Full wwPDB EM Validation Report ⓘ

Oct 1, 2024 – 06:36 PM JST

PDB ID	:	8X90
EMDB ID	:	EMD-38158
Title	:	P/Q type calcium channel
Authors	:	Yan, N.; Li, Z.; Cong, Y.; Wu, T.; Wang, T.
Deposited on	:	2023-11-29
Resolution	:	2.95 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

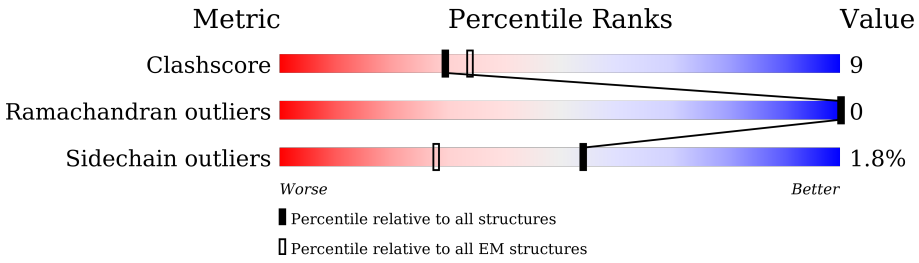
EMDB validation analysis	:	0.0.1.dev113
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.95 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)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2549	43% 10% 46%
2	B	1115	67% 19% 14%
3	C	496	42% 46% 20% 35%
4	D	3	33% 67%
5	E	2	50% 50%
5	G	2	100%
5	H	2	50% 50%
6	F	4	100%

2 Entry composition (i)

There are 13 unique types of molecules in this entry. The entry contains 22122 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Voltage-dependent P/Q-type calcium channel subunit alpha-1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1377	11202	7353	1819	1950	80	1	0

There are 43 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-42	MET	-	initiating methionine	UNP O00555
A	-41	ALA	-	expression tag	UNP O00555
A	-40	SER	-	expression tag	UNP O00555
A	-39	TRP	-	expression tag	UNP O00555
A	-38	SER	-	expression tag	UNP O00555
A	-37	HIS	-	expression tag	UNP O00555
A	-36	PRO	-	expression tag	UNP O00555
A	-35	GLN	-	expression tag	UNP O00555
A	-34	PHE	-	expression tag	UNP O00555
A	-33	GLU	-	expression tag	UNP O00555
A	-32	LYS	-	expression tag	UNP O00555
A	-31	GLY	-	expression tag	UNP O00555
A	-30	GLY	-	expression tag	UNP O00555
A	-29	GLY	-	expression tag	UNP O00555
A	-28	ALA	-	expression tag	UNP O00555
A	-27	ARG	-	expression tag	UNP O00555
A	-26	GLY	-	expression tag	UNP O00555
A	-25	GLY	-	expression tag	UNP O00555
A	-24	SER	-	expression tag	UNP O00555
A	-23	GLY	-	expression tag	UNP O00555
A	-22	GLY	-	expression tag	UNP O00555
A	-21	GLY	-	expression tag	UNP O00555
A	-20	SER	-	expression tag	UNP O00555
A	-19	TRP	-	expression tag	UNP O00555
A	-18	SER	-	expression tag	UNP O00555
A	-17	HIS	-	expression tag	UNP O00555
A	-16	PRO	-	expression tag	UNP O00555

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-15	GLN	-	expression tag	UNP O00555
A	-14	PHE	-	expression tag	UNP O00555
A	-13	GLU	-	expression tag	UNP O00555
A	-12	LYS	-	expression tag	UNP O00555
A	-11	GLY	-	expression tag	UNP O00555
A	-10	PHE	-	expression tag	UNP O00555
A	-9	ASP	-	expression tag	UNP O00555
A	-8	TYR	-	expression tag	UNP O00555
A	-7	LYS	-	expression tag	UNP O00555
A	-6	ASP	-	expression tag	UNP O00555
A	-5	ASP	-	expression tag	UNP O00555
A	-4	ASP	-	expression tag	UNP O00555
A	-3	ASP	-	expression tag	UNP O00555
A	-2	LYS	-	expression tag	UNP O00555
A	-1	GLY	-	expression tag	UNP O00555
A	0	THR	-	expression tag	UNP O00555

- Molecule 2 is a protein called Voltage-dependent calcium channel subunit alpha-2/delta-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	964	Total	C	N	O	S	0	0
			7695	4879	1289	1493	34		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	1104	LEU	-	expression tag	UNP P54289
B	1105	GLU	-	expression tag	UNP P54289
B	1106	HIS	-	expression tag	UNP P54289
B	1107	HIS	-	expression tag	UNP P54289
B	1108	HIS	-	expression tag	UNP P54289
B	1109	HIS	-	expression tag	UNP P54289
B	1110	HIS	-	expression tag	UNP P54289
B	1111	HIS	-	expression tag	UNP P54289
B	1112	HIS	-	expression tag	UNP P54289
B	1113	HIS	-	expression tag	UNP P54289
B	1114	HIS	-	expression tag	UNP P54289
B	1115	HIS	-	expression tag	UNP P54289

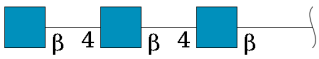
- Molecule 3 is a protein called Voltage-dependent L-type calcium channel subunit beta-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	324	Total	C	N	O	S	0	0
			2575	1619	467	479	10		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	485	LEU	-	expression tag	UNP P54284
C	486	GLU	-	expression tag	UNP P54284
C	487	HIS	-	expression tag	UNP P54284
C	488	HIS	-	expression tag	UNP P54284
C	489	HIS	-	expression tag	UNP P54284
C	490	HIS	-	expression tag	UNP P54284
C	491	HIS	-	expression tag	UNP P54284
C	492	HIS	-	expression tag	UNP P54284
C	493	HIS	-	expression tag	UNP P54284
C	494	HIS	-	expression tag	UNP P54284
C	495	HIS	-	expression tag	UNP P54284
C	496	HIS	-	expression tag	UNP P54284

- Molecule 4 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				AltConf	Trace
4	D	3	Total	C	N	O	0	0
			42	24	3	15		

- Molecule 5 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	2	Total	C	N	O	0	0
			28	16	2	10		
5	G	2	Total	C	N	O	0	0
			28	16	2	10		

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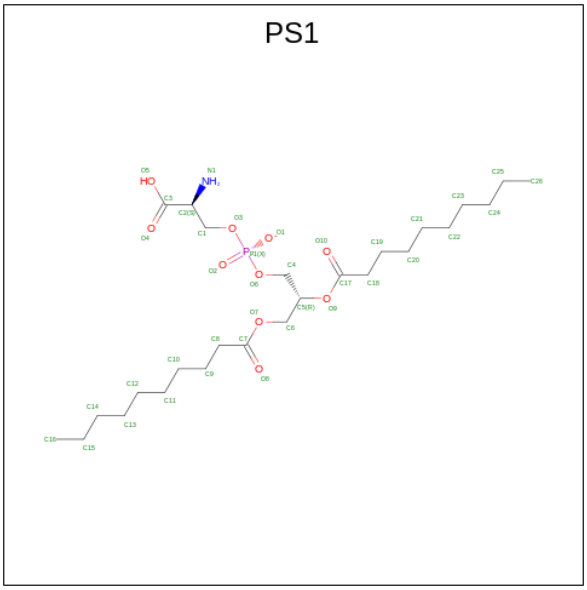
Mol	Chain	Residues	Atoms				AltConf	Trace
5	H	2	Total	C	N	O	0	0
			28	16	2	10		

- Molecule 6 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

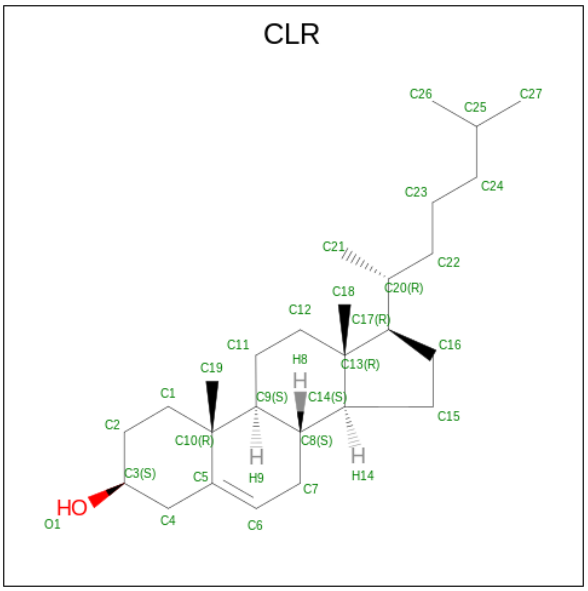
Mol	Chain	Residues	Atoms				AltConf	Trace
6	F	4	Total	C	N	O	0	0
			56	32	4	20		

- Molecule 7 is 1,2-DIDECANOYL-SN-GLYCERO-3-[PHOSPHO-L-SERINE] (three-letter code: PS1) (formula: $C_{26}H_{49}NO_{10}P$).



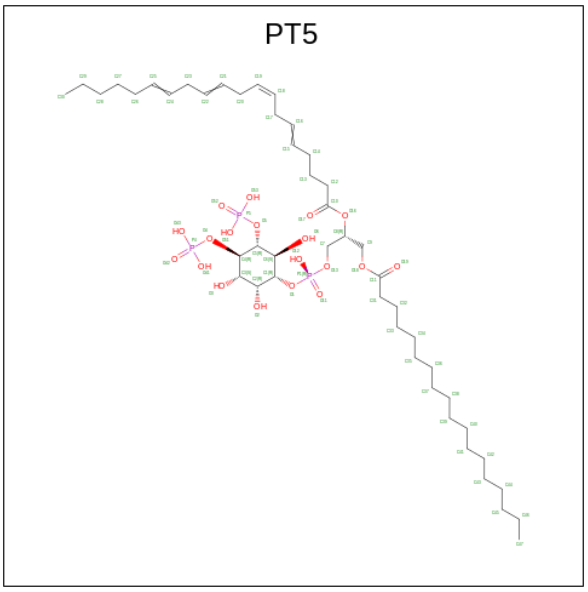
Mol	Chain	Residues	Atoms					AltConf
7	A	1	Total	C	N	O	P	0
			38	26	1	10	1	

- Molecule 8 is CHOLESTEROL (three-letter code: CLR) (formula: $C_{27}H_{46}O$).



Mol	Chain	Residues	Atoms	AltConf
8	A	1	Total C O 28 27 1	0
8	A	1	Total C O 28 27 1	0
8	A	1	Total C O 28 27 1	0
8	A	1	Total C O 28 27 1	0
8	A	1	Total C O 28 27 1	0

- Molecule 9 is [(2R)-1-octadecanoyloxy-3-[oxidanyl-[(1R,2R,3S,4R,5R,6S)-2,3,6-tris(oxidanyl)-4,5-diphosphonooxy-cyclohexyl]oxy-phospho ryl]oxy-propan-2-yl] (8Z)-icosa-5,8,11,14-tetraenoate (three-letter code: PT5) (formula: $C_{47}H_{85}O_{19}P_3$).

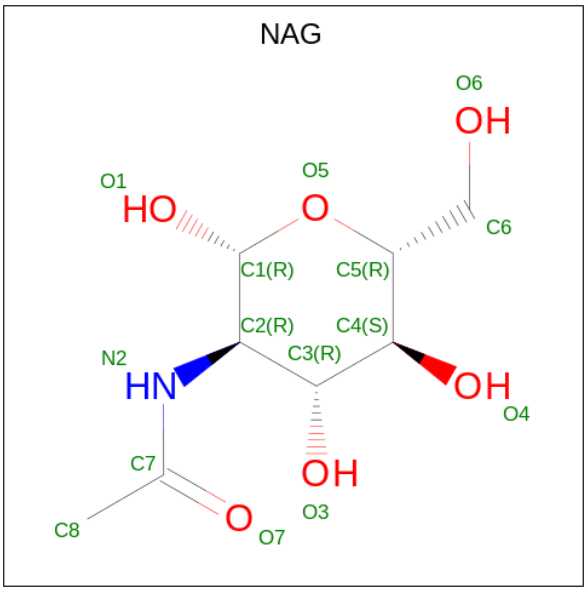


Mol	Chain	Residues	Atoms				AltConf
9	A	1	Total	C	O	P	0
			64	42	19	3	

- Molecule 10 is CALCIUM ION (three-letter code: CA) (formula: Ca).

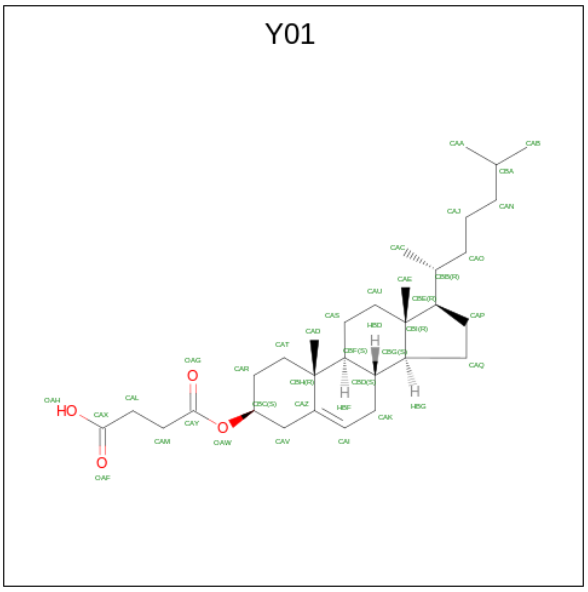
Mol	Chain	Residues	Atoms		AltConf
10	A	1	Total	Ca	0
			1	1	
10	B	1	Total	Ca	0
			1	1	

- Molecule 11 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms	AltConf
11	A	1	Total C N O 14 8 1 5	0
11	B	1	Total C N O 14 8 1 5	0

- Molecule 12 is CHOLESTEROL HEMISUCCINATE (three-letter code: Y01) (formula: $C_{31}H_{50}O_4$).



Mol	Chain	Residues	Atoms	AltConf
12	A	1	Total C O 35 31 4	0

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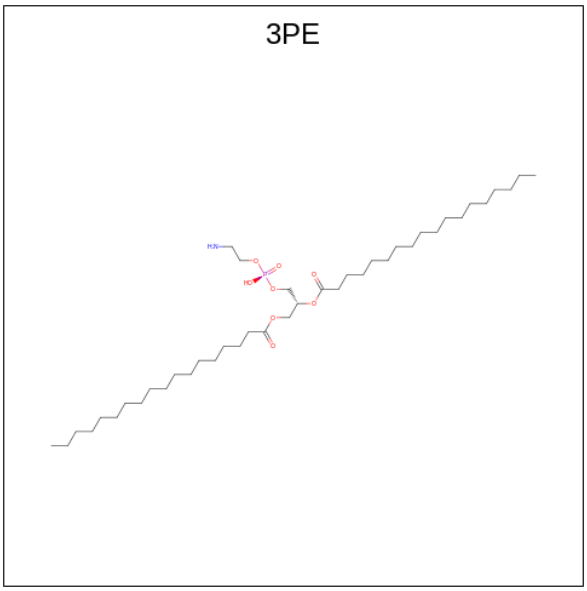
Mol	Chain	Residues	Atoms	AltConf
12	A	1	Total C O 35 31 4	0
12	A	1	Total C O 35 31 4	0

- Molecule 13 is 1,2-Distearoyl-sn-glycerophosphoethanolamine (three-letter code: 3PE) (formula: $C_{41}H_{82}NO_8P$).



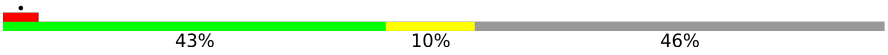
Mol	Chain	Residues	Atoms	AltConf
13	A	1	Total C N O P 40 30 1 8 1	0
13	A	1	Total C N O P 51 41 1 8 1	0

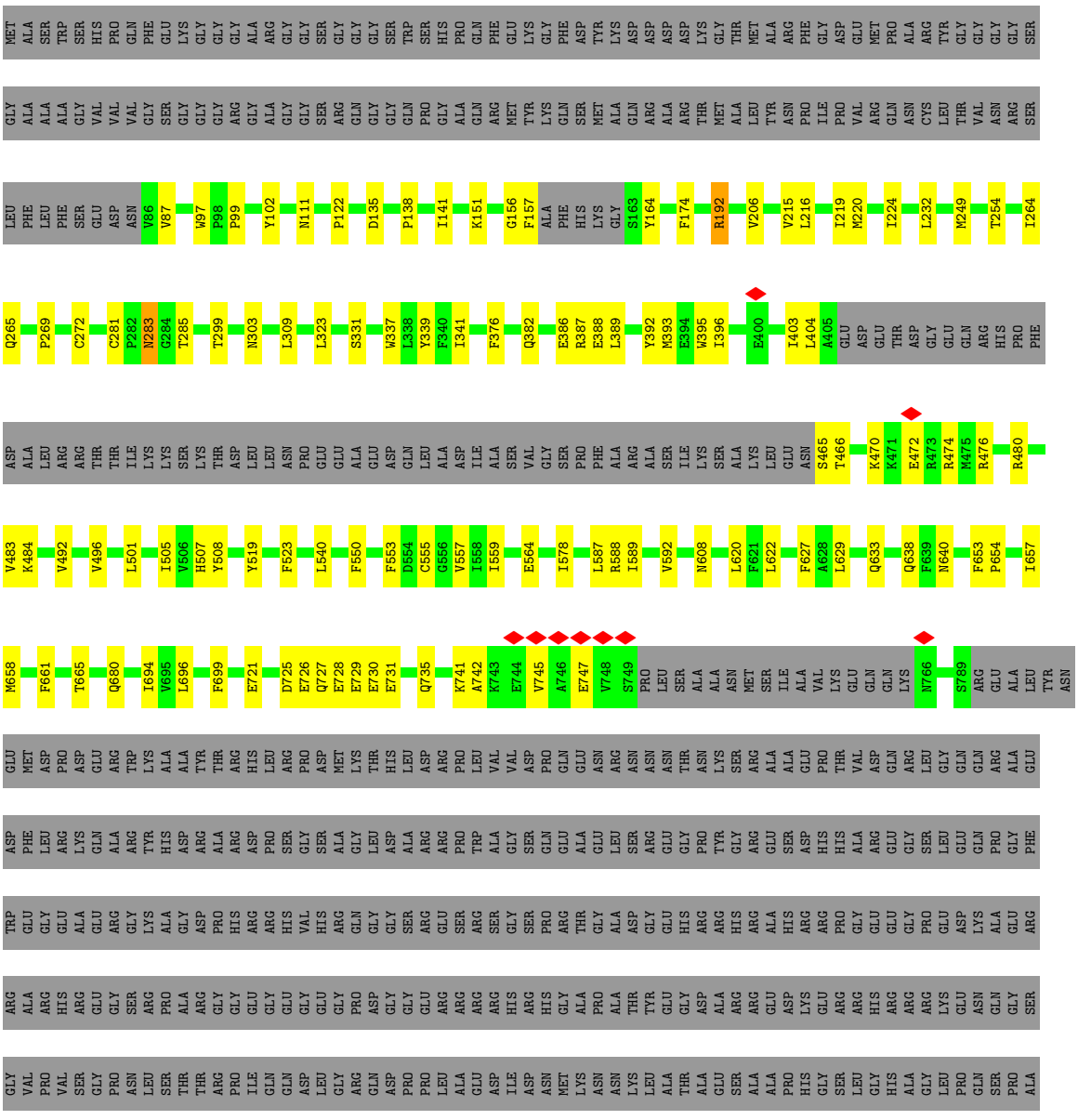
3 Residue-property plots (i)

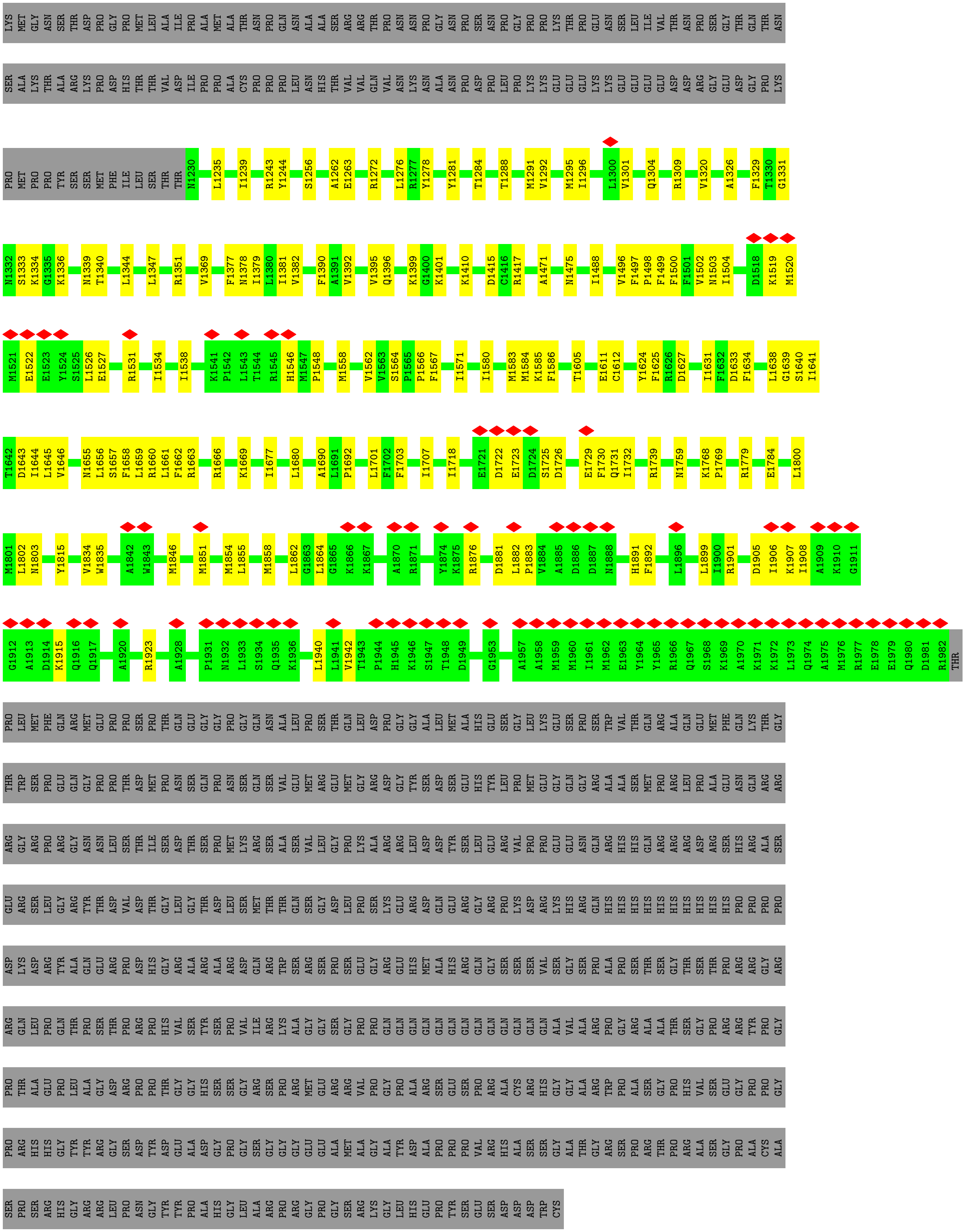
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: Voltage-dependent P/Q-type calcium channel subunit alpha-1A

Chain A:

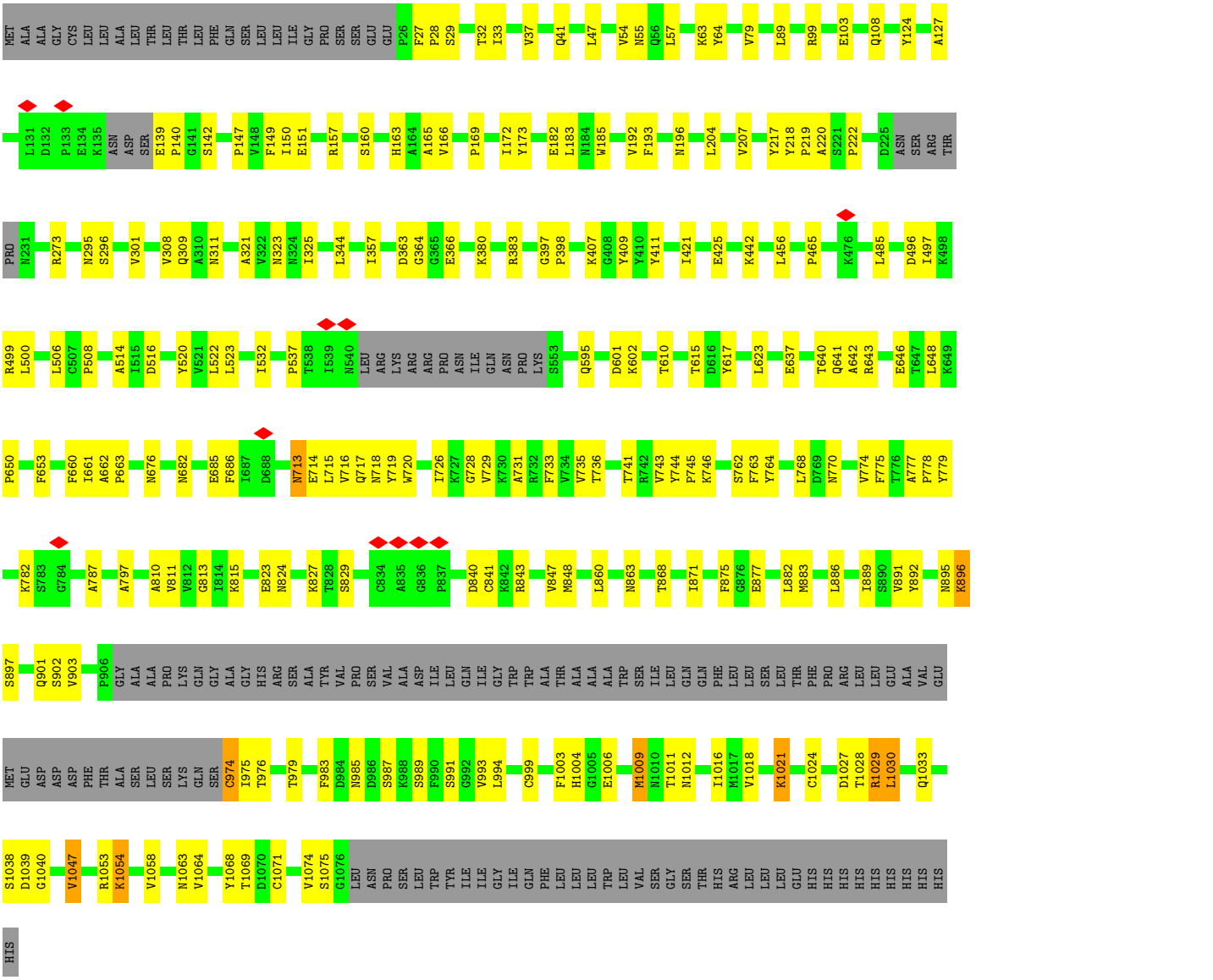





LYS MET GLY ASN SER THR ASP PRO GLY PRO MET LEU ALA ILE PRO ALA MET ALA THR ASN PRO GLN ASN ALA ALA SER ARG ARG THR PRO ASN ASN PRO GLY ASN PRO SER ASN PRO GLY PRO PRO LYS THR PRO GLU ASN SER LEU ILE VAL THR ASN PRO SER GLY THR GLN THR ASN
SER ALA LYS THR ALA ARG LYS PRO ASP HIS THR THR VAL ASP ILE PRO PRO ALA CYS PRO PRO PRO LEU ASN HIS THR VAL VAL GLN VAL ASN LYS ASN ALA ASN PRO ASP PRO LEU PRO LYS LYS GLU GLU GLU LYS LYS GLU GLU GLU GLU ASP ASP ARG GLY GLU ASP GLY PRO LYS
PRO MET PRO PRO TYR SER SER MET PHE ILE LEU SER THR THR N1230 L1235 I1239 R1243 Y1244 S1256 A1262 E1263 R1272 L1276 R1277 Y1278 Y1281 T1284 T1288 M1291 V1292 M1295 I1296 L1300 V1301 Q1304 R1309 V1320 A1326 F1329 T1330 G1331
N1332 S1333 K1334 G1335 K1336 N1339 T1340 L1344 L1347 R1351 V1369 F1377 N1378 I1379 L1380 I1381 V1382 F1390 A1391 V1392 V1395 Q1396 K1399 G1400 K1401 K1410 D1415 C1416 R1417 A1471 N1475 I1488 V1496 F1497 P1498 F1499 F1500 F1501 V1502 N1503 I1504 D1518 K1519 M1520
M1521 E1522 E1523 Y1524 S1525 L1526 E1527 R1531 I1534 I1538 K1541 P1542 L1543 T1544 R1545 H1546 M1547 P1548 M1558 V1562 V1563 S1564 P1565 P1566 F1567 I1571 I1580 M1583 M1584 K1585 F1586 T1605 E1611 C1612 Y1624 F1625 R1626 D1627 I1631 F1632 D1633 F1634 L1638 G1639 S1640 I1641
T1642 D1643 I1644 L1645 V1646 N1655 L1656 S1657 F1658 L1659 R1660 L1661 F1662 R1663 R1666 K1669 I1677 L1680 A1690 L1691 P1692 L1701 F1702 F1703 I1707 I1718 E1721 D1722 E1723 D1724 S1725 D1726 E1729 F1730 Q1731 I1732 R1739 N1759 K1768 P1769 R1779 E1784 L1800
M1801 L1802 N1803 Y1815 V1834 W1835 A1842 W1843 M1846 M1851 M1854 L1855 M1858 L1862 G1863 L1864 G1865 K1866 K1867 A1870 R1871 Y1874 K1875 R1876 D1881 L1882 P1883 V1884 A1885 D1886 D1887 N1888 H1891 F1892 L1896 L1899 I1900 R1901 D1905 I1906 K1907 I1908 A1909 K1910 G1911
G1912 A1913 D1914 K1915 Q1916 Q1917 A1920 R1923 A1928 P1931 N1932 L1933 S1934 Q1935 K1936 L1940 L1941 V1942 T1943 P1944 H1945 K1946 S1947 T1948 D1949 G1953 A1957 A1958 M1959 M1960 I1961 M1962 E1963 Y1964 Y1965 R1966 Q1967 S1968 K1969 A1970 K1971 K1972 L1973 Q1974 A1975 M1976 R1977 E1978 E1979 Q1980 D1981 R1982 THR
PRO LEU MET PHE GLN ARG MET GLU PRO PRO SER PRO THR GLN GLU GLY GLY PRO GLY GLN ASN ALA LEU PRO SER THR GLN LEU ASP PRO GLY GLY ALA LEU MET ALA HIS GLU SER GLY LEU LYS GLU SER PRO SER TRP VAL THR GLN ARG ALA GLN GLU MET PHE GLN LYS THR GLY
THR TRP SER PRO GLU GLN GLY PRO PRO THR ASP MET PRO ASN SER GLN PRO ASN SER GLN SER VAL GLU MET ARG GLU MET GLY ARG ASP GLY TYR SER ASP SER GLU HIS TYR LEU PRO MET GLU GLY GLN GLY ARG ALA ALA SER MET PRO ARG LEU PRO ALA GLU ASN GLN ARG ARG
ARG GLY ARG PRO ARG GLY ASN ASN LEU SER THR ILE SER ASP THR SER PRO MET LYS ARG SER ALA SER VAL LEU GLY PRO LYS ALA ARG ARG LEU ASP ASP TYR SER LEU GLU ARG VAL PRO PRO GLU GLU ASN GLN ARG HIS HIS GLN ARG ARG ARG ASP ARG SER HIS ARG ALA SER
GLU ARG SER LEU GLY ARG TYR THR ASP VAL ASP THR GLY LEU GLY THR ASP LEU SER MET THR THR GLN SER GLY ASP LEU PRO SER LYS GLU ARG ASP GLN GLU ARG GLY ARG PRO LYS ASP ARG LYS HIS ARG GLN HIS HIS HIS HIS HIS HIS HIS HIS HIS HIS PRO PRO PRO PRO
ASP LYS ASP ARG TYR ALA GLN GLU ARG PRO ASP HIS GLY ARG ALA ARG ALA ARG ASP GLN ARG TRP SER ARG SER PRO SER GLU GLY ARG GLU HIS MET ALA HIS ARG GLN GLY SER SER SER VAL SER GLY SER PRO ALA PRO SER THR SER GLY THR SER THR PRO ARG GLY ARG
ARG GLN LEU PRO GLN THR PRO SER THR PRO ARG PRO HIS VAL SER TYR SER PRO VAL ILE ARG LYS ALA GLY GLY SER GLY PRO PRO GLN GLN GLN GLN GLN GLN GLN GLN GLN GLN GLN GLN GLN ALA VAL ALA ARG PRO GLY ARG ALA ALA THR SER GLY PRO ARG ARG TYR PRO GLY
PRO THR ALA GLU PRO LEU ALA GLY ASP ARG PRO PRO THR GLY GLY HIS SER SER GLY ARG SER PRO ARG MET GLU ARG ARG VAL PRO GLY PRO ALA ARG SER GLU SER PRO ARG ALA CYS ARG HIS GLY GLY ALA ARG TRP PRO ALA SER GLY PRO HIS VAL SER GLU GLY PRO PRO GLY
PRO ARG HIS HIS GLY TYR TYR ARG GLY SER ASP TYR ASP GLU ALA ASP GLY PRO GLY SER GLY GLY GLY GLU GLU ALA MET ALA GLY ALA TYR ASP ALA PRO PRO PRO VAL ARG HIS ALA SER SER GLY ALA THR GLY ARG SER PRO ARG THR PRO ARG ALA SER GLY PRO ALA CYS ALA
SER PRO SER ARG HIS GLY ARG ARG LEU PRO ASN GLY TYR TYR PRO ALA HIS GLY LEU ALA ARG PRO ARG GLY PRO GLY SER ARG LYS GLY LEU HIS GLU PRO TYR SER GLU SER ASP ASP TRP CYS

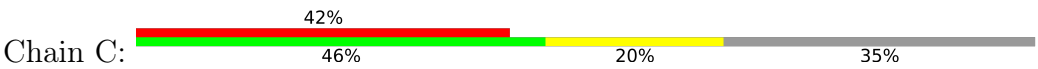
• Molecule 2: Voltage-dependent calcium channel subunit alpha-2/delta-1

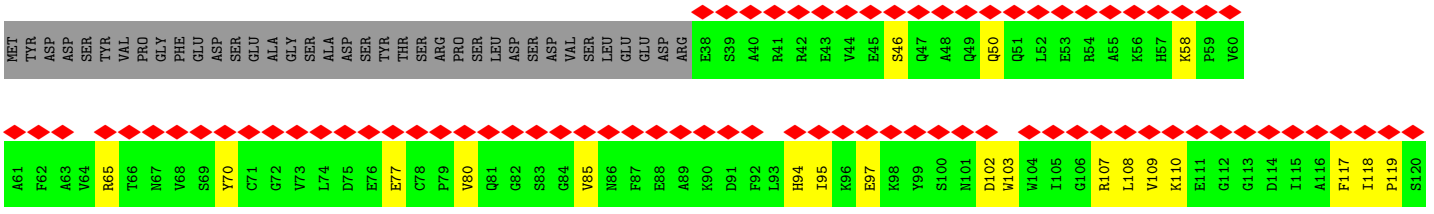
Chain B:

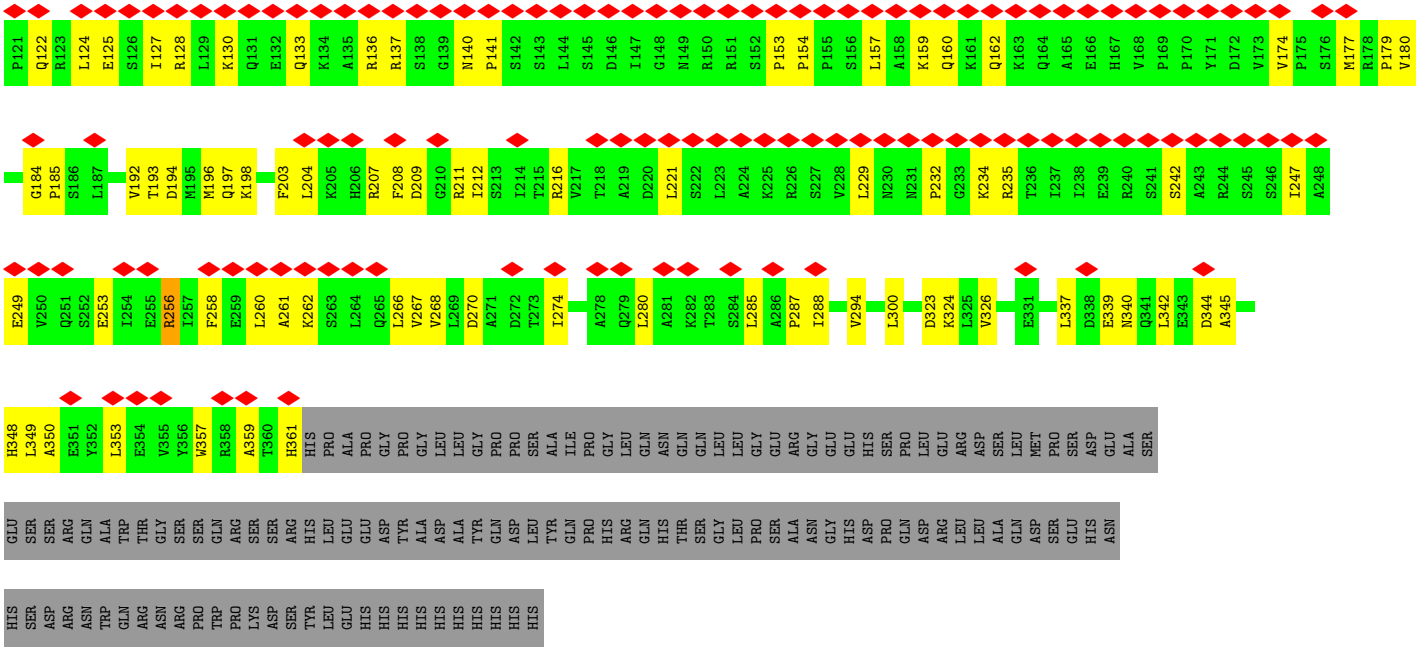


• Molecule 3: Voltage-dependent L-type calcium channel subunit beta-3

Chain C:







• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

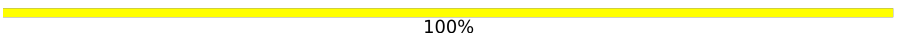
Chain D:

• Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E:

• Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

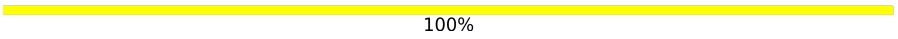
Chain G:



• Molecule 5: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain H:

• Molecule 6: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F: 

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	118997	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1300	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.614	Depositor
Minimum map value	-1.578	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.068	Depositor
Recommended contour level	0.26	Depositor
Map size (Å)	351.328, 351.328, 351.328	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0979, 1.0979, 1.0979	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, 3PE, Y01, PS1, CLR, PT5, CA

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	0.27	0/11478	0.47	0/15531
2	B	0.40	0/7858	0.54	0/10658
3	C	0.25	0/2624	0.54	0/3544
All	All	0.32	0/21960	0.50	0/29733

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	11202	0	11290	200	0
2	B	7695	0	7485	126	0
3	C	2575	0	2619	66	0
4	D	42	0	37	0	0
5	E	28	0	25	0	0
5	G	28	0	25	0	0
5	H	28	0	25	0	0
6	F	56	0	49	0	0
7	A	38	0	48	3	0
8	A	140	0	230	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	A	64	0	67	4	0
10	A	1	0	0	0	0
10	B	1	0	0	0	0
11	A	14	0	13	0	0
11	B	14	0	13	0	0
12	A	105	0	147	24	0
13	A	91	0	139	15	0
All	All	22122	0	22212	399	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 9.

All (399) 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:507:HIS:CE1	12:A:2609:Y01:HAR1	1.86	1.09
1:A:1586:PHE:CD1	8:A:2608:CLR:H21	1.95	1.00
1:A:1658:PHE:HB3	13:A:2614:3PE:H241	1.47	0.97
2:B:41:GLN:HG3	2:B:1009:MET:HB2	1.45	0.95
12:A:2610:Y01:HAA2	13:A:2613:3PE:H3I1	1.47	0.95
1:A:337:TRP:CH2	13:A:2613:3PE:H262	2.07	0.89
1:A:507:HIS:CE1	12:A:2609:Y01:CAR	2.55	0.89
1:A:1656:LEU:HD22	13:A:2614:3PE:O22	1.76	0.86
1:A:657:ILE:CG2	12:A:2606:Y01:HAP2	2.04	0.86
3:C:294:VAL:HG21	3:C:300:LEU:HB2	1.58	0.84
1:A:1835:TRP:CH2	1:A:1846:MET:HB3	2.15	0.81
1:A:507:HIS:NE2	12:A:2609:Y01:HAR1	1.98	0.79
2:B:139:GLU:N	2:B:142:SER:HG	1.81	0.78
1:A:337:TRP:CH2	13:A:2613:3PE:C26	2.67	0.78
1:A:657:ILE:HG21	12:A:2606:Y01:HAP2	1.66	0.77
2:B:537:PRO:HD3	2:B:974:CYS:HB3	1.66	0.77
1:A:507:HIS:CD2	12:A:2609:Y01:HAR1	2.19	0.77
1:A:507:HIS:ND1	12:A:2609:Y01:HAR1	1.98	0.77
1:A:1586:PHE:CD1	8:A:2608:CLR:C2	2.68	0.77
1:A:507:HIS:CG	12:A:2609:Y01:HAR1	2.20	0.76
2:B:653:PHE:HB3	2:B:746:LYS:HZ2	1.50	0.76
1:A:1834:VAL:HB	1:A:1858:MET:HE2	1.66	0.76
2:B:37:VAL:HG21	2:B:1006:GLU:HB3	1.68	0.76
2:B:506:LEU:HD22	2:B:623:LEU:HD21	1.68	0.76
2:B:150:ILE:HG13	2:B:151:GLU:H	1.50	0.76
3:C:184:GLY:HA2	3:C:197:GLN:HE22	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:308:VAL:HG12	2:B:1047:VAL:HG21	1.68	0.74
1:A:1612:CYS:HG	1:A:1624:TYR:HH	1.33	0.73
1:A:658:MET:HE3	12:A:2606:Y01:HAQ1	1.69	0.73
3:C:203:PHE:HZ	3:C:350:ALA:HB2	1.53	0.73
2:B:823:GLU:OE1	2:B:827:LYS:NZ	2.21	0.73
1:A:731:GLU:O	1:A:735:GLN:NE2	2.23	0.72
2:B:380:LYS:O	2:B:407:LYS:NZ	2.23	0.71
1:A:1612:CYS:SG	1:A:1624:TYR:OH	2.47	0.71
2:B:207:VAL:HG22	2:B:217:TYR:HB3	1.73	0.70
2:B:157:ARG:NH2	2:B:222:PRO:O	2.25	0.70
3:C:212:ILE:HG12	3:C:266:LEU:HB2	1.74	0.69
1:A:249:MET:SD	1:A:1585:LYS:NZ	2.64	0.69
1:A:1520:MET:HG2	1:A:1522:GLU:HG2	1.74	0.69
1:A:658:MET:HE3	12:A:2606:Y01:CAQ	2.24	0.69
3:C:260:LEU:HB3	3:C:267:VAL:HG21	1.74	0.68
3:C:157:LEU:HD23	3:C:162:GLN:HG3	1.76	0.68
2:B:57:LEU:HD21	2:B:715:LEU:HD22	1.76	0.68
1:A:404:LEU:HD13	1:A:474:ARG:HH12	1.59	0.68
1:A:388:GLU:HA	3:C:340:ASN:HD22	1.59	0.67
3:C:180:VAL:HB	3:C:268:VAL:HG12	1.77	0.66
1:A:1526:LEU:HD12	1:A:1907:LYS:HG2	1.79	0.65
1:A:638:GLN:OE1	1:A:680:GLN:NE2	2.30	0.64
1:A:1546:HIS:CD2	1:A:1548:PRO:HD3	2.33	0.64
1:A:658:MET:CE	12:A:2606:Y01:CAQ	2.76	0.64
1:A:1580:ILE:O	1:A:1584:MET:HG3	1.97	0.64
2:B:182:GLU:HA	2:B:185:TRP:CD1	2.33	0.64
1:A:1243:ARG:HH21	1:A:1244:TYR:HE1	1.44	0.63
1:A:337:TRP:CZ2	13:A:2613:3PE:H262	2.34	0.63
1:A:1881:ASP:OD2	1:A:1915:LYS:NZ	2.30	0.63
2:B:496:ASP:OD1	2:B:499:ARG:NH2	2.31	0.63
1:A:1586:PHE:CG	8:A:2608:CLR:H21	2.33	0.63
1:A:1278:TYR:HA	1:A:1281:TYR:HD2	1.64	0.62
1:A:303:ASN:OD1	8:A:2608:CLR:H12	1.99	0.62
1:A:97:TRP:CD1	1:A:99:PRO:HG2	2.35	0.62
1:A:658:MET:CE	12:A:2606:Y01:HAQ2	2.29	0.62
1:A:1835:TRP:CZ3	1:A:1846:MET:HE2	2.35	0.62
2:B:357:ILE:HG22	2:B:383:ARG:HB2	1.82	0.61
2:B:63:LYS:HZ2	2:B:64:TYR:HE1	1.48	0.61
2:B:169:PRO:HG2	2:B:172:ILE:HD13	1.81	0.61
2:B:660:PHE:HB2	2:B:741:THR:HB	1.82	0.61
2:B:166:VAL:HG11	2:B:183:LEU:HD21	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1583:MET:HE1	8:A:2608:CLR:H231	1.84	0.60
3:C:85:VAL:HG11	3:C:118:ILE:HG22	1.83	0.60
1:A:1701:LEU:HD22	1:A:1800:LEU:HD12	1.81	0.60
2:B:877:GLU:HA	2:B:1030:LEU:HD12	1.84	0.60
3:C:177:MET:H	3:C:261:ALA:HB1	1.67	0.60
1:A:395:TRP:HE1	3:C:196:MET:HA	1.67	0.60
2:B:27:PHE:HZ	2:B:1004:HIS:HB2	1.65	0.59
1:A:657:ILE:HG22	12:A:2606:Y01:HAP2	1.83	0.59
2:B:139:GLU:N	2:B:142:SER:OG	2.35	0.59
2:B:127:ALA:HB2	2:B:165:ALA:HB1	1.84	0.59
1:A:99:PRO:HA	1:A:102:TYR:HB2	1.84	0.59
1:A:403:ILE:HD13	3:C:198:LYS:HE3	1.84	0.59
1:A:1855:LEU:HD21	1:A:1899:LEU:HD21	1.84	0.59
2:B:886:LEU:HD12	2:B:891:VAL:HG11	1.84	0.59
12:A:2610:Y01:CAA	13:A:2613:3PE:H3I1	2.28	0.59
3:C:179:PRO:HG2	3:C:287:PRO:HB3	1.84	0.59
1:A:1333:SER:O	1:A:1336:LYS:HG2	2.03	0.59
1:A:1731:GLN:HG3	1:A:1759:ASN:HB3	1.84	0.59
1:A:309:LEU:HD13	1:A:694:ILE:HD11	1.83	0.58
1:A:382:GLN:O	1:A:386:GLU:HG2	2.03	0.58
1:A:658:MET:HE2	12:A:2606:Y01:HAQ2	1.84	0.58
3:C:323:ASP:OD1	3:C:324:LYS:N	2.36	0.58
1:A:392:TYR:O	1:A:396:ILE:HG12	2.03	0.58
2:B:889:ILE:HG13	2:B:891:VAL:HG23	1.86	0.58
1:A:1344:LEU:HD13	1:A:1347:LEU:HD12	1.84	0.58
2:B:508:PRO:HG2	2:B:764:TYR:HE2	1.70	0.57
1:A:1639:GLY:HA3	1:A:1662:PHE:HD2	1.70	0.57
2:B:273:ARG:HD2	2:B:323:ASN:HA	1.87	0.57
1:A:1378:ASN:OD1	1:A:1379:ILE:N	2.38	0.56
2:B:29:SER:HB3	2:B:32:THR:HG23	1.87	0.56
3:C:185:PRO:HD2	3:C:193:THR:HG22	1.86	0.56
1:A:1923:ARG:NH2	1:A:1942:VAL:O	2.39	0.56
1:A:220:MET:O	1:A:224:ILE:HG12	2.06	0.56
1:A:265:GLN:HG3	1:A:285:THR:HG21	1.88	0.56
1:A:387:ARG:NH1	1:A:729:GLU:OE2	2.39	0.56
1:A:1586:PHE:CG	8:A:2608:CLR:C2	2.89	0.56
1:A:1834:VAL:HB	1:A:1858:MET:CE	2.35	0.56
1:A:337:TRP:CH2	13:A:2613:3PE:H261	2.40	0.56
1:A:1497:PHE:HB2	1:A:1498:PRO:HD3	1.88	0.56
1:A:97:TRP:HD1	1:A:99:PRO:HG2	1.71	0.56
1:A:1643:ASP:OD2	1:A:1663:ARG:NH2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1835:TRP:CZ3	1:A:1846:MET:CE	2.89	0.55
2:B:714:GLU:OE2	2:B:718:ASN:ND2	2.40	0.55
1:A:1499:PHE:O	1:A:1503:ASN:ND2	2.35	0.55
3:C:337:LEU:HD22	3:C:345:ALA:HB1	1.88	0.55
2:B:660:PHE:HD1	2:B:676:ASN:HD22	1.53	0.55
1:A:587:LEU:HD13	9:A:2603:PT5:H26	1.87	0.55
8:A:2602:CLR:H162	8:A:2602:CLR:H272	1.89	0.54
2:B:295:ASN:OD1	2:B:296:SER:N	2.33	0.54
3:C:184:GLY:HA2	3:C:197:GLN:NE2	2.21	0.54
3:C:280:LEU:HD11	3:C:285:LEU:HD12	1.89	0.54
1:A:1326:ALA:HB2	1:A:1344:LEU:HB3	1.90	0.54
2:B:160:SER:HB3	2:B:220:ALA:HB3	1.90	0.54
2:B:595:GLN:HB3	2:B:762:SER:HB3	1.89	0.54
2:B:508:PRO:HG2	2:B:764:TYR:CE2	2.43	0.54
2:B:653:PHE:HB3	2:B:746:LYS:NZ	2.22	0.54
1:A:1235:LEU:O	1:A:1239:ILE:HG12	2.08	0.53
1:A:1262:ALA:O	1:A:1272:ARG:NE	2.41	0.53
1:A:1410:LYS:HD2	1:A:1415:ASP:HB3	1.89	0.53
1:A:1862:LEU:HD11	1:A:1899:LEU:HB3	1.91	0.53
2:B:775:PHE:HE1	2:B:1011:THR:HB	1.73	0.53
1:A:339:TYR:HB2	13:A:2614:3PE:H341	1.91	0.53
1:A:1729:GLU:OE2	1:A:1768:LYS:NZ	2.40	0.53
3:C:194:ASP:HB3	3:C:198:LYS:NZ	2.23	0.53
1:A:1646:VAL:HG21	1:A:1655:ASN:HD22	1.74	0.53
1:A:550:PHE:HZ	9:A:2603:PT5:H17	1.74	0.53
1:A:151:LYS:HE3	1:A:164:TYR:HE1	1.74	0.53
2:B:150:ILE:HG13	2:B:151:GLU:N	2.20	0.53
1:A:1304:GLN:HA	1:A:1309:ARG:HH21	1.74	0.52
2:B:309:GLN:HE21	2:B:311:ASN:HD21	1.58	0.52
2:B:777:ALA:HA	2:B:860:LEU:HD21	1.92	0.52
1:A:1527:GLU:O	1:A:1531:ARG:NH1	2.43	0.52
1:A:1657:SER:HB3	1:A:1660:ARG:HE	1.74	0.52
1:A:747:GLU:HA	3:C:110:LYS:HE2	1.92	0.52
1:A:1891:HIS:CE1	1:A:1940:LEU:HD21	2.45	0.52
2:B:397:GLY:H	2:B:398:PRO:HD2	1.75	0.52
1:A:550:PHE:CZ	9:A:2603:PT5:H17	2.46	0.52
1:A:1769:PRO:HD3	1:A:1779:ARG:HH21	1.75	0.51
2:B:497:ILE:HG22	2:B:523:LEU:HD11	1.93	0.51
3:C:258:PHE:O	3:C:262:LYS:HG3	2.09	0.51
2:B:733:PHE:CZ	2:B:813:GLY:HA3	2.44	0.51
1:A:1835:TRP:CD1	1:A:1892:PHE:CD1	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:875:PHE:HD2	2:B:883:MET:SD	2.33	0.51
2:B:1028:THR:O	2:B:1029:ARG:C	2.49	0.51
1:A:157:PHE:HB2	1:A:164:TYR:H	1.74	0.51
1:A:341:ILE:HD13	13:A:2613:3PE:H372	1.91	0.51
13:A:2614:3PE:H2	13:A:2614:3PE:H111	1.92	0.51
3:C:204:LEU:HD11	3:C:349:LEU:HD23	1.93	0.51
3:C:344:ASP:OD1	3:C:345:ALA:N	2.43	0.51
1:A:1256:SER:HB3	1:A:1351:ARG:HD3	1.92	0.50
1:A:1272:ARG:CG	8:A:2611:CLR:H191	2.42	0.50
1:A:1802:LEU:HD22	7:A:2601:PS1:H23	1.92	0.50
3:C:179:PRO:O	3:C:288:ILE:N	2.35	0.50
2:B:713:ASN:O	2:B:717:GLN:HG2	2.11	0.50
2:B:736:THR:HG23	2:B:810:ALA:HB2	1.93	0.50
1:A:1605:THR:HG21	1:A:1644:ILE:CD1	2.41	0.50
2:B:615:THR:HG22	2:B:617:TYR:H	1.77	0.50
1:A:1369:VAL:HG22	1:A:1803:ASN:HD22	1.76	0.50
3:C:208:PHE:CE2	3:C:353:LEU:HD11	2.46	0.50
1:A:1496:VAL:O	1:A:1500:PHE:HB3	2.12	0.49
2:B:409:TYR:HD2	2:B:411:TYR:CZ	2.31	0.49
2:B:731:ALA:HB3	2:B:815:LYS:HG3	1.94	0.49
1:A:1369:VAL:HG22	1:A:1803:ASN:ND2	2.28	0.49
1:A:1851:MET:O	1:A:1854:MET:HB3	2.13	0.49
2:B:301:VAL:HG12	2:B:321:ALA:HB1	1.95	0.49
1:A:741:LYS:HG3	3:C:348:HIS:CD2	2.47	0.49
1:A:1661:LEU:HD11	13:A:2614:3PE:H371	1.95	0.49
1:A:388:GLU:HA	3:C:340:ASN:ND2	2.26	0.49
2:B:204:LEU:HD13	2:B:456:LEU:HD13	1.94	0.49
3:C:46:SER:O	3:C:50:GLN:HG2	2.13	0.49
2:B:770:ASN:HD22	2:B:774:VAL:HG22	1.78	0.48
1:A:1564:SER:OG	1:A:1566:PRO:HD2	2.14	0.48
8:A:2611:CLR:H162	8:A:2611:CLR:H221	1.37	0.48
2:B:421:ILE:O	2:B:425:GLU:HG2	2.14	0.48
3:C:192:VAL:O	3:C:196:MET:HG2	2.13	0.48
2:B:877:GLU:HG3	2:B:1030:LEU:HG	1.96	0.48
2:B:601:ASP:OD1	2:B:602:LYS:N	2.46	0.48
3:C:203:PHE:CD2	3:C:204:LEU:HD12	2.49	0.48
1:A:1502:VAL:HG21	8:A:2602:CLR:H151	1.96	0.48
1:A:727:GLN:O	1:A:730:GLU:HG3	2.13	0.48
1:A:472:GLU:O	1:A:476:ARG:HG3	2.14	0.47
13:A:2613:3PE:H221	13:A:2613:3PE:H252	1.47	0.47
2:B:999:CYS:HB3	2:B:1024:CYS:HB3	1.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1567:PHE:O	1:A:1571:ILE:HG12	2.14	0.47
1:A:1901:ARG:HG3	1:A:1906:ILE:HB	1.97	0.47
3:C:357:TRP:O	3:C:361:HIS:ND1	2.46	0.47
3:C:221:LEU:HB3	3:C:274:ILE:HD11	1.96	0.47
1:A:283:ASN:OD1	1:A:283:ASN:N	2.47	0.47
1:A:1784:GLU:HB2	8:A:2612:CLR:H12	1.95	0.47
7:A:2601:PS1:H7	8:A:2602:CLR:C19	2.44	0.47
2:B:79:VAL:HG22	2:B:610:THR:HG22	1.97	0.47
3:C:242:SER:HB3	3:C:247:ILE:HD11	1.95	0.47
1:A:501:LEU:O	1:A:505:ILE:HG12	2.14	0.47
1:A:1722:ASP:OD1	1:A:1723:GLU:N	2.45	0.47
2:B:843:ARG:NH2	2:B:863:ASN:O	2.44	0.47
1:A:1882:LEU:HD12	1:A:1883:PRO:HD2	1.96	0.47
2:B:719:TYR:HD2	2:B:720:TRP:HD1	1.61	0.47
2:B:1054:LYS:HB3	2:B:1054:LYS:HE2	1.32	0.47
3:C:159:LYS:HG2	3:C:160:GLN:H	1.80	0.47
2:B:47:LEU:HD11	2:B:728:GLY:HA3	1.97	0.46
1:A:553:PHE:O	1:A:557:VAL:HG23	2.16	0.46
3:C:95:ILE:HD11	3:C:118:ILE:HD11	1.97	0.46
1:A:215:VAL:O	1:A:219:ILE:HG13	2.15	0.46
1:A:264:ILE:HG21	1:A:269:PRO:HG3	1.98	0.46
1:A:1905:ASP:HA	1:A:1908:ILE:HD12	1.96	0.46
13:A:2614:3PE:H252	13:A:2614:3PE:H351	1.98	0.46
2:B:975:ILE:HD12	2:B:1040:GLY:H	1.80	0.46
1:A:465:SER:OG	1:A:466:THR:N	2.48	0.46
1:A:1605:THR:HG21	1:A:1644:ILE:HD11	1.97	0.46
2:B:797:ALA:HA	2:B:811:VAL:HG22	1.96	0.46
3:C:209:ASP:O	3:C:211:ARG:NH1	2.48	0.46
3:C:229:LEU:HB3	3:C:232:PRO:HG3	1.96	0.46
2:B:829:SER:HB2	2:B:840:ASP:OD2	2.16	0.46
2:B:1003:PHE:HB3	2:B:1018:VAL:HG23	1.98	0.46
3:C:323:ASP:HA	3:C:326:VAL:HG22	1.96	0.46
12:A:2606:Y01:HAM1	12:A:2606:Y01:HBC	1.39	0.46
2:B:532:ILE:HD13	2:B:901:GLN:HG3	1.96	0.46
2:B:648:LEU:H	2:B:648:LEU:HD23	1.80	0.46
2:B:682:ASN:O	2:B:686:PHE:CD2	2.69	0.46
3:C:77:GLU:HB2	3:C:103:TRP:HZ2	1.81	0.46
1:A:564:GLU:OE1	1:A:578:ILE:HG22	2.16	0.46
1:A:508:TYR:OH	1:A:1475:ASN:ND2	2.45	0.46
1:A:1395:VAL:O	1:A:1399:LYS:HB2	2.15	0.46
1:A:1534:ILE:O	1:A:1538:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:206:VAL:HG11	1:A:216:LEU:HD12	1.98	0.46
1:A:480:ARG:HG2	1:A:484:LYS:NZ	2.31	0.46
1:A:1680:LEU:HD13	1:A:1815:TYR:HE2	1.81	0.46
2:B:743:VAL:HG22	2:B:745:PRO:HD2	1.97	0.46
1:A:1272:ARG:NH1	12:A:2610:Y01:HAM2	2.31	0.45
2:B:640:THR:HG22	2:B:643:ARG:HH22	1.80	0.45
2:B:764:TYR:O	2:B:768:LEU:HD23	2.17	0.45
3:C:125:GLU:HG3	3:C:128:ARG:HH21	1.80	0.45
1:A:653:PHE:HB3	1:A:654:PRO:HD3	1.98	0.45
2:B:147:PRO:HG2	2:B:149:PHE:CZ	2.51	0.45
3:C:203:PHE:CE1	3:C:207:ARG:HG3	2.51	0.45
1:A:519:TYR:CZ	1:A:523:PHE:HE2	2.35	0.45
1:A:1263:GLU:HG2	1:A:1276:LEU:HD13	1.99	0.45
1:A:1488:ILE:HD11	12:A:2606:Y01:HAD2	1.98	0.45
2:B:778:PRO:HG3	2:B:787:ALA:HB2	1.98	0.45
1:A:1390:PHE:CE1	8:A:2607:CLR:H242	2.51	0.45
2:B:182:GLU:HG2	2:B:185:TRP:HE1	1.81	0.45
3:C:216:ARG:HA	3:C:270:ASP:HB2	1.97	0.45
2:B:301:VAL:HG13	2:B:325:ILE:HD11	1.97	0.45
1:A:1625:PHE:O	1:A:1631:ILE:HD11	2.17	0.45
1:A:395:TRP:HD1	1:A:396:ILE:HD13	1.81	0.45
2:B:744:TYR:HB3	2:B:745:PRO:HD3	1.99	0.45
3:C:130:LYS:O	3:C:133:GLN:HG3	2.17	0.45
1:A:1864:LEU:HD21	1:A:1876:ARG:HD3	1.98	0.45
2:B:29:SER:O	2:B:33:ILE:HG12	2.17	0.45
2:B:1030:LEU:H	2:B:1030:LEU:HD22	1.81	0.45
2:B:28:PRO:HB2	2:B:33:ILE:HG23	2.00	0.44
2:B:147:PRO:HB3	2:B:163:HIS:CE1	2.52	0.44
2:B:193:PHE:HB3	2:B:218:TYR:CG	2.52	0.44
1:A:483:VAL:HG11	1:A:540:LEU:HD11	1.99	0.44
1:A:1301:VAL:HG13	1:A:1301:VAL:O	2.17	0.44
1:A:164:TYR:HE2	1:A:174:PHE:HB2	1.83	0.44
2:B:516:ASP:OD1	2:B:520:TYR:N	2.50	0.44
2:B:637:GLU:O	2:B:641:GLN:HG2	2.16	0.44
3:C:80:VAL:HB	3:C:117:PHE:CE2	2.52	0.44
3:C:157:LEU:HA	3:C:162:GLN:HG3	1.98	0.44
1:A:1417:ARG:NH2	2:B:173:TYR:OH	2.51	0.44
1:A:1718:ILE:HG12	1:A:1739:ARG:NH2	2.32	0.44
2:B:847:VAL:HG13	2:B:848:MET:N	2.33	0.44
2:B:99:ARG:HD2	2:B:196:ASN:OD1	2.17	0.44
1:A:337:TRP:CZ2	13:A:2613:3PE:C26	2.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1392:VAL:O	1:A:1396:GLN:HG2	2.17	0.44
1:A:1500:PHE:CZ	1:A:1504:ILE:HD11	2.53	0.44
1:A:1558:MET:O	1:A:1562:VAL:HG23	2.17	0.44
2:B:840:ASP:OD1	2:B:841:CYS:N	2.45	0.44
3:C:234:LYS:HG3	3:C:235:ARG:HG2	2.00	0.44
2:B:1021:LYS:H	2:B:1021:LYS:HD2	1.82	0.44
2:B:1021:LYS:HE2	2:B:1021:LYS:HB3	1.86	0.44
2:B:89:LEU:HD22	2:B:500:LEU:HD11	1.99	0.44
2:B:103:GLU:HG2	2:B:192:VAL:HG21	2.00	0.44
2:B:108:GLN:HG2	2:B:485:LEU:HD11	1.98	0.44
2:B:650:PRO:HA	2:B:653:PHE:CZ	2.53	0.44
1:A:1340:THR:O	1:A:1344:LEU:HD23	2.18	0.44
1:A:1640:SER:OG	1:A:1666:ARG:NH2	2.51	0.44
2:B:124:TYR:CE1	2:B:183:LEU:HD13	2.52	0.44
1:A:1901:ARG:HA	1:A:1906:ILE:HD12	2.00	0.43
2:B:719:TYR:HD2	2:B:720:TRP:CD1	2.35	0.43
1:A:254:THR:HG22	1:A:272:CYS:SG	2.58	0.43
1:A:589:ILE:O	1:A:592:VAL:HG22	2.18	0.43
1:A:1627:ASP:O	1:A:1631:ILE:HD12	2.18	0.43
9:A:2603:PT5:H45	9:A:2603:PT5:H39	1.78	0.43
2:B:442:LYS:NZ	2:B:465:PRO:O	2.45	0.43
1:A:232:LEU:HD21	1:A:1677:ILE:HG23	2.00	0.43
1:A:389:LEU:O	1:A:393:MET:HG2	2.19	0.43
1:A:1339:ASN:OD1	1:A:1340:THR:N	2.52	0.43
2:B:366:GLU:N	2:B:366:GLU:OE1	2.51	0.43
2:B:1028:THR:O	2:B:1030:LEU:HD13	2.18	0.43
3:C:253:GLU:HA	3:C:256:ARG:HH21	1.83	0.43
1:A:1643:ASP:HB2	1:A:1659:LEU:HB3	2.00	0.43
8:A:2602:CLR:H192	8:A:2602:CLR:H22	1.55	0.43
2:B:193:PHE:CG	2:B:218:TYR:HB2	2.54	0.43
1:A:192:ARG:H	1:A:192:ARG:HG3	1.60	0.43
1:A:1329:PHE:C	1:A:1331:GLY:H	2.22	0.43
2:B:896:LYS:HB3	2:B:896:LYS:HE3	1.33	0.43
3:C:249:GLU:O	3:C:253:GLU:HG2	2.18	0.43
1:A:331:SER:O	1:A:331:SER:OG	2.31	0.43
2:B:682:ASN:O	2:B:686:PHE:HD2	2.01	0.43
3:C:109:VAL:O	3:C:359:ALA:HB1	2.19	0.43
1:A:550:PHE:HB3	1:A:588:ARG:NH2	2.33	0.43
2:B:54:VAL:HG23	2:B:55:ASN:H	1.83	0.43
2:B:824:ASN:HA	2:B:827:LYS:HZ2	1.83	0.43
3:C:203:PHE:CZ	3:C:350:ALA:HB2	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:138:PRO:HA	1:A:141:ILE:HG22	2.00	0.43
1:A:1291:MET:SD	1:A:1320:VAL:HG11	2.59	0.43
1:A:395:TRP:CZ3	3:C:342:LEU:HA	2.53	0.43
8:A:2602:CLR:H182	8:A:2602:CLR:H8	1.60	0.43
1:A:742:ALA:HA	1:A:745:VAL:HG12	2.00	0.43
1:A:1639:GLY:HA3	1:A:1662:PHE:CD2	2.52	0.43
1:A:507:HIS:CE1	12:A:2609:Y01:HAR2	2.46	0.42
1:A:507:HIS:ND1	12:A:2609:Y01:CAR	2.76	0.42
1:A:1378:ASN:OD1	1:A:1379:ILE:HG12	2.18	0.42
7:A:2601:PS1:H7	8:A:2602:CLR:H192	2.01	0.42
2:B:726:ILE:HB	2:B:729:VAL:HB	2.01	0.42
3:C:140:ASN:OD1	3:C:141:PRO:HD3	2.19	0.42
1:A:135:ASP:O	1:A:138:PRO:HD2	2.19	0.42
1:A:1703:PHE:O	1:A:1707:ILE:HG12	2.19	0.42
2:B:662:ALA:HA	2:B:663:PRO:HD3	1.91	0.42
2:B:882:LEU:O	2:B:886:LEU:HD23	2.19	0.42
1:A:1718:ILE:HG22	1:A:1732:ILE:HG22	2.01	0.42
1:A:1272:ARG:HD2	8:A:2611:CLR:H182	2.01	0.42
2:B:218:TYR:HB3	2:B:219:PRO:HD3	2.01	0.42
2:B:363:ASP:OD1	2:B:364:GLY:N	2.53	0.42
1:A:87:VAL:HA	1:A:156:GLY:HA2	2.01	0.42
1:A:726:GLU:HA	1:A:729:GLU:HG3	2.02	0.42
2:B:642:ALA:O	2:B:646:GLU:HG2	2.19	0.42
1:A:122:PRO:HG3	1:A:640:ASN:ND2	2.35	0.42
1:A:627:PHE:CD1	1:A:696:LEU:HD13	2.55	0.42
2:B:661:ILE:H	2:B:676:ASN:HD21	1.67	0.42
1:A:629:LEU:O	1:A:633:GLN:HG2	2.20	0.42
1:A:1377:PHE:O	1:A:1381:ILE:HG12	2.20	0.42
1:A:1725:SER:O	1:A:1726:ASP:C	2.58	0.42
2:B:713:ASN:HA	2:B:716:VAL:HG12	2.02	0.42
1:A:206:VAL:HG11	1:A:216:LEU:CD1	2.49	0.42
1:A:620:LEU:HD23	12:A:2606:Y01:CAB	2.49	0.42
1:A:1292:VAL:O	1:A:1296:ILE:HG12	2.19	0.42
1:A:1690:ALA:O	1:A:1692:PRO:HD3	2.20	0.42
1:A:1726:ASP:HB3	1:A:1730:PHE:HD2	1.85	0.42
2:B:779:TYR:HB3	2:B:782:LYS:HG3	2.00	0.42
2:B:514:ALA:HB3	2:B:522:LEU:HB3	2.02	0.41
3:C:58:LYS:HE2	3:C:97:GLU:HB3	2.02	0.41
3:C:136:ARG:O	3:C:137:ARG:NH1	2.45	0.41
3:C:153:PRO:HA	3:C:154:PRO:HD3	1.92	0.41
1:A:1401:LYS:HB3	1:A:1471:ALA:HB1	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:A:2610:Y01:HAP1	12:A:2610:Y01:HAO2	1.68	0.41
1:A:492:VAL:O	1:A:496:VAL:HG23	2.20	0.41
2:B:33:ILE:HD12	2:B:1004:HIS:ND1	2.36	0.41
2:B:735:VAL:HG21	2:B:763:PHE:CZ	2.55	0.41
1:A:1641:ILE:O	1:A:1645:LEU:HG	2.20	0.41
2:B:344:LEU:HD23	2:B:344:LEU:HA	1.92	0.41
1:A:376:PHE:CZ	1:A:721:GLU:HB3	2.55	0.41
2:B:682:ASN:O	2:B:685:GLU:HG3	2.21	0.41
1:A:1519:LYS:HE2	1:A:1519:LYS:HB2	1.86	0.41
1:A:1633:ASP:OD1	1:A:1669:LYS:HD3	2.20	0.41
1:A:1634:PHE:CE2	1:A:1638:LEU:HD11	2.55	0.41
3:C:65:ARG:HD2	3:C:174:VAL:HG11	2.02	0.41
3:C:85:VAL:HG23	3:C:108:LEU:HD11	2.03	0.41
2:B:54:VAL:HG23	2:B:55:ASN:N	2.36	0.41
2:B:841:CYS:HB3	2:B:863:ASN:HD22	1.85	0.41
1:A:470:LYS:HA	1:A:470:LYS:HD3	1.86	0.41
1:A:1272:ARG:HG3	8:A:2611:CLR:H191	2.03	0.41
1:A:281:CYS:HB3	1:A:285:THR:OG1	2.21	0.41
1:A:661:PHE:O	1:A:665:THR:HG23	2.20	0.41
1:A:1284:THR:O	1:A:1288:THR:HG23	2.20	0.41
1:A:1291:MET:O	1:A:1295:MET:HG2	2.20	0.41
1:A:1378:ASN:O	1:A:1382:VAL:HG23	2.20	0.41
12:A:2610:Y01:HAA3	12:A:2610:Y01:HAJ2	1.75	0.41
2:B:746:LYS:HD3	2:B:746:LYS:HA	1.76	0.41
3:C:193:THR:O	3:C:197:GLN:OE1	2.38	0.41
1:A:392:TYR:OH	3:C:294:VAL:HA	2.20	0.41
2:B:892:TYR:HE1	2:B:983:PHE:CE1	2.39	0.41
3:C:70:TYR:CZ	3:C:127:ILE:HG12	2.56	0.41
1:A:1272:ARG:HD3	8:A:2611:CLR:C19	2.51	0.40
1:A:299:THR:HG21	1:A:323:LEU:HD11	2.02	0.40
2:B:147:PRO:HB3	2:B:163:HIS:NE2	2.36	0.40
1:A:555:CYS:O	1:A:559:ILE:HG12	2.22	0.40
1:A:622:LEU:HD23	1:A:622:LEU:HA	1.88	0.40
8:A:2602:CLR:H193	8:A:2602:CLR:H111	1.48	0.40
2:B:868:THR:O	2:B:871:ILE:HG12	2.21	0.40
3:C:102:ASP:OD2	3:C:103:TRP:NE1	2.55	0.40
3:C:119:PRO:HB2	3:C:124:LEU:HG	2.02	0.40
3:C:159:LYS:HG2	3:C:160:GLN:N	2.37	0.40
1:A:725:ASP:O	1:A:728:GLU:HG2	2.22	0.40
2:B:139:GLU:N	2:B:140:PRO:HD2	2.36	0.40
3:C:94:HIS:HB2	3:C:107:ARG:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1835:TRP:CH2	1:A:1846:MET:CB	2.96	0.40
2:B:1027:ASP:HB3	2:B:1029:ARG:HH21	1.86	0.40
3:C:102:ASP:HA	3:C:122:GLN:HE21	1.86	0.40
3:C:339:GLU:OE1	3:C:339:GLU:N	2.54	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 PDB entries followed by that with respect to all EM entries.

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	1368/2549 (54%)	1323 (97%)	45 (3%)	0	100	100
2	B	954/1115 (86%)	902 (94%)	52 (6%)	0	100	100
3	C	322/496 (65%)	312 (97%)	10 (3%)	0	100	100
All	All	2644/4160 (64%)	2537 (96%)	107 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	1214/2154 (56%)	1206 (99%)	8 (1%)	81	90
2	B	854/983 (87%)	819 (96%)	35 (4%)	26	51
3	C	287/438 (66%)	286 (100%)	1 (0%)	91	96

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	2355/3575 (66%)	2311 (98%)	44 (2%)	54 73

All (44) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	111	ASN
1	A	192	ARG
1	A	283	ASN
1	A	608	ASN
1	A	699[A]	PHE
1	A	699[B]	PHE
1	A	1334	LYS
1	A	1611	GLU
2	B	713	ASN
2	B	895	ASN
2	B	896	LYS
2	B	897	SER
2	B	902	SER
2	B	903	VAL
2	B	974	CYS
2	B	976	THR
2	B	979	THR
2	B	985	ASN
2	B	987	SER
2	B	989	SER
2	B	991	SER
2	B	993	VAL
2	B	994	LEU
2	B	1009	MET
2	B	1012	ASN
2	B	1016	ILE
2	B	1021	LYS
2	B	1029	ARG
2	B	1030	LEU
2	B	1033	GLN
2	B	1038	SER
2	B	1039	ASP
2	B	1047	VAL
2	B	1053	ARG
2	B	1054	LYS
2	B	1058	VAL
2	B	1063	ASN

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Mol	Chain	Res	Type
2	B	1064	VAL
2	B	1068	TYR
2	B	1069	THR
2	B	1071	CYS
2	B	1074	VAL
2	B	1075	SER
3	C	256	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	735	GLN
1	A	1803	ASN
2	B	309	GLN
2	B	676	ASN
2	B	1012	ASN
2	B	1042	ASN
3	C	122	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

13 monosaccharides 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	NAG	D	1	2,4	14,14,15	0.54	0	17,19,21	1.93	5 (29%)
4	NAG	D	2	4	14,14,15	0.38	0	17,19,21	1.54	3 (17%)
4	NAG	D	3	4	14,14,15	0.32	0	17,19,21	0.87	0
5	NAG	E	1	2,5	14,14,15	0.62	0	17,19,21	1.30	2 (11%)
5	NAG	E	2	5	14,14,15	0.33	0	17,19,21	0.58	0
6	NAG	F	1	6	14,14,15	0.76	0	17,19,21	1.52	2 (11%)
6	NAG	F	2	6	14,14,15	0.52	0	17,19,21	1.55	3 (17%)
6	NAG	F	3	6	14,14,15	0.42	0	17,19,21	1.96	4 (23%)
6	NAG	F	4	6	14,14,15	0.42	0	17,19,21	1.22	2 (11%)
5	NAG	G	1	2,5	14,14,15	0.66	0	17,19,21	1.31	2 (11%)
5	NAG	G	2	5	14,14,15	0.43	0	17,19,21	0.99	1 (5%)
5	NAG	H	1	2,5	14,14,15	0.49	0	17,19,21	2.04	5 (29%)
5	NAG	H	2	5	14,14,15	0.21	0	17,19,21	0.39	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	D	1	2,4	-	0/6/23/26	0/1/1/1
4	NAG	D	2	4	-	5/6/23/26	0/1/1/1
4	NAG	D	3	4	-	5/6/23/26	0/1/1/1
5	NAG	E	1	2,5	-	4/6/23/26	0/1/1/1
5	NAG	E	2	5	-	4/6/23/26	0/1/1/1
6	NAG	F	1	6	-	0/6/23/26	0/1/1/1
6	NAG	F	2	6	-	2/6/23/26	0/1/1/1
6	NAG	F	3	6	-	5/6/23/26	0/1/1/1
6	NAG	F	4	6	-	6/6/23/26	0/1/1/1
5	NAG	G	1	2,5	-	4/6/23/26	0/1/1/1
5	NAG	G	2	5	-	4/6/23/26	0/1/1/1
5	NAG	H	1	2,5	-	3/6/23/26	0/1/1/1
5	NAG	H	2	5	-	1/6/23/26	0/1/1/1

There are no bond length outliers.

All (29) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	F	3	NAG	C1-O5-C5	4.68	118.54	112.19
5	H	1	NAG	C4-C3-C2	-4.40	104.57	111.02
6	F	3	NAG	C3-C4-C5	4.20	117.73	110.24
4	D	1	NAG	C1-O5-C5	4.16	117.83	112.19
6	F	1	NAG	O5-C1-C2	-4.00	104.98	111.29
4	D	2	NAG	C2-N2-C7	3.90	128.46	122.90
6	F	3	NAG	C4-C3-C2	3.65	116.36	111.02
5	H	1	NAG	C2-N2-C7	3.59	128.01	122.90
5	H	1	NAG	C1-O5-C5	3.58	117.04	112.19
6	F	2	NAG	O5-C1-C2	-3.54	105.69	111.29
5	G	1	NAG	C1-O5-C5	-3.49	107.47	112.19
5	E	1	NAG	C4-C3-C2	3.27	115.81	111.02
4	D	2	NAG	C1-C2-N2	3.24	116.03	110.49
6	F	2	NAG	O3-C3-C2	-3.19	102.87	109.47
4	D	1	NAG	C4-C3-C2	3.12	115.59	111.02
6	F	2	NAG	C2-N2-C7	-3.01	118.62	122.90
5	G	2	NAG	O5-C1-C2	-2.96	106.62	111.29
4	D	1	NAG	C3-C4-C5	2.90	115.40	110.24
4	D	1	NAG	O5-C1-C2	-2.88	106.73	111.29
6	F	4	NAG	O5-C1-C2	2.77	115.66	111.29
4	D	1	NAG	O5-C5-C6	-2.69	102.98	107.20
5	H	1	NAG	C1-C2-N2	2.61	114.95	110.49
6	F	4	NAG	C4-C3-C2	2.49	114.66	111.02
6	F	1	NAG	C4-C3-C2	2.47	114.64	111.02
5	H	1	NAG	O4-C4-C5	2.41	115.27	109.30
5	G	1	NAG	C4-C3-C2	2.36	114.48	111.02
4	D	2	NAG	O5-C1-C2	-2.28	107.69	111.29
5	E	1	NAG	O5-C5-C6	-2.23	103.71	107.20
6	F	3	NAG	O5-C5-C4	2.14	116.03	110.83

There are no chirality outliers.

All (43) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	D	2	NAG	C1-C2-N2-C7
4	D	2	NAG	C8-C7-N2-C2
4	D	2	NAG	O7-C7-N2-C2
4	D	3	NAG	C8-C7-N2-C2
4	D	3	NAG	O7-C7-N2-C2
5	E	1	NAG	O7-C7-N2-C2
5	E	2	NAG	C8-C7-N2-C2
5	E	2	NAG	O7-C7-N2-C2
5	G	2	NAG	C8-C7-N2-C2

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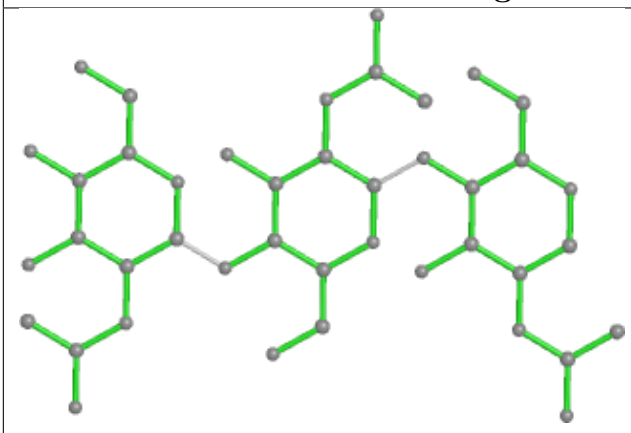
Mol	Chain	Res	Type	Atoms
5	G	2	NAG	O7-C7-N2-C2
6	F	3	NAG	C3-C2-N2-C7
6	F	3	NAG	C8-C7-N2-C2
6	F	3	NAG	O7-C7-N2-C2
6	F	4	NAG	C8-C7-N2-C2
6	F	4	NAG	O7-C7-N2-C2
5	E	1	NAG	C8-C7-N2-C2
5	E	2	NAG	O5-C5-C6-O6
6	F	3	NAG	C4-C5-C6-O6
5	H	1	NAG	C8-C7-N2-C2
5	H	1	NAG	O7-C7-N2-C2
5	G	2	NAG	O5-C5-C6-O6
4	D	2	NAG	O5-C5-C6-O6
5	E	1	NAG	O5-C5-C6-O6
6	F	3	NAG	O5-C5-C6-O6
5	E	2	NAG	C4-C5-C6-O6
5	E	1	NAG	C4-C5-C6-O6
5	G	2	NAG	C4-C5-C6-O6
5	G	1	NAG	O5-C5-C6-O6
6	F	2	NAG	O5-C5-C6-O6
4	D	3	NAG	C1-C2-N2-C7
5	G	1	NAG	C4-C5-C6-O6
6	F	4	NAG	O5-C5-C6-O6
6	F	2	NAG	C4-C5-C6-O6
5	H	1	NAG	C1-C2-N2-C7
4	D	3	NAG	C4-C5-C6-O6
5	G	1	NAG	C8-C7-N2-C2
4	D	2	NAG	C4-C5-C6-O6
6	F	4	NAG	C4-C5-C6-O6
5	G	1	NAG	O7-C7-N2-C2
4	D	3	NAG	O5-C5-C6-O6
5	H	2	NAG	O5-C5-C6-O6
6	F	4	NAG	C1-C2-N2-C7
6	F	4	NAG	C3-C2-N2-C7

There are no ring outliers.

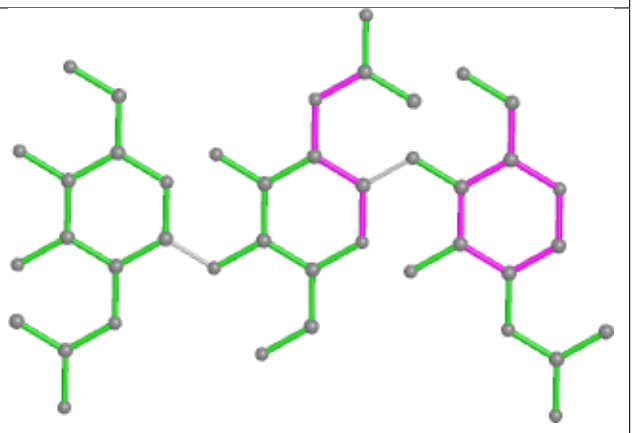
No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

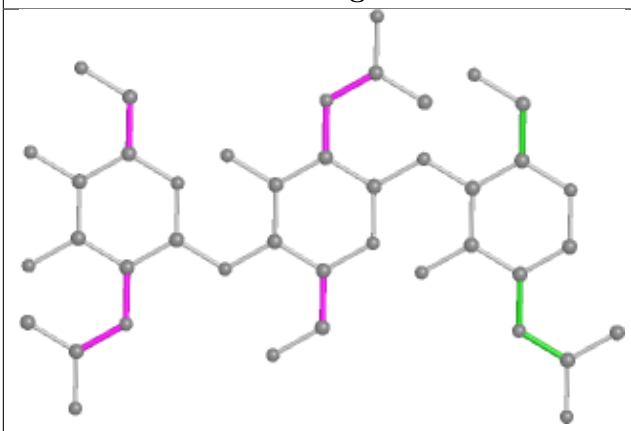
Oligosaccharide Chain D



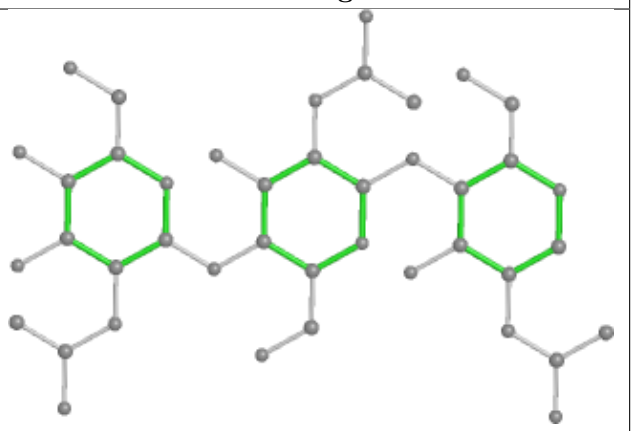
Bond lengths



Bond angles

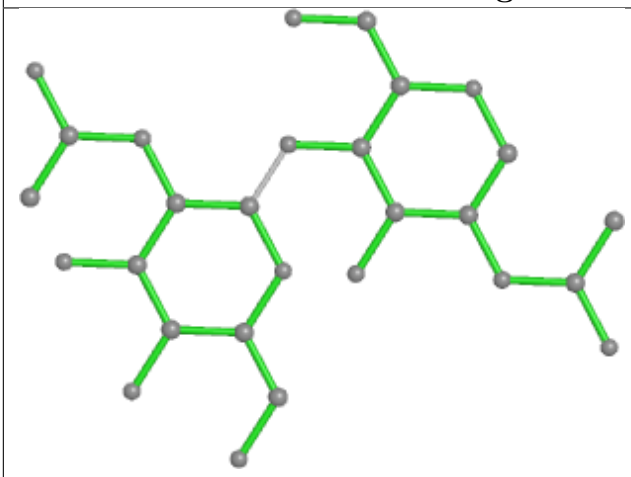


Torsions

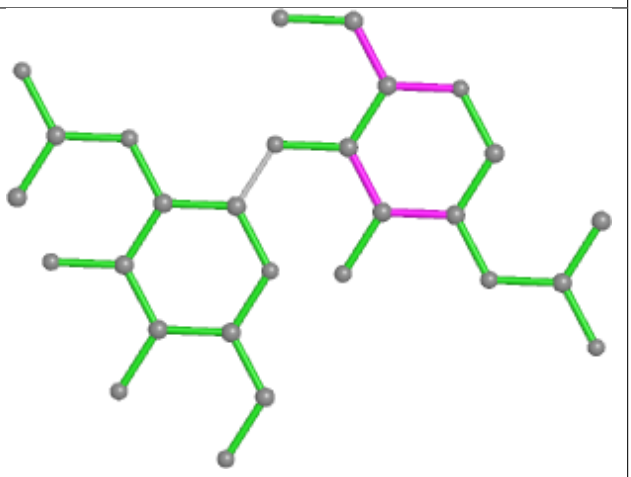


Rings

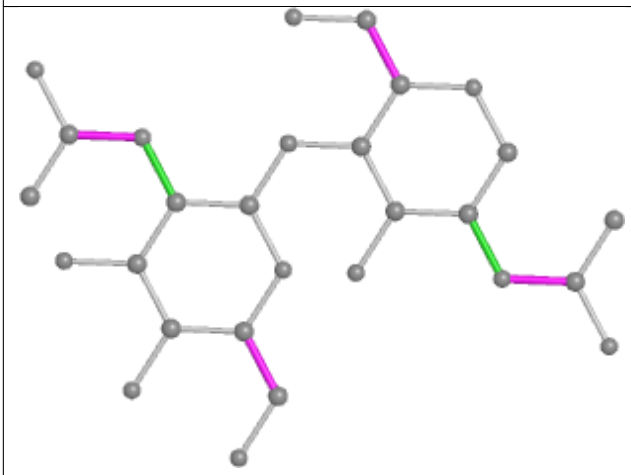
Oligosaccharide Chain E



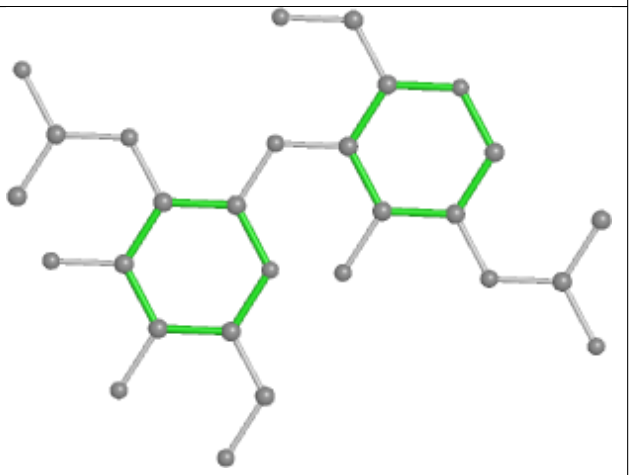
Bond lengths



Bond angles

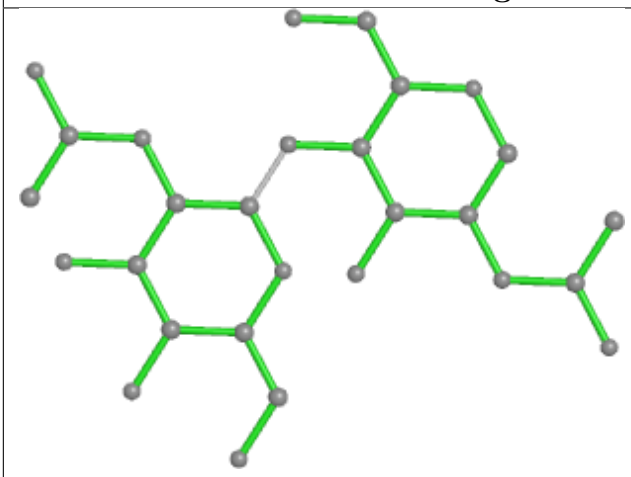


Torsions

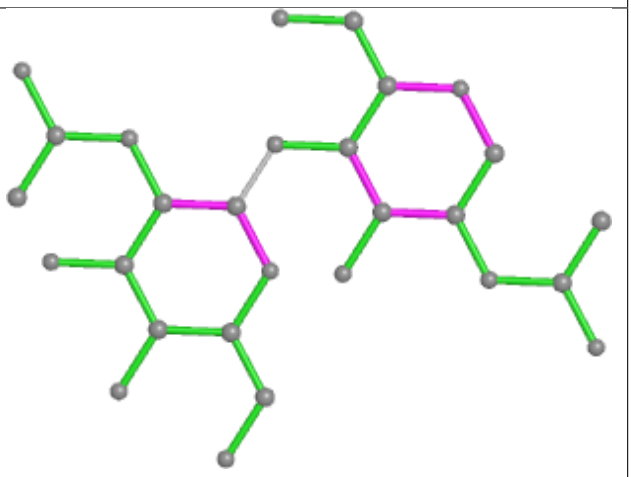


Rings

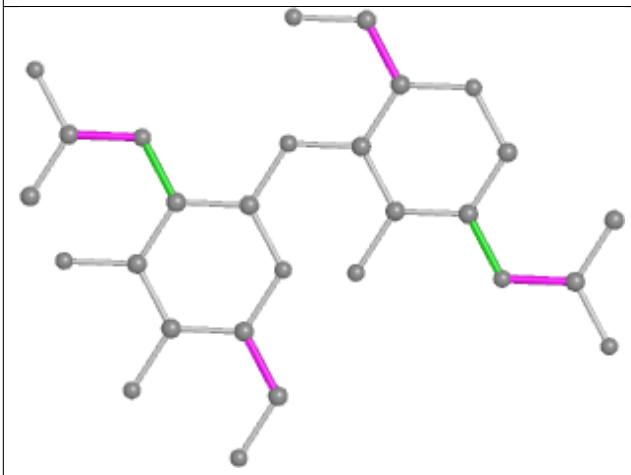
Oligosaccharide Chain G



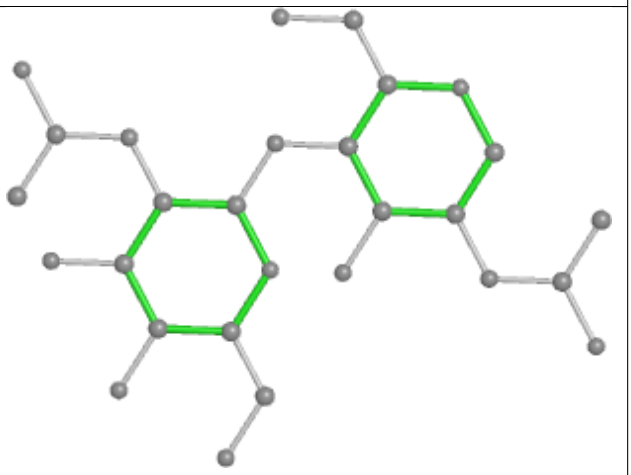
Bond lengths



Bond angles

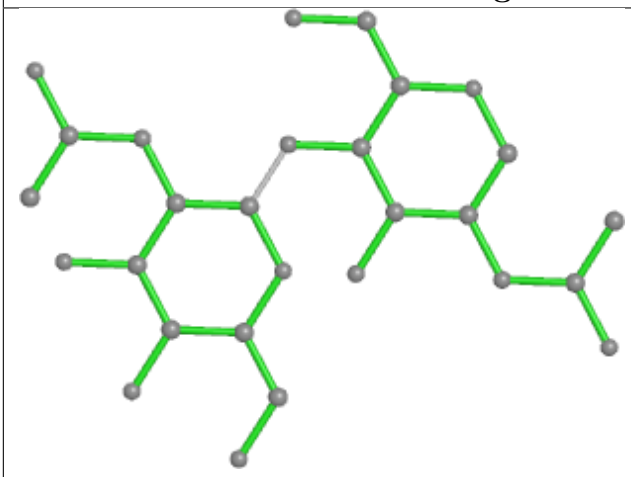


Torsions

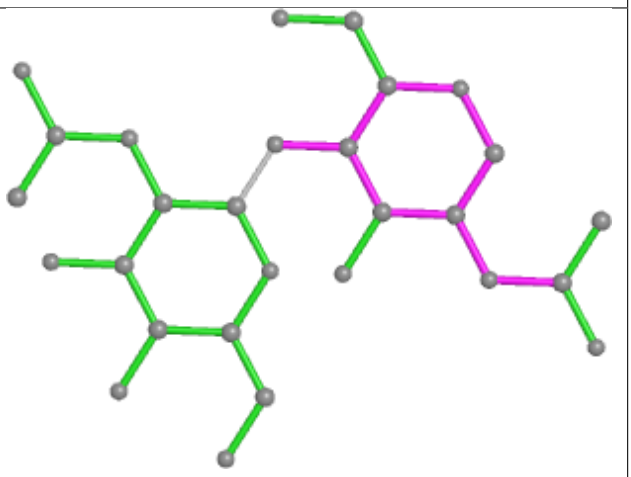


Rings

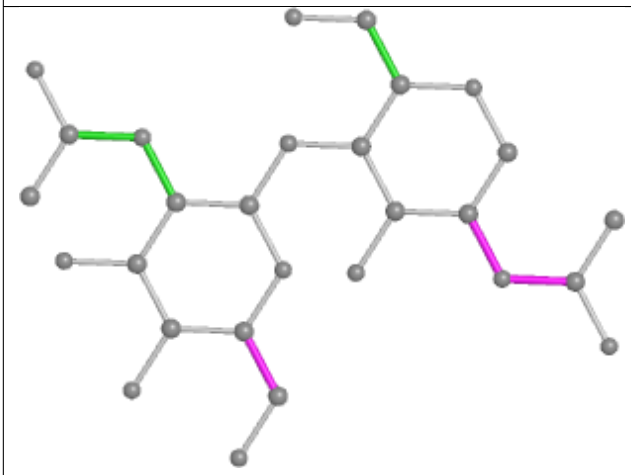
Oligosaccharide Chain H



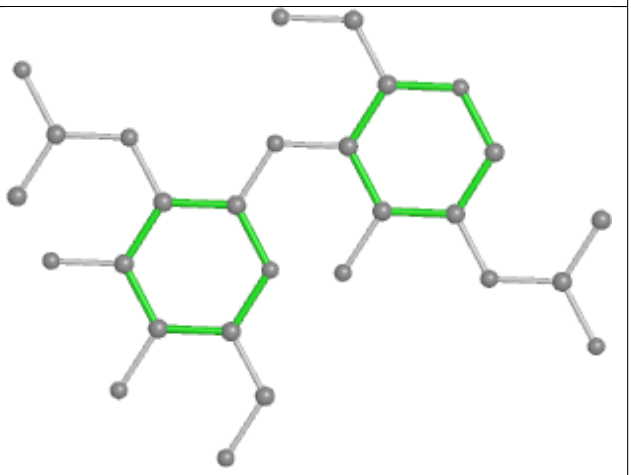
Bond lengths



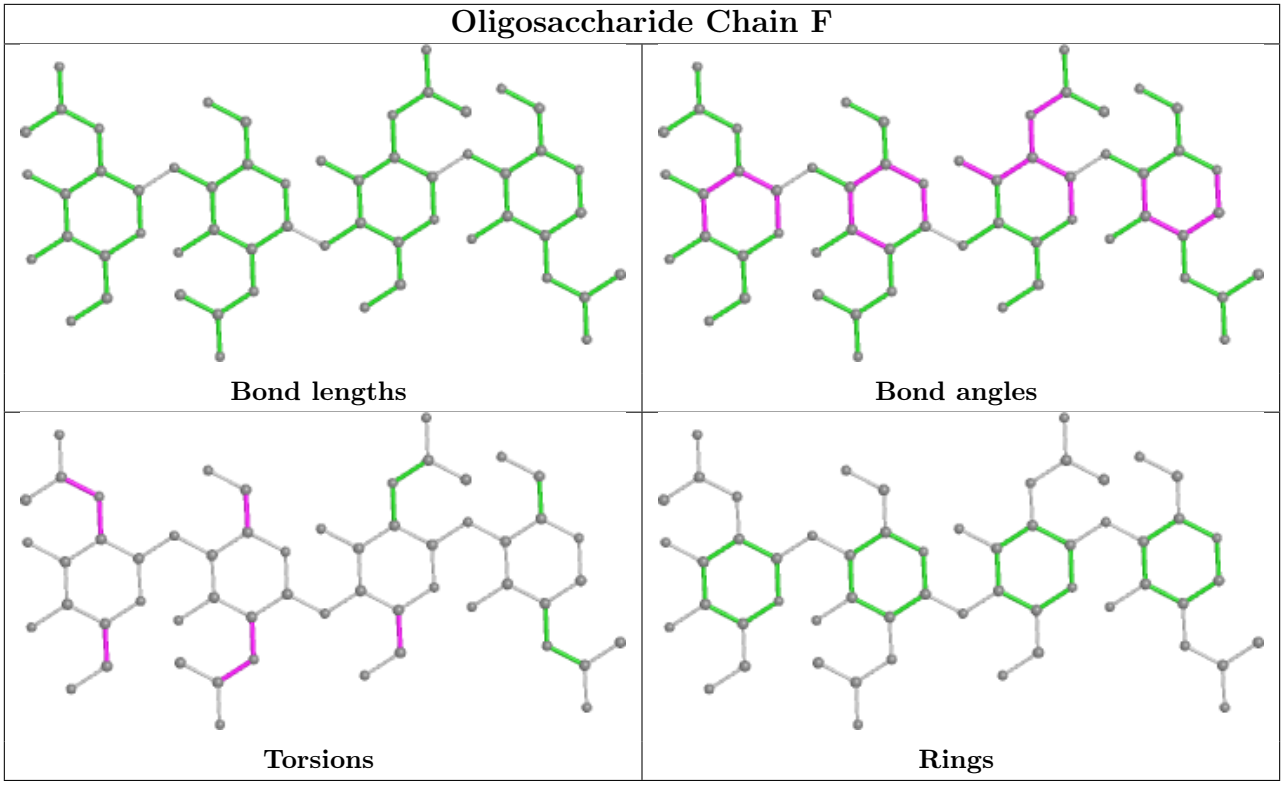
Bond angles



Torsions



Rings



5.6 Ligand geometry (i)

Of 16 ligands modelled in this entry, 2 are monoatomic - leaving 14 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	$\#\|Z\| > 2$
7	PS1	A	2601	10	36,37,37	1.05	4 (11%)	40,44,44	0.99	2 (5%)
8	CLR	A	2611	-	31,31,31	0.30	0	48,48,48	0.38	0
8	CLR	A	2608	-	31,31,31	0.35	0	48,48,48	0.57	0
8	CLR	A	2612	-	31,31,31	0.33	0	48,48,48	0.55	0
8	CLR	A	2602	-	31,31,31	1.27	5 (16%)	48,48,48	3.08	21 (43%)
11	NAG	A	2605	1	14,14,15	0.35	0	17,19,21	1.33	3 (17%)
13	3PE	A	2614	-	50,50,50	0.29	0	53,55,55	0.33	0
11	NAG	B	1202	2	14,14,15	0.47	0	17,19,21	1.22	2 (11%)
8	CLR	A	2607	-	31,31,31	0.31	0	48,48,48	0.46	0
9	PT5	A	2603	-	64,64,69	0.86	2 (3%)	78,82,87	1.26	7 (8%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
12	Y01	A	2610	-	38,38,38	0.45	0	57,57,57	0.48	0
13	3PE	A	2613	-	39,39,50	0.35	0	42,44,55	0.36	0
12	Y01	A	2609	-	38,38,38	0.45	0	57,57,57	0.66	0
12	Y01	A	2606	-	38,38,38	0.46	0	57,57,57	0.51	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	PS1	A	2601	10	-	22/43/43/43	-
8	CLR	A	2611	-	-	9/10/68/68	0/4/4/4
8	CLR	A	2608	-	-	10/10/68/68	0/4/4/4
8	CLR	A	2612	-	-	9/10/68/68	0/4/4/4
8	CLR	A	2602	-	-	6/10/68/68	0/4/4/4
11	NAG	A	2605	1	-	1/6/23/26	0/1/1/1
13	3PE	A	2614	-	-	16/54/54/54	-
11	NAG	B	1202	2	-	4/6/23/26	0/1/1/1
8	CLR	A	2607	-	-	6/10/68/68	0/4/4/4
9	PT5	A	2603	-	-	26/61/85/90	0/1/1/1
12	Y01	A	2610	-	-	13/19/77/77	0/4/4/4
13	3PE	A	2613	-	-	25/43/43/54	-
12	Y01	A	2609	-	-	10/19/77/77	0/4/4/4
12	Y01	A	2606	-	-	8/19/77/77	0/4/4/4

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	2603	PT5	O18-C11	4.27	1.45	1.33
9	A	2603	PT5	O16-C10	3.75	1.44	1.34
8	A	2602	CLR	C13-C14	-3.18	1.48	1.55
8	A	2602	CLR	C8-C14	-2.76	1.48	1.53
8	A	2602	CLR	C10-C9	-2.47	1.51	1.56
7	A	2601	PS1	O7-C7	2.45	1.40	1.33
7	A	2601	PS1	O9-C5	-2.34	1.40	1.46
7	A	2601	PS1	O9-C17	2.18	1.40	1.34
8	A	2602	CLR	C19-C10	-2.16	1.50	1.54
8	A	2602	CLR	C15-C14	-2.14	1.49	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	2601	PS1	O7-C6	-2.08	1.40	1.45

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	A	2602	CLR	C14-C8-C9	-12.13	92.85	109.09
8	A	2602	CLR	C19-C10-C9	-7.52	102.72	111.68
8	A	2602	CLR	C1-C10-C9	5.82	116.86	108.73
8	A	2602	CLR	C19-C10-C5	5.24	116.82	108.34
8	A	2602	CLR	C8-C7-C6	-4.74	105.92	112.73
9	A	2603	PT5	O16-C10-C12	4.12	120.39	111.50
8	A	2602	CLR	C12-C11-C9	3.98	120.02	113.11
11	B	1202	NAG	O5-C1-C2	-3.98	105.01	111.29
8	A	2602	CLR	C2-C1-C10	-3.87	104.37	112.74
8	A	2602	CLR	C13-C14-C8	-3.84	108.70	114.38
7	A	2601	PS1	O9-C17-C18	3.83	119.75	111.50
8	A	2602	CLR	C1-C10-C5	-3.79	101.81	108.75
8	A	2602	CLR	C16-C15-C14	-3.70	97.80	105.13
11	A	2605	NAG	C1-C2-N2	3.34	116.19	110.49
9	A	2603	PT5	C5-C6-C1	3.29	115.79	108.96
8	A	2602	CLR	C1-C2-C3	3.20	114.57	110.47
9	A	2603	PT5	O4-C4-C3	3.02	115.69	108.66
9	A	2603	PT5	C2-C3-C4	2.93	116.36	109.68
8	A	2602	CLR	C15-C14-C13	2.78	107.19	103.84
9	A	2603	PT5	C12-C13-C14	-2.72	108.39	113.23
8	A	2602	CLR	C11-C9-C8	-2.70	107.87	111.75
8	A	2602	CLR	C12-C13-C14	-2.59	103.26	107.27
9	A	2603	PT5	O18-C11-C31	2.59	120.02	111.91
11	A	2605	NAG	C2-N2-C7	-2.58	119.24	122.90
8	A	2602	CLR	C18-C13-C14	-2.54	106.97	111.71
8	A	2602	CLR	C4-C5-C10	2.52	119.77	116.42
7	A	2601	PS1	O7-C7-C8	2.43	119.53	111.91
8	A	2602	CLR	C16-C17-C20	-2.41	108.42	112.15
8	A	2602	CLR	C19-C10-C1	-2.29	105.81	109.43
8	A	2602	CLR	C9-C10-C5	2.27	113.21	109.65
11	A	2605	NAG	C3-C4-C5	2.22	114.19	110.24
9	A	2603	PT5	C2-C1-C6	2.20	114.02	110.85
8	A	2602	CLR	C4-C5-C6	-2.17	117.49	120.61
8	A	2602	CLR	C7-C8-C9	2.16	112.33	109.71
11	B	1202	NAG	C1-O5-C5	2.04	114.96	112.19

There are no chirality outliers.

All (165) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	A	2601	PS1	C4-O6-P1-O1
7	A	2601	PS1	C4-O6-P1-O2
8	A	2611	CLR	C13-C17-C20-C21
8	A	2611	CLR	C16-C17-C20-C22
9	A	2603	PT5	C7-O13-P1-O11
9	A	2603	PT5	C1-O1-P1-O12
9	A	2603	PT5	C3-C4-O4-P4
9	A	2603	PT5	C6-C5-O5-P5
9	A	2603	PT5	C4-C5-O5-P5
9	A	2603	PT5	C12-C10-O16-C8
9	A	2603	PT5	C16-C17-C18-C19
12	A	2606	Y01	OAG-CAY-OAW-CBC
12	A	2606	Y01	CAM-CAY-OAW-CBC
12	A	2610	Y01	CAR-CBC-OAW-CAY
12	A	2610	Y01	CAM-CAY-OAW-CBC
13	A	2613	3PE	C1-O11-P-O12
13	A	2613	3PE	C1-O11-P-O13
13	A	2613	3PE	C11-O13-P-O12
13	A	2613	3PE	O21-C2-C3-O31
13	A	2614	3PE	O13-C11-C12-N
13	A	2614	3PE	C22-C21-O21-C2
9	A	2603	PT5	O19-C11-O18-C9
8	A	2611	CLR	C16-C17-C20-C21
12	A	2609	Y01	CAC-CBB-CBE-CAP
12	A	2609	Y01	CAC-CBB-CBE-CBI
8	A	2611	CLR	C13-C17-C20-C22
7	A	2601	PS1	O10-C17-O9-C5
9	A	2603	PT5	O17-C10-O16-C8
13	A	2614	3PE	O22-C21-O21-C2
9	A	2603	PT5	C31-C11-O18-C9
7	A	2601	PS1	C18-C17-O9-C5
8	A	2607	CLR	C21-C20-C22-C23
8	A	2608	CLR	C21-C20-C22-C23
8	A	2611	CLR	C21-C20-C22-C23
8	A	2612	CLR	C21-C20-C22-C23
8	A	2608	CLR	C16-C17-C20-C21
8	A	2612	CLR	C16-C17-C20-C21
8	A	2612	CLR	C13-C17-C20-C21
8	A	2608	CLR	C13-C17-C20-C22
8	A	2612	CLR	C13-C17-C20-C22
12	A	2609	Y01	CAO-CBB-CBE-CBI
12	A	2606	Y01	CAX-CAL-CAM-CAY

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Mol	Chain	Res	Type	Atoms
12	A	2610	Y01	OAG-CAY-OAW-CBC
8	A	2608	CLR	C13-C17-C20-C21
8	A	2612	CLR	C16-C17-C20-C22
12	A	2609	Y01	CAO-CBB-CBE-CAP
13	A	2613	3PE	C3B-C3C-C3D-C3E
13	A	2613	3PE	C22-C23-C24-C25
12	A	2610	Y01	CAO-CBB-CBE-CBI
8	A	2602	CLR	C17-C20-C22-C23
13	A	2614	3PE	C28-C29-C2A-C2B
11	B	1202	NAG	C8-C7-N2-C2
8	A	2608	CLR	C16-C17-C20-C22
8	A	2611	CLR	C17-C20-C22-C23
12	A	2610	Y01	CAJ-CAO-CBB-CBE
13	A	2613	3PE	C32-C33-C34-C35
7	A	2601	PS1	C8-C7-O7-C6
12	A	2610	Y01	CAC-CBB-CBE-CBI
9	A	2603	PT5	C1-O1-P1-O13
8	A	2608	CLR	C17-C20-C22-C23
8	A	2612	CLR	C17-C20-C22-C23
11	B	1202	NAG	O7-C7-N2-C2
8	A	2608	CLR	C22-C23-C24-C25
7	A	2601	PS1	C17-C18-C19-C20
8	A	2607	CLR	C22-C23-C24-C25
12	A	2606	Y01	CAN-CAJ-CAO-CBB
13	A	2614	3PE	C24-C25-C26-C27
8	A	2602	CLR	C21-C20-C22-C23
7	A	2601	PS1	O8-C7-O7-C6
7	A	2601	PS1	C7-C8-C9-C10
9	A	2603	PT5	C10-C12-C13-C14
12	A	2610	Y01	CAX-CAL-CAM-CAY
8	A	2608	CLR	C20-C22-C23-C24
8	A	2612	CLR	C22-C23-C24-C25
12	A	2610	Y01	CAO-CAJ-CAN-CBA
12	A	2609	Y01	CAJ-CAO-CBB-CBE
7	A	2601	PS1	C1-O3-P1-O6
7	A	2601	PS1	C4-O6-P1-O3
13	A	2613	3PE	C11-O13-P-O11
7	A	2601	PS1	N1-C2-C3-O5
12	A	2610	Y01	CAJ-CAO-CBB-CAC
8	A	2607	CLR	C20-C22-C23-C24
12	A	2606	Y01	CAJ-CAN-CBA-CAB
13	A	2613	3PE	C3A-C3B-C3C-C3D

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Mol	Chain	Res	Type	Atoms
13	A	2613	3PE	C38-C39-C3A-C3B
8	A	2602	CLR	C22-C23-C24-C25
12	A	2610	Y01	CAC-CBB-CBE-CAP
13	A	2613	3PE	C37-C38-C39-C3A
8	A	2607	CLR	C17-C20-C22-C23
13	A	2613	3PE	C3D-C3E-C3F-C3G
12	A	2609	Y01	CAJ-CAO-CBB-CAC
8	A	2607	CLR	C23-C24-C25-C26
12	A	2606	Y01	CAJ-CAN-CBA-CAA
13	A	2613	3PE	C22-C21-O21-C2
8	A	2608	CLR	C23-C24-C25-C27
8	A	2612	CLR	C23-C24-C25-C26
12	A	2610	Y01	CAO-CBB-CBE-CAP
13	A	2613	3PE	O22-C21-O21-C2
11	B	1202	NAG	O5-C5-C6-O6
8	A	2602	CLR	C23-C24-C25-C26
7	A	2601	PS1	O6-C4-C5-O9
12	A	2606	Y01	CAJ-CAO-CBB-CBE
8	A	2608	CLR	C23-C24-C25-C26
8	A	2612	CLR	C23-C24-C25-C27
9	A	2603	PT5	C11-C31-C32-C33
13	A	2613	3PE	C3F-C3G-C3H-C3I
9	A	2603	PT5	C35-C36-C37-C38
13	A	2614	3PE	O31-C31-C32-C33
11	A	2605	NAG	O5-C5-C6-O6
8	A	2611	CLR	C23-C24-C25-C26
13	A	2613	3PE	C3C-C3D-C3E-C3F
13	A	2613	3PE	C39-C3A-C3B-C3C
9	A	2603	PT5	C1-O1-P1-O11
9	A	2603	PT5	C15-C16-C17-C18
9	A	2603	PT5	C21-C22-C23-C24
12	A	2606	Y01	CAJ-CAO-CBB-CAC
13	A	2613	3PE	C23-C24-C25-C26
8	A	2602	CLR	C23-C24-C25-C27
12	A	2609	Y01	CAL-CAM-CAY-OAW
8	A	2607	CLR	C23-C24-C25-C27
8	A	2611	CLR	C23-C24-C25-C27
7	A	2601	PS1	N1-C2-C3-O4
9	A	2603	PT5	C27-C28-C29-C30
7	A	2601	PS1	O6-C4-C5-C6
7	A	2601	PS1	C6-C5-O9-C17
8	A	2611	CLR	C22-C23-C24-C25

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Mol	Chain	Res	Type	Atoms
13	A	2613	3PE	C1-C2-C3-O31
13	A	2614	3PE	O11-C1-C2-O21
12	A	2610	Y01	CAJ-CAN-CBA-CAA
7	A	2601	PS1	C1-O3-P1-O1
13	A	2613	3PE	C1-O11-P-O14
11	B	1202	NAG	C4-C5-C6-O6
7	A	2601	PS1	C22-C23-C24-C25
9	A	2603	PT5	C7-C8-O16-C10
9	A	2603	PT5	C7-O13-P1-O1
13	A	2613	3PE	O31-C31-C32-C33
13	A	2614	3PE	O32-C31-C32-C33
12	A	2610	Y01	CAJ-CAN-CBA-CAB
12	A	2609	Y01	CAN-CAJ-CAO-CBB
13	A	2613	3PE	C35-C36-C37-C38
13	A	2614	3PE	C26-C27-C28-C29
13	A	2614	3PE	C2-C1-O11-P
7	A	2601	PS1	C1-C2-C3-O5
13	A	2614	3PE	C1-C2-O21-C21
9	A	2603	PT5	C18-C19-C20-C21
9	A	2603	PT5	C19-C20-C21-C22
13	A	2614	3PE	C3A-C3B-C3C-C3D
8	A	2602	CLR	C13-C17-C20-C21
13	A	2613	3PE	C24-C25-C26-C27
13	A	2614	3PE	C38-C39-C3A-C3B
7	A	2601	PS1	C20-C21-C22-C23
9	A	2603	PT5	C13-C14-C15-C16
12	A	2609	Y01	CAL-CAM-CAY-OAG
7	A	2601	PS1	O9-C17-C18-C19
9	A	2603	PT5	C12-C13-C14-C15
13	A	2614	3PE	O11-C1-C2-C3
9	A	2603	PT5	C5-O5-P5-O51
7	A	2601	PS1	O3-C1-C2-N1
13	A	2614	3PE	C22-C23-C24-C25
7	A	2601	PS1	O10-C17-C18-C19
13	A	2613	3PE	O13-C11-C12-N
9	A	2603	PT5	O18-C11-C31-C32
13	A	2613	3PE	C12-C11-O13-P
13	A	2614	3PE	C37-C38-C39-C3A
12	A	2609	Y01	CAO-CAJ-CAN-CBA

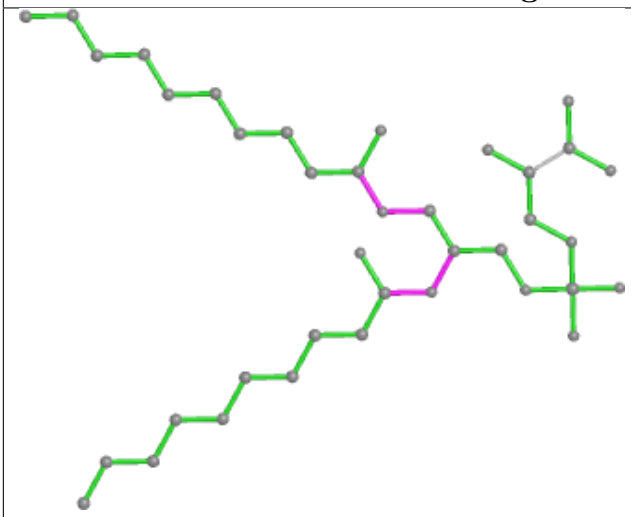
There are no ring outliers.

12 monomers are involved in 62 short contacts:

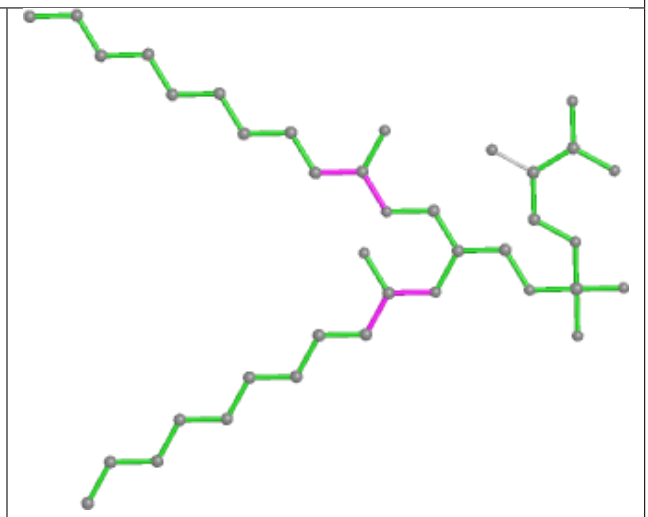
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	A	2601	PS1	3	0
8	A	2611	CLR	5	0
8	A	2608	CLR	6	0
8	A	2612	CLR	1	0
8	A	2602	CLR	7	0
13	A	2614	3PE	6	0
8	A	2607	CLR	1	0
9	A	2603	PT5	4	0
12	A	2610	Y01	5	0
13	A	2613	3PE	9	0
12	A	2609	Y01	8	0
12	A	2606	Y01	11	0

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.

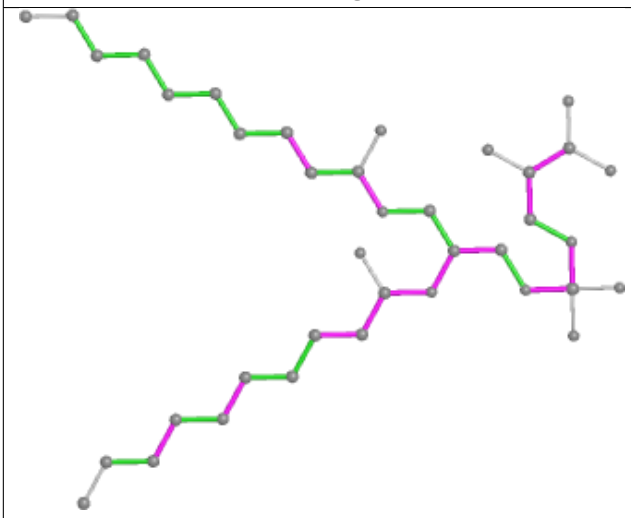
Ligand PS1 A 2601



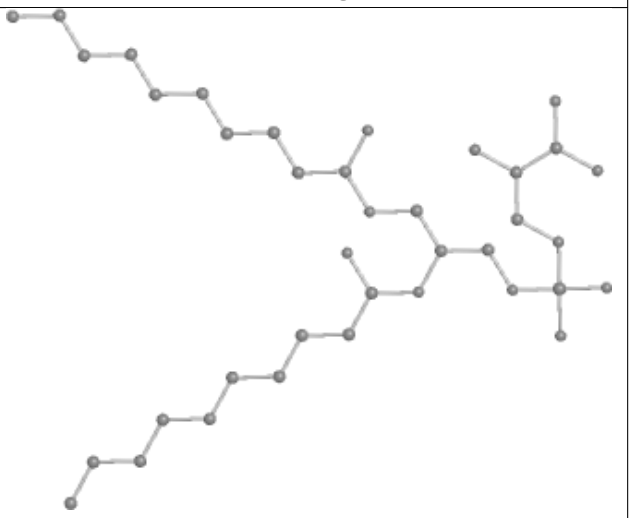
Bond lengths



Bond angles

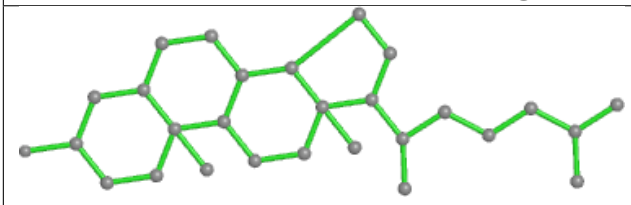


Torsions

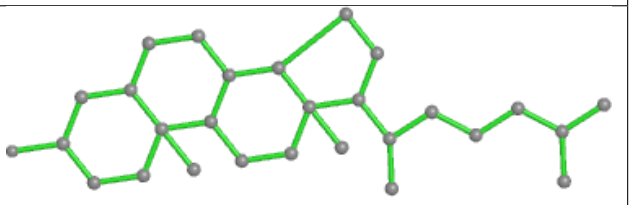


Rings

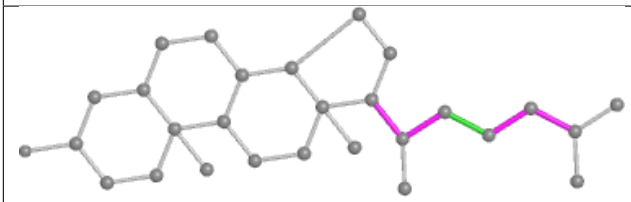
Ligand CLR A 2611



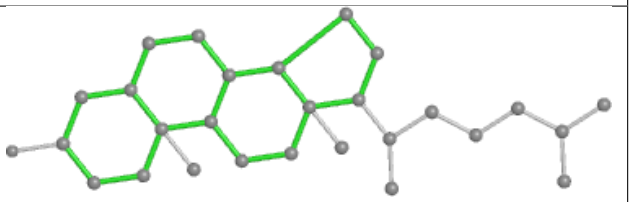
Bond lengths



Bond angles

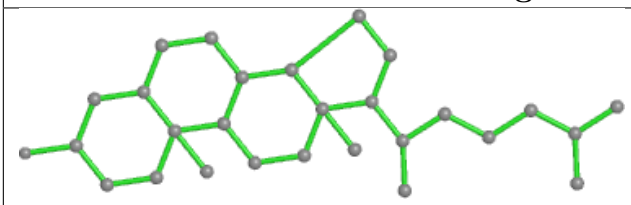


Torsions

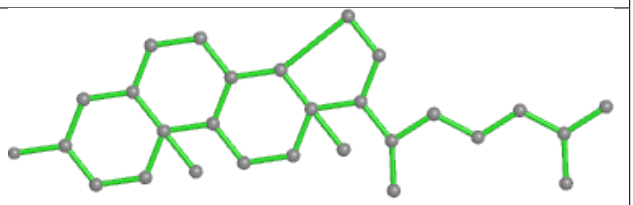


Rings

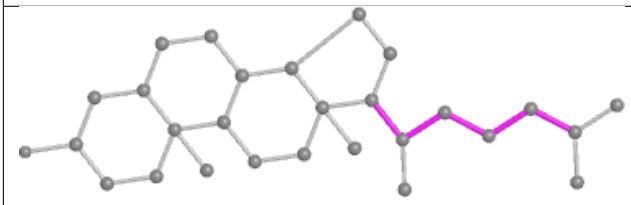
Ligand CLR A 2608



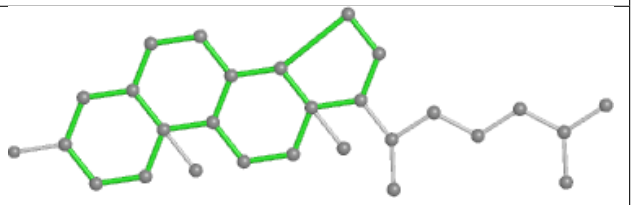
Bond lengths



Bond angles

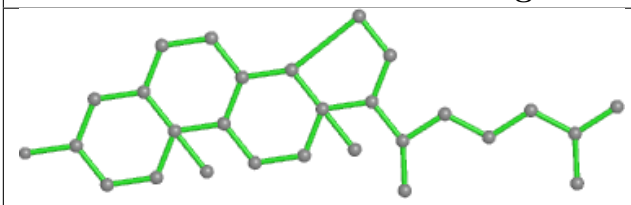


Torsions

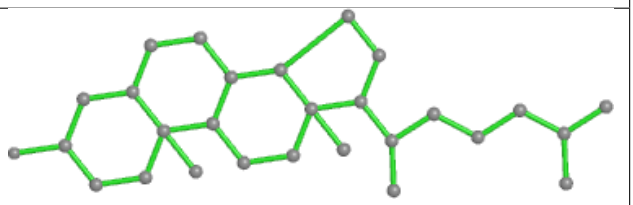


Rings

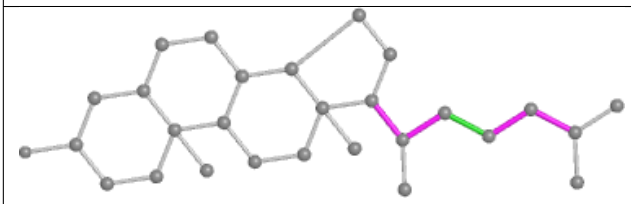
Ligand CLR A 2612



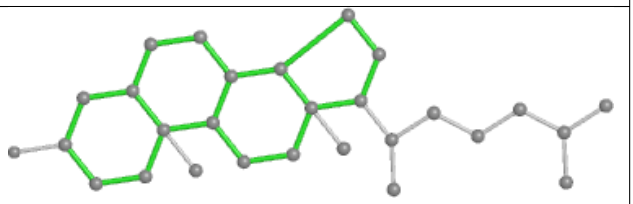
Bond lengths



Bond angles

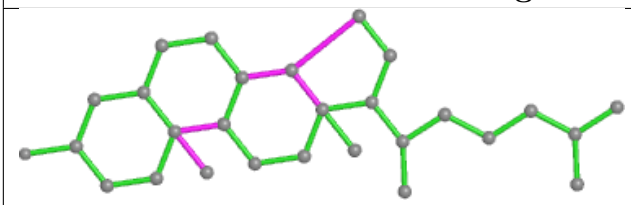


Torsions

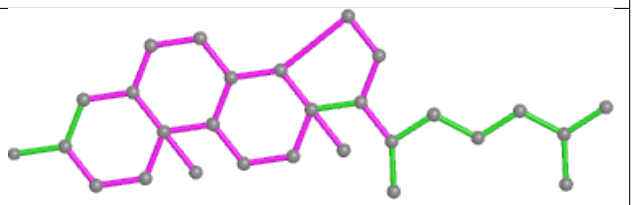


Rings

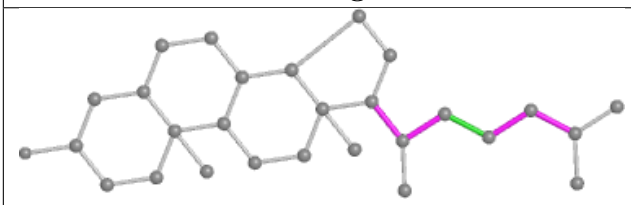
Ligand CLR A 2602



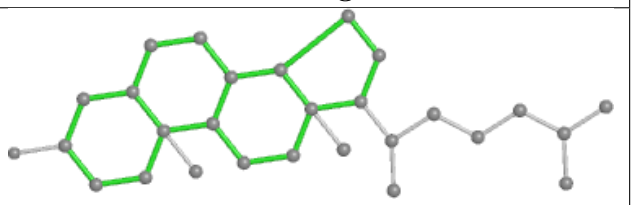
Bond lengths



Bond angles

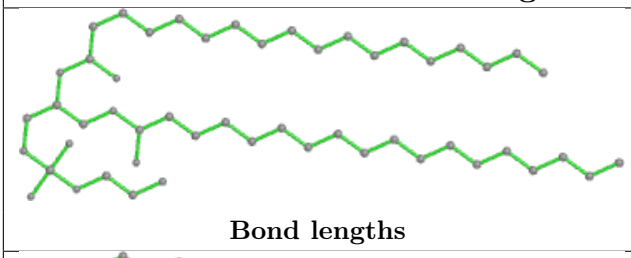


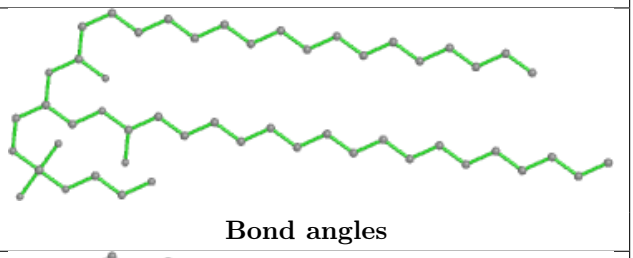
Torsions

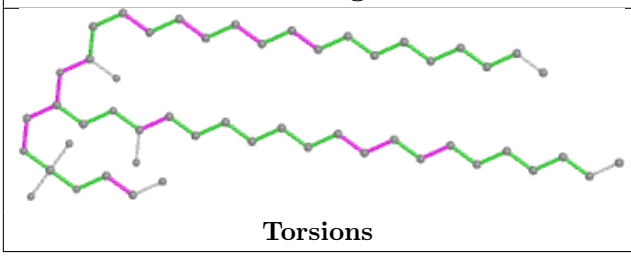


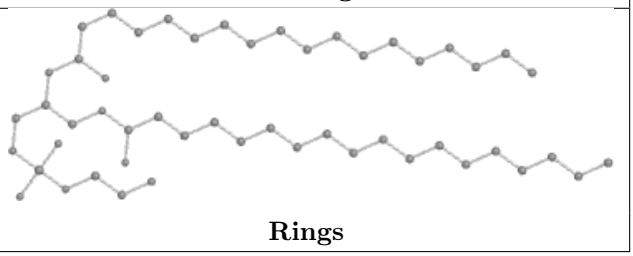
Rings

Ligand 3PE A 2614

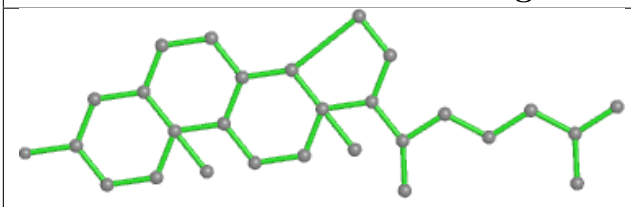

Bond lengths

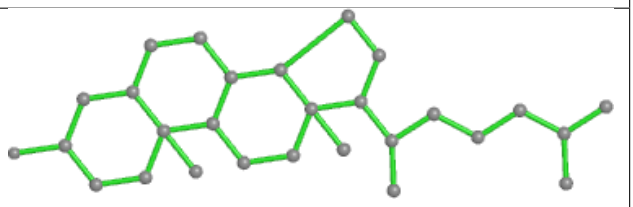

Bond angles

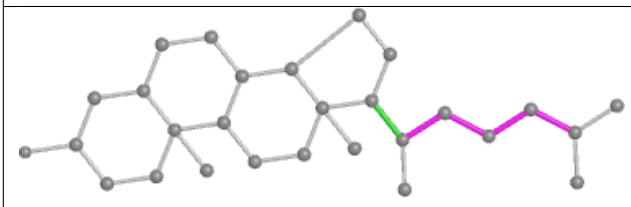

Torsions

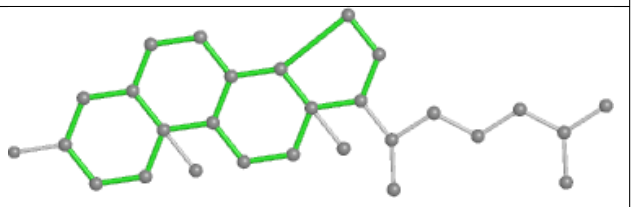

Rings

Ligand CLR A 2607

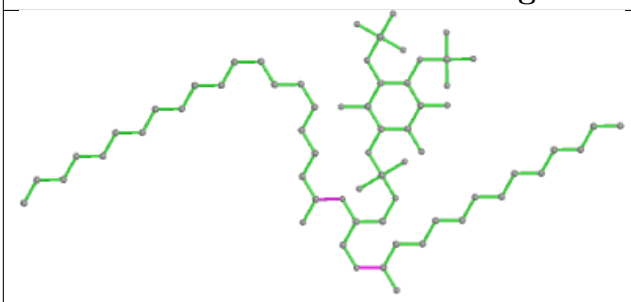

Bond lengths

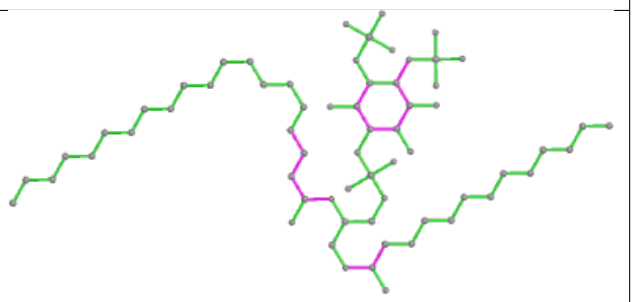

Bond angles

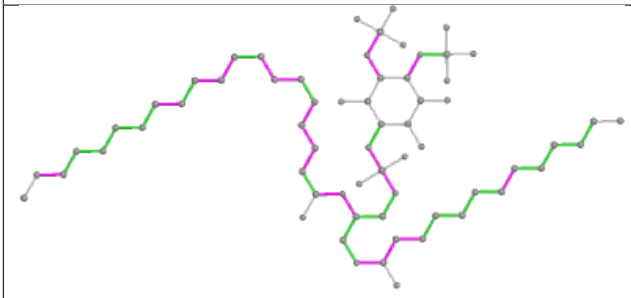

Torsions

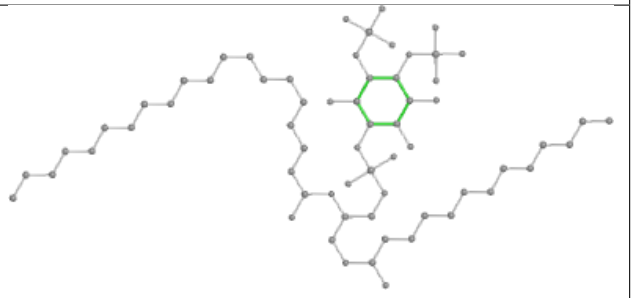

Rings

Ligand PT5 A 2603

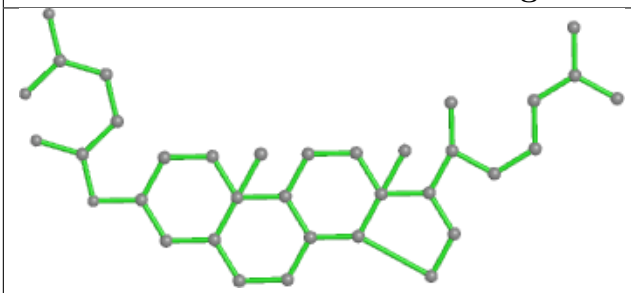

Bond lengths


Bond angles

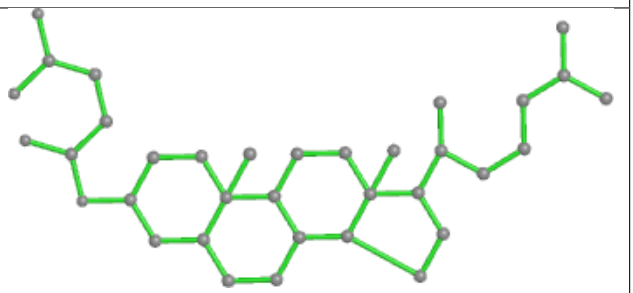

Torsions


Rings

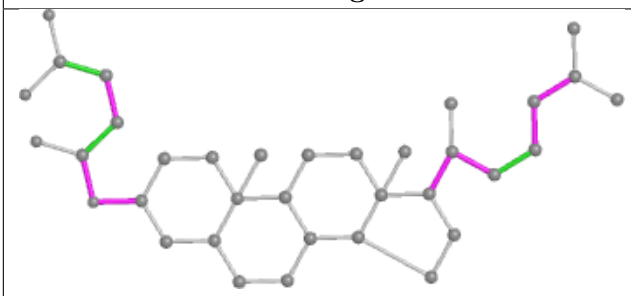
Ligand Y01 A 2610



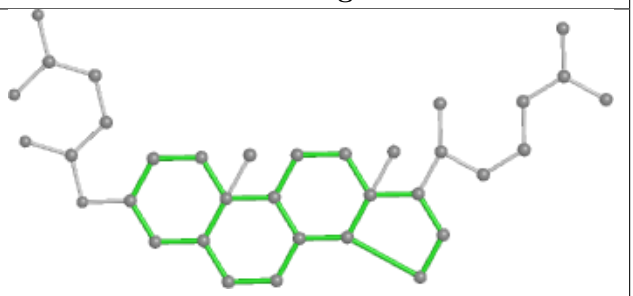
Bond lengths



Bond angles

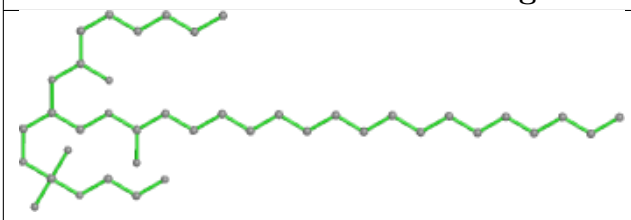


Torsions

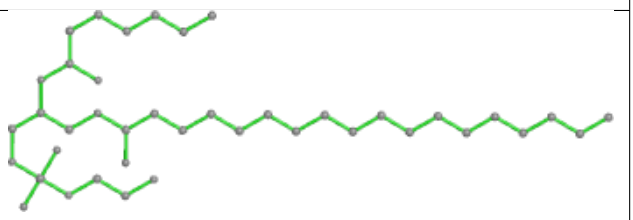


Rings

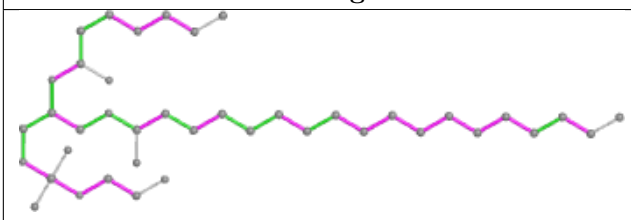
Ligand 3PE A 2613



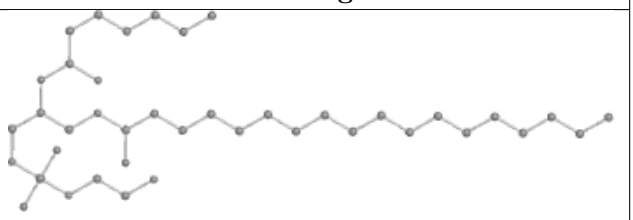
Bond lengths



Bond angles

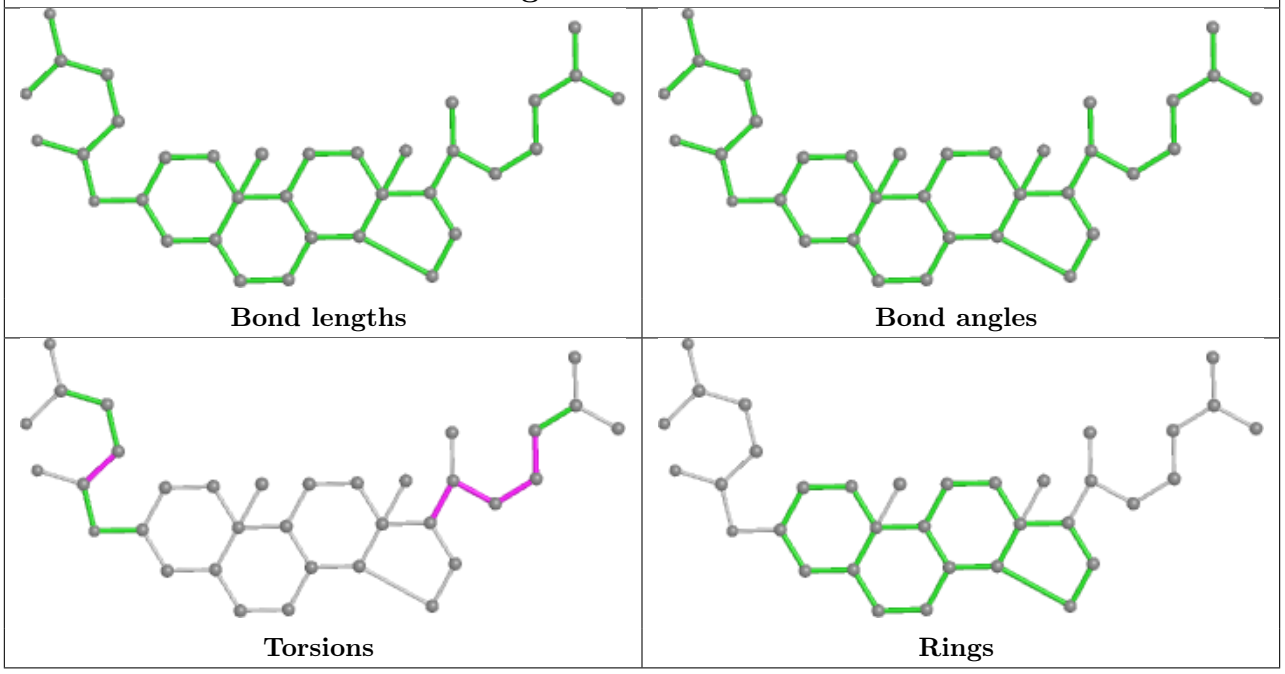


Torsions

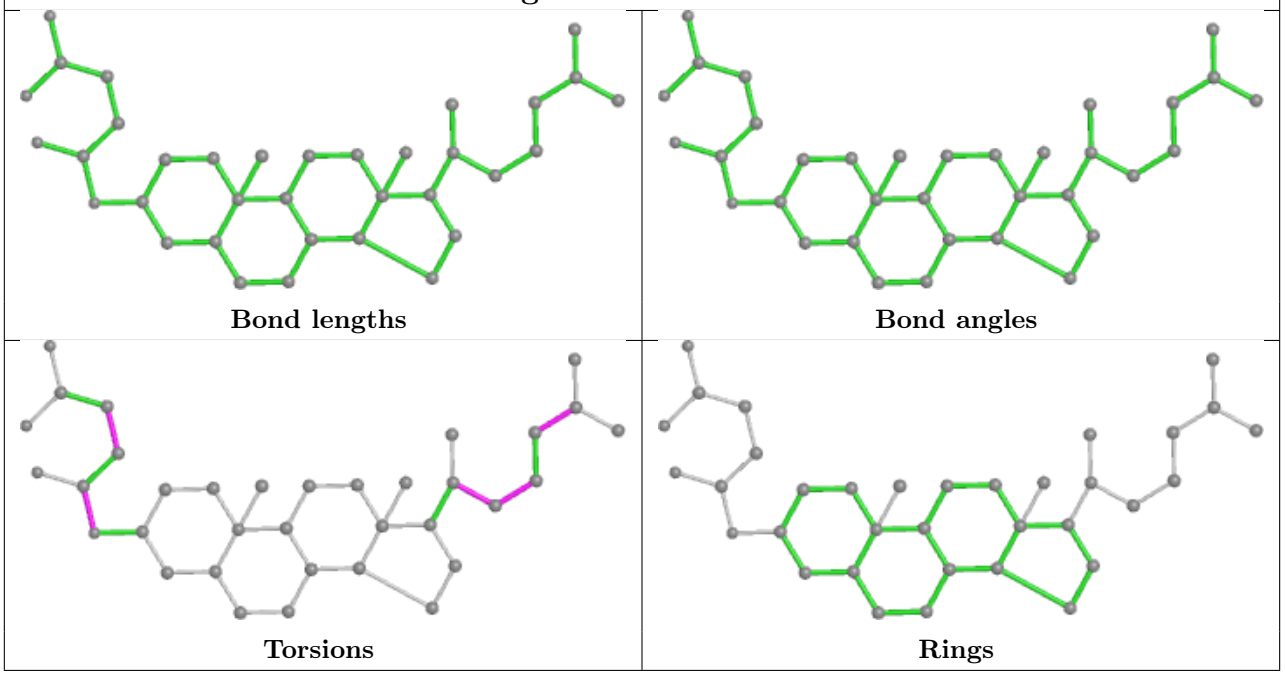


Rings

Ligand Y01 A 2609



Ligand Y01 A 2606



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.

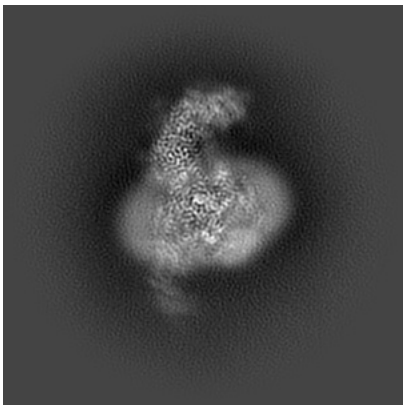
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-38158. These allow visual inspection of the internal detail of the map and identification of artifacts.

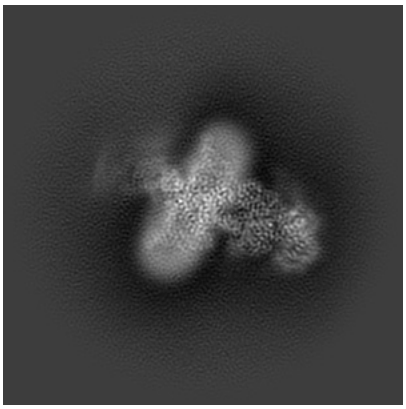
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

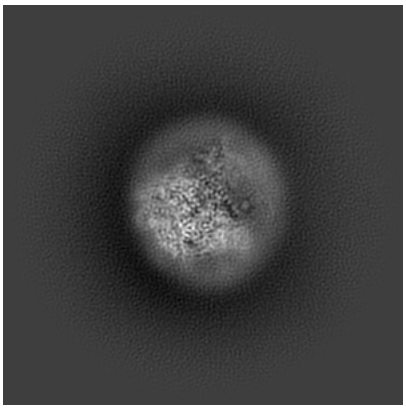
6.1.1 Primary map



X

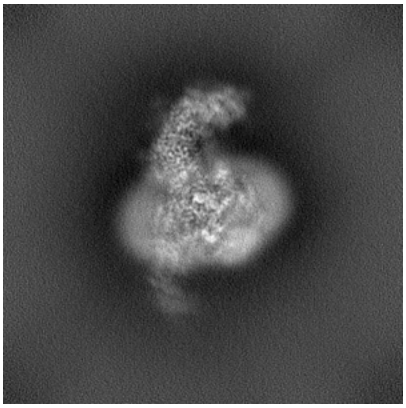


Y

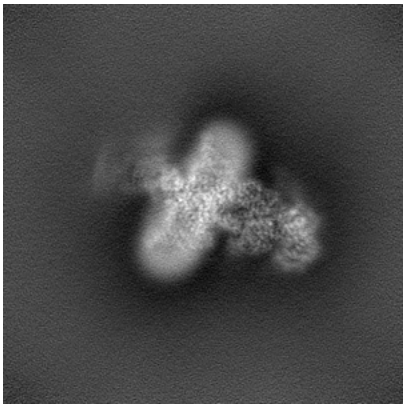


Z

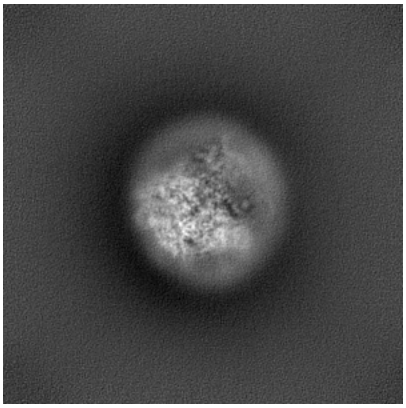
6.1.2 Raw map



X



Y

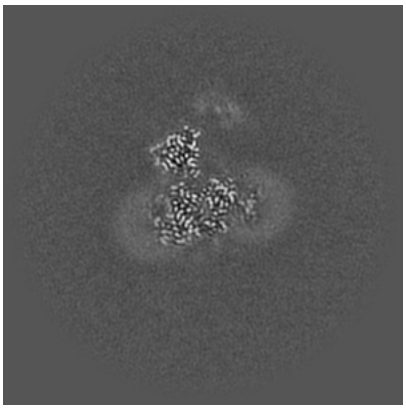


Z

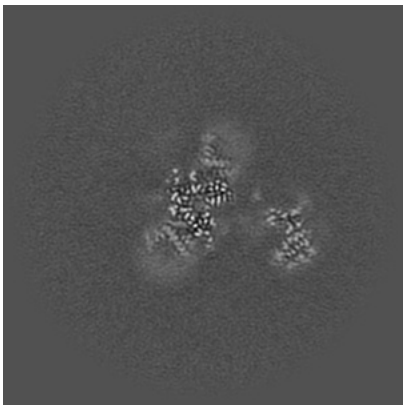
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

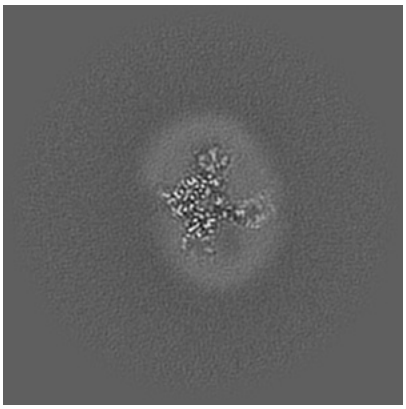
6.2.1 Primary map



X Index: 160

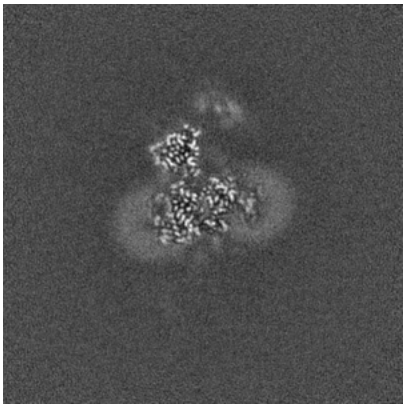


Y Index: 160

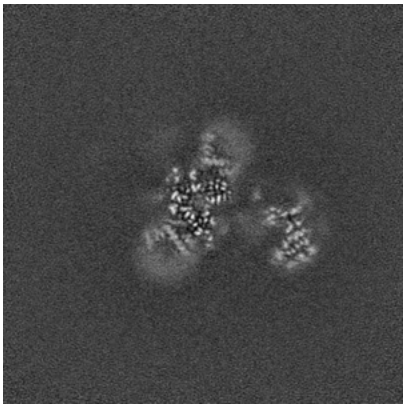


Z Index: 160

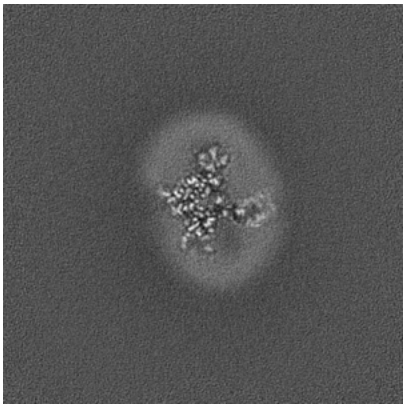
6.2.2 Raw map



X Index: 160



Y Index: 160

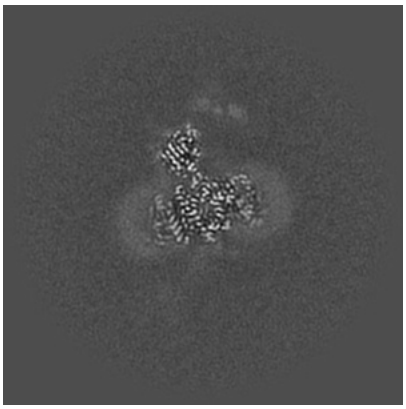


Z Index: 160

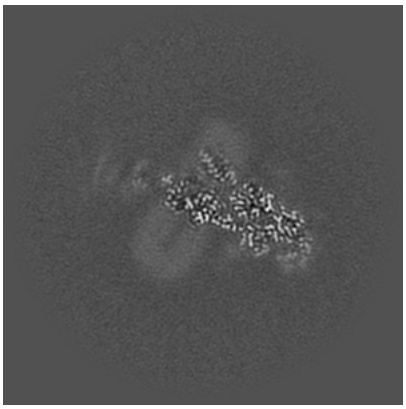
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

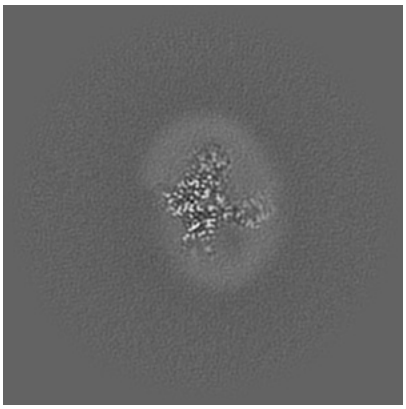
6.3.1 Primary map



X Index: 163

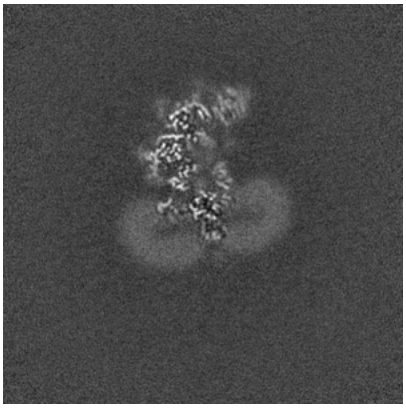


Y Index: 144

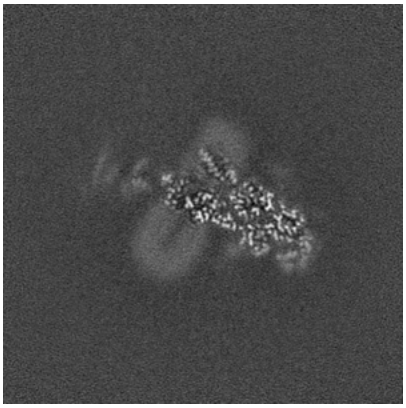


Z Index: 161

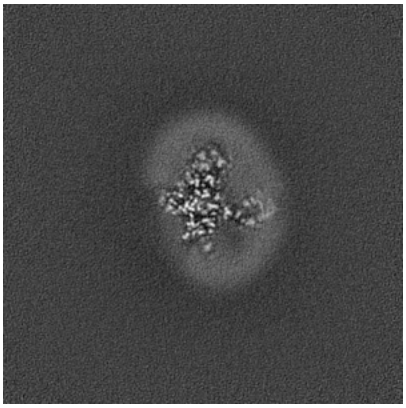
6.3.2 Raw map



X Index: 144



Y Index: 144

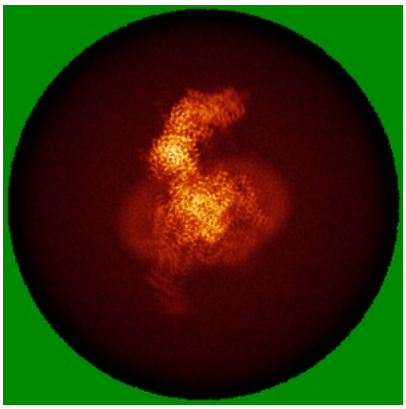


Z Index: 162

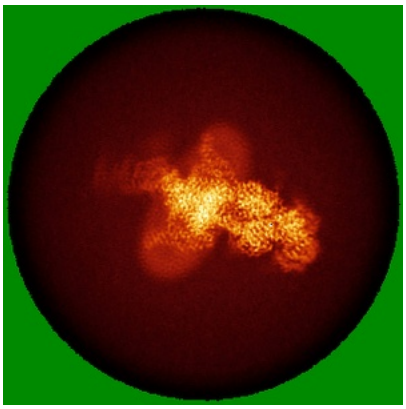
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

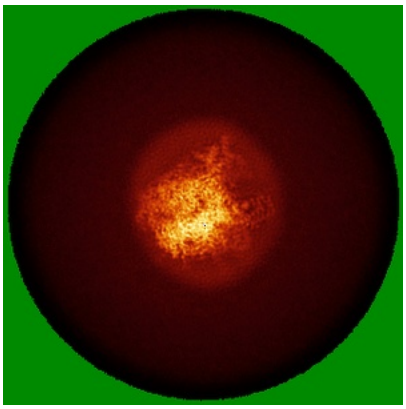
6.4.1 Primary map



X

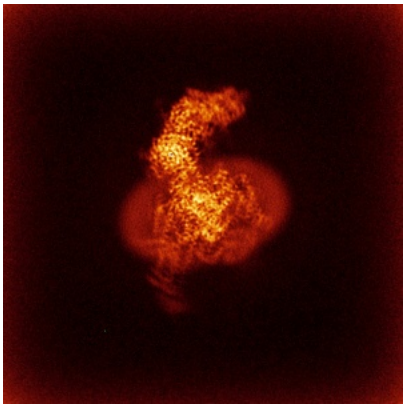


Y

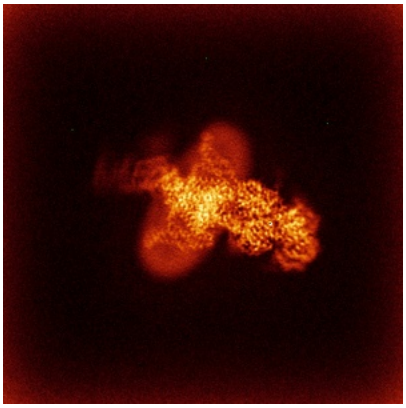


Z

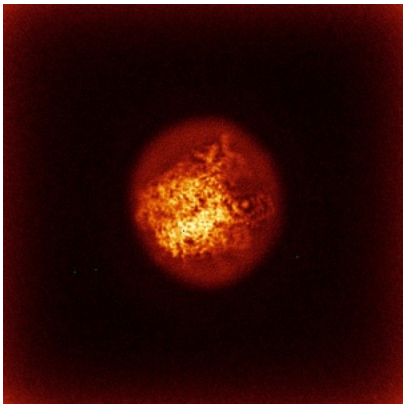
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

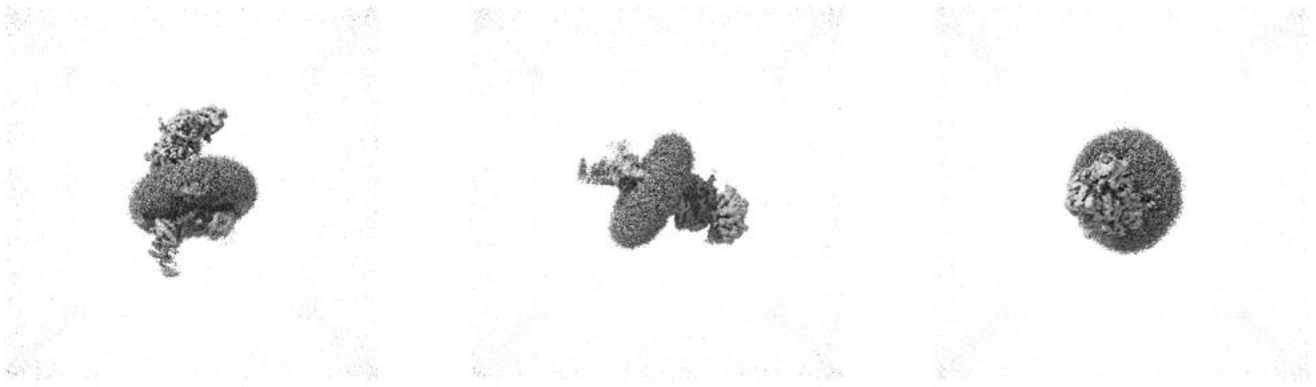
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.26. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

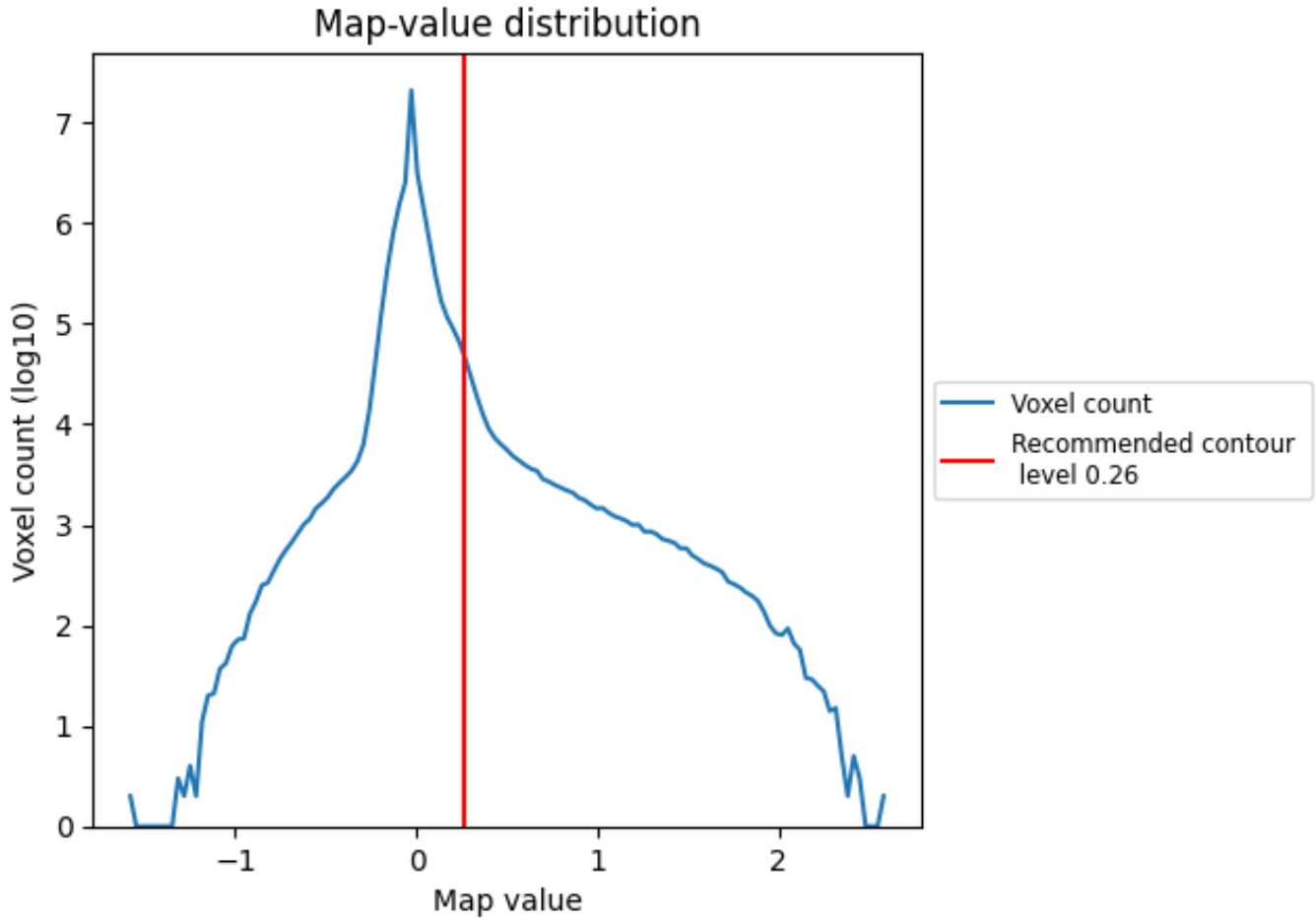
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

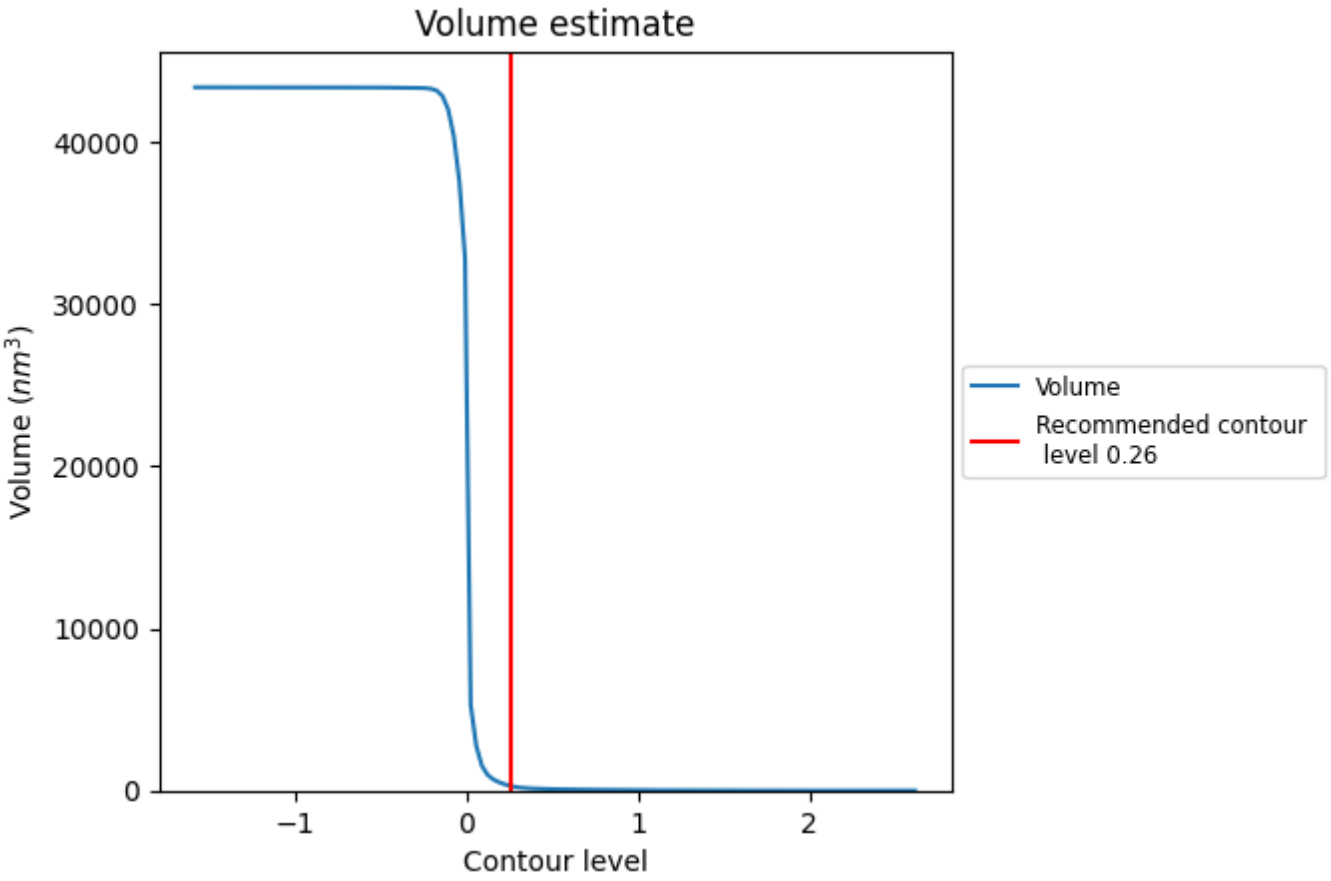
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

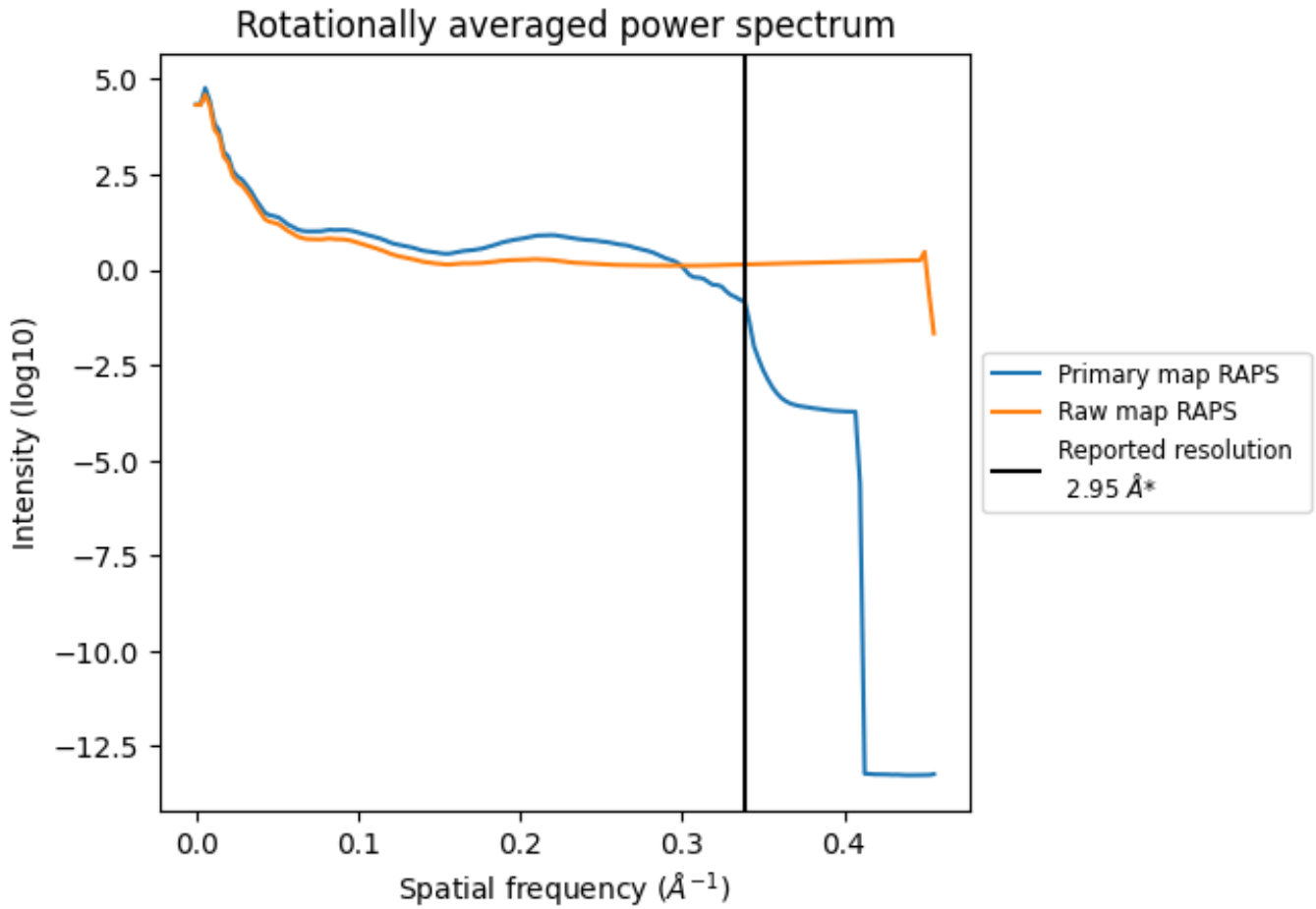
7.2 Volume estimate



The volume at the recommended contour level is 282 nm^3; this corresponds to an approximate mass of 255 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

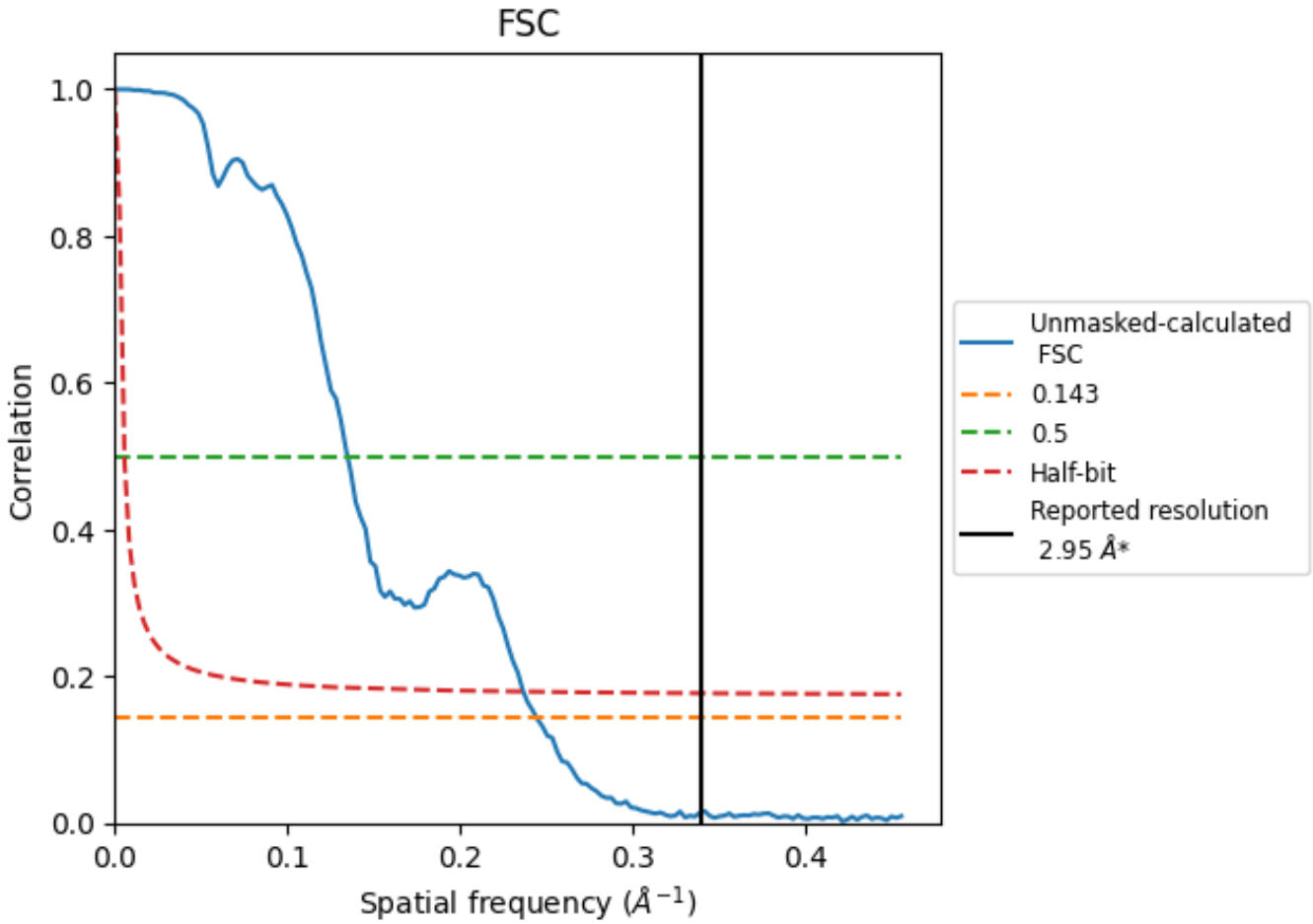


*Reported resolution corresponds to spatial frequency of 0.339 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.339 Å^{-1}

8.2 Resolution estimates (i)

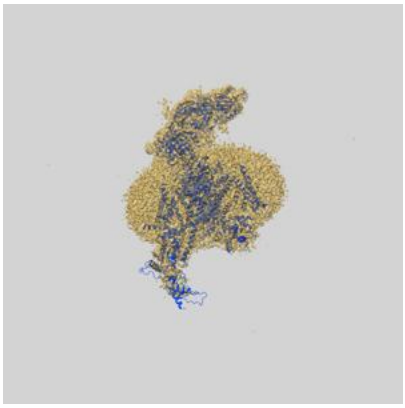
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.95	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.09	7.42	4.23

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.09 differs from the reported value 2.95 by more than 10 %

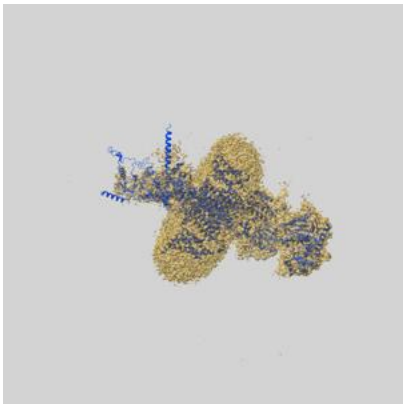
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-38158 and PDB model 8X90. Per-residue inclusion information can be found in section 3 on page 11.

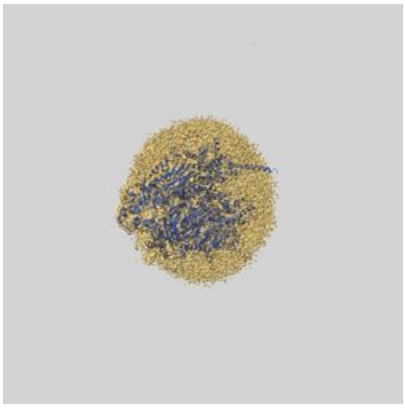
9.1 Map-model overlay



X



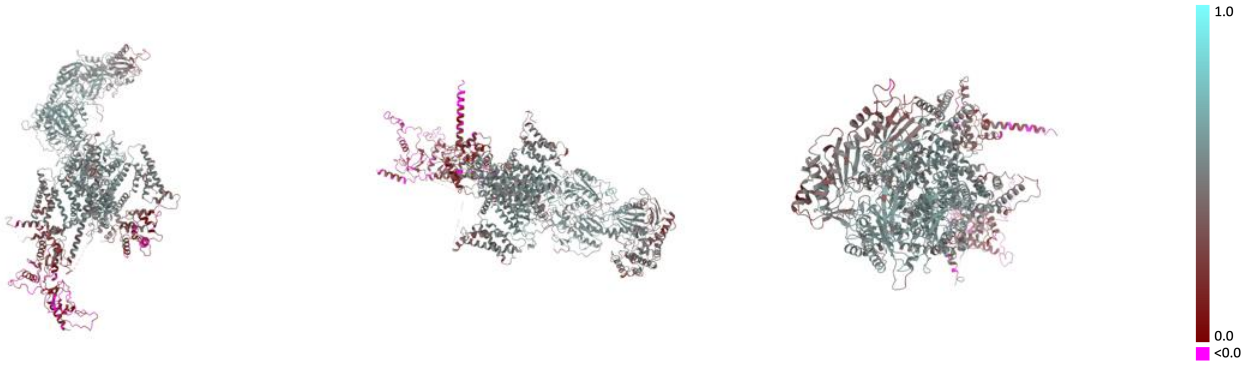
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.26 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

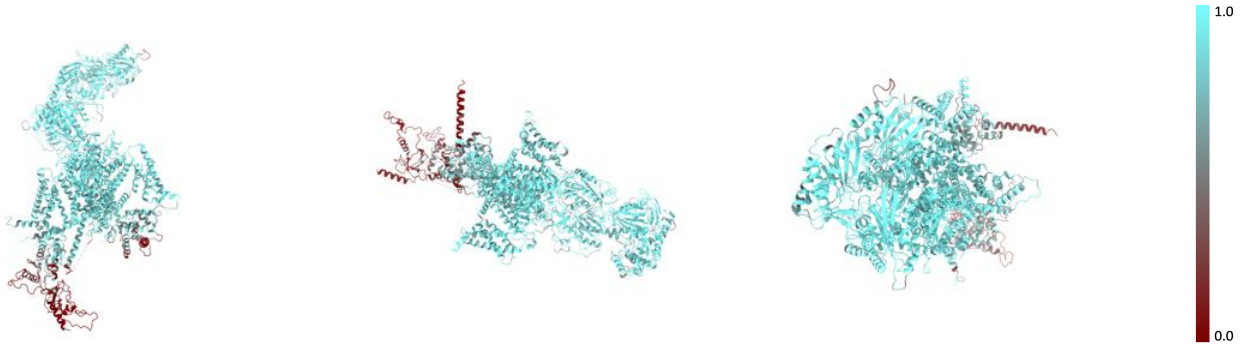
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

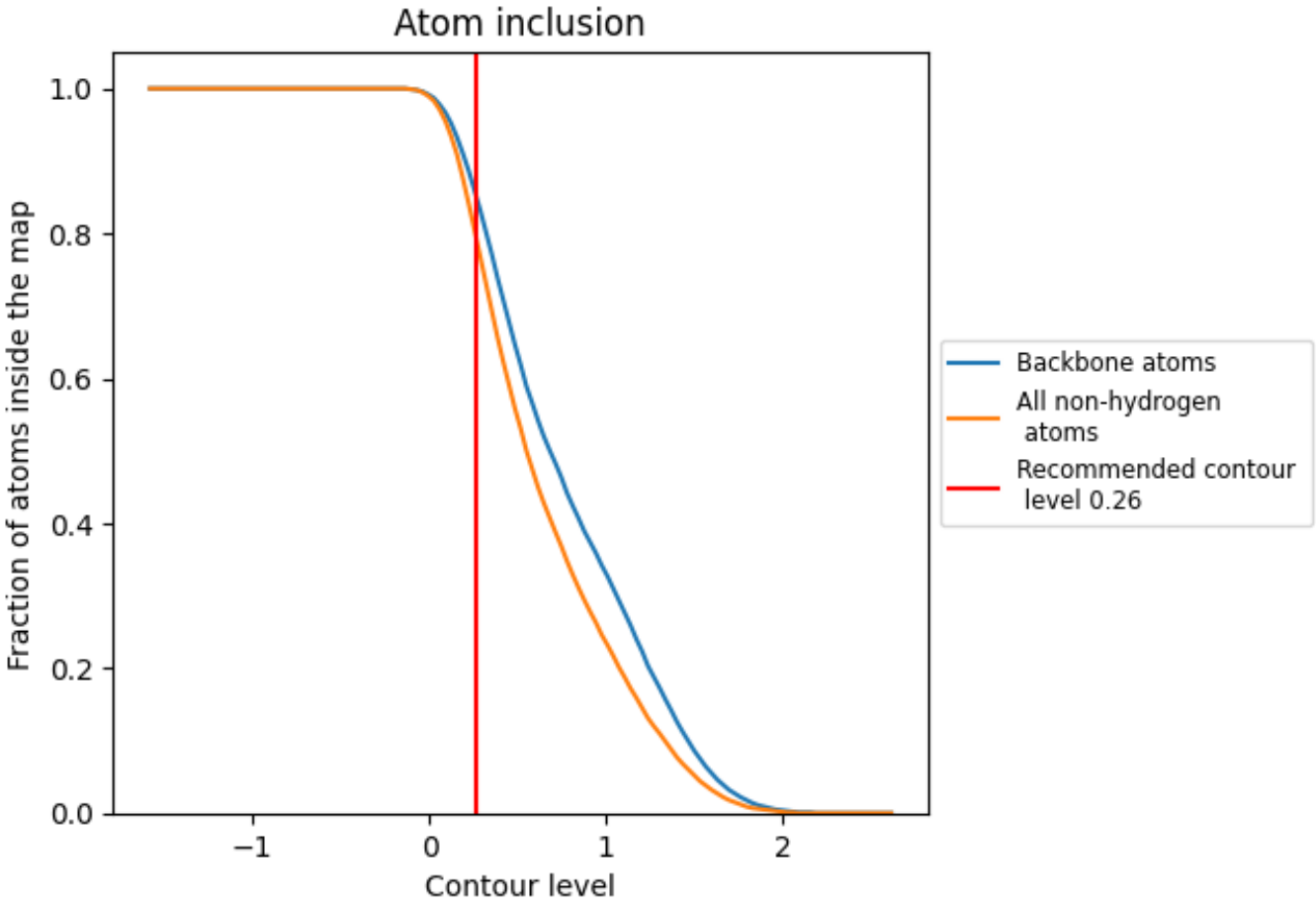
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.26).

9.4 Atom inclusion (i)



At the recommended contour level, 86% of all backbone atoms, 80% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.26) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8010	0.4390
A	0.8320	0.4610
B	0.9120	0.4960
C	0.3210	0.1640
D	0.8810	0.4880
E	0.8210	0.4630
F	0.9640	0.5470
G	0.8570	0.5440
H	0.9290	0.4840