



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 02:53 pm BST

PDB ID : 9RZ6 / pdb_00009rz6
Title : Alpha-Methylacyl-CoA racemase from Mycobacterium tuberculosis in complex with 2-(3-(2-Phenylethoxy)phenylthiol)propanoyl-CoA
Authors : Mojanaga, O.O.; Acharya, K.R.; Lloyd, M.D.
Deposited on : 2025-07-15
Resolution : 2.10 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

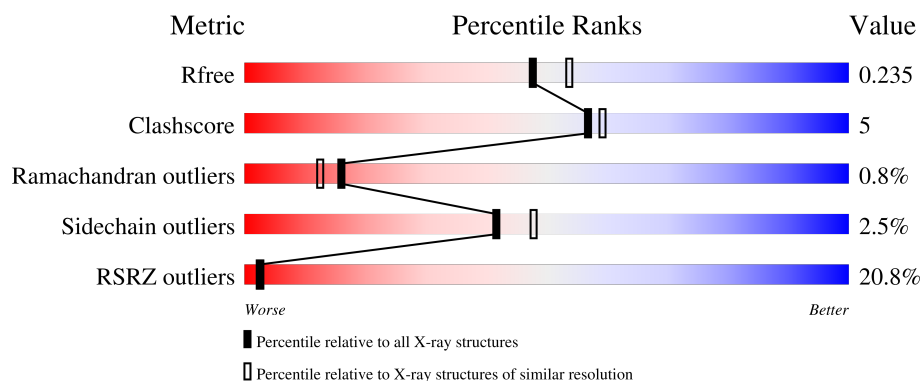
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.10 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	6658 (2.10-2.10)
Clashscore	190562	7164 (2.10-2.10)
Ramachandran outliers	187476	7099 (2.10-2.10)
Sidechain outliers	187428	7100 (2.10-2.10)
RSRZ outliers	180081	6662 (2.10-2.10)

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	
1	B	364	
1	C	364	
1	D	364	
1	E	364	

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Mol	Chain	Length	Quality of chain
1	F	364	27%80%16%
1	G	364	35%82%14%
1	H	364	27%84%12%
1	I	364	10%87%12%
1	J	364	15%86%12%
1	K	364	20%89%8%
1	L	364	15%91%6%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 35284 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	359	Total	C	N	O	S	0	2	0
			2724	1708	488	512	16			
1	C	357	Total	C	N	O	S	0	2	0
			2706	1698	484	508	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	3	0
			2727	1709	488	514	16			
1	F	357	Total	C	N	O	S	0	1	0
			2703	1697	484	506	16			
1	G	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	H	358	Total	C	N	O	S	0	1	0
			2711	1701	485	509	16			
1	I	359	Total	C	N	O	S	0	3	0
			2727	1709	488	514	16			
1	J	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	K	359	Total	C	N	O	S	0	3	0
			2724	1708	487	513	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

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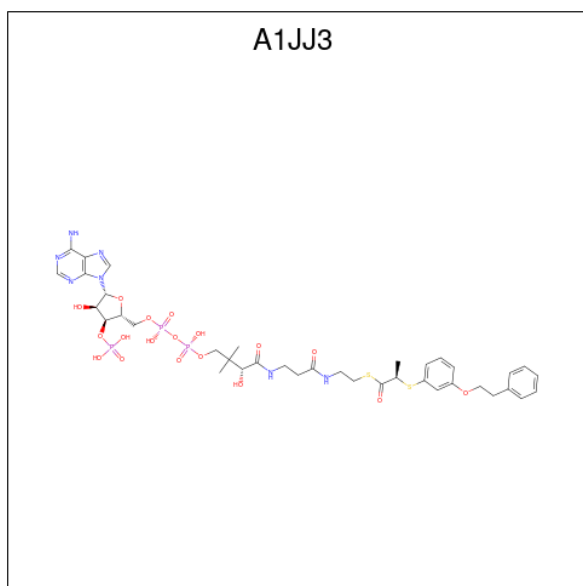
Chain	Residue	Modelled	Actual	Comment	Reference
B	362	SER	-	expression tag	UNP O06543
B	363	GLY	-	expression tag	UNP O06543
B	364	CYS	-	expression tag	UNP O06543
C	361	GLY	-	expression tag	UNP O06543
C	362	SER	-	expression tag	UNP O06543
C	363	GLY	-	expression tag	UNP O06543
C	364	CYS	-	expression tag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

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

- Molecule 2 is 2-(3-(2-Phenylethoxy)phenylthiol)propanoyl-CoA (CCD ID: A1JJ3) (formula: $C_{38}H_{52}N_7O_{18}P_3S_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	B	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	C	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	D	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	E	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	F	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	G	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	H	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	I	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	J	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	K	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		
2	L	1	Total	C	N	O	P	S	0	0
			68	38	7	18	3	2		

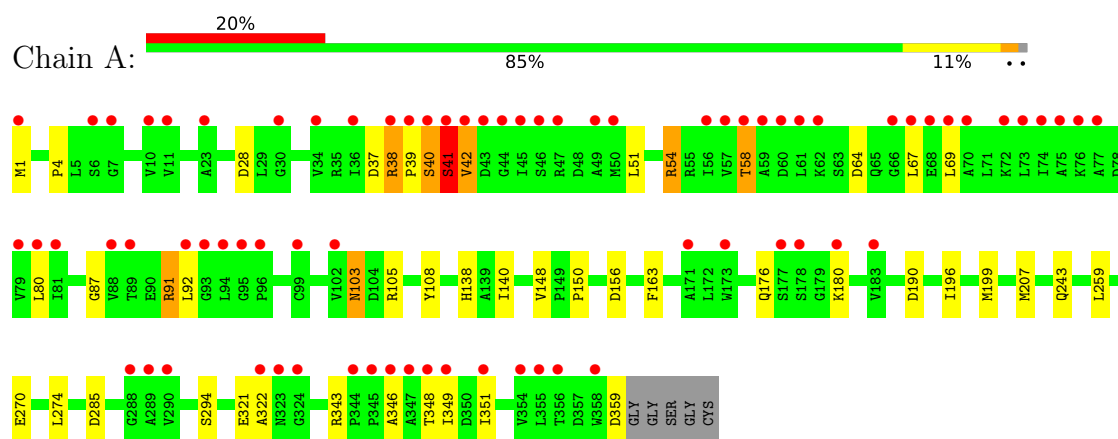
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	154	Total	O	0	0
			154	154		
3	B	147	Total	O	0	0
			147	147		
3	C	157	Total	O	0	0
			157	157		
3	D	179	Total	O	0	0
			179	179		
3	E	136	Total	O	0	0
			136	136		
3	F	151	Total	O	0	0
			151	151		
3	G	130	Total	O	0	0
			130	130		
3	H	139	Total	O	0	0
			139	139		
3	I	179	Total	O	0	0
			179	179		
3	J	169	Total	O	0	0
			169	169		
3	K	160	Total	O	0	0
			160	160		
3	L	164	Total	O	0	0
			164	164		

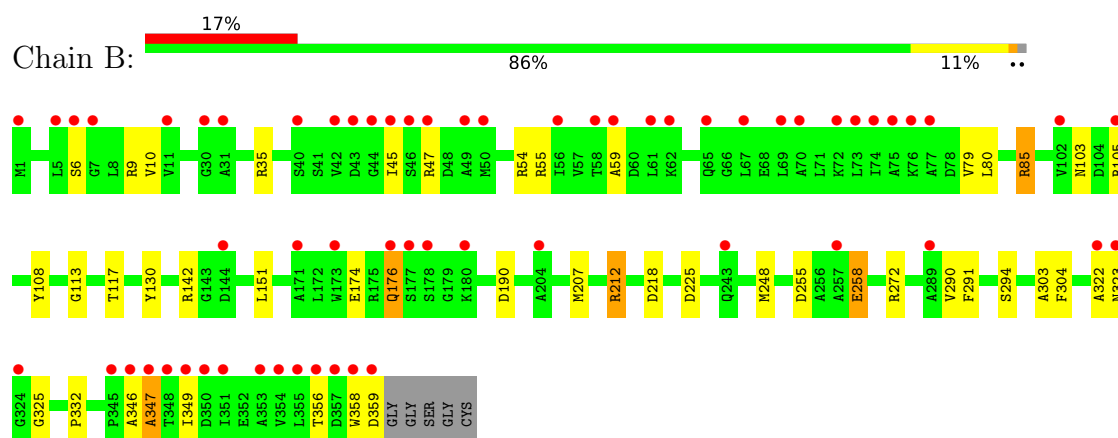
3 Residue-property plots

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

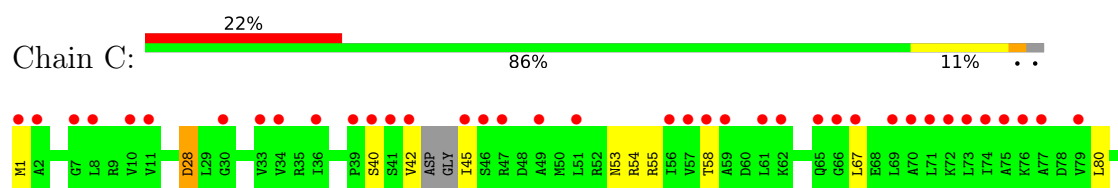
• Molecule 1: Alpha-methylacyl-CoA racemase

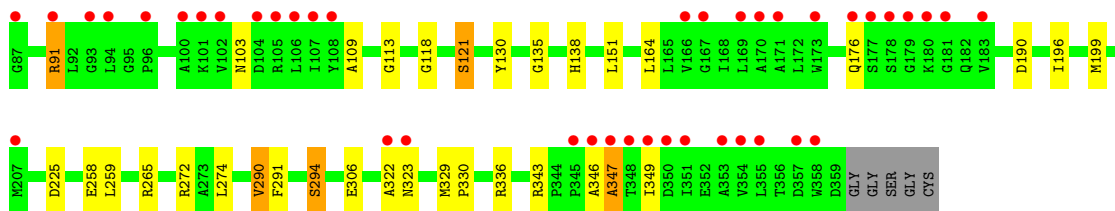


• Molecule 1: Alpha-methylacyl-CoA racemase

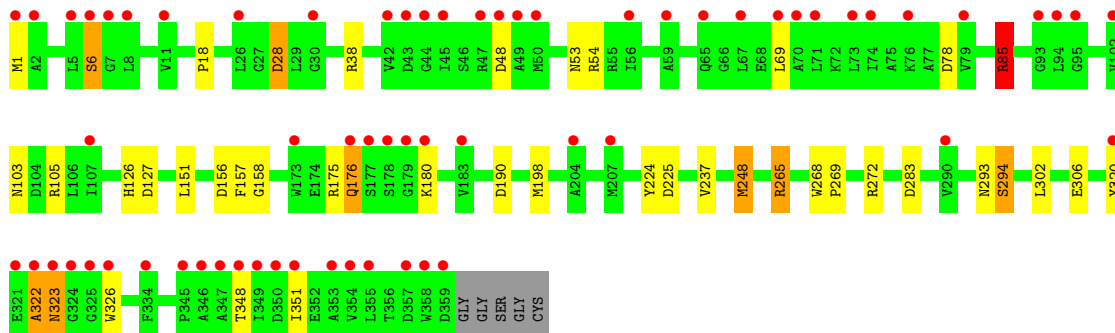
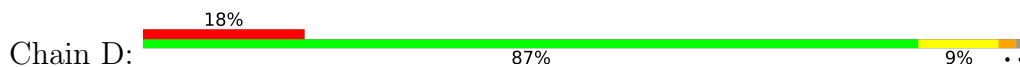


• Molecule 1: Alpha-methylacyl-CoA racemase

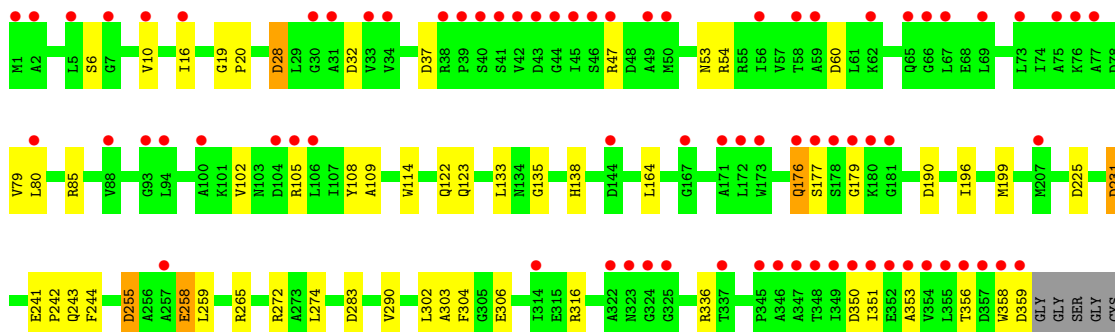
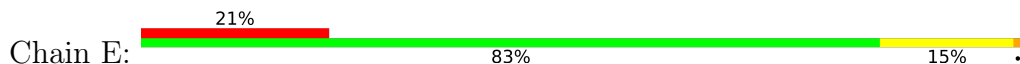




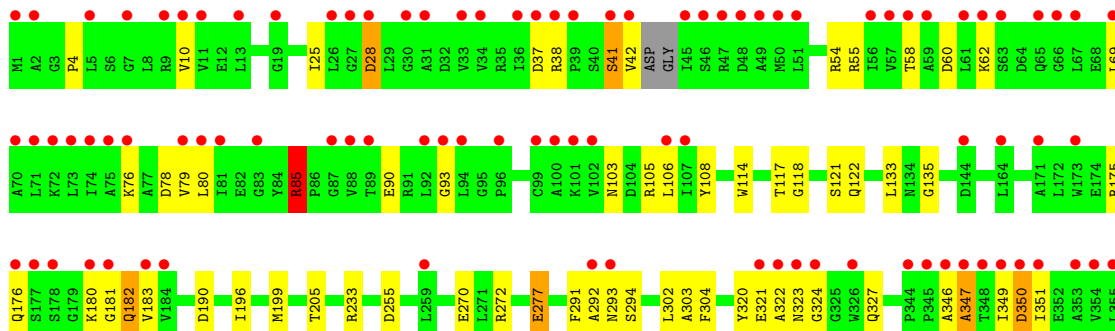
● Molecule 1: Alpha-methylacyl-CoA racemase

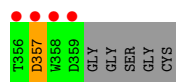


● Molecule 1: Alpha-methylacyl-CoA racemase

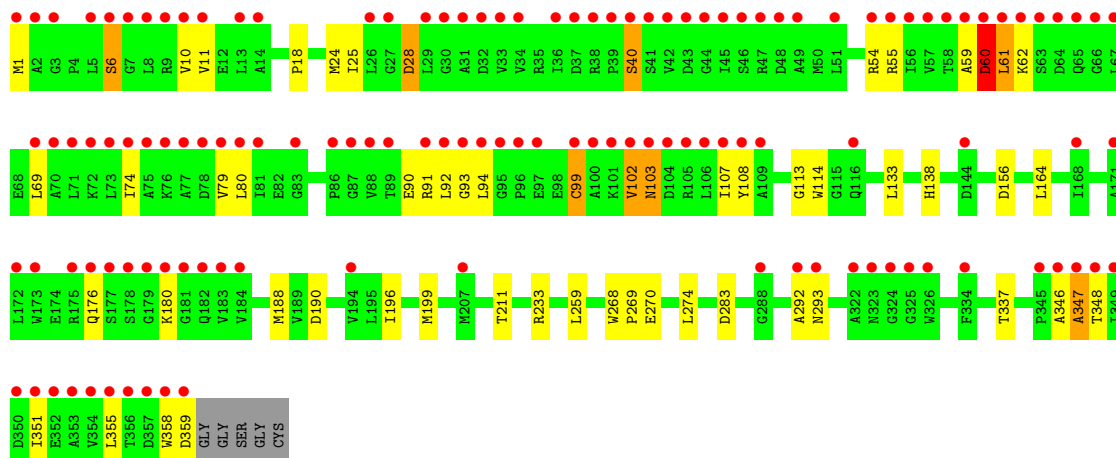
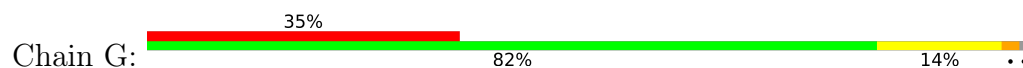


● Molecule 1: Alpha-methylacyl-CoA racemase

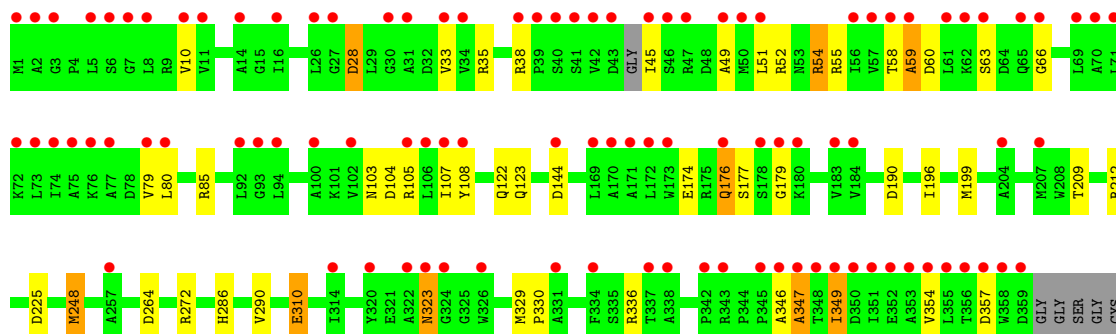
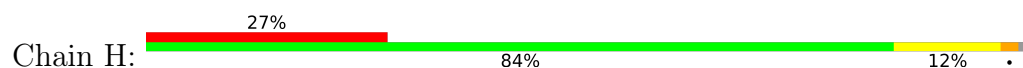




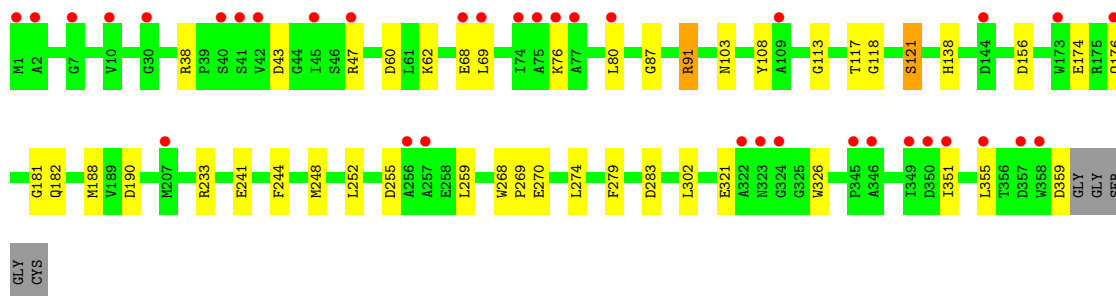
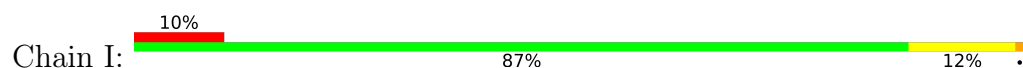
● Molecule 1: Alpha-methylacyl-CoA racemase



● Molecule 1: Alpha-methylacyl-CoA racemase

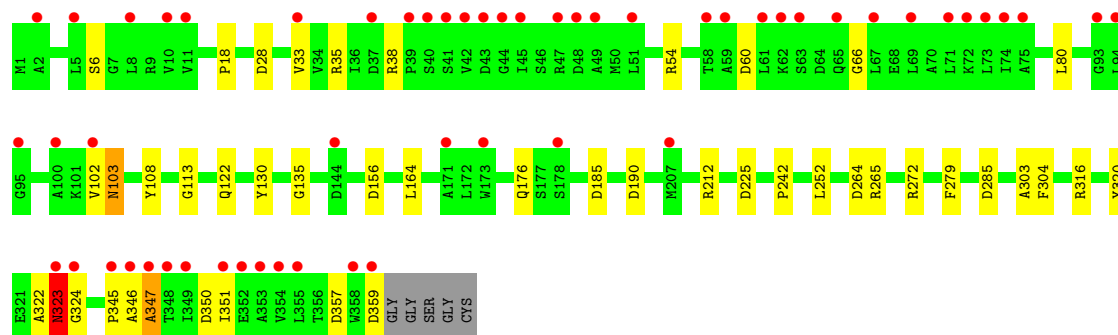


● Molecule 1: Alpha-methylacyl-CoA racemase

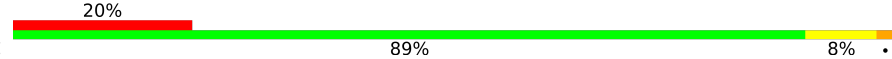


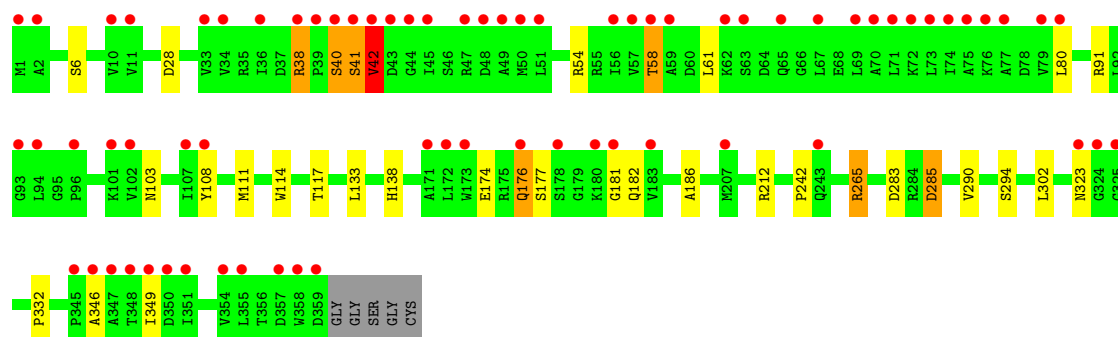
● Molecule 1: Alpha-methylacyl-CoA racemase

Chain J:  15% 86% 12% ..

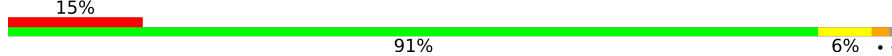


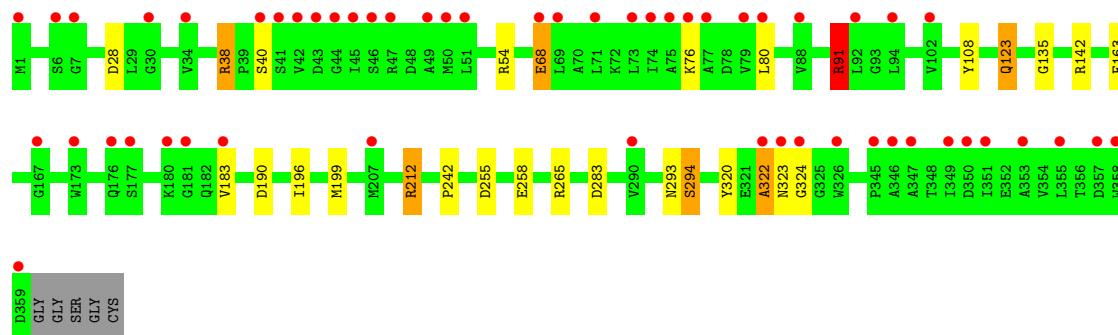
• Molecule 1: Alpha-methylacyl-CoA racemase

Chain K:  20% 89% 8% ..



• Molecule 1: Alpha-methylacyl-CoA racemase

Chain L:  15% 91% 6% ..



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	277.52Å 277.52Å 390.38Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	226.19 – 2.10 226.19 – 2.10	Depositor EDS
% Data completeness (in resolution range)	100.0 (226.19-2.10) 99.8 (226.19-2.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.29 (at 2.10Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.88)	Depositor
R, R_{free}	0.224 , 0.262 0.236 , 0.235	Depositor DCC
R_{free} test set	21946 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å ²)	36.3	Xtriage
Anisotropy	0.015	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 44.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.53$, $\langle L^2 \rangle = 0.37$	Xtriage
Estimated twinning fraction	0.000 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.000 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	35284	wwPDB-VP
Average B, all atoms (Å ²)	42.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.49% 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: A1JJ3

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	0.64	0/2791	1.13	5/3797 (0.1%)
1	B	0.64	0/2791	1.11	7/3797 (0.2%)
1	C	0.65	0/2778	1.13	6/3778 (0.2%)
1	D	0.65	0/2782	1.15	9/3785 (0.2%)
1	E	0.65	0/2800	1.13	8/3809 (0.2%)
1	F	0.64	0/2769	1.15	6/3766 (0.2%)
1	G	0.63	0/2791	1.14	7/3797 (0.2%)
1	H	0.64	0/2777	1.17	9/3777 (0.2%)
1	I	0.65	0/2800	1.16	9/3809 (0.2%)
1	J	0.65	0/2782	1.17	9/3785 (0.2%)
1	K	0.65	0/2800	1.13	9/3809 (0.2%)
1	L	0.64	0/2782	1.11	6/3785 (0.2%)
All	All	0.64	0/33443	1.14	90/45494 (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	D	0	3
1	E	0	3
1	F	0	3
1	G	0	3
1	H	0	4
1	I	0	1
1	J	0	3
1	L	0	5
All	All	0	29

There are no bond length outliers.

All (90) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	38	ARG	CB-CA-C	-8.50	96.36	109.11
1	K	38	ARG	N-CA-CB	8.09	120.96	110.04
1	A	58	THR	CA-CB-OG1	-8.07	97.50	109.60
1	I	38	ARG	CB-CA-C	-7.76	97.47	109.11
1	C	91	ARG	CB-CA-C	-7.60	98.18	110.79
1	J	28	ASP	CA-CB-CG	7.50	120.09	112.60
1	A	28	ASP	CA-CB-CG	7.39	119.99	112.60
1	E	28	ASP	CA-CB-CG	7.25	119.85	112.60
1	G	99	CYS	CB-CA-C	7.16	121.38	109.56
1	I	190	ASP	CA-CB-CG	7.03	119.63	112.60
1	J	285	ASP	CB-CA-C	6.82	122.44	110.85
1	A	190	ASP	CA-CB-CG	6.81	119.41	112.60
1	D	248	MET	CG-SD-CE	6.80	115.87	100.90
1	L	283	ASP	CB-CA-C	6.75	123.27	110.51
1	C	28	ASP	CA-CB-CG	6.74	119.34	112.60
1	K	212	ARG	CB-CA-C	6.72	120.89	109.53
1	K	28	ASP	CA-CB-CG	6.71	119.31	112.60
1	L	91	ARG	CB-CA-C	-6.71	99.28	110.68
1	L	38	ARG	CB-CA-C	-6.64	99.02	109.52
1	I	255	ASP	CB-CA-C	6.63	120.94	110.19
1	J	54	ARG	CB-CA-C	-6.53	96.42	110.45
1	L	190	ASP	CA-CB-CG	6.39	118.99	112.60
1	E	176	GLN	N-CA-CB	6.39	119.65	110.06
1	H	28	ASP	CA-CB-CG	6.36	118.96	112.60
1	I	156	ASP	CA-CB-CG	6.30	118.90	112.60
1	A	148	VAL	CA-C-O	6.13	123.31	119.51
1	G	211	THR	CA-CB-OG1	-6.12	100.41	109.60
1	L	28	ASP	CA-CB-CG	6.10	118.70	112.60
1	B	255	ASP	CB-CA-C	6.08	120.36	110.22
1	C	306	GLU	CB-CA-C	-6.06	99.11	109.65
1	B	54	ARG	CB-CA-C	-6.01	96.85	110.07
1	K	58	THR	CA-CB-OG1	-5.99	100.61	109.60
1	H	190	ASP	CA-CB-CG	5.99	118.59	112.60
1	H	310	GLU	CB-CG-CD	5.82	122.50	112.60
1	B	190	ASP	CA-CB-CG	5.82	118.42	112.60
1	I	321	GLU	CB-CA-C	-5.82	101.21	110.81
1	F	357	ASP	CB-CA-C	5.79	120.40	110.79
1	K	283	ASP	CA-CB-CG	5.77	118.37	112.60
1	J	190	ASP	CA-CB-CG	5.75	118.36	112.60
1	I	248	MET	CG-SD-CE	5.75	113.56	100.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	48	ASP	CA-CB-CG	5.74	118.33	112.60
1	G	283	ASP	CA-CB-CG	5.74	118.33	112.60
1	D	265	ARG	NE-CZ-NH2	5.72	124.35	119.20
1	E	255	ASP	CA-CB-CG	5.71	118.31	112.60
1	B	248	MET	CG-SD-CE	5.70	113.44	100.90
1	G	60	ASP	CA-CB-CG	5.68	118.28	112.60
1	G	164	LEU	N-CA-C	-5.58	105.12	111.14
1	E	231	ASP	CA-CB-CG	5.51	118.11	112.60
1	H	248	MET	CG-SD-CE	5.49	112.99	100.90
1	D	190	ASP	CA-CB-CG	5.46	118.06	112.60
1	G	190	ASP	CA-CB-CG	5.44	118.04	112.60
1	E	32	ASP	CA-CB-CG	5.44	118.04	112.60
1	J	38	ARG	CB-CA-C	-5.44	100.95	109.11
1	J	33	VAL	N-CA-CB	5.41	118.88	111.41
1	J	185	ASP	CA-CB-CG	5.41	118.01	112.60
1	E	306	GLU	CB-CA-C	-5.40	100.25	109.65
1	K	285	ASP	CB-CA-C	5.39	121.01	110.67
1	D	28	ASP	CA-CB-CG	5.38	117.98	112.60
1	F	190	ASP	CA-CB-CG	5.36	117.96	112.60
1	K	54	ARG	CB-CA-C	-5.36	98.79	109.79
1	I	283	ASP	CB-CA-C	5.35	120.62	110.51
1	H	357	ASP	CA-CB-CG	5.34	117.94	112.60
1	F	350	ASP	CB-CA-C	-5.34	100.52	109.65
1	F	28	ASP	CA-CB-CG	5.32	117.92	112.60
1	G	28	ASP	CA-CB-CG	5.32	117.92	112.60
1	C	190	ASP	CA-CB-CG	5.30	117.90	112.60
1	D	38	ARG	CB-CA-C	5.24	116.63	108.61
1	C	290	VAL	N-CA-CB	-5.24	103.92	110.47
1	D	306	GLU	CB-CA-C	-5.24	100.53	109.65
1	K	117	THR	CA-CB-OG1	-5.24	101.74	109.60
1	E	123	GLN	CB-CA-C	-5.23	100.71	109.65
1	L	123	GLN	N-CA-CB	-5.18	102.13	109.85
1	I	91	ARG	CB-CA-C	-5.18	100.41	110.46
1	D	54	ARG	CB-CA-C	-5.14	98.75	110.07
1	B	117	THR	CA-CB-OG1	-5.14	101.89	109.60
1	B	218	ASP	CA-CB-CG	5.14	117.74	112.60
1	B	258	GLU	CB-CA-C	-5.13	99.58	110.31
1	I	91	ARG	N-CA-CB	5.13	118.24	110.14
1	H	264	ASP	CA-CB-CG	5.12	117.72	112.60
1	H	123	GLN	CB-CA-C	5.11	118.16	109.84
1	H	144	ASP	CA-CB-CG	5.10	117.70	112.60
1	J	164	LEU	N-CA-C	-5.08	105.63	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	156	ASP	CA-CB-CG	5.08	117.68	112.60
1	D	283	ASP	CB-CA-C	5.07	120.90	110.40
1	C	258	GLU	CB-CA-C	-5.06	102.01	110.56
1	F	327	GLN	CB-CA-C	-5.05	101.61	109.55
1	F	4	PRO	CB-CA-C	-5.05	104.31	111.68
1	H	310	GLU	CB-CA-C	5.05	115.61	109.85
1	J	357	ASP	CA-CB-CG	5.03	117.63	112.60
1	E	190	ASP	CA-CB-CG	5.02	117.62	112.60

There are no chirality outliers.

All (29) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	38	ARG	Sidechain
1	A	54	ARG	Peptide
1	B	212	ARG	Sidechain
1	B	35	ARG	Sidechain
1	D	265	ARG	Sidechain
1	D	322	ALA	Peptide
1	D	85	ARG	Sidechain
1	E	265	ARG	Sidechain
1	E	350	ASP	Peptide
1	E	54	ARG	Peptide
1	F	233	ARG	Sidechain
1	F	54	ARG	Peptide
1	F	85	ARG	Sidechain
1	G	233	ARG	Sidechain
1	G	54	ARG	Peptide
1	G	91	ARG	Sidechain
1	H	212	ARG	Sidechain
1	H	323	ASN	Peptide
1	H	35	ARG	Sidechain
1	H	54	ARG	Peptide
1	I	233	ARG	Sidechain
1	J	212	ARG	Sidechain
1	J	265	ARG	Sidechain
1	J	35	ARG	Sidechain
1	L	212	ARG	Sidechain
1	L	265	ARG	Sidechain
1	L	322	ALA	Peptide
1	L	54	ARG	Peptide
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	27	0
1	B	2724	0	2667	22	0
1	C	2706	0	2650	29	0
1	D	2715	0	2660	25	0
1	E	2727	0	2665	30	0
1	F	2703	0	2652	42	0
1	G	2718	0	2658	38	0
1	H	2711	0	2656	29	0
1	I	2727	0	2665	26	0
1	J	2715	0	2660	20	0
1	K	2724	0	2666	23	0
1	L	2715	0	2660	17	0
2	A	68	0	0	2	0
2	B	68	0	0	2	0
2	C	68	0	0	1	0
2	D	68	0	0	2	0
2	E	68	0	0	1	0
2	F	68	0	0	4	0
2	G	68	0	0	0	0
2	H	68	0	0	0	0
2	I	68	0	0	2	0
2	J	68	0	0	0	0
2	K	68	0	0	2	0
2	L	68	0	0	0	0
3	A	154	0	0	8	0
3	B	147	0	0	4	0
3	C	157	0	0	3	0
3	D	179	0	0	3	0
3	E	136	0	0	1	0
3	F	151	0	0	8	0
3	G	130	0	0	4	0
3	H	139	0	0	4	0
3	I	179	0	0	8	0
3	J	169	0	0	2	0
3	K	160	0	0	8	0
3	L	164	0	0	2	0
All	All	35284	0	31917	301	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 5.

All (301) 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:C:265:ARG:NH1	3:C:501:HOH:O	1.99	0.96
1:H:349:ILE:HD11	1:H:354:VAL:HG22	1.58	0.84
1:F:85:ARG:HD3	2:F:401:A1JJ3:O11	1.79	0.83
1:A:180:LYS:HD3	3:I:536:HOH:O	1.82	0.78
1:F:41:SER:O	1:F:42:VAL:HG13	1.86	0.74
1:A:41:SER:HB3	1:A:42:VAL:HG23	1.71	0.73
1:E:80:LEU:HD23	1:E:108:TYR:CE2	2.24	0.73
1:K:285:ASP:HB2	3:K:505:HOH:O	1.87	0.73
1:D:85:ARG:HD3	2:D:401:A1JJ3:O11	1.89	0.71
1:F:69:LEU:HD13	1:F:351:ILE:HG23	1.73	0.70
1:G:259:LEU:HD22	1:G:274:LEU:HD13	1.73	0.70
1:C:91:ARG:HG3	1:C:91:ARG:HH11	1.57	0.69
1:F:80:LEU:CD2	1:F:108:TYR:CE2	2.75	0.69
1:F:80:LEU:HD23	1:F:108:TYR:CE2	2.28	0.69
1:G:90:GLU:O	1:G:93:GLY:N	2.24	0.68
1:I:174:GLU:OE2	3:I:501:HOH:O	2.12	0.67
1:G:61:LEU:O	3:G:501:HOH:O	2.12	0.67
1:A:80:LEU:HD23	1:A:108:TYR:CE2	2.31	0.66
1:A:105:ARG:NH1	3:A:502:HOH:O	2.23	0.66
1:D:1:MET:O	1:D:6:SER:OG	2.14	0.65
1:I:118:GLY:O	1:I:121:SER:OG	2.13	0.65
1:K:40:SER:OG	3:K:501:HOH:O	2.14	0.65
1:G:351:ILE:O	1:G:355:LEU:HD12	1.97	0.65
1:C:138:HIS:HD2	3:C:561:HOH:O	1.81	0.64
1:H:349:ILE:HD11	1:H:354:VAL:CG2	2.27	0.63
1:B:85:ARG:HD2	2:B:401:A1JJ3:O10	1.99	0.63
1:K:138:HIS:HD2	3:K:522:HOH:O	1.82	0.62
1:I:91:ARG:HD2	1:K:242:PRO:HB3	1.81	0.62
1:L:68:GLU:HG3	3:L:652:HOH:O	1.99	0.62
1:J:80:LEU:HD23	1:J:108:TYR:CE2	2.34	0.62
1:G:1:MET:O	1:G:6:SER:OG	2.16	0.62
1:K:285:ASP:CB	3:K:505:HOH:O	2.48	0.62
1:E:225:ASP:OD2	1:E:272:ARG:NH1	2.33	0.61
1:F:85:ARG:CD	2:F:401:A1JJ3:O11	2.46	0.61
1:K:91:ARG:NH2	2:K:401:A1JJ3:O17	2.34	0.61
1:D:105:ARG:NH1	3:D:503:HOH:O	2.34	0.61
1:A:348:THR:HG22	1:A:349:ILE:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:69:LEU:HD13	1:D:351:ILE:HG21	1.83	0.60
1:E:358:TRP:O	1:E:359:ASP:C	2.44	0.60
1:J:225:ASP:OD2	1:J:272:ARG:NH1	2.32	0.59
1:F:85:ARG:NH1	2:F:401:A1JJ3:O8	2.35	0.59
1:H:286:HIS:HE1	3:H:626:HOH:O	1.83	0.59
1:C:346:ALA:O	1:C:347:ALA:O	2.20	0.59
1:C:91:ARG:HG3	1:C:91:ARG:NH1	2.17	0.59
1:A:39:PRO:O	1:A:41:SER:N	2.35	0.59
1:B:291:PHE:O	1:B:294:SER:HB3	2.02	0.59
1:A:259:LEU:HD22	1:A:274:LEU:HD13	1.84	0.58
1:H:58:THR:O	1:H:59:ALA:HB2	2.03	0.58
1:F:108:TYR:HB3	1:F:183:VAL:HG22	1.84	0.58
1:J:322:ALA:O	1:J:324:GLY:N	2.35	0.57
1:D:320:TYR:CE2	1:D:322:ALA:HB2	2.39	0.57
1:H:225:ASP:OD2	1:H:272:ARG:NH1	2.37	0.57
1:K:41:SER:O	1:K:42:VAL:HG23	2.03	0.57
1:F:122:GLN:HG2	3:F:501:HOH:O	2.05	0.57
1:H:310:GLU:OE1	3:H:501:HOH:O	2.17	0.57
1:D:320:TYR:HE2	1:D:322:ALA:HB2	1.70	0.57
1:G:18:PRO:HB3	1:G:156:ASP:O	2.05	0.56
1:H:60:ASP:O	1:H:66:GLY:HA3	2.04	0.56
1:A:243:GLN:HG3	3:A:650:HOH:O	2.04	0.56
1:E:259:LEU:HD22	1:E:274:LEU:HD13	1.86	0.56
1:F:294:SER:HB3	1:G:293:ASN:HB3	1.87	0.56
1:F:105:ARG:NH1	3:F:504:HOH:O	2.31	0.56
1:H:28:ASP:CG	1:H:52:ARG:HH21	2.14	0.56
1:K:346:ALA:HB3	3:K:552:HOH:O	2.04	0.56
1:A:138:HIS:HD2	3:A:550:HOH:O	1.88	0.55
1:B:85:ARG:CD	2:B:401:A1JJ3:O10	2.55	0.55
1:B:322:ALA:O	1:B:325:GLY:O	2.25	0.55
1:F:322:ALA:O	1:F:324:GLY:N	2.40	0.55
1:I:359:ASP:HA	3:I:573:HOH:O	2.07	0.54
1:L:80:LEU:HD23	1:L:108:TYR:CE2	2.43	0.54
1:F:69:LEU:HD13	1:F:351:ILE:CG2	2.37	0.54
1:A:38:ARG:NH2	2:A:401:A1JJ3:O13	2.39	0.54
1:B:47:ARG:HB2	3:B:591:HOH:O	2.07	0.53
1:E:255:ASP:HB3	1:E:258:GLU:HG3	1.89	0.53
1:L:255:ASP:HB2	1:L:258:GLU:HG2	1.90	0.53
1:A:346:ALA:HB3	3:A:507:HOH:O	2.09	0.53
1:C:272:ARG:NH1	3:C:510:HOH:O	2.41	0.53
1:G:80:LEU:CD2	1:G:108:TYR:CE1	2.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:138:HIS:HD2	3:E:573:HOH:O	1.92	0.53
1:C:118:GLY:O	1:C:121:SER:OG	2.24	0.53
1:G:355:LEU:O	1:G:359:ASP:C	2.52	0.52
1:H:346:ALA:HB3	3:H:506:HOH:O	2.08	0.52
1:J:122:GLN:HG2	3:J:507:HOH:O	2.08	0.52
1:C:91:ARG:HH11	1:C:91:ARG:CG	2.23	0.52
1:I:259:LEU:HD22	1:I:274:LEU:HD13	1.90	0.52
1:E:47:ARG:HG3	1:F:205:THR:HG21	1.90	0.52
1:I:176:GLN:CD	1:J:176:GLN:HG2	2.35	0.52
1:E:105:ARG:HG2	1:E:179:GLY:O	2.09	0.52
1:A:80:LEU:CD2	1:A:108:TYR:CE2	2.93	0.52
1:G:102:VAL:O	1:G:103:ASN:HB2	2.09	0.52
1:C:135:GLY:HA2	1:D:302:LEU:O	2.09	0.52
1:F:78:ASP:OD1	1:F:175:ARG:NH2	2.40	0.52
1:B:346:ALA:O	1:B:347:ALA:O	2.27	0.51
1:H:346:ALA:O	1:H:347:ALA:O	2.28	0.51
1:K:174:GLU:OE2	3:K:502:HOH:O	2.19	0.51
1:G:80:LEU:HD22	1:G:108:TYR:CE1	2.45	0.51
1:D:85:ARG:CD	2:D:401:A1JJ3:O11	2.58	0.51
1:I:241:GLU:HB2	1:I:244:PHE:CD2	2.46	0.51
1:J:242:PRO:HB3	1:L:91:ARG:HD3	1.92	0.51
1:E:16:ILE:HD13	2:E:401:A1JJ3:S2	2.51	0.51
1:F:114:TRP:CZ3	1:F:133:LEU:HD22	2.46	0.51
1:E:135:GLY:HA2	1:F:302:LEU:O	2.11	0.51
1:H:79:VAL:HG22	1:H:107:ILE:HB	1.92	0.51
1:I:91:ARG:NH2	2:I:401:A1JJ3:O16	2.43	0.50
1:F:106:LEU:O	1:F:181:GLY:HA3	2.12	0.50
1:G:114:TRP:CZ3	1:G:133:LEU:HD22	2.45	0.50
1:J:18:PRO:HB3	1:J:156:ASP:O	2.12	0.50
1:E:85:ARG:NH1	1:E:122:GLN:O	2.40	0.49
1:F:196:ILE:HG12	1:F:199:MET:HB2	1.94	0.49
1:F:181:GLY:O	1:F:182:GLN:HB3	2.11	0.49
1:F:346:ALA:O	1:F:347:ALA:O	2.30	0.49
1:F:291:PHE:O	1:F:293:ASN:N	2.46	0.49
1:A:196:ILE:HG12	1:A:199:MET:HB2	1.93	0.49
1:C:259:LEU:HD22	1:C:274:LEU:HD13	1.94	0.49
1:C:80:LEU:C	1:C:80:LEU:HD13	2.37	0.49
1:F:118:GLY:O	1:F:121:SER:OG	2.24	0.49
1:I:138:HIS:HD2	3:I:537:HOH:O	1.95	0.49
1:I:270:GLU:HG3	3:I:584:HOH:O	2.13	0.49
1:A:37:ASP:OD1	3:A:501:HOH:O	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:346:ALA:O	1:G:347:ALA:O	2.31	0.49
1:J:320:TYR:CE2	1:J:322:ALA:HB2	2.46	0.49
1:F:320:TYR:CE2	1:F:322:ALA:HB2	2.48	0.48
1:G:79:VAL:HG22	1:G:107:ILE:HB	1.95	0.48
1:K:174:GLU:C	1:K:174:GLU:OE1	2.56	0.48
1:L:68:GLU:CG	3:L:652:HOH:O	2.58	0.48
1:F:183:VAL:HG12	3:F:558:HOH:O	2.13	0.48
1:C:322:ALA:O	1:C:323:ASN:C	2.57	0.48
1:E:336:ARG:NH2	1:F:180:LYS:HB2	2.28	0.48
1:F:255:ASP:HB2	3:F:632:HOH:O	2.14	0.48
1:L:142:ARG:O	1:L:212:ARG:HD2	2.13	0.48
2:A:401:A1JJ3:C15	1:B:207:MET:HE1	2.44	0.48
1:C:336:ARG:NH2	1:D:180:LYS:O	2.46	0.48
1:F:38:ARG:NH2	2:F:401:A1JJ3:O13	2.45	0.48
1:F:272:ARG:NH1	3:F:518:HOH:O	2.47	0.48
1:F:277:GLU:HG2	3:F:620:HOH:O	2.12	0.48
1:K:80:LEU:HD23	1:K:108:TYR:CE2	2.48	0.48
1:A:285:ASP:HB2	3:A:622:HOH:O	2.14	0.48
1:C:176:GLN:HG3	1:D:176:GLN:NE2	2.29	0.48
1:L:323:ASN:CG	1:L:324:GLY:H	2.21	0.48
1:C:28:ASP:HA	1:C:53:ASN:ND2	2.29	0.48
1:G:138:HIS:HD2	3:G:524:HOH:O	1.95	0.48
2:C:401:A1JJ3:C16	1:D:198:MET:HE1	2.44	0.47
1:D:69:LEU:HD13	1:D:351:ILE:CG2	2.44	0.47
1:D:294:SER:HB2	1:L:293:ASN:O	2.14	0.47
1:H:55:ARG:HD2	1:H:349:ILE:HD13	1.95	0.47
1:B:358:TRP:O	1:B:359:ASP:HB2	2.13	0.47
1:C:196:ILE:HG12	1:C:199:MET:HB2	1.96	0.47
1:C:1:MET:HE2	1:C:343:ARG:NH2	2.29	0.47
1:E:302:LEU:O	1:F:135:GLY:HA2	2.14	0.47
1:G:60:ASP:OD1	1:G:62:LYS:HB2	2.14	0.47
1:H:63:SER:HB2	1:H:66:GLY:H	1.79	0.47
1:K:111:MET:HE3	1:K:186:ALA:O	2.15	0.47
1:C:113:GLY:HA3	1:C:130:TYR:CZ	2.49	0.47
1:G:11:VAL:HG12	1:G:80:LEU:HD12	1.97	0.47
1:J:323:ASN:HD22	1:J:324:GLY:N	2.12	0.47
1:G:176:GLN:HG3	1:H:176:GLN:NE2	2.30	0.47
1:I:91:ARG:NH2	2:I:401:A1JJ3:O18	2.43	0.47
1:B:105:ARG:NH1	3:B:505:HOH:O	2.47	0.47
1:K:332:PRO:HG3	1:L:163:PHE:O	2.15	0.47
1:F:55:ARG:HD2	1:F:349:ILE:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:359:ASP:HA	3:B:604:HOH:O	2.14	0.46
1:A:1:MET:HE2	1:A:343:ARG:NH2	2.30	0.46
1:A:140:ILE:HD12	1:A:150:PRO:HG3	1.97	0.46
1:E:80:LEU:CD2	1:E:108:TYR:CE2	2.96	0.46
1:J:60:ASP:O	1:J:66:GLY:HA3	2.16	0.46
1:B:80:LEU:HD23	1:B:108:TYR:CE2	2.50	0.46
1:I:80:LEU:CD2	1:I:108:TYR:CE2	2.99	0.46
1:J:345:PRO:HA	3:J:556:HOH:O	2.15	0.46
1:G:61:LEU:HD12	1:G:92:LEU:HD13	1.96	0.46
1:G:69:LEU:HB3	1:G:351:ILE:HD13	1.97	0.46
1:J:113:GLY:HA3	1:J:130:TYR:CE1	2.51	0.46
1:G:180:LYS:HB2	1:H:336:ARG:NH2	2.31	0.45
1:I:91:ARG:CD	1:K:242:PRO:HB3	2.46	0.45
1:B:10:VAL:HG22	1:B:79:VAL:HB	1.98	0.45
1:D:326:TRP:HD1	3:D:581:HOH:O	1.99	0.45
1:G:358:TRP:O	1:G:359:ASP:HB2	2.16	0.45
1:I:326:TRP:HD1	3:I:565:HOH:O	1.98	0.45
1:K:294:SER:O	1:L:123:GLN:HG3	2.16	0.45
1:D:28:ASP:HA	1:D:53:ASN:HD22	1.81	0.45
1:H:349:ILE:O	3:H:502:HOH:O	2.21	0.45
1:F:10:VAL:HG22	1:F:79:VAL:HB	1.98	0.45
1:E:353:ALA:O	1:E:356:THR:HB	2.17	0.45
1:G:61:LEU:HD13	1:G:94:LEU:HD11	1.98	0.45
1:H:51:LEU:HA	1:H:54:ARG:NH1	2.32	0.45
1:H:85:ARG:NH2	1:H:122:GLN:O	2.49	0.45
1:J:346:ALA:O	1:J:347:ALA:O	2.35	0.45
1:K:61:LEU:O	3:K:503:HOH:O	2.20	0.45
1:C:225:ASP:OD2	1:C:272:ARG:NH1	2.48	0.44
1:H:329:MET:HE3	1:H:330:PRO:HD2	1.97	0.44
1:K:181:GLY:O	1:K:182:GLN:HB3	2.17	0.44
3:A:612:HOH:O	1:E:243[B]:GLN:HG3	2.17	0.44
1:H:80:LEU:CD2	1:H:108:TYR:CE2	3.00	0.44
1:B:55:ARG:HD2	1:B:349:ILE:CD1	2.47	0.44
1:F:80:LEU:HD23	1:F:108:TYR:CD2	2.51	0.44
1:J:346:ALA:O	1:J:347:ALA:C	2.61	0.44
1:D:126:HIS:O	1:D:127:ASP:C	2.60	0.44
1:D:323:ASN:ND2	3:D:514:HOH:O	2.47	0.44
1:E:10:VAL:HG22	1:E:79:VAL:HB	2.00	0.44
1:A:103:ASN:OD1	1:A:103:ASN:C	2.60	0.44
1:A:51:LEU:HA	1:A:54:ARG:NH1	2.32	0.44
1:E:196:ILE:HG12	1:E:199:MET:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:176:GLN:HG3	1:H:176:GLN:HE21	1.83	0.44
1:I:91:ARG:HD3	3:I:511:HOH:O	2.18	0.44
1:F:37:ASP:O	1:F:58:THR:HA	2.18	0.44
1:K:91:ARG:HH22	2:K:401:A1JJ3:P3	2.41	0.43
1:K:176:GLN:HA	1:K:176:GLN:HE21	1.83	0.43
1:L:108:TYR:HB3	1:L:183:VAL:HG22	2.00	0.43
1:B:113:GLY:HA3	1:B:130:TYR:CE1	2.54	0.43
1:C:91:ARG:HD3	1:L:242:PRO:CB	2.48	0.43
1:H:10:VAL:HB	1:H:33:VAL:HG22	2.00	0.43
1:E:109:ALA:HB1	1:E:164:LEU:HD11	2.01	0.43
1:G:25:ILE:O	1:G:28:ASP:HB2	2.18	0.43
1:C:67:LEU:HD12	1:C:67:LEU:O	2.18	0.43
1:I:302:LEU:O	1:J:135:GLY:HA2	2.18	0.43
1:A:67:LEU:HD13	1:A:92:LEU:O	2.19	0.43
1:D:28:ASP:HA	1:D:53:ASN:ND2	2.34	0.43
1:L:323:ASN:CG	1:L:324:GLY:N	2.75	0.43
1:C:54:ARG:O	1:C:346:ALA:HB3	2.18	0.43
1:C:176:GLN:HA	1:C:176:GLN:HE21	1.83	0.43
1:E:114:TRP:CZ3	1:E:133:LEU:HD22	2.54	0.43
1:G:55:ARG:HH22	1:G:358:TRP:HE1	1.67	0.43
1:I:87:GLY:O	1:I:91:ARG:HG3	2.19	0.43
1:A:163:PHE:O	1:B:332:PRO:HG3	2.18	0.43
1:I:181:GLY:O	1:I:182:GLN:HB3	2.18	0.43
1:I:268:TRP:N	1:I:269:PRO:CD	2.81	0.43
1:J:252:LEU:HD21	1:J:279:PHE:CE1	2.53	0.43
1:G:10:VAL:HG22	1:G:79:VAL:HB	2.01	0.43
1:K:265:ARG:NH2	3:K:521:HOH:O	2.51	0.43
1:D:225:ASP:OD2	1:D:272:ARG:NH1	2.52	0.43
1:G:40:SER:OG	3:G:502:HOH:O	2.21	0.43
1:C:55:ARG:HG2	1:C:349:ILE:CD1	2.49	0.42
1:A:69:LEU:HD13	1:A:351:ILE:HG23	2.01	0.42
1:C:329:MET:HE3	1:C:330:PRO:HD2	1.99	0.42
1:D:293:ASN:O	1:L:294:SER:HB2	2.19	0.42
1:C:109:ALA:HB1	1:C:164:LEU:HD11	2.02	0.42
1:E:231:ASP:CG	1:E:283:ASP:HB2	2.44	0.42
1:C:336:ARG:HG2	1:C:336:ARG:HH11	1.84	0.42
1:G:69:LEU:HB3	1:G:351:ILE:CD1	2.49	0.42
1:B:225:ASP:OD2	1:B:272:ARG:NH1	2.53	0.42
1:F:90:GLU:O	1:F:93:GLY:N	2.41	0.42
1:D:157:PHE:O	1:D:158:GLY:C	2.62	0.42
1:E:316:ARG:HD2	1:F:117:THR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:337:THR:HG21	1:H:174:GLU:OE2	2.20	0.42
1:C:291:PHE:O	1:C:294:SER:HB3	2.20	0.42
1:E:60:ASP:OD1	1:E:60:ASP:C	2.63	0.42
1:E:303:ALA:O	1:E:304:PHE:C	2.63	0.42
1:K:114:TRP:CZ3	1:K:133:LEU:HD22	2.54	0.42
1:A:176:GLN:HG3	1:B:176:GLN:NE2	2.35	0.41
1:I:69:LEU:HD13	1:I:351:ILE:HG21	2.00	0.41
1:I:252:LEU:HD21	1:I:279:PHE:CE1	2.55	0.41
1:J:303:ALA:O	1:J:304:PHE:C	2.63	0.41
1:F:25:ILE:O	1:F:28:ASP:HB2	2.21	0.41
1:I:80:LEU:HD23	1:I:108:TYR:CE2	2.54	0.41
1:D:18:PRO:HB3	1:D:156:ASP:O	2.21	0.41
1:E:241:GLU:HB2	1:E:244:PHE:CD2	2.54	0.41
1:G:196:ILE:HG12	1:G:199:MET:HB2	2.02	0.41
1:H:45:ILE:HG12	1:H:347:ALA:HB2	2.02	0.41
1:B:9:ARG:NH2	1:B:358:TRP:HA	2.35	0.41
1:B:272:ARG:NH1	3:B:517:HOH:O	2.53	0.41
1:D:268:TRP:N	1:D:269:PRO:CD	2.82	0.41
1:G:346:ALA:O	1:G:347:ALA:C	2.63	0.41
1:H:49:ALA:HB2	1:H:323:ASN:HD21	1.84	0.41
1:I:60:ASP:OD1	1:I:62:LYS:HB2	2.21	0.41
1:K:302:LEU:O	1:L:135:GLY:HA2	2.21	0.41
1:F:60:ASP:OD1	1:F:62:LYS:HB2	2.21	0.41
1:G:270:GLU:HG3	3:G:539:HOH:O	2.21	0.41
1:E:19:GLY:N	1:E:20:PRO:HD2	2.35	0.41
1:G:24:MET:HB3	1:G:24:MET:HE2	1.87	0.41
1:G:74:ILE:HG21	1:G:99:CYS:SG	2.60	0.41
1:B:303:ALA:O	1:B:304:PHE:C	2.63	0.41
1:D:78:ASP:OD1	1:D:175:ARG:NH2	2.44	0.41
1:E:28:ASP:HA	1:E:53:ASN:ND2	2.36	0.41
1:H:105:ARG:HG2	1:H:179:GLY:O	2.20	0.41
1:A:321:GLU:O	1:A:322:ALA:HB2	2.21	0.41
1:B:142:ARG:O	1:B:212:ARG:HD2	2.21	0.41
1:E:80:LEU:HD23	1:E:108:TYR:CD2	2.56	0.41
1:E:241:GLU:HA	1:E:242:PRO:HD3	1.95	0.41
1:G:176:GLN:HE21	1:G:176:GLN:HA	1.85	0.41
1:J:102:VAL:O	1:J:103:ASN:HB2	2.20	0.41
1:L:196:ILE:HG12	1:L:199:MET:HB2	2.01	0.41
1:C:113:GLY:HA3	1:C:130:TYR:CE1	2.56	0.41
1:K:80:LEU:CD2	1:K:108:TYR:CE2	3.04	0.41
1:A:270:GLU:HG3	3:A:544:HOH:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:224:TYR:HA	1:D:237:VAL:O	2.21	0.40
1:G:113:GLY:HA2	1:G:188:MET:HB2	2.02	0.40
1:G:268:TRP:N	1:G:269:PRO:CD	2.84	0.40
1:A:87:GLY:O	1:A:91:ARG:HG3	2.21	0.40
1:H:104:ASP:OD1	1:H:104:ASP:N	2.52	0.40
1:I:113:GLY:HA2	1:I:188:MET:HB2	2.03	0.40
1:I:117:THR:O	1:J:316:ARG:HD2	2.21	0.40
1:L:320:TYR:CE2	1:L:322:ALA:HB2	2.56	0.40
1:E:105:ARG:CG	1:E:179:GLY:O	2.69	0.40
1:F:270:GLU:HG3	3:F:553:HOH:O	2.21	0.40
1:J:264:ASP:OD1	1:J:264:ASP:C	2.65	0.40
1:A:4:PRO:O	1:B:174:GLU:HB2	2.21	0.40
1:F:303:ALA:O	1:F:304:PHE:C	2.65	0.40
1:I:355:LEU:O	1:I:359:ASP:C	2.64	0.40
1:F:272:ARG:HD2	3:F:642:HOH:O	2.22	0.40
1:H:196:ILE:HG12	1:H:199:MET:HB2	2.04	0.40
1:H:336:ARG:HG2	1:H:336:ARG:HH11	1.87	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%)	333 (93%)	22 (6%)	4 (1%)	11	8
1	B	359/364 (99%)	339 (94%)	14 (4%)	6 (2%)	7	3
1	C	355/364 (98%)	335 (94%)	17 (5%)	3 (1%)	16	12
1	D	358/364 (98%)	338 (94%)	18 (5%)	2 (1%)	21	18
1	E	360/364 (99%)	341 (95%)	19 (5%)	0	100	100
1	F	354/364 (97%)	329 (93%)	19 (5%)	6 (2%)	7	3
1	G	359/364 (99%)	328 (91%)	26 (7%)	5 (1%)	9	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	355/364 (98%)	332 (94%)	20 (6%)	3 (1%)	16	12
1	I	360/364 (99%)	348 (97%)	11 (3%)	1 (0%)	36	36
1	J	358/364 (98%)	340 (95%)	15 (4%)	3 (1%)	16	12
1	K	360/364 (99%)	336 (93%)	21 (6%)	3 (1%)	16	12
1	L	358/364 (98%)	339 (95%)	19 (5%)	0	100	100
All	All	4295/4368 (98%)	4038 (94%)	221 (5%)	36 (1%)	16	12

All (36) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	40	SER
1	B	347	ALA
1	C	103	ASN
1	C	347	ALA
1	F	41	SER
1	F	103	ASN
1	F	347	ALA
1	G	103	ASN
1	G	347	ALA
1	H	59	ALA
1	H	347	ALA
1	J	347	ALA
1	K	42	VAL
1	K	103	ASN
1	A	103	ASN
1	B	103	ASN
1	D	103	ASN
1	F	292	ALA
1	F	323	ASN
1	G	59	ALA
1	I	103	ASN
1	J	103	ASN
1	J	323	ASN
1	K	323	ASN
1	A	41	SER
1	G	60	ASP
1	G	292	ALA
1	H	103	ASN
1	A	42	VAL
1	B	151	LEU

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Mol	Chain	Res	Type
1	B	323	ASN
1	F	182	GLN
1	B	59	ALA
1	C	151	LEU
1	D	151	LEU
1	B	290	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	42
1	B	277/277 (100%)	271 (98%)	6 (2%)	45	53
1	C	276/277 (100%)	269 (98%)	7 (2%)	42	48
1	D	276/277 (100%)	269 (98%)	7 (2%)	42	48
1	E	278/277 (100%)	270 (97%)	8 (3%)	37	42
1	F	275/277 (99%)	268 (98%)	7 (2%)	42	48
1	G	277/277 (100%)	272 (98%)	5 (2%)	51	60
1	H	276/277 (100%)	269 (98%)	7 (2%)	42	48
1	I	278/277 (100%)	273 (98%)	5 (2%)	51	60
1	J	276/277 (100%)	271 (98%)	5 (2%)	51	60
1	K	278/277 (100%)	267 (96%)	11 (4%)	28	29
1	L	276/277 (100%)	271 (98%)	5 (2%)	51	60
All	All	3320/3324 (100%)	3239 (98%)	81 (2%)	42	49

All (81) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	40	SER
1	A	41	SER
1	A	58	THR
1	A	64	ASP

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Mol	Chain	Res	Type
1	A	91	ARG
1	A	207	MET
1	A	294	SER
1	A	359	ASP
1	B	6	SER
1	B	45	ILE
1	B	85	ARG
1	B	176	GLN
1	B	258	GLU
1	B	356	THR
1	C	40	SER
1	C	42	VAL
1	C	45	ILE
1	C	58	THR
1	C	121	SER
1	C	290	VAL
1	C	294	SER
1	D	6	SER
1	D	85	ARG
1	D	176	GLN
1	D	248	MET
1	D	294	SER
1	D	323	ASN
1	D	348	THR
1	E	6	SER
1	E	37	ASP
1	E	102	VAL
1	E	176	GLN
1	E	177	SER
1	E	258	GLU
1	E	290	VAL
1	E	351	ILE
1	F	76	LYS
1	F	85	ARG
1	F	176	GLN
1	F	277	GLU
1	F	321	GLU
1	F	350	ASP
1	F	357	ASP
1	G	6	SER
1	G	40	SER
1	G	61	LEU

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Mol	Chain	Res	Type
1	G	102	VAL
1	G	348	THR
1	H	38	ARG
1	H	176	GLN
1	H	177	SER
1	H	209	THR
1	H	248	MET
1	H	290	VAL
1	H	349	ILE
1	I	43	ASP
1	I	47	ARG
1	I	68	GLU
1	I	76	LYS
1	I	121	SER
1	J	6	SER
1	J	323	ASN
1	J	350	ASP
1	J	351	ILE
1	J	359	ASP
1	K	6	SER
1	K	38	ARG
1	K	40	SER
1	K	41	SER
1	K	42	VAL
1	K	58	THR
1	K	176	GLN
1	K	177	SER
1	K	265	ARG
1	K	290	VAL
1	K	349	ILE
1	L	38	ARG
1	L	40	SER
1	L	68	GLU
1	L	76	LYS
1	L	294	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	138	HIS
1	A	176	GLN
1	A	286	HIS

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Mol	Chain	Res	Type
1	B	176	GLN
1	B	286	HIS
1	B	293	ASN
1	B	308	HIS
1	B	327	GLN
1	C	116	GLN
1	C	138	HIS
1	C	176	GLN
1	C	263	ASN
1	C	282	HIS
1	C	323	ASN
1	D	176	GLN
1	D	282	HIS
1	D	286	HIS
1	E	138	HIS
1	E	176	GLN
1	E	263	ASN
1	F	176	GLN
1	F	282	HIS
1	F	308	HIS
1	G	122	GLN
1	G	138	HIS
1	G	176	GLN
1	G	263	ASN
1	G	286	HIS
1	G	293	ASN
1	H	176	GLN
1	H	282	HIS
1	H	286	HIS
1	H	308	HIS
1	H	323	ASN
1	H	327	GLN
1	I	116	GLN
1	I	138	HIS
1	I	176	GLN
1	I	263	ASN
1	J	134	ASN
1	J	282	HIS
1	J	286	HIS
1	J	323	ASN
1	K	138	HIS
1	K	176	GLN

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Mol	Chain	Res	Type
1	K	293	ASN
1	K	327	GLN
1	L	116	GLN
1	L	122	GLN
1	L	176	GLN
1	L	341	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

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	A1JJ3	F	401	-	66,72,72	0.72	2 (3%)	89,104,104	0.99	5 (5%)
2	A1JJ3	K	401	-	66,72,72	0.66	1 (1%)	89,104,104	1.15	9 (10%)
2	A1JJ3	A	401	-	66,72,72	0.66	1 (1%)	89,104,104	1.22	12 (13%)
2	A1JJ3	G	401	-	66,72,72	0.65	1 (1%)	89,104,104	1.02	3 (3%)
2	A1JJ3	J	401	-	66,72,72	0.64	0	89,104,104	1.48	8 (8%)
2	A1JJ3	L	401	-	66,72,72	0.70	1 (1%)	89,104,104	0.94	4 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	A1JJ3	I	401	-	66,72,72	0.77	2 (3%)	89,104,104	1.01	7 (7%)
2	A1JJ3	B	401	-	66,72,72	0.73	1 (1%)	89,104,104	0.85	4 (4%)
2	A1JJ3	C	401	-	66,72,72	0.66	2 (3%)	89,104,104	0.84	5 (5%)
2	A1JJ3	H	401	-	66,72,72	0.84	3 (4%)	89,104,104	0.87	4 (4%)
2	A1JJ3	E	401	-	66,72,72	0.80	2 (3%)	89,104,104	0.84	2 (2%)
2	A1JJ3	D	401	-	66,72,72	0.73	2 (3%)	89,104,104	0.93	5 (5%)

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	A1JJ3	F	401	-	-	11/64/81/81	0/5/5/5
2	A1JJ3	K	401	-	-	15/64/81/81	0/5/5/5
2	A1JJ3	A	401	-	-	16/64/81/81	0/5/5/5
2	A1JJ3	G	401	-	-	7/64/81/81	0/5/5/5
2	A1JJ3	J	401	-	-	14/64/81/81	0/5/5/5
2	A1JJ3	L	401	-	-	14/64/81/81	0/5/5/5
2	A1JJ3	I	401	-	-	11/64/81/81	0/5/5/5
2	A1JJ3	B	401	-	-	10/64/81/81	0/5/5/5
2	A1JJ3	C	401	-	-	7/64/81/81	0/5/5/5
2	A1JJ3	H	401	-	-	7/64/81/81	0/5/5/5
2	A1JJ3	E	401	-	-	15/64/81/81	0/5/5/5
2	A1JJ3	D	401	-	-	10/64/81/81	0/5/5/5

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	401	A1JJ3	O2-C17	3.71	1.26	1.20
2	E	401	A1JJ3	C2-S1	3.47	1.89	1.83
2	H	401	A1JJ3	O2-C17	3.18	1.25	1.20
2	E	401	A1JJ3	O2-C17	3.14	1.25	1.20
2	H	401	A1JJ3	C2-S1	2.99	1.88	1.83
2	H	401	A1JJ3	C17-S2	2.98	1.84	1.75
2	L	401	A1JJ3	O2-C17	2.96	1.25	1.20
2	F	401	A1JJ3	O3-C20	2.85	1.29	1.23
2	F	401	A1JJ3	O2-C17	2.54	1.24	1.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	401	A1JJ3	O2-C17	2.41	1.24	1.20
2	D	401	A1JJ3	P3-O15	2.39	1.63	1.59
2	A	401	A1JJ3	O2-C17	2.35	1.24	1.20
2	C	401	A1JJ3	O2-C17	2.32	1.24	1.20
2	K	401	A1JJ3	C2-S1	2.28	1.87	1.83
2	G	401	A1JJ3	O2-C17	2.20	1.24	1.20
2	I	401	A1JJ3	C17-S2	2.14	1.82	1.75
2	D	401	A1JJ3	O2-C17	2.07	1.23	1.20
2	C	401	A1JJ3	P3-O15	2.01	1.63	1.59

All (68) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	J	401	A1JJ3	C26-C25-C28	-7.23	96.44	108.23
2	J	401	A1JJ3	C27-C25-C28	4.78	116.03	108.23
2	G	401	A1JJ3	O7-P1-O8	4.75	135.74	112.24
2	A	401	A1JJ3	C18-S2-C17	4.44	115.12	101.75
2	J	401	A1JJ3	C26-C25-C24	4.34	116.34	108.82
2	J	401	A1JJ3	O7-P1-O8	4.18	132.91	112.24
2	D	401	A1JJ3	O2-C17-S2	-4.15	118.21	123.80
2	L	401	A1JJ3	C18-S2-C17	4.15	114.23	101.75
2	K	401	A1JJ3	O16-P3-O18	4.08	126.65	110.68
2	A	401	A1JJ3	O7-P1-O8	4.02	132.11	112.24
2	J	401	A1JJ3	O6-P1-O8	-3.95	93.63	109.07
2	I	401	A1JJ3	O7-P1-O8	3.86	131.31	112.24
2	K	401	A1JJ3	O16-P3-O15	-3.47	90.46	105.99
2	K	401	A1JJ3	C18-S2-C17	3.46	112.16	101.75
2	G	401	A1JJ3	O2-C17-S2	-3.36	119.28	123.80
2	F	401	A1JJ3	O7-P1-O8	3.30	128.55	112.24
2	H	401	A1JJ3	O7-P1-O8	3.23	128.21	112.24
2	K	401	A1JJ3	O7-P1-O8	3.21	128.09	112.24
2	L	401	A1JJ3	O7-P1-O8	3.19	128.00	112.24
2	H	401	A1JJ3	O17-P3-O16	3.16	119.70	107.64
2	A	401	A1JJ3	C27-C25-C28	-3.12	103.14	108.23
2	B	401	A1JJ3	O16-P3-O18	2.97	122.31	110.68
2	A	401	A1JJ3	O14-C37-C38	2.92	119.46	111.17
2	J	401	A1JJ3	O7-P1-O6	2.90	121.21	107.75
2	A	401	A1JJ3	O16-P3-O15	2.87	118.83	105.99
2	I	401	A1JJ3	C19-N1-C20	-2.85	117.54	122.84
2	C	401	A1JJ3	O6-P1-O8	-2.83	98.01	109.07
2	K	401	A1JJ3	O6-C28-C25	-2.82	106.02	110.55
2	J	401	A1JJ3	C37-C31-N3	2.72	120.20	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	K	401	A1JJ3	O6-P1-O8	-2.71	98.48	109.07
2	E	401	A1JJ3	O14-C37-C38	2.68	118.78	111.17
2	C	401	A1JJ3	O7-P1-O8	2.64	125.28	112.24
2	D	401	A1JJ3	O7-P1-O8	2.62	125.19	112.24
2	A	401	A1JJ3	O15-P3-O18	-2.56	99.49	109.39
2	J	401	A1JJ3	O17-P3-O18	-2.54	100.72	110.68
2	L	401	A1JJ3	C8-C9-C10	2.50	119.00	113.00
2	C	401	A1JJ3	O17-P3-O16	2.48	117.11	107.64
2	H	401	A1JJ3	C1-C2-S1	2.45	115.65	108.69
2	I	401	A1JJ3	O17-P3-O16	2.43	116.94	107.64
2	F	401	A1JJ3	O6-P1-O8	-2.41	99.65	109.07
2	K	401	A1JJ3	O17-P3-O16	2.41	116.84	107.64
2	B	401	A1JJ3	P2-O9-P1	2.39	141.03	132.83
2	G	401	A1JJ3	O6-C28-C25	-2.39	106.71	110.55
2	B	401	A1JJ3	C1-C2-S1	2.39	115.46	108.69
2	A	401	A1JJ3	P2-O9-P1	-2.38	124.65	132.83
2	D	401	A1JJ3	C7-C16-C3	2.37	121.46	119.44
2	A	401	A1JJ3	C26-C25-C28	2.35	112.07	108.23
2	F	401	A1JJ3	O17-P3-O18	-2.32	101.59	110.68
2	L	401	A1JJ3	C1-C2-S1	2.28	115.15	108.69
2	E	401	A1JJ3	O17-P3-O16	2.24	116.18	107.64
2	C	401	A1JJ3	C26-C25-C24	2.19	112.61	108.82
2	A	401	A1JJ3	C1-C2-S1	2.15	114.80	108.69
2	I	401	A1JJ3	O6-C28-C25	-2.14	107.10	110.55
2	A	401	A1JJ3	O5-C24-C25	-2.14	105.22	110.25
2	D	401	A1JJ3	C37-C31-N3	2.14	118.71	113.30
2	C	401	A1JJ3	O16-P3-O18	-2.13	102.35	110.68
2	I	401	A1JJ3	O17-P3-O18	2.11	118.94	110.68
2	H	401	A1JJ3	O14-C37-C38	2.09	117.10	111.17
2	A	401	A1JJ3	O6-C28-C25	-2.09	107.19	110.55
2	K	401	A1JJ3	O14-C37-C31	-2.09	103.05	110.02
2	F	401	A1JJ3	O6-C28-C25	-2.08	107.21	110.55
2	K	401	A1JJ3	C8-C9-C10	2.05	117.93	113.00
2	I	401	A1JJ3	C26-C25-C28	2.04	111.56	108.23
2	D	401	A1JJ3	C8-C9-C10	2.03	117.89	113.00
2	A	401	A1JJ3	C7-C16-C3	2.03	121.17	119.44
2	I	401	A1JJ3	O17-P3-O15	-2.03	96.88	105.99
2	B	401	A1JJ3	C27-C25-C28	-2.02	104.93	108.23
2	F	401	A1JJ3	C37-C31-N3	2.01	118.39	113.30

There are no chirality outliers.

All (137) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ3	O1-C8-C9-C10
2	A	401	A1JJ3	C2-C17-S2-C18
2	A	401	A1JJ3	O2-C17-S2-C18
2	A	401	A1JJ3	C19-C18-S2-C17
2	A	401	A1JJ3	C20-C21-C22-N2
2	B	401	A1JJ3	P2-O9-P1-O6
2	D	401	A1JJ3	O1-C8-C9-C10
2	E	401	A1JJ3	C23-C24-C25-C28
2	E	401	A1JJ3	C28-O6-P1-O9
2	F	401	A1JJ3	C20-C21-C22-N2
2	F	401	A1JJ3	C28-O6-P1-O7
2	G	401	A1JJ3	O1-C8-C9-C10
2	G	401	A1JJ3	C20-C21-C22-N2
2	H	401	A1JJ3	C38-O15-P3-O17
2	I	401	A1JJ3	O1-C8-C9-C10
2	I	401	A1JJ3	C28-O6-P1-O7
2	J	401	A1JJ3	C23-C24-C25-C28
2	J	401	A1JJ3	C28-O6-P1-O7
2	J	401	A1JJ3	C28-O6-P1-O8
2	K	401	A1JJ3	C2-C17-S2-C18
2	K	401	A1JJ3	O2-C17-S2-C18
2	L	401	A1JJ3	C2-C17-S2-C18
2	L	401	A1JJ3	O2-C17-S2-C18
2	A	401	A1JJ3	C21-C20-N1-C19
2	K	401	A1JJ3	C21-C20-N1-C19
2	K	401	A1JJ3	O3-C20-N1-C19
2	L	401	A1JJ3	C21-C20-N1-C19
2	C	401	A1JJ3	C6-C7-O1-C8
2	C	401	A1JJ3	C16-C7-O1-C8
2	B	401	A1JJ3	C16-C7-O1-C8
2	B	401	A1JJ3	C6-C7-O1-C8
2	E	401	A1JJ3	C16-C7-O1-C8
2	K	401	A1JJ3	C16-C7-O1-C8
2	L	401	A1JJ3	C16-C7-O1-C8
2	E	401	A1JJ3	C6-C7-O1-C8
2	J	401	A1JJ3	C16-C7-O1-C8
2	K	401	A1JJ3	C6-C7-O1-C8
2	I	401	A1JJ3	C16-C7-O1-C8
2	D	401	A1JJ3	C16-C7-O1-C8
2	G	401	A1JJ3	C16-C7-O1-C8
2	L	401	A1JJ3	C6-C7-O1-C8
2	A	401	A1JJ3	O3-C20-N1-C19
2	L	401	A1JJ3	O3-C20-N1-C19

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Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ3	C16-C7-O1-C8
2	D	401	A1JJ3	C6-C7-O1-C8
2	I	401	A1JJ3	C6-C7-O1-C8
2	J	401	A1JJ3	C6-C7-O1-C8
2	A	401	A1JJ3	C6-C7-O1-C8
2	G	401	A1JJ3	C6-C7-O1-C8
2	E	401	A1JJ3	O1-C8-C9-C10
2	F	401	A1JJ3	O1-C8-C9-C10
2	H	401	A1JJ3	O1-C8-C9-C10
2	L	401	A1JJ3	O1-C8-C9-C10
2	C	401	A1JJ3	C20-C21-C22-N2
2	I	401	A1JJ3	C20-C21-C22-N2
2	K	401	A1JJ3	C20-C21-C22-N2
2	L	401	A1JJ3	C20-C21-C22-N2
2	J	401	A1JJ3	O1-C8-C9-C10
2	F	401	A1JJ3	C6-C7-O1-C8
2	F	401	A1JJ3	C16-C7-O1-C8
2	B	401	A1JJ3	C9-C8-O1-C7
2	J	401	A1JJ3	C38-O15-P3-O18
2	L	401	A1JJ3	C11-C10-C9-C8
2	H	401	A1JJ3	C21-C22-N2-C23
2	A	401	A1JJ3	O2-C17-C2-S1
2	B	401	A1JJ3	O2-C17-C2-S1
2	C	401	A1JJ3	O2-C17-C2-S1
2	D	401	A1JJ3	O2-C17-C2-S1
2	E	401	A1JJ3	O2-C17-C2-S1
2	F	401	A1JJ3	O2-C17-C2-S1
2	G	401	A1JJ3	O2-C17-C2-S1
2	H	401	A1JJ3	O2-C17-C2-S1
2	I	401	A1JJ3	O2-C17-C2-S1
2	J	401	A1JJ3	O2-C17-C2-S1
2	K	401	A1JJ3	O2-C17-C2-S1
2	L	401	A1JJ3	O2-C17-C2-S1
2	E	401	A1JJ3	C23-C24-C25-C27
2	J	401	A1JJ3	C23-C24-C25-C26
2	D	401	A1JJ3	C29-O12-P2-O9
2	F	401	A1JJ3	C38-O15-P3-O17
2	H	401	A1JJ3	C38-O15-P3-O16
2	A	401	A1JJ3	P1-O9-P2-O10
2	I	401	A1JJ3	P1-O9-P2-O11
2	E	401	A1JJ3	C28-O6-P1-O8
2	E	401	A1JJ3	O5-C24-C25-C28

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Mol	Chain	Res	Type	Atoms
2	J	401	A1JJ3	O5-C24-C25-C28
2	L	401	A1JJ3	C15-C10-C9-C8
2	D	401	A1JJ3	C9-C8-O1-C7
2	E	401	A1JJ3	C26-C25-C28-O6
2	C	401	A1JJ3	P1-O9-P2-O10
2	L	401	A1JJ3	C9-C8-O1-C7
2	K	401	A1JJ3	C9-C8-O1-C7
2	L	401	A1JJ3	C19-C18-S2-C17
2	B	401	A1JJ3	C11-C10-C9-C8
2	K	401	A1JJ3	O1-C8-C9-C10
2	I	401	A1JJ3	C9-C8-O1-C7
2	D	401	A1JJ3	O12-C29-C30-O13
2	D	401	A1JJ3	C15-C10-C9-C8
2	K	401	A1JJ3	C11-C10-C9-C8
2	D	401	A1JJ3	C20-C21-C22-N2
2	E	401	A1JJ3	C20-C21-C22-N2
2	A	401	A1JJ3	C18-C19-N1-C20
2	E	401	A1JJ3	O12-C29-C30-O13
2	J	401	A1JJ3	O12-C29-C30-O13
2	K	401	A1JJ3	O12-C29-C30-O13
2	E	401	A1JJ3	C23-C24-C25-C26
2	J	401	A1JJ3	C23-C24-C25-C27
2	B	401	A1JJ3	C15-C10-C9-C8
2	D	401	A1JJ3	C11-C10-C9-C8
2	K	401	A1JJ3	C15-C10-C9-C8
2	B	401	A1JJ3	C21-C22-N2-C23
2	A	401	A1JJ3	C38-O15-P3-O17
2	B	401	A1JJ3	C38-O15-P3-O17
2	F	401	A1JJ3	C38-O15-P3-O16
2	J	401	A1JJ3	C28-O6-P1-O9
2	C	401	A1JJ3	O12-C29-C30-O13
2	I	401	A1JJ3	O12-C29-C30-O13
2	A	401	A1JJ3	P1-O9-P2-O11
2	E	401	A1JJ3	P1-O9-P2-O11
2	K	401	A1JJ3	P1-O9-P2-O11
2	A	401	A1JJ3	C29-O12-P2-O11
2	A	401	A1JJ3	O12-C29-C30-O13
2	B	401	A1JJ3	O12-C29-C30-O13
2	F	401	A1JJ3	O12-C29-C30-O13
2	G	401	A1JJ3	O12-C29-C30-O13
2	H	401	A1JJ3	O12-C29-C30-O13
2	L	401	A1JJ3	O12-C29-C30-O13

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Mol	Chain	Res	Type	Atoms
2	F	401	A1JJ3	C11-C10-C9-C8
2	I	401	A1JJ3	C11-C10-C9-C8
2	C	401	A1JJ3	C1-C2-S1-C3
2	E	401	A1JJ3	C1-C2-S1-C3
2	F	401	A1JJ3	C1-C2-S1-C3
2	G	401	A1JJ3	C1-C2-S1-C3
2	H	401	A1JJ3	C1-C2-S1-C3
2	I	401	A1JJ3	C1-C2-S1-C3
2	J	401	A1JJ3	C1-C2-S1-C3
2	K	401	A1JJ3	C1-C2-S1-C3

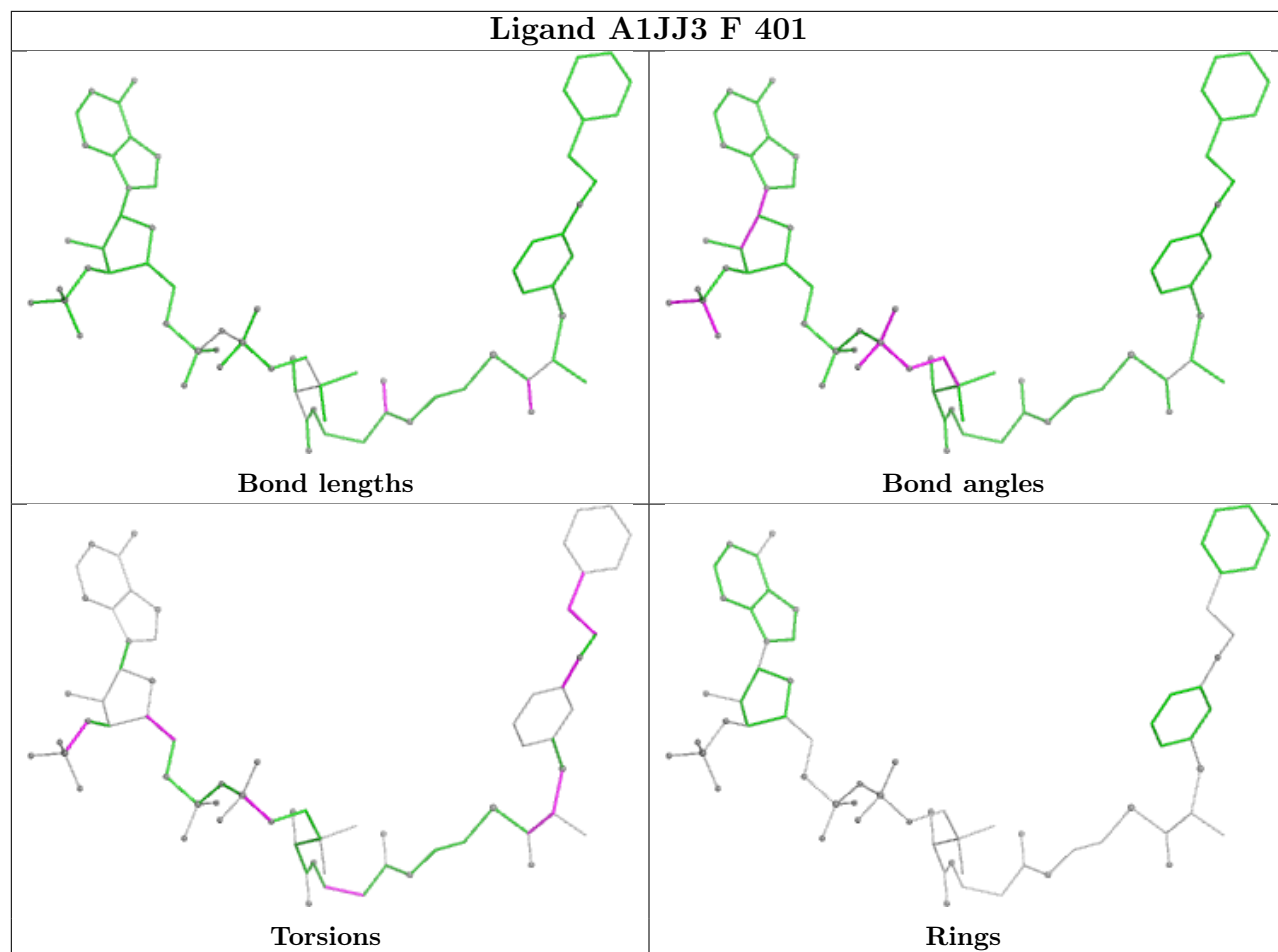
There are no ring outliers.

8 monomers are involved in 16 short contacts:

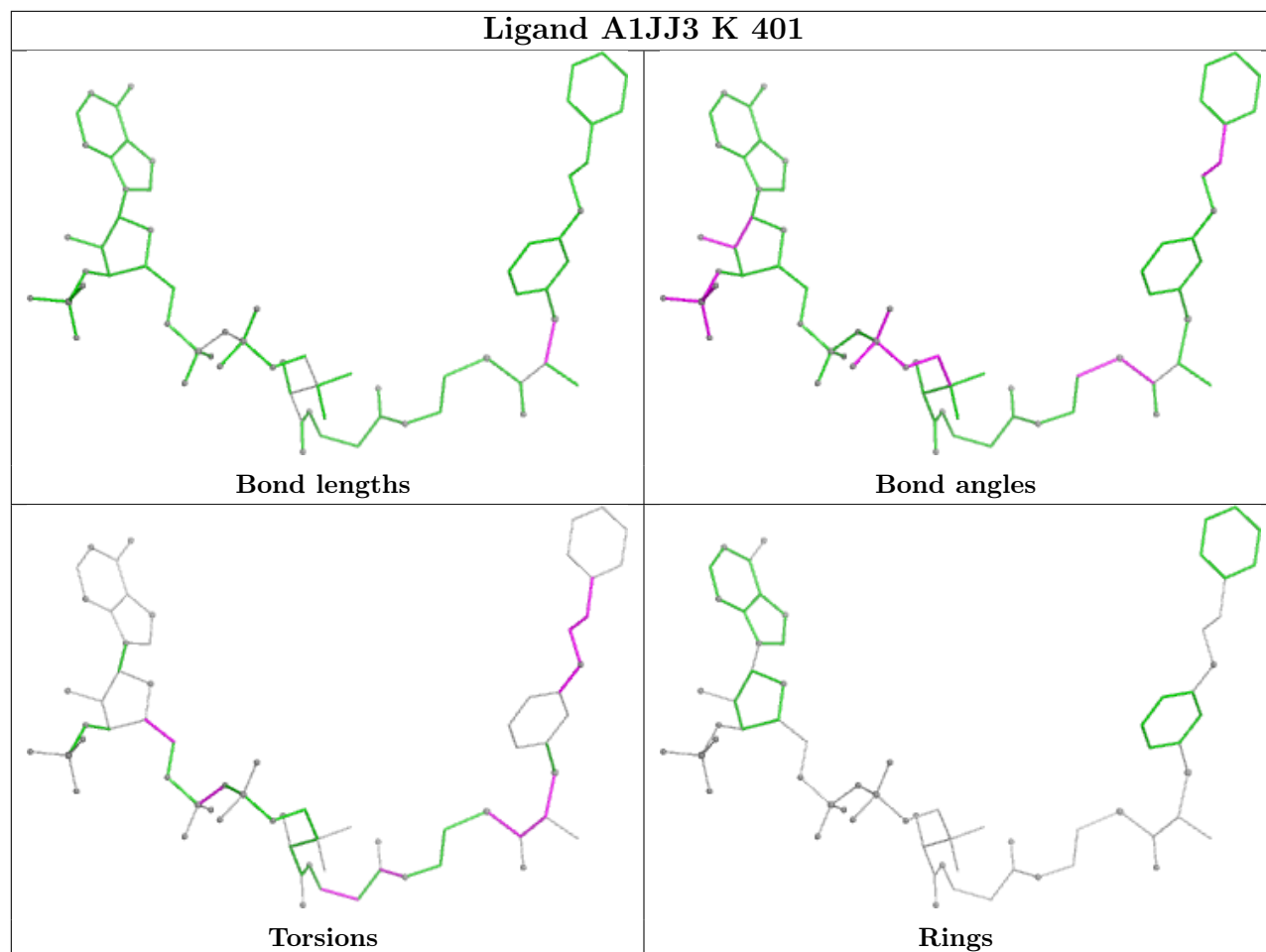
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	401	A1JJ3	4	0
2	K	401	A1JJ3	2	0
2	A	401	A1JJ3	2	0
2	I	401	A1JJ3	2	0
2	B	401	A1JJ3	2	0
2	C	401	A1JJ3	1	0
2	E	401	A1JJ3	1	0
2	D	401	A1JJ3	2	0

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.

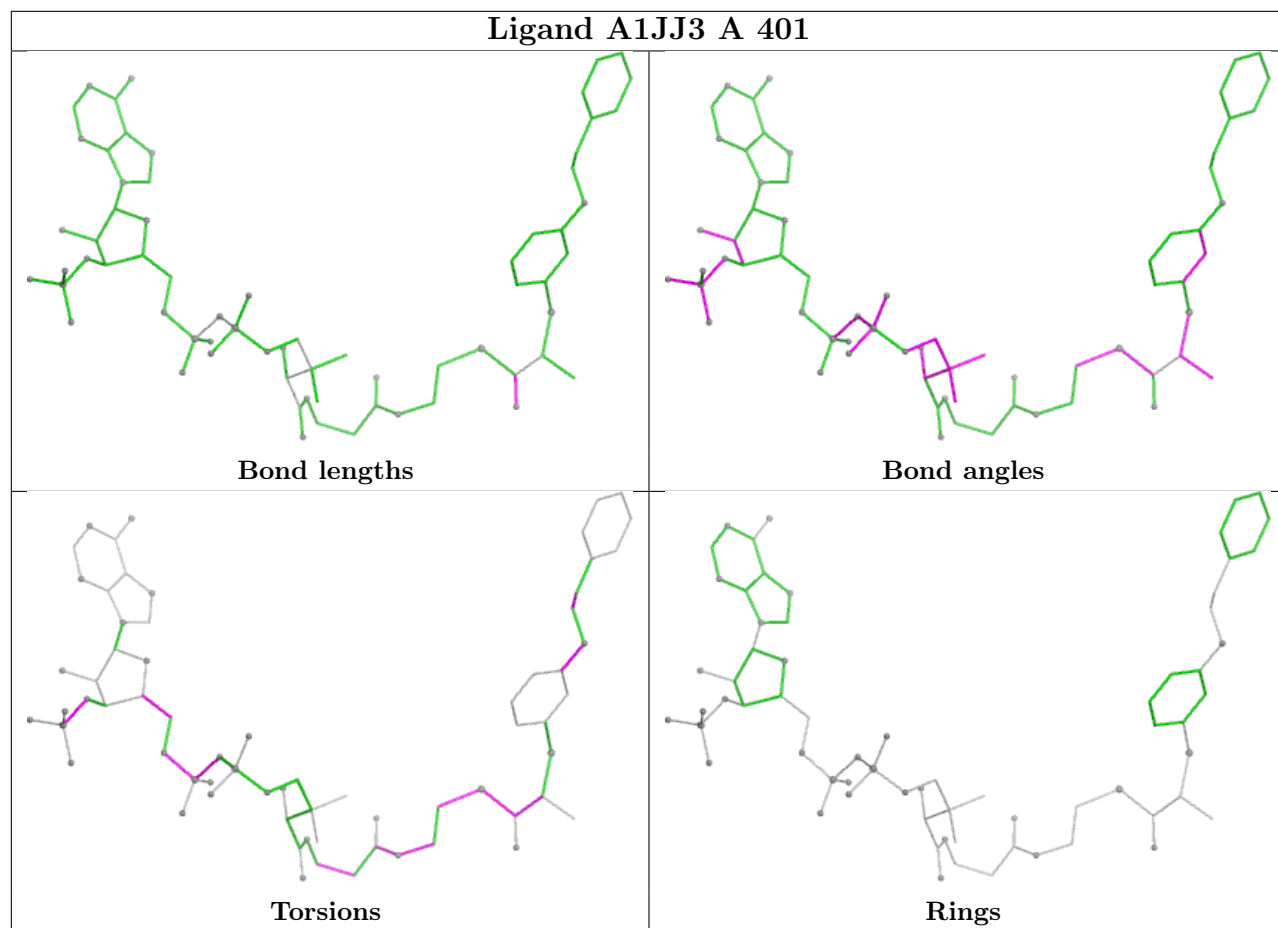
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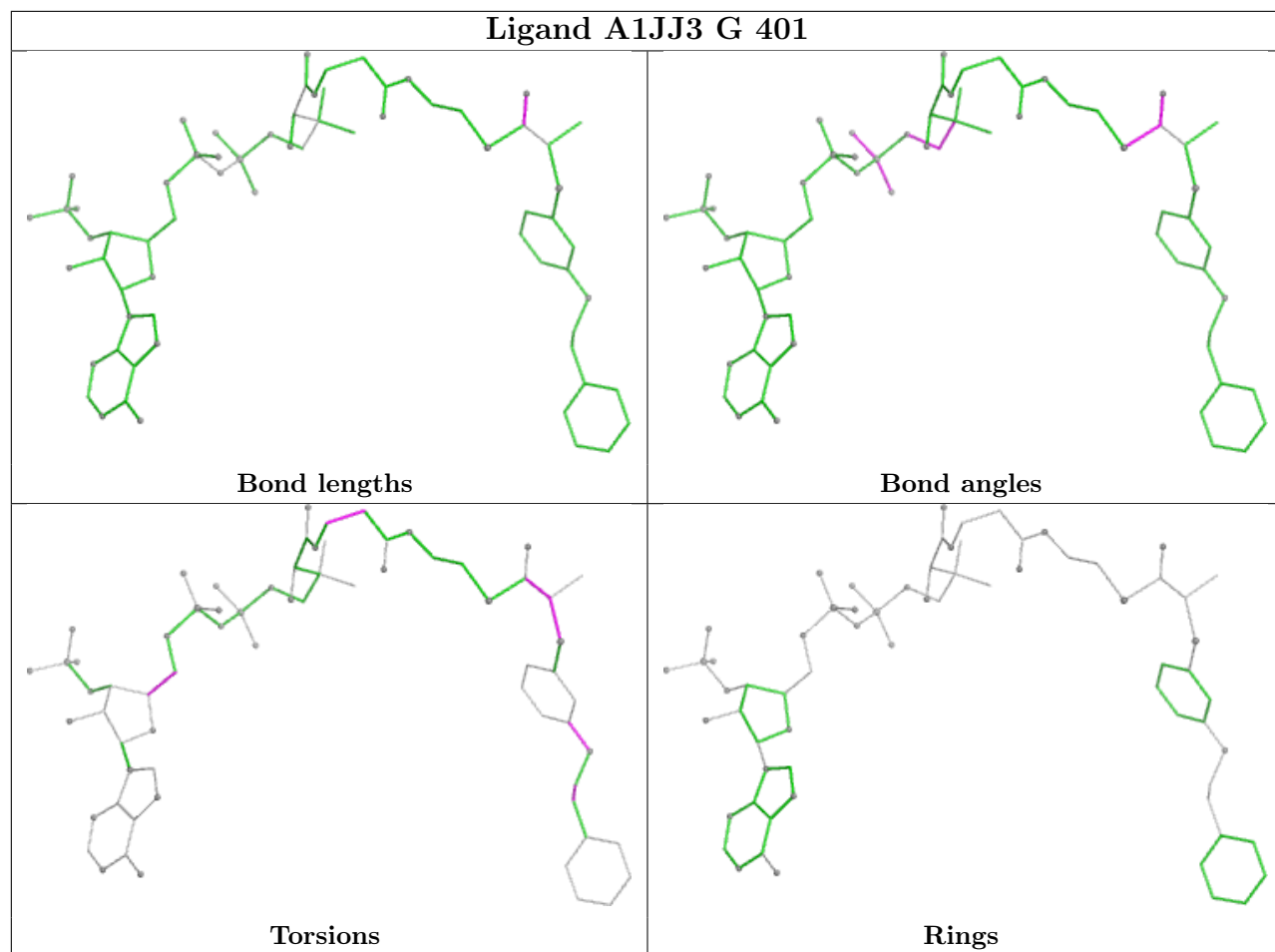


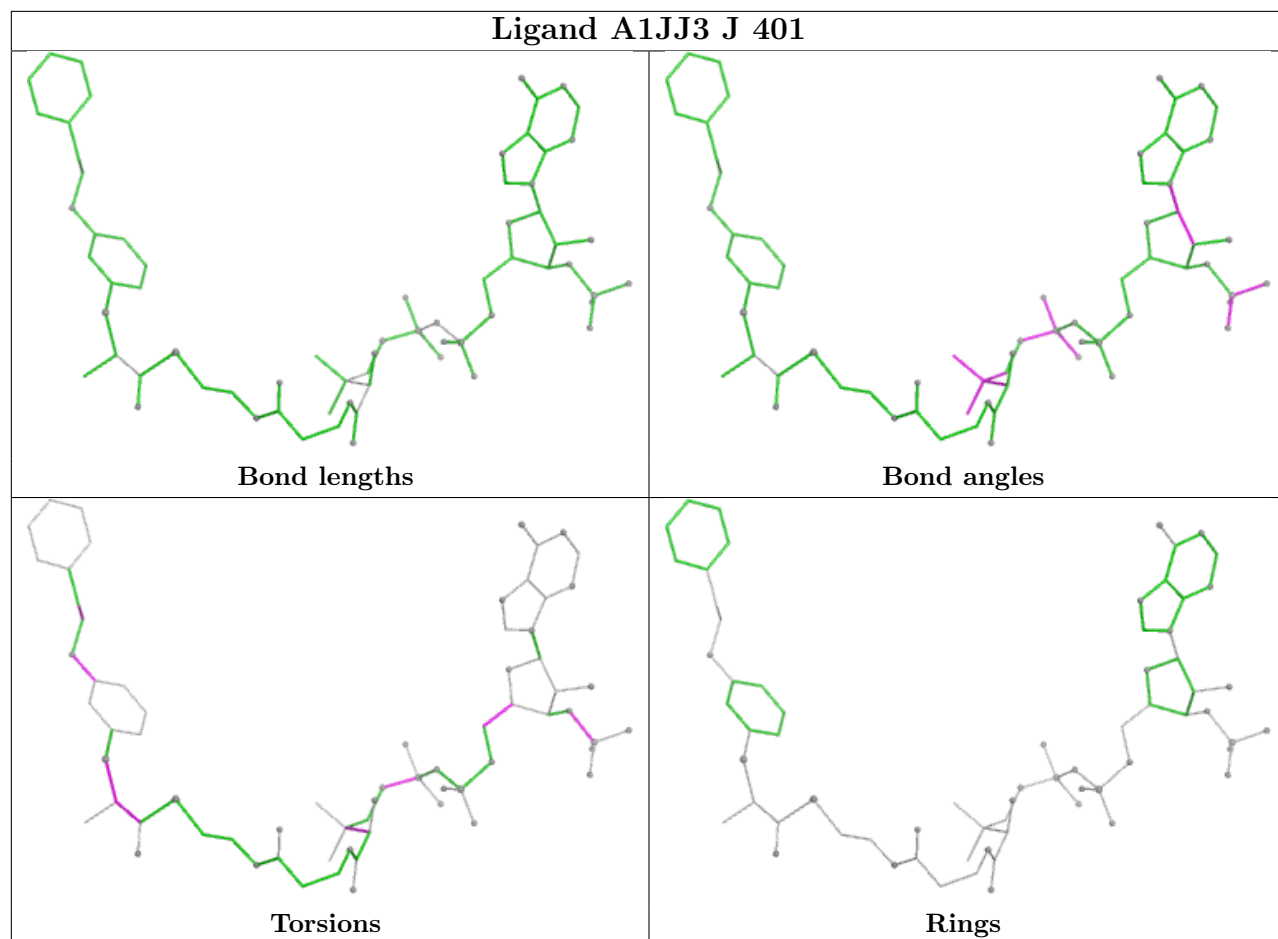
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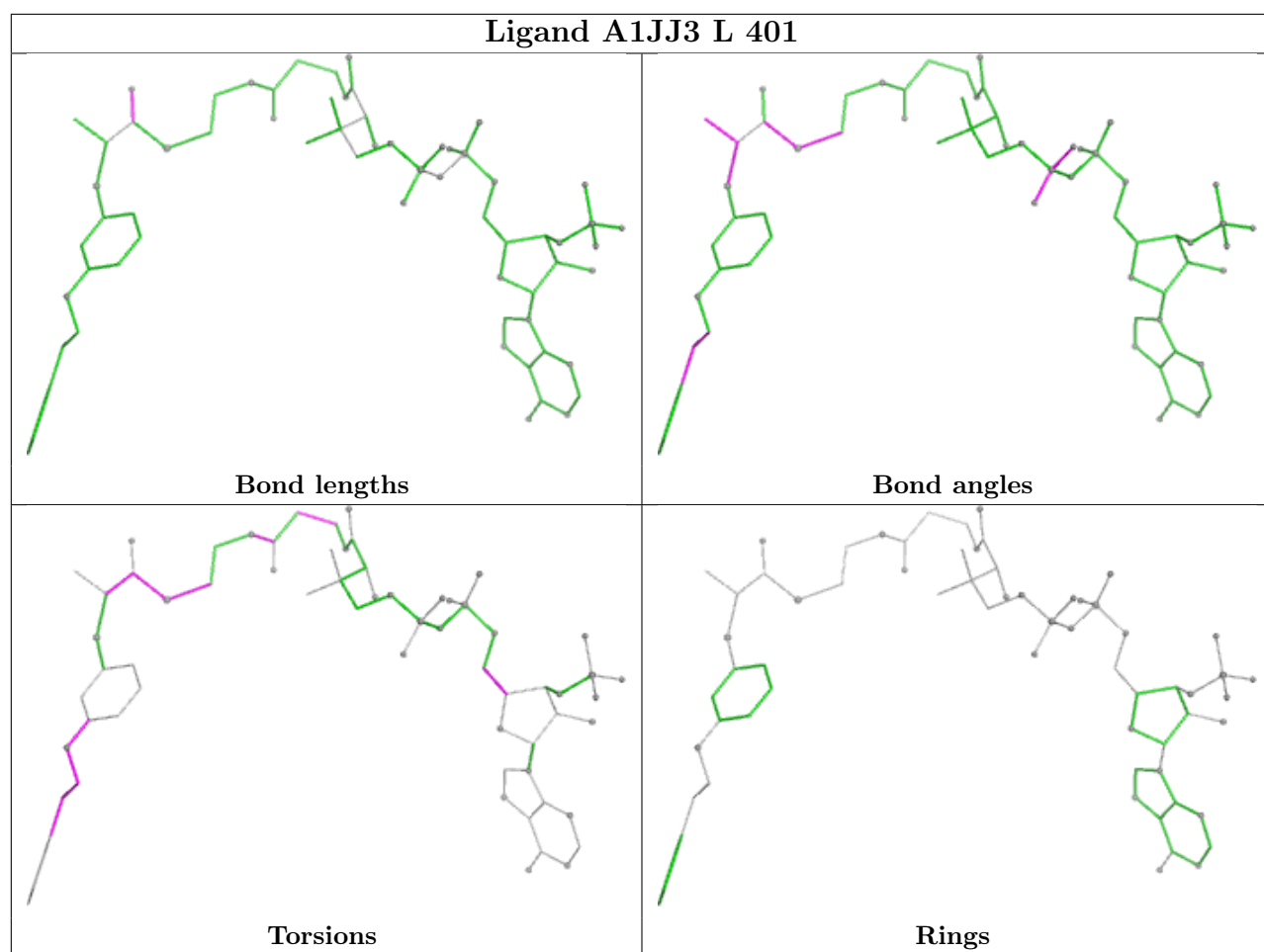


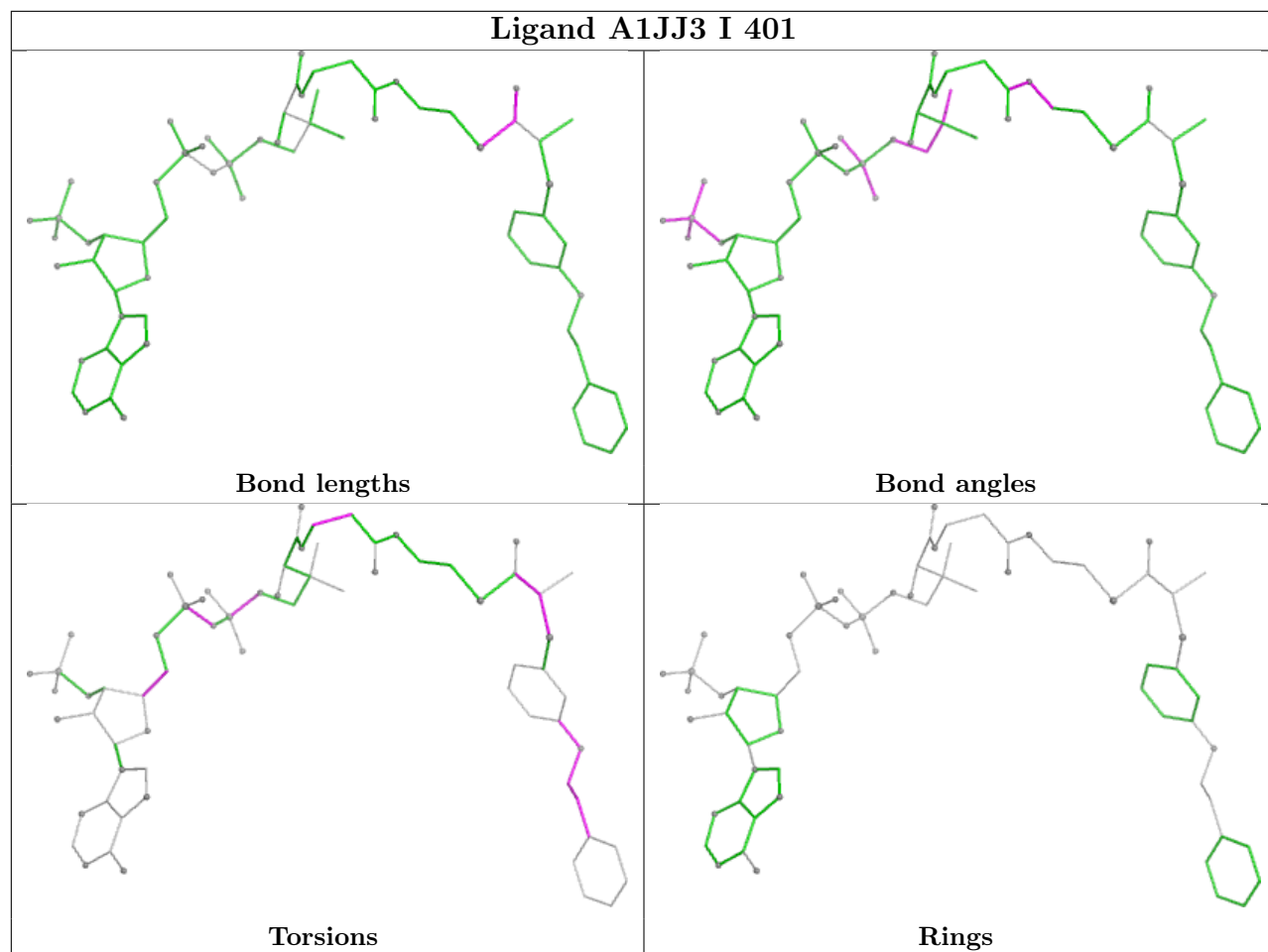
Ligand A1JJ3 A 401

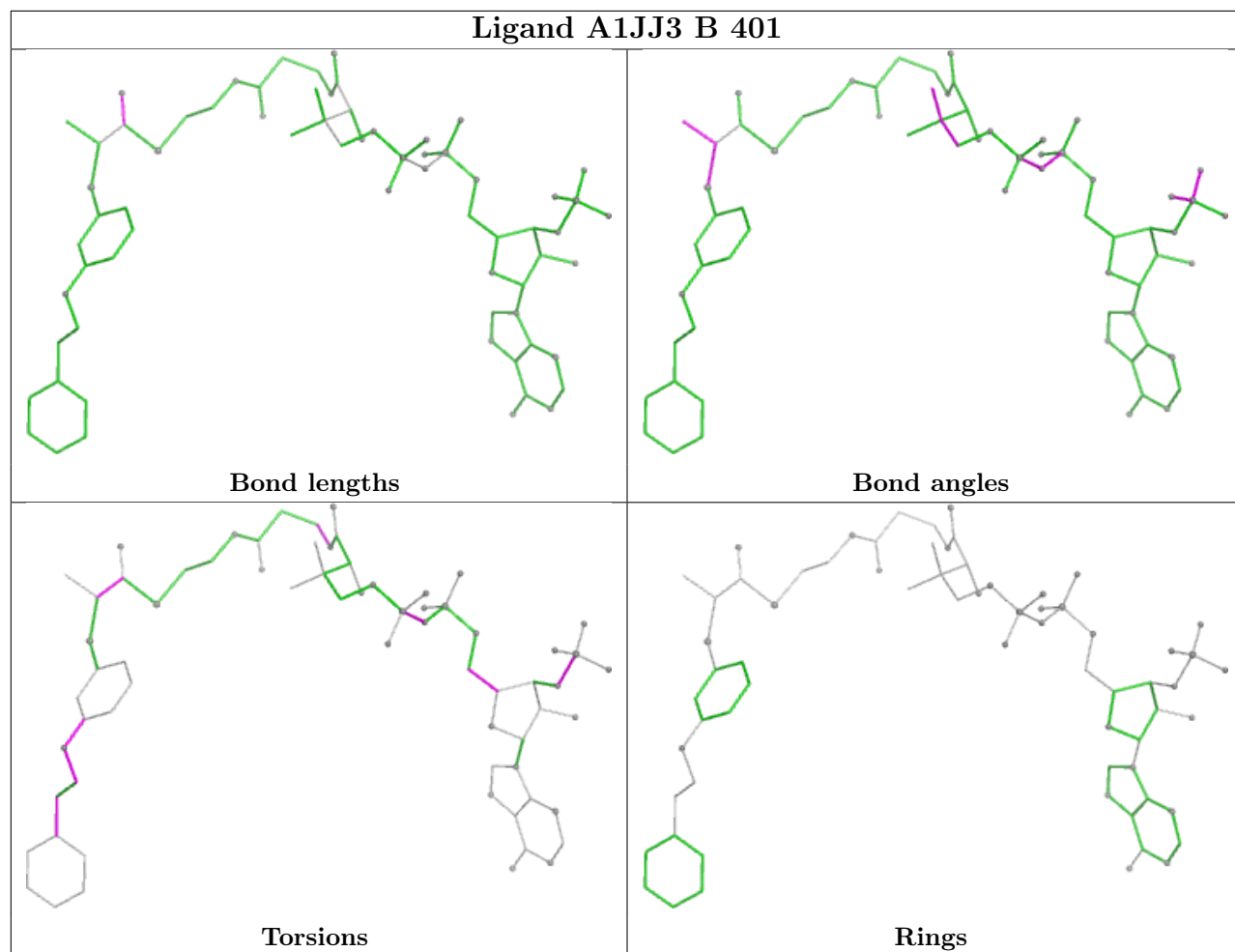


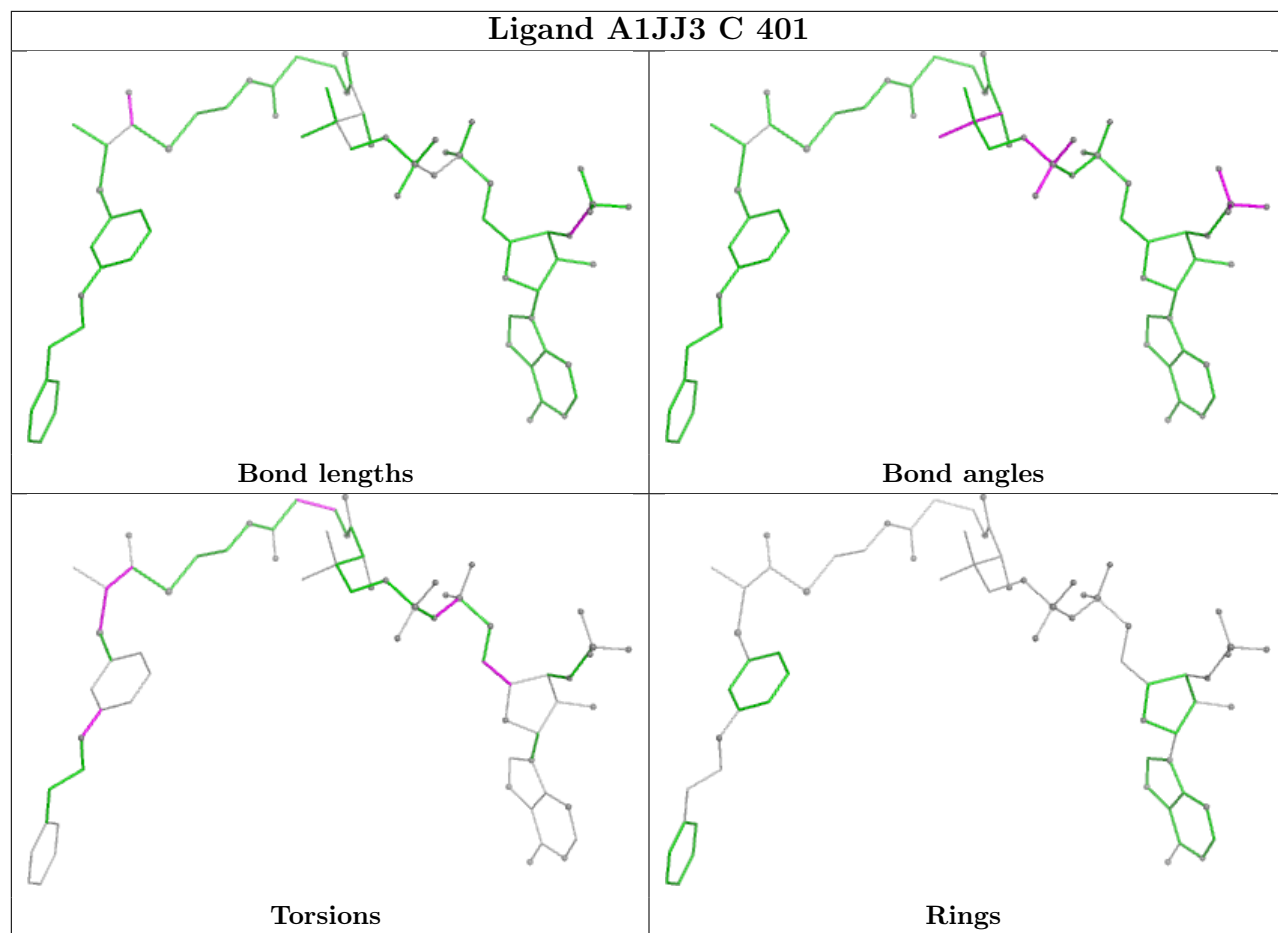




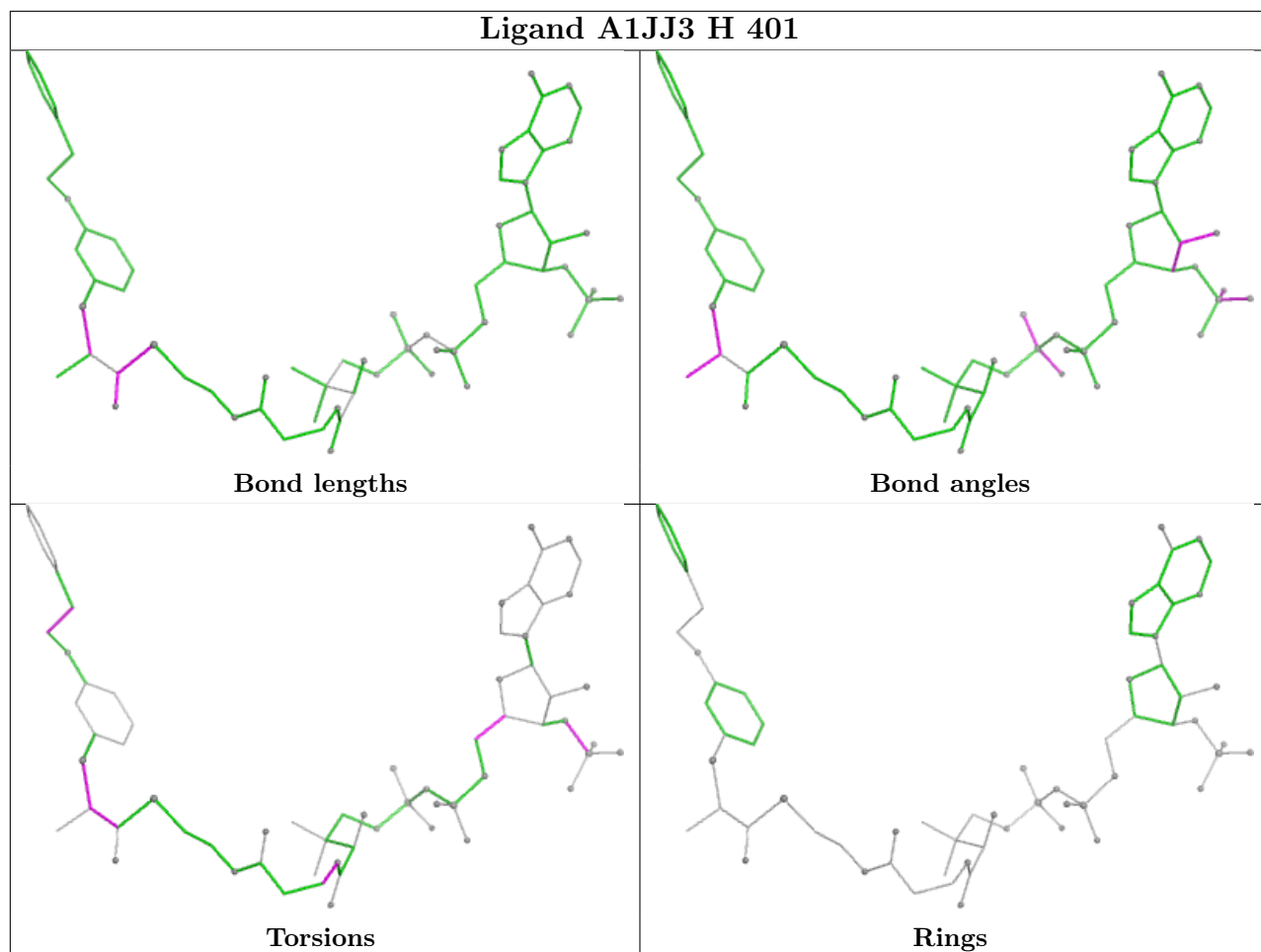


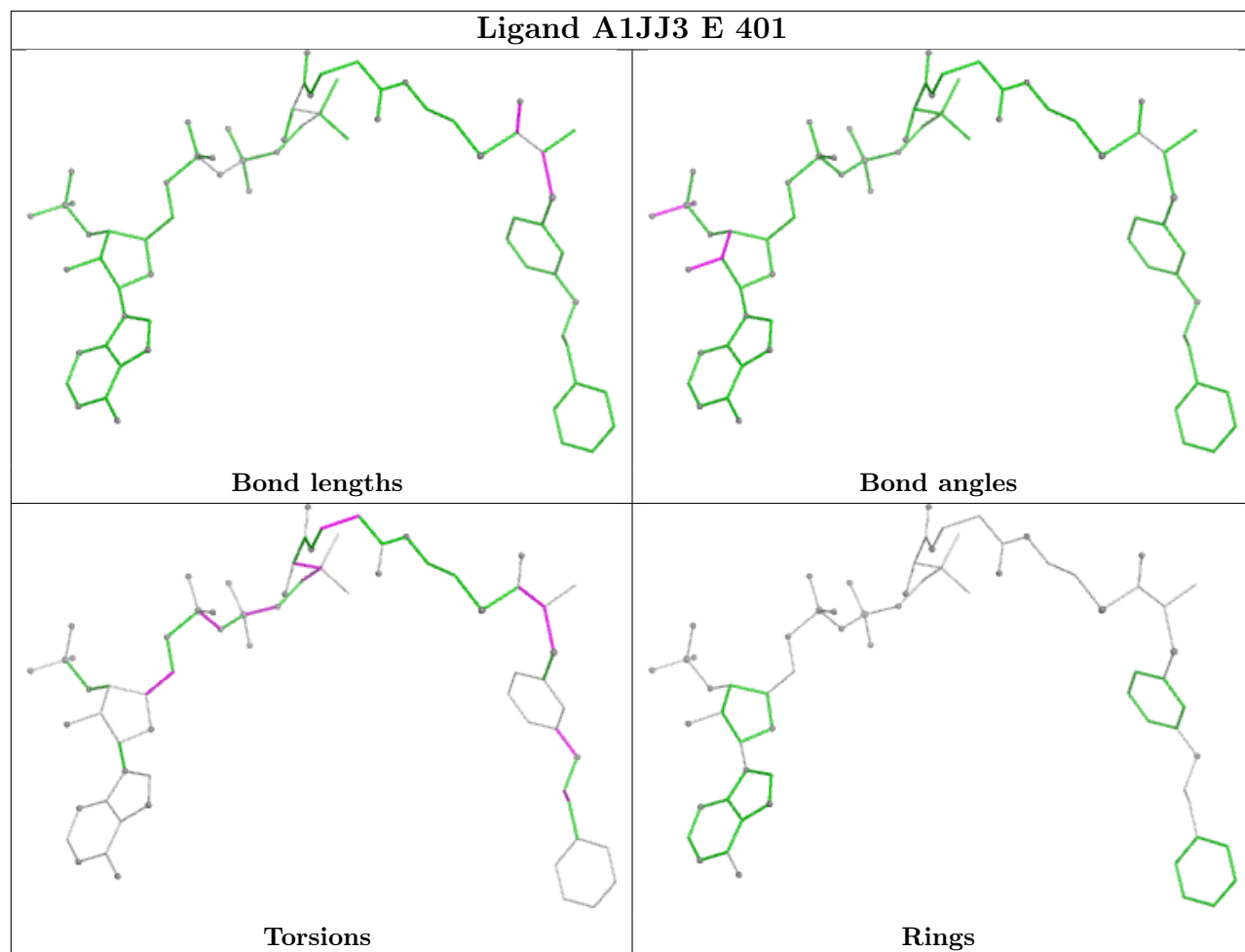


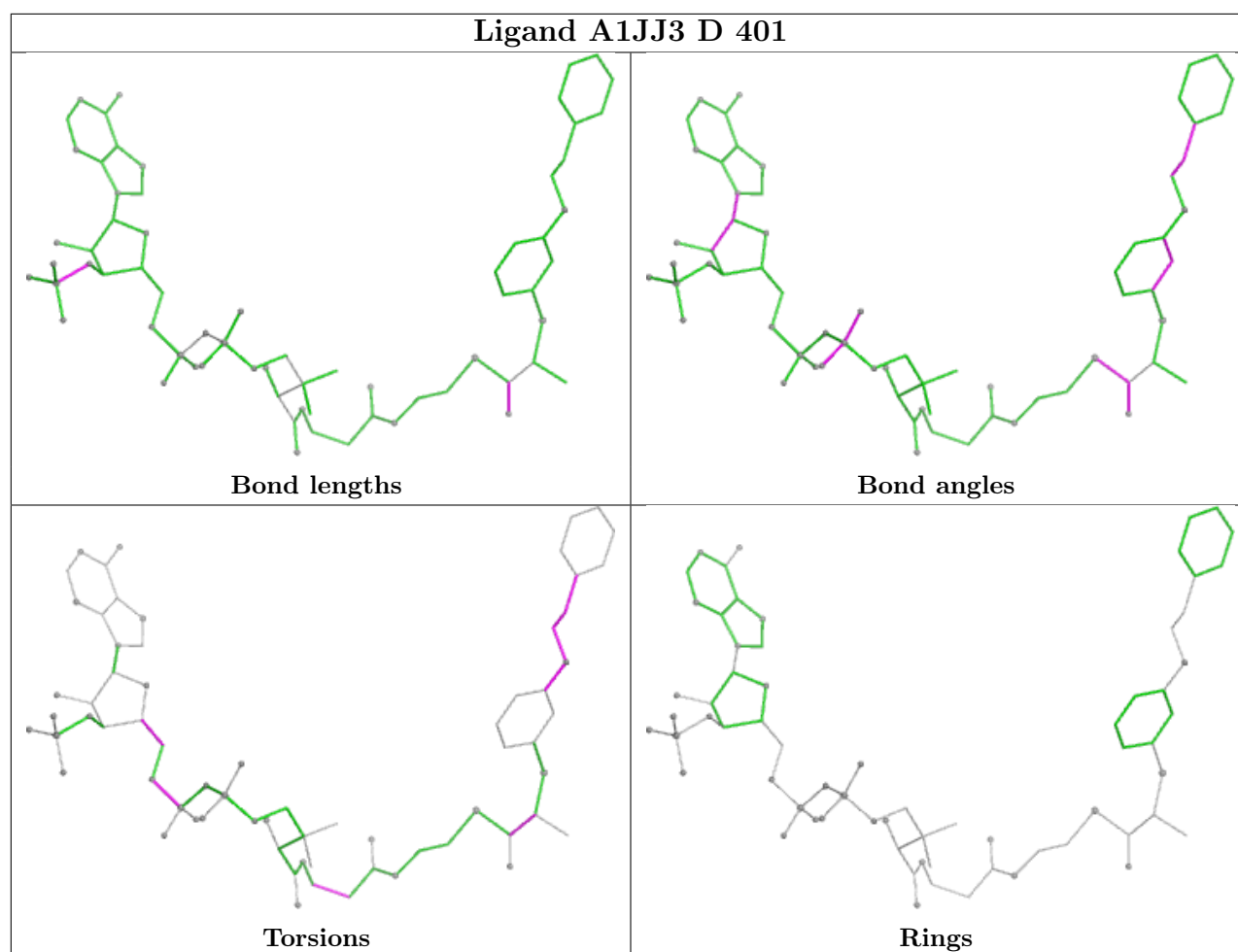




Ligand A1JJ3 H 401







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%)	1.12	74 (20%)	2 3	22, 38, 74, 103	2 (0%)
1	B	359/364 (98%)	0.97	61 (16%)	4 4	16, 37, 79, 112	2 (0%)
1	C	357/364 (98%)	1.04	79 (22%)	2 2	20, 37, 74, 106	2 (0%)
1	D	359/364 (98%)	0.97	64 (17%)	4 4	22, 37, 72, 100	1 (0%)
1	E	359/364 (98%)	1.11	76 (21%)	2 2	14, 39, 82, 106	3 (0%)
1	F	357/364 (98%)	1.35	98 (27%)	1 1	22, 39, 76, 106	1 (0%)
1	G	359/364 (98%)	1.56	127 (35%)	1 1	21, 42, 87, 115	2 (0%)
1	H	358/364 (98%)	1.25	100 (27%)	1 1	21, 40, 85, 106	1 (0%)
1	I	359/364 (98%)	0.80	35 (9%)	13 14	15, 35, 65, 100	3 (0%)
1	J	359/364 (98%)	0.87	55 (15%)	5 5	21, 35, 71, 112	1 (0%)
1	K	359/364 (98%)	1.03	71 (19%)	3 3	17, 37, 77, 108	3 (0%)
1	L	359/364 (98%)	0.92	54 (15%)	5 5	22, 37, 69, 104	1 (0%)
All	All	4303/4368 (98%)	1.08	894 (20%)	2 2	14, 38, 76, 115	22 (0%)

All (894) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	346	ALA	8.2
1	K	346	ALA	8.0
1	D	346	ALA	7.7
1	F	42	VAL	7.6
1	A	346	ALA	7.4
1	G	346	ALA	7.2
1	C	42	VAL	7.0
1	J	346	ALA	6.7
1	E	346	ALA	6.7
1	F	346	ALA	6.5
1	L	323	ASN	6.5

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Mol	Chain	Res	Type	RSRZ
1	F	351	ILE	6.2
1	H	45	ILE	6.2
1	E	349	ILE	6.2
1	H	346	ALA	6.1
1	B	45	ILE	6.1
1	K	345	PRO	6.1
1	A	45	ILE	6.0
1	K	45	ILE	6.0
1	H	39	PRO	5.8
1	G	351	ILE	5.7
1	B	346	ALA	5.7
1	C	45	ILE	5.7
1	G	45	ILE	5.5
1	H	351	ILE	5.5
1	A	351	ILE	5.4
1	E	42	VAL	5.4
1	G	354	VAL	5.3
1	D	323	ASN	5.3
1	G	11	VAL	5.2
1	B	42	VAL	5.2
1	F	45	ILE	5.1
1	G	102	VAL	5.1
1	G	69	LEU	5.1
1	G	96	PRO	5.1
1	G	70	ALA	5.0
1	H	42	VAL	5.0
1	D	322	ALA	5.0
1	G	42	VAL	5.0
1	G	347	ALA	5.0
1	B	345	PRO	5.0
1	G	10	VAL	5.0
1	C	323	ASN	5.0
1	D	45	ILE	5.0
1	B	347	ALA	4.9
1	F	324	GLY	4.9
1	J	347	ALA	4.8
1	E	351	ILE	4.8
1	K	349	ILE	4.8
1	A	40	SER	4.8
1	G	7	GLY	4.8
1	J	351	ILE	4.8
1	H	323	ASN	4.8

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Mol	Chain	Res	Type	RSRZ
1	A	345	PRO	4.8
1	C	347	ALA	4.8
1	G	355	LEU	4.8
1	J	45	ILE	4.7
1	K	324	GLY	4.7
1	G	358	TRP	4.7
1	A	324	GLY	4.7
1	H	144	ASP	4.7
1	L	322	ALA	4.6
1	D	347	ALA	4.6
1	G	94	LEU	4.6
1	G	33	VAL	4.6
1	E	44	GLY	4.6
1	B	351	ILE	4.6
1	L	45	ILE	4.5
1	G	34	VAL	4.5
1	K	44	GLY	4.5
1	G	345	PRO	4.5
1	J	345	PRO	4.5
1	G	61	LEU	4.5
1	G	56	ILE	4.5
1	L	46	SER	4.5
1	F	93	GLY	4.5
1	G	324	GLY	4.5
1	F	345	PRO	4.5
1	G	57	VAL	4.5
1	G	79	VAL	4.5
1	F	48	ASP	4.4
1	G	357	ASP	4.4
1	I	351	ILE	4.4
1	J	323	ASN	4.4
1	E	347	ALA	4.4
1	F	49	ALA	4.4
1	G	353	ALA	4.4
1	C	176	GLN	4.4
1	L	346	ALA	4.3
1	D	345	PRO	4.3
1	A	44	GLY	4.3
1	G	41	SER	4.3
1	G	73	LEU	4.3
1	K	42	VAL	4.3
1	G	71	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
1	L	351	ILE	4.2
1	B	46	SER	4.2
1	G	75	ALA	4.2
1	H	8	LEU	4.2
1	H	358	TRP	4.2
1	A	349	ILE	4.2
1	K	351	ILE	4.2
1	C	69	LEU	4.2
1	G	293	ASN	4.2
1	C	351	ILE	4.2
1	G	107	ILE	4.2
1	G	178	SER	4.2
1	A	323	ASN	4.2
1	H	34	VAL	4.2
1	H	349	ILE	4.1
1	A	69	LEU	4.1
1	H	5	LEU	4.1
1	H	73	LEU	4.1
1	H	355	LEU	4.1
1	G	93	GLY	4.1
1	I	45	ILE	4.1
1	E	176	GLN	4.1
1	B	322	ALA	4.1
1	G	67	LEU	4.1
1	G	44	GLY	4.1
1	A	348	THR	4.1
1	F	359	ASP	4.1
1	G	1	MET	4.1
1	E	46	SER	4.1
1	H	176	GLN	4.1
1	D	351	ILE	4.1
1	G	77	ALA	4.1
1	F	56	ILE	4.1
1	I	346	ALA	4.0
1	F	176	GLN	4.0
1	D	47	ARG	4.0
1	G	97	GLU	4.0
1	G	88	VAL	4.0
1	C	345	PRO	4.0
1	E	45	ILE	4.0
1	D	324	GLY	4.0
1	F	47	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
1	A	74	ILE	4.0
1	G	62	LYS	4.0
1	F	347	ALA	3.9
1	F	355	LEU	3.9
1	J	72	LYS	3.9
1	L	349	ILE	3.9
1	G	59	ALA	3.9
1	K	102	VAL	3.9
1	H	47	ARG	3.9
1	L	359	ASP	3.9
1	J	44	GLY	3.9
1	G	292	ALA	3.9
1	F	323	ASN	3.9
1	G	76	LYS	3.9
1	A	75	ALA	3.9
1	C	75	ALA	3.9
1	I	41	SER	3.9
1	B	76	LYS	3.9
1	A	42	VAL	3.8
1	F	57	VAL	3.8
1	G	183	VAL	3.8
1	B	349	ILE	3.8
1	H	347	ALA	3.8
1	F	69	LEU	3.8
1	G	106	LEU	3.8
1	I	173	TRP	3.8
1	I	324	GLY	3.8
1	E	355	LEU	3.8
1	F	61	LEU	3.8
1	H	30	GLY	3.8
1	G	173	TRP	3.8
1	I	47	ARG	3.8
1	A	177	SER	3.8
1	G	99	CYS	3.8
1	H	353	ALA	3.7
1	G	101	LYS	3.7
1	F	354	VAL	3.7
1	A	347	ALA	3.7
1	F	11	VAL	3.7
1	D	48	ASP	3.7
1	G	179	GLY	3.7
1	G	176	GLN	3.7

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Mol	Chain	Res	Type	RSRZ
1	G	8	LEU	3.6
1	H	71	LEU	3.6
1	L	40	SER	3.6
1	H	57	VAL	3.6
1	H	354	VAL	3.6
1	K	180	LYS	3.6
1	E	58	THR	3.6
1	G	2	ALA	3.6
1	H	173	TRP	3.6
1	A	93	GLY	3.6
1	C	349	ILE	3.6
1	H	74	ILE	3.6
1	G	322	ALA	3.6
1	F	106	LEU	3.6
1	J	324	GLY	3.6
1	A	173	TRP	3.6
1	E	358	TRP	3.6
1	G	177	SER	3.6
1	C	350	ASP	3.6
1	H	59	ALA	3.6
1	J	49	ALA	3.6
1	H	345	PRO	3.6
1	C	47	ARG	3.6
1	G	108	TYR	3.6
1	L	324	GLY	3.6
1	B	358	TRP	3.5
1	J	144	ASP	3.5
1	L	173	TRP	3.5
1	H	56	ILE	3.5
1	E	75	ALA	3.5
1	F	59	ALA	3.5
1	H	322	ALA	3.5
1	A	76	LYS	3.5
1	A	92	LEU	3.5
1	G	63	SER	3.5
1	J	102	VAL	3.5
1	F	348	THR	3.5
1	G	356	THR	3.5
1	C	76	LYS	3.5
1	G	74	ILE	3.5
1	G	323	ASN	3.5
1	K	347	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
1	F	73	LEU	3.5
1	B	324	GLY	3.5
1	E	41	SER	3.5
1	A	358	TRP	3.5
1	F	76	LYS	3.5
1	B	44	GLY	3.5
1	A	47	ARG	3.5
1	G	72	LYS	3.5
1	D	348	THR	3.5
1	A	56	ILE	3.4
1	F	66	GLY	3.4
1	G	5	LEU	3.4
1	B	65	GLN	3.4
1	B	323	ASN	3.4
1	F	349	ILE	3.4
1	H	27	GLY	3.4
1	E	73	LEU	3.4
1	G	51	LEU	3.4
1	H	1	MET	3.4
1	H	324	GLY	3.4
1	C	49	ALA	3.4
1	G	49	ALA	3.4
1	K	49	ALA	3.4
1	C	358	TRP	3.4
1	C	348	THR	3.4
1	E	47	ARG	3.4
1	G	30	GLY	3.4
1	A	180	LYS	3.4
1	C	353	ALA	3.4
1	D	59	ALA	3.4
1	F	171	ALA	3.4
1	I	322	ALA	3.4
1	D	358	TRP	3.3
1	C	66	GLY	3.3
1	G	83	GLY	3.3
1	G	87	GLY	3.3
1	D	2	ALA	3.3
1	G	36	ILE	3.3
1	F	173	TRP	3.3
1	F	358	TRP	3.3
1	K	173	TRP	3.3
1	K	47	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
1	E	348	THR	3.3
1	A	46	SER	3.3
1	L	75	ALA	3.3
1	F	67	LEU	3.3
1	C	180	LYS	3.3
1	G	180	LYS	3.3
1	F	27	GLY	3.3
1	K	354	VAL	3.3
1	F	75	ALA	3.3
1	H	69	LEU	3.3
1	B	176	GLN	3.3
1	H	337	THR	3.2
1	E	179	GLY	3.2
1	G	66	GLY	3.2
1	L	345	PRO	3.2
1	F	92	LEU	3.2
1	F	293	ASN	3.2
1	I	349	ILE	3.2
1	F	180	LYS	3.2
1	K	350	ASP	3.2
1	C	177	SER	3.2
1	H	58	THR	3.2
1	D	102	VAL	3.2
1	C	59	ALA	3.2
1	F	72	LYS	3.2
1	G	100	ALA	3.2
1	H	72	LYS	3.2
1	A	80	LEU	3.2
1	G	80	LEU	3.2
1	J	349	ILE	3.2
1	D	176	GLN	3.2
1	K	176	GLN	3.2
1	A	58	THR	3.2
1	B	47	ARG	3.2
1	B	180	LYS	3.2
1	H	180	LYS	3.2
1	B	49	ALA	3.2
1	L	177	SER	3.2
1	E	345	PRO	3.2
1	A	72	LYS	3.2
1	A	88	VAL	3.1
1	A	322	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
1	E	10	VAL	3.1
1	F	10	VAL	3.1
1	H	2	ALA	3.1
1	F	71	LEU	3.1
1	F	74	ILE	3.1
1	K	359	ASP	3.1
1	A	41	SER	3.1
1	G	58	THR	3.1
1	I	323	ASN	3.1
1	B	144	ASP	3.1
1	D	49	ALA	3.1
1	F	70	ALA	3.1
1	C	74	ILE	3.1
1	K	69	LEU	3.1
1	H	40	SER	3.1
1	K	41	SER	3.1
1	K	76	LYS	3.1
1	H	49	ALA	3.1
1	H	106	LEU	3.1
1	B	1	MET	3.1
1	F	63	SER	3.1
1	D	7	GLY	3.1
1	E	30	GLY	3.1
1	E	39	PRO	3.1
1	G	39	PRO	3.1
1	C	105	ARG	3.1
1	F	79	VAL	3.1
1	K	73	LEU	3.1
1	K	355	LEU	3.1
1	D	56	ILE	3.1
1	G	349	ILE	3.1
1	K	1	MET	3.1
1	E	40	SER	3.1
1	K	358	TRP	3.0
1	E	180	LYS	3.0
1	H	31	ALA	3.0
1	J	75	ALA	3.0
1	G	184	VAL	3.0
1	D	74	ILE	3.0
1	F	81	ILE	3.0
1	B	30	GLY	3.0
1	C	30	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
1	I	207	MET	3.0
1	A	59	ALA	3.0
1	C	171	ALA	3.0
1	A	34	VAL	3.0
1	B	73	LEU	3.0
1	C	106	LEU	3.0
1	C	354	VAL	3.0
1	E	178	SER	3.0
1	G	92	LEU	3.0
1	L	92	LEU	3.0
1	D	107	ILE	3.0
1	G	3	GLY	3.0
1	G	348	THR	3.0
1	B	173	TRP	3.0
1	F	37	ASP	3.0
1	K	43	ASP	3.0
1	L	43	ASP	3.0
1	L	350	ASP	3.0
1	C	41	SER	3.0
1	H	46	SER	3.0
1	L	41	SER	3.0
1	K	34	VAL	3.0
1	K	79	VAL	3.0
1	E	7	GLY	3.0
1	L	44	GLY	3.0
1	K	58	THR	3.0
1	E	1	MET	3.0
1	I	176	GLN	2.9
1	H	105	ARG	2.9
1	J	353	ALA	2.9
1	A	355	LEU	2.9
1	H	80	LEU	2.9
1	E	324	GLY	2.9
1	F	62	LYS	2.9
1	H	359	ASP	2.9
1	J	43	ASP	2.9
1	K	348	THR	2.9
1	H	207	MET	2.9
1	G	326	TRP	2.9
1	I	68	GLU	2.9
1	B	59	ALA	2.9
1	F	353	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	G	171	ALA	2.9
1	L	7	GLY	2.9
1	C	34	VAL	2.9
1	B	348	THR	2.9
1	B	356	THR	2.9
1	L	1	MET	2.9
1	L	207	MET	2.9
1	G	352	GLU	2.9
1	G	46	SER	2.9
1	C	101	LYS	2.9
1	F	101	LYS	2.9
1	B	75	ALA	2.9
1	E	257	ALA	2.9
1	D	73	LEU	2.9
1	J	71	LEU	2.9
1	C	102	VAL	2.9
1	F	33	VAL	2.9
1	K	59	ALA	2.9
1	K	70	ALA	2.9
1	A	30	GLY	2.9
1	A	1	MET	2.8
1	A	61	LEU	2.8
1	C	8	LEU	2.8
1	E	5	LEU	2.8
1	G	32	ASP	2.8
1	G	64	ASP	2.8
1	H	50	MET	2.8
1	K	207	MET	2.8
1	D	42	VAL	2.8
1	B	350	ASP	2.8
1	C	93	GLY	2.8
1	F	30	GLY	2.8
1	F	292	ALA	2.8
1	L	181	GLY	2.8
1	C	51	LEU	2.8
1	D	355	LEU	2.8
1	F	80	LEU	2.8
1	L	71	LEU	2.8
1	D	173	TRP	2.8
1	I	358	TRP	2.8
1	A	79	VAL	2.8
1	C	10	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	F	88	VAL	2.8
1	F	356	THR	2.8
1	G	89	THR	2.8
1	H	348	THR	2.8
1	L	79	VAL	2.8
1	I	76	LYS	2.8
1	B	177	SER	2.8
1	F	41	SER	2.8
1	H	6	SER	2.8
1	G	207	MET	2.8
1	H	179	GLY	2.8
1	A	77	ALA	2.8
1	H	92	LEU	2.8
1	J	73	LEU	2.8
1	L	94	LEU	2.8
1	A	11	VAL	2.8
1	E	34	VAL	2.8
1	F	184	VAL	2.8
1	K	96	PRO	2.8
1	E	323	ASN	2.8
1	C	46	SER	2.8
1	F	46	SER	2.8
1	K	178	SER	2.8
1	F	1	MET	2.8
1	E	66	GLY	2.8
1	F	87	GLY	2.8
1	B	257	ALA	2.8
1	F	322	ALA	2.8
1	F	94	LEU	2.8
1	A	62	LYS	2.8
1	F	183	VAL	2.8
1	E	56	ILE	2.8
1	F	107	ILE	2.8
1	K	56	ILE	2.8
1	G	103	ASN	2.7
1	J	40	SER	2.7
1	K	50	MET	2.7
1	A	43	ASP	2.7
1	D	30	GLY	2.7
1	B	353	ALA	2.7
1	H	76	LYS	2.7
1	H	320	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
1	K	172	LEU	2.7
1	L	69	LEU	2.7
1	F	89	THR	2.7
1	L	47	ARG	2.7
1	F	34	VAL	2.7
1	G	65	GLN	2.7
1	C	104	ASP	2.7
1	H	350	ASP	2.7
1	I	350	ASP	2.7
1	C	77	ALA	2.7
1	E	353	ALA	2.7
1	C	169	LEU	2.7
1	K	39	PRO	2.7
1	D	79	VAL	2.7
1	K	10	VAL	2.7
1	F	177	SER	2.7
1	I	144	ASP	2.7
1	C	173	TRP	2.7
1	E	173	TRP	2.7
1	A	7	GLY	2.7
1	C	181	GLY	2.7
1	H	7	GLY	2.7
1	J	93	GLY	2.7
1	H	338	ALA	2.7
1	K	75	ALA	2.7
1	A	73	LEU	2.7
1	C	355	LEU	2.7
1	D	94	LEU	2.7
1	E	356	THR	2.7
1	J	355	LEU	2.7
1	F	96	PRO	2.7
1	E	207	MET	2.7
1	A	6	SER	2.7
1	B	357	ASP	2.7
1	D	357	ASP	2.7
1	F	36	ILE	2.7
1	J	33	VAL	2.7
1	J	42	VAL	2.7
1	K	107	ILE	2.7
1	K	357	ASP	2.7
1	F	7	GLY	2.7
1	G	47	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
1	E	65	GLN	2.6
1	J	207	MET	2.6
1	J	348	THR	2.6
1	K	67	LEU	2.6
1	A	178	SER	2.6
1	B	102	VAL	2.6
1	C	33	VAL	2.6
1	L	42	VAL	2.6
1	L	76	LYS	2.6
1	F	65	GLN	2.6
1	C	207	MET	2.6
1	I	1	MET	2.6
1	L	353	ALA	2.6
1	F	58	THR	2.6
1	K	94	LEU	2.6
1	L	355	LEU	2.6
1	H	43	ASP	2.6
1	J	359	ASP	2.6
1	K	40	SER	2.6
1	C	91	ARG	2.6
1	C	108	TYR	2.6
1	B	354	VAL	2.6
1	A	95	GLY	2.6
1	L	176	GLN	2.6
1	E	59	ALA	2.6
1	H	326	TRP	2.6
1	J	173	TRP	2.6
1	C	39	PRO	2.6
1	D	69	LEU	2.6
1	F	259	LEU	2.6
1	G	40	SER	2.6
1	H	334	PHE	2.6
1	J	47	ARG	2.6
1	C	79	VAL	2.6
1	D	65	GLN	2.6
1	D	349	ILE	2.6
1	L	102	VAL	2.6
1	E	352	GLU	2.6
1	C	1	MET	2.6
1	E	31	ALA	2.6
1	E	337	THR	2.6
1	E	43	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
1	F	350	ASP	2.6
1	G	359	ASP	2.6
1	A	67	LEU	2.6
1	J	69	LEU	2.6
1	K	51	LEU	2.6
1	L	6	SER	2.6
1	L	80	LEU	2.6
1	A	354	VAL	2.5
1	C	107	ILE	2.5
1	F	102	VAL	2.5
1	H	102	VAL	2.5
1	H	107	ILE	2.5
1	I	10	VAL	2.5
1	K	74	ILE	2.5
1	K	93	GLY	2.5
1	C	62	LYS	2.5
1	B	289	ALA	2.5
1	G	31	ALA	2.5
1	H	342	PRO	2.5
1	E	106	LEU	2.5
1	G	26	LEU	2.5
1	H	172	LEU	2.5
1	I	355	LEU	2.5
1	K	71	LEU	2.5
1	F	326	TRP	2.5
1	L	358	TRP	2.5
1	A	50	MET	2.5
1	E	50	MET	2.5
1	A	10	VAL	2.5
1	D	11	VAL	2.5
1	F	181	GLY	2.5
1	K	11	VAL	2.5
1	K	181	GLY	2.5
1	D	320	TYR	2.5
1	H	357	ASP	2.5
1	A	289	ALA	2.5
1	B	178	SER	2.5
1	B	243[A]	GLN	2.5
1	C	2	ALA	2.5
1	D	353	ALA	2.5
1	H	352	GLU	2.5
1	C	67	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	E	80	LEU	2.5
1	E	172	LEU	2.5
1	K	72	LYS	2.5
1	C	57	VAL	2.5
1	H	16	ILE	2.5
1	J	11	VAL	2.5
1	B	204	ALA	2.5
1	E	77	ALA	2.5
1	H	100	ALA	2.5
1	A	94	LEU	2.5
1	B	355	LEU	2.5
1	D	5	LEU	2.5
1	I	69	LEU	2.5
1	K	80	LEU	2.5
1	E	62	LYS	2.5
1	B	7	GLY	2.5
1	H	93	GLY	2.5
1	L	30	GLY	2.5
1	K	323	ASN	2.5
1	D	183	VAL	2.4
1	D	354	VAL	2.4
1	H	11	VAL	2.4
1	B	43	ASP	2.4
1	F	357	ASP	2.4
1	A	99	CYS	2.4
1	F	99	CYS	2.4
1	C	40	SER	2.4
1	H	41	SER	2.4
1	B	77	ALA	2.4
1	H	170	ALA	2.4
1	I	2	ALA	2.4
1	J	100	ALA	2.4
1	L	50	MET	2.4
1	G	13	LEU	2.4
1	H	26	LEU	2.4
1	K	101	LYS	2.4
1	C	87	GLY	2.4
1	C	65	GLN	2.4
1	G	116	GLN	2.4
1	A	183	VAL	2.4
1	A	290	VAL	2.4
1	C	183	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
1	H	183	VAL	2.4
1	L	88	VAL	2.4
1	G	6	SER	2.4
1	D	1	MET	2.4
1	B	72	LYS	2.4
1	C	71	LEU	2.4
1	F	5	LEU	2.4
1	L	73	LEU	2.4
1	C	7	GLY	2.4
1	E	93	GLY	2.4
1	K	65	GLN	2.4
1	J	37	ASP	2.4
1	C	11	VAL	2.4
1	E	33	VAL	2.4
1	H	33	VAL	2.4
1	C	72	LYS	2.4
1	G	9	ARG	2.4
1	A	344	PRO	2.4
1	F	39	PRO	2.4
1	A	49	ALA	2.4
1	F	2	ALA	2.4
1	G	181	GLY	2.4
1	G	48	ASP	2.4
1	G	54	ARG	2.4
1	G	105	ARG	2.4
1	J	10	VAL	2.4
1	E	76	LYS	2.4
1	A	96	PRO	2.4
1	A	70	ALA	2.3
1	E	171	ALA	2.3
1	G	14	ALA	2.3
1	H	171	ALA	2.3
1	H	65	GLN	2.3
1	D	44	GLY	2.3
1	K	325	GLY	2.3
1	F	144	ASP	2.3
1	G	78	ASP	2.3
1	G	104	ASP	2.3
1	G	350	ASP	2.3
1	F	50	MET	2.3
1	D	177	SER	2.3
1	F	178	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	100	ALA	2.3
1	C	61	LEU	2.3
1	C	73	LEU	2.3
1	G	325	GLY	2.3
1	C	357	ASP	2.3
1	J	48	ASP	2.3
1	K	48	ASP	2.3
1	E	105	ARG	2.3
1	D	180	LYS	2.3
1	H	62	LYS	2.3
1	J	41	SER	2.3
1	J	63	SER	2.3
1	E	16	ILE	2.3
1	G	168	ILE	2.3
1	H	314	ILE	2.3
1	A	68	GLU	2.3
1	C	166	VAL	2.3
1	H	79	VAL	2.3
1	J	352	GLU	2.3
1	D	70	ALA	2.3
1	D	204	ALA	2.3
1	F	31	ALA	2.3
1	H	14	ALA	2.3
1	L	49	ALA	2.3
1	A	288	GLY	2.3
1	B	61	LEU	2.3
1	C	167	GLY	2.3
1	D	8	LEU	2.3
1	D	95	GLY	2.3
1	E	350	ASP	2.3
1	F	51	LEU	2.3
1	F	83	GLY	2.3
1	G	91	ARG	2.3
1	H	3	GLY	2.3
1	J	178	SER	2.3
1	K	63	SER	2.3
1	G	334	PHE	2.3
1	B	56	ILE	2.3
1	K	183	VAL	2.3
1	L	34	VAL	2.3
1	A	89	THR	2.3
1	G	38	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
1	G	55	ARG	2.3
1	H	38	ARG	2.3
1	H	77	ALA	2.3
1	H	66	GLY	2.3
1	E	94	LEU	2.3
1	F	164	LEU	2.3
1	J	67	LEU	2.3
1	K	108	TYR	2.3
1	C	178	SER	2.2
1	H	178	SER	2.2
1	J	65	GLN	2.2
1	A	57	VAL	2.2
1	D	290	VAL	2.2
1	F	344	PRO	2.2
1	K	57	VAL	2.2
1	D	43	ASP	2.2
1	G	37	ASP	2.2
1	A	23	ALA	2.2
1	C	70	ALA	2.2
1	C	179	GLY	2.2
1	E	181	GLY	2.2
1	E	325	GLY	2.2
1	H	75	ALA	2.2
1	I	7	GLY	2.2
1	I	77	ALA	2.2
1	H	61	LEU	2.2
1	J	358	TRP	2.2
1	B	6	SER	2.2
1	B	62	LYS	2.2
1	D	76	LYS	2.2
1	I	42	VAL	2.2
1	I	345	PRO	2.2
1	L	74	ILE	2.2
1	G	144	ASP	2.2
1	C	100	ALA	2.2
1	E	322	ALA	2.2
1	F	100	ALA	2.2
1	H	204	ALA	2.2
1	I	75	ALA	2.2
1	I	257	ALA	2.2
1	E	69	LEU	2.2
1	G	172	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	H	51	LEU	2.2
1	J	5	LEU	2.2
1	J	51	LEU	2.2
1	F	38	ARG	2.2
1	A	81	ILE	2.2
1	D	334	PHE	2.2
1	B	50	MET	2.2
1	B	359	ASP	2.2
1	D	359	ASP	2.2
1	E	354	VAL	2.2
1	K	33	VAL	2.2
1	D	179	GLY	2.2
1	D	321	GLU	2.2
1	D	325	GLY	2.2
1	L	68	GLU	2.2
1	C	170	ALA	2.2
1	K	77	ALA	2.2
1	B	69	LEU	2.2
1	D	71	LEU	2.2
1	B	40	SER	2.2
1	E	177	SER	2.2
1	F	9	ARG	2.2
1	H	343	ARG	2.2
1	L	326	TRP	2.2
1	E	144	ASP	2.2
1	L	357	ASP	2.2
1	E	314	ILE	2.1
1	J	74	ILE	2.1
1	H	184	VAL	2.1
1	A	66	GLY	2.1
1	D	93	GLY	2.1
1	F	19	GLY	2.1
1	I	30	GLY	2.1
1	A	171	ALA	2.1
1	H	331	ALA	2.1
1	K	171	ALA	2.1
1	C	94	LEU	2.1
1	F	26	LEU	2.1
1	H	94	LEU	2.1
1	J	8	LEU	2.1
1	I	40	SER	2.1
1	D	50	MET	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	60	ASP	2.1
1	G	43	ASP	2.1
1	A	356	THR	2.1
1	B	58	THR	2.1
1	J	58	THR	2.1
1	D	326	TRP	2.1
1	A	36	ILE	2.1
1	B	74	ILE	2.1
1	C	56	ILE	2.1
1	G	81	ILE	2.1
1	K	36	ILE	2.1
1	E	167	GLY	2.1
1	J	354	VAL	2.1
1	L	183	VAL	2.1
1	L	290	VAL	2.1
1	B	31	ALA	2.1
1	C	322	ALA	2.1
1	J	59	ALA	2.1
1	H	169	LEU	2.1
1	L	51	LEU	2.1
1	E	104	ASP	2.1
1	G	60	ASP	2.1
1	C	96	PRO	2.1
1	A	38	ARG	2.1
1	G	27	GLY	2.1
1	G	288	GLY	2.1
1	B	11	VAL	2.1
1	J	62	LYS	2.1
1	B	70	ALA	2.1
1	B	171	ALA	2.1
1	G	109	ALA	2.1
1	H	70	ALA	2.1
1	K	2	ALA	2.1
1	L	77	ALA	2.1
1	L	347	ALA	2.1
1	B	5	LEU	2.1
1	D	26	LEU	2.1
1	D	67	LEU	2.1
1	E	67	LEU	2.1
1	F	13	LEU	2.1
1	I	80	LEU	2.1
1	J	94	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	207	MET	2.1
1	E	357	ASP	2.1
1	I	357	ASP	2.1
1	H	356	THR	2.1
1	K	38	ARG	2.1
1	C	36	ILE	2.1
1	I	74	ILE	2.1
1	L	180	LYS	2.1
1	H	10	VAL	2.1
1	D	6	SER	2.1
1	H	257	ALA	2.1
1	I	109	ALA	2.1
1	I	256	ALA	2.1
1	J	61	LEU	2.0
1	G	182	GLN	2.0
1	K	243[A]	GLN	2.0
1	G	175	ARG	2.0
1	A	39	PRO	2.0
1	G	86	PRO	2.0
1	J	39	PRO	2.0
1	G	95	GLY	2.0
1	H	108	TYR	2.0
1	A	102	VAL	2.0
1	E	88	VAL	2.0
1	F	321	GLU	2.0
1	G	194	VAL	2.0
1	D	178	SER	2.0
1	H	63	SER	2.0
1	E	2	ALA	2.0
1	E	49	ALA	2.0
1	J	2	ALA	2.0
1	J	171	ALA	2.0
1	B	67	LEU	2.0
1	G	29	LEU	2.0
1	D	350	ASP	2.0
1	E	359	ASP	2.0
1	F	28	ASP	2.0
1	B	105	ARG	2.0
1	E	38	ARG	2.0
1	K	62	LYS	2.0
1	C	58	THR	2.0
1	J	95	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
1	L	167	GLY	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](#)

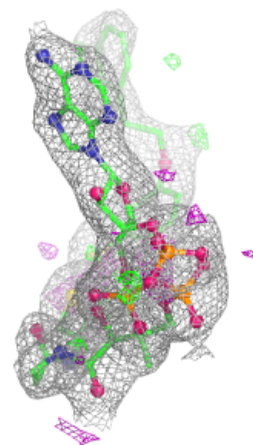
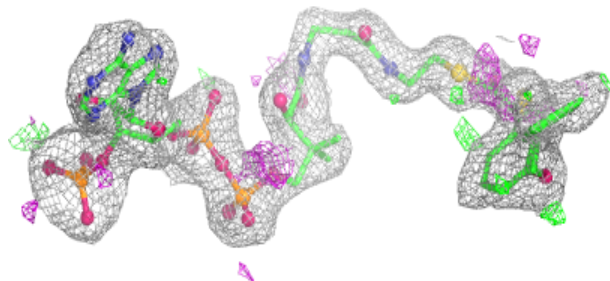
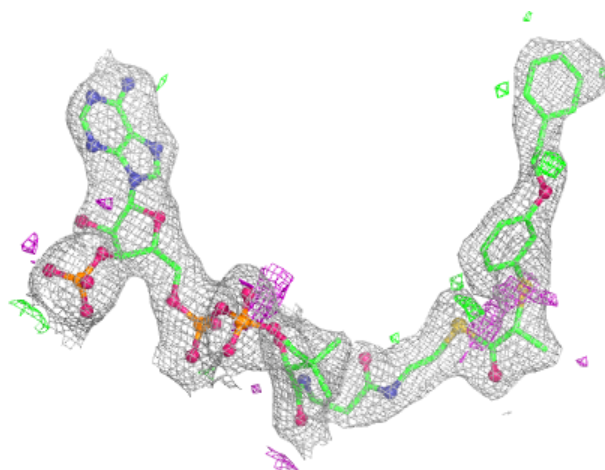
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists 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	A1JJ3	E	401	68/68	0.91	0.15	36,55,88,96	0
2	A1JJ3	H	401	68/68	0.91	0.15	38,54,91,95	0
2	A1JJ3	G	401	68/68	0.93	0.15	27,51,91,99	0
2	A1JJ3	A	401	68/68	0.93	0.14	28,48,85,104	0
2	A1JJ3	F	401	68/68	0.94	0.13	25,49,99,104	0
2	A1JJ3	B	401	68/68	0.95	0.12	26,45,101,105	0
2	A1JJ3	C	401	68/68	0.95	0.13	29,46,100,106	0
2	A1JJ3	J	401	68/68	0.95	0.12	23,44,93,97	0
2	A1JJ3	K	401	68/68	0.95	0.13	27,46,93,103	0
2	A1JJ3	I	401	68/68	0.96	0.11	23,39,98,107	0
2	A1JJ3	L	401	68/68	0.96	0.11	27,38,84,96	0
2	A1JJ3	D	401	68/68	0.97	0.10	22,37,94,108	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.

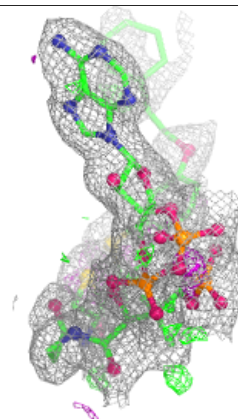
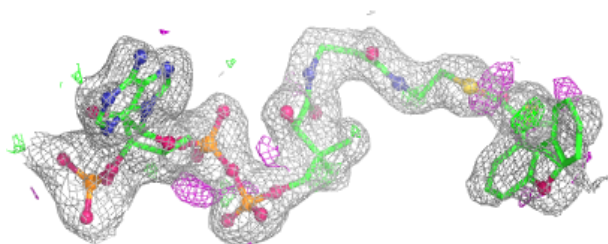
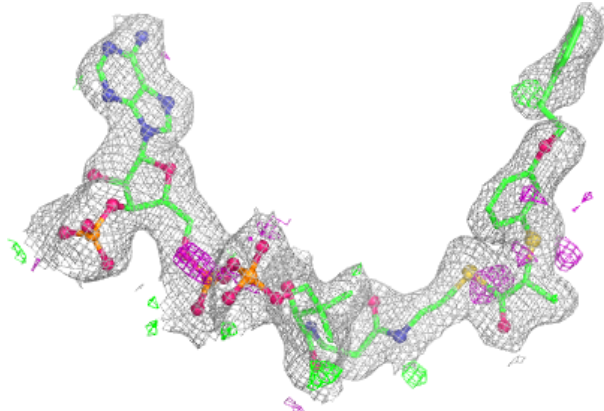
Electron density around A1JJ3 E 401:

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

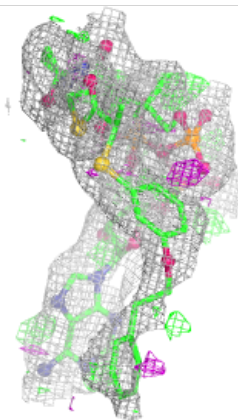
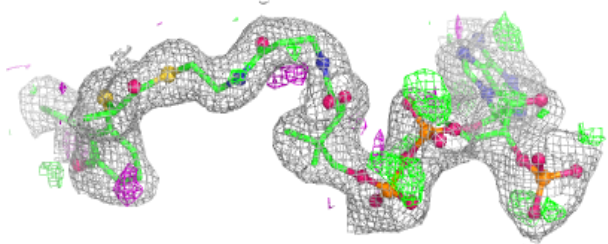
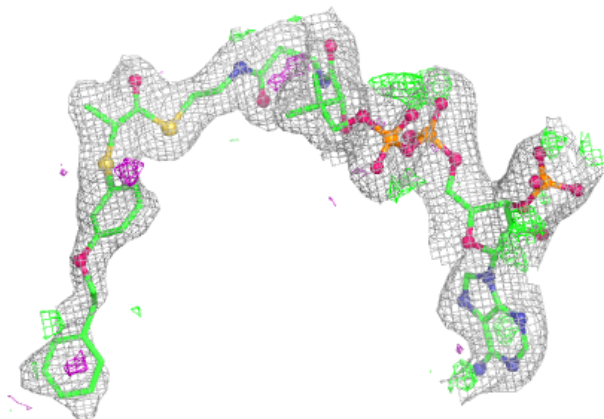


Electron density around A1JJ3 H 401:

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

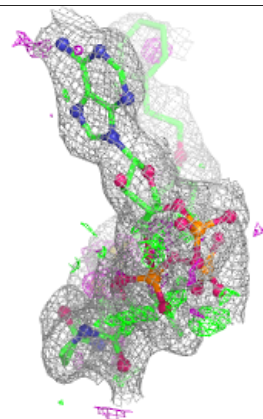
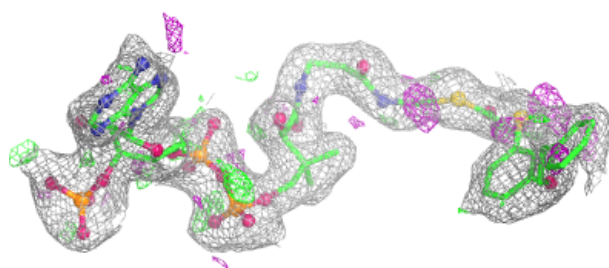
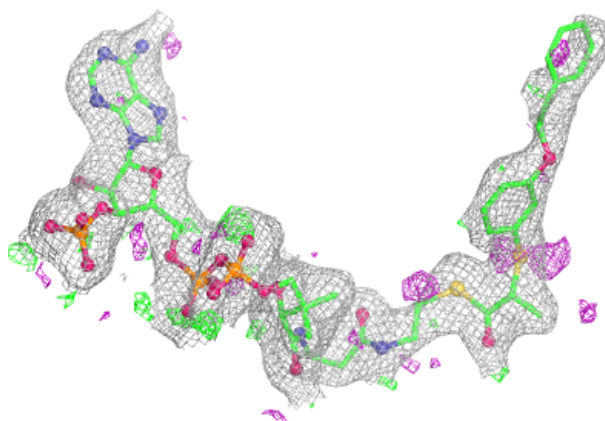
**Electron density around A1JJ3 G 401:**

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



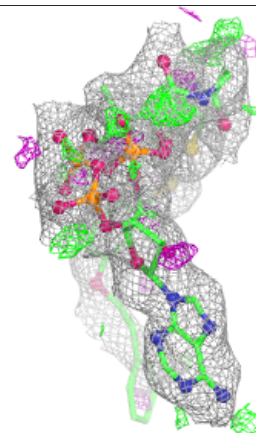
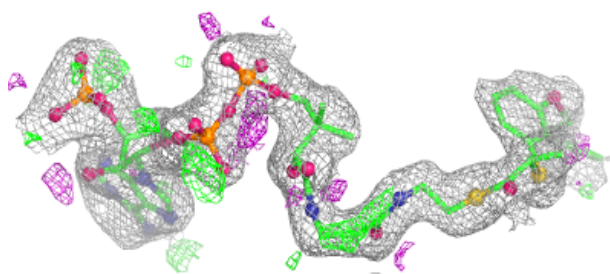
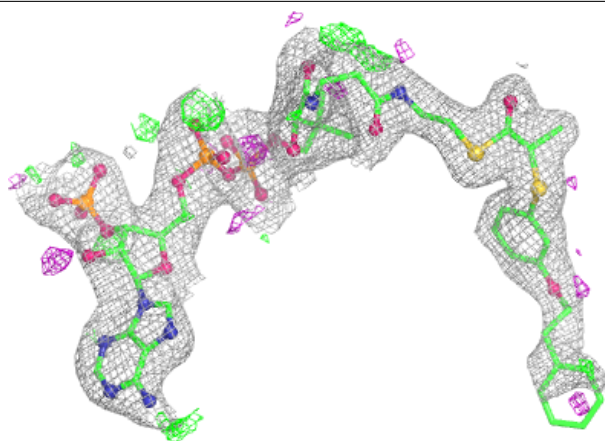
Electron density around A1JJ3 A 401:

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



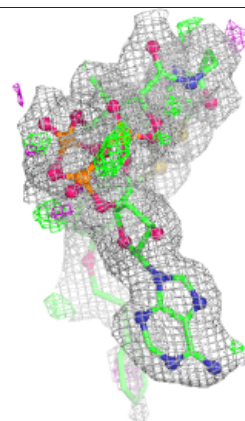
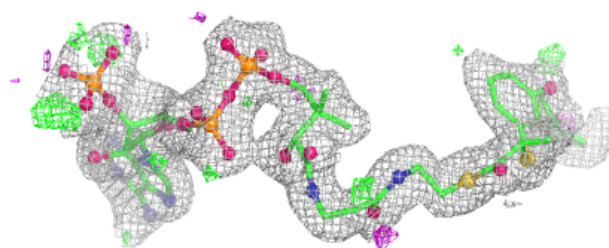
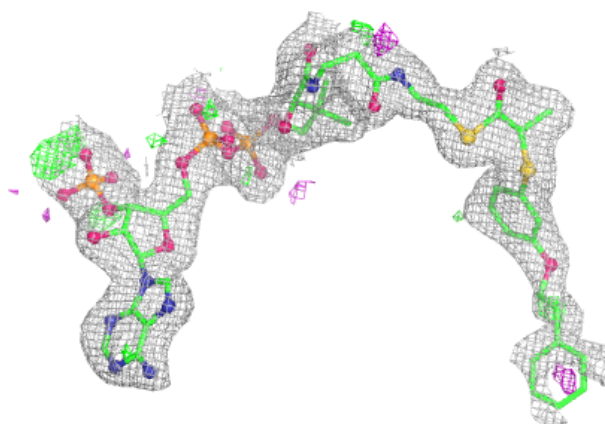
Electron density around A1JJ3 F 401:

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



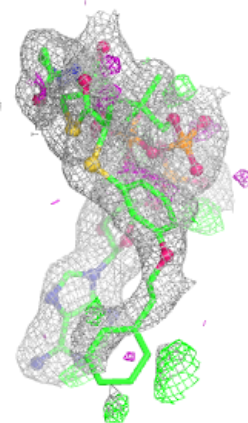
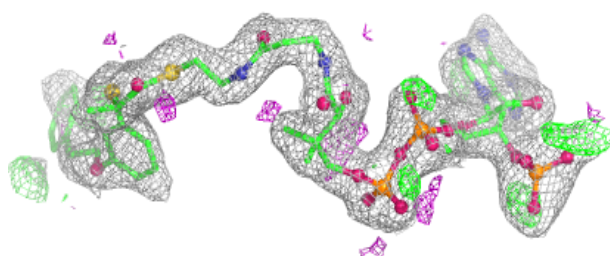
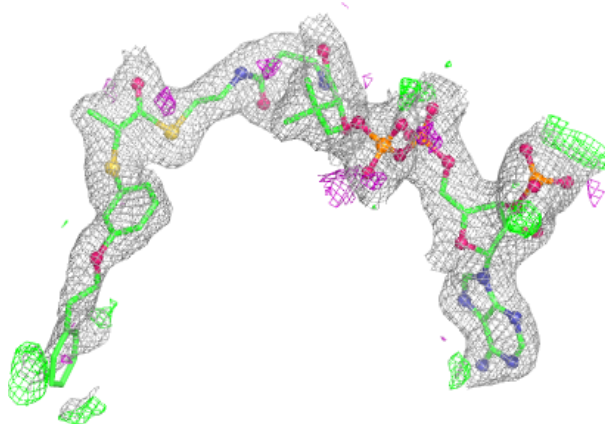
Electron density around A1JJ3 B 401:

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

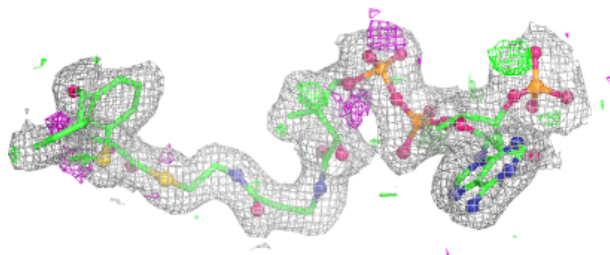
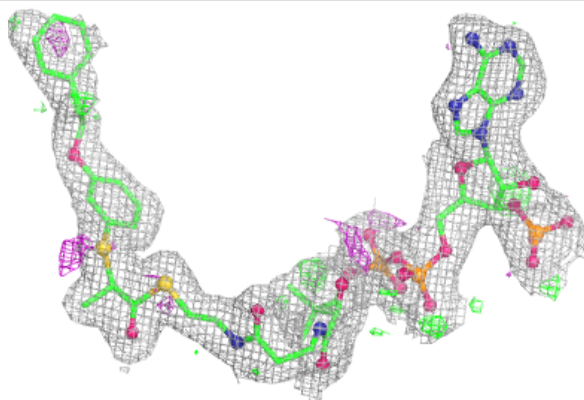


Electron density around A1JJ3 C 401:

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

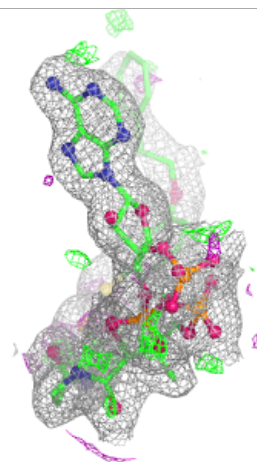
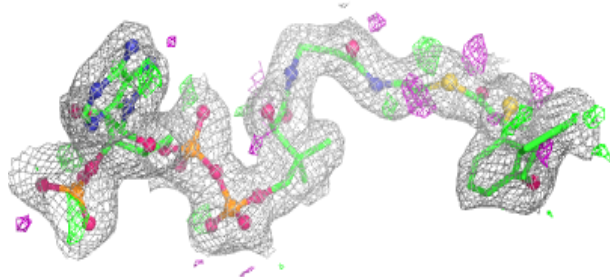
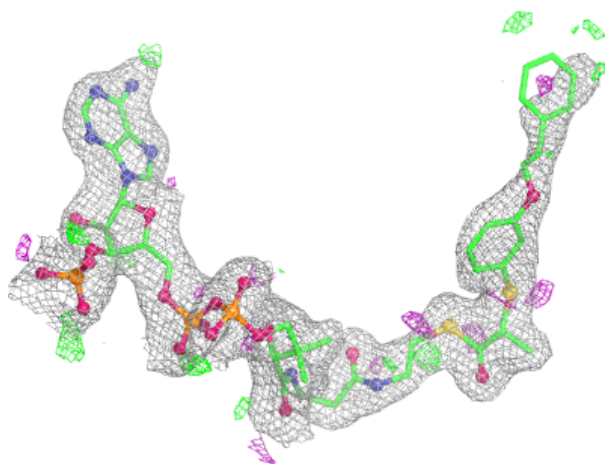
**Electron density around A1JJ3 J 401:**

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



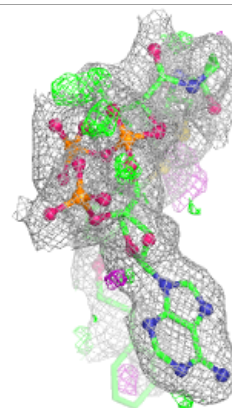
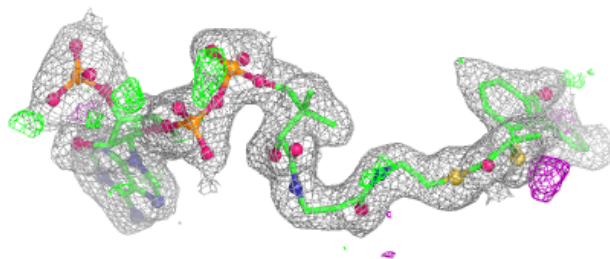
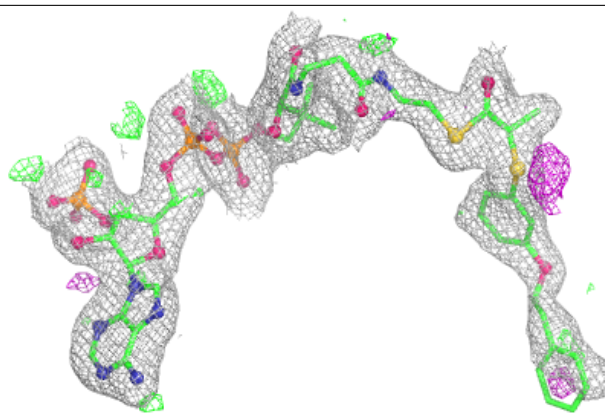
Electron density around A1JJ3 K 401:

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

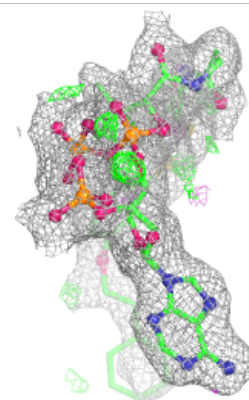
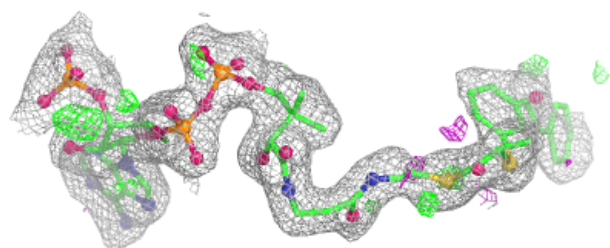
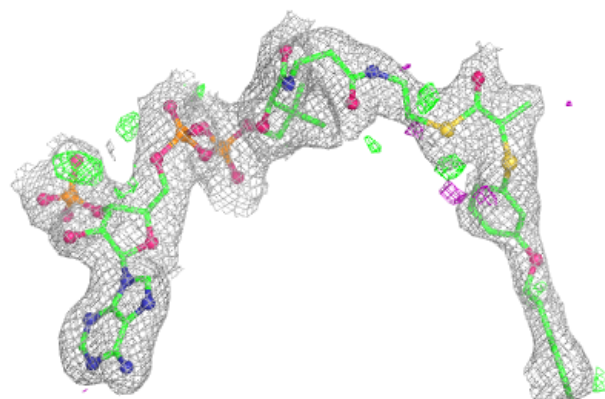


Electron density around A1JJ3 I 401:

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

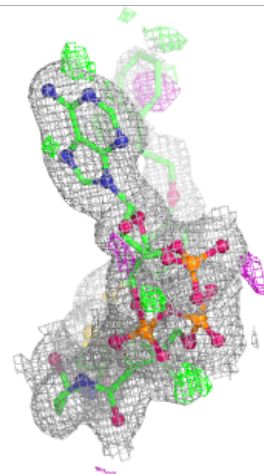
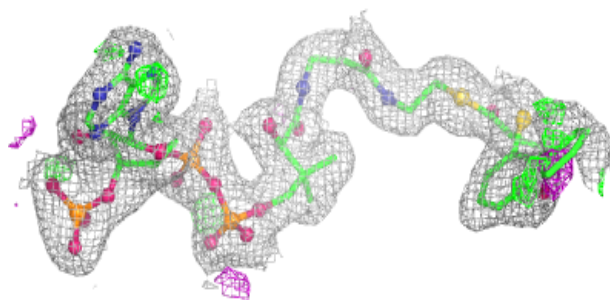
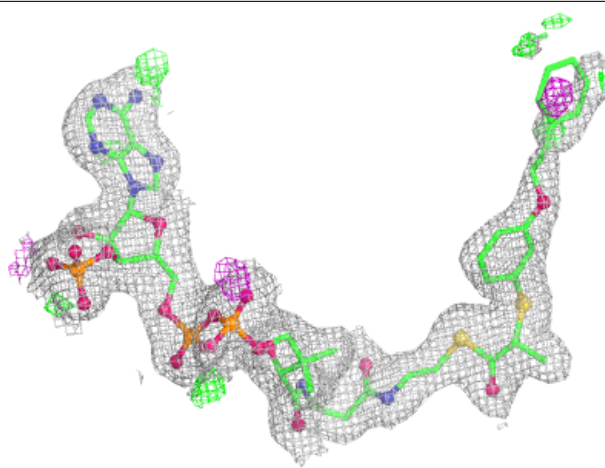
**Electron density around A1JJ3 L 401:**

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



Electron density around A1JJ3 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.