Full wwPDB X-ray Structure Validation Report (i)

Jun 26, 2024 – 05:38 AM EDT

PDB ID	:	6Y5X
Title	:	Structure of apo New Jersey Polyomavirus VP1
Authors	:	Stroh, L.J.; Rustmeier, N.H.; Stehle, T.
Deposited on	:	2020-02-26
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 (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 (1)) were used in the production of this report:

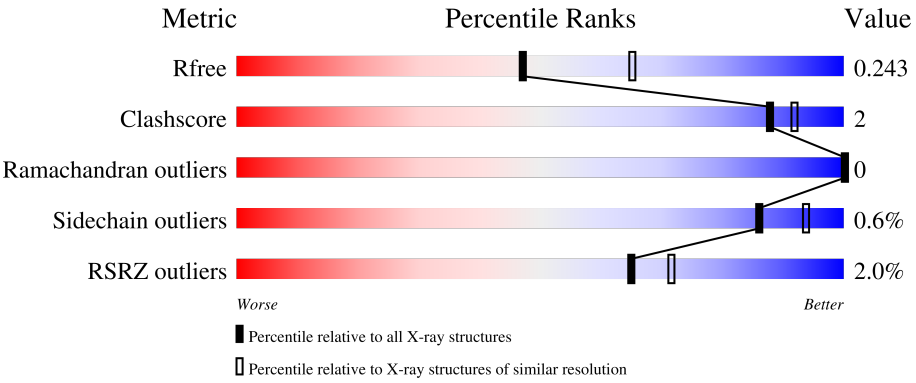
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (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 2.30 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}	130704	5042 (2.30-2.30)
Clashscore	141614	5643 (2.30-2.30)
Ramachandran outliers	138981	5575 (2.30-2.30)
Sidechain outliers	138945	5575 (2.30-2.30)
RSRZ outliers	127900	4938 (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	311	2% 84% · 12%
1	B	311	% 84% · 12%
1	C	311	2% 85% · 12%
1	D	311	3% 87% · 9%
1	E	311	% 85% · 12%

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Mol	Chain	Length	Quality of chain
1	F	311	2% 86% 5% 9%
1	G	311	2% 85% 7% 8%
1	H	311	3% 84% 12%
1	I	311	% 84% 5% 12%
1	J	311	% 83% 5% 12%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 22259 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 VP1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	275	Total	C	N	O	S	0	1	0
			2111	1329	361	407	14			
1	B	274	Total	C	N	O	S	0	0	0
			2106	1326	358	408	14			
1	C	273	Total	C	N	O	S	0	0	0
			2083	1314	356	399	14			
1	D	283	Total	C	N	O	S	0	0	0
			2154	1360	368	413	13			
1	E	274	Total	C	N	O	S	0	0	0
			2104	1326	359	404	15			
1	F	282	Total	C	N	O	S	0	0	0
			2146	1354	366	412	14			
1	G	286	Total	C	N	O	S	0	0	0
			2174	1372	370	418	14			
1	H	274	Total	C	N	O	S	0	0	0
			2094	1318	357	405	14			
1	I	274	Total	C	N	O	S	0	0	0
			2087	1314	358	402	13			
1	J	274	Total	C	N	O	S	0	0	0
			2087	1317	357	399	14			

There are 230 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	12	MET	-	initiating methionine	UNP A0A024B5J2
A	13	GLY	-	expression tag	UNP A0A024B5J2
A	14	SER	-	expression tag	UNP A0A024B5J2
A	15	SER	-	expression tag	UNP A0A024B5J2
A	16	HIS	-	expression tag	UNP A0A024B5J2
A	17	HIS	-	expression tag	UNP A0A024B5J2
A	18	HIS	-	expression tag	UNP A0A024B5J2
A	19	HIS	-	expression tag	UNP A0A024B5J2
A	20	HIS	-	expression tag	UNP A0A024B5J2

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Chain	Residue	Modelled	Actual	Comment	Reference
A	21	HIS	-	expression tag	UNP A0A024B5J2
A	22	SER	-	expression tag	UNP A0A024B5J2
A	23	SER	-	expression tag	UNP A0A024B5J2
A	24	GLY	-	expression tag	UNP A0A024B5J2
A	25	LEU	-	expression tag	UNP A0A024B5J2
A	26	VAL	-	expression tag	UNP A0A024B5J2
A	27	PRO	-	expression tag	UNP A0A024B5J2
A	28	ARG	-	expression tag	UNP A0A024B5J2
A	29	GLY	-	expression tag	UNP A0A024B5J2
A	30	SER	-	expression tag	UNP A0A024B5J2
A	31	HIS	-	expression tag	UNP A0A024B5J2
A	32	MET	-	expression tag	UNP A0A024B5J2
A	33	LEU	-	expression tag	UNP A0A024B5J2
A	34	ASP	-	expression tag	UNP A0A024B5J2
B	12	MET	-	initiating methionine	UNP A0A024B5J2
B	13	GLY	-	expression tag	UNP A0A024B5J2
B	14	SER	-	expression tag	UNP A0A024B5J2
B	15	SER	-	expression tag	UNP A0A024B5J2
B	16	HIS	-	expression tag	UNP A0A024B5J2
B	17	HIS	-	expression tag	UNP A0A024B5J2
B	18	HIS	-	expression tag	UNP A0A024B5J2
B	19	HIS	-	expression tag	UNP A0A024B5J2
B	20	HIS	-	expression tag	UNP A0A024B5J2
B	21	HIS	-	expression tag	UNP A0A024B5J2
B	22	SER	-	expression tag	UNP A0A024B5J2
B	23	SER	-	expression tag	UNP A0A024B5J2
B	24	GLY	-	expression tag	UNP A0A024B5J2
B	25	LEU	-	expression tag	UNP A0A024B5J2
B	26	VAL	-	expression tag	UNP A0A024B5J2
B	27	PRO	-	expression tag	UNP A0A024B5J2
B	28	ARG	-	expression tag	UNP A0A024B5J2
B	29	GLY	-	expression tag	UNP A0A024B5J2
B	30	SER	-	expression tag	UNP A0A024B5J2
B	31	HIS	-	expression tag	UNP A0A024B5J2
B	32	MET	-	expression tag	UNP A0A024B5J2
B	33	LEU	-	expression tag	UNP A0A024B5J2
B	34	ASP	-	expression tag	UNP A0A024B5J2
C	12	MET	-	initiating methionine	UNP A0A024B5J2
C	13	GLY	-	expression tag	UNP A0A024B5J2
C	14	SER	-	expression tag	UNP A0A024B5J2
C	15	SER	-	expression tag	UNP A0A024B5J2
C	16	HIS	-	expression tag	UNP A0A024B5J2

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Chain	Residue	Modelled	Actual	Comment	Reference
C	17	HIS	-	expression tag	UNP A0A024B5J2
C	18	HIS	-	expression tag	UNP A0A024B5J2
C	19	HIS	-	expression tag	UNP A0A024B5J2
C	20	HIS	-	expression tag	UNP A0A024B5J2
C	21	HIS	-	expression tag	UNP A0A024B5J2
C	22	SER	-	expression tag	UNP A0A024B5J2
C	23	SER	-	expression tag	UNP A0A024B5J2
C	24	GLY	-	expression tag	UNP A0A024B5J2
C	25	LEU	-	expression tag	UNP A0A024B5J2
C	26	VAL	-	expression tag	UNP A0A024B5J2
C	27	PRO	-	expression tag	UNP A0A024B5J2
C	28	ARG	-	expression tag	UNP A0A024B5J2
C	29	GLY	-	expression tag	UNP A0A024B5J2
C	30	SER	-	expression tag	UNP A0A024B5J2
C	31	HIS	-	expression tag	UNP A0A024B5J2
C	32	MET	-	expression tag	UNP A0A024B5J2
C	33	LEU	-	expression tag	UNP A0A024B5J2
C	34	ASP	-	expression tag	UNP A0A024B5J2
D	12	MET	-	initiating methionine	UNP A0A024B5J2
D	13	GLY	-	expression tag	UNP A0A024B5J2
D	14	SER	-	expression tag	UNP A0A024B5J2
D	15	SER	-	expression tag	UNP A0A024B5J2
D	16	HIS	-	expression tag	UNP A0A024B5J2
D	17	HIS	-	expression tag	UNP A0A024B5J2
D	18	HIS	-	expression tag	UNP A0A024B5J2
D	19	HIS	-	expression tag	UNP A0A024B5J2
D	20	HIS	-	expression tag	UNP A0A024B5J2
D	21	HIS	-	expression tag	UNP A0A024B5J2
D	22	SER	-	expression tag	UNP A0A024B5J2
D	23	SER	-	expression tag	UNP A0A024B5J2
D	24	GLY	-	expression tag	UNP A0A024B5J2
D	25	LEU	-	expression tag	UNP A0A024B5J2
D	26	VAL	-	expression tag	UNP A0A024B5J2
D	27	PRO	-	expression tag	UNP A0A024B5J2
D	28	ARG	-	expression tag	UNP A0A024B5J2
D	29	GLY	-	expression tag	UNP A0A024B5J2
D	30	SER	-	expression tag	UNP A0A024B5J2
D	31	HIS	-	expression tag	UNP A0A024B5J2
D	32	MET	-	expression tag	UNP A0A024B5J2
D	33	LEU	-	expression tag	UNP A0A024B5J2
D	34	ASP	-	expression tag	UNP A0A024B5J2
E	12	MET	-	initiating methionine	UNP A0A024B5J2

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Chain	Residue	Modelled	Actual	Comment	Reference
E	13	GLY	-	expression tag	UNP A0A024B5J2
E	14	SER	-	expression tag	UNP A0A024B5J2
E	15	SER	-	expression tag	UNP A0A024B5J2
E	16	HIS	-	expression tag	UNP A0A024B5J2
E	17	HIS	-	expression tag	UNP A0A024B5J2
E	18	HIS	-	expression tag	UNP A0A024B5J2
E	19	HIS	-	expression tag	UNP A0A024B5J2
E	20	HIS	-	expression tag	UNP A0A024B5J2
E	21	HIS	-	expression tag	UNP A0A024B5J2
E	22	SER	-	expression tag	UNP A0A024B5J2
E	23	SER	-	expression tag	UNP A0A024B5J2
E	24	GLY	-	expression tag	UNP A0A024B5J2
E	25	LEU	-	expression tag	UNP A0A024B5J2
E	26	VAL	-	expression tag	UNP A0A024B5J2
E	27	PRO	-	expression tag	UNP A0A024B5J2
E	28	ARG	-	expression tag	UNP A0A024B5J2
E	29	GLY	-	expression tag	UNP A0A024B5J2
E	30	SER	-	expression tag	UNP A0A024B5J2
E	31	HIS	-	expression tag	UNP A0A024B5J2
E	32	MET	-	expression tag	UNP A0A024B5J2
E	33	LEU	-	expression tag	UNP A0A024B5J2
E	34	ASP	-	expression tag	UNP A0A024B5J2
F	12	MET	-	initiating methionine	UNP A0A024B5J2
F	13	GLY	-	expression tag	UNP A0A024B5J2
F	14	SER	-	expression tag	UNP A0A024B5J2
F	15	SER	-	expression tag	UNP A0A024B5J2
F	16	HIS	-	expression tag	UNP A0A024B5J2
F	17	HIS	-	expression tag	UNP A0A024B5J2
F	18	HIS	-	expression tag	UNP A0A024B5J2
F	19	HIS	-	expression tag	UNP A0A024B5J2
F	20	HIS	-	expression tag	UNP A0A024B5J2
F	21	HIS	-	expression tag	UNP A0A024B5J2
F	22	SER	-	expression tag	UNP A0A024B5J2
F	23	SER	-	expression tag	UNP A0A024B5J2
F	24	GLY	-	expression tag	UNP A0A024B5J2
F	25	LEU	-	expression tag	UNP A0A024B5J2
F	26	VAL	-	expression tag	UNP A0A024B5J2
F	27	PRO	-	expression tag	UNP A0A024B5J2
F	28	ARG	-	expression tag	UNP A0A024B5J2
F	29	GLY	-	expression tag	UNP A0A024B5J2
F	30	SER	-	expression tag	UNP A0A024B5J2
F	31	HIS	-	expression tag	UNP A0A024B5J2

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Chain	Residue	Modelled	Actual	Comment	Reference
F	32	MET	-	expression tag	UNP A0A024B5J2
F	33	LEU	-	expression tag	UNP A0A024B5J2
F	34	ASP	-	expression tag	UNP A0A024B5J2
G	12	MET	-	initiating methionine	UNP A0A024B5J2
G	13	GLY	-	expression tag	UNP A0A024B5J2
G	14	SER	-	expression tag	UNP A0A024B5J2
G	15	SER	-	expression tag	UNP A0A024B5J2
G	16	HIS	-	expression tag	UNP A0A024B5J2
G	17	HIS	-	expression tag	UNP A0A024B5J2
G	18	HIS	-	expression tag	UNP A0A024B5J2
G	19	HIS	-	expression tag	UNP A0A024B5J2
G	20	HIS	-	expression tag	UNP A0A024B5J2
G	21	HIS	-	expression tag	UNP A0A024B5J2
G	22	SER	-	expression tag	UNP A0A024B5J2
G	23	SER	-	expression tag	UNP A0A024B5J2
G	24	GLY	-	expression tag	UNP A0A024B5J2
G	25	LEU	-	expression tag	UNP A0A024B5J2
G	26	VAL	-	expression tag	UNP A0A024B5J2
G	27	PRO	-	expression tag	UNP A0A024B5J2
G	28	ARG	-	expression tag	UNP A0A024B5J2
G	29	GLY	-	expression tag	UNP A0A024B5J2
G	30	SER	-	expression tag	UNP A0A024B5J2
G	31	HIS	-	expression tag	UNP A0A024B5J2
G	32	MET	-	expression tag	UNP A0A024B5J2
G	33	LEU	-	expression tag	UNP A0A024B5J2
G	34	ASP	-	expression tag	UNP A0A024B5J2
H	12	MET	-	initiating methionine	UNP A0A024B5J2
H	13	GLY	-	expression tag	UNP A0A024B5J2
H	14	SER	-	expression tag	UNP A0A024B5J2
H	15	SER	-	expression tag	UNP A0A024B5J2
H	16	HIS	-	expression tag	UNP A0A024B5J2
H	17	HIS	-	expression tag	UNP A0A024B5J2
H	18	HIS	-	expression tag	UNP A0A024B5J2
H	19	HIS	-	expression tag	UNP A0A024B5J2
H	20	HIS	-	expression tag	UNP A0A024B5J2
H	21	HIS	-	expression tag	UNP A0A024B5J2
H	22	SER	-	expression tag	UNP A0A024B5J2
H	23	SER	-	expression tag	UNP A0A024B5J2
H	24	GLY	-	expression tag	UNP A0A024B5J2
H	25	LEU	-	expression tag	UNP A0A024B5J2
H	26	VAL	-	expression tag	UNP A0A024B5J2
H	27	PRO	-	expression tag	UNP A0A024B5J2

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Chain	Residue	Modelled	Actual	Comment	Reference
H	28	ARG	-	expression tag	UNP A0A024B5J2
H	29	GLY	-	expression tag	UNP A0A024B5J2
H	30	SER	-	expression tag	UNP A0A024B5J2
H	31	HIS	-	expression tag	UNP A0A024B5J2
H	32	MET	-	expression tag	UNP A0A024B5J2
H	33	LEU	-	expression tag	UNP A0A024B5J2
H	34	ASP	-	expression tag	UNP A0A024B5J2
I	12	MET	-	initiating methionine	UNP A0A024B5J2
I	13	GLY	-	expression tag	UNP A0A024B5J2
I	14	SER	-	expression tag	UNP A0A024B5J2
I	15	SER	-	expression tag	UNP A0A024B5J2
I	16	HIS	-	expression tag	UNP A0A024B5J2
I	17	HIS	-	expression tag	UNP A0A024B5J2
I	18	HIS	-	expression tag	UNP A0A024B5J2
I	19	HIS	-	expression tag	UNP A0A024B5J2
I	20	HIS	-	expression tag	UNP A0A024B5J2
I	21	HIS	-	expression tag	UNP A0A024B5J2
I	22	SER	-	expression tag	UNP A0A024B5J2
I	23	SER	-	expression tag	UNP A0A024B5J2
I	24	GLY	-	expression tag	UNP A0A024B5J2
I	25	LEU	-	expression tag	UNP A0A024B5J2
I	26	VAL	-	expression tag	UNP A0A024B5J2
I	27	PRO	-	expression tag	UNP A0A024B5J2
I	28	ARG	-	expression tag	UNP A0A024B5J2
I	29	GLY	-	expression tag	UNP A0A024B5J2
I	30	SER	-	expression tag	UNP A0A024B5J2
I	31	HIS	-	expression tag	UNP A0A024B5J2
I	32	MET	-	expression tag	UNP A0A024B5J2
I	33	LEU	-	expression tag	UNP A0A024B5J2
I	34	ASP	-	expression tag	UNP A0A024B5J2
J	12	MET	-	initiating methionine	UNP A0A024B5J2
J	13	GLY	-	expression tag	UNP A0A024B5J2
J	14	SER	-	expression tag	UNP A0A024B5J2
J	15	SER	-	expression tag	UNP A0A024B5J2
J	16	HIS	-	expression tag	UNP A0A024B5J2
J	17	HIS	-	expression tag	UNP A0A024B5J2
J	18	HIS	-	expression tag	UNP A0A024B5J2
J	19	HIS	-	expression tag	UNP A0A024B5J2
J	20	HIS	-	expression tag	UNP A0A024B5J2
J	21	HIS	-	expression tag	UNP A0A024B5J2
J	22	SER	-	expression tag	UNP A0A024B5J2
J	23	SER	-	expression tag	UNP A0A024B5J2

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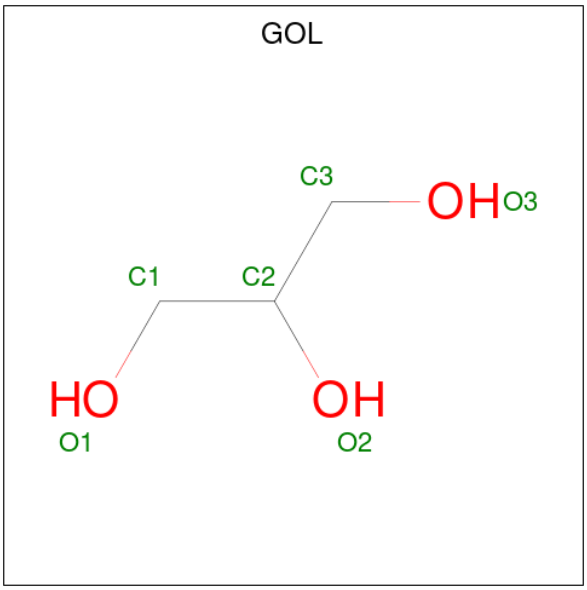
Chain	Residue	Modelled	Actual	Comment	Reference
J	24	GLY	-	expression tag	UNP A0A024B5J2
J	25	LEU	-	expression tag	UNP A0A024B5J2
J	26	VAL	-	expression tag	UNP A0A024B5J2
J	27	PRO	-	expression tag	UNP A0A024B5J2
J	28	ARG	-	expression tag	UNP A0A024B5J2
J	29	GLY	-	expression tag	UNP A0A024B5J2
J	30	SER	-	expression tag	UNP A0A024B5J2
J	31	HIS	-	expression tag	UNP A0A024B5J2
J	32	MET	-	expression tag	UNP A0A024B5J2
J	33	LEU	-	expression tag	UNP A0A024B5J2
J	34	ASP	-	expression tag	UNP A0A024B5J2

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



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

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	1	Total C O 6 3 3	0	0
2	D	1	Total C O 6 3 3	0	0
2	D	1	Total C O 6 3 3	0	0
2	D	1	Total C O 6 3 3	0	0
2	D	1	Total C O 6 3 3	0	0
2	E	1	Total C O 6 3 3	0	0
2	E	1	Total C O 6 3 3	0	0
2	E	1	Total C O 6 3 3	0	0
2	F	1	Total C O 6 3 3	0	0
2	F	1	Total C O 6 3 3	0	0
2	G	1	Total C O 6 3 3	0	0
2	G	1	Total C O 6 3 3	0	0
2	G	1	Total C O 6 3 3	0	0
2	G	1	Total C O 6 3 3	0	0
2	H	1	Total C O 6 3 3	0	0
2	H	1	Total C O 6 3 3	0	0
2	I	1	Total C O 6 3 3	0	0
2	I	1	Total C O 6 3 3	0	0
2	J	1	Total C O 6 3 3	0	0
2	J	1	Total C O 6 3 3	0	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	2	Total Mg 2 2	0	0
3	C	2	Total Mg 2 2	0	0
3	D	1	Total Mg 1 1	0	0
3	F	2	Total Mg 2 2	0	0
3	H	1	Total Mg 1 1	0	0
3	I	1	Total Mg 1 1	0	0

- Molecule 4 is water.

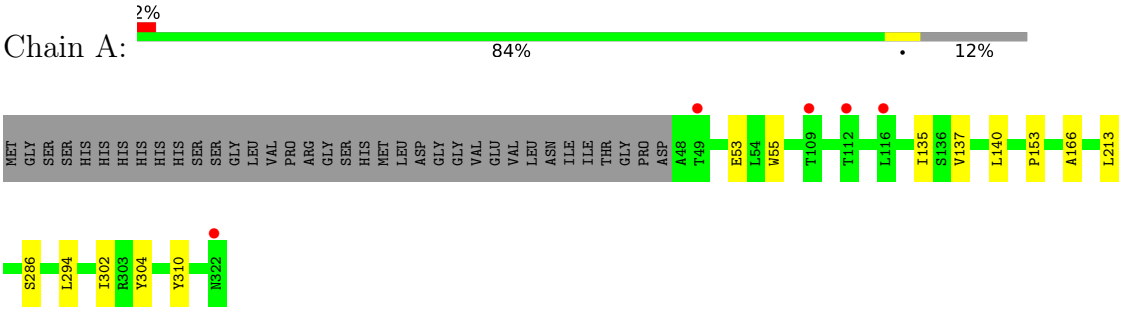
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	104	Total O 104 104	0	0
4	B	100	Total O 100 100	0	0
4	C	90	Total O 90 90	0	0
4	D	127	Total O 127 127	0	0
4	E	115	Total O 115 115	0	0
4	F	94	Total O 94 94	0	0
4	G	78	Total O 78 78	0	0
4	H	66	Total O 66 66	0	0
4	I	82	Total O 82 82	0	0
4	J	92	Total O 92 92	0	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.

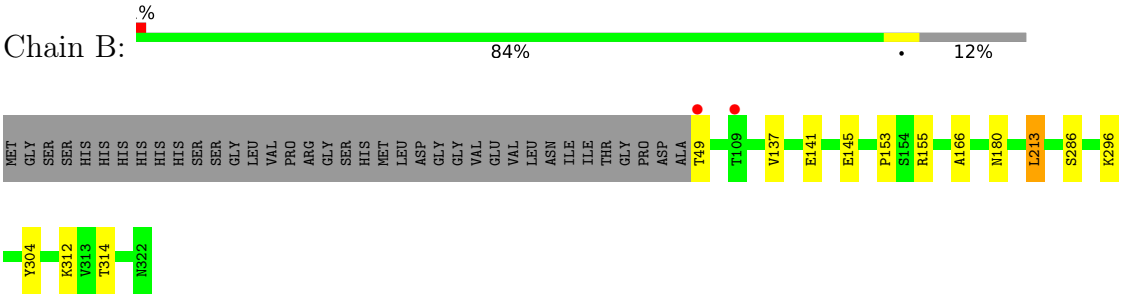
• Molecule 1: VP1

Chain A:



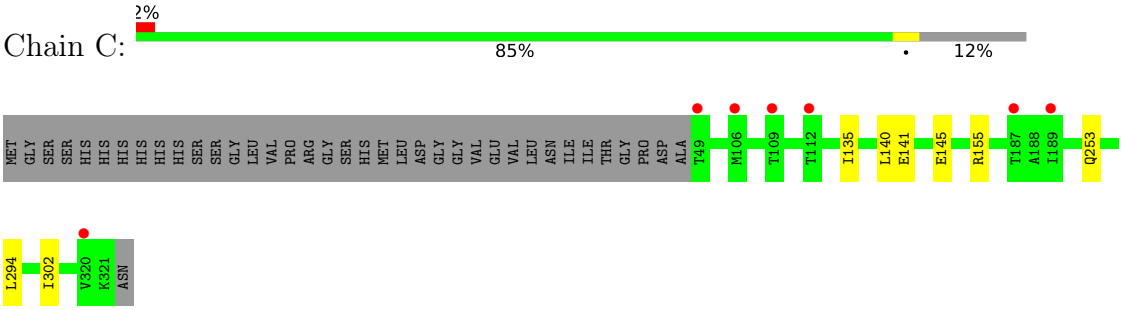
• Molecule 1: VP1

Chain B:



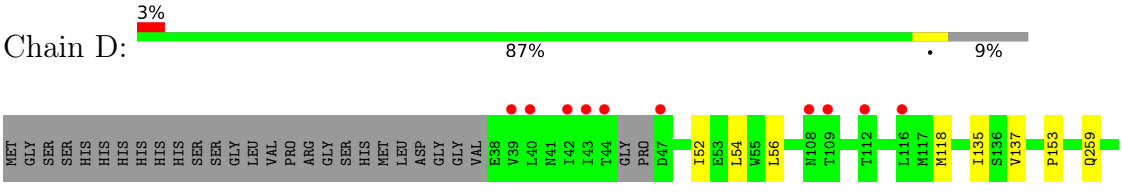
• Molecule 1: VP1

Chain C:



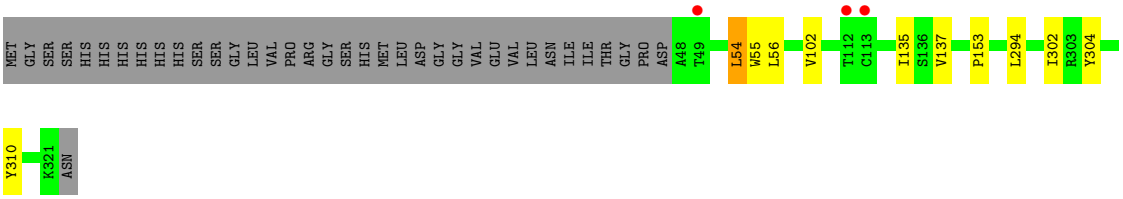
• Molecule 1: VP1

Chain D:



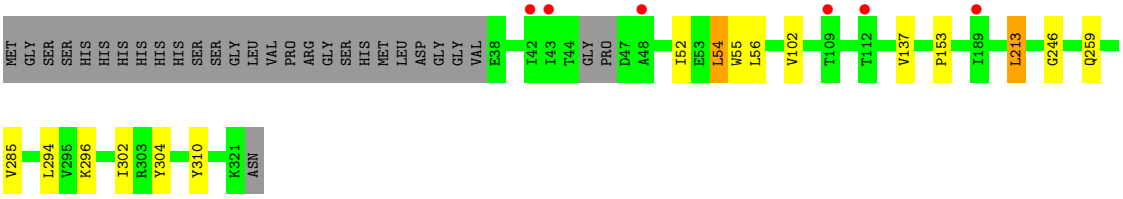
• Molecule 1: VP1

Chain E:



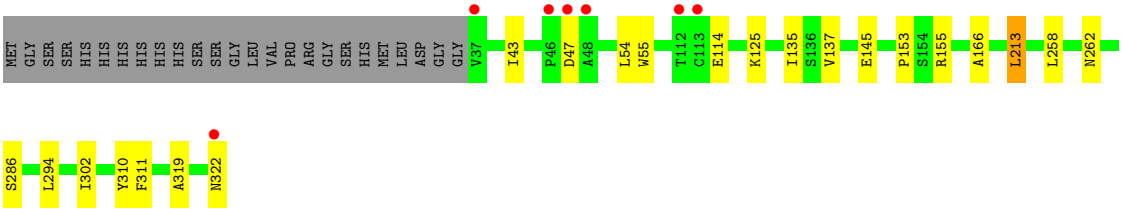
• Molecule 1: VP1

Chain F:



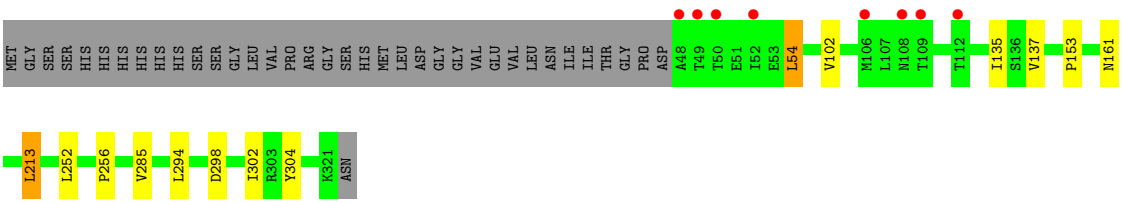
• Molecule 1: VP1

Chain G:



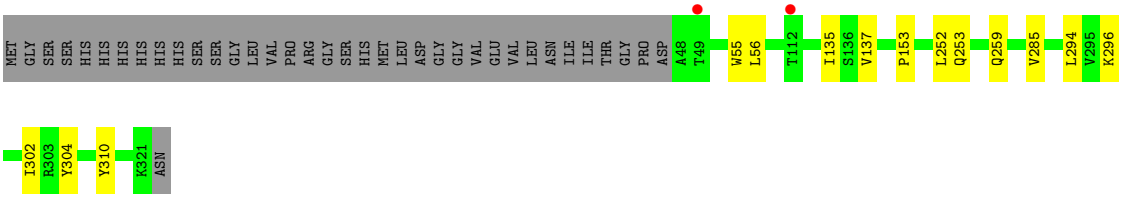
• Molecule 1: VP1

Chain H:

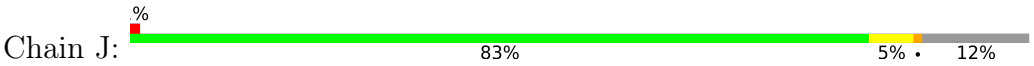


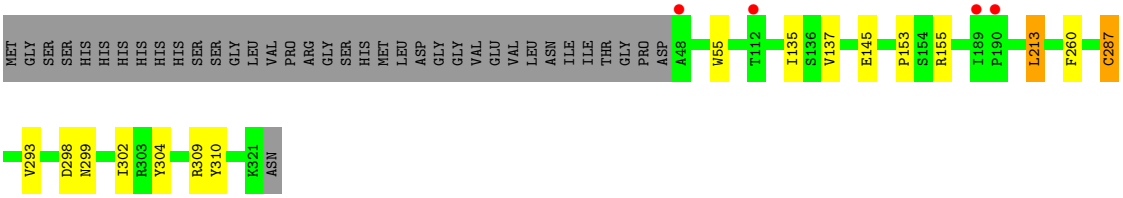
• Molecule 1: VP1

Chain I:



• Molecule 1: VP1





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	86.48Å 151.76Å 130.91Å 90.00° 106.85° 90.00°	Depositor
Resolution (Å)	48.31 – 2.30 48.31 – 2.30	Depositor EDS
% Data completeness (in resolution range)	99.9 (48.31-2.30) 100.0 (48.31-2.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.79 (at 2.29Å)	Xtriage
Refinement program	PHENIX (1.16_3549: ???)	Depositor
R, R_{free}	0.202 , 0.243 0.202 , 0.243	Depositor DCC
R_{free} test set	7153 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	24.6	Xtriage
Anisotropy	0.733	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 35.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.020 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	22259	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.70% 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, MG

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	0.25	0/2159	0.44	0/2935
1	B	0.25	0/2154	0.44	0/2928
1	C	0.25	0/2131	0.45	0/2898
1	D	0.25	0/2201	0.45	0/2992
1	E	0.25	0/2152	0.46	0/2923
1	F	0.25	0/2193	0.45	0/2983
1	G	0.25	0/2223	0.45	0/3025
1	H	0.25	0/2142	0.46	0/2913
1	I	0.25	0/2135	0.45	0/2903
1	J	0.24	0/2135	0.44	0/2904
All	All	0.25	0/21625	0.45	0/29404

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	2111	0	2047	11	0
1	B	2106	0	2045	9	0
1	C	2083	0	2020	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	2154	0	2087	9	0
1	E	2104	0	2056	9	0
1	F	2146	0	2083	12	0
1	G	2174	0	2114	12	0
1	H	2094	0	2027	10	0
1	I	2087	0	2019	11	0
1	J	2087	0	2028	12	0
2	A	12	0	16	0	0
2	B	18	0	24	2	0
2	C	12	0	16	0	0
2	D	24	0	32	1	0
2	E	18	0	24	0	0
2	F	12	0	16	0	0
2	G	24	0	32	1	0
2	H	12	0	16	2	0
2	I	12	0	16	1	0
2	J	12	0	16	0	0
3	A	2	0	0	0	0
3	C	2	0	0	0	0
3	D	1	0	0	0	0
3	F	2	0	0	0	0
3	H	1	0	0	0	0
3	I	1	0	0	0	0
4	A	104	0	0	0	0
4	B	100	0	0	0	0
4	C	90	0	0	0	0
4	D	127	0	0	1	0
4	E	115	0	0	0	0
4	F	94	0	0	1	0
4	G	78	0	0	0	0
4	H	66	0	0	0	0
4	I	82	0	0	0	0
4	J	92	0	0	0	0
All	All	22259	0	20734	84	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 (84) 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:B:141:GLU:H	2:B:403:GOL:H32	1.44	0.81
1:I:137:VAL:HB	1:I:153:PRO:HB2	1.76	0.66
1:C:140:LEU:HG	1:C:141:GLU:HG3	1.82	0.62
1:B:145:GLU:HG2	1:B:155:ARG:HG2	1.83	0.61
1:F:54:LEU:HD11	1:F:285:VAL:HG21	1.82	0.61
1:C:145:GLU:HG2	1:C:155:ARG:HG2	1.83	0.60
2:B:401:GOL:H2	1:C:253:GLN:HE21	1.70	0.57
1:A:55:TRP:CZ3	1:A:310:TYR:HB2	2.40	0.56
2:H:402:GOL:HO2	1:I:253:GLN:HE21	1.54	0.55
1:A:137:VAL:HB	1:A:153:PRO:HB2	1.89	0.54
1:J:137:VAL:HB	1:J:153:PRO:HB2	1.90	0.54
1:A:213:LEU:HD13	1:E:55:TRP:CE3	2.43	0.53
1:E:137:VAL:HB	1:E:153:PRO:HB2	1.89	0.53
1:C:141:GLU:H	2:D:403:GOL:H2	1.74	0.52
1:D:137:VAL:HB	1:D:153:PRO:HB2	1.92	0.52
1:J:293:VAL:HG13	1:J:302:ILE:HB	1.92	0.52
1:F:54:LEU:HD22	1:F:102:VAL:HG21	1.91	0.52
1:G:137:VAL:HB	1:G:153:PRO:HB2	1.91	0.52
1:A:140:LEU:HD12	1:B:180:ASN:HB3	1.91	0.52
1:A:304:TYR:OH	1:E:135:ILE:O	2.28	0.51
1:J:145:GLU:HG2	1:J:155:ARG:HG2	1.91	0.51
1:B:49:THR:HG23	1:B:314:THR:HG23	1.92	0.51
1:F:56:LEU:HD11	1:F:285:VAL:HG23	1.92	0.51
1:G:294:LEU:O	1:G:302:ILE:HA	2.11	0.50
1:F:304:TYR:OH	1:J:135:ILE:O	2.31	0.48
1:H:137:VAL:HB	1:H:153:PRO:HB2	1.94	0.48
1:I:137:VAL:HG21	1:J:302:ILE:HD11	1.95	0.48
1:A:135:ILE:O	1:B:304:TYR:OH	2.29	0.48
1:G:145:GLU:HG2	1:G:155:ARG:HG2	1.95	0.47
1:B:166:ALA:HB3	1:B:286:SER:HB2	1.97	0.47
1:D:259:GLN:NE2	4:D:501:HOH:O	2.37	0.47
1:I:135:ILE:O	1:J:304:TYR:OH	2.32	0.47
1:A:302:ILE:HD11	1:E:137:VAL:HG21	1.96	0.47
1:I:55:TRP:CZ3	1:I:310:TYR:HB2	2.50	0.46
1:G:43:ILE:HD11	1:G:319:ALA:HB2	1.96	0.46
1:G:135:ILE:O	1:H:304:TYR:OH	2.33	0.46
1:E:54:LEU:HD22	1:E:102:VAL:HG21	1.98	0.46
1:G:114:GLU:O	1:G:322:ASN:N	2.43	0.46
1:G:166:ALA:HB3	1:G:286:SER:HB2	1.97	0.46
1:D:135:ILE:O	1:E:304:TYR:OH	2.33	0.45
1:G:55:TRP:CE3	1:H:213:LEU:HD13	2.51	0.45
2:I:402:GOL:O3	2:I:402:GOL:O1	2.21	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:137:VAL:HB	1:F:153:PRO:HB2	1.98	0.45
1:F:55:TRP:CE3	1:G:213:LEU:HD13	2.51	0.45
2:G:403:GOL:H12	1:H:252:LEU:HB2	1.98	0.44
1:B:137:VAL:HB	1:B:153:PRO:HB2	1.99	0.44
1:A:166:ALA:HB3	1:A:286:SER:HB2	2.00	0.43
1:H:54:LEU:HD11	1:H:285:VAL:HG21	2.00	0.43
1:D:294:LEU:O	1:D:302:ILE:HA	2.18	0.43
1:H:135:ILE:O	1:I:304:TYR:OH	2.35	0.43
1:I:55:TRP:CE3	1:J:213:LEU:HD13	2.52	0.43
1:H:161:ASN:HD21	1:H:256:PRO:HB3	1.84	0.43
1:H:54:LEU:HD22	1:H:102:VAL:HG21	2.01	0.43
1:C:135:ILE:O	1:D:304:TYR:OH	2.35	0.42
1:D:52:ILE:HD13	1:D:52:ILE:HA	1.89	0.42
1:D:54:LEU:HD21	1:D:285:VAL:HG21	2.01	0.42
2:H:402:GOL:H32	1:I:252:LEU:H	1.85	0.42
1:A:55:TRP:CE3	1:B:213:LEU:HD13	2.54	0.42
1:J:298:ASP:OD1	1:J:299:ASN:N	2.52	0.42
1:H:294:LEU:O	1:H:302:ILE:HA	2.20	0.42
1:H:298:ASP:N	1:H:298:ASP:OD1	2.50	0.42
1:F:55:TRP:CZ3	1:F:310:TYR:HB2	2.55	0.42
1:I:56:LEU:HD11	1:I:285:VAL:HG23	2.01	0.42
1:F:213:LEU:HD13	1:J:55:TRP:CE3	2.55	0.42
1:A:53:GLU:OE2	1:A:310:TYR:OH	2.38	0.42
1:D:118:MET:HG3	1:D:320:VAL:HG21	2.02	0.41
1:C:294:LEU:O	1:C:302:ILE:HA	2.20	0.41
1:J:55:TRP:CZ3	1:J:310:TYR:HB2	2.55	0.41
1:A:294:LEU:O	1:A:302:ILE:HA	2.21	0.41
1:I:296:LYS:HE2	1:I:296:LYS:HB3	1.89	0.41
1:E:56:LEU:HD23	1:E:56:LEU:HA	1.93	0.41
1:F:246:GLY:HA3	1:J:260:PHE:CZ	2.56	0.41
1:G:55:TRP:CZ3	1:G:310:TYR:HB2	2.56	0.41
1:F:294:LEU:O	1:F:302:ILE:HA	2.20	0.41
1:G:125:LYS:NZ	1:G:262:ASN:O	2.39	0.41
1:I:294:LEU:O	1:I:302:ILE:HA	2.20	0.41
1:J:287:CYS:HB2	1:J:309:ARG:HD2	2.02	0.41
1:E:55:TRP:CZ3	1:E:310:TYR:HB2	2.56	0.41
1:G:54:LEU:HG	1:G:311:PHE:HB2	2.03	0.41
1:B:296:LYS:HE2	1:B:296:LYS:HB3	1.90	0.40
1:F:52:ILE:HD13	1:F:52:ILE:HA	1.90	0.40
1:E:294:LEU:O	1:E:302:ILE:HA	2.22	0.40
1:F:296:LYS:NZ	4:F:508:HOH:O	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:56:LEU:HD23	1:D:56:LEU:HA	1.96	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	274/311 (88%)	262 (96%)	12 (4%)	0	100	100
1	B	272/311 (88%)	259 (95%)	13 (5%)	0	100	100
1	C	271/311 (87%)	259 (96%)	12 (4%)	0	100	100
1	D	279/311 (90%)	267 (96%)	12 (4%)	0	100	100
1	E	272/311 (88%)	260 (96%)	12 (4%)	0	100	100
1	F	278/311 (89%)	265 (95%)	13 (5%)	0	100	100
1	G	284/311 (91%)	273 (96%)	11 (4%)	0	100	100
1	H	272/311 (88%)	259 (95%)	13 (5%)	0	100	100
1	I	272/311 (88%)	261 (96%)	11 (4%)	0	100	100
1	J	272/311 (88%)	262 (96%)	10 (4%)	0	100	100
All	All	2746/3110 (88%)	2627 (96%)	119 (4%)	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	226/261 (87%)	226 (100%)	0	100	100
1	B	227/261 (87%)	225 (99%)	2 (1%)	78	89
1	C	222/261 (85%)	222 (100%)	0	100	100
1	D	228/261 (87%)	228 (100%)	0	100	100
1	E	227/261 (87%)	226 (100%)	1 (0%)	91	96
1	F	229/261 (88%)	226 (99%)	3 (1%)	69	82
1	G	232/261 (89%)	229 (99%)	3 (1%)	69	82
1	H	224/261 (86%)	222 (99%)	2 (1%)	78	89
1	I	222/261 (85%)	221 (100%)	1 (0%)	88	95
1	J	222/261 (85%)	220 (99%)	2 (1%)	78	89
All	All	2259/2610 (87%)	2245 (99%)	14 (1%)	86	94

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	213	LEU
1	B	312	LYS
1	E	54	LEU
1	F	54	LEU
1	F	213	LEU
1	F	259	GLN
1	G	47	ASP
1	G	213	LEU
1	G	258	LEU
1	H	54	LEU
1	H	213	LEU
1	I	259	GLN
1	J	213	LEU
1	J	287	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	253	GLN
1	F	149	ASN
1	F	253	GLN
1	H	253	GLN
1	J	253	GLN

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 35 ligands modelled in this entry, 9 are monoatomic - leaving 26 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	G	401	-	5,5,5	0.91	0	5,5,5	0.99	0
2	GOL	B	403	-	5,5,5	0.90	0	5,5,5	1.01	0
2	GOL	E	402	-	5,5,5	0.90	0	5,5,5	1.04	0
2	GOL	I	401	-	5,5,5	0.91	0	5,5,5	0.99	0
2	GOL	C	403	-	5,5,5	0.94	0	5,5,5	0.94	0
2	GOL	E	401	-	5,5,5	0.91	0	5,5,5	1.00	0
2	GOL	D	404	-	5,5,5	0.91	0	5,5,5	0.99	0
2	GOL	A	401	-	5,5,5	0.92	0	5,5,5	1.00	0
2	GOL	F	402	-	5,5,5	0.91	0	5,5,5	0.99	0
2	GOL	H	402	-	5,5,5	0.90	0	5,5,5	1.01	0
2	GOL	I	402	-	5,5,5	0.92	0	5,5,5	0.98	0
2	GOL	A	402	-	5,5,5	0.89	0	5,5,5	1.05	0
2	GOL	D	401	-	5,5,5	0.92	0	5,5,5	0.94	0
2	GOL	D	403	-	5,5,5	0.89	0	5,5,5	1.00	0
2	GOL	B	401	-	5,5,5	0.91	0	5,5,5	0.99	0
2	GOL	F	401	-	5,5,5	0.92	0	5,5,5	1.00	0
2	GOL	B	402	-	5,5,5	0.90	0	5,5,5	1.02	0
2	GOL	C	402	-	5,5,5	0.91	0	5,5,5	0.96	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	GOL	H	401	-	5,5,5	0.88	0	5,5,5	1.03	0
2	GOL	J	401	-	5,5,5	0.87	0	5,5,5	1.05	0
2	GOL	D	402	-	5,5,5	0.89	0	5,5,5	1.01	0
2	GOL	G	404	-	5,5,5	0.88	0	5,5,5	1.11	1 (20%)
2	GOL	G	402	-	5,5,5	0.93	0	5,5,5	0.94	0
2	GOL	J	402	-	5,5,5	0.93	0	5,5,5	0.97	0
2	GOL	G	403	-	5,5,5	0.92	0	5,5,5	1.00	0
2	GOL	E	403	-	5,5,5	0.91	0	5,5,5	1.00	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	G	401	-	-	3/4/4/4	-
2	GOL	B	403	-	-	2/4/4/4	-
2	GOL	E	402	-	-	2/4/4/4	-
2	GOL	I	401	-	-	0/4/4/4	-
2	GOL	C	403	-	-	2/4/4/4	-
2	GOL	E	401	-	-	4/4/4/4	-
2	GOL	D	404	-	-	2/4/4/4	-
2	GOL	A	401	-	-	2/4/4/4	-
2	GOL	F	402	-	-	2/4/4/4	-
2	GOL	H	402	-	-	4/4/4/4	-
2	GOL	I	402	-	-	0/4/4/4	-
2	GOL	A	402	-	-	0/4/4/4	-
2	GOL	D	401	-	-	2/4/4/4	-
2	GOL	D	403	-	-	2/4/4/4	-
2	GOL	B	401	-	-	3/4/4/4	-
2	GOL	F	401	-	-	0/4/4/4	-
2	GOL	B	402	-	-	2/4/4/4	-
2	GOL	C	402	-	-	1/4/4/4	-
2	GOL	H	401	-	-	0/4/4/4	-
2	GOL	J	401	-	-	0/4/4/4	-
2	GOL	D	402	-	-	2/4/4/4	-
2	GOL	G	404	-	-	0/4/4/4	-
2	GOL	G	402	-	-	2/4/4/4	-
2	GOL	J	402	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GOL	G	403	-	-	0/4/4/4	-
2	GOL	E	403	-	-	0/4/4/4	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	G	404	GOL	C3-C2-C1	-2.15	103.33	111.70

There are no chirality outliers.

All (39) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	401	GOL	C1-C2-C3-O3
2	B	402	GOL	O1-C1-C2-C3
2	C	403	GOL	C1-C2-C3-O3
2	D	402	GOL	C1-C2-C3-O3
2	D	404	GOL	O1-C1-C2-C3
2	E	401	GOL	O1-C1-C2-C3
2	E	402	GOL	O1-C1-C2-C3
2	H	402	GOL	O1-C1-C2-C3
2	J	402	GOL	O1-C1-C2-C3
2	D	402	GOL	O2-C2-C3-O3
2	E	401	GOL	O1-C1-C2-O2
2	G	401	GOL	O2-C2-C3-O3
2	H	402	GOL	O2-C2-C3-O3
2	A	401	GOL	O1-C1-C2-C3
2	B	403	GOL	O1-C1-C2-C3
2	D	401	GOL	C1-C2-C3-O3
2	D	403	GOL	O1-C1-C2-C3
2	E	401	GOL	C1-C2-C3-O3
2	F	402	GOL	O1-C1-C2-C3
2	G	401	GOL	C1-C2-C3-O3
2	G	402	GOL	O1-C1-C2-C3
2	H	402	GOL	C1-C2-C3-O3
2	A	401	GOL	O1-C1-C2-O2
2	C	403	GOL	O2-C2-C3-O3
2	D	401	GOL	O2-C2-C3-O3
2	D	403	GOL	O1-C1-C2-O2
2	E	402	GOL	O1-C1-C2-O2
2	H	402	GOL	O1-C1-C2-O2

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Mol	Chain	Res	Type	Atoms
2	J	402	GOL	O1-C1-C2-O2
2	B	401	GOL	O2-C2-C3-O3
2	C	402	GOL	C1-C2-C3-O3
2	G	401	GOL	O1-C1-C2-C3
2	B	403	GOL	O1-C1-C2-O2
2	G	402	GOL	O1-C1-C2-O2
2	F	402	GOL	O1-C1-C2-O2
2	B	401	GOL	O1-C1-C2-C3
2	B	402	GOL	O1-C1-C2-O2
2	D	404	GOL	O1-C1-C2-O2
2	E	401	GOL	O2-C2-C3-O3

There are no ring outliers.

6 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	403	GOL	1	0
2	H	402	GOL	2	0
2	I	402	GOL	1	0
2	D	403	GOL	1	0
2	B	401	GOL	1	0
2	G	403	GOL	1	0

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	275/311 (88%)	-0.03	5 (1%)	68	74	17, 23, 40, 59	0
1	B	274/311 (88%)	-0.01	2 (0%)	87	91	18, 26, 40, 55	0
1	C	273/311 (87%)	0.04	7 (2%)	56	63	18, 26, 40, 59	0
1	D	283/311 (90%)	0.00	10 (3%)	44	51	15, 22, 39, 55	0
1	E	274/311 (88%)	-0.14	3 (1%)	80	85	15, 21, 37, 55	0
1	F	282/311 (90%)	0.04	6 (2%)	63	70	21, 27, 44, 56	0
1	G	286/311 (91%)	0.04	7 (2%)	59	66	21, 28, 44, 59	0
1	H	274/311 (88%)	0.17	8 (2%)	51	58	22, 31, 46, 62	0
1	I	274/311 (88%)	0.06	2 (0%)	87	91	23, 30, 44, 61	0
1	J	274/311 (88%)	0.08	4 (1%)	73	79	20, 27, 42, 57	0
All	All	2769/3110 (89%)	0.02	54 (1%)	65	71	15, 26, 42, 62	0

All (54) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	46	PRO	5.9
1	G	37	VAL	4.8
1	D	112	THR	4.6
1	H	49	THR	4.3
1	D	43	ILE	4.1
1	E	112	THR	4.1
1	J	190	PRO	4.0
1	G	112	THR	3.8
1	H	109	THR	3.6
1	H	112	THR	3.3
1	H	50	THR	3.3
1	A	322	ASN	3.1
1	F	112	THR	3.1

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Mol	Chain	Res	Type	RSRZ
1	J	189	ILE	3.0
1	F	43	ILE	3.0
1	E	113	CYS	3.0
1	G	113	CYS	3.0
1	H	106	MET	2.9
1	B	109	THR	2.9
1	H	48	ALA	2.9
1	D	109	THR	2.8
1	G	322	ASN	2.8
1	G	48	ALA	2.7
1	A	112	THR	2.7
1	E	49	THR	2.7
1	J	48	ALA	2.7
1	D	116	LEU	2.5
1	I	49	THR	2.5
1	J	112	THR	2.5
1	C	106	MET	2.4
1	H	52	ILE	2.4
1	A	49	THR	2.4
1	C	109	THR	2.4
1	H	108	ASN	2.4
1	I	112	THR	2.3
1	D	108	ASN	2.3
1	C	320	VAL	2.3
1	D	42	ILE	2.3
1	D	44	THR	2.2
1	C	189	ILE	2.2
1	B	49	THR	2.2
1	C	187	THR	2.2
1	F	42	ILE	2.2
1	F	109	THR	2.2
1	C	112	THR	2.2
1	A	116	LEU	2.2
1	F	48	ALA	2.2
1	G	47	ASP	2.1
1	F	189	ILE	2.1
1	D	40	LEU	2.1
1	D	47	ASP	2.1
1	D	39	VAL	2.0
1	A	109	THR	2.0
1	C	49	THR	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
2	GOL	D	404	6/6	0.75	0.24	25,26,27,29	0
3	MG	F	404	1/1	0.76	0.15	44,44,44,44	0
3	MG	C	401	1/1	0.78	0.25	43,43,43,43	0
2	GOL	G	404	6/6	0.82	0.24	30,32,33,38	0
2	GOL	B	403	6/6	0.83	0.16	25,34,34,38	0
2	GOL	C	403	6/6	0.84	0.21	22,25,28,37	0
2	GOL	G	402	6/6	0.87	0.24	29,35,36,38	0
2	GOL	I	402	6/6	0.89	0.20	31,33,34,35	0
2	GOL	B	401	6/6	0.89	0.18	25,30,32,35	0
3	MG	C	404	1/1	0.89	0.22	42,42,42,42	0
2	GOL	A	402	6/6	0.89	0.19	20,28,30,33	0
3	MG	A	404	1/1	0.90	0.20	34,34,34,34	0
3	MG	F	403	1/1	0.90	0.12	41,41,41,41	0
2	GOL	D	402	6/6	0.90	0.18	24,29,29,30	0
3	MG	D	405	1/1	0.91	0.25	39,39,39,39	0
2	GOL	E	401	6/6	0.91	0.15	22,24,29,30	0
2	GOL	G	401	6/6	0.91	0.16	29,30,32,33	0
2	GOL	G	403	6/6	0.92	0.15	27,33,35,35	0
2	GOL	A	401	6/6	0.92	0.18	22,27,29,30	0
2	GOL	F	402	6/6	0.92	0.17	28,33,35,36	0
2	GOL	D	403	6/6	0.93	0.21	23,27,28,29	0
2	GOL	J	402	6/6	0.93	0.13	29,35,37,37	0
3	MG	I	403	1/1	0.93	0.19	37,37,37,37	0
2	GOL	H	401	6/6	0.94	0.13	27,29,31,32	0
2	GOL	H	402	6/6	0.94	0.15	30,32,33,34	0
2	GOL	I	401	6/6	0.94	0.15	25,26,27,28	0
2	GOL	E	402	6/6	0.94	0.13	25,28,31,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	GOL	J	401	6/6	0.94	0.15	26,27,28,34	0
2	GOL	B	402	6/6	0.94	0.15	23,26,29,31	0
3	MG	A	403	1/1	0.94	0.12	39,39,39,39	0
3	MG	H	403	1/1	0.95	0.22	36,36,36,36	0
2	GOL	F	401	6/6	0.95	0.14	22,27,29,36	0
2	GOL	E	403	6/6	0.96	0.15	19,20,24,26	0
2	GOL	D	401	6/6	0.96	0.13	23,28,29,31	0
2	GOL	C	402	6/6	0.97	0.12	22,27,30,32	0

6.5 Other polymers

There are no such residues in this entry.