



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 04:07 AM UTC

PDB ID : 6B2R / pdb_00006b2r
Title : Crystal structure of Xanthomonas campestris OleA H285A
Authors : Jensen, M.R.; Goblirsch, B.R.; Esler, M.A.; Christenson, J.K.; Mohamed, F.A.; Wackett, L.P.; Wilmot, C.M.
Deposited on : 2017-09-20
Resolution : 1.77 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

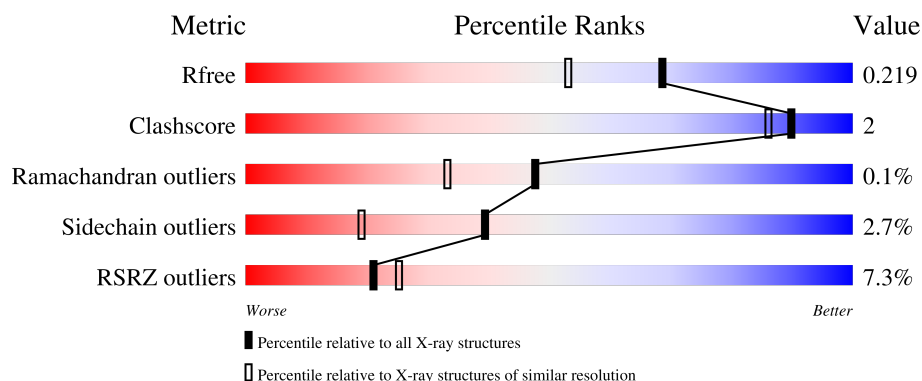
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.77 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	1365 (1.78-1.78)
Clashscore	190562	1395 (1.78-1.78)
Ramachandran outliers	187476	1382 (1.78-1.78)
Sidechain outliers	187428	1382 (1.78-1.78)
RSRZ outliers	180081	1365 (1.78-1.78)

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	358	% 85% 11% .
2	B	358	13% 82% 11% 5%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 5545 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 3-oxoacyl-[ACP] synthase III.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	344	Total	C	N	O	S	0	8	0
			2667	1674	470	507	16			

There are 21 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP Q8PDX2
A	2	GLY	-	expression tag	UNP Q8PDX2
A	3	SER	-	expression tag	UNP Q8PDX2
A	4	SER	-	expression tag	UNP Q8PDX2
A	5	HIS	-	expression tag	UNP Q8PDX2
A	6	HIS	-	expression tag	UNP Q8PDX2
A	7	HIS	-	expression tag	UNP Q8PDX2
A	8	HIS	-	expression tag	UNP Q8PDX2
A	9	HIS	-	expression tag	UNP Q8PDX2
A	10	HIS	-	expression tag	UNP Q8PDX2
A	11	SER	-	expression tag	UNP Q8PDX2
A	12	SER	-	expression tag	UNP Q8PDX2
A	13	GLY	-	expression tag	UNP Q8PDX2
A	14	LEU	-	expression tag	UNP Q8PDX2
A	15	VAL	-	expression tag	UNP Q8PDX2
A	16	PRO	-	expression tag	UNP Q8PDX2
A	17	ARG	-	expression tag	UNP Q8PDX2
A	18	GLY	-	expression tag	UNP Q8PDX2
A	19	SER	-	expression tag	UNP Q8PDX2
A	20	HIS	-	expression tag	UNP Q8PDX2
A	285	ALA	HIS	engineered mutation	UNP Q8PDX2

- Molecule 2 is a protein called 3-oxoacyl-[ACP] synthase III.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	339	Total	C	N	O	S	0	4	0
			2605	1636	456	496	17			

There are 21 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	1	MET	-	initiating methionine	UNP Q8PDX2
B	2	GLY	-	expression tag	UNP Q8PDX2
B	3	SER	-	expression tag	UNP Q8PDX2
B	4	SER	-	expression tag	UNP Q8PDX2
B	5	HIS	-	expression tag	UNP Q8PDX2
B	6	HIS	-	expression tag	UNP Q8PDX2
B	7	HIS	-	expression tag	UNP Q8PDX2
B	8	HIS	-	expression tag	UNP Q8PDX2
B	9	HIS	-	expression tag	UNP Q8PDX2
B	10	HIS	-	expression tag	UNP Q8PDX2
B	11	SER	-	expression tag	UNP Q8PDX2
B	12	SER	-	expression tag	UNP Q8PDX2
B	13	GLY	-	expression tag	UNP Q8PDX2
B	14	LEU	-	expression tag	UNP Q8PDX2
B	15	VAL	-	expression tag	UNP Q8PDX2
B	16	PRO	-	expression tag	UNP Q8PDX2
B	17	ARG	-	expression tag	UNP Q8PDX2
B	18	GLY	-	expression tag	UNP Q8PDX2
B	19	SER	-	expression tag	UNP Q8PDX2
B	20	HIS	-	expression tag	UNP Q8PDX2
B	285	ALA	HIS	engineered mutation	UNP Q8PDX2

- Molecule 3 is GLYCEROL (CCD ID: GOL) (formula: C₃H₈O₃).



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

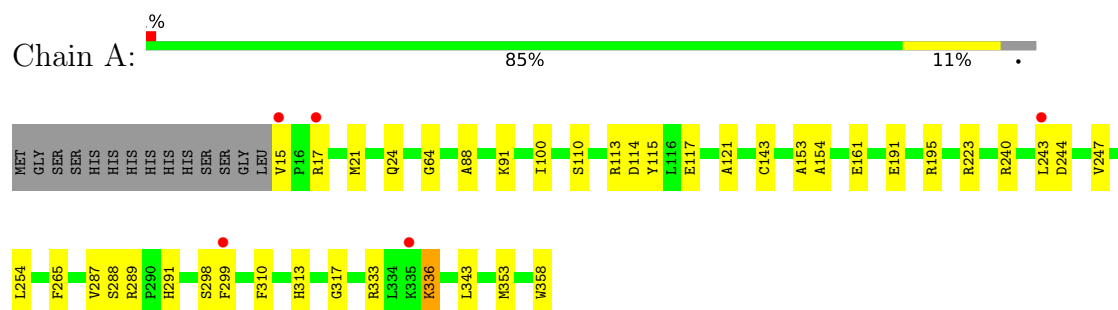
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	152	Total	O	0	0
			152	152		
4	B	109	Total	O	0	1
			109	109		

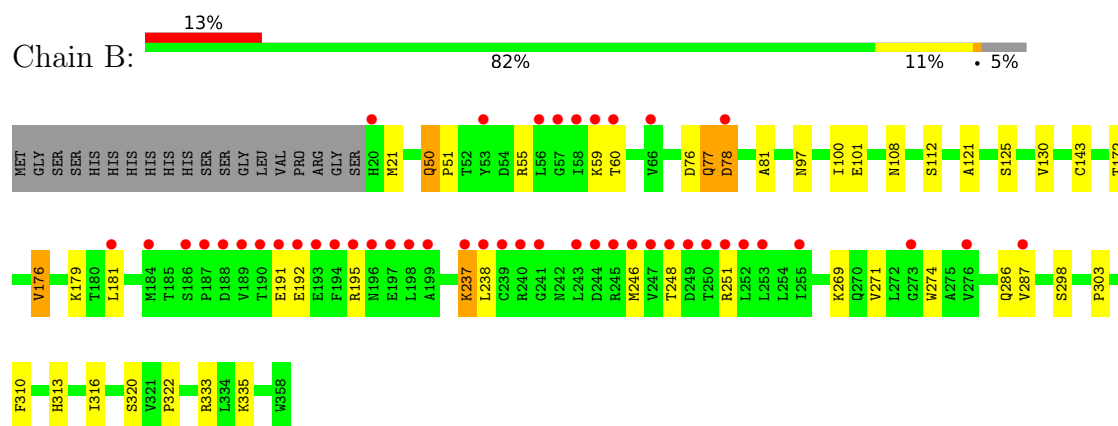
3 Residue-property plots

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: 3-oxoacyl-[ACP] synthase III



• Molecule 2: 3-oxoacyl-[ACP] synthase III



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	82.18Å 85.61Å 103.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 1.77 50.00 – 1.77	Depositor EDS
% Data completeness (in resolution range)	99.5 (50.00-1.77) 99.6 (50.00-1.77)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.64 (at 1.77Å)	Xtriage
Refinement program	REFMAC 5.8.0158	Depositor
R, R_{free}	0.175 , 0.209 0.186 , 0.219	Depositor DCC
R_{free} test set	3568 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	21.0	Xtriage
Anisotropy	0.138	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 32.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.017 for k,h,-l	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	5545	wwPDB-VP
Average B, all atoms (Å ²)	26.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.45% 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: GOL, CSO

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	1.61	18/2711 (0.7%)	1.35	7/3671 (0.2%)
2	B	1.67	19/2629 (0.7%)	1.41	14/3557 (0.4%)
All	All	1.64	37/5340 (0.7%)	1.38	21/7228 (0.3%)

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	195	ARG	CA-C	-8.47	1.42	1.52
1	A	240	ARG	CD-NE	-8.42	1.34	1.46
2	B	78	ASP	CA-C	7.22	1.62	1.52
2	B	101	GLU	CD-OE1	7.00	1.38	1.25
1	A	154	ALA	N-CA	6.87	1.54	1.46
1	A	195	ARG	C-O	-6.59	1.16	1.24
1	A	313	HIS	N-CA	6.45	1.55	1.45
1	A	121	ALA	N-CA	-6.26	1.38	1.46
2	B	81	ALA	C-O	-6.03	1.17	1.24
2	B	176	VAL	N-CA	-5.86	1.39	1.46
1	A	91	LYS	N-CA	5.85	1.53	1.46
1	A	17	ARG	CA-C	5.83	1.59	1.52
1	A	289	ARG	N-CA	-5.82	1.40	1.46
2	B	237	LYS	N-CA	5.79	1.53	1.46
2	B	50	GLN	CA-C	5.75	1.59	1.52
1	A	247	VAL	CA-CB	-5.66	1.47	1.54
1	A	64	GLY	C-O	5.65	1.30	1.23
1	A	100	ILE	C-O	5.65	1.31	1.24
2	B	76	ASP	N-CA	5.64	1.53	1.46
1	A	343	LEU	N-CA	-5.54	1.38	1.45
2	B	179	LYS	CA-C	-5.52	1.45	1.52
2	B	121	ALA	N-CA	-5.52	1.39	1.46
1	A	114	ASP	CA-C	5.48	1.59	1.52
2	B	322	PRO	CA-CB	5.44	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	110	SER	C-O	-5.42	1.17	1.23
2	B	298	SER	CA-C	-5.42	1.45	1.52
2	B	303	PRO	N-CA	5.33	1.54	1.47
1	A	15	VAL	N-CA	5.24	1.56	1.46
2	B	310	PHE	N-CA	5.24	1.53	1.46
2	B	195	ARG	C-O	-5.22	1.18	1.24
2	B	112	SER	C-O	-5.20	1.17	1.23
1	A	115	TYR	N-CA	5.20	1.52	1.45
2	B	251	ARG	N-CA	5.15	1.52	1.46
1	A	88	ALA	C-O	5.13	1.30	1.24
2	B	108	ASN	CA-CB	-5.12	1.46	1.53
2	B	181	LEU	CA-C	5.11	1.59	1.52
1	A	113	ARG	CZ-NH2	5.04	1.40	1.33

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	286	GLN	CA-CB-CG	-7.35	99.40	114.10
2	B	320	SER	CA-CB-OG	-6.88	97.33	111.10
2	B	237	LYS	N-CA-C	6.43	119.11	111.71
2	B	77	GLN	CA-C-N	-6.37	113.68	124.31
2	B	77	GLN	C-N-CA	-6.37	113.68	124.31
1	A	153	ALA	N-CA-C	-6.19	104.62	111.36
2	B	287	VAL	CB-CA-C	6.12	117.25	111.44
1	A	240	ARG	CB-CG-CD	6.01	125.12	111.30
2	B	125	SER	CA-CB-OG	-5.71	99.69	111.10
1	A	21	MET	CA-CB-CG	-5.59	102.92	114.10
2	B	238	LEU	N-CA-C	5.44	118.13	111.82
1	A	223	ARG	NE-CZ-NH2	-5.42	114.33	119.20
2	B	195	ARG	CA-C-O	-5.40	115.33	121.00
1	A	244	ASP	N-CA-C	5.26	120.35	112.94
2	B	172	THR	OG1-CB-CG2	-5.23	98.84	109.30
2	B	287	VAL	N-CA-CB	-5.17	105.73	111.41
2	B	333	ARG	CG-CD-NE	-5.15	100.66	112.00
2	B	101	GLU	CG-CD-OE1	5.12	130.19	118.40
1	A	161	GLU	CA-CB-CG	-5.12	103.86	114.10
1	A	191	GLU	CB-CG-CD	-5.03	104.05	112.60
2	B	97	ASN	N-CA-C	5.03	118.33	111.39

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	2667	0	2695	13	0
2	B	2605	0	2638	6	0
3	A	6	0	8	0	0
3	B	6	0	8	0	0
4	A	152	0	0	1	0
4	B	109	0	0	1	0
All	All	5545	0	5349	19	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.

All (19) 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:265[A]:PHE:CD2	1:A:299:PHE:CE1	2.68	0.81
1:A:24:GLN:NE2	4:A:501:HOH:O	2.33	0.60
1:A:265[A]:PHE:HD2	1:A:299:PHE:CE1	2.16	0.60
1:A:265[A]:PHE:HD2	1:A:299:PHE:CZ	2.20	0.58
1:A:265[A]:PHE:CD2	1:A:353:MET:HE1	2.39	0.57
1:A:254:LEU:HD23	1:A:254:LEU:C	2.34	0.52
1:A:265[A]:PHE:CD2	1:A:299:PHE:CZ	2.98	0.50
1:A:254:LEU:HB2	1:A:291[B]:HIS:CE1	2.48	0.49
2:B:313:HIS:HB3	2:B:316:ILE:HD11	1.94	0.49
2:B:237:LYS:HE2	4:B:503:HOH:O	2.12	0.49
2:B:269:LYS:HG2	2:B:274:TRP:O	2.13	0.48
1:A:288:SER:HA	1:A:310:PHE:CZ	2.49	0.47
1:A:143[B]:CYS:SG	1:A:317:GLY:HA2	2.54	0.47
1:A:333:ARG:HG3	1:A:333:ARG:O	2.14	0.47
2:B:77:GLN:O	2:B:78:ASP:HB2	2.15	0.47
1:A:336:LYS:HE3	1:A:358:TRP:O	2.17	0.43
1:A:265[A]:PHE:CD2	1:A:299:PHE:CD1	3.08	0.42
2:B:50:GLN:HB3	2:B:51:PRO:HD3	2.02	0.41
2:B:100:ILE:HD11	2:B:130:VAL:HG12	2.03	0.41

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	350/358 (98%)	342 (98%)	8 (2%)	0	100	100
2	B	339/358 (95%)	327 (96%)	11 (3%)	1 (0%)	36	22
All	All	689/716 (96%)	669 (97%)	19 (3%)	1 (0%)	48	33

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	55	ARG

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	285/289 (99%)	280 (98%)	5 (2%)	51	33
2	B	275/288 (96%)	265 (96%)	10 (4%)	31	10
All	All	560/577 (97%)	545 (97%)	15 (3%)	39	19

All (15) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	117	GLU
1	A	243	LEU
1	A	287	VAL
1	A	298	SER
1	A	336	LYS

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Mol	Chain	Res	Type
2	B	21	MET
2	B	59	LYS
2	B	60	THR
2	B	176	VAL
2	B	191	GLU
2	B	192	GLU
2	B	246	MET
2	B	248	THR
2	B	271	VAL
2	B	335	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	GLN
1	A	25	ASN
1	A	87	GLN
1	A	270	GLN
2	B	50	GLN
2	B	270	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

2 non-standard protein/DNA/RNA residues 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	$\# Z > 2$
2	CSO	B	143[A]	2	3,6,7	1.39	0	1,6,8	1.08	0
2	CSO	B	143[B]	2	4,5,7	2.15	1 (25%)	1,5,8	1.58	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	CSO	B	143[A]	2	-	0/1/5/7	-
2	CSO	B	143[B]	2	-	0/1/4/7	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	143[B]	CSO	CB-SG	-3.82	1.73	1.81

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.

5.5 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	GOL	A	401	-	5,5,5	0.41	0	5,5,5	0.60	0
3	GOL	B	401	-	5,5,5	0.63	0	5,5,5	0.73	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
3	GOL	A	401	-	-	4/4/4/4	-
3	GOL	B	401	-	-	0/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	401	GOL	C1-C2-C3-O3
3	A	401	GOL	O1-C1-C2-C3
3	A	401	GOL	O2-C2-C3-O3
3	A	401	GOL	O1-C1-C2-O2

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	344/358 (96%)	-0.09	5 (1%) 72 78	8, 21, 36, 55	8 (2%)
2	B	338/358 (94%)	0.43	45 (13%) 7 7	9, 23, 58, 86	3 (0%)
All	All	682/716 (95%)	0.17	50 (7%) 21 25	8, 21, 52, 86	11 (1%)

All (50) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	243	LEU	6.8
1	A	243	LEU	5.3
2	B	58	ILE	5.2
2	B	20	HIS	4.9
2	B	192	GLU	4.7
2	B	187	PRO	4.6
2	B	239	CYS	4.5
2	B	238	LEU	4.5
2	B	189	VAL	4.4
2	B	241	GLY	4.2
2	B	249	ASP	4.0
2	B	56	LEU	4.0
2	B	196	ASN	3.9
2	B	244	ASP	3.7
2	B	250	THR	3.7
2	B	194	PHE	3.6
2	B	253	LEU	3.6
2	B	53	TYR	3.5
2	B	245	ARG	3.4
2	B	247	VAL	3.3
2	B	248	THR	3.2
2	B	195	ARG	3.0
2	B	252	LEU	3.0
2	B	246	MET	2.9

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Mol	Chain	Res	Type	RSRZ
2	B	237	LYS	2.9
2	B	188	ASP	2.9
2	B	57	GLY	2.8
2	B	191	GLU	2.7
2	B	251	ARG	2.7
2	B	59	LYS	2.7
2	B	193	GLU	2.6
2	B	184	MET	2.6
2	B	198	LEU	2.6
1	A	15	VAL	2.6
2	B	273	GLY	2.5
2	B	190	THR	2.5
2	B	186	SER	2.5
2	B	276	VAL	2.5
1	A	335	LYS	2.4
2	B	240	ARG	2.4
1	A	17	ARG	2.3
2	B	255	ILE	2.3
1	A	299	PHE	2.3
2	B	78	ASP	2.3
2	B	197	GLU	2.2
2	B	60	THR	2.2
2	B	66	VAL	2.1
2	B	199	ALA	2.1
2	B	287	VAL	2.1
2	B	181	LEU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [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(Å ²)	Q<0.9
2	CSO	B	143[A]	7/8	0.90	0.10	16,17,20,20	7
2	CSO	B	143[B]	6/8	0.90	0.10	16,16,17,18	6

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
3	GOL	A	401	6/6	0.84	0.16	33,40,42,53	0
3	GOL	B	401	6/6	0.96	0.06	25,26,28,30	0

6.5 Other polymers [i](#)

There are no such residues in this entry.