WORLDWIDE PDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

Jun 16, 2024 – 07:34 AM EDT

PDB ID	:	4ZIQ
Title	:	Crystal structure of trypsin activated alpha-2-macroglobulin from Escherichia coli.
Authors	:	Garcia-Ferrer, I.; Arede, P.; Gomez-Blanco, J.; Luque, D.; Duquerroy, S.; Caston, J.R.; Goulas, T.; Gomis-Ruth, X.F.
Deposited on	:	2015-04-28
Resolution	:	2.55 Å(reported)

The following versions of software and data (see references (i)) were used in the production of this report:

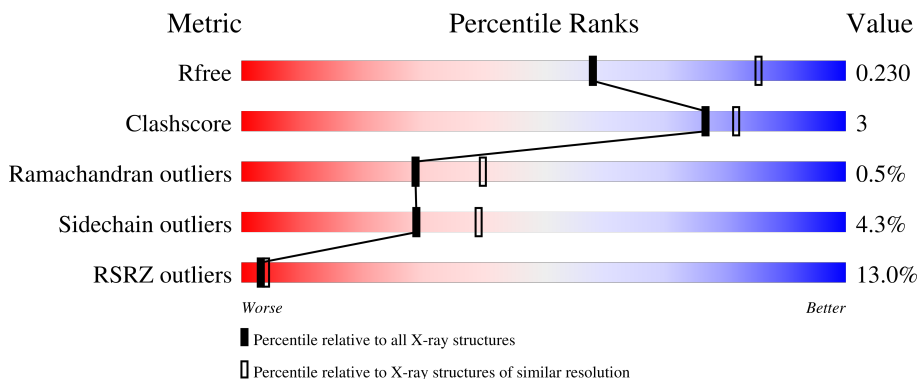|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.55 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		0.230
Clashscore		3
Ramachandran outliers		0.5%
Sidechain outliers		4.3%
RSRZ outliers		13.0%

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$_{free}$	130704	1284 (2.56-2.52)
Clashscore	141614	1332 (2.56-2.52)
Ramachandran outliers	138981	1315 (2.56-2.52)
Sidechain outliers	138945	1315 (2.56-2.52)
RSRZ outliers	127900	1272 (2.56-2.52)

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	1617	12% / 80% / 9% · 10%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	CL	A	1704	-	-	-	X

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 11338 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 lipoprotein YfhM.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1450	Total 11224	C 7092	N 1951	O 2157	S 24	0	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	37	GLY	-	expression tag	UNP P76578
A	38	PRO	-	expression tag	UNP P76578
A	39	MET	-	expression tag	UNP P76578

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

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

- Molecule 3 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	3	Total 3	Cl 3	0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	105	Total 105	O 105	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: Uncharacterized lipoprotein YfhM

L1413 R1421 W1422 A1434 A1435 Q1439 D1440 G1443 K1444 W1445 T1449 A1453 E1454 Q1455 L1456 E1459 K1460 S1468 Q1482 S1520 L1521 R1525 N1540 S1541 A1553 Q1571 S1587 I1588 V1602 Y1624 E1646 D1647 R1652 P1653
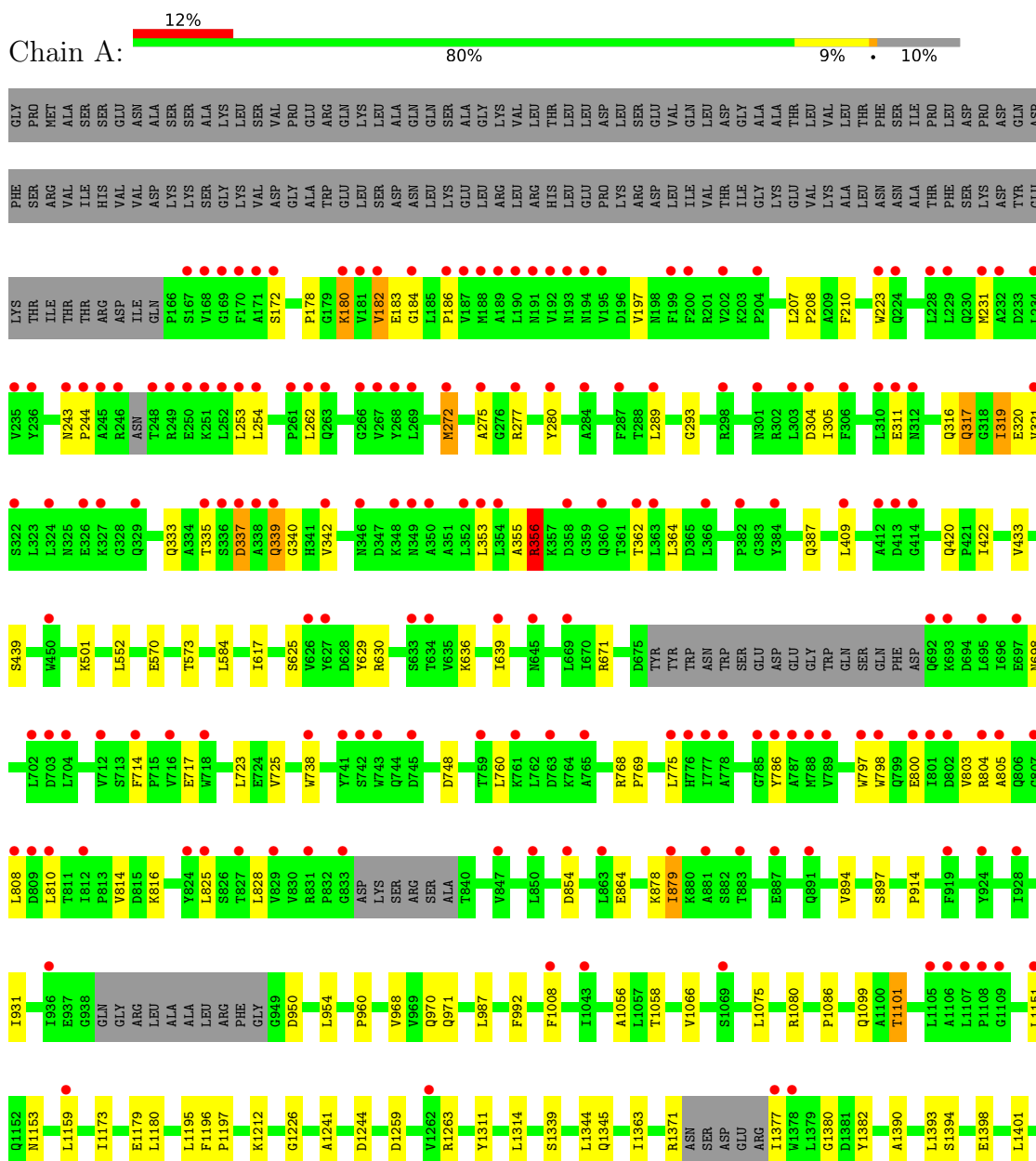
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants	274.28Å 95.36Å 81.09Å	
a, b, c, α, β, γ	90.00° 104.77° 90.00°	Depositor
Resolution (Å)	47.68 – 2.55	Depositor
	47.68 – 2.55	EDS
% Data completeness	99.0 (47.68-2.55)	Depositor
(in resolution range)	98.8 (47.68-2.55)	EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.30 (at 2.54Å)	Xtriage
Refinement program	BUSTER 2.10.2	Depositor
R, R_{free}	0.190 , 0.221	Depositor
	0.199 , 0.230	DCC
R_{free} test set	1083 reflections (1.66%)	wwPDB-VP
Wilson B-factor (Å^2)	74.0	Xtriage
Anisotropy	0.306	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 75.0	EDS
L-test for twinning[2]	$< |L| > = 0.46, < L^2 > = 0.29$	Xtriage
Estimated twinning fraction	0.029 for -h-2*l,-k,l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	11338	wwPDB-VP
Average B, all atoms (Å^2)	111.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.14% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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: CL, GOL

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	0.44	0/11456	0.63	0/15582

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 (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	11224	0	11146	66	0
2	A	6	0	8	3	0
3	A	3	0	0	0	0
4	A	105	0	0	0	0
All	All	11338	0	11154	66	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 3.

All (66) 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:321:VAL:HG21	1:A:342:VAL:HG21	1.70	0.71
1:A:786:TYR:HA	1:A:800:GLU:O	1.95	0.67
1:A:769:PRO:HB3	1:A:816:LYS:HA	1.79	0.64
1:A:1380:GLY:H	2:A:1701:GOL:H31	1.63	0.63
1:A:364:LEU:HD12	1:A:931:ILE:HG23	1.80	0.63
1:A:914:PRO:HB2	1:A:1008:PHE:HB3	1.82	0.60
1:A:197:VAL:HG22	1:A:272:MET:HB2	1.83	0.60
1:A:617:ILE:HD11	1:A:725:VAL:HG12	1.88	0.55
1:A:182:VAL:HG22	1:A:184:GLY:H	1.73	0.53
1:A:639:ILE:HG22	1:A:738:TRP:HB3	1.90	0.53
1:A:305:ILE:HB	1:A:342:VAL:HG13	1.90	0.53
1:A:321:VAL:HG11	1:A:342:VAL:HG11	1.91	0.53
1:A:1195:LEU:HD11	1:A:1226:GLY:HA3	1.91	0.52
1:A:1259:ASP:OD1	1:A:1263:ARG:HD2	2.10	0.52
1:A:1393:LEU:HD23	1:A:1434:ALA:HB1	1.91	0.52
1:A:409:LEU:HD22	1:A:422:ILE:HD11	1.92	0.51
1:A:968:VAL:HG21	1:A:992:PHE:CD1	2.45	0.50
1:A:172:SER:HB2	1:A:186:PRO:HG2	1.92	0.50
1:A:800:GLU:HG2	1:A:810:LEU:HD21	1.92	0.50
1:A:1173:ILE:HD13	1:A:1435:ALA:HB3	1.93	0.50
1:A:1380:GLY:HA2	2:A:1701:GOL:H11	1.93	0.50
1:A:1241:ALA:HB3	1:A:1244:ASP:O	2.12	0.49
1:A:864:GLU:HB3	1:A:878:LYS:HB2	1.94	0.49
1:A:1056:ALA:HB3	1:A:1101:THR:HG23	1.93	0.49
1:A:1394:SER:O	1:A:1398:GLU:HB2	2.12	0.49
1:A:897:SER:HB3	1:A:971:GLN:HG3	1.93	0.48
1:A:1314:LEU:HD22	1:A:1345:GLN:HG2	1.95	0.48
1:A:1390:ALA:HA	1:A:1413:LEU:HD11	1.95	0.48
1:A:1382:TYR:H	2:A:1701:GOL:H32	1.78	0.48
1:A:803:VAL:HA	1:A:808:LEU:HD13	1.96	0.48
1:A:1344:LEU:HD12	1:A:1363:ILE:HG12	1.96	0.48
1:A:768:ARG:HD3	1:A:854:ASP:HB2	1.95	0.47
1:A:293:GLY:HA2	1:A:931:ILE:HD11	1.97	0.47
1:A:317:GLN:HA	1:A:340:GLY:HA3	1.95	0.47
1:A:1159:LEU:HB3	1:A:1468:SER:HB3	1.96	0.47
1:A:210:PHE:HD2	1:A:231:MET:HG3	1.79	0.46
1:A:207:LEU:N	1:A:208:PRO:HD2	2.30	0.46
1:A:954:LEU:HD22	1:A:960:PRO:HG3	1.97	0.46
1:A:316:GLN:HB2	1:A:339:GLN:HB3	1.97	0.46
1:A:180:LYS:HD2	1:A:311:GLU:CD	2.35	0.46
1:A:321:VAL:HG23	1:A:333:GLN:HA	1.97	0.45
1:A:320:GLU:HB2	1:A:356:ARG:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:671:ARG:HH21	1:A:717:GLU:HB2	1.82	0.45
1:A:698:ASN:HD22	1:A:714:PHE:HE1	1.66	0.44
1:A:760:LEU:HB3	1:A:775:LEU:HD11	2.00	0.44
1:A:552:LEU:HD22	1:A:584:LEU:HD21	2.01	0.43
1:A:178:PRO:HB2	1:A:180:LYS:O	2.18	0.43
1:A:321:VAL:H	1:A:333:GLN:HG3	1.82	0.43
1:A:184:GLY:HA3	1:A:254:LEU:O	2.19	0.42
1:A:625:SER:HA	1:A:636:LYS:HA	2.01	0.42
1:A:1066:VAL:HB	1:A:1086:PRO:HB2	2.01	0.42
1:A:1180:LEU:HD11	1:A:1197:PRO:HB2	2.02	0.42
1:A:182:VAL:HG13	1:A:183:GLU:H	1.85	0.42
1:A:355:ALA:HB3	1:A:362:THR:HB	2.02	0.42
1:A:1588:ILE:HG12	1:A:1602:VAL:HG12	2.02	0.41
1:A:970:GLN:HB3	1:A:987:LEU:HD22	2.02	0.41
1:A:1151:LEU:HD22	1:A:1159:LEU:HD21	2.02	0.41
1:A:319:ILE:HB	1:A:335:THR:HB	2.02	0.41
1:A:1525:ARG:HG2	1:A:1652:ARG:HB2	2.02	0.41
1:A:1339:SER:HB2	1:A:1371:ARG:HG3	2.02	0.41
1:A:1344:LEU:CD1	1:A:1363:ILE:HG12	2.50	0.41
1:A:243:ASN:N	1:A:244:PRO:HD3	2.36	0.41
1:A:879:ILE:HG21	1:A:894:VAL:HG21	2.02	0.41
1:A:1553:ALA:HB3	1:A:1624:TYR:CD1	2.56	0.40
1:A:804:ARG:HD3	1:A:805:ALA:H	1.86	0.40
1:A:1179:GLU:HG3	1:A:1212:LYS:HB2	2.03	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	1438/1617 (89%)	1364 (95%)	67 (5%)	7 (0%)	29	40

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	337	ASP
1	A	275	ALA
1	A	798	TRP
1	A	1521	LEU
1	A	748	ASP
1	A	182	VAL
1	A	356	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	1199/1344 (89%)	1147 (96%)	52 (4%)	29	39

All (52) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	180	LYS
1	A	223	TRP
1	A	253	LEU
1	A	262	LEU
1	A	272	MET
1	A	277	ARG
1	A	280	TYR
1	A	289	LEU
1	A	304	ASP
1	A	317	GLN
1	A	319	ILE
1	A	337	ASP
1	A	339	GLN
1	A	353	LEU
1	A	356	ARG
1	A	387	GLN
1	A	420	GLN
1	A	433	VAL

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Mol	Chain	Res	Type
1	A	439	SER
1	A	501	LYS
1	A	570	GLU
1	A	573	THR
1	A	629	TYR
1	A	630	ARG
1	A	723	LEU
1	A	797	TRP
1	A	814	VAL
1	A	825	LEU
1	A	828	LEU
1	A	879	ILE
1	A	950	ASP
1	A	1058	THR
1	A	1075	LEU
1	A	1080	ARG
1	A	1099	GLN
1	A	1101	THR
1	A	1153	ASN
1	A	1196	PHE
1	A	1311	TYR
1	A	1377	ILE
1	A	1401	LEU
1	A	1422	TRP
1	A	1444	LYS
1	A	1460	LYS
1	A	1482	GLN
1	A	1520	SER
1	A	1540	ASN
1	A	1541	SER
1	A	1571	GLN
1	A	1587	SER
1	A	1646	GLU
1	A	1647	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	387	GLN
1	A	419	ASN
1	A	698	ASN
1	A	980	GLN

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Mol	Chain	Res	Type
1	A	1153	ASN
1	A	1446	GLN
1	A	1540	ASN
1	A	1582	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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 4 ligands modelled in this entry, 3 are monoatomic - leaving 1 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	$\#|Z| > 2$
2	GOL	A	1701	-	5,5,5	0.09	0	5,5,5	0.25	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	1701	-	-	0/4/4/4	-

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.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1701	GOL	3	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, 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	1450/1617 (89%)	0.82	188 (12%)	3	4	52, 105, 179, 274	0

All (188) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	262	LEU	14.3
1	A	245	ALA	11.0
1	A	189	ALA	9.2
1	A	248	THR	9.0
1	A	190	LEU	9.0
1	A	223	TRP	8.4
1	A	786	TYR	7.8
1	A	188	MET	7.4
1	A	187	VAL	6.9
1	A	244	PRO	6.7
1	A	833	GLY	6.7
1	A	1106	ALA	6.4
1	A	228	LEU	6.3
1	A	743	TRP	6.3
1	A	235	VAL	6.3
1	A	249	ARG	6.1
1	A	191	ASN	6.1
1	A	192	VAL	5.9
1	A	321	VAL	5.8
1	A	246	ARG	5.8
1	A	741	TYR	5.7
1	A	825	LEU	5.6
1	A	268	TYR	5.5
1	A	280	TYR	5.5
1	A	289	LEU	5.4
1	A	366	LEU	5.2
1	A	718	TRP	5.1

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Mol	Chain	Res	Type	RSRZ
1	A	252	LEU	5.0
1	A	778	ALA	5.0
1	A	745	ASP	4.9
1	A	303	LEU	4.8
1	A	807	GLY	4.8
1	A	346	ASN	4.8
1	A	1105	LEU	4.7
1	A	850	LEU	4.6
1	A	627	TYR	4.6
1	A	312	ASN	4.5
1	A	306	PHE	4.4
1	A	171	ALA	4.3
1	A	863	LEU	4.3
1	A	787	ALA	4.3
1	A	253	LEU	4.3
1	A	231	MET	4.2
1	A	928	ILE	4.2
1	A	716	VAL	4.2
1	A	337	ASP	4.2
1	A	338	ALA	4.2
1	A	266	GLY	4.1
1	A	1422	TRP	4.0
1	A	785	GLY	4.0
1	A	200	PHE	4.0
1	A	335	THR	4.0
1	A	1377	ILE	4.0
1	A	352	LEU	3.9
1	A	883	THR	3.9
1	A	348	LYS	3.9
1	A	634	THR	3.8
1	A	1453	ALA	3.8
1	A	1109	GLY	3.8
1	A	336	SER	3.8
1	A	358	ASP	3.8
1	A	194	ASN	3.8
1	A	798	TRP	3.7
1	A	186	PRO	3.7
1	A	626	VAL	3.7
1	A	891	GLN	3.7
1	A	384	TYR	3.7
1	A	181	VAL	3.6
1	A	805	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	168	VAL	3.6
1	A	363	LEU	3.5
1	A	362	THR	3.5
1	A	777	ILE	3.5
1	A	738	TRP	3.5
1	A	193	ASN	3.5
1	A	812	ILE	3.4
1	A	1421	ARG	3.4
1	A	879	ILE	3.4
1	A	1107	LEU	3.4
1	A	322	SER	3.3
1	A	232	ALA	3.3
1	A	326	GLU	3.3
1	A	250	GLU	3.3
1	A	802	ASP	3.2
1	A	310	LEU	3.2
1	A	1449	THR	3.1
1	A	702	LEU	3.1
1	A	409	LEU	3.1
1	A	243	ASN	3.0
1	A	182	VAL	3.0
1	A	229	LEU	3.0
1	A	1456	LEU	3.0
1	A	180	LYS	3.0
1	A	776	HIS	3.0
1	A	765	ALA	3.0
1	A	697	GLU	3.0
1	A	349	ASN	2.9
1	A	350	ALA	2.9
1	A	195	VAL	2.9
1	A	327	LYS	2.9
1	A	645	ASN	2.8
1	A	887	GLU	2.8
1	A	692	GLN	2.8
1	A	797	TRP	2.8
1	A	789	VAL	2.8
1	A	881	ALA	2.8
1	A	1043	ILE	2.8
1	A	269	LEU	2.8
1	A	329	GLN	2.8
1	A	263	GLN	2.7
1	A	1378	TRP	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	170	PHE	2.7
1	A	1069	SER	2.7
1	A	1439	GLN	2.7
1	A	1440	ASP	2.7
1	A	202	VAL	2.7
1	A	808	LEU	2.7
1	A	354	LEU	2.6
1	A	714	PHE	2.6
1	A	847	VAL	2.6
1	A	169	GLY	2.6
1	A	763	ASP	2.6
1	A	267	VAL	2.6
1	A	382	PRO	2.6
1	A	829	VAL	2.5
1	A	1445	TRP	2.5
1	A	800	GLU	2.5
1	A	234	LEU	2.5
1	A	339	GLN	2.5
1	A	761	LYS	2.5
1	A	1159	LEU	2.5
1	A	184	GLY	2.5
1	A	199	PHE	2.5
1	A	287	PHE	2.5
1	A	831	ARG	2.4
1	A	924	TYR	2.4
1	A	353	LEU	2.4
1	A	669	LEU	2.4
1	A	204	PRO	2.4
1	A	254	LEU	2.4
1	A	693	LYS	2.4
1	A	703	ASP	2.4
1	A	298	ARG	2.4
1	A	1443	GLY	2.4
1	A	712	VAL	2.4
1	A	275	ALA	2.3
1	A	704	LEU	2.3
1	A	788	MET	2.3
1	A	167	SER	2.3
1	A	695	LEU	2.3
1	A	775	LEU	2.3
1	A	1459	GLU	2.3
1	A	251	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	742	SER	2.3
1	A	759	THR	2.3
1	A	639	ILE	2.3
1	A	1151	LEU	2.3
1	A	277	ARG	2.2
1	A	804	ARG	2.2
1	A	414	GLY	2.2
1	A	1455	GLN	2.2
1	A	342	VAL	2.2
1	A	1008	PHE	2.2
1	A	284	ALA	2.2
1	A	236	TYR	2.2
1	A	261	PRO	2.2
1	A	304	ASP	2.2
1	A	450	TRP	2.2
1	A	301	ASN	2.2
1	A	633	SER	2.2
1	A	1262	VAL	2.2
1	A	809	ASP	2.2
1	A	801	ILE	2.1
1	A	919	PHE	2.1
1	A	360	GLN	2.1
1	A	824	TYR	2.1
1	A	324	LEU	2.1
1	A	1108	PRO	2.1
1	A	412	ALA	2.1
1	A	172	SER	2.1
1	A	854	ASP	2.0
1	A	827	THR	2.0
1	A	311	GLU	2.0
1	A	272	MET	2.0
1	A	413	ASP	2.0
1	A	810	LEU	2.0
1	A	936	ILE	2.0
1	A	224	GLN	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 ⓘ

There are no monosaccharides 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(Å²)	Q<0.9
2	GOL	A	1701	6/6	0.58	0.35	105,111,113,113	0
3	CL	A	1704	1/1	0.70	1.34	84,84,84,84	1
3	CL	A	1702	1/1	0.82	0.42	74,74,74,74	1
3	CL	A	1703	1/1	0.83	0.37	87,87,87,87	1

6.5 Other polymers ⓘ

There are no such residues in this entry.