



# wwPDB X-ray Structure Validation Summary Report ⓘ

Mar 5, 2026 – 09:51 AM UTC

PDB ID : 4QN9 / pdb\_00004qn9  
Title : Structure of human NAPE-PLD  
Authors : Garau, G.  
Deposited on : 2014-06-17  
Resolution : 2.65 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4-5-2 with Phenix2.0  
Mogul : 2022.3.0, CSD as543be (2022)  
Xtrriage (Phenix) : 2.0  
EDS : 3.0  
Buster-report : wwPDB partial adaption of 1.1.7 (2018)  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
CCP4 : 9.0.010 (Gargrove)  
Density-Fitness : 1.0.12  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.49

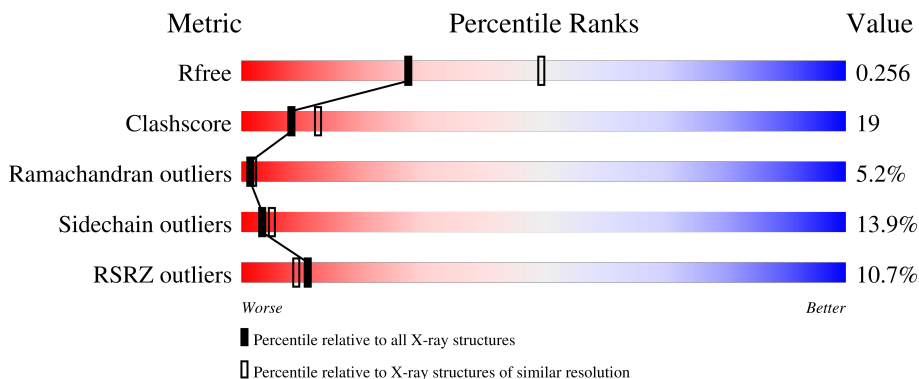
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.65 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	180053	1110 (2.66-2.66)
Clashscore	190562	1141 (2.66-2.66)
Ramachandran outliers	187476	1126 (2.66-2.66)
Sidechain outliers	187428	1126 (2.66-2.66)
RSRZ outliers	180081	1110 (2.66-2.66)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	393	
1	B	393	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	SO4	B	611	-	-	X	-

## 2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 5875 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

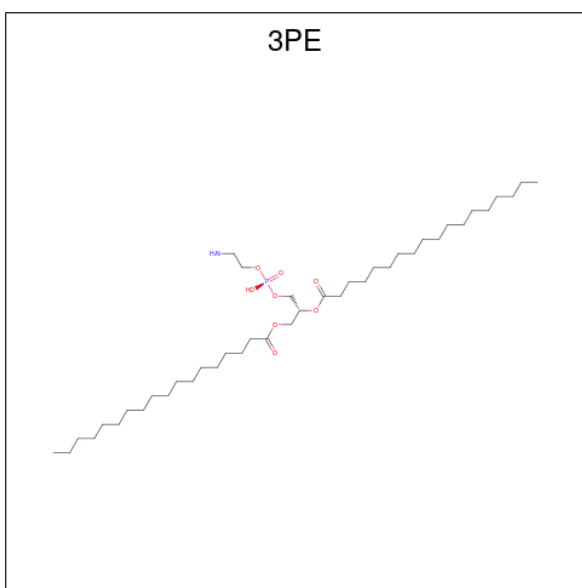
- Molecule 1 is a protein called N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	321	Total 2679	C 1732	N 452	O 482	S 13	0	8	0
1	B	322	Total 2682	C 1732	N 452	O 485	S 13	0	7	0

- Molecule 2 is ZINC ION (CCD ID: ZN) (formula: Zn).

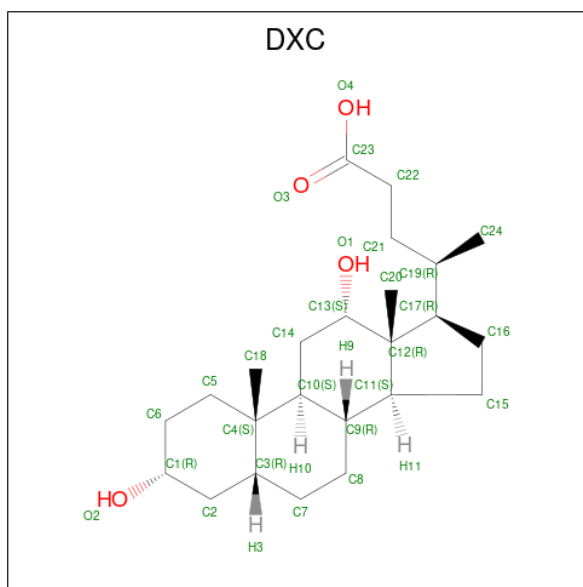
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	2	Total 2	Zn 2	0	0
2	B	2	Total 2	Zn 2	0	0

- Molecule 3 is 1,2-Distearoyl-sn-glycerophosphoethanolamine (CCD ID: 3PE) (formula: C<sub>41</sub>H<sub>82</sub>NO<sub>8</sub>P).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
3	A	1	Total	C	N	O	P	0	0
			44	34	1	8	1		
3	B	1	Total	C	N	O	P	0	0
			44	34	1	8	1		

- Molecule 4 is (3ALPHA,5BETA,12ALPHA)-3,12-DIHYDROXYCHOLAN-24-OIC ACID (CCD ID: DXC) (formula: C<sub>24</sub>H<sub>40</sub>O<sub>4</sub>).



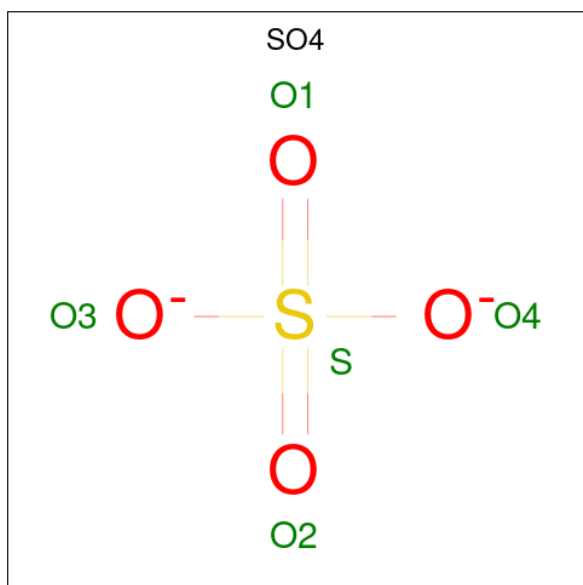
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			28	24	4		
4	A	1	Total	C	O	0	0
			28	24	4		
4	A	1	Total	C	O	0	0
			28	24	4		
4	A	1	Total	C	O	0	0
			28	24	4		
4	B	1	Total	C	O	0	0
			28	24	4		
4	B	1	Total	C	O	0	0
			28	24	4		
4	B	1	Total	C	O	0	0
			28	24	4		
4	B	1	Total	C	O	0	0
			28	24	4		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	B	1	Total	C	O	0	0
			28	24	4		
4	B	1	Total	C	O	0	0
			28	24	4		

- Molecule 5 is SULFATE ION (CCD ID: SO4) (formula: O<sub>4</sub>S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	O	S	0	0
			5	4	1		
5	A	1	Total	O	S	0	0
			5	4	1		
5	B	1	Total	O	S	0	0
			5	4	1		

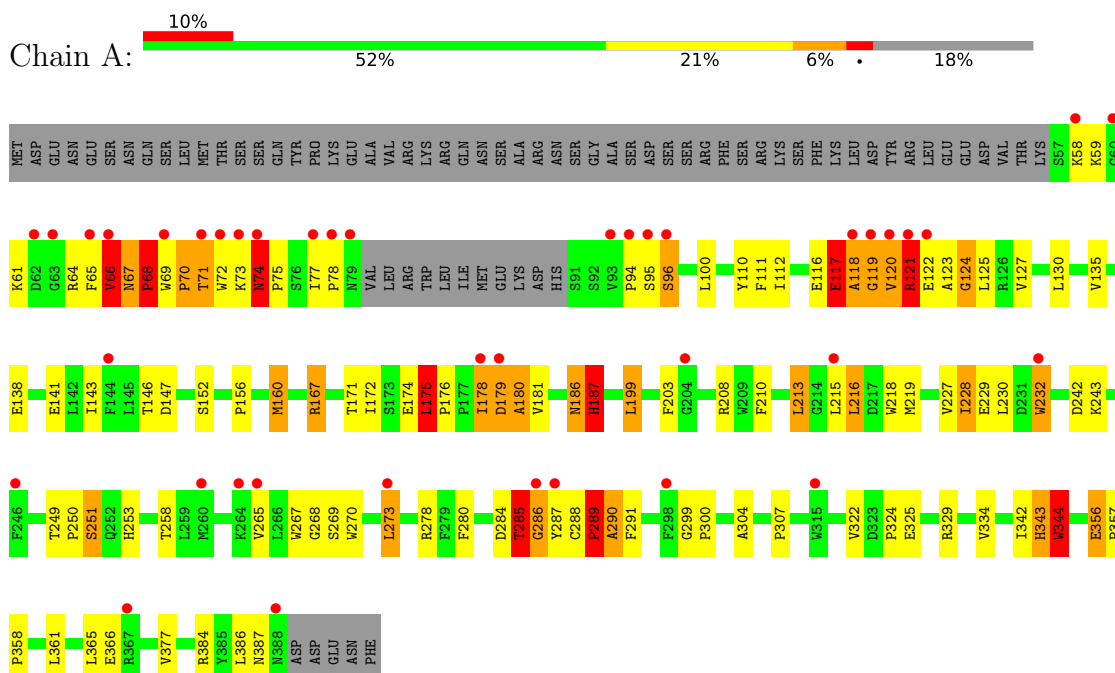
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	36	Total	O	0	0
			36	36		
6	B	62	Total	O	0	1
			63	63		

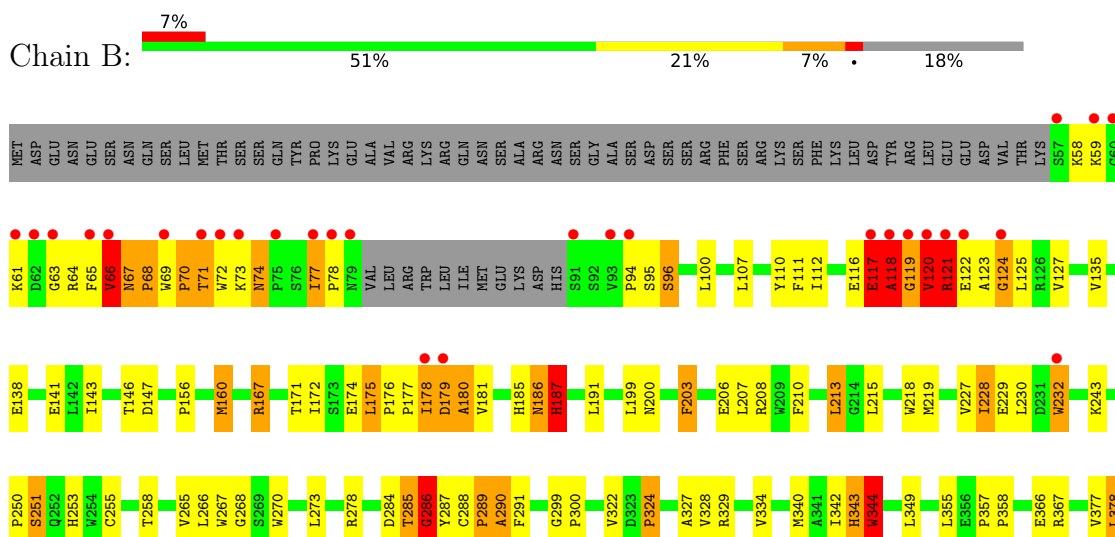
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D



- Molecule 1: N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D



R364
N357
N358
D359
ASP
GLU
ASN
PHE

## 4 Data and refinement statistics

Property	Value	Source
Space group	P 65 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	95.10Å 95.10Å 444.17Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	82.36 – 2.65 82.36 – 2.65	Depositor EDS
% Data completeness (in resolution range)	100.0 (82.36-2.65) 100.0 (82.36-2.65)	Depositor EDS
$R_{merge}$	0.05	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	3.68 (at 2.65Å)	Xtrriage
Refinement program	CCP4, REFMAC 5.7.0029	Depositor
R, $R_{free}$	0.214 , 0.253 0.218 , 0.256	Depositor DCC
$R_{free}$ test set	1794 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	72.1	Xtrriage
Anisotropy	0.241	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.35 , 84.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	5875	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	76.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.91% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: DXC, ZN, SO4, 3PE

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	0.85	1/2774 (0.0%)	1.14	16/3777 (0.4%)
1	B	1.06	5/2773 (0.2%)	1.19	12/3777 (0.3%)
All	All	0.96	6/5547 (0.1%)	1.16	28/7554 (0.4%)

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	9
1	B	0	8
All	All	0	17

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	118	ALA	C-O	-7.39	1.17	1.24
1	B	71	THR	CA-C	6.62	1.61	1.52
1	A	71	THR	CA-C	6.54	1.61	1.52
1	B	117	GLU	CA-C	5.87	1.60	1.52
1	B	286	GLY	CA-C	-5.12	1.44	1.51

The worst 5 of 28 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	121	ARG	NE-CZ-NH2	-11.36	108.98	119.20
1	A	121	ARG	CD-NE-CZ	10.27	138.77	124.40
1	A	287	TYR	N-CA-C	-10.17	92.67	109.24
1	B	121	ARG	NE-CZ-NH1	-9.40	112.10	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	121	ARG	NE-CZ-NH2	8.99	127.29	119.20

There are no chirality outliers.

5 of 17 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	116	GLU	Peptide
1	A	117	GLU	Peptide
1	A	118	ALA	Peptide
1	A	121	ARG	Sidechain
1	A	175[A]	LEU	Peptide

## 5.2 Too-close contacts [i](#)

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	2679	0	2572	99	0
1	B	2682	0	2567	114	0
2	A	2	0	0	0	0
2	B	2	0	0	0	0
3	A	44	0	62	1	0
3	B	44	0	62	1	0
4	A	112	0	156	10	0
4	B	196	0	273	8	0
5	A	10	0	0	1	0
5	B	5	0	0	2	0
6	A	36	0	0	0	0
6	B	63	0	0	3	0
All	All	5875	0	5692	221	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 19.

The worst 5 of 221 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:118:ALA:HB1	1:B:138:GLU:OE1	1.41	1.17
1:A:118:ALA:HB1	1:A:138:GLU:OE1	1.50	1.10
1:B:175[B]:LEU:HB2	1:B:176[B]:PRO:HD2	1.09	1.07
1:A:232:TRP:HZ3	1:A:267:TRP:O	1.39	1.06
1:B:232:TRP:HZ3	1:B:267:TRP:O	1.39	1.05

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	325/393 (83%)	284 (87%)	22 (7%)	19 (6%)	1	1
1	B	325/393 (83%)	281 (86%)	26 (8%)	18 (6%)	1	2
All	All	650/786 (83%)	565 (87%)	48 (7%)	37 (6%)	1	1

5 of 37 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	66	VAL
1	A	67	ASN
1	A	119	GLY
1	A	120	VAL
1	A	121	ARG

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	291/352 (83%)	246 (84%)	45 (16%)	2	3
1	B	291/352 (83%)	254 (87%)	37 (13%)	4	6
All	All	582/704 (83%)	500 (86%)	82 (14%)	3	5

5 of 82 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	117	GLU
1	B	334	VAL
1	B	135	VAL
1	B	228	ILE
1	B	355	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	277	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 20 ligands modelled in this entry, 4 are monoatomic - leaving 16 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
4	DXC	A	504	-	31,31,31	0.95	2 (6%)	49,49,49	1.34	7 (14%)
5	SO4	B	611	-	4,4,4	0.67	0	6,6,6	0.63	0
4	DXC	B	610	-	31,31,31	1.03	2 (6%)	49,49,49	2.40	16 (32%)
4	DXC	B	601	-	31,31,31	0.98	1 (3%)	49,49,49	1.38	8 (16%)
4	DXC	B	609	-	31,31,31	1.18	3 (9%)	49,49,49	2.14	13 (26%)
4	DXC	B	603	-	31,31,31	1.32	3 (9%)	49,49,49	3.88	23 (46%)
5	SO4	A	508	-	4,4,4	0.53	0	6,6,6	0.42	0
4	DXC	A	506	-	31,31,31	0.97	1 (3%)	49,49,49	1.34	6 (12%)
4	DXC	B	607	-	31,31,31	1.12	4 (12%)	49,49,49	1.54	12 (24%)
3	3PE	A	503	2	43,43,50	0.97	3 (6%)	46,48,55	1.37	4 (8%)
4	DXC	B	602	-	31,31,31	0.96	1 (3%)	49,49,49	1.22	6 (12%)
4	DXC	A	505	-	31,31,31	1.00	1 (3%)	49,49,49	1.32	7 (14%)
4	DXC	B	608	-	31,31,31	1.15	3 (9%)	49,49,49	1.61	13 (26%)
4	DXC	A	507	-	31,31,31	1.26	3 (9%)	49,49,49	3.55	20 (40%)
5	SO4	A	509	-	4,4,4	0.49	0	6,6,6	0.30	0
3	3PE	B	606	2	43,43,50	1.04	2 (4%)	46,48,55	1.42	6 (13%)

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	DXC	A	504	-	-	2/9/71/71	0/4/4/4
4	DXC	B	610	-	-	9/9/71/71	0/4/4/4
4	DXC	B	601	-	-	0/9/71/71	0/4/4/4
4	DXC	B	609	-	-	1/9/71/71	0/4/4/4
4	DXC	B	603	-	-	3/9/71/71	0/4/4/4
4	DXC	A	506	-	-	3/9/71/71	0/4/4/4
4	DXC	B	607	-	-	0/9/71/71	0/4/4/4
3	3PE	A	503	2	-	17/47/47/54	-
4	DXC	B	602	-	-	2/9/71/71	0/4/4/4
4	DXC	A	505	-	-	2/9/71/71	0/4/4/4
4	DXC	B	608	-	-	3/9/71/71	0/4/4/4
4	DXC	A	507	-	-	4/9/71/71	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	3PE	B	606	2	-	17/47/47/54	-

The worst 5 of 29 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	603	DXC	C12-C11	-4.89	1.47	1.55
3	B	606	3PE	O21-C21	4.82	1.47	1.34
3	A	503	3PE	O21-C21	4.27	1.46	1.34
4	A	507	DXC	C12-C11	-3.16	1.50	1.55
4	A	507	DXC	C12-C17	-3.08	1.50	1.55

The worst 5 of 141 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	603	DXC	C12-C11-C9	-14.85	98.73	114.69
4	A	507	DXC	C12-C11-C9	-13.78	99.87	114.69
4	B	603	DXC	C11-C9-C10	-11.63	93.89	109.09
4	A	507	DXC	C11-C9-C10	-11.08	94.61	109.09
4	B	603	DXC	C11-C12-C13	7.85	114.59	107.42

There are no chirality outliers.

5 of 63 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	503	3PE	C1-O11-P-O12
3	A	503	3PE	C1-O11-P-O13
3	B	606	3PE	C1-O11-P-O12
3	B	606	3PE	C1-O11-P-O13
4	B	610	DXC	C12-C17-C19-C24

There are no ring outliers.

11 monomers are involved in 20 short contacts:

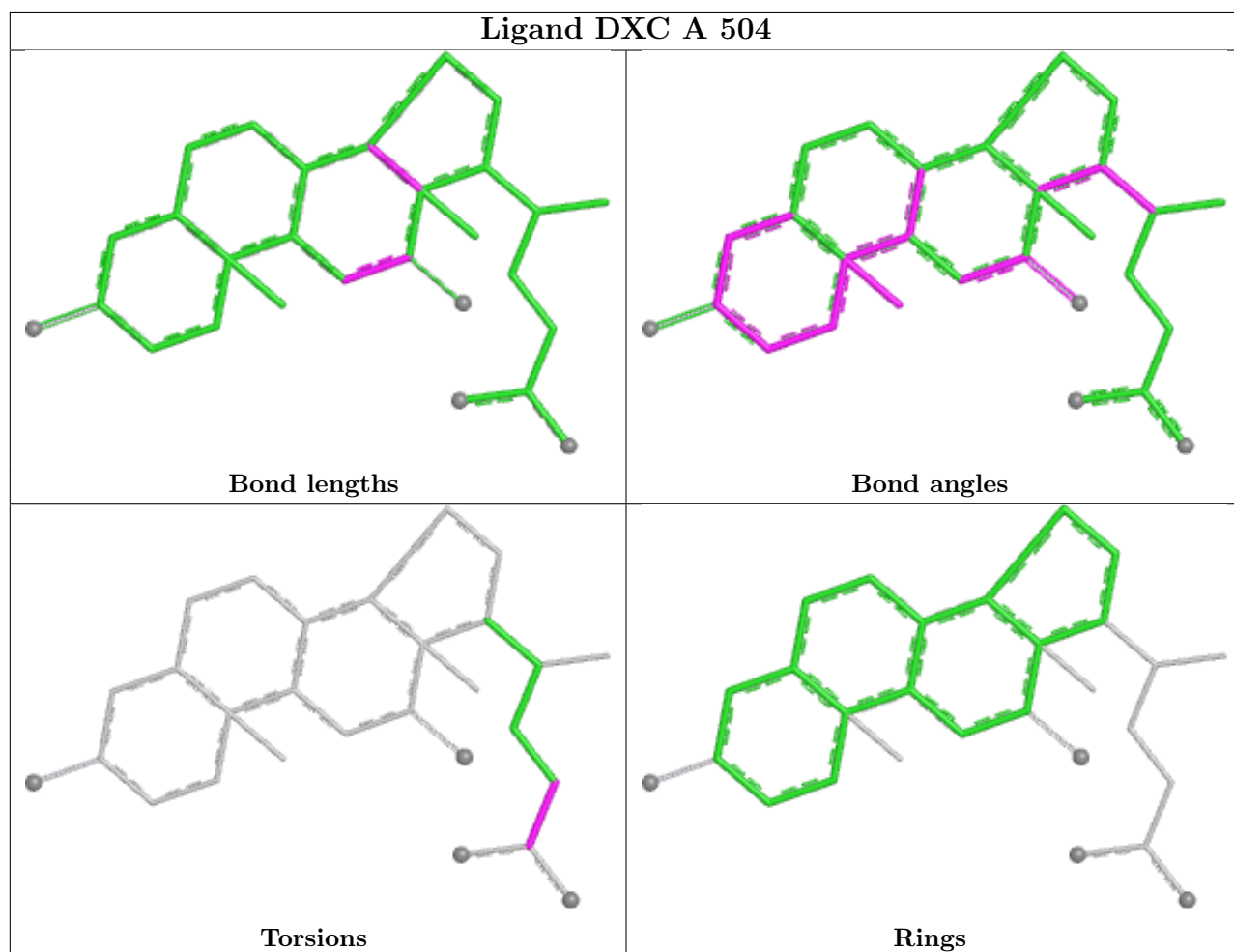
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	504	DXC	3	0
5	B	611	SO4	2	0
4	B	601	DXC	2	0
4	B	603	DXC	2	0
5	A	508	SO4	1	0
4	B	607	DXC	3	0
3	A	503	3PE	1	0

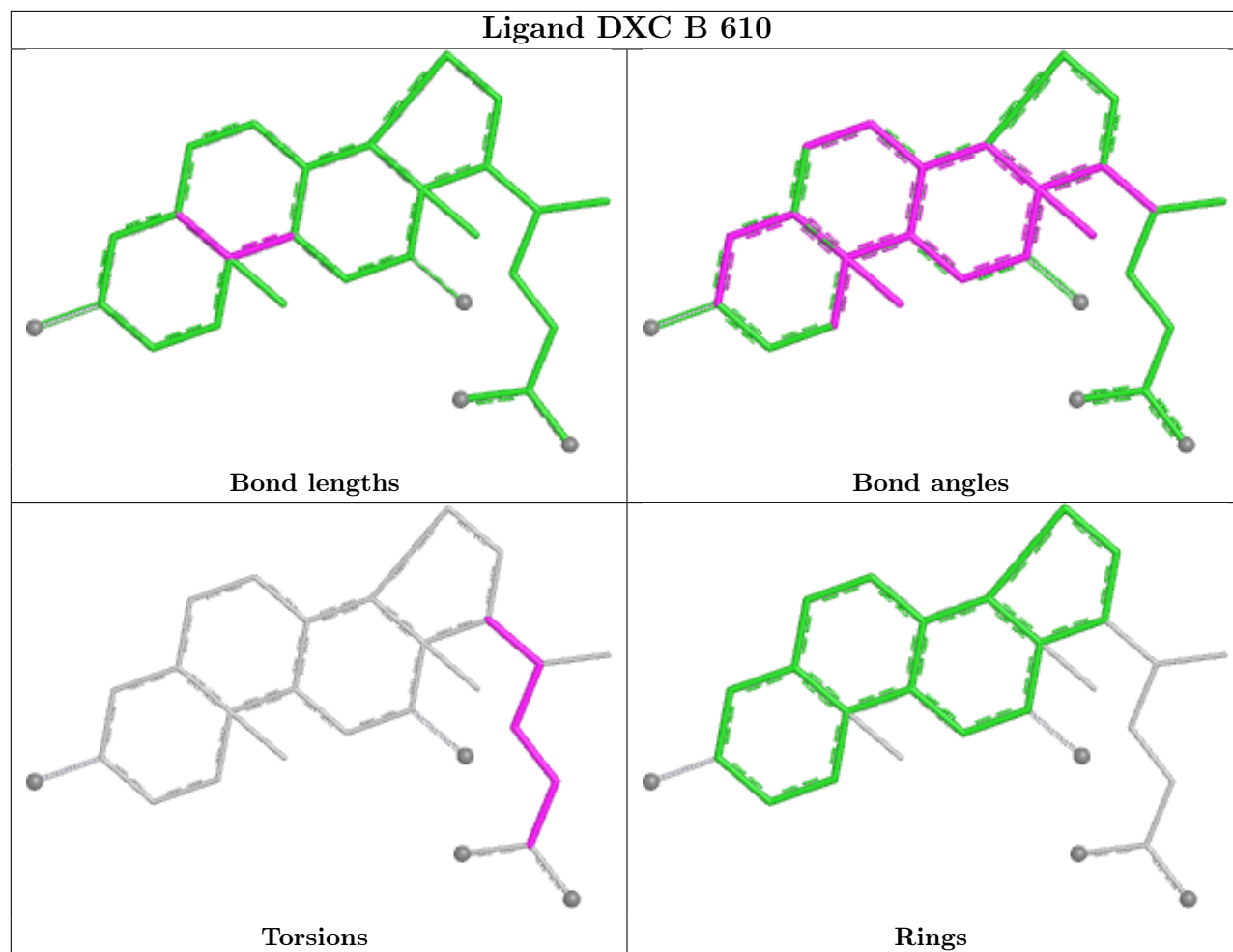
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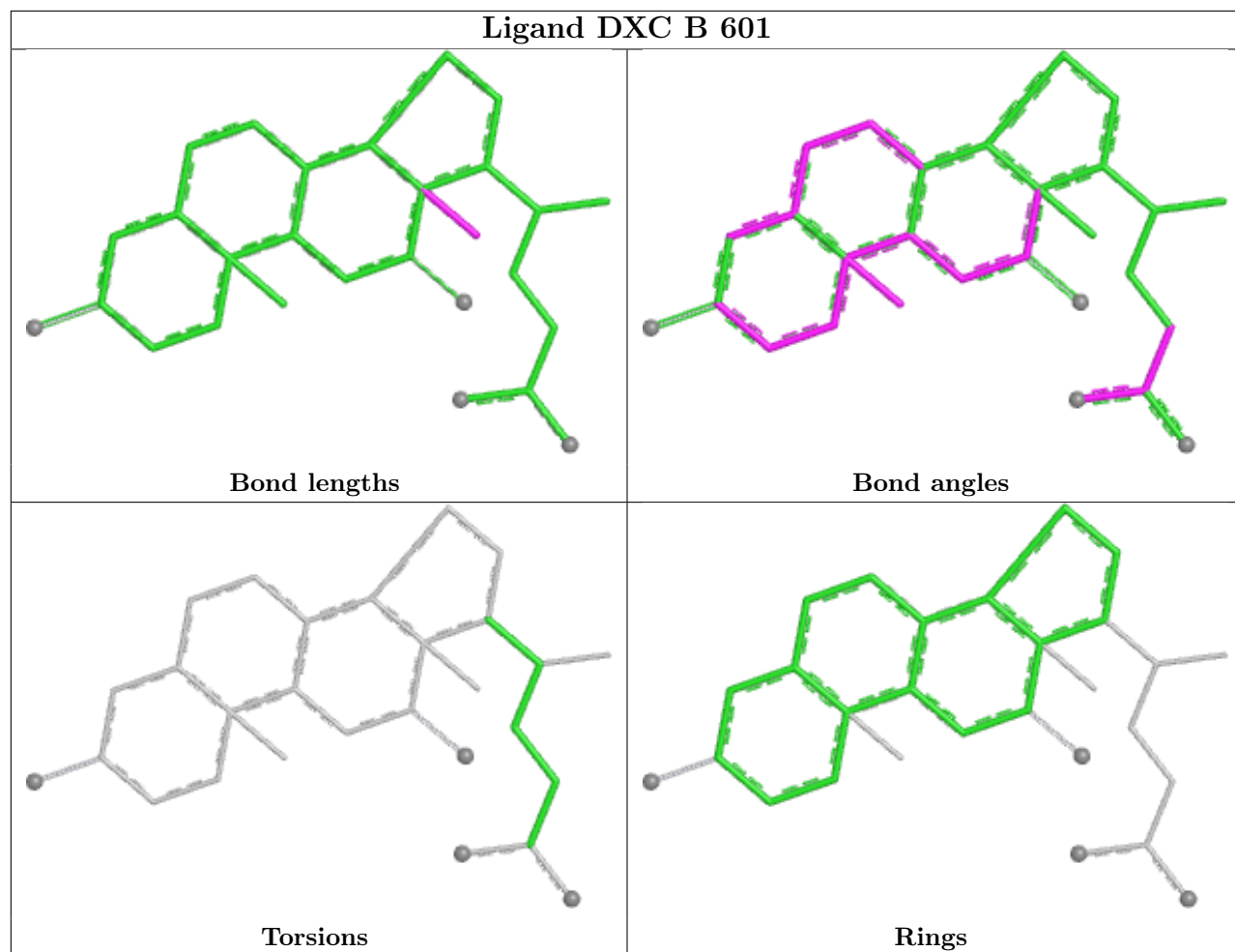
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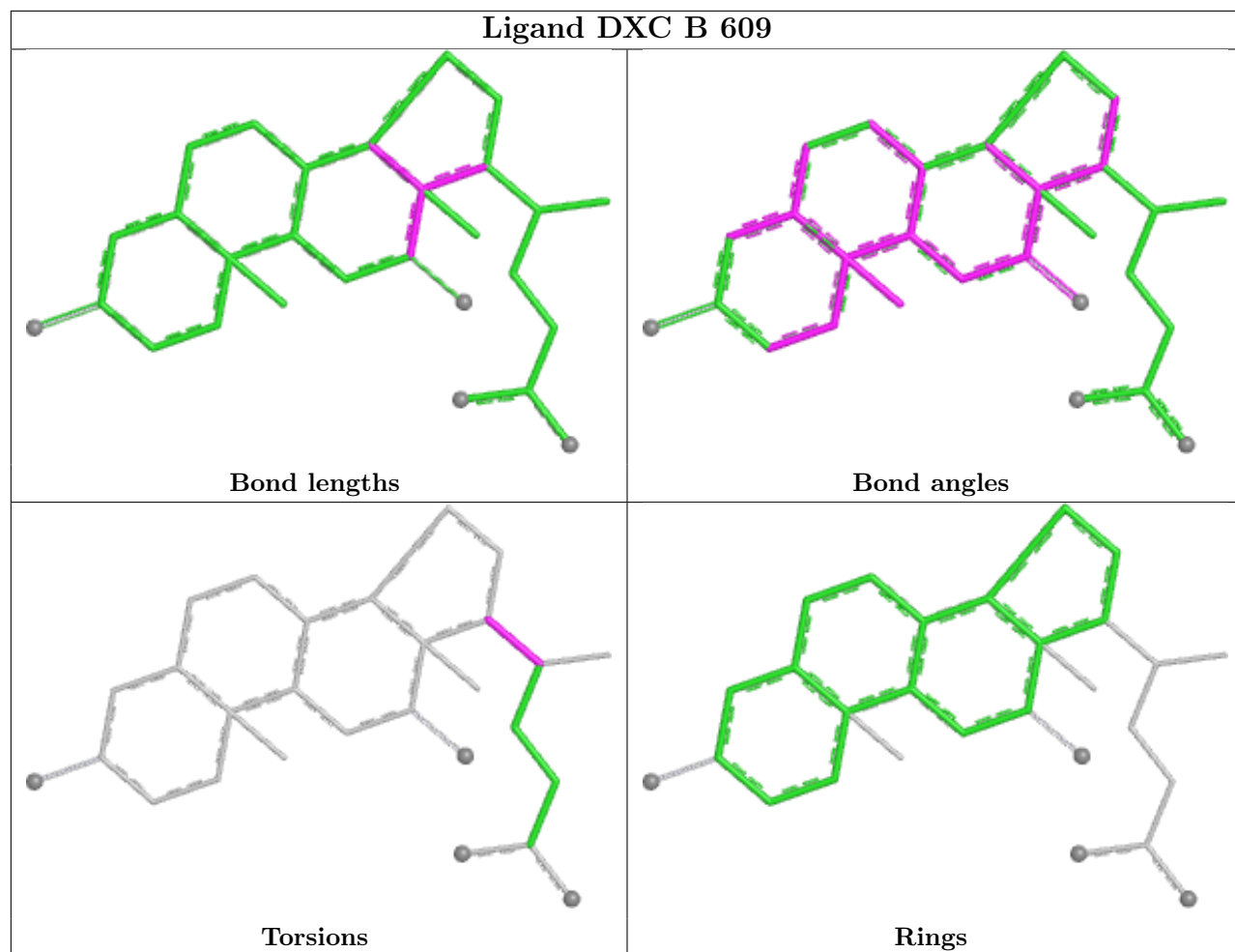
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	602	DXC	2	0
4	A	505	DXC	3	0
4	A	507	DXC	4	0
3	B	606	3PE	1	0

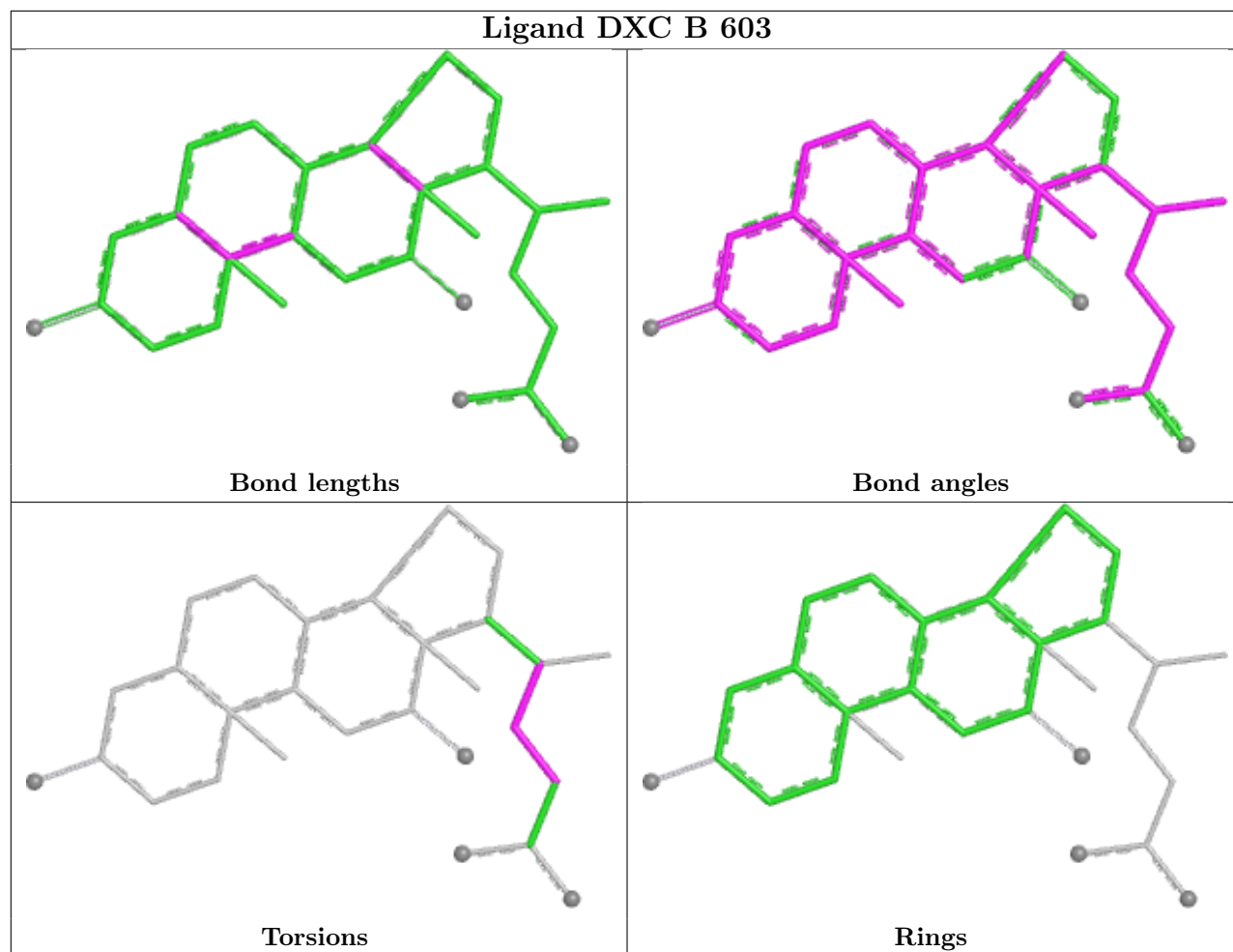
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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.

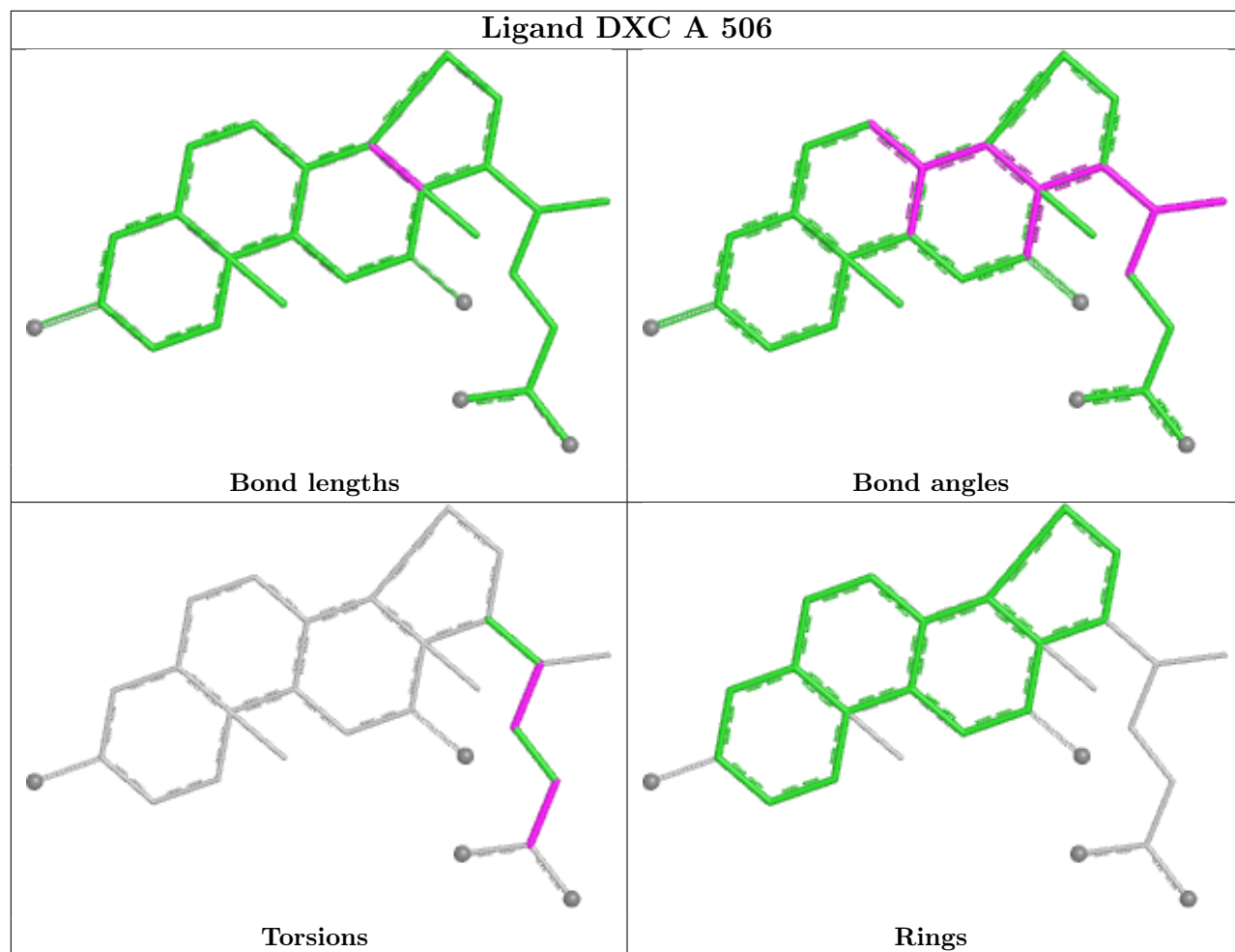


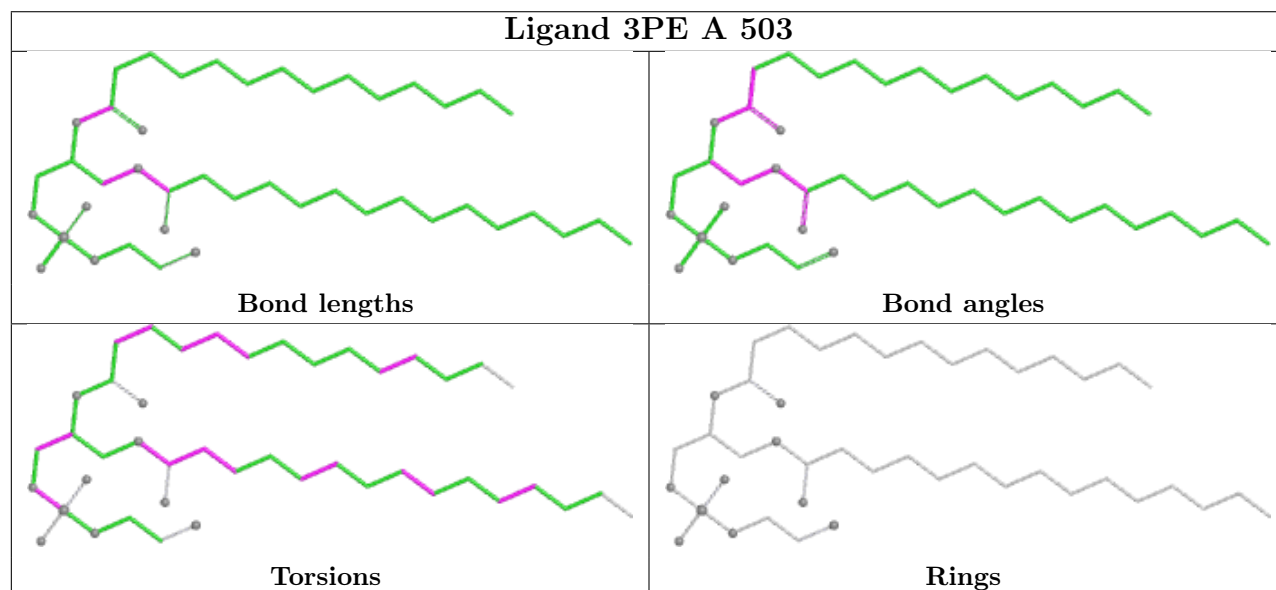
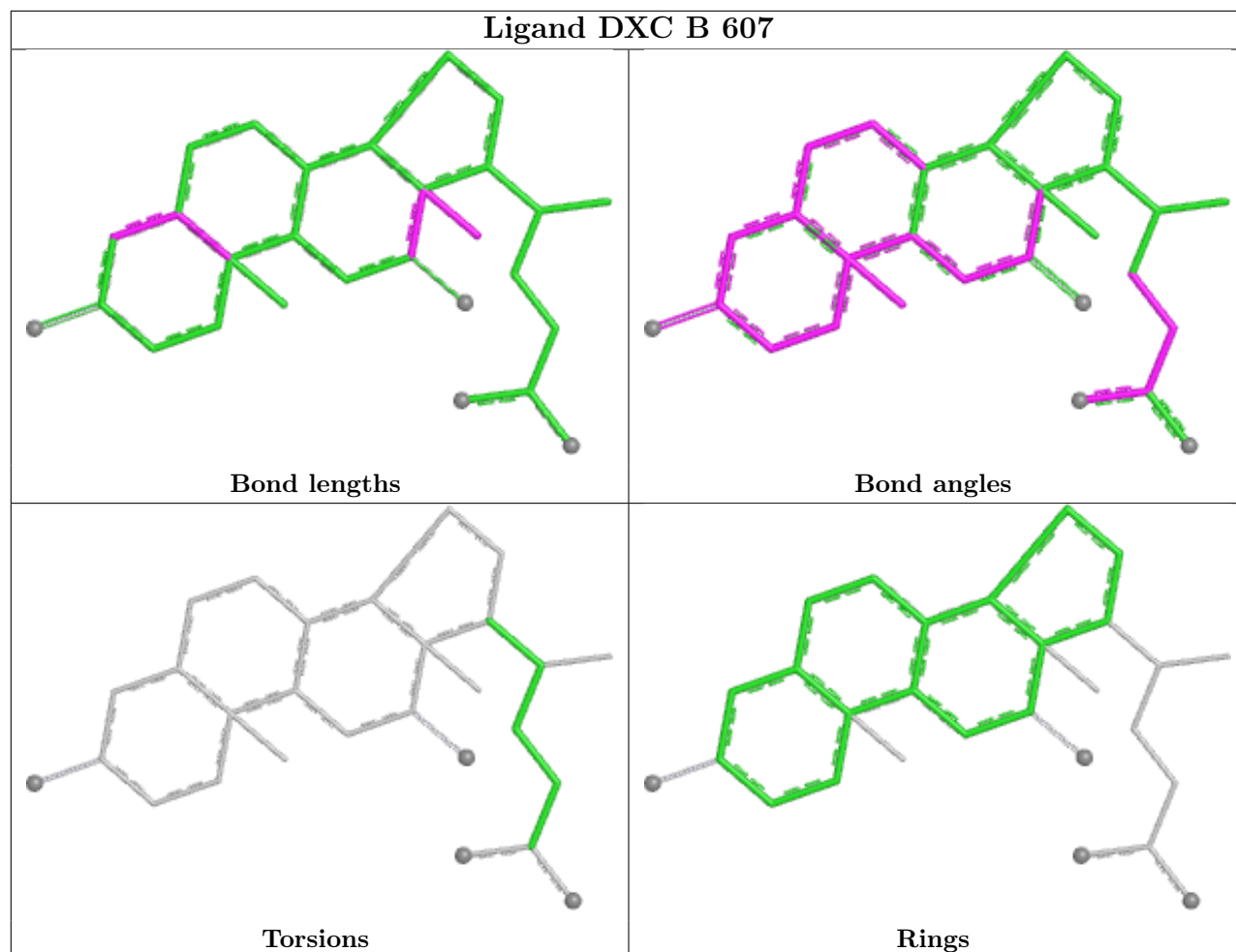


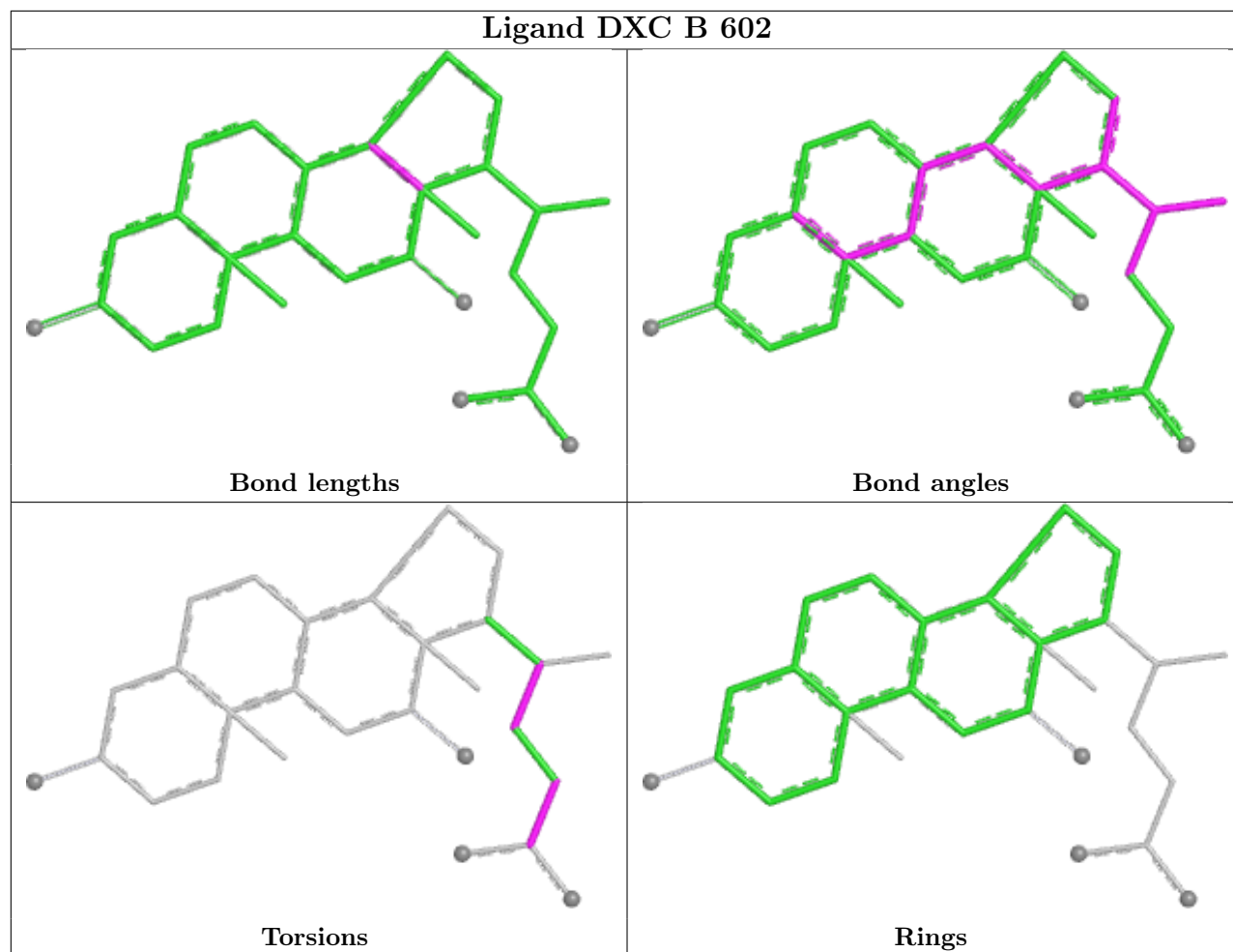


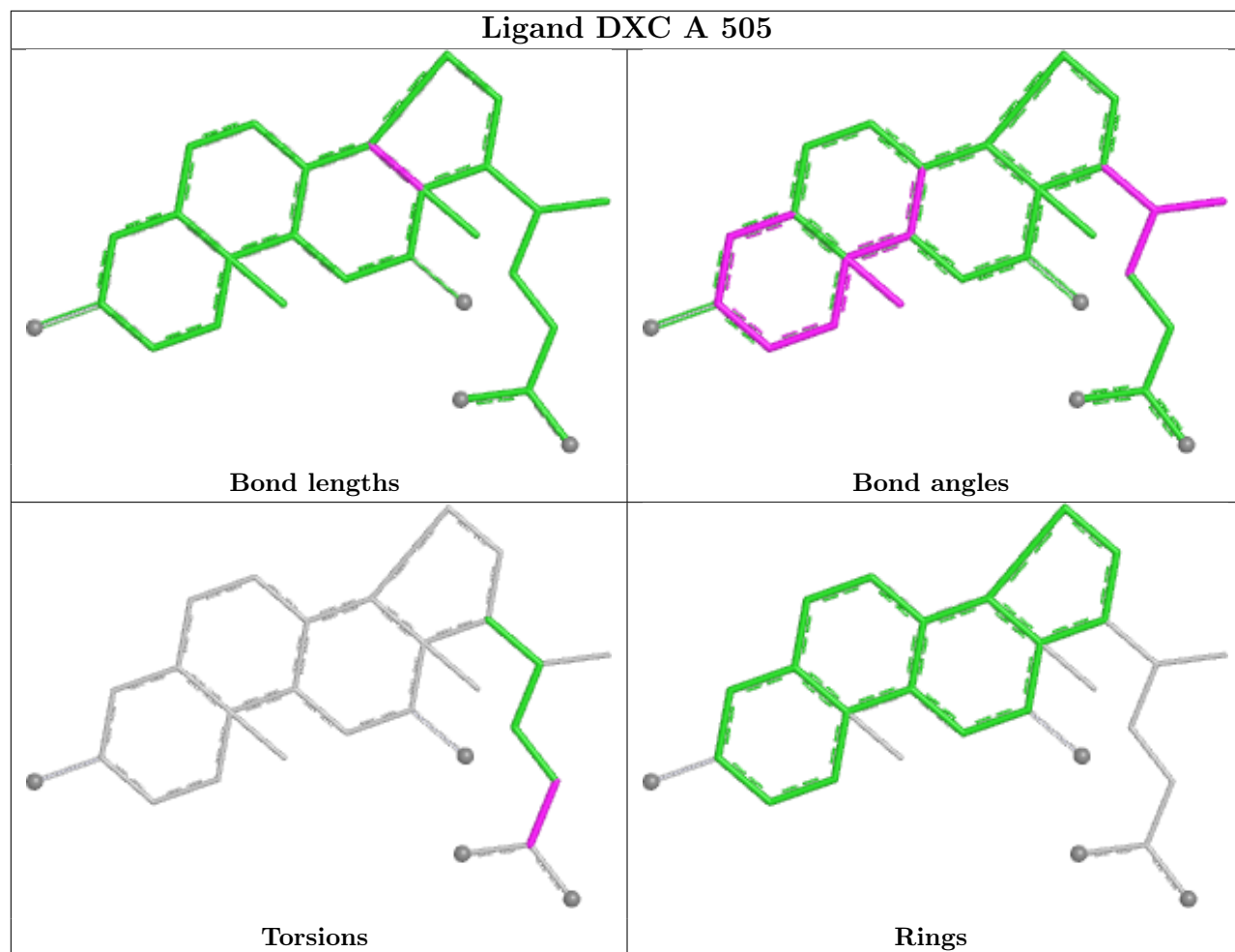


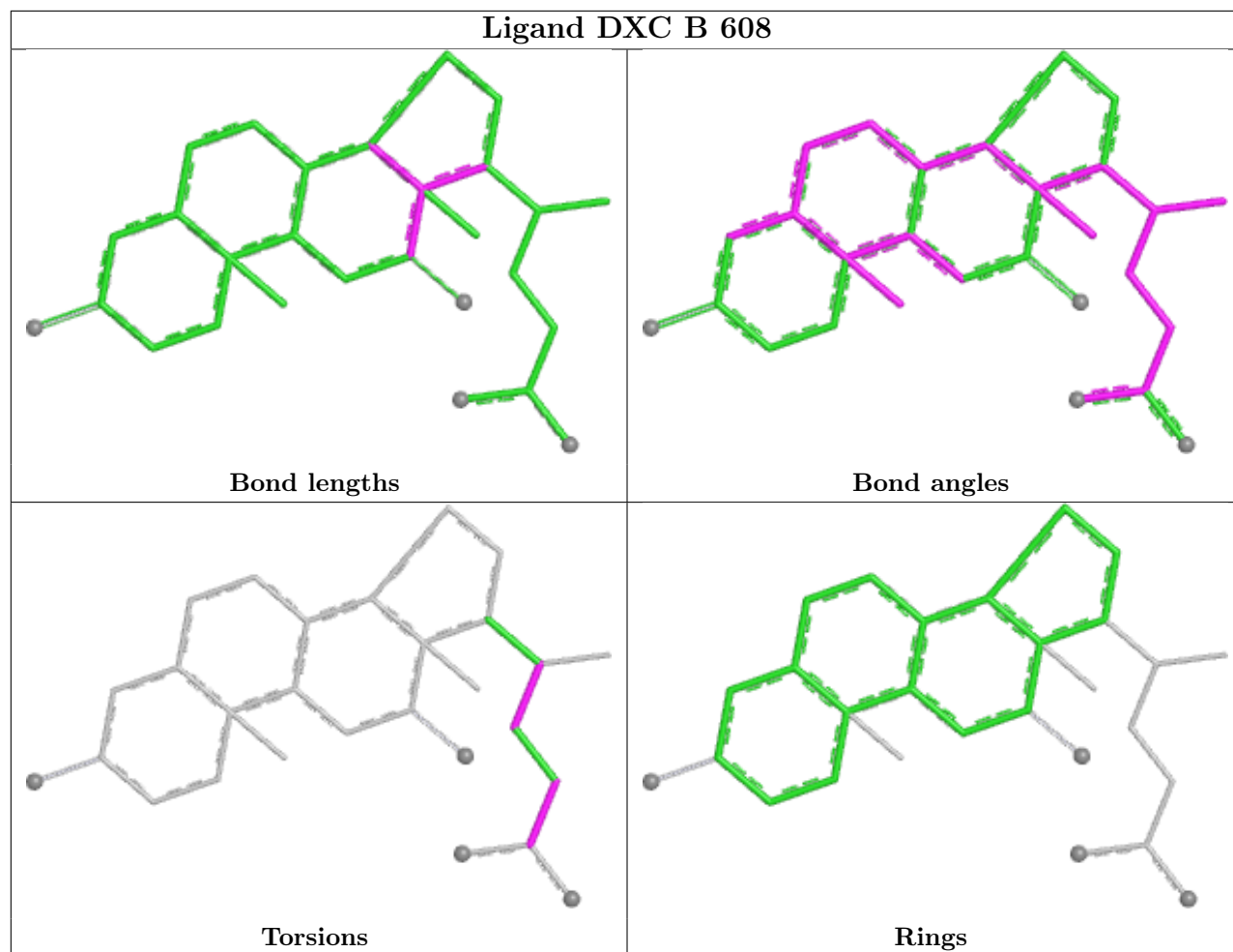


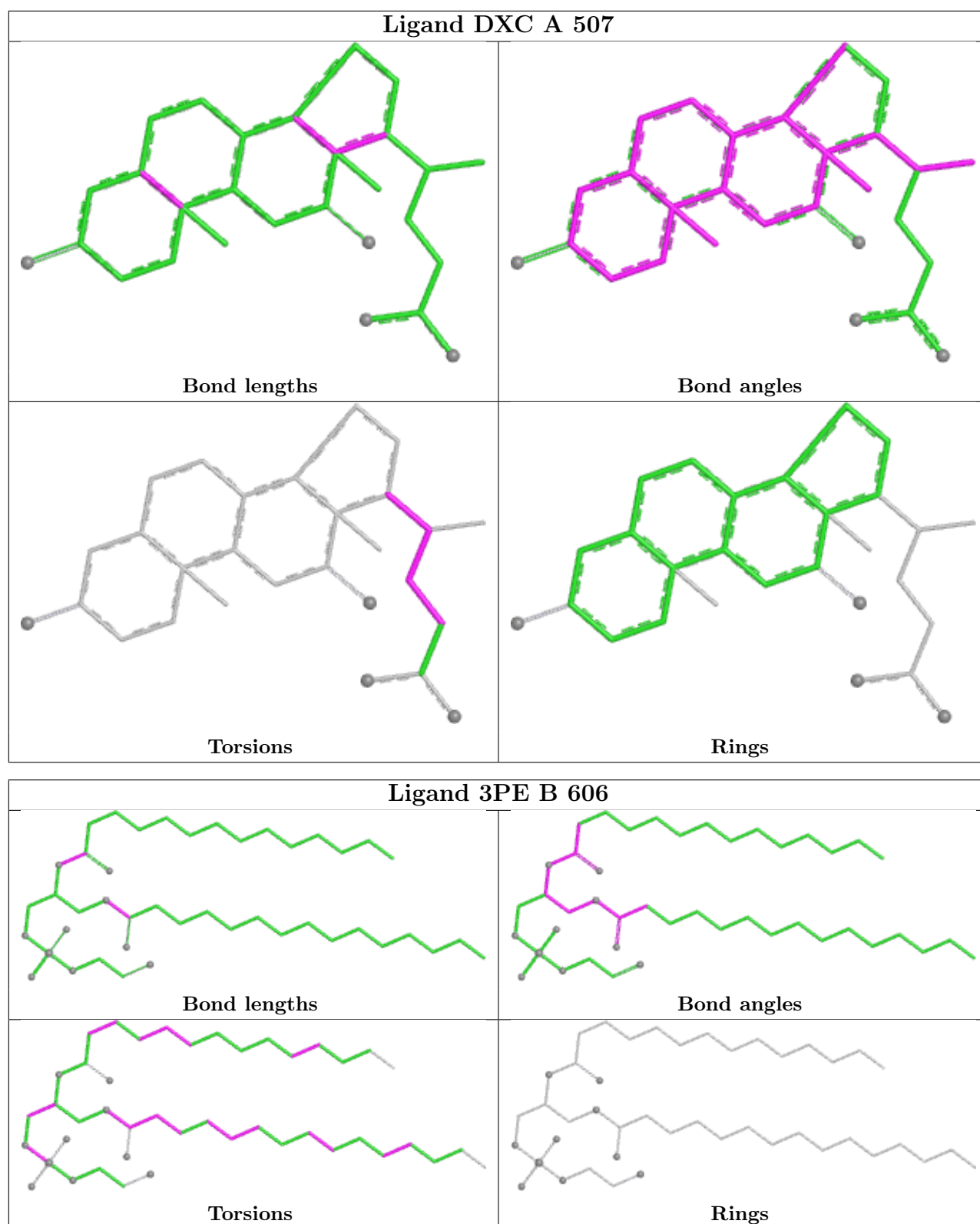












## 5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	321/393 (81%)	0.66	40 (12%) 8 6	38, 81, 135, 166	8 (2%)
1	B	322/393 (81%)	0.31	29 (9%) 15 12	21, 62, 110, 134	7 (2%)
All	All	643/786 (81%)	0.48	69 (10%) 11 9	21, 71, 125, 166	15 (2%)

The worst 5 of 69 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	178[A]	ILE	10.7
1	B	178[A]	ILE	8.9
1	B	62	ASP	7.5
1	B	72	TRP	6.7
1	A	62	ASP	6.2

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

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

### 6.3 Carbohydrates [i](#)

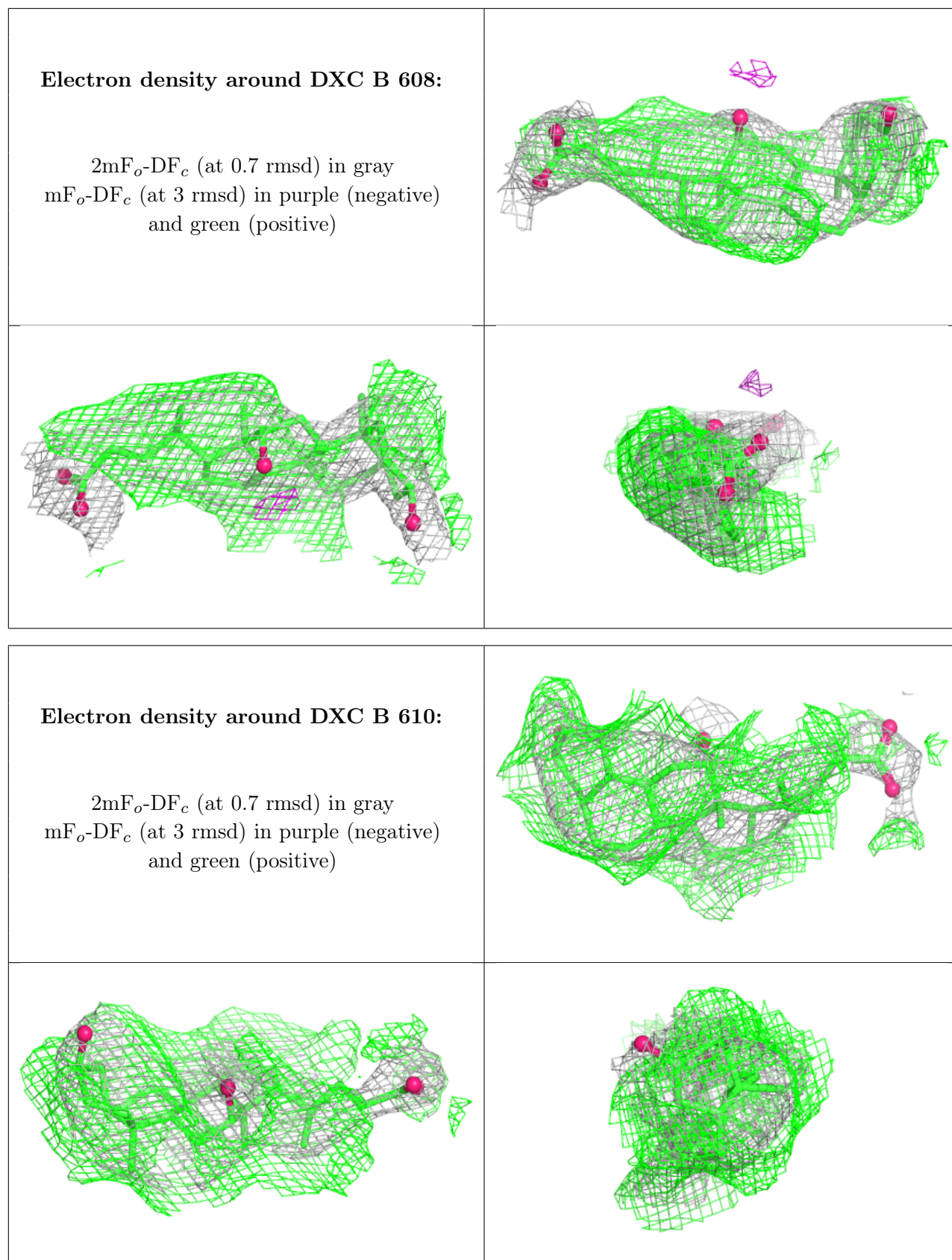
There are no oligosaccharides in this entry.

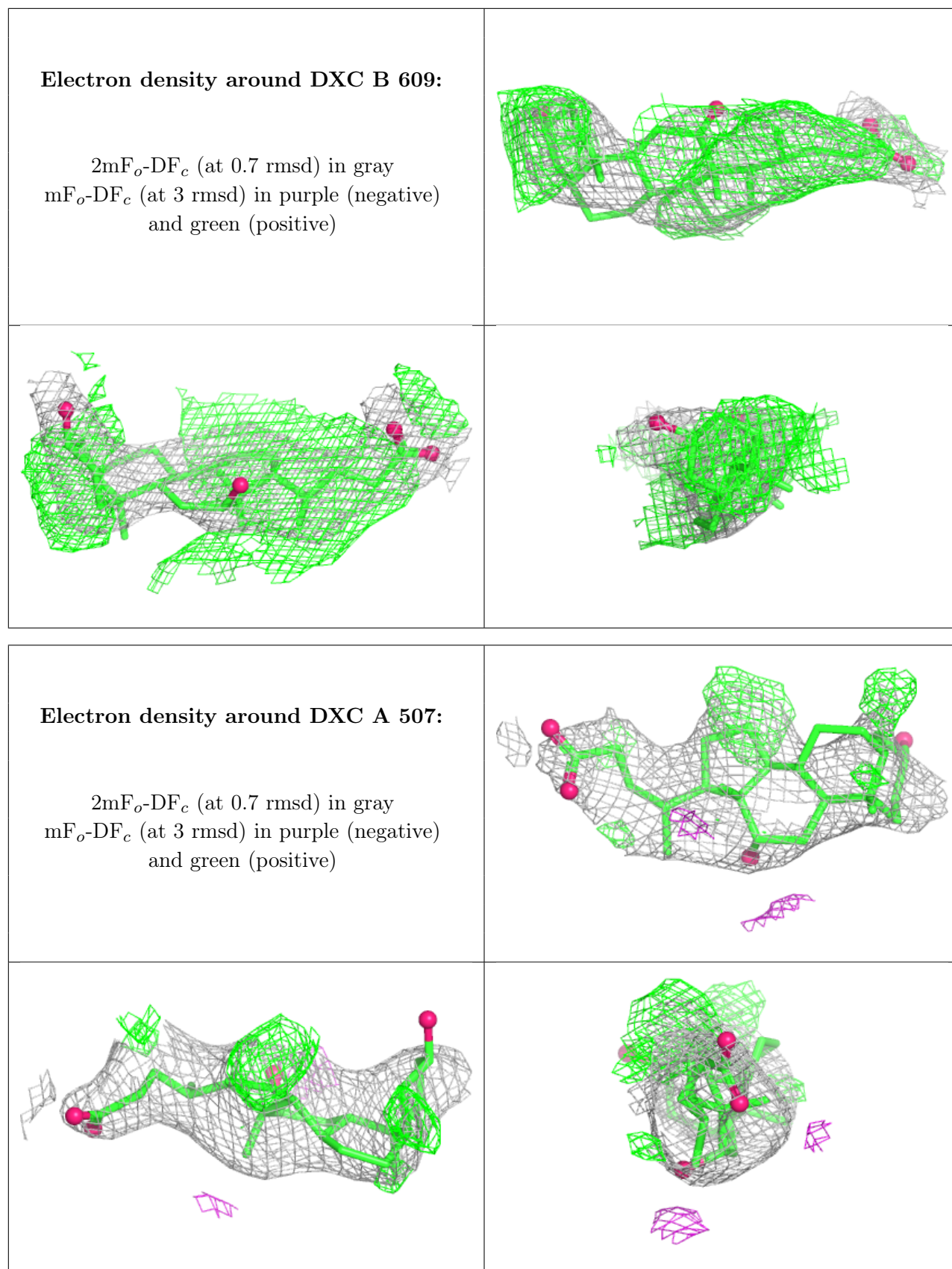
### 6.4 Ligands [i](#)

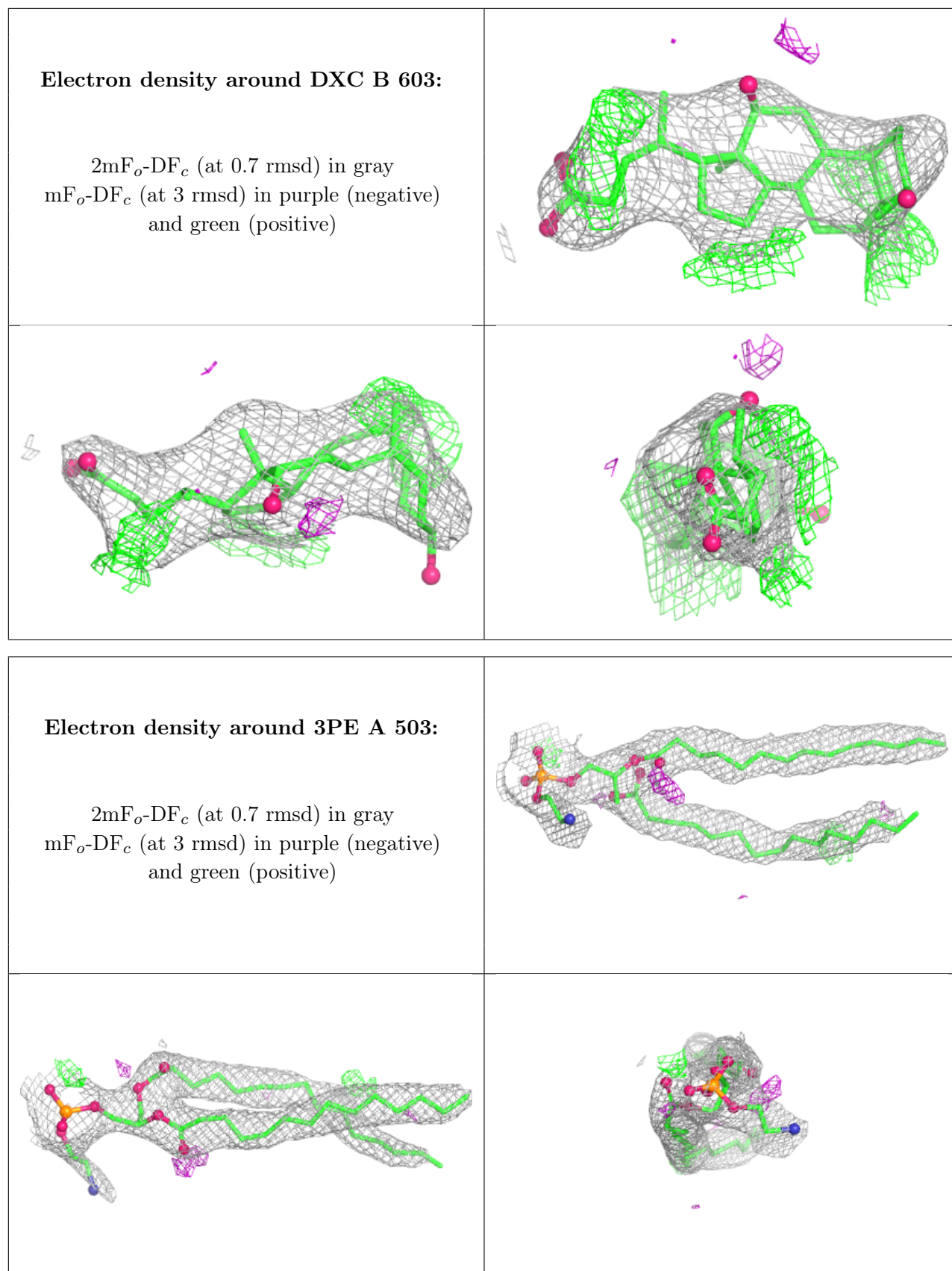
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled ‘Q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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
5	SO4	A	509	5/5	0.76	0.24	53,63,73,74	5
5	SO4	A	508	5/5	0.80	0.19	52,57,63,73	5
4	DXC	B	608	28/28	0.84	0.36	44,58,69,69	28
4	DXC	B	610	28/28	0.84	0.47	67,76,81,85	28
4	DXC	B	609	28/28	0.86	0.35	49,56,72,75	28
5	SO4	B	611	5/5	0.87	0.13	44,52,57,63	5
4	DXC	A	507	28/28	0.88	0.22	73,83,88,89	28
4	DXC	B	603	28/28	0.89	0.20	66,74,82,84	28
3	3PE	A	503	44/51	0.94	0.15	58,69,80,98	0
4	DXC	B	601	28/28	0.94	0.12	55,71,79,80	0
4	DXC	A	504	28/28	0.94	0.11	63,67,95,100	0
4	DXC	B	607	28/28	0.94	0.14	61,69,73,76	0
4	DXC	A	506	28/28	0.94	0.11	55,64,75,90	0
4	DXC	A	505	28/28	0.95	0.09	50,54,78,86	0
4	DXC	B	602	28/28	0.95	0.12	64,73,82,88	0
3	3PE	B	606	44/51	0.96	0.14	53,68,81,93	0
2	ZN	A	501	1/1	0.99	0.04	64,64,64,64	0
2	ZN	A	502	1/1	0.99	0.04	66,66,66,66	0
2	ZN	B	604	1/1	0.99	0.07	60,60,60,60	0
2	ZN	B	605	1/1	0.99	0.04	58,58,58,58	0

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

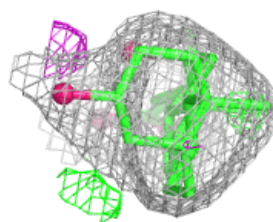
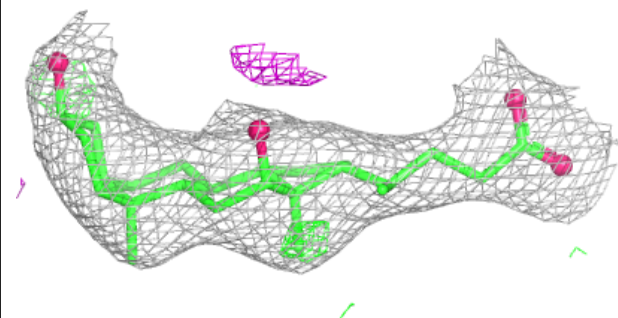
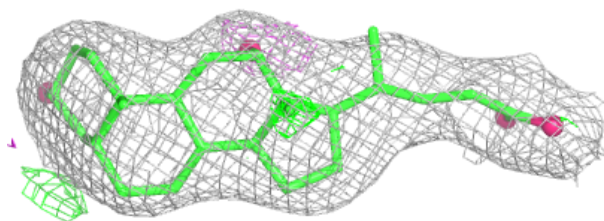




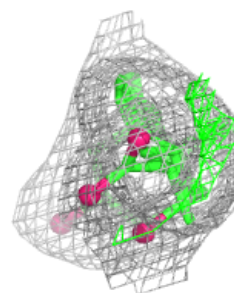
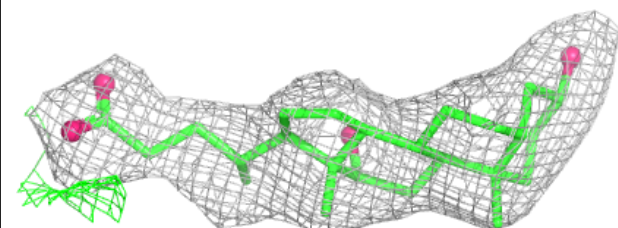
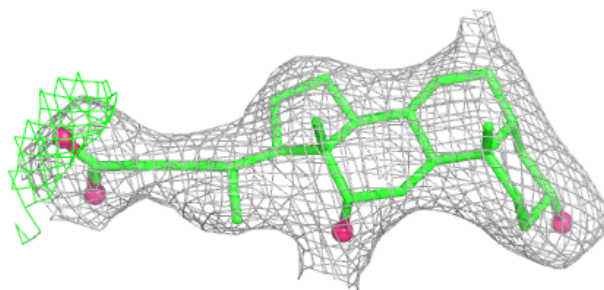


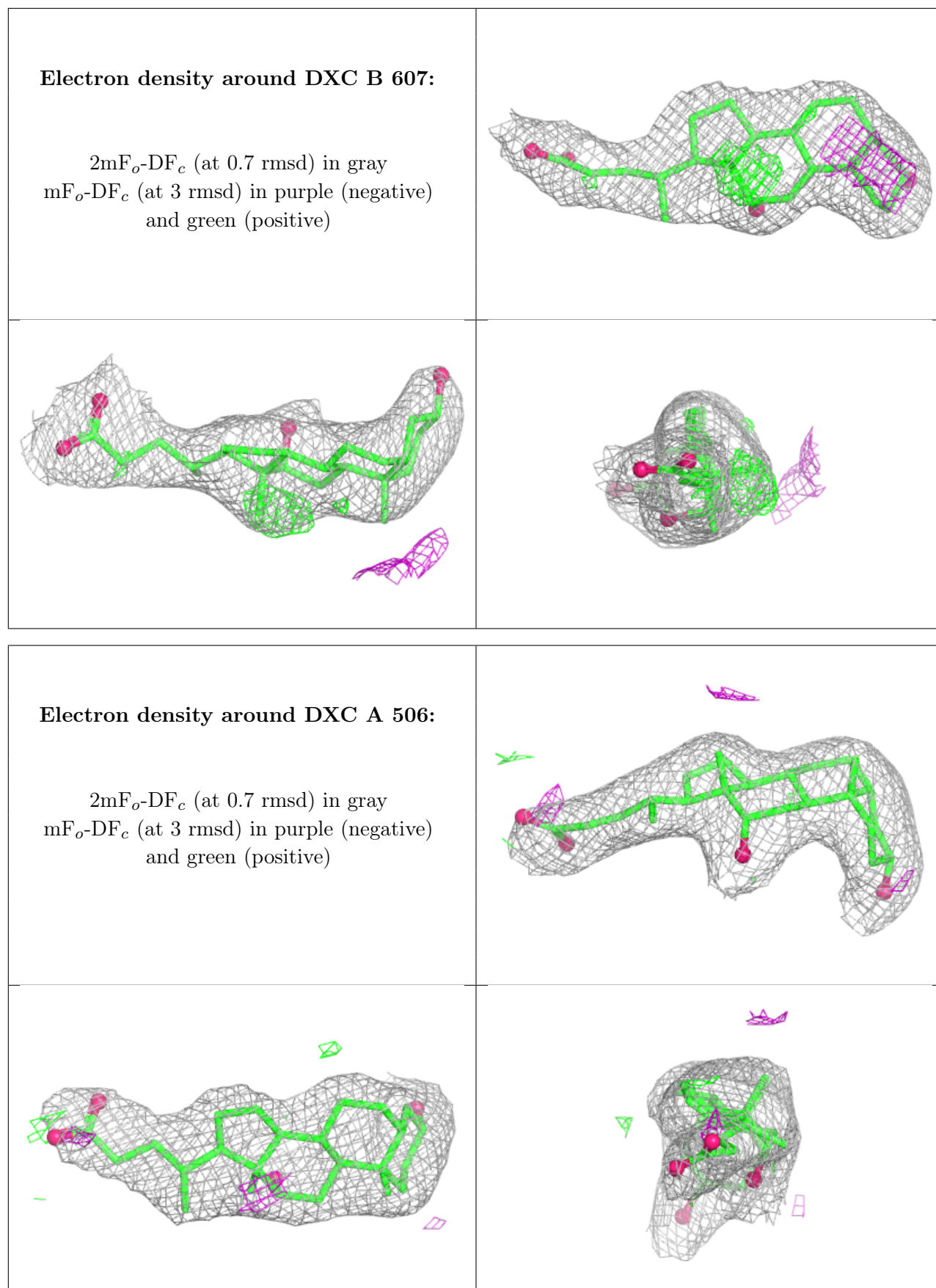
**Electron density around DXC B 601:**

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

**Electron density around DXC A 504:**

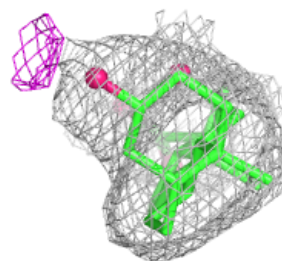
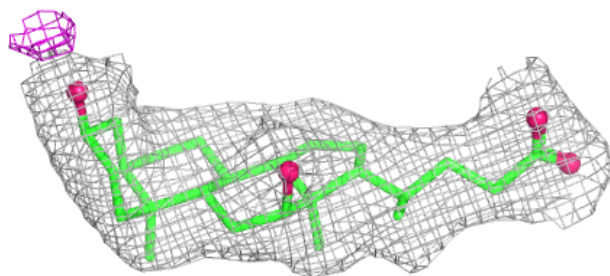
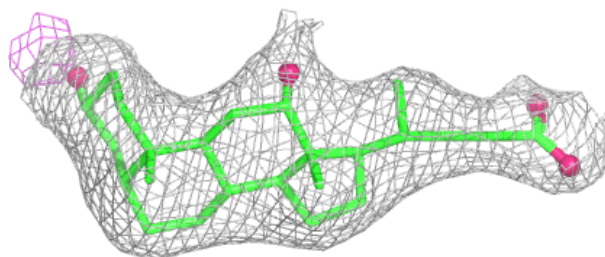
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



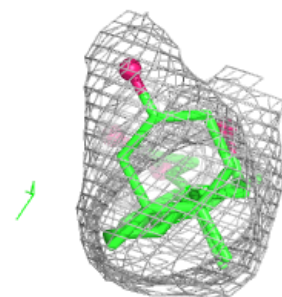
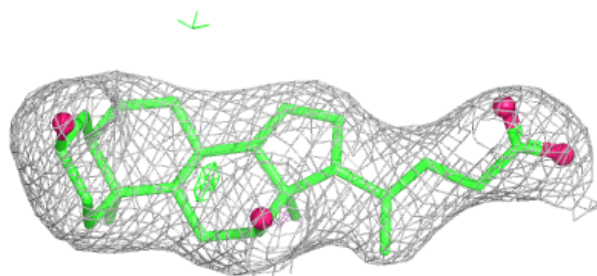
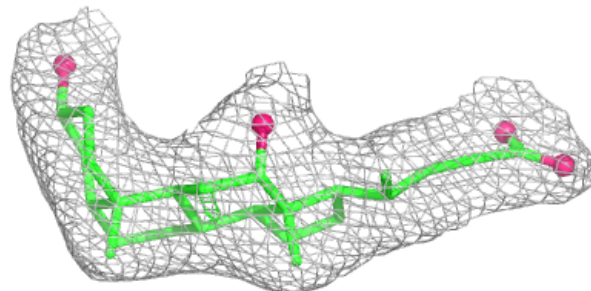


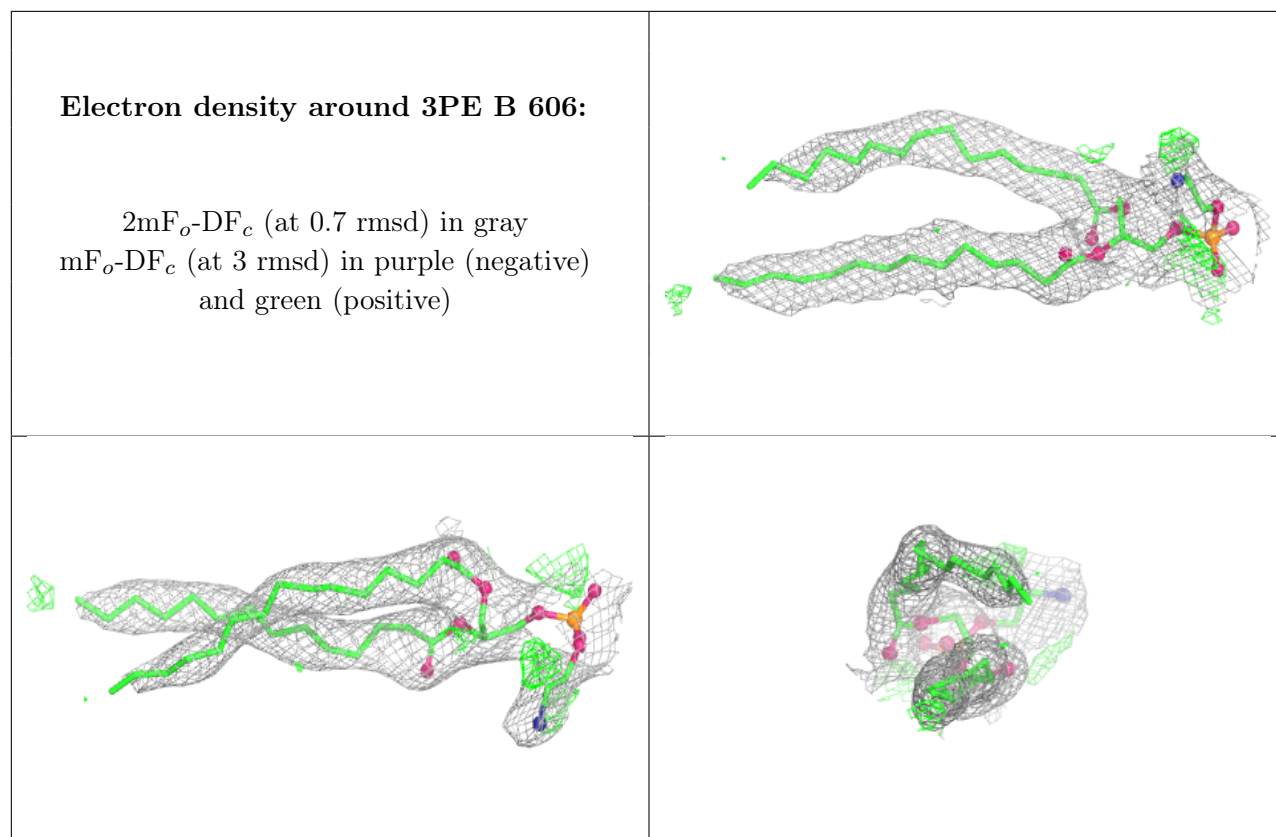
**Electron density around DXC A 505:**

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

**Electron density around DXC B 602:**

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





## 6.5 Other polymers [i](#)

There are no such residues in this entry.