Full wwPDB X-ray Structure Validation Report ⓘ

Dec 8, 2022 – 03:20 am GMT

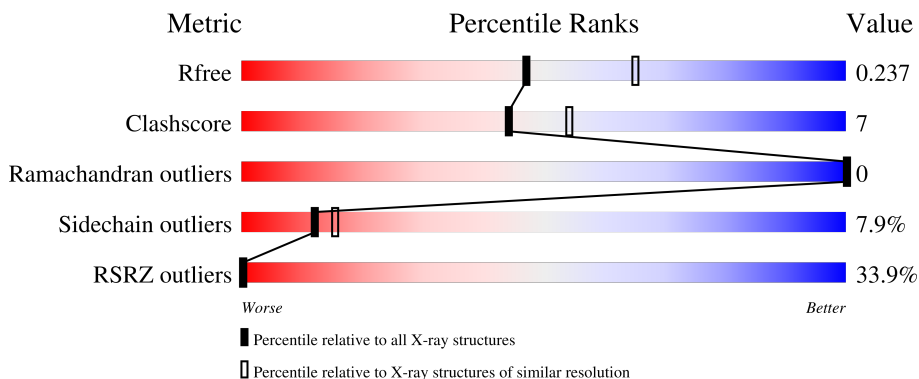|		
PDB ID	:	7QP4
Title	:	Complex of a Gemini-cholesterol analogue with Retinoid-related Orphan Receptor gamma
Authors	:	Rochel, N.
Deposited on	:	2022-01-02
Resolution	:	2.30 Å(reported)

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 2.30 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
Rfree		0.237
Clashscore		7
Ramachandran outliers		0
Sidechain outliers		7.9%
RSRZ outliers		33.9%

Worse   *Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	130704	5042 (2.30-2.30)
Clashscore	141614	5643 (2.30-2.30)
Ramachandran outliers	138981	5575 (2.30-2.30)
Sidechain outliers	138945	5575 (2.30-2.30)
RSRZ outliers	127900	4938 (2.30-2.30)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	259	30% / 72% / 14% · 10%
1	B	259	28% / 69% / 16% · 15%
2	P	15	60% / 60% / 40%

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:

W O R L D W I D E
wwPDB
PROTEIN DATA BANK

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	ACT	A	601	-	-	-	X

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 4120 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 Nuclear receptor ROR-gamma.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	233	Total	C	N	O	S	0	1	0
			1898	1203	344	337	14			
1	B	221	Total	C	N	O	S	0	1	0
			1806	1142	326	324	14			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	260	GLY	-	expression tag	UNP P51449
A	261	SER	-	expression tag	UNP P51449
A	262	HIS	-	expression tag	UNP P51449
A	263	MET	-	expression tag	UNP P51449
B	260	GLY	-	expression tag	UNP P51449
B	261	SER	-	expression tag	UNP P51449
B	262	HIS	-	expression tag	UNP P51449
B	263	MET	-	expression tag	UNP P51449

- Molecule 2 is a protein called HIS-VAL-GLU-ARG-LEU-GLN-ILE-PHE-GLN-HIS-LEU-HIS-PRO-ILE-VAL.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	P	15	Total	C	N	O	0	1	0
			138	91	27	20			

- Molecule 3 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).

ACT

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

- Molecule 4 is (3 {S},8 {S},9 {S},10 {R},13 {R},14 {S},17 {R})-17-[(6 {R})-2,10-dimethyl-2-oxidanyl-undecan-6-yl]-10,13-dimethyl-2,3,4,7,8,9,11,12,14,15,16,17-dodecahydro-1 {H}-cyclopenta[a]phenanthren-3-ol (three-letter code: ECK) (formula: $C_{32}H_{56}O_2$) (labeled as "Ligand of Interest" by depositor).

ECK
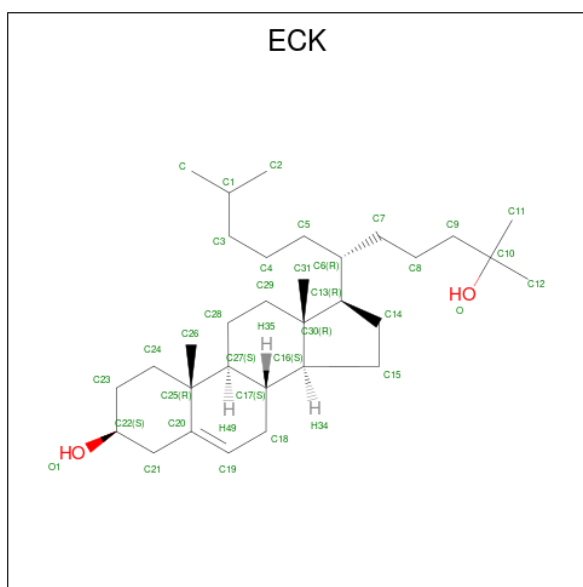
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 34	C 32	O 2	0	0
4	B	1	Total 34	C 32	O 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	107	Total 107	O 107	0	0
5	B	85	Total 85	O 85	0	0
5	P	2	Total 2	O 2	0	0

3 Residue-property plots ⓘ

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

- Molecule 1: Nuclear receptor ROR-gamma

Chain A:

- Molecule 1: Nuclear receptor ROR-gamma

Chain B:
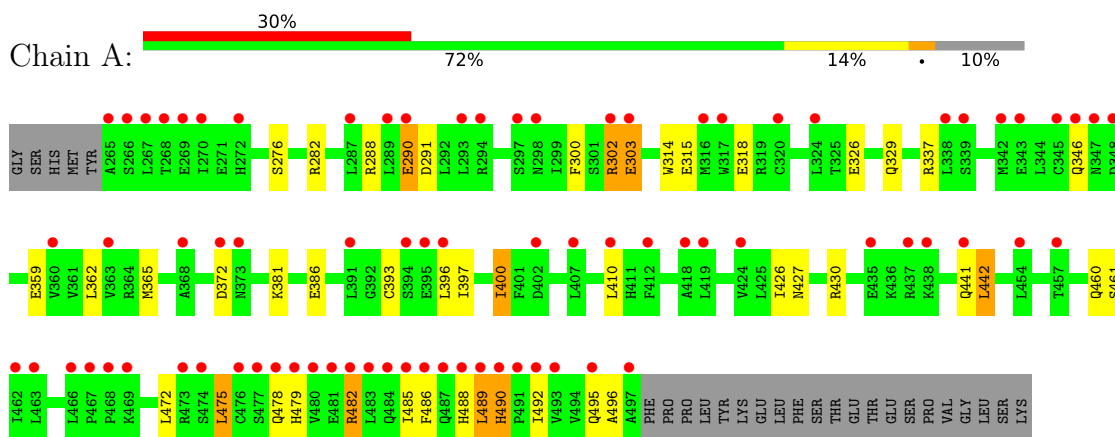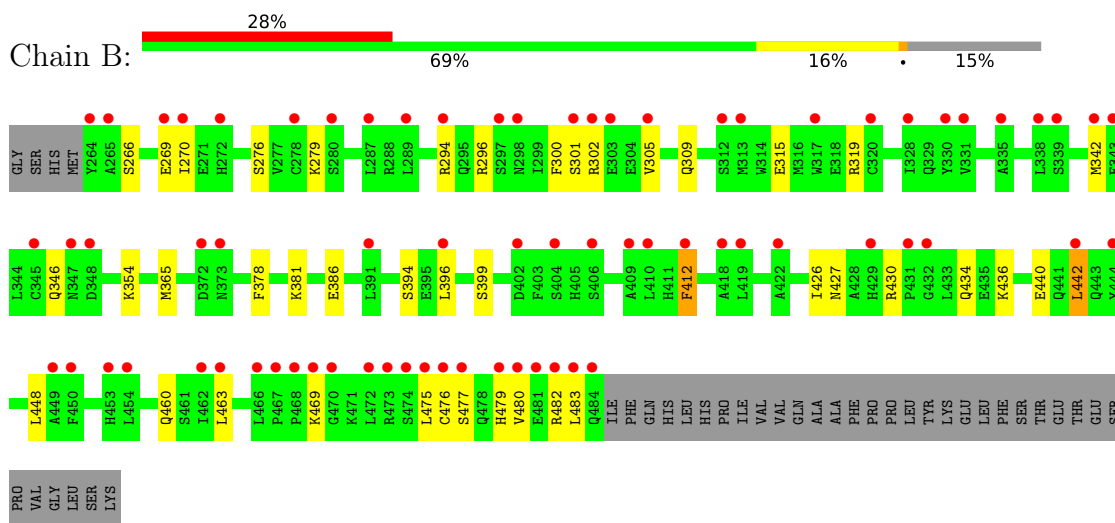
- Molecule 2: HIS-VAL-GLU-ARG-LEU-GLN-ILE-PHE-GLN-HIS-LEU-HIS-PRO-ILE-VAL

L

Chain P:

H479 V480 E481 R482 L483 Q484 I485 H490 P491 I492 V493
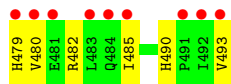
4   Data and refinement statistics   ⓘ

Property	Value	Source
Space group	P 61	Depositor
Cell constants a, b, c, α, β, γ	99.38Å 99.38Å 129.31Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	40.83 – 2.30 46.38 – 2.30	Depositor EDS
% Data completeness (in resolution range)	99.2 (40.83-2.30) 99.2 (46.38-2.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.15 (at 2.29Å)	Xtriage
Refinement program	PHENIX 1.17_3644	Depositor
R, R_{free}	0.178 , 0.237 0.178 , 0.237	Depositor DCC
R_{free} test set	1053 reflections (3.30%)	wwPDB-VP
Wilson B-factor (Å^2)	49.8	Xtriage
Anisotropy	0.202	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	(Not available) , (Not available)	EDS
L-test for twinning [2]	$< |L| > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.058 for h,-h-k,-l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	4120	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.30% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5   Model quality ⓘ

5.1   Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ACT, ECK

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	0.41	0/1936	0.53	0/2606
1	B	0.40	0/1841	0.52	0/2475
2	P	0.34	0/145	0.44	0/196
All	All	0.40	0/3922	0.52	0/5277

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	1898	0	1902	26	0
1	B	1806	0	1804	24	0
2	P	138	0	141	5	0
3	A	8	0	6	0	0
3	B	8	0	6	1	0
4	A	34	0	0	0	0
4	B	34	0	0	0	0
5	A	107	0	0	5	0
5	B	85	0	0	3	2
5	P	2	0	0	0	0
All	All	4120	0	3859	51	2

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 7.

All (51) 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:461:SER:OG	5:A:701:HOH:O	2.00	0.78
1:B:396:LEU:HB3	1:B:479:HIS:CE1	2.24	0.72
1:B:315:GLU:OE1	1:B:319:ARG:NH1	2.25	0.69
1:A:359:GLU:HB3	1:A:472:LEU:HD23	1.78	0.66
1:B:346:GLN:HG2	5:B:765:HOH:O	1.97	0.64
1:A:478:GLN:O	1:A:482:ARG:NH1	2.33	0.61
1:A:362:LEU:HD21	1:A:475:LEU:HD13	1.83	0.60
1:B:294:ARG:O	5:B:701:HOH:O	2.17	0.58
1:A:302:ARG:HD2	1:A:302:ARG:H	1.70	0.57
1:A:290:GLU:HG3	1:A:291:ASP:N	2.19	0.56
1:A:282:ARG:NH1	5:A:710:HOH:O	2.40	0.54
1:A:396:LEU:HB3	1:A:479:HIS:CE1	2.44	0.53
1:A:396:LEU:HG	5:A:786:HOH:O	2.11	0.51
1:B:426:ILE:HG21	1:B:442:LEU:HB3	1.94	0.50
1:B:270:ILE:HG13	1:B:448:LEU:HD22	1.93	0.49
1:B:477:SER:HA	1:B:480:VAL:HG22	1.95	0.49
2:P:480:VAL:HB	2:P:485:ILE:HG12	1.94	0.49
1:B:427:ASN:O	1:B:430:ARG:HG2	2.15	0.47
1:B:476:CYS:O	1:B:480:VAL:HG13	2.15	0.47
1:B:296:ARG:HD3	5:B:773:HOH:O	2.15	0.46
1:A:346:GLN:OE1	2:P:482:ARG:HB2	2.15	0.46
1:A:288:ARG:NH1	1:A:290:GLU:HG2	2.31	0.46
1:A:365:MET:HE1	1:A:400:ILE:HD12	1.97	0.46
1:A:489:LEU:O	1:A:490:HIS:ND1	2.48	0.46
1:A:303:GLU:OE1	1:A:303:GLU:N	2.35	0.45
1:B:342:MET:HA	1:B:342:MET:HE2	1.98	0.45
1:B:266:SER:HB3	1:B:269:GLU:OE1	2.18	0.44
1:B:354:LYS:HG3	2:P:479:HIS:ND1	2.33	0.43
1:B:346:GLN:HE22	2:P:490:HIS:CD2	2.36	0.43
1:A:337:ARG:NE	5:A:709:HOH:O	2.39	0.43
1:A:410:LEU:HD23	1:A:410:LEU:HA	1.77	0.43
1:A:326:GLU:OE1	5:A:703:HOH:O	2.21	0.43
1:B:378:PHE:HA	3:B:601:ACT:H1	2.00	0.43
1:A:329:GLN:HE22	1:A:496:ALA:HA	1.84	0.42
1:A:482:ARG:N	1:A:482:ARG:HD3	2.33	0.42
1:B:305:VAL:O	1:B:309:GLN:HG3	2.20	0.42
1:B:270:ILE:HG21	1:B:448:LEU:HD23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:CYS:O	1:A:397:ILE:HG12	2.19	0.42
1:B:354:LYS:O	2:P:479:HIS:HA	2.19	0.42
1:A:300:PHE:CZ	1:A:381:LYS:HB2	2.55	0.42
1:B:300:PHE:CZ	1:B:381:LYS:HB2	2.55	0.42
1:A:314:TRP:CH2	1:A:489:LEU:HB3	2.53	0.42
1:A:318:GLU:HG2	1:A:492:ILE:HD13	2.02	0.42
1:B:301:SER:O	1:B:305:VAL:HG23	2.20	0.41
1:A:426:ILE:HG21	1:A:442:LEU:HB3	2.02	0.41
1:B:412:PHE:HD1	1:B:412:PHE:HA	1.73	0.41
1:B:436:LYS:O	1:B:440:GLU:HG3	2.21	0.41
1:A:492:ILE:HD12	1:A:492:ILE:HA	1.78	0.41
1:B:463:LEU:HD23	1:B:463:LEU:HA	1.87	0.40
1:A:427:ASN:O	1:A:430:ARG:HG2	2.20	0.40
1:B:399:SER:HB3	1:B:475:LEU:HD21	2.03	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:729:HOH:O	5:B:771:HOH:O[5_554]	2.13	0.07
5:B:703:HOH:O	5:B:716:HOH:O[5_554]	2.17	0.03

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 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	231/259 (89%)	224 (97%)	7 (3%)	0	100	100
1	B	219/259 (85%)	212 (97%)	7 (3%)	0	100	100
2	P	14/15 (93%)	14 (100%)	0	0	100	100
All	All	464/533 (87%)	450 (97%)	14 (3%)	0	100	100

There are no Ramachandran outliers to report.

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 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	207/231 (90%)	188 (91%)	19 (9%)	9	11
1	B	197/231 (85%)	184 (93%)	13 (7%)	16	22
2	P	16/15 (107%)	15 (94%)	1 (6%)	18	24
All	All	420/477 (88%)	387 (92%)	33 (8%)	12	15

All (33) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	276	SER
1	A	290	GLU
1	A	302	ARG
1	A	303	GLU
1	A	315	GLU
1	A	372	ASP
1	A	386	GLU
1	A	400	ILE
1	A	441	GLN
1	A	442	LEU
1	A	460	GLN
1	A	475	LEU
1	A	482	ARG
1	A	485	ILE
1	A	486	PHE
1	A	488	HIS
1	A	489	LEU
1	A	490	HIS
1	A	495	GLN
1	B	276	SER
1	B	279	LYS
1	B	302	ARG
1	B	365	MET

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Mol	Chain	Res	Type
1	B	386	GLU
1	B	394	SER
1	B	412	PHE
1	B	434	GLN
1	B	442	LEU
1	B	460	GLN
1	B	469	LYS
1	B	482	ARG
1	B	483	LEU
2	P	493	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	346	GLN
1	B	451	HIS
1	B	479	HIS

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 ⓘ

There are no monosaccharides in this entry.

5.6   Ligand geometry ⓘ

6 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	$\#\|Z\| > 2$
3	ACT	B	601	-	3,3,3	1.42	0	3,3,3	1.30	0
4	ECK	A	603	-	37,37,37	0.20	0	57,57,57	0.41	0
3	ACT	A	602	-	3,3,3	1.24	0	3,3,3	1.50	0
3	ACT	A	601	-	3,3,3	1.51	1 (33%)	3,3,3	1.31	0
4	ECK	B	603	-	37,37,37	0.18	0	57,57,57	0.30	0
3	ACT	B	602	-	3,3,3	1.34	0	3,3,3	1.34	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	ECK	B	603	-	-	9/17/75/75	0/4/4/4
4	ECK	A	603	-	-	7/17/75/75	0/4/4/4

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	601	ACT	CH3-C	2.18	1.58	1.49

There are no bond angle outliers.

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	603	ECK	C5-C6-C7-C8
4	B	603	ECK	C5-C6-C7-C8
4	B	603	ECK	C14-C13-C6-C5
4	A	603	ECK	C14-C13-C6-C5
4	A	603	ECK	C30-C13-C6-C5
4	B	603	ECK	C30-C13-C6-C5
4	B	603	ECK	C30-C13-C6-C7
4	B	603	ECK	C14-C13-C6-C7
4	B	603	ECK	C4-C5-C6-C13
4	B	603	ECK	C1-C3-C4-C5
4	A	603	ECK	C14-C13-C6-C7

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Mol	Chain	Res	Type	Atoms
4	A	603	ECK	C4-C5-C6-C7
4	B	603	ECK	C13-C6-C7-C8
4	A	603	ECK	C30-C13-C6-C7
4	A	603	ECK	C-C1-C3-C4
4	B	603	ECK	C4-C5-C6-C7

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	601	ACT	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand ECK A 603

Bond lengths

Bond angles

Torsions

Rings

Ligand ECK B 603

Bond lengths

Bond angles

Torsions

Rings
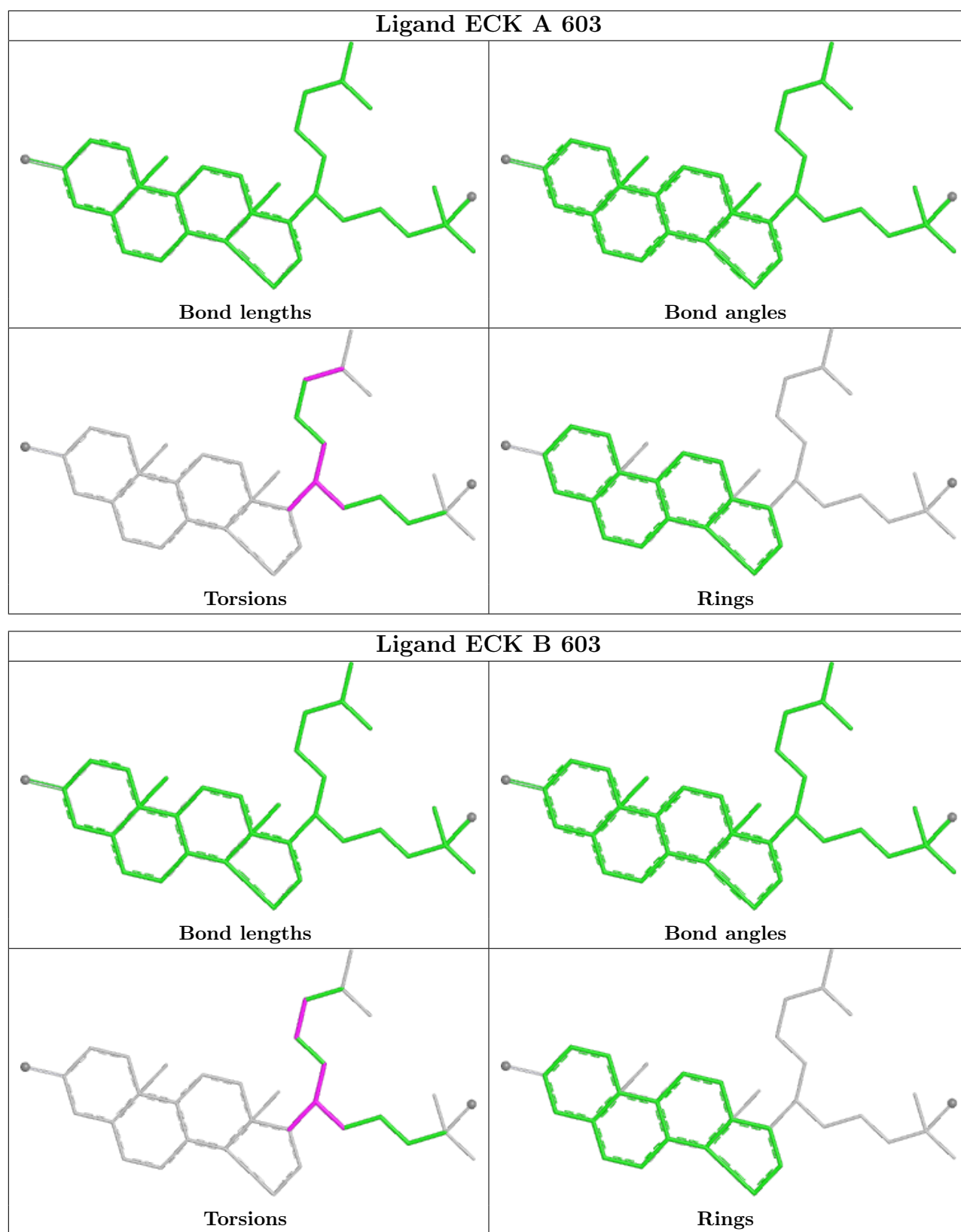
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	233/259 (89%)	1.94	78 (33%)	0	0	36, 58, 126, 173	0
1	B	221/259 (85%)	1.83	72 (32%)	0	0	39, 59, 102, 148	0
2	P	15/15 (100%)	3.78	9 (60%)	0	0	74, 95, 129, 129	0
All	All	469/533 (87%)	1.95	159 (33%)	0	0	36, 59, 120, 173	0

All (159) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	488	HIS	24.2
2	P	493	VAL	11.0
1	B	484	GLN	10.9
1	B	477	SER	10.6
1	A	481	GLU	9.0
1	B	480	VAL	8.8
1	B	345	CYS	8.6
1	B	476	CYS	8.6
1	A	490	HIS	8.6
1	A	345	CYS	8.3
1	B	481	GLU	6.7
1	A	485	ILE	6.5
1	A	484	GLN	6.2
1	A	489	LEU	6.1
1	B	347	ASN	6.0
1	A	483	LEU	5.9
1	B	302	ARG	5.9
2	P	480	VAL	5.8
1	A	480	VAL	5.8
1	B	469	LYS	5.8
1	A	265	ALA	5.8
2	P	481	GLU	5.8
1	A	342	MET	5.5

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Full wwPDB X-ray Structure Validation Report

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Mol	Chain	Res	Type	RSRZ
1	A	476	CYS	5.4
1	A	482	ARG	5.3
1	A	303	GLU	5.2
1	A	487	GLN	5.1
1	A	492	ILE	4.9
1	B	373	ASN	4.8
2	P	479	HIS	4.8
2	P	491	PRO	4.8
1	B	467	PRO	4.7
1	A	491	PRO	4.5
1	A	343	GLU	4.5
1	B	396	LEU	4.4
1	B	297	SER	4.4
2	P	485	ILE	4.4
1	B	483	LEU	4.3
1	B	265	ALA	4.2
1	A	477	SER	4.2
1	A	297	SER	4.1
1	A	272	HIS	4.0
1	B	466	LEU	4.0
1	A	268	THR	3.9
2	P	492	ILE	3.9
1	A	469	LYS	3.8
1	A	294	ARG	3.8
1	A	396	LEU	3.7
1	A	346	GLN	3.7
1	B	343	GLU	3.7
1	A	302	ARG	3.6
2	P	484[A]	GLN	3.6
1	A	363	VAL	3.6
1	A	338	LEU	3.5
1	B	454	LEU	3.5
2	P	483	LEU	3.5
1	A	474	SER	3.5
1	A	467	PRO	3.5
1	A	438	LYS	3.5
1	B	418	ALA	3.4
1	B	482	ARG	3.3
1	A	495	GLN	3.3
1	A	466	LEU	3.3
1	B	264	TYR	3.3
1	B	412	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	347	ASN	3.2
1	B	294	ARG	3.2
1	B	470	GLY	3.2
1	A	463	LEU	3.2
1	A	410	LEU	3.2
1	B	468	PRO	3.1
1	B	338	LEU	3.1
1	B	474	SER	3.1
1	A	298	ASN	3.1
1	B	272	HIS	3.0
1	B	342	MET	3.0
1	A	287	LEU	3.0
1	B	406	SER	3.0
1	B	431	PRO	3.0
1	A	394	SER	2.9
1	A	402	ASP	2.9
1	B	462	ILE	2.9
1	A	360	VAL	2.9
1	A	473	ARG	2.9
1	B	463	LEU	2.9
1	A	478	GLN	2.8
1	A	317	TRP	2.8
1	B	410	LEU	2.8
1	B	432	GLY	2.7
1	A	339	SER	2.7
1	A	454	LEU	2.7
1	B	278	CYS	2.6
1	B	348	ASP	2.6
1	B	372	ASP	2.6
1	B	303	GLU	2.6
1	A	324	LEU	2.6
1	A	424	VAL	2.6
1	A	372	ASP	2.6
1	A	468	PRO	2.6
1	B	475	LEU	2.6
1	A	497	ALA	2.6
1	A	290	GLU	2.6
1	B	301	SER	2.5
1	A	412	PHE	2.5
1	A	441	GLN	2.5
1	B	409	ALA	2.5
1	A	348	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	269	GLU	2.5
1	A	419	LEU	2.5
1	A	493	VAL	2.5
1	A	267	LEU	2.5
1	B	402	ASP	2.5
1	B	313	MET	2.4
1	A	462	ILE	2.4
1	A	486	PHE	2.4
1	B	450	PHE	2.4
1	B	442	LEU	2.4
1	A	479	HIS	2.4
1	B	305	VAL	2.4
1	A	457	THR	2.4
1	B	339	SER	2.4
1	B	429	HIS	2.3
1	A	269	GLU	2.3
1	B	449	ALA	2.3
1	B	298	ASN	2.3
1	A	368	ALA	2.3
1	A	266	SER	2.3
1	B	280	SER	2.3
1	B	479	HIS	2.3
1	A	373	ASN	2.3
1	A	320	CYS	2.3
1	B	422	ALA	2.3
1	B	317	TRP	2.3
1	A	437	ARG	2.3
1	B	444	TYR	2.3
1	A	418	ALA	2.3
1	B	289	LEU	2.2
1	B	391	LEU	2.2
1	B	472	LEU	2.2
1	B	312	SER	2.2
1	A	289	LEU	2.2
1	A	435	GLU	2.2
1	A	270	ILE	2.2
1	B	419	LEU	2.2
1	B	328	ILE	2.2
1	A	395	GLU	2.2
1	A	391	LEU	2.1
1	B	287	LEU	2.1
1	B	404	SER	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	473	ARG	2.1
1	B	330	TYR	2.1
1	B	453	HIS	2.1
1	A	407	LEU	2.1
1	B	335	ALA	2.1
1	B	270	ILE	2.0
1	A	293	LEU	2.0
1	A	316	MET	2.0
1	B	331	VAL	2.0
1	B	320	CYS	2.0

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

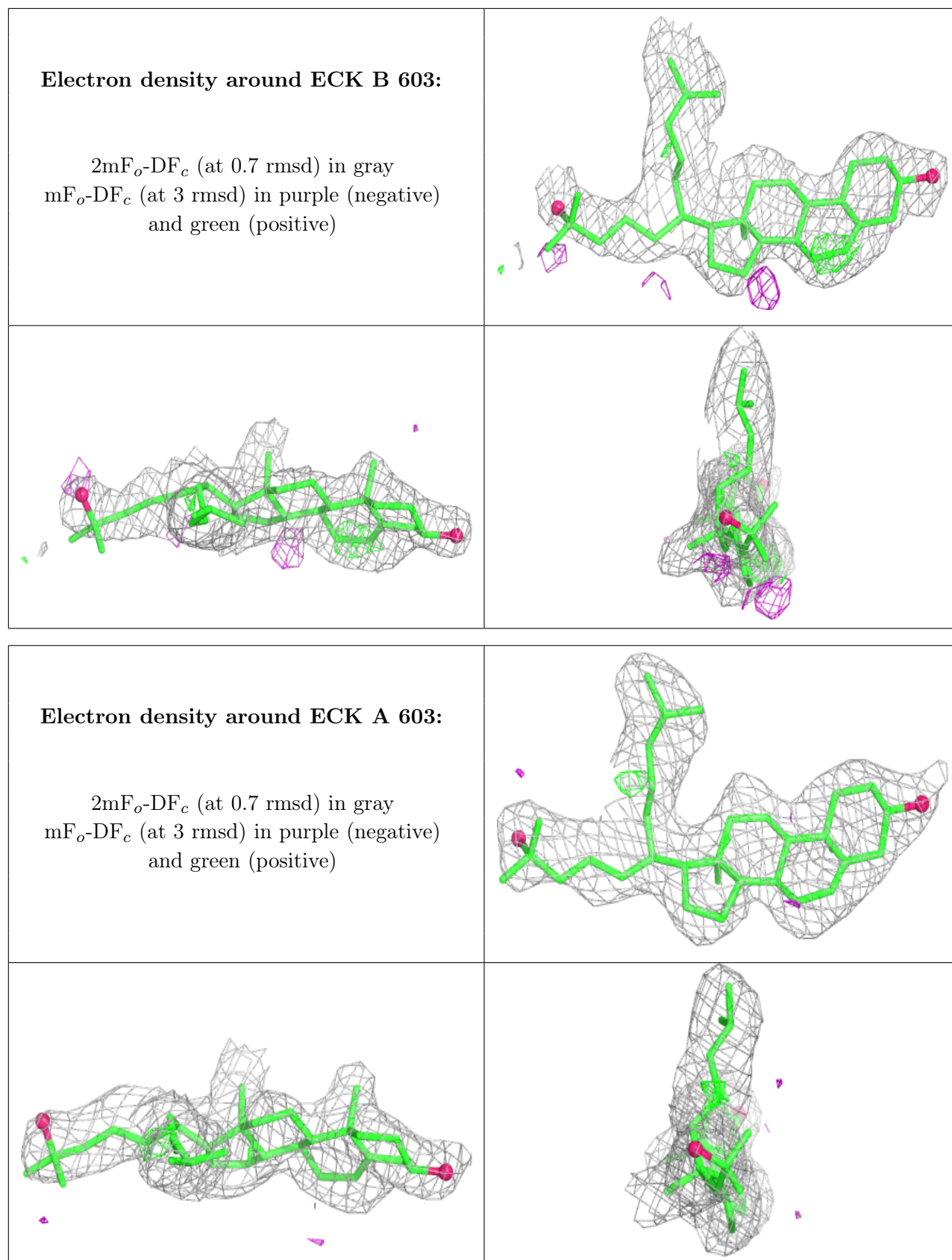There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	ECK	B	603	34/34	0.70	0.27	53,79,109,116	0
3	ACT	B	601	4/4	0.71	0.34	82,94,94,97	0
4	ECK	A	603	34/34	0.72	0.27	46,68,106,113	0
3	ACT	B	602	4/4	0.73	0.27	89,91,95,102	0
3	ACT	A	601	4/4	0.74	0.45	88,89,94,96	0
3	ACT	A	602	4/4	0.79	0.35	72,81,88,96	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 ECK B 603:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around ECK A 603:

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.