W O R L D W I D E
wwPDB
P R O T E I N   D A T A   B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Jan 7, 2024 – 04:00 pm GMT

PDB ID	:	5OYL
Title	:	VSV G CR2
Authors	:	Albertini, A.A.; Belot, L.; Legrand, P.; Gaudin, Y.
Deposited on	:	2017-09-11
Resolution	:	2.25 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	:	4.02b-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
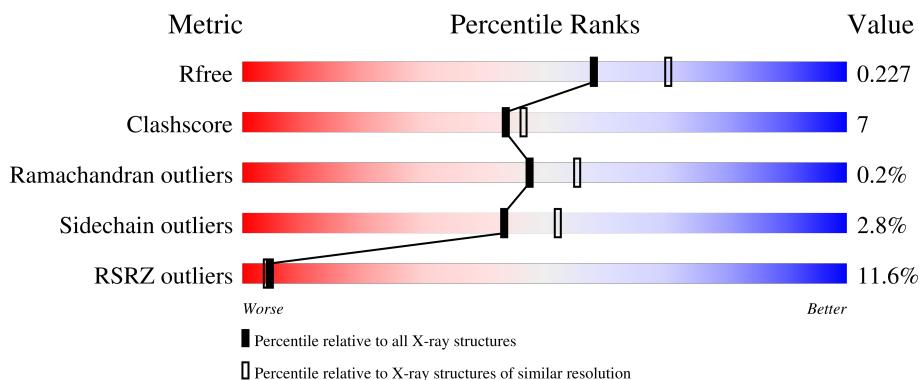
1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION
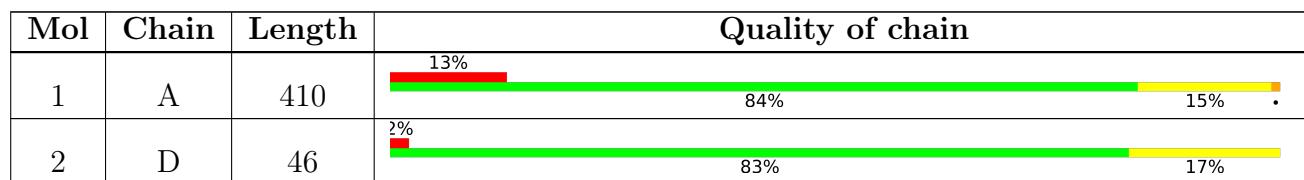
The reported resolution of this entry is 2.25 Å.

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		0.227
Clashscore		7
Ramachandran outliers		0.2%
Sidechain outliers		2.8%
RSRZ outliers		11.6%

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$_{free}$	130704	1377 (2.26-2.26)
Clashscore	141614	1487 (2.26-2.26)
Ramachandran outliers	138981	1449 (2.26-2.26)
Sidechain outliers	138945	1450 (2.26-2.26)
RSRZ outliers	127900	1356 (2.26-2.26)

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	410	13% / 84% / 15% ·
2	D	46	2% / 83% / 17%

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	NAG	A	501	-	-	-	X
3	NAG	A	502	-	-	-	X
3	NAG	A	503	-	-	-	X

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 3812 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 Glycoprotein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	410	Total 3243	C 2069	N 541	O 612	S 21	0	0	0
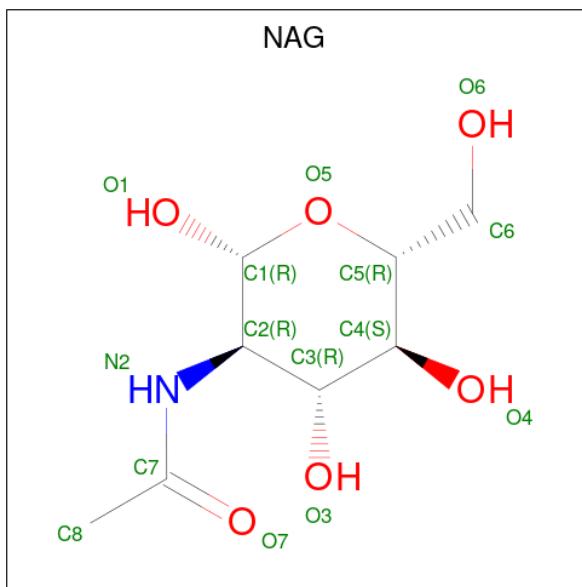
- Molecule 2 is a protein called Low-density lipoprotein receptor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	D	46	Total 334	C 198	N 62	O 68	S 6	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	40	GLY	-	expression tag	UNP P01130
D	41	PRO	-	expression tag	UNP P01130
D	42	LEU	-	expression tag	UNP P01130
D	43	GLY	-	expression tag	UNP P01130

- Molecule 3 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).

NAG

O6
OH

O1　　　O5
HO　　　O

C1(R)　C5(R)　　C6
C2(R)　C4(S)
N2　　　C3(R)
HN

OH
O4
C7

OH
C8
O　O3
O7
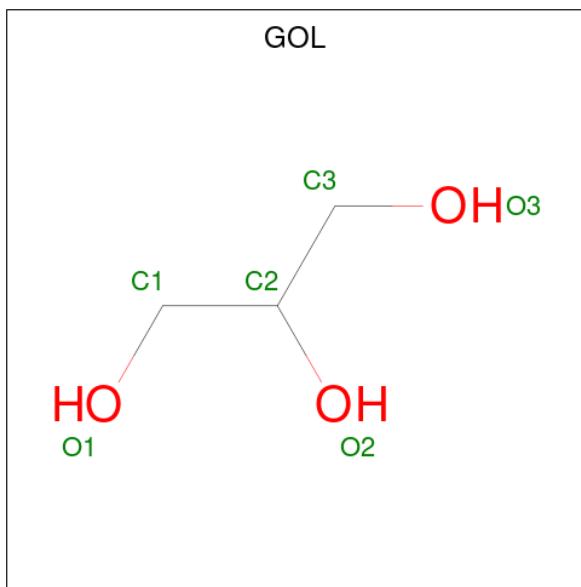
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 14	C 8	N 1	O 5	0	0
3	A	1	Total 14	C 8	N 1	O 5	0	0
3	A	1	Total 14	C 8	N 1	O 5	0	0

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total 1	Ca 1	0	0
4	D	1	Total 1	Ca 1	0	0

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).

GOL

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0
5	D	1	Total 6	C 3	O 3	0	0
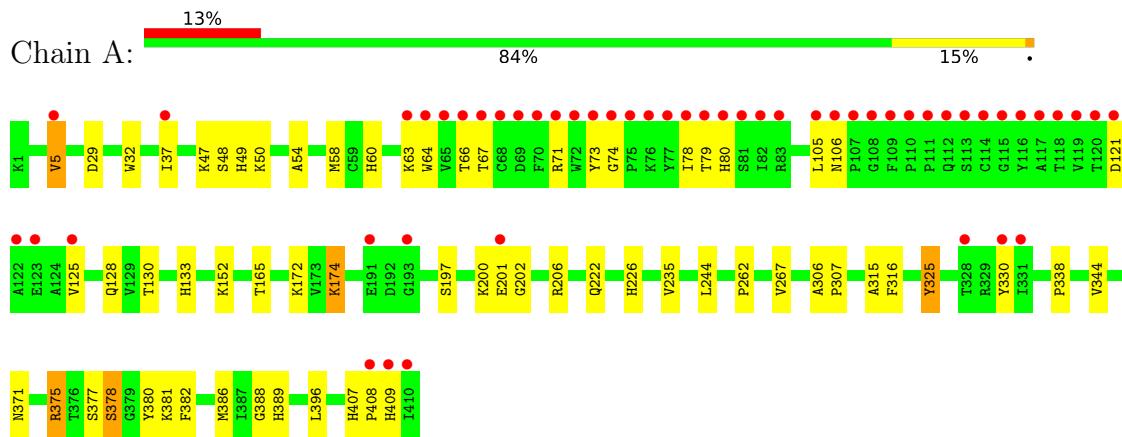
- Molecule 6 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	126	Total 126	O 126	0	0
6	D	23	Total 23	O 23	0	0
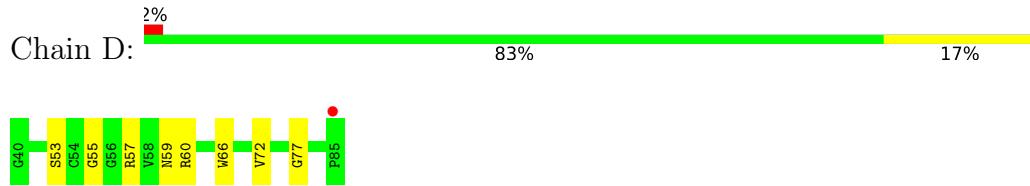
3 Residue-property plots ⓘ

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: Glycoprotein

• Molecule 2: Low-density lipoprotein receptor

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	H 3 2	Depositor
Cell constants a, b, c, α, β, γ	90.04Å 90.04Å 515.78Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	29.98 – 2.25 29.98 – 2.25	Depositor EDS
% Data completeness (in resolution range)	76.4 (29.98-2.25) 76.4 (29.98-2.25)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.61 (at 2.24Å)	Xtriage
Refinement program	REFMAC	Depositor
R, R_{free}	0.188 , 0.224 0.191 , 0.227	Depositor DCC
R_{free} test set	1493 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	38.8	Xtriage
Anisotropy	0.046	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 45.8	EDS
L-test for twinning[2]	$< \lvert L \rvert > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	3812	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 3.72% 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 $< \lvert L \rvert >$, $< L^2 >$ 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, NAG, CA, MLZ

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	0.37	0/3332	0.57	0/4537
2	D	0.41	0/341	0.60	0/460
All	All	0.37	0/3673	0.57	0/4997

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	3243	0	3092	43	0
2	D	334	0	293	6	0
3	A	42	0	39	1	0
4	A	1	0	0	0	0
4	D	1	0	0	0	0
5	A	36	0	48	3	0
5	D	6	0	8	1	0
6	A	126	0	0	2	2
6	D	23	0	0	0	0
All	All	3812	0	3480	48	2

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 7.

All (48) 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)
2:D:55:GLY:H	2:D:59:ASN:HD22	1.30	0.77
1:A:386:MET:HE3	1:A:396:LEU:HD11	1.76	0.67
2:D:55:GLY:H	2:D:59:ASN:ND2	1.93	0.67
2:D:60:ARG:HH12	5:D:101:GOL:H12	1.59	0.66
1:A:389:HIS:H	5:A:510:GOL:H11	1.62	0.65
1:A:382:PHE:O	1:A:386:MET:HG3	1.96	0.65
1:A:152:LYS:NZ	6:A:601:HOH:O	2.33	0.61
1:A:48:SER:OG	1:A:49:HIS:HD2	1.83	0.60
1:A:316:PHE:H	1:A:371:ASN:ND2	2.03	0.56
1:A:375:ARG:HG3	1:A:380:TYR:CE1	2.40	0.56
1:A:29:ASP:HA	1:A:32:TRP:CE2	2.42	0.54
1:A:197:SER:HA	1:A:200:LYS:HD2	1.90	0.53
1:A:222:GLN:HA	1:A:226:HIS:O	2.08	0.53
1:A:60:HIS:CD2	1:A:128:GLN:HB3	2.44	0.53
1:A:306:ALA:HB2	1:A:371:ASN:HB3	1.90	0.52
1:A:105:LEU:HG	1:A:106:ASN:H	1.75	0.52
1:A:338:PRO:HB2	1:A:386:MET:HG2	1.89	0.52
1:A:58:MET:HE3	1:A:165:THR:HG22	1.91	0.51
1:A:60:HIS:CE1	1:A:130:THR:HG23	2.44	0.51
1:A:235:VAL:HG22	1:A:262:PRO:HG3	1.94	0.49
1:A:201:GLU:HG3	1:A:202:GLY:H	1.78	0.49
2:D:72:VAL:HG13	2:D:77:GLY:HA2	1.95	0.48
1:A:60:HIS:HE1	1:A:130:THR:HG23	1.79	0.48
1:A:58:MET:HE3	1:A:165:THR:CG2	2.44	0.47
2:D:53:SER:HB3	2:D:59:ASN:HD21	1.78	0.47
1:A:316:PHE:H	1:A:371:ASN:HD21	1.61	0.47
1:A:71:ARG:HD2	1:A:73:TYR:CE1	2.50	0.46
1:A:66:THR:HG22	1:A:80:HIS:ND1	2.30	0.46
1:A:378:SER:O	5:A:506:GOL:H12	2.17	0.45
1:A:407:HIS:CD2	1:A:408:PRO:HD2	2.51	0.45
1:A:377:SER:HB3	3:A:502:NAG:H3	1.99	0.44
1:A:381:LYS:HB3	1:A:386:MET:CE	2.48	0.44
1:A:63:LYS:NZ	1:A:125:VAL:HB	2.33	0.43
1:A:315:ALA:O	1:A:325:TYR:HA	2.18	0.43
1:A:54:ALA:O	1:A:133:HIS:HA	2.19	0.43
1:A:29:ASP:HA	1:A:32:TRP:CD2	2.53	0.43
1:A:37:ILE:HD13	1:A:37:ILE:HA	1.87	0.43
1:A:64:TRP:HE1	1:A:409:HIS:HD1	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:5:VAL:HG13	1:A:330:TYR:HB3	2.01	0.43
1:A:172:LYS:HA	1:A:172:LYS:HD2	1.85	0.42
1:A:78:ILE:H	1:A:78:ILE:HG13	1.68	0.42
1:A:47:LYS:HE2	2:D:66:TRP:CE2	2.55	0.42
1:A:174:LYS:NZ	6:A:609:HOH:O	2.53	0.42
1:A:386:MET:CE	1:A:396:LEU:HD21	2.50	0.41
1:A:67:THR:O	1:A:79:THR:OG1	2.38	0.41
1:A:307:PRO:HG2	1:A:330:TYR:CE1	2.56	0.41
1:A:388:GLY:HA3	5:A:510:GOL:C1	2.51	0.41
1:A:381:LYS:HB3	1:A:386:MET:HE2	2.02	0.40

All (2) 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)
6:A:630:HOH:O	6:A:630:HOH:O[2_655]	1.78	0.42
6:A:715:HOH:O	6:A:715:HOH:O[11_565]	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	407/410 (99%)	389 (96%)	17 (4%)	1 (0%)	47	55
2	D	44/46 (96%)	44 (100%)	0	0	100	100
All	All	451/456 (99%)	433 (96%)	17 (4%)	1 (0%)	47	55

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	74	GLY

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	358/358 (100%)	348 (97%)	10 (3%)	43	52
2	D	38/38 (100%)	37 (97%)	1 (3%)	46	55
All	All	396/396 (100%)	385 (97%)	11 (3%)	43	52

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	VAL
1	A	121	ASP
1	A	174	LYS
1	A	206	ARG
1	A	244	LEU
1	A	267	VAL
1	A	325	TYR
1	A	344	VAL
1	A	375	ARG
1	A	378	SER
2	D	57	ARG

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	22	HIS
1	A	49	HIS
1	A	60	HIS
1	A	285	GLN
1	A	371	ASN
1	A	407	HIS
2	D	59	ASN
2	D	64	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

1 non-standard protein/DNA/RNA residue is 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	#$|Z| > 2$
1	MLZ	A	50	1	8,9,10	1.34	1 (12%)	4,9,11	1.54	1 (25%)

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
1	MLZ	A	50	1	-	1/7/8/10	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	50	MLZ	CB-CA	3.03	1.57	1.53

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	50	MLZ	CD-CE-NZ	2.99	122.85	112.05

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	50	MLZ	CD-CE-NZ-CM

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 12 ligands modelled in this entry, 2 are monoatomic - leaving 10 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	$\#|Z| > 2$
5	GOL	A	507	-	5,5,5	0.37	0	5,5,5	0.52	0
5	GOL	D	101	-	5,5,5	0.43	0	5,5,5	0.80	0
5	GOL	A	509	-	5,5,5	0.35	0	5,5,5	0.34	0
3	NAG	A	501	1	14,14,15	1.48	2 (14%)	17,19,21	1.99	1 (5%)
3	NAG	A	502	-	14,14,15	0.53	0	17,19,21	0.43	0
5	GOL	A	505	-	5,5,5	0.33	0	5,5,5	0.52	0
5	GOL	A	506	-	5,5,5	0.36	0	5,5,5	0.49	0
5	GOL	A	510	-	5,5,5	0.35	0	5,5,5	0.49	0
5	GOL	A	508	-	5,5,5	0.42	0	5,5,5	0.88	0
3	NAG	A	503	-	14,14,15	0.57	0	17,19,21	0.66	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
5	GOL	A	507	-	-	4/4/4/4	-
5	GOL	D	101	-	-	2/4/4/4	-
5	GOL	A	509	-	-	4/4/4/4	-
3	NAG	A	501	1	-	0/6/23/26	0/1/1/1
3	NAG	A	502	-	-	0/6/23/26	0/1/1/1

WORLDWIDE
wwPDB
PROTEIN DATA BANK

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	GOL	A	505	-	-	0/4/4/4	-
5	GOL	A	506	-	-	2/4/4/4	-
5	GOL	A	510	-	-	0/4/4/4	-
5	GOL	A	508	-	-	2/4/4/4	-
3	NAG	A	503	-	-	4/6/23/26	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	501	NAG	C1-C2	4.92	1.59	1.52
3	A	501	NAG	O5-C1	2.40	1.47	1.43

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	501	NAG	C1-O5-C5	7.64	122.54	112.19

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	503	NAG	C3-C2-N2-C7
5	A	507	GOL	O1-C1-C2-C3
5	A	507	GOL	C1-C2-C3-O3
5	A	508	GOL	O1-C1-C2-O2
5	A	508	GOL	O1-C1-C2-C3
5	A	509	GOL	C1-C2-C3-O3
5	D	101	GOL	C1-C2-C3-O3
3	A	503	NAG	O5-C5-C6-O6
3	A	503	NAG	C4-C5-C6-O6
5	A	507	GOL	O1-C1-C2-O2
5	A	507	GOL	O2-C2-C3-O3
5	D	101	GOL	O2-C2-C3-O3
3	A	503	NAG	C1-C2-N2-C7
5	A	509	GOL	O1-C1-C2-O2
5	A	509	GOL	O2-C2-C3-O3
5	A	506	GOL	O1-C1-C2-C3
5	A	509	GOL	O1-C1-C2-C3
5	A	506	GOL	O1-C1-C2-O2

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	D	101	GOL	1	0
3	A	502	NAG	1	0
5	A	506	GOL	1	0
5	A	510	GOL	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, 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	409/410 (99%)	0.70	52 (12%)	3	3	25, 41, 138, 193	0
2	D	46/46 (100%)	-0.28	1 (2%)	62	65	29, 38, 55, 66	0
All	All	455/456 (99%)	0.60	53 (11%)	4	4	25, 41, 136, 193	0

All (53) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	116	TYR	17.3
1	A	68	CYS	16.2
1	A	118	THR	15.0
1	A	77	TYR	14.2
1	A	72	TRP	11.4
1	A	70	PHE	10.8
1	A	120	THR	10.5
1	A	119	VAL	9.8
1	A	75	PRO	9.7
1	A	73	TYR	9.1
1	A	115	GLY	8.9
1	A	122	ALA	8.2
1	A	69	ASP	8.2
1	A	74	GLY	8.2
1	A	71	ARG	8.1
1	A	114	CYS	7.8
1	A	113	SER	7.5
1	A	66	THR	7.4
1	A	111	PRO	7.3
1	A	67	THR	7.1
1	A	117	ALA	6.6
1	A	112	GLN	6.1
1	A	78	ILE	6.1
1	A	80	HIS	6.0

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Mol	Chain	Res	Type	RSRZ
1	A	110	PRO	5.7
1	A	410	ILE	5.3
1	A	81	SER	5.0
1	A	79	THR	5.0
1	A	82	ILE	4.8
1	A	121	ASP	4.3
1	A	108	GLY	4.2
1	A	107	PRO	4.1
1	A	65	VAL	3.8
1	A	76	LYS	3.3
2	D	85	PRO	3.3
1	A	83	ARG	3.3
1	A	109	PHE	3.1
1	A	123	GLU	3.1
1	A	64	TRP	3.1
1	A	105	LEU	3.0
1	A	201	GLU	3.0
1	A	409	HIS	2.7
1	A	37	ILE	2.6
1	A	106	ASN	2.5
1	A	191	GLU	2.4
1	A	331	ILE	2.4
1	A	330	TYR	2.3
1	A	193	GLY	2.2
1	A	5	VAL	2.1
1	A	125	VAL	2.1
1	A	408	PRO	2.1
1	A	328	THR	2.0
1	A	63	LYS	2.0

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

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
1	MLZ	A	50	10/11	0.87	0.36	30,41,51,53	0

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(Å^2)	Q<0.9
3	NAG	A	503	14/15	0.34	0.54	92,111,113,115	0
3	NAG	A	501	14/15	0.60	0.43	100,109,114,117	0
3	NAG	A	502	14/15	0.63	0.48	118,125,129,130	0
5	GOL	A	510	6/6	0.85	0.16	69,73,76,77	0
5	GOL	A	508	6/6	0.86	0.21	40,58,61,66	0
5	GOL	A	506	6/6	0.88	0.23	59,62,67,74	0
5	GOL	D	101	6/6	0.88	0.19	57,61,63,66	0
5	GOL	A	507	6/6	0.90	0.20	47,66,68,72	0
5	GOL	A	509	6/6	0.90	0.29	57,62,65,66	0
4	CA	A	504	1/1	0.93	0.15	61,61,61,61	0
5	GOL	A	505	6/6	0.94	0.17	54,54,58,60	0
4	CA	D	102	1/1	1.00	0.09	32,32,32,32	0

6.5 Other polymers ⓘ

There are no such residues in this entry.