Full wwPDB X-ray Structure Validation Report (i)

Dec 17, 2023 – 05:12 pm GMT

PDB ID	:	3ZED
Title	:	X-ray structure of the birnavirus VP1-VP3 complex
Authors	:	Bahar, M.W.; Sarin, L.P.; Graham, S.C.; Pang, J.; Bamford, D.H.; Stuart, D.I.; Grimes, J.M.
Deposited on	:	2012-12-04
Resolution	:	2.20 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 (i) 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 (i)) were used in the production of this report:

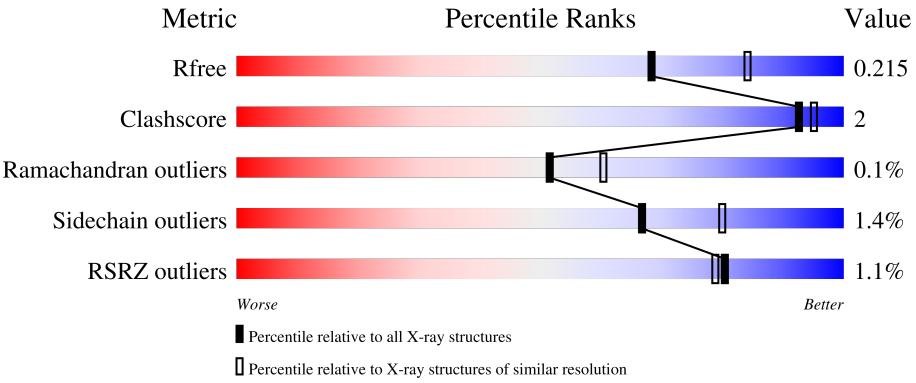
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	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 2.20 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}	130704	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

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	853	85% · 10%
1	B	853	85% · 10%
1	C	853	84% 5% 10%
2	D	242	5% 95%
2	E	242	· 97%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
2	F	242	97%

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 19298 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 RNA-DIRECTED RNA POLYMERASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	765	Total	C	N	O	S	0	2	0
			5996	3803	1006	1162	25			
1	B	766	Total	C	N	O	S	0	1	0
			5972	3788	996	1163	25			
1	C	765	Total	C	N	O	S	0	0	0
			5982	3794	1003	1160	25			

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	846	VAL	-	expression tag	UNP P22173
A	847	GLU	-	expression tag	UNP P22173
A	848	HIS	-	expression tag	UNP P22173
A	849	HIS	-	expression tag	UNP P22173
A	850	HIS	-	expression tag	UNP P22173
A	851	HIS	-	expression tag	UNP P22173
A	852	HIS	-	expression tag	UNP P22173
A	853	HIS	-	expression tag	UNP P22173
B	846	VAL	-	expression tag	UNP P22173
B	847	GLU	-	expression tag	UNP P22173
B	848	HIS	-	expression tag	UNP P22173
B	849	HIS	-	expression tag	UNP P22173
B	850	HIS	-	expression tag	UNP P22173
B	851	HIS	-	expression tag	UNP P22173
B	852	HIS	-	expression tag	UNP P22173
B	853	HIS	-	expression tag	UNP P22173
C	846	VAL	-	expression tag	UNP P22173
C	847	GLU	-	expression tag	UNP P22173
C	848	HIS	-	expression tag	UNP P22173
C	849	HIS	-	expression tag	UNP P22173
C	850	HIS	-	expression tag	UNP P22173
C	851	HIS	-	expression tag	UNP P22173
C	852	HIS	-	expression tag	UNP P22173

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
C	853	HIS	-	expression tag	UNP P22173

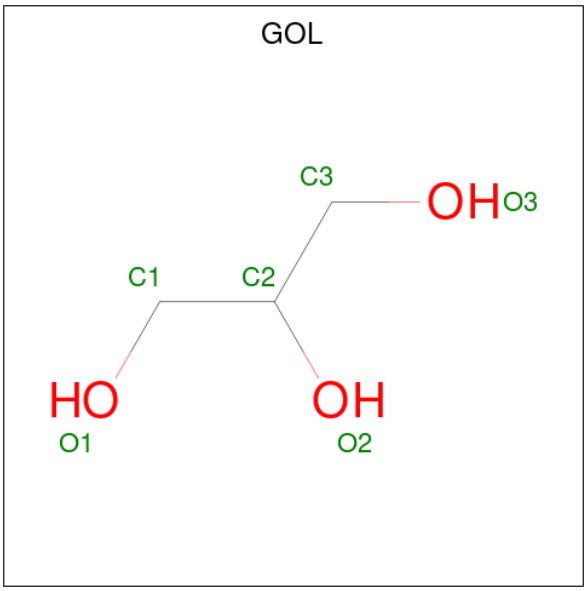
- Molecule 2 is a protein called CAPSID PROTEIN VP3.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	D	12	Total	C	N	O	0	0	0
			89	52	15	22			
2	E	8	Total	C	N	O	0	0	0
			63	39	11	13			
2	F	8	Total	C	N	O	0	0	0
			63	39	11	13			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	-3	GLY	-	expression tag	UNP P05844
D	-2	PRO	-	expression tag	UNP P05844
D	-1	THR	-	expression tag	UNP P05844
D	0	ALA	-	expression tag	UNP P05844
E	-3	GLY	-	expression tag	UNP P05844
E	-2	PRO	-	expression tag	UNP P05844
E	-1	THR	-	expression tag	UNP P05844
E	0	ALA	-	expression tag	UNP P05844
F	-3	GLY	-	expression tag	UNP P05844
F	-2	PRO	-	expression tag	UNP P05844
F	-1	THR	-	expression tag	UNP P05844
F	0	ALA	-	expression tag	UNP P05844

- Molecule 3 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



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

- Molecule 4 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	2	Total K 2 2	0	0
4	B	2	Total K 2 2	0	0
4	C	2	Total K 2 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	504	Total O 504 504	0	0
5	B	303	Total O 303 303	0	0
5	C	290	Total O 290 290	0	0

Continued on next page...

Continued from previous page...

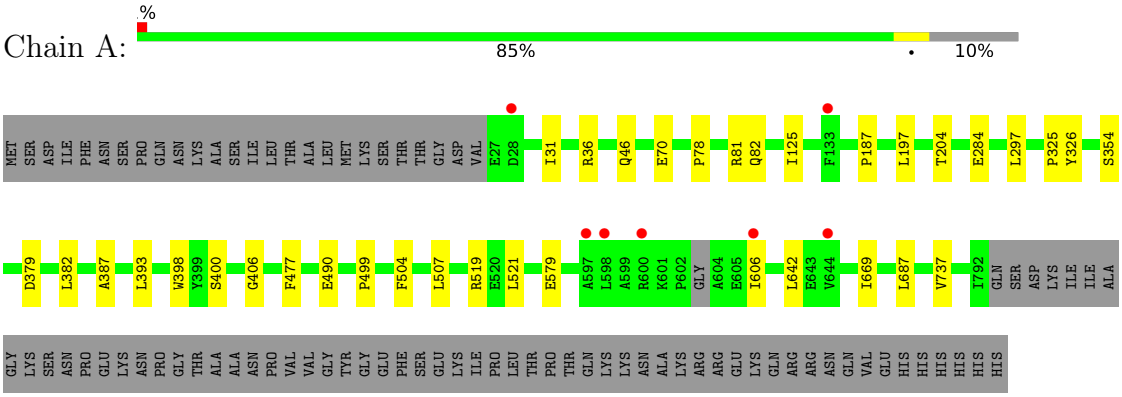
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	D	3	Total O 3 3	0	0
5	E	6	Total O 6 6	0	0
5	F	3	Total O 3 3	0	0

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.

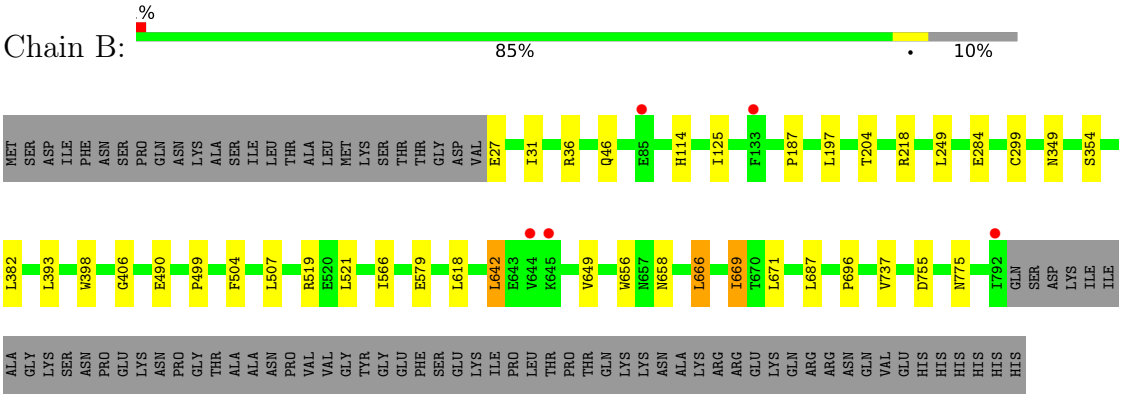
• Molecule 1: RNA-DIRECTED RNA POLYMERASE

Chain A:



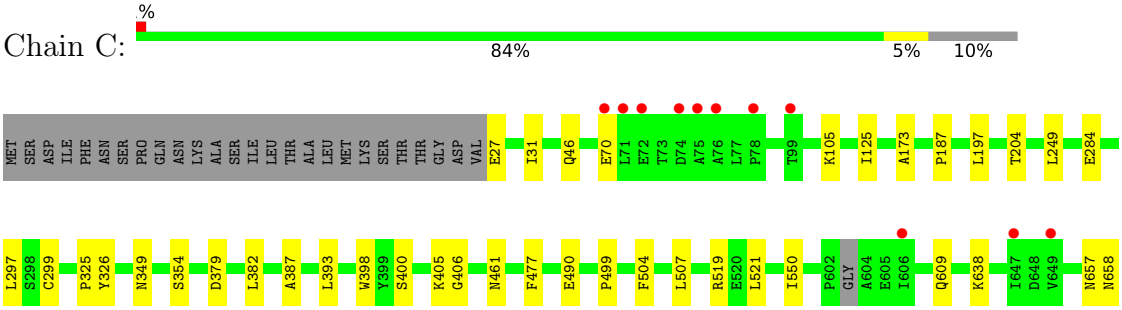
• Molecule 1: RNA-DIRECTED RNA POLYMERASE

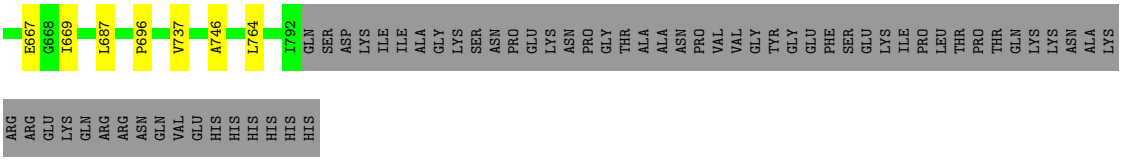
Chain B:



• Molecule 1: RNA-DIRECTED RNA POLYMERASE

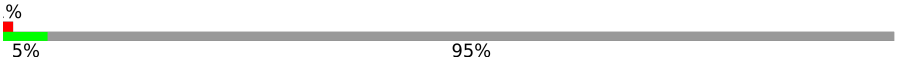
Chain C:

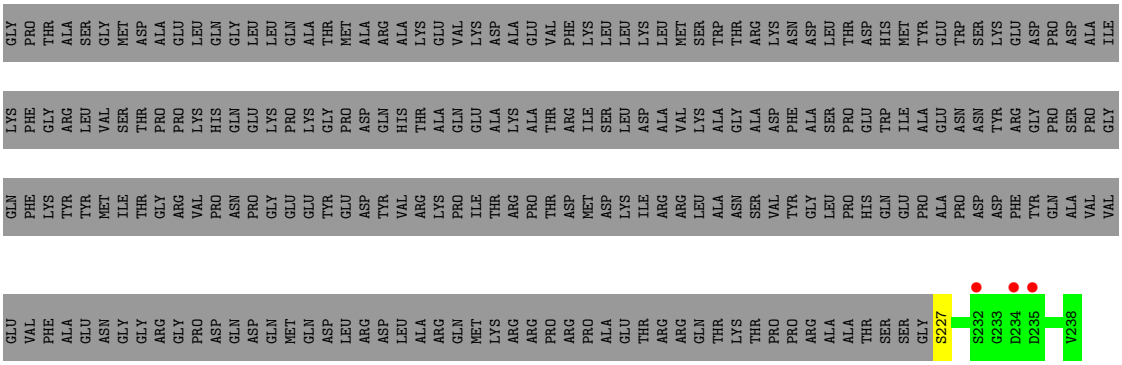




• Molecule 2: CAPSID PROTEIN VP3

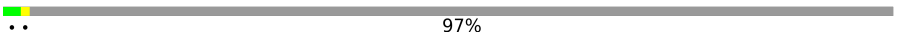
Chain D:

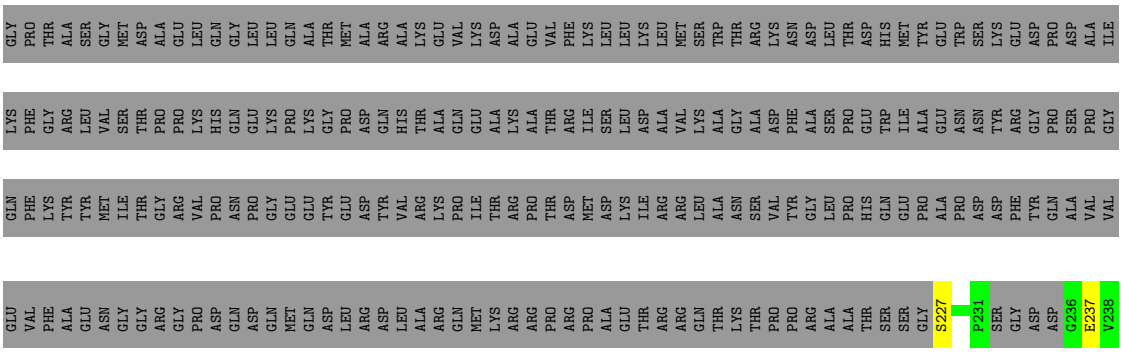




• Molecule 2: CAPSID PROTEIN VP3

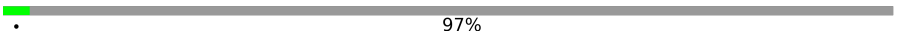
Chain E:

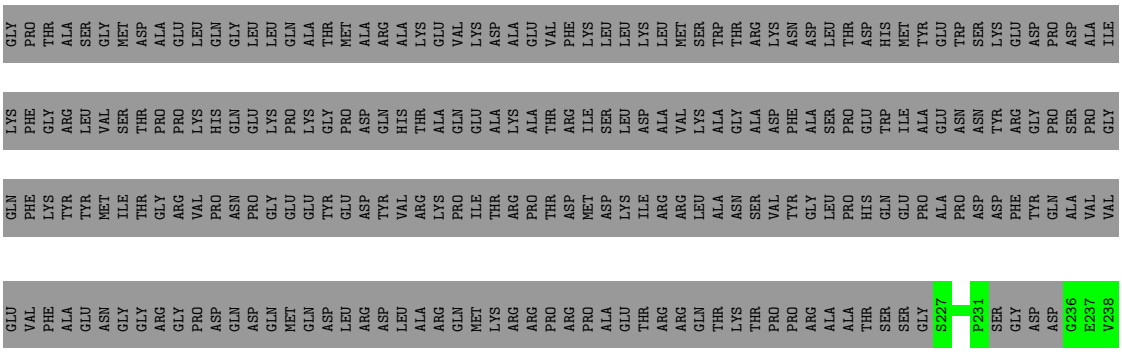




• Molecule 2: CAPSID PROTEIN VP3

Chain F:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	118.27Å 341.87Å 59.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	59.13 – 2.20 59.13 – 2.20	Depositor EDS
% Data completeness (in resolution range)	99.6 (59.13-2.20) 99.6 (59.13-2.20)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.40 (at 2.20Å)	Xtriage
Refinement program	BUSTER 2.11.2	Depositor
R, R_{free}	0.179 , 0.214 0.178 , 0.215	Depositor DCC
R_{free} test set	6202 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	41.4	Xtriage
Anisotropy	0.345	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 54.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	19298	wwPDB-VP
Average B, all atoms (Å^2)	55.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 13.71% 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: GOL, K

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	0.52	0/6137	0.59	0/8359
1	B	0.49	0/6111	0.60	0/8331
1	C	0.48	0/6117	0.60	0/8333
2	D	0.57	0/90	0.60	0/119
2	E	0.59	0/63	0.71	0/81
2	F	0.57	0/63	0.55	0/81
All	All	0.50	0/18581	0.60	0/25304

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	5996	0	5912	16	0
1	B	5972	0	5859	19	0
1	C	5982	0	5893	21	0
2	D	89	0	74	0	0
2	E	63	0	57	1	0
2	F	63	0	57	0	0
3	A	12	0	16	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	6	0	8	0	0
4	A	2	0	0	0	0
4	B	2	0	0	0	0
4	C	2	0	0	0	0
5	A	504	0	0	0	0
5	B	303	0	0	0	0
5	C	290	0	0	0	0
5	D	3	0	0	0	0
5	E	6	0	0	0	0
5	F	3	0	0	0	0
All	All	19298	0	17876	55	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 2.

All (55) 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:606:ILE:HG21	1:A:642:LEU:HD21	1.61	0.80
1:B:666:LEU:HB3	1:B:669:ILE:HG12	1.79	0.64
1:A:78:PRO:O	1:A:81:ARG:HG3	1.99	0.62
1:C:284:GLU:HA	1:C:737:VAL:HG12	1.86	0.57
1:A:284:GLU:HA	1:A:737:VAL:HG12	1.86	0.57
1:B:284:GLU:HA	1:B:737:VAL:HG12	1.87	0.56
1:A:398:TRP:HB3	1:A:521:LEU:HB3	1.89	0.55
1:C:187:PRO:HB3	1:C:197:LEU:HD11	1.88	0.55
1:B:187:PRO:HB3	1:B:197:LEU:HD11	1.88	0.55
1:C:398:TRP:HB3	1:C:521:LEU:HB3	1.89	0.55
1:A:187:PRO:HB3	1:A:197:LEU:HD11	1.90	0.54
1:B:398:TRP:HB3	1:B:521:LEU:HB3	1.89	0.53
1:B:642:LEU:HD21	1:B:649:VAL:HG22	1.91	0.53
1:C:173:ALA:HB1	1:C:405:LYS:HE2	1.91	0.51
1:B:218:ARG:O	2:E:237:GLU:HB2	2.10	0.50
1:B:204:THR:O	1:B:354:SER:HB2	2.12	0.49
1:C:382:LEU:HB3	1:C:393:LEU:HB3	1.95	0.49
1:B:519:ARG:NH1	1:B:579[B]:GLU:OE2	2.46	0.49
1:A:606:ILE:CG2	1:A:642:LEU:HD21	2.36	0.48
1:B:382:LEU:HB3	1:B:393:LEU:HB3	1.95	0.48
1:B:499:PRO:HA	1:B:504:PHE:CG	2.48	0.48
1:A:499:PRO:HA	1:A:504:PHE:CG	2.49	0.48
1:C:499:PRO:HA	1:C:504:PHE:CG	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:382:LEU:HB3	1:A:393:LEU:HB3	1.95	0.47
1:A:204:THR:O	1:A:354:SER:HB2	2.16	0.46
1:C:249:LEU:O	1:C:325:PRO:HB3	2.16	0.46
1:C:249:LEU:HD12	1:C:299:CYS:HB3	1.98	0.45
1:B:490:GLU:HB3	1:B:507:LEU:HD22	1.99	0.45
1:C:657:ASN:ND2	1:C:667:GLU:HA	2.32	0.45
1:A:31:ILE:HD12	1:A:125:ILE:HG23	1.99	0.45
1:B:775:ASN:CG	1:C:550:ILE:HG21	2.37	0.45
1:C:31:ILE:HD12	1:C:125:ILE:HG23	2.00	0.44
1:A:519:ARG:NH1	1:A:579[B]:GLU:OE2	2.51	0.44
1:C:297:LEU:HA	1:C:325:PRO:HG2	2.00	0.44
1:A:387:ALA:HB2	1:A:477:PHE:CD2	2.53	0.43
1:B:36:ARG:NH1	1:B:114:HIS:O	2.48	0.43
1:A:297:LEU:HA	1:A:325:PRO:HG2	2.01	0.43
1:B:31:ILE:HG23	1:B:125:ILE:HD12	2.01	0.42
1:B:249:LEU:HD12	1:B:299:CYS:HB3	2.02	0.42
1:C:31:ILE:HG23	1:C:125:ILE:HD12	2.01	0.42
1:C:746:ALA:HA	1:C:764:LEU:HD13	2.00	0.41
1:C:387:ALA:HB2	1:C:477:PHE:CD2	2.56	0.41
1:C:609:GLN:HB3	1:C:638:LYS:HD3	2.02	0.41
1:A:490:GLU:HB3	1:A:507:LEU:HD22	2.03	0.41
1:C:400:SER:HB3	1:C:519:ARG:HB3	2.03	0.41
1:A:31:ILE:HG23	1:A:125:ILE:HD12	2.01	0.41
1:B:31:ILE:HD12	1:B:125:ILE:HG23	2.03	0.41
1:C:349:ASN:O	1:C:696:PRO:HD2	2.20	0.41
1:A:400:SER:HB3	1:A:519:ARG:HB3	2.02	0.41
1:B:656:TRP:HZ2	1:B:666:LEU:HB2	1.85	0.40
1:C:490:GLU:HB3	1:C:507:LEU:HD22	2.02	0.40
1:B:349:ASN:O	1:B:696:PRO:HD2	2.20	0.40
1:C:105:LYS:HG2	1:C:461:ASN:HB3	2.04	0.40
1:B:618:LEU:HD11	1:B:671:LEU:HD21	2.02	0.40
1:C:204:THR:O	1:C:354:SER:HB2	2.22	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	763/853 (89%)	745 (98%)	17 (2%)	1 (0%)	51 60
1	B	765/853 (90%)	742 (97%)	22 (3%)	1 (0%)	51 60
1	C	761/853 (89%)	740 (97%)	20 (3%)	1 (0%)	51 60
2	D	10/242 (4%)	9 (90%)	1 (10%)	0	100 100
2	E	4/242 (2%)	4 (100%)	0	0	100 100
2	F	4/242 (2%)	4 (100%)	0	0	100 100
All	All	2307/3285 (70%)	2244 (97%)	60 (3%)	3 (0%)	51 60

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	406	GLY
1	B	406	GLY
1	C	406	GLY

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	653/739 (88%)	645 (99%)	8 (1%)	71 83
1	B	648/739 (88%)	639 (99%)	9 (1%)	67 80
1	C	651/739 (88%)	643 (99%)	8 (1%)	71 83
2	D	10/202 (5%)	9 (90%)	1 (10%)	7 7
2	E	7/202 (4%)	6 (86%)	1 (14%)	3 2
2	F	7/202 (4%)	7 (100%)	0	100 100
All	All	1976/2823 (70%)	1949 (99%)	27 (1%)	67 80

All (27) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	36	ARG
1	A	46	GLN
1	A	70	GLU
1	A	82	GLN
1	A	326	TYR
1	A	379	ASP
1	A	669	ILE
1	A	687	LEU
1	B	27	GLU
1	B	46	GLN
1	B	566	ILE
1	B	642	LEU
1	B	658	ASN
1	B	666	LEU
1	B	669	ILE
1	B	687	LEU
1	B	755	ASP
1	C	27	GLU
1	C	46	GLN
1	C	70	GLU
1	C	326	TYR
1	C	379	ASP
1	C	658	ASN
1	C	669	ILE
1	C	687	LEU
2	D	227	SER
2	E	227	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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 monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 9 ligands modelled in this entry, 6 are monoatomic - leaving 3 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	GOL	A	1004	-	5,5,5	0.17	0	5,5,5	0.25	0
3	GOL	A	1001	-	5,5,5	0.22	0	5,5,5	0.40	0
3	GOL	C	1001	-	5,5,5	0.24	0	5,5,5	0.37	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
3	GOL	A	1004	-	-	0/4/4/4	-
3	GOL	A	1001	-	-	0/4/4/4	-
3	GOL	C	1001	-	-	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^{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	765/853 (89%)	-0.48	7 (0%) 84 83	27, 43, 71, 110	0
1	B	766/853 (89%)	-0.29	5 (0%) 87 86	32, 56, 94, 128	0
1	C	765/853 (89%)	-0.29	11 (1%) 75 73	35, 57, 98, 143	0
2	D	12/242 (4%)	0.81	3 (25%) 0 0	45, 65, 85, 89	0
2	E	8/242 (3%)	0.04	0 100 100	58, 66, 77, 79	0
2	F	8/242 (3%)	0.49	0 100 100	56, 76, 87, 90	0
All	All	2324/3285 (70%)	-0.34	26 (1%) 80 79	27, 52, 92, 143	0

All (26) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	644	VAL	4.2
2	D	235	ASP	4.1
1	C	649	VAL	3.2
1	A	644	VAL	3.1
1	B	85	GLU	3.0
1	A	598	LEU	2.9
1	C	99	THR	2.9
1	C	78	PRO	2.9
1	B	792	ILE	2.8
1	C	70	GLU	2.8
1	A	606	ILE	2.7
2	D	234	ASP	2.7
1	A	600	ARG	2.6
1	C	72	GLU	2.6
1	C	76	ALA	2.5
1	A	28	ASP	2.4
1	A	133	PHE	2.3
1	C	75	ALA	2.3
2	D	232	SER	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	606	ILE	2.2
1	C	74	ASP	2.2
1	B	133	PHE	2.1
1	C	647	ILE	2.1
1	C	71	LEU	2.1
1	B	645	LYS	2.1
1	A	597	ALA	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 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^{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
3	GOL	C	1001	6/6	0.77	0.22	53,63,64,65	0
3	GOL	A	1001	6/6	0.82	0.16	48,61,63,65	0
3	GOL	A	1004	6/6	0.93	0.12	60,61,61,62	0
4	K	C	1003	1/1	0.98	0.05	70,70,70,70	0
4	K	B	1003	1/1	0.99	0.05	56,56,56,56	0
4	K	A	1003	1/1	0.99	0.04	37,37,37,37	0
4	K	A	1002	1/1	1.00	0.11	34,34,34,34	0
4	K	C	1002	1/1	1.00	0.07	38,38,38,38	0
4	K	B	1002	1/1	1.00	0.08	43,43,43,43	0

6.5 Other polymers (i)

There are no such residues in this entry.