



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 23, 2024 – 11:34 PM EDT

PDB ID : 2FAU  
Title : Crystal structure of human vps26  
Authors : Shi, H.; Rojas, R.; Bonifacino, J.S.; Hurley, J.H.  
Deposited on : 2005-12-08  
Resolution : 2.10 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](mailto: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 : 2022.3.0, CSD as543be (2022)  
Xtriage (Phenix) : 1.20.1  
EDS : 3.0  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
CCP4 : 9.0.003 (Gargrove)  
Density-Fitness : 1.0.11  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

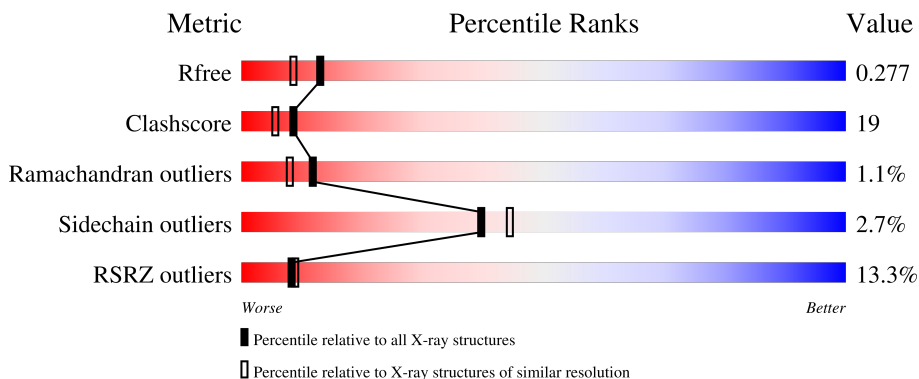
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.10 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))
$R_{free}$	164625	6234 (2.10-2.10)
Clashscore	180529	6893 (2.10-2.10)
Ramachandran outliers	177936	6839 (2.10-2.10)
Sidechain outliers	177891	6840 (2.10-2.10)
RSRZ outliers	164620	6234 (2.10-2.10)

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  $\geq 3$ , 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  $\leq 5\%$ . 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	341	

## 2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 2471 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 Vacuolar protein sorting 26.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	As	C	N	O	S			
1	A	288	2383	2	1538	394	440	9	8	0	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	MET	-	cloning artifact	UNP O75436
A	0	GLY	-	cloning artifact	UNP O75436
A	12	CAF	CYS	modified residue	UNP O75436
A	173	CAF	CYS	modified residue	UNP O75436
A	328	GLY	-	cloning artifact	UNP O75436
A	329	LEU	-	cloning artifact	UNP O75436
A	330	VAL	-	cloning artifact	UNP O75436
A	331	PRO	-	cloning artifact	UNP O75436
A	332	ARG	-	cloning artifact	UNP O75436
A	333	GLY	-	cloning artifact	UNP O75436
A	334	SER	-	cloning artifact	UNP O75436
A	335	HIS	-	expression tag	UNP O75436
A	336	HIS	-	expression tag	UNP O75436
A	337	HIS	-	expression tag	UNP O75436
A	338	HIS	-	expression tag	UNP O75436
A	339	HIS	-	expression tag	UNP O75436

- Molecule 2 is GLYCEROL (three-letter code: GOL) (formula: C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>).



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

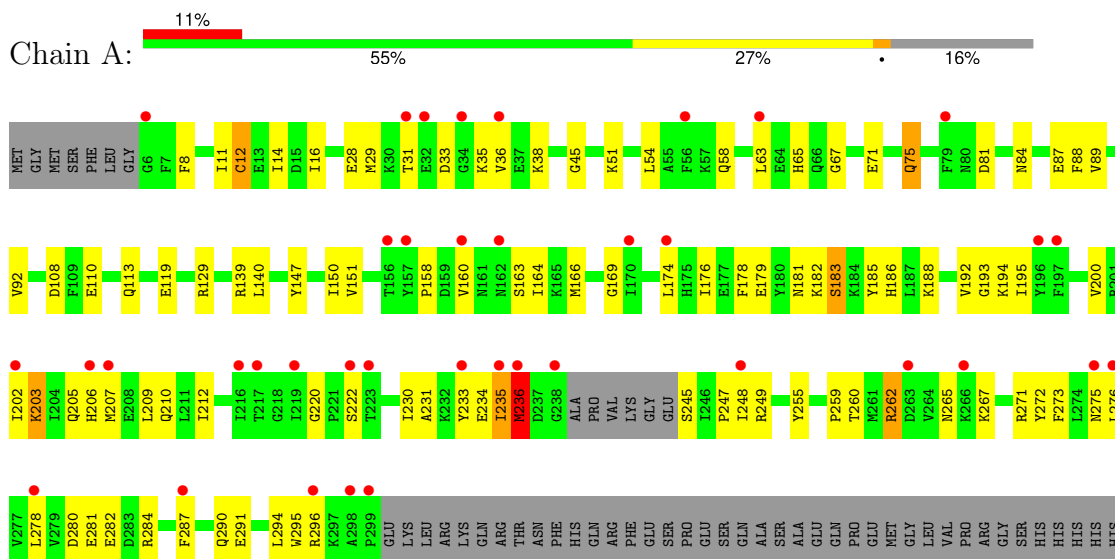
- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	82	Total O 82 82	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: Vacuolar protein sorting 26



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	40.96Å 76.37Å 126.49Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.71 – 2.10 48.71 – 2.10	Depositor EDS
% Data completeness (in resolution range)	88.5 (48.71-2.10) 88.7 (48.71-2.10)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.99 (at 2.10Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.235 , 0.284 0.226 , 0.277	Depositor DCC
$R_{free}$ test set	2202 reflections (9.96%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	46.0	Xtrriage
Anisotropy	0.652	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33 , 47.5	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	2471	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	66.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.08% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  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: CAF, 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	0.40	0/2409	0.66	0/3241

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	2383	0	2394	89	0
2	A	6	0	8	0	0
3	A	82	0	0	3	0
All	All	2471	0	2402	89	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 19.

All (89) 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:194:LYS:HG2	1:A:247:PRO:HA	1.48	0.94

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:HIS:HD2	1:A:67:GLY:H	1.21	0.87
1:A:210:GLN:NE2	1:A:275:ASN:HD22	1.76	0.83
1:A:259:PRO:HG2	1:A:296:ARG:HH12	1.47	0.79
1:A:203:LYS:HD3	1:A:203:LYS:H	1.49	0.75
1:A:176:ILE:HD12	1:A:278:LEU:HD13	1.70	0.73
1:A:265:ASN:ND2	1:A:267:LYS:H	1.86	0.72
1:A:259:PRO:HG2	1:A:296:ARG:NH1	2.05	0.71
1:A:12:CAF:O1	1:A:14:ILE:HG12	1.91	0.71
1:A:207:MET:HB2	1:A:278:LEU:HD23	1.76	0.68
1:A:259:PRO:CG	1:A:296:ARG:HH12	2.07	0.67
1:A:262:ARG:HH11	1:A:262:ARG:HB3	1.59	0.65
1:A:176:ILE:HD12	1:A:278:LEU:CD1	2.25	0.65
1:A:65:HIS:CD2	1:A:67:GLY:H	2.10	0.64
1:A:28:GLU:HG2	1:A:38:LYS:HG2	1.85	0.59
1:A:65:HIS:HD2	1:A:67:GLY:N	1.98	0.58
1:A:169:GLY:HA3	1:A:174:LEU:O	2.05	0.57
1:A:75:GLN:HG3	1:A:87:GLU:HG2	1.86	0.57
1:A:178:PHE:HB2	1:A:276:LEU:HD11	1.87	0.57
1:A:12:CAF:CE2	1:A:63:LEU:HD22	2.34	0.56
1:A:33:ASP:HB2	1:A:35:LYS:HG3	1.86	0.56
1:A:265:ASN:ND2	1:A:267:LYS:HB2	2.21	0.56
1:A:210:GLN:HB2	1:A:275:ASN:HB3	1.88	0.56
1:A:273:PHE:CE2	1:A:291:GLU:HB2	2.42	0.54
1:A:58:GLN:HB3	3:A:401:HOH:O	2.07	0.54
1:A:262:ARG:NH2	1:A:271:ARG:HD3	2.23	0.53
1:A:233:TYR:CE2	1:A:248:ILE:HG23	2.43	0.53
1:A:194:LYS:HE2	1:A:247:PRO:HG3	1.91	0.53
1:A:210:GLN:HE22	1:A:275:ASN:HD22	1.55	0.53
1:A:186:HIS:HA	1:A:295:TRP:O	2.09	0.53
1:A:205:GLN:OE1	1:A:281:GLU:HA	2.09	0.52
1:A:181:ASN:ND2	1:A:182:LYS:HG3	2.24	0.52
1:A:230:ILE:CD1	1:A:272:TYR:HE2	2.23	0.52
1:A:265:ASN:HD21	1:A:267:LYS:HB2	1.75	0.52
1:A:202:ILE:HD13	1:A:280:ASP:OD2	2.10	0.52
1:A:129:ARG:HD3	3:A:371:HOH:O	2.09	0.51
1:A:16:ILE:HD12	1:A:147:TYR:HB2	1.92	0.51
1:A:29:MET:HG3	1:A:150:ILE:HD13	1.93	0.51
1:A:71:GLU:HG2	1:A:92:VAL:HG22	1.91	0.51
1:A:164:ILE:HD11	1:A:183:SER:CA	2.41	0.51
1:A:158:PRO:HB2	1:A:160:VAL:HG23	1.93	0.50
1:A:259:PRO:CG	1:A:296:ARG:NH1	2.71	0.50

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:186:HIS:HD2	1:A:188:LYS:H	1.59	0.49
1:A:209:LEU:HB3	1:A:233:TYR:HB3	1.94	0.49
1:A:139:ARG:HG3	1:A:140:LEU:N	2.28	0.49
1:A:195:ILE:O	1:A:245:SER:N	2.46	0.49
1:A:230:ILE:HD11	1:A:272:TYR:HE2	1.78	0.49
1:A:45:GLY:O	1:A:113:GLN:HA	2.12	0.49
1:A:202:ILE:HG12	1:A:203:LYS:H	1.76	0.49
1:A:296:ARG:NH1	1:A:296:ARG:HB2	2.28	0.48
1:A:234:GLU:C	1:A:235:ILE:HG13	2.33	0.48
1:A:203:LYS:HE2	1:A:282:GLU:HG3	1.95	0.48
1:A:220:GLY:C	1:A:222:SER:H	2.18	0.47
1:A:203:LYS:HG3	1:A:281:GLU:CD	2.35	0.47
1:A:195:ILE:HD12	1:A:235:ILE:HD13	1.97	0.47
1:A:262:ARG:HH11	1:A:262:ARG:CB	2.28	0.47
1:A:206:HIS:ND1	1:A:236:MET:HB3	2.28	0.47
1:A:51:LYS:HG2	1:A:108:ASP:OD1	2.15	0.46
1:A:185:TYR:O	1:A:294:LEU:HA	2.16	0.46
1:A:8:PHE:HD2	1:A:11:ILE:HD12	1.79	0.46
1:A:164:ILE:HD12	1:A:182:LYS:O	2.16	0.46
1:A:207:MET:H	1:A:236:MET:HA	1.82	0.45
1:A:75:GLN:HG3	1:A:87:GLU:CG	2.45	0.45
1:A:166:MET:HB2	1:A:290:GLN:OE1	2.16	0.45
1:A:192:VAL:HG22	1:A:249:ARG:HE	1.81	0.45
1:A:276:LEU:O	1:A:287:PHE:HA	2.16	0.45
1:A:36:VAL:O	1:A:36:VAL:HG13	2.16	0.44
1:A:233:TYR:HE2	1:A:248:ILE:HG12	1.83	0.44
1:A:88:PHE:HD1	1:A:89:VAL:HG23	1.83	0.44
1:A:207:MET:HB2	1:A:278:LEU:CD2	2.45	0.43
1:A:12:CAF:O1	1:A:54:LEU:HD22	2.17	0.43
1:A:203:LYS:HG3	1:A:281:GLU:HB2	2.01	0.43
1:A:119:GLU:HG3	1:A:151:VAL:O	2.19	0.43
1:A:164:ILE:CD1	1:A:183:SER:HA	2.49	0.43
1:A:231:ALA:HB2	1:A:255:TYR:CE2	2.55	0.42
1:A:260:THR:CG2	1:A:262:ARG:HG3	2.50	0.42
1:A:193:GLY:O	1:A:248:ILE:N	2.51	0.42
1:A:262:ARG:CZ	1:A:271:ARG:NE	2.82	0.42
1:A:31:THR:CG2	1:A:35:LYS:HB2	2.50	0.41
1:A:202:ILE:HG12	1:A:203:LYS:N	2.35	0.41
1:A:164:ILE:HD11	1:A:183:SER:CB	2.50	0.41
1:A:166:MET:HE3	1:A:290:GLN:HB2	2.02	0.41
1:A:212:ILE:HD13	3:A:393:HOH:O	2.20	0.41

*Continued on next page...*

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:203:LYS:H	1:A:203:LYS:CD	2.25	0.41
1:A:200:VAL:HG12	1:A:202:ILE:O	2.21	0.40
1:A:282:GLU:CD	1:A:284:ARG:NH2	2.74	0.40
1:A:164:ILE:O	1:A:179:GLU:HA	2.21	0.40
1:A:203:LYS:HG3	1:A:281:GLU:CG	2.51	0.40
1:A:110:GLU:HG3	1:A:110:GLU:O	2.21	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	282/341 (83%)	263 (93%)	16 (6%)	3 (1%)	12   8

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	236	MET
1	A	235	ILE
1	A	163	SER

#### 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	261/306 (85%)	254 (97%)	7 (3%)	40 44

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	75	GLN
1	A	81	ASP
1	A	84	ASN
1	A	183	SER
1	A	203	LYS
1	A	236	MET
1	A	262	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	19	ASN
1	A	65	HIS
1	A	75	GLN
1	A	153	GLN
1	A	162	ASN
1	A	186	HIS
1	A	210	GLN
1	A	265	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

2 non-standard protein/DNA/RNA residues 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
1	CAF	A	173	1	5,9,10	1.02	0	4,12,14	0.32	0
1	CAF	A	12	1	5,9,10	1.05	0	4,12,14	1.39	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	CAF	A	173	1	-	0/0/8/10	-
1	CAF	A	12	1	-	0/0/8/10	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	12	CAF	CA-CB-SG	-2.41	106.97	112.49

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
1	A	12	CAF	3	0

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

1 ligand 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	$\# Z  > 2$
2	GOL	A	340	-	5,5,5	0.27	0	5,5,5	0.23	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	340	-	-	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.

No monomer is involved in short contacts.

## 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

### 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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	285/341 (83%)	0.93	38 (13%) <b>8</b> <b>9</b>	33, 63, 106, 135	0

All (38) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	160	VAL	5.1
1	A	299	PRO	4.5
1	A	233	TYR	3.7
1	A	236	MET	3.7
1	A	219	ILE	3.6
1	A	202	ILE	3.5
1	A	238	GLY	3.2
1	A	298	ALA	3.2
1	A	287	PHE	3.1
1	A	248	ILE	2.9
1	A	235	ILE	2.8
1	A	31	THR	2.8
1	A	6	GLY	2.7
1	A	32	GLU	2.7
1	A	56	PHE	2.6
1	A	162	ASN	2.5
1	A	36	VAL	2.5
1	A	206	HIS	2.4
1	A	266	LYS	2.4
1	A	79	PHE	2.4
1	A	196	TYR	2.3
1	A	156	THR	2.3
1	A	278	LEU	2.3
1	A	34	GLY	2.2
1	A	170	ILE	2.2
1	A	197	PHE	2.2
1	A	276	LEU	2.2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
1	A	157	TYR	2.2
1	A	174	LEU	2.1
1	A	222	SER	2.1
1	A	275	ASN	2.1
1	A	63	LEU	2.1
1	A	216	ILE	2.1
1	A	223	THR	2.1
1	A	217	THR	2.0
1	A	296	ARG	2.0
1	A	263	ASP	2.0
1	A	207	MET	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	CAF	A	12	10/11	0.71	0.27	63,92,127,131	0
1	CAF	A	173	10/11	0.83	0.17	77,106,137,147	0

## 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
2	GOL	A	340	6/6	0.86	0.15	57,72,91,92	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.