



wwPDB X-ray Structure Validation Summary Report ⓘ

Dec 1, 2021 – 02:13 pm GMT

PDB ID : 7O8C
Title : Structure of SGBP BO2743 from Bacteroides ovatus
Authors : Correia, V.C.; Trovao, F.; Pinheiro, B.A.; Palma, A.S.; Carvalho, A.L.
Deposited on : 2021-04-15
Resolution : 2.00 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

<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 ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.4 (270009), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.23.2
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0267
CCP4 : 7.1.010 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.23.2

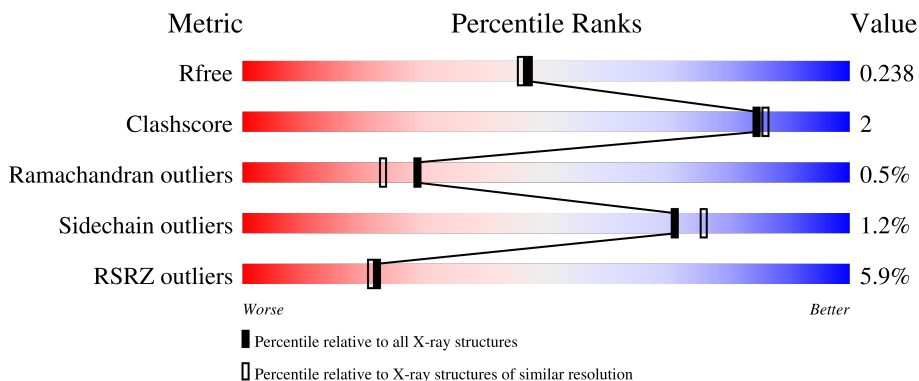
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 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	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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	598	 6% 91% 6% .
1	B	598	 6% 89% 6% . .

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 10004 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 Surface glycan-binding protein BO2743.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	582	4670	2942	796	910	22	0	5	0
1	B	579	4620	2908	789	902	21	0	0	0

There are 156 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-38	MET	-	initiating methionine	UNP A7LY27
A	-37	HIS	-	expression tag	UNP A7LY27
A	-36	HIS	-	expression tag	UNP A7LY27
A	-35	HIS	-	expression tag	UNP A7LY27
A	-34	HIS	-	expression tag	UNP A7LY27
A	-33	HIS	-	expression tag	UNP A7LY27
A	-32	HIS	-	expression tag	UNP A7LY27
A	-31	SER	-	expression tag	UNP A7LY27
A	-30	SER	-	expression tag	UNP A7LY27
A	-29	GLY	-	expression tag	UNP A7LY27
A	-28	VAL	-	expression tag	UNP A7LY27
A	-27	ASP	-	expression tag	UNP A7LY27
A	-26	ASN	-	expression tag	UNP A7LY27
A	-25	LYS	-	expression tag	UNP A7LY27
A	-24	PHE	-	expression tag	UNP A7LY27
A	-23	ASN	-	expression tag	UNP A7LY27
A	-22	LYS	-	expression tag	UNP A7LY27
A	-21	GLU	-	expression tag	UNP A7LY27
A	-20	ARG	-	expression tag	UNP A7LY27
A	-19	ARG	-	expression tag	UNP A7LY27
A	-18	ARG	-	expression tag	UNP A7LY27
A	-17	ALA	-	expression tag	UNP A7LY27
A	-16	ARG	-	expression tag	UNP A7LY27
A	-15	ARG	-	expression tag	UNP A7LY27
A	-14	GLU	-	expression tag	UNP A7LY27

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-13	ILE	-	expression tag	UNP A7LY27
A	-12	ARG	-	expression tag	UNP A7LY27
A	-11	HIS	-	expression tag	UNP A7LY27
A	-10	LEU	-	expression tag	UNP A7LY27
A	-9	PRO	-	expression tag	UNP A7LY27
A	-8	ASN	-	expression tag	UNP A7LY27
A	-7	LEU	-	expression tag	UNP A7LY27
A	-6	ASN	-	expression tag	UNP A7LY27
A	-5	ARG	-	expression tag	UNP A7LY27
A	-4	GLU	-	expression tag	UNP A7LY27
A	-3	GLN	-	expression tag	UNP A7LY27
A	-2	ARG	-	expression tag	UNP A7LY27
A	-1	ARG	-	expression tag	UNP A7LY27
A	0	ALA	-	expression tag	UNP A7LY27
A	1	PHE	-	expression tag	UNP A7LY27
A	2	ILE	-	expression tag	UNP A7LY27
A	3	ARG	-	expression tag	UNP A7LY27
A	4	SER	-	expression tag	UNP A7LY27
A	5	LEU	-	expression tag	UNP A7LY27
A	6	ARG	-	expression tag	UNP A7LY27
A	7	ASP	-	expression tag	UNP A7LY27
A	8	ASP	-	expression tag	UNP A7LY27
A	9	PRO	-	expression tag	UNP A7LY27
A	10	SER	-	expression tag	UNP A7LY27
A	11	GLN	-	expression tag	UNP A7LY27
A	12	SER	-	expression tag	UNP A7LY27
A	13	ALA	-	expression tag	UNP A7LY27
A	14	ASN	-	expression tag	UNP A7LY27
A	15	LEU	-	expression tag	UNP A7LY27
A	16	LEU	-	expression tag	UNP A7LY27
A	17	ALA	-	expression tag	UNP A7LY27
A	18	GLU	-	expression tag	UNP A7LY27
A	19	ALA	-	expression tag	UNP A7LY27
A	20	LYS	-	expression tag	UNP A7LY27
A	21	LYS	-	expression tag	UNP A7LY27
A	22	LEU	-	expression tag	UNP A7LY27
A	23	ASN	-	expression tag	UNP A7LY27
A	24	ASP	-	expression tag	UNP A7LY27
A	25	ALA	-	expression tag	UNP A7LY27
A	26	GLN	-	expression tag	UNP A7LY27
A	27	PRO	-	expression tag	UNP A7LY27
A	28	LYS	-	expression tag	UNP A7LY27

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Chain	Residue	Modelled	Actual	Comment	Reference
A	29	GLY	-	expression tag	UNP A7LY27
A	30	THR	-	expression tag	UNP A7LY27
A	31	GLU	-	expression tag	UNP A7LY27
A	32	ASN	-	expression tag	UNP A7LY27
A	33	LEU	-	expression tag	UNP A7LY27
A	34	TYR	-	expression tag	UNP A7LY27
A	35	PHE	-	expression tag	UNP A7LY27
A	36	GLN	-	expression tag	UNP A7LY27
A	37	SER	-	expression tag	UNP A7LY27
A	38	MET	-	expression tag	UNP A7LY27
A	559	GLN	-	expression tag	UNP A7LY27
B	-38	MET	-	initiating methionine	UNP A7LY27
B	-37	HIS	-	expression tag	UNP A7LY27
B	-36	HIS	-	expression tag	UNP A7LY27
B	-35	HIS	-	expression tag	UNP A7LY27
B	-34	HIS	-	expression tag	UNP A7LY27
B	-33	HIS	-	expression tag	UNP A7LY27
B	-32	HIS	-	expression tag	UNP A7LY27
B	-31	SER	-	expression tag	UNP A7LY27
B	-30	SER	-	expression tag	UNP A7LY27
B	-29	GLY	-	expression tag	UNP A7LY27
B	-28	VAL	-	expression tag	UNP A7LY27
B	-27	ASP	-	expression tag	UNP A7LY27
B	-26	ASN	-	expression tag	UNP A7LY27
B	-25	LYS	-	expression tag	UNP A7LY27
B	-24	PHE	-	expression tag	UNP A7LY27
B	-23	ASN	-	expression tag	UNP A7LY27
B	-22	LYS	-	expression tag	UNP A7LY27
B	-21	GLU	-	expression tag	UNP A7LY27
B	-20	ARG	-	expression tag	UNP A7LY27
B	-19	ARG	-	expression tag	UNP A7LY27
B	-18	ARG	-	expression tag	UNP A7LY27
B	-17	ALA	-	expression tag	UNP A7LY27
B	-16	ARG	-	expression tag	UNP A7LY27
B	-15	ARG	-	expression tag	UNP A7LY27
B	-14	GLU	-	expression tag	UNP A7LY27
B	-13	ILE	-	expression tag	UNP A7LY27
B	-12	ARG	-	expression tag	UNP A7LY27
B	-11	HIS	-	expression tag	UNP A7LY27
B	-10	LEU	-	expression tag	UNP A7LY27
B	-9	PRO	-	expression tag	UNP A7LY27
B	-8	ASN	-	expression tag	UNP A7LY27

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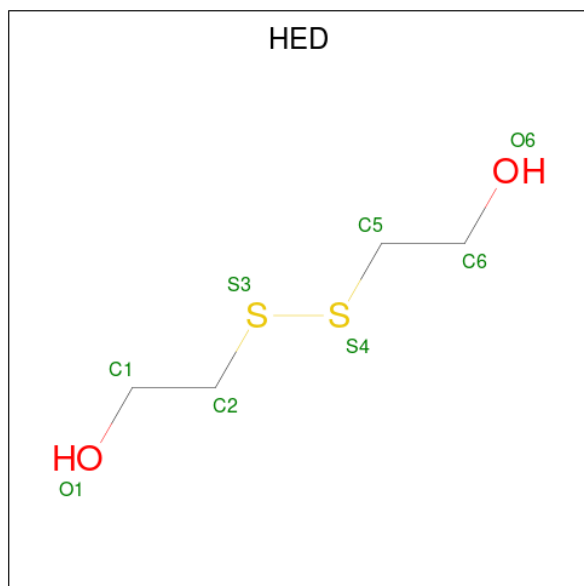
Chain	Residue	Modelled	Actual	Comment	Reference
B	-7	LEU	-	expression tag	UNP A7LY27
B	-6	ASN	-	expression tag	UNP A7LY27
B	-5	ARG	-	expression tag	UNP A7LY27
B	-4	GLU	-	expression tag	UNP A7LY27
B	-3	GLN	-	expression tag	UNP A7LY27
B	-2	ARG	-	expression tag	UNP A7LY27
B	-1	ARG	-	expression tag	UNP A7LY27
B	0	ALA	-	expression tag	UNP A7LY27
B	1	PHE	-	expression tag	UNP A7LY27
B	2	ILE	-	expression tag	UNP A7LY27
B	3	ARG	-	expression tag	UNP A7LY27
B	4	SER	-	expression tag	UNP A7LY27
B	5	LEU	-	expression tag	UNP A7LY27
B	6	ARG	-	expression tag	UNP A7LY27
B	7	ASP	-	expression tag	UNP A7LY27
B	8	ASP	-	expression tag	UNP A7LY27
B	9	PRO	-	expression tag	UNP A7LY27
B	10	SER	-	expression tag	UNP A7LY27
B	11	GLN	-	expression tag	UNP A7LY27
B	12	SER	-	expression tag	UNP A7LY27
B	13	ALA	-	expression tag	UNP A7LY27
B	14	ASN	-	expression tag	UNP A7LY27
B	15	LEU	-	expression tag	UNP A7LY27
B	16	LEU	-	expression tag	UNP A7LY27
B	17	ALA	-	expression tag	UNP A7LY27
B	18	GLU	-	expression tag	UNP A7LY27
B	19	ALA	-	expression tag	UNP A7LY27
B	20	LYS	-	expression tag	UNP A7LY27
B	21	LYS	-	expression tag	UNP A7LY27
B	22	LEU	-	expression tag	UNP A7LY27
B	23	ASN	-	expression tag	UNP A7LY27
B	24	ASP	-	expression tag	UNP A7LY27
B	25	ALA	-	expression tag	UNP A7LY27
B	26	GLN	-	expression tag	UNP A7LY27
B	27	PRO	-	expression tag	UNP A7LY27
B	28	LYS	-	expression tag	UNP A7LY27
B	29	GLY	-	expression tag	UNP A7LY27
B	30	THR	-	expression tag	UNP A7LY27
B	31	GLU	-	expression tag	UNP A7LY27
B	32	ASN	-	expression tag	UNP A7LY27
B	33	LEU	-	expression tag	UNP A7LY27
B	34	TYR	-	expression tag	UNP A7LY27

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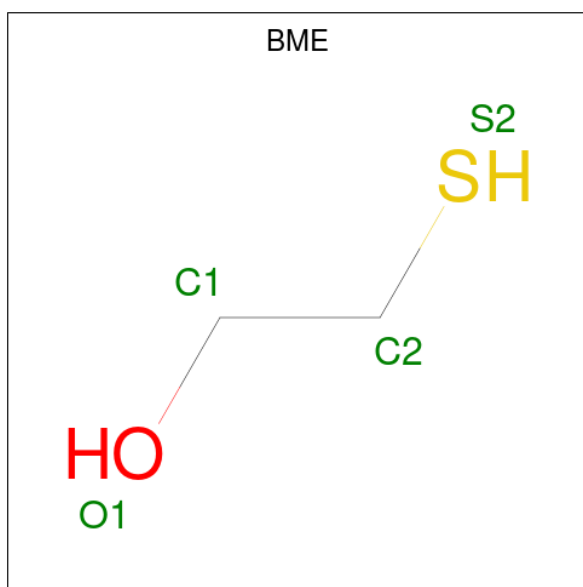
Chain	Residue	Modelled	Actual	Comment	Reference
B	35	PHE	-	expression tag	UNP A7LY27
B	36	GLN	-	expression tag	UNP A7LY27
B	37	SER	-	expression tag	UNP A7LY27
B	38	MET	-	expression tag	UNP A7LY27
B	559	GLN	-	expression tag	UNP A7LY27

- Molecule 2 is 2-HYDROXYETHYL DISULFIDE (three-letter code: HED) (formula: C₄H₁₀O₂S₂).



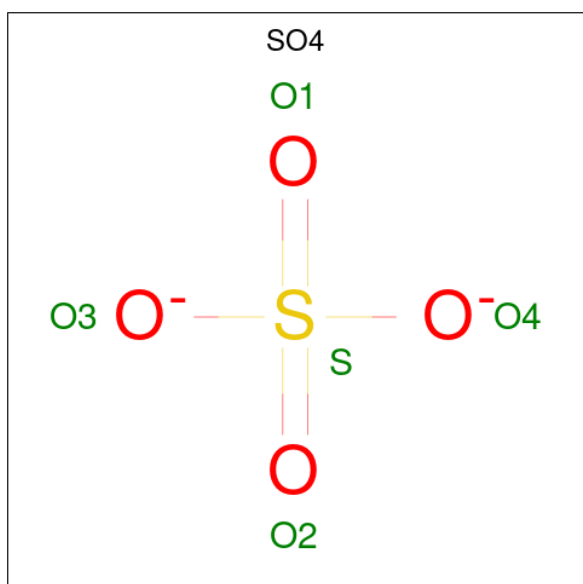
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
2	A	1	Total	C	O	S	0	0
			8	4	2	2		
2	A	1	Total	C	O	S	0	0
			8	4	2	2		
2	A	1	Total	C	O	S	0	0
			8	4	2	2		
2	B	1	Total	C	O	S	0	0
			8	4	2	2		

- Molecule 3 is BETA-MERCAPTOETHANOL (three-letter code: BME) (formula: C₂H₆OS).



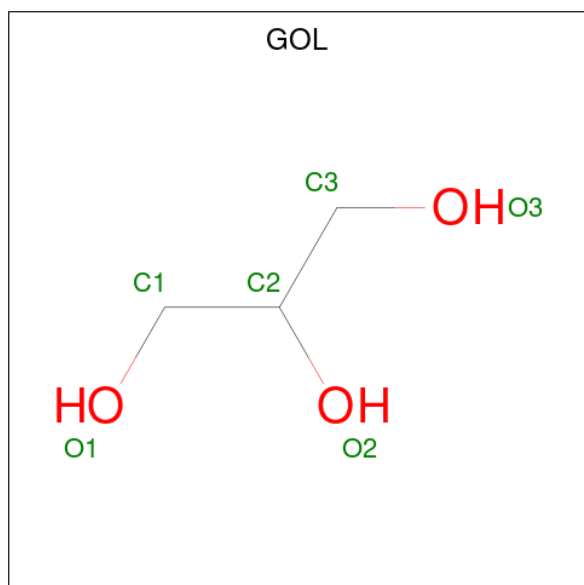
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	O	S	0	0
			4	2	1	1		
3	A	1	Total	C	O	S	0	0
			4	2	1	1		
3	B	1	Total	C	O	S	0	0
			4	2	1	1		
3	B	1	Total	C	O	S	0	0
			4	2	1	1		
3	B	1	Total	C	O	S	0	0
			4	2	1	1		

- Molecule 4 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



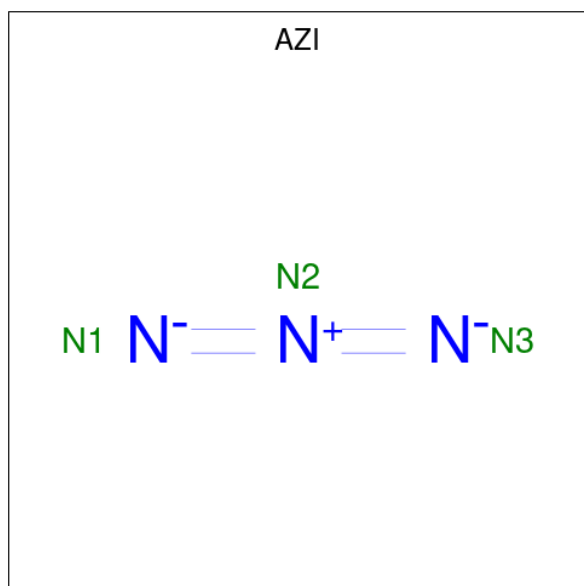
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 6 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 6 3 3	0	0
5	A	1	Total C O 6 3 3	0	0
5	A	1	Total C O 6 3 3	0	0
5	A	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0

- Molecule 6 is AZIDE ION (three-letter code: AZI) (formula: N₃).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total N 3 3	0	0
6	B	1	Total N 3 3	0	0
6	B	1	Total N 3 3	0	0

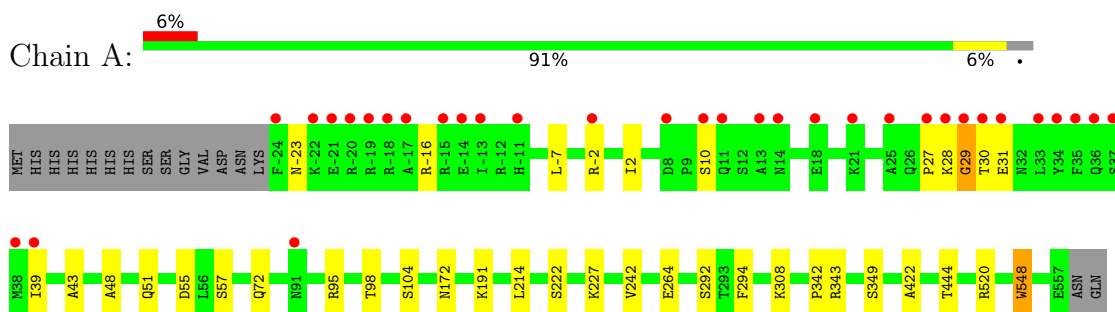
- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	323	Total 323	O 323	0	0
7	B	221	Total 221	O 221	0	0

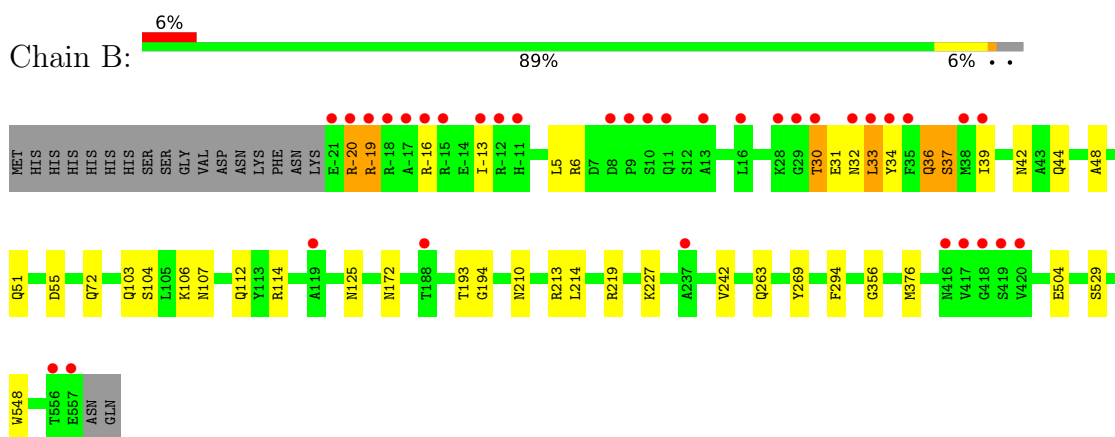
3 Residue-property plots [i](#)

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: Surface glycan-binding protein BO2743



- Molecule 1: Surface glycan-binding protein BO2743



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	207.12Å 207.12Å 170.58Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	55.56 – 2.00 55.56 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.9 (55.56-2.00) 99.9 (55.56-2.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.39 (at 2.00Å)	Xtrriage
Refinement program	PDB-REDO 1.19.1_4122, PHENIX 1.19.1_4122	Depositor
R, R_{free}	0.201 , 0.229 0.208 , 0.238	Depositor DCC
R_{free} test set	6114 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å ²)	29.4	Xtrriage
Anisotropy	0.276	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	(Not available) , (Not available)	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	10004	wwPDB-VP
Average B, all atoms (Å ²)	36.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.35% 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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: SO4, HED, GOL, AZI, BME

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	0/4794	0.60	0/6505
1	B	0.43	0/4728	0.61	0/6416
All	All	0.42	0/9522	0.60	0/12921

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	30	THR	Peptide

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	4670	0	4484	20	0
1	B	4620	0	4423	27	0
2	A	24	0	30	0	0
2	B	8	0	10	0	0
3	A	8	0	12	0	0
3	B	12	0	18	0	0
4	A	30	0	0	0	0
4	B	25	0	0	0	0
5	A	30	0	37	1	0
5	B	24	0	30	1	0
6	A	3	0	0	0	0
6	B	6	0	0	0	0
7	A	323	0	0	0	0
7	B	221	0	0	0	0
All	All	10004	0	9044	43	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 2.

The worst 5 of 43 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:-7:LEU:HB2	1:A:-2:ARG:NH2	1.94	0.82
1:A:-16:ARG:HG3	1:A:2:ILE:HD12	1.65	0.79
1:A:39:ILE:HD11	1:B:39:ILE:HD11	1.69	0.75
1:B:51:GLN:HG3	1:B:55:ASP:HB2	1.89	0.55
1:A:-2:ARG:O	1:A:2:ILE:HG12	2.06	0.54

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	585/598 (98%)	568 (97%)	14 (2%)	3 (0%)	29	23
1	B	577/598 (96%)	558 (97%)	16 (3%)	3 (0%)	29	23
All	All	1162/1196 (97%)	1126 (97%)	30 (3%)	6 (0%)	29	23

5 of 6 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	30	THR
1	A	29	GLY
1	B	32	ASN
1	B	37	SER
1	A	27	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	A	501/511 (98%)	495 (99%)	6 (1%)	71	76
1	B	493/511 (96%)	487 (99%)	6 (1%)	71	76
All	All	994/1022 (97%)	982 (99%)	12 (1%)	71	76

5 of 12 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	-19	ARG
1	B	36	GLN
1	B	548	TRP
1	B	504	GLU
1	A	191	LYS

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

Mol	Chain	Res	Type
1	B	42	ASN

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Mol	Chain	Res	Type
1	B	112	GLN
1	B	210	ASN

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

32 ligands are modelled in this entry.

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 [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	582/598 (97%)	0.22	33 (5%) 23 23	21, 30, 61, 122	0
1	B	579/598 (96%)	0.20	35 (6%) 21 20	24, 34, 53, 129	0
All	All	1161/1196 (97%)	0.21	68 (5%) 22 21	21, 32, 57, 129	0

The worst 5 of 68 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	35	PHE	8.9
1	B	34	TYR	7.0
1	A	-24	PHE	7.0
1	A	34	TYR	6.8
1	B	-11	HIS	5.9

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, 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(\AA^2)	Q<0.9
6	AZI	B	614	3/3	0.60	0.18	59,59,66,74	0
3	BME	A	605	4/4	0.66	0.28	66,74,76,92	0
2	HED	B	601	8/8	0.68	0.38	68,83,113,120	0
3	BME	B	603	4/4	0.78	0.13	69,70,74,74	0
2	HED	A	602	8/8	0.78	0.31	64,76,86,92	0
3	BME	B	604	4/4	0.80	0.18	51,73,78,90	0
2	HED	A	603	8/8	0.81	0.26	58,69,77,83	0
3	BME	B	602	4/4	0.82	0.31	73,76,79,98	0
2	HED	A	601	8/8	0.82	0.21	51,76,96,98	0
5	GOL	A	614	6/6	0.83	0.21	56,69,82,87	0
5	GOL	B	612	6/6	0.85	0.16	43,53,58,68	0
5	GOL	B	613	6/6	0.85	0.13	63,68,77,80	0
4	SO4	B	607	5/5	0.85	0.31	90,98,108,112	0
5	GOL	A	616	6/6	0.87	0.22	64,67,70,75	0
3	BME	A	604	4/4	0.87	0.16	68,70,71,80	0
6	AZI	B	615	3/3	0.87	0.16	73,73,76,79	0
6	AZI	A	617	3/3	0.88	0.17	46,46,74,82	0
4	SO4	A	610	5/5	0.89	0.27	82,91,102,105	0
4	SO4	A	611	5/5	0.89	0.21	113,114,117,118	0
4	SO4	B	608	5/5	0.90	0.31	98,98,109,113	0
5	GOL	A	615	6/6	0.90	0.14	46,61,64,77	0
4	SO4	B	606	5/5	0.91	0.17	72,77,81,95	0
4	SO4	A	609	5/5	0.92	0.15	83,100,108,112	0
4	SO4	B	609	5/5	0.92	0.15	77,78,84,86	0
5	GOL	B	611	6/6	0.93	0.25	46,65,76,85	0
5	GOL	A	613	6/6	0.93	0.17	36,55,67,87	0
4	SO4	A	608	5/5	0.94	0.27	94,98,101,107	0
4	SO4	B	605	5/5	0.95	0.15	66,70,77,78	0
4	SO4	A	607	5/5	0.97	0.17	56,67,73,84	0
5	GOL	A	612	6/6	0.97	0.16	35,37,40,40	0
5	GOL	B	610	6/6	0.97	0.14	38,42,46,47	0
4	SO4	A	606	5/5	0.98	0.17	53,55,61,78	0

6.5 Other polymers [i](#)

There are no such residues in this entry.