Full wwPDB X-ray Structure Validation Report (i)

Jul 11, 2022 – 07:13 pm BST

PDB ID	:	7P33
Title	:	Epstein-Barr virus encoded Bcl-2 homolog BHRF-1 in complex with Bid BH3 peptide
Authors	:	Suraweera, C.D.; Hinds, M.G.; Kvansakul, M.
Deposited on	:	2021-07-07
Resolution	:	2.79 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:

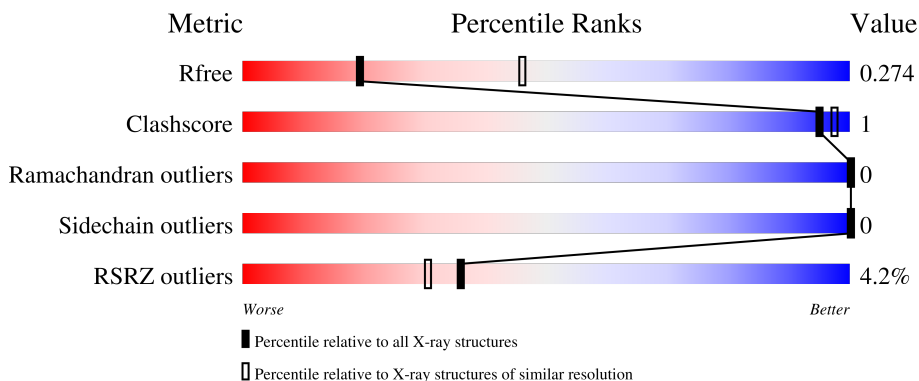|		
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.29
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0267
CCP4	:	7.1.010 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.29

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 2.79 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		0.274
Clashscore		1
Ramachandran outliers		0
Sidechain outliers		0
RSRZ outliers		4.2%

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	4107 (2.80-2.76)
Clashscore	141614	4575 (2.80-2.76)
Ramachandran outliers	138981	4487 (2.80-2.76)
Sidechain outliers	138945	4489 (2.80-2.76)
RSRZ outliers	127900	4027 (2.80-2.76)

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	173	% · 88% · 11%
1	B	173	2% · 88% · 10%
1	C	173	% · 86% · 12%
1	D	173	9% · 88% · 10%
1	E	173	4% · 83% · 14%

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Mol	Chain	Length	Quality of chain
2	F	34	59% 41%
2	G	34	6% 76% 15% 9%
2	H	34	3% 88% 12%
2	I	34	68% 32%
2	J	34	15% 65% 12% 24%

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 14005 atoms, of which 6742 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 Apoptosis regulator BHRF1.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	154	Total	C	H	N	O	S	2	0	0
			2426	785	1183	219	231	8			
1	B	155	Total	C	H	N	O	S	2	0	0
			2446	789	1195	221	233	8			
1	C	152	Total	C	H	N	O	S	2	0	0
			2406	778	1176	217	227	8			
1	D	156	Total	C	H	N	O	S	0	0	0
			2458	794	1200	221	234	9			
1	E	148	Total	C	H	N	O	S	0	0	0
			2352	761	1154	210	219	8			

There are 65 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-12	MET	-	initiating methionine	UNP P03182
A	-11	GLY	-	expression tag	UNP P03182
A	-10	SER	-	expression tag	UNP P03182
A	-9	HIS	-	expression tag	UNP P03182
A	-8	HIS	-	expression tag	UNP P03182
A	-7	HIS	-	expression tag	UNP P03182
A	-6	HIS	-	expression tag	UNP P03182
A	-5	HIS	-	expression tag	UNP P03182
A	-4	HIS	-	expression tag	UNP P03182
A	-3	SER	-	expression tag	UNP P03182
A	-2	GLN	-	expression tag	UNP P03182
A	-1	ASP	-	expression tag	UNP P03182
A	0	PRO	-	expression tag	UNP P03182
B	-12	MET	-	initiating methionine	UNP P03182
B	-11	GLY	-	expression tag	UNP P03182
B	-10	SER	-	expression tag	UNP P03182
B	-9	HIS	-	expression tag	UNP P03182
B	-8	HIS	-	expression tag	UNP P03182
B	-7	HIS	-	expression tag	UNP P03182

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-6	HIS	-	expression tag	UNP P03182
B	-5	HIS	-	expression tag	UNP P03182
B	-4	HIS	-	expression tag	UNP P03182
B	-3	SER	-	expression tag	UNP P03182
B	-2	GLN	-	expression tag	UNP P03182
B	-1	ASP	-	expression tag	UNP P03182
B	0	PRO	-	expression tag	UNP P03182
C	-12	MET	-	initiating methionine	UNP P03182
C	-11	GLY	-	expression tag	UNP P03182
C	-10	SER	-	expression tag	UNP P03182
C	-9	HIS	-	expression tag	UNP P03182
C	-8	HIS	-	expression tag	UNP P03182
C	-7	HIS	-	expression tag	UNP P03182
C	-6	HIS	-	expression tag	UNP P03182
C	-5	HIS	-	expression tag	UNP P03182
C	-4	HIS	-	expression tag	UNP P03182
C	-3	SER	-	expression tag	UNP P03182
C	-2	GLN	-	expression tag	UNP P03182
C	-1	ASP	-	expression tag	UNP P03182
C	0	PRO	-	expression tag	UNP P03182
D	-12	MET	-	initiating methionine	UNP P03182
D	-11	GLY	-	expression tag	UNP P03182
D	-10	SER	-	expression tag	UNP P03182
D	-9	HIS	-	expression tag	UNP P03182
D	-8	HIS	-	expression tag	UNP P03182
D	-7	HIS	-	expression tag	UNP P03182
D	-6	HIS	-	expression tag	UNP P03182
D	-5	HIS	-	expression tag	UNP P03182
D	-4	HIS	-	expression tag	UNP P03182
D	-3	SER	-	expression tag	UNP P03182
D	-2	GLN	-	expression tag	UNP P03182
D	-1	ASP	-	expression tag	UNP P03182
D	0	PRO	-	expression tag	UNP P03182
E	-12	MET	-	initiating methionine	UNP P03182
E	-11	GLY	-	expression tag	UNP P03182
E	-10	SER	-	expression tag	UNP P03182
E	-9	HIS	-	expression tag	UNP P03182
E	-8	HIS	-	expression tag	UNP P03182
E	-7	HIS	-	expression tag	UNP P03182
E	-6	HIS	-	expression tag	UNP P03182
E	-5	HIS	-	expression tag	UNP P03182
E	-4	HIS	-	expression tag	UNP P03182

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Chain	Residue	Modelled	Actual	Comment	Reference
E	-3	SER	-	expression tag	UNP P03182
E	-2	GLN	-	expression tag	UNP P03182
E	-1	ASP	-	expression tag	UNP P03182
E	0	PRO	-	expression tag	UNP P03182

- Molecule 2 is a protein called BH3-interacting domain death agonist p15.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	G	31	Total 436	C 143	H 199	N 45	O 48	S 1	0	0	0
2	H	30	Total 417	C 139	H 187	N 45	O 45	S 1	0	0	0
2	F	20	Total 310	C 94	H 152	N 31	O 32	S 1	0	0	0
2	I	23	Total 349	C 109	H 166	N 37	O 36	S 1	0	0	0
2	J	26	Total 328	C 120	H 124	N 40	O 43	S 1	0	0	0

- Molecule 3 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).
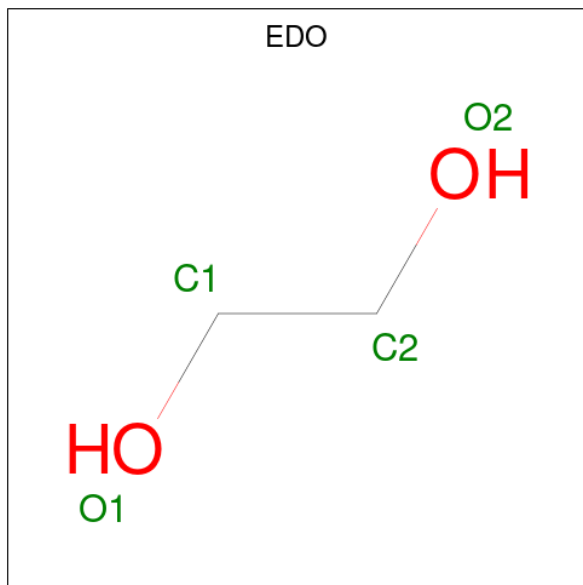
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	C	1	Total 10	C 2	H 6	O 2	0	0

- Molecule 4 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	I	1	Total 5	O 4	P 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	11	Total 11	O 11	0	0
5	B	4	Total 4	O 4	0	0
5	C	16	Total 16	O 16	0	0
5	D	4	Total 4	O 4	0	0
5	E	10	Total 10	O 10	0	0
5	G	6	Total 6	O 6	0	0
5	H	4	Total 4	O 4	0	0
5	F	4	Total 4	O 4	0	0
5	I	2	Total 2	O 2	0	0
5	J	1	Total 1	O 1	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.
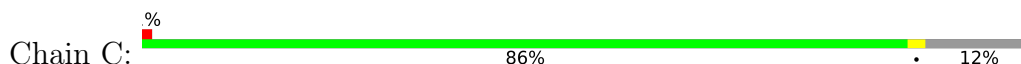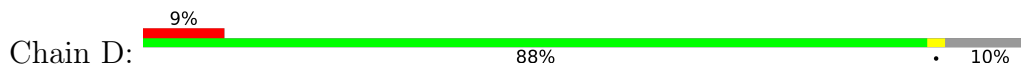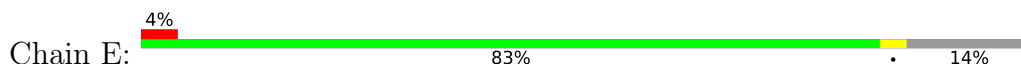
- Molecule 1: Apoptosis regulator BHRF1
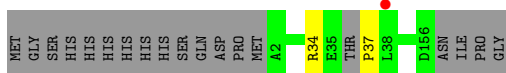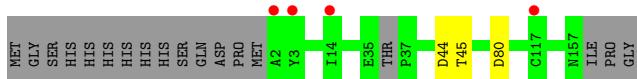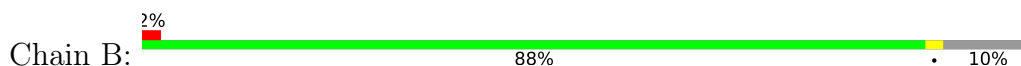
- Molecule 1: Apoptosis regulator BHRF1

- Molecule 1: Apoptosis regulator BHRF1
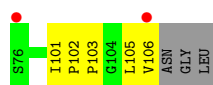

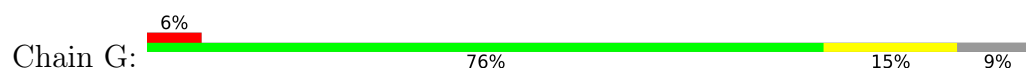- Molecule 1: Apoptosis regulator BHRF1

- Molecule 1: Apoptosis regulator BHRF1

- Molecule 2: BH3-interacting domain death agonist p15

Chain G:

6%

76% 15% 9%

S76 I101 P102 P103 G104 L105 V106 ASN GLY LEU

• Molecule 2: BH3-interacting domain death agonist p15

Chain H:

3%

88% 12%

SER GLU S78 N107 GLY LEU

• Molecule 2: BH3-interacting domain death agonist p15

Chain F:

59% 41%

SER GLU SER Q79 D98 ARG SER ILE PRO PRO GLY LEU VAL ASN GLY LEU
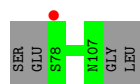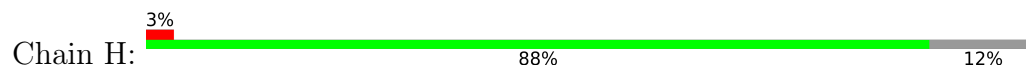
• Molecule 2: BH3-interacting domain death agonist p15

Chain I:

68% 32%

SER GLU SER Q79 I101 PRO PRO GLY LEU VAL ASN GLY LEU

• Molecule 2: BH3-interacting domain death agonist p15

Chain J:

15%

65% 12% 24%

S76 E77 S78 D81 R88 D95 D98 R99 S100 I101 PRO PRO GLY LEU VAL ASN GLY LEU
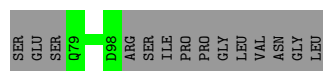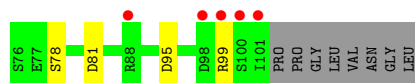
4 Data and refinement statistics ⓘ

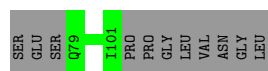| Property	Value	Source
Space group	P 65 2 2	Depositor
Cell constants a, b, c, α, β, γ	94.21Å 94.21Å 455.58Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	46.85 – 2.79 46.85 – 2.79	Depositor EDS
% Data completeness (in resolution range)	92.2 (46.85-2.79) 92.2 (46.85-2.79)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.99 (at 2.77Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.230 , 0.274 0.230 , 0.274	Depositor DCC
R_{free} test set	1396 reflections (4.84%)	wwPDB-VP
Wilson B-factor (Å^2)	59.5	Xtriage
Anisotropy	0.070	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	(Not available) , (Not available)	EDS
L-test for twinning[2]	$< |L| > = 0.44$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	14005	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.35% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5   Model quality ⓘ

5.1   Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: EDO, PO4

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	0.22	0/1273	0.38	0/1731
1	B	0.23	0/1281	0.39	0/1742
1	C	0.25	0/1260	0.40	0/1713
1	D	0.23	0/1289	0.38	0/1755
1	E	0.22	0/1227	0.37	0/1667
2	F	0.21	0/158	0.39	0/211
2	G	0.23	0/239	0.39	0/322
2	H	0.22	0/232	0.36	0/313
2	I	0.25	0/183	0.34	0/244
2	J	0.20	0/204	0.33	0/272
All	All	0.23	0/7346	0.38	0/9970

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	1243	1183	1196	1	0
1	B	1251	1195	1202	2	0
1	C	1230	1176	1187	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	1258	1200	1215	3	0
1	E	1198	1154	1161	3	0
2	F	158	152	152	0	0
2	G	237	199	234	3	0
2	H	230	187	229	0	0
2	I	183	166	181	0	0
2	J	204	124	197	2	0
3	C	4	6	6	0	0
4	I	5	0	0	0	0
5	A	11	0	0	0	0
5	B	4	0	0	0	0
5	C	16	0	0	0	0
5	D	4	0	0	0	0
5	E	10	0	0	0	0
5	F	4	0	0	0	0
5	G	6	0	0	0	0
5	H	4	0	0	0	0
5	I	2	0	0	0	0
5	J	1	0	0	0	0
All	All	7263	6742	6960	17	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 1.

All (17) 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:C:34:ARG:O	1:C:37:PRO:HG2	1.97	0.64
2:J:95:ASP:O	2:J:99:ARG:HG3	2.06	0.55
1:E:35:GLU:O	1:E:37:PRO:HG2	2.06	0.55
1:A:34:ARG:O	1:A:37:PRO:HG2	2.07	0.54
1:D:77:GLU:HG3	1:D:78:HIS:ND1	2.23	0.52
2:G:105:LEU:O	2:G:106:VAL:HG23	2.10	0.52
2:J:78:SER:HB2	2:J:81:ASP:HB2	1.92	0.52
1:E:34:ARG:O	1:E:37:PRO:HD2	2.12	0.50
1:D:77:GLU:HG3	1:D:78:HIS:CE1	2.47	0.48
1:C:83:PHE:HE2	1:C:129:SER:O	1.96	0.47
1:D:88:LEU:O	1:D:92:HIS:N	2.47	0.47
2:G:101:ILE:HB	2:G:102:PRO:HD3	1.99	0.45
1:B:44:ASP:OD1	1:B:45:THR:N	2.50	0.44
1:E:58:ILE:O	1:E:62:SER:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:80:ASP:OD1	1:B:80:ASP:N	2.53	0.41
1:C:83:PHE:CE2	1:C:129:SER:HA	2.55	0.41
2:G:102:PRO:N	2:G:103:PRO:HD2	2.37	0.40

There are no symmetry-related clashes.

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	150/173 (87%)	147 (98%)	3 (2%)	0	100	100
1	B	151/173 (87%)	148 (98%)	3 (2%)	0	100	100
1	C	148/173 (86%)	145 (98%)	3 (2%)	0	100	100
1	D	154/173 (89%)	149 (97%)	5 (3%)	0	100	100
1	E	142/173 (82%)	141 (99%)	1 (1%)	0	100	100
2	F	18/34 (53%)	18 (100%)	0	0	100	100
2	G	29/34 (85%)	26 (90%)	3 (10%)	0	100	100
2	H	28/34 (82%)	28 (100%)	0	0	100	100
2	I	21/34 (62%)	20 (95%)	1 (5%)	0	100	100
2	J	24/34 (71%)	24 (100%)	0	0	100	100
All	All	865/1035 (84%)	846 (98%)	19 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	136/153 (89%)	136 (100%)	0	100	100
1	B	137/153 (90%)	137 (100%)	0	100	100
1	C	135/153 (88%)	135 (100%)	0	100	100
1	D	138/153 (90%)	138 (100%)	0	100	100
1	E	132/153 (86%)	132 (100%)	0	100	100
2	F	17/29 (59%)	17 (100%)	0	100	100
2	G	27/29 (93%)	27 (100%)	0	100	100
2	H	26/29 (90%)	26 (100%)	0	100	100
2	I	20/29 (69%)	20 (100%)	0	100	100
2	J	23/29 (79%)	23 (100%)	0	100	100
All	All	791/910 (87%)	791 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

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

5.3.3   RNA ⓘ

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5   Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6   Ligand geometry ⓘ

2 ligands 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	$\#|Z| > 2$
3	EDO	C	201	-	3,3,3	0.39	0	2,2,2	0.40	0
4	PO4	I	201	-	4,4,4	0.91	0	6,6,6	0.43	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	EDO	C	201	-	-	0/1/1/1	-

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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

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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	154/173 (89%)	0.28	1 (0%)	89	88	32, 48, 87, 112	2 (1%)
1	B	155/173 (89%)	0.31	4 (2%)	56	51	36, 49, 91, 135	2 (1%)
1	C	152/173 (87%)	0.32	2 (1%)	77	75	35, 51, 93, 129	2 (1%)
1	D	156/173 (90%)	0.67	16 (10%)	6	4	44, 70, 115, 139	0
1	E	148/173 (85%)	0.49	7 (4%)	31	25	40, 58, 101, 115	0
2	F	20/34 (58%)	0.39	0	100	100	45, 60, 78, 90	0
2	G	31/34 (91%)	0.68	2 (6%)	18	14	35, 56, 106, 125	0
2	H	30/34 (88%)	0.53	1 (3%)	46	41	37, 52, 88, 101	0
2	I	23/34 (67%)	0.60	0	100	100	67, 88, 104, 133	0
2	J	26/34 (76%)	1.13	5 (19%)	1	0	73, 97, 124, 133	0
All	All	895/1035 (86%)	0.45	38 (4%)	36	30	32, 56, 104, 139	6 (0%)

All (38) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	106	VAL	5.7
2	J	101	ILE	4.5
2	G	76	SER	4.2
1	C	29	LEU	4.2
1	D	3	TYR	4.2
1	D	92	HIS	4.1
1	D	25	LEU	3.9
1	D	100	ARG	3.8
2	J	99	ARG	3.7
1	D	91	PHE	3.7
1	D	93	ARG	3.5
1	E	90	ILE	3.5
1	D	156	ASP	3.5

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Mol	Chain	Res	Type	RSRZ
1	E	92	HIS	3.3
1	E	98	LEU	3.3
1	A	38	LEU	3.2
2	H	78	SER	3.1
1	D	95	ASP	3.0
1	E	88	LEU	3.0
2	J	100	SER	2.9
1	B	3	TYR	2.7
2	J	98	ASP	2.6
1	D	90	ILE	2.6
1	C	144	ILE	2.4
1	B	117	CYS	2.3
1	D	96	PRO	2.3
1	E	144	ILE	2.3
1	D	143	TRP	2.3
1	E	146	GLN	2.2
1	D	22	ASN	2.2
1	D	94	GLY	2.2
2	J	88	ARG	2.2
1	D	73	ILE	2.2
1	D	53	LEU	2.1
1	B	2	ALA	2.1
1	E	29	LEU	2.1
1	B	14	ILE	2.1
1	D	24	THR	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	EDO	C	201	4/4	0.69	0.16	74,89,93,96	0
4	PO4	I	201	5/5	0.89	0.22	122,124,128,130	0

6.5 Other polymers ⓘ

There are no such residues in this entry.