Full wwPDB X-ray Structure Validation Report (i)

Jun 17, 2024 – 06:06 AM EDT

PDB ID	:	5MLE
Title	:	Crystal Structure of Human Dihydropyrimidinease-like 2 (DPYSL2A)/Collapsin Response Mediator Protein (CRMP2 13-516) Mutant Y479E/Y499E
Authors	:	Sethi, R.; Zheng, Y.; Talon, R.; Velupillai, S.; Arrowsmith, C.H.; Edwards, A.M.; Bountra, C.; Ahmed, A.A.; von Delft, F.
Deposited on	:	2016-12-06
Resolution	:	2.48 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:

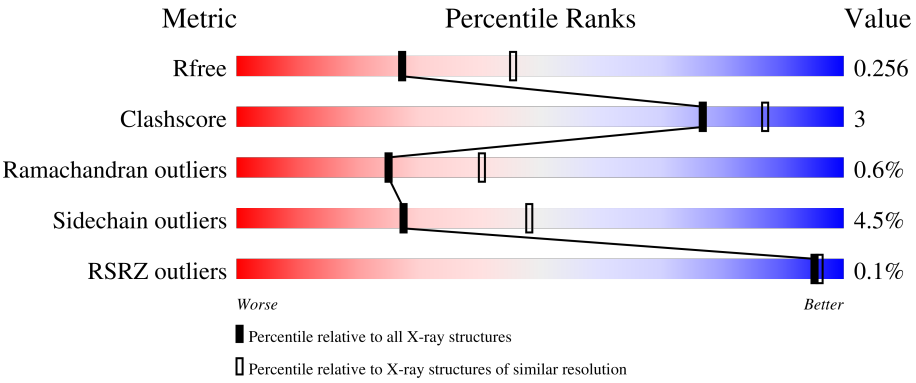
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (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 2.48 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	5857 (2.50-2.46)
Clashscore	141614	6594 (2.50-2.46)
Ramachandran outliers	138981	6469 (2.50-2.46)
Sidechain outliers	138945	6471 (2.50-2.46)
RSRZ outliers	127900	5738 (2.50-2.46)

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	504	85% 7% • 6%
1	C	504	83% 9% • 7%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PEG	A	602	-	-	X	X
3	EDO	A	603	-	-	-	X

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 7459 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.

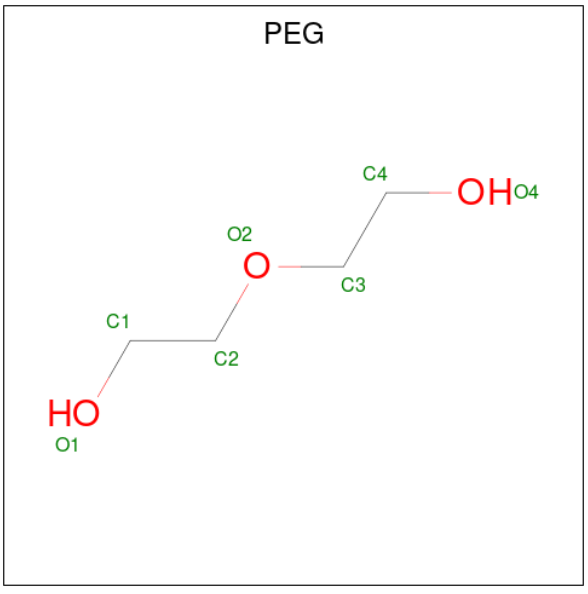
- Molecule 1 is a protein called Dihydropyrimidinase-related protein 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	C	468	Total	C	N	O	S	0	1	0
			3595	2266	608	702	19			
1	A	472	Total	C	N	O	S	0	2	0
			3626	2286	614	707	19			

There are 4 discrepancies between the modelled and reference sequences:

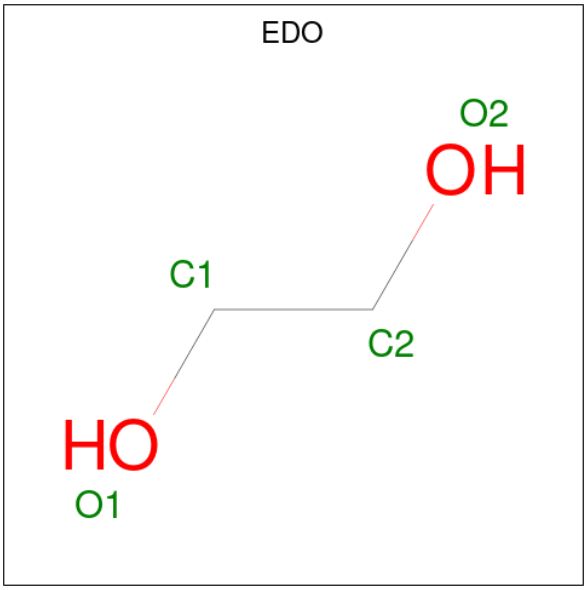
Chain	Residue	Modelled	Actual	Comment	Reference
C	479	GLU	TYR	engineered mutation	UNP Q16555
C	499	GLU	TYR	engineered mutation	UNP Q16555
A	479	GLU	TYR	engineered mutation	UNP Q16555
A	499	GLU	TYR	engineered mutation	UNP Q16555

- Molecule 2 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $C_4H_{10}O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	1	Total C O 7 4 3	0	0
2	A	1	Total C O 7 4 3	0	0
2	A	1	Total C O 7 4 3	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 C O 4 2 2	0	0
3	C	1	Total C O 4 2 2	0	0
3	C	1	Total C O 4 2 2	0	0
3	C	1	Total C O 4 2 2	0	0
3	C	1	Total C O 4 2 2	0	0
3	C	1	Total C O 4 2 2	0	0
3	A	1	Total C O 4 2 2	0	0
3	A	1	Total C O 4 2 2	0	0
3	A	1	Total C O 4 2 2	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 4 2 2	0	0

- Molecule 4 is NICKEL (II) ION (three-letter code: NI) (formula: Ni).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total Ni 1 1	0	0
4	A	1	Total Ni 1 1	0	0

- Molecule 5 is water.

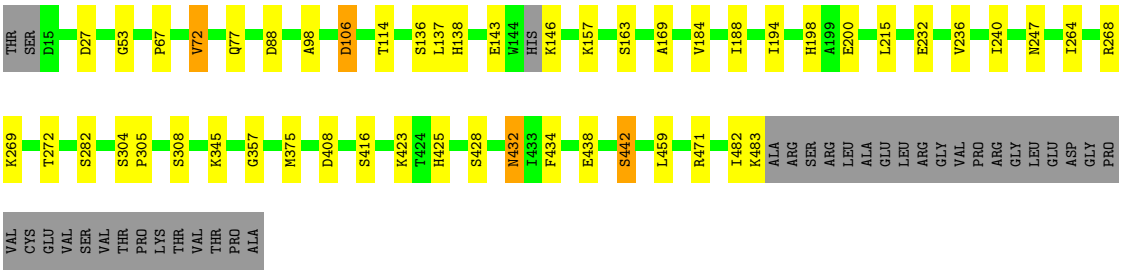
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	C	103	Total O 103 103	0	0
5	A	72	Total O 72 72	0	0

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.

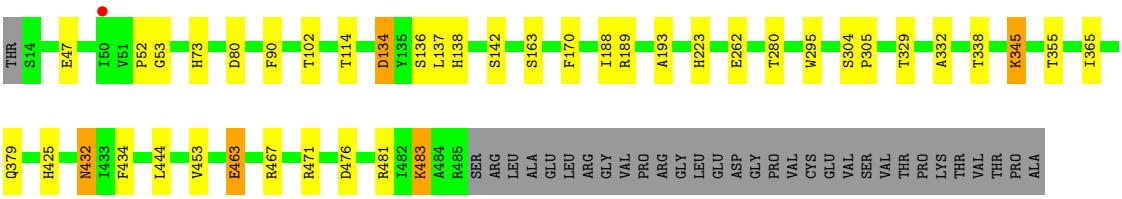
• Molecule 1: Dihydropyrimidinase-related protein 2

Chain C:



• Molecule 1: Dihydropyrimidinase-related protein 2

Chain A:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	70.90Å 185.82Å 196.31Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	83.98 – 2.48 83.98 – 2.48	Depositor EDS
% Data completeness (in resolution range)	99.9 (83.98-2.48) 99.9 (83.98-2.48)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.50 (at 2.48Å)	Xtriage
Refinement program	REFMAC 5.8.0158	Depositor
R, R_{free}	0.206 , 0.254 0.214 , 0.256	Depositor DCC
R_{free} test set	2328 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	36.2	Xtriage
Anisotropy	0.144	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 23.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	7459	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.42% 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: PEG, EDO, NI

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	0.72	3/3706 (0.1%)	0.82	3/5031 (0.1%)
1	C	0.69	0/3670	0.82	0/4980
All	All	0.71	3/7376 (0.0%)	0.82	3/10011 (0.0%)

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	463	GLU	CG-CD	5.70	1.60	1.51
1	A	463	GLU	CB-CG	5.59	1.62	1.52
1	A	463	GLU	CD-OE2	5.35	1.31	1.25

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	189	ARG	NE-CZ-NH1	6.33	123.46	120.30
1	A	134	ASP	CB-CG-OD1	5.78	123.50	118.30
1	A	80	ASP	CB-CG-OD1	5.33	123.10	118.30

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	3626	0	3564	18	0
1	C	3595	0	3533	26	0
2	A	14	0	20	4	0
2	C	7	0	10	0	0
3	A	16	0	24	1	0
3	C	24	0	36	8	0
4	A	1	0	0	0	0
4	C	1	0	0	0	0
5	A	72	0	0	0	0
5	C	103	0	0	2	2
All	All	7459	0	7187	44	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

All (44) 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:137:LEU:O	1:A:471:ARG:NH2	2.13	0.81
1:C:282:SER:HA	3:C:607:EDO:H21	1.64	0.79
1:C:308:SER:N	3:C:607:EDO:O1	2.22	0.73
1:A:134:ASP:OD2	2:A:602:PEG:H21	1.95	0.67
1:C:163:SER:HB2	5:C:708:HOH:O	1.96	0.65
1:A:280:THR:HG22	1:A:434:PHE:CZ	2.33	0.62
1:C:163:SER:OG	1:C:471:ARG:NH1	2.32	0.60
1:C:282:SER:HA	3:C:607:EDO:C2	2.33	0.58
1:A:329:THR:HG21	1:A:365:ILE:HD11	1.85	0.58
1:A:102:THR:O	2:A:602:PEG:O1	2.20	0.56
1:C:137:LEU:O	1:C:471:ARG:NH2	2.38	0.56
1:A:432:ASN:HD22	1:A:434:PHE:H	1.53	0.56
1:C:106:ASP:OD1	3:C:606:EDO:H11	2.07	0.54
1:C:482:ILE:HD11	5:C:789:HOH:O	2.08	0.54
1:C:432:ASN:HD22	1:C:434:PHE:H	1.57	0.51
1:A:329:THR:HG21	1:A:365:ILE:CD1	2.39	0.51
1:A:467:ARG:NH2	2:A:602:PEG:H42	2.26	0.50
1:C:67:PRO:HB3	3:C:602:EDO:H22	1.94	0.49
1:A:163:SER:OG	1:A:471:ARG:NH1	2.36	0.47
1:C:432:ASN:HD22	1:C:432:ASN:C	2.18	0.47
1:A:295:TRP:CZ2	1:A:345:LYS:HA	2.50	0.47
1:A:73:HIS:O	1:A:332:ALA:N	2.48	0.47
1:A:90:PHE:CD1	1:A:463:GLU:HG3	2.49	0.47
1:C:98:ALA:HB2	1:C:459:LEU:HD11	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:198:HIS:HE1	1:C:200:GLU:OE1	1.99	0.46
1:C:247:ASN:ND2	3:C:604:EDO:O1	2.47	0.46
1:C:194:ILE:HD12	1:C:194:ILE:N	2.31	0.46
1:C:408:ASP:O	3:C:602:EDO:H21	2.18	0.43
1:C:106:ASP:OD1	3:C:606:EDO:C1	2.67	0.43
1:C:169:ALA:HB2	1:C:200:GLU:HB2	2.01	0.43
1:C:77:GLN:HG3	1:C:88:ASP:HB2	2.01	0.43
1:A:432:ASN:ND2	1:A:434:PHE:H	2.17	0.42
1:C:304:SER:HA	1:C:305:PRO:C	2.39	0.42
1:C:240:ILE:HG23	1:C:272:THR:HG21	2.00	0.42
1:C:416:SER:OG	1:C:442:SER:OG	2.30	0.42
1:A:223:HIS:ND1	3:A:606:EDO:H22	2.35	0.42
1:C:184:VAL:HG12	1:C:188:ILE:HD12	2.00	0.42
1:A:304:SER:HA	1:A:305:PRO:C	2.39	0.42
1:C:232:GLU:O	1:C:236:VAL:HG23	2.20	0.41
1:C:72:VAL:O	1:C:138:HIS:HE1	2.03	0.41
1:A:188:ILE:HG23	1:A:193:ALA:HB3	2.01	0.41
1:A:467:ARG:HH22	2:A:602:PEG:H42	1.84	0.41
1:A:138:HIS:HD2	1:A:163:SER:OG	2.03	0.41
1:C:264:ILE:O	1:C:268:ARG:HG3	2.22	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:796:HOH:O	5:C:796:HOH:O[3_555]	0.52	1.68
5:C:803:HOH:O	5:C:803:HOH:O[3_555]	1.97	0.23

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	472/504 (94%)	448 (95%)	20 (4%)	4 (1%)	19 33
1	C	465/504 (92%)	443 (95%)	20 (4%)	2 (0%)	34 52
All	All	937/1008 (93%)	891 (95%)	40 (4%)	6 (1%)	25 40

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	53	GLY
1	A	52	PRO
1	A	53	GLY
1	A	483	LYS
1	A	170	PHE
1	C	357	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	395/423 (93%)	379 (96%)	16 (4%)	30 53
1	C	392/423 (93%)	373 (95%)	19 (5%)	25 45
All	All	787/846 (93%)	752 (96%)	35 (4%)	27 49

All (35) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	27	ASP
1	C	72	VAL
1	C	106	ASP
1	C	114	THR
1	C	136	SER
1	C	143	GLU
1	C	146	LYS
1	C	157	LYS
1	C	215	LEU
1	C	269	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	345	LYS
1	C	375	MET
1	C	423	LYS
1	C	425	HIS
1	C	428	SER
1	C	432	ASN
1	C	438	GLU
1	C	442	SER
1	C	483	LYS
1	A	47	GLU
1	A	114	THR
1	A	136	SER
1	A	142	SER
1	A	262	GLU
1	A	338	THR
1	A	345	LYS
1	A	355	THR
1	A	379	GLN
1	A	425	HIS
1	A	432	ASN
1	A	444	LEU
1	A	453	VAL
1	A	476	ASP
1	A	481	ARG
1	A	483	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	29	GLN
1	C	77	GLN
1	C	138	HIS
1	C	198	HIS
1	C	209	GLN
1	C	247	ASN
1	C	426	ASN
1	C	432	ASN
1	A	48	ASN
1	A	138	HIS
1	A	149	GLN
1	A	245	GLN
1	A	347	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	379	GLN
1	A	426	ASN
1	A	432	ASN
1	A	460	HIS

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 15 ligands modelled in this entry, 2 are monoatomic - leaving 13 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	EDO	C	606	-	3,3,3	0.47	0	2,2,2	0.64	0
3	EDO	A	603	-	3,3,3	0.53	0	2,2,2	0.18	0
2	PEG	A	602	-	6,6,6	0.55	0	5,5,5	0.87	0
3	EDO	A	605	-	3,3,3	0.46	0	2,2,2	0.30	0
3	EDO	C	602	-	3,3,3	0.99	0	2,2,2	1.06	0
3	EDO	C	605	-	3,3,3	0.61	0	2,2,2	0.53	0
3	EDO	C	607	-	3,3,3	0.27	0	2,2,2	0.65	0
3	EDO	A	606	-	3,3,3	0.58	0	2,2,2	0.19	0
2	PEG	C	601	-	6,6,6	0.61	0	5,5,5	0.54	0
2	PEG	A	601	-	6,6,6	0.69	0	5,5,5	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	EDO	C	604	-	3,3,3	0.52	0	2,2,2	0.34	0
3	EDO	A	604	-	3,3,3	0.61	0	2,2,2	0.28	0
3	EDO	C	603	-	3,3,3	0.50	0	2,2,2	0.52	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	606	-	-	0/1/1/1	-
3	EDO	A	603	-	-	1/1/1/1	-
2	PEG	A	602	-	-	2/4/4/4	-
3	EDO	A	605	-	-	1/1/1/1	-
3	EDO	C	602	-	-	0/1/1/1	-
3	EDO	C	605	-	-	1/1/1/1	-
3	EDO	C	607	-	-	0/1/1/1	-
3	EDO	A	606	-	-	0/1/1/1	-
2	PEG	C	601	-	-	3/4/4/4	-
2	PEG	A	601	-	-	3/4/4/4	-
3	EDO	C	604	-	-	0/1/1/1	-
3	EDO	A	604	-	-	1/1/1/1	-
3	EDO	C	603	-	-	1/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	601	PEG	O2-C3-C4-O4
2	C	601	PEG	O1-C1-C2-O2
2	A	601	PEG	O1-C1-C2-O2
2	A	602	PEG	O2-C3-C4-O4
3	C	605	EDO	O1-C1-C2-O2
3	A	605	EDO	O1-C1-C2-O2
3	C	603	EDO	O1-C1-C2-O2
2	A	602	PEG	C4-C3-O2-C2
2	A	601	PEG	C1-C2-O2-C3
2	A	601	PEG	C4-C3-O2-C2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	C	601	PEG	C1-C2-O2-C3
3	A	604	EDO	O1-C1-C2-O2
3	A	603	EDO	O1-C1-C2-O2

There are no ring outliers.

6 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	606	EDO	2	0
2	A	602	PEG	4	0
3	C	602	EDO	2	0
3	C	607	EDO	3	0
3	A	606	EDO	1	0
3	C	604	EDO	1	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	472/504 (93%)	-0.40	1 (0%) 95 95	26, 39, 67, 111	0
1	C	468/504 (92%)	-0.45	0 100 100	24, 36, 59, 95	0
All	All	940/1008 (93%)	-0.43	1 (0%) 95 96	24, 37, 63, 111	0

All (1) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	50	ILE	2.6

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, 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	EDO	A	603	4/4	0.64	0.40	66,71,74,75	0
4	NI	A	607	1/1	0.69	0.20	152,152,152,152	0
3	EDO	C	607	4/4	0.75	0.39	67,73,77,82	0
3	EDO	A	606	4/4	0.79	0.38	96,102,102,103	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	PEG	A	601	7/7	0.80	0.22	60,66,69,73	0
2	PEG	A	602	7/7	0.80	0.53	81,95,115,118	0
3	EDO	C	603	4/4	0.82	0.17	61,61,61,63	0
3	EDO	C	604	4/4	0.84	0.15	51,53,55,55	0
4	NI	C	608	1/1	0.87	0.30	144,144,144,144	0
3	EDO	C	606	4/4	0.87	0.35	65,71,72,77	0
3	EDO	C	602	4/4	0.88	0.23	45,47,47,48	0
3	EDO	A	604	4/4	0.88	0.12	44,46,48,49	0
3	EDO	A	605	4/4	0.88	0.12	54,56,56,57	0
2	PEG	C	601	7/7	0.89	0.16	40,46,53,54	0
3	EDO	C	605	4/4	0.90	0.22	58,59,59,60	0

6.5 Other polymers (i)

There are no such residues in this entry.