WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 08:14 PM JST

PDB ID	:	9X1I / pdb_00009x1i
Title	:	Structure of endo-beta-N-acetylglucosaminidase HS
Authors	:	Kurauchi, I.; Okura, K.; Hosokawa, C.; Ito, K.; Miyahra, I.
Deposited on	:	2025-10-02
Resolution	:	1.81 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:

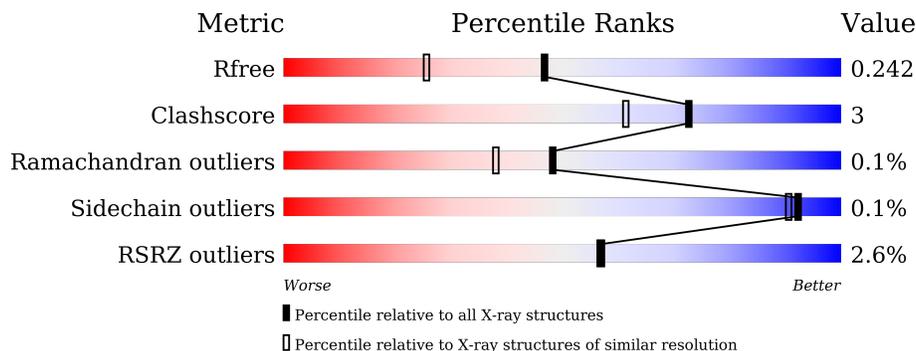|		
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48.1

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 1.81 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	Percentile Ranks	Value
Rfree		0.242
Clashscore		3
Ramachandran outliers		0.1%
Sidechain outliers		0.1%
RSRZ outliers		2.6%

Worse *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	164625	9242 (1.84-1.80)
Clashscore	180529	1080 (1.82-1.82)
Ramachandran outliers	177936	1073 (1.82-1.82)
Sidechain outliers	177891	1073 (1.82-1.82)
RSRZ outliers	164620	9241 (1.84-1.80)

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.

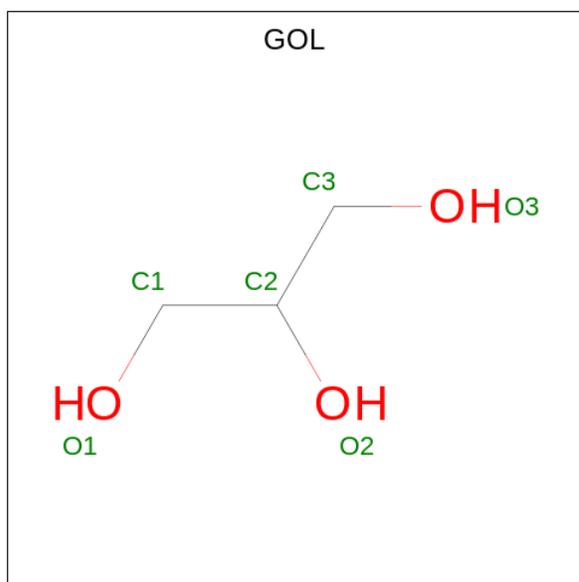| Mol	Chain	Length	Quality of chain
1	A	981	2% ▐ 93% 6% ·
1	B	981	3% ▐ 92% 7% ·

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 17463 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 Endo-beta-N-acetylglucosaminidase HS.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	972	Total	C	N	O	S	0	0	0
			7528	4720	1311	1473	24			
1	B	972	Total	C	N	O	S	0	0	0
			7516	4709	1306	1477	24			

- Molecule 2 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).

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

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

- Molecule 3 is SULFATE ION (CCD ID: SO4) (formula: O$_4$S).
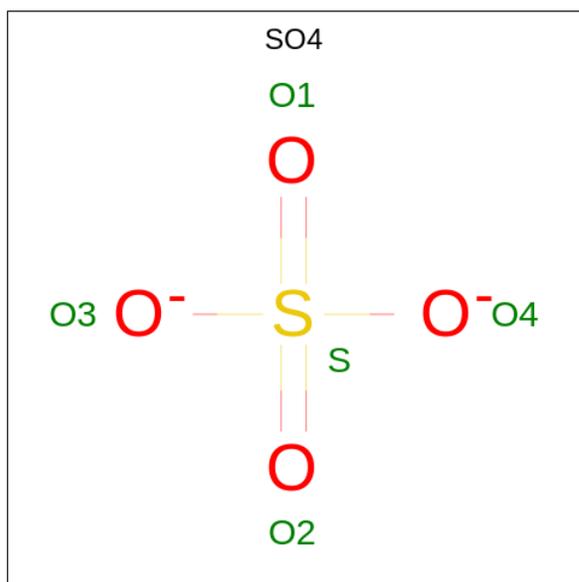
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total 5	O 4	S 1	0	0
3	B	1	Total 5	O 4	S 1	0	0

- Molecule 4 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total 1	K 1	0	0
4	B	1	Total 1	K 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	1271	Total 1271	O 1271	0	0
5	B	1106	Total 1106	O 1106	0	0

# 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: Endo-beta-N-acetylglucosaminidase HS

Chain A:

- Molecule 1: Endo-beta-N-acetylglucosaminidase HS

Chain B:
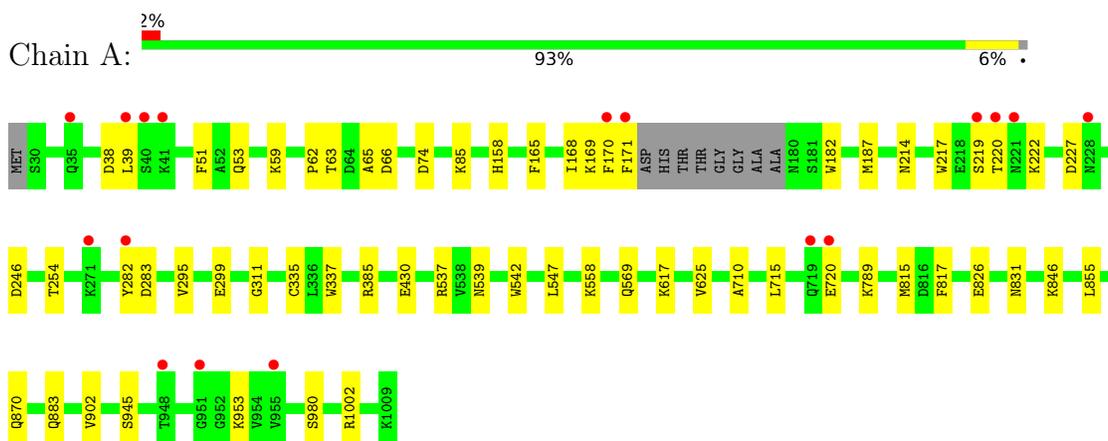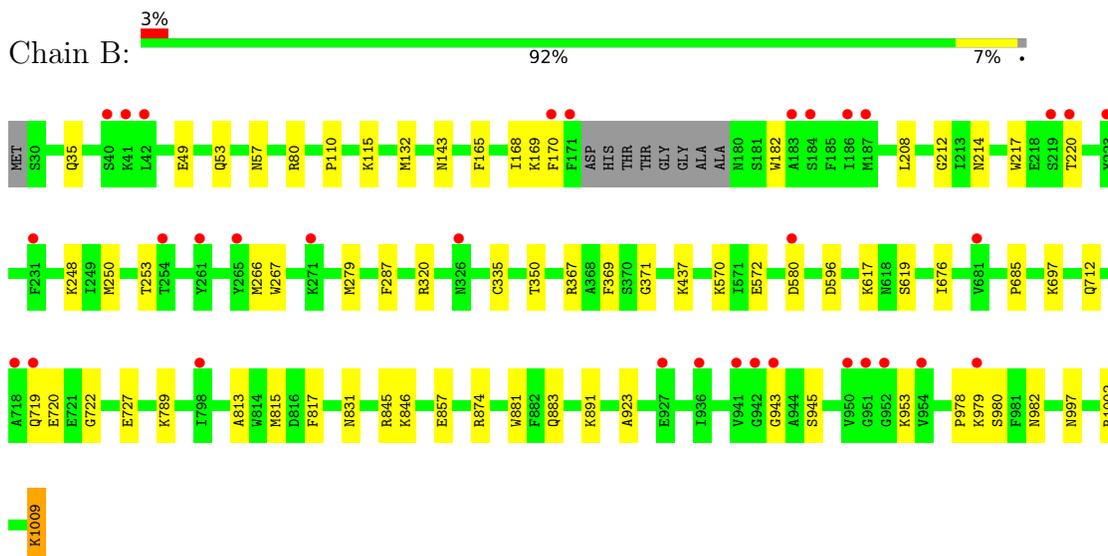
4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	71.93Å 135.57Å 238.87Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.05 – 1.81 39.05 – 1.81	Depositor EDS
% Data completeness (in resolution range)	99.8 (39.05-1.81) 99.8 (39.05-1.81)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.49 (at 1.81Å)	Xtriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, R_{free}	0.196 , 0.242 0.196 , 0.242	Depositor DCC
R_{free} test set	10611 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å^2)	20.7	Xtriage
Anisotropy	0.855	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 44.6	EDS
L-test for twinning[2]	$< \lvert L \rvert > = 0.46, < L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	17463	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 41.66 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 2.2841e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< \lvert L \rvert >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.30	0/7692	0.54	0/10439
1	B	0.28	0/7680	0.51	0/10422
All	All	0.29	0/15372	0.53	0/20861

There are no bond length outliers.

There are no bond angle outliers.

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	7528	0	7171	46	0
1	B	7516	0	7134	47	0
2	A	18	0	24	2	0
2	B	12	0	16	1	0
3	A	5	0	0	0	0
3	B	5	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
5	A	1271	0	0	11	0
5	B	1106	0	0	6	1
All	All	17463	0	14345	92	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 (92) 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:385:ARG:NH2	5:A:1201:HOH:O	2.05	0.87
1:A:846:LYS:NZ	5:A:1202:HOH:O	2.07	0.79
1:A:870:GLN:NE2	5:A:1204:HOH:O	2.17	0.75
1:A:295:VAL:O	1:A:299:GLU:HG3	1.88	0.73
1:A:171:PHE:O	5:A:1203:HOH:O	2.13	0.66
1:B:287:PHE:O	1:B:320:ARG:NH2	2.28	0.66
1:B:720:GLU:HG2	1:B:722:GLY:H	1.60	0.65
1:A:220:THR:OG1	1:A:222:LYS:HG3	1.98	0.63
1:A:815:MET:HG2	1:A:817:PHE:CE1	2.33	0.63
1:B:570:LYS:HG2	1:B:572:GLU:HG3	1.80	0.62
1:B:132:MET:HG3	1:B:369:PHE:CD1	2.36	0.60
1:A:542:TRP:HE1	2:A:1103:GOL:H31	1.68	0.58
1:B:168:ILE:HG22	1:B:214:ASN:HB3	1.86	0.58
1:A:311:GLY:HA2	1:A:335:CYS:HB3	1.86	0.58
1:A:385:ARG:NH1	5:A:1220:HOH:O	2.35	0.57
1:B:617:LYS:HE3	1:B:712:GLN:O	2.07	0.55
1:B:720:GLU:HG2	1:B:722:GLY:N	2.21	0.54
1:A:953:LYS:HE3	1:A:980:SER:OG	2.08	0.54
1:B:115:LYS:NZ	5:B:1224:HOH:O	2.41	0.54
1:B:169:LYS:HE3	1:B:182:TRP:CE3	2.43	0.54
1:A:169:LYS:HE2	1:A:182:TRP:CE3	2.44	0.53
1:A:59:LYS:NZ	5:A:1234:HOH:O	2.42	0.53
1:A:617:LYS:HE3	1:A:715:LEU:O	2.09	0.53
1:B:279:MET:HE3	1:B:335:CYS:SG	2.49	0.52
1:A:219:SER:HA	1:A:254:THR:HG23	1.90	0.52
1:B:943:GLY:O	1:B:997:ASN:ND2	2.43	0.52
1:A:219:SER:HA	1:A:254:THR:CG2	2.40	0.52
1:B:217:TRP:O	1:B:220:THR:HG22	2.10	0.51
1:A:547:LEU:O	1:A:558:LYS:HE3	2.11	0.51
1:B:80:ARG:HG2	1:B:208:LEU:HA	1.93	0.51
1:A:539:ASN:ND2	1:A:569:GLN:HG2	2.24	0.51
1:A:945:SER:H	1:A:1002:ARG:NH1	2.08	0.51
1:B:719:GLN:O	1:B:720:GLU:HB3	2.10	0.51
1:B:789:LYS:HG2	1:B:857:GLU:HG2	1.93	0.50
1:A:63:THR:HG22	1:A:66:ASP:OD2	2.13	0.49
1:A:168:ILE:HD11	1:A:170:PHE:CE2	2.47	0.49
1:A:53:GLN:NE2	5:A:1246:HOH:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:437:LYS:HD3	1:B:923:ALA:HA	1.94	0.48
1:B:815:MET:HE2	1:B:817:PHE:HE1	1.78	0.48
1:B:953:LYS:HE2	1:B:980:SER:OG	2.14	0.48
1:B:945:SER:H	1:B:1002:ARG:CZ	2.26	0.48
1:B:35:GLN:O	1:B:35:GLN:HG2	2.15	0.47
1:A:282:TYR:OH	1:A:337:TRP:HB3	2.15	0.47
1:B:979:LYS:N	1:B:979:LYS:HD3	2.29	0.47
1:B:720:GLU:HB2	5:B:1981:HOH:O	2.14	0.47
1:A:217:TRP:O	1:A:220:THR:HG22	2.14	0.47
1:B:883:GLN:HG2	5:B:1279:HOH:O	2.14	0.47
1:A:815:MET:HE3	1:A:902:VAL:HG11	1.97	0.47
1:A:85:LYS:HE3	1:A:246:ASP:CG	2.40	0.46
1:A:220:THR:OG1	1:A:222:LYS:HE2	2.16	0.46
1:A:430:GLU:HG3	5:A:2152:HOH:O	2.15	0.46
1:A:165:PHE:CG	1:A:214:ASN:HB2	2.50	0.46
1:B:350:THR:HG23	2:B:1101:GOL:O1	2.15	0.46
1:A:63:THR:HG23	1:A:66:ASP:H	1.81	0.46
1:A:168:ILE:HD11	1:A:170:PHE:CZ	2.51	0.46
1:B:815:MET:HE2	1:B:817:PHE:CE1	2.51	0.46
1:A:59:LYS:NZ	1:B:57:ASN:HD22	2.14	0.46
1:B:846:LYS:HD2	1:B:846:LYS:HA	1.79	0.46
1:B:253:THR:OG1	1:B:266:MET:HE1	2.16	0.45
1:A:187:MET:SD	1:A:227:ASP:HB3	2.57	0.45
1:A:826:GLU:OE1	1:A:831:ASN:ND2	2.30	0.45
1:B:596:ASP:O	1:B:697:LYS:HE2	2.17	0.45
1:A:74:ASP:HA	1:A:625:VAL:HG11	1.99	0.45
1:A:710:ALA:HB3	1:A:715:LEU:HD11	1.98	0.45
1:B:168:ILE:CD1	1:B:170:PHE:HD1	2.30	0.45
1:B:727:GLU:O	1:B:891:LYS:HA	2.17	0.44
1:A:789:LYS:HB3	1:A:855:LEU:HD22	1.99	0.44
1:A:883:GLN:HG2	5:A:1995:HOH:O	2.15	0.44
1:B:49:GLU:O	1:B:53:GLN:HG3	2.18	0.44
1:B:165:PHE:CG	1:B:214:ASN:HB2	2.52	0.44
1:A:537:ARG:HH11	2:A:1103:GOL:H2	1.83	0.43
1:B:580:ASP:OD2	5:B:1201:HOH:O	2.21	0.43
1:A:283:ASP:OD2	5:A:1205:HOH:O	2.20	0.43
1:A:85:LYS:HB2	1:A:158:HIS:CD2	2.53	0.43
1:B:845:ARG:HG2	1:B:881:TRP:CD1	2.54	0.42
1:B:813:ALA:HA	1:B:874:ARG:O	2.19	0.42
1:B:212:GLY:HA3	1:B:248:LYS:O	2.19	0.42
1:A:815:MET:CE	1:A:902:VAL:HG11	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:110:PRO:HB3	1:B:143:ASN:HB3	2.02	0.42
1:A:385:ARG:NH2	5:A:1266:HOH:O	2.49	0.41
1:B:953:LYS:HE3	1:B:982:ASN:OD1	2.20	0.41
1:B:367:ARG:HA	1:B:371:GLY:O	2.20	0.41
1:A:63:THR:HG23	1:A:65:ALA:N	2.36	0.41
1:B:132:MET:HG3	1:B:369:PHE:CG	2.55	0.41
1:A:38:ASP:O	1:A:39:LEU:HD23	2.19	0.41
1:B:250:MET:HE2	1:B:250:MET:HB2	1.92	0.41
1:B:619:SER:HA	1:B:676:ILE:O	2.21	0.41
1:B:831:ASN:OD1	5:B:1202:HOH:O	2.21	0.41
1:A:51:PHE:CE2	1:A:62:PRO:HD3	2.55	0.41
1:B:978:PRO:C	1:B:979:LYS:HD3	2.45	0.41
1:B:1009:LYS:N	1:B:1009:LYS:HD3	2.36	0.41
1:B:685:PRO:HD2	5:B:1419:HOH:O	2.22	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)
5:B:2047:HOH:O	5:B:2211:HOH:O[1_655]	2.19	0.01

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	968/981 (99%)	940 (97%)	27 (3%)	1 (0%)	48	38
1	B	968/981 (99%)	938 (97%)	29 (3%)	1 (0%)	48	38
All	All	1936/1962 (99%)	1878 (97%)	56 (3%)	2 (0%)	48	38

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	720	GLU
1	B	267	TRP

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	787/815 (97%)	787 (100%)	0	100	100
1	B	784/815 (96%)	783 (100%)	1 (0%)	92	90
All	All	1571/1630 (96%)	1570 (100%)	1 (0%)	92	90

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	1009	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	392	GLN
1	A	494	ASN
1	A	791	GLN
1	A	803	ASN
1	A	851	GLN
1	A	870	GLN
1	A	970	GLN
1	B	57	ASN
1	B	284	ASN
1	B	657	ASN
1	B	703	GLN
1	B	822	GLN
1	B	940	ASN
1	B	996	GLN

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 ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 9 ligands modelled in this entry, 2 are monoatomic - leaving 7 for Mogul analysis.

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	SO4	A	1104	-	4,4,4	0.21	0	6,6,6	0.30	0
2	GOL	A	1103	-	5,5,5	0.89	0	5,5,5	1.29	1 (20%)
2	GOL	B	1101	-	5,5,5	0.80	0	5,5,5	0.99	0
2	GOL	A	1101	-	5,5,5	0.98	0	5,5,5	0.95	0
3	SO4	B	1103	-	4,4,4	0.24	0	6,6,6	0.23	0
2	GOL	A	1102	-	5,5,5	1.11	0	5,5,5	0.96	0
2	GOL	B	1102	-	5,5,5	1.10	0	5,5,5	1.04	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	GOL	A	1103	-	-	2/4/4/4	-
2	GOL	B	1101	-	-	1/4/4/4	-
2	GOL	A	1101	-	-	0/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GOL	A	1102	-	-	1/4/4/4	-
2	GOL	B	1102	-	-	2/4/4/4	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	1103	GOL	C3-C2-C1	-2.16	103.32	111.70

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1103	GOL	C1-C2-C3-O3
2	A	1103	GOL	O2-C2-C3-O3
2	A	1102	GOL	C1-C2-C3-O3
2	B	1102	GOL	C1-C2-C3-O3
2	B	1101	GOL	O1-C1-C2-O2
2	B	1102	GOL	O2-C2-C3-O3

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1103	GOL	2	0
2	B	1101	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.

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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	972/981 (99%)	0.18	17 (1%)	69	69	15, 23, 38, 57	0
1	B	972/981 (99%)	0.41	33 (3%)	48	48	17, 27, 45, 58	0
All	All	1944/1962 (99%)	0.30	50 (2%)	57	57	15, 25, 42, 58	0

All (50) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	261	TYR	4.2
1	A	170	PHE	4.1
1	A	171	PHE	3.8
1	A	282	TYR	3.5
1	B	941	VAL	3.5
1	B	171	PHE	3.4
1	B	943	GLY	3.3
1	B	254	THR	3.1
1	B	798	ILE	3.1
1	B	718	ALA	3.1
1	B	186	ILE	3.1
1	B	220	THR	3.1
1	A	948	THR	3.0
1	A	220	THR	3.0
1	B	231	PHE	2.9
1	B	927	GLU	2.8
1	B	950	VAL	2.8
1	B	942	GLY	2.7
1	B	40	SER	2.7
1	B	187	MET	2.7
1	B	170	PHE	2.7
1	B	41	LYS	2.6
1	B	265	TYR	2.6
1	A	720	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	42	LEU	2.5
1	A	228	ASN	2.5
1	B	219	SER	2.4
1	A	40	SER	2.4
1	B	183	ALA	2.4
1	B	681	VAL	2.3
1	A	719	GLN	2.3
1	A	955	VAL	2.3
1	A	219	SER	2.3
1	B	951	GLY	2.2
1	A	35	GLN	2.2
1	B	719	GLN	2.2
1	B	979	LYS	2.2
1	B	271	LYS	2.2
1	A	951	GLY	2.2
1	A	271	LYS	2.1
1	A	221	ASN	2.1
1	B	580	ASP	2.1
1	A	41	LYS	2.1
1	B	326	ASN	2.1
1	B	952	GLY	2.1
1	B	954	VAL	2.1
1	A	39	LEU	2.1
1	B	936	ILE	2.1
1	B	184	SER	2.1
1	B	223	TYR	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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	1103	6/6	0.84	0.13	31,35,39,39	0
3	SO4	B	1103	5/5	0.85	0.17	29,36,38,41	0
2	GOL	A	1102	6/6	0.87	0.11	21,24,26,31	0
2	GOL	B	1102	6/6	0.88	0.11	27,30,31,35	0
2	GOL	A	1101	6/6	0.90	0.09	30,33,35,39	0
2	GOL	B	1101	6/6	0.95	0.07	28,30,33,36	0
3	SO4	A	1104	5/5	0.97	0.09	27,28,31,33	0
4	K	A	1105	1/1	0.98	0.05	19,19,19,19	0
4	K	B	1104	1/1	0.98	0.05	18,18,18,18	0

6.5 Other polymers ⓘ

There are no such residues in this entry.