Full wwPDB X-ray Structure Validation Report ⓘ

Nov 14, 2026 – 09:05 am GMT

PDB ID	:	31BL / pdb_000031bl
Title	:	Crystal structure of inactive ThomasA-H539A/E540A in complex with IgA1 Fab and hinge region (PVPSTPPT residues)
Authors	:	Martinez Gascuena, A.; Marquez-Monino, M.A.; Castillo Calvente, C.; Hernandez-Aleman, H.; Trastoy, B.
Deposited on	:	2026-05-22
Resolution	:	2.30 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:

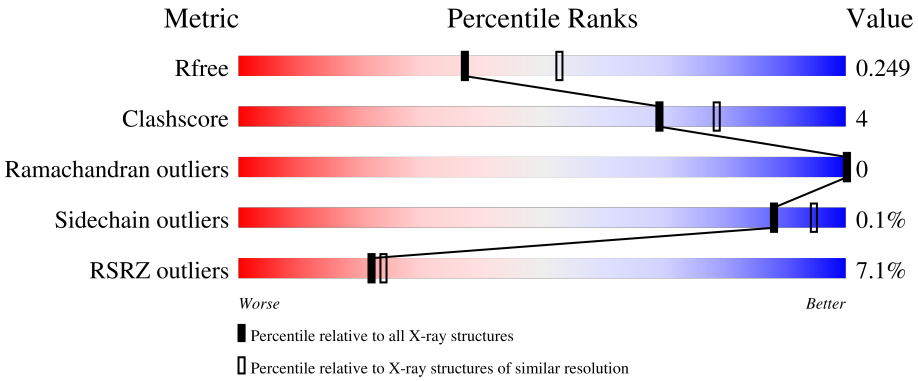
MolProbity	:	4-5-2 with Phenix2.2
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.2
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

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 2.30 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	6319 (2.30-2.30)
Clashscore	190562	6919 (2.30-2.30)
Ramachandran outliers	187476	6854 (2.30-2.30)
Sidechain outliers	187428	6854 (2.30-2.30)
RSRZ outliers	180081	6325 (2.30-2.30)

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 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	560	8% 90% 9% .
2	H	240	6% 88% 7% 5%
3	L	213	5% 93% 7%

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 8064 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 IgA protease.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	554	4456	2823	735	881	17	0	4	0

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	319	GLY	-	expression tag	UNP Q9AES2
A	320	GLY	-	expression tag	UNP Q9AES2
A	321	SER	-	expression tag	UNP Q9AES2
A	322	GLY	-	expression tag	UNP Q9AES2
A	539	ALA	HIS	engineered mutation	UNP Q9AES2
A	540	ALA	GLU	engineered mutation	UNP Q9AES2

- Molecule 2 is a protein called IgA1 Heavy Chain Fab.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	H	227	1711	1086	283	334	8	0	0	0

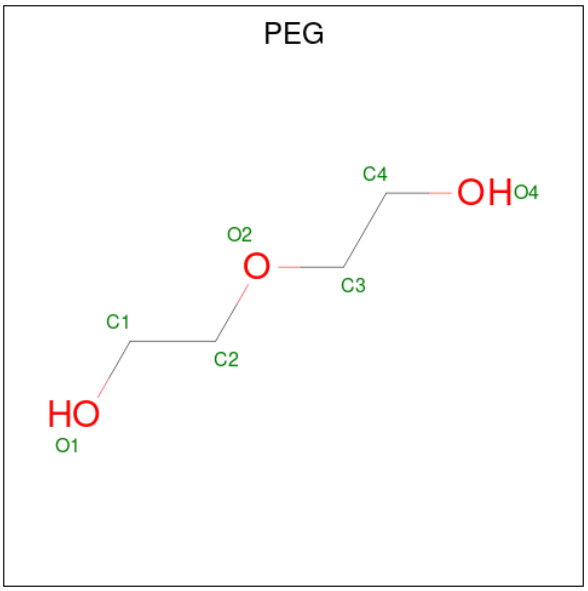
- Molecule 3 is a protein called IgA1 Light Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	L	213	1636	1016	276	337	7	0	1	0

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

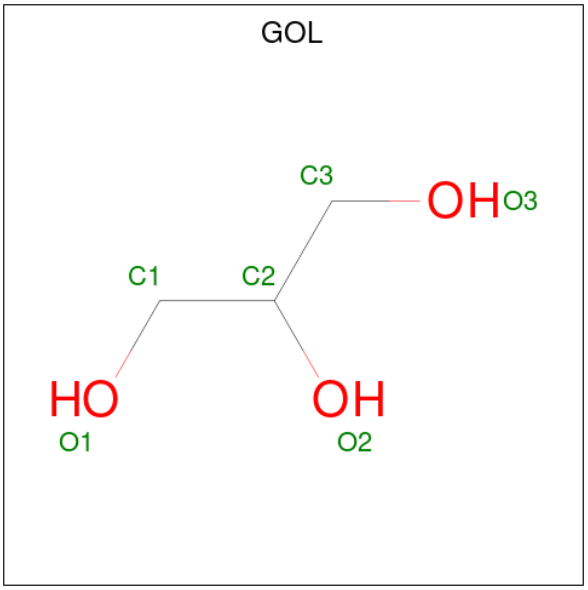
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
4	A	1	1	1	0	0

- Molecule 5 is DI(HYDROXYETHYL)ETHER (CCD ID: PEG) (formula: $C_4H_{10}O_3$).



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

- Molecule 6 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).



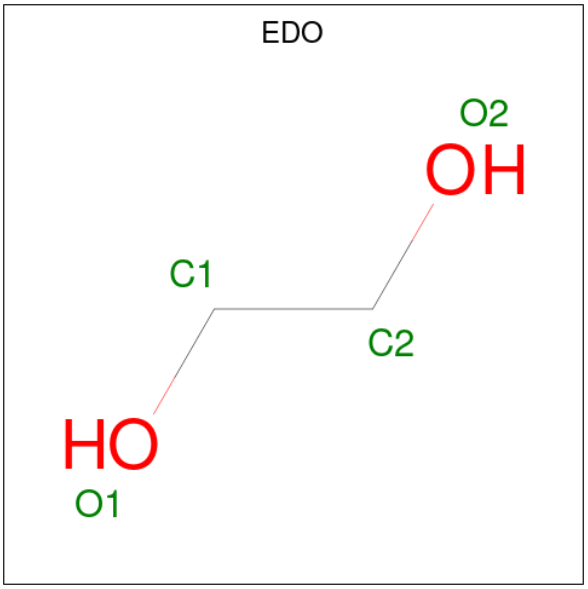
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total C O 6 3 3	0	0
6	A	1	Total C O 6 3 3	0	0
6	H	1	Total C O 6 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	H	1	Total C O 6 3 3	0	0
6	H	1	Total C O 6 3 3	0	0
6	L	1	Total C O 6 3 3	0	0
6	L	1	Total C O 6 3 3	0	0
6	L	1	Total C O 6 3 3	0	0

- Molecule 7 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	1	Total C O 4 2 2	0	0
7	A	1	Total C O 4 2 2	0	0
7	A	1	Total C O 4 2 2	0	0
7	A	1	Total C O 4 2 2	0	0
7	L	1	Total C O 4 2 2	0	0
7	L	1	Total C O 4 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	L	1	Total C O 4 2 2	0	0

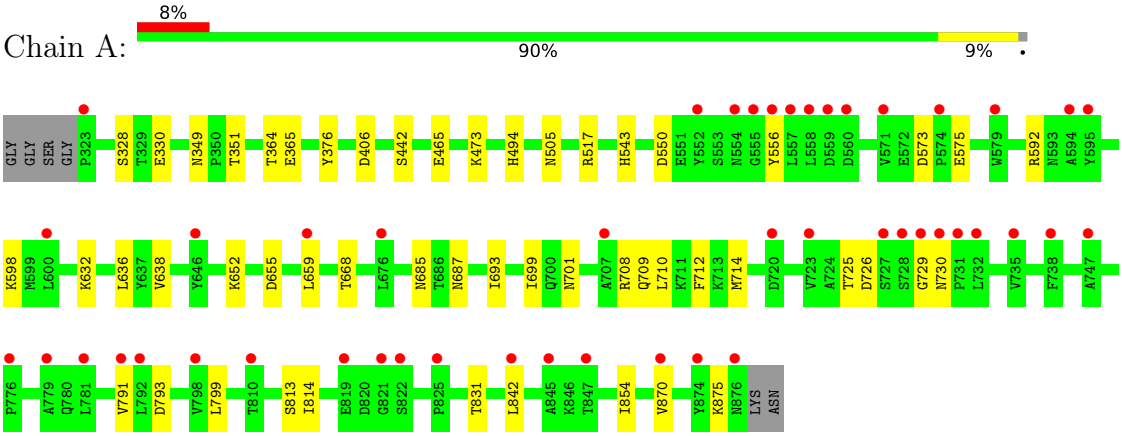
- Molecule 8 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	82	Total O 82 82	0	0
8	H	49	Total O 49 49	0	0
8	L	46	Total O 46 46	0	0

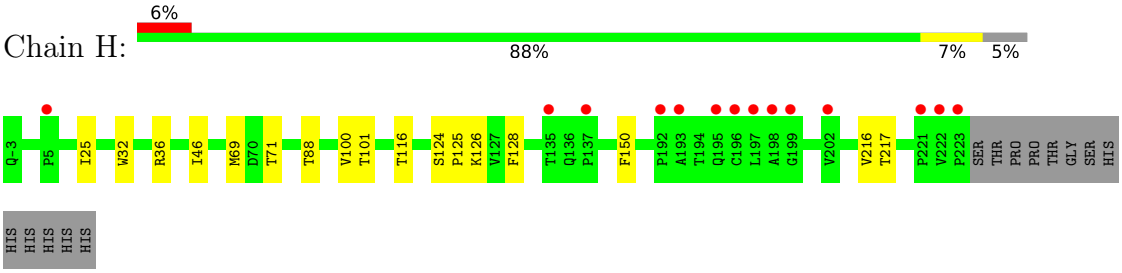
3 Residue-property plots (i)

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.

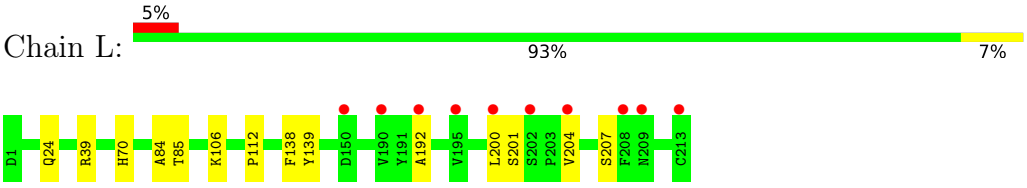
• Molecule 1: IgA protease



• Molecule 2: IgA1 Heavy Chain Fab



• Molecule 3: IgA1 Light Chain



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	253.87Å 53.70Å 79.23Å 90.00° 92.47° 90.00°	Depositor
Resolution (Å)	43.59 – 2.30 43.59 – 2.30	Depositor EDS
% Data completeness (in resolution range)	95.6 (43.59-2.30) 95.7 (43.59-2.30)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.42 (at 2.29Å)	Xtriage
Refinement program	PHENIX 1.21.2_5419	Depositor
R, R_{free}	0.223 , 0.249 0.222 , 0.249	Depositor DCC
R_{free} test set	2297 reflections (4.79%)	wwPDB-VP
Wilson B-factor (Å^2)	43.0	Xtriage
Anisotropy	0.378	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 37.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.35$	Xtriage
Estimated twinning fraction	0.012 for -h,-k,l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	8064	wwPDB-VP
Average B, all atoms (Å^2)	53.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.57% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PEG, EDO, GOL, ZN

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	0.22	0/4577	0.46	0/6214
2	H	0.22	0/1761	0.48	0/2423
3	L	0.24	0/1670	0.51	0/2269
All	All	0.22	0/8008	0.47	0/10906

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	4456	0	4226	35	0
2	H	1711	0	1662	12	0
3	L	1636	0	1552	7	0
4	A	1	0	0	0	0
5	A	7	0	10	1	0
6	A	12	0	16	4	0
6	H	18	0	24	1	0
6	L	18	0	24	1	0
7	A	16	0	24	4	0
7	L	12	0	18	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	A	82	0	0	2	0
8	H	49	0	0	0	0
8	L	46	0	0	0	0
All	All	8064	0	7556	54	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.

All (54) 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:517:ARG:HH21	7:A:908:EDO:H12	1.48	0.79
3:L:192:ALA:HB2	3:L:207:SER:OG	1.92	0.69
3:L:39:ARG:HD2	3:L:84:ALA:HB2	1.74	0.68
1:A:693:ILE:HD12	1:A:714:MET:HE2	1.78	0.65
1:A:556:TYR:HB3	1:A:598:LYS:HB3	1.80	0.63
6:A:903:GOL:H12	2:H:217:THR:H	1.64	0.62
2:H:25:ILE:HD11	2:H:71:THR:HA	1.81	0.61
1:A:854:ILE:HD11	1:A:875:LYS:HD3	1.83	0.60
1:A:638:VAL:HG22	1:A:699:ILE:HD12	1.85	0.59
1:A:712:PHE:CE2	1:A:791:VAL:HG13	2.38	0.59
3:L:200:LEU:HD13	3:L:204:VAL:HG22	1.85	0.58
1:A:592:ARG:HH11	1:A:659:LEU:HB2	1.69	0.56
1:A:592:ARG:NH1	1:A:659:LEU:HB2	2.21	0.55
1:A:365:GLU:HA	1:A:632:LYS:HE3	1.89	0.54
2:H:100:VAL:HG12	2:H:101:THR:HG23	1.89	0.54
1:A:636:LEU:HD21	1:A:710:LEU:HD11	1.88	0.53
1:A:406:ASP:OD1	1:A:842:LEU:HD21	2.08	0.53
2:H:125:PRO:HB3	2:H:150:PHE:HB3	1.89	0.53
1:A:465:GLU:OE1	1:A:473:LYS:HD3	2.09	0.52
1:A:813:SER:HB2	1:A:831:THR:HG22	1.92	0.52
1:A:364:THR:HA	6:A:907:GOL:H32	1.91	0.52
1:A:710:LEU:HD22	1:A:799:LEU:HD11	1.93	0.51
1:A:726:ASP:OD1	1:A:730:ASN:HB2	2.10	0.50
2:H:88:THR:HG23	2:H:116:THR:HA	1.92	0.50
1:A:328:SER:OG	1:A:330:GLU:HG3	2.11	0.49
1:A:685:ASN:ND2	1:A:687:ASN:H	2.10	0.49
1:A:442:SER:HA	6:A:903:GOL:H31	1.94	0.49
1:A:349[A]:ASN:HB2	7:A:906:EDO:H21	1.96	0.48
2:H:25:ILE:HD12	2:H:69:MET:HG2	1.96	0.47
1:A:517:ARG:NH2	7:A:908:EDO:H12	2.24	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:24:GLN:OE1	3:L:70:HIS:HD2	1.98	0.47
1:A:349[B]:ASN:HB3	7:A:906:EDO:H21	1.97	0.47
3:L:85:THR:HG21	6:L:304:GOL:H31	1.98	0.46
1:A:708:ARG:C	1:A:709:GLN:HG3	2.41	0.46
1:A:725:THR:HB	1:A:729:GLY:HA2	1.97	0.45
2:H:25:ILE:HD12	2:H:69:MET:CG	2.46	0.45
3:L:112:PRO:HB3	3:L:138:PHE:HB3	1.99	0.45
1:A:814:ILE:HD13	1:A:870:VAL:HB	1.99	0.45
1:A:668:THR:HG21	8:A:1060:HOH:O	2.17	0.45
1:A:793:ASP:HB3	1:A:799:LEU:HD21	1.98	0.44
1:A:636:LEU:HD12	1:A:701:ASN:HA	1.99	0.44
2:H:124:SER:HB3	6:H:301:GOL:H12	1.99	0.44
1:A:573:ASP:OD1	1:A:575:GLU:HG3	2.17	0.44
2:H:36:ARG:HB3	2:H:46:ILE:HD11	2.01	0.43
2:H:25:ILE:HG22	2:H:32:TRP:CE2	2.52	0.43
2:H:126:LYS:HE3	2:H:128:PHE:CZ	2.54	0.43
1:A:543:HIS:NE2	1:A:550:ASP:OD1	2.52	0.42
1:A:351:THR:H	5:A:902:PEG:H31	1.84	0.42
1:A:376:TYR:CZ	1:A:505:ASN:HB2	2.55	0.42
1:A:598:LYS:HA	1:A:598:LYS:HD3	1.73	0.42
3:L:106:LYS:HA	3:L:139:TYR:OH	2.21	0.41
1:A:652:LYS:HZ2	1:A:655:ASP:CG	2.28	0.41
6:A:903:GOL:H2	2:H:216:VAL:HG13	2.03	0.41
1:A:494:HIS:HD2	8:A:1021:HOH:O	2.04	0.40

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	556/560 (99%)	528 (95%)	28 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	H	225/240 (94%)	214 (95%)	11 (5%)	0	100	100
3	L	212/213 (100%)	205 (97%)	7 (3%)	0	100	100
All	All	993/1013 (98%)	947 (95%)	46 (5%)	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	493/497 (99%)	493 (100%)	0	100	100
2	H	195/208 (94%)	195 (100%)	0	100	100
3	L	185/187 (99%)	184 (100%)	1 (0%)	81	90
All	All	873/892 (98%)	872 (100%)	1 (0%)	88	95

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

Mol	Chain	Res	Type
3	L	201	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	670	ASN
1	A	685	ASN
2	H	-1	GLN
3	L	70	HIS

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 17 ligands modelled in this entry, 1 is monoatomic - leaving 16 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	$\#\|Z\| > 2$
6	GOL	H	303	-	5,5,5	0.38	0	5,5,5	0.42	0
6	GOL	H	302	-	5,5,5	0.38	0	5,5,5	0.41	0
6	GOL	H	301	-	5,5,5	0.36	0	5,5,5	0.48	0
5	PEG	A	902	-	6,6,6	0.24	0	5,5,5	0.26	0
7	EDO	A	904	-	3,3,3	0.27	0	2,2,2	0.33	0
6	GOL	A	907	-	5,5,5	0.31	0	5,5,5	0.39	0
7	EDO	A	906	-	3,3,3	0.27	0	2,2,2	0.33	0
6	GOL	A	903	-	5,5,5	0.38	0	5,5,5	0.36	0
6	GOL	L	304	-	5,5,5	0.30	0	5,5,5	0.29	0
6	GOL	L	303	-	5,5,5	0.28	0	5,5,5	0.42	0
7	EDO	A	905	-	3,3,3	0.27	0	2,2,2	0.30	0
7	EDO	L	305	-	3,3,3	0.26	0	2,2,2	0.37	0
7	EDO	L	301	-	3,3,3	0.27	0	2,2,2	0.30	0
6	GOL	L	302	-	5,5,5	0.31	0	5,5,5	0.37	0
7	EDO	L	306	-	3,3,3	0.27	0	2,2,2	0.28	0
7	EDO	A	908	-	3,3,3	0.26	0	2,2,2	0.27	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
6	GOL	H	303	-	-	0/4/4/4	-
6	GOL	H	302	-	-	0/4/4/4	-
6	GOL	H	301	-	-	1/4/4/4	-
5	PEG	A	902	-	-	1/4/4/4	-
7	EDO	A	904	-	-	1/1/1/1	-
6	GOL	A	907	-	-	0/4/4/4	-
7	EDO	A	906	-	-	1/1/1/1	-
6	GOL	A	903	-	-	0/4/4/4	-
6	GOL	L	304	-	-	0/4/4/4	-
6	GOL	L	303	-	-	0/4/4/4	-
7	EDO	A	905	-	-	1/1/1/1	-
7	EDO	L	305	-	-	1/1/1/1	-
7	EDO	L	301	-	-	0/1/1/1	-
6	GOL	L	302	-	-	0/4/4/4	-
7	EDO	L	306	-	-	0/1/1/1	-
7	EDO	A	908	-	-	1/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	L	305	EDO	O1-C1-C2-O2
5	A	902	PEG	C4-C3-O2-C2
7	A	906	EDO	O1-C1-C2-O2
7	A	905	EDO	O1-C1-C2-O2
6	H	301	GOL	C1-C2-C3-O3
7	A	904	EDO	O1-C1-C2-O2
7	A	908	EDO	O1-C1-C2-O2

There are no ring outliers.

7 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	H	301	GOL	1	0
5	A	902	PEG	1	0
6	A	907	GOL	1	0
7	A	906	EDO	2	0
6	A	903	GOL	3	0
6	L	304	GOL	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	A	908	EDO	2	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

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, 95^{th} 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	554/560 (98%)	0.73	47 (8%)	16	18	20, 58, 83, 99	4 (0%)
2	H	227/240 (94%)	0.45	14 (6%)	26	28	33, 44, 72, 90	0
3	L	213/213 (100%)	0.51	10 (4%)	36	38	16, 45, 76, 96	1 (0%)
All	All	994/1013 (98%)	0.62	71 (7%)	22	24	16, 50, 81, 99	5 (0%)

All (71) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	H	198	ALA	3.8
2	H	197	LEU	3.5
1	A	323	PRO	3.4
2	H	135	THR	3.4
2	H	223	PRO	3.4
2	H	222	VAL	3.2
3	L	213	CYS	3.1
3	L	192	ALA	3.1
1	A	847	THR	3.0
2	H	199	GLY	3.0
1	A	732	LEU	3.0
1	A	781	LEU	3.0
1	A	729	GLY	3.0
1	A	747	ALA	2.9
1	A	556	TYR	2.9
3	L	202	SER	2.8
1	A	558	LEU	2.8
1	A	554	ASN	2.7
1	A	552	TYR	2.7
3	L	200	LEU	2.7
1	A	825	PRO	2.6
1	A	707	ALA	2.6
1	A	791	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	798	VAL	2.5
1	A	822	SER	2.5
1	A	595	TYR	2.5
2	H	193	ALA	2.5
1	A	821	GLY	2.5
1	A	779	ALA	2.4
1	A	723	VAL	2.4
1	A	731	PRO	2.4
2	H	137	PRO	2.4
3	L	204	VAL	2.4
1	A	728	SER	2.3
2	H	195	GLN	2.3
1	A	730	ASN	2.3
1	A	555	GLY	2.3
1	A	810	THR	2.3
1	A	792	LEU	2.3
1	A	720	ASP	2.3
1	A	574	PRO	2.3
1	A	579	TRP	2.3
2	H	221	PRO	2.3
1	A	819	GLU	2.3
1	A	738	PHE	2.2
3	L	208	PHE	2.2
3	L	150	ASP	2.2
1	A	776	PRO	2.2
1	A	646	TYR	2.2
1	A	600	LEU	2.2
1	A	676	LEU	2.2
1	A	571	VAL	2.2
1	A	594	ALA	2.2
1	A	557	LEU	2.1
1	A	560	ASP	2.1
3	L	195	VAL	2.1
2	H	192	PRO	2.1
2	H	196	CYS	2.1
1	A	727	SER	2.1
3	L	190	VAL	2.1
1	A	659	LEU	2.1
1	A	870	VAL	2.1
2	H	202	VAL	2.1
1	A	845	ALA	2.1
1	A	874	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	876	ASN	2.0
3	L	209	ASN	2.0
1	A	735	VAL	2.0
1	A	559	ASP	2.0
1	A	842	LEU	2.0
2	H	5	PRO	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 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, 95^{th} 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
7	EDO	A	906	4/4	0.72	0.18	41,48,52,53	0
7	EDO	L	306	4/4	0.73	0.19	56,57,59,61	0
6	GOL	L	303	6/6	0.74	0.19	37,48,51,55	0
7	EDO	A	908	4/4	0.74	0.18	52,57,59,63	0
6	GOL	L	304	6/6	0.74	0.18	46,52,56,63	0
7	EDO	L	301	4/4	0.75	0.20	51,52,53,56	0
6	GOL	A	907	6/6	0.76	0.17	53,64,66,67	0
5	PEG	A	902	7/7	0.78	0.18	46,53,56,59	0
7	EDO	L	305	4/4	0.78	0.16	46,54,54,59	0
7	EDO	A	905	4/4	0.78	0.20	62,64,67,67	0
6	GOL	H	303	6/6	0.79	0.16	60,63,65,69	0
6	GOL	H	302	6/6	0.80	0.15	53,59,64,64	0
7	EDO	A	904	4/4	0.85	0.13	38,40,44,45	0
6	GOL	L	302	6/6	0.86	0.15	37,42,44,44	0
6	GOL	A	903	6/6	0.88	0.12	41,45,46,46	0
6	GOL	H	301	6/6	0.90	0.14	40,41,43,43	0
4	ZN	A	901	1/1	0.98	0.06	62,62,62,62	0

6.5 Other polymers (i)

There are no such residues in this entry.