Full wwPDB X-ray Structure Validation Report (i)

Nov 9, 2024 – 10:12 am GMT

PDB ID	:	5IUX
Title	:	GLIC-V135C bimane labelled X-ray structure
Authors	:	Fourati, Z.; Menny, A.; Delarue, M.
Deposited on	:	2016-03-18
Resolution	:	2.60 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:

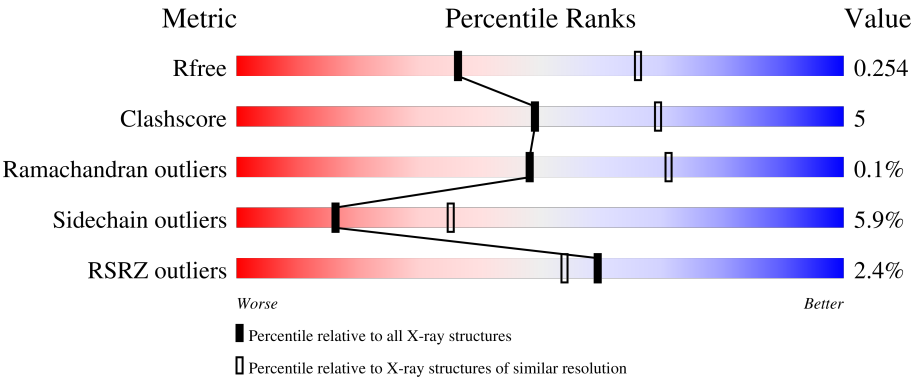
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 2.60 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}	164625	3775 (2.60-2.60)
Clashscore	180529	4181 (2.60-2.60)
Ramachandran outliers	177936	4129 (2.60-2.60)
Sidechain outliers	177891	4129 (2.60-2.60)
RSRZ outliers	164620	3775 (2.60-2.60)

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	317	3% 85% 12%
1	B	317	2% 85% 12%
1	C	317	2% 78% 20%
1	D	317	3% 84% 14%
1	E	317	2% 82% 15%

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
4	ACT	A	505	-	-	X	-
4	ACT	A	509	-	-	X	-
4	ACT	A	510	-	-	X	-
4	ACT	B	607	-	-	X	-
4	ACT	C	608	-	-	X	-
4	ACT	D	608	-	-	X	-
4	ACT	E	401	-	-	X	-

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 13699 atoms, of which 52 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.

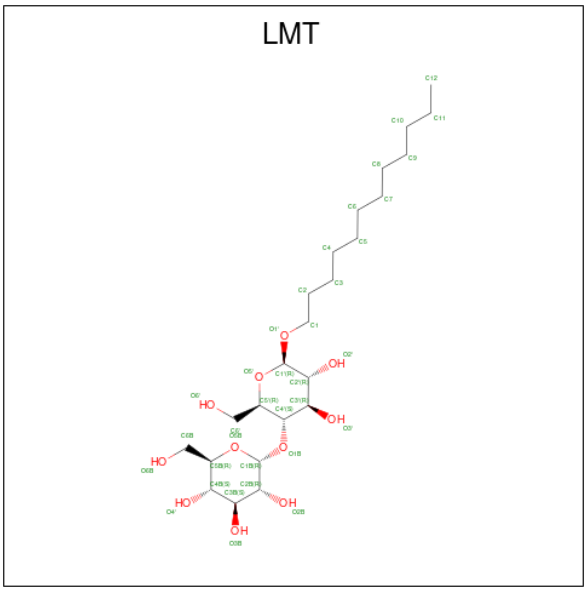
- Molecule 1 is a protein called Proton-gated ion channel.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	311	Total	C	N	O	S	0	0	0
			2524	1662	404	454	4			
1	B	311	Total	C	N	O	S	0	1	0
			2533	1668	406	455	4			
1	C	311	Total	C	N	O	S	0	1	0
			2533	1668	406	455	4			
1	D	311	Total	C	N	O	S	0	1	0
			2533	1668	406	455	4			
1	E	311	Total	C	N	O	S	0	1	0
			2533	1668	406	455	4			

There are 10 discrepancies between the modelled and reference sequences:

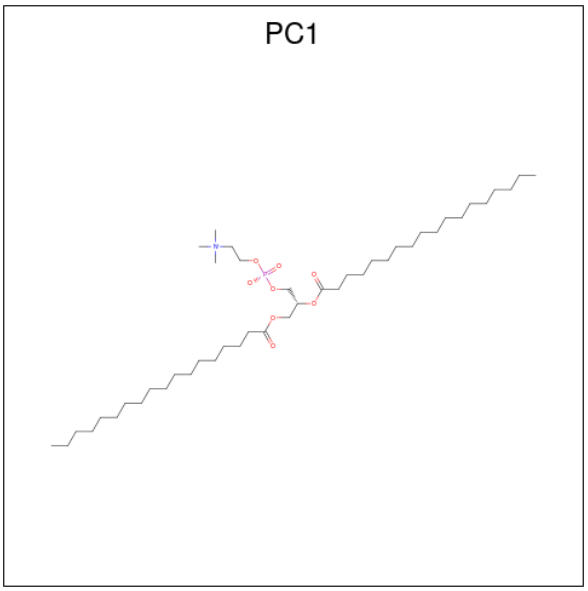
Chain	Residue	Modelled	Actual	Comment	Reference
A	27	SER	CYS	conflict	UNP Q7NDN8
A	135	CYS	VAL	engineered mutation	UNP Q7NDN8
B	27	SER	CYS	conflict	UNP Q7NDN8
B	135	CYS	VAL	engineered mutation	UNP Q7NDN8
C	27	SER	CYS	conflict	UNP Q7NDN8
C	135	CYS	VAL	engineered mutation	UNP Q7NDN8
D	27	SER	CYS	conflict	UNP Q7NDN8
D	135	CYS	VAL	engineered mutation	UNP Q7NDN8
E	27	SER	CYS	conflict	UNP Q7NDN8
E	135	CYS	VAL	engineered mutation	UNP Q7NDN8

- Molecule 2 is DODECYL-BETA-D-MALTOSIDE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C O 35 24 11	0	0
2	A	1	Total C O 35 24 11	0	0
2	B	1	Total C O 35 24 11	0	0
2	C	1	Total C O 35 24 11	0	0
2	E	1	Total C O 35 24 11	0	0
2	E	1	Total C O 35 24 11	0	0

- Molecule 3 is 1,2-DIACYL-SN-GLYCERO-3-PHOSPHOCHOLINE (three-letter code: PC1) (formula: $C_{44}H_{88}NO_8P$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			39	29	1	8	1		
3	A	1	Total	C	O			0	0
			27	23	4				
3	A	1	Total	C	N	O	P	0	0
			47	37	1	8	1		
3	B	1	Total	C	N	O	P	0	0
			47	37	1	8	1		
3	B	1	Total	C	N	O	P	0	0
			39	29	1	8	1		
3	B	1	Total	C	O			0	0
			26	22	4				
3	C	1	Total	C	N	O	P	0	0
			47	37	1	8	1		
3	C	1	Total	C	N	O	P	0	0
			39	29	1	8	1		
3	C	1	Total	C	O			0	0
			27	23	4				
3	D	1	Total	C	N	O	P	0	0
			47	37	1	8	1		
3	D	1	Total	C	N	O	P	0	0
			39	29	1	8	1		
3	D	1	Total	C	O			0	0
			22	18	4				
3	E	1	Total	C	N	O	P	0	0
			47	37	1	8	1		
3	E	1	Total	C	N	O	P	0	0
			39	29	1	8	1		

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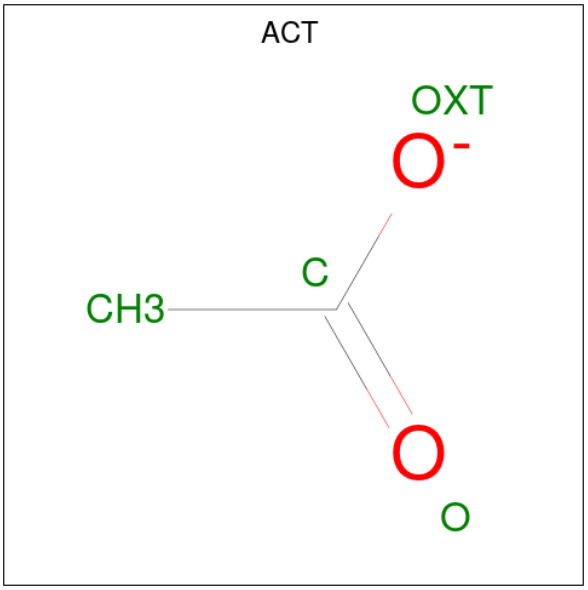
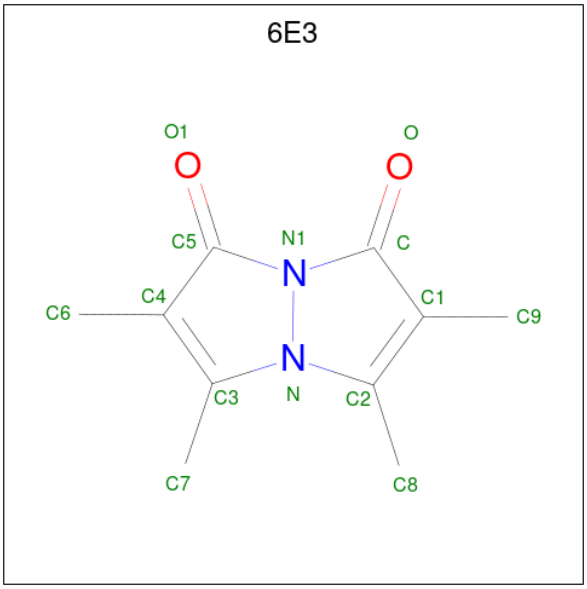
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	E	1	Total C O 27 23 4	0	0

- Molecule 4 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).



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

- Molecule 5 is 2,3,5,6-tetramethyl-1H,7H-pyrazolo[1,2-a]pyrazole-1,7-dione (three-letter code: 6E3) (formula: $C_{10}H_{12}N_2O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C H N O 25 10 11 2 2	0	0
5	D	1	Total C H N O 25 10 11 2 2	0	0

- Molecule 6 is BROMIDE ION (three-letter code: BR) (formula: Br).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total Br 1 1	0	0
6	B	1	Total Br 1 1	0	0
6	C	1	Total Br 1 1	0	0
6	D	1	Total Br 1 1	0	0
6	E	1	Total Br 1 1	0	0

- Molecule 7 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	B	1	Total Na 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	C	1	Total Na 1 1	0	0
7	D	1	Total Na 1 1	0	0
7	E	1	Total Na 1 1	0	0

- Molecule 8 is water.

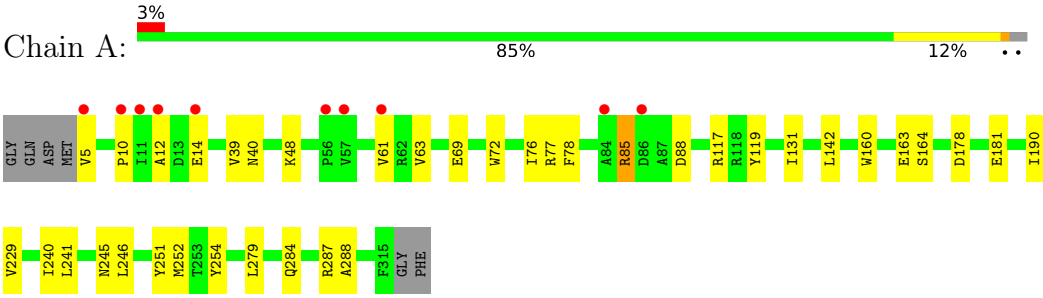
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	26	Total O 26 26	0	0
8	B	33	Total O 33 33	0	0
8	C	28	Total O 28 28	0	0
8	D	29	Total O 29 29	0	0
8	E	29	Total O 29 29	0	0

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.

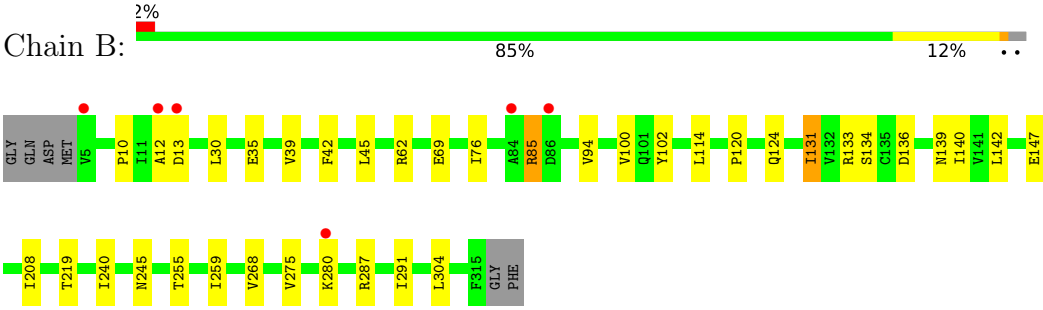
• Molecule 1: Proton-gated ion channel

Chain A:



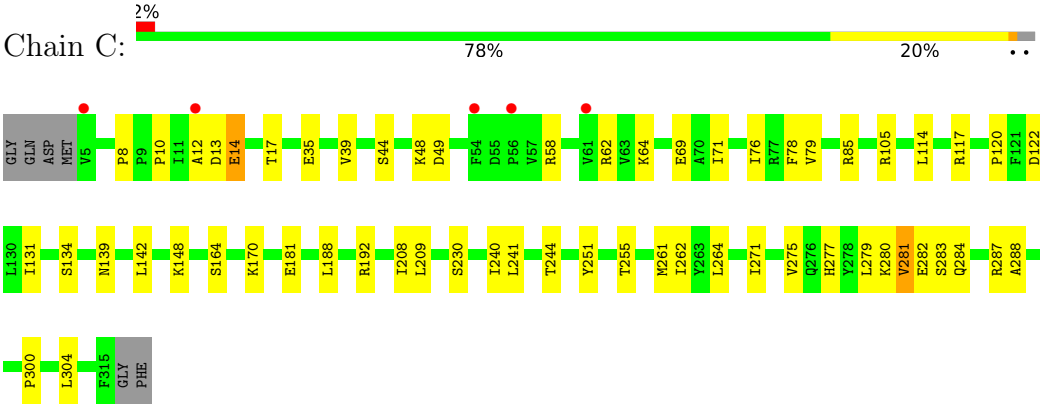
• Molecule 1: Proton-gated ion channel

Chain B:



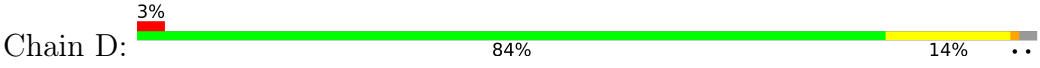
• Molecule 1: Proton-gated ion channel

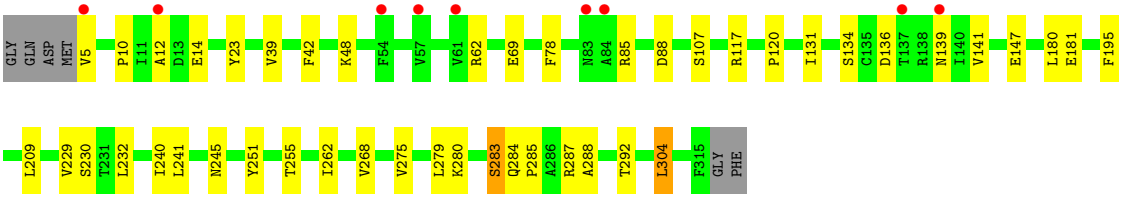
Chain C:



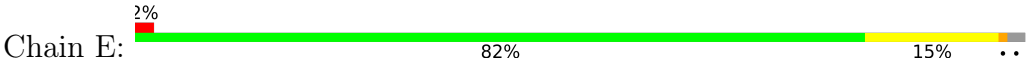
• Molecule 1: Proton-gated ion channel

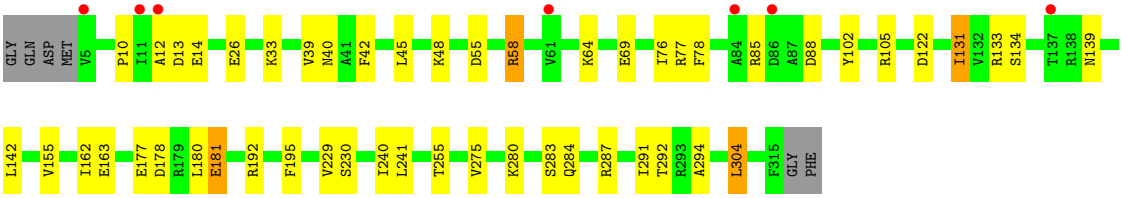
Chain D:





• Molecule 1: Proton-gated ion channel





4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	182.03Å 134.07Å 159.94Å 90.00° 102.51° 90.00°	Depositor
Resolution (Å)	12.00 – 2.60 12.00 – 2.60	Depositor EDS
% Data completeness (in resolution range)	99.8 (12.00-2.60) 98.7 (12.00-2.60)	Depositor EDS
R_{merge}	0.04	Depositor
R_{sym}	0.05	Depositor
$< I/\sigma(I) >$ [1]	1.64 (at 2.59Å)	Xtriage
Refinement program	BUSTER 2.10.2	Depositor
R, R_{free}	0.203 , 0.237 0.217 , 0.254	Depositor DCC
R_{free} test set	5709 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	67.0	Xtriage
Anisotropy	0.410	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 72.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	13699	wwPDB-VP
Average B, all atoms (Å^2)	88.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.16% 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: 6E3, NA, PC1, BR, LMT, ACT

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	0.49	0/2592	0.70	0/3543
1	B	0.48	0/2601	0.68	0/3554
1	C	0.49	0/2601	0.71	0/3554
1	D	0.48	0/2601	0.70	0/3554
1	E	0.45	0/2601	0.68	0/3554
All	All	0.48	0/12996	0.70	0/17759

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	2524	0	2540	24	0
1	B	2533	0	2553	33	0
1	C	2533	0	2553	32	0
1	D	2533	0	2552	24	0
1	E	2533	0	2553	28	0
2	A	70	0	92	6	0
2	B	35	0	46	3	0
2	C	35	0	46	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	E	70	0	92	3	0
3	A	113	0	158	3	0
3	B	112	0	157	6	0
3	C	113	0	158	4	0
3	D	108	0	149	5	0
3	E	113	0	158	5	0
4	A	12	9	9	14	0
4	B	4	3	3	3	0
4	C	8	6	6	3	0
4	D	8	6	6	2	0
4	E	8	6	6	2	0
5	A	14	11	0	1	0
5	D	14	11	0	0	0
6	A	1	0	0	0	0
6	B	1	0	0	1	0
6	C	1	0	0	0	0
6	D	1	0	0	0	0
6	E	1	0	0	0	0
7	B	1	0	0	0	0
7	C	1	0	0	0	0
7	D	1	0	0	0	0
7	E	1	0	0	0	0
8	A	26	0	0	2	0
8	B	33	0	0	3	0
8	C	28	0	0	0	0
8	D	29	0	0	1	0
8	E	29	0	0	0	0
All	All	13647	52	13837	146	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 5.

All (146) 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:131:ILE:HG21	4:A:505:ACT:H1	1.27	1.14
1:D:131:ILE:HG21	4:D:608:ACT:H2	1.35	1.07
1:A:85:ARG:NH2	4:A:509:ACT:H3	1.88	0.88
3:A:504:PC1:H32	8:A:602:HOH:O	1.82	0.80
1:B:133:ARG:HH12	1:B:177:GLU:HB2	1.53	0.73
1:B:10:PRO:HB2	1:B:12:ALA:O	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:510:ACT:CH3	1:B:131:ILE:HG21	2.20	0.70
1:E:78:PHE:HE2	1:E:85:ARG:HD3	1.54	0.69
1:C:280[A]:LYS:O	1:C:281:VAL:HB	1.93	0.69
1:B:219:THR:HA	1:B:280[A]:LYS:NZ	2.08	0.69
4:A:510:ACT:H3	1:B:131:ILE:HG12	1.76	0.67
3:D:602:PC1:H232	3:D:602:PC1:H31	1.76	0.66
1:A:85:ARG:HH22	4:A:509:ACT:H3	1.58	0.66
1:D:78:PHE:HE2	1:D:85:ARG:HD3	1.62	0.65
1:C:280[B]:LYS:O	1:C:281:VAL:HB	1.97	0.64
1:B:42:PHE:HZ	4:C:608:ACT:O	1.81	0.64
1:B:76:ILE:HD12	1:B:142:LEU:HD21	1.78	0.64
1:C:78:PHE:HE2	1:C:85:ARG:HD3	1.62	0.64
1:C:78:PHE:CE2	1:C:85:ARG:HD3	2.33	0.64
1:B:219:THR:HA	1:B:280[A]:LYS:HZ1	1.65	0.62
1:D:10:PRO:HB2	1:D:12:ALA:O	2.00	0.61
1:A:131:ILE:CG2	4:A:505:ACT:H1	2.18	0.61
1:A:10:PRO:HB2	1:A:12:ALA:O	2.02	0.60
4:A:505:ACT:O	1:E:42:PHE:CZ	2.56	0.58
1:A:85:ARG:HH22	4:A:509:ACT:CH3	2.16	0.58
4:A:505:ACT:H3	1:E:105:ARG:NH1	2.18	0.58
1:B:85:ARG:HH22	4:B:607:ACT:H1	1.67	0.58
1:E:122:ASP:OD1	1:E:192:ARG:HD2	2.04	0.57
1:E:76:ILE:HD12	1:E:142:LEU:HD21	1.87	0.56
1:E:131:ILE:HG21	4:E:401:ACT:H2	1.85	0.56
1:C:10:PRO:HB2	1:C:12:ALA:O	2.05	0.56
1:D:120:PRO:HD3	1:D:255:THR:OG1	2.06	0.56
1:A:77:ARG:HH21	4:A:505:ACT:C	2.20	0.55
1:B:245:ASN:HB3	8:B:703:HOH:O	2.06	0.55
1:A:279:LEU:HB2	1:A:288:ALA:HB2	1.90	0.54
1:A:85:ARG:HH21	4:A:509:ACT:H3	1.70	0.54
1:E:275:VAL:HG22	3:E:404:PC1:H221	1.89	0.54
1:C:277:HIS:O	1:C:280[B]:LYS:O	2.25	0.53
3:B:601:PC1:H31	8:B:708:HOH:O	2.09	0.53
1:D:245:ASN:HB3	8:D:711:HOH:O	2.09	0.53
1:A:160:TRP:CE3	1:A:190:ILE:HD12	2.44	0.53
1:E:78:PHE:CE2	1:E:85:ARG:HD3	2.39	0.53
1:D:268:VAL:HG11	3:D:603:PC1:H281	1.91	0.52
1:E:26:GLU:HB2	1:E:40:ASN:HB3	1.92	0.52
1:B:42:PHE:CZ	4:C:608:ACT:O	2.60	0.51
1:C:134:SER:HB3	1:C:139:ASN:HA	1.92	0.51
1:A:78:PHE:HE2	1:A:85:ARG:HD3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:134:SER:HB3	1:E:139:ASN:HA	1.91	0.51
1:B:76:ILE:H	4:B:607:ACT:H2	1.76	0.51
1:C:277:HIS:O	1:C:280[A]:LYS:O	2.28	0.51
1:B:268:VAL:HG11	3:B:604:PC1:H281	1.93	0.50
2:A:501:LMT:H6E	2:B:602:LMT:H6'2	1.94	0.50
1:A:117:ARG:HG3	1:A:251:TYR:CD2	2.46	0.50
1:C:297:ILE:O	1:C:300:PRO:HD2	2.12	0.50
1:E:155:VAL:HG12	1:E:162:ILE:HD13	1.94	0.49
1:D:23:TYR:HB3	1:D:42:PHE:HB2	1.95	0.49
2:A:506:LMT:H51	2:B:602:LMT:H82	1.93	0.49
1:C:35:GLU:HG2	1:C:114:LEU:HG	1.93	0.49
1:D:78:PHE:CE2	1:D:85:ARG:HD3	2.44	0.49
1:A:119:TYR:CE2	1:A:246:LEU:HD21	2.48	0.49
1:B:94:VAL:HG22	1:B:100:VAL:HG22	1.94	0.49
1:E:291:ILE:HG23	3:E:406:PC1:H232	1.94	0.49
1:A:241:LEU:HD22	1:B:240:ILE:HG12	1.96	0.48
1:A:229:VAL:HG11	1:E:230:SER:HB2	1.95	0.48
1:A:245:ASN:HB3	8:A:605:HOH:O	2.12	0.48
1:D:241:LEU:HD22	1:E:240:ILE:HG12	1.95	0.48
1:D:209:LEU:HD13	1:D:262:ILE:HG23	1.95	0.48
1:E:133:ARG:HH12	1:E:177:GLU:HB2	1.78	0.47
1:B:275:VAL:HG22	3:B:601:PC1:H221	1.97	0.47
1:E:55:ASP:HB3	1:E:58:ARG:HG3	1.94	0.47
1:E:77:ARG:HH21	4:E:401:ACT:C	2.28	0.47
1:C:261:MET:HA	1:C:264:LEU:HD12	1.96	0.47
1:D:275:VAL:HG22	3:D:601:PC1:H221	1.96	0.47
1:C:275:VAL:HG22	3:C:601:PC1:H221	1.95	0.47
1:D:39:VAL:O	1:D:107:SER:HA	2.15	0.47
1:D:304:LEU:HD23	3:E:404:PC1:H2I1	1.96	0.47
1:B:35:GLU:HA	1:B:114:LEU:CD1	2.45	0.47
1:B:35:GLU:HA	1:B:114:LEU:HD12	1.96	0.47
1:D:139:ASN:HD22	1:D:180:LEU:HD13	1.80	0.46
3:D:602:PC1:H152	3:D:602:PC1:H11	1.97	0.46
1:B:85:ARG:NH2	4:B:607:ACT:H1	2.30	0.46
1:C:280[A]:LYS:O	1:C:281:VAL:CB	2.63	0.45
1:D:117:ARG:HG3	1:D:251:TYR:CD2	2.51	0.45
1:B:255:THR:HG22	1:B:259:ILE:CD1	2.46	0.45
4:A:510:ACT:H2	1:B:131:ILE:HG21	1.97	0.45
1:C:241:LEU:HD22	1:D:240:ILE:HG12	1.98	0.45
1:A:63:VAL:HG21	1:B:136:ASP:HB3	1.99	0.45
1:C:8:PRO:HB3	1:C:49:ASP:OD1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:230:SER:HB2	1:E:229:VAL:HG11	1.99	0.45
1:C:279:LEU:HB2	1:C:288:ALA:HB2	1.97	0.45
1:A:254:TYR:HE1	3:A:502:PC1:H332	1.82	0.45
1:C:76:ILE:HD12	1:C:142:LEU:HD21	1.98	0.44
1:C:120:PRO:HD3	1:C:255:THR:OG1	2.17	0.44
1:C:131:ILE:HG21	4:C:608:ACT:H1	1.98	0.44
3:C:603:PC1:H32	3:C:603:PC1:H322	1.75	0.44
1:A:222:GLU:H	1:A:222:GLU:CD	2.20	0.44
1:B:85:ARG:HG2	6:B:605:BR:BR	2.73	0.44
4:A:510:ACT:H2	1:B:131:ILE:CG2	2.48	0.44
1:B:120:PRO:HD3	1:B:255:THR:OG1	2.18	0.44
1:C:12:ALA:HB3	1:C:14:GLU:HG3	1.98	0.44
1:E:10:PRO:HB2	1:E:12:ALA:O	2.18	0.44
1:E:12:ALA:HB3	1:E:14:GLU:HG3	1.99	0.44
1:A:240:ILE:HG12	1:E:241:LEU:HD22	2.00	0.44
4:A:510:ACT:CH3	1:B:131:ILE:CG2	2.93	0.44
1:B:134:SER:HB3	1:B:139:ASN:HA	2.00	0.44
3:B:603:PC1:H321	3:B:603:PC1:H241	1.99	0.44
1:D:195:PHE:C	1:D:195:PHE:CD1	2.91	0.44
1:B:291:ILE:HG12	3:B:604:PC1:H31	2.00	0.43
2:A:501:LMT:H82	2:A:506:LMT:H52	1.99	0.43
1:B:219:THR:HA	1:B:280[A]:LYS:HZ3	1.83	0.43
1:C:280[B]:LYS:O	1:C:281:VAL:CB	2.66	0.43
1:B:45:LEU:HB2	1:B:102:TYR:HB3	2.01	0.43
1:B:134:SER:HA	1:B:140:ILE:HD12	2.01	0.43
1:E:275:VAL:HG13	3:E:404:PC1:H32	2.01	0.43
1:A:76:ILE:HD12	1:A:142:LEU:HD21	2.00	0.43
1:C:208:ILE:HG22	1:D:232:LEU:HD21	2.01	0.42
1:C:291:ILE:HG23	3:C:604:PC1:H251	2.00	0.42
1:C:117:ARG:HG3	1:C:251:TYR:CD2	2.55	0.42
1:E:131:ILE:HD11	1:E:181:GLU:HG2	2.00	0.42
3:D:602:PC1:H31	3:D:602:PC1:H322	1.88	0.42
1:E:294:ALA:HB3	3:E:406:PC1:H231	2.01	0.42
1:E:33:LYS:HD3	2:E:403:LMT:H6'2	2.02	0.42
3:A:504:PC1:H2I1	1:E:304:LEU:HD23	2.02	0.42
2:A:506:LMT:H122	2:B:602:LMT:H12	2.01	0.42
1:C:240:ILE:O	1:C:244:THR:HG23	2.19	0.42
2:A:506:LMT:H41	2:E:403:LMT:H102	2.01	0.42
1:C:105:ARG:HD2	4:D:608:ACT:OXT	2.20	0.42
1:D:279:LEU:HB2	1:D:288:ALA:HB2	2.00	0.42
1:B:255:THR:HG22	1:B:259:ILE:HD11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:126:LEU:HB2	1:C:188:LEU:HB3	2.02	0.41
1:C:209:LEU:HD13	1:C:262:ILE:HG23	2.02	0.41
1:C:271:ILE:O	1:C:275:VAL:HG23	2.20	0.41
1:D:134:SER:HB3	1:D:139:ASN:HA	2.02	0.41
1:A:72:TRP:HE1	5:A:507:6E3:C8	2.33	0.41
3:B:601:PC1:C3	8:B:708:HOH:O	2.67	0.41
1:C:79:VAL:HB	1:C:129:TYR:HB2	2.02	0.41
1:D:69:GLU:CD	1:D:69:GLU:H	2.23	0.41
1:D:283:SER:C	1:D:285:PRO:HD3	2.42	0.41
1:A:163:GLU:OE2	1:A:191:SER:HB3	2.21	0.41
1:B:114:LEU:HA	1:B:124:GLN:OE1	2.21	0.40
3:C:603:PC1:H361	3:C:603:PC1:H281	2.03	0.40
1:A:252:MET:HE2	1:E:195:PHE:CZ	2.57	0.40
1:E:45:LEU:HB2	1:E:102:TYR:HB3	2.03	0.40
2:A:506:LMT:H61	2:E:403:LMT:H82	2.04	0.40
1:C:122:ASP:OD1	1:C:192:ARG:HD2	2.22	0.40
1:C:230:SER:HB2	1:D:229:VAL:HG11	2.02	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	309/317 (98%)	297 (96%)	12 (4%)	0	100	100
1	B	310/317 (98%)	297 (96%)	13 (4%)	0	100	100
1	C	310/317 (98%)	292 (94%)	17 (6%)	1 (0%)	37	59
1	D	310/317 (98%)	303 (98%)	7 (2%)	0	100	100
1	E	310/317 (98%)	298 (96%)	12 (4%)	0	100	100
All	All	1549/1585 (98%)	1487 (96%)	61 (4%)	1 (0%)	48	71

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	281	VAL

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	280/284 (99%)	265 (95%)	15 (5%)	18	39
1	B	281/284 (99%)	269 (96%)	12 (4%)	25	49
1	C	281/284 (99%)	260 (92%)	21 (8%)	11	24
1	D	281/284 (99%)	265 (94%)	16 (6%)	17	37
1	E	281/284 (99%)	261 (93%)	20 (7%)	12	26
All	All	1404/1420 (99%)	1320 (94%)	84 (6%)	16	35

All (84) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	VAL
1	A	14	GLU
1	A	39	VAL
1	A	40	ASN
1	A	48	LYS
1	A	61	VAL
1	A	69	GLU
1	A	85	ARG
1	A	88	ASP
1	A	164	SER
1	A	178	ASP
1	A	181	GLU
1	A	222	GLU
1	A	284	GLN
1	A	287	ARG
1	B	13	ASP
1	B	30	LEU

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Mol	Chain	Res	Type
1	B	39	VAL
1	B	62	ARG
1	B	69	GLU
1	B	85	ARG
1	B	131	ILE
1	B	147	GLU
1	B	189	ARG
1	B	208	ILE
1	B	287	ARG
1	B	304	LEU
1	C	13	ASP
1	C	14	GLU
1	C	17	THR
1	C	39	VAL
1	C	44	SER
1	C	48	LYS
1	C	58	ARG
1	C	62	ARG
1	C	64	LYS
1	C	69	GLU
1	C	71	ILE
1	C	148	LYS
1	C	164	SER
1	C	170	LYS
1	C	181	GLU
1	C	282	GLU
1	C	283	SER
1	C	284	GLN
1	C	287	ARG
1	C	292	THR
1	C	304	LEU
1	D	5	VAL
1	D	14	GLU
1	D	48	LYS
1	D	62	ARG
1	D	88	ASP
1	D	136	ASP
1	D	141	VAL
1	D	147	GLU
1	D	181	GLU
1	D	280[A]	LYS
1	D	280[B]	LYS

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Mol	Chain	Res	Type
1	D	283	SER
1	D	284	GLN
1	D	287	ARG
1	D	292	THR
1	D	304	LEU
1	E	13	ASP
1	E	39	VAL
1	E	48	LYS
1	E	58	ARG
1	E	64	LYS
1	E	69	GLU
1	E	88	ASP
1	E	131	ILE
1	E	163	GLU
1	E	178	ASP
1	E	180	LEU
1	E	181	GLU
1	E	255	THR
1	E	280[A]	LYS
1	E	280[B]	LYS
1	E	283	SER
1	E	284	GLN
1	E	287	ARG
1	E	292	THR
1	E	304	LEU

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

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 42 ligands modelled in this entry, 9 are monoatomic - leaving 33 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	PC1	B	603	-	38,38,53	1.31	6 (15%)	44,46,61	1.16	2 (4%)
3	PC1	A	504	-	46,46,53	1.26	4 (8%)	52,54,61	1.11	3 (5%)
2	LMT	E	402	-	36,36,36	1.53	7 (19%)	47,47,47	1.39	7 (14%)
4	ACT	A	505	-	3,3,3	0.74	0	3,3,3	1.39	0
3	PC1	E	404	-	46,46,53	1.28	6 (13%)	52,54,61	0.98	2 (3%)
4	ACT	E	401	-	3,3,3	1.13	0	3,3,3	0.70	0
4	ACT	A	510	-	3,3,3	0.86	0	3,3,3	1.63	1 (33%)
3	PC1	A	502	-	38,38,53	1.39	7 (18%)	44,46,61	1.15	2 (4%)
3	PC1	E	405	-	38,38,53	1.32	5 (13%)	44,46,61	1.07	1 (2%)
3	PC1	D	601	-	46,46,53	1.34	7 (15%)	52,54,61	1.27	5 (9%)
2	LMT	A	501	-	36,36,36	1.18	6 (16%)	47,47,47	1.50	10 (21%)
3	PC1	A	503	-	26,26,53	1.12	3 (11%)	28,28,61	0.88	1 (3%)
4	ACT	C	607	-	3,3,3	1.11	0	3,3,3	0.86	0
4	ACT	D	607	-	3,3,3	1.14	0	3,3,3	0.73	0
2	LMT	E	403	-	36,36,36	1.44	8 (22%)	47,47,47	1.15	4 (8%)
3	PC1	D	603	-	20,20,53	0.80	0	20,20,61	0.94	0
3	PC1	C	601	-	46,46,53	1.32	7 (15%)	52,54,61	1.13	2 (3%)
2	LMT	A	506	-	36,36,36	1.46	8 (22%)	47,47,47	1.28	4 (8%)
2	LMT	B	602	-	36,36,36	1.40	6 (16%)	47,47,47	1.45	9 (19%)
4	ACT	A	509	-	3,3,3	1.05	0	3,3,3	1.12	0
3	PC1	C	603	-	38,38,53	1.32	6 (15%)	44,46,61	1.10	2 (4%)
3	PC1	E	406	-	26,26,53	0.99	2 (7%)	28,28,61	0.77	0
3	PC1	C	604	-	26,26,53	1.10	2 (7%)	28,28,61	0.82	1 (3%)
3	PC1	D	602	-	38,38,53	1.33	4 (10%)	44,46,61	1.29	4 (9%)
4	ACT	D	608	-	3,3,3	0.85	0	3,3,3	1.45	0
5	6E3	A	507	1	15,15,15	0.45	0	24,24,24	0.94	1 (4%)
4	ACT	B	607	-	3,3,3	0.89	0	3,3,3	1.19	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
5	6E3	D	604	1	15,15,15	0.44	0	24,24,24	1.15	3 (12%)
4	ACT	E	409	-	3,3,3	1.01	0	3,3,3	0.83	0
4	ACT	C	608	-	3,3,3	0.88	0	3,3,3	1.28	0
2	LMT	C	602	-	36,36,36	1.43	7 (19%)	47,47,47	1.49	7 (14%)
3	PC1	B	601	-	46,46,53	1.20	4 (8%)	52,54,61	1.00	1 (1%)
3	PC1	B	604	-	25,25,53	0.86	1 (4%)	26,26,61	1.05	2 (7%)

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	PC1	B	603	-	-	14/42/42/57	-
3	PC1	A	504	-	-	13/50/50/57	-
2	LMT	E	402	-	-	11/21/61/61	0/2/2/2
3	PC1	E	404	-	-	17/50/50/57	-
3	PC1	A	502	-	-	14/42/42/57	-
3	PC1	E	405	-	-	11/42/42/57	-
3	PC1	D	601	-	-	15/50/50/57	-
2	LMT	A	501	-	-	9/21/61/61	0/2/2/2
3	PC1	A	503	-	-	8/27/27/57	-
2	LMT	E	403	-	-	7/21/61/61	0/2/2/2
3	PC1	D	603	-	-	3/17/17/57	-
3	PC1	C	601	-	-	13/50/50/57	-
2	LMT	A	506	-	-	4/21/61/61	0/2/2/2
2	LMT	B	602	-	-	11/21/61/61	0/2/2/2
3	PC1	C	603	-	-	25/42/42/57	-
3	PC1	E	406	-	-	13/27/27/57	-
3	PC1	C	604	-	-	7/27/27/57	-
3	PC1	D	602	-	-	24/42/42/57	-
5	6E3	A	507	1	-	-	0/2/2/2
5	6E3	D	604	1	-	-	0/2/2/2
2	LMT	C	602	-	-	5/21/61/61	0/2/2/2
3	PC1	B	601	-	-	18/50/50/57	-
3	PC1	B	604	-	-	15/25/25/57	-

All (106) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	504	PC1	P-O13	4.94	1.79	1.59
3	E	404	PC1	P-O13	4.92	1.79	1.59
3	D	602	PC1	P-O13	4.73	1.78	1.59
3	E	405	PC1	P-O13	4.69	1.78	1.59
3	D	601	PC1	P-O13	4.65	1.78	1.59
3	C	603	PC1	P-O13	4.60	1.77	1.59
3	B	601	PC1	P-O13	4.55	1.77	1.59
3	A	502	PC1	P-O13	4.53	1.77	1.59
3	C	601	PC1	P-O13	4.46	1.77	1.59
3	B	603	PC1	P-O13	4.25	1.76	1.59
2	E	402	LMT	C3'-C4'	3.91	1.62	1.52
2	E	403	LMT	C4B-C5B	3.60	1.60	1.53
3	A	503	PC1	C3-C2	3.48	1.58	1.50
2	E	403	LMT	C3'-C4'	3.44	1.61	1.52
2	A	506	LMT	C4B-C5B	3.36	1.60	1.53
3	C	604	PC1	C3-C2	3.33	1.58	1.50
2	A	506	LMT	C3'-C4'	3.33	1.61	1.52
2	B	602	LMT	C3'-C2'	3.30	1.60	1.52
3	E	406	PC1	C3-C2	3.25	1.58	1.50
3	D	601	PC1	C3-C2	3.14	1.60	1.50
2	B	602	LMT	C4B-C5B	3.09	1.59	1.53
2	C	602	LMT	C1'-C2'	3.09	1.61	1.52
2	E	402	LMT	C4'-C5'	3.05	1.61	1.52
2	B	602	LMT	C4B-C3B	3.04	1.60	1.52
2	A	506	LMT	C3'-C2'	3.03	1.60	1.52
2	A	506	LMT	C4B-C3B	3.02	1.60	1.52
2	C	602	LMT	C4B-C5B	3.01	1.59	1.53
2	E	402	LMT	C4B-C5B	2.92	1.59	1.53
2	E	402	LMT	C1B-C2B	2.92	1.60	1.52
3	C	601	PC1	C1-C2	2.85	1.59	1.50
2	C	602	LMT	C4B-C3B	2.81	1.59	1.52
3	C	601	PC1	C3-C2	2.80	1.59	1.50
3	D	601	PC1	C12-C11	2.79	1.60	1.51
3	E	404	PC1	C12-C11	2.77	1.60	1.51
3	D	601	PC1	C1-C2	2.76	1.59	1.50
2	E	402	LMT	C4B-C3B	2.74	1.59	1.52
3	A	504	PC1	C12-C11	2.67	1.59	1.51
2	E	403	LMT	C4'-C5'	2.66	1.60	1.52
2	B	602	LMT	C1'-C2'	2.65	1.60	1.52
3	B	601	PC1	C12-C11	2.60	1.59	1.51
3	B	603	PC1	C12-C11	2.58	1.59	1.51
3	A	502	PC1	C1-C2	2.56	1.58	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	603	PC1	C12-C11	2.55	1.59	1.51
3	A	502	PC1	C12-C11	2.54	1.59	1.51
3	E	405	PC1	C12-C11	2.54	1.59	1.51
3	D	602	PC1	O21-C21	2.53	1.41	1.34
2	C	602	LMT	C3B-C2B	2.52	1.58	1.52
2	E	402	LMT	C3B-C2B	2.52	1.58	1.52
2	A	506	LMT	C1'-C2'	2.51	1.59	1.52
2	B	602	LMT	C3'-C4'	2.50	1.59	1.52
2	E	403	LMT	C3B-C2B	2.50	1.58	1.52
3	A	504	PC1	C12-N	2.50	1.59	1.51
2	E	403	LMT	C1B-C2B	2.48	1.59	1.52
3	C	601	PC1	C12-C11	2.47	1.59	1.51
2	A	501	LMT	C3'-C2'	2.46	1.58	1.52
3	B	603	PC1	C1-C2	2.44	1.58	1.50
2	E	403	LMT	C4B-C3B	2.44	1.58	1.52
3	B	604	PC1	O31-C31	2.44	1.40	1.33
3	D	601	PC1	P-O11	2.43	1.69	1.59
3	C	601	PC1	P-O11	2.43	1.69	1.59
3	E	404	PC1	C12-N	2.43	1.59	1.51
3	B	601	PC1	C12-N	2.40	1.59	1.51
3	A	504	PC1	P-O11	2.40	1.69	1.59
3	A	502	PC1	P-O11	2.40	1.69	1.59
3	C	604	PC1	O31-C31	2.38	1.40	1.33
2	A	506	LMT	C3B-C2B	2.38	1.58	1.52
3	D	601	PC1	C12-N	2.38	1.59	1.51
3	D	602	PC1	C12-C11	2.37	1.58	1.51
2	A	501	LMT	C4B-C3B	2.35	1.58	1.52
3	E	404	PC1	C3-C2	2.32	1.57	1.50
2	A	501	LMT	C1'-C2'	2.30	1.59	1.52
3	D	602	PC1	P-O11	2.30	1.68	1.59
2	A	506	LMT	C1B-C2B	2.30	1.59	1.52
3	B	603	PC1	P-O11	2.29	1.68	1.59
3	B	603	PC1	O21-C21	2.28	1.40	1.34
3	E	405	PC1	C12-N	2.26	1.58	1.51
3	D	601	PC1	O31-C31	2.24	1.39	1.33
3	E	405	PC1	O21-C21	2.24	1.40	1.34
3	A	502	PC1	C12-N	2.23	1.58	1.51
3	A	502	PC1	C3-C2	2.22	1.57	1.50
2	A	501	LMT	C4B-C5B	2.22	1.57	1.53
3	C	603	PC1	P-O11	2.22	1.68	1.59
3	A	502	PC1	O21-C21	2.19	1.40	1.34
2	E	402	LMT	C3'-C2'	2.19	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	602	LMT	C1B-C2B	2.18	1.58	1.52
3	E	404	PC1	C1-C2	2.18	1.57	1.50
2	A	506	LMT	C4'-C5'	2.18	1.58	1.52
2	C	602	LMT	O5'-C1'	2.17	1.47	1.41
3	C	601	PC1	O21-C21	2.16	1.40	1.34
3	E	404	PC1	P-O11	2.15	1.68	1.59
2	A	501	LMT	C3'-C4'	2.14	1.58	1.52
3	C	603	PC1	C1-C2	2.14	1.57	1.50
3	C	601	PC1	O31-C31	2.13	1.39	1.33
2	E	403	LMT	C3'-C2'	2.12	1.57	1.52
3	A	503	PC1	O31-C31	2.12	1.39	1.33
3	B	601	PC1	P-O11	2.12	1.67	1.59
3	A	503	PC1	O21-C21	2.10	1.40	1.34
3	C	603	PC1	C12-N	2.07	1.58	1.51
2	B	602	LMT	C3B-C2B	2.06	1.57	1.52
2	A	501	LMT	C3B-C2B	2.06	1.57	1.52
3	E	405	PC1	C1-C2	2.06	1.57	1.50
2	E	403	LMT	C1'-C2'	2.04	1.58	1.52
2	C	602	LMT	C3'-C2'	2.02	1.57	1.52
3	C	603	PC1	C3-C2	2.01	1.56	1.50
3	B	603	PC1	C3-C2	2.01	1.56	1.50
3	E	406	PC1	O31-C31	2.00	1.39	1.33

All (74) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	601	PC1	O12-P-O14	4.56	134.76	112.24
3	B	603	PC1	O12-P-O14	4.55	134.72	112.24
3	A	502	PC1	O12-P-O14	4.55	134.71	112.24
3	D	602	PC1	O12-P-O14	4.52	134.58	112.24
3	E	405	PC1	O12-P-O14	4.44	134.21	112.24
3	C	603	PC1	O12-P-O14	4.44	134.18	112.24
3	D	601	PC1	O12-P-O14	4.26	133.29	112.24
3	B	601	PC1	O12-P-O14	4.18	132.89	112.24
3	E	404	PC1	O12-P-O14	4.17	132.88	112.24
2	E	402	LMT	C1B-O5B-C5B	4.17	121.88	113.69
2	E	402	LMT	C1-O1'-C1'	4.13	120.70	113.84
3	A	504	PC1	O12-P-O14	4.09	132.45	112.24
2	C	602	LMT	C1'-O5'-C5'	4.04	121.62	113.69
3	C	601	PC1	C2-O21-C21	3.98	127.59	117.79
2	C	602	LMT	O1B-C4'-C3'	3.76	117.27	107.28
5	D	604	6E3	C2-N-C3	-3.60	125.19	138.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	601	PC1	C2-O21-C21	3.58	126.61	117.79
2	C	602	LMT	C2'-C3'-C4'	-3.56	101.56	109.68
2	B	602	LMT	C1'-C2'-C3'	3.52	117.32	110.00
3	B	603	PC1	C2-O21-C21	3.32	125.95	117.79
2	A	506	LMT	C2'-C3'-C4'	3.30	117.22	109.68
3	A	502	PC1	C2-O21-C21	3.27	125.85	117.79
5	A	507	6E3	C2-N-C3	-3.16	126.86	138.94
2	A	506	LMT	C1B-O5B-C5B	3.15	119.87	113.69
3	D	602	PC1	C2-O21-C21	3.14	125.53	117.79
3	A	504	PC1	C2-O21-C21	3.11	125.44	117.79
2	A	506	LMT	C1'-C2'-C3'	3.09	116.44	110.00
2	A	501	LMT	C3B-C4B-C5B	-3.08	104.75	110.24
2	B	602	LMT	C1B-O5B-C5B	3.02	119.62	113.69
3	D	601	PC1	O31-C31-O32	-3.01	115.99	123.59
2	E	403	LMT	O1'-C1'-C2'	-2.92	103.74	108.30
2	A	501	LMT	O5'-C5'-C4'	-2.92	103.61	109.75
2	A	501	LMT	O2'-C2'-C3'	-2.91	103.63	110.35
2	A	501	LMT	O5B-C1B-C2B	2.91	116.50	110.35
3	B	604	PC1	C3-O31-C31	2.88	126.23	116.92
2	B	602	LMT	C2'-C3'-C4'	2.85	116.18	109.68
2	A	501	LMT	C1B-O1B-C4'	-2.83	110.95	117.96
2	A	501	LMT	C1'-C2'-C3'	2.76	115.75	110.00
3	D	602	PC1	O31-C31-O32	-2.72	116.73	123.59
3	D	601	PC1	C3-O31-C31	2.66	126.99	117.12
2	A	506	LMT	O2'-C2'-C3'	-2.59	104.35	110.35
2	B	602	LMT	O2B-C2B-C3B	-2.59	104.36	110.35
2	C	602	LMT	C1B-O1B-C4'	-2.52	111.72	117.96
2	B	602	LMT	O3'-C3'-C4'	-2.52	103.27	109.94
3	A	503	PC1	C2-O21-C21	2.45	121.03	117.88
2	A	501	LMT	C1B-O5B-C5B	2.43	118.45	113.69
2	A	501	LMT	O1'-C1'-C2'	-2.37	104.61	108.30
2	C	602	LMT	C1B-O5B-C5B	2.35	118.29	113.69
3	A	504	PC1	O21-C2-C1	2.32	116.79	108.40
2	C	602	LMT	O3B-C3B-C4B	-2.31	105.01	110.35
3	E	404	PC1	C2-O21-C21	2.29	123.43	117.79
3	B	604	PC1	O31-C31-O32	-2.24	117.94	123.59
2	A	501	LMT	C4B-C3B-C2B	-2.24	106.92	110.82
2	B	602	LMT	O1'-C1'-C2'	-2.23	104.81	108.30
2	E	403	LMT	O2B-C2B-C3B	-2.20	105.25	110.35
3	D	602	PC1	C3-O31-C31	2.18	125.18	117.12
2	E	402	LMT	O5B-C1B-C2B	2.16	114.91	110.35
2	E	402	LMT	O2'-C2'-C3'	-2.15	105.37	110.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	501	LMT	O3'-C3'-C4'	-2.15	104.24	109.94
2	E	402	LMT	O2B-C2B-C1B	2.14	115.25	110.05
2	B	602	LMT	O2'-C2'-C3'	-2.13	105.42	110.35
2	E	403	LMT	C3'-C4'-C5'	-2.12	106.07	110.93
2	E	402	LMT	O2B-C2B-C3B	-2.12	105.46	110.35
5	D	604	6E3	C-N1-C5	-2.11	124.09	135.40
3	C	603	PC1	O31-C31-O32	-2.10	118.29	123.59
3	D	601	PC1	O31-C31-C32	2.09	118.48	111.91
2	E	402	LMT	O5B-C5B-C4B	2.09	113.48	109.69
2	E	403	LMT	O2'-C2'-C3'	-2.07	105.57	110.35
3	C	604	PC1	C2-O21-C21	2.06	120.52	117.88
2	C	602	LMT	C1-O1'-C1'	2.04	117.22	113.84
4	A	510	ACT	OXT-C-O	2.02	129.50	122.05
2	B	602	LMT	O3B-C3B-C4B	-2.02	105.69	110.35
5	D	604	6E3	C9-C1-C2	-2.02	123.86	127.32
2	B	602	LMT	O5B-C5B-C4B	2.01	113.34	109.69

There are no chirality outliers.

All (257) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	501	LMT	C2-C1-O1'-C1'
2	C	602	LMT	O5'-C1'-O1'-C1
3	A	502	PC1	C11-O13-P-O12
3	A	502	PC1	C22-C21-O21-C2
3	A	503	PC1	C22-C21-O21-C2
3	A	504	PC1	C1-O11-P-O12
3	A	504	PC1	O21-C2-C3-O31
3	A	504	PC1	C22-C21-O21-C2
3	B	601	PC1	C1-O11-P-O13
3	B	601	PC1	C22-C21-O21-C2
3	B	603	PC1	O13-C11-C12-N
3	B	603	PC1	O22-C21-O21-C2
3	B	603	PC1	C22-C21-O21-C2
3	B	604	PC1	O32-C31-O31-C3
3	B	604	PC1	C32-C31-O31-C3
3	C	603	PC1	C11-O13-P-O11
3	C	603	PC1	C1-O11-P-O12
3	C	603	PC1	O21-C2-C3-O31
3	C	603	PC1	C22-C21-O21-C2
3	C	603	PC1	O32-C31-O31-C3
3	C	603	PC1	C32-C31-O31-C3

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Mol	Chain	Res	Type	Atoms
3	C	604	PC1	C22-C21-O21-C2
3	D	601	PC1	C1-O11-P-O12
3	D	601	PC1	C1-O11-P-O14
3	D	601	PC1	O13-C11-C12-N
3	D	601	PC1	O22-C21-O21-C2
3	D	601	PC1	O32-C31-O31-C3
3	D	601	PC1	C32-C31-O31-C3
3	D	602	PC1	C11-O13-P-O14
3	D	602	PC1	C1-O11-P-O14
3	D	602	PC1	O13-C11-C12-N
3	D	602	PC1	O32-C31-O31-C3
3	D	602	PC1	C32-C31-O31-C3
3	E	404	PC1	C11-O13-P-O12
3	E	404	PC1	O13-C11-C12-N
3	E	405	PC1	C11-O13-P-O14
3	E	405	PC1	O13-C11-C12-N
3	E	406	PC1	C22-C21-O21-C2
2	B	602	LMT	O5B-C1B-O1B-C4'
3	A	502	PC1	O22-C21-O21-C2
3	A	504	PC1	O22-C21-O21-C2
3	B	601	PC1	O22-C21-O21-C2
3	C	603	PC1	O22-C21-O21-C2
3	C	604	PC1	O22-C21-O21-C2
3	E	405	PC1	O22-C21-O21-C2
3	E	406	PC1	O22-C21-O21-C2
3	D	601	PC1	C22-C21-O21-C2
3	A	503	PC1	O22-C21-O21-C2
3	E	405	PC1	C22-C21-O21-C2
2	A	501	LMT	C4B-C5B-C6B-O6B
3	B	604	PC1	O21-C2-C3-O31
3	B	604	PC1	C22-C21-O21-C2
2	C	602	LMT	C2'-C1'-O1'-C1
3	B	601	PC1	O21-C2-C3-O31
2	A	501	LMT	O5B-C5B-C6B-O6B
3	B	604	PC1	O22-C21-O21-C2
2	A	506	LMT	O5'-C5'-C6'-O6'
3	D	601	PC1	C31-C32-C33-C34
3	B	603	PC1	C31-C32-C33-C34
3	D	601	PC1	C21-C22-C23-C24
3	D	602	PC1	C21-C22-C23-C24
3	E	406	PC1	C31-C32-C33-C34
2	C	602	LMT	O1'-C1-C2-C3

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Mol	Chain	Res	Type	Atoms
2	A	506	LMT	O5'-C1'-O1'-C1
2	B	602	LMT	O5'-C1'-O1'-C1
3	A	502	PC1	C11-O13-P-O11
3	C	601	PC1	C11-O13-P-O11
3	C	601	PC1	C1-O11-P-O13
3	C	603	PC1	C1-O11-P-O13
3	D	601	PC1	C1-O11-P-O13
3	D	602	PC1	C11-O13-P-O11
3	D	602	PC1	C1-O11-P-O13
3	E	405	PC1	C11-O13-P-O11
3	C	603	PC1	C21-C22-C23-C24
3	C	601	PC1	O22-C21-O21-C2
3	D	602	PC1	O22-C21-O21-C2
2	A	501	LMT	O5B-C1B-O1B-C4'
3	C	601	PC1	C22-C21-O21-C2
3	D	602	PC1	C22-C21-O21-C2
2	E	403	LMT	C5'-C4'-O1B-C1B
3	A	502	PC1	C25-C26-C27-C28
3	A	502	PC1	C35-C36-C37-C38
3	B	603	PC1	C32-C33-C34-C35
3	B	603	PC1	C33-C34-C35-C36
3	D	601	PC1	C28-C29-C2A-C2B
3	E	406	PC1	C2A-C2B-C2C-C2D
3	A	502	PC1	C36-C37-C38-C39
3	E	404	PC1	O22-C21-O21-C2
2	E	402	LMT	C3'-C4'-O1B-C1B
3	D	602	PC1	C27-C28-C29-C2A
3	E	406	PC1	C32-C33-C34-C35
3	A	502	PC1	C24-C25-C26-C27
3	C	604	PC1	C28-C29-C2A-C2B
2	A	506	LMT	C2'-C1'-O1'-C1
2	B	602	LMT	C2'-C1'-O1'-C1
3	A	504	PC1	C22-C23-C24-C25
3	A	504	PC1	C28-C29-C2A-C2B
3	E	404	PC1	C22-C21-O21-C2
3	B	601	PC1	C2C-C2D-C2E-C2F
3	C	601	PC1	C27-C28-C29-C2A
3	B	604	PC1	C22-C23-C24-C25
3	C	603	PC1	C24-C25-C26-C27
3	B	603	PC1	C21-C22-C23-C24
3	C	603	PC1	C31-C32-C33-C34
2	E	402	LMT	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
2	C	602	LMT	C2-C1-O1'-C1'
2	E	402	LMT	C2-C1-O1'-C1'
2	E	403	LMT	C2-C1-O1'-C1'
3	A	503	PC1	C22-C23-C24-C25
3	E	405	PC1	C1-C2-C3-O31
3	B	603	PC1	C34-C35-C36-C37
3	E	404	PC1	C26-C27-C28-C29
2	E	402	LMT	C5'-C4'-O1B-C1B
2	E	402	LMT	O5'-C5'-C6'-O6'
2	B	602	LMT	C1-C2-C3-C4
2	B	602	LMT	O5B-C5B-C6B-O6B
2	E	403	LMT	C1-C2-C3-C4
3	B	604	PC1	C25-C26-C27-C28
3	B	601	PC1	C2E-C2F-C2G-C2H
3	B	601	PC1	C21-C22-C23-C24
3	C	601	PC1	C28-C29-C2A-C2B
2	E	403	LMT	O5'-C1'-O1'-C1
2	E	402	LMT	C2-C3-C4-C5
3	A	503	PC1	C32-C33-C34-C35
2	E	402	LMT	C3-C4-C5-C6
3	B	601	PC1	C28-C29-C2A-C2B
3	C	603	PC1	C32-C33-C34-C35
3	E	406	PC1	C28-C29-C2A-C2B
3	C	601	PC1	C21-C22-C23-C24
3	D	602	PC1	C36-C37-C38-C39
3	A	503	PC1	C28-C29-C2A-C2B
3	B	601	PC1	C2B-C2C-C2D-C2E
2	E	402	LMT	O1'-C1-C2-C3
3	B	603	PC1	C28-C29-C2A-C2B
3	E	404	PC1	C27-C28-C29-C2A
2	A	506	LMT	C4'-C5'-C6'-O6'
3	D	603	PC1	C21-C22-C23-C24
3	B	604	PC1	C23-C24-C25-C26
3	E	404	PC1	C28-C29-C2A-C2B
3	A	504	PC1	C1-C2-O21-C21
2	A	501	LMT	O1'-C1-C2-C3
3	C	603	PC1	C34-C35-C36-C37
2	E	403	LMT	C3'-C4'-O1B-C1B
3	D	602	PC1	C32-C33-C34-C35
2	E	402	LMT	C2'-C1'-O1'-C1
3	E	406	PC1	C24-C25-C26-C27
3	E	404	PC1	C24-C25-C26-C27

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Mol	Chain	Res	Type	Atoms
3	C	604	PC1	C24-C25-C26-C27
3	D	601	PC1	C2D-C2E-C2F-C2G
3	E	405	PC1	C35-C36-C37-C38
3	C	601	PC1	C2F-C2G-C2H-C2I
3	B	604	PC1	C29-C2A-C2B-C2C
3	A	504	PC1	O11-C1-C2-C3
3	B	601	PC1	O11-C1-C2-C3
2	B	602	LMT	C2-C3-C4-C5
3	C	601	PC1	C2-C1-O11-P
2	B	602	LMT	C2-C1-O1'-C1'
3	D	602	PC1	C31-C32-C33-C34
3	D	603	PC1	C32-C33-C34-C35
3	E	405	PC1	C22-C23-C24-C25
3	A	504	PC1	C1-C2-C3-O31
3	B	601	PC1	C1-C2-C3-O31
3	C	603	PC1	C1-C2-C3-O31
3	E	404	PC1	C2F-C2G-C2H-C2I
3	E	406	PC1	O21-C2-C3-O31
3	E	404	PC1	O21-C2-C3-O31
3	C	604	PC1	C23-C24-C25-C26
3	C	603	PC1	C28-C29-C2A-C2B
3	C	604	PC1	C2B-C2C-C2D-C2E
3	C	604	PC1	C31-C32-C33-C34
3	E	404	PC1	C2D-C2E-C2F-C2G
2	B	602	LMT	O1'-C1-C2-C3
2	A	501	LMT	C11-C10-C9-C8
3	C	603	PC1	C22-C23-C24-C25
3	E	406	PC1	C33-C34-C35-C36
3	E	404	PC1	C29-C2A-C2B-C2C
3	C	603	PC1	C25-C26-C27-C28
3	D	603	PC1	C28-C29-C2A-C2B
3	D	602	PC1	C1-C2-C3-O31
3	B	601	PC1	O11-C1-C2-O21
3	D	601	PC1	O21-C2-C3-O31
3	D	602	PC1	O21-C2-C3-O31
3	E	404	PC1	C11-O13-P-O11
3	B	601	PC1	C2D-C2E-C2F-C2G
3	B	601	PC1	C1-O11-P-O14
3	C	601	PC1	C11-O13-P-O14
3	C	601	PC1	C1-O11-P-O14
3	C	603	PC1	C11-O13-P-O12
3	C	603	PC1	C1-O11-P-O14

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Mol	Chain	Res	Type	Atoms
3	D	602	PC1	C11-O13-P-O12
3	D	602	PC1	C1-O11-P-O12
3	E	405	PC1	C11-O13-P-O12
3	A	502	PC1	O11-C1-C2-C3
2	C	602	LMT	C11-C10-C9-C8
3	A	503	PC1	C2B-C2C-C2D-C2E
2	E	402	LMT	C1-C2-C3-C4
3	A	504	PC1	O11-C1-C2-O21
2	A	501	LMT	C2B-C1B-O1B-C4'
2	B	602	LMT	C9-C10-C11-C12
3	A	504	PC1	O13-C11-C12-N
3	B	601	PC1	O13-C11-C12-N
3	C	603	PC1	O13-C11-C12-N
3	D	601	PC1	C1-C2-C3-O31
3	E	405	PC1	O21-C2-C3-O31
2	B	602	LMT	C5'-C4'-O1B-C1B
3	B	604	PC1	C24-C25-C26-C27
3	A	503	PC1	C21-C22-C23-C24
3	A	502	PC1	C23-C24-C25-C26
3	A	502	PC1	C1-C2-O21-C21
3	B	603	PC1	C1-C2-O21-C21
3	D	601	PC1	C3-C2-O21-C21
3	D	602	PC1	C22-C23-C24-C25
2	E	403	LMT	C2'-C1'-O1'-C1
3	B	603	PC1	C11-O13-P-O11
3	A	503	PC1	C2A-C2B-C2C-C2D
2	E	403	LMT	C2-C3-C4-C5
3	B	604	PC1	C21-C22-C23-C24
3	C	601	PC1	C1-C2-O21-C21
2	E	402	LMT	C7-C8-C9-C10
3	C	601	PC1	C2D-C2E-C2F-C2G
3	E	404	PC1	C1-C2-C3-O31
3	A	502	PC1	C22-C23-C24-C25
3	E	406	PC1	C2B-C2C-C2D-C2E
2	B	602	LMT	C3'-C4'-O1B-C1B
3	D	602	PC1	C1-C2-O21-C21
3	B	601	PC1	O31-C31-C32-C33
2	A	501	LMT	C5'-C4'-O1B-C1B
3	B	603	PC1	O31-C31-C32-C33
3	E	404	PC1	O21-C21-C22-C23
3	E	404	PC1	C34-C35-C36-C37
3	B	604	PC1	O31-C31-C32-C33

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Mol	Chain	Res	Type	Atoms
3	A	504	PC1	O31-C31-C32-C33
3	C	603	PC1	O31-C31-C32-C33
3	C	603	PC1	C36-C37-C38-C39
3	E	406	PC1	O31-C31-C32-C33
3	D	602	PC1	C35-C36-C37-C38
3	D	602	PC1	C33-C34-C35-C36
3	B	601	PC1	C29-C2A-C2B-C2C
3	E	406	PC1	O32-C31-C32-C33
3	E	405	PC1	C23-C24-C25-C26
3	B	604	PC1	O32-C31-C32-C33
3	B	603	PC1	C2-C1-O11-P
3	B	601	PC1	O32-C31-C32-C33
3	B	603	PC1	O32-C31-C32-C33
3	E	404	PC1	O22-C21-C22-C23
3	C	603	PC1	O32-C31-C32-C33
2	A	501	LMT	C3'-C4'-O1B-C1B
3	D	602	PC1	C3-C2-O21-C21
3	B	604	PC1	O21-C21-C22-C23
3	A	504	PC1	O32-C31-C32-C33
3	C	603	PC1	O21-C21-C22-C23
3	A	502	PC1	C31-C32-C33-C34
3	C	603	PC1	O22-C21-C22-C23
3	E	406	PC1	O21-C21-C22-C23
3	D	602	PC1	C28-C29-C2A-C2B
3	A	502	PC1	O22-C21-C22-C23
3	B	604	PC1	O22-C21-C22-C23

There are no ring outliers.

25 monomers are involved in 55 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	603	PC1	1	0
3	A	504	PC1	2	0
4	A	505	ACT	5	0
3	E	404	PC1	3	0
4	E	401	ACT	2	0
4	A	510	ACT	5	0
3	A	502	PC1	1	0
3	D	601	PC1	1	0
2	A	501	LMT	2	0
2	E	403	LMT	3	0
3	D	603	PC1	1	0

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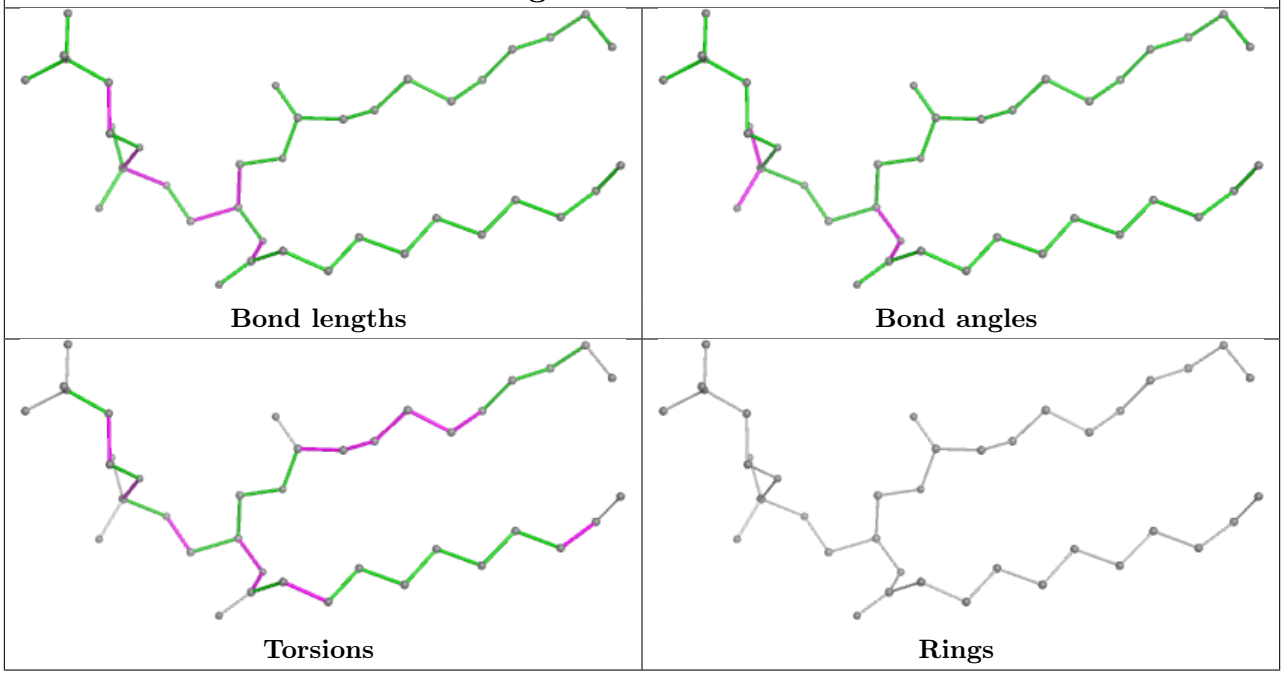
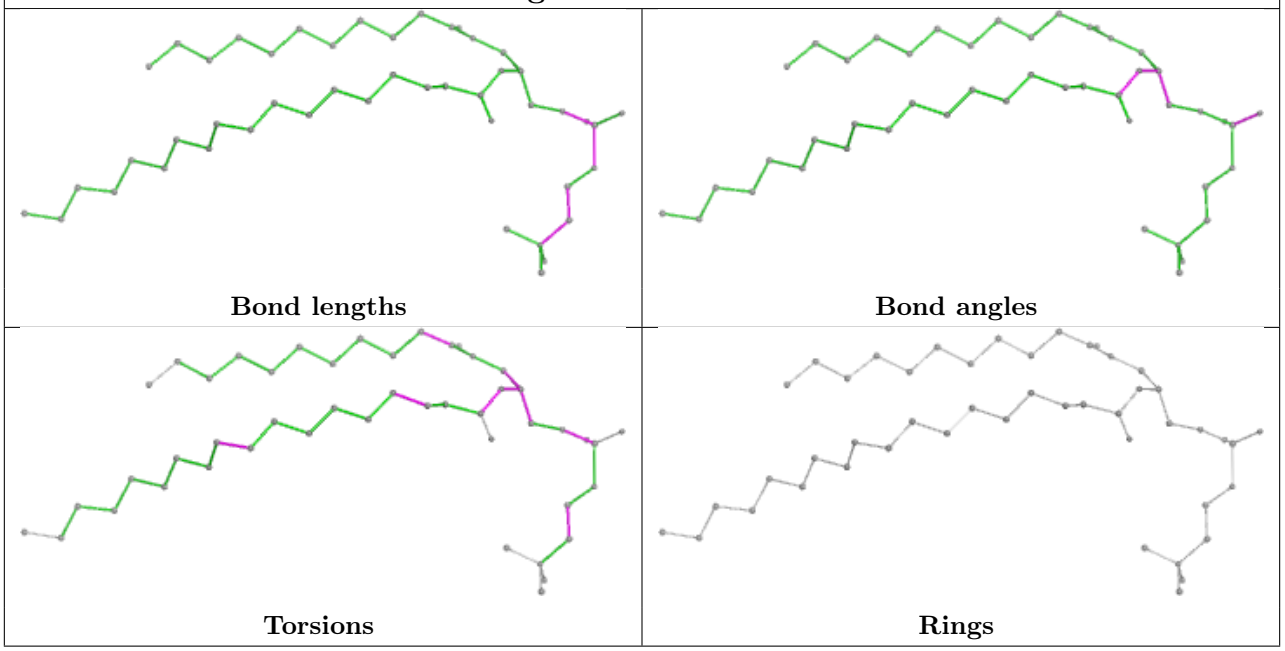
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	601	PC1	1	0
2	A	506	LMT	5	0
2	B	602	LMT	3	0
4	A	509	ACT	4	0
3	C	603	PC1	2	0
3	E	406	PC1	2	0
3	C	604	PC1	1	0
3	D	602	PC1	3	0
4	D	608	ACT	2	0
5	A	507	6E3	1	0
4	B	607	ACT	3	0
4	C	608	ACT	3	0
3	B	601	PC1	3	0
3	B	604	PC1	2	0

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.

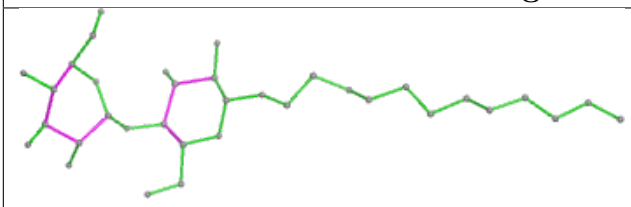
Ligand PC1 B 603



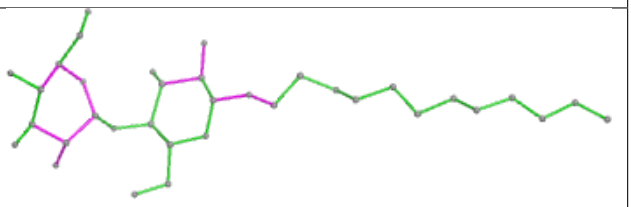
Ligand PC1 A 504



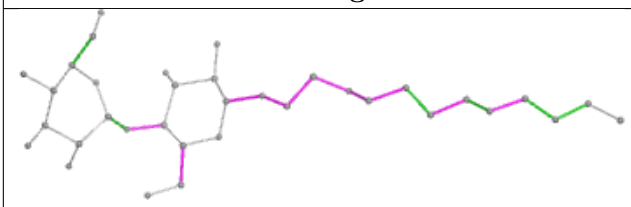
Ligand LMT E 402



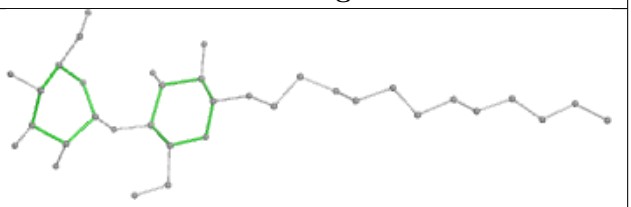
Bond lengths



Bond angles

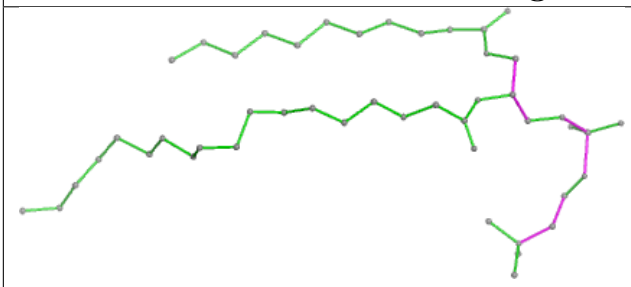


Torsions

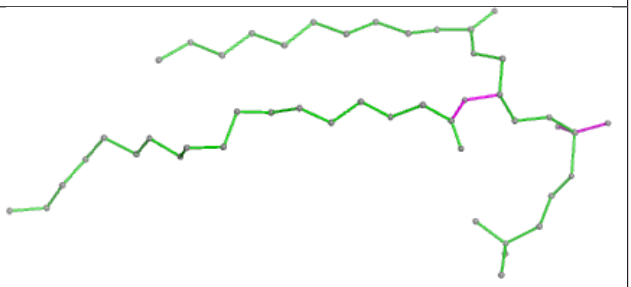


Rings

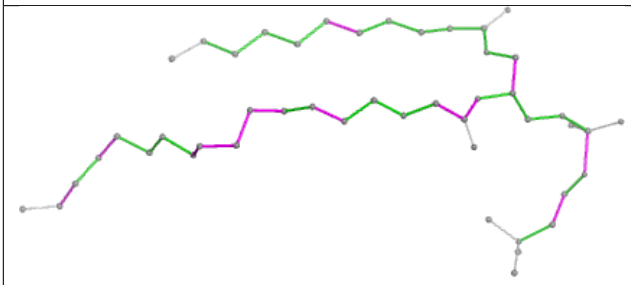
Ligand PC1 E 404



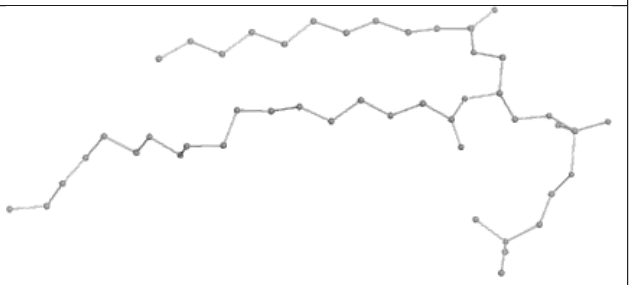
Bond lengths



Bond angles

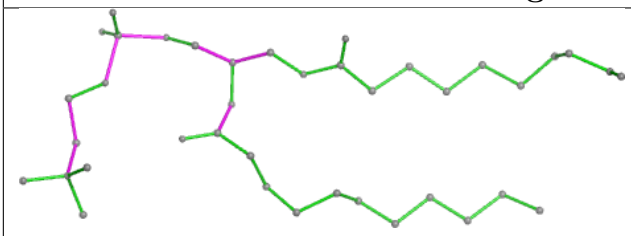


Torsions

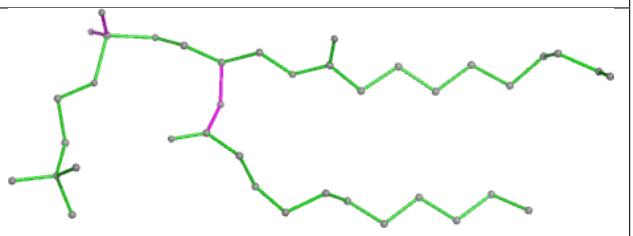


Rings

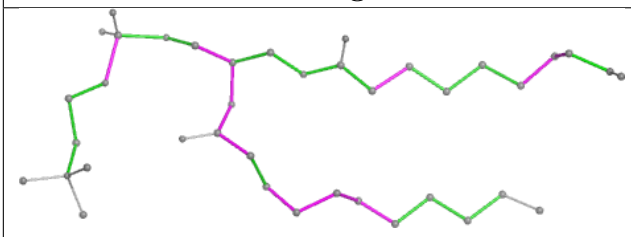
Ligand PC1 A 502



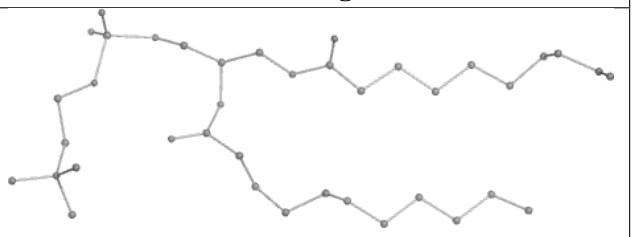
Bond lengths



Bond angles

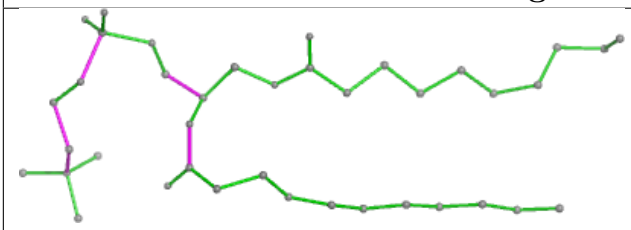


Torsions

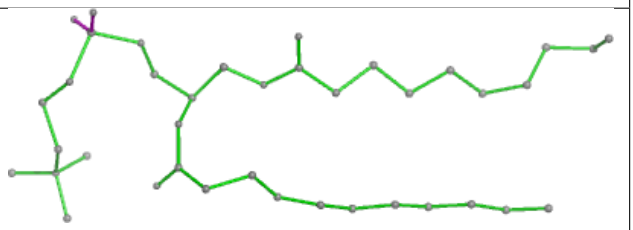


Rings

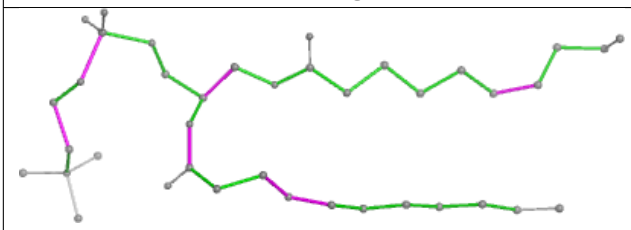
Ligand PC1 E 405



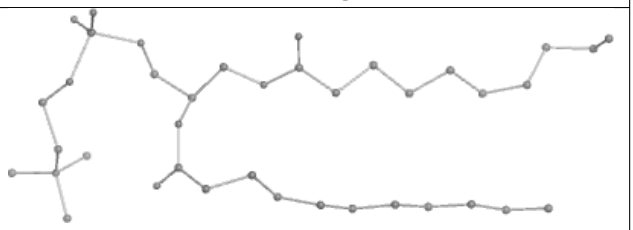
Bond lengths



Bond angles

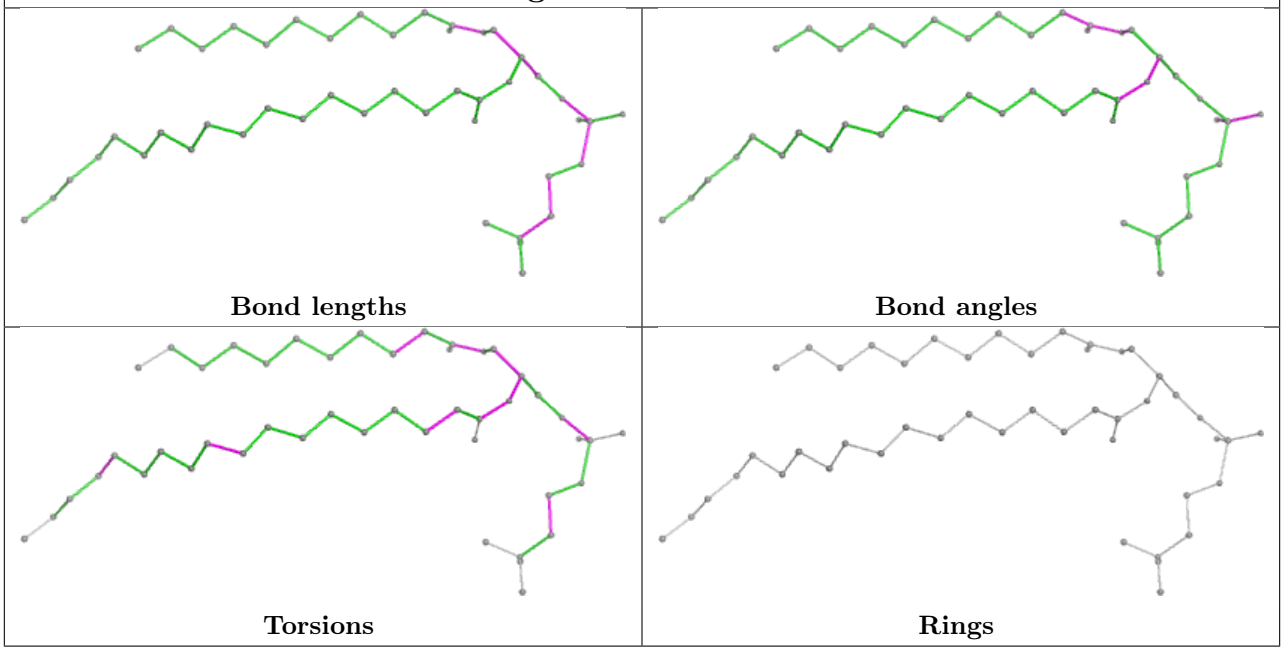


Torsions

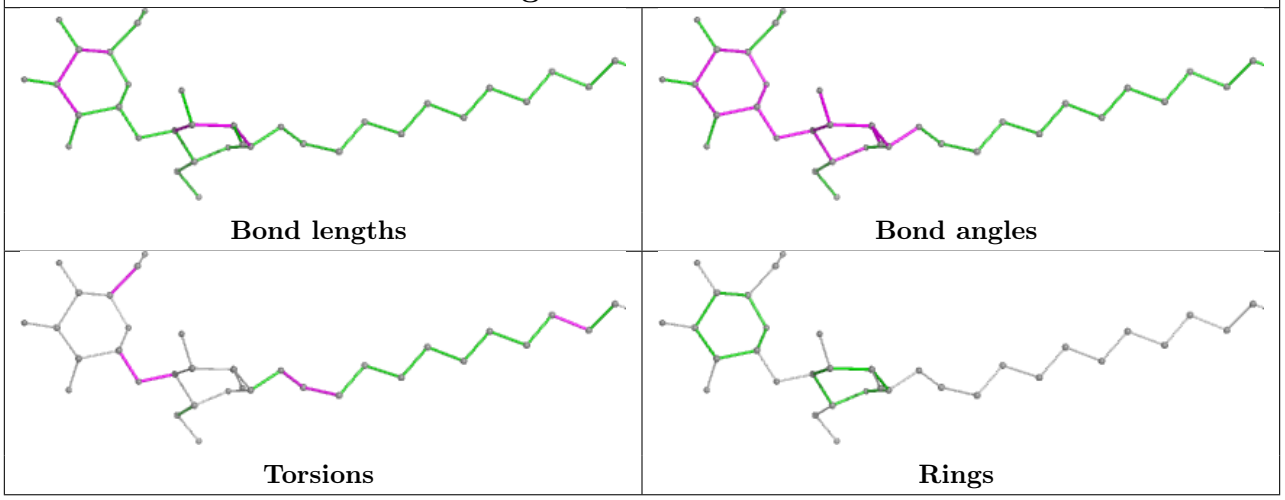


Rings

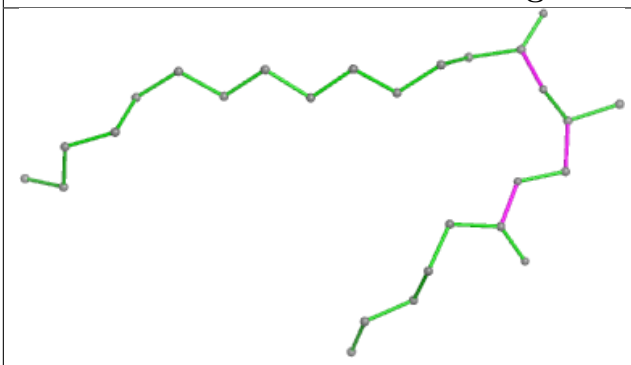
Ligand PC1 D 601



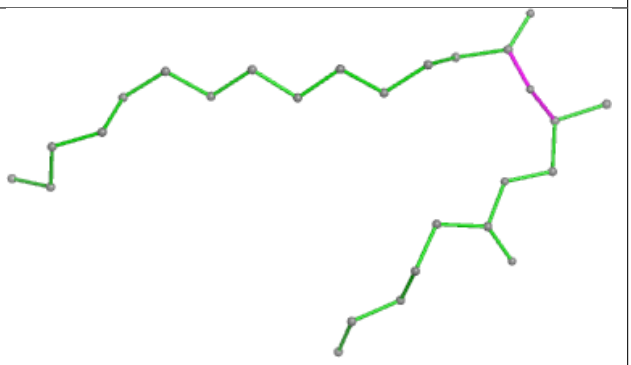
Ligand LMT A 501



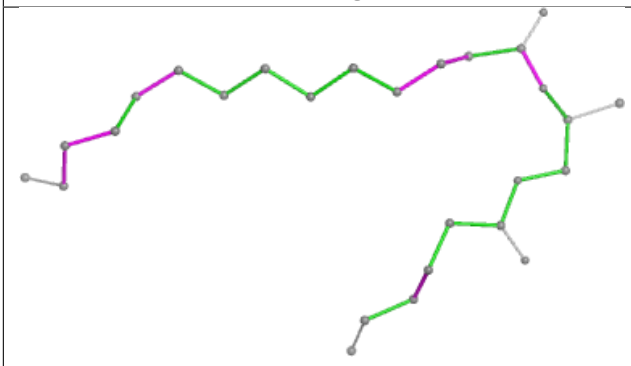
Ligand PC1 A 503



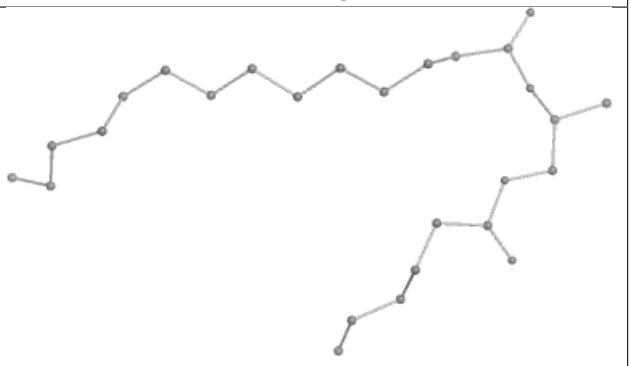
Bond lengths



Bond angles

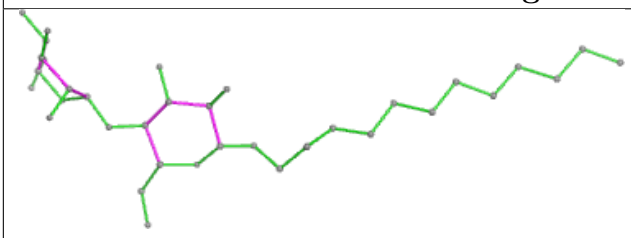


Torsions

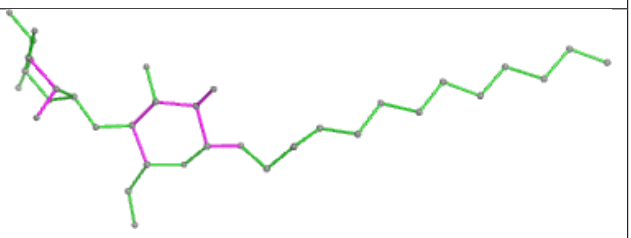


Rings

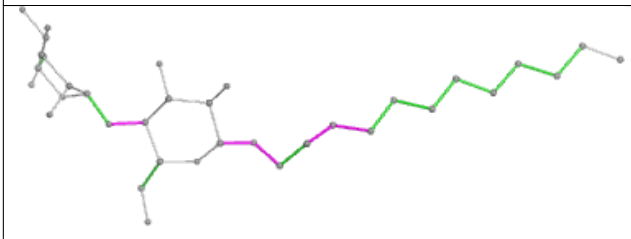
Ligand LMT E 403



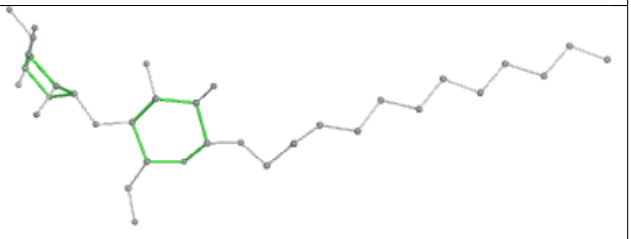
Bond lengths



Bond angles

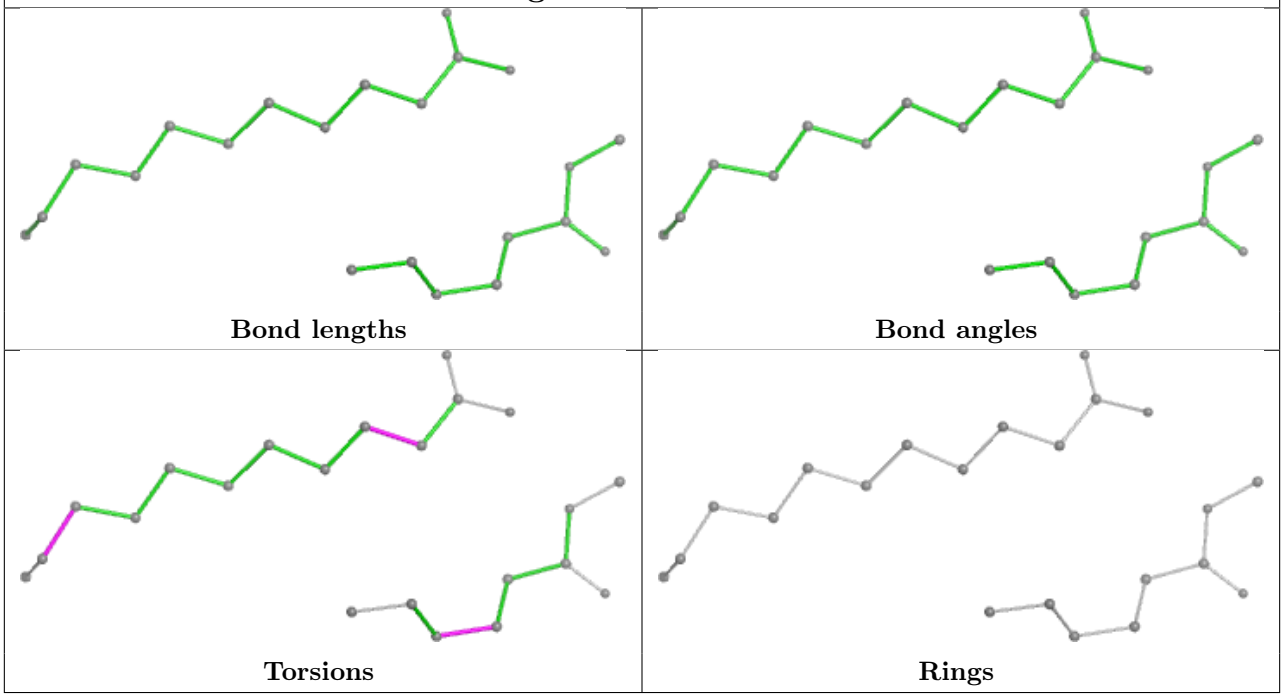


Torsions

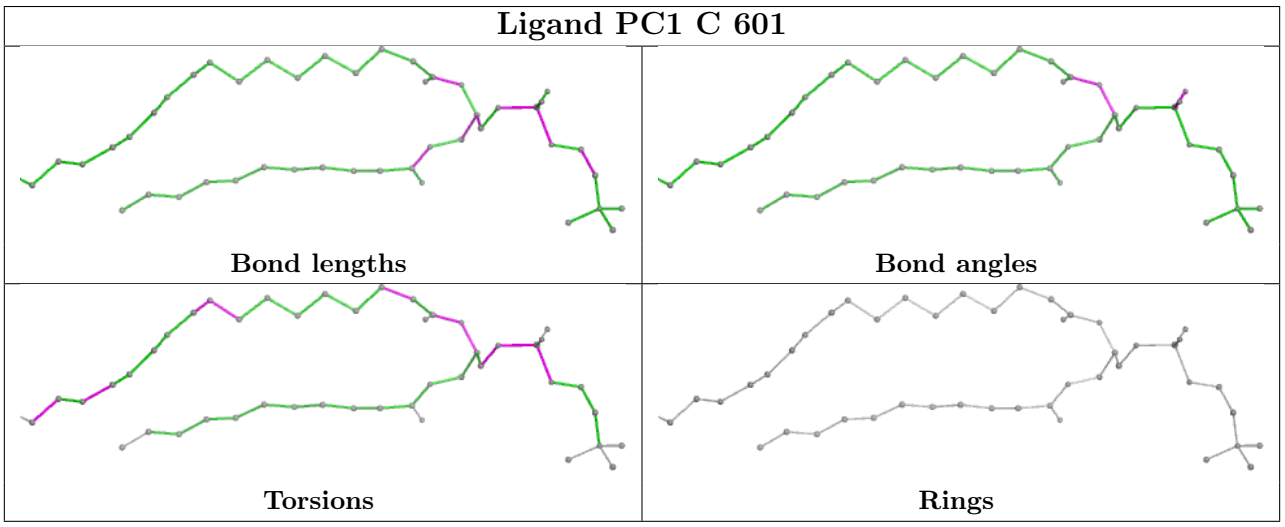


Rings

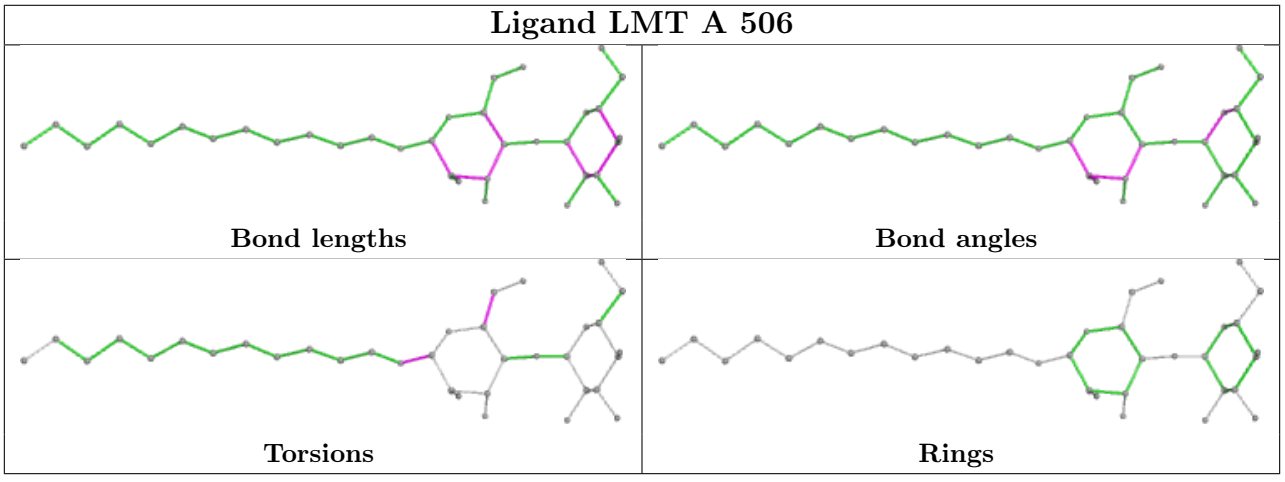
Ligand PC1 D 603



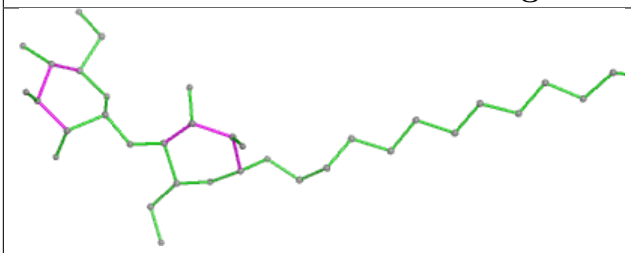
Ligand PC1 C 601



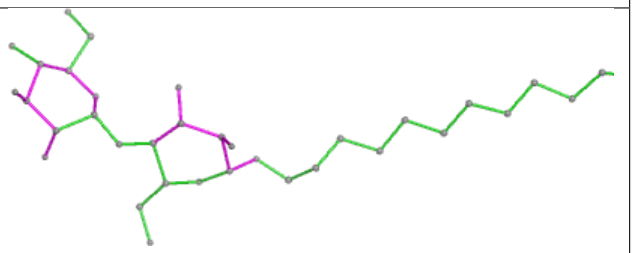
Ligand LMT A 506



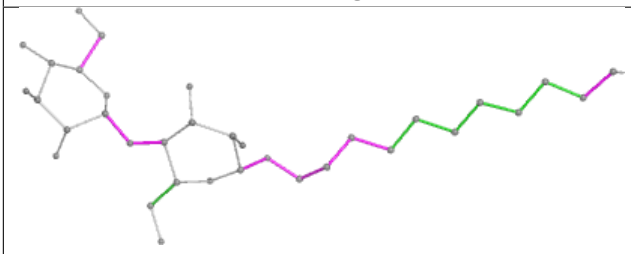
Ligand LMT B 602



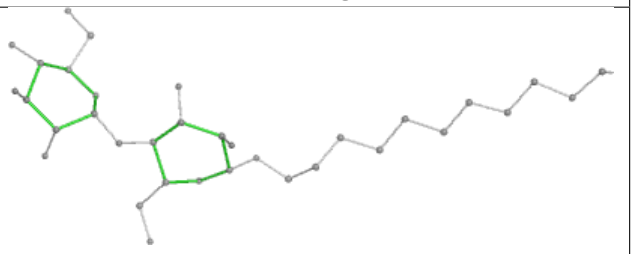
Bond lengths



Bond angles

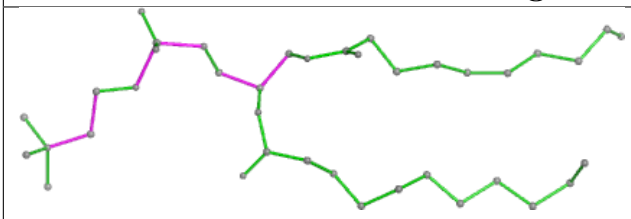


Torsions

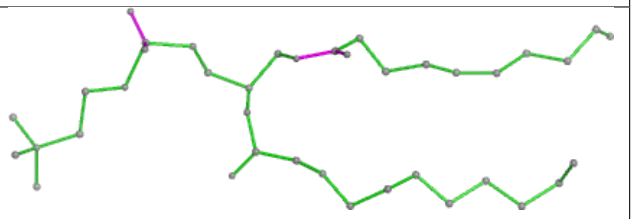


Rings

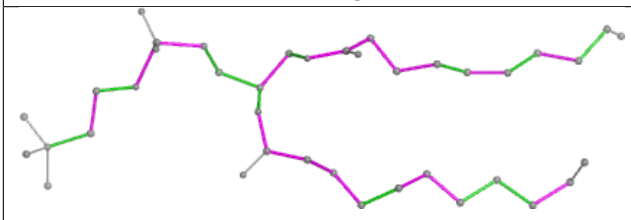
Ligand PC1 C 603



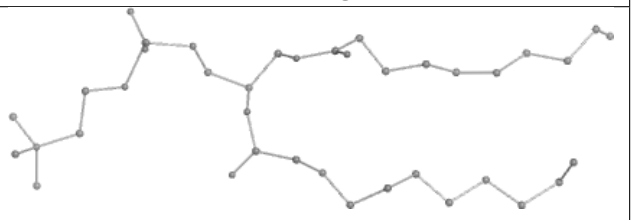
Bond lengths



Bond angles

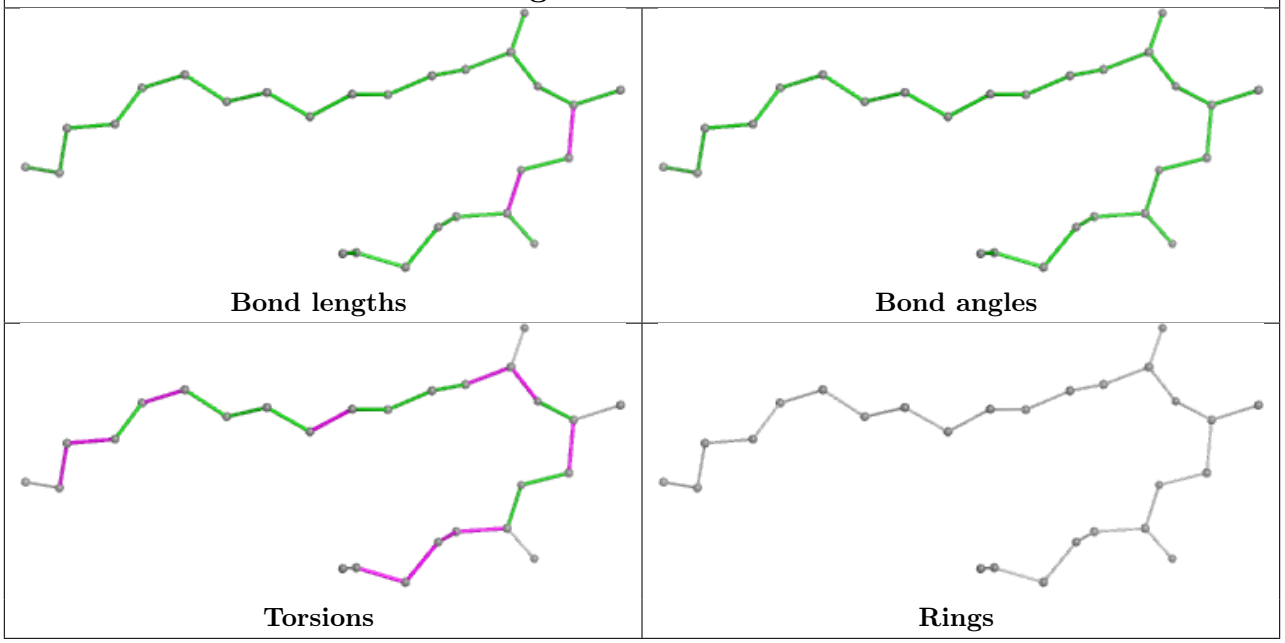


Torsions

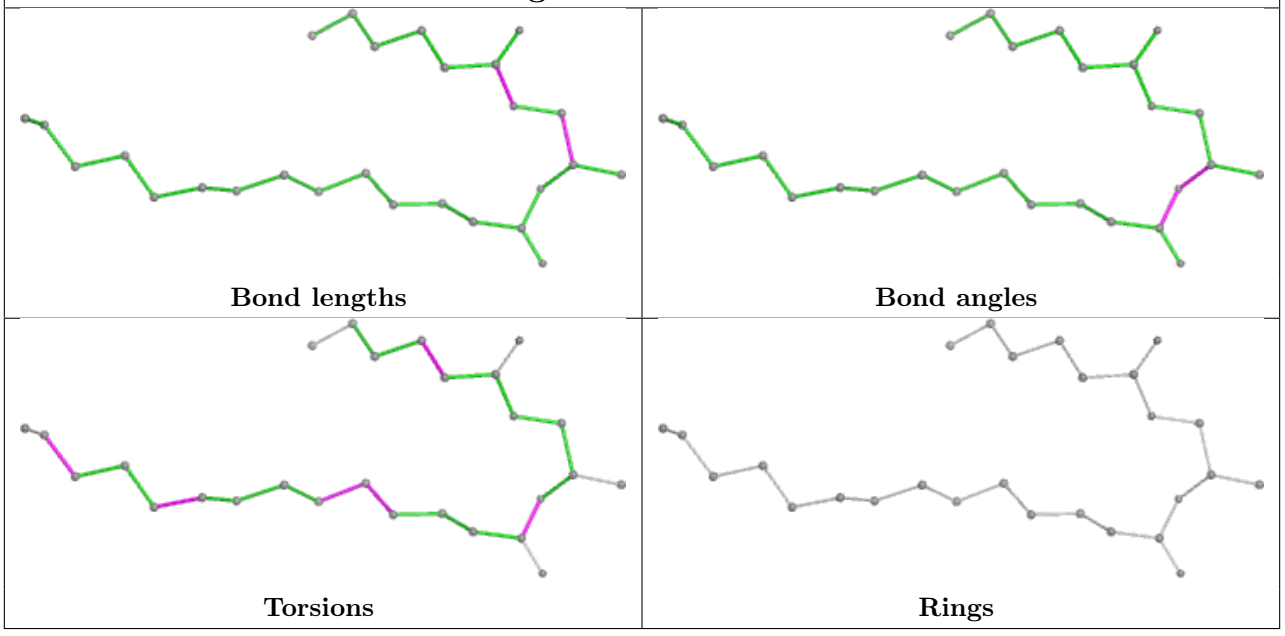


Rings

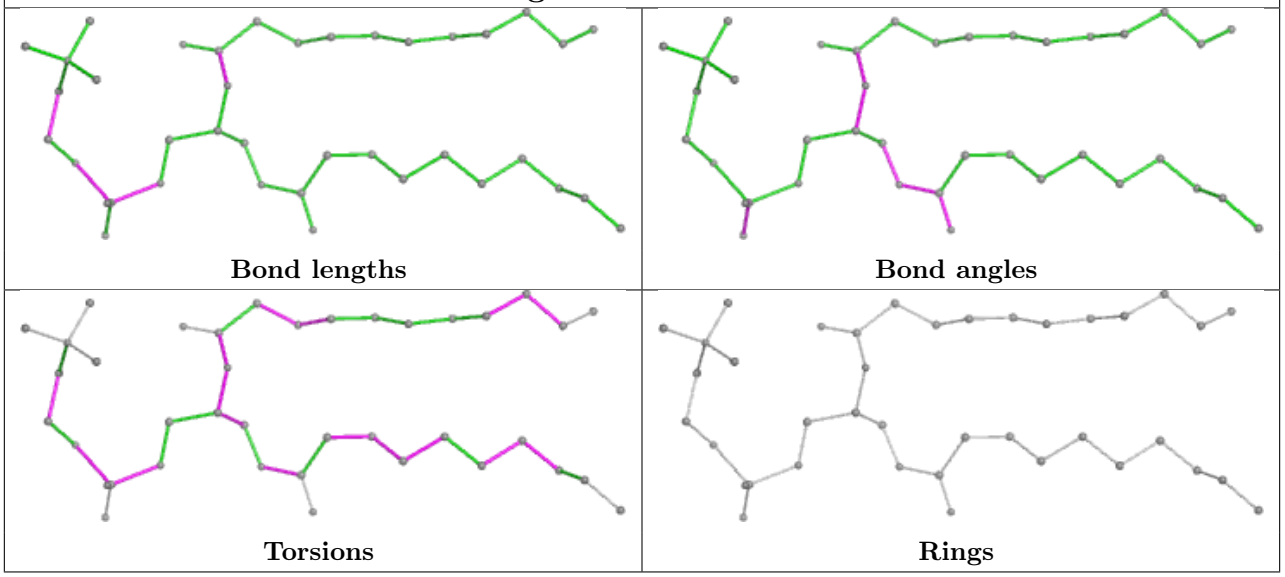
Ligand PC1 E 406



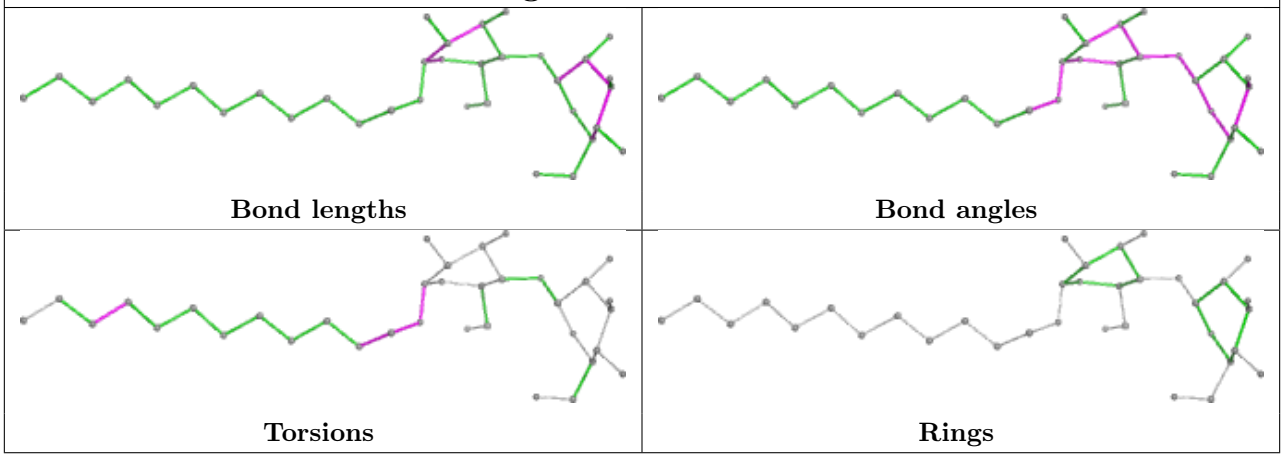
Ligand PC1 C 604

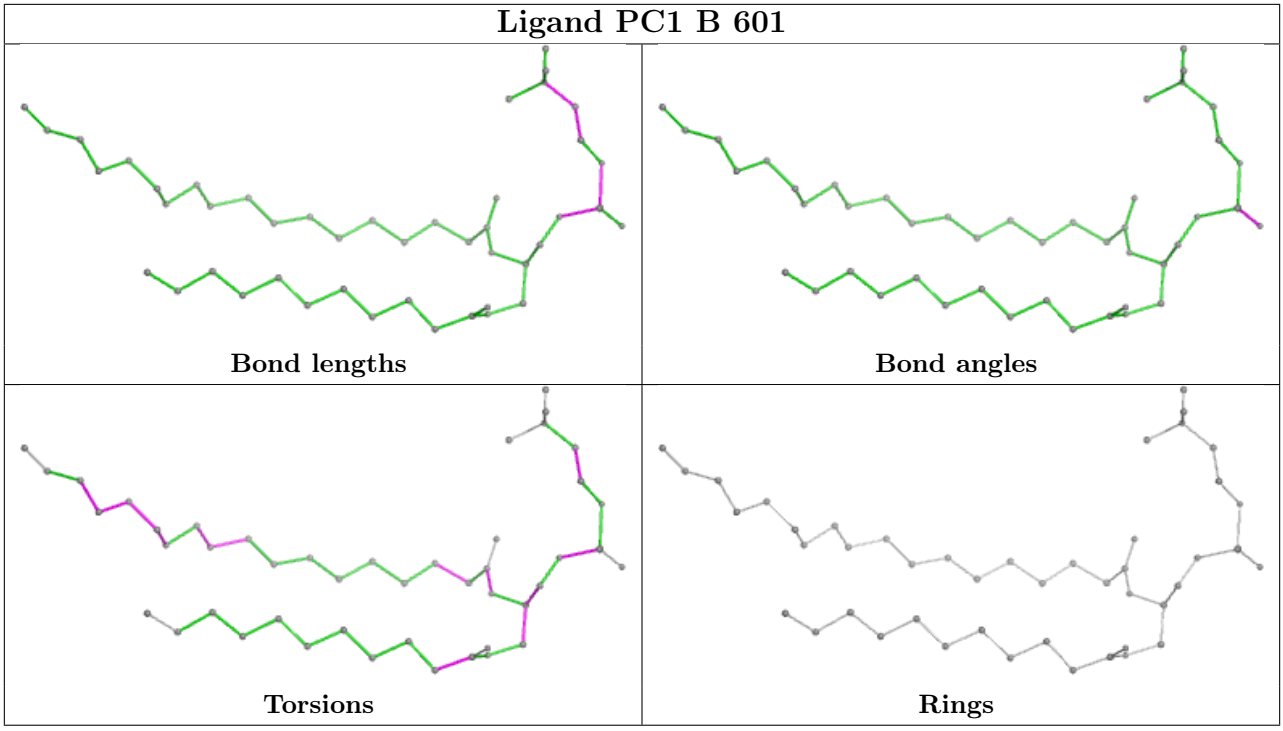


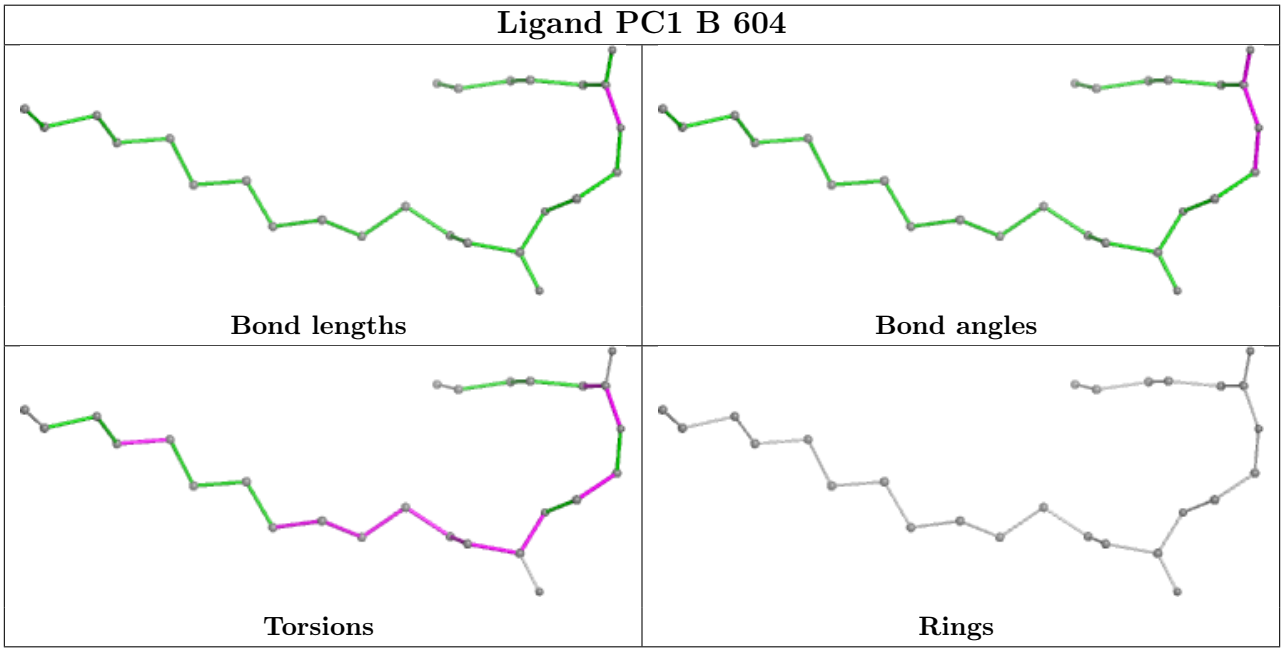
Ligand PC1 D 602



Ligand LMT C 602







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	311/317 (98%)	-0.13	10 (3%)	50	45	57, 79, 126, 155	0
1	B	311/317 (98%)	-0.15	6 (1%)	66	61	39, 79, 112, 132	1 (0%)
1	C	311/317 (98%)	-0.11	5 (1%)	70	65	39, 79, 124, 164	1 (0%)
1	D	311/317 (98%)	-0.11	9 (2%)	54	48	40, 81, 122, 155	1 (0%)
1	E	311/317 (98%)	-0.13	7 (2%)	61	55	38, 81, 126, 149	1 (0%)
All	All	1555/1585 (98%)	-0.13	37 (2%)	59	54	38, 80, 123, 164	4 (0%)

All (37) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	11	ILE	3.8
1	E	5	VAL	3.6
1	A	84	ALA	3.6
1	E	61	VAL	3.6
1	D	12	ALA	3.5
1	C	5	VAL	3.5
1	E	12	ALA	3.4
1	D	57	VAL	3.3
1	B	84	ALA	3.3
1	B	12	ALA	3.3
1	B	280[A]	LYS	3.2
1	A	14	GLU	3.1
1	D	61	VAL	3.1
1	B	5	VAL	2.9
1	A	57	VAL	2.9
1	A	12	ALA	2.8
1	A	5	VAL	2.7
1	A	61	VAL	2.7
1	E	84	ALA	2.7
1	C	54	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
1	B	86	ASP	2.6
1	E	86	ASP	2.6
1	E	11	ILE	2.5
1	A	86	ASP	2.5
1	A	10	PRO	2.4
1	A	56	PRO	2.3
1	D	5	VAL	2.3
1	D	84	ALA	2.3
1	E	137	THR	2.3
1	C	61	VAL	2.3
1	C	56	PRO	2.2
1	D	54	PHE	2.2
1	D	139	ASN	2.1
1	D	137	THR	2.1
1	D	83	ASN	2.0
1	B	13	ASP	2.0
1	C	12	ALA	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	PC1	A	503	27/54	0.58	0.21	96,123,134,134	0
5	6E3	D	604	14/14	0.60	0.20	137,153,156,156	0
6	BR	B	605	1/1	0.60	0.22	245,245,245,245	0
3	PC1	C	604	27/54	0.61	0.20	94,113,132,133	0
3	PC1	E	406	27/54	0.64	0.20	95,112,134,135	0
4	ACT	D	607	4/4	0.64	0.20	93,93,99,100	0

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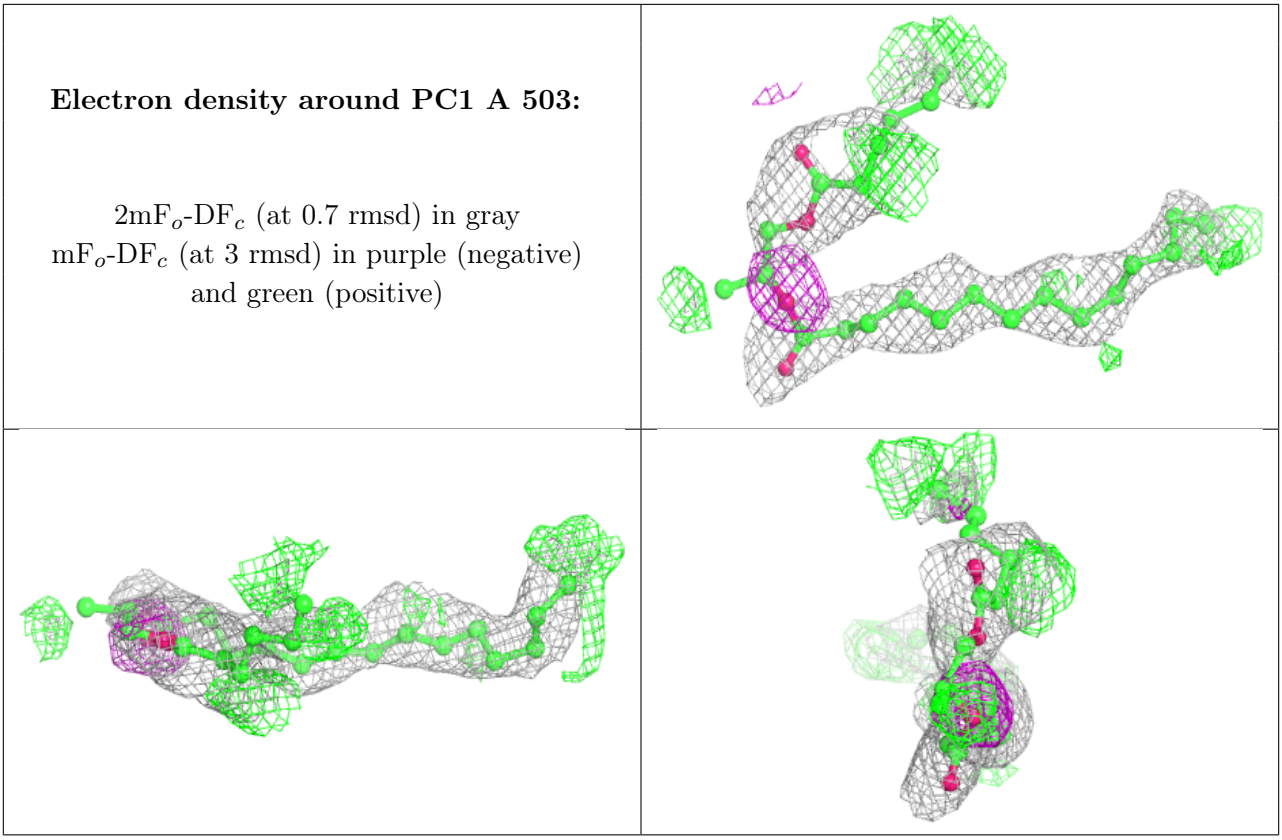
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	PC1	A	504	47/54	0.65	0.19	98,113,135,137	0
4	ACT	C	608	4/4	0.66	0.20	119,119,121,123	0
3	PC1	C	601	47/54	0.66	0.19	99,118,147,148	0
3	PC1	A	502	39/54	0.68	0.17	82,111,149,150	0
4	ACT	D	608	4/4	0.69	0.22	118,118,122,123	0
4	ACT	A	509	4/4	0.70	0.17	96,96,102,104	0
5	6E3	A	507	14/14	0.70	0.19	136,151,152,152	0
3	PC1	D	603	22/54	0.70	0.20	100,114,133,135	0
3	PC1	D	601	47/54	0.70	0.19	103,116,144,146	0
3	PC1	D	602	39/54	0.72	0.18	89,118,154,155	0
3	PC1	B	603	39/54	0.73	0.17	82,121,151,152	0
3	PC1	C	603	39/54	0.74	0.16	102,126,166,167	0
3	PC1	E	404	47/54	0.74	0.17	96,112,141,142	0
3	PC1	B	604	26/54	0.75	0.17	90,108,125,125	0
3	PC1	B	601	47/54	0.75	0.18	109,117,143,144	0
3	PC1	E	405	39/54	0.76	0.16	96,129,157,157	0
6	BR	C	605	1/1	0.76	0.21	238,238,238,238	0
4	ACT	A	510	4/4	0.81	0.20	125,125,128,130	0
2	LMT	E	403	35/35	0.82	0.19	70,156,174,175	0
4	ACT	E	401	4/4	0.82	0.15	112,112,114,115	0
7	NA	B	606	1/1	0.82	0.11	101,101,101,101	0
7	NA	D	606	1/1	0.82	0.32	117,117,117,117	0
6	BR	E	407	1/1	0.83	0.19	235,235,235,235	0
4	ACT	A	505	4/4	0.84	0.16	107,107,110,111	0
6	BR	D	605	1/1	0.87	0.13	201,201,201,201	0
7	NA	E	408	1/1	0.87	0.20	112,112,112,112	0
4	ACT	C	607	4/4	0.88	0.10	103,104,104,104	0
2	LMT	B	602	35/35	0.88	0.15	64,149,169,171	0
2	LMT	A	501	35/35	0.89	0.14	57,145,160,161	0
2	LMT	C	602	35/35	0.89	0.15	50,146,167,169	0
2	LMT	E	402	35/35	0.89	0.13	52,141,164,164	0
2	LMT	A	506	35/35	0.89	0.15	75,146,162,162	0
6	BR	A	508	1/1	0.90	0.12	195,195,195,195	0
7	NA	C	606	1/1	0.91	0.09	90,90,90,90	0
4	ACT	B	607	4/4	0.91	0.09	93,94,95,95	0
4	ACT	E	409	4/4	0.91	0.08	94,96,99,99	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.

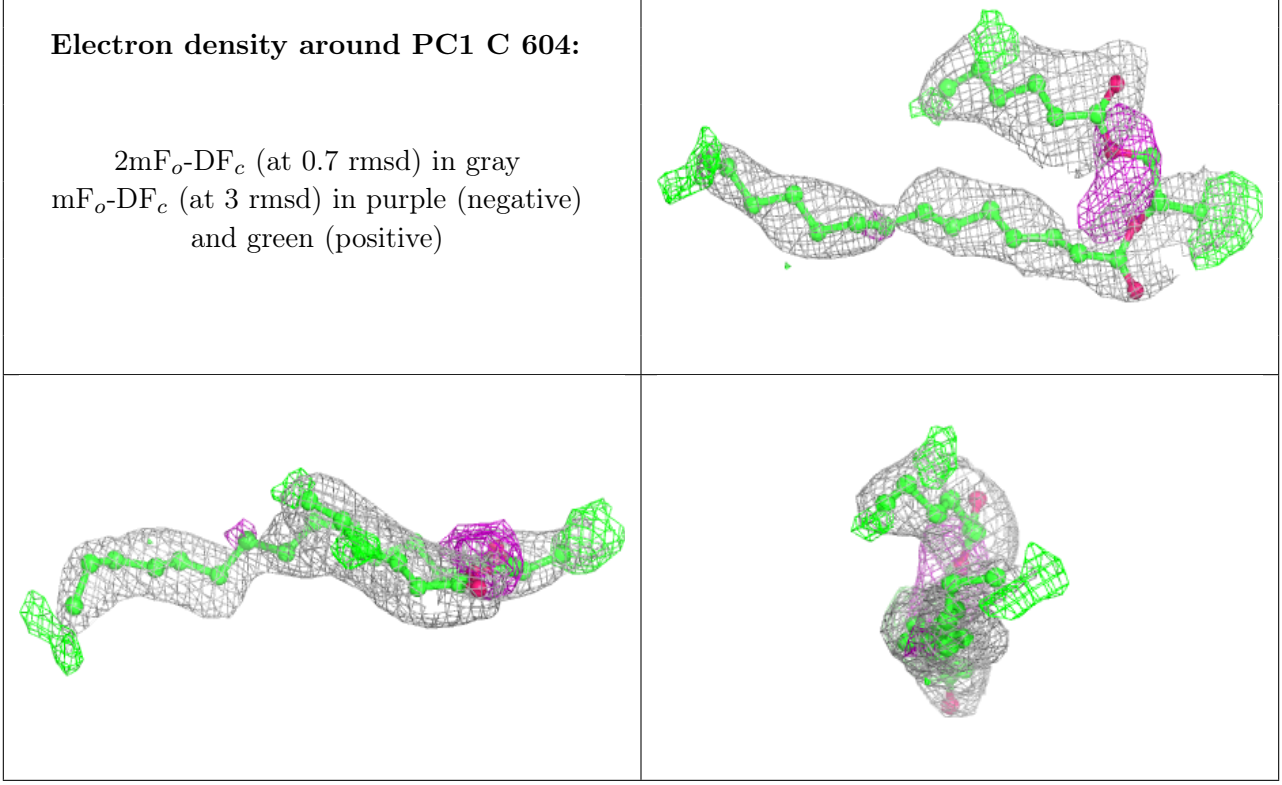
Electron density around PC1 A 503:

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



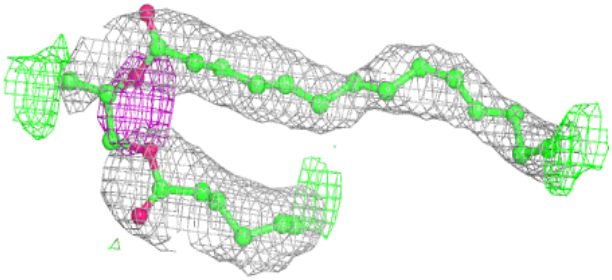
Electron density around PC1 C 604:

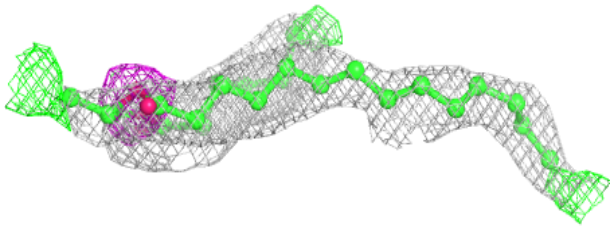
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

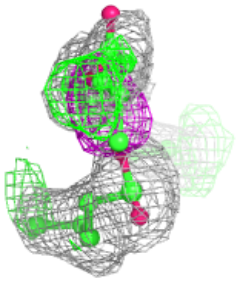


Electron density around PC1 E 406:

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

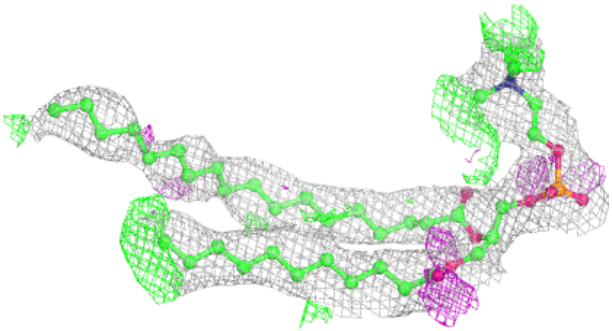


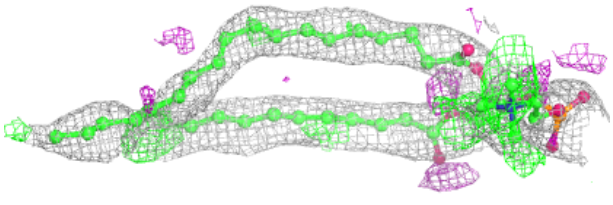


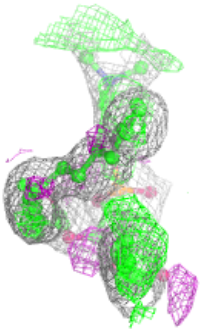


Electron density around PC1 A 504:

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

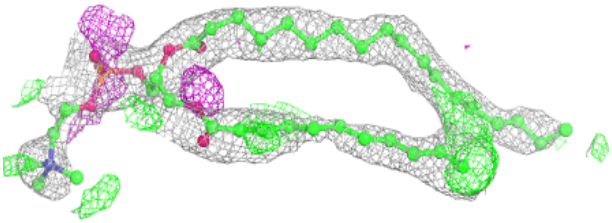


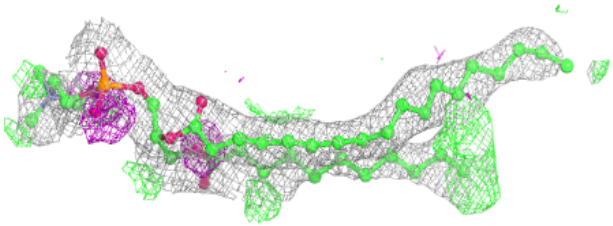


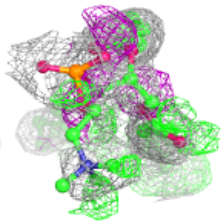


Electron density around PC1 C 601:

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

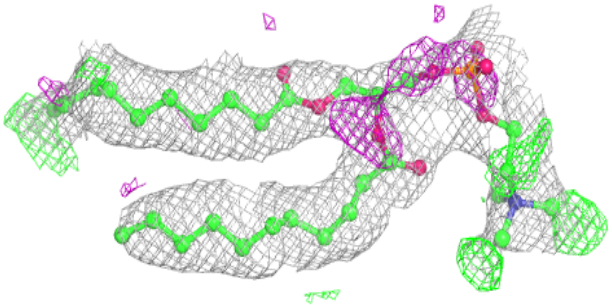


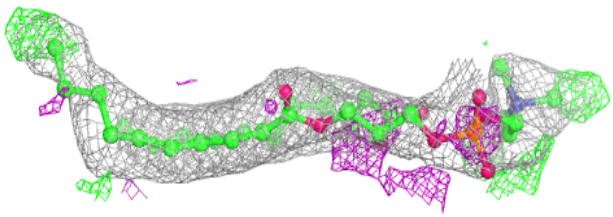


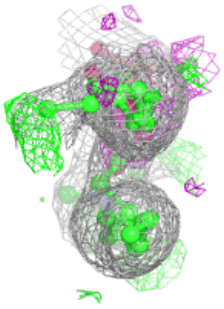


Electron density around PC1 A 502:

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

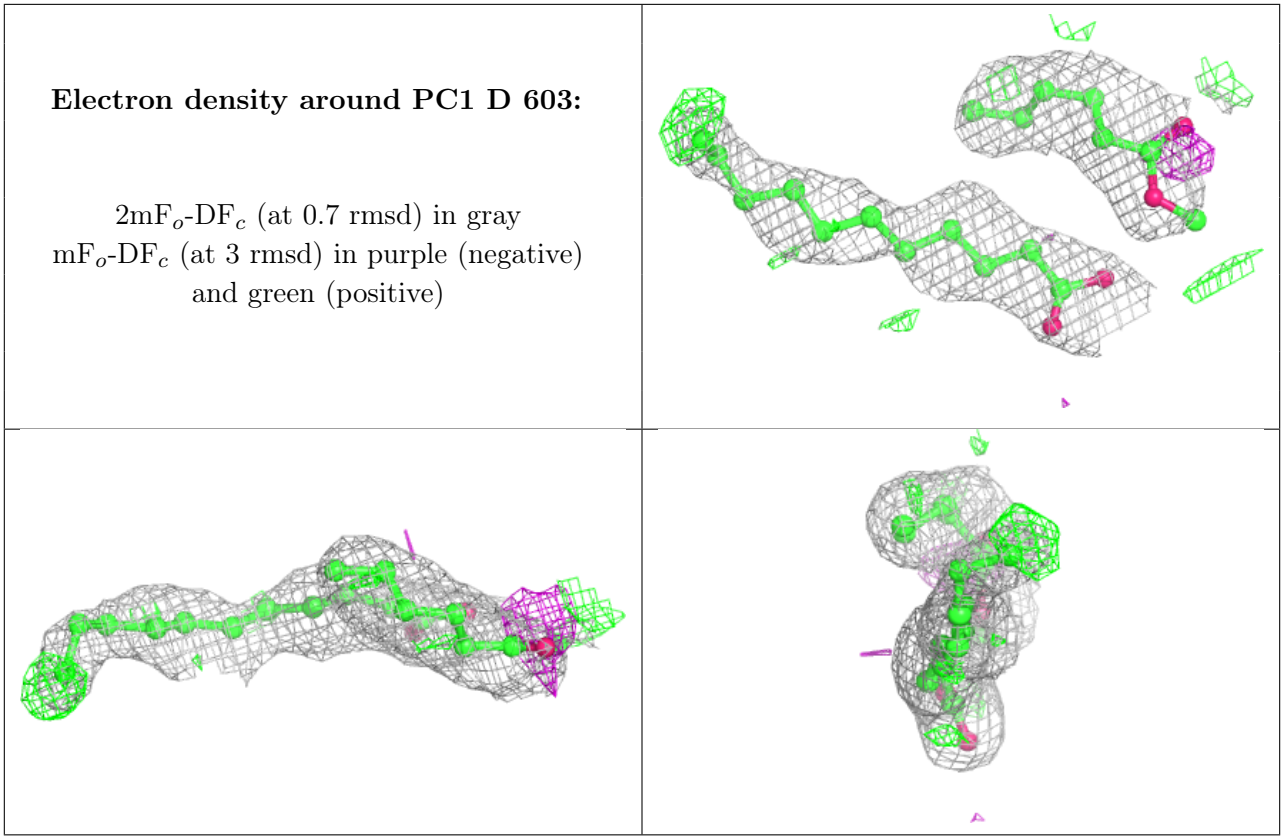






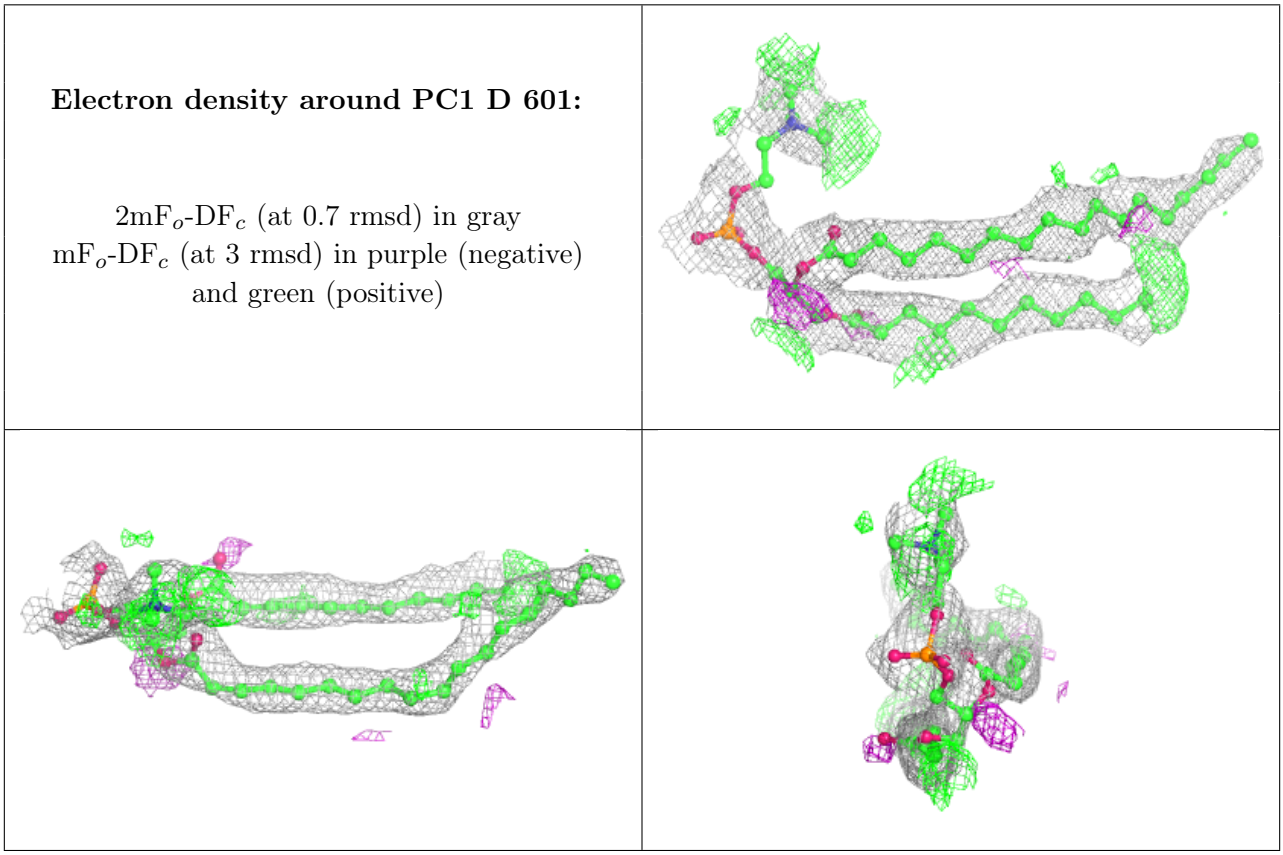
Electron density around PC1 D 603:

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



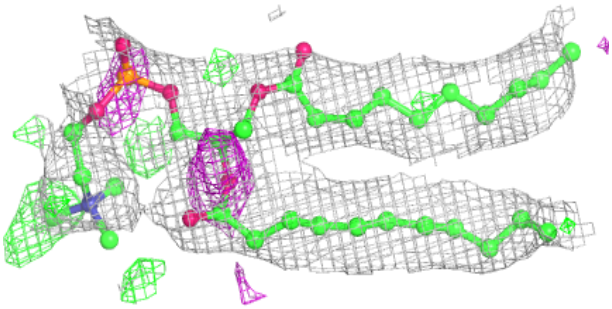
Electron density around PC1 D 601:

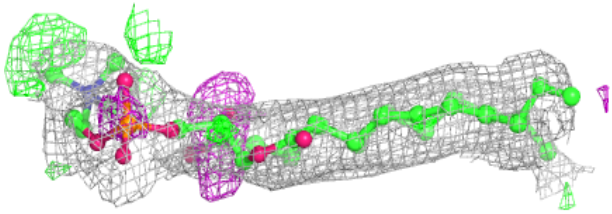
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

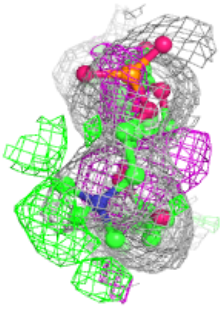


Electron density around PC1 D 602:

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

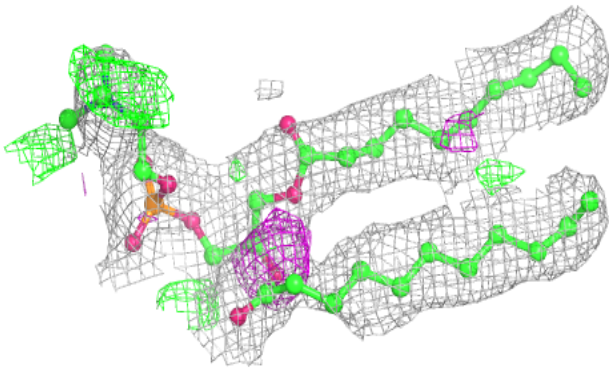


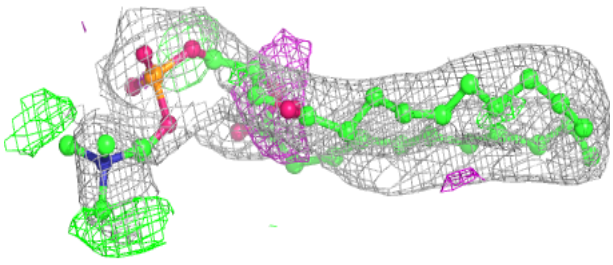


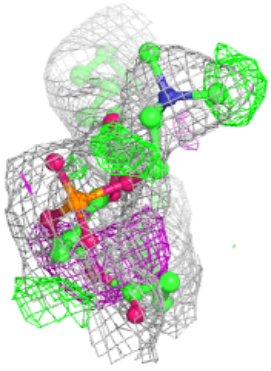


Electron density around PC1 B 603:

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

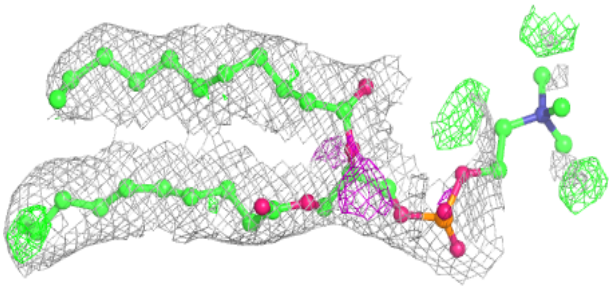


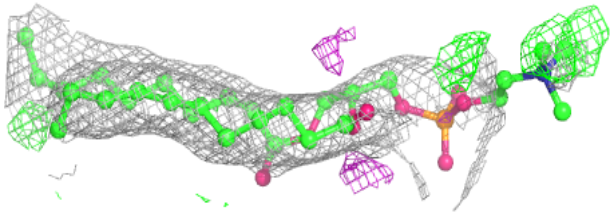


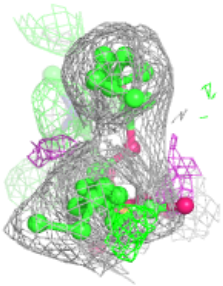


Electron density around PC1 C 603:

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

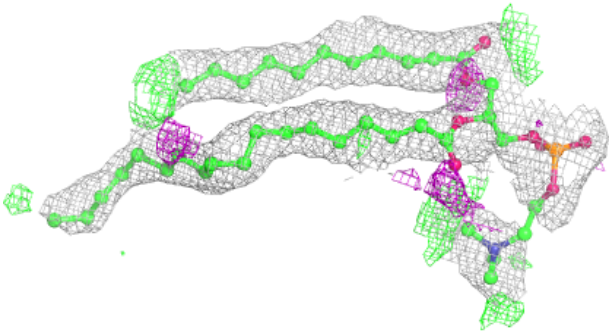


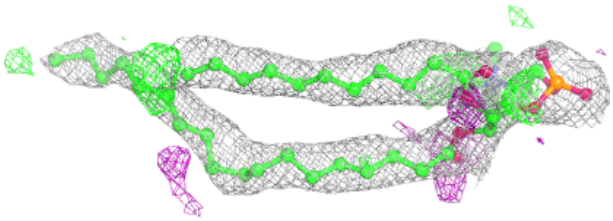


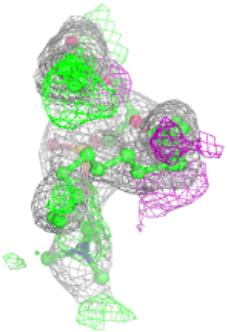


Electron density around PC1 E 404:

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

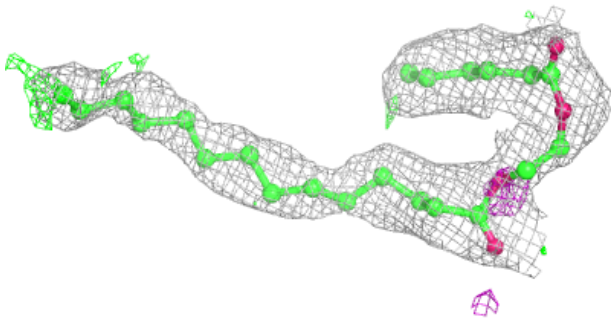


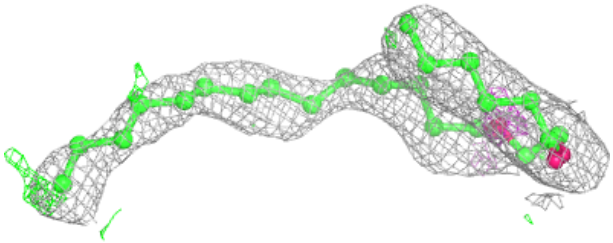


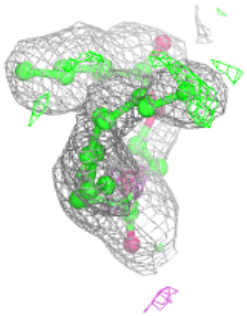


Electron density around PC1 B 604:

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

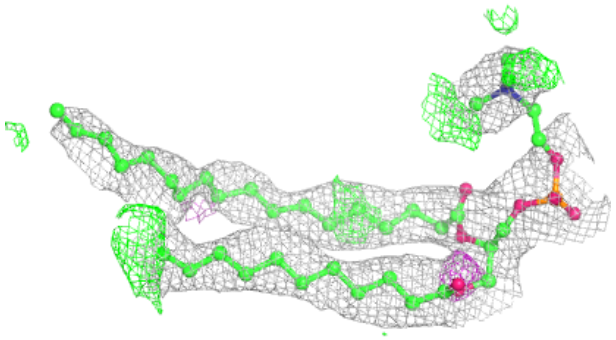


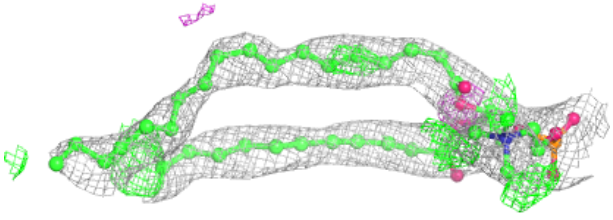




Electron density around PC1 B 601:

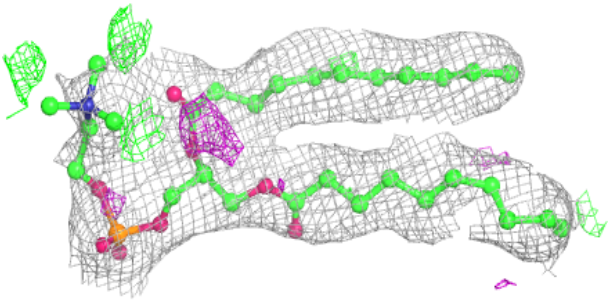
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

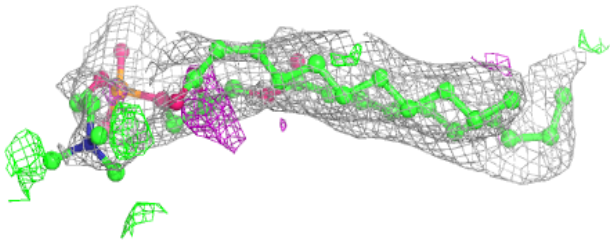


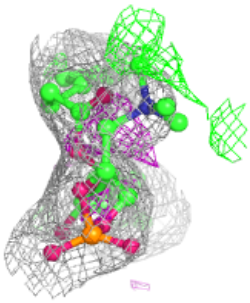


Electron density around PC1 E 405:

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

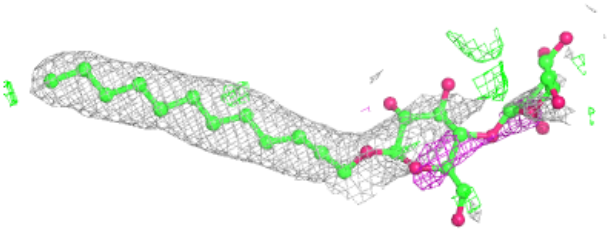


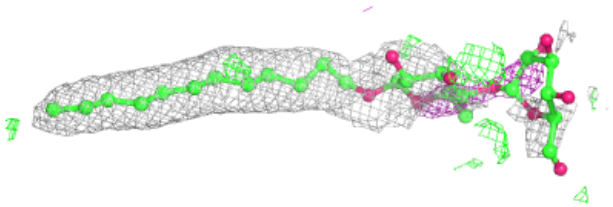


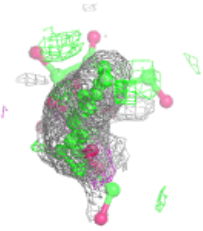


Electron density around LMT E 403:

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

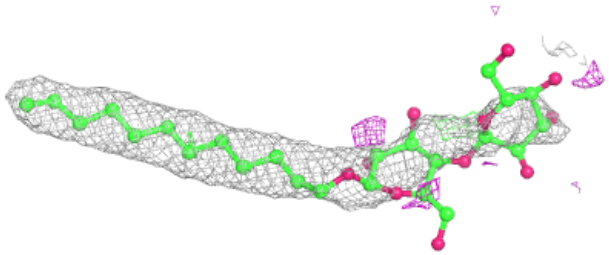


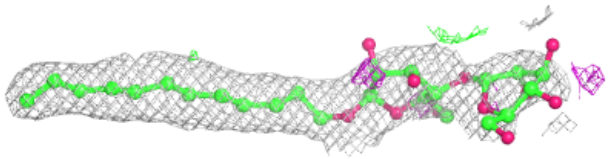


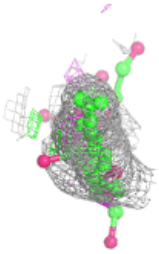


Electron density around LMT B 602:

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

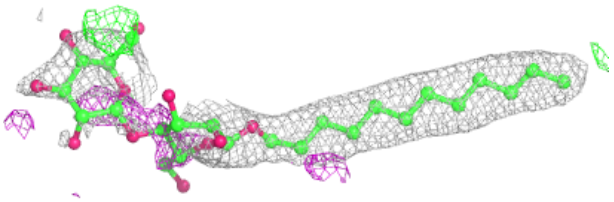


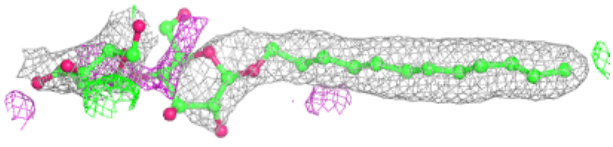


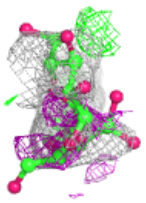


Electron density around LMT A 501:

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

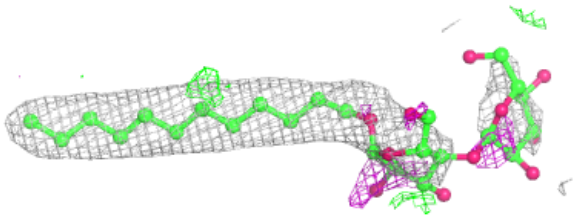


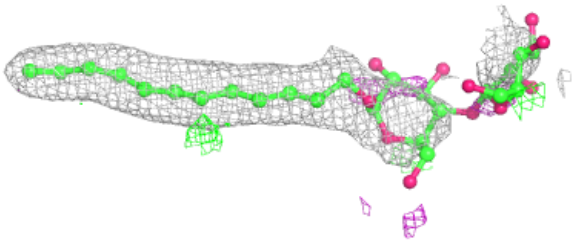


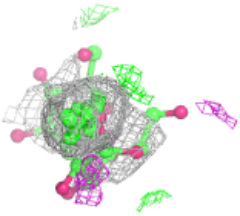


Electron density around LMT C 602:

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

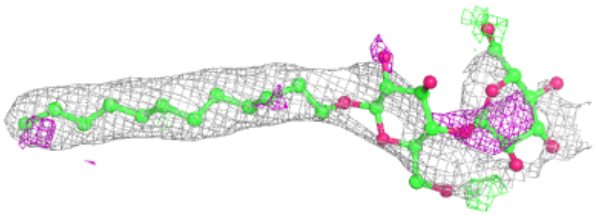


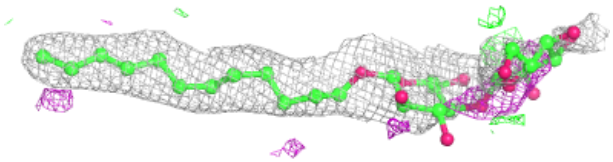


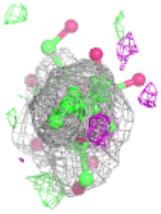


Electron density around LMT E 402:

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

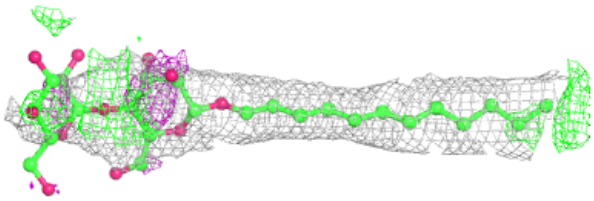


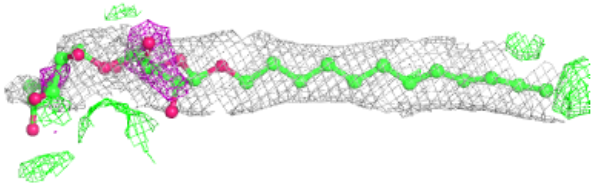


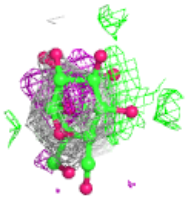


Electron density around LMT A 506:

$2mF_o$-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

There are no such residues in this entry.