



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 02:37 pm BST

PDB ID : 9RZ5 / pdb_00009rz5
Title : Alpha-Methylacyl-CoA racemase from Mycobacterium tuberculosis in complex with 2-(4-Pentyloxyphenylthio)propanoyl-CoA
Authors : Mojanaga, O.O.; Acharya, K.R.; Lloyd, M.D.
Deposited on : 2025-07-15
Resolution : 2.30 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

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	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (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	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.50

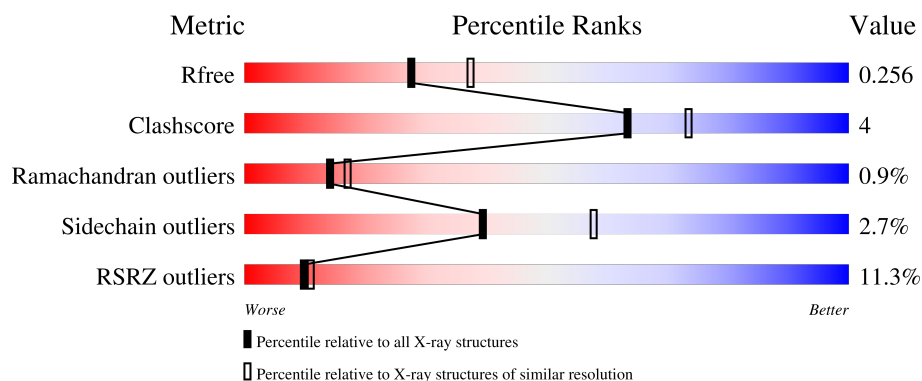
1 Overall quality at a glance

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	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	6319 (2.30-2.30)
Clashscore	190562	6919 (2.30-2.30)
Ramachandran outliers	187476	6854 (2.30-2.30)
Sidechain outliers	187428	6854 (2.30-2.30)
RSRZ outliers	180081	6325 (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 $\leq 5\%$. 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	364	9% 85%12%..
1	B	364	8% 87%11%.
1	C	364	13% 83%15%..
1	D	364	9% 85%12%..
1	E	364	10% 85%14%.

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	364	
1	G	364	
1	H	364	
1	I	364	
1	J	364	
1	K	364	
1	L	364	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 34104 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 Alpha-methylacyl-CoA racemase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	B	358	Total	C	N	O	S	0	1	0
			2707	1699	485	507	16			
1	C	358	Total	C	N	O	S	0	3	0
			2716	1704	486	510	16			
1	D	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	E	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	F	357	Total	C	N	O	S	0	2	0
			2706	1696	484	510	16			
1	G	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	H	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	I	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	J	358	Total	C	N	O	S	0	2	0
			2714	1702	486	510	16			
1	K	358	Total	C	N	O	S	0	3	0
			2716	1704	486	510	16			
1	L	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	361	GLY	-	expression tag	UNP O06543
A	362	SER	-	expression tag	UNP O06543
A	363	GLY	-	expression tag	UNP O06543
A	364	CYS	-	expression tag	UNP O06543
B	361	GLY	-	expression tag	UNP O06543

Continued on next page...

Continued from previous page...

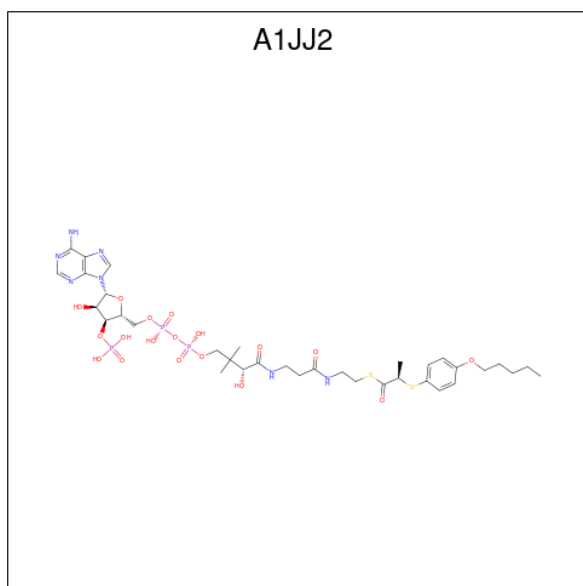
Chain	Residue	Modelled	Actual	Comment	Reference
B	362	SER	-	expression tag	UNP O06543
B	363	GLY	-	expression tag	UNP O06543
B	364	CYS	-	expression tag	UNP O06543
C	361	GLY	-	expression tag	UNP O06543
C	362	SER	-	expression tag	UNP O06543
C	363	GLY	-	expression tag	UNP O06543
C	364	CYS	-	expression tag	UNP O06543
D	361	GLY	-	expression tag	UNP O06543
D	362	SER	-	expression tag	UNP O06543
D	363	GLY	-	expression tag	UNP O06543
D	364	CYS	-	expression tag	UNP O06543
E	361	GLY	-	expression tag	UNP O06543
E	362	SER	-	expression tag	UNP O06543
E	363	GLY	-	expression tag	UNP O06543
E	364	CYS	-	expression tag	UNP O06543
F	361	GLY	-	expression tag	UNP O06543
F	362	SER	-	expression tag	UNP O06543
F	363	GLY	-	expression tag	UNP O06543
F	364	CYS	-	expression tag	UNP O06543
G	361	GLY	-	expression tag	UNP O06543
G	362	SER	-	expression tag	UNP O06543
G	363	GLY	-	expression tag	UNP O06543
G	364	CYS	-	expression tag	UNP O06543
H	361	GLY	-	expression tag	UNP O06543
H	362	SER	-	expression tag	UNP O06543
H	363	GLY	-	expression tag	UNP O06543
H	364	CYS	-	expression tag	UNP O06543
I	361	GLY	-	expression tag	UNP O06543
I	362	SER	-	expression tag	UNP O06543
I	363	GLY	-	expression tag	UNP O06543
I	364	CYS	-	expression tag	UNP O06543
J	361	GLY	-	expression tag	UNP O06543
J	362	SER	-	expression tag	UNP O06543
J	363	GLY	-	expression tag	UNP O06543
J	364	CYS	-	expression tag	UNP O06543
K	361	GLY	-	expression tag	UNP O06543
K	362	SER	-	expression tag	UNP O06543
K	363	GLY	-	expression tag	UNP O06543
K	364	CYS	-	expression tag	UNP O06543
L	361	GLY	-	expression tag	UNP O06543
L	362	SER	-	expression tag	UNP O06543
L	363	GLY	-	expression tag	UNP O06543

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
L	364	CYS	-	expression tag	UNP O06543

- Molecule 2 is 2-(4-Pentyloxyphenylthio)propanoyl-CoA (CCD ID: A1JJ2) (formula: $C_{35}H_{54}N_7O_{18}P_3S_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	B	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	C	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	D	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	E	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	F	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	G	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	H	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	I	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	J	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	K	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		
2	L	1	Total	C	N	O	P	S	0	0
			65	35	7	18	3	2		

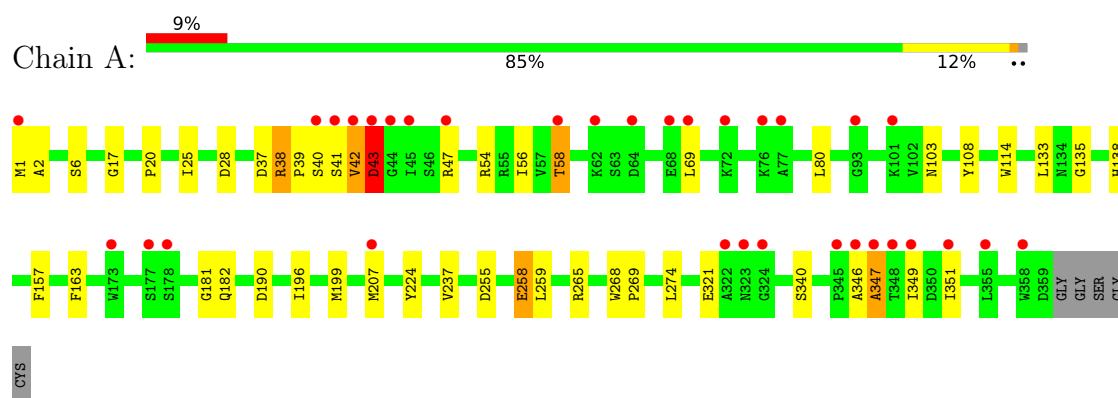
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	68	Total	O	0	0
			68	68		
3	B	65	Total	O	0	0
			65	65		
3	C	61	Total	O	0	0
			61	61		
3	D	76	Total	O	0	0
			76	76		
3	E	59	Total	O	0	0
			59	59		
3	F	43	Total	O	0	0
			43	43		
3	G	53	Total	O	0	0
			53	53		
3	H	50	Total	O	0	0
			50	50		
3	I	74	Total	O	0	0
			74	74		
3	J	74	Total	O	0	0
			74	74		
3	K	64	Total	O	0	0
			64	64		
3	L	61	Total	O	0	0
			61	61		

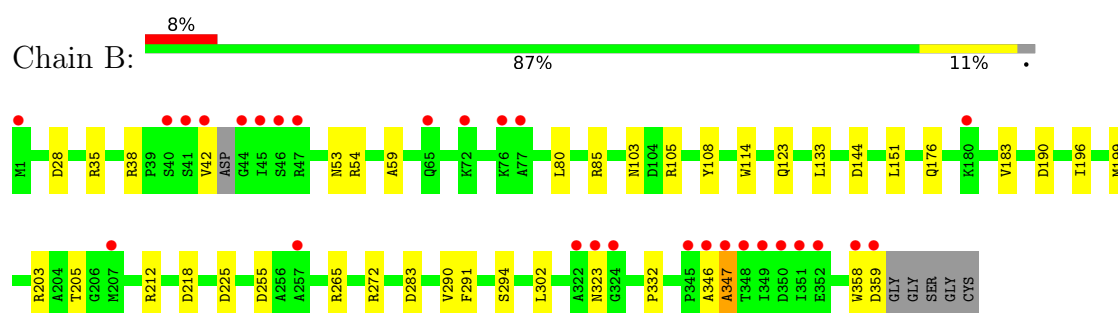
3 Residue-property plots [i](#)

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.

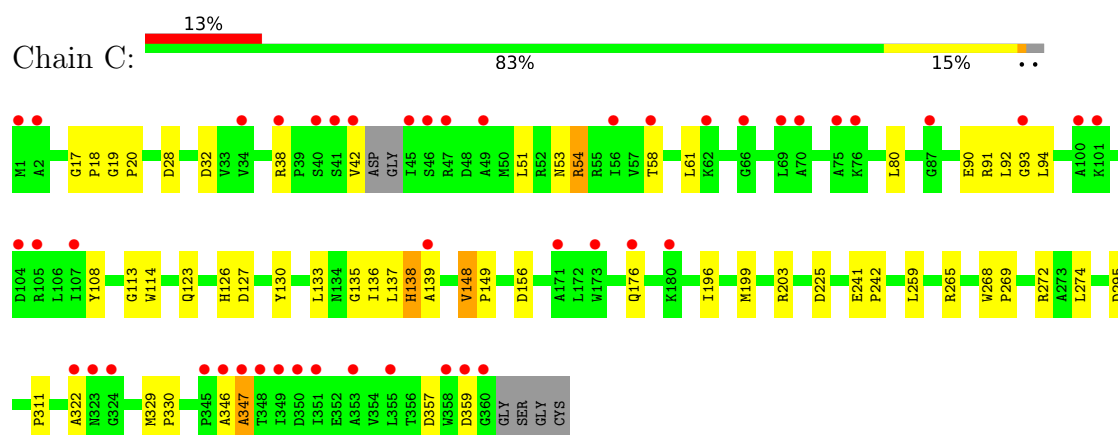
- Molecule 1: Alpha-methylacyl-CoA racemase



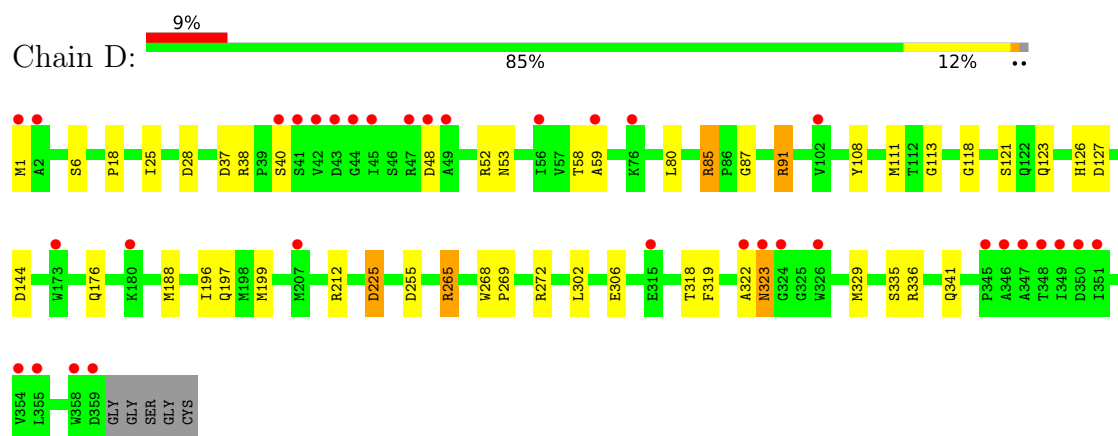
- Molecule 1: Alpha-methylacyl-CoA racemase



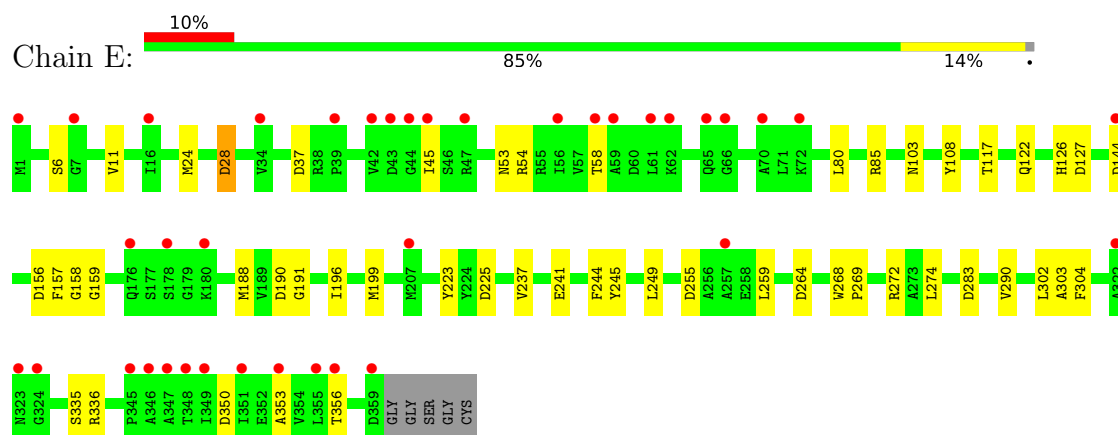
- Molecule 1: Alpha-methylacyl-CoA racemase



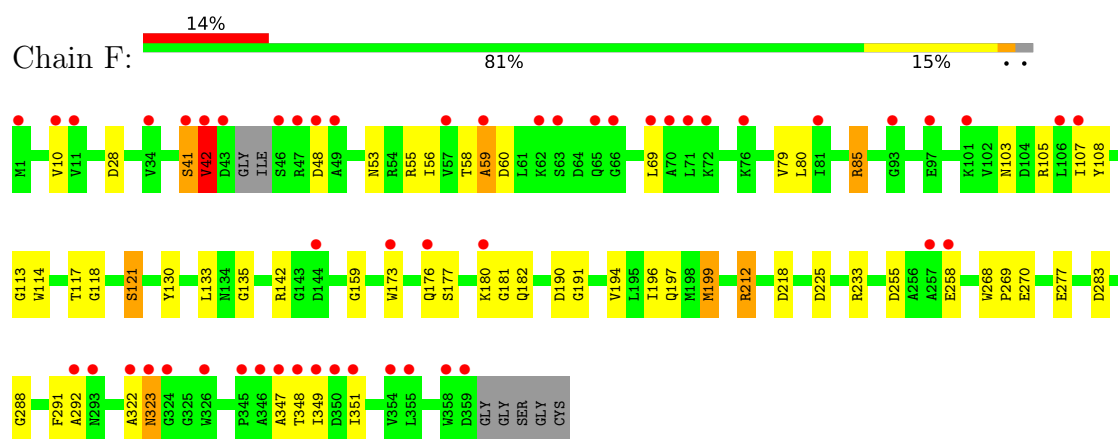
• Molecule 1: Alpha-methylacyl-CoA racemase



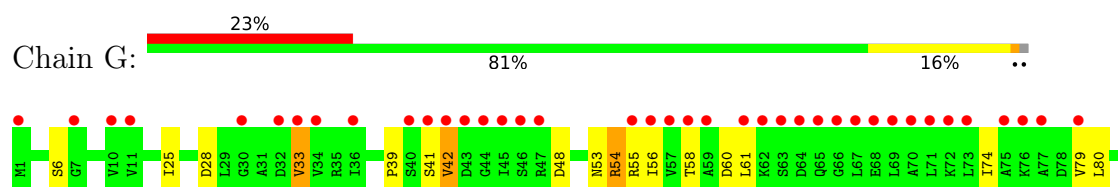
• Molecule 1: Alpha-methylacyl-CoA racemase

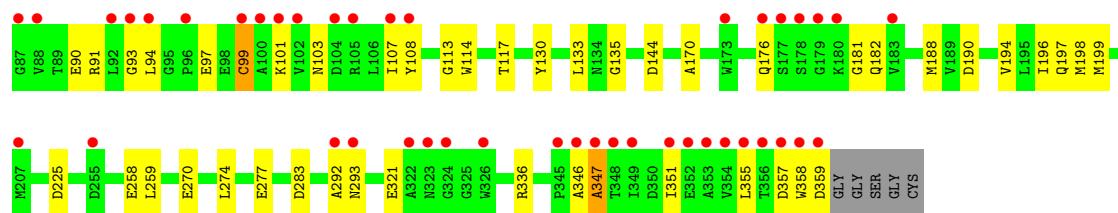


• Molecule 1: Alpha-methylacyl-CoA racemase

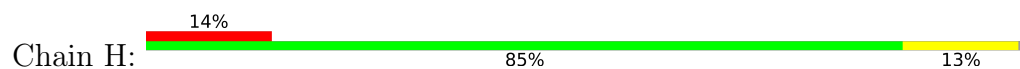


• Molecule 1: Alpha-methylacyl-CoA racemase

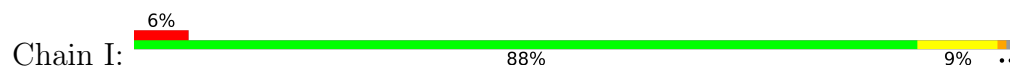




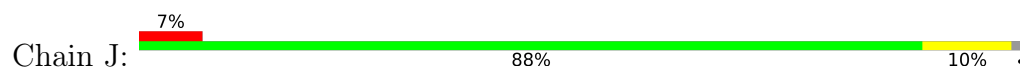
• Molecule 1: Alpha-methylacyl-CoA racemase



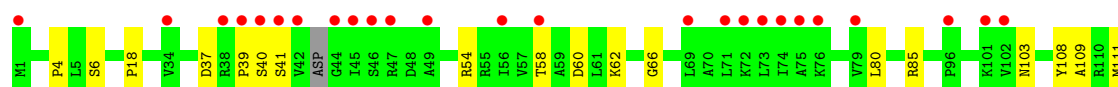
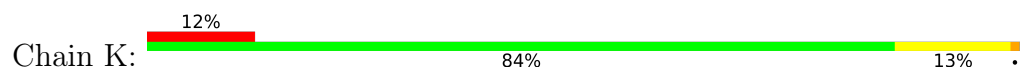
• Molecule 1: Alpha-methylacyl-CoA racemase

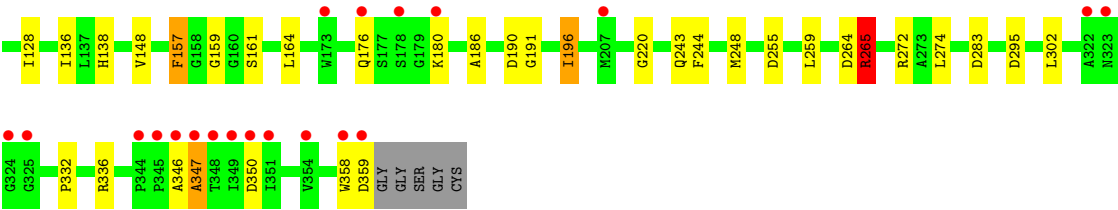


• Molecule 1: Alpha-methylacyl-CoA racemase

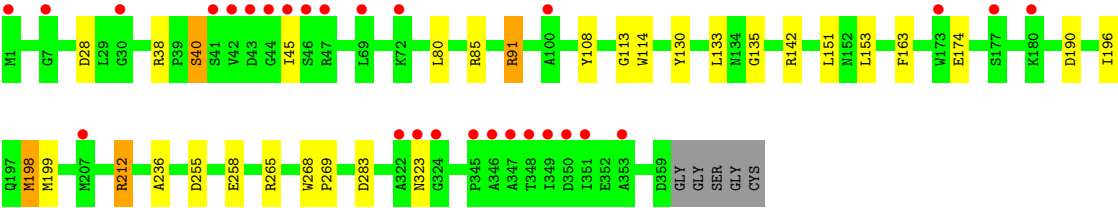
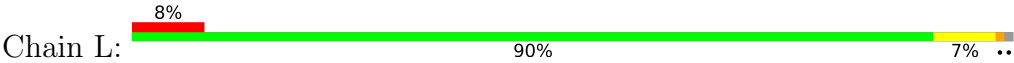


• Molecule 1: Alpha-methylacyl-CoA racemase





● Molecule 1: Alpha-methylacyl-CoA racemase



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	276.58Å 276.58Å 389.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	196.34 – 2.30 196.34 – 2.30	Depositor EDS
% Data completeness (in resolution range)	100.0 (196.34-2.30) 99.7 (196.34-2.30)	Depositor EDS
R_{merge}	0.34	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.39 (at 2.29Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.88)	Depositor
R, R_{free}	0.207 , 0.249 0.215 , 0.256	Depositor DCC
R_{free} test set	16771 reflections (5.10%)	wwPDB-VP
Wilson B-factor (Å ²)	40.2	Xtriage
Anisotropy	0.201	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 29.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.010 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.015 for -1/2*h-1/2*k+1/2*l,-1/2*h-1/2*k-1/2*l,h-k	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	34104	wwPDB-VP
Average B, all atoms (Å ²)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.57% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1JJ2

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	0.60	0/2791	1.12	8/3797 (0.2%)
1	B	0.61	0/2773	1.10	11/3771 (0.3%)
1	C	0.60	0/2791	1.11	6/3795 (0.2%)
1	D	0.60	0/2782	1.12	9/3785 (0.2%)
1	E	0.61	0/2791	1.08	7/3797 (0.2%)
1	F	0.60	0/2778	1.09	5/3778 (0.1%)
1	G	0.58	0/2791	1.11	8/3797 (0.2%)
1	H	0.59	0/2782	1.13	6/3785 (0.2%)
1	I	0.58	0/2791	1.09	9/3797 (0.2%)
1	J	0.59	0/2783	1.12	5/3784 (0.1%)
1	K	0.60	0/2791	1.11	7/3795 (0.2%)
1	L	0.60	0/2782	1.09	4/3785 (0.1%)
All	All	0.60	0/33426	1.10	85/45466 (0.2%)

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	2
1	B	0	2
1	C	0	1
1	D	0	1
1	E	0	1
1	F	0	2
1	G	0	1
1	H	0	2
1	I	0	1
1	J	0	4
1	K	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
1	L	0	3
All	All	0	21

There are no bond length outliers.

All (85) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	203	ARG	N-CA-CB	9.24	124.60	110.28
1	B	203	ARG	CB-CA-C	-9.21	92.99	110.67
1	C	138	HIS	N-CA-C	-9.20	98.38	110.43
1	C	203	ARG	CB-CA-C	-7.95	97.33	110.85
1	I	283	ASP	CA-CB-CG	7.34	119.94	112.60
1	I	190	ASP	CA-CB-CG	7.25	119.85	112.60
1	E	283	ASP	CA-CB-CG	6.73	119.33	112.60
1	B	283	ASP	CA-CB-CG	6.67	119.27	112.60
1	G	283	ASP	CA-CB-CG	6.63	119.23	112.60
1	I	144	ASP	CA-CB-CG	6.60	119.20	112.60
1	J	357	ASP	CA-CB-CG	6.41	119.01	112.60
1	A	58	THR	CA-CB-OG1	-6.32	100.12	109.60
1	G	225	ASP	CA-CB-CG	6.29	118.89	112.60
1	B	123	GLN	N-CA-CB	-6.16	100.67	109.85
1	D	48	ASP	CA-CB-CG	6.15	118.75	112.60
1	H	144	ASP	CA-CB-CG	6.14	118.74	112.60
1	F	48	ASP	CA-CB-CG	6.13	118.73	112.60
1	G	60	ASP	CA-CB-CG	6.11	118.71	112.60
1	I	58	THR	CA-CB-OG1	-6.04	100.54	109.60
1	E	190	ASP	CA-CB-CG	6.02	118.62	112.60
1	E	255	ASP	CA-CB-CG	5.98	118.58	112.60
1	F	190	ASP	CA-CB-CG	5.96	118.56	112.60
1	B	255	ASP	CB-CA-C	5.93	120.12	110.22
1	L	198	MET	CG-SD-CE	-5.87	88.00	100.90
1	K	264	ASP	CA-CB-CG	5.85	118.45	112.60
1	L	190	ASP	CA-CB-CG	5.84	118.44	112.60
1	K	190	ASP	CA-CB-CG	5.84	118.44	112.60
1	B	123	GLN	CB-CA-C	5.84	119.23	109.89
1	G	357	ASP	CA-CB-CG	5.83	118.43	112.60
1	D	144	ASP	CA-CB-CG	5.83	118.43	112.60
1	A	37	ASP	CA-CB-CG	5.81	118.41	112.60
1	B	218	ASP	CA-CB-CG	5.79	118.39	112.60
1	A	43	ASP	CA-CB-CG	5.78	118.38	112.60
1	I	185	ASP	CA-CB-CG	5.76	118.36	112.60
1	H	28	ASP	CA-CB-CG	5.74	118.33	112.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	190	ASP	CA-CB-CG	5.71	118.31	112.60
1	E	264	ASP	CA-CB-CG	5.70	118.30	112.60
1	E	28	ASP	CA-CB-CG	5.70	118.30	112.60
1	K	265	ARG	CD-NE-CZ	5.69	132.37	124.40
1	B	190	ASP	CA-CB-CG	5.68	118.28	112.60
1	D	91	ARG	CB-CA-C	-5.67	98.36	110.32
1	H	357	ASP	CA-CB-CG	5.67	118.27	112.60
1	L	283	ASP	CA-CB-CG	5.66	118.25	112.60
1	H	190	ASP	CA-CB-CG	5.65	118.25	112.60
1	K	157	PHE	CB-CA-C	5.63	121.62	110.42
1	G	144	ASP	CA-CB-CG	5.61	118.21	112.60
1	F	283	ASP	CA-CB-CG	5.59	118.19	112.60
1	K	283	ASP	CA-CB-CG	5.57	118.17	112.60
1	C	123	GLN	CB-CA-C	-5.54	101.95	110.26
1	B	144	ASP	CA-CB-CG	5.50	118.11	112.60
1	D	197	GLN	N-CA-CB	-5.47	101.86	110.06
1	B	54	ARG	CB-CA-C	-5.46	98.59	109.79
1	D	225	ASP	CA-CB-CG	5.45	118.05	112.60
1	I	359	ASP	CA-CB-CG	5.43	118.03	112.60
1	J	28	ASP	CA-CB-CG	5.42	118.02	112.60
1	A	157	PHE	CB-CA-C	5.39	121.14	110.42
1	A	255	ASP	CA-CB-CG	5.37	117.97	112.60
1	C	203	ARG	N-CA-CB	5.37	118.10	110.16
1	G	190	ASP	CA-CB-CG	5.37	117.97	112.60
1	E	255	ASP	CB-CA-C	5.36	118.98	110.19
1	D	38	ARG	CB-CA-C	5.35	116.56	108.86
1	E	37	ASP	CA-CB-CG	5.35	117.95	112.60
1	H	264	ASP	CA-CB-CG	5.34	117.94	112.60
1	G	48	ASP	CA-CB-CG	5.29	117.89	112.60
1	I	176	GLN	N-CA-CB	5.29	117.81	109.94
1	A	258	GLU	CB-CA-C	-5.28	99.59	109.72
1	I	255	ASP	CA-CB-CG	5.27	117.87	112.60
1	G	99	CYS	CB-CA-C	5.26	119.03	110.24
1	D	341	GLN	CB-CA-C	5.24	118.15	109.56
1	J	190	ASP	CA-CB-CG	5.21	117.81	112.60
1	D	306	GLU	CB-CA-C	-5.20	100.60	109.65
1	F	225	ASP	CA-CB-CG	5.20	117.80	112.60
1	F	60	ASP	CA-CB-CG	5.18	117.78	112.60
1	C	32	ASP	CA-CB-CG	5.18	117.78	112.60
1	I	156	ASP	CA-CB-CG	5.17	117.77	112.60
1	K	37	ASP	CA-CB-CG	5.16	117.76	112.60
1	L	28	ASP	CA-CB-CG	5.15	117.75	112.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	148	VAL	CB-CA-C	5.12	115.85	110.37
1	D	265	ARG	NE-CZ-NH2	5.08	123.77	119.20
1	J	60	ASP	CA-CB-CG	5.07	117.67	112.60
1	A	207	MET	CG-SD-CE	5.06	112.04	100.90
1	C	357	ASP	CA-CB-CG	5.06	117.66	112.60
1	J	310	GLU	CB-CG-CD	5.05	121.19	112.60
1	K	255	ASP	CA-CB-CG	5.02	117.62	112.60
1	B	38	ARG	CB-CA-C	5.00	116.40	108.84

There are no chirality outliers.

All (21) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	265	ARG	Sidechain
1	A	38	ARG	Sidechain
1	B	212	ARG	Sidechain
1	B	35	ARG	Sidechain
1	C	38	ARG	Sidechain
1	D	212	ARG	Sidechain
1	E	350	ASP	Peptide
1	F	212	ARG	Sidechain
1	F	233	ARG	Sidechain
1	G	91	ARG	Sidechain
1	H	212	ARG	Sidechain
1	H	54	ARG	Peptide
1	I	38	ARG	Sidechain
1	J	110	ARG	Sidechain
1	J	212	ARG	Sidechain
1	J	265	ARG	Sidechain
1	J	322	ALA	Peptide
1	K	265	ARG	Sidechain
1	L	212	ARG	Sidechain
1	L	265	ARG	Sidechain
1	L	91	ARG	Sidechain

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	2718	0	2658	24	0
1	B	2707	0	2655	16	0
1	C	2716	0	2661	32	0
1	D	2715	0	2660	24	0
1	E	2718	0	2658	20	0
1	F	2706	0	2643	28	0
1	G	2718	0	2658	33	0
1	H	2715	0	2660	18	0
1	I	2718	0	2658	21	0
1	J	2714	0	2658	17	0
1	K	2716	0	2661	30	0
1	L	2715	0	2660	17	0
2	A	65	0	0	3	0
2	B	65	0	0	1	0
2	C	65	0	0	0	0
2	D	65	0	0	0	0
2	E	65	0	0	1	0
2	F	65	0	0	1	0
2	G	65	0	0	1	0
2	H	65	0	0	1	0
2	I	65	0	0	0	0
2	J	65	0	0	0	0
2	K	65	0	0	2	0
2	L	65	0	0	0	0
3	A	68	0	0	2	0
3	B	65	0	0	1	0
3	C	61	0	0	3	0
3	D	76	0	0	2	0
3	E	59	0	0	0	0
3	F	43	0	0	3	0
3	G	53	0	0	1	0
3	H	50	0	0	0	0
3	I	74	0	0	2	0
3	J	74	0	0	0	0
3	K	64	0	0	1	0
3	L	61	0	0	1	0
All	All	34104	0	31890	262	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 4.

All (262) 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:40:SER:OG	3:A:501:HOH:O	1.90	0.88
1:G:259:LEU:HD22	1:G:274:LEU:HD13	1.59	0.84
1:C:138:HIS:O	1:C:139:ALA:HB3	1.77	0.84
1:C:80:LEU:HD22	1:C:108:TYR:CE1	2.19	0.76
1:H:79:VAL:HG22	1:H:107:ILE:HB	1.68	0.74
1:I:80:LEU:HD23	1:I:108:TYR:CE2	2.26	0.70
1:C:80:LEU:CD2	1:C:108:TYR:CE1	2.74	0.70
1:K:196:ILE:HG13	1:L:153:LEU:HD21	1.77	0.67
1:A:80:LEU:HD23	1:A:108:TYR:CE2	2.30	0.67
1:C:138:HIS:O	1:C:139:ALA:CB	2.41	0.65
1:G:79:VAL:HG22	1:G:107:ILE:HB	1.80	0.64
1:D:322:ALA:O	1:D:323:ASN:HB3	1.98	0.63
1:K:138:HIS:HD2	3:K:535:HOH:O	1.81	0.63
1:B:358:TRP:O	1:B:359:ASP:HB2	1.98	0.62
1:C:138:HIS:HD2	3:C:541:HOH:O	1.81	0.62
1:B:80:LEU:HD23	1:B:108:TYR:CE2	2.34	0.62
1:F:118:GLY:O	1:F:121:SER:OG	2.19	0.61
1:K:332:PRO:HG3	1:L:163:PHE:O	2.00	0.61
1:K:159:GLY:O	1:K:191:GLY:HA3	2.02	0.60
1:G:80:LEU:CD2	1:G:108:TYR:CE1	2.85	0.59
1:J:113:GLY:HA3	1:J:130:TYR:CE1	2.36	0.59
1:E:259:LEU:HD22	1:E:274:LEU:HD13	1.85	0.59
1:A:38:ARG:NH2	2:A:401:A1JJ2:O13	2.35	0.59
1:B:291:PHE:O	1:B:294:SER:HB3	2.03	0.59
1:J:80:LEU:HD23	1:J:108:TYR:CE2	2.38	0.59
1:F:196:ILE:HG12	1:F:199:MET:HB2	1.85	0.58
1:I:118:GLY:O	1:I:121:SER:OG	2.12	0.58
2:H:401:A1JJ2:C21	2:H:401:A1JJ2:O4	2.52	0.57
1:H:225:ASP:OD2	1:H:272:ARG:NH1	2.36	0.57
1:A:69:LEU:HD13	1:A:351:ILE:HG21	1.85	0.57
1:H:60:ASP:O	1:H:66:GLY:HA3	2.03	0.57
1:K:60:ASP:O	1:K:66:GLY:HA3	2.05	0.57
1:J:60:ASP:O	1:J:66:GLY:HA3	2.05	0.57
1:F:105:ARG:NH1	3:F:502:HOH:O	2.37	0.56
1:K:85:ARG:NH2	2:K:401:A1JJ2:O7	2.35	0.56
1:I:326:TRP:HD1	3:I:544:HOH:O	1.89	0.55
1:C:137:LEU:C	1:C:138:HIS:O	2.45	0.55
1:G:41:SER:O	1:G:42:VAL:C	2.49	0.55
1:L:80:LEU:HD23	1:L:108:TYR:CE2	2.41	0.55
1:K:346:ALA:O	1:K:347:ALA:O	2.25	0.54
1:F:85:ARG:HD3	2:F:401:A1JJ2:O11	2.07	0.54
1:K:39:PRO:HA	1:K:58:THR:HG23	1.89	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:17:GLY:O	1:I:20:PRO:HD2	2.08	0.54
1:F:80:LEU:CD2	1:F:108:TYR:CE2	2.90	0.54
1:K:243[A]:GLN:CD	1:K:243[A]:GLN:H	2.16	0.53
1:C:18:PRO:HB3	1:C:156:ASP:O	2.09	0.53
1:D:322:ALA:O	1:D:323:ASN:CB	2.56	0.53
1:J:220:GLY:O	1:J:272:ARG:NH2	2.42	0.52
1:E:336:ARG:NH2	1:F:180:LYS:HB2	2.25	0.52
1:G:28:ASP:HA	1:G:53:ASN:ND2	2.24	0.52
1:A:346:ALA:O	1:A:347:ALA:C	2.52	0.52
1:C:136:ILE:O	1:C:138:HIS:O	2.28	0.52
1:K:80:LEU:HD23	1:K:108:TYR:CE1	2.45	0.52
1:A:135:GLY:HA2	1:B:302:LEU:O	2.10	0.52
1:F:55:ARG:HD2	1:F:349:ILE:HD11	1.91	0.52
1:G:270:GLU:HG3	3:G:538:HOH:O	2.08	0.52
1:E:159:GLY:O	1:E:191:GLY:HA3	2.09	0.52
1:G:135:GLY:HA2	1:H:302:LEU:O	2.10	0.52
1:F:194:VAL:O	1:F:197:GLN:HB2	2.10	0.52
1:G:39:PRO:O	1:G:42:VAL:HG23	2.10	0.52
1:B:196:ILE:HG12	1:B:199:MET:HB2	1.93	0.51
1:D:80:LEU:CD2	1:D:108:TYR:CE2	2.93	0.51
1:G:181:GLY:O	1:G:182:GLN:HB3	2.10	0.51
1:C:61:LEU:HD22	1:C:94:LEU:HD11	1.92	0.51
1:I:259:LEU:HD22	1:I:274:LEU:HD13	1.92	0.51
1:C:176:GLN:CD	1:D:176:GLN:HG2	2.36	0.51
1:H:85:ARG:NH2	1:H:122:GLN:O	2.44	0.50
1:I:270:GLU:HG3	3:I:562:HOH:O	2.10	0.50
1:E:80:LEU:HD23	1:E:108:TYR:CE2	2.47	0.50
1:F:288:GLY:O	1:F:292:ALA:HB2	2.11	0.50
2:K:401:A1JJ2:C8	1:L:198:MET:HE1	2.41	0.50
1:E:225:ASP:OD2	1:E:272:ARG:NH1	2.44	0.50
1:G:196:ILE:HG12	1:G:199:MET:HB2	1.94	0.50
1:D:268:TRP:N	1:D:269:PRO:CD	2.74	0.50
1:E:157:PHE:O	1:E:158:GLY:C	2.54	0.50
1:G:28:ASP:HA	1:G:53:ASN:HD22	1.76	0.50
1:B:105:ARG:NH1	3:B:504:HOH:O	2.44	0.50
2:B:401:A1JJ2:O4	2:B:401:A1JJ2:C21	2.60	0.50
1:C:259:LEU:CD2	1:C:274:LEU:HD13	2.42	0.49
1:C:295:ASP:CG	1:D:85:ARG:HH22	2.19	0.49
2:E:401:A1JJ2:O4	2:E:401:A1JJ2:C21	2.60	0.49
1:C:51:LEU:HA	1:C:54:ARG:NH1	2.25	0.49
1:D:87:GLY:O	1:D:91:ARG:HG3	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:181:GLY:O	1:F:182:GLN:HB3	2.11	0.49
1:C:259:LEU:HD22	1:C:274:LEU:HD13	1.93	0.49
1:A:39:PRO:O	1:A:41:SER:O	2.31	0.49
1:K:244:PHE:CD1	1:K:295:ASP:HB3	2.48	0.49
1:A:38:ARG:HB3	2:A:401:A1JJ2:C29	2.42	0.49
1:B:346:ALA:O	1:B:347:ALA:O	2.31	0.49
1:F:291:PHE:O	1:F:292:ALA:C	2.56	0.49
1:L:196:ILE:HG12	1:L:199:MET:HB2	1.94	0.48
1:D:118:GLY:O	1:D:121:SER:OG	2.22	0.48
1:F:270:GLU:HG3	3:F:508:HOH:O	2.13	0.48
1:D:28:ASP:CG	1:D:52:ARG:HH21	2.20	0.48
1:I:23:ALA:HB3	1:I:54:ARG:NH2	2.27	0.48
1:H:80:LEU:HD23	1:H:108:TYR:CE2	2.48	0.48
1:A:259:LEU:HD22	1:A:274:LEU:HD13	1.95	0.48
1:E:245:TYR:CE2	1:E:249:LEU:HD11	2.48	0.48
1:D:80:LEU:HD23	1:D:108:TYR:CE2	2.48	0.48
1:G:113:GLY:HA3	1:G:130:TYR:CZ	2.48	0.48
1:C:17:GLY:O	1:C:20:PRO:HD2	2.14	0.48
1:F:79:VAL:HG22	1:F:107:ILE:HB	1.95	0.48
1:F:113:GLY:HA3	1:F:130:TYR:CZ	2.49	0.48
1:C:92:LEU:O	3:C:501:HOH:O	2.20	0.47
1:C:19:GLY:N	1:C:20:PRO:CD	2.77	0.47
1:D:126:HIS:O	1:D:127:ASP:C	2.56	0.47
1:B:346:ALA:O	1:B:347:ALA:C	2.57	0.47
1:H:80:LEU:CD2	1:H:108:TYR:CE2	2.97	0.47
1:G:113:GLY:HA3	1:G:130:TYR:CE1	2.50	0.47
1:I:268:TRP:N	1:I:269:PRO:CD	2.77	0.47
2:A:401:A1JJ2:C21	2:A:401:A1JJ2:O4	2.62	0.47
1:G:113:GLY:HA2	1:G:188:MET:HB2	1.96	0.47
1:K:136:ILE:HG12	1:K:196:ILE:HD12	1.96	0.47
1:A:138:HIS:HD2	3:A:519:HOH:O	1.96	0.47
1:H:157:PHE:HA	1:H:161:SER:OG	2.15	0.47
1:C:90:GLU:OE1	1:C:90:GLU:N	2.40	0.46
1:K:157:PHE:HA	1:K:161:SER:OG	2.14	0.46
1:E:85:ARG:NH1	1:E:122:GLN:O	2.44	0.46
1:I:23:ALA:HB3	1:I:54:ARG:HH21	1.80	0.46
1:F:58:THR:O	1:F:59:ALA:HB2	2.15	0.46
1:G:358:TRP:O	1:G:359:ASP:C	2.58	0.46
1:A:17:GLY:O	1:A:20:PRO:HD2	2.15	0.46
1:C:329:MET:HE3	1:C:330:PRO:HD2	1.98	0.46
1:A:163:PHE:O	1:B:332:PRO:HG3	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:346:ALA:O	1:A:347:ALA:O	2.33	0.46
1:C:225:ASP:OD2	1:C:272:ARG:NH1	2.48	0.46
1:D:18:PRO:HB2	1:D:111:MET:HG2	1.97	0.46
1:D:336:ARG:HG2	1:D:336:ARG:HH11	1.81	0.46
1:G:61:LEU:HG	2:G:401:A1JJ2:N5	2.31	0.46
1:H:18:PRO:HB2	1:H:111:MET:HG2	1.98	0.46
1:B:28:ASP:HA	1:B:53:ASN:HD22	1.81	0.46
1:E:196:ILE:HG12	1:E:199:MET:HB2	1.98	0.46
1:A:196:ILE:HG12	1:A:199:MET:HB2	1.98	0.45
1:F:159:GLY:O	1:F:191:GLY:HA3	2.16	0.45
1:C:148:VAL:HG23	1:C:149:PRO:HD2	1.97	0.45
1:F:69:LEU:HD13	1:F:351:ILE:HG23	1.97	0.45
1:G:346:ALA:O	1:G:347:ALA:C	2.59	0.45
1:J:114:TRP:CZ3	1:J:133:LEU:HD22	2.52	0.45
1:K:4:PRO:O	1:L:174:GLU:HB2	2.16	0.45
1:E:223:TYR:O	1:E:237:VAL:HG12	2.16	0.45
1:H:58:THR:O	1:H:59:ALA:HB2	2.15	0.45
1:I:225:ASP:OD2	1:I:272:ARG:NH1	2.48	0.45
1:B:225:ASP:OD2	1:B:272:ARG:NH1	2.49	0.45
1:G:259:LEU:CD2	1:G:274:LEU:HD13	2.40	0.45
1:E:156:ASP:HA	1:E:188:MET:SD	2.56	0.45
1:F:113:GLY:HA3	1:F:130:TYR:CE1	2.51	0.45
1:F:268:TRP:N	1:F:269:PRO:CD	2.80	0.45
1:I:80:LEU:HD23	1:I:108:TYR:CD2	2.52	0.45
1:D:196:ILE:HG12	1:D:199:MET:HB2	1.99	0.45
1:F:142:ARG:O	1:F:212:ARG:HD2	2.17	0.45
1:K:39:PRO:HB3	1:K:58:THR:CG2	2.47	0.45
1:L:40:SER:OG	3:L:501:HOH:O	2.17	0.45
1:D:265:ARG:HD2	3:D:548:HOH:O	2.16	0.45
1:K:111:MET:HE3	1:K:186:ALA:O	2.17	0.45
1:L:268:TRP:N	1:L:269:PRO:CD	2.80	0.45
1:C:268:TRP:N	1:C:269:PRO:CD	2.79	0.44
1:A:43:ASP:OD1	1:A:43:ASP:O	2.34	0.44
1:C:93:GLY:C	3:C:511:HOH:O	2.59	0.44
1:E:268:TRP:N	1:E:269:PRO:CD	2.79	0.44
1:I:159:GLY:O	1:I:191:GLY:HA3	2.17	0.44
1:I:301:VAL:HG12	1:J:138:HIS:HB2	1.98	0.44
1:A:268:TRP:N	1:A:269:PRO:CD	2.80	0.44
1:G:176:GLN:HE21	1:G:176:GLN:HA	1.82	0.44
1:A:181:GLY:O	1:A:182:GLN:HB3	2.17	0.44
1:D:37:ASP:O	1:D:58:THR:HA	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:241:GLU:HB2	1:E:244:PHE:CD2	2.52	0.44
1:G:80:LEU:HD23	1:G:108:TYR:CE1	2.52	0.44
1:C:135:GLY:HA2	1:D:302:LEU:O	2.17	0.43
1:G:170:ALA:HA	1:H:5:LEU:HD21	1.98	0.43
1:J:113:GLY:HA2	1:J:188:MET:HB2	1.99	0.43
1:K:346:ALA:O	1:K:347:ALA:C	2.61	0.43
1:A:2:ALA:HB3	1:A:340:SER:OG	2.19	0.43
1:K:80:LEU:CD2	1:K:108:TYR:CE1	3.00	0.43
1:K:302:LEU:O	1:L:135:GLY:HA2	2.17	0.43
1:L:113:GLY:HA3	1:L:130:TYR:CE1	2.53	0.43
1:A:114:TRP:CZ3	1:A:133:LEU:HD22	2.53	0.43
1:J:242:PRO:HB3	1:L:91:ARG:HD3	2.00	0.43
1:K:196:ILE:HG23	1:K:196:ILE:O	2.17	0.43
1:G:351:ILE:O	1:G:355:LEU:HD12	2.18	0.43
1:I:60:ASP:O	1:I:66:GLY:HA3	2.18	0.43
1:D:25:ILE:O	1:D:28:ASP:HB2	2.18	0.43
1:A:25:ILE:O	1:A:28:ASP:HB2	2.18	0.43
1:A:47:ARG:HG2	1:B:205:THR:HG22	2.00	0.43
1:C:346:ALA:O	1:C:347:ALA:C	2.61	0.43
1:K:248:MET:HE3	1:K:248:MET:HB3	1.89	0.43
1:E:303:ALA:O	1:E:304:PHE:C	2.62	0.43
1:L:80:LEU:CD2	1:L:108:TYR:CE2	3.01	0.43
1:B:80:LEU:CD2	1:B:108:TYR:CE2	3.02	0.43
1:H:329:MET:HE3	1:H:330:PRO:HD2	2.00	0.43
1:K:336:ARG:HH11	1:K:336:ARG:HG2	1.84	0.43
1:B:114:TRP:CZ3	1:B:133:LEU:HD22	2.54	0.43
1:G:194:VAL:O	1:G:197:GLN:HB2	2.19	0.43
1:J:316:ARG:O	1:J:317:ASN:C	2.62	0.43
1:B:108:TYR:HB3	1:B:183:VAL:HG22	2.01	0.42
1:F:80:LEU:HD22	1:F:108:TYR:CE2	2.53	0.42
1:K:39:PRO:CA	1:K:58:THR:HG23	2.49	0.42
1:C:113:GLY:HA3	1:C:130:TYR:CE1	2.54	0.42
1:G:198:MET:HE3	1:H:50:MET:HE1	2.01	0.42
1:C:241:GLU:HA	1:C:242:PRO:HD3	1.94	0.42
1:D:225:ASP:OD2	1:D:272:ARG:NH1	2.52	0.42
1:G:90:GLU:O	1:G:93:GLY:N	2.37	0.42
1:J:54:ARG:HH11	1:J:54:ARG:HG2	1.84	0.42
1:J:113:GLY:HA3	1:J:130:TYR:CZ	2.54	0.42
1:F:41:SER:O	1:F:42:VAL:HG13	2.20	0.42
1:K:109:ALA:HB1	1:K:164:LEU:HD11	2.01	0.42
1:K:259:LEU:HD22	1:K:274:LEU:HD13	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:55:ARG:HH22	1:G:358:TRP:HE1	1.67	0.42
1:E:28:ASP:HA	1:E:53:ASN:ND2	2.35	0.42
1:F:114:TRP:CZ3	1:F:133:LEU:HD22	2.54	0.42
1:F:322:ALA:O	1:F:323:ASN:HB3	2.19	0.42
1:C:114:TRP:CZ3	1:C:133:LEU:HD22	2.54	0.42
1:E:126:HIS:O	1:E:127:ASP:C	2.63	0.42
1:D:318:THR:HG22	1:D:319:PHE:CD1	2.55	0.42
1:E:302:LEU:O	1:F:135:GLY:HA2	2.19	0.42
1:G:336:ARG:HG2	1:G:336:ARG:HH11	1.84	0.42
1:J:157:PHE:O	1:J:158:GLY:C	2.63	0.42
1:C:126:HIS:O	1:C:127:ASP:C	2.63	0.42
1:G:61:LEU:HD13	1:G:94:LEU:HD11	2.01	0.42
1:C:28:ASP:HA	1:C:53:ASN:ND2	2.35	0.41
1:I:19:GLY:N	1:I:20:PRO:CD	2.83	0.41
1:A:80:LEU:CD2	1:A:108:TYR:CE2	3.01	0.41
1:E:24:MET:HE2	1:E:24:MET:HB3	1.97	0.41
1:G:25:ILE:O	1:G:28:ASP:HB2	2.20	0.41
1:A:42:VAL:HG12	1:A:43:ASP:N	2.35	0.41
1:G:80:LEU:HD22	1:G:108:TYR:CE1	2.55	0.41
1:I:80:LEU:CD2	1:I:108:TYR:CE2	3.00	0.41
1:L:114:TRP:CZ3	1:L:133:LEU:HD22	2.55	0.41
1:A:224:TYR:HA	1:A:237:VAL:O	2.20	0.41
1:C:113:GLY:HA3	1:C:130:TYR:CZ	2.56	0.41
1:L:113:GLY:HA3	1:L:130:TYR:CZ	2.55	0.41
1:H:236:ALA:O	1:H:298:VAL:HA	2.20	0.41
1:K:18:PRO:HB2	1:K:111:MET:HG2	2.03	0.41
1:E:11:VAL:O	1:E:80:LEU:HD12	2.20	0.41
1:F:218:ASP:HB2	3:F:525:HOH:O	2.19	0.41
1:I:198:MET:HB2	1:J:50:MET:HE1	2.03	0.41
1:C:196:ILE:HG12	1:C:199:MET:HB2	2.03	0.41
1:D:28:ASP:HA	1:D:53:ASN:ND2	2.35	0.41
1:F:28:ASP:HA	1:F:53:ASN:ND2	2.36	0.41
1:H:106:LEU:O	1:H:181:GLY:HA3	2.21	0.41
1:E:353:ALA:O	1:E:356:THR:HB	2.20	0.41
1:G:74:ILE:HD13	1:G:99:CYS:SG	2.61	0.41
1:G:114:TRP:CZ3	1:G:133:LEU:HD22	2.56	0.41
1:H:18:PRO:HB2	1:H:111:MET:CG	2.51	0.41
1:H:114:TRP:CZ3	1:H:133:LEU:HD22	2.56	0.41
1:K:128:ILE:HG12	1:L:236:ALA:HB1	2.02	0.41
1:L:255:ASP:HB2	1:L:258:GLU:HG2	2.02	0.41
1:F:10:VAL:HG13	1:F:79:VAL:HG12	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:113:GLY:HA2	1:D:188:MET:HB2	2.02	0.40
1:D:329:MET:HE3	1:D:329:MET:HB3	1.94	0.40
1:H:268:TRP:N	1:H:269:PRO:CD	2.84	0.40
1:J:106:LEU:O	1:J:181:GLY:HA3	2.21	0.40
1:K:220:GLY:O	1:K:272:ARG:NH2	2.54	0.40
1:K:358:TRP:O	1:K:359:ASP:C	2.64	0.40
1:G:33:VAL:HB	1:G:54:ARG:HD2	2.04	0.40
1:I:176:GLN:HE21	1:I:176:GLN:HA	1.85	0.40
1:I:196:ILE:HG13	1:J:153:LEU:HD21	2.03	0.40
1:K:60:ASP:OD1	1:K:62:LYS:HB2	2.22	0.40
1:B:358:TRP:O	1:B:359:ASP:CB	2.65	0.40
1:I:302:LEU:O	1:J:135:GLY:HA2	2.21	0.40
1:D:1:MET:N	3:D:507:HOH:O	2.55	0.40
1:I:332:PRO:HG3	1:J:163:PHE:O	2.22	0.40
1:L:142:ARG:O	1:L:212:ARG:HD2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	359/364 (99%)	332 (92%)	23 (6%)	4 (1%)	11	13
1	B	355/364 (98%)	336 (95%)	14 (4%)	5 (1%)	9	9
1	C	357/364 (98%)	333 (93%)	21 (6%)	3 (1%)	16	20
1	D	358/364 (98%)	333 (93%)	23 (6%)	2 (1%)	21	27
1	E	359/364 (99%)	337 (94%)	20 (6%)	2 (1%)	21	27
1	F	355/364 (98%)	326 (92%)	22 (6%)	7 (2%)	6	5
1	G	359/364 (99%)	330 (92%)	24 (7%)	5 (1%)	9	9
1	H	358/364 (98%)	330 (92%)	25 (7%)	3 (1%)	16	20

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	I	359/364 (99%)	345 (96%)	13 (4%)	1 (0%)	36	46
1	J	356/364 (98%)	339 (95%)	15 (4%)	2 (1%)	21	27
1	K	357/364 (98%)	329 (92%)	26 (7%)	2 (1%)	21	27
1	L	358/364 (98%)	338 (94%)	18 (5%)	2 (1%)	21	27
All	All	4290/4368 (98%)	4008 (93%)	244 (6%)	38 (1%)	14	17

All (38) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	43	ASP
1	A	103	ASN
1	A	347	ALA
1	B	347	ALA
1	D	323	ASN
1	F	41	SER
1	F	103	ASN
1	G	42	VAL
1	G	292	ALA
1	G	347	ALA
1	K	103	ASN
1	K	347	ALA
1	A	42	VAL
1	C	347	ALA
1	F	42	VAL
1	F	323	ASN
1	G	103	ASN
1	H	59	ALA
1	J	103	ASN
1	B	59	ALA
1	C	359	ASP
1	D	59	ALA
1	E	103	ASN
1	F	347	ALA
1	F	348	THR
1	H	347	ALA
1	J	40	SER
1	B	103	ASN
1	B	151	LEU
1	F	59	ALA
1	G	101	LYS
1	L	151	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	323	ASN
1	C	322	ALA
1	E	45	ILE
1	H	103	ASN
1	L	323	ASN
1	I	323	ASN

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	277/277 (100%)	269 (97%)	8 (3%)	37	55
1	B	275/277 (99%)	270 (98%)	5 (2%)	51	70
1	C	277/277 (100%)	270 (98%)	7 (2%)	42	60
1	D	276/277 (100%)	270 (98%)	6 (2%)	45	65
1	E	277/277 (100%)	270 (98%)	7 (2%)	42	60
1	F	276/277 (100%)	264 (96%)	12 (4%)	26	39
1	G	277/277 (100%)	266 (96%)	11 (4%)	28	42
1	H	276/277 (100%)	266 (96%)	10 (4%)	31	47
1	I	277/277 (100%)	271 (98%)	6 (2%)	45	65
1	J	276/277 (100%)	273 (99%)	3 (1%)	65	81
1	K	277/277 (100%)	267 (96%)	10 (4%)	31	47
1	L	276/277 (100%)	272 (99%)	4 (1%)	59	76
All	All	3317/3324 (100%)	3228 (97%)	89 (3%)	39	58

All (89) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	6	SER
1	A	54	ARG
1	A	56	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	58	THR
1	A	258	GLU
1	A	321	GLU
1	A	349	ILE
1	B	42	VAL
1	B	85	ARG
1	B	176	GLN
1	B	265	ARG
1	B	290	VAL
1	C	42	VAL
1	C	54	ARG
1	C	58	THR
1	C	91	ARG
1	C	148	VAL
1	C	265	ARG
1	C	311	PRO
1	D	6	SER
1	D	40	SER
1	D	85	ARG
1	D	123	GLN
1	D	255	ASP
1	D	335	SER
1	E	6	SER
1	E	54	ARG
1	E	58	THR
1	E	117	THR
1	E	144	ASP
1	E	290	VAL
1	E	335	SER
1	F	42	VAL
1	F	56	ILE
1	F	85	ARG
1	F	117	THR
1	F	121	SER
1	F	173	TRP
1	F	176	GLN
1	F	177	SER
1	F	199	MET
1	F	255	ASP
1	F	258	GLU
1	F	277	GLU
1	G	6	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	G	33	VAL
1	G	54	ARG
1	G	56	ILE
1	G	58	THR
1	G	97	GLU
1	G	117	THR
1	G	258	GLU
1	G	277	GLU
1	G	293	ASN
1	G	321	GLU
1	H	9	ARG
1	H	38	ARG
1	H	40	SER
1	H	42	VAL
1	H	43	ASP
1	H	45	ILE
1	H	176	GLN
1	H	248	MET
1	H	265	ARG
1	H	323	ASN
1	I	42	VAL
1	I	54	ARG
1	I	58	THR
1	I	68	GLU
1	I	121	SER
1	I	323	ASN
1	J	43	ASP
1	J	58	THR
1	J	351	ILE
1	K	6	SER
1	K	40	SER
1	K	41	SER
1	K	54	ARG
1	K	148	VAL
1	K	176	GLN
1	K	180	LYS
1	K	196	ILE
1	K	265	ARG
1	K	350	ASP
1	L	38	ARG
1	L	40	SER
1	L	45	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L	85	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (49) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	116	GLN
1	A	138	HIS
1	A	263	ASN
1	A	286	HIS
1	A	327	GLN
1	B	176	GLN
1	B	286	HIS
1	B	293	ASN
1	B	308	HIS
1	B	323	ASN
1	C	116	GLN
1	C	138	HIS
1	C	176	GLN
1	C	282	HIS
1	C	286	HIS
1	C	327	GLN
1	D	286	HIS
1	D	323	ASN
1	E	176	GLN
1	F	116	GLN
1	F	286	HIS
1	F	293	ASN
1	G	138	HIS
1	G	176	GLN
1	G	182	GLN
1	G	263	ASN
1	G	282	HIS
1	G	293	ASN
1	G	323	ASN
1	G	327	GLN
1	H	116	GLN
1	H	286	HIS
1	H	323	ASN
1	H	327	GLN
1	I	122	GLN
1	I	138	HIS
1	I	176	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	I	309	ASN
1	J	176	GLN
1	J	286	HIS
1	J	309	ASN
1	J	323	ASN
1	K	138	HIS
1	K	176	GLN
1	K	282	HIS
1	K	327	GLN
1	L	122	GLN
1	L	176	GLN
1	L	286	HIS

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](#)

12 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	$\# Z > 2$
2	A1JJ2	I	401	-	62,68,68	0.75	2 (3%)	83,98,98	0.93	5 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	A1JJ2	F	401	-	62,68,68	0.65	2 (3%)	83,98,98	1.11	9 (10%)
2	A1JJ2	J	401	-	62,68,68	0.57	0	83,98,98	0.91	5 (6%)
2	A1JJ2	L	401	-	62,68,68	0.65	1 (1%)	83,98,98	1.26	10 (12%)
2	A1JJ2	A	401	-	62,68,68	0.58	1 (1%)	83,98,98	0.96	6 (7%)
2	A1JJ2	G	401	-	62,68,68	0.63	1 (1%)	83,98,98	1.32	8 (9%)
2	A1JJ2	K	401	-	62,68,68	0.58	1 (1%)	83,98,98	1.25	9 (10%)
2	A1JJ2	D	401	-	62,68,68	0.58	0	83,98,98	0.98	6 (7%)
2	A1JJ2	C	401	-	62,68,68	0.60	1 (1%)	83,98,98	0.90	5 (6%)
2	A1JJ2	B	401	-	62,68,68	0.64	1 (1%)	83,98,98	1.36	7 (8%)
2	A1JJ2	E	401	-	62,68,68	0.70	2 (3%)	83,98,98	1.03	8 (9%)
2	A1JJ2	H	401	-	62,68,68	0.86	3 (4%)	83,98,98	1.06	8 (9%)

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
2	A1JJ2	I	401	-	-	9/64/81/81	0/4/4/4
2	A1JJ2	F	401	-	-	14/64/81/81	0/4/4/4
2	A1JJ2	J	401	-	-	7/64/81/81	0/4/4/4
2	A1JJ2	L	401	-	-	21/64/81/81	0/4/4/4
2	A1JJ2	A	401	-	-	16/64/81/81	0/4/4/4
2	A1JJ2	G	401	-	-	17/64/81/81	0/4/4/4
2	A1JJ2	K	401	-	-	20/64/81/81	0/4/4/4
2	A1JJ2	D	401	-	-	17/64/81/81	0/4/4/4
2	A1JJ2	C	401	-	-	11/64/81/81	0/4/4/4
2	A1JJ2	B	401	-	-	17/64/81/81	0/4/4/4
2	A1JJ2	E	401	-	-	16/64/81/81	0/4/4/4
2	A1JJ2	H	401	-	-	28/64/81/81	0/4/4/4

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	401	A1JJ2	O2-C12	3.92	1.26	1.20
2	I	401	A1JJ2	O2-C12	3.51	1.25	1.20
2	L	401	A1JJ2	O2-C12	3.20	1.25	1.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	401	A1JJ2	O2-C12	2.82	1.25	1.20
2	H	401	A1JJ2	C12-S2	2.79	1.84	1.75
2	C	401	A1JJ2	O2-C12	2.65	1.24	1.20
2	B	401	A1JJ2	O2-C12	2.64	1.24	1.20
2	K	401	A1JJ2	O2-C12	2.49	1.24	1.20
2	H	401	A1JJ2	C10-S1	2.33	1.87	1.83
2	E	401	A1JJ2	C10-S1	2.31	1.87	1.83
2	G	401	A1JJ2	C10-S1	2.30	1.87	1.83
2	F	401	A1JJ2	O2-C12	2.26	1.24	1.20
2	A	401	A1JJ2	O2-C12	2.19	1.24	1.20
2	F	401	A1JJ2	P3-O15	2.15	1.63	1.59
2	I	401	A1JJ2	C10-S1	2.11	1.86	1.83

All (86) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	401	A1JJ2	C13-S2-C12	6.60	121.60	101.75
2	K	401	A1JJ2	P2-O9-P1	6.46	154.99	132.83
2	B	401	A1JJ2	C22-C20-C23	6.04	118.08	108.23
2	B	401	A1JJ2	C21-C20-C23	-5.27	99.64	108.23
2	L	401	A1JJ2	O6-P1-O8	-3.92	93.76	109.07
2	F	401	A1JJ2	C22-C20-C23	3.79	114.42	108.23
2	G	401	A1JJ2	C14-N1-C15	3.74	129.78	122.84
2	E	401	A1JJ2	O14-C32-C33	3.74	121.78	111.17
2	A	401	A1JJ2	C21-C20-C23	-3.71	102.18	108.23
2	B	401	A1JJ2	O16-P3-O18	-3.67	96.32	110.68
2	D	401	A1JJ2	P2-O9-P1	3.63	145.30	132.83
2	L	401	A1JJ2	O6-C23-C20	3.60	116.34	110.55
2	L	401	A1JJ2	O7-P1-O8	3.54	129.73	112.24
2	G	401	A1JJ2	O14-C32-C33	3.48	121.05	111.17
2	G	401	A1JJ2	O14-C32-C26	-3.41	98.61	110.02
2	L	401	A1JJ2	C21-C20-C23	3.34	113.68	108.23
2	I	401	A1JJ2	O15-P3-O18	-3.18	97.13	109.39
2	D	401	A1JJ2	O15-P3-O18	-3.16	97.18	109.39
2	I	401	A1JJ2	O7-P1-O8	3.14	127.74	112.24
2	F	401	A1JJ2	O14-C32-C33	3.13	120.05	111.17
2	C	401	A1JJ2	O7-P1-O8	3.12	127.69	112.24
2	L	401	A1JJ2	C22-C20-C23	-3.11	103.16	108.23
2	H	401	A1JJ2	C14-N1-C15	3.09	128.57	122.84
2	K	401	A1JJ2	C21-C20-C23	-3.09	103.19	108.23
2	L	401	A1JJ2	P2-O9-P1	3.07	143.37	132.83
2	A	401	A1JJ2	O7-P1-O8	3.06	127.39	112.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	401	A1JJ2	O6-P1-O8	3.04	120.95	109.07
2	B	401	A1JJ2	O17-P3-O16	2.98	119.04	107.64
2	F	401	A1JJ2	O7-P1-O8	2.96	126.90	112.24
2	B	401	A1JJ2	O6-C23-C20	2.96	115.31	110.55
2	C	401	A1JJ2	O7-P1-O6	-2.92	94.18	107.75
2	K	401	A1JJ2	O17-P3-O16	2.91	118.77	107.64
2	H	401	A1JJ2	P2-O9-P1	2.89	142.75	132.83
2	A	401	A1JJ2	O6-P1-O8	-2.79	98.17	109.07
2	F	401	A1JJ2	P2-O9-P1	2.76	142.31	132.83
2	J	401	A1JJ2	O6-P1-O8	-2.75	98.31	109.07
2	F	401	A1JJ2	C11-C10-S1	2.74	116.46	108.69
2	E	401	A1JJ2	C21-C20-C23	-2.73	103.78	108.23
2	A	401	A1JJ2	C21-C20-C19	2.69	113.48	108.82
2	D	401	A1JJ2	O16-P3-O18	2.66	121.10	110.68
2	K	401	A1JJ2	O17-P3-O18	-2.66	100.26	110.68
2	E	401	A1JJ2	O14-C32-C26	-2.62	101.27	110.02
2	L	401	A1JJ2	O12-P2-O11	2.61	119.27	109.07
2	I	401	A1JJ2	C21-C20-C23	2.61	112.49	108.23
2	L	401	A1JJ2	O15-P3-O18	-2.56	99.52	109.39
2	J	401	A1JJ2	C11-C10-S1	2.54	115.89	108.69
2	H	401	A1JJ2	C13-S2-C12	2.49	109.24	101.75
2	C	401	A1JJ2	C11-C10-S1	2.47	115.70	108.69
2	D	401	A1JJ2	O6-C23-C20	-2.46	106.59	110.55
2	G	401	A1JJ2	C22-C20-C23	2.41	112.16	108.23
2	C	401	A1JJ2	O6-C23-C20	-2.40	106.68	110.55
2	J	401	A1JJ2	O7-P1-O8	2.39	124.03	112.24
2	E	401	A1JJ2	P2-O9-P1	2.38	141.00	132.83
2	K	401	A1JJ2	O12-P2-O11	2.38	118.36	109.07
2	L	401	A1JJ2	C22-C20-C19	2.36	112.91	108.82
2	D	401	A1JJ2	O2-C12-S2	-2.35	120.63	123.80
2	K	401	A1JJ2	O7-P1-O6	2.34	118.62	107.75
2	K	401	A1JJ2	O6-C23-C20	2.33	114.29	110.55
2	B	401	A1JJ2	O16-P3-O15	2.28	116.20	105.99
2	H	401	A1JJ2	C22-C20-C23	2.27	111.93	108.23
2	C	401	A1JJ2	O2-C12-S2	2.23	126.80	123.80
2	G	401	A1JJ2	C22-C20-C19	2.22	112.67	108.82
2	I	401	A1JJ2	C11-C10-S1	2.21	114.95	108.69
2	J	401	A1JJ2	O5-C19-C20	-2.20	105.06	110.25
2	G	401	A1JJ2	O17-P3-O16	2.19	116.02	107.64
2	H	401	A1JJ2	O6-C23-C20	2.19	114.07	110.55
2	F	401	A1JJ2	O17-P3-O16	-2.18	99.29	107.64
2	F	401	A1JJ2	O12-P2-O11	2.16	117.50	109.07

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	401	A1JJ2	O10-P2-O11	2.15	122.88	112.24
2	G	401	A1JJ2	O17-P3-O18	-2.15	102.28	110.68
2	H	401	A1JJ2	O17-P3-O16	2.12	115.74	107.64
2	E	401	A1JJ2	C17-C16-C15	2.11	115.87	112.36
2	F	401	A1JJ2	O10-P2-O11	2.11	122.65	112.24
2	D	401	A1JJ2	O7-P1-O8	2.09	122.59	112.24
2	I	401	A1JJ2	O16-P3-O18	2.08	118.84	110.68
2	K	401	A1JJ2	O14-C32-C33	2.08	117.07	111.17
2	E	401	A1JJ2	C21-C20-C19	2.07	112.41	108.82
2	J	401	A1JJ2	O15-P3-O18	-2.05	101.47	109.39
2	E	401	A1JJ2	O5-C19-C20	2.04	115.06	110.25
2	H	401	A1JJ2	C11-C10-S1	2.04	114.47	108.69
2	K	401	A1JJ2	C11-C10-S1	2.03	114.45	108.69
2	F	401	A1JJ2	O16-P3-O15	2.02	115.06	105.99
2	E	401	A1JJ2	O6-C23-C20	2.02	113.80	110.55
2	L	401	A1JJ2	O17-P3-O18	2.01	118.56	110.68
2	A	401	A1JJ2	O14-C32-C33	2.01	116.87	111.17
2	A	401	A1JJ2	C11-C10-S1	2.00	114.37	108.69

There are no chirality outliers.

All (193) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ2	C15-C16-C17-N2
2	A	401	A1JJ2	C18-C19-C20-C21
2	A	401	A1JJ2	C18-C19-C20-C22
2	A	401	A1JJ2	C18-C19-C20-C23
2	A	401	A1JJ2	C23-O6-P1-O8
2	B	401	A1JJ2	C18-C19-C20-C21
2	B	401	A1JJ2	C18-C19-C20-C23
2	B	401	A1JJ2	O5-C19-C20-C23
2	B	401	A1JJ2	O12-C24-C25-O13
2	B	401	A1JJ2	O12-C24-C25-C33
2	D	401	A1JJ2	C19-C20-C23-O6
2	D	401	A1JJ2	C24-O12-P2-O9
2	D	401	A1JJ2	O12-C24-C25-O13
2	D	401	A1JJ2	O12-C24-C25-C33
2	E	401	A1JJ2	C15-C16-C17-N2
2	E	401	A1JJ2	C18-C19-C20-C21
2	E	401	A1JJ2	C18-C19-C20-C22
2	E	401	A1JJ2	C18-C19-C20-C23
2	E	401	A1JJ2	O5-C19-C20-C21

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	E	401	A1JJ2	O5-C19-C20-C22
2	E	401	A1JJ2	O5-C19-C20-C23
2	E	401	A1JJ2	C24-O12-P2-O11
2	E	401	A1JJ2	O12-C24-C25-O13
2	E	401	A1JJ2	O12-C24-C25-C33
2	F	401	A1JJ2	C33-O15-P3-O18
2	G	401	A1JJ2	C13-C14-N1-C15
2	G	401	A1JJ2	C10-C12-S2-C13
2	G	401	A1JJ2	O2-C12-S2-C13
2	G	401	A1JJ2	C14-C13-S2-C12
2	G	401	A1JJ2	C23-O6-P1-O9
2	G	401	A1JJ2	C24-O12-P2-O10
2	H	401	A1JJ2	C13-C14-N1-C15
2	H	401	A1JJ2	C10-C12-S2-C13
2	H	401	A1JJ2	O2-C12-S2-C13
2	H	401	A1JJ2	C14-C13-S2-C12
2	H	401	A1JJ2	C18-C19-C20-C21
2	H	401	A1JJ2	C18-C19-C20-C22
2	H	401	A1JJ2	C18-C19-C20-C23
2	H	401	A1JJ2	C23-O6-P1-O7
2	H	401	A1JJ2	C24-O12-P2-O9
2	H	401	A1JJ2	C24-O12-P2-O11
2	J	401	A1JJ2	C33-O15-P3-O18
2	K	401	A1JJ2	C18-C19-C20-C23
2	K	401	A1JJ2	C23-O6-P1-O7
2	K	401	A1JJ2	C23-O6-P1-O8
2	K	401	A1JJ2	P2-O9-P1-O6
2	K	401	A1JJ2	O12-C24-C25-O13
2	K	401	A1JJ2	O12-C24-C25-C33
2	L	401	A1JJ2	C15-C16-C17-N2
2	L	401	A1JJ2	C18-C19-C20-C21
2	L	401	A1JJ2	C18-C19-C20-C22
2	L	401	A1JJ2	C18-C19-C20-C23
2	L	401	A1JJ2	O5-C19-C20-C21
2	L	401	A1JJ2	O5-C19-C20-C23
2	L	401	A1JJ2	O12-C24-C25-O13
2	L	401	A1JJ2	O12-C24-C25-C33
2	L	401	A1JJ2	C33-O15-P3-O16
2	H	401	A1JJ2	C3-C4-C5-O1
2	F	401	A1JJ2	O12-C24-C25-O13
2	F	401	A1JJ2	O12-C24-C25-C33
2	H	401	A1JJ2	O12-C24-C25-O13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	H	401	A1JJ2	O12-C24-C25-C33
2	G	401	A1JJ2	C35-C6-O1-C5
2	G	401	A1JJ2	C7-C6-O1-C5
2	K	401	A1JJ2	C3-C4-C5-O1
2	B	401	A1JJ2	C3-C4-C5-O1
2	L	401	A1JJ2	C3-C4-C5-O1
2	C	401	A1JJ2	C3-C4-C5-O1
2	C	401	A1JJ2	C7-C6-O1-C5
2	K	401	A1JJ2	C35-C6-O1-C5
2	C	401	A1JJ2	C35-C6-O1-C5
2	K	401	A1JJ2	C7-C6-O1-C5
2	H	401	A1JJ2	C16-C17-N2-C18
2	D	401	A1JJ2	C21-C20-C23-O6
2	D	401	A1JJ2	C22-C20-C23-O6
2	C	401	A1JJ2	C1-C2-C3-C4
2	I	401	A1JJ2	C3-C4-C5-O1
2	D	401	A1JJ2	C7-C6-O1-C5
2	D	401	A1JJ2	C35-C6-O1-C5
2	I	401	A1JJ2	C2-C3-C4-C5
2	G	401	A1JJ2	C2-C3-C4-C5
2	H	401	A1JJ2	C1-C2-C3-C4
2	C	401	A1JJ2	C15-C16-C17-N2
2	D	401	A1JJ2	C15-C16-C17-N2
2	F	401	A1JJ2	C15-C16-C17-N2
2	I	401	A1JJ2	C15-C16-C17-N2
2	K	401	A1JJ2	C15-C16-C17-N2
2	J	401	A1JJ2	C2-C3-C4-C5
2	B	401	A1JJ2	C7-C6-O1-C5
2	E	401	A1JJ2	C2-C3-C4-C5
2	B	401	A1JJ2	C35-C6-O1-C5
2	A	401	A1JJ2	C3-C4-C5-O1
2	I	401	A1JJ2	C4-C5-O1-C6
2	K	401	A1JJ2	C4-C5-O1-C6
2	K	401	A1JJ2	C1-C2-C3-C4
2	C	401	A1JJ2	C4-C5-O1-C6
2	A	401	A1JJ2	O5-C19-C20-C21
2	A	401	A1JJ2	O5-C19-C20-C22
2	B	401	A1JJ2	O5-C19-C20-C21
2	H	401	A1JJ2	O5-C19-C20-C21
2	H	401	A1JJ2	O5-C19-C20-C22
2	L	401	A1JJ2	O5-C19-C20-C22
2	D	401	A1JJ2	P1-O9-P2-O11

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	F	401	A1JJ2	P1-O9-P2-O11
2	F	401	A1JJ2	C1-C2-C3-C4
2	H	401	A1JJ2	C35-C6-O1-C5
2	H	401	A1JJ2	C4-C5-O1-C6
2	B	401	A1JJ2	P1-O9-P2-O12
2	D	401	A1JJ2	P1-O9-P2-O12
2	E	401	A1JJ2	P1-O9-P2-O12
2	F	401	A1JJ2	P1-O9-P2-O12
2	H	401	A1JJ2	P1-O9-P2-O12
2	A	401	A1JJ2	C33-O15-P3-O18
2	H	401	A1JJ2	C7-C6-O1-C5
2	L	401	A1JJ2	C33-O15-P3-O18
2	A	401	A1JJ2	S1-C10-C12-O2
2	B	401	A1JJ2	S1-C10-C12-O2
2	C	401	A1JJ2	S1-C10-C12-O2
2	D	401	A1JJ2	S1-C10-C12-O2
2	E	401	A1JJ2	S1-C10-C12-O2
2	F	401	A1JJ2	S1-C10-C12-O2
2	G	401	A1JJ2	S1-C10-C12-O2
2	H	401	A1JJ2	S1-C10-C12-O2
2	I	401	A1JJ2	S1-C10-C12-O2
2	J	401	A1JJ2	S1-C10-C12-O2
2	K	401	A1JJ2	S1-C10-C12-O2
2	L	401	A1JJ2	S1-C10-C12-O2
2	A	401	A1JJ2	C23-O6-P1-O9
2	F	401	A1JJ2	C23-O6-P1-O9
2	G	401	A1JJ2	C24-O12-P2-O9
2	H	401	A1JJ2	C23-O6-P1-O9
2	H	401	A1JJ2	C33-O15-P3-O16
2	K	401	A1JJ2	C23-O6-P1-O9
2	B	401	A1JJ2	C2-C3-C4-C5
2	B	401	A1JJ2	P2-O9-P1-O7
2	J	401	A1JJ2	P1-O9-P2-O11
2	L	401	A1JJ2	C1-C2-C3-C4
2	D	401	A1JJ2	C23-O6-P1-O8
2	D	401	A1JJ2	C24-O12-P2-O10
2	F	401	A1JJ2	C24-O12-P2-O11
2	G	401	A1JJ2	C23-O6-P1-O8
2	K	401	A1JJ2	C24-O12-P2-O11
2	L	401	A1JJ2	C24-O12-P2-O11
2	A	401	A1JJ2	O5-C19-C20-C23
2	H	401	A1JJ2	O5-C19-C20-C23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	J	401	A1JJ2	C12-C10-S1-C9
2	K	401	A1JJ2	O5-C19-C20-C23
2	L	401	A1JJ2	C12-C10-S1-C9
2	F	401	A1JJ2	C3-C4-C5-O1
2	I	401	A1JJ2	O12-C24-C25-O13
2	K	401	A1JJ2	C22-C20-C23-O6
2	L	401	A1JJ2	C22-C20-C23-O6
2	C	401	A1JJ2	P1-O9-P2-O10
2	G	401	A1JJ2	S2-C13-C14-N1
2	L	401	A1JJ2	C21-C20-C23-O6
2	I	401	A1JJ2	C1-C2-C3-C4
2	E	401	A1JJ2	P1-O9-P2-O11
2	A	401	A1JJ2	O12-C24-C25-O13
2	K	401	A1JJ2	C2-C3-C4-C5
2	L	401	A1JJ2	P1-O9-P2-O12
2	D	401	A1JJ2	C3-C4-C5-O1
2	C	401	A1JJ2	C33-O15-P3-O18
2	F	401	A1JJ2	C22-C20-C23-O6
2	G	401	A1JJ2	C15-C16-C17-N2
2	J	401	A1JJ2	O12-C24-C25-O13
2	B	401	A1JJ2	C18-C19-C20-C22
2	K	401	A1JJ2	C18-C19-C20-C21
2	A	401	A1JJ2	C33-O15-P3-O16
2	B	401	A1JJ2	O5-C19-C20-C22
2	D	401	A1JJ2	C23-O6-P1-O9
2	F	401	A1JJ2	C24-O12-P2-O9
2	I	401	A1JJ2	C24-O12-P2-O9
2	L	401	A1JJ2	C24-O12-P2-O9
2	J	401	A1JJ2	C16-C17-N2-C18
2	C	401	A1JJ2	O12-C24-C25-O13
2	G	401	A1JJ2	O12-C24-C25-O13
2	A	401	A1JJ2	P1-O9-P2-O11
2	B	401	A1JJ2	P2-O9-P1-O8
2	B	401	A1JJ2	P1-O9-P2-O10
2	F	401	A1JJ2	P2-O9-P1-O8
2	A	401	A1JJ2	C24-O12-P2-O11
2	G	401	A1JJ2	C24-O12-P2-O11
2	H	401	A1JJ2	C23-O6-P1-O8
2	H	401	A1JJ2	O4-C18-C19-C20
2	C	401	A1JJ2	C11-C10-S1-C9
2	D	401	A1JJ2	C11-C10-S1-C9
2	E	401	A1JJ2	C11-C10-S1-C9

Continued on next page...

Continued from previous page...

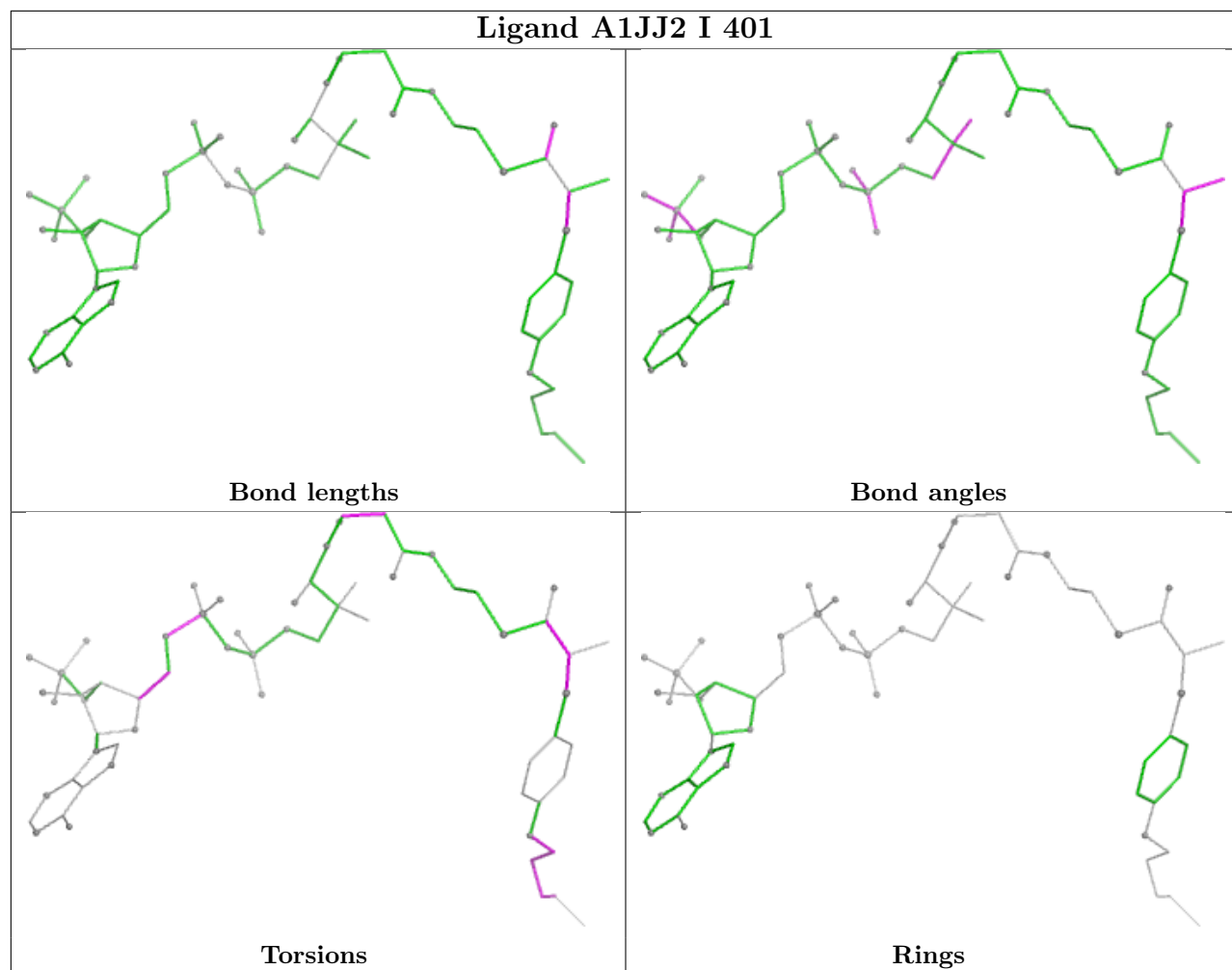
Mol	Chain	Res	Type	Atoms
2	G	401	A1JJ2	C11-C10-S1-C9
2	H	401	A1JJ2	C11-C10-S1-C9
2	I	401	A1JJ2	C11-C10-S1-C9
2	K	401	A1JJ2	C11-C10-S1-C9
2	L	401	A1JJ2	C11-C10-S1-C9
2	E	401	A1JJ2	C3-C4-C5-O1

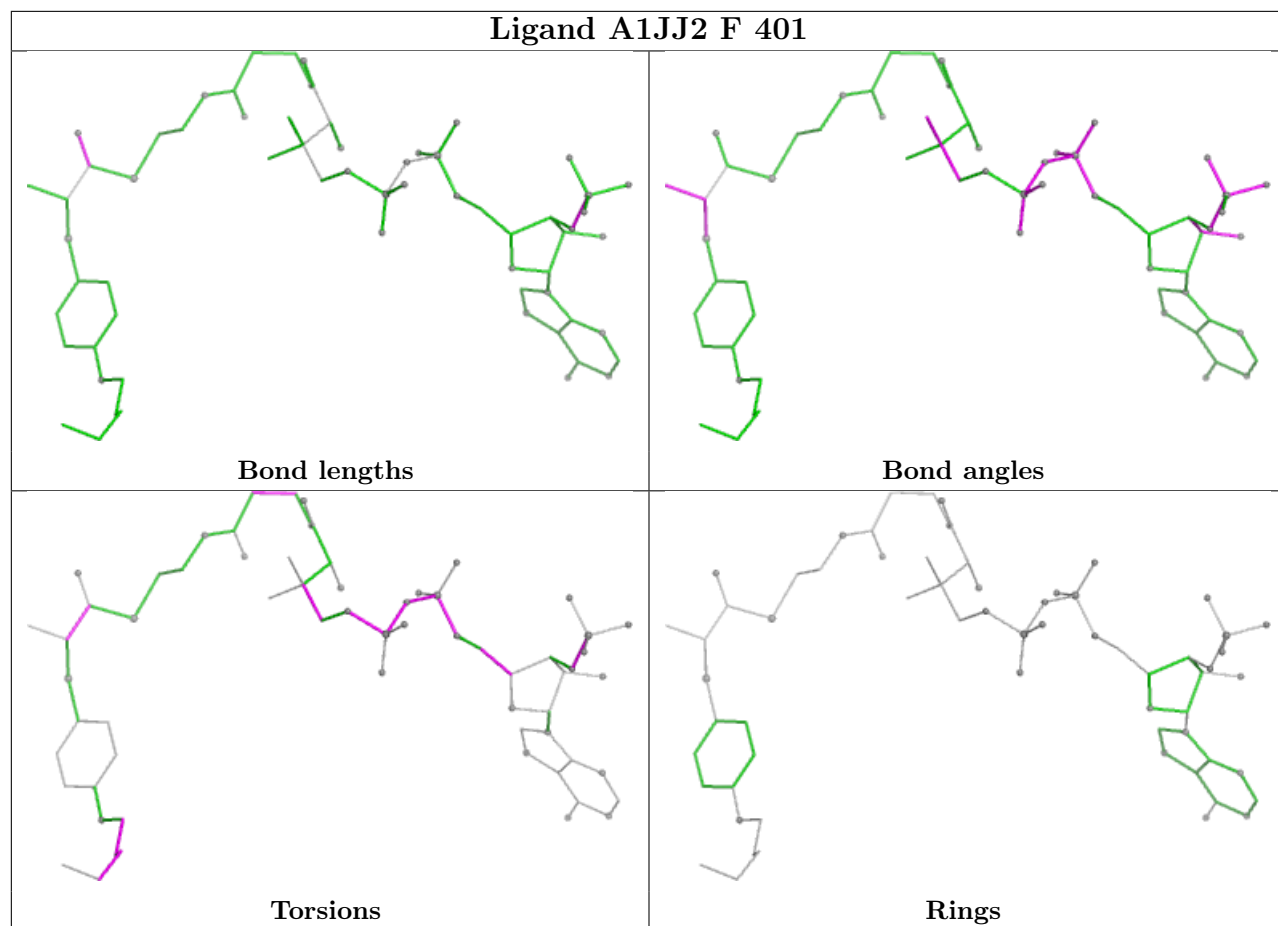
There are no ring outliers.

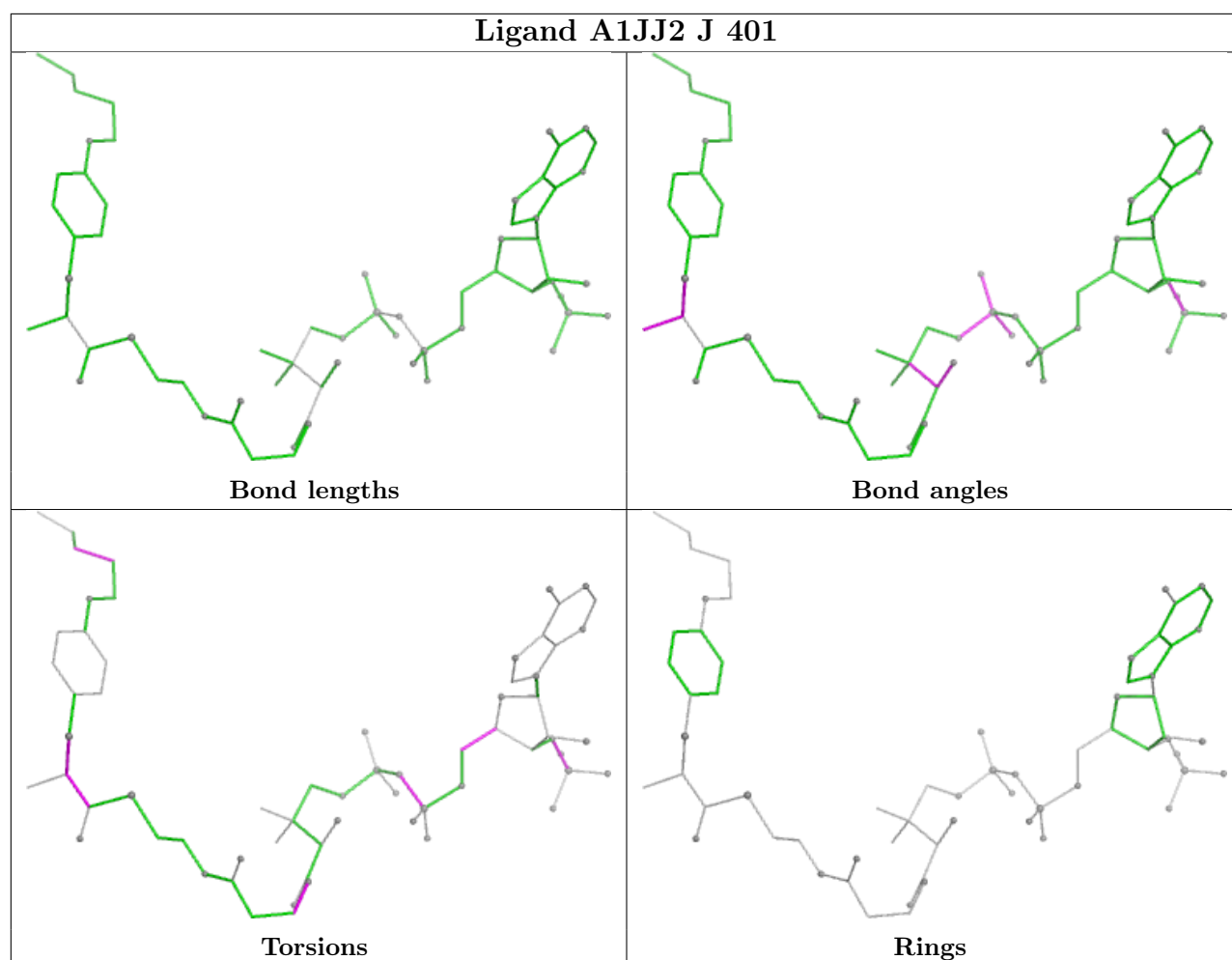
7 monomers are involved in 10 short contacts:

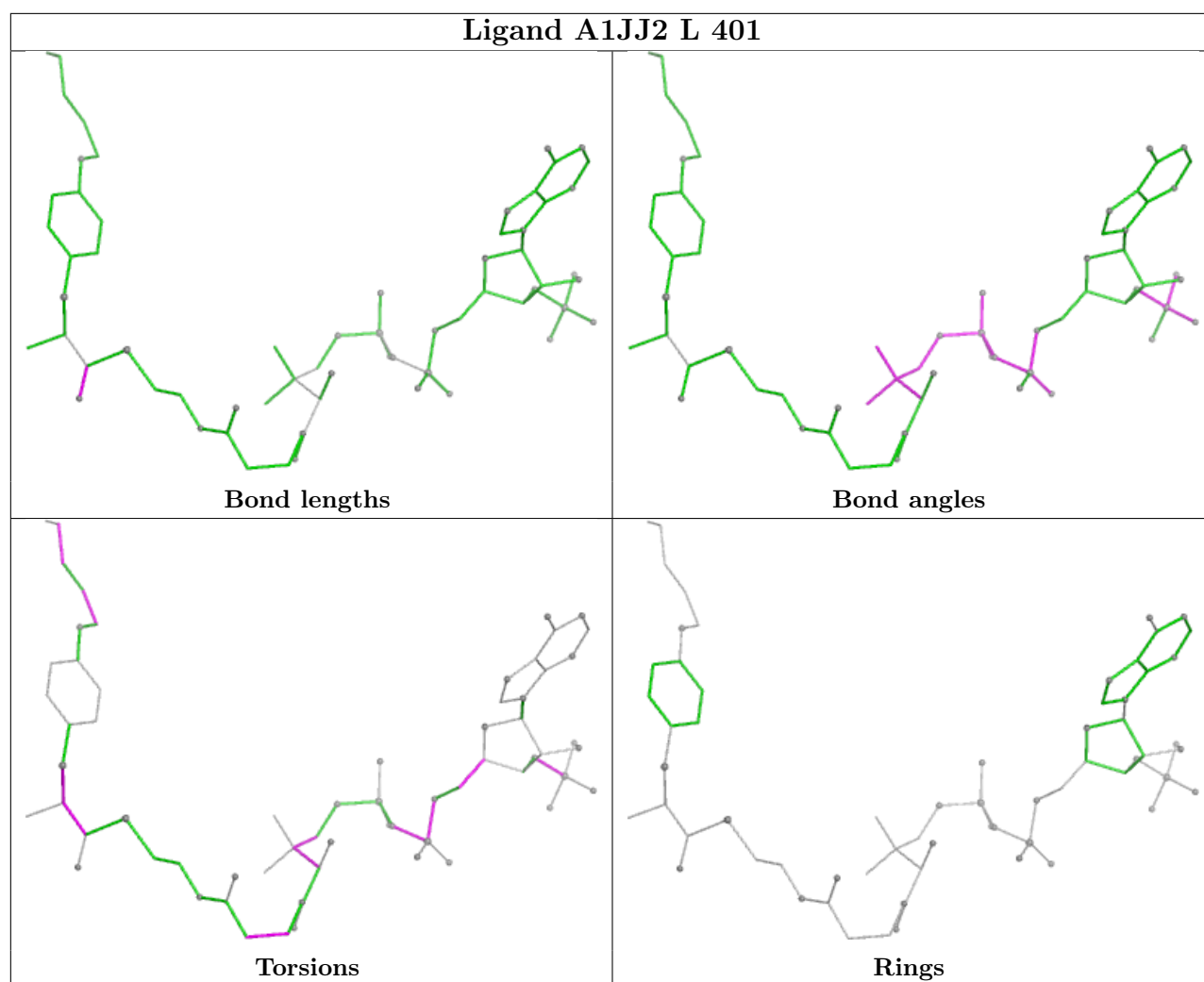
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	401	A1JJ2	1	0
2	A	401	A1JJ2	3	0
2	G	401	A1JJ2	1	0
2	K	401	A1JJ2	2	0
2	B	401	A1JJ2	1	0
2	E	401	A1JJ2	1	0
2	H	401	A1JJ2	1	0

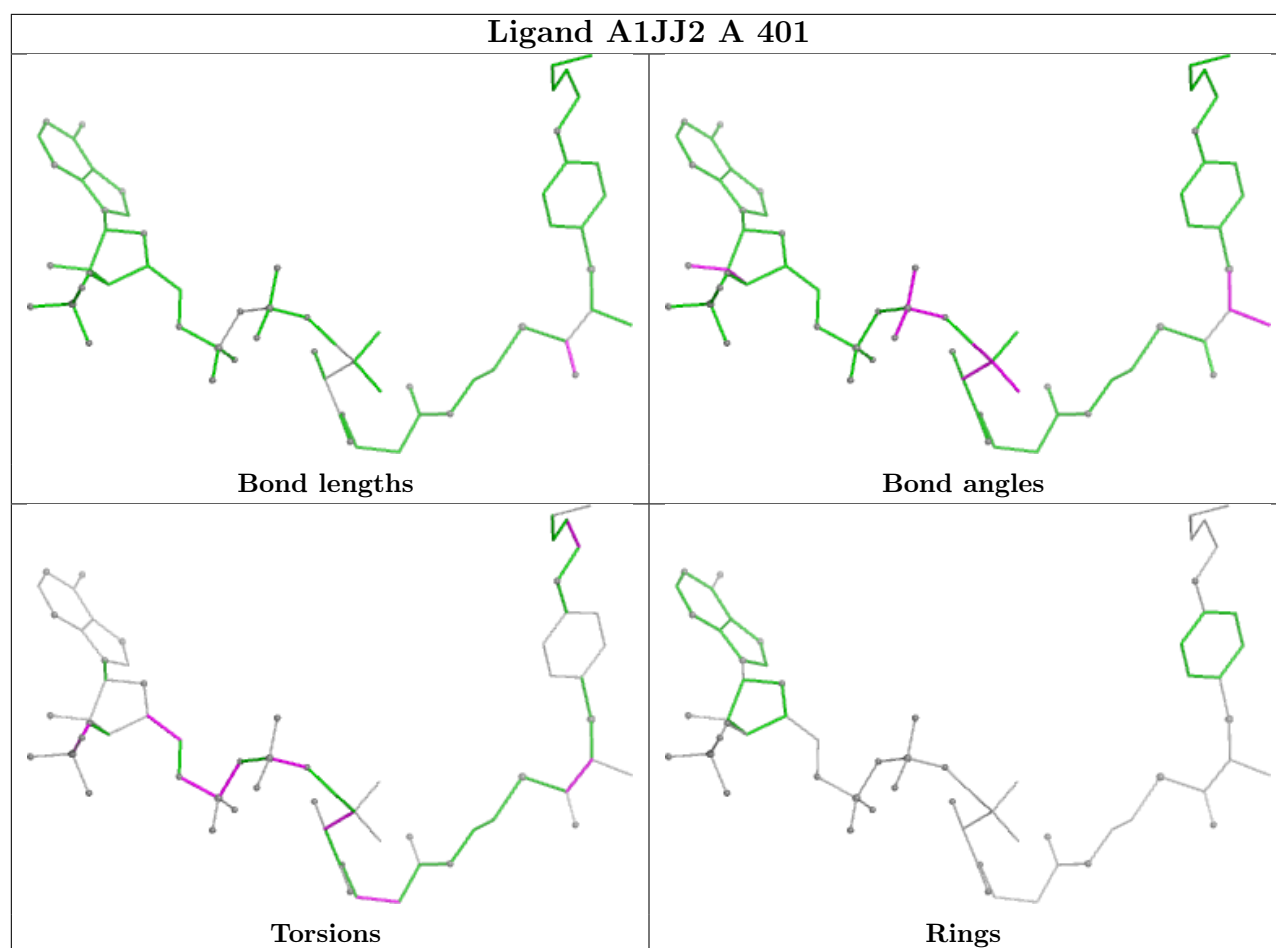
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

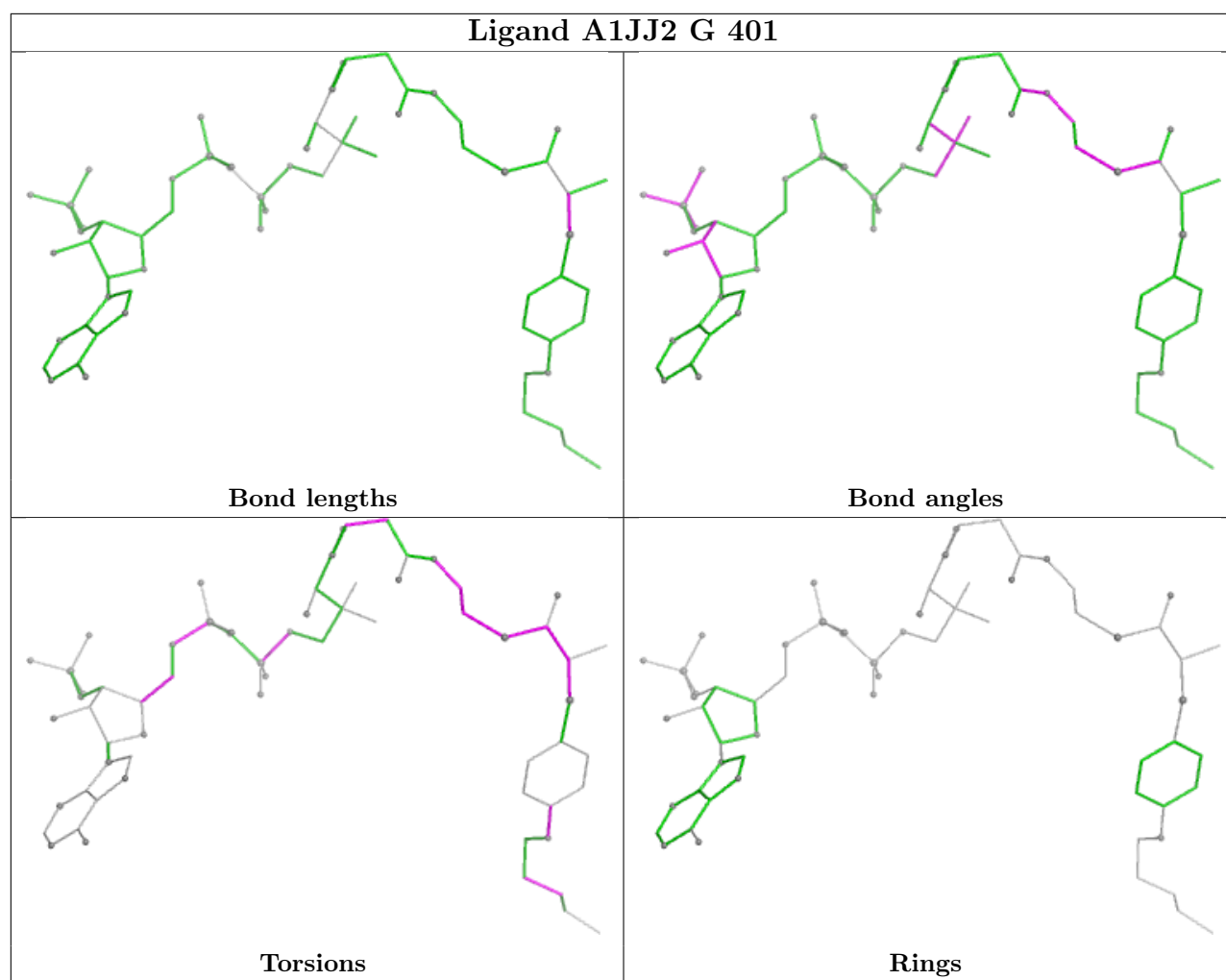




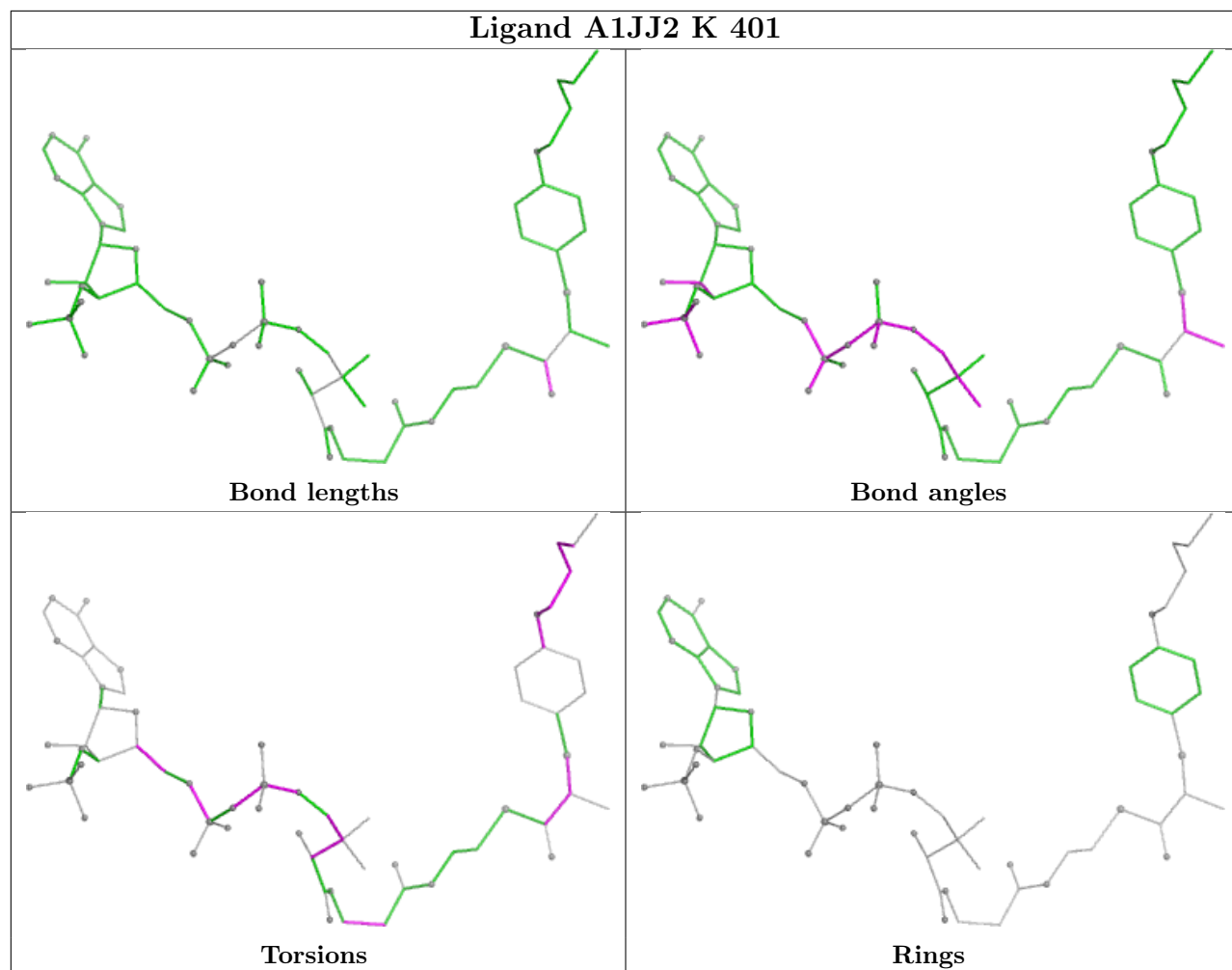




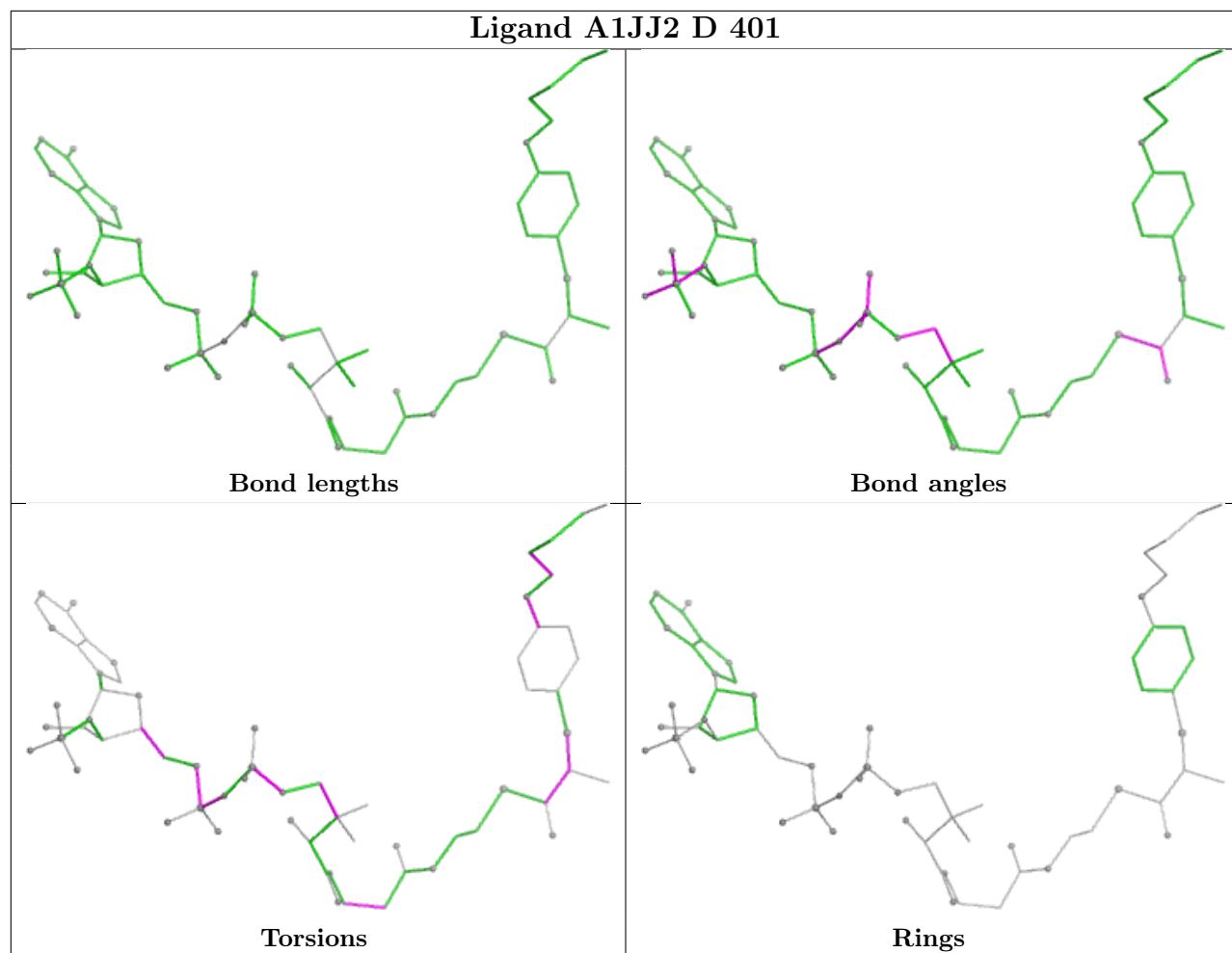


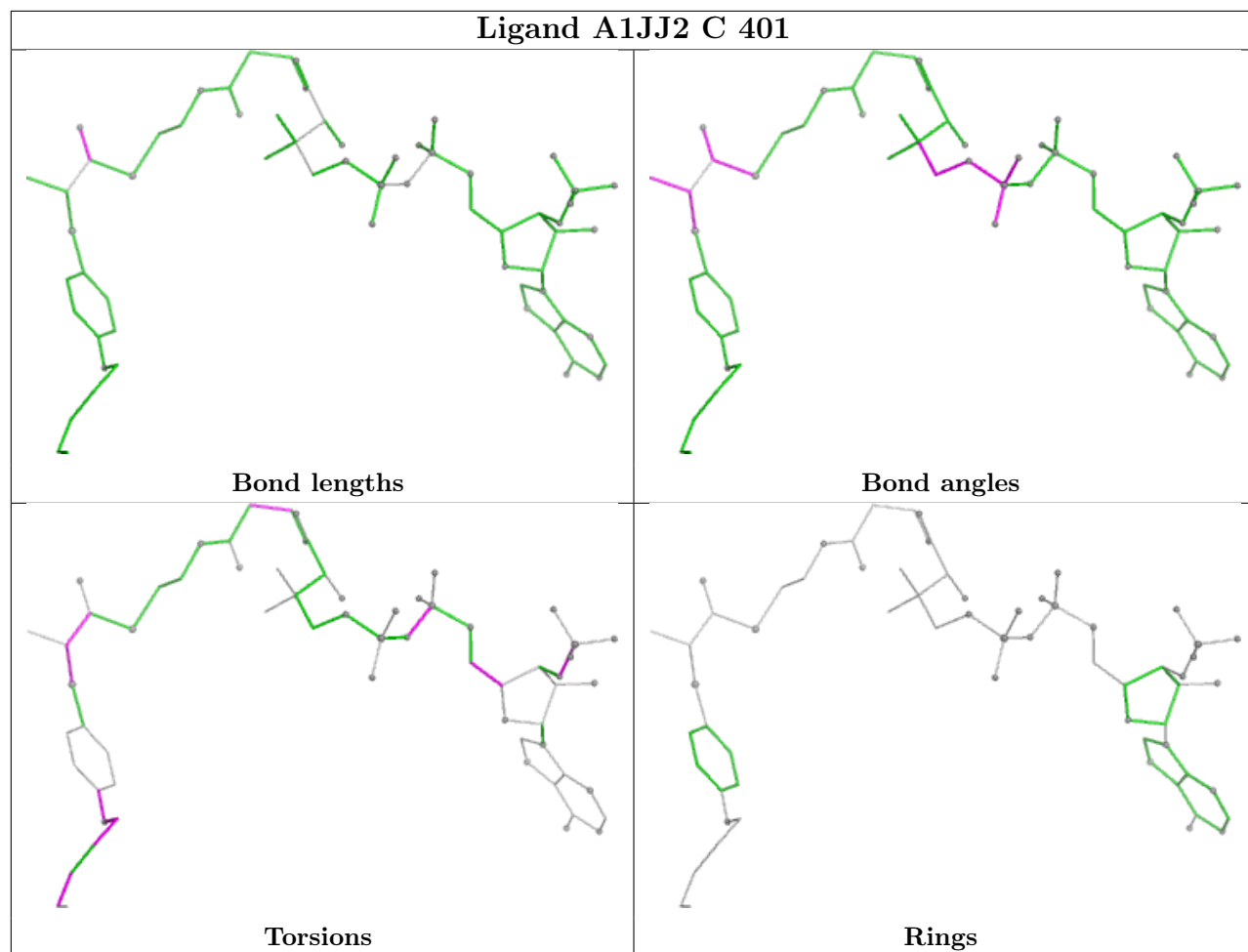


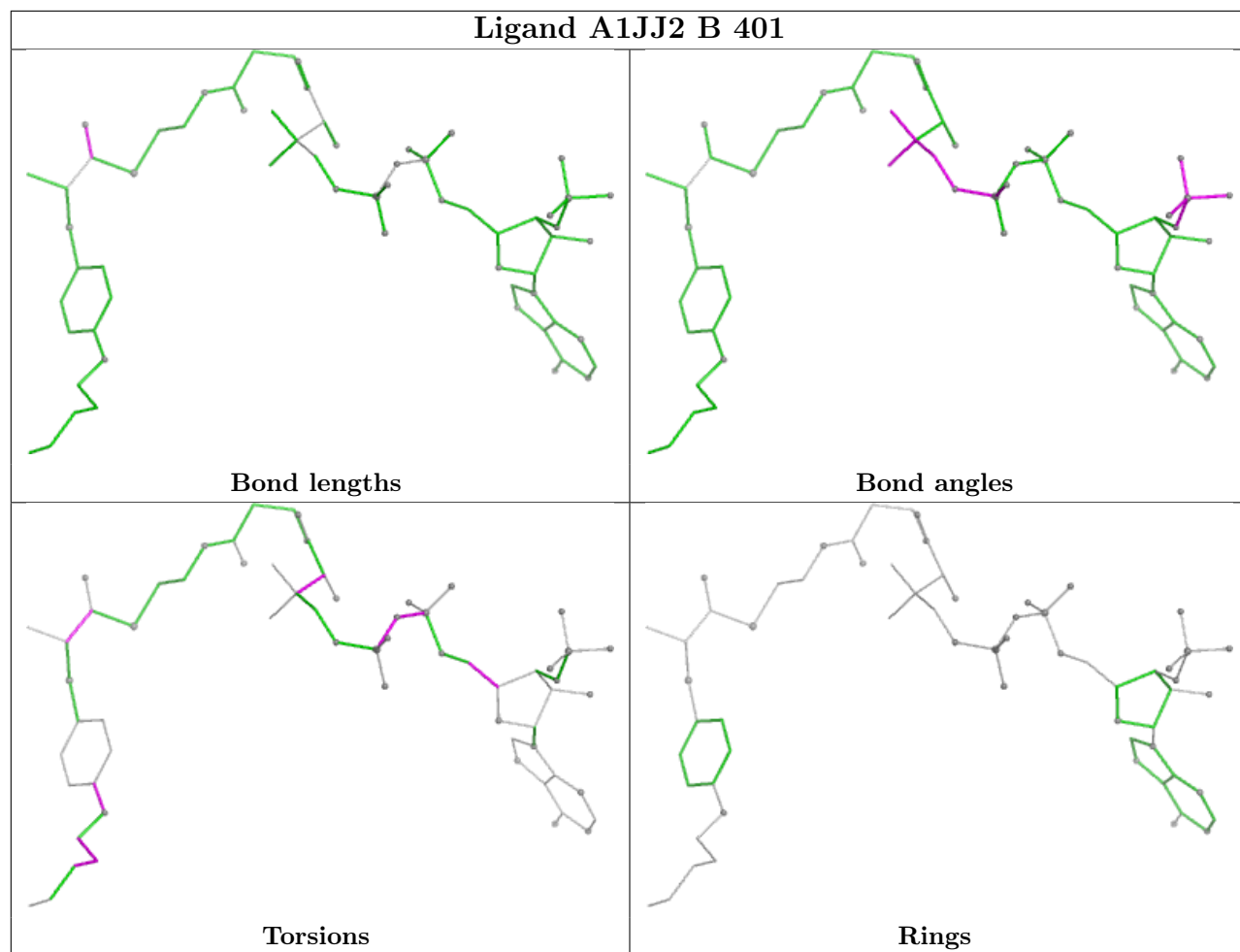
Ligand A1JJ2 K 401

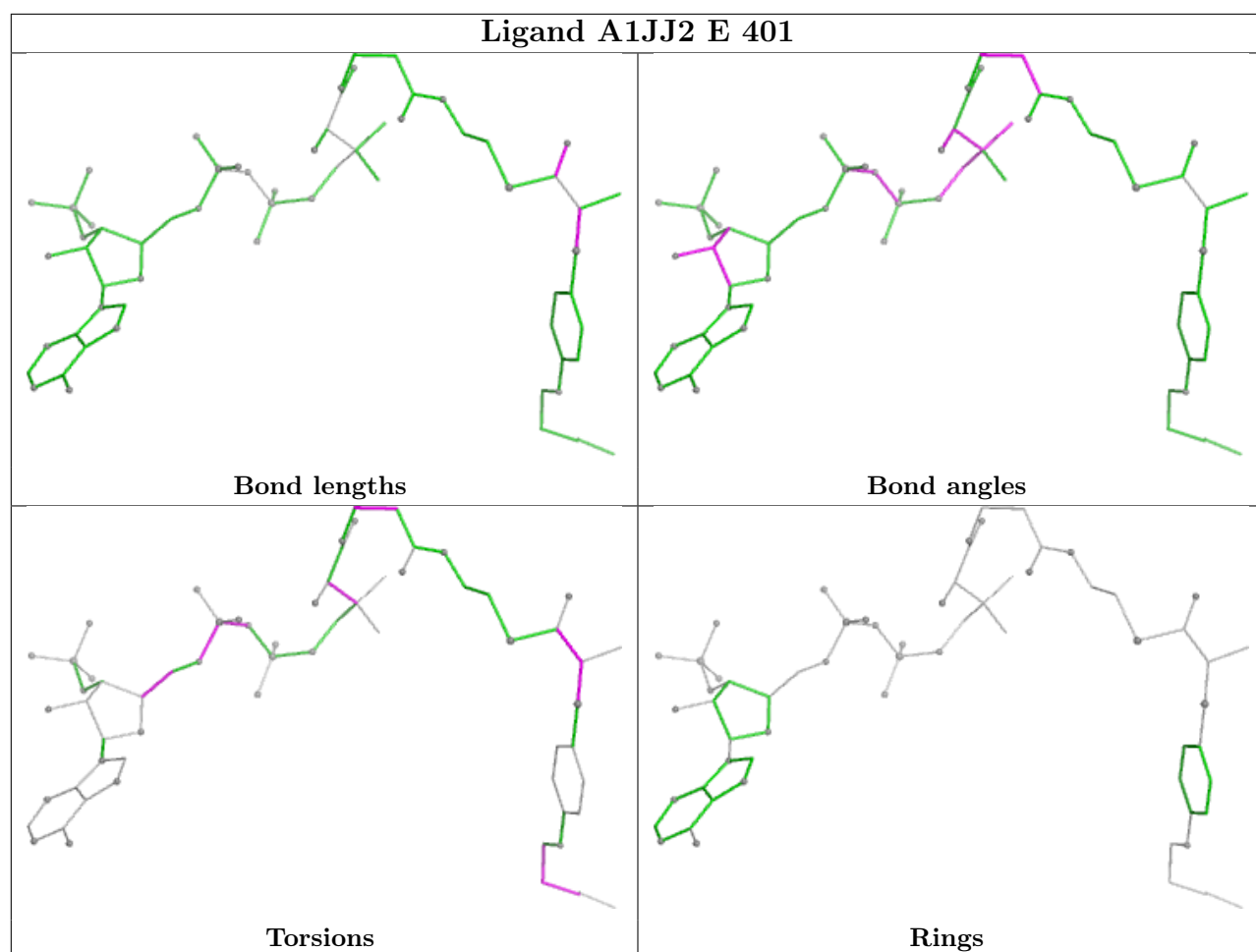


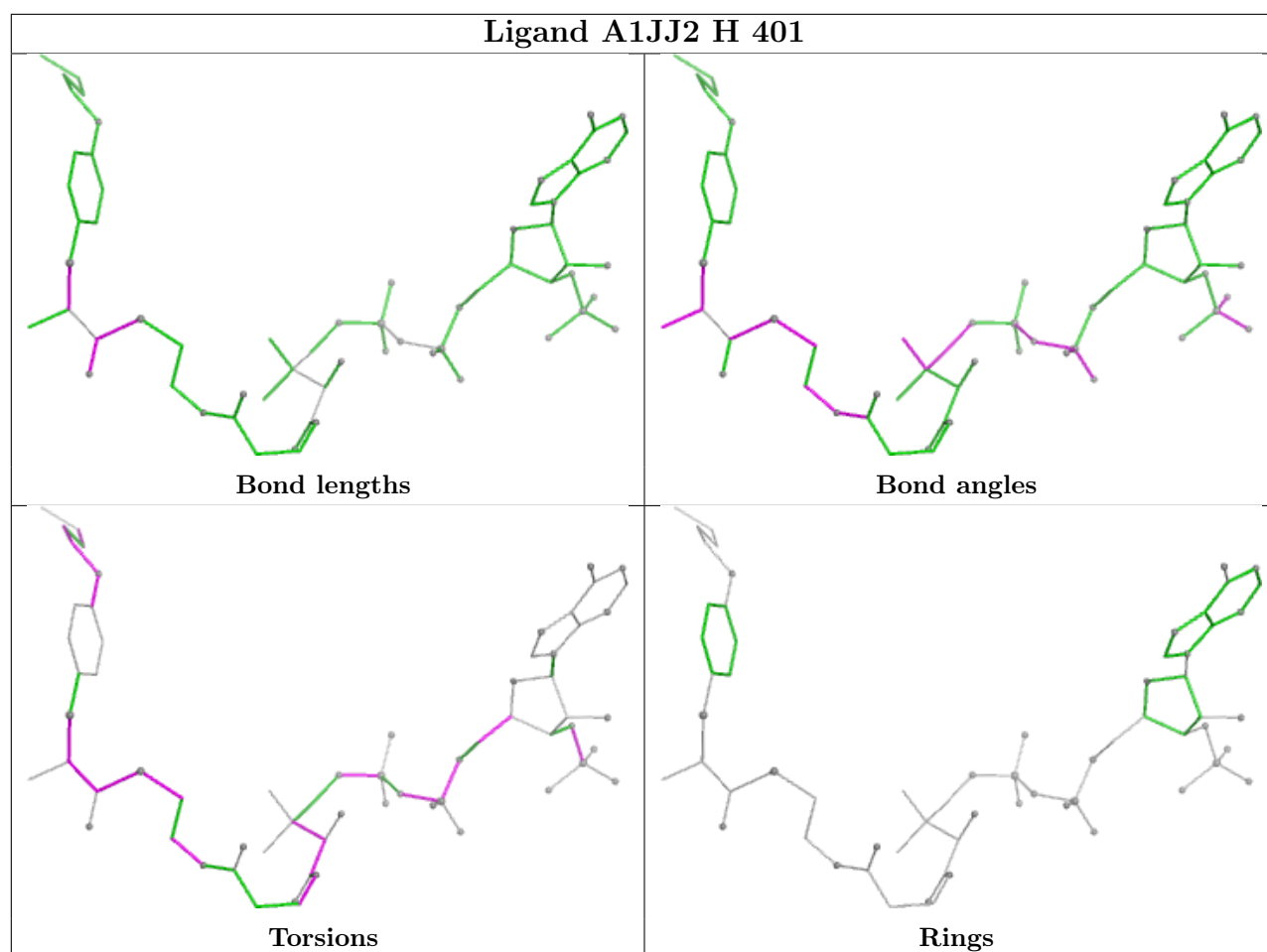
Ligand A1JJ2 D 401











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, 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	359/364 (98%)	0.52	33 (9%)	14 16	26, 43, 89, 130	2 (0%)
1	B	358/364 (98%)	0.41	28 (7%)	19 21	26, 42, 91, 130	1 (0%)
1	C	358/364 (98%)	0.58	46 (12%)	7 8	18, 44, 91, 120	3 (0%)
1	D	359/364 (98%)	0.52	34 (9%)	14 15	26, 44, 87, 133	1 (0%)
1	E	359/364 (98%)	0.57	38 (10%)	11 12	27, 45, 95, 126	2 (0%)
1	F	357/364 (98%)	0.67	51 (14%)	6 7	27, 46, 89, 121	2 (0%)
1	G	359/364 (98%)	0.97	82 (22%)	2 2	27, 49, 102, 138	2 (0%)
1	H	359/364 (98%)	0.73	52 (14%)	6 7	28, 48, 102, 130	1 (0%)
1	I	359/364 (98%)	0.32	23 (6%)	25 27	28, 42, 80, 111	2 (0%)
1	J	358/364 (98%)	0.35	24 (6%)	24 26	21, 42, 81, 118	2 (0%)
1	K	358/364 (98%)	0.54	45 (12%)	8 9	21, 44, 92, 127	3 (0%)
1	L	359/364 (98%)	0.36	28 (7%)	19 21	27, 44, 82, 126	1 (0%)
All	All	4302/4368 (98%)	0.54	484 (11%)	10 11	18, 44, 92, 138	22 (0%)

All (484) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	K	42	VAL	9.4
1	A	346	ALA	8.7
1	D	42	VAL	8.5
1	C	42	VAL	8.0
1	B	42	VAL	7.9
1	B	346	ALA	7.5
1	H	346	ALA	7.3
1	D	346	ALA	7.2
1	H	45	ILE	7.1
1	C	346	ALA	6.8
1	J	346	ALA	6.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	K	346	ALA	6.3
1	L	45	ILE	6.2
1	C	45	ILE	6.1
1	G	42	VAL	6.0
1	F	346	ALA	6.0
1	D	45	ILE	5.8
1	F	42	VAL	5.7
1	G	346	ALA	5.7
1	K	45	ILE	5.7
1	B	45	ILE	5.6
1	K	324	GLY	5.6
1	E	349	ILE	5.4
1	D	347	ALA	5.2
1	E	45	ILE	5.2
1	H	42	VAL	5.1
1	A	45	ILE	5.1
1	I	45	ILE	5.1
1	C	360	GLY	5.0
1	G	58	THR	4.9
1	J	45	ILE	4.9
1	F	347	ALA	4.8
1	G	102	VAL	4.8
1	G	324	GLY	4.8
1	G	351	ILE	4.8
1	C	323	ASN	4.8
1	G	347	ALA	4.7
1	E	42	VAL	4.6
1	G	45	ILE	4.6
1	H	358	TRP	4.5
1	J	347	ALA	4.5
1	J	324	GLY	4.4
1	K	347	ALA	4.4
1	G	69	LEU	4.4
1	A	324	GLY	4.4
1	A	347	ALA	4.4
1	B	345	PRO	4.4
1	H	349	ILE	4.4
1	A	42	VAL	4.3
1	L	349	ILE	4.3
1	I	323	ASN	4.3
1	F	46	SER	4.3
1	G	180	LYS	4.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	351	ILE	4.3
1	G	101	LYS	4.3
1	F	349	ILE	4.3
1	E	324	GLY	4.2
1	I	346	ALA	4.2
1	C	347	ALA	4.2
1	K	180	LYS	4.2
1	I	47	ARG	4.2
1	K	44	GLY	4.1
1	H	322	ALA	4.1
1	G	178	SER	4.1
1	F	76	LYS	4.1
1	G	76	LYS	4.1
1	B	44	GLY	4.0
1	A	349	ILE	4.0
1	D	359	ASP	4.0
1	G	349	ILE	4.0
1	G	348	THR	4.0
1	A	351	ILE	4.0
1	C	176	GLN	3.9
1	H	324	GLY	3.9
1	H	34	VAL	3.9
1	G	107	ILE	3.9
1	A	348	THR	3.8
1	G	358	TRP	3.8
1	L	323	ASN	3.8
1	H	16	ILE	3.8
1	L	346	ALA	3.8
1	E	1	MET	3.8
1	G	11	VAL	3.8
1	B	65	GLN	3.7
1	G	1	MET	3.7
1	C	349	ILE	3.7
1	K	349	ILE	3.7
1	G	62	LYS	3.7
1	G	34	VAL	3.7
1	B	351	ILE	3.7
1	A	345	PRO	3.7
1	D	348	THR	3.6
1	F	49	ALA	3.6
1	G	292	ALA	3.6
1	D	345	PRO	3.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	F	322	ALA	3.6
1	G	72	LYS	3.6
1	F	351	ILE	3.6
1	G	92	LEU	3.6
1	D	323	ASN	3.6
1	G	354	VAL	3.6
1	H	2	ALA	3.6
1	D	44	GLY	3.6
1	H	355	LEU	3.6
1	G	345	PRO	3.6
1	B	347	ALA	3.6
1	G	100	ALA	3.6
1	B	76	LYS	3.5
1	D	43	ASP	3.5
1	D	351	ILE	3.5
1	G	44	GLY	3.5
1	I	351	ILE	3.5
1	K	359	ASP	3.5
1	G	179	GLY	3.5
1	L	348	THR	3.5
1	G	10	VAL	3.5
1	G	33	VAL	3.5
1	G	104	ASP	3.5
1	G	96	PRO	3.4
1	K	76	LYS	3.4
1	F	324	GLY	3.4
1	A	47	ARG	3.4
1	E	323	ASN	3.4
1	F	47	ARG	3.4
1	G	176	GLN	3.4
1	D	76	LYS	3.4
1	K	102	VAL	3.4
1	B	46	SER	3.4
1	A	44	GLY	3.4
1	D	324	GLY	3.4
1	A	69	LEU	3.4
1	C	348	THR	3.4
1	J	40	SER	3.4
1	I	207	MET	3.3
1	H	347	ALA	3.3
1	I	42	VAL	3.3
1	C	180	LYS	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	F	323	ASN	3.3
1	G	357	ASP	3.3
1	G	63	SER	3.3
1	K	350	ASP	3.3
1	E	16	ILE	3.3
1	G	47	ARG	3.3
1	F	176	GLN	3.3
1	J	41	SER	3.3
1	E	347	ALA	3.3
1	F	292	ALA	3.3
1	J	207	MET	3.3
1	F	350	ASP	3.3
1	E	345	PRO	3.3
1	A	358	TRP	3.3
1	H	323	ASN	3.2
1	J	43	ASP	3.2
1	C	345	PRO	3.2
1	F	345	PRO	3.2
1	I	76	LYS	3.2
1	H	46	SER	3.2
1	I	1	MET	3.2
1	G	93	GLY	3.2
1	L	324	GLY	3.2
1	A	76	LYS	3.2
1	C	69	LEU	3.2
1	K	348	THR	3.2
1	H	47	ARG	3.2
1	B	322	ALA	3.2
1	F	11	VAL	3.2
1	H	44	GLY	3.2
1	G	293	ASN	3.2
1	K	345	PRO	3.2
1	H	1	MET	3.2
1	H	207	MET	3.2
1	B	323	ASN	3.2
1	H	176	GLN	3.2
1	J	351	ILE	3.2
1	E	58	THR	3.2
1	G	99	CYS	3.1
1	H	178	SER	3.1
1	C	66	GLY	3.1
1	J	323	ASN	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	H	351	ILE	3.1
1	H	41	SER	3.1
1	I	324	GLY	3.1
1	D	59	ALA	3.1
1	I	349	ILE	3.1
1	K	351	ILE	3.1
1	G	57	VAL	3.1
1	A	41	SER	3.1
1	B	1	MET	3.1
1	H	56	ILE	3.0
1	A	173	TRP	3.0
1	K	358	TRP	3.0
1	F	43	ASP	3.0
1	H	7	GLY	3.0
1	E	72	LYS	3.0
1	G	61	LEU	3.0
1	G	65	GLN	3.0
1	H	326	TRP	3.0
1	K	47	ARG	3.0
1	G	352	GLU	3.0
1	H	57	VAL	3.0
1	K	176	GLN	3.0
1	F	101	LYS	3.0
1	G	173	TRP	3.0
1	I	44	GLY	3.0
1	B	47	ARG	3.0
1	G	108	TYR	3.0
1	C	1	MET	3.0
1	H	345	PRO	3.0
1	G	353	ALA	2.9
1	D	47	ARG	2.9
1	D	207	MET	2.9
1	F	1	MET	2.9
1	A	93	GLY	2.9
1	G	7	GLY	2.9
1	G	88	VAL	2.9
1	C	351	ILE	2.9
1	D	349	ILE	2.9
1	G	41	SER	2.9
1	G	355	LEU	2.9
1	H	8	LEU	2.9
1	K	322	ALA	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	F	348	THR	2.9
1	J	349	ILE	2.9
1	B	41	SER	2.8
1	H	179	GLY	2.8
1	K	72	LYS	2.8
1	G	67	LEU	2.8
1	B	257	ALA	2.8
1	K	1	MET	2.8
1	A	323	ASN	2.8
1	J	44	GLY	2.8
1	F	355	LEU	2.8
1	E	346	ALA	2.8
1	B	358	TRP	2.8
1	C	47	ARG	2.8
1	H	144	ASP	2.8
1	G	73	LEU	2.8
1	H	76	LYS	2.8
1	C	173	TRP	2.8
1	F	107	ILE	2.8
1	F	293	ASN	2.8
1	F	358	TRP	2.8
1	A	72	LYS	2.8
1	I	180	LYS	2.8
1	E	47	ARG	2.8
1	G	79	VAL	2.8
1	I	348	THR	2.7
1	D	358	TRP	2.7
1	F	93	GLY	2.7
1	K	325	GLY	2.7
1	F	180	LYS	2.7
1	G	105	ARG	2.7
1	K	49	ALA	2.7
1	L	47	ARG	2.7
1	G	183	VAL	2.7
1	A	58	THR	2.7
1	D	56	ILE	2.7
1	E	43	ASP	2.7
1	E	348	THR	2.7
1	C	324	GLY	2.7
1	H	173	TRP	2.7
1	L	207	MET	2.7
1	B	77	ALA	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	322	ALA	2.7
1	A	68	GLU	2.7
1	C	76	LYS	2.7
1	I	326	TRP	2.7
1	H	73	LEU	2.7
1	G	70	ALA	2.7
1	F	144	ASP	2.7
1	G	43	ASP	2.7
1	G	68	GLU	2.7
1	I	58	THR	2.7
1	D	41	SER	2.7
1	K	40	SER	2.7
1	K	178	SER	2.7
1	E	355	LEU	2.7
1	F	173	TRP	2.7
1	L	173	TRP	2.7
1	C	70	ALA	2.6
1	A	43	ASP	2.6
1	G	64	ASP	2.6
1	H	315	GLU	2.6
1	H	105	ARG	2.6
1	C	358	TRP	2.6
1	F	326	TRP	2.6
1	G	59	ALA	2.6
1	L	347	ALA	2.6
1	L	44	GLY	2.6
1	G	36	ILE	2.6
1	A	62	LYS	2.6
1	J	47	ARG	2.6
1	C	34	VAL	2.6
1	K	58	THR	2.6
1	J	345	PRO	2.6
1	C	107	ILE	2.6
1	F	72	LYS	2.6
1	I	176	GLN	2.6
1	G	94	LEU	2.6
1	B	359	ASP	2.6
1	F	66	GLY	2.6
1	G	66	GLY	2.6
1	F	41	SER	2.6
1	F	97	GLU	2.5
1	H	350	ASP	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	101	LYS	2.5
1	F	10	VAL	2.5
1	F	62	LYS	2.5
1	C	359	ASP	2.5
1	E	59	ALA	2.5
1	F	59	ALA	2.5
1	B	324	GLY	2.5
1	H	72	LYS	2.5
1	H	58	THR	2.5
1	A	177	SER	2.5
1	A	1	MET	2.5
1	C	139	ALA	2.5
1	D	180	LYS	2.5
1	K	323	ASN	2.5
1	L	180	LYS	2.5
1	C	41	SER	2.5
1	G	40	SER	2.5
1	I	358	TRP	2.5
1	F	106	LEU	2.5
1	B	207	MET	2.5
1	G	32	ASP	2.5
1	G	75	ALA	2.5
1	E	176	GLN	2.5
1	G	87	GLY	2.5
1	F	258	GLU	2.4
1	E	34	VAL	2.4
1	G	56	ILE	2.4
1	D	173	TRP	2.4
1	D	1	MET	2.4
1	F	70	ALA	2.4
1	C	93	GLY	2.4
1	H	39	PRO	2.4
1	H	348	THR	2.4
1	H	40	SER	2.4
1	L	46	SER	2.4
1	I	173	TRP	2.4
1	C	75	ALA	2.4
1	H	77	ALA	2.4
1	H	353	ALA	2.4
1	J	322	ALA	2.4
1	K	39	PRO	2.4
1	B	348	THR	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	356	THR	2.4
1	K	41	SER	2.4
1	J	102	VAL	2.4
1	L	351	ILE	2.4
1	L	350	ASP	2.4
1	C	49	ALA	2.4
1	D	49	ALA	2.4
1	I	347	ALA	2.4
1	L	7	GLY	2.4
1	F	34	VAL	2.4
1	F	81	ILE	2.4
1	F	69	LEU	2.4
1	D	326	TRP	2.4
1	J	326	TRP	2.4
1	C	350	ASP	2.3
1	E	70	ALA	2.3
1	G	322	ALA	2.3
1	B	349	ILE	2.3
1	K	34	VAL	2.3
1	F	65	GLN	2.3
1	B	350	ASP	2.3
1	H	359	ASP	2.3
1	J	350	ASP	2.3
1	L	43	ASP	2.3
1	L	345	PRO	2.3
1	E	322	ALA	2.3
1	B	40	SER	2.3
1	G	207	MET	2.3
1	H	50	MET	2.3
1	K	56	ILE	2.3
1	D	102	VAL	2.3
1	G	323	ASN	2.3
1	H	180	LYS	2.3
1	E	44	GLY	2.3
1	K	207	MET	2.3
1	C	105	ARG	2.3
1	E	56	ILE	2.3
1	H	334	PHE	2.3
1	B	72	LYS	2.3
1	K	101	LYS	2.3
1	F	359	ASP	2.3
1	I	350	ASP	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	J	37	ASP	2.3
1	J	48	ASP	2.3
1	E	7	GLY	2.3
1	C	171	ALA	2.3
1	D	2	ALA	2.3
1	G	326	TRP	2.3
1	C	101	LYS	2.3
1	E	62	LYS	2.3
1	K	73	LEU	2.2
1	C	104	ASP	2.2
1	D	48	ASP	2.2
1	D	350	ASP	2.2
1	G	255	ASP	2.2
1	E	39	PRO	2.2
1	D	322	ALA	2.2
1	E	257	ALA	2.2
1	K	75	ALA	2.2
1	C	58	THR	2.2
1	C	40	SER	2.2
1	E	178	SER	2.2
1	G	177	SER	2.2
1	K	74	ILE	2.2
1	G	71	LEU	2.2
1	K	71	LEU	2.2
1	K	96	PRO	2.2
1	G	30	GLY	2.2
1	A	77	ALA	2.2
1	C	2	ALA	2.2
1	C	353	ALA	2.2
1	J	75	ALA	2.2
1	L	41	SER	2.2
1	C	56	ILE	2.2
1	A	355	LEU	2.2
1	L	42	VAL	2.2
1	J	359	ASP	2.2
1	L	1	MET	2.2
1	D	315	GLU	2.2
1	E	180	LYS	2.2
1	C	100	ALA	2.2
1	L	322	ALA	2.2
1	H	6	SER	2.2
1	K	46	SER	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	359	ASP	2.2
1	F	48	ASP	2.2
1	F	57	VAL	2.2
1	F	354	VAL	2.2
1	B	180	LYS	2.2
1	E	65	GLN	2.2
1	H	325	GLY	2.2
1	A	40	SER	2.2
1	A	178	SER	2.2
1	H	337	THR	2.2
1	C	355	LEU	2.1
1	D	355	LEU	2.1
1	A	207	MET	2.1
1	L	30	GLY	2.1
1	D	40	SER	2.1
1	E	353	ALA	2.1
1	G	46	SER	2.1
1	J	49	ALA	2.1
1	G	55	ARG	2.1
1	H	69	LEU	2.1
1	K	69	LEU	2.1
1	K	79	VAL	2.1
1	F	63	SER	2.1
1	F	257	ALA	2.1
1	L	100	ALA	2.1
1	L	177	SER	2.1
1	L	353	ALA	2.1
1	E	207	MET	2.1
1	B	352	GLU	2.1
1	E	61	LEU	2.1
1	A	64	ASP	2.1
1	H	107	ILE	2.1
1	K	344	PRO	2.1
1	K	38	ARG	2.1
1	G	356	THR	2.1
1	J	76	LYS	2.1
1	L	72	LYS	2.1
1	I	359	ASP	2.1
1	D	354	VAL	2.1
1	C	87	GLY	2.1
1	E	66	GLY	2.1
1	C	38	ARG	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	322	ALA	2.0
1	I	68	GLU	2.0
1	F	71	LEU	2.0
1	K	354	VAL	2.0
1	K	173	TRP	2.0
1	C	46	SER	2.0
1	G	77	ALA	2.0
1	E	144	ASP	2.0
1	G	359	ASP	2.0
1	L	69	LEU	2.0
1	C	62	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 oligosaccharides in this entry.

6.4 Ligands [i](#)

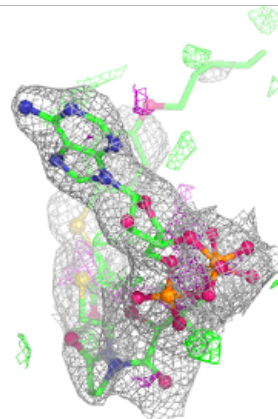
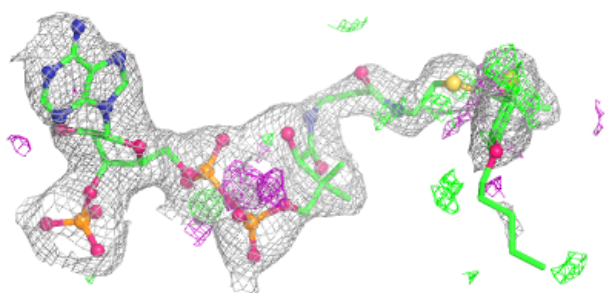
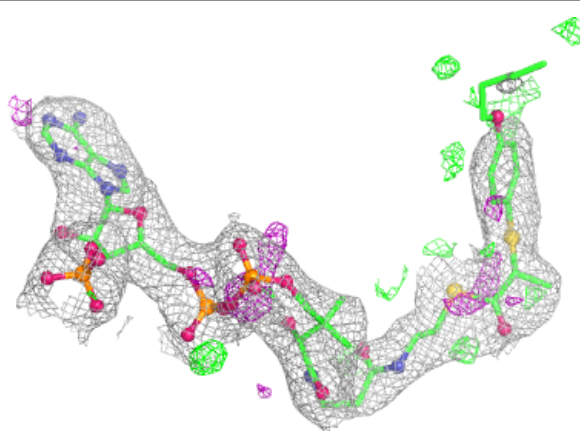
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	A1JJ2	E	401	65/65	0.89	0.17	47,73,126,134	0
2	A1JJ2	H	401	65/65	0.89	0.17	55,76,109,121	0
2	A1JJ2	G	401	65/65	0.93	0.14	37,58,94,103	0
2	A1JJ2	F	401	65/65	0.94	0.12	33,54,85,98	0
2	A1JJ2	K	401	65/65	0.94	0.12	35,54,102,124	0
2	A1JJ2	C	401	65/65	0.95	0.12	37,54,98,110	0
2	A1JJ2	A	401	65/65	0.95	0.12	33,55,97,111	0
2	A1JJ2	J	401	65/65	0.95	0.11	34,48,90,103	0
2	A1JJ2	B	401	65/65	0.95	0.11	33,52,93,105	0
2	A1JJ2	L	401	65/65	0.95	0.11	33,48,110,126	0
2	A1JJ2	I	401	65/65	0.96	0.11	29,44,103,121	0
2	A1JJ2	D	401	65/65	0.96	0.10	32,49,82,97	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.

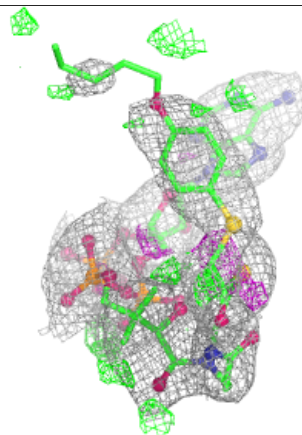
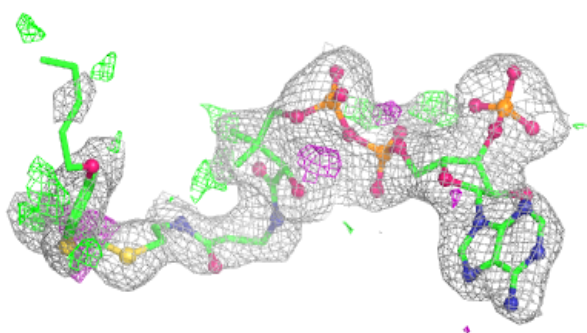
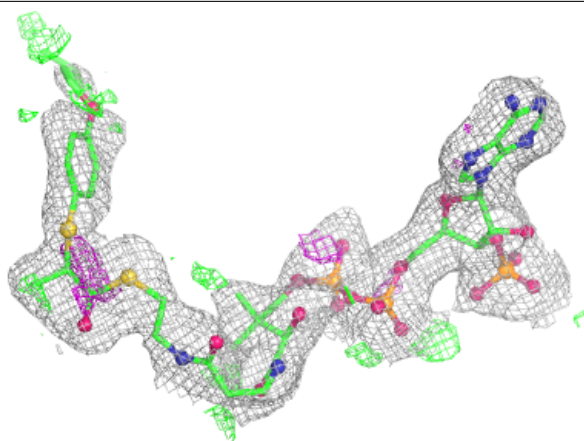
Electron density around A1JJ2 E 401:

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



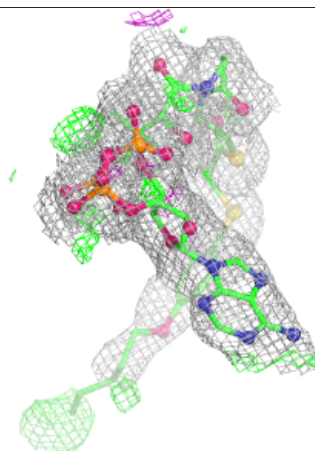
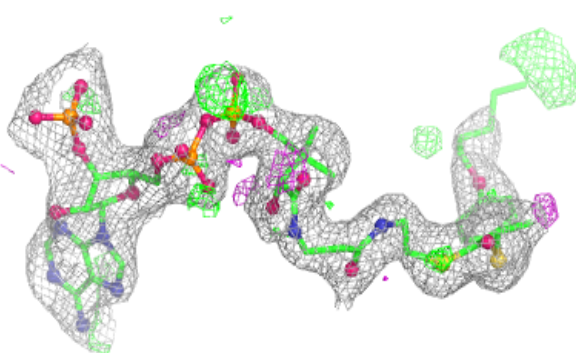
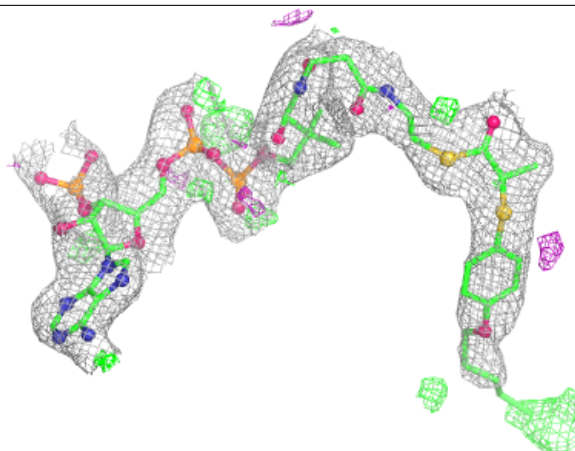
Electron density around A1JJ2 H 401:

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

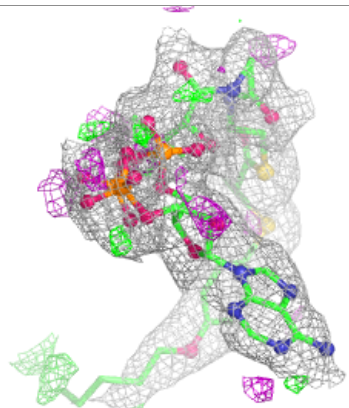
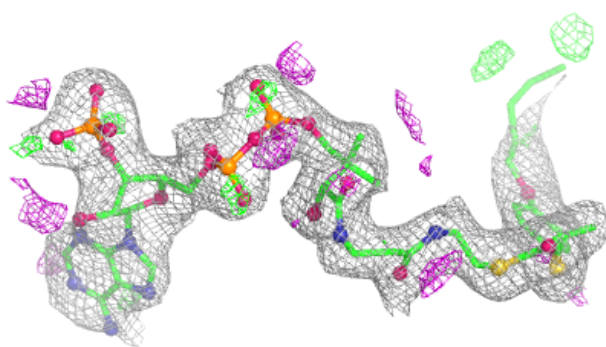
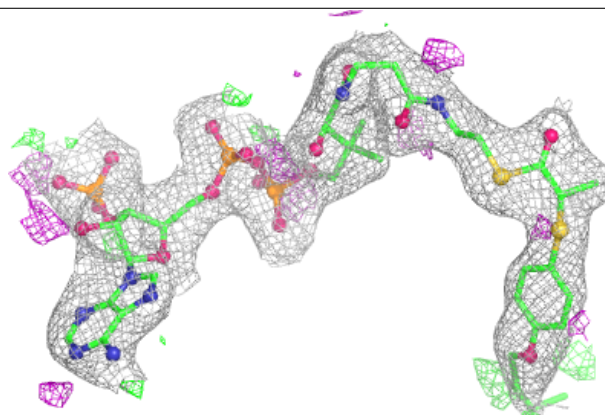


Electron density around A1JJ2 G 401:

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

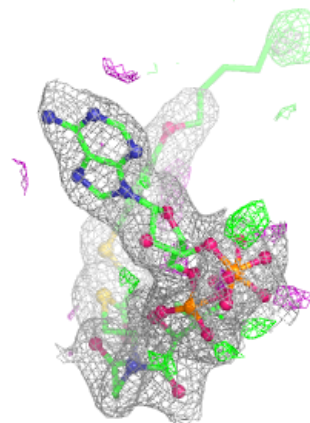
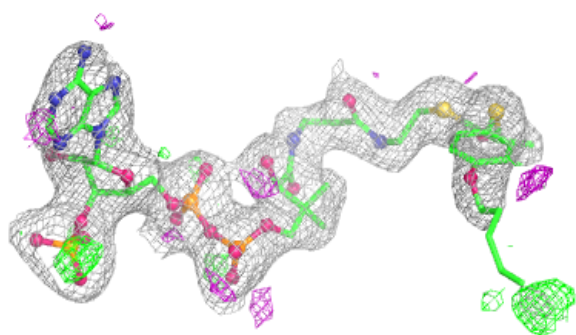
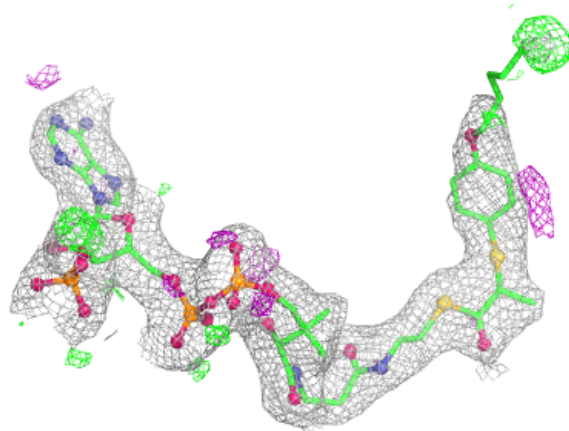
**Electron density around A1JJ2 F 401:**

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



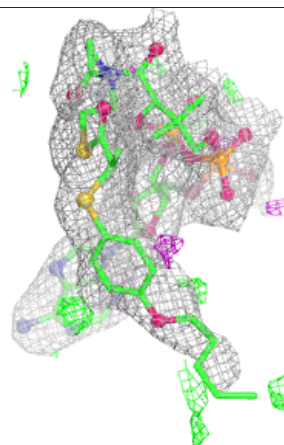
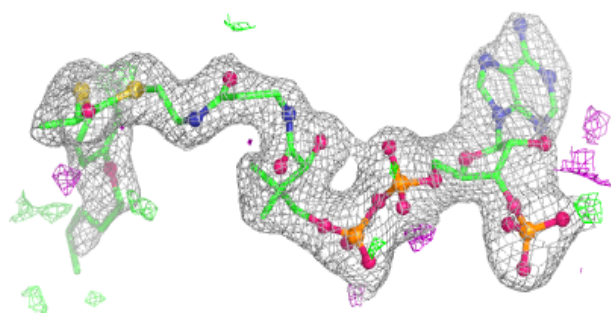
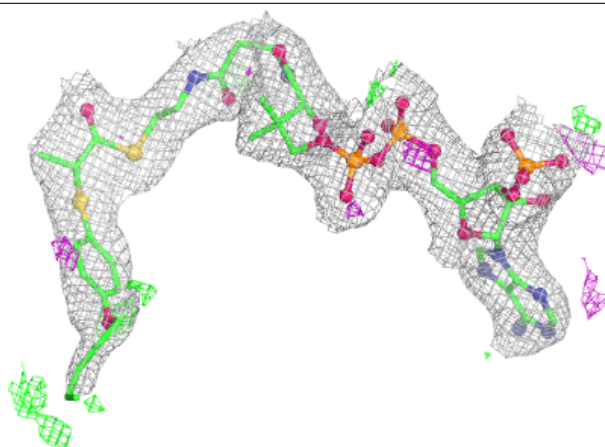
Electron density around A1JJ2 K 401:

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



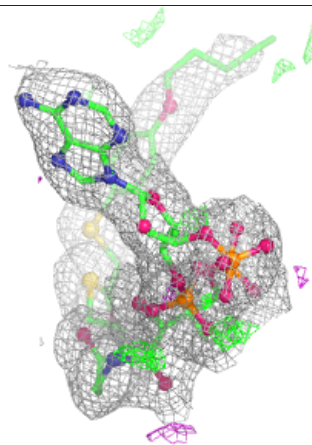
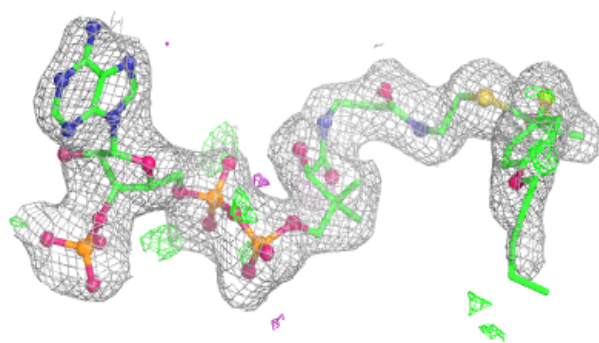
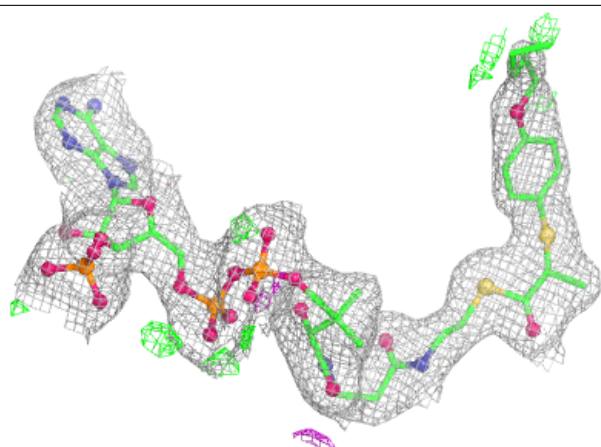
Electron density around A1JJ2 C 401:

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



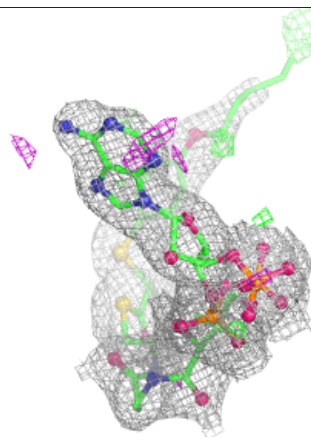
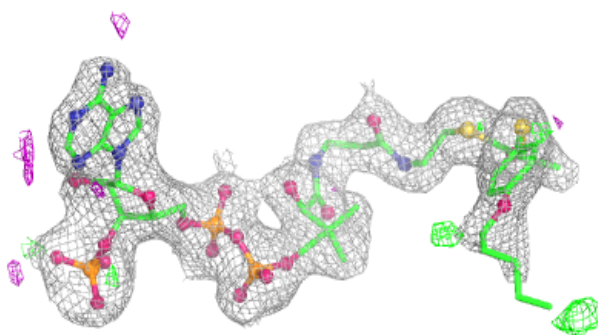
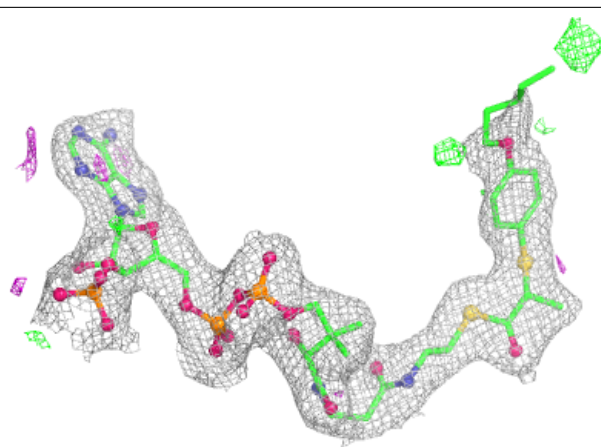
Electron density around A1JJ2 A 401:

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



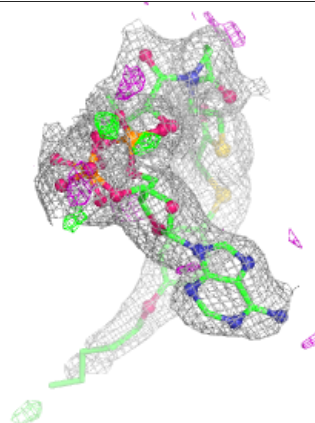
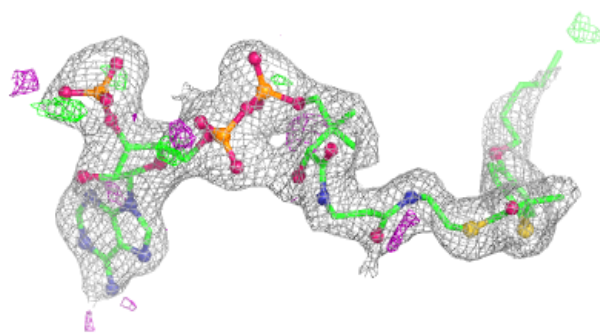
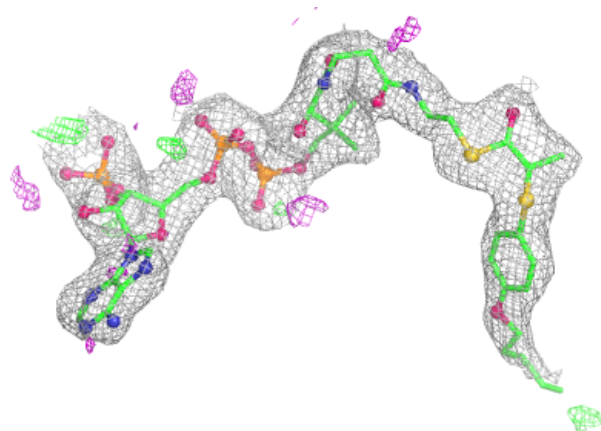
Electron density around A1JJ2 J 401:

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



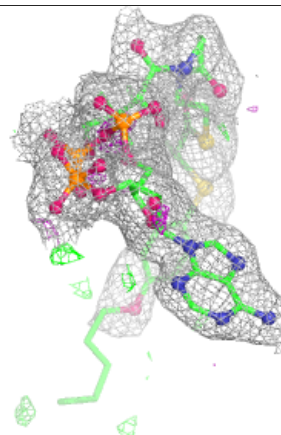
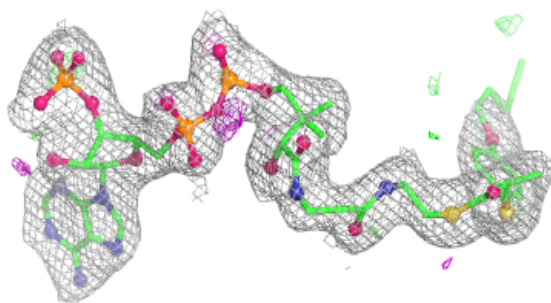
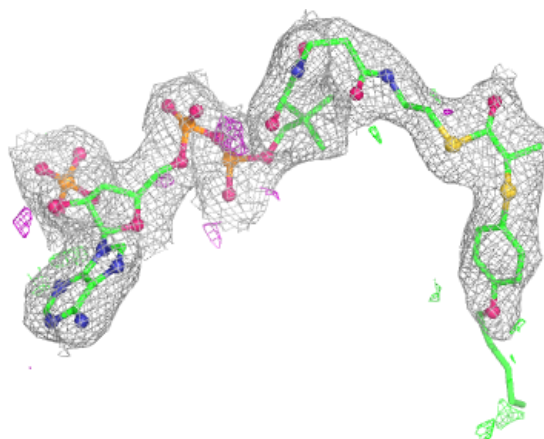
Electron density around A1JJ2 B 401:

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



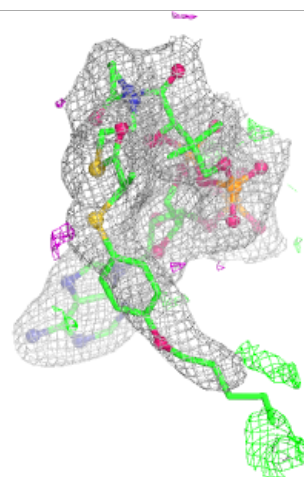
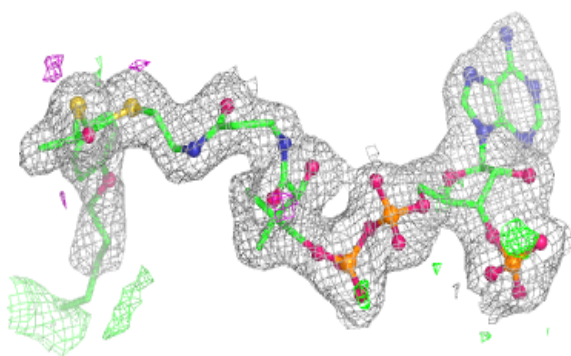
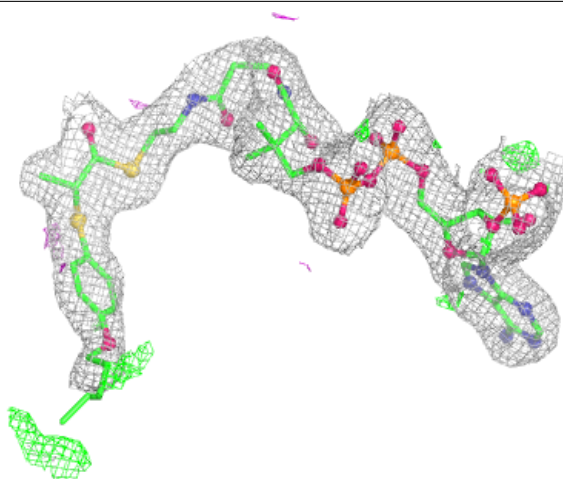
Electron density around A1JJ2 L 401:

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



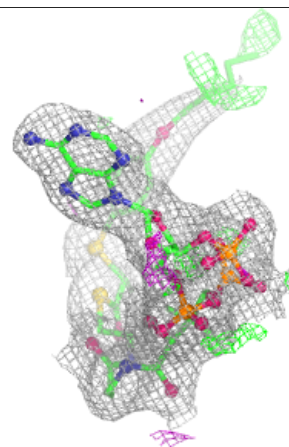
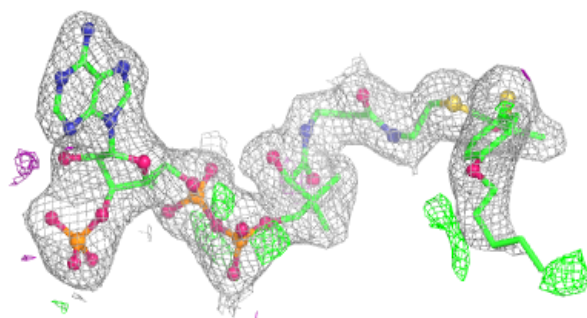
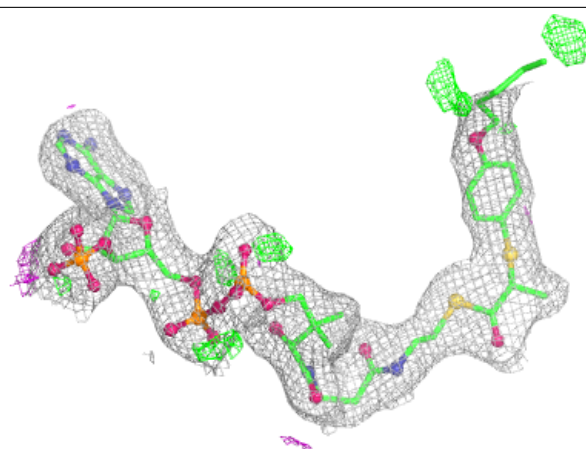
Electron density around A1JJ2 I 401:

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



Electron density around A1JJ2 D 401:

$2mF_o-DF_c$ (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.