



# Full wwPDB X-ray Structure Validation Report ⓘ

Dec 20, 2023 – 01:31 pm GMT

PDB ID : 8BZ8  
Title : Crystal structure of the *L. monocytogenes* RmlT D198A variant in complex with TDP-rhamnose  
Authors : Cereija, T.B.; Morais-Cabral, J.H.  
Deposited on : 2022-12-14  
Resolution : 2.52 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](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>.

---

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

MolProbity : 4.02b-467  
Mogul : 1.8.4, CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

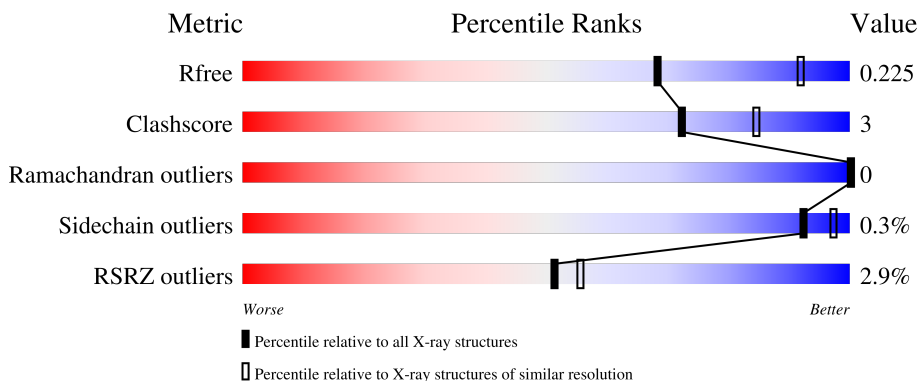
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.52 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))
$R_{free}$	130704	5743 (2.54-2.50)
Clashscore	141614	6463 (2.54-2.50)
Ramachandran outliers	138981	6335 (2.54-2.50)
Sidechain outliers	138945	6337 (2.54-2.50)
RSRZ outliers	127900	5630 (2.54-2.50)

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	624	 89% 8% .
1	B	624	 87% 10% .
1	C	624	 91% 6% .
1	D	624	 86% 10% .
1	E	624	 87% 9% .

Continued on next page...

*Continued from previous page...*

Mol	Chain	Length	Quality of chain
1	F	624	 A horizontal bar chart representing the quality of chain. The bar is divided into three segments: a red segment on the left labeled '8%', a large green segment in the middle labeled '85%', and a yellow segment on the right labeled '11%'. A small grey dot is visible at the end of the bar.

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	TAR	E	704	-	-	-	X

## 2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 30233 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 Glycosyltransferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	603	4899	3124	815	948	12	0	2	0
1	B	601	4887	3119	812	944	12	0	2	0
1	C	603	4883	3116	812	943	12	0	0	0
1	D	603	4883	3116	812	943	12	0	0	0
1	E	599	4877	3113	809	943	12	0	2	0
1	F	599	4860	3104	807	937	12	0	0	0

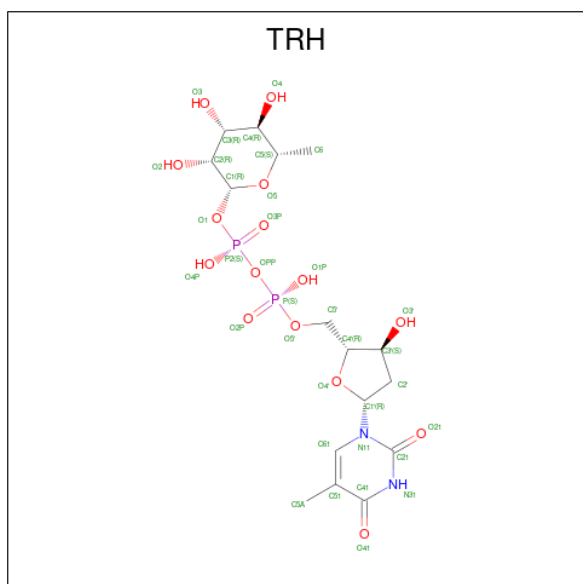
There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	GLY	-	expression tag	UNP A0A401AAP7
A	198	ALA	ASP	engineered mutation	UNP A0A401AAP7
B	0	GLY	-	expression tag	UNP A0A401AAP7
B	198	ALA	ASP	engineered mutation	UNP A0A401AAP7
C	0	GLY	-	expression tag	UNP A0A401AAP7
C	198	ALA	ASP	engineered mutation	UNP A0A401AAP7
D	0	GLY	-	expression tag	UNP A0A401AAP7
D	198	ALA	ASP	engineered mutation	UNP A0A401AAP7
E	0	GLY	-	expression tag	UNP A0A401AAP7
E	198	ALA	ASP	engineered mutation	UNP A0A401AAP7
F	0	GLY	-	expression tag	UNP A0A401AAP7
F	198	ALA	ASP	engineered mutation	UNP A0A401AAP7

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	2	Total Mg 2 2	0	0
2	B	1	Total Mg 1 1	0	0
2	C	2	Total Mg 2 2	0	0
2	D	1	Total Mg 1 1	0	0
2	E	2	Total Mg 2 2	0	0
2	F	1	Total Mg 1 1	0	0

- Molecule 3 is 2'-DEOXY-THYMIDINE-BETA-L-RHAMNOSE (three-letter code: TRH) (formula: C<sub>16</sub>H<sub>26</sub>N<sub>2</sub>O<sub>15</sub>P<sub>2</sub>) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O P 35 16 2 15 2	0	0
3	B	1	Total C N O P 35 16 2 15 2	0	0
3	C	1	Total C N O P 35 16 2 15 2	0	0
3	D	1	Total C N O P 35 16 2 15 2	0	0
3	E	1	Total C N O P 35 16 2 15 2	0	0

*Continued on next page...*

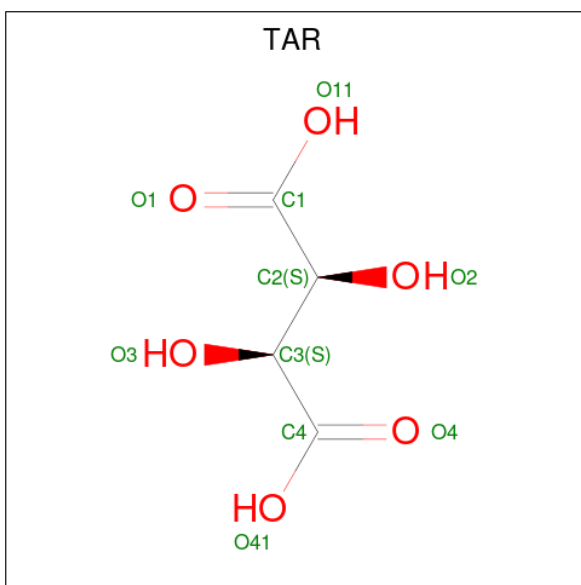
Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
3	F	1	35	16	2	15	2	0	0

- Molecule 4 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	1	Total Cl 1 1	0	0
4	F	1	Total Cl 1 1	0	0

- Molecule 5 is D(-)-TARTARIC ACID (three-letter code: TAR) (formula: C<sub>4</sub>H<sub>6</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C O 10 4 6	0	0
5	D	1	Total C O 10 4 6	0	0
5	E	1	Total C O 10 4 6	0	0
5	F	1	Total C O 10 4 6	0	0
5	F	1	Total C O 10 4 6	0	0

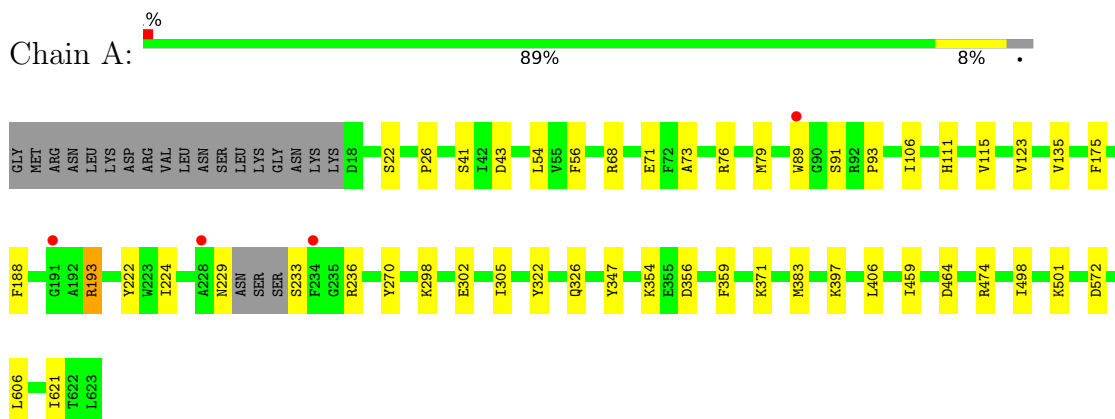
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	151	Total 151	O 151	0	0
6	B	93	Total 93	O 93	0	0
6	C	161	Total 161	O 161	0	0
6	D	116	Total 116	O 116	0	0
6	E	93	Total 93	O 93	0	0
6	F	59	Total 59	O 59	0	0

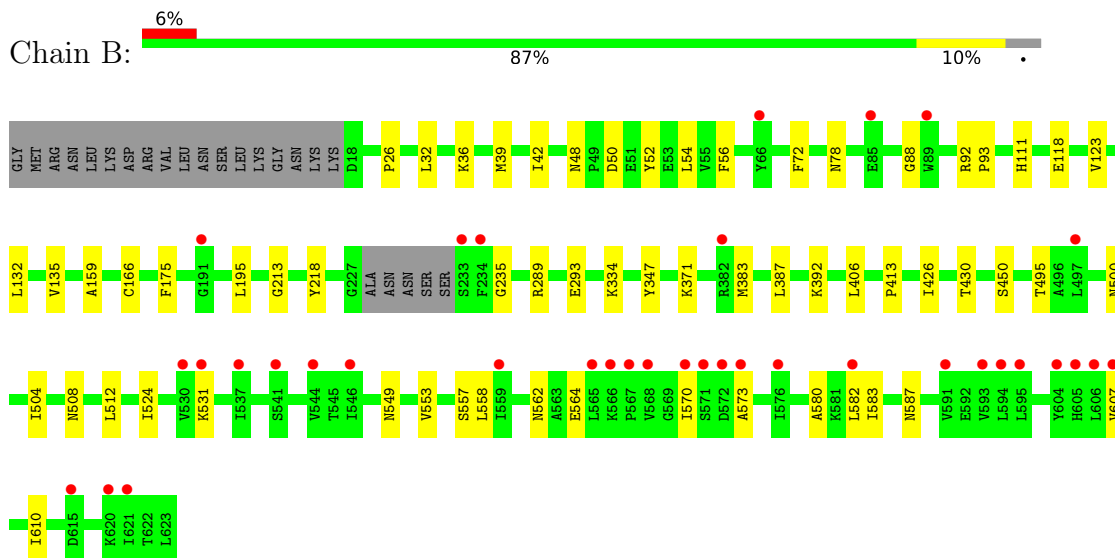
### 3 Residue-property plots [i](#)

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 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.

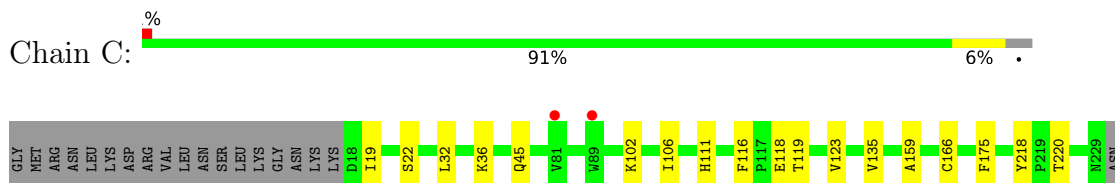
- Molecule 1: Glycosyltransferase



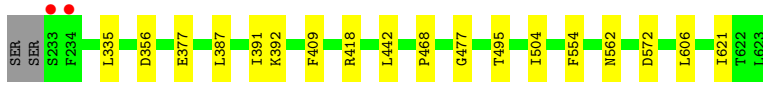
- Molecule 1: Glycosyltransferase



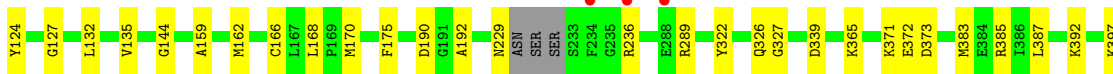
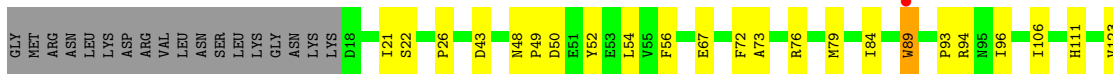
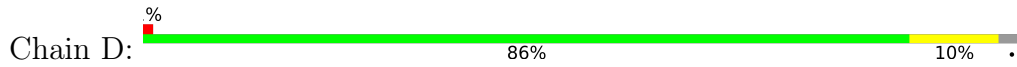
- Molecule 1: Glycosyltransferase



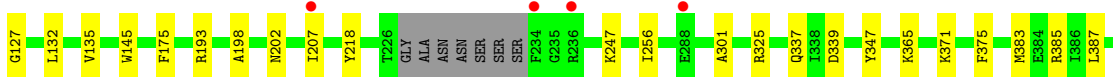
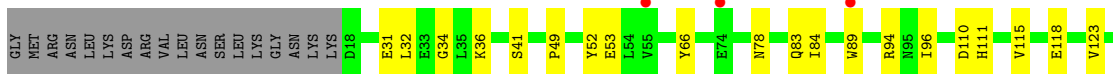
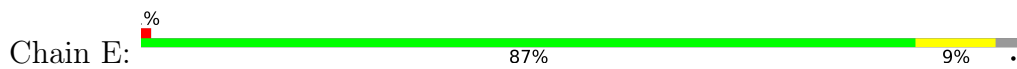




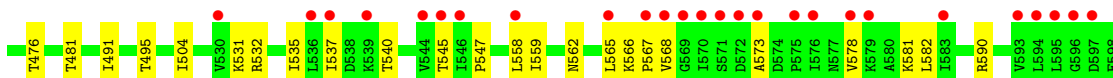
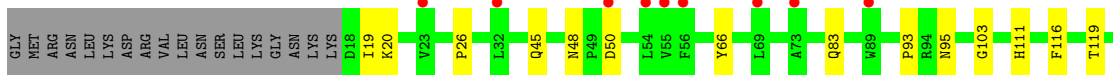
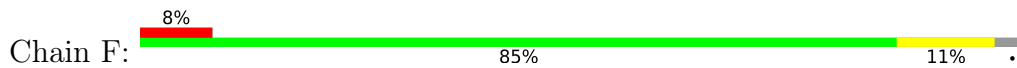
- Molecule 1: Glycosyltransferase



- Molecule 1: Glycosyltransferase



- Molecule 1: Glycosyltransferase



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	87.40Å 292.38Å 93.08Å 90.00° 100.50° 90.00°	Depositor
Resolution (Å)	45.76 – 2.52 49.28 – 2.52	Depositor EDS
% Data completeness (in resolution range)	100.0 (45.76-2.52) 100.0 (49.28-2.52)	Depositor EDS
$R_{merge}$	0.11	Depositor
$R_{sym}$	0.11	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.76 (at 2.51Å)	Xtrriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, $R_{free}$	0.191 , 0.228 0.187 , 0.225	Depositor DCC
$R_{free}$ test set	7586 reflections (4.93%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	53.8	Xtrriage
Anisotropy	0.289	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.32 , 39.5	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	30233	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	63.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.45% 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: TAR, TRH, CL, MG

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	0.26	0/4999	0.47	0/6750
1	B	0.25	0/4987	0.46	0/6732
1	C	0.25	0/4983	0.47	0/6728
1	D	0.25	0/4983	0.47	0/6728
1	E	0.25	0/4977	0.46	0/6720
1	F	0.25	0/4960	0.47	0/6697
All	All	0.25	0/29889	0.47	0/40355

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 [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	4899	0	4836	32	0
1	B	4887	0	4832	37	0
1	C	4883	0	4828	19	0
1	D	4883	0	4828	43	0
1	E	4877	0	4817	33	0
1	F	4860	0	4809	42	0
2	A	2	0	0	0	0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	1	0	0	0	0
2	C	2	0	0	0	0
2	D	1	0	0	0	0
2	E	2	0	0	0	0
2	F	1	0	0	0	0
3	A	35	0	24	2	0
3	B	35	0	24	0	0
3	C	35	0	24	0	0
3	D	35	0	24	1	0
3	E	35	0	24	0	0
3	F	35	0	24	1	0
4	B	1	0	0	0	0
4	F	1	0	0	0	0
5	B	10	0	4	0	0
5	D	10	0	4	2	0
5	E	10	0	4	0	0
5	F	20	0	8	3	0
6	A	151	0	0	1	0
6	B	93	0	0	0	0
6	C	161	0	0	1	0
6	D	116	0	0	0	0
6	E	93	0	0	0	0
6	F	59	0	0	0	0
All	All	30233	0	29114	197	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 3.

All (197) 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:500:ASN:H	1:B:557:SER:HB3	1.49	0.78
1:F:144:GLY:H	5:F:705:TAR:H2	1.48	0.75
1:B:558:LEU:HD13	1:B:583:ILE:HG13	1.72	0.72
1:C:335:LEU:HD21	1:C:391:ILE:HG21	1.75	0.69
1:D:144:GLY:H	5:D:703:TAR:H2	1.56	0.69
1:F:565:LEU:HG	1:F:606:LEU:HD23	1.73	0.69
1:E:365:LYS:HG2	1:E:446:GLU:HG2	1.75	0.68
1:B:413:PRO:HG2	1:B:426:ILE:HB	1.77	0.67
1:D:26:PRO:HB3	1:D:93:PRO:HB2	1.77	0.66
1:B:26:PRO:HB3	1:B:93:PRO:HB2	1.78	0.65

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:335:LEU:HD21	1:F:391:ILE:HG21	1.80	0.63
1:E:339:ASP:OD2	1:E:385:ARG:NH2	2.33	0.61
1:B:383:MET:HG3	1:B:406:LEU:HD11	1.83	0.61
1:D:168:LEU:HD12	1:D:170:MET:HG3	1.83	0.61
1:E:207:ILE:HD11	1:E:256:ILE:HG12	1.84	0.60
1:D:73:ALA:HA	1:D:79:MET:HE3	1.85	0.59
1:F:582:LEU:HB2	1:F:610:ILE:HD13	1.84	0.59
1:E:94:ARG:NH2	1:E:110:ASP:OD1	2.36	0.58
1:E:301:ALA:O	1:E:325:ARG:NH1	2.36	0.58
1:D:387:LEU:HB2	1:D:392:LYS:HG3	1.85	0.58
1:B:32:LEU:HG	1:B:36:LYS:HE3	1.85	0.58
1:F:19:ILE:HG22	1:F:103:GLY:HA2	1.85	0.57
1:F:537:ILE:HD11	1:F:621:ILE:HB	1.87	0.57
1:A:73:ALA:HA	1:A:79:MET:HE3	1.86	0.56
1:B:387:LEU:HB2	1:B:392:LYS:HG3	1.88	0.55
1:F:416:LYS:HZ3	5:F:705:TAR:H3	1.71	0.55
1:D:43:ASP:OD2	1:D:76:ARG:NH2	2.40	0.54
1:D:327:GLY:HA3	1:F:540:THR:HG21	1.87	0.54
1:D:21:ILE:HD11	1:D:124:TYR:HB2	1.88	0.54
1:F:26:PRO:HB3	1:F:93:PRO:HB2	1.89	0.54
1:E:508:ASN:HD21	1:E:512:LEU:HB2	1.73	0.53
1:E:123:VAL:HG13	1:E:135:VAL:HG11	1.90	0.53
1:A:233:SER:HB2	1:A:236:ARG:HG3	1.90	0.53
1:A:572:ASP:OD1	1:A:572:ASP:N	2.37	0.53
1:F:558:LEU:HD11	1:F:581:LYS:HD2	1.90	0.53
1:B:508:ASN:HD21	1:B:512:LEU:HB2	1.74	0.53
1:E:387:LEU:HB2	1:E:392:LYS:HG3	1.91	0.53
1:B:92:ARG:NH2	1:D:190:ASP:O	2.36	0.53
1:C:562:ASN:ND2	6:C:805:HOH:O	2.42	0.53
1:A:123:VAL:HG13	1:A:135:VAL:HG11	1.91	0.52
1:B:52:TYR:O	1:B:78:ASN:ND2	2.37	0.52
1:A:322:TYR:O	1:A:326:GLN:HG2	2.09	0.52
1:F:26:PRO:O	3:F:702:TRH:O3'	2.23	0.52
1:D:22:SER:HB2	1:D:106:ILE:HD13	1.92	0.52
1:F:567:PRO:HA	1:F:604:TYR:HA	1.91	0.52
1:C:32:LEU:HG	1:C:36:LYS:HE3	1.92	0.52
1:D:67:GLU:N	1:D:67:GLU:OE1	2.42	0.51
1:F:566:LYS:HD2	1:F:573:ALA:HB3	1.93	0.51
1:A:354:LYS:HB3	1:A:359:PHE:CE1	2.46	0.51
1:D:383:MET:HG3	1:D:406:LEU:HD11	1.91	0.51
1:C:606:LEU:HD12	1:C:621:ILE:HD13	1.93	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:88:GLY:HA3	1:D:192:ALA:CB	2.41	0.51
1:F:532:ARG:NH2	1:F:617:GLN:O	2.44	0.51
1:C:45:GLN:NE2	1:C:116:PHE:O	2.33	0.50
1:E:383:MET:HG3	1:E:406:LEU:HD11	1.94	0.50
1:A:26:PRO:O	3:A:703:TRH:O3'	2.26	0.50
1:A:22:SER:HB2	1:A:106:ILE:HD13	1.92	0.50
1:A:474:ARG:NH1	6:A:809:HOH:O	2.44	0.50
1:E:53:GLU:HA	1:E:78:ASN:HB2	1.94	0.50
1:D:322:TYR:O	1:D:326:GLN:HG2	2.12	0.50
1:D:159:ALA:O	1:D:162:MET:HG2	2.12	0.49
1:D:418:ARG:HB3	1:D:468:PRO:HG2	1.95	0.49
1:F:416:LYS:NZ	5:F:705:TAR:H3	2.27	0.49
1:F:123:VAL:HG13	1:F:135:VAL:HG11	1.93	0.49
1:D:26:PRO:HG3	1:D:94:ARG:HG3	1.94	0.49
1:F:354:LYS:HB3	1:F:359:PHE:CE1	2.47	0.49
1:C:495:THR:HG22	1:C:504:ILE:HG12	1.95	0.49
1:D:123:VAL:HG13	1:D:135:VAL:HG11	1.94	0.49
1:A:459:ILE:HG23	1:A:464:ASP:HB2	1.95	0.49
1:D:48:ASN:ND2	1:D:50:ASP:OD1	2.38	0.49
1:D:521:VAL:HG23	1:D:522:ARG:HG3	1.95	0.49
1:C:123:VAL:HG13	1:C:135:VAL:HG11	1.95	0.48
1:B:123:VAL:HG13	1:B:135:VAL:HG11	1.95	0.48
1:D:159:ALA:HB1	1:D:166:CYS:HB2	1.96	0.48
1:A:229:ASN:HA	3:A:703:TRH:O3	2.14	0.48
1:C:22:SER:HB2	1:C:106:ILE:HD13	1.96	0.48
1:D:568:VAL:HG21	1:D:603:GLU:HG2	1.95	0.48
1:F:568:VAL:HG22	1:F:605:HIS:CD2	2.49	0.48
1:E:123:VAL:HG11	1:E:175:PHE:CG	2.49	0.48
1:E:418:ARG:HB3	1:E:468:PRO:HG2	1.95	0.48
1:C:123:VAL:HG11	1:C:175:PHE:CG	2.49	0.47
1:B:132:LEU:HD13	1:B:213:GLY:HA3	1.95	0.47
1:D:339:ASP:OD2	1:D:385:ARG:NH2	2.46	0.47
1:F:495:THR:HG22	1:F:504:ILE:HG12	1.97	0.47
1:A:383:MET:HG3	1:A:406:LEU:HD11	1.95	0.47
1:C:572:ASP:OD1	1:C:572:ASP:N	2.42	0.47
1:B:582:LEU:HB2	1:B:610:ILE:HG12	1.95	0.47
1:C:19:ILE:HD12	1:C:102:LYS:HB2	1.96	0.47
1:B:159:ALA:HB1	1:B:166:CYS:HB2	1.97	0.47
1:B:562:ASN:HA	1:B:580:ALA:H	1.79	0.47
1:E:375:PHE:HZ	1:E:438:LYS:HD3	1.80	0.47
1:B:88:GLY:HA3	1:D:192:ALA:HB2	1.96	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:54:LEU:HD23	1:D:56:PHE:HE1	1.81	0.46
1:E:489:GLY:O	1:E:507:LYS:NZ	2.41	0.46
1:F:20:LYS:HD3	1:F:124:TYR:CE2	2.50	0.46
1:C:159:ALA:HB1	1:C:166:CYS:HB2	1.97	0.46
1:D:89:TRP:HE3	1:D:89:TRP:N	2.14	0.46
1:A:54:LEU:HD23	1:A:56:PHE:HE1	1.81	0.45
1:B:42:ILE:HG21	1:B:54:LEU:HD11	1.98	0.45
1:B:531:LYS:HE3	1:B:549:ASN:HA	1.98	0.45
1:D:365:LYS:HD2	1:D:373:ASP:OD1	2.16	0.45
1:E:415:ILE:HG13	1:E:471:ILE:HD13	1.97	0.45
1:F:66:TYR:CE1	1:F:83:GLN:HB2	2.50	0.45
1:F:390:GLU:HG2	1:F:391:ILE:HD12	1.98	0.45
1:B:289:ARG:NH1	1:B:293:GLU:OE2	2.49	0.45
1:B:92:ARG:HB3	1:B:93:PRO:HD3	1.99	0.45
1:B:195:LEU:HD11	1:B:235:GLY:HA3	1.98	0.45
1:C:118:GLU:HB2	1:C:218:TYR:CZ	2.52	0.45
1:C:418:ARG:HB3	1:C:468:PRO:HG2	1.97	0.45
1:F:119:THR:HG23	1:F:220:THR:HB	1.98	0.45
1:E:83:GLN:O	1:E:84:ILE:HG13	2.17	0.45
1:D:123:VAL:HG11	1:D:175:PHE:CD1	2.51	0.45
1:F:306:PRO:HG2	1:F:309:ILE:HG12	1.99	0.45
1:B:570:ILE:HB	1:B:573:ALA:HB2	1.98	0.45
1:E:198:ALA:O	1:E:202:ASN:ND2	2.43	0.45
1:C:387:LEU:HB2	1:C:392:LYS:HG3	1.98	0.45
1:A:123:VAL:HG11	1:A:175:PHE:CG	2.52	0.44
1:F:123:VAL:HG11	1:F:175:PHE:CG	2.51	0.44
1:A:26:PRO:HB3	1:A:93:PRO:HB2	1.99	0.44
1:B:123:VAL:HG11	1:B:175:PHE:CG	2.52	0.44
1:B:430:THR:HG22	1:B:450:SER:HB2	2.00	0.44
1:D:397:LYS:HA	1:D:400:PHE:CE2	2.53	0.44
1:E:41:SER:HB2	1:E:115:VAL:O	2.17	0.44
1:A:498:ILE:O	1:A:501:LYS:HE3	2.18	0.44
1:A:606:LEU:HD12	1:A:621:ILE:HD13	1.99	0.44
1:B:118:GLU:HB2	1:B:218:TYR:CZ	2.53	0.44
1:B:504:ILE:HD11	1:B:524:ILE:HA	2.00	0.44
1:B:495:THR:HG22	1:B:504:ILE:HG12	1.99	0.44
1:E:572:ASP:OD1	1:E:572:ASP:N	2.48	0.44
1:C:377:GLU:HG3	1:C:442:LEU:HD23	2.00	0.44
1:D:455:ILE:HG12	1:D:517:VAL:HG21	1.99	0.43
1:B:39:MET:HG3	1:B:72:PHE:CD2	2.54	0.43
1:F:531:LYS:HG3	1:F:547:PRO:HG2	1.99	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:545:THR:HG23	1:F:590:ARG:HD2	2.00	0.43
1:D:123:VAL:HG11	1:D:175:PHE:CG	2.53	0.43
1:E:347:TYR:CZ	1:F:371:LYS:HA	2.53	0.43
1:A:91:SER:HB3	1:A:188:PHE:HB3	2.00	0.43
1:A:347:TYR:CZ	1:B:371:LYS:HA	2.54	0.43
1:D:236:ARG:O	1:D:289:ARG:NH2	2.46	0.43
1:F:132:LEU:HD13	1:F:213:GLY:HA3	2.00	0.43
1:F:347:TYR:OH	1:F:370:ASP:OD1	2.32	0.43
1:C:409:PHE:CD1	1:C:477:GLY:HA3	2.53	0.43
1:D:229:ASN:HB3	3:D:702:TRH:O2	2.19	0.43
1:D:229:ASN:OD1	1:D:229:ASN:N	2.51	0.43
1:F:159:ALA:HB1	1:F:166:CYS:HB2	2.00	0.43
1:F:476:THR:HG22	1:F:481:THR:HG23	2.01	0.43
1:B:48:ASN:HB3	1:B:50:ASP:OD1	2.18	0.43
1:D:371:LYS:HB3	1:D:372:GLU:H	1.61	0.43
1:D:72:PHE:HB3	1:D:79:MET:HE1	2.00	0.43
1:E:118:GLU:HB2	1:E:218:TYR:CZ	2.53	0.43
1:A:43:ASP:OD2	1:A:76:ARG:NH1	2.52	0.43
1:F:532:ARG:HA	1:F:535:ILE:HG13	2.01	0.43
1:E:247:LYS:HE2	1:E:247:LYS:HB3	1.76	0.43
1:A:356:ASP:HA	1:A:498:ILE:HD13	2.00	0.43
1:E:84:ILE:HD13	1:E:96:ILE:HD13	2.01	0.43
1:B:54:LEU:HD23	1:B:56:PHE:HE1	1.84	0.42
1:A:89:TRP:CE3	1:A:193:ARG:HD3	2.54	0.42
1:E:135:VAL:HB	1:E:175:PHE:HB2	2.01	0.42
1:F:45:GLN:NE2	1:F:116:PHE:O	2.39	0.42
1:B:123:VAL:HG11	1:B:175:PHE:CD1	2.55	0.42
1:E:66:TYR:CD1	1:E:83:GLN:HG2	2.54	0.42
1:B:564:GLU:HB3	1:B:607:VAL:HG22	2.01	0.42
1:D:144:GLY:N	5:D:703:TAR:H2	2.31	0.42
1:F:559:ILE:HD12	1:F:582:LEU:HD23	2.02	0.42
1:F:562:ASN:HB2	1:F:578:VAL:O	2.20	0.42
1:A:397:LYS:HE2	1:A:397:LYS:HB3	1.85	0.42
1:B:553:VAL:HB	1:B:587:ASN:HA	2.01	0.42
1:D:127:GLY:HA2	1:D:132:LEU:HD12	2.02	0.42
1:E:31:GLU:HG3	1:E:34:GLY:H	1.84	0.42
1:F:339:ASP:OD2	1:F:385:ARG:NH2	2.53	0.42
1:F:418:ARG:HB3	1:F:468:PRO:HG2	2.01	0.42
1:A:68:ARG:NH2	1:A:71:GLU:OE1	2.43	0.41
1:D:49:PRO:HA	1:D:52:TYR:CE2	2.55	0.41
1:D:84:ILE:HD13	1:D:96:ILE:HD12	2.02	0.41

*Continued on next page...*



Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:127:GLY:HA2	1:E:132:LEU:HD12	2.02	0.41
1:A:123:VAL:HG11	1:A:175:PHE:CD1	2.55	0.41
1:F:95:ASN:ND2	1:F:187:THR:HB	2.35	0.41
1:A:371:LYS:HA	1:B:347:TYR:CZ	2.55	0.41
1:A:89:TRP:HD1	1:A:91:SER:H	1.68	0.41
1:A:222:TYR:CE2	1:A:224:ILE:HG12	2.56	0.41
1:A:270:TYR:CD1	1:A:305:ILE:HG13	2.55	0.41
1:D:539:LYS:HE2	1:D:623:LEU:HA	2.02	0.41
1:B:334:LYS:HD2	1:B:334:LYS:HA	1.95	0.41
1:C:119:THR:HG23	1:C:220:THR:HB	2.02	0.41
1:C:356:ASP:HB3	1:C:554:PHE:CE2	2.56	0.41
1:E:89:TRP:CZ3	1:E:193:ARG:HB2	2.55	0.41
1:E:145:TRP:CZ2	1:E:485:ALA:HB2	2.56	0.41
1:A:89:TRP:CD1	1:A:91:SER:HB2	2.56	0.41
1:A:298:LYS:NZ	1:A:302:GLU:OE2	2.44	0.41
1:D:383:MET:O	1:D:402:TYR:N	2.50	0.41
1:F:48:ASN:ND2	1:F:50:ASP:OD1	2.54	0.41
1:E:49:PRO:HA	1:E:52:TYR:CE2	2.56	0.40
1:A:41:SER:HB2	1:A:115:VAL:O	2.22	0.40
1:D:89:TRP:N	1:D:89:TRP:CE3	2.89	0.40
1:E:337:GLN:HG3	1:F:491:ILE:HD12	2.03	0.40
1:E:32:LEU:HG	1:E:36:LYS:HE3	2.04	0.40
1:E:371:LYS:HA	1:F:347:TYR:CZ	2.57	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	601/624 (96%)	581 (97%)	20 (3%)	0	100 100
1	B	599/624 (96%)	575 (96%)	24 (4%)	0	100 100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	599/624 (96%)	581 (97%)	18 (3%)	0	100	100
1	D	599/624 (96%)	582 (97%)	17 (3%)	0	100	100
1	E	597/624 (96%)	573 (96%)	24 (4%)	0	100	100
1	F	595/624 (95%)	575 (97%)	20 (3%)	0	100	100
All	All	3590/3744 (96%)	3467 (97%)	123 (3%)	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 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	535/552 (97%)	533 (100%)	2 (0%)	91	97
1	B	534/552 (97%)	533 (100%)	1 (0%)	93	98
1	C	533/552 (97%)	532 (100%)	1 (0%)	93	98
1	D	533/552 (97%)	531 (100%)	2 (0%)	91	97
1	E	533/552 (97%)	532 (100%)	1 (0%)	93	98
1	F	531/552 (96%)	530 (100%)	1 (0%)	93	98
All	All	3199/3312 (97%)	3191 (100%)	8 (0%)	92	97

All (8) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	111	HIS
1	A	193	ARG
1	B	111	HIS
1	C	111	HIS
1	D	89	TRP
1	D	111	HIS
1	E	111	HIS
1	F	111	HIS

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

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 22 ligands modelled in this entry, 11 are monoatomic - leaving 11 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	TRH	F	702	2	34,37,37	0.32	0	52,57,57	0.42	0
3	TRH	C	703	2	34,37,37	0.32	0	52,57,57	0.49	0
3	TRH	E	703	2	34,37,37	0.38	0	52,57,57	0.64	1 (1%)
3	TRH	D	702	2	34,37,37	0.32	0	52,57,57	0.44	0
5	TAR	D	703	-	9,9,9	0.98	0	12,12,12	0.97	0
5	TAR	E	704	-	9,9,9	1.00	0	12,12,12	0.97	0
3	TRH	A	703	2	34,37,37	0.35	0	52,57,57	0.57	0
5	TAR	B	704	-	9,9,9	0.98	0	12,12,12	0.99	0
5	TAR	F	705	-	9,9,9	0.99	0	12,12,12	0.97	0
3	TRH	B	702	2	34,37,37	0.33	0	52,57,57	0.44	0
5	TAR	F	704	-	9,9,9	0.98	0	12,12,12	0.99	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	TRH	F	702	2	-	0/21/53/53	0/3/3/3
3	TRH	C	703	2	-	3/21/53/53	0/3/3/3
3	TRH	E	703	2	-	3/21/53/53	0/3/3/3
3	TRH	D	702	2	-	4/21/53/53	0/3/3/3
5	TAR	D	703	-	-	12/12/12/12	-
5	TAR	E	704	-	-	4/12/12/12	-
3	TRH	A	703	2	-	1/21/53/53	0/3/3/3
5	TAR	B	704	-	-	10/12/12/12	-
5	TAR	F	705	-	-	8/12/12/12	-
3	TRH	B	702	2	-	4/21/53/53	0/3/3/3
5	TAR	F	704	-	-	3/12/12/12	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	703	TRH	C1-C2-C3	2.03	114.23	110.00

There are no chirality outliers.

All (52) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	702	TRH	O5-C1-O1-P2
3	E	703	TRH	O5-C1-O1-P2
5	B	704	TAR	O1-C1-C2-O2
5	B	704	TAR	O11-C1-C2-O2
5	B	704	TAR	O3-C3-C4-O4
5	D	703	TAR	O1-C1-C2-O2
5	D	703	TAR	O11-C1-C2-O2
5	D	703	TAR	C2-C3-C4-O4
5	D	703	TAR	C2-C3-C4-O41
5	E	704	TAR	O3-C3-C4-O4
5	E	704	TAR	O3-C3-C4-O41
5	F	705	TAR	O1-C1-C2-O2
5	F	705	TAR	C1-C2-C3-C4
5	F	705	TAR	O3-C3-C4-O4
5	F	705	TAR	O3-C3-C4-O41

*Continued on next page...*

*Continued from previous page...*

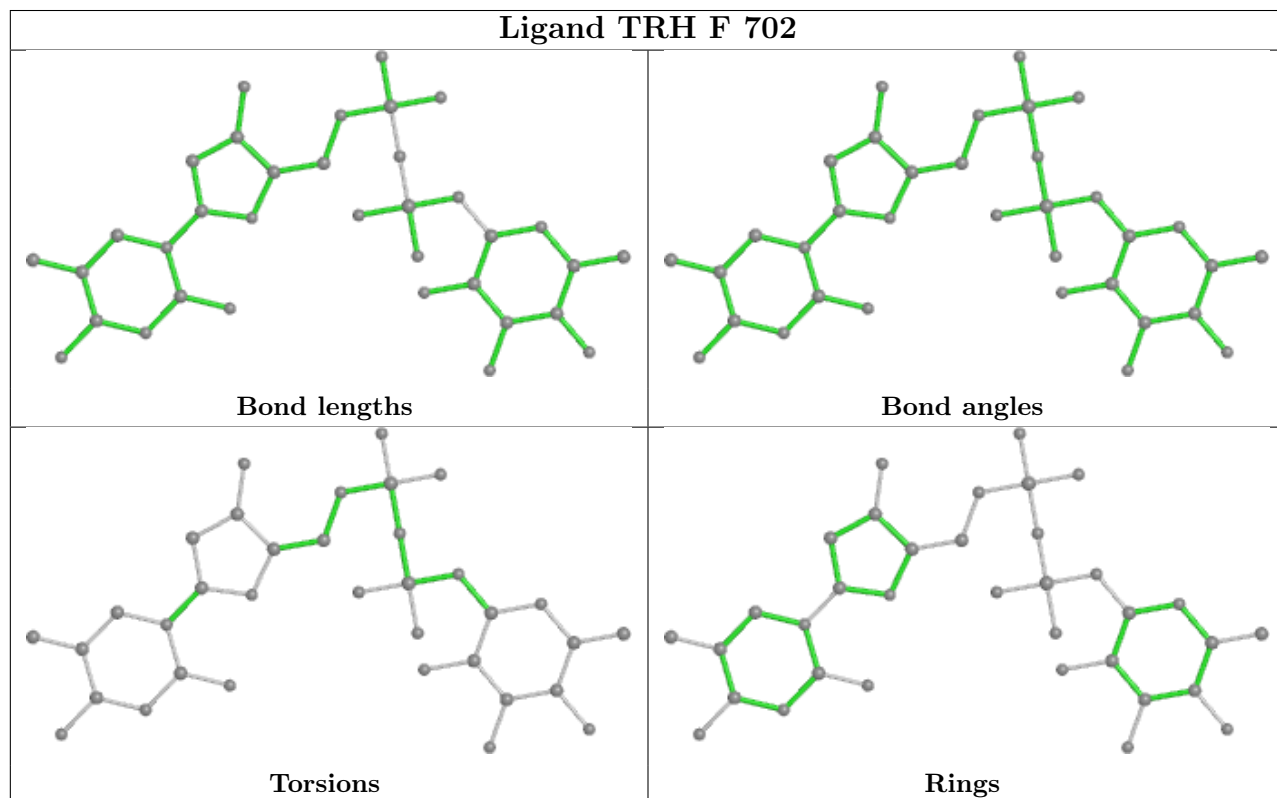
Mol	Chain	Res	Type	Atoms
5	F	705	TAR	O2-C2-C3-O3
5	B	704	TAR	O3-C3-C4-O41
5	D	703	TAR	O3-C3-C4-O4
5	D	703	TAR	O3-C3-C4-O41
5	E	704	TAR	O1-C1-C2-O2
5	E	704	TAR	O11-C1-C2-O2
5	F	705	TAR	O11-C1-C2-O2
5	B	704	TAR	O1-C1-C2-C3
5	B	704	TAR	O11-C1-C2-C3
5	D	703	TAR	O1-C1-C2-C3
5	D	703	TAR	O11-C1-C2-C3
5	F	705	TAR	C1-C2-C3-O3
5	F	705	TAR	O2-C2-C3-C4
5	B	704	TAR	O2-C2-C3-C4
5	D	703	TAR	C1-C2-C3-O3
5	D	703	TAR	O2-C2-C3-C4
5	B	704	TAR	C1-C2-C3-O3
3	A	703	TRH	C1-O1-P2-OPP
3	C	703	TRH	C1-O1-P2-OPP
3	E	703	TRH	C1-O1-P2-OPP
3	D	702	TRH	P-OPP-P2-O3P
5	D	703	TAR	C1-C2-C3-C4
5	B	704	TAR	C1-C2-C3-C4
3	E	703	TRH	C2-C1-O1-P2
3	B	702	TRH	P-OPP-P2-O4P
5	F	704	TAR	O2-C2-C3-O3
3	D	702	TRH	O5-C1-O1-P2
5	B	704	TAR	O2-C2-C3-O3
5	F	704	TAR	O2-C2-C3-C4
3	B	702	TRH	C4'-C5'-O5'-P
3	C	703	TRH	P-OPP-P2-O3P
3	B	702	TRH	P-OPP-P2-O3P
3	C	703	TRH	P-OPP-P2-O4P
3	D	702	TRH	P-OPP-P2-O4P
5	F	704	TAR	C1-C2-C3-O3
3	D	702	TRH	C1-O1-P2-OPP
5	D	703	TAR	O2-C2-C3-O3

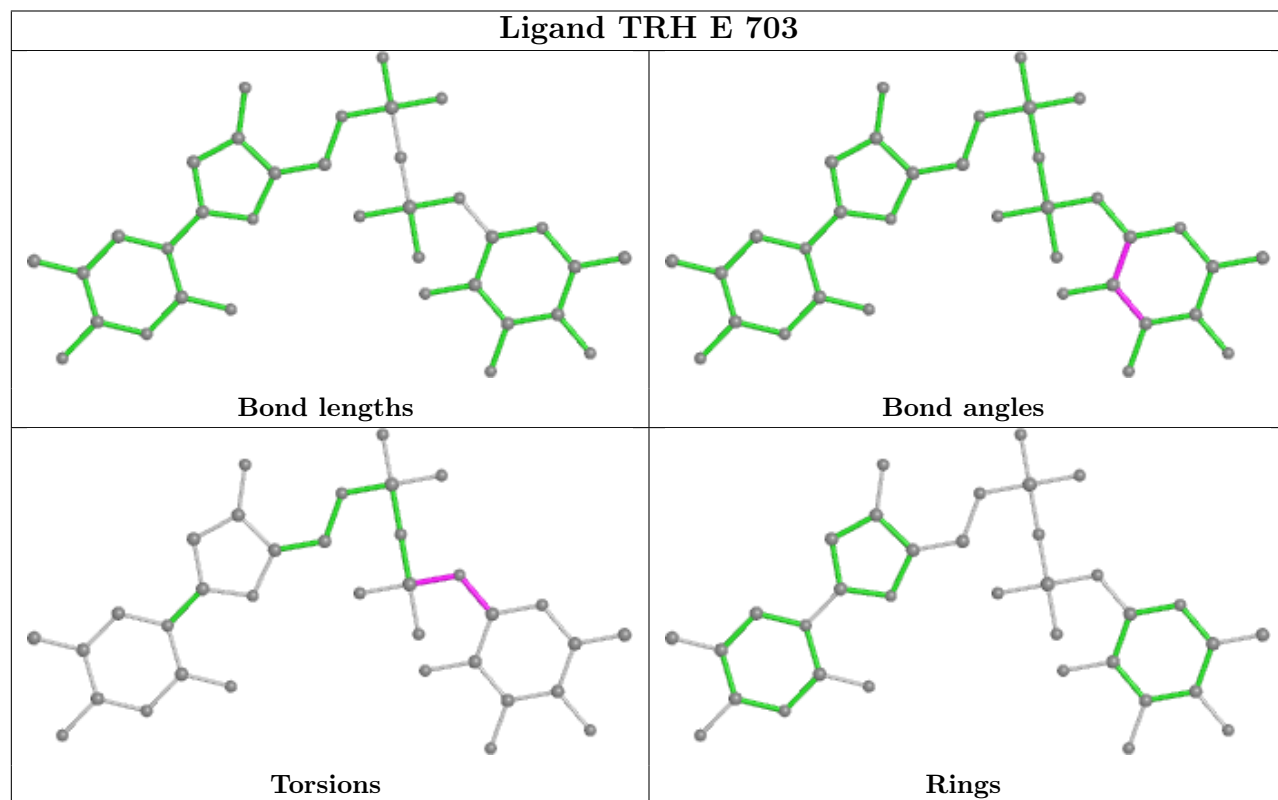
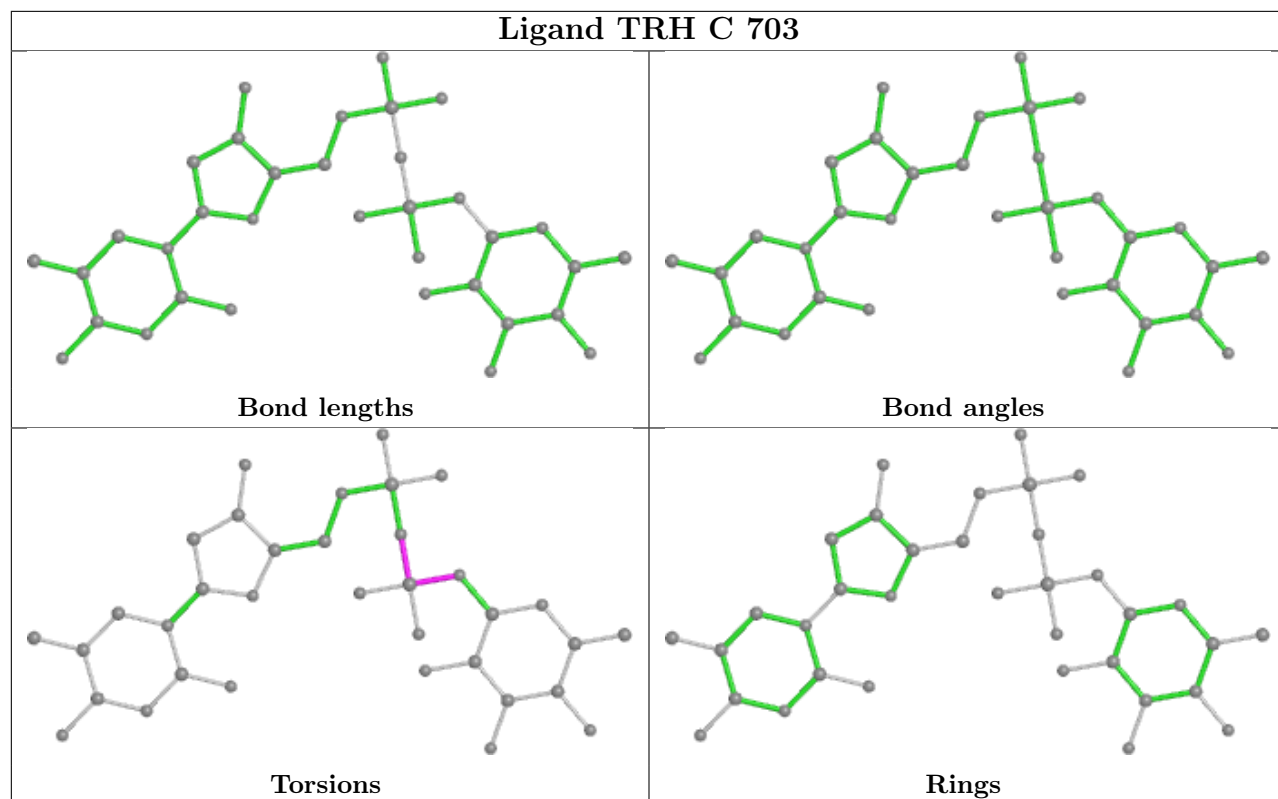
There are no ring outliers.

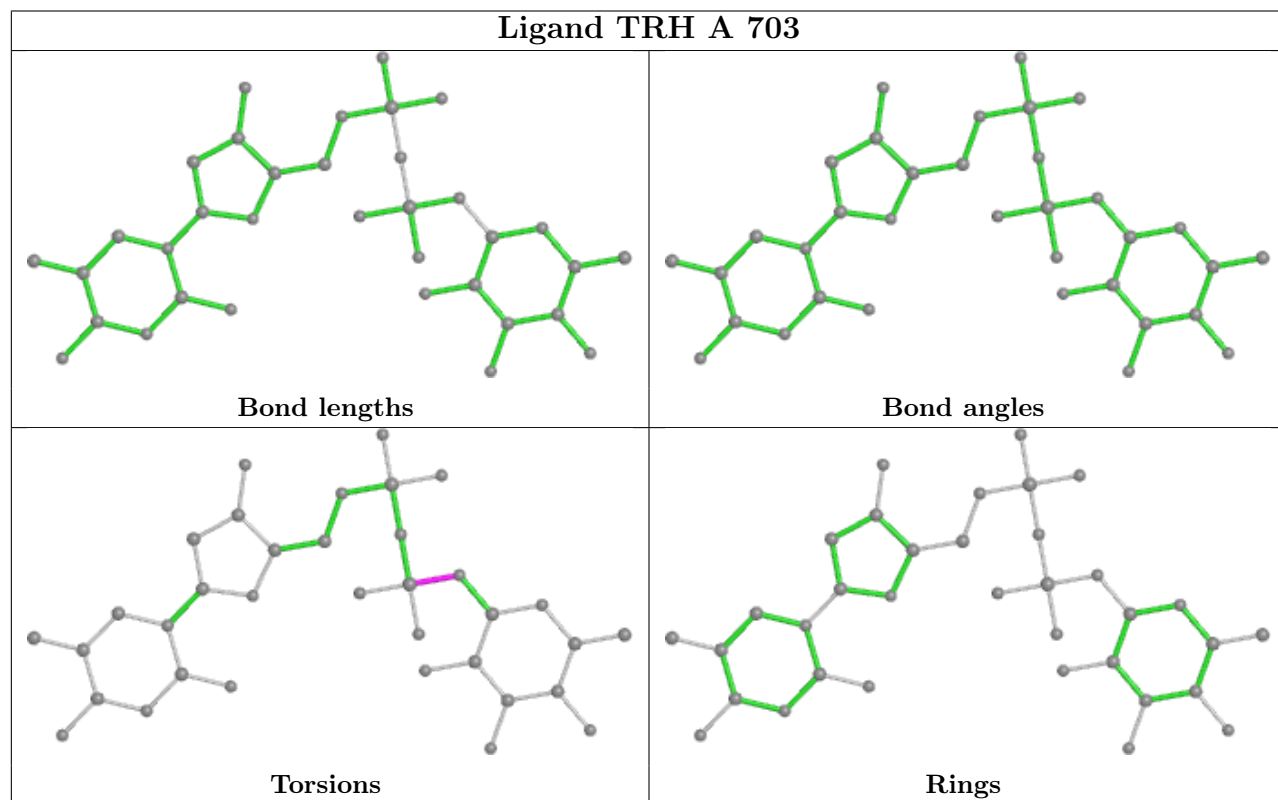
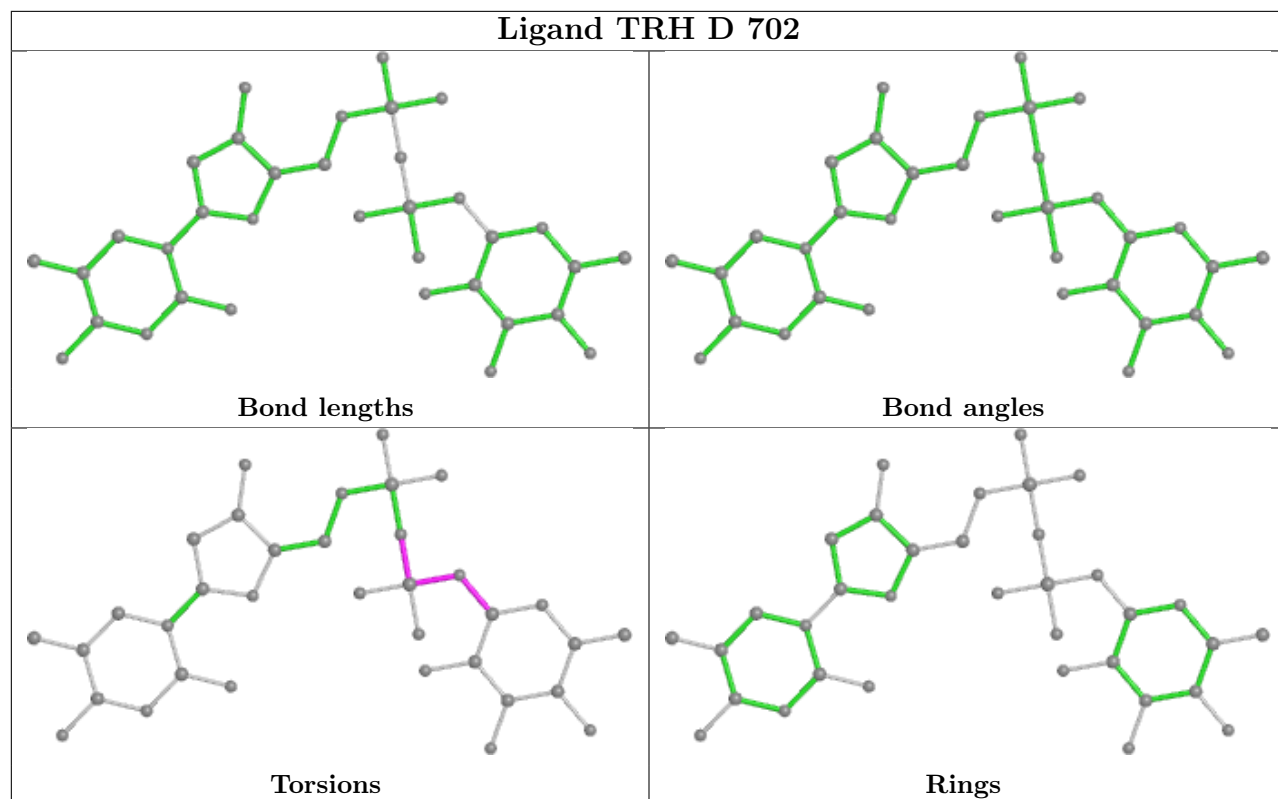
5 monomers are involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	702	TRH	1	0
3	D	702	TRH	1	0
5	D	703	TAR	2	0
3	A	703	TRH	2	0
5	F	705	TAR	3	0

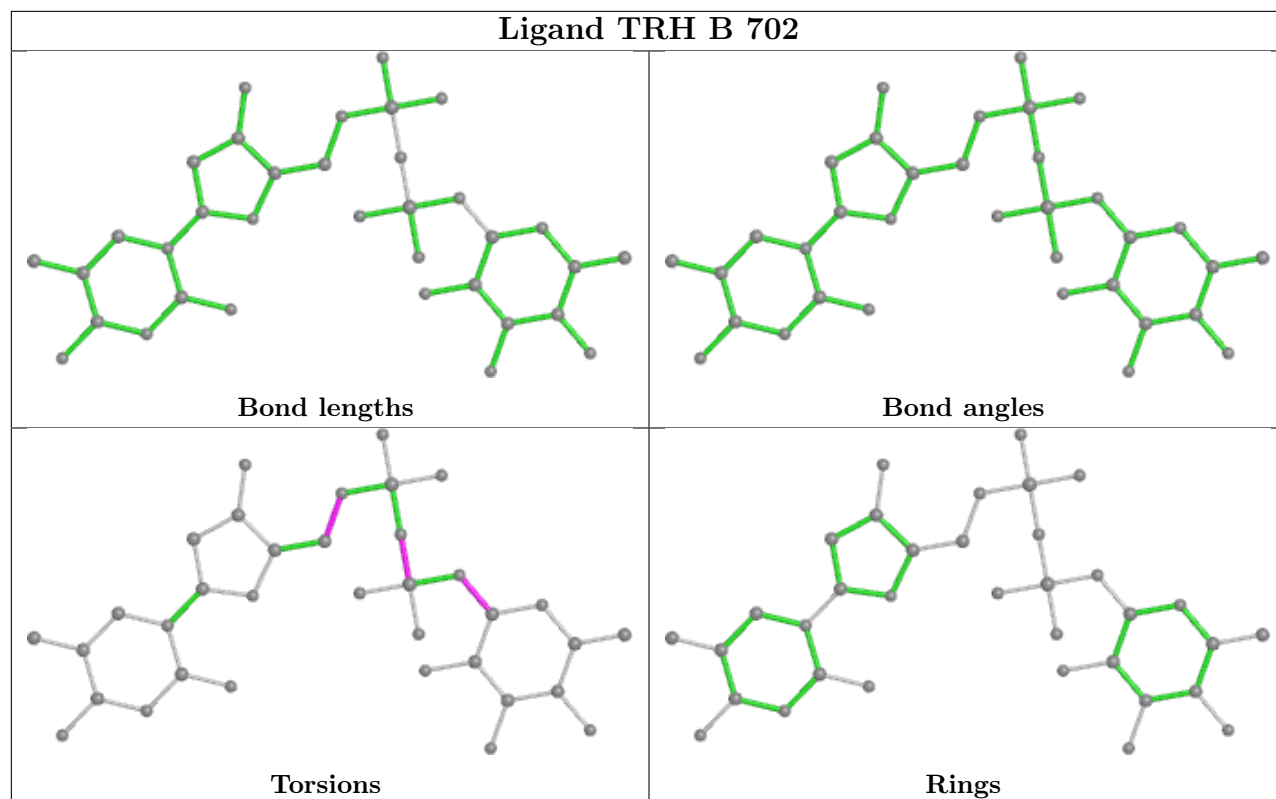
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<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	603/624 (96%)	-0.08	4 (0%) 87 89	28, 55, 91, 128	0
1	B	601/624 (96%)	0.31	36 (5%) 21 23	35, 66, 117, 179	0
1	C	603/624 (96%)	0.04	4 (0%) 87 89	34, 53, 84, 129	0
1	D	603/624 (96%)	-0.01	4 (0%) 87 89	36, 54, 82, 124	0
1	E	599/624 (95%)	0.05	7 (1%) 79 81	35, 64, 101, 159	0
1	F	599/624 (95%)	0.39	50 (8%) 11 11	40, 71, 121, 156	0
All	All	3608/3744 (96%)	0.12	105 (2%) 51 55	28, 59, 104, 179	0

All (105) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	623	LEU	8.6
1	F	596	GLY	8.5
1	B	572	ASP	7.0
1	F	594	LEU	6.4
1	B	573	ALA	6.1
1	F	600	LEU	6.0
1	C	233	SER	5.8
1	B	570	ILE	5.8
1	B	537	ILE	5.7
1	F	571	SER	5.7
1	F	576	ILE	5.5
1	B	234	PHE	5.3
1	B	595	LEU	5.2
1	A	234	PHE	5.2
1	F	565	LEU	5.1
1	E	236	ARG	5.0
1	B	604	TYR	5.0
1	F	595	LEU	4.9
1	B	544	VAL	4.9

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	D	234	PHE	4.9
1	D	89	TRP	4.7
1	B	607	VAL	4.7
1	B	605	HIS	4.7
1	F	537	ILE	4.5
1	B	593	VAL	4.3
1	F	69	LEU	4.2
1	B	606	LEU	4.2
1	F	606	LEU	4.1
1	A	89	TRP	4.1
1	F	602	GLY	4.0
1	F	573	ALA	3.8
1	B	89	TRP	3.8
1	F	568	VAL	3.7
1	F	569	GLY	3.7
1	B	530	VAL	3.7
1	F	597	ASP	3.6
1	B	566	LYS	3.6
1	B	233	SER	3.6
1	B	591	VAL	3.6
1	F	23	VAL	3.5
1	C	89	TRP	3.5
1	F	599	LYS	3.5
1	B	571	SER	3.3
1	F	234	PHE	3.2
1	F	55	VAL	3.0
1	B	565	LEU	3.0
1	F	545	THR	2.9
1	F	619	ILE	2.9
1	F	604	TYR	2.8
1	F	54	LEU	2.8
1	E	288	GLU	2.8
1	F	539	LYS	2.8
1	B	567	PRO	2.8
1	F	579	LYS	2.7
1	F	530	VAL	2.7
1	B	191	GLY	2.7
1	F	544	VAL	2.7
1	B	621	ILE	2.7
1	C	81	VAL	2.7
1	B	568	VAL	2.6
1	C	234	PHE	2.6

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	F	572	ASP	2.6
1	F	397	LYS	2.6
1	F	593	VAL	2.6
1	F	622	THR	2.6
1	B	66	TYR	2.6
1	A	191	GLY	2.5
1	F	570	ILE	2.5
1	F	601	SER	2.5
1	F	32	LEU	2.5
1	B	546	ILE	2.5
1	F	89	TRP	2.4
1	B	594	LEU	2.4
1	B	576	ILE	2.4
1	E	89	TRP	2.4
1	F	607	VAL	2.4
1	D	236	ARG	2.4
1	F	583	ILE	2.3
1	B	559	ILE	2.3
1	F	56	PHE	2.3
1	F	536	LEU	2.3
1	F	605	HIS	2.3
1	B	582	LEU	2.3
1	F	546	ILE	2.3
1	E	74	GLU	2.2
1	F	50	ASP	2.2
1	F	73	ALA	2.2
1	F	578	VAL	2.2
1	B	497	LEU	2.2
1	F	558	LEU	2.2
1	B	85	GLU	2.2
1	F	567	PRO	2.2
1	F	618	GLN	2.1
1	F	575	PRO	2.1
1	B	615	ASP	2.1
1	B	541	SER	2.1
1	E	234	PHE	2.1
1	B	620	LYS	2.0
1	A	228	ALA	2.0
1	D	288	GLU	2.0
1	E	55	VAL	2.0
1	E	207	ILE	2.0
1	B	382	ARG	2.0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
1	F	621	ILE	2.0
1	B	531	LYS	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<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.

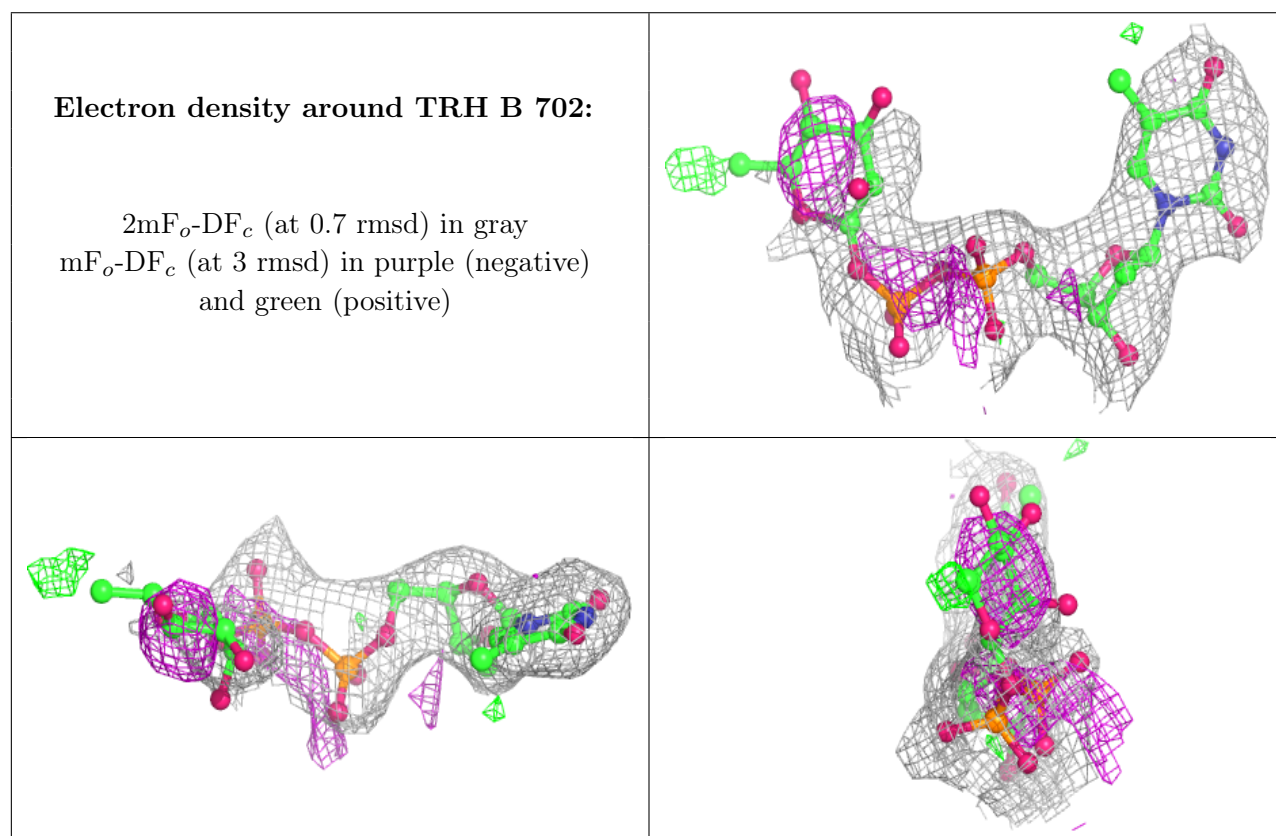
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
2	MG	B	701	1/1	0.65	0.07	76,76,76,76	0
2	MG	A	702	1/1	0.67	0.10	67,67,67,67	0
5	TAR	E	704	10/10	0.73	0.43	57,62,69,71	0
2	MG	E	702	1/1	0.77	0.12	74,74,74,74	0
5	TAR	D	703	10/10	0.82	0.34	56,65,69,69	0
5	TAR	B	704	10/10	0.86	0.18	54,64,73,75	0
2	MG	F	701	1/1	0.87	0.07	75,75,75,75	0
3	TRH	B	702	35/35	0.87	0.20	71,86,110,114	0
3	TRH	F	702	35/35	0.87	0.17	81,88,107,112	0
5	TAR	F	704	10/10	0.87	0.18	59,65,67,70	0
3	TRH	E	703	35/35	0.88	0.23	77,91,100,105	0
2	MG	D	701	1/1	0.90	0.06	55,55,55,55	0
5	TAR	F	705	10/10	0.90	0.13	54,60,64,66	0
3	TRH	A	703	35/35	0.92	0.19	62,82,107,109	0
4	CL	F	703	1/1	0.94	0.08	56,56,56,56	0
4	CL	B	703	1/1	0.94	0.11	55,55,55,55	0
2	MG	C	702	1/1	0.95	0.09	63,63,63,63	0
3	TRH	C	703	35/35	0.95	0.17	57,72,96,100	0
3	TRH	D	702	35/35	0.95	0.17	55,70,91,93	0
2	MG	C	701	1/1	0.97	0.15	35,35,35,35	0
2	MG	E	701	1/1	0.98	0.11	33,33,33,33	0

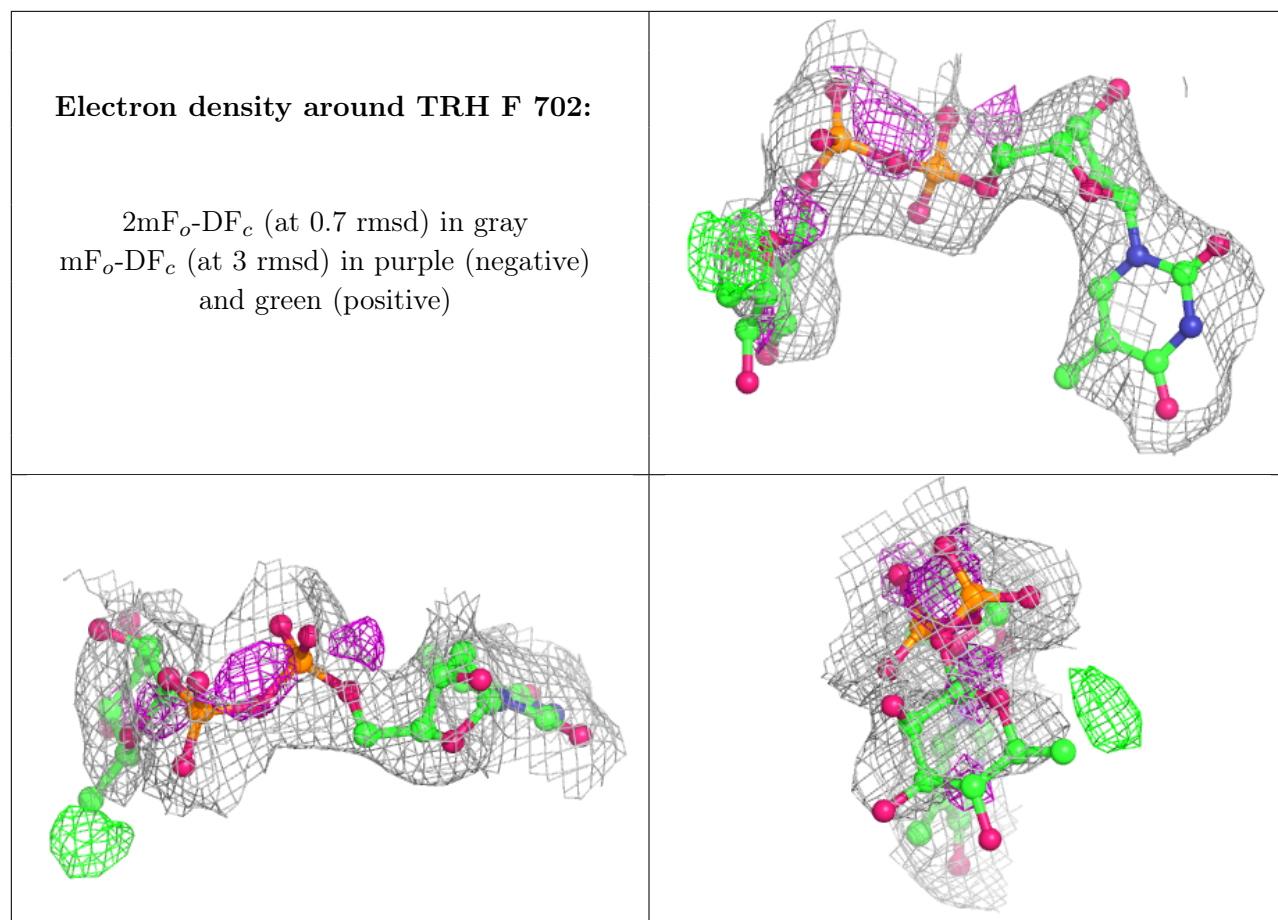
*Continued on next page...*

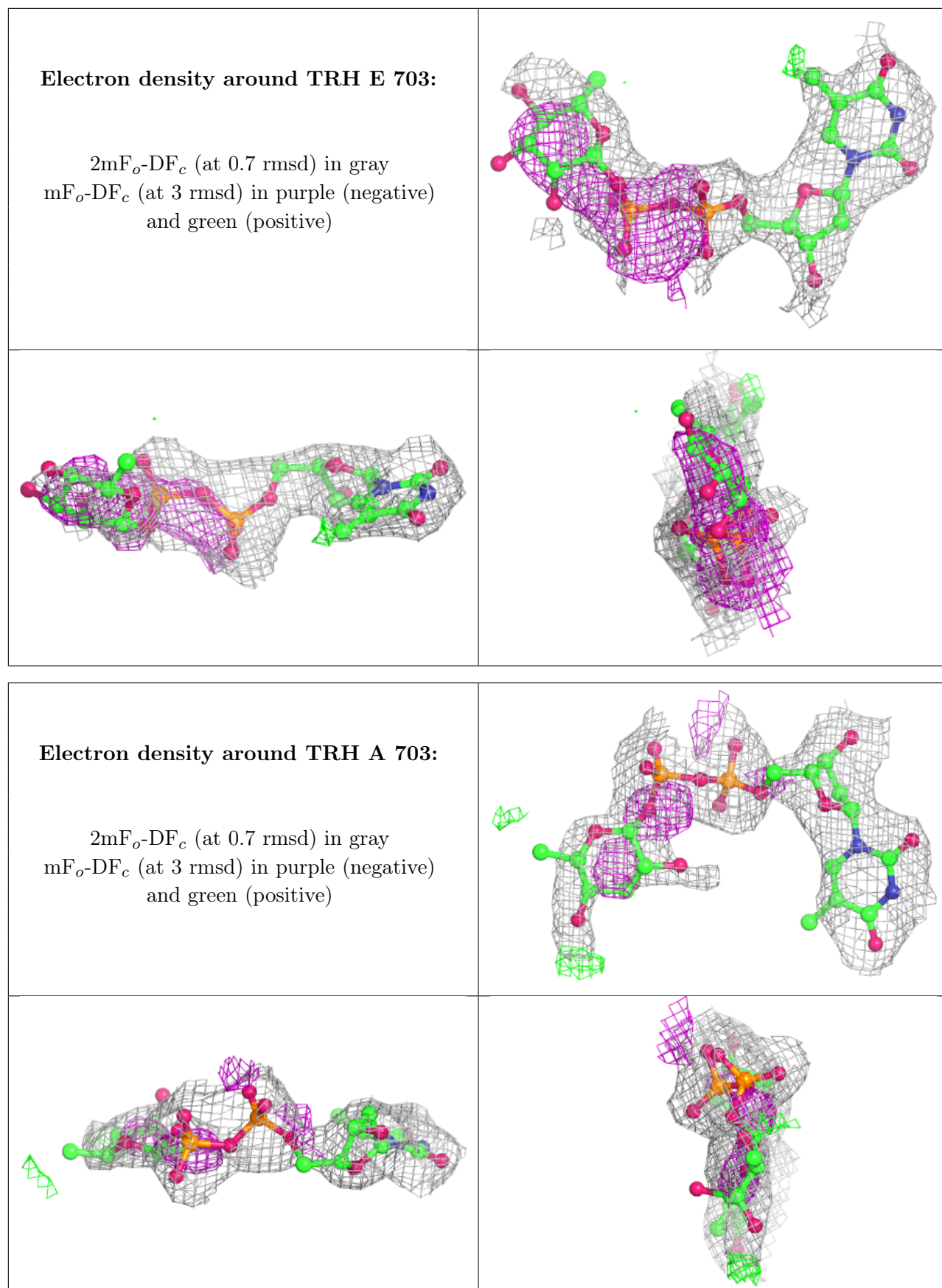
Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
2	MG	A	701	1/1	0.99	0.12	26,26,26,26	0

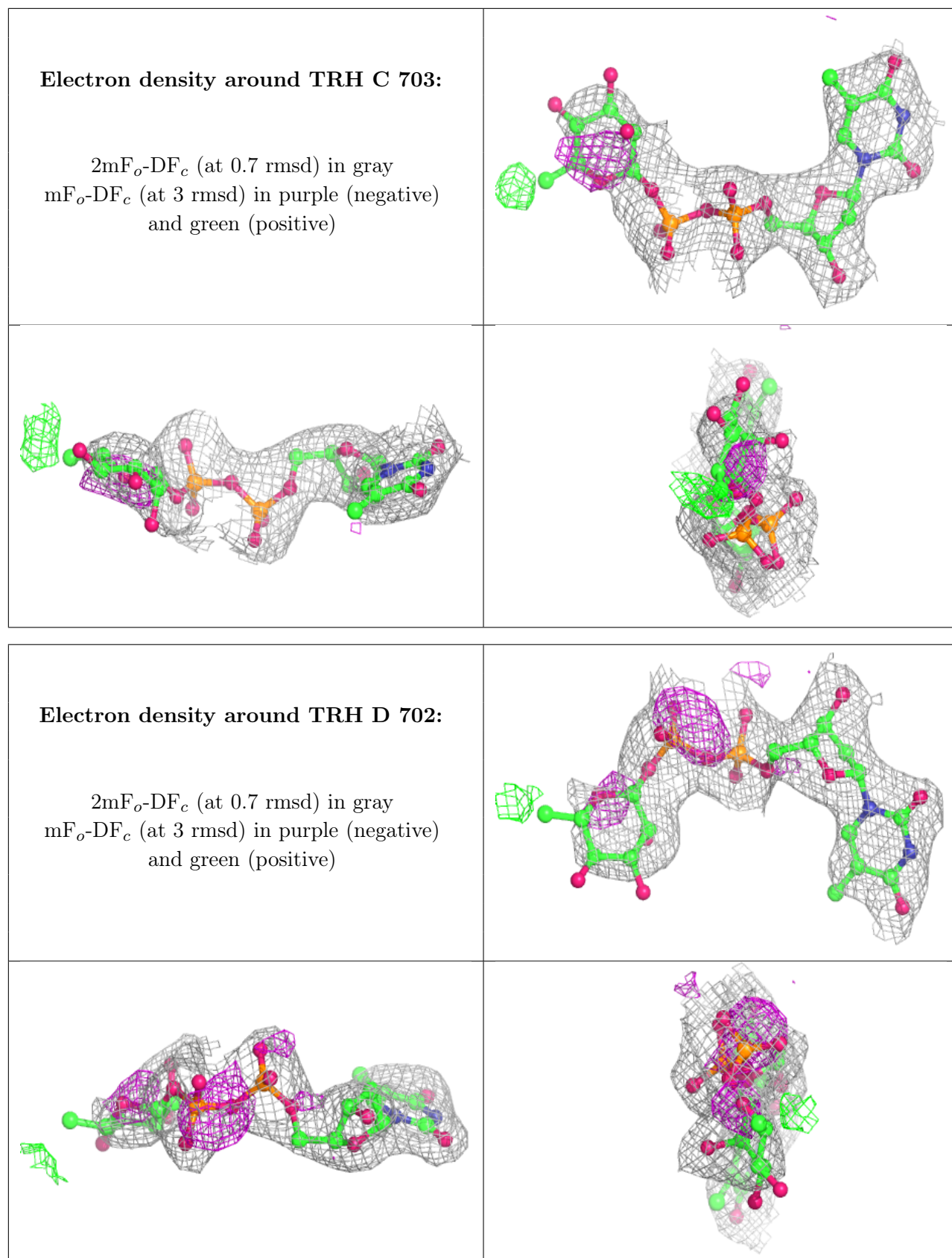
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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











## 6.5 Other polymers [i](#)

There are no such residues in this entry.