Full wwPDB X-ray Structure Validation Report (i)

Jan 8, 2024 – 01:40 pm GMT

PDB ID	:	5OO2
Title	:	Crystal structure of Mycolicibacterium hassiacum glucosylglycerate hydrolase (MhGgH) E419A variant in complex with glucosylglycolate
Authors	:	Cereija, T.B.; Macedo-Ribeiro, S.; Pereira, P.J.B.
Deposited on	:	2017-08-05
Resolution	:	2.06 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 (i) 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 (i)) were used in the production of this report:

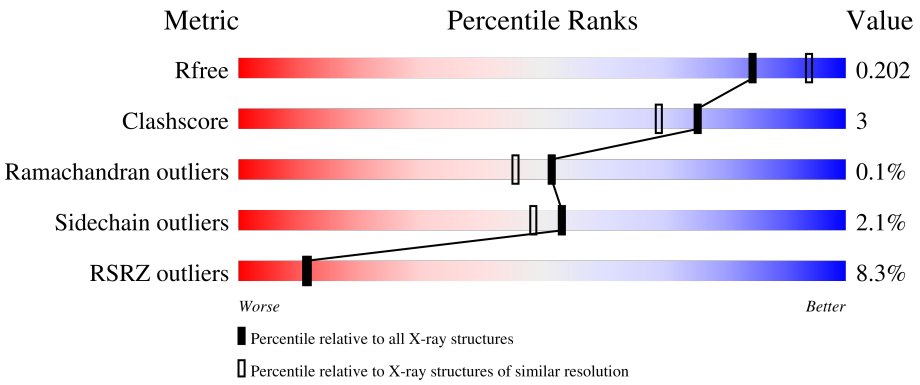
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 2.06 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	2684 (2.08-2.04)
Clashscore	141614	2801 (2.08-2.04)
Ramachandran outliers	138981	2768 (2.08-2.04)
Sidechain outliers	138945	2768 (2.08-2.04)
RSRZ outliers	127900	2646 (2.08-2.04)

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 <=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	448	5% 92% 7% •
1	B	448	12% 89% 9% ••

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 7868 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.

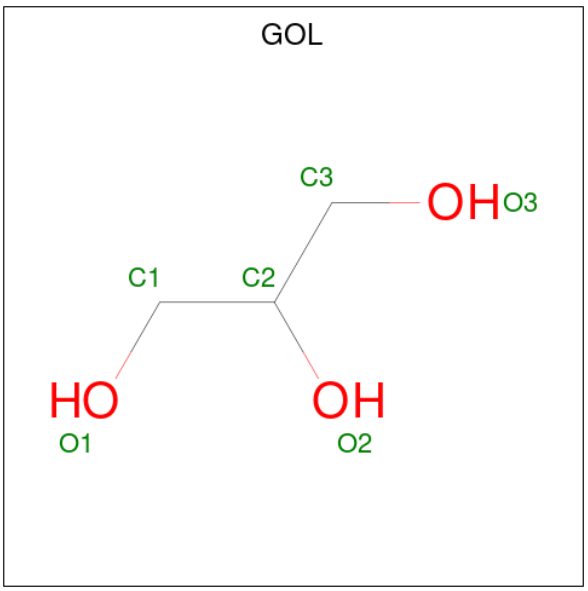
- Molecule 1 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	445	3637	2311	663	650	13	0	7	0
1	B	445	3700	2348	679	660	13	35	14	0

There are 6 discrepancies between the modelled and reference sequences:

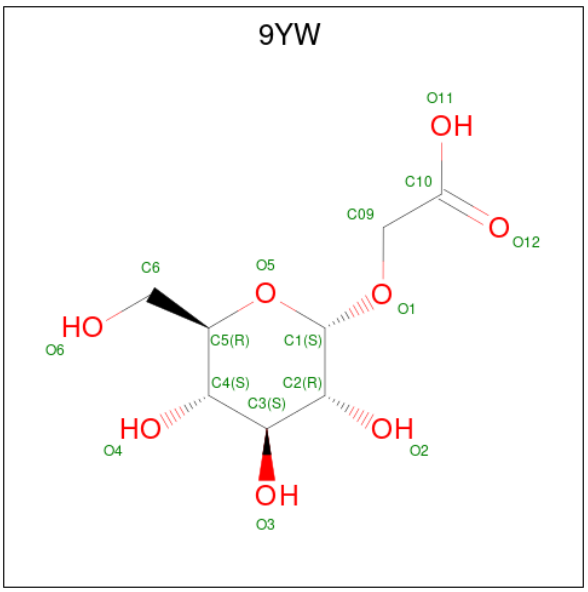
Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP K5BDL0
A	0	ALA	-	expression tag	UNP K5BDL0
A	419	ALA	GLU	engineered mutation	UNP K5BDL0
B	-1	GLY	-	expression tag	UNP K5BDL0
B	0	ALA	-	expression tag	UNP K5BDL0
B	419	ALA	GLU	engineered mutation	UNP K5BDL0

- Molecule 2 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



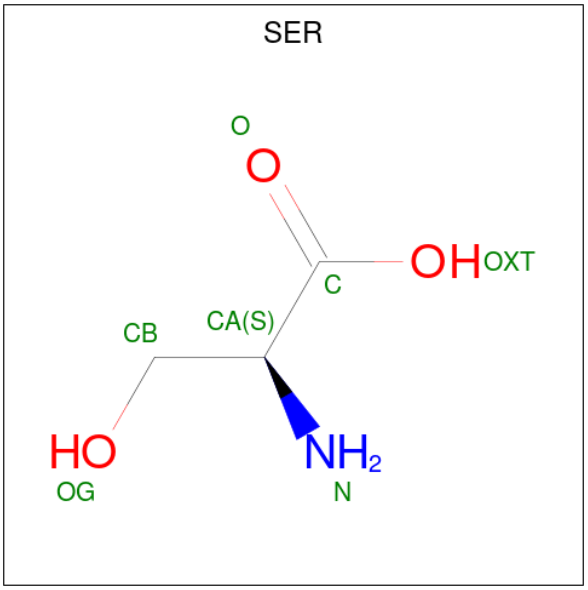
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
2	A	1	6	3	3	0	0
2	A	1	6	3	3	0	0
2	A	1	6	3	3	0	0
2	A	1	6	3	3	0	0
2	A	1	6	3	3	0	0
2	A	1	6	3	3	0	1
2	B	1	6	3	3	0	0
2	B	1	6	3	3	0	0
2	B	1	6	3	3	0	0
2	B	1	6	3	3	0	0
2	B	1	6	3	3	0	0

- Molecule 3 is (alpha-D-glucopyranosyloxy)acetic acid (three-letter code: 9YW) (formula: $C_8H_{14}O_8$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	O		0	1
			16	8	8			
3	B	1	Total	C	O		0	0
			16	8	8			

- Molecule 4 is SERINE (three-letter code: SER) (formula: $C_3H_7NO_3$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	1
			7	3	1	3		

- Molecule 5 is water.

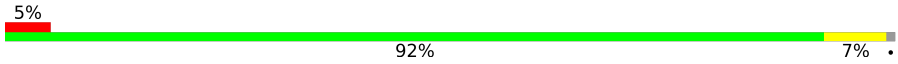
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	245	Total	O	0	2
			245	245		
5	B	181	Total	O	0	3
			181	181		

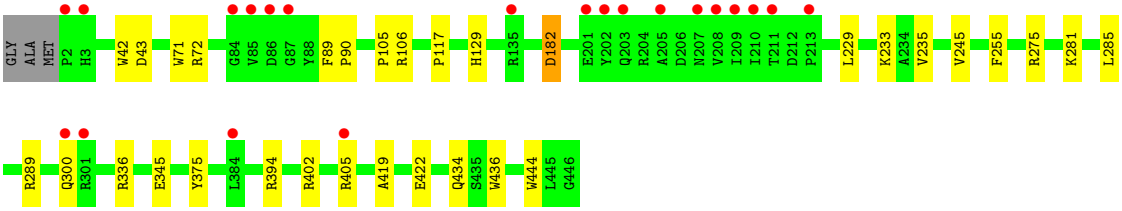
3 Residue-property plots (i)

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: Uncharacterized protein

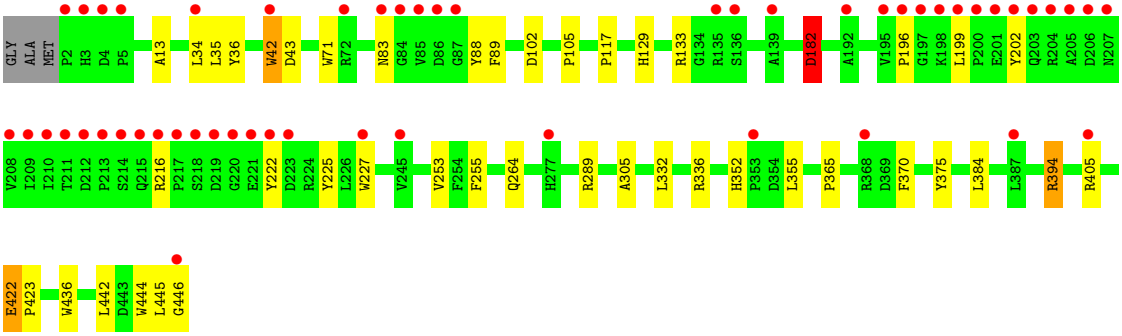
Chain A:





• Molecule 1: Uncharacterized protein

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	86.95Å 157.68Å 87.56Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	41.91 – 2.06 42.18 – 2.06	Depositor EDS
% Data completeness (in resolution range)	99.9 (41.91-2.06) 99.9 (42.18-2.06)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.52 (at 2.06Å)	Xtriage
Refinement program	PHENIX (1.11.1_2575: ???)	Depositor
R, R_{free}	0.162 , 0.202 0.163 , 0.202	Depositor DCC
R_{free} test set	3628 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å^2)	39.1	Xtriage
Anisotropy	0.488	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 58.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.010 for l,-k,h	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	7868	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.80% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: GOL, 9YW

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	0.52	0/3747	0.64	1/5106 (0.0%)
1	B	0.50	0/3810	0.62	2/5186 (0.0%)
All	All	0.51	0/7557	0.63	3/10292 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	182	ASP	CB-CG-OD1	6.43	124.08	118.30
1	A	182	ASP	CB-CG-OD2	5.56	123.30	118.30
1	B	42	TRP	CA-CB-CG	5.11	123.41	113.70

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	3637	0	3510	17	1
1	B	3700	0	3571	27	1
2	A	36	0	48	2	0
2	B	30	0	40	1	0
3	A	16	0	0	0	0
3	B	16	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	7	0	4	1	0
5	A	245	0	0	2	0
5	B	181	0	0	2	0
All	All	7868	0	7173	45	1

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 3.

All (45) 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:B:216:ARG:HA	1:B:375:TYR:HE1	1.32	0.94
1:B:216:ARG:HA	1:B:375:TYR:CE1	2.02	0.94
2:A:506[B]:GOL:HO2	4:A:508[B]:SER:N	1.69	0.90
1:B:199:LEU:H	1:B:199:LEU:HD23	1.64	0.63
1:A:129:HIS:HD2	5:A:828:HOH:O	1.83	0.61
1:A:345:GLU:HG2	2:A:504:GOL:H12	1.85	0.59
1:B:88:TYR:OH	3:B:506:9YW:O12	2.20	0.59
1:B:216:ARG:CA	1:B:375:TYR:HE1	2.11	0.55
1:B:129:HIS:HD2	5:B:762:HOH:O	1.89	0.55
1:A:405[B]:ARG:HG3	1:A:444:TRP:CD1	2.43	0.54
1:B:332:LEU:HD22	1:B:336:ARG:HD2	1.90	0.53
1:B:89:PHE:CZ	1:B:202:TYR:HB2	2.45	0.52
1:A:289:ARG:NE	5:A:602:HOH:O	2.31	0.52
1:B:264:GLN:HG2	1:B:394:ARG:HH22	1.74	0.52
1:B:196:PRO:HB3	1:B:227:TRP:HB2	1.92	0.51
1:B:117:PRO:HD3	1:B:255:PHE:CE1	2.46	0.51
1:B:13:ALA:HB2	1:B:445[A]:LEU:HD13	1.93	0.51
1:B:71:TRP:CD1	1:B:105:PRO:HD3	2.47	0.50
1:B:264:GLN:HG2	1:B:394:ARG:NH2	2.28	0.49
1:B:289:ARG:NE	5:B:607:HOH:O	2.42	0.49
1:A:300:GLN:O	1:A:336:ARG:HD3	2.13	0.48
1:B:35:LEU:HD23	1:B:36:TYR:CE2	2.49	0.47
1:A:229:LEU:O	1:A:233:LYS:HG3	2.15	0.47
1:A:281:LYS:HE2	1:A:281:LYS:HB3	1.77	0.47
1:A:289:ARG:HH21	1:A:289:ARG:HG3	1.80	0.47
1:B:442:LEU:O	1:B:446[B]:GLY:N	2.48	0.47
1:B:222:TYR:HA	1:B:225:TYR:HB2	1.98	0.46
1:A:235:VAL:HG11	1:A:245:VAL:HG11	1.98	0.46
1:A:117:PRO:HD3	1:A:255:PHE:CE1	2.52	0.45
1:B:182:ASP:OD1	1:B:182:ASP:N	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:275:ARG:HA	1:A:275:ARG:HD3	1.77	0.44
1:A:89:PHE:CD1	1:A:90:PRO:HA	2.52	0.44
1:B:365:PRO:HA	1:B:370:PHE:CD1	2.53	0.43
1:B:352:HIS:HB3	1:B:355:LEU:HG	2.00	0.43
1:A:419:ALA:HB2	1:A:434:GLN:HG3	2.01	0.43
1:B:405[B]:ARG:HG3	1:B:444:TRP:CD1	2.53	0.43
1:B:196:PRO:HB3	1:B:227:TRP:CB	2.49	0.43
1:B:253:VAL:HG21	1:B:305:ALA:HB1	2.01	0.42
1:A:402:ARG:CZ	2:B:503:GOL:H2	2.50	0.42
1:B:34:LEU:HA	1:B:34:LEU:HD12	1.76	0.41
1:A:71:TRP:CD1	1:A:105:PRO:HD3	2.56	0.40
1:B:384[A]:LEU:HD23	1:B:384[A]:LEU:HA	1.87	0.40
1:B:422:GLU:HA	1:B:423:PRO:HD3	1.96	0.40
1:A:106[A]:ARG:HD2	1:A:106[A]:ARG:N	2.36	0.40
1:A:405[A]:ARG:NH2	1:A:444:TRP:O	2.51	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72[A]:ARG:NH1	1:B:102:ASP:OD1[1_556]	2.14	0.06

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	450/448 (100%)	437 (97%)	13 (3%)	0	100	100
1	B	456/448 (102%)	439 (96%)	16 (4%)	1 (0%)	47	39
All	All	906/896 (101%)	876 (97%)	29 (3%)	1 (0%)	51	45

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	83	ASN

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	370/365 (101%)	362 (98%)	8 (2%)	52	46
1	B	377/365 (103%)	370 (98%)	7 (2%)	57	53
All	All	747/730 (102%)	732 (98%)	15 (2%)	53	51

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

Mol	Chain	Res	Type
1	A	42	TRP
1	A	43	ASP
1	A	182	ASP
1	A	285	LEU
1	A	375	TYR
1	A	394	ARG
1	A	422	GLU
1	A	436	TRP
1	B	42	TRP
1	B	43	ASP
1	B	133	ARG
1	B	182	ASP
1	B	394	ARG
1	B	422	GLU
1	B	436	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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)

14 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	SER	A	508[B]	-	5,6,6	1.00	0	5,7,7	1.87	2 (40%)
3	9YW	B	506	-	16,16,16	1.20	0	20,22,22	1.29	3 (15%)
2	GOL	A	506[B]	-	5,5,5	0.54	0	5,5,5	0.36	0
2	GOL	A	503	-	5,5,5	0.31	0	5,5,5	0.41	0
2	GOL	B	503	-	5,5,5	0.40	0	5,5,5	0.48	0
3	9YW	A	507[A]	-	16,16,16	1.29	2 (12%)	20,22,22	0.96	1 (5%)
2	GOL	A	505	-	5,5,5	0.32	0	5,5,5	0.31	0
2	GOL	B	502	-	5,5,5	0.24	0	5,5,5	0.58	0
2	GOL	A	502	-	5,5,5	0.37	0	5,5,5	0.29	0
2	GOL	B	504	-	5,5,5	0.29	0	5,5,5	0.24	0
2	GOL	A	501	-	5,5,5	0.24	0	5,5,5	0.69	0
2	GOL	B	501	-	5,5,5	0.31	0	5,5,5	1.00	0
2	GOL	A	504	-	5,5,5	0.35	0	5,5,5	0.33	0
2	GOL	B	505	-	5,5,5	0.31	0	5,5,5	0.38	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
4	SER	A	508[B]	-	-	4/6/6/6	-
3	9YW	B	506	-	-	0/7/27/27	0/1/1/1
2	GOL	A	506[B]	-	-	2/4/4/4	-
2	GOL	A	503	-	-	2/4/4/4	-
2	GOL	B	503	-	-	0/4/4/4	-
3	9YW	A	507[A]	-	-	0/7/27/27	0/1/1/1
2	GOL	A	505	-	-	1/4/4/4	-
2	GOL	B	502	-	-	4/4/4/4	-
2	GOL	A	502	-	-	2/4/4/4	-
2	GOL	B	504	-	-	2/4/4/4	-
2	GOL	A	501	-	-	2/4/4/4	-
2	GOL	B	501	-	-	0/4/4/4	-
2	GOL	A	504	-	-	2/4/4/4	-
2	GOL	B	505	-	-	2/4/4/4	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	507[A]	9YW	C2-C3	-2.45	1.46	1.52
3	A	507[A]	9YW	O5-C1	2.00	1.47	1.41

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	508[B]	SER	OXT-C-O	-3.04	117.18	124.09
3	B	506	9YW	O1-C1-C2	2.82	112.70	108.30
4	A	508[B]	SER	OXT-C-CA	2.78	122.84	113.38
3	B	506	9YW	O5-C5-C4	2.55	114.32	109.69
3	A	507[A]	9YW	O5-C5-C4	2.37	113.99	109.69
3	B	506	9YW	O11-C10-C09	2.23	123.66	113.34

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	501	GOL	C1-C2-C3-O3
2	A	502	GOL	O1-C1-C2-C3
2	A	504	GOL	O1-C1-C2-C3
2	B	502	GOL	O1-C1-C2-C3
2	B	502	GOL	C1-C2-C3-O3

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Mol	Chain	Res	Type	Atoms
2	B	504	GOL	O1-C1-C2-C3
2	B	505	GOL	O1-C1-C2-C3
4	A	508[B]	SER	O-C-CA-CB
4	A	508[B]	SER	OXT-C-CA-CB
2	B	502	GOL	O1-C1-C2-O2
2	B	505	GOL	O1-C1-C2-O2
4	A	508[B]	SER	OXT-C-CA-N
2	A	506[B]	GOL	O1-C1-C2-C3
2	A	506[B]	GOL	O1-C1-C2-O2
2	B	504	GOL	O1-C1-C2-O2
2	A	501	GOL	O2-C2-C3-O3
2	A	502	GOL	O1-C1-C2-O2
2	A	504	GOL	O1-C1-C2-O2
4	A	508[B]	SER	O-C-CA-N
2	A	503	GOL	O1-C1-C2-O2
2	A	505	GOL	O2-C2-C3-O3
2	A	503	GOL	O1-C1-C2-C3
2	B	502	GOL	O2-C2-C3-O3

There are no ring outliers.

5 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	508[B]	SER	1	0
3	B	506	9YW	1	0
2	A	506[B]	GOL	1	0
2	B	503	GOL	1	0
2	A	504	GOL	1	0

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	445/448 (99%)	0.21	21 (4%)	31	32	29, 44, 78, 122	0
1	B	445/448 (99%)	0.64	53 (11%)	4	4	31, 48, 127, 155	7 (1%)
All	All	890/896 (99%)	0.42	74 (8%)	11	11	29, 46, 93, 155	7 (0%)

All (74) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	205	ALA	10.4
1	B	211	THR	9.9
1	B	202	TYR	9.9
1	B	210	ILE	8.7
1	B	216	ARG	8.3
1	B	217	PRO	8.2
1	B	208	VAL	7.5
1	B	218	SER	7.2
1	B	212	ASP	6.7
1	B	213	PRO	6.6
1	B	198	LYS	6.5
1	B	221	GLU	6.0
1	B	200	PRO	6.0
1	B	214	SER	5.9
1	B	87	GLY	5.9
1	B	197	GLY	5.8
1	B	206	ASP	5.7
1	B	199	LEU	5.6
1	B	207	ASN	5.6
1	B	85	VAL	5.5
1	B	209	ILE	5.5
1	A	208	VAL	5.0
1	A	207	ASN	4.9
1	B	135	ARG	4.5

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Mol	Chain	Res	Type	RSRZ
1	A	203	GLN	4.5
1	B	83	ASN	4.4
1	A	205	ALA	4.3
1	B	201	GLU	4.3
1	B	2	PRO	4.0
1	B	219	ASP	4.0
1	A	84	GLY	3.8
1	B	84	GLY	3.7
1	A	85	VAL	3.7
1	A	86	ASP	3.6
1	A	211	THR	3.6
1	A	201	GLU	3.5
1	B	222	TYR	3.5
1	B	196	PRO	3.5
1	A	2	PRO	3.4
1	A	213	PRO	3.4
1	B	195	VAL	3.4
1	A	301	ARG	3.3
1	B	215	GLN	3.3
1	B	203	GLN	3.2
1	B	227	TRP	3.1
1	B	34	LEU	3.1
1	B	204	ARG	3.0
1	B	42	TRP	3.0
1	A	405[A]	ARG	3.0
1	B	4	ASP	2.9
1	B	220	GLY	2.9
1	A	202	TYR	2.7
1	B	368	ARG	2.7
1	B	5	PRO	2.7
1	B	139	ALA	2.7
1	A	300	GLN	2.7
1	B	405[A]	ARG	2.6
1	A	384	LEU	2.4
1	B	86	ASP	2.3
1	B	245	VAL	2.3
1	B	192	ALA	2.2
1	A	3	HIS	2.2
1	A	210	ILE	2.2
1	B	353	PRO	2.2
1	B	277[A]	HIS	2.1
1	A	87	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	209	ILE	2.1
1	B	223	ASP	2.1
1	B	72[A]	ARG	2.1
1	B	446[A]	GLY	2.1
1	A	135	ARG	2.1
1	B	387	LEU	2.0
1	B	3	HIS	2.0
1	B	136	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 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(Å^2)	Q<0.9
2	GOL	A	503	6/6	0.82	0.30	77,81,88,88	0
2	GOL	A	504	6/6	0.84	0.18	77,79,81,83	0
2	GOL	B	505	6/6	0.84	0.23	69,91,93,97	0
2	GOL	A	506[B]	6/6	0.87	0.17	39,41,46,50	6
2	GOL	B	504	6/6	0.89	0.14	77,81,82,86	0
2	GOL	A	502	6/6	0.89	0.18	84,89,89,91	0
3	9YW	A	507[A]	16/16	0.89	0.21	36,43,48,49	16
3	9YW	B	506	16/16	0.89	0.14	43,55,68,75	0
2	GOL	B	503	6/6	0.90	0.19	48,67,71,77	0
2	GOL	A	505	6/6	0.91	0.28	59,84,85,91	0
2	GOL	A	501	6/6	0.92	0.14	48,53,57,59	0
4	SER	A	508[B]	7/7	0.92	0.18	36,41,47,47	7
2	GOL	B	501	6/6	0.93	0.21	43,60,64,69	0
2	GOL	B	502	6/6	0.95	0.26	56,57,61,61	0

6.5 Other polymers (i)

There are no such residues in this entry.