Full wwPDB X-ray Structure Validation Report ⓘ

Jun 16, 2024 – 09:31 PM EDT

PDB ID	:	5OKM
Title	:	Crystal structure of human SHIP2 Phosphatase-C2
Authors	:	Le Coq, J.; Lietha, D.
Deposited on	:	2017-07-25
Resolution	:	1.96 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 ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

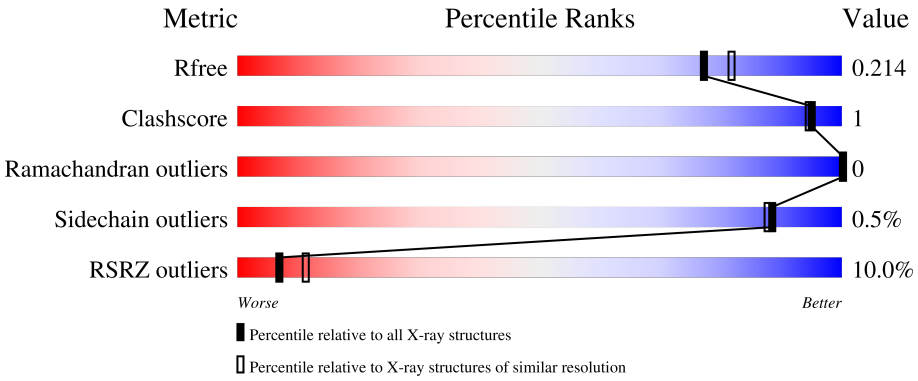
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 1.96 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	2580 (1.96-1.96)
Clashscore	141614	2705 (1.96-1.96)
Ramachandran outliers	138981	2678 (1.96-1.96)
Sidechain outliers	138945	2678 (1.96-1.96)
RSRZ outliers	127900	2539 (1.96-1.96)

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	461	10% 88% 6% 6%
1	B	461	7% 93%
1	C	461	14% 91% 7%
1	D	461	5% 91% 5%
1	E	461	9% 92% 6%

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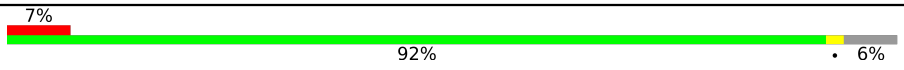
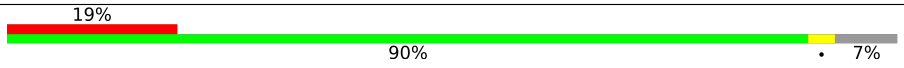
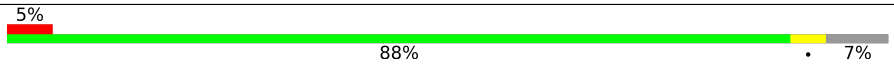
Mol	Chain	Length	Quality of chain
1	F	461	
1	G	461	
1	H	461	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 29931 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 Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	435	Total	C	N	O	S	0	3	0
			3529	2251	596	668	14			
1	B	442	Total	C	N	O	S	0	4	0
			3591	2290	607	680	14			
1	C	431	Total	C	N	O	S	0	0	0
			3488	2222	589	663	14			
1	D	436	Total	C	N	O	S	0	1	0
			3532	2252	598	668	14			
1	E	432	Total	C	N	O	S	0	5	0
			3525	2251	594	666	14			
1	F	433	Total	C	N	O	S	0	0	0
			3506	2236	595	661	14			
1	G	431	Total	C	N	O	S	0	2	0
			3497	2230	590	663	14			
1	H	427	Total	C	N	O	S	0	3	0
			3474	2218	584	658	14			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	418	GLY	-	expression tag	UNP O15357
A	419	PRO	-	expression tag	UNP O15357
B	418	GLY	-	expression tag	UNP O15357
B	419	PRO	-	expression tag	UNP O15357
C	418	GLY	-	expression tag	UNP O15357
C	419	PRO	-	expression tag	UNP O15357
D	418	GLY	-	expression tag	UNP O15357
D	419	PRO	-	expression tag	UNP O15357
E	418	GLY	-	expression tag	UNP O15357
E	419	PRO	-	expression tag	UNP O15357
F	418	GLY	-	expression tag	UNP O15357
F	419	PRO	-	expression tag	UNP O15357
G	418	GLY	-	expression tag	UNP O15357

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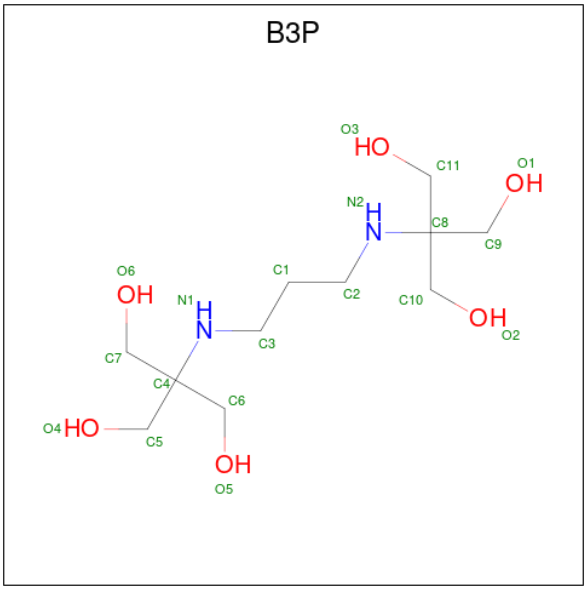
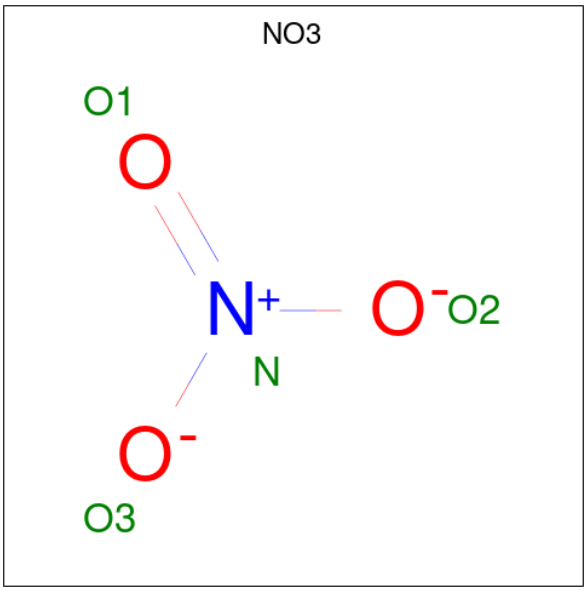
Chain	Residue	Modelled	Actual	Comment	Reference
G	419	PRO	-	expression tag	UNP O15357
H	418	GLY	-	expression tag	UNP O15357
H	419	PRO	-	expression tag	UNP O15357

- Molecule 2 is 2-[3-(2-HYDROXY-1,1-DIHYDROXYMETHYL-ETHYLAMINO)-PROPYL AMINO]-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (three-letter code: B3P) (formula: $C_{11}H_{26}N_2O_6$).



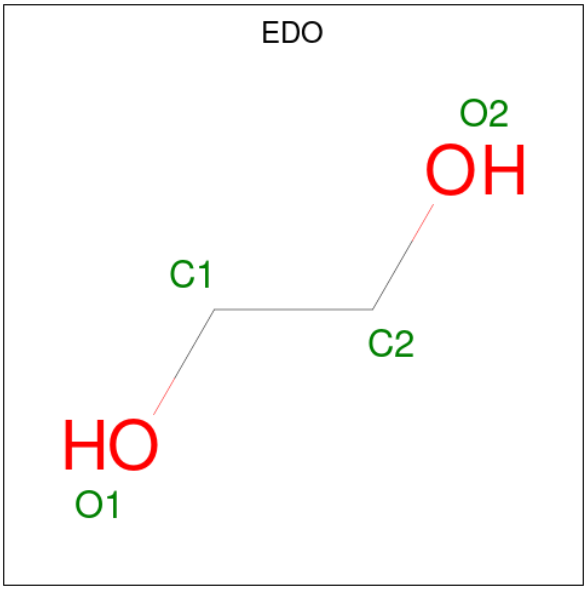
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			19	11	2	6		
2	B	1	Total	C	N	O	0	0
			19	11	2	6		
2	C	1	Total	C	N	O	0	0
			19	11	2	6		
2	D	1	Total	C	N	O	0	0
			19	11	2	6		
2	E	1	Total	C	N	O	0	0
			19	11	2	6		
2	F	1	Total	C	N	O	0	0
			19	11	2	6		
2	H	1	Total	C	N	O	0	0
			19	11	2	6		

- Molecule 3 is NITRATE ION (three-letter code: NO3) (formula: NO_3).



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

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



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

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			4	2	2		
4	A	1	Total	C	O	0	0
			4	2	2		
4	A	1	Total	C	O	0	0
			4	2	2		
4	B	1	Total	C	O	0	0
			4	2	2		
4	B	1	Total	C	O	0	0
			4	2	2		
4	B	1	Total	C	O	0	0
			4	2	2		
4	B	1	Total	C	O	0	0
			4	2	2		
4	C	1	Total	C	O	0	0
			4	2	2		
4	D	1	Total	C	O	0	0
			4	2	2		
4	D	1	Total	C	O	0	0
			4	2	2		
4	D	1	Total	C	O	0	0
			4	2	2		
4	D	1	Total	C	O	0	0
			4	2	2		
4	D	1	Total	C	O	0	0
			4	2	2		
4	F	1	Total	C	O	0	0
			4	2	2		
4	F	1	Total	C	O	0	0
			4	2	2		
4	F	1	Total	C	O	0	0
			4	2	2		
4	F	1	Total	C	O	0	0
			4	2	2		
4	G	1	Total	C	O	0	0
			4	2	2		
4	H	1	Total	C	O	0	0
			4	2	2		

- Molecule 5 is water.

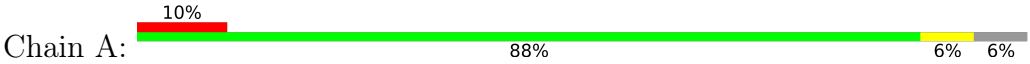
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	220	Total O 220 220	0	0
5	B	232	Total O 232 232	0	0
5	C	157	Total O 157 157	0	0
5	D	187	Total O 187 187	0	0
5	E	206	Total O 206 206	0	0
5	F	190	Total O 190 190	0	0
5	G	150	Total O 150 150	0	0
5	H	222	Total O 222 222	0	0

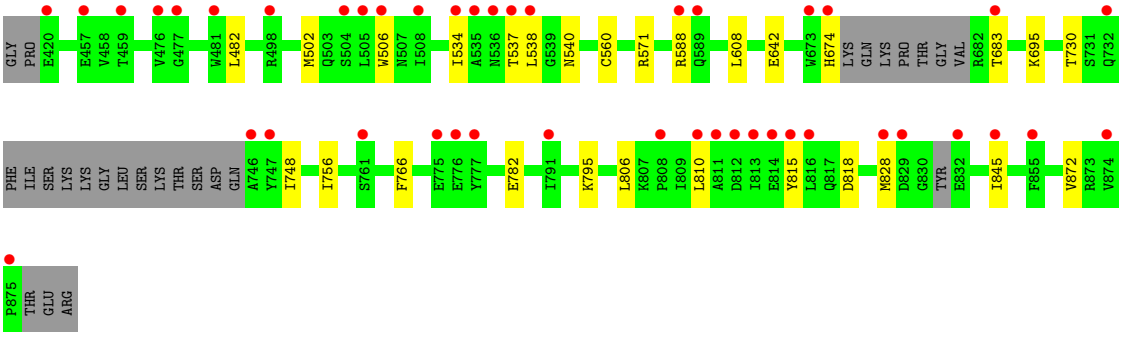
3 Residue-property plots (i)

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: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

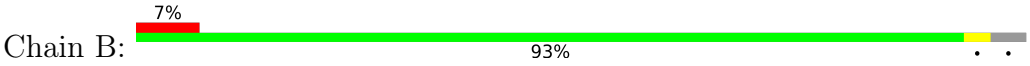
Chain A:

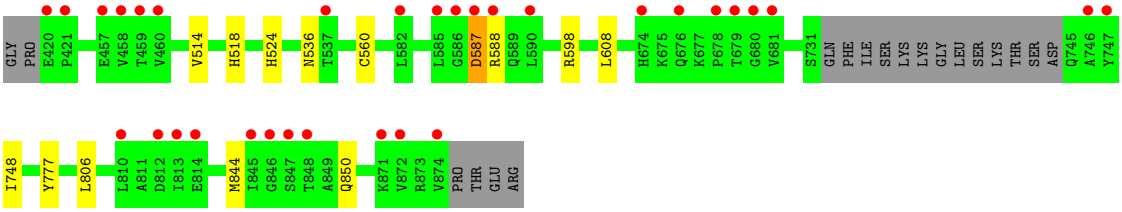




• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

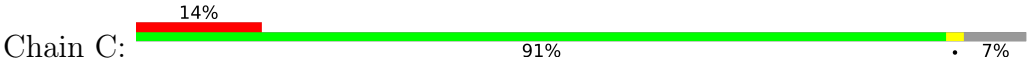
Chain B:

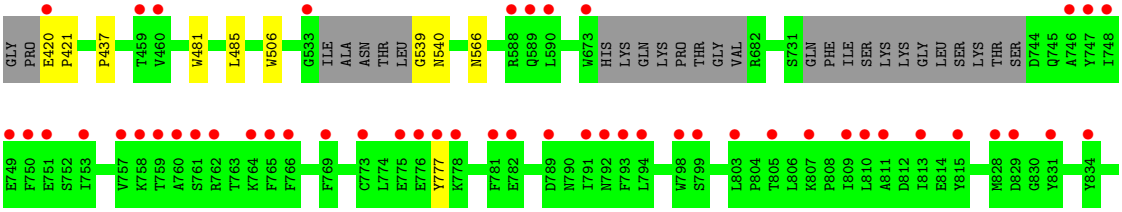


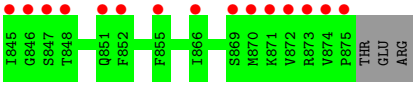


• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

Chain C:

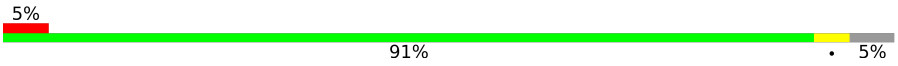


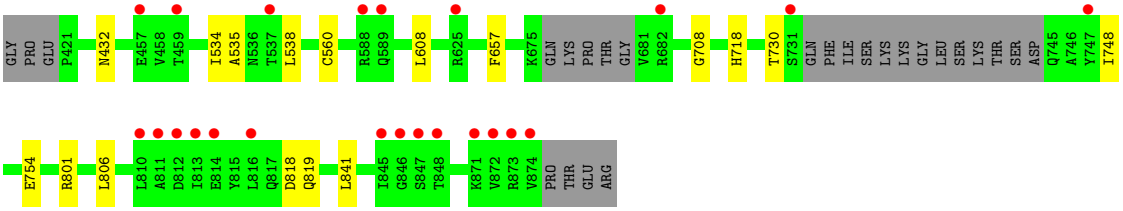




• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

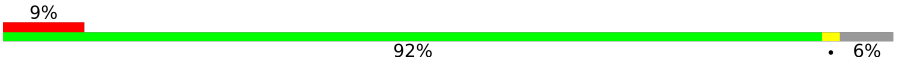
Chain D:

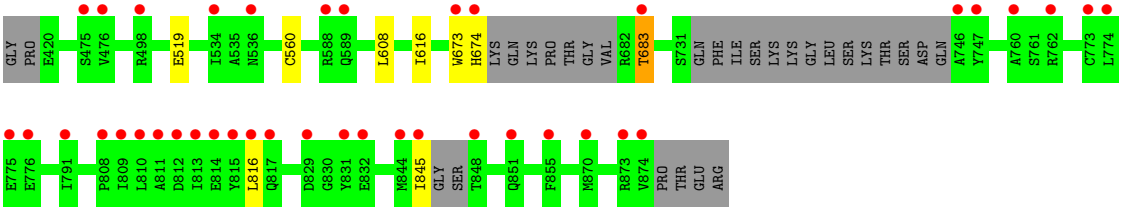




• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

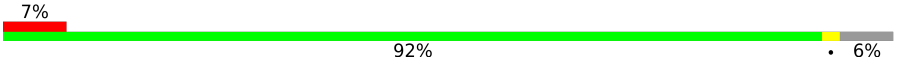
Chain E:

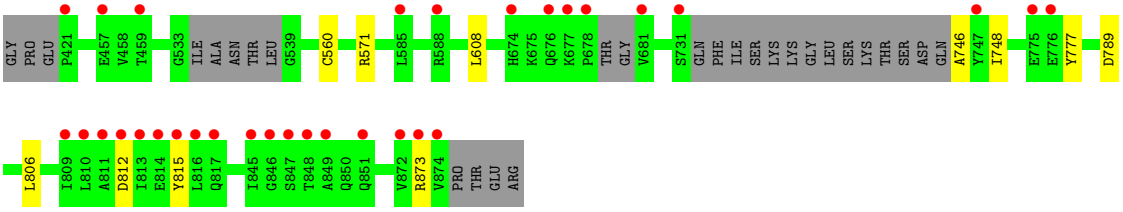




• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

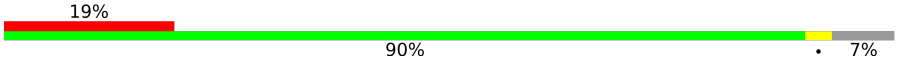
Chain F:

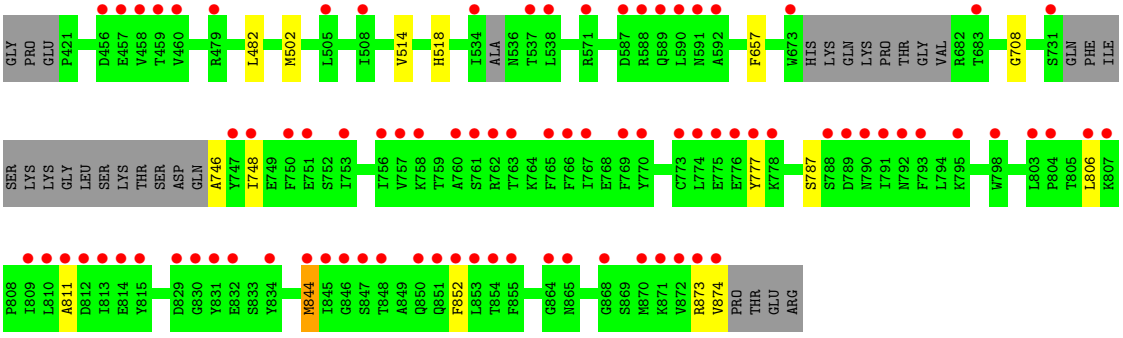




• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

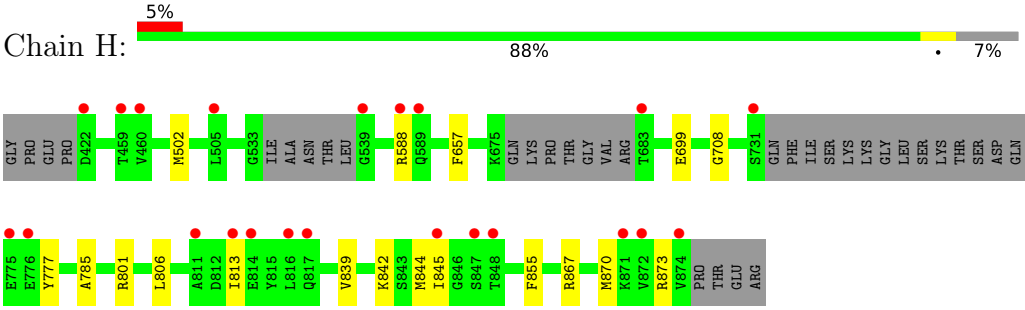
Chain G:





• Molecule 1: Phosphatidylinositol 3,4,5-trisphosphate 5-phosphatase 2

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	136.04Å 175.84Å 176.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.96 – 1.96 48.86 – 1.96	Depositor EDS
% Data completeness (in resolution range)	100.0 (48.96-1.96) 100.0 (48.86-1.96)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.19 (at 1.97Å)	Xtriage
Refinement program	REFMAC 5.8.0158	Depositor
R, R_{free}	0.179 , 0.207 0.188 , 0.214	Depositor DCC
R_{free} test set	15180 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	29.0	Xtriage
Anisotropy	0.545	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 44.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	0.035 for -h,l,k	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	29931	wwPDB-VP
Average B, all atoms (Å^2)	46.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.29% 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: B3P, NO3, EDO

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	0/3619	0.72	0/4900
1	B	0.52	0/3687	0.72	1/4993 (0.0%)
1	C	0.48	0/3569	0.69	0/4831
1	D	0.49	0/3617	0.70	0/4896
1	E	0.49	0/3621	0.69	0/4903
1	F	0.48	0/3588	0.70	1/4854 (0.0%)
1	G	0.46	0/3583	0.66	0/4849
1	H	0.52	0/3564	0.72	0/4822
All	All	0.50	0/28848	0.70	2/39048 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	571	ARG	NE-CZ-NH2	-5.04	117.78	120.30
1	B	598	ARG	NE-CZ-NH2	-5.02	117.79	120.30

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	3529	0	3459	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	3591	0	3527	9	0
1	C	3488	0	3399	5	0
1	D	3532	0	3459	10	0
1	E	3525	0	3457	4	0
1	F	3506	0	3432	5	0
1	G	3497	0	3422	10	0
1	H	3474	0	3391	13	0
2	A	19	0	26	0	0
2	B	19	0	26	0	0
2	C	19	0	26	0	0
2	D	19	0	26	0	0
2	E	19	0	26	0	0
2	F	19	0	26	0	0
2	H	19	0	26	0	0
3	A	4	0	0	0	0
3	C	4	0	0	0	0
4	A	20	0	30	0	0
4	B	16	0	24	0	0
4	C	4	0	6	0	0
4	D	20	0	30	1	0
4	F	16	0	24	0	0
4	G	4	0	6	0	0
4	H	4	0	6	0	0
5	A	220	0	0	1	0
5	B	232	0	0	0	0
5	C	157	0	0	0	0
5	D	187	0	0	1	0
5	E	206	0	0	0	0
5	F	190	0	0	0	0
5	G	150	0	0	0	0
5	H	222	0	0	0	0
All	All	29931	0	27854	68	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 (68) 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:524:HIS:HB3	1:B:587:ASP:HB3	1.49	0.94
1:G:746:ALA:N	1:G:873:ARG:O	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:746:ALA:HB2	1:G:811:ALA:CB	2.32	0.60
1:G:844:MET:HE1	1:G:852:PHE:HB3	1.83	0.59
1:A:730:THR:HG21	1:A:818:ASP:HB3	1.85	0.59
1:G:748:ILE:HB	1:G:806:LEU:HB2	1.86	0.58
1:B:536:ASN:HD22	1:H:785:ALA:HA	1.69	0.56
1:C:437:PRO:HD3	1:H:502:MET:HG2	1.86	0.56
1:A:766:PHE:HB3	1:A:828:MET:HE1	1.90	0.54
1:C:506:TRP:CE3	1:C:540:ASN:HA	2.43	0.54
1:H:839:VAL:HG11	1:H:870:MET:HE1	1.90	0.54
1:A:506:TRP:CE3	1:A:540:ASN:HA	2.42	0.54
1:G:746:ALA:HB2	1:G:811:ALA:HB1	1.90	0.54
1:D:560:CYS:SG	1:D:608:LEU:HD22	2.47	0.54
1:D:748:ILE:HB	1:D:806:LEU:HB2	1.92	0.50
1:F:560:CYS:SG	1:F:608:LEU:HD22	2.51	0.50
1:A:845:ILE:HD13	1:A:872:VAL:HB	1.94	0.50
1:B:536:ASN:ND2	1:H:785:ALA:HA	2.26	0.50
1:H:813:ILE:HG23	1:H:845:ILE:HG21	1.94	0.49
1:H:749:GLU:OE2	1:H:873:ARG:NE	2.45	0.49
1:D:730:THR:HG21	1:D:818:ASP:HB3	1.94	0.48
1:G:746:ALA:HB2	1:G:811:ALA:HB2	1.96	0.48
1:H:844:MET:HE3	1:H:870:MET:HB3	1.95	0.48
1:A:766:PHE:HB3	1:A:828:MET:CE	2.44	0.48
1:A:748:ILE:HG12	1:A:872:VAL:HG22	1.96	0.47
1:B:588:ARG:O	1:B:588:ARG:HG2	2.15	0.47
1:C:420:GLU:CB	1:C:421:PRO:HD3	2.44	0.47
1:A:482:LEU:HD13	1:A:502:MET:HE3	1.97	0.47
1:D:819:GLN:HB2	1:D:841:LEU:HD12	1.97	0.47
1:E:816:LEU:HB3	1:E:845:ILE:HD11	1.97	0.47
1:G:657:PHE:CD1	1:G:708:GLY:HA2	2.50	0.47
1:B:560:CYS:SG	1:B:608:LEU:HD22	2.55	0.46
1:G:514:VAL:HG22	1:G:518:HIS:HB2	1.98	0.46
1:A:674:HIS:HB2	1:A:683:THR:OG1	2.14	0.46
1:D:534:ILE:HD11	1:F:789:ASP:HA	1.98	0.46
1:G:844:MET:CE	1:G:852:PHE:HB3	2.45	0.46
1:D:801:ARG:NH1	5:D:1003:HOH:O	2.46	0.45
1:E:616:ILE:HD13	1:E:673:TRP:HB2	1.98	0.45
1:A:560:CYS:SG	1:A:608:LEU:HD22	2.56	0.45
1:A:695:LYS:NZ	5:A:1011:HOH:O	2.50	0.45
1:B:844:MET:CG	1:B:850:GLN:HB2	2.47	0.45
1:B:748:ILE:HB	1:B:806:LEU:HB2	1.99	0.45
1:F:748:ILE:HB	1:F:806:LEU:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:534:ILE:HG23	1:A:537:THR:OG1	2.17	0.44
1:A:782:GLU:HG3	1:A:828:MET:HE3	1.99	0.44
1:C:539:GLY:HA3	1:H:588:ARG:HD2	1.98	0.44
1:B:514:VAL:HG22	1:B:518:HIS:HB2	1.99	0.44
1:H:699:GLU:HB3	1:H:842:LYS:HE2	1.98	0.44
1:D:754:GLU:HB3	4:D:906:EDO:H21	2.00	0.44
1:A:588:ARG:HH21	1:H:801:ARG:HG3	1.82	0.43
1:A:482:LEU:HB2	1:A:502:MET:CE	2.49	0.43
1:F:746:ALA:HA	1:F:873:ARG:O	2.18	0.43
1:E:560:CYS:SG	1:E:608:LEU:HD22	2.59	0.43
1:H:657:PHE:CD1	1:H:708:GLY:HA2	2.54	0.42
1:A:534:ILE:CD1	1:A:571:ARG:HE	2.33	0.42
1:C:481:TRP:CZ2	1:C:485:LEU:HD11	2.54	0.42
1:A:756:ILE:HD11	1:A:795:LYS:HE2	2.01	0.42
1:D:535:ALA:HB3	1:D:538:LEU:HD12	2.02	0.42
1:A:810:LEU:HD23	1:A:815:TYR:CG	2.55	0.42
1:F:812:ASP:HB3	1:F:815:TYR:HB3	2.02	0.41
1:G:482:LEU:HD22	1:G:502:MET:HE2	2.02	0.41
1:E:674:HIS:HB2	1:E:683:THR:OG1	2.20	0.41
1:B:844:MET:HG2	1:B:850:GLN:HB2	2.02	0.41
1:D:657:PHE:CD1	1:D:708:GLY:HA2	2.56	0.41
1:A:748:ILE:HB	1:A:806:LEU:HB2	2.03	0.41
1:H:813:ILE:HD12	1:H:813:ILE:H	1.86	0.40
1:H:748:ILE:HB	1:H:806:LEU:HB2	2.03	0.40
1:D:432:ASN:HB3	1:D:718:HIS:CG	2.57	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	430/461 (93%)	423 (98%)	7 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	442/461 (96%)	435 (98%)	7 (2%)	0	100	100
1	C	423/461 (92%)	416 (98%)	7 (2%)	0	100	100
1	D	431/461 (94%)	423 (98%)	8 (2%)	0	100	100
1	E	429/461 (93%)	418 (97%)	11 (3%)	0	100	100
1	F	425/461 (92%)	419 (99%)	6 (1%)	0	100	100
1	G	425/461 (92%)	418 (98%)	7 (2%)	0	100	100
1	H	422/461 (92%)	417 (99%)	5 (1%)	0	100	100
All	All	3427/3688 (93%)	3369 (98%)	58 (2%)	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	397/417 (95%)	395 (100%)	2 (0%)	88	88
1	B	404/417 (97%)	402 (100%)	2 (0%)	88	88
1	C	391/417 (94%)	389 (100%)	2 (0%)	88	88
1	D	396/417 (95%)	396 (100%)	0	100	100
1	E	397/417 (95%)	395 (100%)	2 (0%)	88	88
1	F	393/417 (94%)	392 (100%)	1 (0%)	92	92
1	G	393/417 (94%)	389 (99%)	4 (1%)	76	74
1	H	390/417 (94%)	386 (99%)	4 (1%)	76	74
All	All	3161/3336 (95%)	3144 (100%)	17 (0%)	88	88

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	538	LEU
1	A	642	GLU

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Mol	Chain	Res	Type
1	B	587	ASP
1	B	777	TYR
1	C	566	ASN
1	C	777	TYR
1	E	519	GLU
1	E	683	THR
1	F	777	TYR
1	G	777	TYR
1	G	787	SER
1	G	844	MET
1	G	874	VAL
1	H	777	TYR
1	H	855[A]	PHE
1	H	855[B]	PHE
1	H	867	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	551	ASN
1	A	817	GLN
1	B	536	ASN
1	D	591	ASN
1	F	674	HIS
1	F	850	GLN
1	H	524	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)

30 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	$\#\|Z\| > 2$
4	EDO	A	903	-	3,3,3	0.42	0	2,2,2	0.34	0
2	B3P	D	901	-	18,18,18	0.85	0	21,23,23	0.93	0
4	EDO	B	904	-	3,3,3	0.46	0	2,2,2	0.08	0
2	B3P	H	901	-	18,18,18	0.88	0	21,23,23	0.86	0
4	EDO	D	905	-	3,3,3	0.44	0	2,2,2	0.24	0
4	EDO	A	905	-	3,3,3	0.51	0	2,2,2	0.33	0
4	EDO	B	902	-	3,3,3	0.49	0	2,2,2	0.23	0
4	EDO	D	902	-	3,3,3	0.50	0	2,2,2	0.19	0
4	EDO	B	903	-	3,3,3	0.54	0	2,2,2	0.26	0
2	B3P	C	901	-	18,18,18	0.97	1 (5%)	21,23,23	0.86	0
4	EDO	D	904	-	3,3,3	0.54	0	2,2,2	0.20	0
4	EDO	A	904	-	3,3,3	0.44	0	2,2,2	0.45	0
4	EDO	D	906	-	3,3,3	0.45	0	2,2,2	0.21	0
4	EDO	A	907	-	3,3,3	0.51	0	2,2,2	0.03	0
2	B3P	E	901	-	18,18,18	1.00	1 (5%)	21,23,23	1.00	0
4	EDO	F	903	-	3,3,3	0.53	0	2,2,2	0.13	0
4	EDO	F	905	-	3,3,3	0.45	0	2,2,2	0.36	0
2	B3P	A	901	-	18,18,18	0.98	1 (5%)	21,23,23	1.11	1 (4%)
4	EDO	A	906	-	3,3,3	0.54	0	2,2,2	0.13	0
2	B3P	F	901	-	18,18,18	0.97	1 (5%)	21,23,23	0.74	0
3	NO3	C	902	-	1,3,3	0.32	0	0,3,3	-	-
2	B3P	B	901	-	18,18,18	1.29	2 (11%)	21,23,23	0.85	0
4	EDO	B	905	-	3,3,3	0.45	0	2,2,2	0.29	0
4	EDO	C	903	-	3,3,3	0.49	0	2,2,2	0.25	0
4	EDO	F	902	-	3,3,3	0.71	0	2,2,2	0.66	0
4	EDO	F	904	-	3,3,3	0.47	0	2,2,2	0.15	0
4	EDO	D	903	-	3,3,3	0.48	0	2,2,2	0.29	0
4	EDO	H	902	-	3,3,3	0.50	0	2,2,2	0.17	0
4	EDO	G	901	-	3,3,3	0.51	0	2,2,2	0.32	0
3	NO3	A	902	-	1,3,3	0.23	0	0,3,3	-	-

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
4	EDO	A	903	-	-	1/1/1/1	-
2	B3P	D	901	-	-	2/28/28/28	-
4	EDO	B	904	-	-	1/1/1/1	-
2	B3P	H	901	-	-	4/28/28/28	-
4	EDO	D	905	-	-	0/1/1/1	-
4	EDO	A	905	-	-	0/1/1/1	-
4	EDO	B	902	-	-	0/1/1/1	-
4	EDO	D	902	-	-	0/1/1/1	-
4	EDO	B	903	-	-	0/1/1/1	-
2	B3P	C	901	-	-	2/28/28/28	-
4	EDO	D	904	-	-	0/1/1/1	-
4	EDO	A	904	-	-	0/1/1/1	-
4	EDO	D	906	-	-	0/1/1/1	-
4	EDO	A	907	-	-	0/1/1/1	-
2	B3P	E	901	-	-	0/28/28/28	-
4	EDO	F	903	-	-	1/1/1/1	-
4	EDO	F	905	-	-	0/1/1/1	-
2	B3P	A	901	-	-	0/28/28/28	-
4	EDO	A	906	-	-	0/1/1/1	-
2	B3P	F	901	-	-	0/28/28/28	-
4	EDO	B	905	-	-	0/1/1/1	-
2	B3P	B	901	-	-	9/28/28/28	-
4	EDO	C	903	-	-	0/1/1/1	-
4	EDO	F	902	-	-	0/1/1/1	-
4	EDO	F	904	-	-	1/1/1/1	-
4	EDO	D	903	-	-	0/1/1/1	-
4	EDO	H	902	-	-	0/1/1/1	-
4	EDO	G	901	-	-	0/1/1/1	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	901	B3P	C10-C8	3.28	1.57	1.53
2	B	901	B3P	C7-C4	2.61	1.56	1.53
2	E	901	B3P	C7-C4	2.52	1.56	1.53
2	C	901	B3P	C7-C4	2.44	1.56	1.53
2	F	901	B3P	C7-C4	2.37	1.56	1.53
2	A	901	B3P	C3-N1	2.16	1.49	1.46

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	901	B3P	C6-C4-C5	-2.62	104.50	110.04

There are no chirality outliers.

All (21) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	H	901	B3P	N1-C4-C6-O5
2	H	901	B3P	C7-C4-C6-O5
2	H	901	B3P	C5-C4-C6-O5
2	D	901	B3P	C3-C1-C2-N2
2	H	901	B3P	C3-C1-C2-N2
2	C	901	B3P	C11-C8-N2-C2
2	B	901	B3P	O2-C10-C8-C9
2	B	901	B3P	N2-C8-C9-O1
2	D	901	B3P	N1-C4-C6-O5
2	B	901	B3P	O3-C11-C8-C10
2	B	901	B3P	C3-C1-C2-N2
2	B	901	B3P	C1-C2-N2-C8
2	C	901	B3P	C10-C8-N2-C2
2	B	901	B3P	O3-C11-C8-C9
4	A	903	EDO	O1-C1-C2-O2
4	B	904	EDO	O1-C1-C2-O2
4	F	903	EDO	O1-C1-C2-O2
2	B	901	B3P	O2-C10-C8-N2
2	B	901	B3P	O3-C11-C8-N2
4	F	904	EDO	O1-C1-C2-O2
2	B	901	B3P	O2-C10-C8-C11

There are no ring outliers.

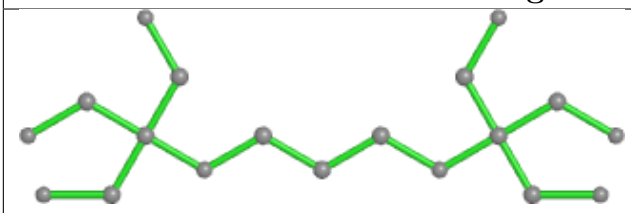
1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	D	906	EDO	1	0

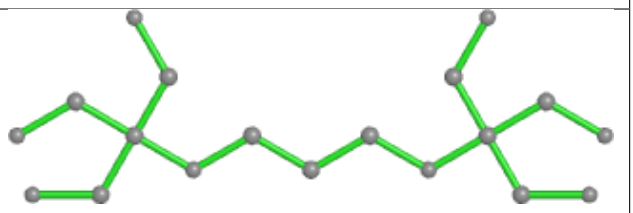
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

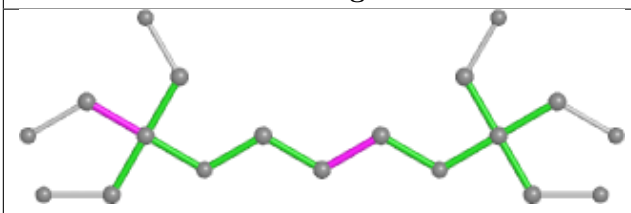
Ligand B3P D 901



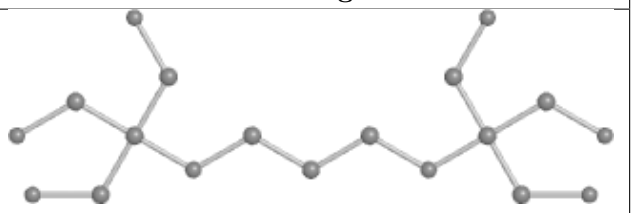
Bond lengths



Bond angles

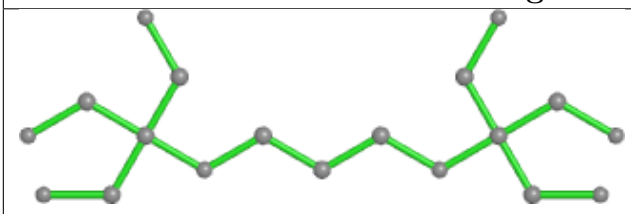


Torsions

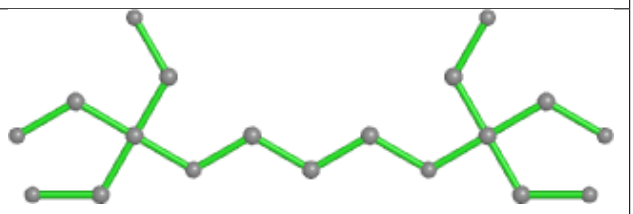


Rings

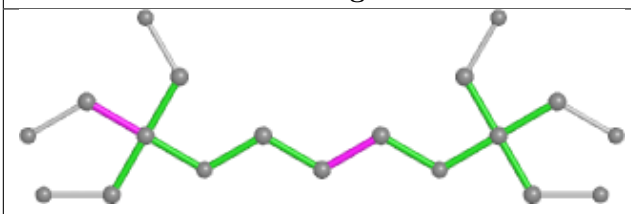
Ligand B3P H 901



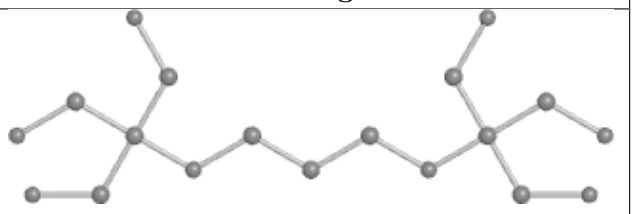
Bond lengths



Bond angles

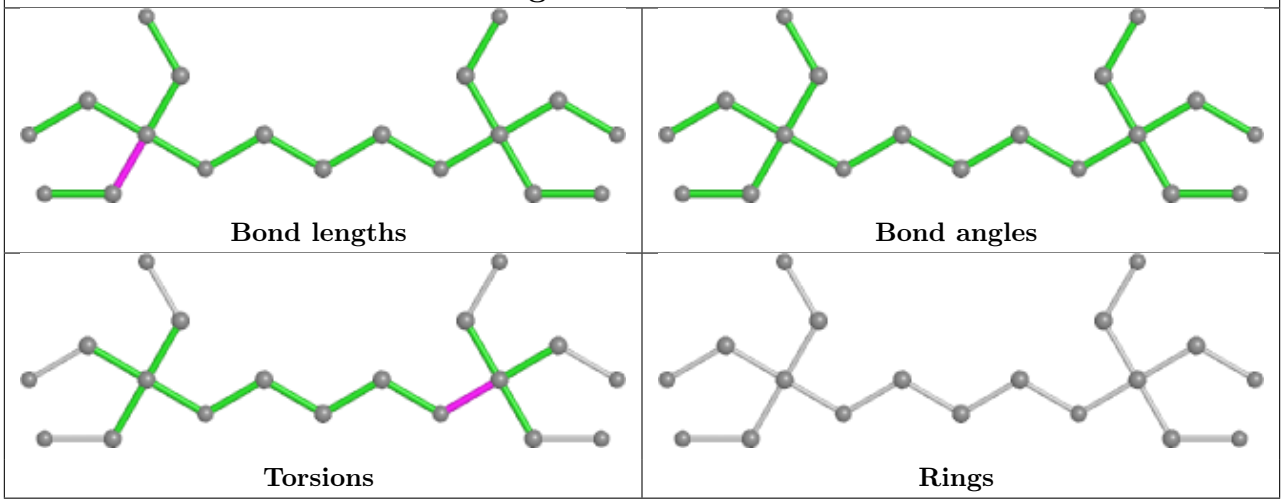


Torsions



Rings

Ligand B3P C 901



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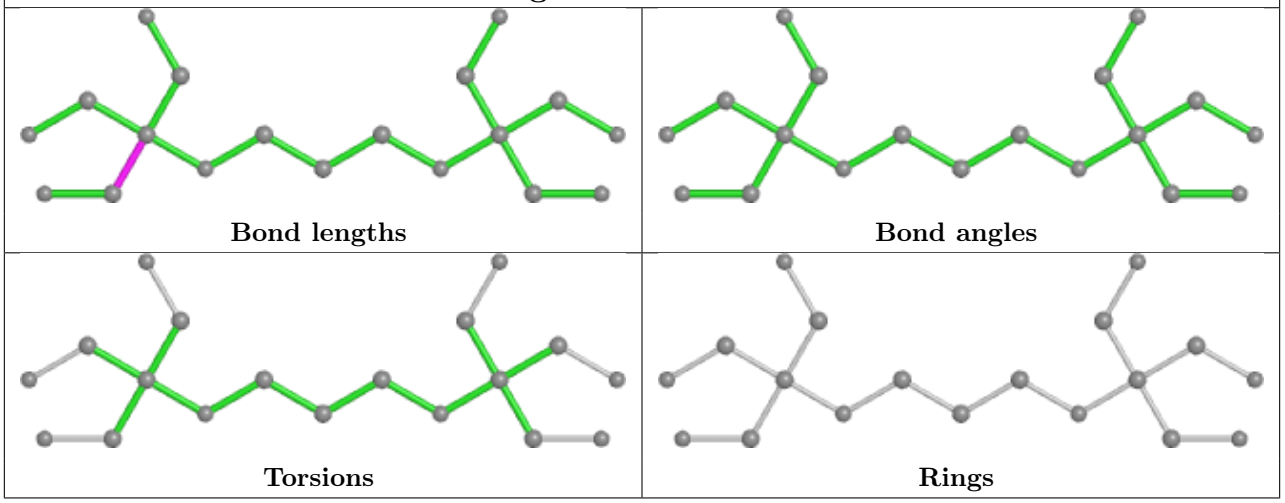
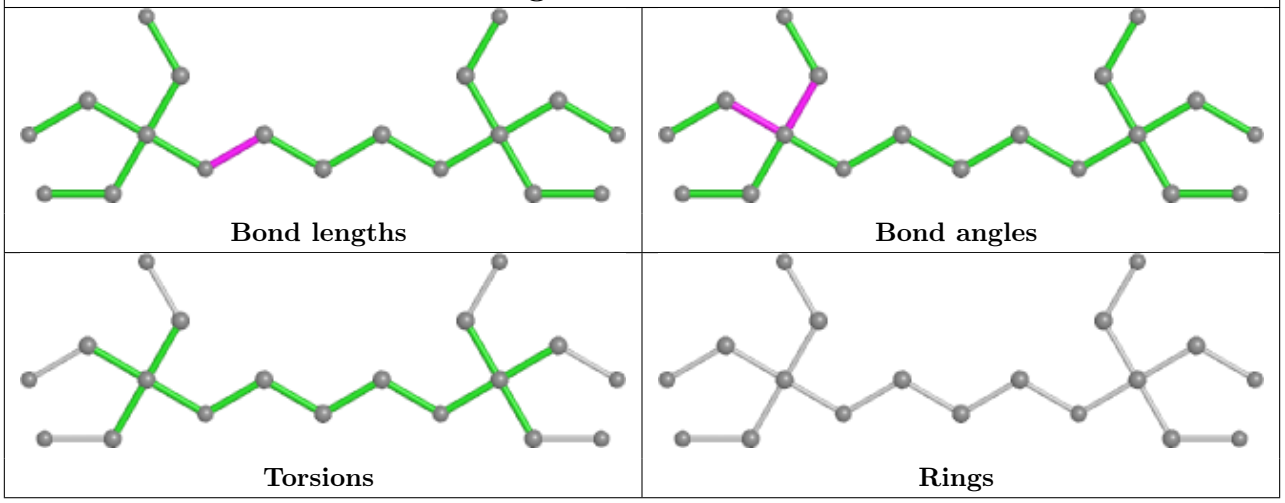
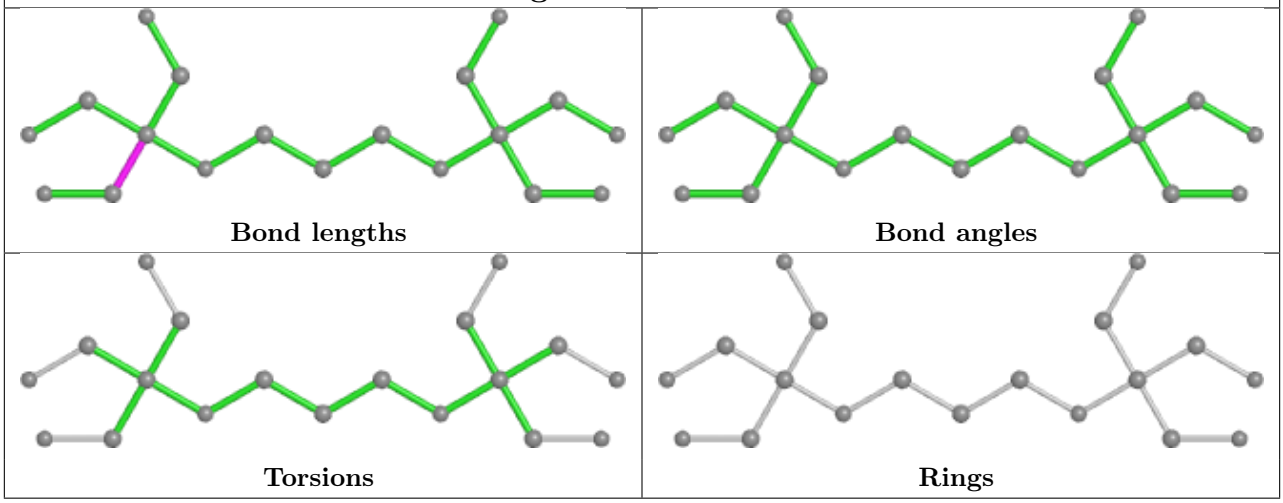


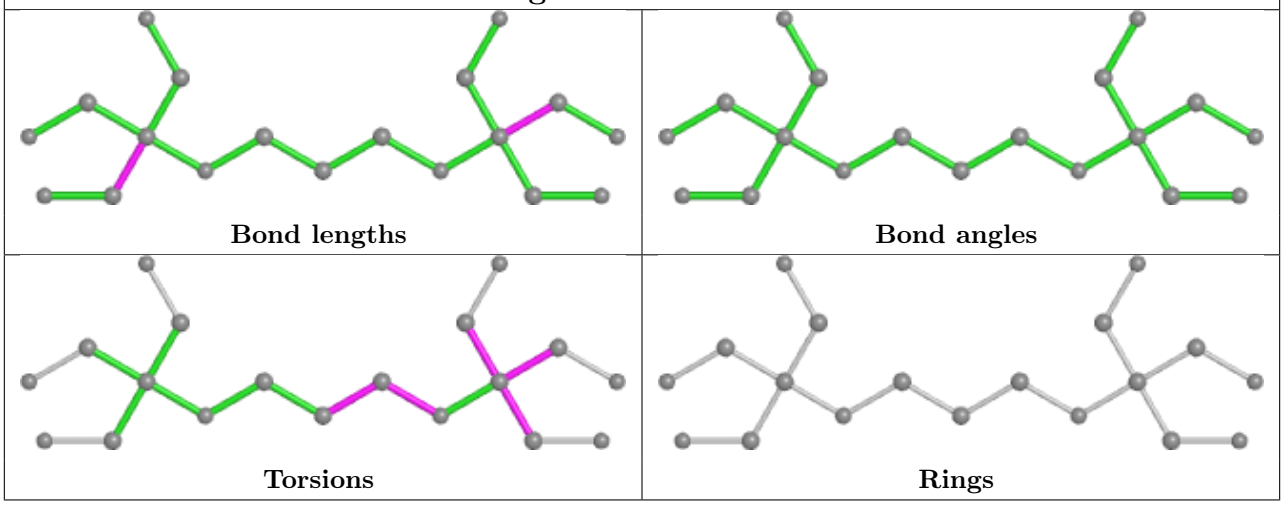
Ligand B3P A 901



Ligand B3P F 901



Ligand B3P B 901



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	435/461 (94%)	0.50	44 (10%) 7 11	23, 39, 72, 93	0
1	B	442/461 (95%)	0.44	32 (7%) 15 23	22, 36, 75, 94	0
1	C	431/461 (93%)	0.76	66 (15%) 2 3	25, 48, 113, 147	0
1	D	436/461 (94%)	0.37	23 (5%) 26 35	24, 42, 74, 93	0
1	E	432/461 (93%)	0.54	40 (9%) 8 14	23, 43, 89, 130	0
1	F	433/461 (93%)	0.45	32 (7%) 14 22	24, 41, 82, 113	0
1	G	431/461 (93%)	0.89	87 (20%) 1 1	27, 47, 107, 149	0
1	H	427/461 (92%)	0.27	24 (5%) 24 33	22, 35, 65, 86	0
All	All	3467/3688 (94%)	0.53	348 (10%) 7 11	22, 41, 88, 149	0

All (348) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	874	VAL	8.0
1	G	590	LEU	7.7
1	G	831	TYR	7.5
1	F	747	TYR	7.4
1	B	587	ASP	6.8
1	C	762	ARG	6.8
1	B	810	LEU	6.5
1	G	847	SER	6.2
1	D	847	SER	6.2
1	E	813	ILE	6.1
1	F	676	GLN	6.0
1	G	874	VAL	6.0
1	F	872	VAL	6.0
1	G	747	TYR	5.9
1	A	535	ALA	5.8
1	C	874	VAL	5.7

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Mol	Chain	Res	Type	RSRZ
1	E	811	ALA	5.6
1	F	813	ILE	5.6
1	F	845	ILE	5.5
1	G	811	ALA	5.5
1	F	810	LEU	5.4
1	H	589	GLN	5.4
1	H	588	ARG	5.2
1	G	460	VAL	5.2
1	G	761	SER	5.2
1	E	809	ILE	5.1
1	C	813	ILE	5.1
1	B	872	VAL	5.1
1	B	459	THR	5.1
1	G	459	THR	5.0
1	C	811	ALA	5.0
1	D	845	ILE	5.0
1	B	679	THR	5.0
1	G	791	ILE	5.0
1	A	810	LEU	4.9
1	F	816	LEU	4.9
1	G	813	ILE	4.9
1	E	810	LEU	4.8
1	C	809	ILE	4.8
1	D	874	VAL	4.7
1	G	758	LYS	4.7
1	D	459	THR	4.7
1	A	791	ILE	4.7
1	C	831	TYR	4.6
1	B	874	VAL	4.6
1	A	534	ILE	4.6
1	G	534	ILE	4.5
1	C	810	LEU	4.5
1	G	848	THR	4.5
1	H	459	THR	4.5
1	G	762	ARG	4.4
1	G	846	GLY	4.4
1	G	588	ARG	4.4
1	C	781	PHE	4.4
1	E	831	TYR	4.4
1	F	847	SER	4.4
1	H	874	VAL	4.4
1	E	747	TYR	4.3

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Mol	Chain	Res	Type	RSRZ
1	C	775	GLU	4.3
1	F	846	GLY	4.3
1	A	536	ASN	4.3
1	G	587	ASP	4.3
1	G	810	LEU	4.3
1	D	813	ILE	4.2
1	G	789	ASP	4.2
1	G	832	GLU	4.2
1	F	811	ALA	4.2
1	B	586	GLY	4.2
1	E	673	TRP	4.2
1	G	829	ASP	4.1
1	C	765	PHE	4.1
1	C	673	TRP	4.1
1	B	813	ILE	4.1
1	H	813	ILE	4.1
1	D	747	TYR	4.1
1	G	765	PHE	4.1
1	B	680	GLY	4.1
1	B	537	THR	4.1
1	C	847	SER	4.0
1	C	848	THR	4.0
1	H	845	ILE	4.0
1	H	872	VAL	4.0
1	G	777	TYR	4.0
1	H	460	VAL	4.0
1	E	776	GLU	4.0
1	C	873	ARG	3.9
1	E	845	ILE	3.9
1	G	538	LEU	3.9
1	A	813	ILE	3.9
1	C	747	TYR	3.9
1	E	760	ALA	3.8
1	E	816	LEU	3.8
1	B	845	ILE	3.8
1	F	848	THR	3.8
1	G	872	VAL	3.8
1	A	874	VAL	3.8
1	C	757	VAL	3.8
1	E	762	ARG	3.8
1	D	872	VAL	3.8
1	A	875	PRO	3.7

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Mol	Chain	Res	Type	RSRZ
1	C	872	VAL	3.7
1	A	811	ALA	3.7
1	D	588	ARG	3.7
1	D	811	ALA	3.7
1	F	776	GLU	3.7
1	B	676	GLN	3.7
1	F	459	THR	3.7
1	E	808	PRO	3.7
1	F	809	ILE	3.6
1	G	537	THR	3.6
1	G	809	ILE	3.6
1	E	814	GLU	3.6
1	B	871	LYS	3.6
1	E	589	GLN	3.6
1	D	846	GLY	3.6
1	G	873	ARG	3.6
1	G	790	ASN	3.5
1	C	760	ALA	3.5
1	F	681	VAL	3.5
1	G	830	GLY	3.5
1	C	420	GLU	3.5
1	G	793	PHE	3.5
1	B	847	SER	3.4
1	E	674	HIS	3.4
1	G	845	ILE	3.4
1	D	682	ARG	3.4
1	E	815	TYR	3.4
1	A	832	GLU	3.4
1	F	731	SER	3.4
1	H	747	TYR	3.4
1	A	459	THR	3.3
1	C	782	GLU	3.3
1	D	810	LEU	3.3
1	G	855	PHE	3.3
1	C	759	THR	3.3
1	E	791	ILE	3.3
1	E	536	ASN	3.3
1	C	589	GLN	3.3
1	C	828	MET	3.2
1	C	870	MET	3.2
1	C	746	ALA	3.2
1	C	776	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	747	TYR	3.2
1	E	498	ARG	3.2
1	A	816	LEU	3.2
1	B	590	LEU	3.2
1	G	458	VAL	3.2
1	H	847	SER	3.2
1	B	588	ARG	3.2
1	A	746	ALA	3.2
1	A	420	GLU	3.2
1	A	674	HIS	3.1
1	F	874	VAL	3.1
1	E	746	ALA	3.1
1	A	776	GLU	3.1
1	G	766	PHE	3.1
1	C	751	GLU	3.1
1	C	815	TYR	3.1
1	E	775	GLU	3.1
1	G	870	MET	3.1
1	B	460	VAL	3.1
1	G	763	THR	3.1
1	G	776	GLU	3.0
1	C	753	ILE	3.0
1	C	845	ILE	3.0
1	C	791	ILE	3.0
1	D	731	SER	3.0
1	G	750	PHE	3.0
1	G	775	GLU	2.9
1	G	852	PHE	2.9
1	F	873	ARG	2.9
1	A	538	LEU	2.9
1	C	778	LYS	2.9
1	A	498	ARG	2.9
1	C	750	PHE	2.8
1	B	846	GLY	2.8
1	C	460	VAL	2.8
1	E	851	GLN	2.8
1	C	798	TRP	2.8
1	G	778	LYS	2.8
1	B	421	PRO	2.8
1	G	815	TYR	2.8
1	F	814	GLU	2.8
1	G	505	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	H	811	ALA	2.8
1	C	805	THR	2.8
1	E	773	CYS	2.8
1	G	788	SER	2.8
1	C	794	LEU	2.8
1	F	678	PRO	2.8
1	A	481	TRP	2.8
1	F	775	GLU	2.8
1	D	814	GLU	2.8
1	A	732	GLN	2.7
1	C	764	LYS	2.7
1	G	457	GLU	2.7
1	E	812	ASP	2.7
1	A	814	GLU	2.7
1	F	674	HIS	2.7
1	F	812	ASP	2.7
1	G	814	GLU	2.7
1	H	814	GLU	2.7
1	C	761	SER	2.7
1	A	537	THR	2.7
1	B	674	HIS	2.7
1	G	591	ASN	2.7
1	C	749	GLU	2.7
1	C	829	ASP	2.6
1	G	756	ILE	2.6
1	D	457	GLU	2.6
1	E	829	ASP	2.6
1	H	539	GLY	2.6
1	B	678	PRO	2.6
1	C	459	THR	2.6
1	C	866	ILE	2.6
1	C	855	PHE	2.6
1	H	775	GLU	2.6
1	G	853	LEU	2.6
1	H	816	LEU	2.6
1	C	792	ASN	2.6
1	D	537	THR	2.6
1	G	683	THR	2.6
1	G	751	GLU	2.6
1	E	534	ILE	2.6
1	G	673	TRP	2.5
1	G	798	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
1	G	851	GLN	2.5
1	C	758	LYS	2.5
1	G	773	CYS	2.5
1	A	457	GLU	2.5
1	C	789	ASP	2.5
1	G	589	GLN	2.5
1	C	875	PRO	2.5
1	F	677	LYS	2.5
1	A	589	GLN	2.5
1	G	834	TYR	2.5
1	G	479	ARG	2.5
1	F	421	PRO	2.5
1	G	456	ASP	2.5
1	F	585	LEU	2.5
1	C	851	GLN	2.4
1	G	871	LYS	2.4
1	D	848	THR	2.4
1	E	683	THR	2.4
1	C	834	TYR	2.4
1	C	846	GLY	2.4
1	G	508	ILE	2.4
1	B	814	GLU	2.4
1	C	590	LEU	2.4
1	A	829	ASP	2.4
1	B	812	ASP	2.4
1	E	774	LEU	2.4
1	H	817	GLN	2.4
1	E	848	THR	2.4
1	D	589	GLN	2.4
1	C	803	LEU	2.4
1	D	816	LEU	2.4
1	G	770	TYR	2.4
1	E	870	MET	2.4
1	D	873	ARG	2.4
1	F	457	GLU	2.4
1	F	817	GLN	2.4
1	C	777	TYR	2.3
1	A	683	THR	2.3
1	G	803	LEU	2.3
1	A	815	TYR	2.3
1	G	769	PHE	2.3
1	C	807	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	458	VAL	2.3
1	E	817	GLN	2.3
1	G	748	ILE	2.3
1	A	828	MET	2.3
1	C	533	GLY	2.3
1	B	585	LEU	2.3
1	C	793	PHE	2.3
1	H	683	THR	2.3
1	E	475	SER	2.3
1	A	747	TYR	2.3
1	C	871	LYS	2.3
1	G	807	LYS	2.3
1	A	812	ASP	2.3
1	G	844	MET	2.3
1	A	845	ILE	2.3
1	F	849	ALA	2.3
1	G	865	ASN	2.3
1	A	808	PRO	2.2
1	D	871	LYS	2.2
1	H	871	LYS	2.2
1	B	582	LEU	2.2
1	G	806	LEU	2.2
1	B	420	GLU	2.2
1	A	504	SER	2.2
1	A	761	SER	2.2
1	H	505	LEU	2.2
1	A	777	TYR	2.2
1	H	848	THR	2.2
1	C	852	PHE	2.2
1	G	760	ALA	2.2
1	G	868	GLY	2.2
1	E	588	ARG	2.2
1	F	588	ARG	2.2
1	A	506	TRP	2.2
1	G	592	ALA	2.2
1	G	864	GLY	2.2
1	B	457	GLU	2.2
1	C	769	PHE	2.2
1	A	508	ILE	2.1
1	G	767	ILE	2.1
1	A	505	LEU	2.1
1	A	673	TRP	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	746	ALA	2.1
1	F	851	GLN	2.1
1	C	766	PHE	2.1
1	B	681	VAL	2.1
1	C	588	ARG	2.1
1	H	422	ASP	2.1
1	D	625	ARG	2.1
1	A	775	GLU	2.1
1	C	748	ILE	2.1
1	H	776	GLU	2.1
1	G	795	LYS	2.1
1	A	855	PHE	2.1
1	E	832	GLU	2.1
1	B	848	THR	2.1
1	G	757	VAL	2.1
1	G	854	THR	2.1
1	G	571	ARG	2.1
1	C	773	CYS	2.1
1	C	799	SER	2.1
1	G	753	ILE	2.1
1	H	731	SER	2.1
1	G	804	PRO	2.1
1	A	477	GLY	2.1
1	F	815	TYR	2.1
1	A	588	ARG	2.1
1	E	476	VAL	2.1
1	D	812	ASP	2.1
1	G	731	SER	2.1
1	H	746	ALA	2.1
1	E	873	ARG	2.0
1	G	774	LEU	2.0
1	G	812	ASP	2.0
1	E	844	MET	2.0
1	G	850	GLN	2.0
1	A	476	VAL	2.0
1	E	855	PHE	2.0
1	G	792	ASN	2.0
1	C	869	SER	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.

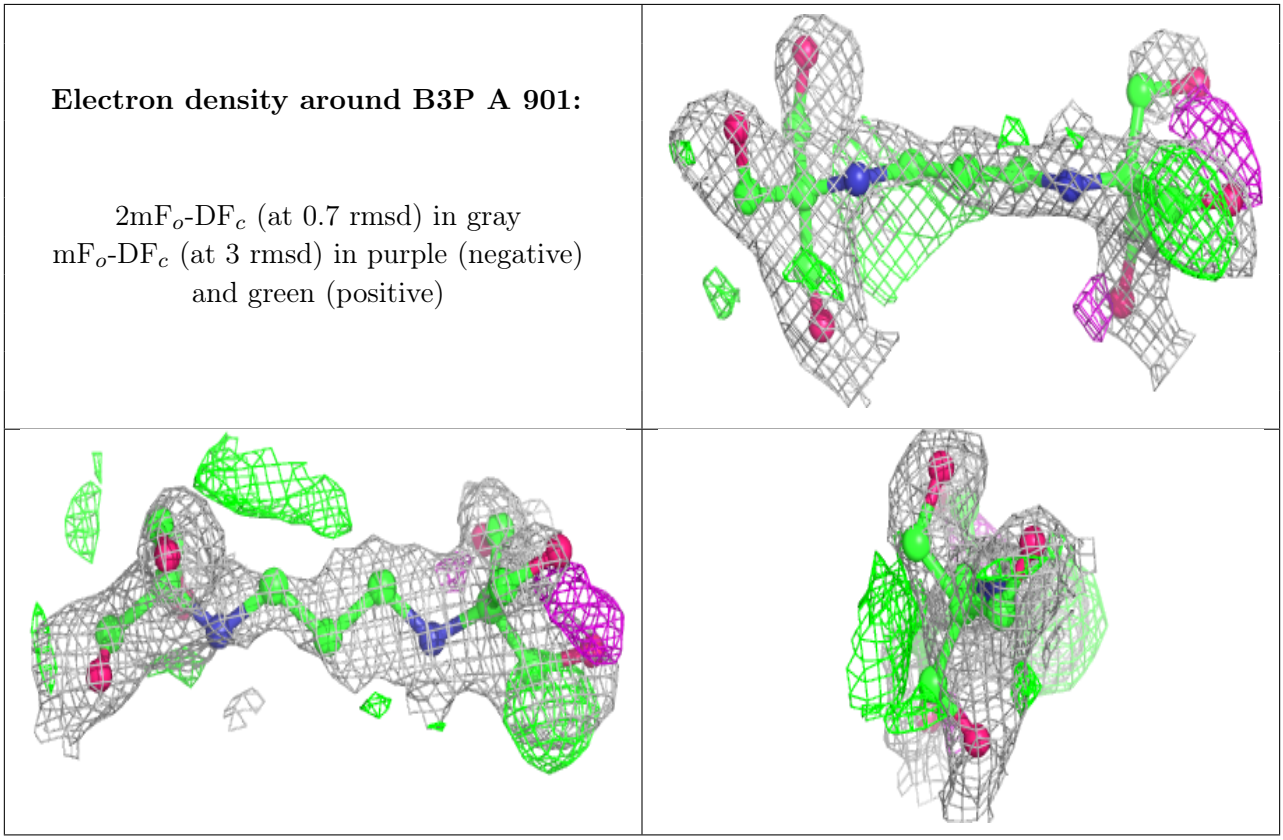
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	B3P	A	901	19/19	0.68	0.32	42,46,48,48	19
2	B3P	E	901	19/19	0.78	0.24	38,44,47,50	19
2	B3P	D	901	19/19	0.80	0.27	44,46,49,50	0
4	EDO	F	902	4/4	0.81	0.20	39,39,41,42	0
2	B3P	C	901	19/19	0.85	0.24	42,44,48,49	0
4	EDO	A	904	4/4	0.87	0.15	45,45,46,46	0
4	EDO	A	906	4/4	0.88	0.14	38,41,42,43	0
2	B3P	F	901	19/19	0.89	0.20	39,43,45,48	0
2	B3P	B	901	19/19	0.89	0.15	37,40,45,45	0
4	EDO	F	903	4/4	0.89	0.21	40,42,42,43	0
4	EDO	C	903	4/4	0.90	0.26	43,43,44,44	0
2	B3P	H	901	19/19	0.90	0.15	36,40,42,46	0
4	EDO	A	903	4/4	0.90	0.26	42,43,46,49	0
4	EDO	F	905	4/4	0.90	0.14	43,44,44,47	0
4	EDO	D	905	4/4	0.91	0.19	36,38,40,41	0
4	EDO	B	904	4/4	0.91	0.11	40,40,42,42	0
4	EDO	G	901	4/4	0.92	0.15	38,41,41,43	0
4	EDO	D	903	4/4	0.93	0.11	44,44,45,46	0
3	NO3	A	902	4/4	0.93	0.15	35,40,41,42	0
4	EDO	B	902	4/4	0.93	0.14	33,38,38,42	0
4	EDO	F	904	4/4	0.94	0.13	33,34,35,36	0
4	EDO	A	907	4/4	0.94	0.22	45,46,46,50	0
4	EDO	D	906	4/4	0.94	0.29	40,40,41,42	0
4	EDO	A	905	4/4	0.95	0.12	39,39,41,41	0
4	EDO	B	905	4/4	0.95	0.20	43,44,45,47	0
3	NO3	C	902	4/4	0.95	0.12	35,38,39,43	0
4	EDO	D	902	4/4	0.95	0.11	42,42,44,47	0
4	EDO	B	903	4/4	0.96	0.12	30,32,34,34	0
4	EDO	D	904	4/4	0.97	0.12	30,31,32,32	0
4	EDO	H	902	4/4	0.98	0.11	31,32,33,33	0

The following is a graphical depiction of the model fit to experimental electron density of all

instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

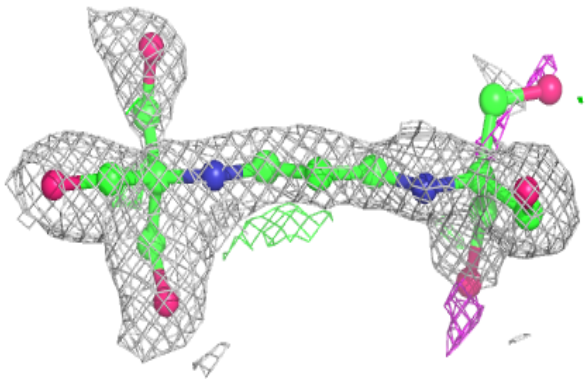
Electron density around B3P A 901:

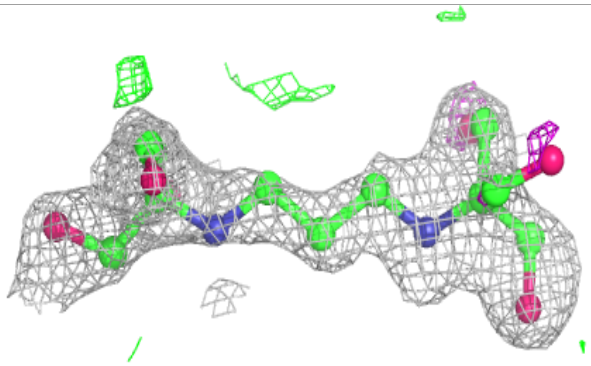
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

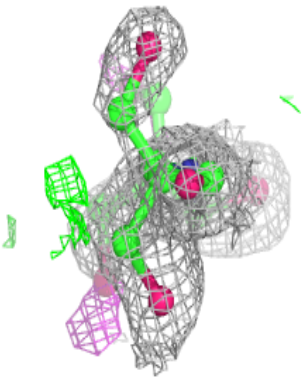


Electron density around B3P E 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

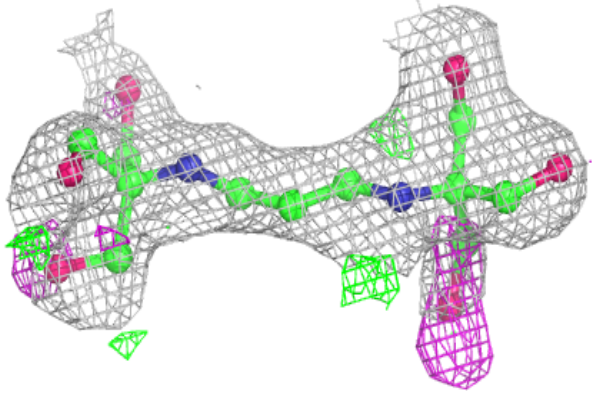


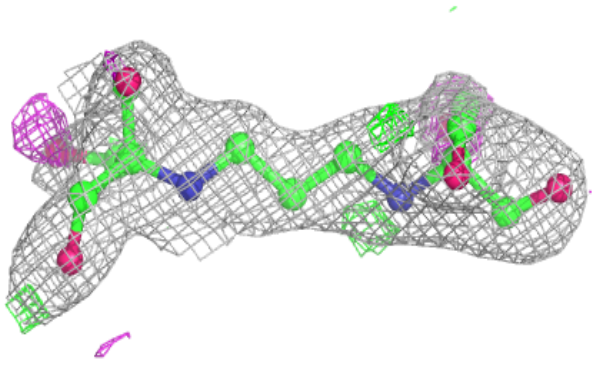


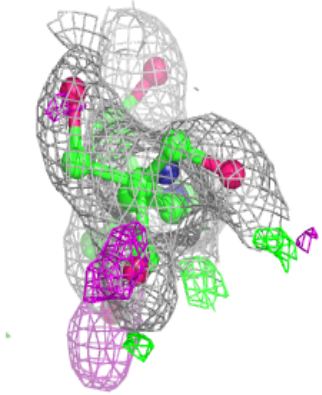


Electron density around B3P D 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

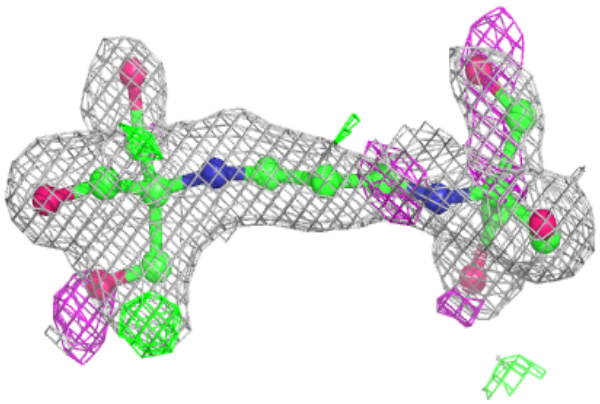


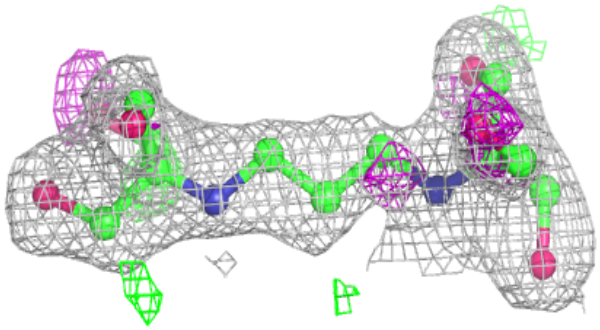


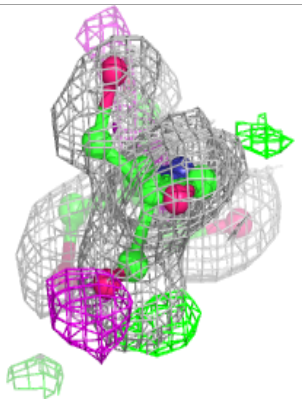


Electron density around B3P C 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

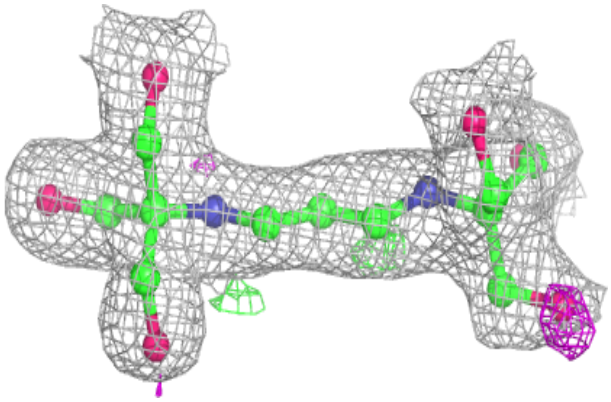


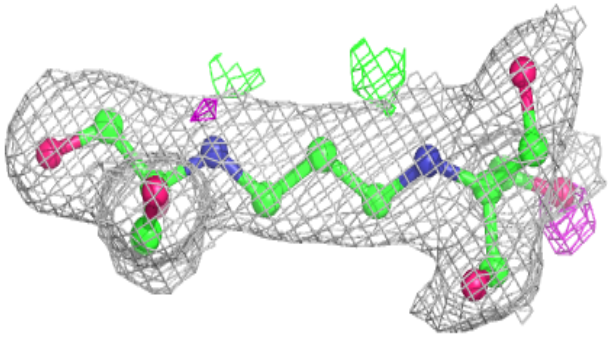


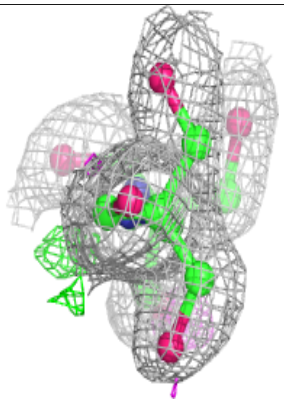


Electron density around B3P F 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

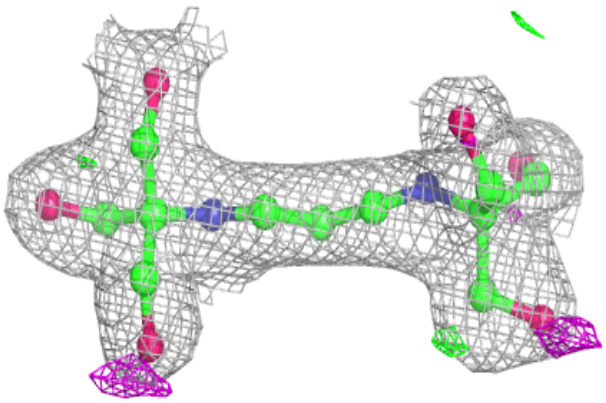


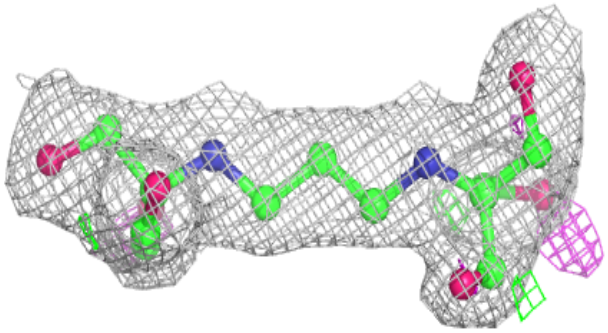


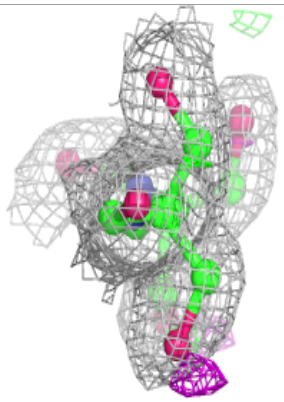


Electron density around B3P B 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

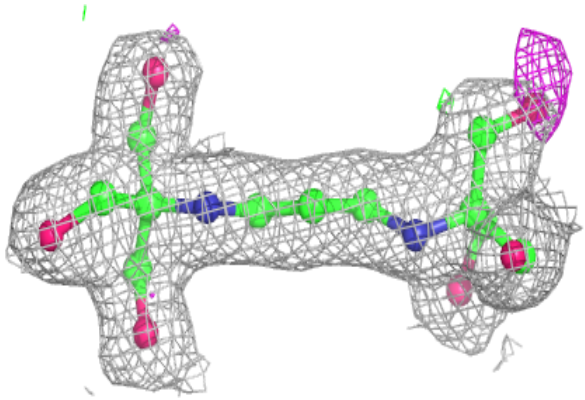


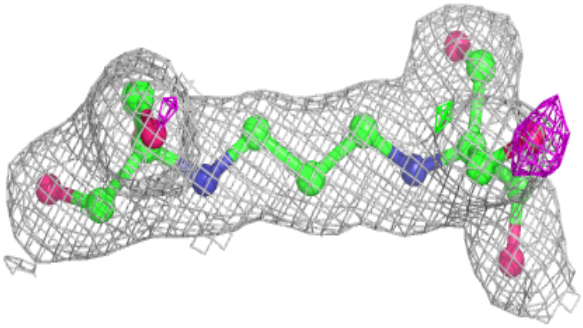


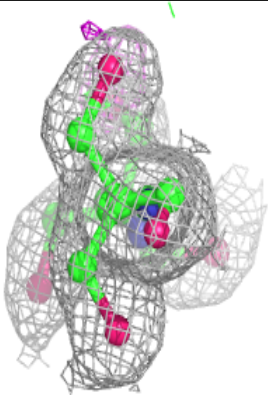


Electron density around B3P H 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)







6.5 Other polymers (i)

There are no such residues in this entry.