wwPDB X-ray Structure Validation Summary Report (i)

Nov 11, 2026 – 12:52 pm GMT

PDB ID	:	32DI / pdb_000032di
Title	:	RAD52 N-terminal domain in complex with fragment Z369737780
Authors	:	Bocquet, N.; Powell, A.J.; Barker, I.A.
Deposited on	:	2026-07-06
Resolution	:	2.10 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) 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 (i)) were used in the production of this report:

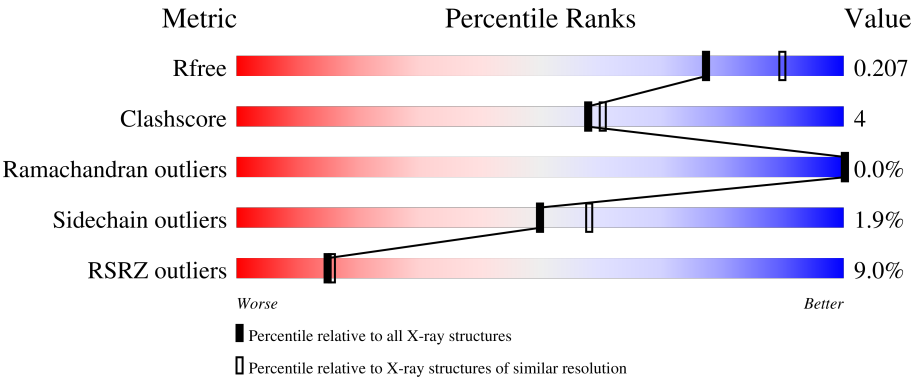
MolProbity	:	4-5-2 with Phenix2.2
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.2
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.10 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 <=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	215	8% 76% 10% 13%
1	B	215	9% 80% 6% • 13%
1	C	215	6% 77% 9% • 13%
1	D	215	9% 80% 7% 13%
1	E	215	6% 81% 6% • 12%

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Mol	Chain	Length	Quality of chain
1	F	215	8% 80% 6% 13%
1	G	215	6% 75% 11% 13%
1	H	215	11% 78% 8% 12%
1	I	215	11% 77% 8% 13%
1	J	215	12% 76% 10% 13%
1	K	215	15% 73% 12% 13%
1	L	215	6% 79% 8% 13%
1	M	215	7% 77% 10% 12%
1	N	215	6% 77% 8% 13%
1	O	215	7% 77% 8% 13%
1	P	215	9% 79% 7% 13%
1	Q	215	7% 79% 8% 13%
1	R	215	5% 78% 8% 13%
1	S	215	6% 80% 7% 13%
1	T	215	8% 79% 8% 13%
1	U	215	5% 78% 7% 13%
1	V	215	7% 80% 6% 13%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	EDO	C	305	-	-	X	-
3	EDO	G	301	-	-	X	-
3	EDO	H	303	-	-	X	-
3	EDO	I	301	-	-	X	-
3	EDO	K	305	-	-	X	-
3	EDO	T	304	-	-	X	-
3	EDO	V	301	-	-	X	-

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 35430 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 DNA repair protein RAD52 homolog.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	186	Total	C	N	O	S	0	2	0
			1479	922	270	279	8			
1	B	187	Total	C	N	O	S	0	2	0
			1488	929	269	282	8			
1	C	188	Total	C	N	O	S	0	2	0
			1492	929	271	283	9			
1	D	188	Total	C	N	O	S	0	1	0
			1481	922	269	281	9			
1	E	189	Total	C	N	O	S	0	0	0
			1481	924	268	280	9			
1	F	187	Total	C	N	O	S	0	1	0
			1479	922	270	279	8			
1	G	187	Total	C	N	O	S	0	2	0
			1484	923	272	281	8			
1	H	189	Total	C	N	O	S	0	2	0
			1500	934	274	283	9			
1	I	187	Total	C	N	O	S	0	0	0
			1462	912	265	277	8			
1	J	187	Total	C	N	O	S	0	2	0
			1487	926	272	281	8			
1	K	187	Total	C	N	O	S	0	2	0
			1482	923	269	281	9			
1	L	187	Total	C	N	O	S	0	2	0
			1487	926	272	281	8			
1	M	189	Total	C	N	O	S	0	2	0
			1500	934	274	283	9			
1	N	187	Total	C	N	O	S	0	3	0
			1492	929	273	282	8			
1	O	187	Total	C	N	O	S	0	2	0
			1488	929	269	282	8			
1	P	188	Total	C	N	O	S	0	2	0
			1492	929	273	282	8			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Q	188	Total	C	N	O	S	0	2	0
			1493	932	270	283	8			
1	R	187	Total	C	N	O	S	0	1	0
			1476	920	268	280	8			
1	S	188	Total	C	N	O	S	0	0	0
			1473	919	267	279	8			
1	T	188	Total	C	N	O	S	0	2	0
			1493	932	270	283	8			
1	U	188	Total	C	N	O	S	0	1	0
			1484	925	271	280	8			
1	V	187	Total	C	N	O	S	0	1	0
			1479	922	270	279	8			

There are 110 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLY	-	expression tag	UNP P43351
A	-1	SER	-	expression tag	UNP P43351
A	0	HIS	-	expression tag	UNP P43351
A	102	ALA	LYS	engineered mutation	UNP P43351
A	133	ALA	LYS	engineered mutation	UNP P43351
B	-2	GLY	-	expression tag	UNP P43351
B	-1	SER	-	expression tag	UNP P43351
B	0	HIS	-	expression tag	UNP P43351
B	102	ALA	LYS	engineered mutation	UNP P43351
B	133	ALA	LYS	engineered mutation	UNP P43351
C	-2	GLY	-	expression tag	UNP P43351
C	-1	SER	-	expression tag	UNP P43351
C	0	HIS	-	expression tag	UNP P43351
C	102	ALA	LYS	engineered mutation	UNP P43351
C	133	ALA	LYS	engineered mutation	UNP P43351
D	-2	GLY	-	expression tag	UNP P43351
D	-1	SER	-	expression tag	UNP P43351
D	0	HIS	-	expression tag	UNP P43351
D	102	ALA	LYS	engineered mutation	UNP P43351
D	133	ALA	LYS	engineered mutation	UNP P43351
E	-2	GLY	-	expression tag	UNP P43351
E	-1	SER	-	expression tag	UNP P43351
E	0	HIS	-	expression tag	UNP P43351
E	102	ALA	LYS	engineered mutation	UNP P43351
E	133	ALA	LYS	engineered mutation	UNP P43351
F	-2	GLY	-	expression tag	UNP P43351
F	-1	SER	-	expression tag	UNP P43351

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Chain	Residue	Modelled	Actual	Comment	Reference
F	0	HIS	-	expression tag	UNP P43351
F	102	ALA	LYS	engineered mutation	UNP P43351
F	133	ALA	LYS	engineered mutation	UNP P43351
G	-2	GLY	-	expression tag	UNP P43351
G	-1	SER	-	expression tag	UNP P43351
G	0	HIS	-	expression tag	UNP P43351
G	102	ALA	LYS	engineered mutation	UNP P43351
G	133	ALA	LYS	engineered mutation	UNP P43351
H	-2	GLY	-	expression tag	UNP P43351
H	-1	SER	-	expression tag	UNP P43351
H	0	HIS	-	expression tag	UNP P43351
H	102	ALA	LYS	engineered mutation	UNP P43351
H	133	ALA	LYS	engineered mutation	UNP P43351
I	-2	GLY	-	expression tag	UNP P43351
I	-1	SER	-	expression tag	UNP P43351
I	0	HIS	-	expression tag	UNP P43351
I	102	ALA	LYS	engineered mutation	UNP P43351
I	133	ALA	LYS	engineered mutation	UNP P43351
J	-2	GLY	-	expression tag	UNP P43351
J	-1	SER	-	expression tag	UNP P43351
J	0	HIS	-	expression tag	UNP P43351
J	102	ALA	LYS	engineered mutation	UNP P43351
J	133	ALA	LYS	engineered mutation	UNP P43351
K	-2	GLY	-	expression tag	UNP P43351
K	-1	SER	-	expression tag	UNP P43351
K	0	HIS	-	expression tag	UNP P43351
K	102	ALA	LYS	engineered mutation	UNP P43351
K	133	ALA	LYS	engineered mutation	UNP P43351
L	-2	GLY	-	expression tag	UNP P43351
L	-1	SER	-	expression tag	UNP P43351
L	0	HIS	-	expression tag	UNP P43351
L	102	ALA	LYS	engineered mutation	UNP P43351
L	133	ALA	LYS	engineered mutation	UNP P43351
M	-2	GLY	-	expression tag	UNP P43351
M	-1	SER	-	expression tag	UNP P43351
M	0	HIS	-	expression tag	UNP P43351
M	102	ALA	LYS	engineered mutation	UNP P43351
M	133	ALA	LYS	engineered mutation	UNP P43351
N	-2	GLY	-	expression tag	UNP P43351
N	-1	SER	-	expression tag	UNP P43351
N	0	HIS	-	expression tag	UNP P43351
N	102	ALA	LYS	engineered mutation	UNP P43351

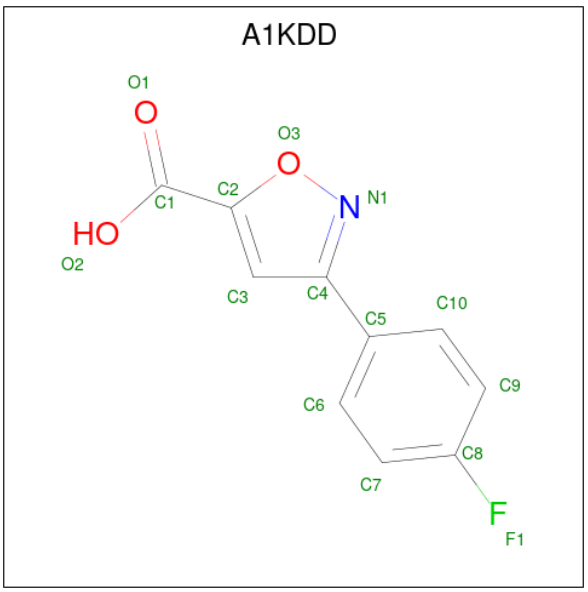
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Chain	Residue	Modelled	Actual	Comment	Reference
N	133	ALA	LYS	engineered mutation	UNP P43351
O	-2	GLY	-	expression tag	UNP P43351
O	-1	SER	-	expression tag	UNP P43351
O	0	HIS	-	expression tag	UNP P43351
O	102	ALA	LYS	engineered mutation	UNP P43351
O	133	ALA	LYS	engineered mutation	UNP P43351
P	-2	GLY	-	expression tag	UNP P43351
P	-1	SER	-	expression tag	UNP P43351
P	0	HIS	-	expression tag	UNP P43351
P	102	ALA	LYS	engineered mutation	UNP P43351
P	133	ALA	LYS	engineered mutation	UNP P43351
Q	-2	GLY	-	expression tag	UNP P43351
Q	-1	SER	-	expression tag	UNP P43351
Q	0	HIS	-	expression tag	UNP P43351
Q	102	ALA	LYS	engineered mutation	UNP P43351
Q	133	ALA	LYS	engineered mutation	UNP P43351
R	-2	GLY	-	expression tag	UNP P43351
R	-1	SER	-	expression tag	UNP P43351
R	0	HIS	-	expression tag	UNP P43351
R	102	ALA	LYS	engineered mutation	UNP P43351
R	133	ALA	LYS	engineered mutation	UNP P43351
S	-2	GLY	-	expression tag	UNP P43351
S	-1	SER	-	expression tag	UNP P43351
S	0	HIS	-	expression tag	UNP P43351
S	102	ALA	LYS	engineered mutation	UNP P43351
S	133	ALA	LYS	engineered mutation	UNP P43351
T	-2	GLY	-	expression tag	UNP P43351
T	-1	SER	-	expression tag	UNP P43351
T	0	HIS	-	expression tag	UNP P43351
T	102	ALA	LYS	engineered mutation	UNP P43351
T	133	ALA	LYS	engineered mutation	UNP P43351
U	-2	GLY	-	expression tag	UNP P43351
U	-1	SER	-	expression tag	UNP P43351
U	0	HIS	-	expression tag	UNP P43351
U	102	ALA	LYS	engineered mutation	UNP P43351
U	133	ALA	LYS	engineered mutation	UNP P43351
V	-2	GLY	-	expression tag	UNP P43351
V	-1	SER	-	expression tag	UNP P43351
V	0	HIS	-	expression tag	UNP P43351
V	102	ALA	LYS	engineered mutation	UNP P43351
V	133	ALA	LYS	engineered mutation	UNP P43351

- Molecule 2 is 3-(4-fluorophenyl)-1,2-oxazole-5-carboxylic acid (CCD ID: A1KDD) (formula:

$C_{10}H_6FNO_3$) (labeled as "Ligand of Interest" by depositor).



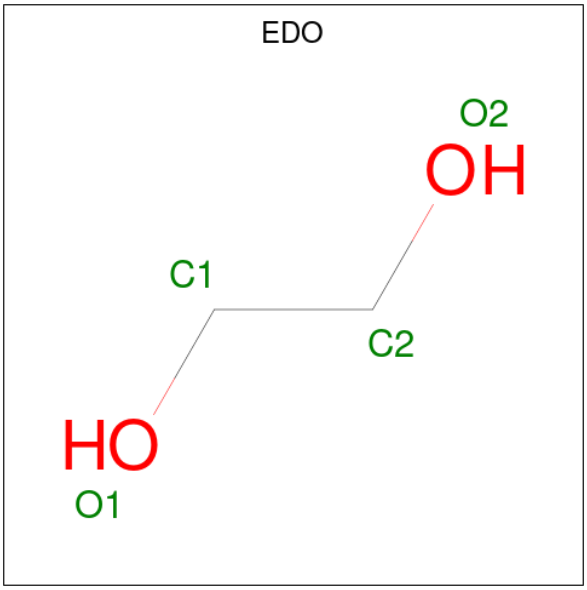
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	B	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	C	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	D	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	E	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	F	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	H	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	H	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	K	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	K	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	L	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	L	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	M	1	Total	C	F	N	O	0	0
			15	10	1	1	3		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	N	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	O	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	O	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	P	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	R	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	R	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	S	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	S	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	T	1	Total	C	F	N	O	0	0
			15	10	1	1	3		
2	U	1	Total	C	F	N	O	0	0
			15	10	1	1	3		

- Molecule 3 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: $C_2H_6O_2$).



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

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

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	E	1	Total	C	O	0	0
			4	2	2		
3	F	1	Total	C	O	0	0
			4	2	2		
3	F	1	Total	C	O	0	0
			4	2	2		
3	F	1	Total	C	O	0	0
			4	2	2		
3	G	1	Total	C	O	0	0
			4	2	2		
3	G	1	Total	C	O	0	0
			4	2	2		
3	H	1	Total	C	O	0	0
			4	2	2		
3	H	1	Total	C	O	0	0
			4	2	2		
3	I	1	Total	C	O	0	0
			4	2	2		
3	I	1	Total	C	O	0	0
			4	2	2		
3	I	1	Total	C	O	0	0
			4	2	2		
3	I	1	Total	C	O	0	0
			4	2	2		
3	J	1	Total	C	O	0	0
			4	2	2		
3	J	1	Total	C	O	0	0
			4	2	2		
3	K	1	Total	C	O	0	0
			4	2	2		
3	K	1	Total	C	O	0	0
			4	2	2		
3	K	1	Total	C	O	0	0
			4	2	2		
3	L	1	Total	C	O	0	0
			4	2	2		
3	L	1	Total	C	O	0	0
			4	2	2		
3	L	1	Total	C	O	0	0
			4	2	2		
3	M	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	M	1	Total	C	O	0	0
			4	2	2		
3	M	1	Total	C	O	0	0
			4	2	2		
3	M	1	Total	C	O	0	0
			4	2	2		
3	N	1	Total	C	O	0	0
			4	2	2		
3	N	1	Total	C	O	0	0
			4	2	2		
3	N	1	Total	C	O	0	0
			4	2	2		
3	O	1	Total	C	O	0	0
			4	2	2		
3	O	1	Total	C	O	0	0
			4	2	2		
3	O	1	Total	C	O	0	0
			4	2	2		
3	O	1	Total	C	O	0	0
			4	2	2		
3	P	1	Total	C	O	0	0
			4	2	2		
3	Q	1	Total	C	O	0	0
			4	2	2		
3	Q	1	Total	C	O	0	0
			4	2	2		
3	Q	1	Total	C	O	0	0
			4	2	2		
3	Q	1	Total	C	O	0	0
			4	2	2		
3	Q	1	Total	C	O	0	0
			4	2	2		
3	R	1	Total	C	O	0	0
			4	2	2		
3	R	1	Total	C	O	0	0
			4	2	2		
3	R	1	Total	C	O	0	0
			4	2	2		
3	R	1	Total	C	O	0	0
			4	2	2		
3	S	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	S	1	Total C O 4 2 2	0	0
3	S	1	Total C O 4 2 2	0	0
3	S	1	Total C O 4 2 2	0	0
3	T	1	Total C O 4 2 2	0	0
3	T	1	Total C O 4 2 2	0	0
3	T	1	Total C O 4 2 2	0	0
3	U	1	Total C O 4 2 2	0	0
3	U	1	Total C O 4 2 2	0	0
3	U	1	Total C O 4 2 2	0	0
3	U	1	Total C O 4 2 2	0	0
3	V	1	Total C O 4 2 2	0	0
3	V	1	Total C O 4 2 2	0	0
3	V	1	Total C O 4 2 2	0	0

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

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

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	G	2	Total Cl 2 2	0	0
4	H	1	Total Cl 1 1	0	0
4	L	1	Total Cl 1 1	0	0
4	N	1	Total Cl 1 1	0	0
4	O	1	Total Cl 1 1	0	0
4	P	1	Total Cl 1 1	0	0
4	Q	1	Total Cl 1 1	0	0
4	R	1	Total Cl 1 1	0	0
4	S	1	Total Cl 1 1	0	0
4	T	1	Total Cl 1 1	0	0
4	V	1	Total Cl 1 1	0	0

- Molecule 5 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total Mg 1 1	0	0
5	C	1	Total Mg 1 1	0	0
5	K	1	Total Mg 1 1	0	0
5	O	1	Total Mg 1 1	0	0
5	P	1	Total Mg 1 1	0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	90	Total O 90 90	0	0

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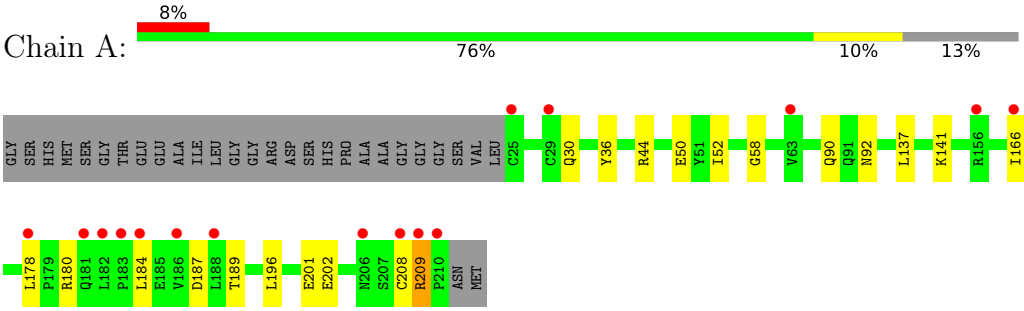
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	B	109	Total O 109 109	0	0
6	C	126	Total O 126 126	0	0
6	D	103	Total O 103 103	0	0
6	E	84	Total O 84 84	0	0
6	F	104	Total O 104 104	0	0
6	G	65	Total O 65 65	0	0
6	H	73	Total O 73 73	0	0
6	I	49	Total O 49 49	0	0
6	J	42	Total O 42 42	0	0
6	K	68	Total O 68 68	0	0
6	L	111	Total O 111 111	0	0
6	M	103	Total O 103 103	0	0
6	N	96	Total O 96 96	0	0
6	O	105	Total O 105 105	0	0
6	P	112	Total O 112 112	0	0
6	Q	118	Total O 118 118	0	0
6	R	122	Total O 122 122	0	0
6	S	85	Total O 85 85	0	0
6	T	88	Total O 88 88	0	0
6	U	115	Total O 115 115	0	0
6	V	112	Total O 112 112	0	0

3 Residue-property plots (i)

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

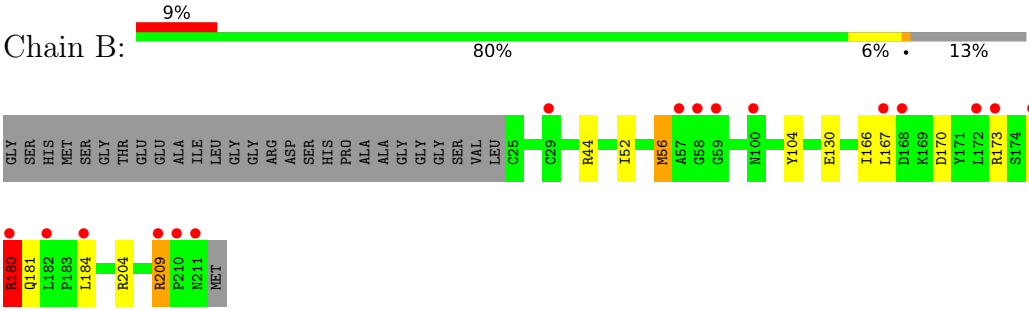
• Molecule 1: DNA repair protein RAD52 homolog

Chain A:



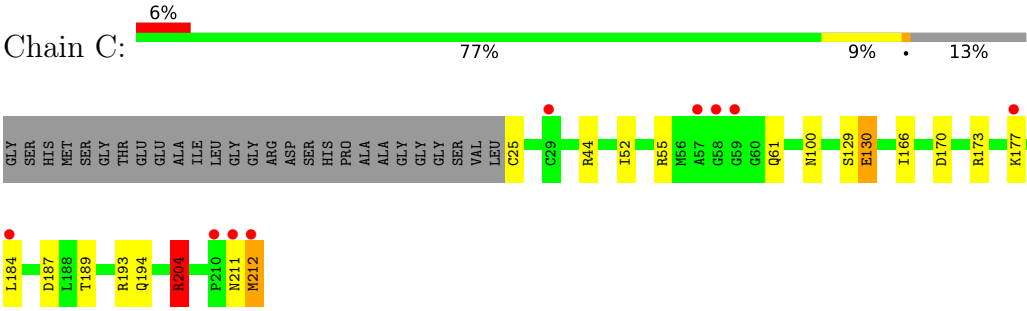
• Molecule 1: DNA repair protein RAD52 homolog

Chain B:



• Molecule 1: DNA repair protein RAD52 homolog

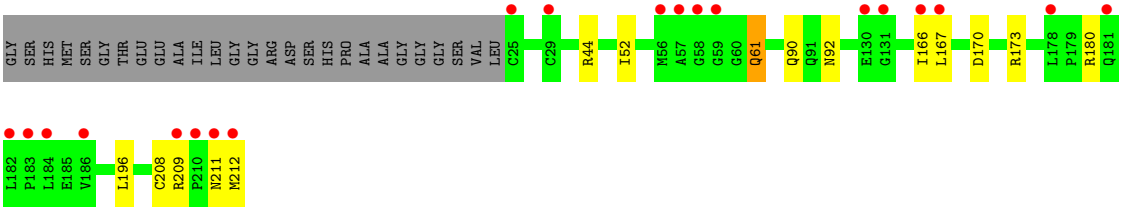
Chain C:



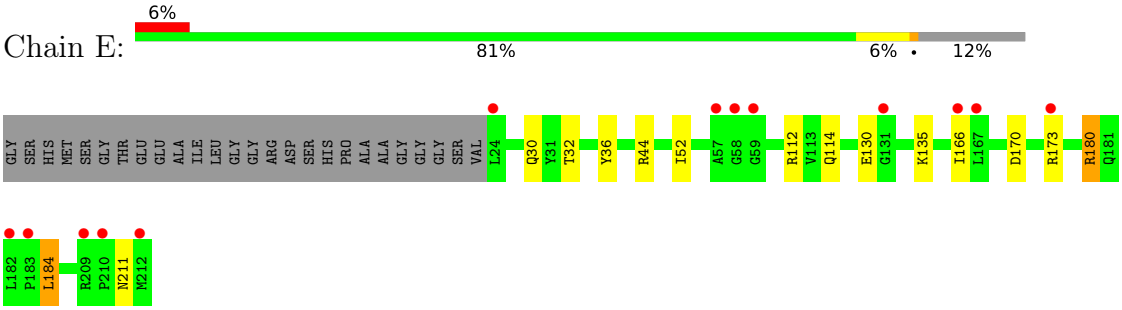
• Molecule 1: DNA repair protein RAD52 homolog

Chain D:

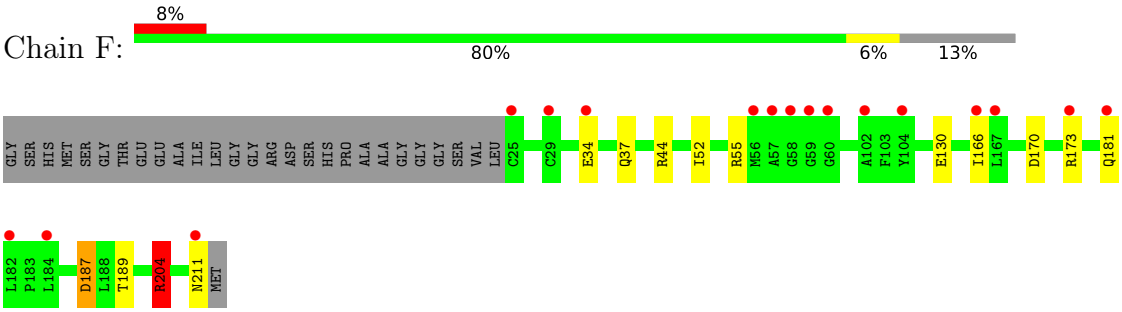




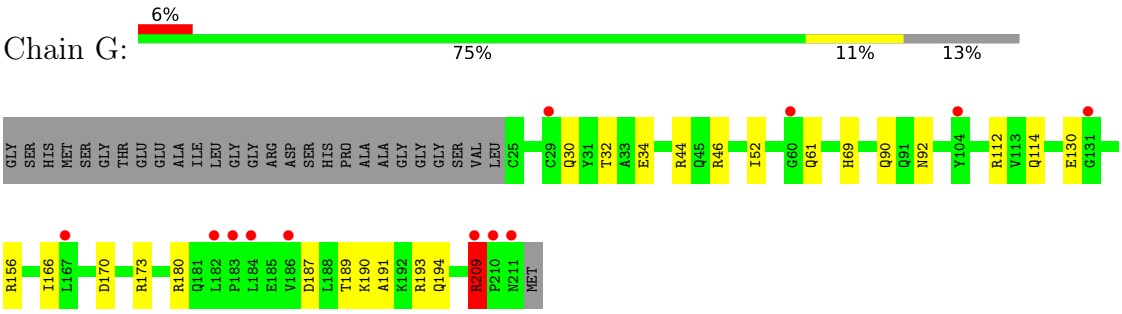
• Molecule 1: DNA repair protein RAD52 homolog



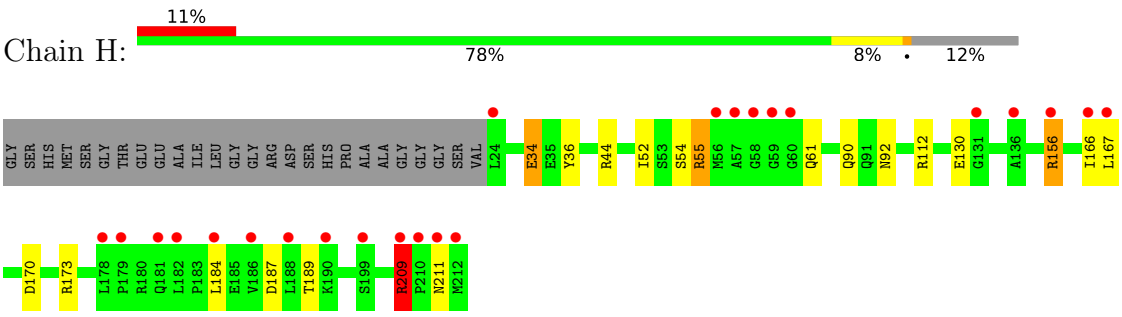
• Molecule 1: DNA repair protein RAD52 homolog



• Molecule 1: DNA repair protein RAD52 homolog

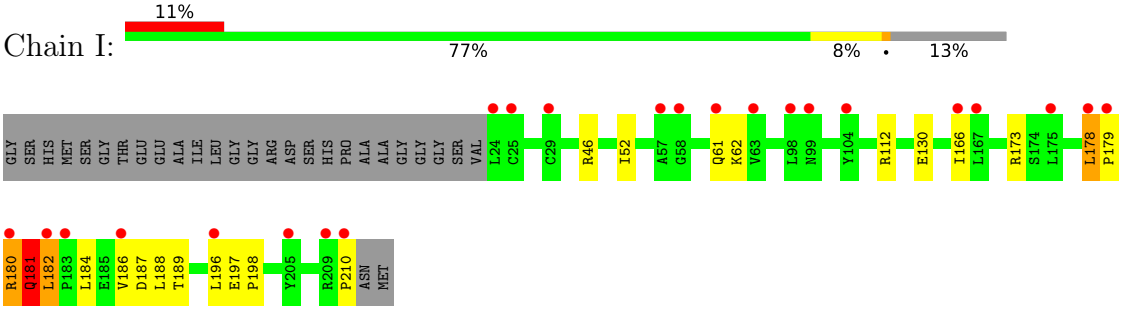


• Molecule 1: DNA repair protein RAD52 homolog



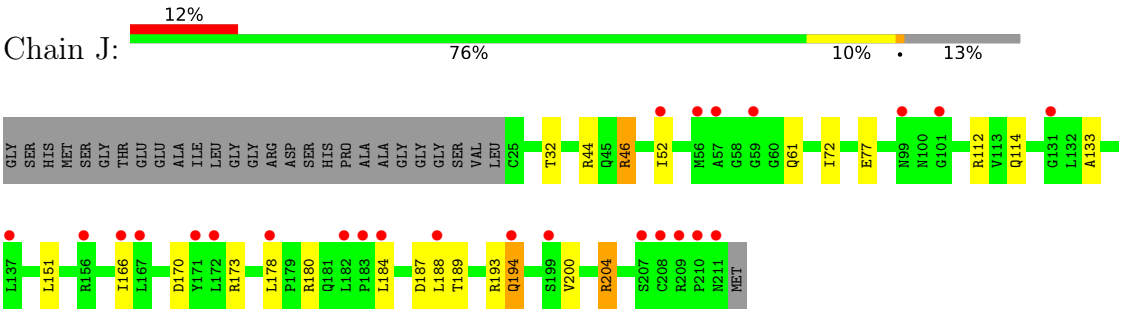
• Molecule 1: DNA repair protein RAD52 homolog

Chain I:



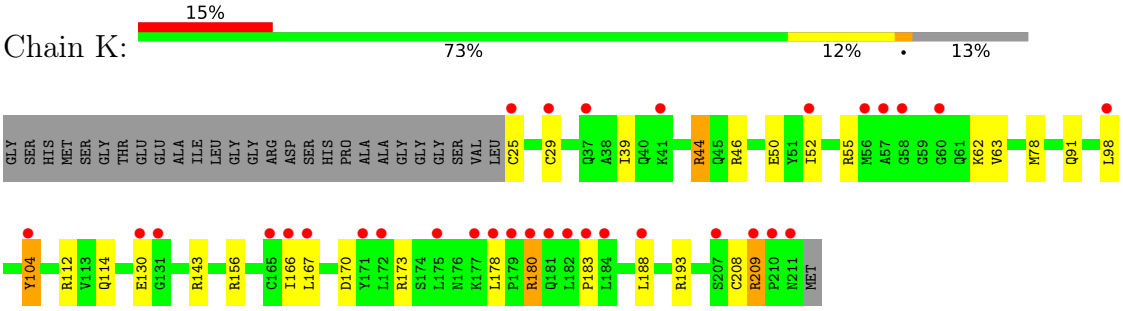
• Molecule 1: DNA repair protein RAD52 homolog

Chain J:



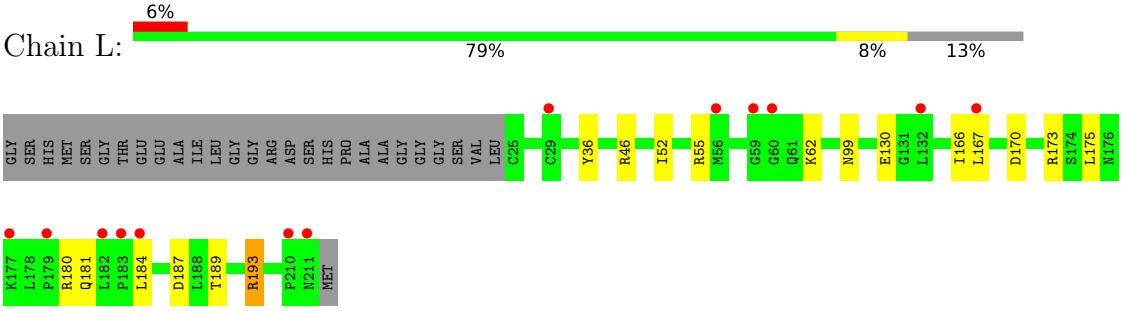
• Molecule 1: DNA repair protein RAD52 homolog

Chain K:



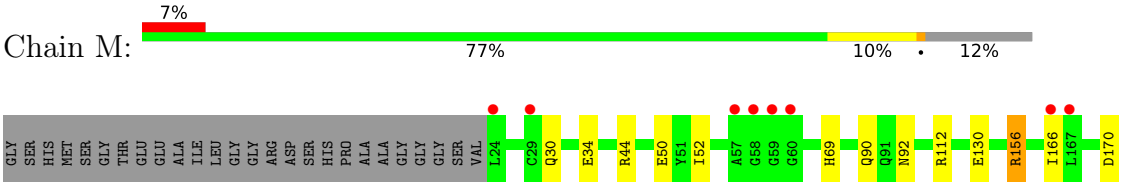
• Molecule 1: DNA repair protein RAD52 homolog

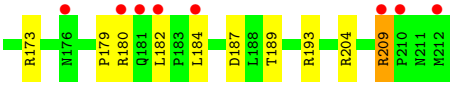
Chain L:



• Molecule 1: DNA repair protein RAD52 homolog

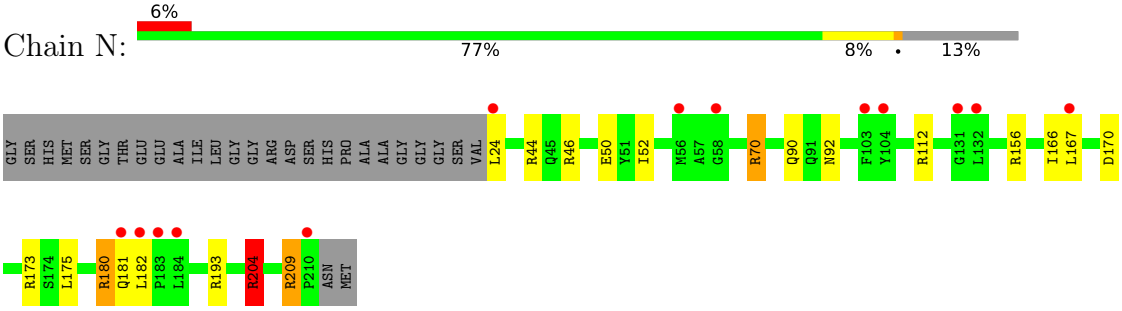
Chain M:





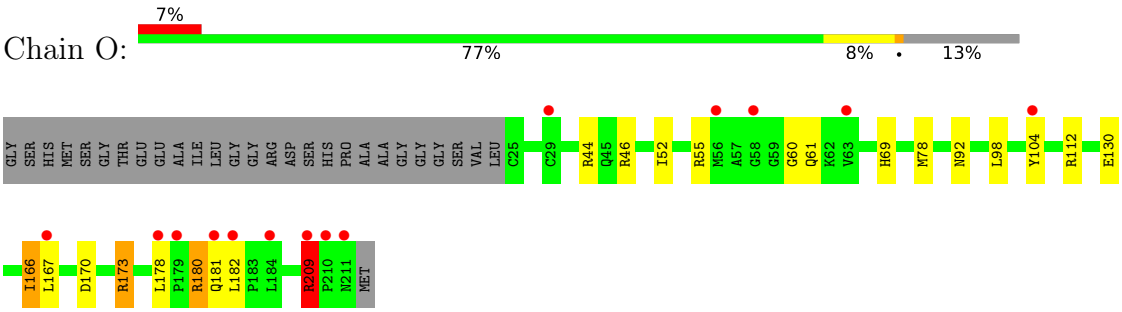
• Molecule 1: DNA repair protein RAD52 homolog

Chain N:



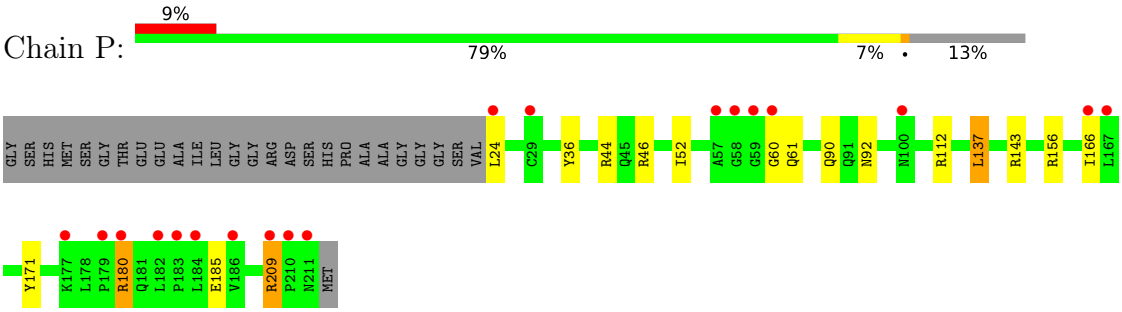
• Molecule 1: DNA repair protein RAD52 homolog

Chain O:



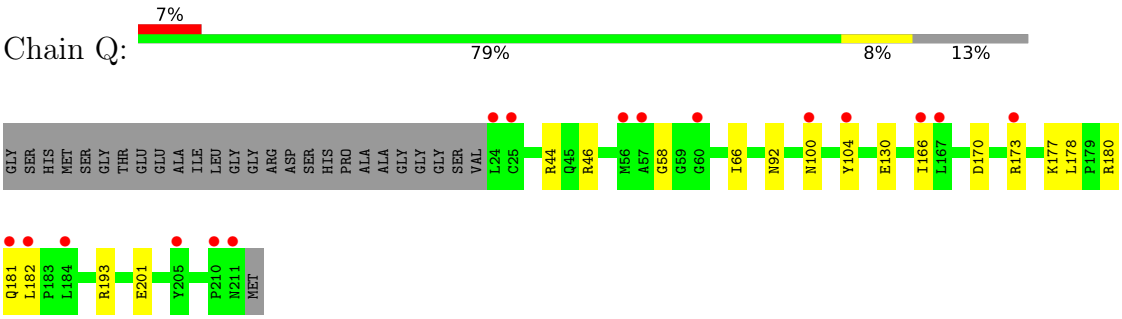
• Molecule 1: DNA repair protein RAD52 homolog

Chain P:



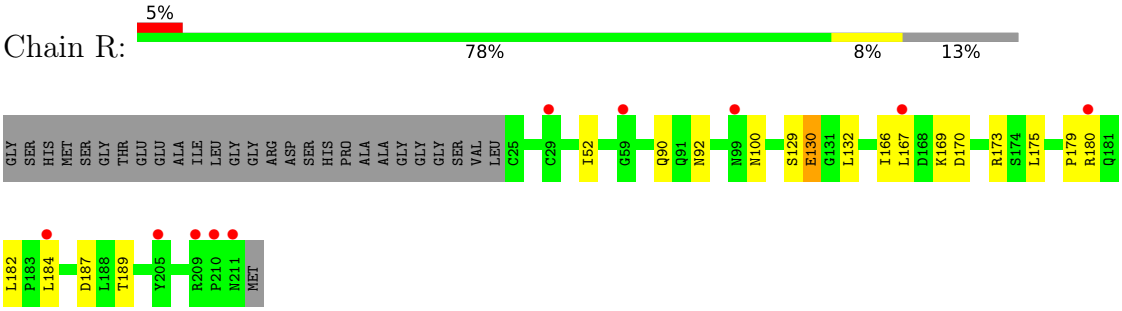
• Molecule 1: DNA repair protein RAD52 homolog

Chain Q:



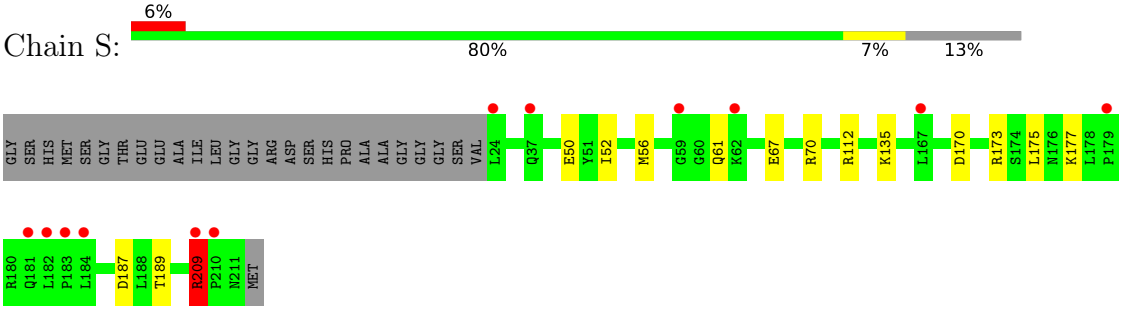
• Molecule 1: DNA repair protein RAD52 homolog

Chain R:



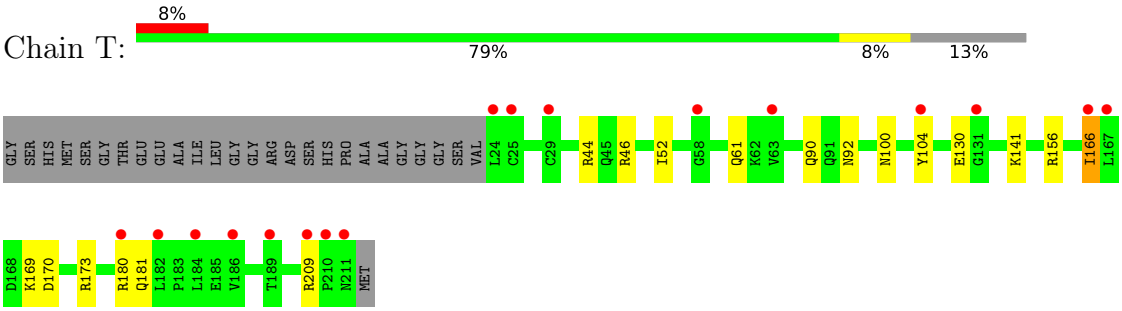
• Molecule 1: DNA repair protein RAD52 homolog

Chain S:



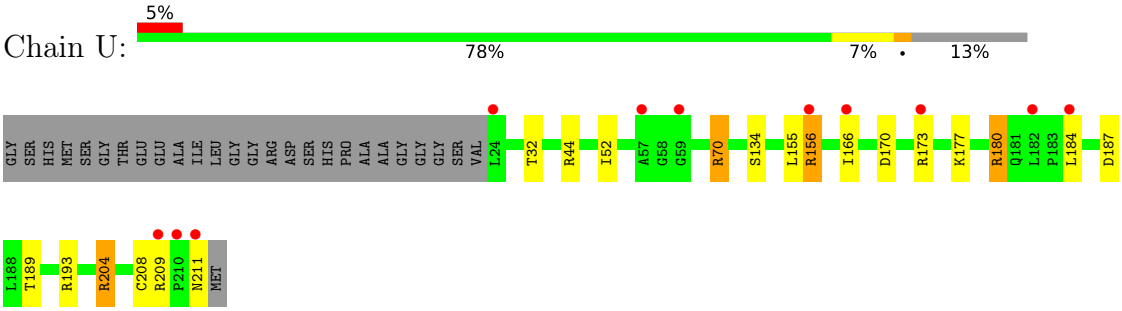
• Molecule 1: DNA repair protein RAD52 homolog

Chain T:



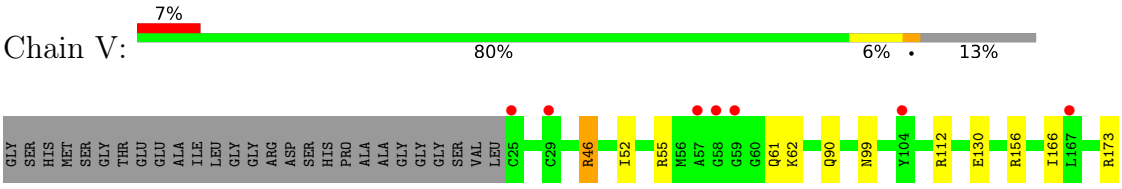
• Molecule 1: DNA repair protein RAD52 homolog

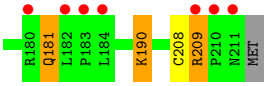
Chain U:



• Molecule 1: DNA repair protein RAD52 homolog

Chain V:




R180
Q181
L182
P183
L184
K190
C208
R209
P210
N211
MET

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	145.00Å 147.25Å 251.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	79.91 – 2.10 79.91 – 2.10	Depositor EDS
% Data completeness (in resolution range)	100.0 (79.91-2.10) 100.0 (79.91-2.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.04 (at 1.88Å)	Xtriage
Refinement program	REFMAC 5.8.0419	Depositor
R, R_{free}	0.173 , 0.199 0.184 , 0.207	Depositor DCC
R_{free} test set	21408 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å^2)	36.3	Xtriage
Anisotropy	0.021	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 67.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.012 for k,h,-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	35430	wwPDB-VP
Average B, all atoms (Å^2)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.40% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: EDO, CL, A1KDD, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.78	2/1504 (0.1%)	1.09	6/2024 (0.3%)
1	B	0.73	0/1514	1.10	7/2039 (0.3%)
1	C	0.72	1/1517 (0.1%)	1.10	8/2042 (0.4%)
1	D	0.72	0/1506	1.07	6/2027 (0.3%)
1	E	0.70	0/1506	1.03	3/2027 (0.1%)
1	F	0.73	0/1504	1.07	6/2024 (0.3%)
1	G	0.70	0/1509	1.01	3/2031 (0.1%)
1	H	0.66	0/1525	1.01	1/2052 (0.0%)
1	I	0.65	0/1487	1.13	6/2002 (0.3%)
1	J	0.66	0/1512	1.06	2/2035 (0.1%)
1	K	0.74	1/1507 (0.1%)	1.20	9/2029 (0.4%)
1	L	0.71	0/1512	1.07	4/2035 (0.2%)
1	M	0.76	1/1525 (0.1%)	1.28	8/2052 (0.4%)
1	N	0.68	0/1517	1.02	5/2042 (0.2%)
1	O	0.80	1/1514 (0.1%)	1.08	4/2039 (0.2%)
1	P	0.82	3/1517 (0.2%)	1.07	3/2042 (0.1%)
1	Q	0.73	0/1519	1.04	1/2046 (0.0%)
1	R	0.74	1/1501 (0.1%)	1.22	6/2021 (0.3%)
1	S	0.70	0/1498	1.03	3/2017 (0.1%)
1	T	0.68	1/1519 (0.1%)	1.01	2/2046 (0.1%)
1	U	0.75	2/1509 (0.1%)	1.07	3/2031 (0.1%)
1	V	0.74	1/1504 (0.1%)	1.10	8/2024 (0.4%)
All	All	0.72	14/33226 (0.0%)	1.09	104/44727 (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

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	3
1	C	0	2
1	D	0	5
1	E	0	1
1	F	0	3
1	G	0	6
1	H	0	4
1	I	0	3
1	J	0	2
1	K	0	5
1	L	0	4
1	M	0	3
1	N	0	7
1	O	0	5
1	P	0	6
1	Q	0	3
1	S	0	2
1	T	0	3
1	U	0	9
1	V	0	5
All	All	0	83

The worst 5 of 14 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	208	CYS	C-N	13.32	1.53	1.33
1	P	61	GLN	C-N	12.28	1.50	1.33
1	O	60	GLY	C-N	11.95	1.49	1.33
1	M	179	PRO	C-N	8.33	1.44	1.33
1	V	208	CYS	C-N	8.13	1.48	1.33

The worst 5 of 104 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	M	179	PRO	O-C-N	-21.66	98.10	123.01
1	M	179	PRO	CA-C-N	17.66	145.78	120.71
1	M	179	PRO	C-N-CA	17.66	145.78	120.71
1	R	179	PRO	CA-C-N	16.98	145.34	121.05
1	R	179	PRO	C-N-CA	16.98	145.34	121.05

There are no chirality outliers.

5 of 83 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	209	ARG	Sidechain
1	A	44	ARG	Sidechain
1	B	180	ARG	Sidechain
1	B	204	ARG	Sidechain
1	B	209	ARG	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1479	0	1454	18	0
1	B	1488	0	1456	9	0
1	C	1492	0	1462	17	0
1	D	1481	0	1448	10	0
1	E	1481	0	1454	18	0
1	F	1479	0	1455	16	0
1	G	1484	0	1451	19	0
1	H	1500	0	1471	25	0
1	I	1462	0	1430	22	0
1	J	1487	0	1460	19	0
1	K	1482	0	1451	35	0
1	L	1487	0	1460	7	0
1	M	1500	0	1471	15	0
1	N	1492	0	1461	14	0
1	O	1488	0	1456	13	0
1	P	1492	0	1462	8	0
1	Q	1493	0	1458	16	0
1	R	1476	0	1447	13	0
1	S	1473	0	1445	8	0
1	T	1493	0	1458	16	0
1	U	1484	0	1457	8	0
1	V	1479	0	1455	11	0
2	A	15	0	0	0	0
2	B	15	0	0	0	0
2	C	15	0	0	0	0
2	D	15	0	0	0	0
2	E	15	0	0	0	0
2	F	15	0	0	0	0
2	H	30	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	K	30	0	0	0	0
2	L	30	0	0	0	0
2	M	15	0	0	0	0
2	N	15	0	0	0	0
2	O	30	0	0	0	0
2	P	15	0	0	0	0
2	R	30	0	0	0	0
2	S	30	0	0	0	0
2	T	15	0	0	0	0
2	U	15	0	0	0	0
3	A	24	0	36	5	0
3	B	20	0	30	0	0
3	C	16	0	24	4	0
3	D	16	0	24	0	0
3	E	16	0	24	3	0
3	F	12	0	18	0	0
3	G	8	0	12	5	0
3	H	8	0	12	7	0
3	I	16	0	24	8	0
3	J	8	0	12	0	0
3	K	12	0	18	9	0
3	L	12	0	18	0	0
3	M	16	0	24	5	0
3	N	12	0	18	3	0
3	O	16	0	24	1	0
3	P	4	0	6	0	0
3	Q	20	0	30	2	0
3	R	16	0	24	2	0
3	S	16	0	24	2	0
3	T	12	0	18	5	0
3	U	16	0	24	0	0
3	V	12	0	18	8	0
4	A	1	0	0	0	0
4	B	2	0	0	0	0
4	C	2	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
4	G	2	0	0	0	0
4	H	1	0	0	0	0
4	L	1	0	0	0	0
4	N	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	O	1	0	0	0	0
4	P	1	0	0	0	0
4	Q	1	0	0	0	0
4	R	1	0	0	0	0
4	S	1	0	0	0	0
4	T	1	0	0	0	0
4	V	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	K	1	0	0	0	0
5	O	1	0	0	0	0
5	P	1	0	0	0	0
6	A	90	0	0	3	0
6	B	109	0	0	2	0
6	C	126	0	0	2	0
6	D	103	0	0	3	0
6	E	84	0	0	1	0
6	F	104	0	0	5	0
6	G	65	0	0	0	0
6	H	73	0	0	2	0
6	I	49	0	0	0	0
6	J	42	0	0	1	0
6	K	68	0	0	4	0
6	L	111	0	0	2	0
6	M	103	0	0	1	0
6	N	96	0	0	2	0
6	O	105	0	0	1	0
6	P	112	0	0	2	0
6	Q	118	0	0	4	0
6	R	122	0	0	2	0
6	S	85	0	0	0	0
6	T	88	0	0	1	0
6	U	115	0	0	2	0
6	V	112	0	0	3	0
All	All	35430	0	32484	294	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.

The worst 5 of 294 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:Q:58:GLY:HA3	6:Q:417:HOH:O	1.40	1.20
1:Q:66:ILE:HG13	1:Q:166:ILE:HD11	1.26	1.07
1:T:130:GLU:H	3:T:304:EDO:H21	1.21	1.03
1:K:112:ARG:HE	3:K:305:EDO:C2	1.74	1.00
1:Q:66:ILE:CG1	1:Q:166:ILE:HD11	1.90	1.00

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	186/215 (86%)	186 (100%)	0	0	100	100
1	B	187/215 (87%)	186 (100%)	1 (0%)	0	100	100
1	C	188/215 (87%)	188 (100%)	0	0	100	100
1	D	187/215 (87%)	186 (100%)	1 (0%)	0	100	100
1	E	187/215 (87%)	187 (100%)	0	0	100	100
1	F	186/215 (86%)	186 (100%)	0	0	100	100
1	G	187/215 (87%)	184 (98%)	3 (2%)	0	100	100
1	H	189/215 (88%)	188 (100%)	1 (0%)	0	100	100
1	I	185/215 (86%)	182 (98%)	2 (1%)	1 (0%)	24	22
1	J	187/215 (87%)	187 (100%)	0	0	100	100
1	K	187/215 (87%)	186 (100%)	1 (0%)	0	100	100
1	L	187/215 (87%)	187 (100%)	0	0	100	100
1	M	189/215 (88%)	189 (100%)	0	0	100	100
1	N	188/215 (87%)	188 (100%)	0	0	100	100
1	O	187/215 (87%)	187 (100%)	0	0	100	100
1	P	188/215 (87%)	188 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Q	188/215 (87%)	187 (100%)	1 (0%)	0	100	100
1	R	186/215 (86%)	186 (100%)	0	0	100	100
1	S	186/215 (86%)	186 (100%)	0	0	100	100
1	T	188/215 (87%)	188 (100%)	0	0	100	100
1	U	187/215 (87%)	187 (100%)	0	0	100	100
1	V	186/215 (86%)	185 (100%)	1 (0%)	0	100	100
All	All	4116/4730 (87%)	4104 (100%)	11 (0%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	I	181	GLN

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	155/172 (90%)	153 (99%)	2 (1%)	61	69
1	B	156/172 (91%)	153 (98%)	3 (2%)	50	58
1	C	157/172 (91%)	153 (98%)	4 (2%)	42	48
1	D	155/172 (90%)	154 (99%)	1 (1%)	78	86
1	E	155/172 (90%)	153 (99%)	2 (1%)	61	69
1	F	155/172 (90%)	155 (100%)	0	100	100
1	G	155/172 (90%)	152 (98%)	3 (2%)	50	58
1	H	157/172 (91%)	151 (96%)	6 (4%)	29	32
1	I	152/172 (88%)	148 (97%)	4 (3%)	40	46
1	J	156/172 (91%)	153 (98%)	3 (2%)	50	58
1	K	156/172 (91%)	153 (98%)	3 (2%)	50	58
1	L	156/172 (91%)	154 (99%)	2 (1%)	61	69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	M	157/172 (91%)	154 (98%)	3 (2%)	50	58
1	N	156/172 (91%)	151 (97%)	5 (3%)	34	38
1	O	156/172 (91%)	150 (96%)	6 (4%)	29	32
1	P	156/172 (91%)	153 (98%)	3 (2%)	50	58
1	Q	156/172 (91%)	155 (99%)	1 (1%)	78	86
1	R	155/172 (90%)	153 (99%)	2 (1%)	61	69
1	S	154/172 (90%)	151 (98%)	3 (2%)	50	58
1	T	156/172 (91%)	152 (97%)	4 (3%)	40	46
1	U	155/172 (90%)	151 (97%)	4 (3%)	40	46
1	V	155/172 (90%)	152 (98%)	3 (2%)	50	58
All	All	3421/3784 (90%)	3354 (98%)	67 (2%)	50	56

5 of 67 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	T	100	ASN
1	T	181	GLN
1	V	62	LYS
1	I	182	LEU
1	I	178	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 67 such sidechains are listed below:

Mol	Chain	Res	Type
1	R	211	ASN
1	S	37	GLN
1	T	211	ASN
1	G	211	ASN
1	G	114	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 125 ligands modelled in this entry, 25 are monoatomic - leaving 100 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	EDO	F	302	-	3,3,3	0.42	0	2,2,2	0.68	0
3	EDO	B	305	-	3,3,3	0.37	0	2,2,2	0.89	0
3	EDO	S	303	-	3,3,3	0.38	0	2,2,2	0.18	0
3	EDO	O	305	-	3,3,3	0.29	0	2,2,2	0.41	0
3	EDO	E	305	-	3,3,3	0.34	0	2,2,2	0.37	0
3	EDO	B	304	-	3,3,3	0.25	0	2,2,2	0.30	0
3	EDO	E	301	-	3,3,3	0.21	0	2,2,2	0.19	0
3	EDO	C	303	-	3,3,3	0.36	0	2,2,2	0.19	0
2	A1KDD	N	301	-	16,16,16	0.73	0	21,22,22	0.74	0
2	A1KDD	F	301	-	16,16,16	0.96	2 (12%)	21,22,22	0.87	2 (9%)
3	EDO	L	303	-	3,3,3	0.26	0	2,2,2	0.28	0
3	EDO	T	304	-	3,3,3	0.21	0	2,2,2	0.60	0
3	EDO	I	303	-	3,3,3	0.20	0	2,2,2	0.27	0
3	EDO	U	305	-	3,3,3	0.25	0	2,2,2	0.08	0
3	EDO	L	304	-	3,3,3	0.32	0	2,2,2	0.48	0
3	EDO	D	304	-	3,3,3	0.35	0	2,2,2	0.94	0
3	EDO	J	301	-	3,3,3	1.41	0	2,2,2	1.07	0
3	EDO	A	305	-	3,3,3	0.24	0	2,2,2	0.85	0
3	EDO	I	304	-	3,3,3	0.28	0	2,2,2	0.41	0
3	EDO	K	305	-	3,3,3	0.46	0	2,2,2	1.01	0
3	EDO	O	304	-	3,3,3	0.33	0	2,2,2	0.49	0
3	EDO	C	305	-	3,3,3	0.47	0	2,2,2	0.77	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	EDO	A	302	-	3,3,3	0.84	0	2,2,2	0.95	0
3	EDO	B	306	-	3,3,3	0.73	0	2,2,2	0.61	0
2	A1KDD	H	301	-	16,16,16	0.83	0	21,22,22	0.64	0
2	A1KDD	B	302	-	16,16,16	0.85	0	21,22,22	0.59	0
2	A1KDD	D	302	-	16,16,16	0.78	1 (6%)	21,22,22	0.49	0
3	EDO	P	302	-	3,3,3	0.28	0	2,2,2	0.37	0
3	EDO	R	305	-	3,3,3	0.80	0	2,2,2	0.47	0
3	EDO	M	301	-	3,3,3	0.34	0	2,2,2	0.65	0
3	EDO	S	304	-	3,3,3	0.35	0	2,2,2	0.38	0
2	A1KDD	L	301	-	16,16,16	0.73	0	21,22,22	0.51	0
3	EDO	R	304	-	3,3,3	0.17	0	2,2,2	0.84	0
3	EDO	N	302	-	3,3,3	0.22	0	2,2,2	0.26	0
3	EDO	T	303	-	3,3,3	0.45	0	2,2,2	0.54	0
3	EDO	C	301	-	3,3,3	0.15	0	2,2,2	0.36	0
2	A1KDD	L	305	-	16,16,16	0.91	1 (6%)	21,22,22	0.95	0
3	EDO	A	304	-	3,3,3	0.55	0	2,2,2	0.52	0
2	A1KDD	O	302	-	16,16,16	0.85	1 (6%)	21,22,22	0.38	0
3	EDO	I	301	-	3,3,3	0.10	0	2,2,2	0.69	0
3	EDO	A	306	-	3,3,3	0.10	0	2,2,2	0.31	0
3	EDO	M	304	-	3,3,3	0.45	0	2,2,2	0.53	0
3	EDO	E	304	-	3,3,3	0.61	0	2,2,2	0.34	0
2	A1KDD	T	301	-	16,16,16	0.96	1 (6%)	21,22,22	0.38	0
3	EDO	N	304	-	3,3,3	0.18	0	2,2,2	0.48	0
3	EDO	O	303	-	3,3,3	0.25	0	2,2,2	0.27	0
3	EDO	D	305	-	3,3,3	0.46	0	2,2,2	0.34	0
2	A1KDD	R	301	-	16,16,16	0.75	0	21,22,22	0.68	0
3	EDO	S	305	-	3,3,3	0.08	0	2,2,2	0.34	0
3	EDO	Q	305	-	3,3,3	0.15	0	2,2,2	0.26	0
3	EDO	U	304	-	3,3,3	0.29	0	2,2,2	0.23	0
3	EDO	Q	304	-	3,3,3	0.35	0	2,2,2	0.04	0
3	EDO	Q	302	-	3,3,3	0.27	0	2,2,2	0.35	0
3	EDO	H	303	-	3,3,3	0.57	0	2,2,2	0.64	0
2	A1KDD	R	302	-	16,16,16	0.78	0	21,22,22	0.55	0
3	EDO	R	303	-	3,3,3	0.51	0	2,2,2	0.32	0
3	EDO	U	303	-	3,3,3	1.73	1 (33%)	2,2,2	1.66	0
3	EDO	I	302	-	3,3,3	0.06	0	2,2,2	0.20	0
2	A1KDD	P	301	-	16,16,16	0.68	0	21,22,22	0.87	2 (9%)
3	EDO	L	302	-	3,3,3	0.28	0	2,2,2	0.20	0
3	EDO	O	306	-	3,3,3	0.39	0	2,2,2	0.04	0
3	EDO	V	303	-	3,3,3	0.39	0	2,2,2	0.75	0
3	EDO	V	302	-	3,3,3	0.63	0	2,2,2	0.85	0
3	EDO	J	302	-	3,3,3	0.27	0	2,2,2	0.42	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	A1KDD	C	302	-	16,16,16	0.73	0	21,22,22	0.68	0
3	EDO	E	303	-	3,3,3	0.81	0	2,2,2	0.45	0
3	EDO	G	302	-	3,3,3	0.23	0	2,2,2	0.22	0
3	EDO	H	304	-	3,3,3	0.66	0	2,2,2	0.60	0
3	EDO	C	304	-	3,3,3	0.27	0	2,2,2	0.52	0
3	EDO	K	304	-	3,3,3	0.24	0	2,2,2	0.34	0
2	A1KDD	E	302	-	16,16,16	0.92	1 (6%)	21,22,22	0.67	0
2	A1KDD	M	302	-	16,16,16	0.65	0	21,22,22	0.94	1 (4%)
3	EDO	D	303	-	3,3,3	0.16	0	2,2,2	0.30	0
3	EDO	Q	303	-	3,3,3	0.51	0	2,2,2	0.41	0
2	A1KDD	H	302	-	16,16,16	0.83	0	21,22,22	0.58	0
3	EDO	F	304	-	3,3,3	0.37	0	2,2,2	0.70	0
3	EDO	A	303	-	3,3,3	0.40	0	2,2,2	0.37	0
3	EDO	R	306	-	3,3,3	0.23	0	2,2,2	0.37	0
3	EDO	V	301	-	3,3,3	0.70	0	2,2,2	0.68	0
2	A1KDD	K	302	-	16,16,16	0.79	0	21,22,22	0.50	0
3	EDO	B	301	-	3,3,3	0.27	0	2,2,2	0.74	0
3	EDO	D	301	-	3,3,3	0.33	0	2,2,2	0.78	0
3	EDO	M	303	-	3,3,3	0.77	0	2,2,2	0.53	0
3	EDO	U	302	-	3,3,3	0.33	0	2,2,2	0.44	0
2	A1KDD	K	301	-	16,16,16	0.73	0	21,22,22	0.39	0
3	EDO	S	302	-	3,3,3	0.20	0	2,2,2	0.71	0
2	A1KDD	U	301	-	16,16,16	0.80	1 (6%)	21,22,22	0.42	0
3	EDO	N	303	-	3,3,3	0.28	0	2,2,2	0.64	0
2	A1KDD	O	301	-	16,16,16	0.83	0	21,22,22	0.49	0
2	A1KDD	A	301	-	16,16,16	0.93	1 (6%)	21,22,22	0.61	0
3	EDO	B	303	-	3,3,3	0.39	0	2,2,2	0.74	0
3	EDO	Q	301	-	3,3,3	0.46	0	2,2,2	0.18	0
3	EDO	A	307	-	3,3,3	0.22	0	2,2,2	0.16	0
3	EDO	F	303	-	3,3,3	0.20	0	2,2,2	0.22	0
2	A1KDD	S	306	-	16,16,16	0.77	0	21,22,22	0.55	0
3	EDO	K	303	-	3,3,3	0.33	0	2,2,2	0.49	0
3	EDO	T	302	-	3,3,3	0.36	0	2,2,2	0.20	0
3	EDO	G	301	-	3,3,3	0.66	0	2,2,2	0.31	0
3	EDO	M	305	-	3,3,3	0.21	0	2,2,2	0.22	0
2	A1KDD	S	301	-	16,16,16	0.98	1 (6%)	21,22,22	0.90	2 (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
3	EDO	F	302	-	-	1/1/1/1	-
3	EDO	B	305	-	-	1/1/1/1	-
3	EDO	S	303	-	-	1/1/1/1	-
3	EDO	O	305	-	-	1/1/1/1	-
3	EDO	E	305	-	-	1/1/1/1	-
3	EDO	B	304	-	-	1/1/1/1	-
3	EDO	E	301	-	-	0/1/1/1	-
3	EDO	C	303	-	-	1/1/1/1	-
2	A1KDD	N	301	-	-	6/8/8/8	0/2/2/2
2	A1KDD	F	301	-	-	0/8/8/8	0/2/2/2
3	EDO	L	303	-	-	0/1/1/1	-
3	EDO	T	304	-	-	1/1/1/1	-
3	EDO	I	303	-	-	0/1/1/1	-
3	EDO	U	305	-	-	1/1/1/1	-
3	EDO	L	304	-	-	1/1/1/1	-
3	EDO	D	304	-	-	0/1/1/1	-
3	EDO	J	301	-	-	0/1/1/1	-
3	EDO	A	305	-	-	1/1/1/1	-
3	EDO	I	304	-	-	1/1/1/1	-
3	EDO	K	305	-	-	1/1/1/1	-
3	EDO	O	304	-	-	0/1/1/1	-
3	EDO	C	305	-	-	1/1/1/1	-
3	EDO	A	302	-	-	0/1/1/1	-
3	EDO	B	306	-	-	0/1/1/1	-
2	A1KDD	H	301	-	-	8/8/8/8	0/2/2/2
2	A1KDD	B	302	-	-	0/8/8/8	0/2/2/2
2	A1KDD	D	302	-	-	0/8/8/8	0/2/2/2
3	EDO	P	302	-	-	1/1/1/1	-
3	EDO	R	305	-	-	1/1/1/1	-
3	EDO	M	301	-	-	1/1/1/1	-
3	EDO	S	304	-	-	1/1/1/1	-
2	A1KDD	L	301	-	-	5/8/8/8	0/2/2/2
3	EDO	R	304	-	-	0/1/1/1	-
3	EDO	N	302	-	-	0/1/1/1	-
3	EDO	T	303	-	-	1/1/1/1	-
3	EDO	C	301	-	-	1/1/1/1	-
2	A1KDD	L	305	-	-	6/8/8/8	0/2/2/2
3	EDO	A	304	-	-	1/1/1/1	-
2	A1KDD	O	302	-	-	8/8/8/8	0/2/2/2
3	EDO	I	301	-	-	1/1/1/1	-
3	EDO	A	306	-	-	1/1/1/1	-
3	EDO	M	304	-	-	0/1/1/1	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	EDO	E	304	-	-	1/1/1/1	-
2	A1KDD	T	301	-	-	2/8/8/8	0/2/2/2
3	EDO	N	304	-	-	1/1/1/1	-
3	EDO	O	303	-	-	1/1/1/1	-
3	EDO	D	305	-	-	1/1/1/1	-
2	A1KDD	R	301	-	-	2/8/8/8	0/2/2/2
3	EDO	S	305	-	-	1/1/1/1	-
3	EDO	Q	305	-	-	1/1/1/1	-
3	EDO	U	304	-	-	1/1/1/1	-
3	EDO	Q	304	-	-	1/1/1/1	-
3	EDO	Q	302	-	-	1/1/1/1	-
3	EDO	H	303	-	-	1/1/1/1	-
2	A1KDD	R	302	-	-	8/8/8/8	0/2/2/2
3	EDO	R	303	-	-	1/1/1/1	-
3	EDO	U	303	-	-	0/1/1/1	-
3	EDO	I	302	-	-	0/1/1/1	-
2	A1KDD	P	301	-	-	0/8/8/8	0/2/2/2
3	EDO	L	302	-	-	1/1/1/1	-
3	EDO	O	306	-	-	1/1/1/1	-
3	EDO	V	303	-	-	1/1/1/1	-
3	EDO	V	302	-	-	1/1/1/1	-
3	EDO	J	302	-	-	1/1/1/1	-
2	A1KDD	C	302	-	-	1/8/8/8	0/2/2/2
3	EDO	E	303	-	-	1/1/1/1	-
3	EDO	G	302	-	-	1/1/1/1	-
3	EDO	H	304	-	-	1/1/1/1	-
3	EDO	C	304	-	-	1/1/1/1	-
3	EDO	K	304	-	-	1/1/1/1	-
2	A1KDD	E	302	-	-	2/8/8/8	0/2/2/2
2	A1KDD	M	302	-	-	0/8/8/8	0/2/2/2
3	EDO	D	303	-	-	0/1/1/1	-
3	EDO	Q	303	-	-	1/1/1/1	-
2	A1KDD	H	302	-	-	2/8/8/8	0/2/2/2
3	EDO	F	304	-	-	1/1/1/1	-
3	EDO	A	303	-	-	1/1/1/1	-
3	EDO	R	306	-	-	1/1/1/1	-
3	EDO	V	301	-	-	1/1/1/1	-
2	A1KDD	K	302	-	-	4/8/8/8	0/2/2/2
3	EDO	B	301	-	-	1/1/1/1	-
3	EDO	D	301	-	-	1/1/1/1	-
3	EDO	M	303	-	-	1/1/1/1	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	EDO	U	302	-	-	0/1/1/1	-
2	A1KDD	K	301	-	-	2/8/8/8	0/2/2/2
3	EDO	S	302	-	-	1/1/1/1	-
2	A1KDD	U	301	-	-	1/8/8/8	0/2/2/2
3	EDO	N	303	-	-	1/1/1/1	-
2	A1KDD	O	301	-	-	1/8/8/8	0/2/2/2
2	A1KDD	A	301	-	-	1/8/8/8	0/2/2/2
3	EDO	B	303	-	-	1/1/1/1	-
3	EDO	Q	301	-	-	1/1/1/1	-
3	EDO	A	307	-	-	1/1/1/1	-
3	EDO	F	303	-	-	1/1/1/1	-
2	A1KDD	S	306	-	-	0/8/8/8	0/2/2/2
3	EDO	K	303	-	-	1/1/1/1	-
3	EDO	T	302	-	-	1/1/1/1	-
3	EDO	G	301	-	-	1/1/1/1	-
3	EDO	M	305	-	-	1/1/1/1	-
2	A1KDD	S	301	-	-	0/8/8/8	0/2/2/2

The worst 5 of 11 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	T	301	A1KDD	O1-C1	2.73	1.29	1.22
2	S	301	A1KDD	O1-C1	2.52	1.29	1.22
3	U	303	EDO	O1-C1	2.34	1.54	1.42
2	F	301	A1KDD	O1-C1	2.34	1.28	1.22
2	E	302	A1KDD	O1-C1	2.25	1.28	1.22

The worst 5 of 7 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	P	301	A1KDD	O2-C1-C2	2.76	121.08	114.20
2	F	301	A1KDD	C3-C2-C1	2.30	137.20	132.57
2	S	301	A1KDD	C10-C5-C4	-2.12	118.44	120.88
2	S	301	A1KDD	C6-C5-C4	2.11	123.30	120.88
2	F	301	A1KDD	C5-C4-C3	2.06	131.74	128.70

There are no chirality outliers.

5 of 121 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	302	A1KDD	O1-C1-C2-O3

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Mol	Chain	Res	Type	Atoms
2	H	301	A1KDD	O1-C1-C2-C3
2	H	301	A1KDD	O1-C1-C2-O3
2	H	301	A1KDD	O2-C1-C2-O3
2	H	302	A1KDD	O1-C1-C2-O3

There are no ring outliers.

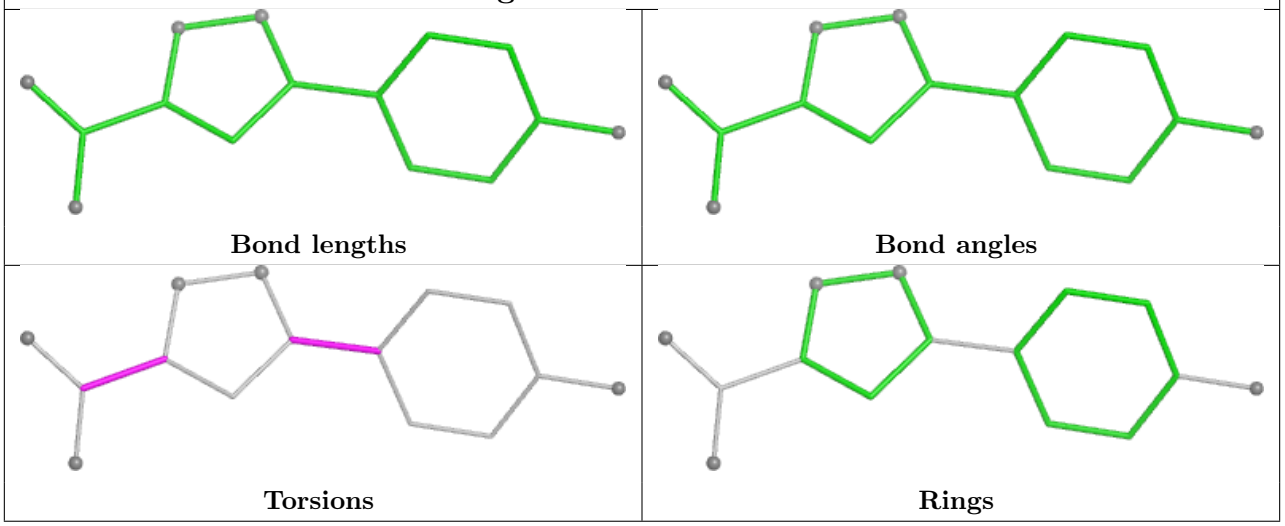
22 monomers are involved in 69 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	T	304	EDO	5	0
3	A	305	EDO	3	0
3	K	305	EDO	6	0
3	O	304	EDO	1	0
3	C	305	EDO	4	0
3	A	302	EDO	1	0
3	M	301	EDO	2	0
3	R	304	EDO	2	0
3	N	302	EDO	2	0
3	I	301	EDO	8	0
3	A	306	EDO	1	0
3	N	304	EDO	1	0
3	Q	302	EDO	1	0
3	H	303	EDO	7	0
3	V	302	EDO	1	0
3	E	303	EDO	3	0
3	K	304	EDO	3	0
3	V	301	EDO	7	0
3	M	303	EDO	3	0
3	S	302	EDO	2	0
3	Q	301	EDO	1	0
3	G	301	EDO	5	0

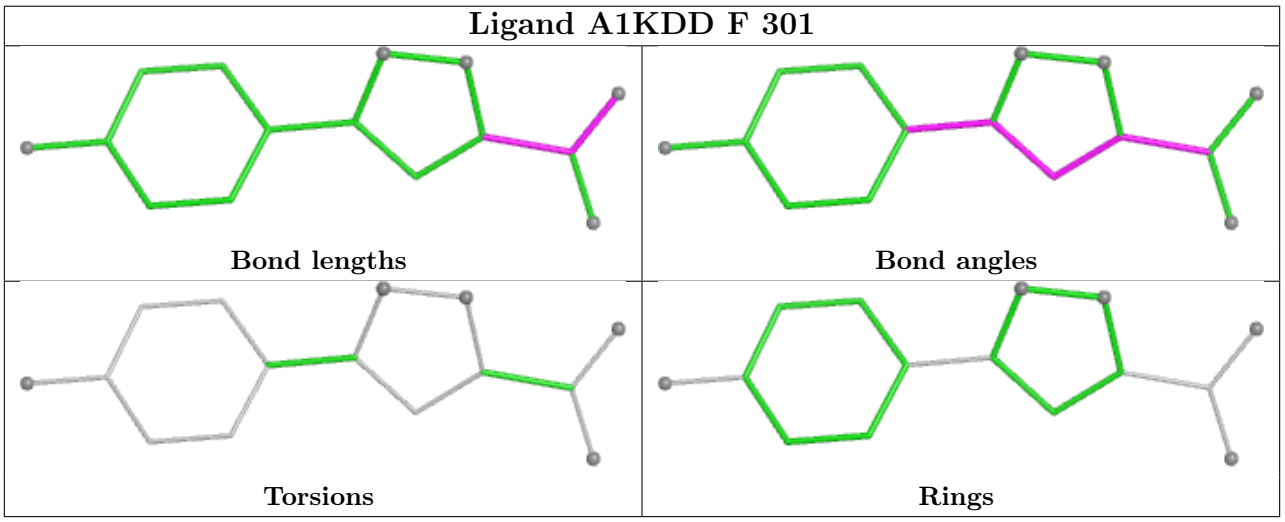
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier.

The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

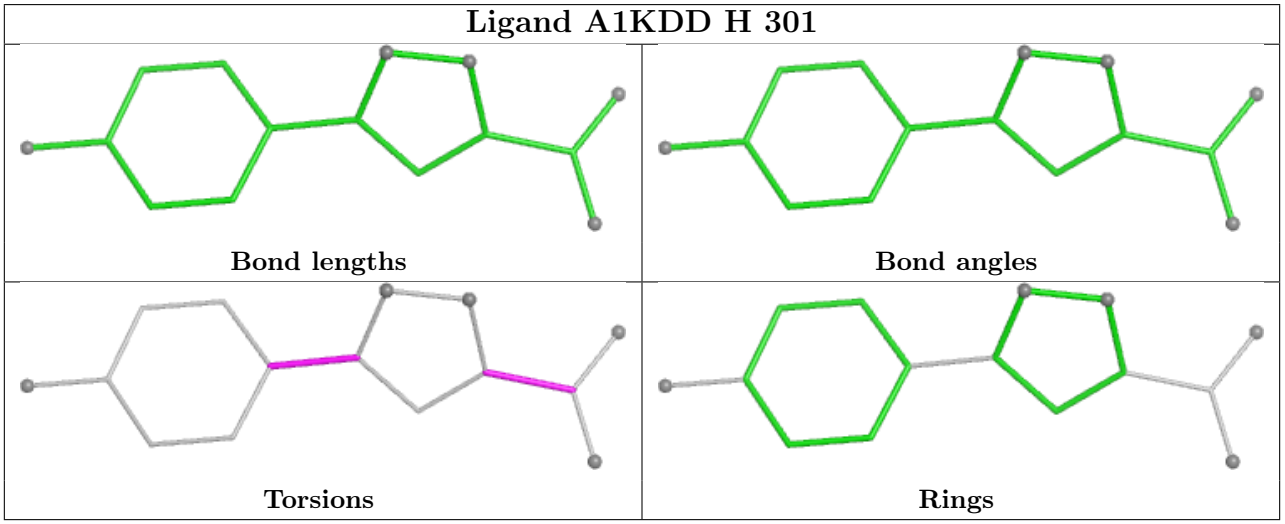
Ligand A1KDD N 301



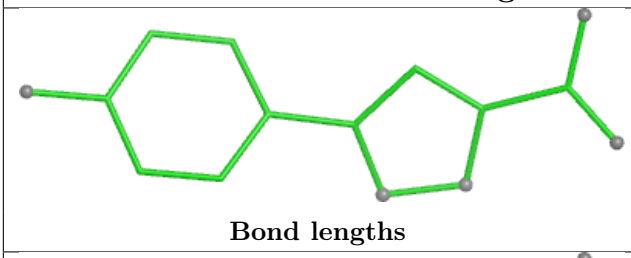
Ligand A1KDD F 301



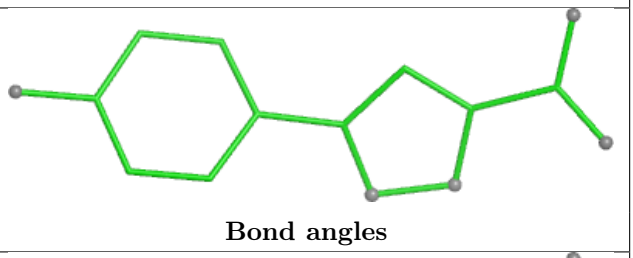
Ligand A1KDD H 301



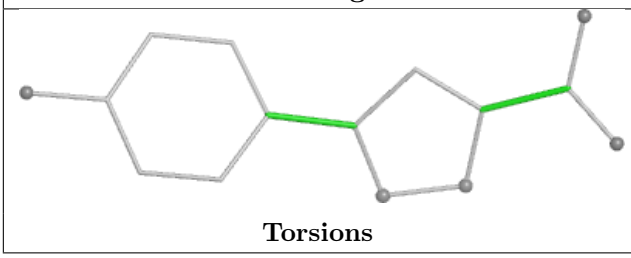
Ligand A1KDD B 302



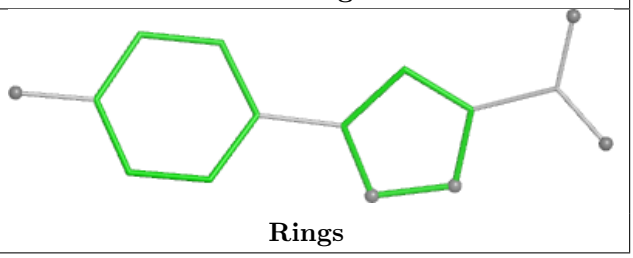
Bond lengths



Bond angles

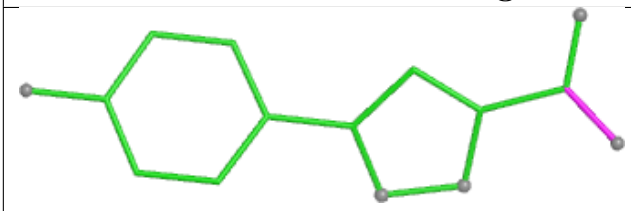


Torsions

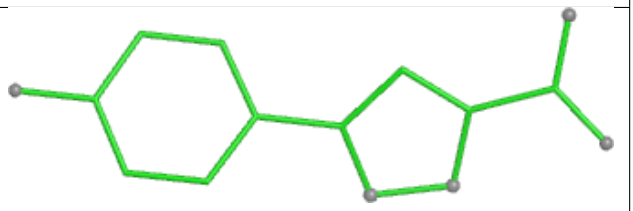


Rings

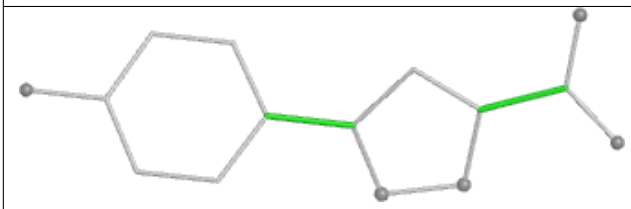
Ligand A1KDD D 302



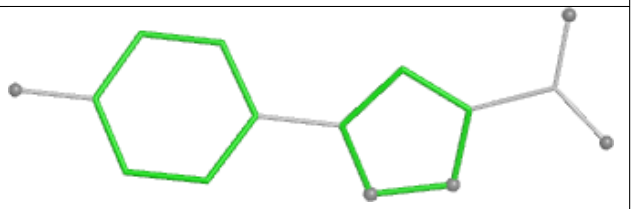
Bond lengths



Bond angles

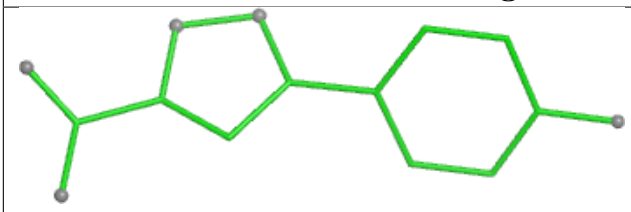


Torsions

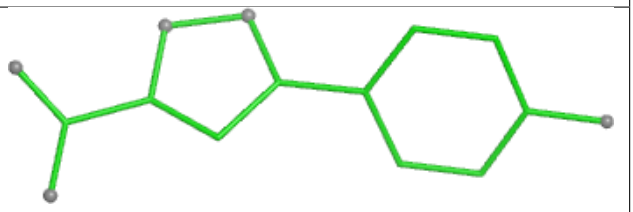


Rings

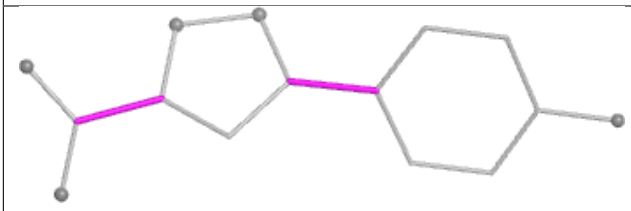
Ligand A1KDD L 301



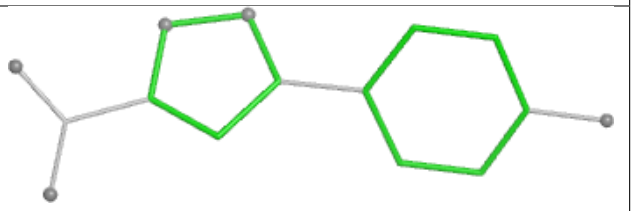
Bond lengths



Bond angles

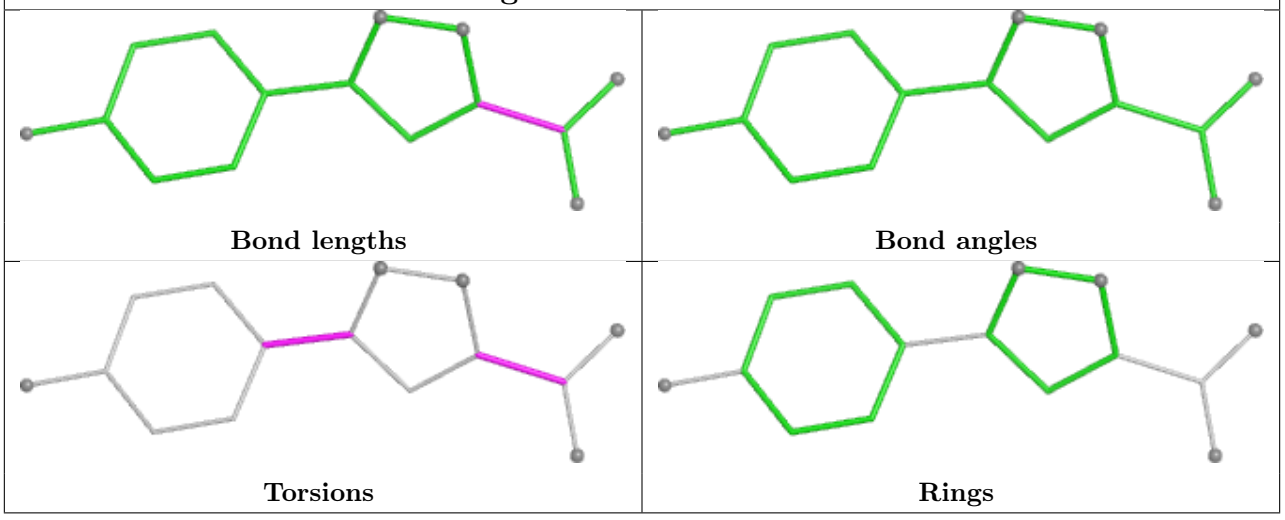


Torsions

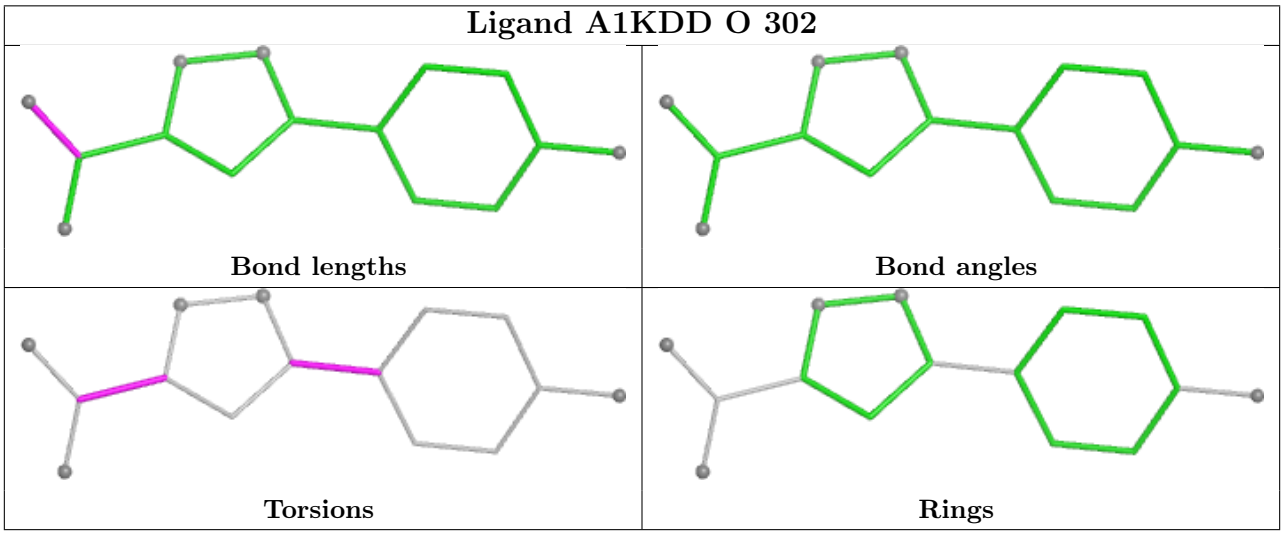


Rings

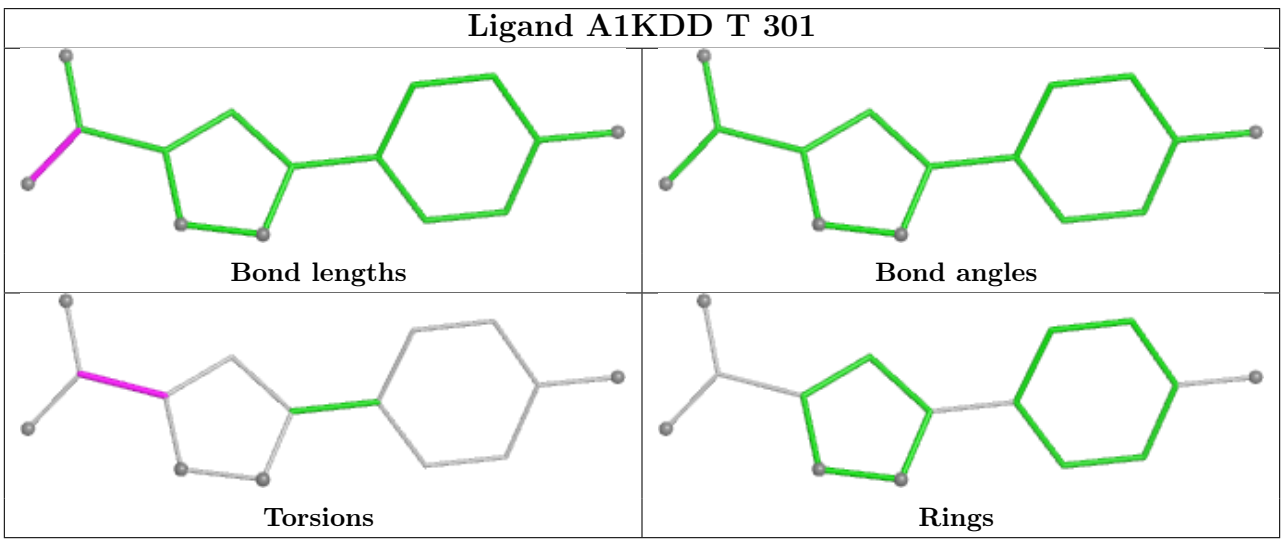
Ligand A1KDD L 305



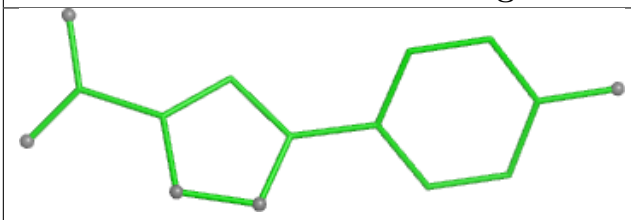
Ligand A1KDD O 302



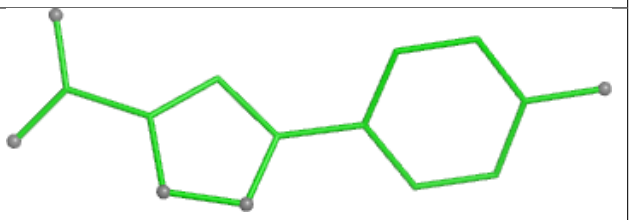
Ligand A1KDD T 301



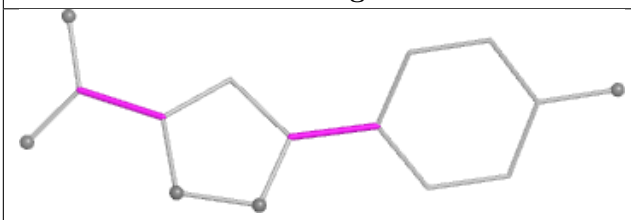
Ligand A1KDD R 301



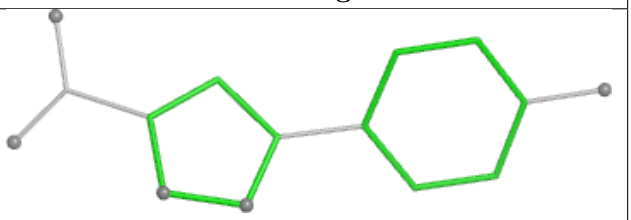
Bond lengths



Bond angles

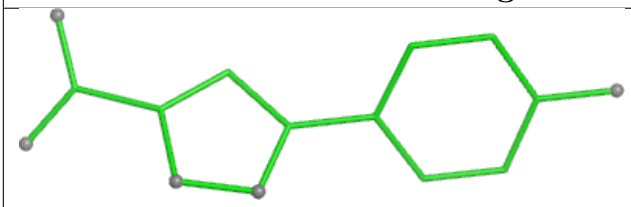


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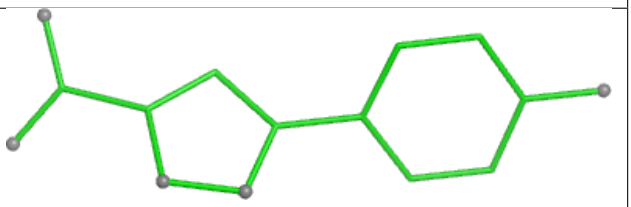


Rings

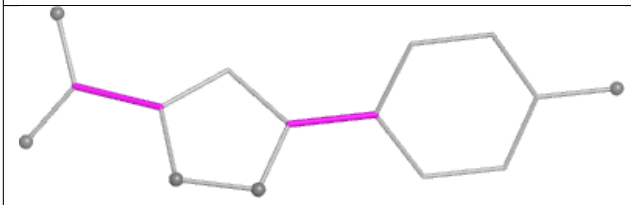
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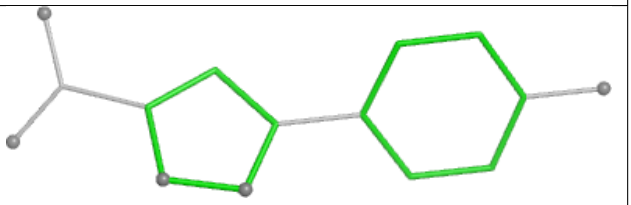
Bond lengths



Bond angles

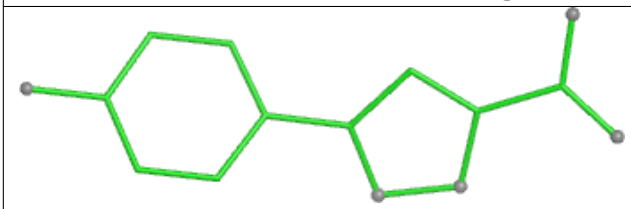


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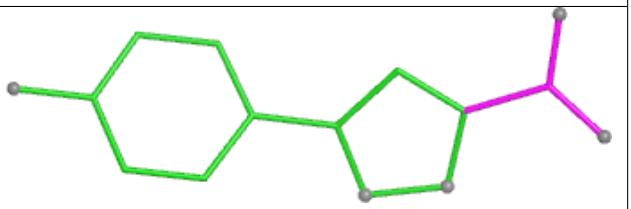


Rings

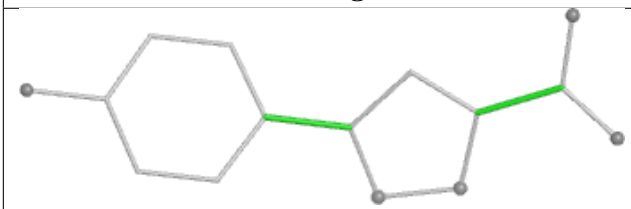
Ligand A1KDD P 301



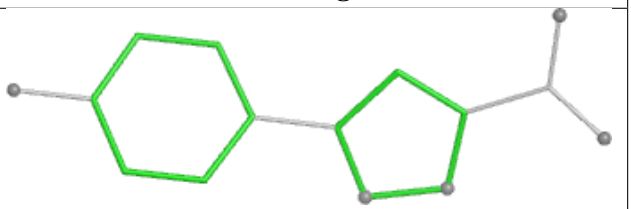
Bond lengths



Bond angles

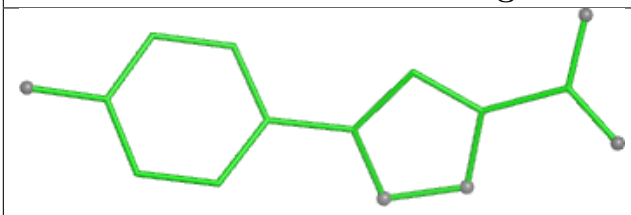


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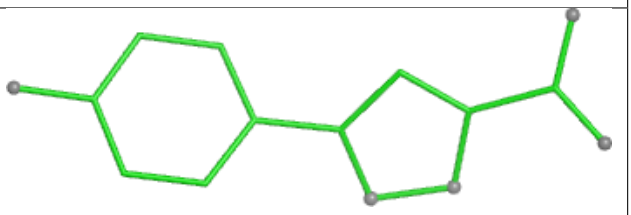


Rings

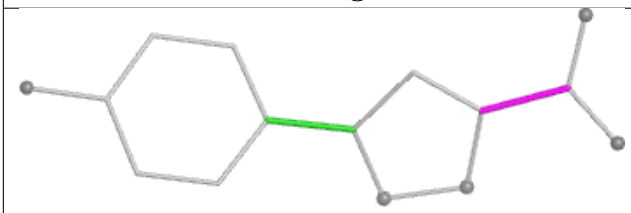
Ligand A1KDD C 302



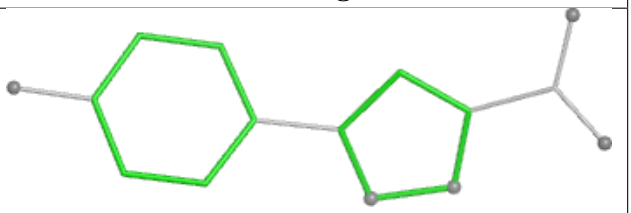
Bond lengths



Bond angles

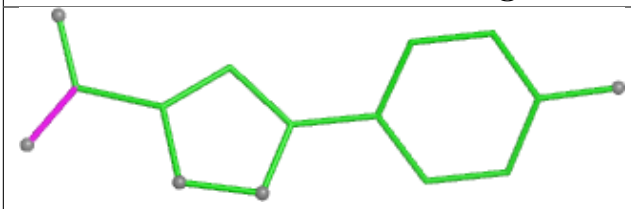


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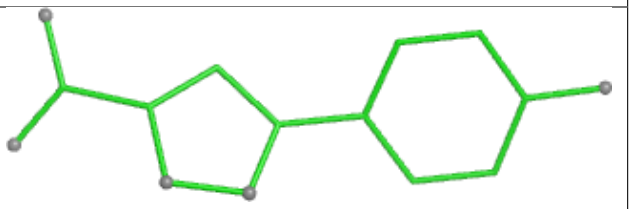


Rings

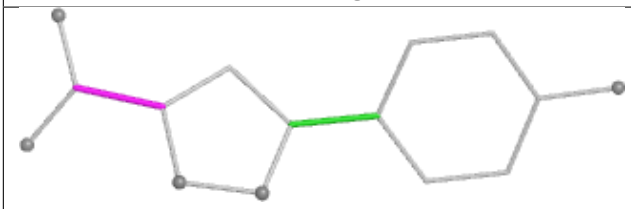
Ligand A1KDD E 302



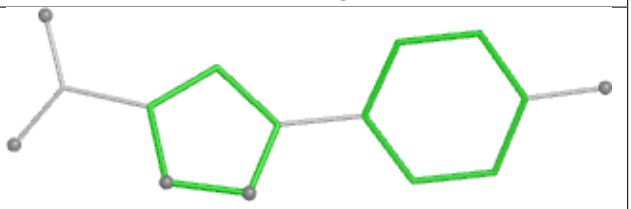
Bond lengths



Bond angles

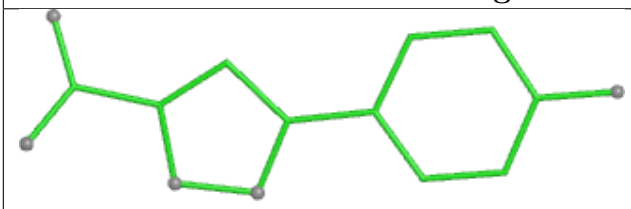


Torsions

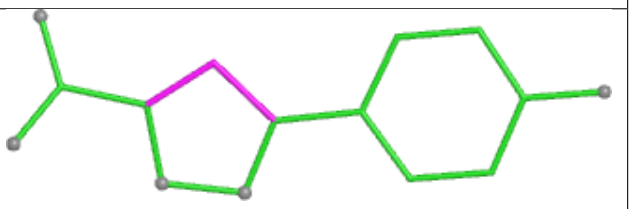


Rings

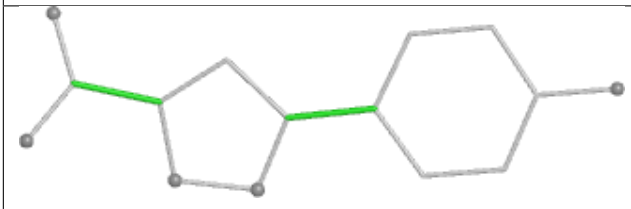
Ligand A1KDD M 302



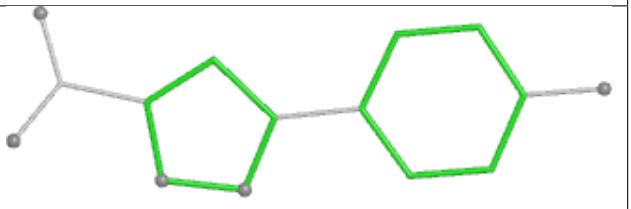
Bond lengths



Bond angles

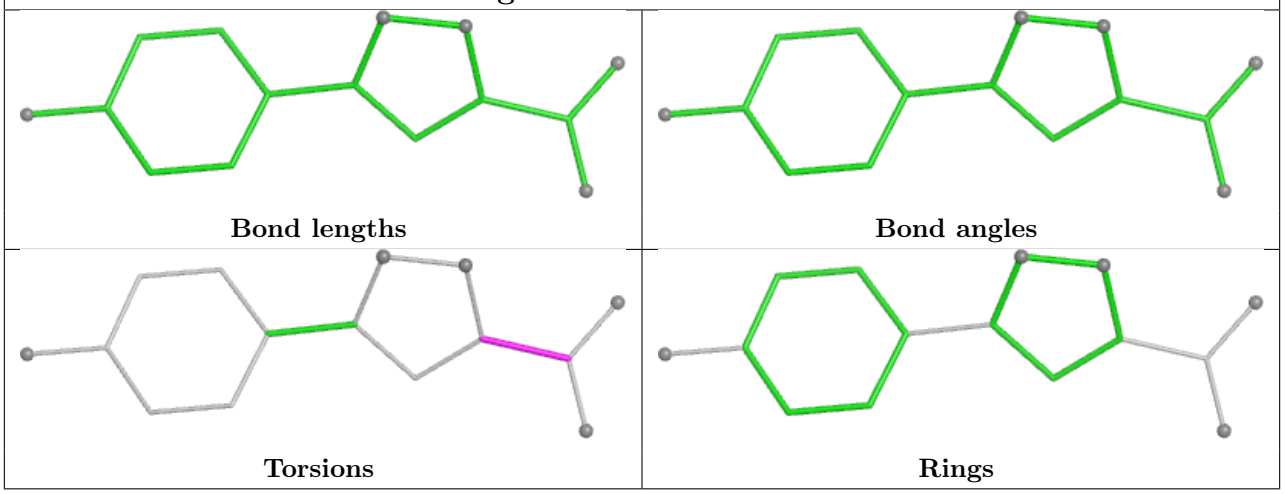


Torsions

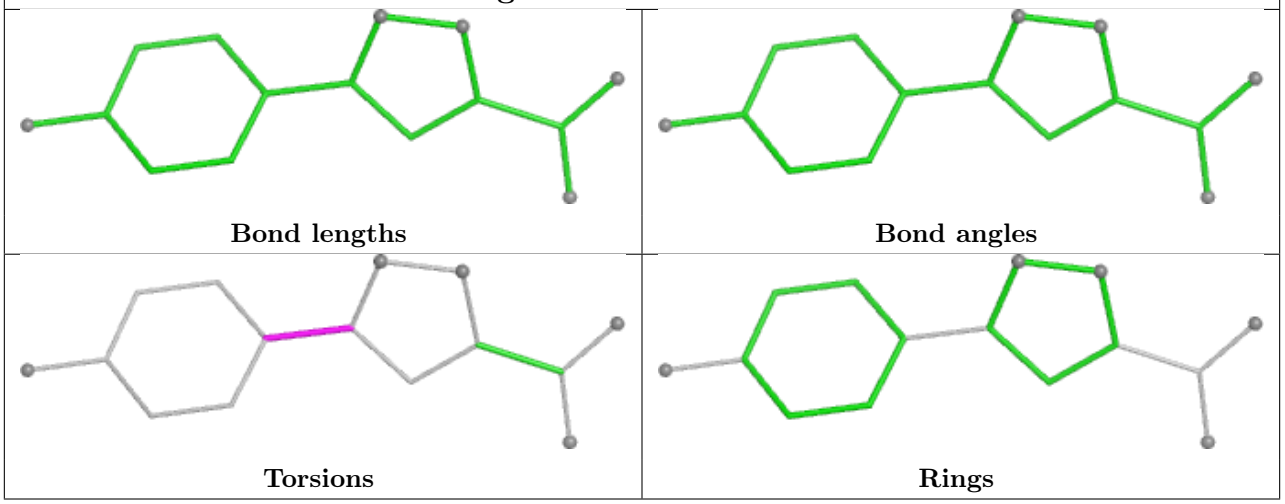


Rings

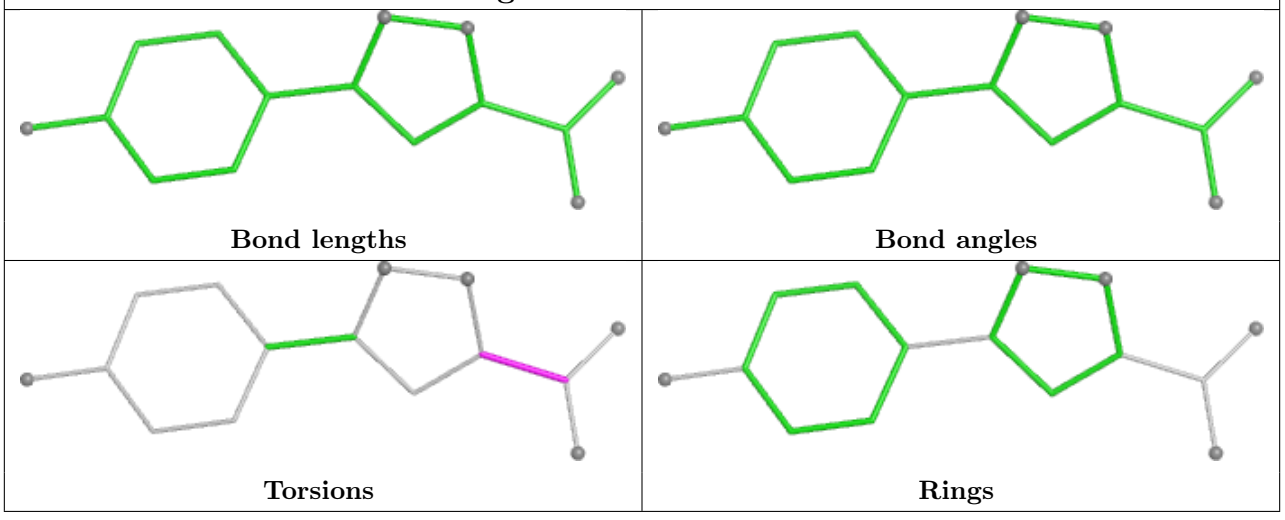
Ligand A1KDD H 302



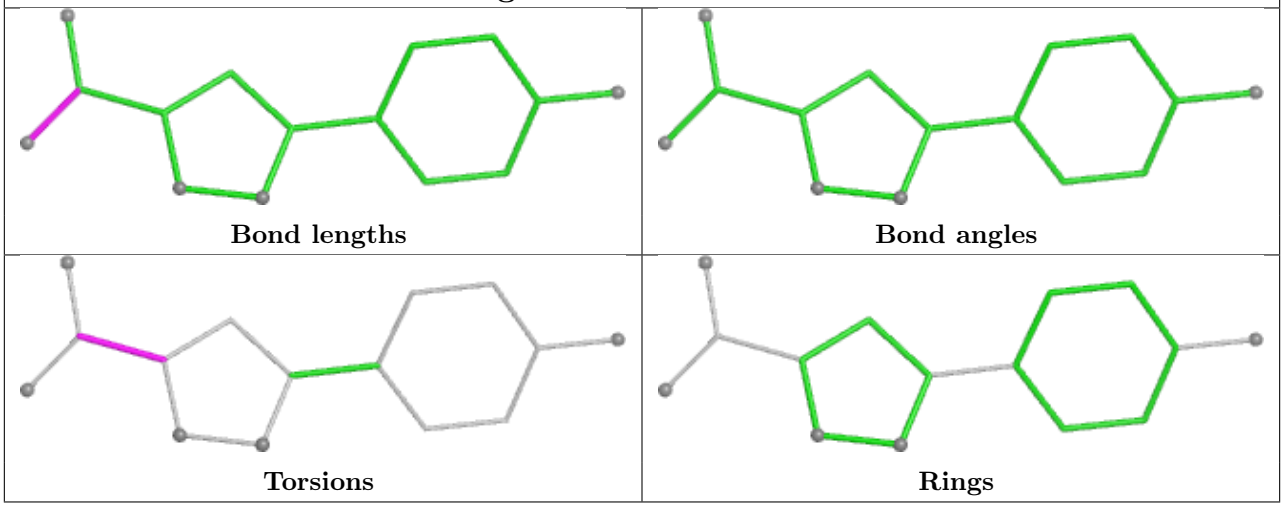
Ligand A1KDD K 302



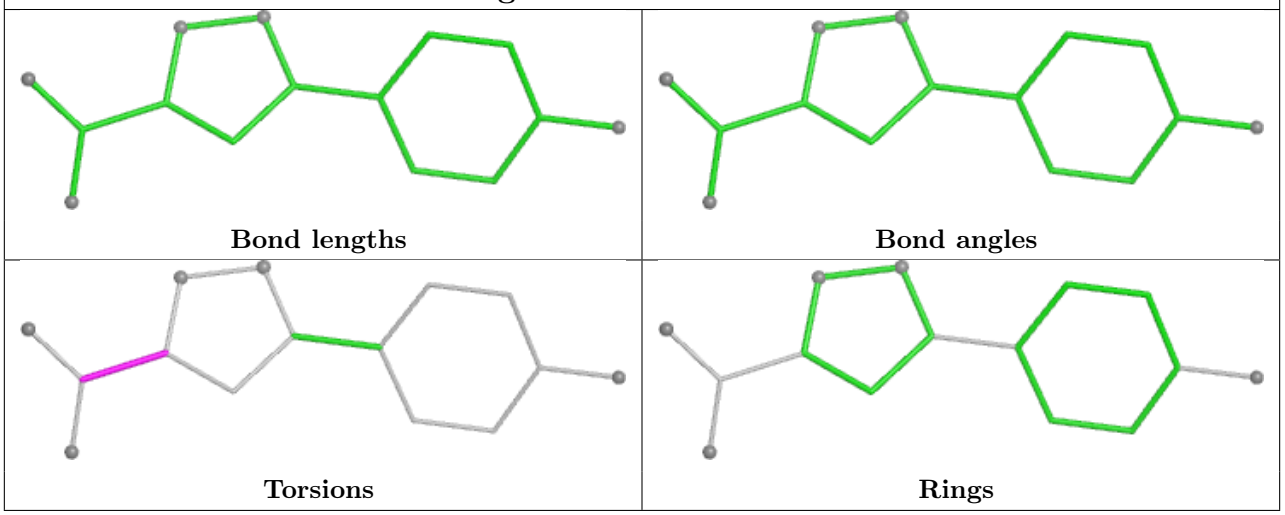
Ligand A1KDD K 301



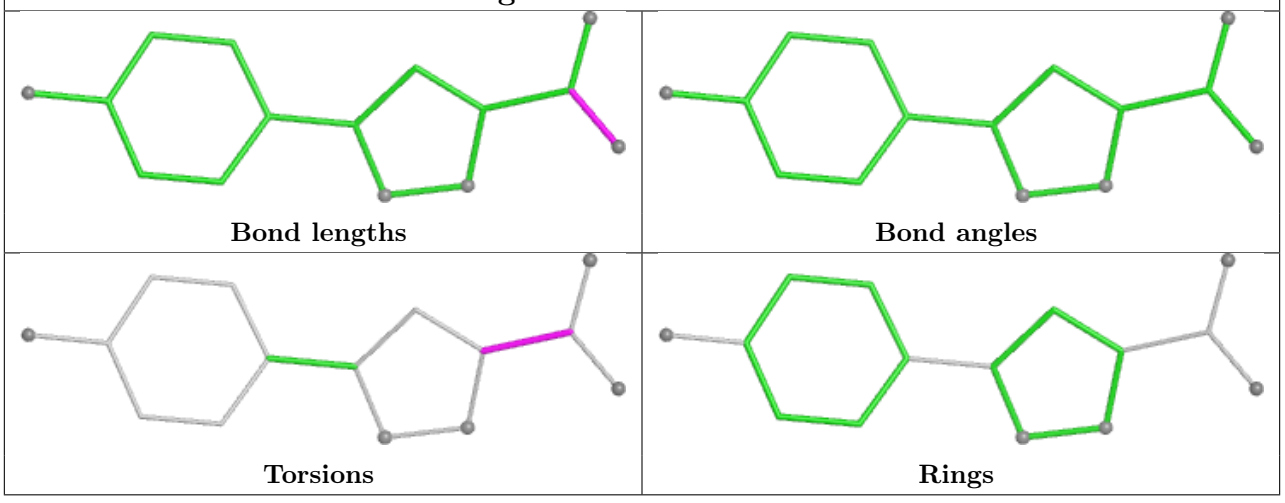
Ligand A1KDD U 301



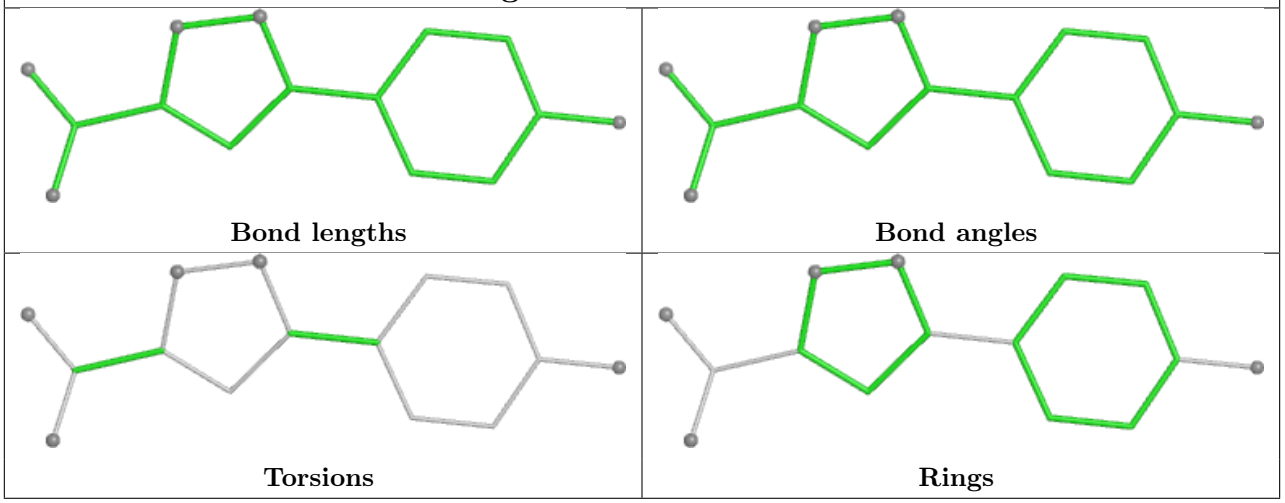
Ligand A1KDD O 301



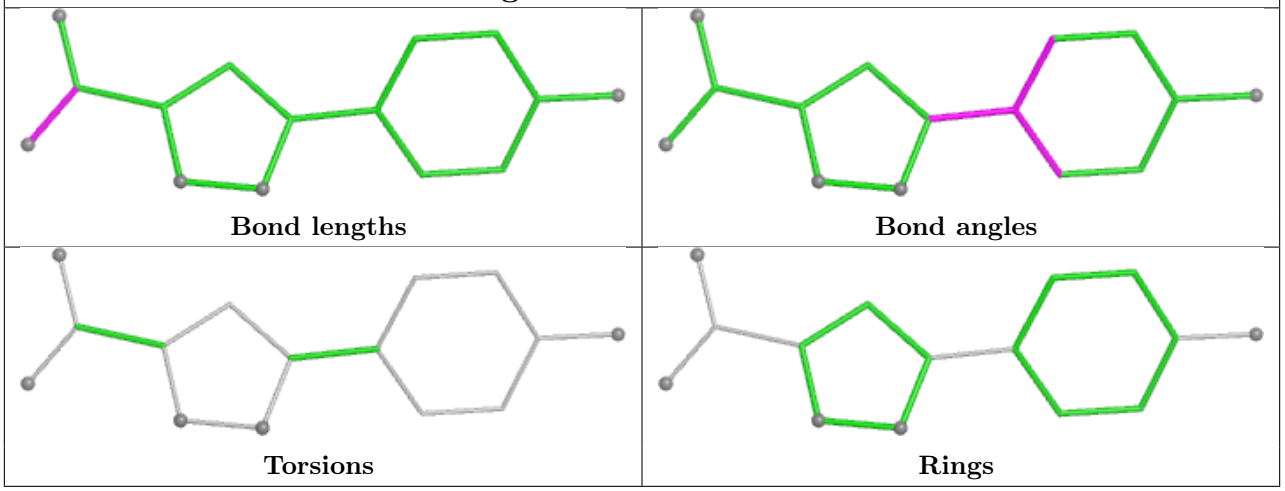
Ligand A1KDD A 301



Ligand A1KDD S 306



Ligand A1KDD S 301



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} 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	186/215 (86%)	0.31	17 (9%)	15	15	16, 42, 116, 133	2 (1%)
1	B	187/215 (86%)	0.23	19 (10%)	12	12	14, 37, 91, 134	2 (1%)
1	C	188/215 (87%)	0.14	13 (6%)	23	24	14, 37, 99, 128	2 (1%)
1	D	188/215 (87%)	0.24	20 (10%)	11	12	15, 36, 108, 140	1 (0%)
1	E	189/215 (87%)	0.22	13 (6%)	23	24	23, 36, 87, 136	0
1	F	187/215 (86%)	0.26	17 (9%)	15	15	23, 38, 85, 119	1 (0%)
1	G	187/215 (86%)	0.36	12 (6%)	25	27	18, 43, 104, 128	2 (1%)
1	H	189/215 (87%)	0.59	24 (12%)	8	8	20, 49, 100, 138	2 (1%)
1	I	187/215 (86%)	0.75	23 (12%)	8	8	34, 57, 140, 159	0
1	J	187/215 (86%)	0.80	25 (13%)	7	7	27, 60, 136, 171	2 (1%)
1	K	187/215 (86%)	0.81	32 (17%)	4	4	20, 55, 130, 158	2 (1%)
1	L	187/215 (86%)	0.18	13 (6%)	22	24	17, 37, 97, 135	2 (1%)
1	M	189/215 (87%)	0.34	16 (8%)	16	17	16, 39, 83, 112	2 (1%)
1	N	187/215 (86%)	0.32	13 (6%)	22	24	16, 40, 103, 140	3 (1%)
1	O	187/215 (86%)	0.28	14 (7%)	20	21	16, 38, 99, 137	2 (1%)
1	P	188/215 (87%)	0.22	19 (10%)	12	13	14, 35, 89, 134	2 (1%)
1	Q	188/215 (87%)	0.22	16 (8%)	16	17	15, 35, 101, 144	2 (1%)
1	R	187/215 (86%)	0.22	10 (5%)	32	34	16, 37, 81, 138	1 (0%)
1	S	188/215 (87%)	0.21	12 (6%)	25	27	26, 40, 100, 134	0
1	T	188/215 (87%)	0.33	17 (9%)	15	16	17, 41, 109, 138	2 (1%)
1	U	188/215 (87%)	0.27	11 (5%)	28	30	19, 38, 96, 132	1 (0%)
1	V	187/215 (86%)	0.22	14 (7%)	20	21	17, 38, 86, 114	1 (0%)
All	All	4126/4730 (87%)	0.34	370 (8%)	15	16	14, 41, 105, 171	34 (0%)

The worst 5 of 370 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	25	CYS	5.6
1	Q	184	LEU	5.5
1	N	184	LEU	5.2
1	G	210	PRO	5.2
1	A	184	LEU	5.0

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	EDO	J	301	4/4	0.61	0.27	52,57,64,69	0
2	A1KDD	S	306	15/15	0.70	0.18	66,94,106,106	0
2	A1KDD	T	301	15/15	0.72	0.18	47,71,85,86	0
2	A1KDD	F	301	15/15	0.72	0.18	47,74,91,96	0
3	EDO	A	306	4/4	0.76	0.15	66,68,71,78	0
2	A1KDD	L	305	15/15	0.76	0.16	44,77,88,97	0
2	A1KDD	K	302	15/15	0.77	0.17	53,92,107,108	0
2	A1KDD	L	301	15/15	0.77	0.17	45,73,87,92	0
2	A1KDD	H	302	15/15	0.77	0.16	55,86,93,97	0
2	A1KDD	M	302	15/15	0.77	0.18	66,101,113,113	0
3	EDO	S	302	4/4	0.77	0.22	50,57,63,70	0
3	EDO	U	303	4/4	0.77	0.19	42,44,58,59	0
3	EDO	O	304	4/4	0.78	0.21	55,60,61,65	0
3	EDO	U	302	4/4	0.79	0.19	50,55,57,66	0
2	A1KDD	O	302	15/15	0.79	0.18	44,79,114,132	0
2	A1KDD	B	302	15/15	0.80	0.15	43,59,67,76	0
2	A1KDD	S	301	15/15	0.80	0.14	50,63,69,70	0
3	EDO	L	303	4/4	0.81	0.11	62,64,65,69	0
3	EDO	N	302	4/4	0.81	0.17	46,67,68,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	EDO	C	305	4/4	0.81	0.16	52,61,65,65	0
3	EDO	K	305	4/4	0.82	0.18	57,58,59,65	0
3	EDO	K	304	4/4	0.83	0.20	61,68,70,70	0
3	EDO	R	303	4/4	0.83	0.17	53,60,63,63	0
2	A1KDD	E	302	15/15	0.83	0.14	37,58,69,78	0
2	A1KDD	D	302	15/15	0.83	0.13	41,68,92,100	0
2	A1KDD	R	302	15/15	0.83	0.14	45,70,75,80	0
3	EDO	A	302	4/4	0.84	0.15	57,58,62,66	0
3	EDO	M	304	4/4	0.84	0.19	62,67,68,75	0
2	A1KDD	N	301	15/15	0.84	0.14	46,83,92,104	0
2	A1KDD	U	301	15/15	0.84	0.13	47,64,68,71	0
3	EDO	E	303	4/4	0.85	0.14	47,55,57,64	0
3	EDO	T	304	4/4	0.85	0.12	55,57,59,60	0
3	EDO	C	301	4/4	0.85	0.21	73,73,75,78	0
2	A1KDD	C	302	15/15	0.85	0.13	41,57,63,68	0
3	EDO	Q	305	4/4	0.86	0.17	35,47,50,54	0
3	EDO	M	303	4/4	0.86	0.14	53,53,56,57	0
3	EDO	F	302	4/4	0.86	0.15	49,58,62,66	0
3	EDO	S	305	4/4	0.86	0.13	59,65,69,73	0
3	EDO	I	301	4/4	0.86	0.17	50,54,60,61	0
2	A1KDD	K	301	15/15	0.86	0.12	59,74,80,80	0
3	EDO	O	306	4/4	0.86	0.17	42,51,53,55	0
3	EDO	V	303	4/4	0.86	0.15	60,62,67,70	0
4	CL	A	308	1/1	0.86	0.14	78,78,78,78	0
4	CL	R	307	1/1	0.86	0.18	59,59,59,59	0
3	EDO	D	303	4/4	0.87	0.14	61,68,69,70	0
2	A1KDD	O	301	15/15	0.87	0.12	42,65,74,90	0
3	EDO	R	304	4/4	0.87	0.15	59,60,60,60	0
3	EDO	B	303	4/4	0.87	0.14	42,52,53,55	0
3	EDO	G	301	4/4	0.87	0.14	50,53,56,61	0
3	EDO	B	305	4/4	0.87	0.14	50,59,60,64	0
3	EDO	O	303	4/4	0.87	0.15	39,44,49,52	0
2	A1KDD	H	301	15/15	0.87	0.13	49,79,88,88	0
3	EDO	V	301	4/4	0.87	0.16	49,60,61,63	0
2	A1KDD	R	301	15/15	0.87	0.11	37,54,63,64	0
3	EDO	Q	302	4/4	0.87	0.20	66,70,72,72	0
4	CL	C	308	1/1	0.87	0.15	64,64,64,64	0
3	EDO	Q	304	4/4	0.87	0.16	44,53,54,56	0
3	EDO	Q	303	4/4	0.88	0.19	62,62,64,65	0
3	EDO	F	304	4/4	0.88	0.14	49,63,65,70	0
3	EDO	D	301	4/4	0.88	0.15	64,65,66,68	0
3	EDO	H	303	4/4	0.88	0.13	52,60,60,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	EDO	V	302	4/4	0.88	0.16	42,56,57,61	0
3	EDO	H	304	4/4	0.88	0.19	60,66,67,69	0
3	EDO	R	305	4/4	0.88	0.14	45,53,55,57	0
4	CL	B	309	1/1	0.88	0.15	89,89,89,89	0
3	EDO	M	301	4/4	0.88	0.14	44,58,58,63	0
4	CL	G	303	1/1	0.88	0.17	73,73,73,73	0
3	EDO	A	307	4/4	0.88	0.18	65,67,69,70	0
4	CL	B	308	1/1	0.89	0.15	68,68,68,68	0
3	EDO	B	301	4/4	0.89	0.18	66,68,69,69	0
2	A1KDD	A	301	15/15	0.89	0.10	42,49,55,60	0
3	EDO	A	305	4/4	0.89	0.14	51,55,61,61	0
3	EDO	S	304	4/4	0.89	0.12	44,52,59,62	0
3	EDO	A	303	4/4	0.90	0.13	36,40,45,48	0
3	EDO	F	303	4/4	0.90	0.13	42,48,51,57	0
3	EDO	D	305	4/4	0.90	0.13	48,55,56,57	0
3	EDO	E	301	4/4	0.90	0.15	63,67,69,73	0
2	A1KDD	P	301	15/15	0.90	0.10	37,44,52,56	0
3	EDO	L	302	4/4	0.90	0.13	40,48,52,55	0
5	MG	C	306	1/1	0.90	0.13	67,67,67,67	0
5	MG	O	307	1/1	0.90	0.10	61,61,61,61	0
3	EDO	U	305	4/4	0.91	0.17	64,68,69,75	0
4	CL	C	307	1/1	0.91	0.15	78,78,78,78	0
3	EDO	T	303	4/4	0.91	0.16	52,56,58,62	0
3	EDO	C	303	4/4	0.91	0.13	43,57,58,58	0
4	CL	H	305	1/1	0.91	0.16	83,83,83,83	0
3	EDO	E	304	4/4	0.91	0.13	46,51,60,60	0
4	CL	S	307	1/1	0.91	0.15	79,79,79,79	0
3	EDO	J	302	4/4	0.91	0.13	51,52,56,60	0
5	MG	K	306	1/1	0.91	0.14	68,68,68,68	0
3	EDO	U	304	4/4	0.91	0.13	40,48,49,56	0
3	EDO	B	306	4/4	0.92	0.12	47,57,60,66	0
3	EDO	I	302	4/4	0.92	0.13	79,80,83,90	0
5	MG	P	303	1/1	0.92	0.16	63,63,63,63	0
3	EDO	C	304	4/4	0.93	0.11	45,49,50,52	0
3	EDO	O	305	4/4	0.93	0.11	57,59,65,72	0
3	EDO	D	304	4/4	0.93	0.10	40,42,46,52	0
4	CL	T	305	1/1	0.93	0.16	76,76,76,76	0
3	EDO	K	303	4/4	0.93	0.13	49,54,56,59	0
3	EDO	I	304	4/4	0.93	0.12	59,69,69,71	0
3	EDO	R	306	4/4	0.93	0.11	40,48,48,58	0
4	CL	G	304	1/1	0.93	0.16	84,84,84,84	0
4	CL	N	305	1/1	0.94	0.14	77,77,77,77	0

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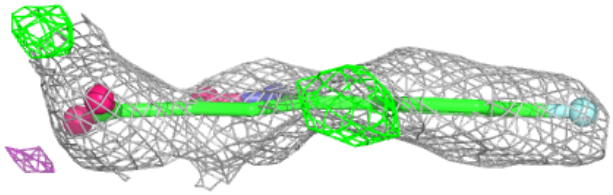
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	EDO	L	304	4/4	0.94	0.11	46,54,57,58	0
3	EDO	M	305	4/4	0.94	0.10	42,47,51,55	0
3	EDO	A	304	4/4	0.94	0.10	39,47,49,51	0
4	CL	V	304	1/1	0.94	0.14	80,80,80,80	0
5	MG	B	307	1/1	0.94	0.22	70,70,70,70	0
3	EDO	T	302	4/4	0.94	0.11	40,48,51,58	0
3	EDO	Q	301	4/4	0.94	0.11	38,47,49,49	0
3	EDO	N	303	4/4	0.94	0.11	40,47,52,60	0
3	EDO	I	303	4/4	0.94	0.11	51,54,59,62	0
3	EDO	G	302	4/4	0.95	0.11	46,50,55,64	0
3	EDO	B	304	4/4	0.95	0.09	37,44,47,53	0
3	EDO	E	305	4/4	0.95	0.09	40,46,47,55	0
4	CL	O	308	1/1	0.95	0.09	76,76,76,76	0
4	CL	Q	306	1/1	0.95	0.17	67,67,67,67	0
4	CL	E	306	1/1	0.95	0.19	75,75,75,75	0
3	EDO	N	304	4/4	0.95	0.12	49,54,57,62	0
4	CL	F	305	1/1	0.96	0.19	71,71,71,71	0
3	EDO	S	303	4/4	0.96	0.08	40,46,49,56	0
4	CL	L	306	1/1	0.96	0.16	73,73,73,73	0
4	CL	D	306	1/1	0.97	0.13	72,72,72,72	0
4	CL	P	304	1/1	0.97	0.15	72,72,72,72	0
3	EDO	P	302	4/4	0.97	0.09	36,40,45,49	0

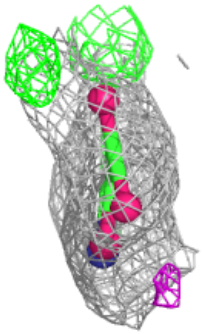
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around A1KDD S 306:

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

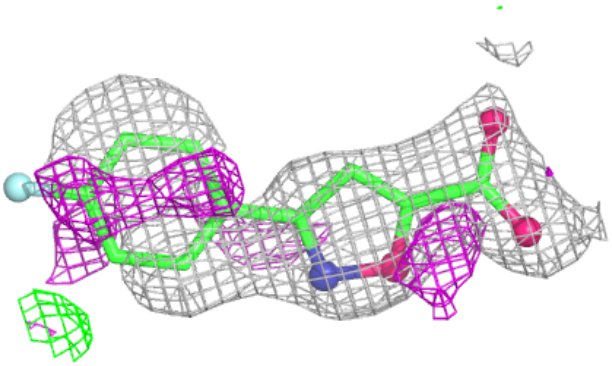


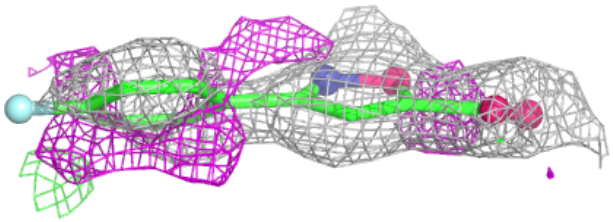


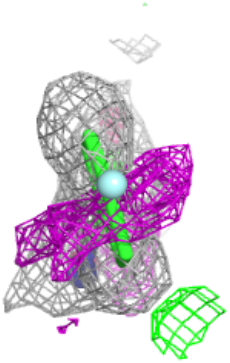


Electron density around A1KDD T 301:

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

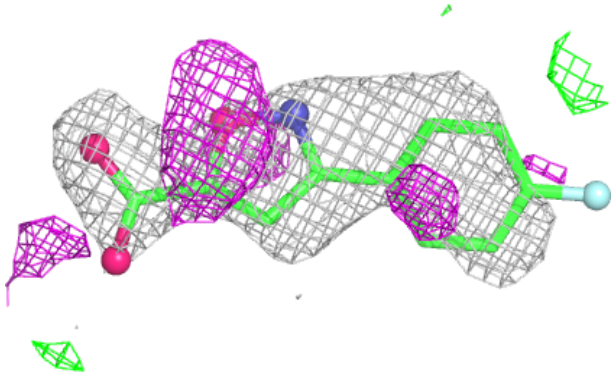


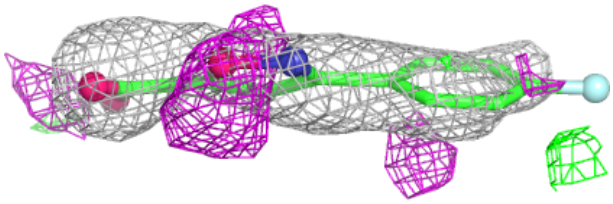


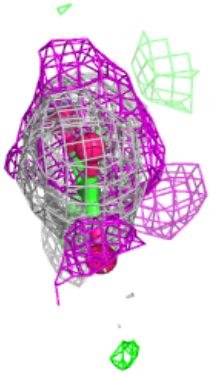


Electron density around A1KDD F 301:

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

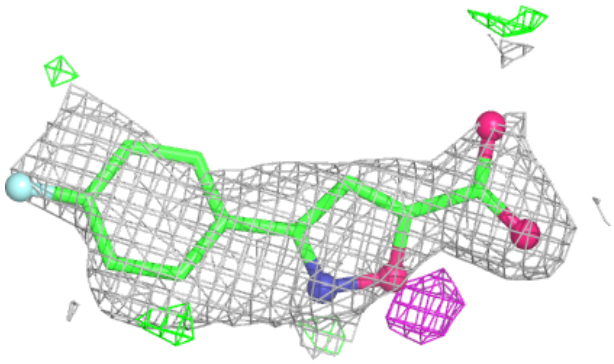


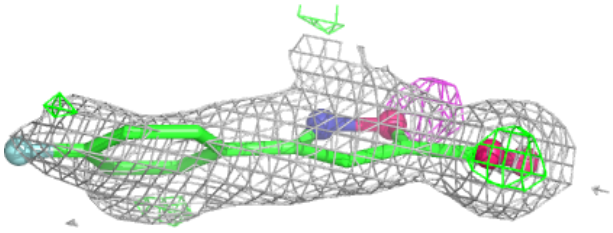


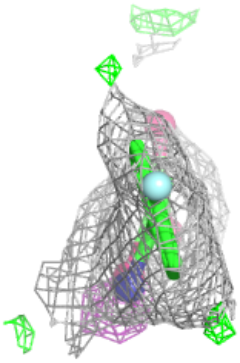


Electron density around A1KDD L 305:

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

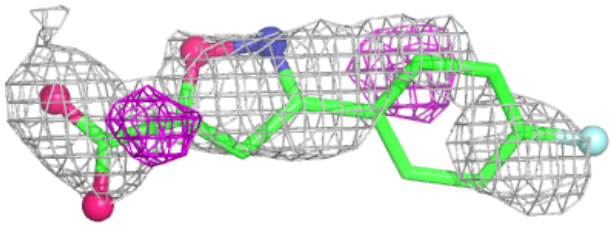


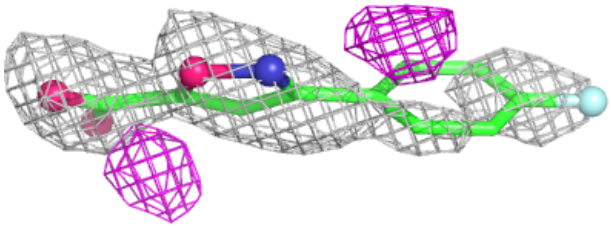


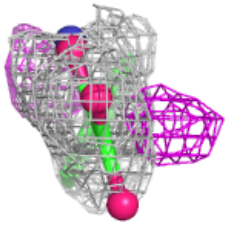


Electron density around A1KDD K 302:

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

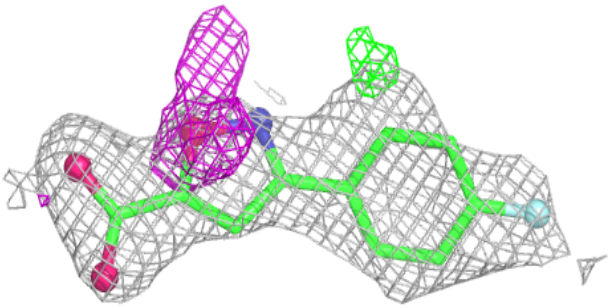


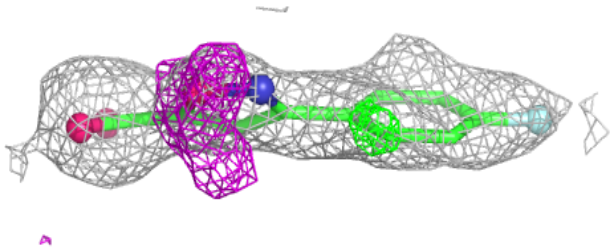


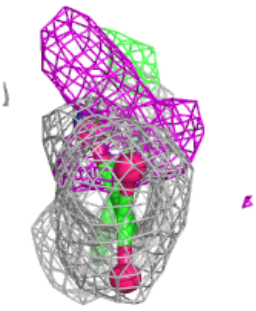


Electron density around A1KDD L 301:

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

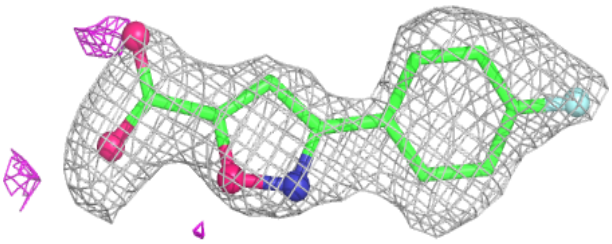


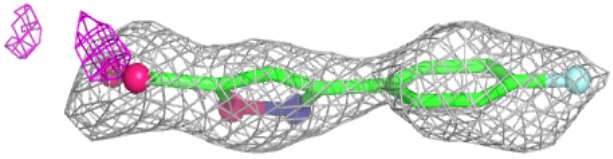


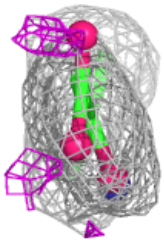


Electron density around A1KDD H 302:

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

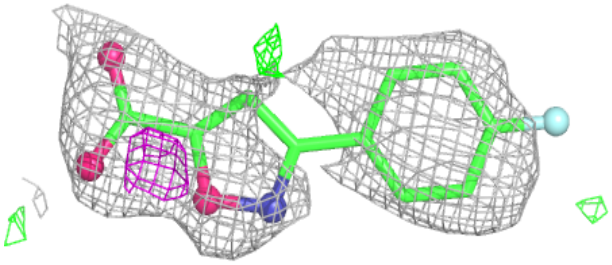


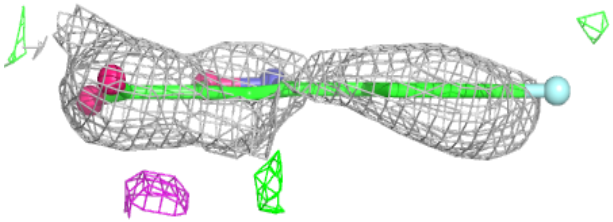


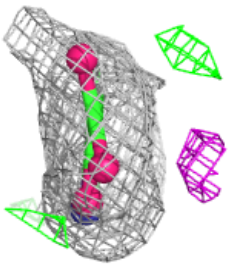


Electron density around A1KDD M 302:

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

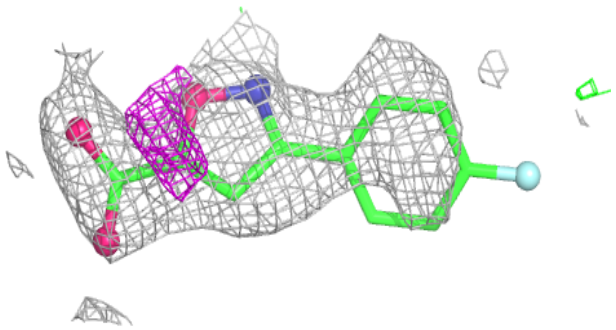


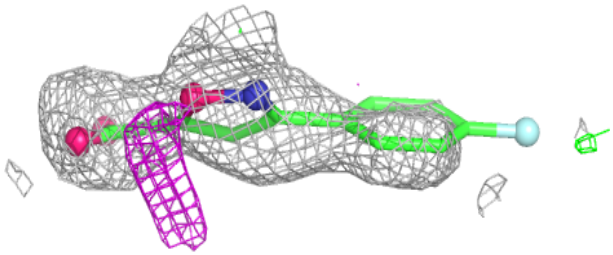


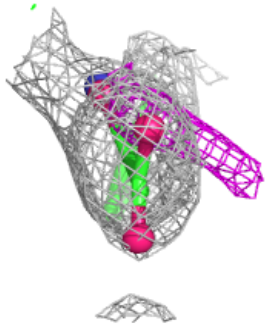


Electron density around A1KDD O 302:

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

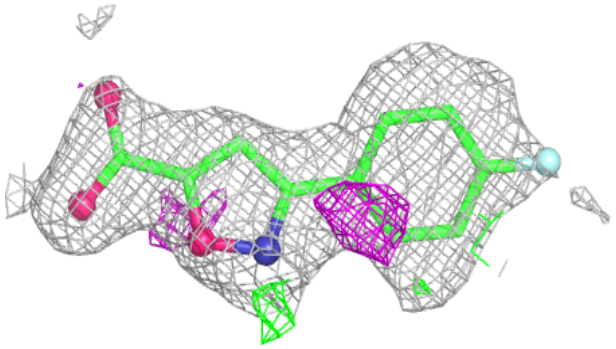


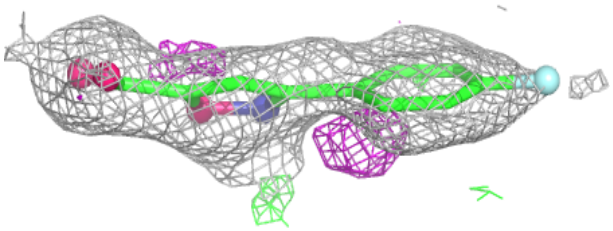


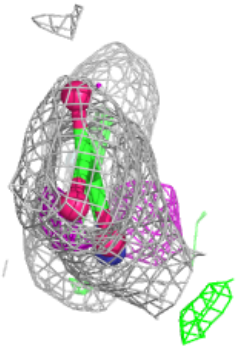


Electron density around A1KDD B 302:

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

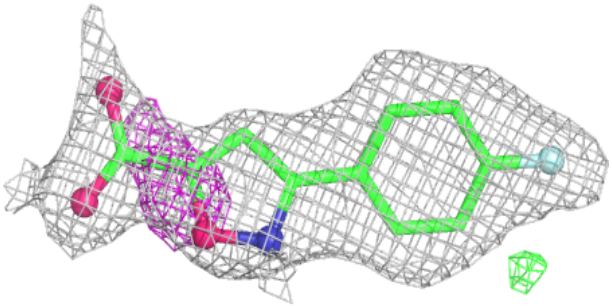


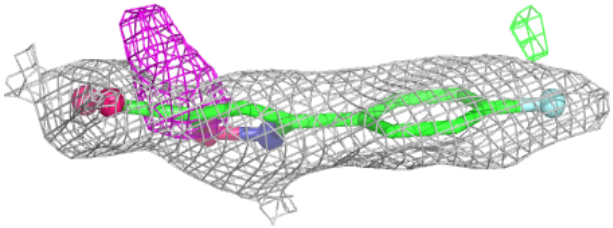


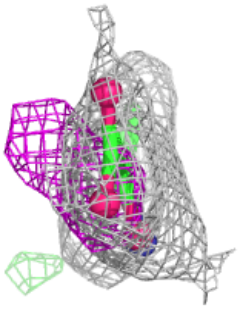


Electron density around A1KDD S 301:

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

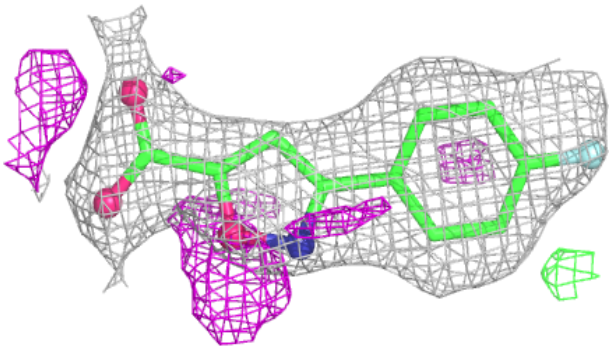


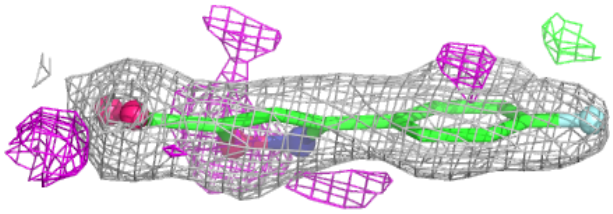


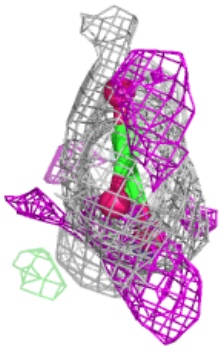


Electron density around A1KDD E 302:

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

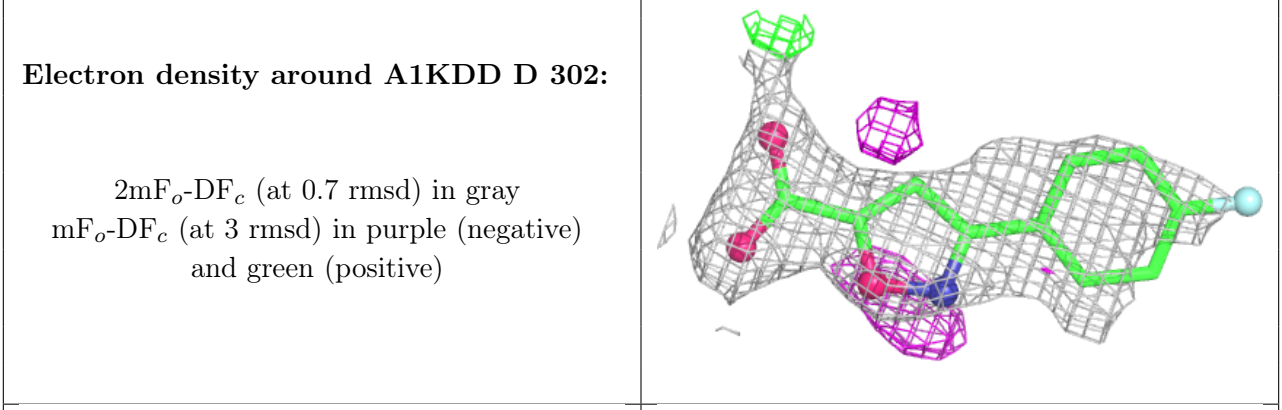






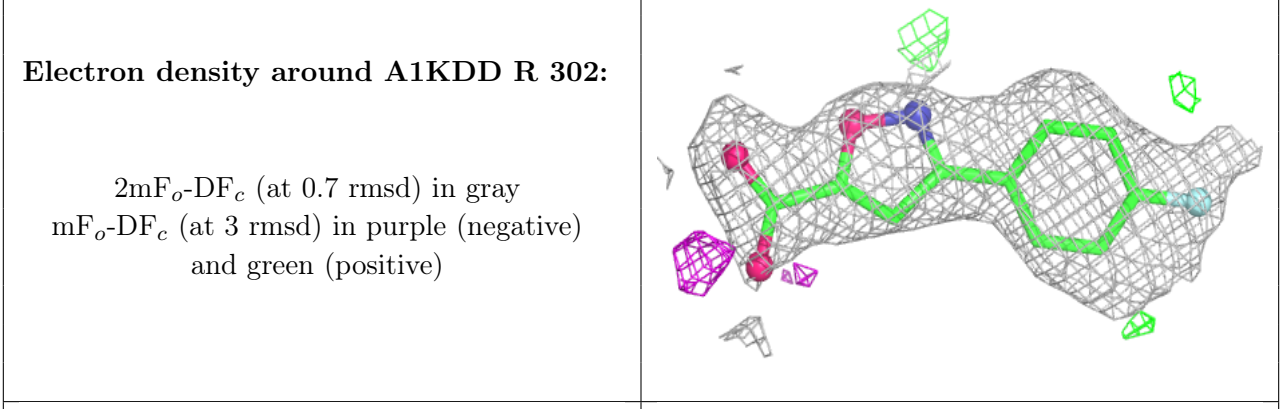
Electron density around A1KDD D 302:

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



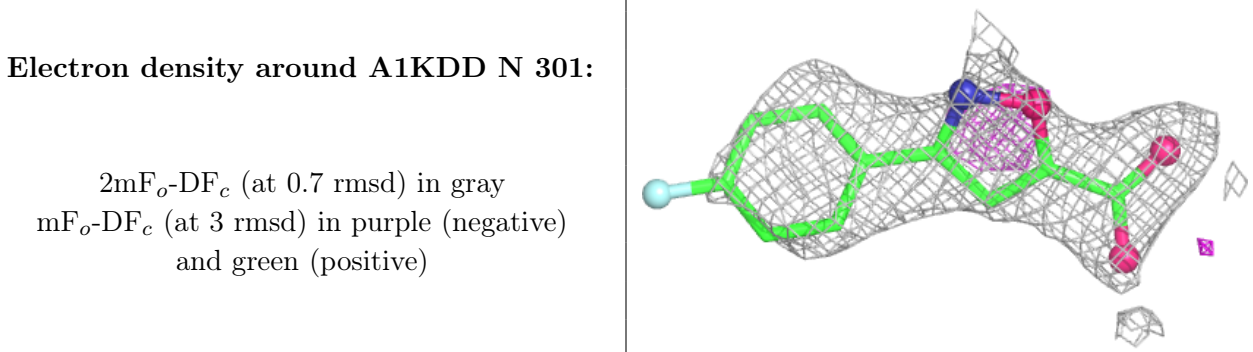
Electron density around A1KDD R 302:

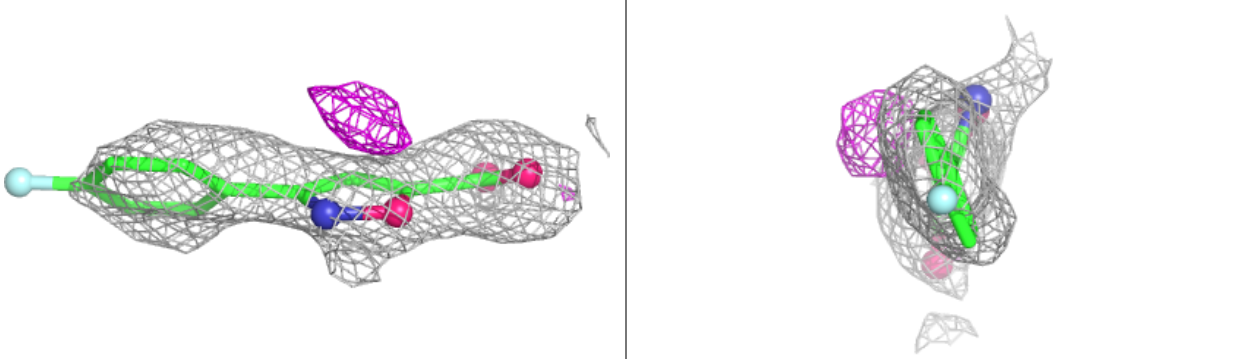
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around A1KDD N 301:

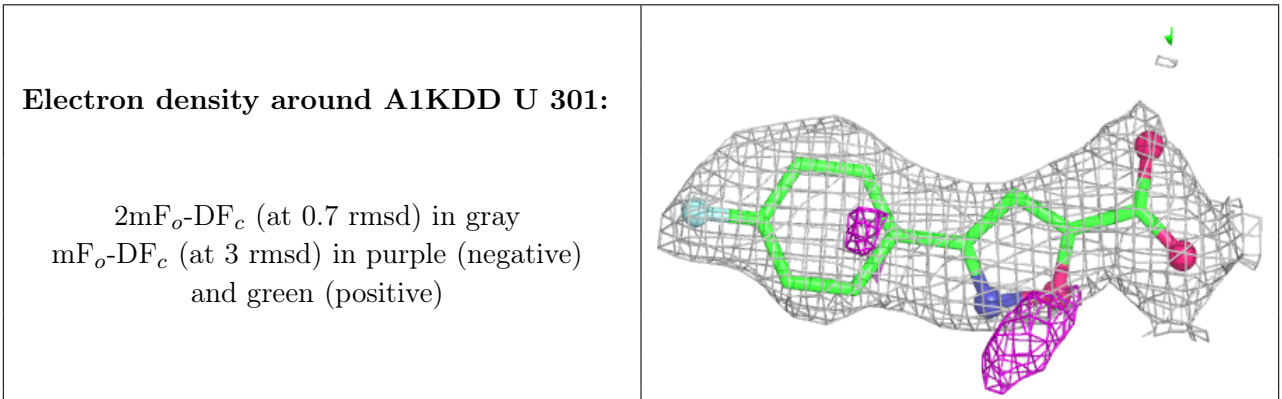
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

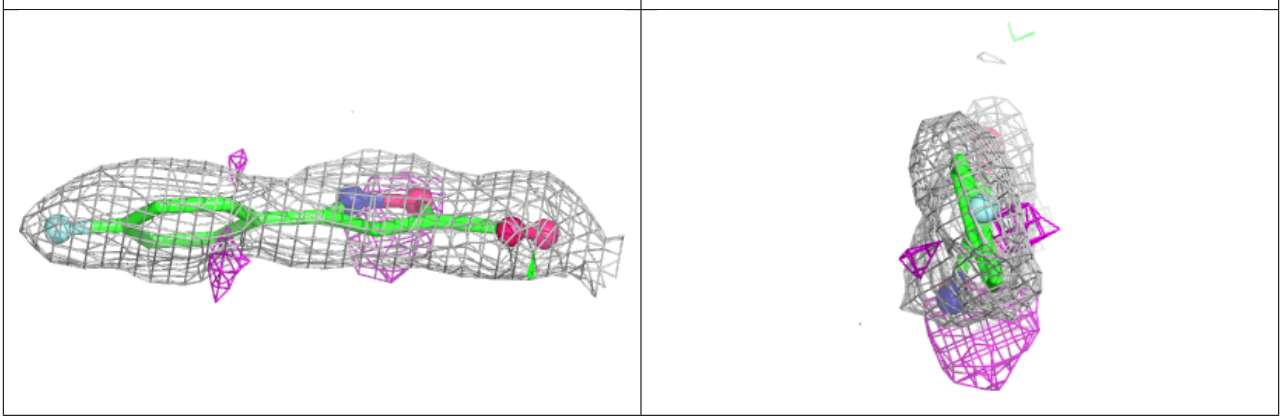




Electron density around A1KDD U 301:

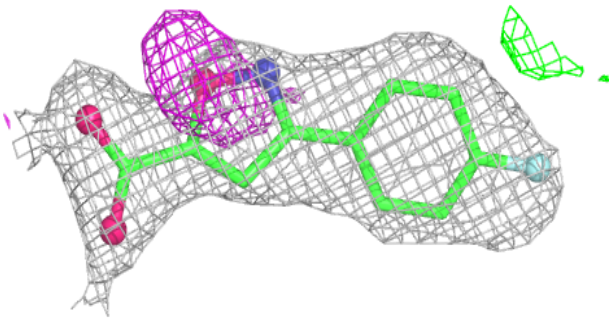
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

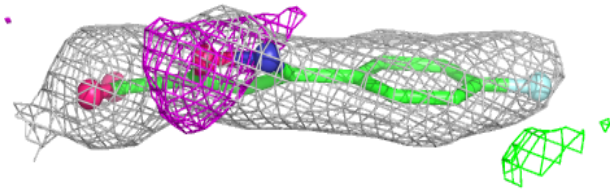


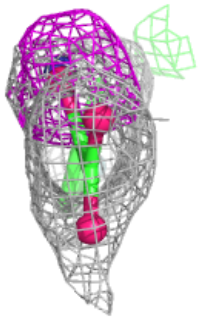


Electron density around A1KDD C 302:

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

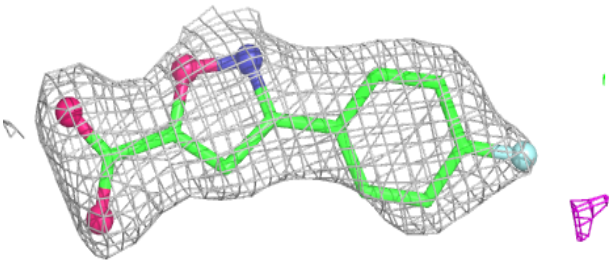


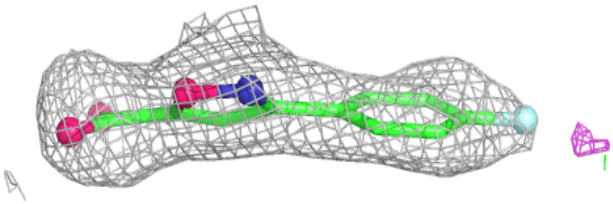


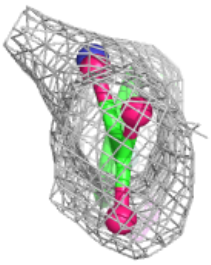


Electron density around A1KDD K 301:

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

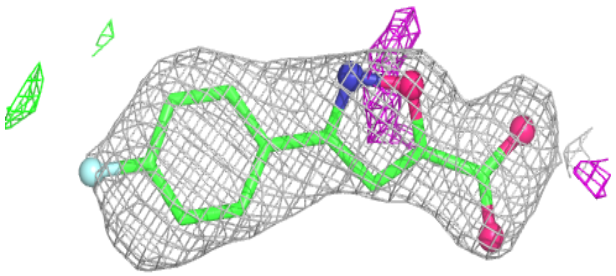


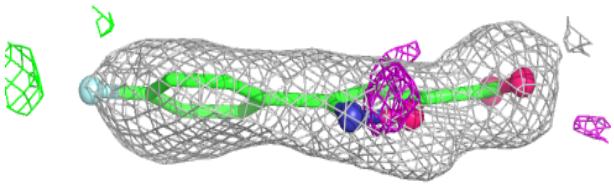


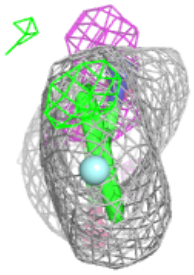


Electron density around A1KDD O 301:

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

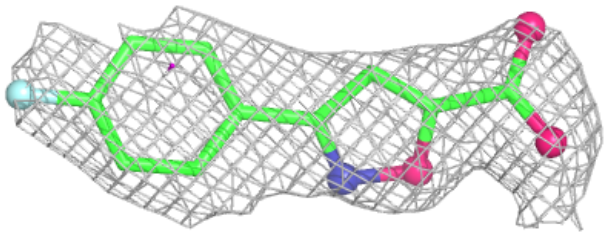


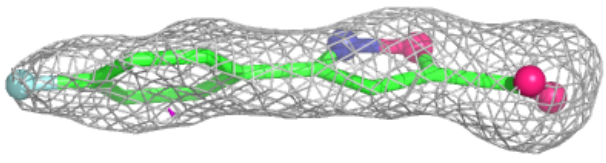


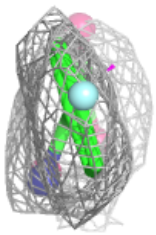


Electron density around A1KDD H 301:

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

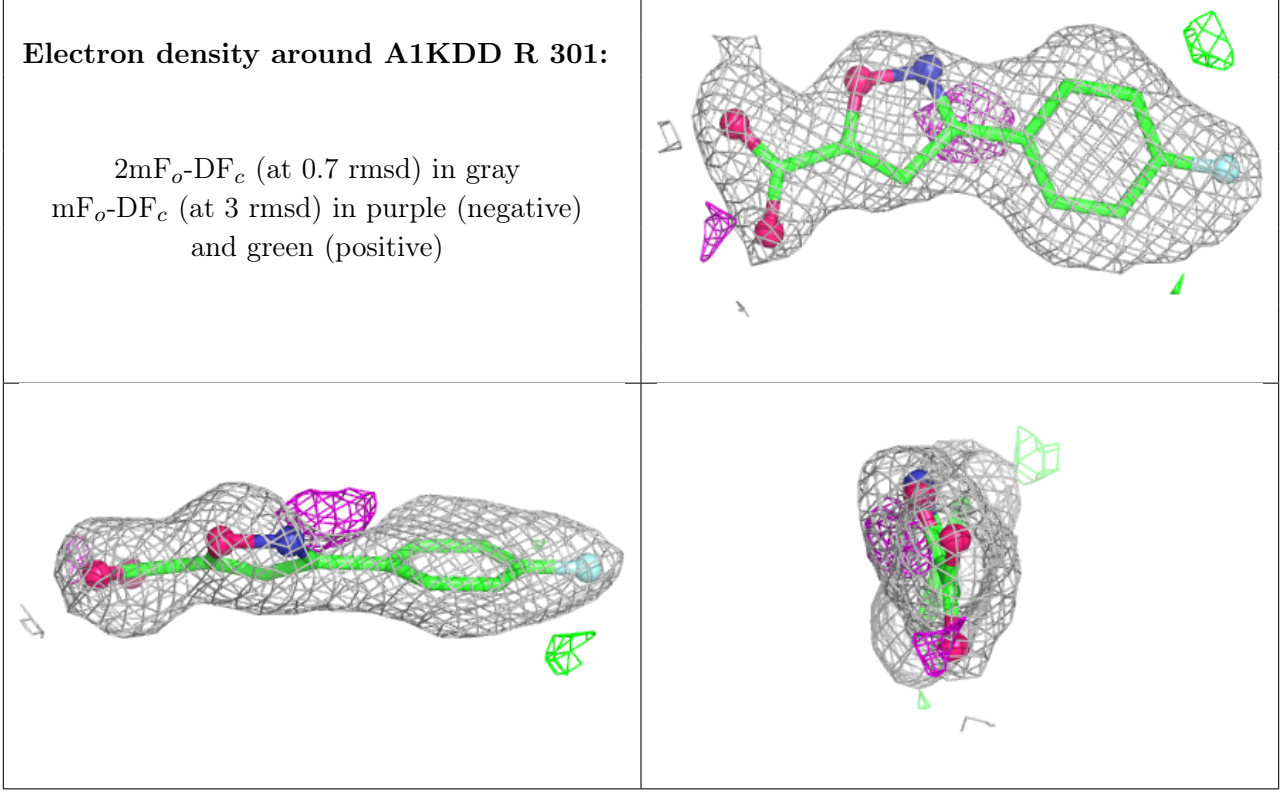






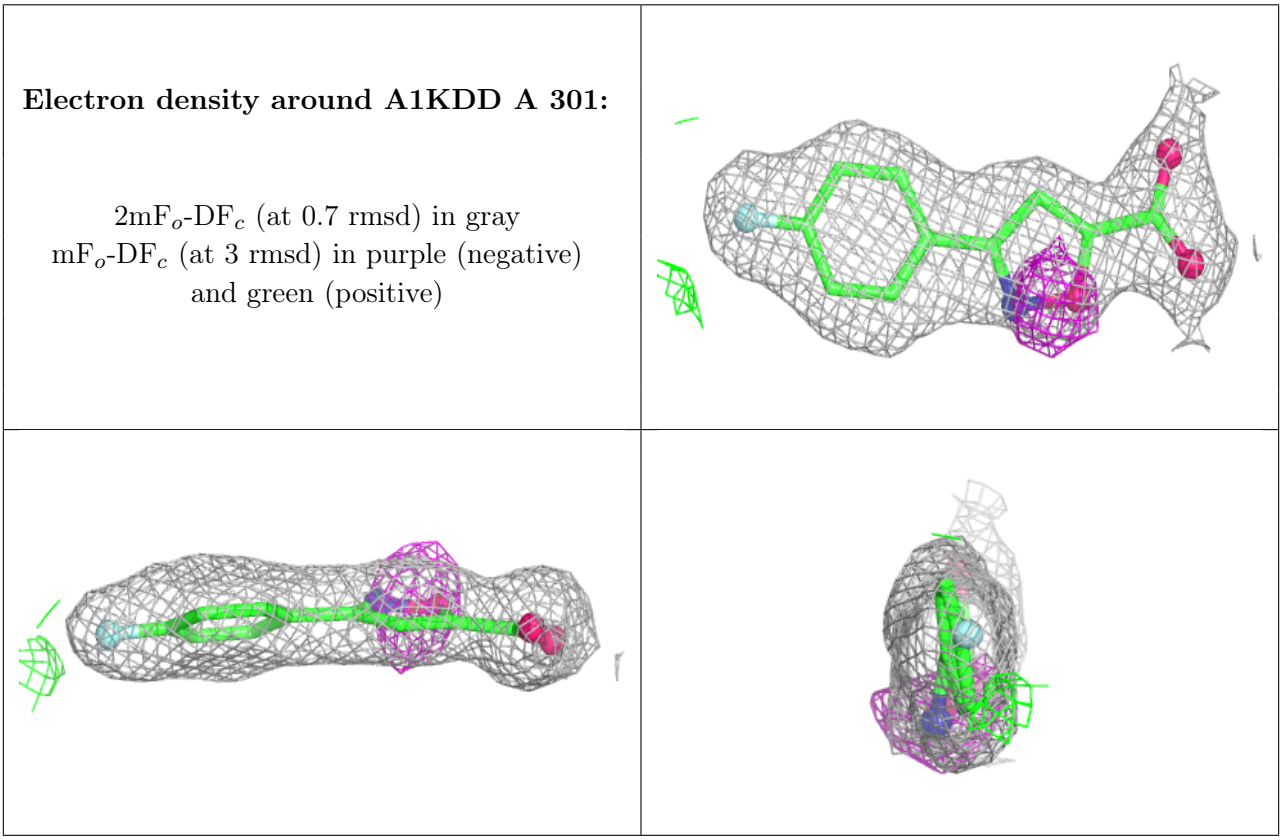
Electron density around A1KDD R 301:

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



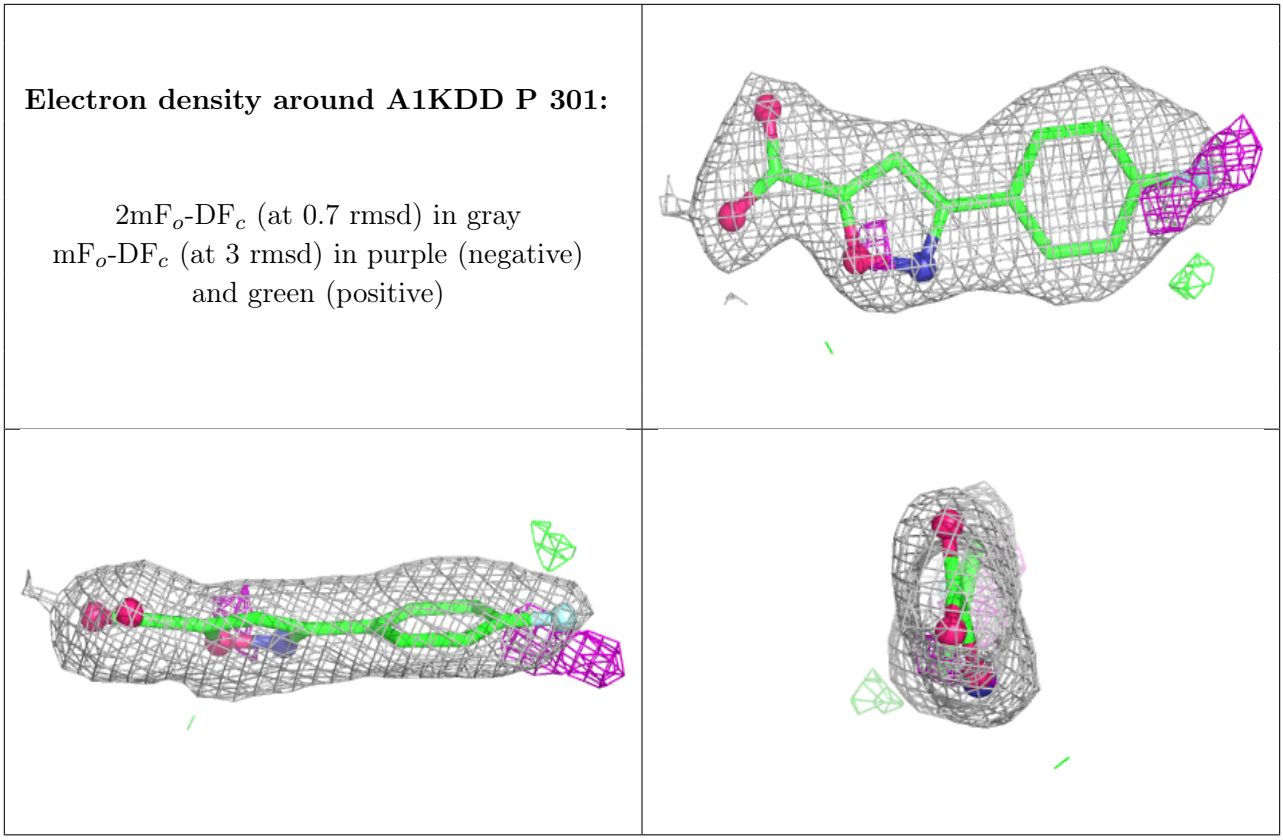
Electron density around A1KDD A 301:

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



Electron density around A1KDD P 301:

$2mF_o$-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.