WORLDWIDE wwPDB PROTEIN DATA BANK

wwPDB EM Validation Summary Report (i)

Nov 13, 2022 – 08:44 AM EST

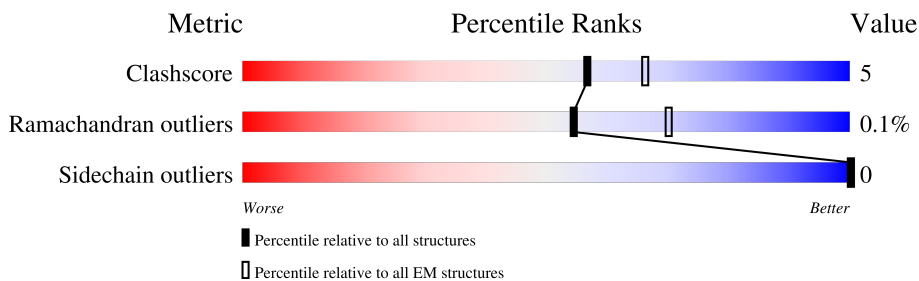|		
PDB ID	:	6WTS
EMDB ID	:	EMD-21898
Title	:	CryoEM structure of the C. sordellii lethal toxin TcsL in complex with SEMA6A
Authors	:	Kucharska, I.; Rubinstein, J.L.; Julien, J.P.
Deposited on	:	2020-05-03
Resolution	:	3.30 Å(reported)
Based on initial model	:	6C0B

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 3.30 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.

Metric	Percentile Ranks	Value
Clashscore		5
Ramachandran outliers		0.1%
Sidechain outliers		0

Worse   *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	564	5% — 85% / 10% / 5%
1	B	564	23% — 84% / 11% / 6%
2	C	552	21% — 32% / 8% / 60%
3	D	2	100%
3	E	2	100%
3	F	2	100%

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 9863 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 SEMA6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	536	Total	C	N	O	S	0	0
			4170	2657	709	773	31		
1	B	532	Total	C	N	O	S	0	0
			3964	2537	675	721	31		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	17	GLU	-	expression tag	UNP Q9H2E6
A	18	THR	-	expression tag	UNP Q9H2E6
A	571	GLY	-	expression tag	UNP Q9H2E6
A	572	SER	-	expression tag	UNP Q9H2E6
A	573	TRP	-	expression tag	UNP Q9H2E6
A	574	SER	-	expression tag	UNP Q9H2E6
A	575	HIS	-	expression tag	UNP Q9H2E6
A	576	PRO	-	expression tag	UNP Q9H2E6
A	577	GLN	-	expression tag	UNP Q9H2E6
A	578	PHE	-	expression tag	UNP Q9H2E6
A	579	GLU	-	expression tag	UNP Q9H2E6
A	580	LYS	-	expression tag	UNP Q9H2E6
B	17	GLU	-	expression tag	UNP Q9H2E6
B	18	THR	-	expression tag	UNP Q9H2E6
B	571	GLY	-	expression tag	UNP Q9H2E6
B	572	SER	-	expression tag	UNP Q9H2E6
B	573	TRP	-	expression tag	UNP Q9H2E6
B	574	SER	-	expression tag	UNP Q9H2E6
B	575	HIS	-	expression tag	UNP Q9H2E6
B	576	PRO	-	expression tag	UNP Q9H2E6
B	577	GLN	-	expression tag	UNP Q9H2E6
B	578	PHE	-	expression tag	UNP Q9H2E6
B	579	GLU	-	expression tag	UNP Q9H2E6
B	580	LYS	-	expression tag	UNP Q9H2E6

- Molecule 2 is a protein called TcsL.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	219	1589	1043	251	291	4	0	0

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	1268	SER	-	expression tag	UNP V5T923
C	1269	ALA	-	expression tag	UNP V5T923
C	1270	TRP	-	expression tag	UNP V5T923
C	1271	SER	-	expression tag	UNP V5T923
C	1272	HIS	-	expression tag	UNP V5T923
C	1273	PRO	-	expression tag	UNP V5T923
C	1274	GLN	-	expression tag	UNP V5T923
C	1275	PHE	-	expression tag	UNP V5T923
C	1276	GLU	-	expression tag	UNP V5T923
C	1277	LYS	-	expression tag	UNP V5T923
C	1278	GLU	-	expression tag	UNP V5T923
C	1279	ASN	-	expression tag	UNP V5T923
C	1280	LEU	-	expression tag	UNP V5T923
C	1281	TYR	-	expression tag	UNP V5T923
C	1282	PHE	-	expression tag	UNP V5T923
C	1283	GLN	-	expression tag	UNP V5T923
C	1284	GLY	-	expression tag	UNP V5T923
C	1805	GLY	-	expression tag	UNP V5T923
C	1806	SER	-	expression tag	UNP V5T923
C	1807	GLU	-	expression tag	UNP V5T923
C	1808	ASN	-	expression tag	UNP V5T923
C	1809	LEU	-	expression tag	UNP V5T923
C	1810	TYR	-	expression tag	UNP V5T923
C	1811	PHE	-	expression tag	UNP V5T923
C	1812	GLN	-	expression tag	UNP V5T923
C	1813	GLY	-	expression tag	UNP V5T923
C	1814	HIS	-	expression tag	UNP V5T923
C	1815	HIS	-	expression tag	UNP V5T923
C	1816	HIS	-	expression tag	UNP V5T923
C	1817	HIS	-	expression tag	UNP V5T923
C	1818	HIS	-	expression tag	UNP V5T923
C	1819	HIS	-	expression tag	UNP V5T923

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-a cetamido-2-deoxy-beta-D-glucopyranose.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	D	2	Total	C	N	O	0	0
			28	16	2	10		
3	E	2	Total	C	N	O	0	0
			28	16	2	10		
3	F	2	Total	C	N	O	0	0
			28	16	2	10		

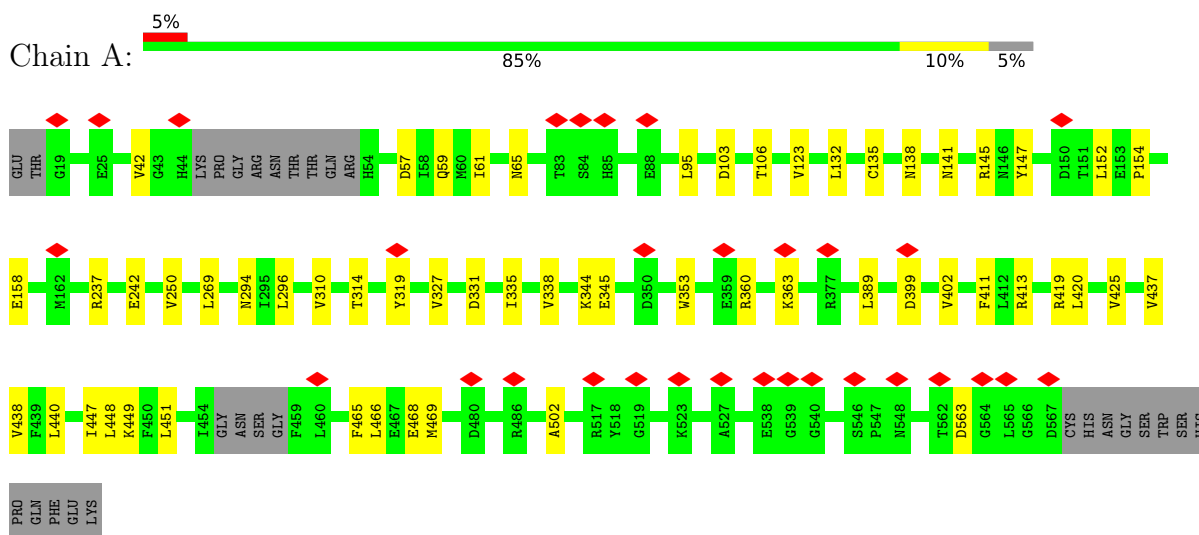- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).
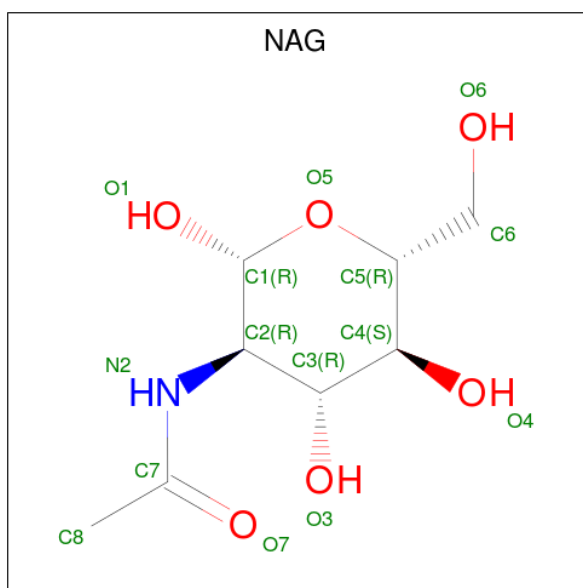
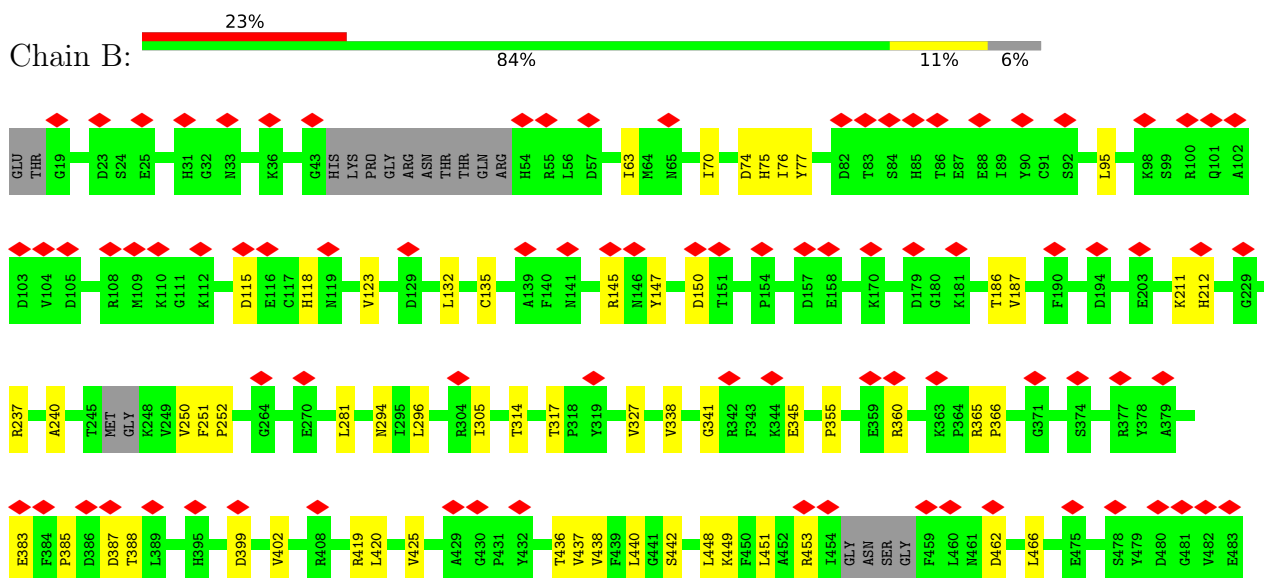| Mol	Chain	Residues	Atoms				AltConf
4	A	1	Total	C	N	O	0
			28	16	2	10	
4	A	1	Total	C	N	O	0
			28	16	2	10	
4	B	1	Total	C	N	O	0
			28	16	2	10	
4	B	1	Total	C	N	O	0
			28	16	2	10	

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 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: SEMA6A

- Molecule 1: SEMA6A

I1487 D493 S497 G513 R514 C515 E516 R517 Y518 G519 K520 C521 K522 K523 I526 A527 S528 R529 D530 C533 G534 W535 I536 K537 E538 G539 G540 A541 C542 S543 S546 P547 N548 S549 R550 L551 T552 F553 E554 Q555 D556 G560 N561 T562 D563 G564 L565 G566 ASP CYS HIS ASN

GLY SER TRP HIS PRO GLN PHE GLU LYS

● Molecule 2: TcsL

Chain C:

21%

32%   8%   60%

SER ALA TRP SER HIS PRO GLN PHE GLU GLU ASN LEU TYR PHE GLN GLY THR ASN VAL ARG ILE ASN LEU ASP GLY ASN THR ARG SER PHE ILE VAL PRO VAL ILE THR GLU ILE ARG ASN LEU SER TYR SER PHE TYR GLY SER GLY SER TYR LEU SER LEU

SER PRO TYR MET ASN ASP ILE ASP LEU ASN LEU VAL GLU ASN ASP THR TRP VAL ILE ASP VAL ASP ASN VAL VAL LYS ASN ILE THR ILE GLU SER ASP GLU ILE GLN LYS GLY LEU ILE LEU GLU ASN ILE ILE SER LYS LEU ASN ILE LEU ASP ASN ALA LYS SER ILE VAL LEU ASN ASN HIS

THR ILE ASN PHE TYR GLY ALA ILE ASN GLU SER ASN R1400 F1401 I1402 S1403 F1406 S1407 I1408 L1409 E1410 D1411 I1412 I1415 I1416 E1417 I1418 D1419 L1420 V1421 S1422 K1423 S1424 Y1425 L1429 N1432 C1433 I1434 I1437 E1438 N1439 D1442 I1443 Q1444 Q1445 K1446 H1449 I1450 G1451 G1454 E1455 H1456

Q1457 Y1462 I1465 D1466 N1467 E1468 T1469 F1474 I1475 D1476 K1480 E1481 G1482 L1483 I1494 R1495 N1496 I1497 Y1498 M1499 P1500 D1501 S1502 N1503 N1504 L1505 F1506 I1507 I1516 R1517 I1518 I1519 ASN LYS GLY D1523 V1524 K1525 L1526 L1527 I1528 G1529 N1530 Y1531 F1532 K1533 D1534 N1535 M1536 K1537 V1538 S1539 L1540

I1544 E1545 D1546 T1547 N1548 T1549 I1550 K1551 L1552 N1553 G1554 V1555 Y1556 L1557 D1558 E1559 N1560 G1561 V1562 A1563 Q1564 I1565 L1566 K1567 F1568 M1569 N1570 ASN ALA LYS SER ALA LEU ASN THR SER ASN SER L1582 M1583 N1584 F1585 L1586 E1587 S1588 I1589 N1590 I1591 K1592 N1597 N1602 I1603 K1604 F1605 I1606 L1607 D1608 T1609

N1610 F1611 I1612 I1613 S1614 G1615 SER ASN SER ILE GLY Q1621 F1622 E1623 L1624 I1625 C1626 D1627 K1628 D1629 K1630 N1631 I1632 Q1633 P1634 Y1635 F1636 I1637 LYS PHE LYS ILE LYS GLU THR SER TYR THR LEU TYR ALA GLY ASN ARG GLN ASN LEU ILE VAL GLU PRO SER TYR HIS LEU ASP ASP SER GLY ASN

ILE SER SER THR VAL ILE ASN PHE SER GLN LYS TYR LEU TYR GLY ILE ASP ARG TYR VAL ASN LYS VAL ILE THR PRO ASN LEU LEU TYR THR ASP GLU ILE ASN ILE THR PRO VAL TYR LYS PRO ASN ALA TYR THR ILE CYS PRO GLU VAL ILE LEU ASP ALA ASN TYR ILE ASN GLU LYS

ILE ASN ILE ASN ILE ASN ASP LEU SER GLN LYS TYR VAL TRP ASP ASP GLY SER ASP LEU LEU ALA ASN SER GLU ASP PRO GLN VAL LYS ILE ARG PHE VAL ASN VAL PHE LYS ASP SER THR ALA ALA ASP LYS LEU LEU PHE ASN PHE SER ASP LYS GLN

ASP VAL SER VAL SER LYS ILE ILE SER THR PHE SER LEU ALA ALA GLY SER GLU LEU TYR PHE GLN GLY HIS HIS HIS HIS HIS HIS

● Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain D: 100%

NAG1 NAG2

● Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E: 100%

NAG1
NAG2

• Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F: 100%

NAG1
NAG2

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	179188	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 $(e^-/\text{Å}^2)$	45.24	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	OTHER	Depositor
Maximum map value	16.825	Depositor
Minimum map value	-12.241	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	2.3	Depositor
Map size (Å)	125.659996, 120.509995, 148.31999	wwPDB
Map dimensions	144, 117, 122	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.03, 1.03, 1.03	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

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	0.25	0/4270	0.43	0/5786
1	B	0.24	0/4059	0.41	0/5523
2	C	0.25	0/1615	0.48	0/2196
All	All	0.25	0/9944	0.43	0/13505

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	363	LYS	Peptide

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.

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4170	0	4009	31	0
1	B	3964	0	3670	33	0
2	C	1589	0	1428	33	0
3	D	28	0	25	0	0
3	E	28	0	25	0	0
3	F	28	0	25	0	0
4	A	28	0	26	1	0
4	B	28	0	26	0	0
All	All	9863	0	9234	97	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.

The worst 5 of 97 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:123:VAL:HB	1:B:135:CYS:HB2	1.71	0.73
1:B:338:VAL:HG11	1:B:402:VAL:HG22	1.75	0.69
2:C:1495:ARG:HB2	2:C:1507:ILE:HG12	1.77	0.67
1:A:338:VAL:HG11	1:A:402:VAL:HG22	1.79	0.62
1:A:314:THR:HG22	1:A:327:VAL:HG22	1.82	0.61

There are no symmetry-related clashes.

5.3   Torsion angles ⓘ

5.3.1   Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	530/564 (94%)	510 (96%)	19 (4%)	1 (0%)	47	77
1	B	524/564 (93%)	509 (97%)	15 (3%)	0	100	100
2	C	211/552 (38%)	196 (93%)	15 (7%)	0	100	100
All	All	1265/1680 (75%)	1215 (96%)	49 (4%)	1 (0%)	54	81

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	42	VAL

5.3.2   Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	445/494 (90%)	445 (100%)	0	100	100
1	B	393/494 (80%)	393 (100%)	0	100	100
2	C	145/515 (28%)	145 (100%)	0	100	100
All	All	983/1503 (65%)	983 (100%)	0	100	100

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

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

5.3.3   RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5   Carbohydrates ⓘ

6 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	$\#|Z| > 2$
3	NAG	D	1	3,1	14,14,15	0.23	0	17,19,21	0.46	0
3	NAG	D	2	3	14,14,15	0.27	0	17,19,21	0.43	0
3	NAG	E	1	3,1	14,14,15	0.24	0	17,19,21	0.50	0
3	NAG	E	2	3	14,14,15	0.25	0	17,19,21	0.44	0
3	NAG	F	1	3,1	14,14,15	0.37	0	17,19,21	0.59	0
3	NAG	F	2	3	14,14,15	0.17	0	17,19,21	0.52	0

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

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 16 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	E	2	NAG	O5-C5-C6-O6
3	F	2	NAG	O5-C5-C6-O6
3	E	2	NAG	C4-C5-C6-O6
3	D	1	NAG	C8-C7-N2-C2
3	D	1	NAG	O7-C7-N2-C2

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 F

Bond lengths

Bond angles

Torsions

Rings
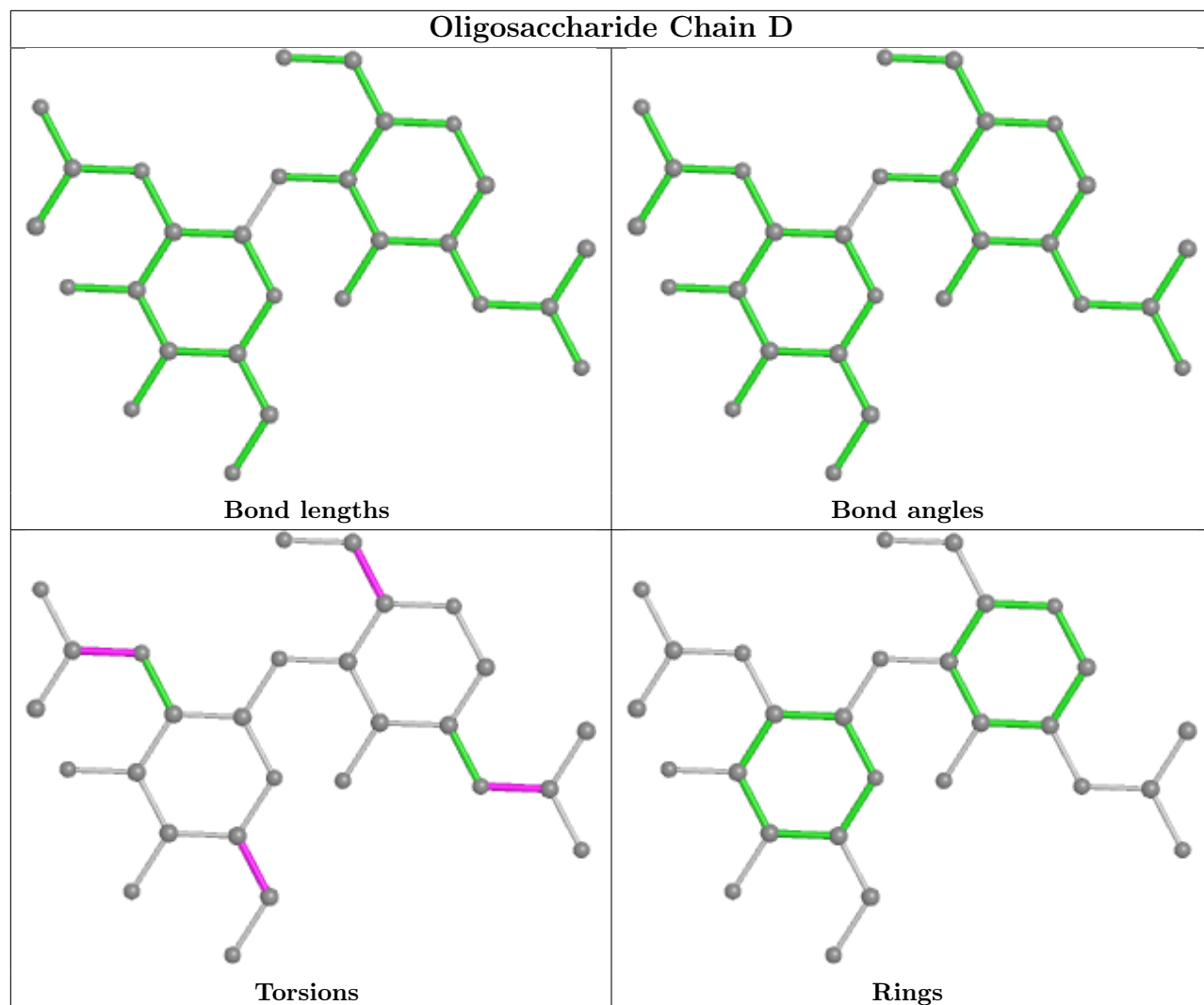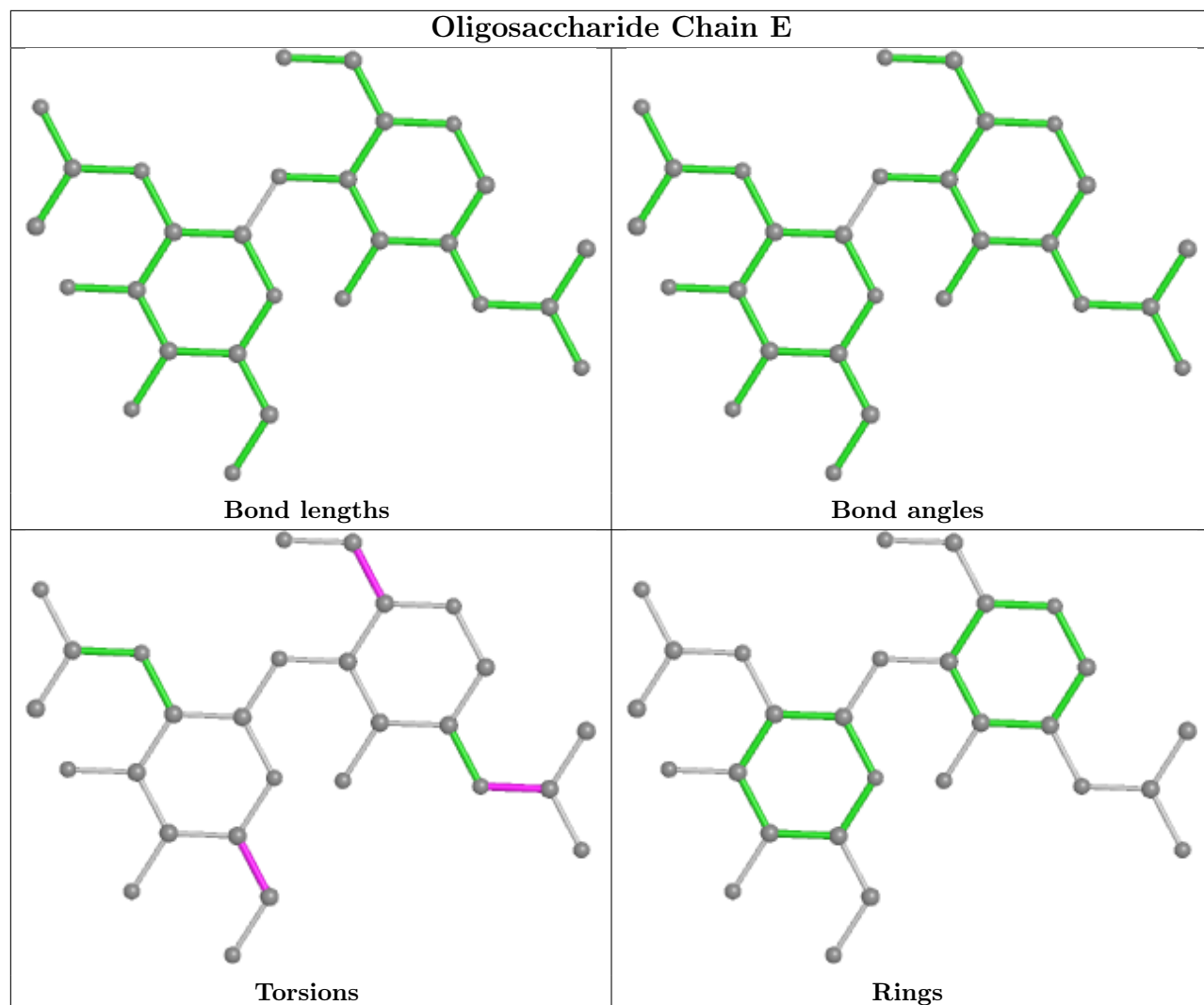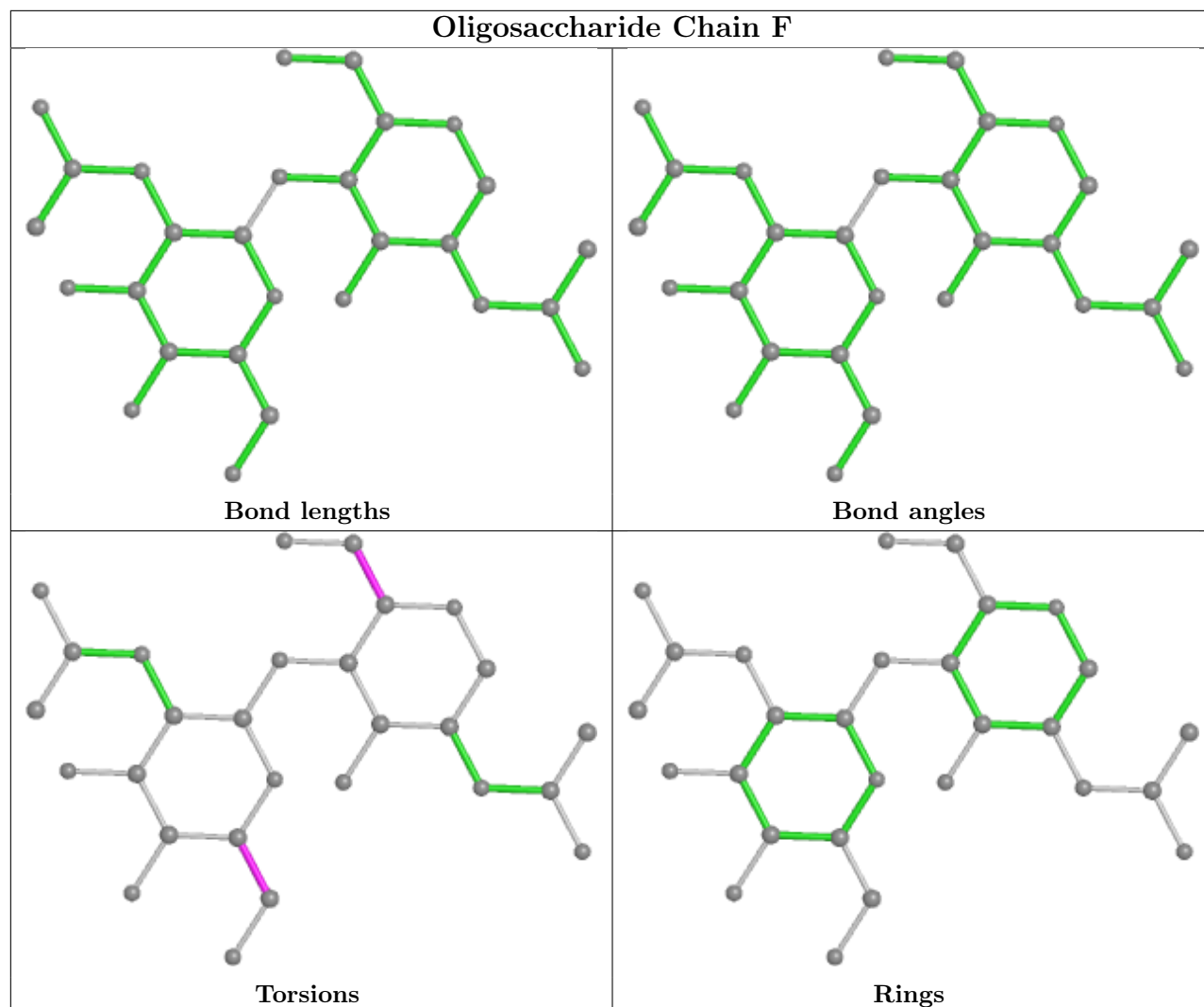
5.6 Ligand geometry ⓘ

4 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
4	NAG	A	605	1	14,14,15	0.26	0	17,19,21	0.45	0
4	NAG	A	606	1	14,14,15	0.40	0	17,19,21	0.53	0
4	NAG	B	1303	1	14,14,15	0.22	0	17,19,21	0.41	0
4	NAG	B	1304	1	14,14,15	0.30	0	17,19,21	0.49	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	A	605	1	-	3/6/23/26	0/1/1/1
4	NAG	A	606	1	-	2/6/23/26	0/1/1/1
4	NAG	B	1303	1	-	2/6/23/26	0/1/1/1
4	NAG	B	1304	1	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 9 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	606	NAG	O5-C5-C6-O6
4	B	1303	NAG	O5-C5-C6-O6
4	B	1304	NAG	O5-C5-C6-O6
4	A	606	NAG	C4-C5-C6-O6
4	A	605	NAG	C8-C7-N2-C2

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	606	NAG	1	0

5.7　Other polymers ⓘ

There are no such residues in this entry.

5.8　Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-21898. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections ⓘ

6.1.1 Primary map

| X | Y | Z |
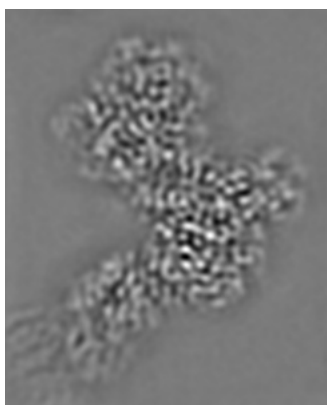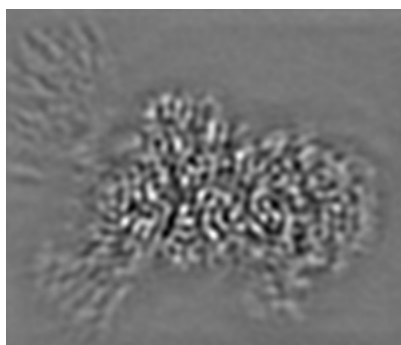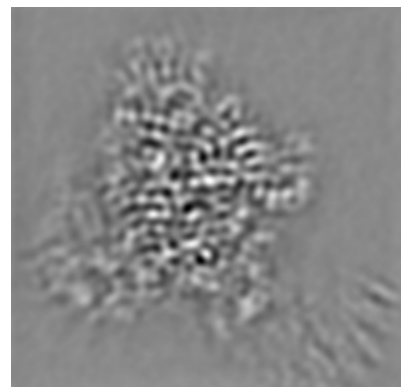
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ
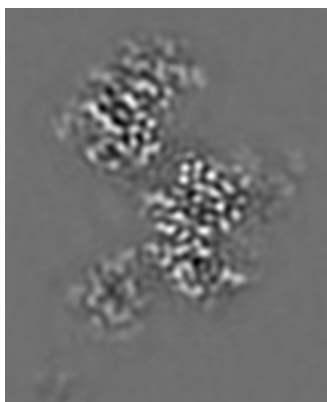
6.2.1 Primary map
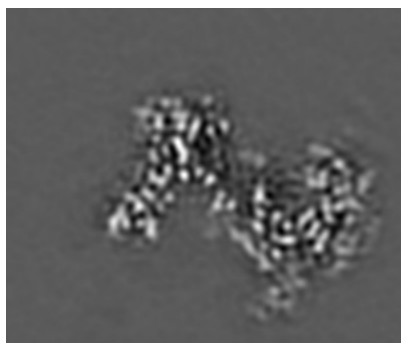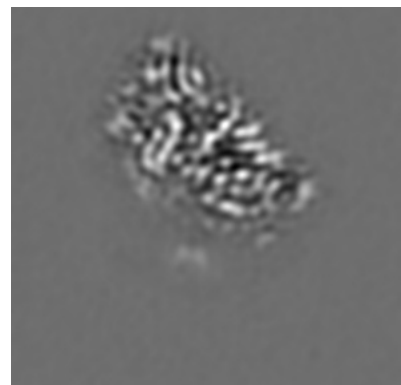
| X Index: 61 | Y Index: 58 | Z Index: 72 |

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

6.3   Largest variance slices ⓘ
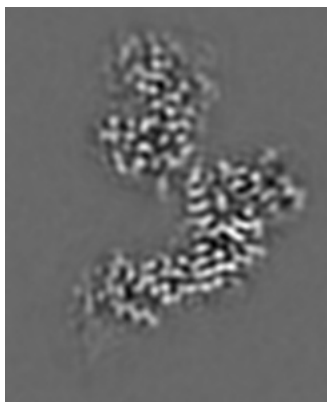
6.3.1   Primary map
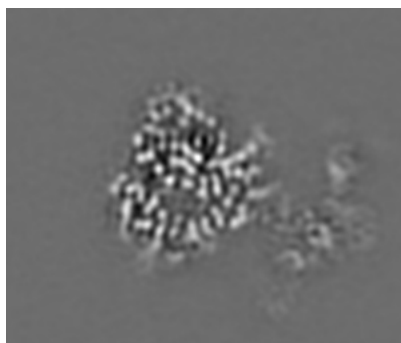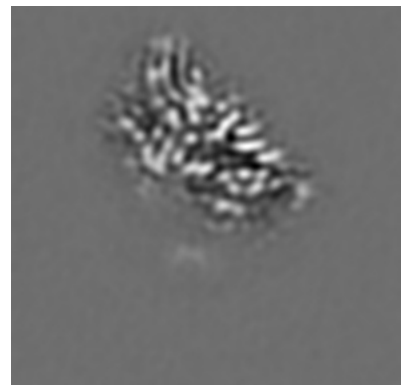
| X Index: 45 | Y Index: 68 | Z Index: 71 |

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

6.4   Orthogonal surface views ⓘ

6.4.1   Primary map

| X | Y | Z |
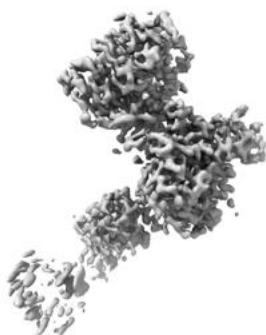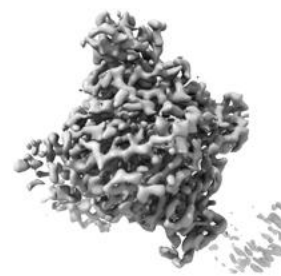
The images above show the 3D surface view of the map at the recommended contour level 2.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5 Mask visualisation ⓘ

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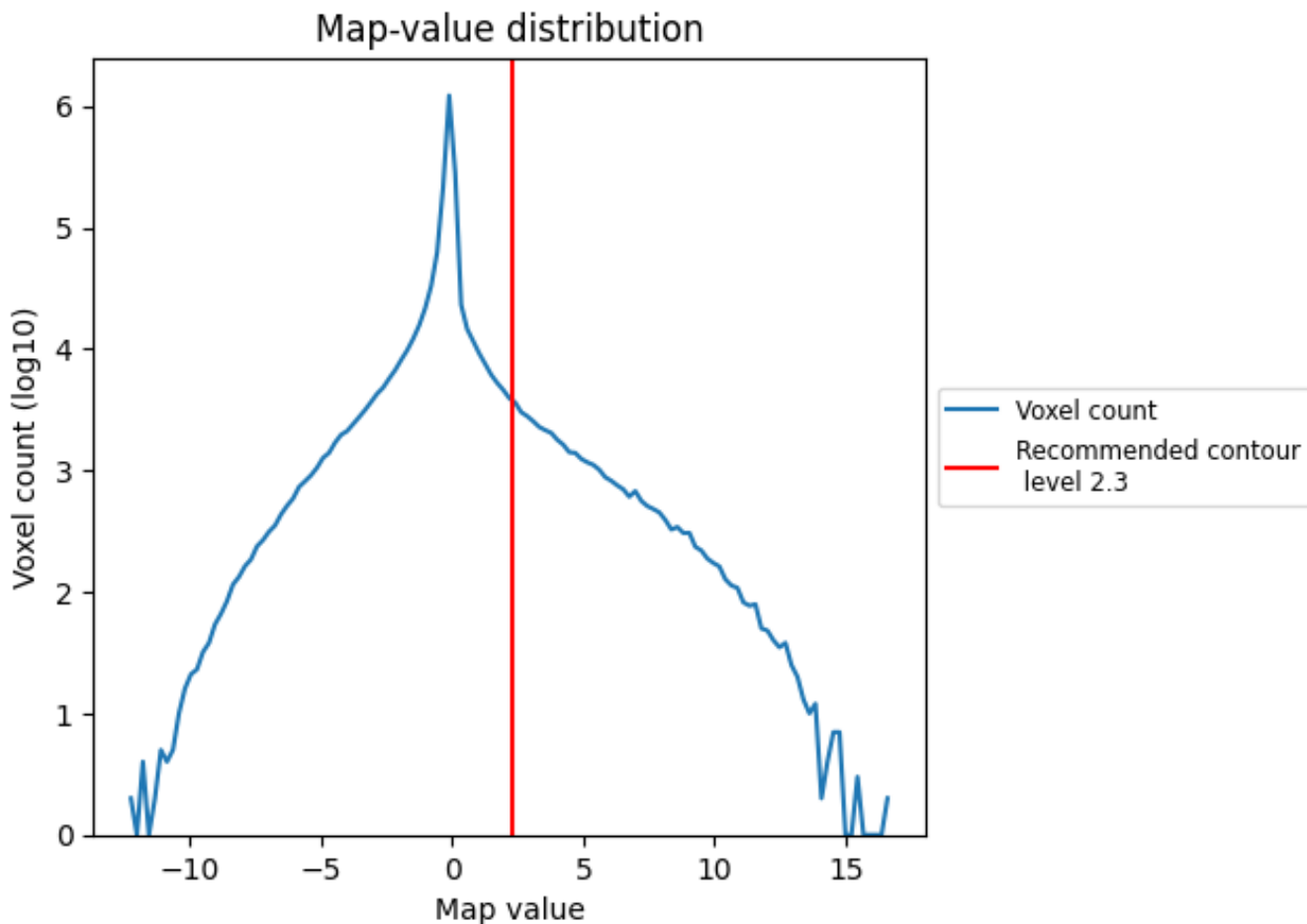
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2   Volume estimate ⓘ
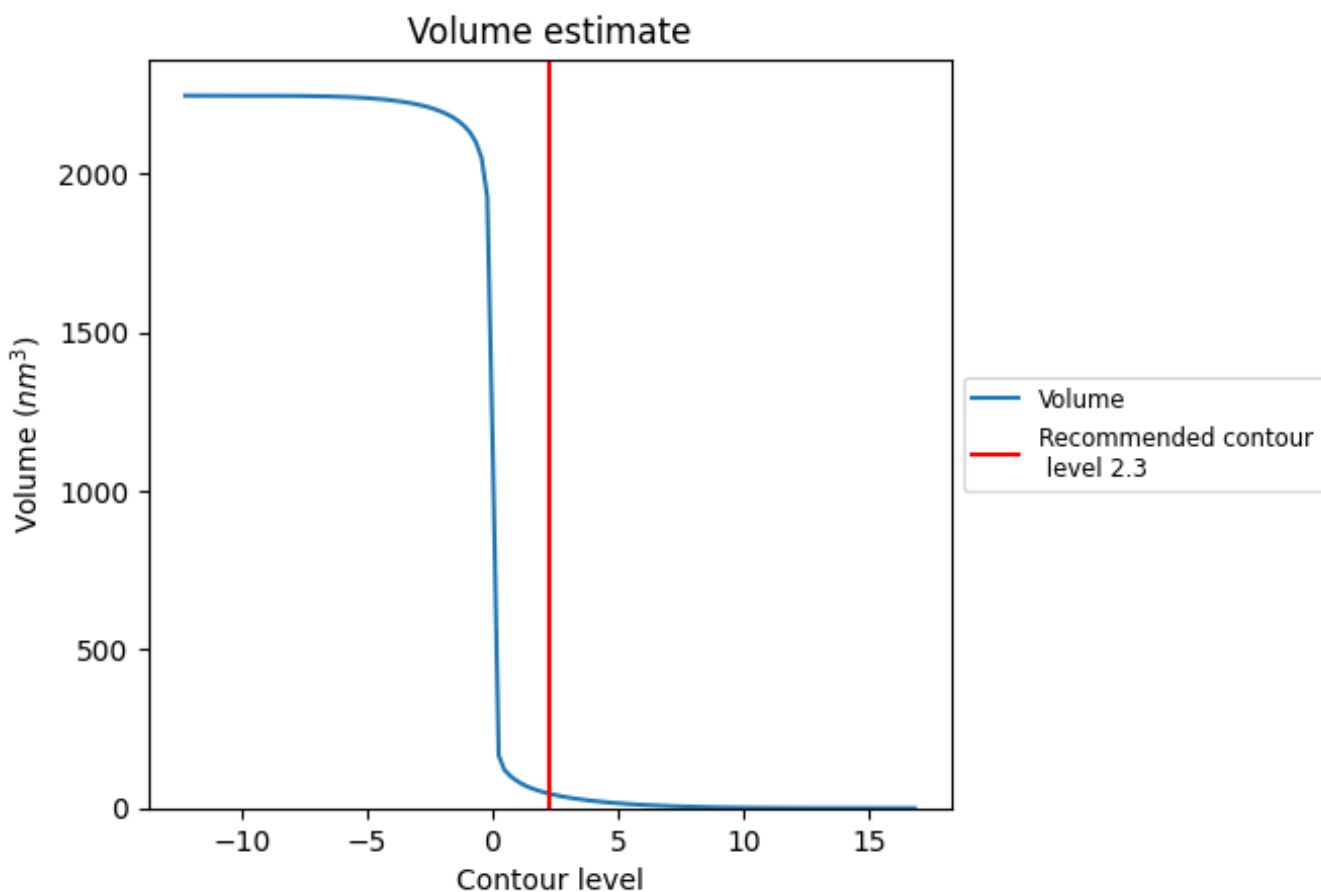
The volume at the recommended contour level is 45 nm^3; this corresponds to an approximate mass of 40 kDa.

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 ⓘ

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9   Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-21898 and PDB model 6WTS. Per-residue inclusion information can be found in section 3 on page 6.

9.1   Map-model overlay (i)
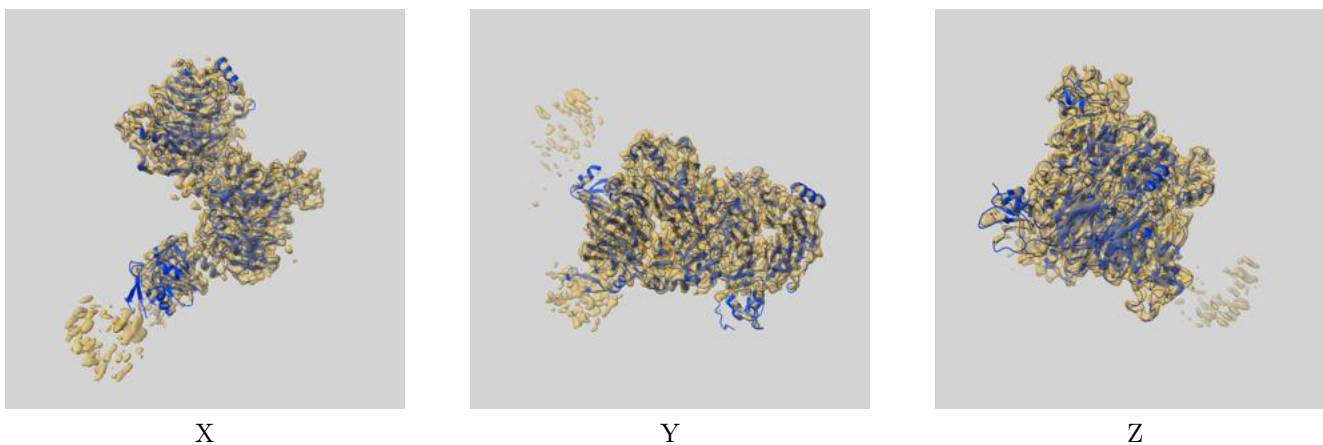
The images above show the 3D surface view of the map at the recommended contour level 2.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2   Q-score mapped to coordinate model ⓘ

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 ⓘ
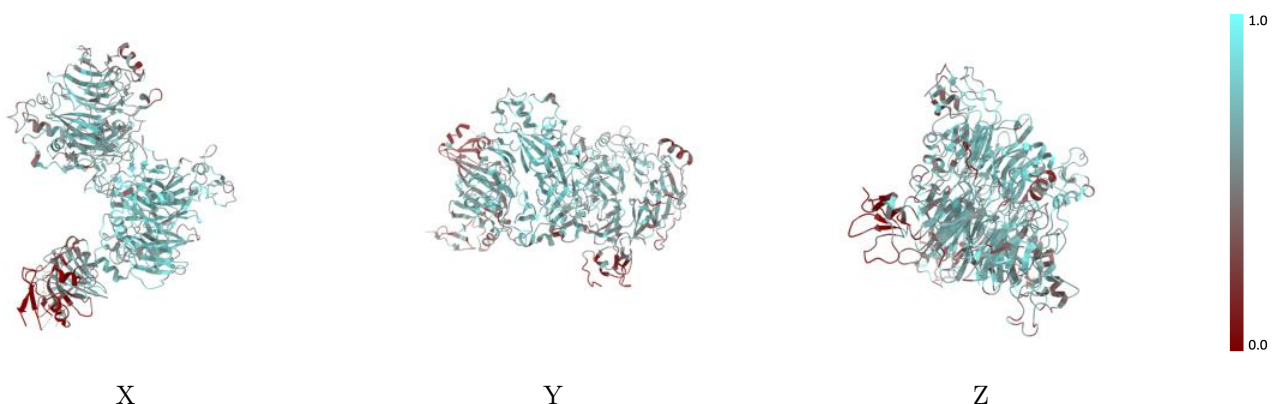
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (2.3).

9.4 Atom inclusion ⓘ
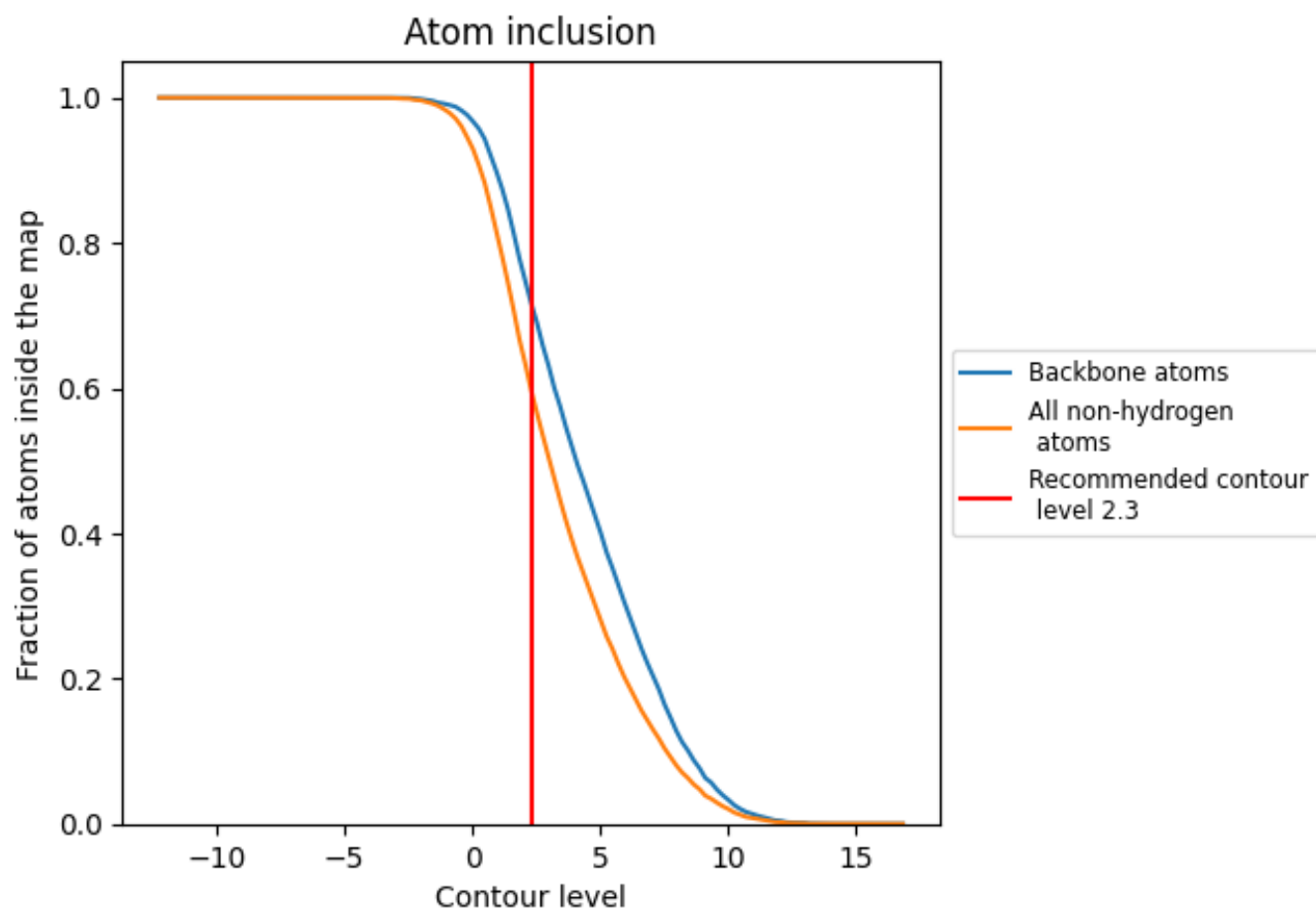
At the recommended contour level, 72% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (2.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5958	0.4630
A	0.6971	0.5010
B	0.5701	0.4630
C	0.3934	0.3650
D	0.6786	0.4790
E	0.6429	0.4660
F	0.5714	0.4650

1.0

0.0
<0.0