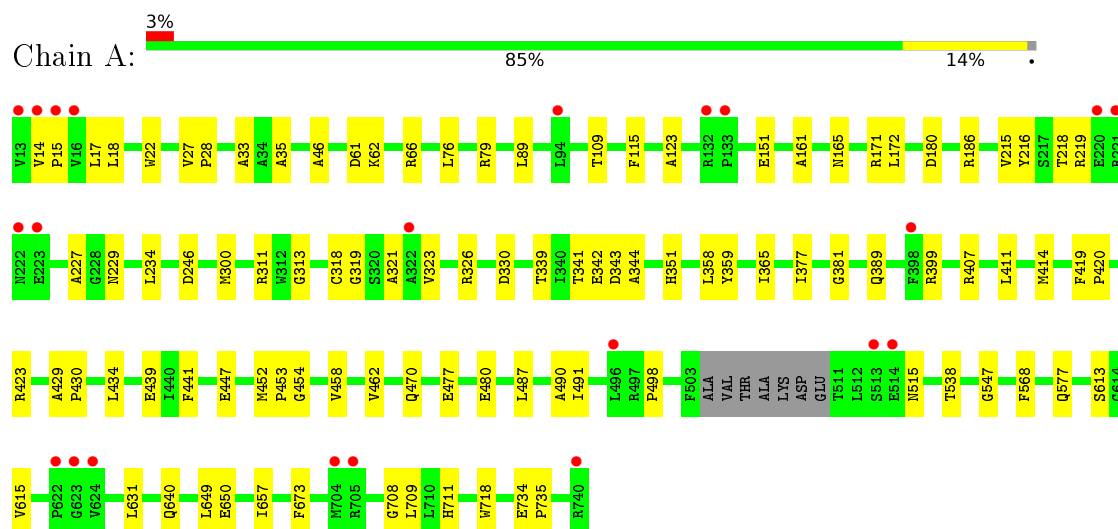


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	
7	A	1	Total 20	C 10	N 1	O 8	P 1	0	0	
7	A	1	Total 8		C 8				0	0

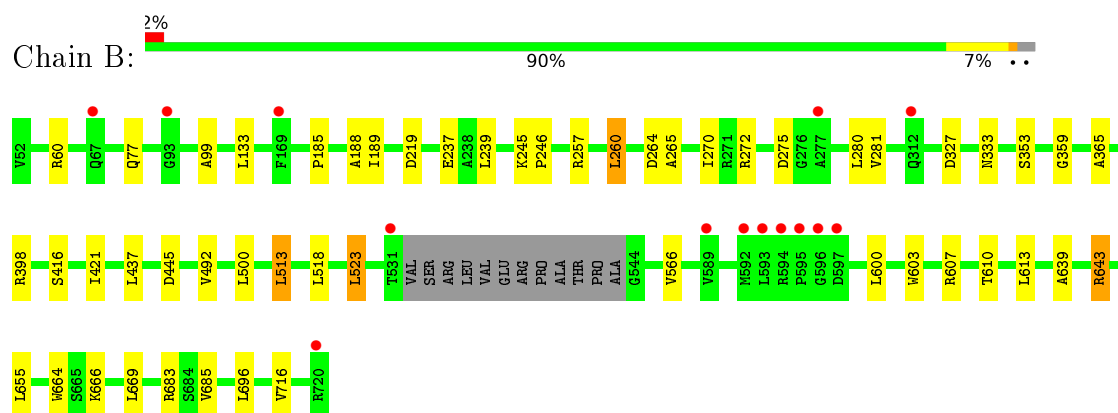
3 Residue-property plots

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 ($\text{RSRZ} > 2$). 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: Putative cellulose synthase



- Molecule 2: Putative cellulose synthase



- Molecule 3: poly(unk)



There are no outlier residues recorded for this chain.

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	67.36 Å 218.23 Å 220.76 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	24.86 – 3.40 29.48 – 3.40	Depositor EDS
% Data completeness (in resolution range)	99.8 (24.86-3.40) 99.9 (29.48-3.40)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.74 (at 3.39 Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.4_1496)	Depositor
R, R_{free}	0.233 , 0.277 0.248 , 0.284	Depositor DCC
R_{free} test set	2300 reflections (5.31%)	DCC
Wilson B-factor (Å ²)	120.9	Xtriage
Anisotropy	0.798	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 69.2	EDS
Estimated twinning fraction	0.035 for -h,l,k	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 45653 reflections	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	10978	wwPDB-VP
Average B, all atoms (Å ²)	152.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.58% 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, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: BGC, 3PE, XP5, C2E

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	0.24	0/5829	0.44	0/7926
2	B	0.23	0/5018	0.45	1/6883 (0.0%)
All	All	0.23	0/10847	0.44	1/14809 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	260	LEU	CA-CB-CG	5.64	128.28	115.30

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	5684	0	5796	65	0
2	B	4899	0	4979	29	0
3	D	35	0	11	0	0
4	A	199	0	164	12	0
5	A	92	0	41	7	0
6	A	22	0	25	0	0
6	B	19	0	19	1	0
7	A	28	0	29	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	10978	0	11064	97	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.

The worst 5 of 97 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)
5:A:920:C2E:O4'	5:A:920:C2E:C4'	1.64	1.14
5:A:919:C2E:O4'	5:A:919:C2E:C4'	1.63	1.07
4:A:905:BGC:O2	2:B:566:VAL:HG21	1.69	0.93
2:B:513:LEU:HD21	2:B:523:LEU:HD22	1.61	0.83
1:A:319:GLY:HA3	4:A:918:BGC:H5	1.69	0.75

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	717/728 (98%)	683 (95%)	34 (5%)	0	100	100
2	B	653/669 (98%)	638 (98%)	15 (2%)	0	100	100
All	All	1370/1397 (98%)	1321 (96%)	49 (4%)	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	593/598 (99%)	585 (99%)	8 (1%)	76	91
2	B	521/531 (98%)	506 (97%)	15 (3%)	50	82
All	All	1114/1129 (99%)	1091 (98%)	23 (2%)	61	86

5 of 23 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	281	VAL
2	B	421	ILE
2	B	685	VAL
2	B	416	SER
2	B	492	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	77	GLN

5.3.3 RNA [i](#)

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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

24 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	$\# Z > 2$
4	BGC	A	901	4	12,12,12	1.39	1 (8%)	17,17,17	1.46	3 (17%)
4	BGC	A	902	4	11,11,12	1.75	3 (27%)	15,15,17	1.67	4 (26%)
4	BGC	A	903	4	11,11,12	1.69	2 (18%)	15,15,17	2.08	3 (20%)
4	BGC	A	904	4	11,11,12	1.70	2 (18%)	15,15,17	2.21	6 (40%)
4	BGC	A	905	4	11,11,12	1.58	2 (18%)	15,15,17	1.88	4 (26%)
4	BGC	A	906	4	11,11,12	2.12	3 (27%)	15,15,17	1.07	1 (6%)
4	BGC	A	907	4	11,11,12	1.71	3 (27%)	15,15,17	1.05	0
4	BGC	A	908	4	11,11,12	1.65	2 (18%)	15,15,17	1.74	4 (26%)
4	BGC	A	909	4	11,11,12	1.66	2 (18%)	15,15,17	1.27	1 (6%)
4	BGC	A	910	4	11,11,12	1.76	2 (18%)	15,15,17	1.80	3 (20%)
4	BGC	A	911	4	11,11,12	1.60	2 (18%)	15,15,17	1.11	2 (13%)
4	BGC	A	912	4	11,11,12	1.70	2 (18%)	15,15,17	0.85	0
4	BGC	A	913	4	11,11,12	1.62	2 (18%)	15,15,17	1.25	2 (13%)
4	BGC	A	914	4	11,11,12	1.62	2 (18%)	15,15,17	1.51	2 (13%)
4	BGC	A	915	4	11,11,12	1.64	2 (18%)	15,15,17	1.50	4 (26%)
4	BGC	A	916	4	11,11,12	1.54	2 (18%)	15,15,17	2.06	3 (20%)
4	BGC	A	917	4	11,11,12	1.76	3 (27%)	15,15,17	1.08	1 (6%)
4	BGC	A	918	4	11,11,12	1.67	2 (18%)	15,15,17	1.05	1 (6%)
5	C2E	A	919	-	44,52,52	5.39	28 (63%)	50,82,82	2.55	11 (22%)
5	C2E	A	920	-	44,52,52	5.39	29 (65%)	50,82,82	2.52	10 (20%)
6	XP5	A	921	-	21,21,31	1.22	2 (9%)	24,28,39	1.14	1 (4%)
7	3PE	A	922	-	19,19,50	1.36	4 (21%)	21,24,55	1.60	3 (14%)
7	3PE	A	923	-	7,7,50	0.31	0	6,6,55	0.77	0
6	XP5	B	801	-	18,18,31	1.22	1 (5%)	21,25,39	0.77	1 (4%)

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
4	BGC	A	901	4	-	0/2/22/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	BGC	A	902	4	-	0/2/19/22	0/1/1/1
4	BGC	A	903	4	-	0/2/19/22	0/1/1/1
4	BGC	A	904	4	-	0/2/19/22	0/1/1/1
4	BGC	A	905	4	-	0/2/19/22	0/1/1/1
4	BGC	A	906	4	-	0/2/19/22	0/1/1/1
4	BGC	A	907	4	-	0/2/19/22	0/1/1/1
4	BGC	A	908	4	-	0/2/19/22	0/1/1/1
4	BGC	A	909	4	-	0/2/19/22	0/1/1/1
4	BGC	A	910	4	-	0/2/19/22	0/1/1/1
4	BGC	A	911	4	-	0/2/19/22	0/1/1/1
4	BGC	A	912	4	-	0/2/19/22	0/1/1/1
4	BGC	A	913	4	-	0/2/19/22	0/1/1/1
4	BGC	A	914	4	-	0/2/19/22	0/1/1/1
4	BGC	A	915	4	-	0/2/19/22	0/1/1/1
4	BGC	A	916	4	-	0/2/19/22	0/1/1/1
4	BGC	A	917	4	-	0/2/19/22	0/1/1/1
4	BGC	A	918	4	-	0/2/19/22	0/1/1/1
5	C2E	A	919	-	-	0/22/62/62	0/6/7/7
5	C2E	A	920	-	-	0/22/62/62	0/6/7/7
6	XP5	A	921	-	-	0/24/24/35	0/0/0/0
7	3PE	A	922	-	-	0/22/22/54	0/0/0/0
7	3PE	A	923	-	-	0/5/5/54	0/0/0/0
6	XP5	B	801	-	-	0/19/19/35	0/0/0/0

The worst 5 of 103 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	920	C2E	C2A-C1A	-14.79	1.30	1.53
5	A	919	C2E	C2A-C1A	-14.57	1.30	1.53
5	A	919	C2E	C3'-C4'	-10.04	1.24	1.52
5	A	920	C2E	C3'-C4'	-9.89	1.25	1.52
5	A	919	C2E	O4'-C1'	-7.29	1.30	1.41

The worst 5 of 70 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	920	C2E	C1'-N9-C4	-12.63	112.71	126.81
5	A	919	C2E	C1'-N9-C4	-12.60	112.75	126.81
5	A	920	C2E	N3-C2-N1	-5.60	119.94	127.56
5	A	919	C2E	N3-C2-N1	-5.57	119.98	127.56
5	A	920	C2E	N31-C21-N11	-5.38	120.23	127.56

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

12 monomers are involved in 24 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	905	BGC	2	0
4	A	906	BGC	1	0
4	A	908	BGC	2	0
4	A	909	BGC	1	0
4	A	912	BGC	1	0
4	A	914	BGC	1	0
4	A	918	BGC	4	0
5	A	919	C2E	3	0
5	A	920	C2E	4	0
7	A	922	3PE	3	0
7	A	923	3PE	1	0
6	B	801	XP5	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
3	D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	173:UNK	C	175:UNK	N	4.64

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	721/728 (99%)	-0.06	22 (3%) 52 48	95, 145, 232, 335	0
2	B	657/669 (98%)	-0.16	14 (2%) 67 61	93, 139, 213, 325	0
3	D	0/7	-	-	-	-
All	All	1378/1404 (98%)	-0.10	36 (2%) 59 54	93, 142, 227, 335	0

The worst 5 of 36 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	593	LEU	5.6
2	B	531	THR	3.9
1	A	496	LEU	3.8
2	B	589	VAL	3.7
2	B	597	ASP	3.6

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 carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(\AA^2)	Q<0.9
4	BGC	A	912	11/12	0.93	0.35	2.79	150,155,158,161	0
4	BGC	A	913	11/12	0.92	0.47	2.49	148,153,155,155	0
4	BGC	A	916	11/12	0.94	0.25	2.09	168,168,169,170	0
4	BGC	A	915	11/12	0.94	0.27	2.04	146,146,147,148	0
7	3PE	A	922	20/51	0.86	0.33	1.90	162,167,172,172	0
4	BGC	A	914	11/12	0.87	0.37	1.46	132,133,134,134	0
6	XP5	A	921	22/32	0.88	0.29	1.28	215,221,227,228	0
4	BGC	A	918	11/12	0.80	0.33	1.19	160,161,162,163	0
4	BGC	A	911	11/12	0.93	0.23	1.16	136,138,142,142	0
4	BGC	A	917	11/12	0.93	0.23	1.06	142,144,146,147	0
4	BGC	A	906	11/12	0.88	0.32	0.74	149,158,183,204	0
4	BGC	A	908	11/12	0.83	0.29	0.46	153,158,185,206	0
4	BGC	A	905	11/12	0.89	0.27	0.34	111,114,128,173	0
6	XP5	B	801	19/32	0.79	0.32	0.33	208,212,214,215	0
4	BGC	A	909	11/12	0.98	0.15	-0.92	112,117,123,127	0
4	BGC	A	910	11/12	0.97	0.14	-1.07	117,125,144,150	0
4	BGC	A	904	11/12	0.94	0.14	-1.07	119,127,169,194	0
5	C2E	A	919	46/46	0.93	0.12	-1.38	133,138,143,144	0
5	C2E	A	920	46/46	0.94	0.10	-1.93	143,147,150,151	0
4	BGC	A	903	11/12	0.85	0.22	-	181,200,213,215	0
4	BGC	A	902	11/12	0.81	0.23	-	185,200,214,230	0
4	BGC	A	907	11/12	0.82	0.43	-	118,136,142,154	0
4	BGC	A	901	12/12	0.70	0.27	-	267,272,285,306	0
7	3PE	A	923	8/51	0.80	0.19	-	118,120,122,123	0

6.5 Other polymers [i](#)

There are no such residues in this entry.