Full wwPDB X-ray Structure Validation Report ⓘ

Jun 3, 2024 – 09:37 PM JST

PDB ID	:	8XGY
Title	:	Crystal structure of human Golgi resident glutaminyl cyclase in complex with (R,Z)-3-((1H-benzo[d]imidazol-5-yl)methylene)-4-((1-acetylpyrrolidin-3-yl)oxy)indolin-2-one
Authors	:	Li, G.-B.; Wang, X.-Y.
Deposited on	:	2023-12-16
Resolution	:	2.81 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:

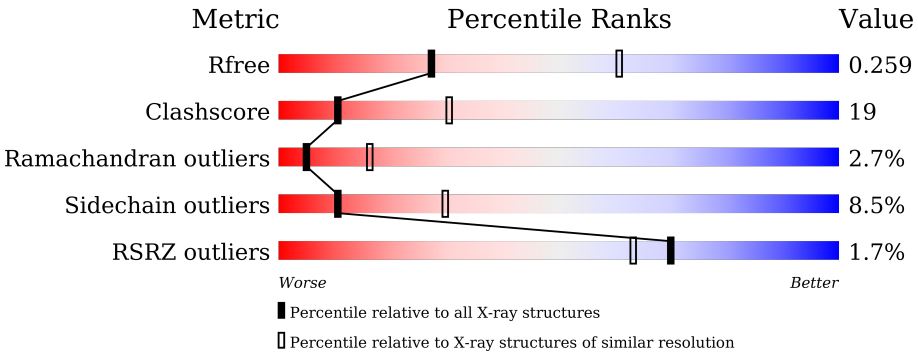
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

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 2.81 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3617 (2.84-2.80)
Clashscore	141614	4060 (2.84-2.80)
Ramachandran outliers	138981	3978 (2.84-2.80)
Sidechain outliers	138945	3980 (2.84-2.80)
RSRZ outliers	127900	3552 (2.84-2.80)

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	329	54% 39%
1	B	329	50% 37% 9%
1	C	329	55% 37% 6%
1	D	329	57% 35% 6%
1	E	329	52% 38% 8%

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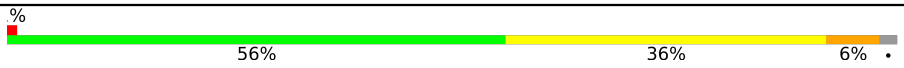
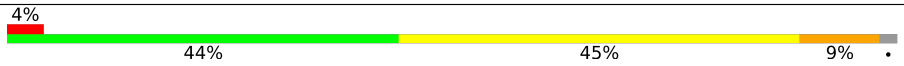
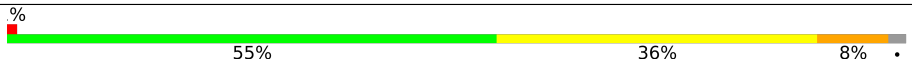
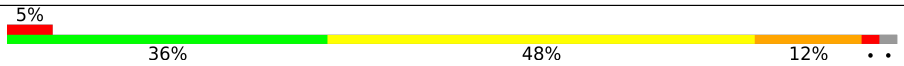
Mol	Chain	Length	Quality of chain
1	F	329	
1	G	329	
1	H	329	
1	I	329	
1	J	329	
1	K	329	
1	L	329	

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
2	ZN	L	401	-	-	X	-

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 31701 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 Glutaminyl-peptide cyclotransferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	A	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	C	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	D	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	E	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	F	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	G	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	H	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	I	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	J	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	K	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			
1	L	323	Total	C	N	O	S	5	0	0
			2610	1673	450	478	9			

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	B	1	Total	Zn	0	0
			1	1		
2	A	1	Total	Zn	0	0
			1	1		

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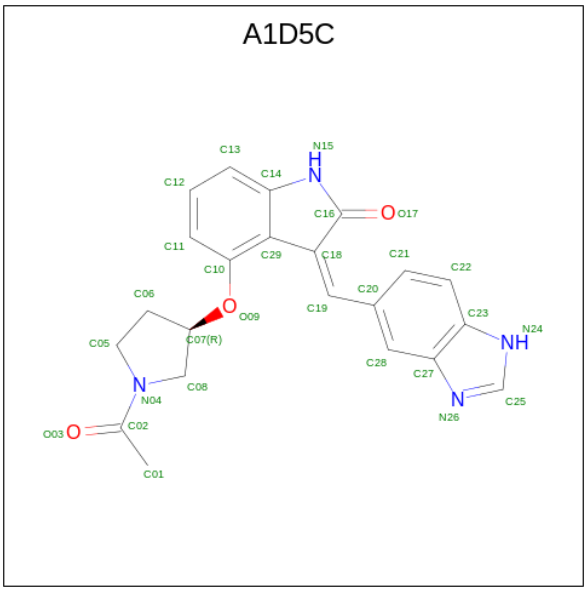
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	1	Total Zn 1 1	0	0
2	D	1	Total Zn 1 1	0	0
2	E	1	Total Zn 1 1	0	0
2	F	1	Total Zn 1 1	0	0
2	G	1	Total Zn 1 1	0	0
2	H	1	Total Zn 1 1	0	0
2	I	1	Total Zn 1 1	0	0
2	J	1	Total Zn 1 1	0	0
2	K	1	Total Zn 1 1	0	0
2	L	1	Total Zn 1 1	0	0

- Molecule 3 is (3 {Z})-3-(1 {H}-benzimidazol-5-ylmethylidene)-4-[(3 {R})-1-ethanoylpyrrolidin-3-yl]oxy-1 {H}-indol-2-one (three-letter code: A1D5C) (formula: $C_{22}H_{20}N_4O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	B	1	Total	C	N	O	0	0
			29	22	4	3		
3	A	1	Total	C	N	O	0	0
			29	22	4	3		
3	C	1	Total	C	N	O	0	0
			29	22	4	3		
3	D	1	Total	C	N	O	0	0
			29	22	4	3		
3	E	1	Total	C	N	O	0	0
			29	22	4	3		
3	F	1	Total	C	N	O	0	0
			29	22	4	3		
3	G	1	Total	C	N	O	0	0
			29	22	4	3		
3	H	1	Total	C	N	O	0	0
			29	22	4	3		
3	I	1	Total	C	N	O	0	0
			29	22	4	3		
3	J	1	Total	C	N	O	0	0
			29	22	4	3		
3	K	1	Total	C	N	O	0	0
			29	22	4	3		
3	L	1	Total	C	N	O	0	0
			29	22	4	3		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	B	5	Total	O	0	0
			5	5		
4	A	1	Total	O	0	0
			1	1		
4	C	3	Total	O	0	0
			3	3		
4	D	1	Total	O	0	0
			1	1		
4	E	2	Total	O	0	0
			2	2		
4	F	3	Total	O	0	0
			3	3		
4	G	1	Total	O	0	0
			1	1		
4	H	1	Total	O	0	0
			1	1		

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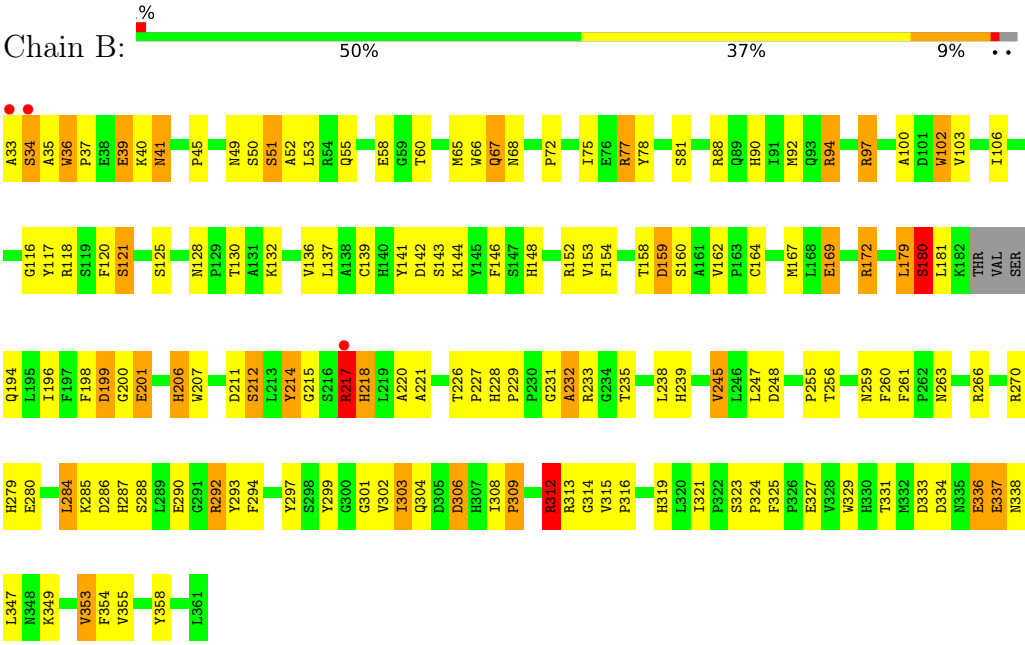
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	K	3	Total O 3 3	0	0
4	L	1	Total O 1 1	0	0

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.

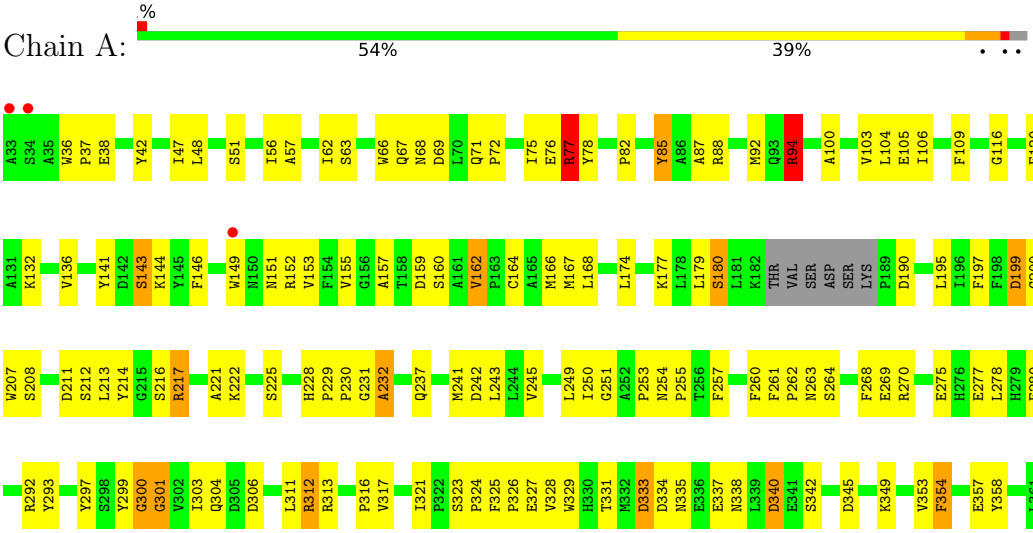
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain B:



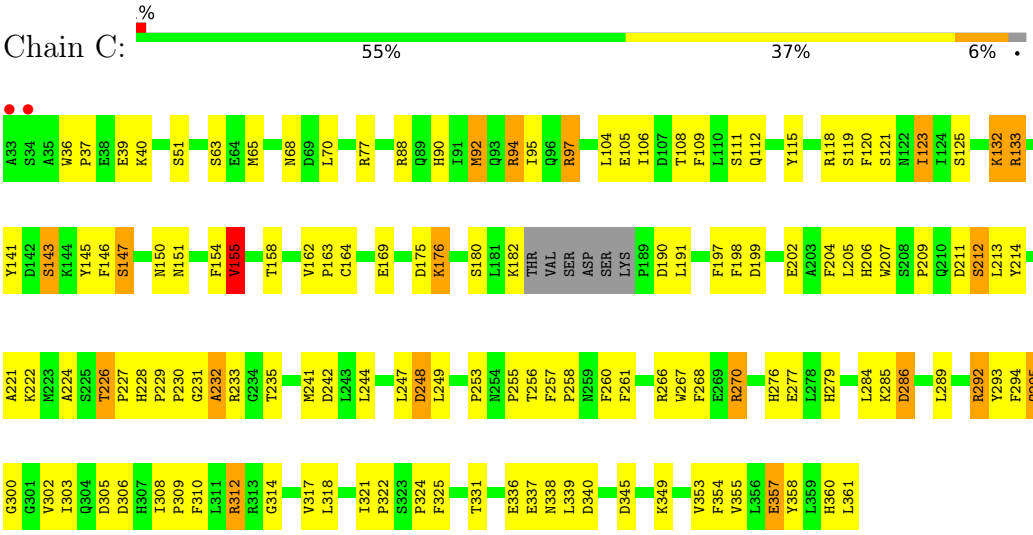
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain A:



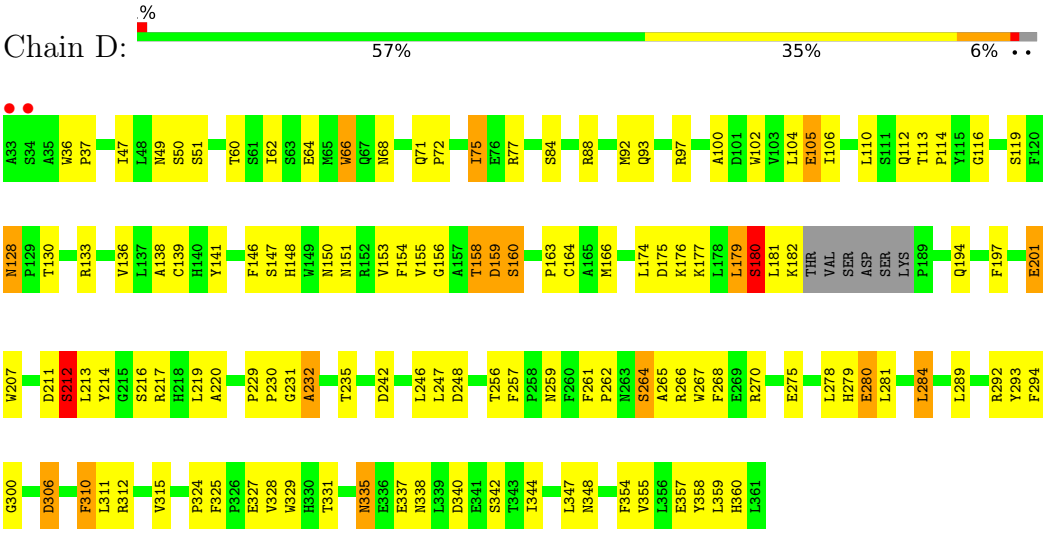
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain C:



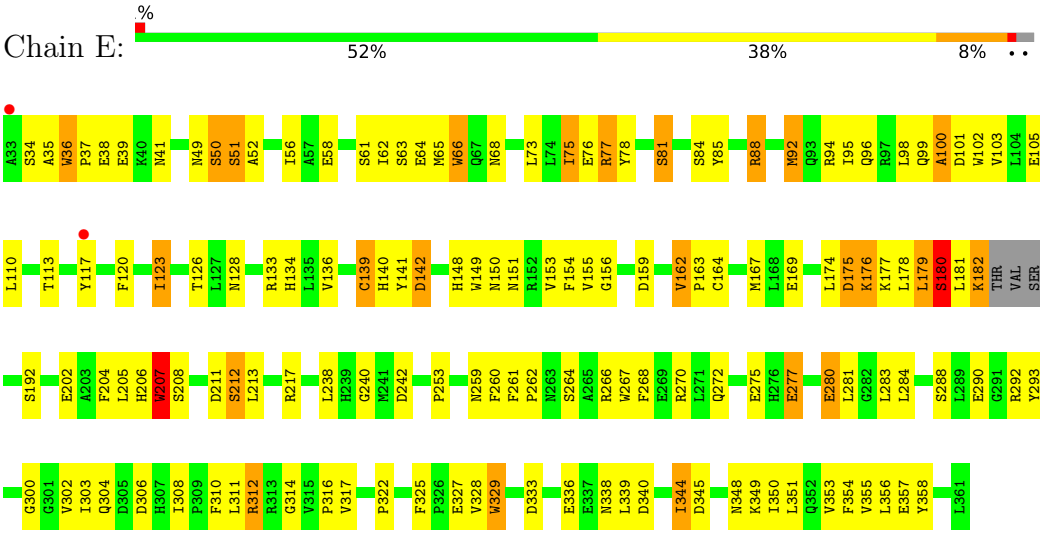
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain D:



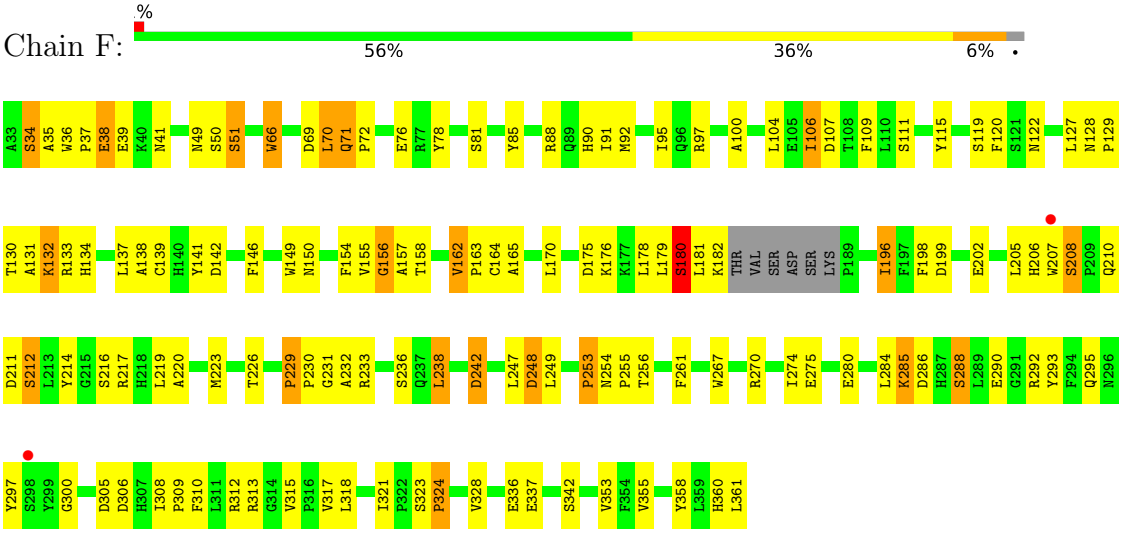
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain E:



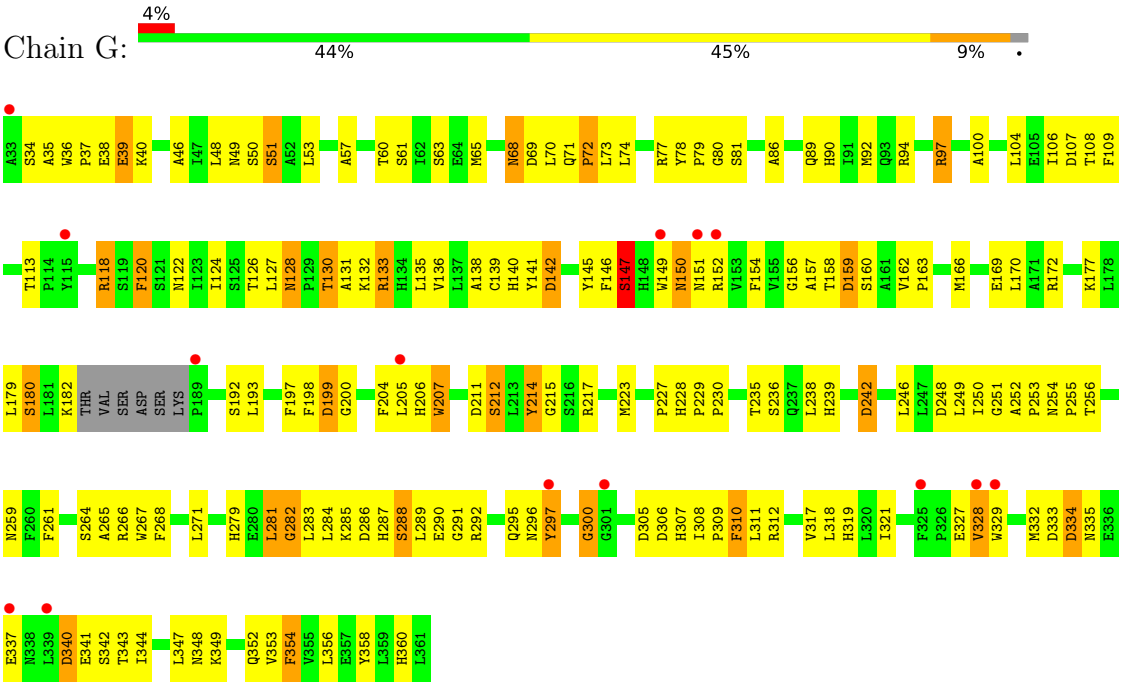
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain F:



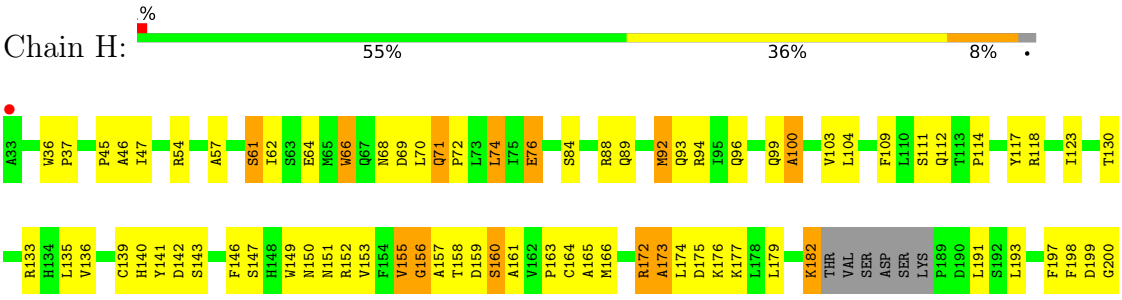
• Molecule 1: Glutaminyl-peptide cyclotransferase

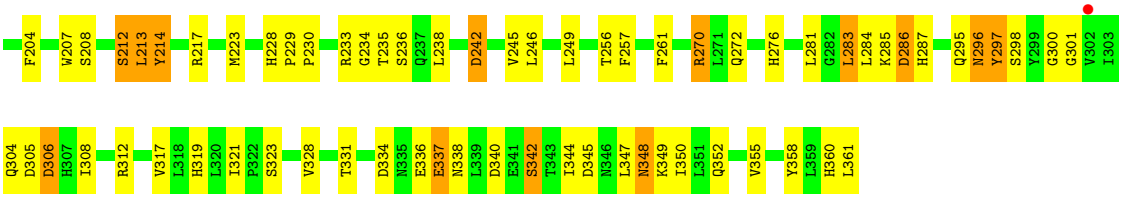
Chain G:



• Molecule 1: Glutaminyl-peptide cyclotransferase

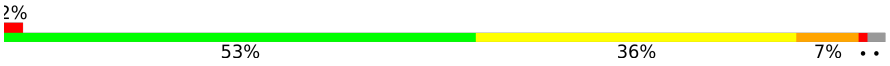
Chain H:

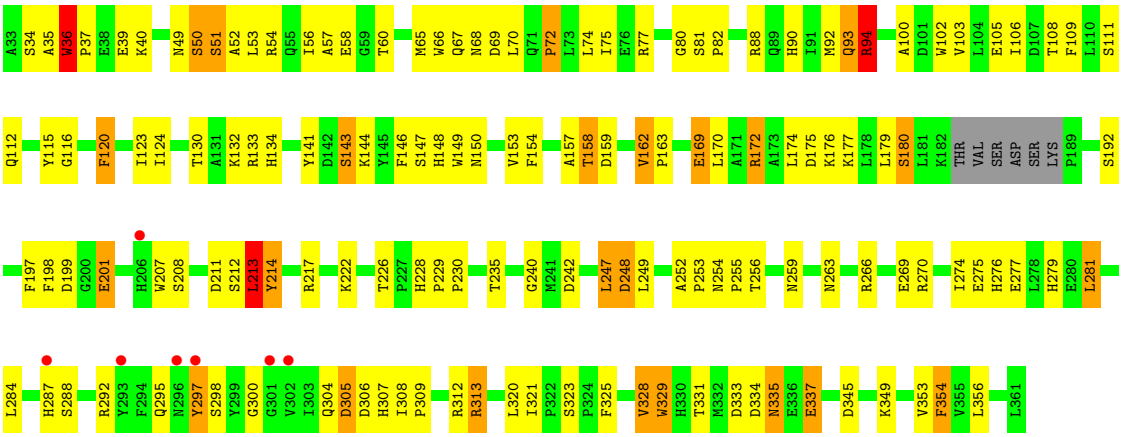




• Molecule 1: Glutaminyl-peptide cyclotransferase

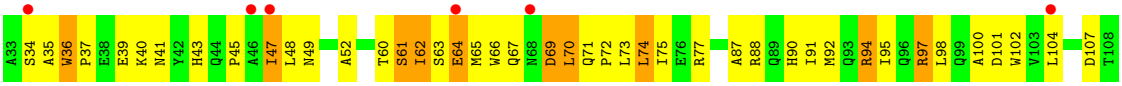
Chain I:

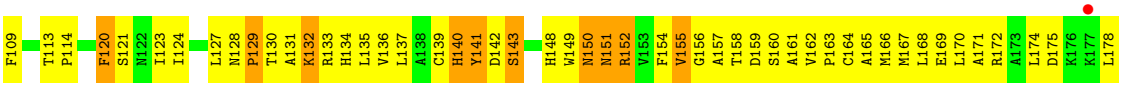


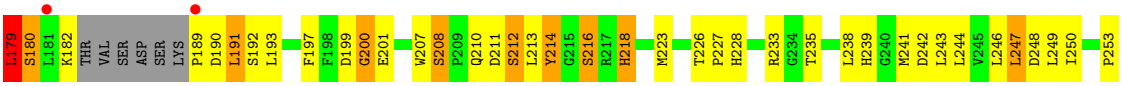


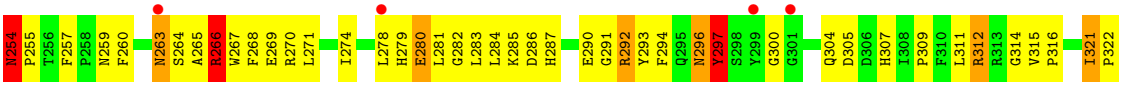
• Molecule 1: Glutaminyl-peptide cyclotransferase

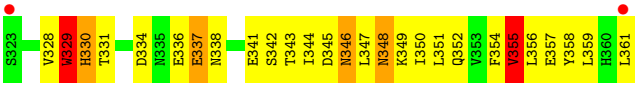
Chain J:





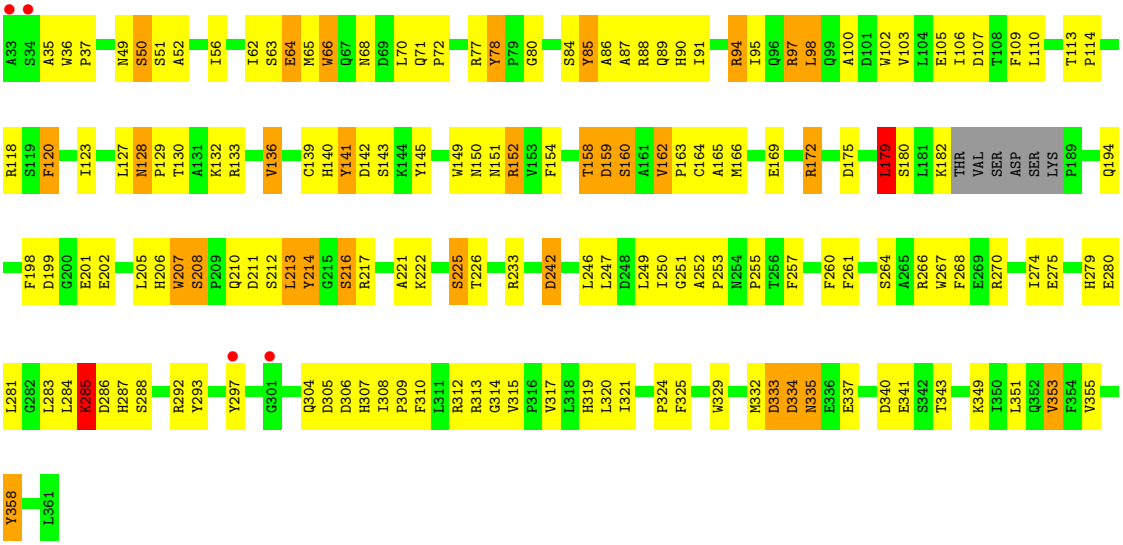






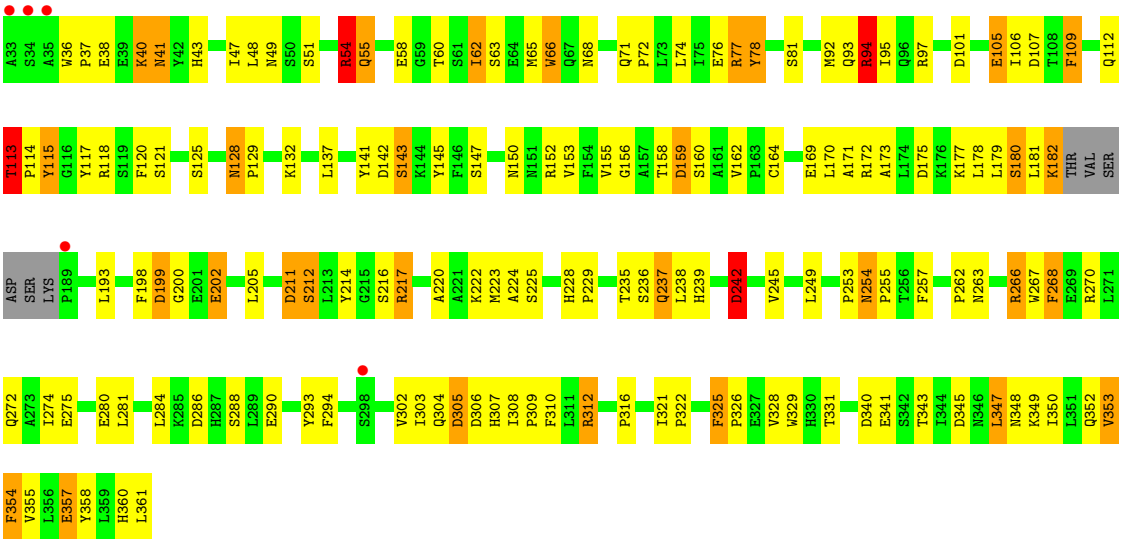
• Molecule 1: Glutaminyl-peptide cyclotransferase

Chain K:



- Molecule 1: Glutaminyl-peptide cyclotransferase

Chain L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	83.72Å 217.25Å 242.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	78.12 – 2.81 78.12 – 2.81	Depositor EDS
% Data completeness (in resolution range)	99.9 (78.12-2.81) 99.9 (78.12-2.81)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.29 (at 2.82Å)	Xtriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.188 , 0.258 0.195 , 0.259	Depositor DCC
R_{free} test set	1999 reflections (1.85%)	wwPDB-VP
Wilson B-factor (Å^2)	57.0	Xtriage
Anisotropy	0.475	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 59.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	31701	wwPDB-VP
Average B, all atoms (Å^2)	53.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.95% 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: A1D5C, ZN

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	2.15	105/2687 (3.9%)	1.26	18/3656 (0.5%)
1	B	2.13	101/2687 (3.8%)	1.27	20/3656 (0.5%)
1	C	2.00	81/2687 (3.0%)	1.21	16/3656 (0.4%)
1	D	2.03	90/2687 (3.3%)	1.15	11/3656 (0.3%)
1	E	1.91	70/2687 (2.6%)	1.17	14/3656 (0.4%)
1	F	1.78	57/2687 (2.1%)	1.10	8/3656 (0.2%)
1	G	1.22	11/2687 (0.4%)	0.92	7/3656 (0.2%)
1	H	1.49	29/2687 (1.1%)	1.01	6/3656 (0.2%)
1	I	1.58	34/2687 (1.3%)	1.11	14/3656 (0.4%)
1	J	1.14	13/2687 (0.5%)	0.93	6/3656 (0.2%)
1	K	1.84	75/2687 (2.8%)	1.18	20/3656 (0.5%)
1	L	1.70	50/2687 (1.9%)	1.28	22/3656 (0.6%)
All	All	1.78	716/32244 (2.2%)	1.14	162/43872 (0.4%)

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	B	0	1

All (716) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	139	CYS	CB-SG	-14.64	1.57	1.82
1	D	139	CYS	CB-SG	-14.06	1.58	1.82
1	B	164	CYS	CB-SG	-13.67	1.59	1.82
1	A	78	TYR	CE1-CZ	-11.49	1.23	1.38
1	B	214	TYR	CE2-CZ	-11.40	1.23	1.38
1	E	139	CYS	CB-SG	-11.13	1.63	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	164	CYS	CB-SG	-11.02	1.63	1.82
1	A	329	TRP	CE3-CZ3	-10.86	1.20	1.38
1	A	358	TYR	CD2-CE2	-10.84	1.23	1.39
1	D	293	TYR	CE2-CZ	-10.81	1.24	1.38
1	D	293	TYR	CE1-CZ	-10.80	1.24	1.38
1	A	337	GLU	CG-CD	10.72	1.68	1.51
1	A	261	PHE	CE1-CZ	-10.45	1.17	1.37
1	A	358	TYR	CE2-CZ	-10.37	1.25	1.38
1	K	66	TRP	CB-CG	-10.20	1.31	1.50
1	D	293	TYR	CD2-CE2	-10.19	1.24	1.39
1	A	164	CYS	CB-SG	-10.16	1.65	1.82
1	D	268	PHE	CD2-CE2	-10.00	1.19	1.39
1	C	155	VAL	CB-CG2	-9.89	1.32	1.52
1	B	121	SER	CB-OG	-9.87	1.29	1.42
1	D	214	TYR	CE1-CZ	-9.80	1.25	1.38
1	H	139	CYS	CB-SG	-9.78	1.65	1.82
1	A	136	VAL	CB-CG2	-9.78	1.32	1.52
1	B	358	TYR	CE1-CZ	-9.76	1.25	1.38
1	A	76	GLU	CB-CG	-9.75	1.33	1.52
1	B	102	TRP	CE3-CZ3	-9.66	1.22	1.38
1	L	214	TYR	CE2-CZ	-9.63	1.26	1.38
1	D	357	GLU	CG-CD	-9.62	1.37	1.51
1	B	293	TYR	CD2-CE2	-9.60	1.25	1.39
1	B	260	PHE	CD2-CE2	-9.50	1.20	1.39
1	K	164	CYS	CB-SG	-9.49	1.66	1.82
1	E	293	TYR	CE1-CZ	-9.46	1.26	1.38
1	F	164	CYS	CB-SG	-9.41	1.66	1.82
1	B	120	PHE	CE2-CZ	-9.40	1.19	1.37
1	D	141	TYR	CE2-CZ	-9.32	1.26	1.38
1	E	261	PHE	CD1-CE1	-9.30	1.20	1.39
1	B	293	TYR	CD1-CE1	-9.26	1.25	1.39
1	H	214	TYR	CE2-CZ	-9.19	1.26	1.38
1	A	85	TYR	CE2-CZ	-9.16	1.26	1.38
1	C	257	PHE	CE2-CZ	-9.14	1.20	1.37
1	B	214	TYR	CD1-CE1	-9.13	1.25	1.39
1	D	214	TYR	CE2-CZ	-9.05	1.26	1.38
1	B	158	THR	CB-CG2	-8.98	1.22	1.52
1	E	358	TYR	CE1-CZ	-8.97	1.26	1.38
1	E	260	PHE	CD2-CE2	-8.95	1.21	1.39
1	C	270	ARG	CZ-NH1	-8.93	1.21	1.33
1	K	214	TYR	CE2-CZ	-8.93	1.26	1.38
1	A	261	PHE	CD2-CE2	-8.84	1.21	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	355	VAL	CB-CG1	-8.84	1.34	1.52
1	B	214	TYR	CE1-CZ	-8.82	1.27	1.38
1	D	268	PHE	CD1-CE1	-8.80	1.21	1.39
1	A	155	VAL	CB-CG2	-8.79	1.34	1.52
1	C	268	PHE	CD1-CE1	-8.71	1.21	1.39
1	A	94	ARG	CZ-NH1	-8.70	1.21	1.33
1	E	355	VAL	CB-CG2	-8.70	1.34	1.52
1	K	257	PHE	CD2-CE2	-8.68	1.21	1.39
1	J	141	TYR	CD1-CE1	-8.68	1.26	1.39
1	D	329	TRP	CG-CD1	-8.67	1.24	1.36
1	A	141	TYR	CE2-CZ	-8.64	1.27	1.38
1	F	216	SER	CB-OG	-8.64	1.31	1.42
1	F	139	CYS	CB-SG	-8.62	1.67	1.82
1	B	329	TRP	CD1-NE1	-8.60	1.23	1.38
1	A	85	TYR	CD1-CE1	-8.59	1.26	1.39
1	K	317	VAL	CB-CG1	-8.54	1.34	1.52
1	A	85	TYR	CD2-CE2	-8.49	1.26	1.39
1	E	260	PHE	CG-CD2	-8.48	1.26	1.38
1	K	335	ASN	CB-CG	-8.48	1.31	1.51
1	H	245	VAL	CB-CG1	-8.47	1.35	1.52
1	I	66	TRP	CB-CG	-8.47	1.35	1.50
1	E	293	TYR	CE2-CZ	-8.40	1.27	1.38
1	B	214	TYR	CG-CD2	-8.40	1.28	1.39
1	A	162	VAL	CB-CG1	-8.40	1.35	1.52
1	I	120	PHE	CE1-CZ	-8.39	1.21	1.37
1	I	275	GLU	CG-CD	-8.37	1.39	1.51
1	E	136	VAL	CB-CG2	-8.35	1.35	1.52
1	L	164	CYS	CB-SG	-8.31	1.68	1.82
1	I	103	VAL	CB-CG2	-8.27	1.35	1.52
1	A	103	VAL	CB-CG1	-8.27	1.35	1.52
1	D	105	GLU	CG-CD	8.27	1.64	1.51
1	E	142	ASP	CB-CG	-8.25	1.34	1.51
1	E	261	PHE	CE1-CZ	-8.22	1.21	1.37
1	A	78	TYR	CE2-CZ	-8.21	1.27	1.38
1	K	293	TYR	CD1-CE1	-8.16	1.27	1.39
1	D	354	PHE	CE1-CZ	-8.12	1.22	1.37
1	A	268	PHE	CE1-CZ	-8.10	1.22	1.37
1	H	214	TYR	CE1-CZ	-8.09	1.28	1.38
1	L	275	GLU	CG-CD	-8.08	1.39	1.51
1	I	214	TYR	CE1-CZ	-8.06	1.28	1.38
1	E	264	SER	CB-OG	-8.05	1.31	1.42
1	F	315	VAL	CB-CG1	-8.05	1.35	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	141	TYR	CD1-CE1	-8.03	1.27	1.39
1	A	214	TYR	CD2-CE2	-8.03	1.27	1.39
1	D	293	TYR	CD1-CE1	-8.02	1.27	1.39
1	K	310	PHE	CE1-CZ	-8.02	1.22	1.37
1	H	198	PHE	CD1-CE1	-7.96	1.23	1.39
1	L	77	ARG	CZ-NH1	-7.96	1.22	1.33
1	C	257	PHE	CE1-CZ	-7.95	1.22	1.37
1	C	256	THR	CB-CG2	-7.92	1.26	1.52
1	B	358	TYR	CD1-CE1	-7.90	1.27	1.39
1	A	141	TYR	CD1-CE1	-7.87	1.27	1.39
1	D	264	SER	CB-OG	-7.81	1.32	1.42
1	B	245	VAL	CB-CG1	-7.80	1.36	1.52
1	C	268	PHE	CE1-CZ	-7.76	1.22	1.37
1	L	155	VAL	CB-CG2	-7.75	1.36	1.52
1	B	358	TYR	CD2-CE2	-7.74	1.27	1.39
1	B	154	PHE	CE2-CZ	-7.73	1.22	1.37
1	I	103	VAL	CB-CG1	-7.72	1.36	1.52
1	K	268	PHE	CE1-CZ	-7.70	1.22	1.37
1	B	153	VAL	CB-CG1	-7.69	1.36	1.52
1	A	358	TYR	CD1-CE1	-7.69	1.27	1.39
1	A	293	TYR	CE2-CZ	-7.66	1.28	1.38
1	E	268	PHE	CD2-CE2	-7.64	1.24	1.39
1	K	293	TYR	CG-CD1	-7.62	1.29	1.39
1	B	120	PHE	CD1-CE1	-7.58	1.24	1.39
1	B	270	ARG	CG-CD	-7.58	1.32	1.51
1	D	141	TYR	CE1-CZ	-7.57	1.28	1.38
1	L	212	SER	CA-CB	-7.56	1.41	1.52
1	B	120	PHE	CG-CD1	-7.55	1.27	1.38
1	I	354	PHE	CG-CD1	-7.55	1.27	1.38
1	E	260	PHE	CD1-CE1	-7.55	1.24	1.39
1	F	305	ASP	CB-CG	-7.51	1.35	1.51
1	A	153	VAL	CB-CG1	-7.51	1.37	1.52
1	K	288	SER	CA-CB	-7.51	1.41	1.52
1	A	325	PHE	CE2-CZ	-7.50	1.23	1.37
1	A	214	TYR	CE2-CZ	-7.49	1.28	1.38
1	D	354	PHE	CD2-CE2	-7.48	1.24	1.39
1	H	236	SER	CB-OG	-7.43	1.32	1.42
1	C	310	PHE	CE2-CZ	-7.43	1.23	1.37
1	K	261	PHE	CE2-CZ	-7.43	1.23	1.37
1	F	106	ILE	CB-CG2	-7.42	1.29	1.52
1	A	225	SER	CB-OG	-7.41	1.32	1.42
1	C	164	CYS	CB-SG	-7.41	1.69	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	325	PHE	CE2-CZ	-7.39	1.23	1.37
1	J	141	TYR	CD2-CE2	-7.39	1.28	1.39
1	D	62	ILE	CB-CG2	-7.38	1.29	1.52
1	B	312	ARG	C-O	-7.37	1.09	1.23
1	F	66	TRP	CE3-CZ3	-7.34	1.25	1.38
1	C	255	PRO	CB-CG	-7.33	1.13	1.50
1	I	120	PHE	CG-CD1	-7.31	1.27	1.38
1	K	288	SER	CB-OG	-7.31	1.32	1.42
1	D	261	PHE	CE1-CZ	-7.30	1.23	1.37
1	F	69	ASP	CB-CG	-7.29	1.36	1.51
1	C	268	PHE	CE2-CZ	-7.29	1.23	1.37
1	K	214	TYR	CG-CD1	-7.28	1.29	1.39
1	E	268	PHE	CD1-CE1	-7.27	1.24	1.39
1	C	257	PHE	CG-CD1	-7.27	1.27	1.38
1	B	212	SER	CB-OG	-7.25	1.32	1.42
1	F	214	TYR	CD1-CE1	-7.25	1.28	1.39
1	G	256	THR	CA-CB	-7.24	1.34	1.53
1	H	141	TYR	CE1-CZ	-7.24	1.29	1.38
1	A	78	TYR	CG-CD2	-7.24	1.29	1.39
1	E	329	TRP	CZ3-CH2	-7.23	1.28	1.40
1	B	275	GLU	CD-OE2	-7.23	1.17	1.25
1	E	329	TRP	CD2-CE2	-7.22	1.32	1.41
1	C	141	TYR	CD2-CE2	-7.17	1.28	1.39
1	C	292	ARG	CB-CG	-7.17	1.33	1.52
1	C	354	PHE	CD2-CE2	-7.14	1.25	1.39
1	L	113	THR	C-N	-7.12	1.20	1.34
1	E	275	GLU	CD-OE2	-7.12	1.17	1.25
1	B	325	PHE	CD1-CE1	-7.12	1.25	1.39
1	L	202	GLU	CD-OE2	7.11	1.33	1.25
1	B	154	PHE	CE1-CZ	-7.11	1.23	1.37
1	E	260	PHE	CE2-CZ	-7.11	1.23	1.37
1	D	214	TYR	CG-CD1	-7.09	1.29	1.39
1	B	354	PHE	CG-CD2	-7.09	1.28	1.38
1	K	211	ASP	CB-CG	-7.08	1.36	1.51
1	A	331	THR	CB-CG2	-7.06	1.29	1.52
1	D	261	PHE	CD2-CE2	-7.06	1.25	1.39
1	G	214	TYR	CE2-CZ	-7.05	1.29	1.38
1	I	141	TYR	CD2-CE2	-7.04	1.28	1.39
1	E	325	PHE	CE1-CZ	-7.02	1.24	1.37
1	L	268	PHE	CE2-CZ	-7.00	1.24	1.37
1	D	154	PHE	CE2-CZ	-6.99	1.24	1.37
1	A	217	ARG	CZ-NH2	-6.96	1.24	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	I	337	GLU	CG-CD	6.95	1.62	1.51
1	B	292	ARG	CB-CG	-6.94	1.33	1.52
1	E	272	GLN	CB-CG	-6.94	1.33	1.52
1	C	155	VAL	CB-CG1	-6.91	1.38	1.52
1	F	275	GLU	CG-CD	-6.90	1.41	1.51
1	L	275	GLU	CD-OE1	-6.90	1.18	1.25
1	C	267	TRP	CE3-CZ3	-6.89	1.26	1.38
1	B	325	PHE	CE2-CZ	-6.89	1.24	1.37
1	B	260	PHE	CE1-CZ	-6.89	1.24	1.37
1	I	214	TYR	CD1-CE1	-6.89	1.29	1.39
1	B	261	PHE	CE1-CZ	-6.88	1.24	1.37
1	K	139	CYS	CB-SG	-6.88	1.70	1.82
1	C	139	CYS	CB-SG	-6.86	1.70	1.82
1	B	102	TRP	CD2-CE2	-6.84	1.33	1.41
1	B	275	GLU	CB-CG	-6.83	1.39	1.52
1	A	268	PHE	CG-CD1	-6.83	1.28	1.38
1	H	197	PHE	CE1-CZ	-6.83	1.24	1.37
1	B	109	PHE	CD2-CE2	-6.80	1.25	1.39
1	L	358	TYR	CD2-CE2	-6.80	1.29	1.39
1	A	120	PHE	CE2-CZ	-6.79	1.24	1.37
1	H	317	VAL	CB-CG2	-6.78	1.38	1.52
1	C	120	PHE	CE1-CZ	-6.77	1.24	1.37
1	B	162	VAL	C-N	-6.76	1.21	1.34
1	E	290	GLU	CG-CD	-6.75	1.41	1.51
1	C	331	THR	CB-CG2	-6.75	1.30	1.52
1	E	358	TYR	CD1-CE1	-6.75	1.29	1.39
1	B	329	TRP	CD2-CE2	-6.73	1.33	1.41
1	A	120	PHE	CG-CD1	-6.73	1.28	1.38
1	A	261	PHE	CG-CD2	-6.71	1.28	1.38
1	E	260	PHE	CE1-CZ	-6.71	1.24	1.37
1	C	120	PHE	CG-CD2	-6.70	1.28	1.38
1	C	257	PHE	CG-CD2	-6.70	1.28	1.38
1	A	268	PHE	CG-CD2	-6.70	1.28	1.38
1	B	214	TYR	CG-CD1	-6.69	1.30	1.39
1	C	141	TYR	CE1-CZ	-6.69	1.29	1.38
1	D	261	PHE	CG-CD2	-6.68	1.28	1.38
1	B	256	THR	CB-CG2	-6.67	1.30	1.52
1	D	66	TRP	CE3-CZ3	-6.67	1.27	1.38
1	D	354	PHE	CD1-CE1	-6.67	1.25	1.39
1	B	136	VAL	CB-CG2	-6.66	1.38	1.52
1	L	198	PHE	CD1-CE1	-6.65	1.25	1.39
1	F	248	ASP	CB-CG	-6.65	1.37	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L	214	TYR	CE1-CZ	-6.64	1.29	1.38
1	B	102	TRP	CZ3-CH2	-6.64	1.29	1.40
1	B	354	PHE	CE2-CZ	-6.64	1.24	1.37
1	D	197	PHE	CE2-CZ	-6.63	1.24	1.37
1	K	325	PHE	CE1-CZ	-6.63	1.24	1.37
1	A	317	VAL	CB-CG2	-6.62	1.39	1.52
1	B	293	TYR	CE1-CZ	-6.62	1.29	1.38
1	J	107	ASP	CA-CB	-6.62	1.39	1.53
1	D	256	THR	CB-CG2	-6.60	1.30	1.52
1	B	58	GLU	CG-CD	6.60	1.61	1.51
1	A	338	ASN	CB-CG	-6.60	1.35	1.51
1	C	293	TYR	CE1-CZ	-6.60	1.29	1.38
1	B	293	TYR	CG-CD2	-6.59	1.30	1.39
1	D	257	PHE	CE1-CZ	-6.59	1.24	1.37
1	G	120	PHE	CE2-CZ	-6.57	1.24	1.37
1	I	335	ASN	CB-CG	-6.57	1.35	1.51
1	D	275	GLU	CB-CG	-6.57	1.39	1.52
1	K	333	ASP	C-O	-6.56	1.10	1.23
1	E	141	TYR	CD1-CE1	-6.56	1.29	1.39
1	D	315	VAL	CB-CG1	-6.56	1.39	1.52
1	A	268	PHE	CD1-CE1	-6.55	1.26	1.39
1	D	337	GLU	CG-CD	6.54	1.61	1.51
1	C	198	PHE	CB-CG	-6.54	1.40	1.51
1	E	162	VAL	CB-CG2	-6.52	1.39	1.52
1	D	268	PHE	CE1-CZ	-6.51	1.25	1.37
1	B	214	TYR	CD2-CE2	-6.51	1.29	1.39
1	I	325	PHE	CD2-CE2	-6.51	1.26	1.39
1	A	214	TYR	CG-CD2	-6.50	1.30	1.39
1	F	315	VAL	CB-CG2	-6.50	1.39	1.52
1	C	268	PHE	CD2-CE2	-6.48	1.26	1.39
1	D	216	SER	CB-OG	-6.48	1.33	1.42
1	I	162	VAL	CB-CG2	-6.46	1.39	1.52
1	B	288	SER	CB-OG	-6.46	1.33	1.42
1	A	275	GLU	CD-OE1	-6.45	1.18	1.25
1	F	337	GLU	CG-CD	6.45	1.61	1.51
1	C	197	PHE	CE2-CZ	-6.45	1.25	1.37
1	I	275	GLU	CB-CG	-6.43	1.40	1.52
1	L	115	TYR	CE1-CZ	-6.43	1.30	1.38
1	B	260	PHE	CD1-CE1	-6.43	1.26	1.39
1	D	214	TYR	CG-CD2	-6.42	1.30	1.39
1	H	141	TYR	CE2-CZ	-6.41	1.30	1.38
1	K	214	TYR	CD2-CE2	-6.41	1.29	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L	214	TYR	CG-CD1	-6.40	1.30	1.39
1	B	325	PHE	CG-CD2	-6.40	1.29	1.38
1	A	120	PHE	CD1-CE1	-6.40	1.26	1.39
1	K	261	PHE	CD2-CE2	-6.40	1.26	1.39
1	F	122	ASN	CB-CG	-6.40	1.36	1.51
1	B	353	VAL	CB-CG2	-6.39	1.39	1.52
1	C	337	GLU	CG-CD	6.39	1.61	1.51
1	B	102	TRP	CE2-CZ2	-6.38	1.28	1.39
1	K	141	TYR	CD2-CE2	-6.38	1.29	1.39
1	D	328	VAL	CB-CG1	-6.38	1.39	1.52
1	A	166	MET	CG-SD	-6.38	1.64	1.81
1	K	85	TYR	CD2-CE2	-6.36	1.29	1.39
1	E	354	PHE	CE1-CZ	-6.35	1.25	1.37
1	F	109	PHE	CD1-CE1	-6.34	1.26	1.39
1	H	149	TRP	CB-CG	-6.34	1.38	1.50
1	I	154	PHE	CG-CD1	-6.34	1.29	1.38
1	B	270	ARG	CZ-NH1	-6.34	1.24	1.33
1	D	293	TYR	CG-CD1	-6.33	1.30	1.39
1	A	153	VAL	CB-CG2	-6.32	1.39	1.52
1	K	261	PHE	C-N	-6.32	1.22	1.34
1	A	120	PHE	CD2-CE2	-6.32	1.26	1.39
1	D	212	SER	CB-OG	-6.31	1.34	1.42
1	D	358	TYR	CE1-CZ	-6.30	1.30	1.38
1	B	355	VAL	CB-CG1	-6.29	1.39	1.52
1	B	337	GLU	CG-CD	6.29	1.61	1.51
1	H	141	TYR	CD1-CE1	-6.29	1.29	1.39
1	A	323	SER	CA-CB	-6.28	1.43	1.52
1	B	66	TRP	CD2-CE2	-6.28	1.33	1.41
1	A	264	SER	CB-OG	-6.27	1.34	1.42
1	C	123	ILE	CB-CG2	-6.25	1.33	1.52
1	I	325	PHE	CE1-CZ	-6.25	1.25	1.37
1	I	120	PHE	CD2-CE2	-6.25	1.26	1.39
1	F	202	GLU	CD-OE1	-6.25	1.18	1.25
1	B	136	VAL	CB-CG1	-6.24	1.39	1.52
1	J	214	TYR	CE1-CZ	-6.24	1.30	1.38
1	E	317	VAL	CB-CG1	-6.22	1.39	1.52
1	D	133	ARG	CB-CG	-6.22	1.35	1.52
1	H	155	VAL	CB-CG1	-6.22	1.39	1.52
1	L	66	TRP	CE2-CZ2	-6.21	1.29	1.39
1	K	120	PHE	CD1-CE1	-6.20	1.26	1.39
1	A	263	ASN	CB-CG	-6.19	1.36	1.51
1	I	329	TRP	CZ3-CH2	-6.19	1.30	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L	109	PHE	CD1-CE1	-6.19	1.26	1.39
1	D	329	TRP	CE3-CZ3	-6.19	1.27	1.38
1	L	358	TYR	CE1-CZ	-6.19	1.30	1.38
1	B	354	PHE	CD1-CE1	-6.19	1.26	1.39
1	C	145	TYR	CD2-CE2	-6.19	1.30	1.39
1	K	329	TRP	CE3-CZ3	-6.18	1.27	1.38
1	B	66	TRP	CB-CG	-6.18	1.39	1.50
1	C	224	ALA	CA-C	-6.18	1.36	1.52
1	F	198	PHE	CD2-CE2	-6.17	1.26	1.39
1	I	354	PHE	CB-CG	-6.17	1.40	1.51
1	J	355	VAL	CB-CG1	-6.17	1.39	1.52
1	D	315	VAL	CB-CG2	-6.15	1.40	1.52
1	A	214	TYR	CE1-CZ	-6.14	1.30	1.38
1	B	154	PHE	CG-CD2	-6.13	1.29	1.38
1	A	109	PHE	CD2-CE2	-6.13	1.26	1.39
1	A	78	TYR	CD1-CE1	-6.11	1.30	1.39
1	A	141	TYR	CD2-CE2	-6.11	1.30	1.39
1	C	354	PHE	CE2-CZ	-6.11	1.25	1.37
1	D	329	TRP	CD2-CE2	-6.11	1.34	1.41
1	L	66	TRP	CG-CD1	-6.10	1.28	1.36
1	D	146	PHE	CE2-CZ	-6.10	1.25	1.37
1	F	288	SER	CA-CB	-6.09	1.43	1.52
1	F	293	TYR	CG-CD1	-6.09	1.31	1.39
1	J	329	TRP	CB-CG	-6.08	1.39	1.50
1	A	197	PHE	CE2-CZ	-6.08	1.25	1.37
1	D	266	ARG	CZ-NH1	-6.07	1.25	1.33
1	K	77	ARG	CZ-NH1	-6.06	1.25	1.33
1	B	66	TRP	CG-CD1	-6.06	1.28	1.36
1	K	315	VAL	CB-CG2	-6.06	1.40	1.52
1	D	335	ASN	CB-CG	-6.05	1.37	1.51
1	E	77	ARG	CZ-NH1	-6.04	1.25	1.33
1	K	198	PHE	CG-CD2	-6.04	1.29	1.38
1	A	312	ARG	CZ-NH2	6.04	1.40	1.33
1	A	329	TRP	CE2-CZ2	-6.04	1.29	1.39
1	D	294	PHE	CG-CD2	-6.04	1.29	1.38
1	L	94	ARG	CZ-NH1	-6.04	1.25	1.33
1	C	268	PHE	CG-CD1	-6.03	1.29	1.38
1	D	261	PHE	CE2-CZ	-6.03	1.25	1.37
1	L	115	TYR	CG-CD2	-6.03	1.31	1.39
1	A	109	PHE	CD1-CE1	-6.02	1.27	1.39
1	E	344	ILE	CB-CG2	-6.02	1.34	1.52
1	I	102	TRP	CE3-CZ3	-6.02	1.28	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	316	PRO	CG-CD	-6.01	1.30	1.50
1	H	146	PHE	CE1-CZ	-6.01	1.25	1.37
1	A	197	PHE	CG-CD2	-6.00	1.29	1.38
1	D	66	TRP	CE2-CZ2	-6.00	1.29	1.39
1	A	316	PRO	CG-CD	-6.00	1.30	1.50
1	C	154	PHE	CE1-CZ	-5.99	1.25	1.37
1	E	153	VAL	CB-CG2	-5.99	1.40	1.52
1	B	293	TYR	CE2-CZ	-5.99	1.30	1.38
1	E	354	PHE	CG-CD2	-5.99	1.29	1.38
1	F	120	PHE	CB-CG	-5.98	1.41	1.51
1	D	261	PHE	CD1-CE1	-5.98	1.27	1.39
1	E	280	GLU	CB-CG	5.98	1.63	1.52
1	F	293	TYR	CE2-CZ	-5.98	1.30	1.38
1	F	146	PHE	CE1-CZ	-5.97	1.26	1.37
1	B	194	GLN	CB-CG	-5.96	1.36	1.52
1	F	317	VAL	CB-CG1	-5.96	1.40	1.52
1	J	139	CYS	CB-SG	-5.96	1.72	1.81
1	C	253	PRO	CG-CD	-5.95	1.31	1.50
1	E	85	TYR	CE2-CZ	-5.95	1.30	1.38
1	B	338	ASN	CB-CG	-5.95	1.37	1.51
1	A	280	GLU	CB-CG	5.95	1.63	1.52
1	D	201	GLU	CD-OE1	-5.95	1.19	1.25
1	D	267	TRP	CE3-CZ3	-5.94	1.28	1.38
1	D	136	VAL	CB-CG1	-5.94	1.40	1.52
1	D	158	THR	CB-CG2	-5.93	1.32	1.52
1	C	336	GLU	CB-CG	-5.92	1.40	1.52
1	G	139	CYS	CB-SG	-5.92	1.72	1.81
1	A	268	PHE	CD2-CE2	-5.91	1.27	1.39
1	A	66	TRP	CG-CD1	-5.91	1.28	1.36
1	B	141	TYR	CD2-CE2	-5.91	1.30	1.39
1	B	324	PRO	CA-C	-5.90	1.41	1.52
1	A	123	ILE	CB-CG2	-5.90	1.34	1.52
1	L	212	SER	CB-OG	-5.90	1.34	1.42
1	L	293	TYR	CE1-CZ	-5.90	1.30	1.38
1	D	154	PHE	CD1-CE1	-5.90	1.27	1.39
1	K	198	PHE	CG-CD1	-5.90	1.29	1.38
1	K	325	PHE	CG-CD2	-5.90	1.29	1.38
1	A	160	SER	CA-CB	-5.90	1.44	1.52
1	B	142	ASP	CB-CG	-5.89	1.39	1.51
1	C	146	PHE	CE1-CZ	-5.89	1.26	1.37
1	K	332	MET	C-N	-5.89	1.20	1.34
1	E	103	VAL	CB-CG2	-5.89	1.40	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	260	PHE	CE1-CZ	-5.88	1.26	1.37
1	E	260	PHE	CG-CD1	-5.88	1.29	1.38
1	A	262	PRO	CB-CG	-5.87	1.20	1.50
1	C	324	PRO	C-O	-5.87	1.11	1.23
1	L	275	GLU	CD-OE2	-5.87	1.19	1.25
1	H	261	PHE	CE1-CZ	-5.87	1.26	1.37
1	E	36	TRP	CD2-CE2	-5.87	1.34	1.41
1	D	141	TYR	CD1-CE1	-5.86	1.30	1.39
1	L	343	THR	CB-CG2	-5.86	1.33	1.52
1	K	78	TYR	CE1-CZ	-5.86	1.30	1.38
1	F	255	PRO	CG-CD	-5.86	1.31	1.50
1	H	198	PHE	CG-CD2	-5.86	1.29	1.38
1	D	197	PHE	CE1-CZ	-5.85	1.26	1.37
1	B	103	VAL	CB-CG1	-5.85	1.40	1.52
1	B	172	ARG	CZ-NH2	-5.85	1.25	1.33
1	E	126	THR	CA-CB	-5.85	1.38	1.53
1	C	141	TYR	CD1-CE1	-5.85	1.30	1.39
1	B	336	GLU	CB-CG	-5.84	1.41	1.52
1	A	325	PHE	CD1-CE1	-5.84	1.27	1.39
1	L	353	VAL	CB-CG1	-5.84	1.40	1.52
1	D	259	ASN	CG-ND2	-5.84	1.18	1.32
1	A	85	TYR	CG-CD1	-5.83	1.31	1.39
1	D	344	ILE	CB-CG2	-5.83	1.34	1.52
1	C	125	SER	CB-OG	-5.83	1.34	1.42
1	I	329	TRP	CD2-CE2	-5.82	1.34	1.41
1	A	253	PRO	CG-CD	-5.82	1.31	1.50
1	F	146	PHE	CE2-CZ	-5.82	1.26	1.37
1	I	82	PRO	CG-CD	-5.81	1.31	1.50
1	D	77	ARG	CB-CG	-5.81	1.36	1.52
1	F	76	GLU	CG-CD	5.80	1.60	1.51
1	G	358	TYR	CE2-CZ	-5.80	1.31	1.38
1	D	355	VAL	CB-CG1	-5.79	1.40	1.52
1	F	324	PRO	C-N	-5.79	1.20	1.34
1	C	357	GLU	CB-CG	-5.79	1.41	1.52
1	L	293	TYR	CE2-CZ	-5.78	1.31	1.38
1	L	202	GLU	CB-CG	5.78	1.63	1.52
1	C	355	VAL	CB-CG2	-5.78	1.40	1.52
1	F	310	PHE	CG-CD1	-5.77	1.30	1.38
1	L	77	ARG	CZ-NH2	-5.76	1.25	1.33
1	L	357	GLU	CB-CG	-5.76	1.41	1.52
1	L	115	TYR	CE2-CZ	-5.76	1.31	1.38
1	K	260	PHE	CE1-CZ	-5.75	1.26	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	257	PHE	CE1-CZ	-5.75	1.26	1.37
1	B	331	THR	CB-CG2	-5.75	1.33	1.52
1	K	355	VAL	CB-CG1	-5.75	1.40	1.52
1	K	154	PHE	CE2-CZ	-5.75	1.26	1.37
1	J	201	GLU	CG-CD	5.74	1.60	1.51
1	B	120	PHE	CD2-CE2	-5.73	1.27	1.39
1	K	268	PHE	CE2-CZ	-5.73	1.26	1.37
1	C	145	TYR	CD1-CE1	-5.72	1.30	1.39
1	F	66	TRP	CE2-CZ2	-5.72	1.30	1.39
1	I	198	PHE	CD1-CE1	-5.72	1.27	1.39
1	L	155	VAL	CB-CG1	-5.72	1.40	1.52
1	A	103	VAL	CB-CG2	-5.71	1.40	1.52
1	E	141	TYR	CD2-CE2	-5.71	1.30	1.39
1	C	247	LEU	CG-CD1	-5.71	1.30	1.51
1	E	66	TRP	CE2-CZ2	-5.71	1.30	1.39
1	E	266	ARG	CZ-NH1	-5.71	1.25	1.33
1	C	145	TYR	CE1-CZ	-5.70	1.31	1.38
1	K	310	PHE	CG-CD1	-5.70	1.30	1.38
1	I	328	VAL	CB-CG2	-5.69	1.40	1.52
1	H	109	PHE	CE2-CZ	-5.69	1.26	1.37
1	L	145	TYR	CE1-CZ	-5.68	1.31	1.38
1	L	268	PHE	CG-CD2	-5.68	1.30	1.38
1	K	214	TYR	CE1-CZ	-5.68	1.31	1.38
1	E	261	PHE	CE2-CZ	-5.67	1.26	1.37
1	C	120	PHE	CG-CD1	-5.67	1.30	1.38
1	K	162	VAL	CB-CG2	-5.67	1.41	1.52
1	E	310	PHE	CG-CD2	-5.66	1.30	1.38
1	C	310	PHE	CD1-CE1	-5.66	1.27	1.39
1	F	119	SER	CB-OG	-5.66	1.34	1.42
1	A	354	PHE	CB-CG	-5.66	1.41	1.51
1	K	261	PHE	CD1-CE1	-5.66	1.27	1.39
1	G	136	VAL	CB-CG2	-5.65	1.41	1.52
1	F	141	TYR	CD2-CE2	-5.65	1.30	1.39
1	H	136	VAL	CB-CG1	-5.65	1.41	1.52
1	B	60	THR	CB-CG2	-5.64	1.33	1.52
1	L	325	PHE	CE2-CZ	-5.64	1.26	1.37
1	F	141	TYR	CE2-CZ	-5.64	1.31	1.38
1	C	325	PHE	CG-CD1	-5.63	1.30	1.38
1	D	270	ARG	CZ-NH1	-5.63	1.25	1.33
1	B	261	PHE	CD2-CE2	-5.63	1.27	1.39
1	A	82	PRO	CG-CD	-5.63	1.32	1.50
1	K	268	PHE	CG-CD2	-5.63	1.30	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	142	ASP	CB-CG	-5.62	1.40	1.51
1	E	154	PHE	CE2-CZ	-5.62	1.26	1.37
1	K	141	TYR	CE1-CZ	-5.62	1.31	1.38
1	A	325	PHE	CG-CD1	-5.62	1.30	1.38
1	B	358	TYR	CG-CD2	-5.61	1.31	1.39
1	C	325	PHE	CE2-CZ	-5.61	1.26	1.37
1	E	322	PRO	CG-CD	-5.61	1.32	1.50
1	F	275	GLU	CB-CG	-5.61	1.41	1.52
1	C	211	ASP	CA-CB	-5.61	1.41	1.53
1	K	310	PHE	CG-CD2	-5.61	1.30	1.38
1	D	194	GLN	CG-CD	-5.60	1.38	1.51
1	F	154	PHE	CE2-CZ	-5.60	1.26	1.37
1	F	38	GLU	CB-CG	-5.60	1.41	1.52
1	C	293	TYR	CG-CD1	-5.59	1.31	1.39
1	H	66	TRP	CB-CG	-5.59	1.40	1.50
1	F	66	TRP	CD2-CE2	-5.59	1.34	1.41
1	B	39	GLU	CD-OE1	-5.57	1.19	1.25
1	B	347	LEU	CG-CD2	-5.57	1.31	1.51
1	F	310	PHE	CB-CG	-5.57	1.41	1.51
1	B	280	GLU	CG-CD	5.57	1.60	1.51
1	D	354	PHE	CE2-CZ	-5.56	1.26	1.37
1	E	275	GLU	CB-CG	-5.56	1.41	1.52
1	G	310	PHE	CB-CG	-5.56	1.42	1.51
1	F	293	TYR	CD2-CE2	-5.56	1.31	1.39
1	A	326	PRO	CB-CG	-5.55	1.22	1.50
1	L	216	SER	CB-OG	-5.55	1.35	1.42
1	L	141	TYR	CD2-CE2	-5.55	1.31	1.39
1	A	69	ASP	CG-OD1	-5.55	1.12	1.25
1	C	324	PRO	CG-CD	-5.55	1.32	1.50
1	E	267	TRP	CD2-CE2	-5.54	1.34	1.41
1	K	261	PHE	CG-CD2	-5.54	1.30	1.38
1	F	162	VAL	CB-CG1	-5.53	1.41	1.52
1	K	315	VAL	CB-CG1	-5.53	1.41	1.52
1	H	214	TYR	CD2-CE2	-5.53	1.31	1.39
1	J	214	TYR	CD2-CE2	-5.52	1.31	1.39
1	D	267	TRP	CZ3-CH2	-5.52	1.31	1.40
1	K	329	TRP	CD1-NE1	-5.52	1.28	1.38
1	G	358	TYR	CD2-CE2	-5.51	1.31	1.39
1	H	207	TRP	CB-CG	5.51	1.60	1.50
1	E	329	TRP	CD1-NE1	-5.50	1.28	1.38
1	A	324	PRO	CB-CG	-5.50	1.22	1.50
1	K	324	PRO	C-O	-5.50	1.12	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	261	PHE	CE1-CZ	-5.50	1.26	1.37
1	D	235	THR	CB-CG2	-5.50	1.34	1.52
1	K	310	PHE	CD2-CE2	-5.50	1.28	1.39
1	I	141	TYR	CD1-CE1	-5.49	1.31	1.39
1	K	358	TYR	CE1-CZ	-5.48	1.31	1.38
1	E	310	PHE	CB-CG	-5.48	1.42	1.51
1	E	164	CYS	CB-SG	-5.48	1.72	1.81
1	A	269	GLU	CG-CD	5.47	1.60	1.51
1	E	350	ILE	CB-CG2	-5.47	1.35	1.52
1	I	36	TRP	CB-CG	-5.47	1.40	1.50
1	E	267	TRP	CG-CD1	-5.47	1.29	1.36
1	D	204	PHE	CE1-CZ	-5.47	1.26	1.37
1	K	154	PHE	CD1-CE1	-5.47	1.28	1.39
1	K	198	PHE	CD1-CE1	-5.46	1.28	1.39
1	D	146	PHE	CG-CD1	-5.46	1.30	1.38
1	C	310	PHE	CG-CD2	-5.45	1.30	1.38
1	C	294	PHE	CE2-CZ	-5.45	1.26	1.37
1	H	355	VAL	CB-CG2	-5.45	1.41	1.52
1	E	207	TRP	CB-CG	5.45	1.60	1.50
1	H	261	PHE	CD1-CE1	-5.44	1.28	1.39
1	K	78	TYR	CB-CG	-5.44	1.43	1.51
1	L	275	GLU	CB-CG	-5.44	1.41	1.52
1	C	310	PHE	CE1-CZ	-5.44	1.27	1.37
1	A	260	PHE	CG-CD2	-5.43	1.30	1.38
1	K	264	SER	CB-OG	-5.43	1.35	1.42
1	F	310	PHE	CG-CD2	-5.43	1.30	1.38
1	D	88	ARG	CB-CG	-5.42	1.38	1.52
1	D	146	PHE	CD2-CE2	-5.42	1.28	1.39
1	K	198	PHE	CD2-CE2	-5.42	1.28	1.39
1	B	315	VAL	CB-CG2	-5.42	1.41	1.52
1	L	267	TRP	CB-CG	-5.42	1.40	1.50
1	I	120	PHE	CG-CD2	-5.42	1.30	1.38
1	K	78	TYR	CE2-CZ	-5.41	1.31	1.38
1	F	214	TYR	CD2-CE2	-5.41	1.31	1.39
1	F	328	VAL	CB-CG1	-5.41	1.41	1.52
1	C	266	ARG	CB-CG	-5.41	1.38	1.52
1	B	169	GLU	CG-CD	-5.41	1.43	1.51
1	C	136	VAL	CB-CG1	-5.41	1.41	1.52
1	C	146	PHE	CG-CD2	-5.40	1.30	1.38
1	G	124	ILE	CB-CG2	-5.40	1.36	1.52
1	A	328	VAL	CB-CG1	-5.39	1.41	1.52
1	C	214	TYR	CG-CD2	-5.39	1.32	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	277	GLU	CB-CG	-5.39	1.42	1.52
1	G	120	PHE	CG-CD1	-5.39	1.30	1.38
1	K	285	LYS	CD-CE	5.39	1.64	1.51
1	F	253	PRO	C-N	-5.39	1.21	1.34
1	L	162	VAL	CB-CG1	-5.39	1.41	1.52
1	F	196	ILE	CB-CG2	-5.38	1.36	1.52
1	D	66	TRP	CD2-CE2	-5.38	1.34	1.41
1	E	336	GLU	CG-CD	5.38	1.60	1.51
1	E	329	TRP	CD2-CE3	-5.38	1.32	1.40
1	A	141	TYR	CG-CD1	-5.38	1.32	1.39
1	K	260	PHE	CD1-CE1	-5.38	1.28	1.39
1	D	325	PHE	CB-CG	-5.37	1.42	1.51
1	L	329	TRP	CD1-NE1	-5.36	1.28	1.38
1	A	261	PHE	CD1-CE1	-5.36	1.28	1.39
1	F	146	PHE	CD1-CE1	-5.36	1.28	1.39
1	C	133	ARG	CZ-NH1	-5.36	1.26	1.33
1	C	277	GLU	CB-CG	-5.36	1.42	1.52
1	B	198	PHE	CD2-CE2	-5.36	1.28	1.39
1	C	258	PRO	CB-CG	-5.36	1.23	1.50
1	B	45	PRO	CB-CG	-5.35	1.23	1.50
1	D	154	PHE	CG-CD2	-5.35	1.30	1.38
1	A	268	PHE	CE2-CZ	-5.34	1.27	1.37
1	D	125	SER	CB-OG	-5.34	1.35	1.42
1	E	293	TYR	CG-CD1	-5.34	1.32	1.39
1	A	325	PHE	CG-CD2	-5.34	1.30	1.38
1	K	145	TYR	CE1-CZ	-5.34	1.31	1.38
1	A	288	SER	CB-OG	-5.33	1.35	1.42
1	A	275	GLU	CB-CG	-5.33	1.42	1.52
1	K	103	VAL	CB-CG1	-5.33	1.41	1.52
1	A	260	PHE	CD2-CE2	-5.32	1.28	1.39
1	K	198	PHE	CE2-CZ	-5.32	1.27	1.37
1	I	94	ARG	CG-CD	-5.32	1.38	1.51
1	B	280	GLU	CB-CG	5.32	1.62	1.52
1	D	155	VAL	CB-CG2	-5.32	1.41	1.52
1	C	261	PHE	CD1-CE1	-5.32	1.28	1.39
1	B	142	ASP	CG-OD1	-5.31	1.13	1.25
1	E	259	ASN	CB-CG	-5.31	1.38	1.51
1	B	41	ASN	CB-CG	-5.31	1.38	1.51
1	I	197	PHE	CB-CG	-5.31	1.42	1.51
1	J	64	GLU	CB-CG	5.31	1.62	1.52
1	C	136	VAL	CB-CG2	-5.31	1.41	1.52
1	C	260	PHE	CE1-CZ	-5.31	1.27	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	78	TYR	CD2-CE2	-5.30	1.31	1.39
1	L	293	TYR	CD1-CE1	-5.30	1.31	1.39
1	K	275	GLU	CB-CG	-5.30	1.42	1.52
1	A	195	LEU	CA-CB	-5.30	1.41	1.53
1	K	214	TYR	CD1-CE1	-5.30	1.31	1.39
1	B	294	PHE	CE1-CZ	-5.30	1.27	1.37
1	D	268	PHE	CE2-CZ	-5.30	1.27	1.37
1	C	358	TYR	CD1-CE1	-5.29	1.31	1.39
1	A	42	TYR	CE1-CZ	-5.29	1.31	1.38
1	D	121	SER	CB-OG	-5.29	1.35	1.42
1	D	327	GLU	CB-CG	-5.29	1.42	1.52
1	D	310	PHE	CG-CD2	-5.29	1.30	1.38
1	D	294	PHE	CE1-CZ	-5.28	1.27	1.37
1	F	146	PHE	CD2-CE2	-5.28	1.28	1.39
1	K	268	PHE	CD1-CE1	-5.27	1.28	1.39
1	B	160	SER	CA-CB	-5.27	1.45	1.52
1	A	151	ASN	CB-CG	5.26	1.63	1.51
1	C	214	TYR	CE1-CZ	-5.26	1.31	1.38
1	B	354	PHE	CE1-CZ	-5.25	1.27	1.37
1	L	354	PHE	CE2-CZ	-5.25	1.27	1.37
1	A	216	SER	CB-OG	-5.25	1.35	1.42
1	H	261	PHE	CD2-CE2	-5.25	1.28	1.39
1	A	245	VAL	CB-CG1	-5.25	1.41	1.52
1	J	208	SER	C-N	-5.24	1.24	1.34
1	A	243	LEU	CG-CD1	-5.24	1.32	1.51
1	A	241	MET	CB-CG	-5.24	1.34	1.51
1	C	338	ASN	CG-ND2	-5.24	1.19	1.32
1	F	275	GLU	CD-OE2	-5.24	1.19	1.25
1	K	159	ASP	N-CA	-5.23	1.35	1.46
1	B	201	GLU	CD-OE1	-5.23	1.19	1.25
1	I	169	GLU	CB-CG	-5.23	1.42	1.52
1	B	303	ILE	CB-CG2	-5.22	1.36	1.52
1	B	309	PRO	CB-CG	-5.22	1.23	1.50
1	A	120	PHE	CG-CD2	-5.22	1.30	1.38
1	L	268	PHE	CG-CD1	-5.22	1.30	1.38
1	B	329	TRP	CE3-CZ3	-5.21	1.29	1.38
1	L	293	TYR	CD2-CE2	-5.21	1.31	1.39
1	C	105	GLU	CB-CG	-5.21	1.42	1.52
1	A	334	ASP	CB-CG	-5.21	1.40	1.51
1	F	154	PHE	CE1-CZ	-5.21	1.27	1.37
1	F	229	PRO	CG-CD	-5.20	1.33	1.50
1	K	78	TYR	CG-CD2	-5.20	1.32	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	316	PRO	CG-CD	-5.20	1.33	1.50
1	K	324	PRO	CB-CG	-5.20	1.24	1.50
1	L	78	TYR	CE1-CZ	-5.20	1.31	1.38
1	L	198	PHE	CE2-CZ	-5.19	1.27	1.37
1	C	317	VAL	CB-CG2	-5.17	1.42	1.52
1	K	62	ILE	CB-CG2	-5.17	1.36	1.52
1	F	115	TYR	CE1-CZ	-5.17	1.31	1.38
1	G	358	TYR	CD1-CE1	-5.17	1.31	1.39
1	L	62	ILE	CB-CG2	-5.17	1.36	1.52
1	C	115	TYR	CE1-CZ	-5.17	1.31	1.38
1	C	141	TYR	CG-CD1	-5.17	1.32	1.39
1	F	154	PHE	CD2-CE2	-5.16	1.28	1.39
1	J	120	PHE	CD2-CE2	-5.16	1.28	1.39
1	I	81	SER	CB-OG	-5.16	1.35	1.42
1	C	325	PHE	CE1-CZ	-5.15	1.27	1.37
1	K	136	VAL	CB-CG1	-5.15	1.42	1.52
1	A	94	ARG	CZ-NH2	-5.15	1.26	1.33
1	F	293	TYR	CB-CG	-5.15	1.44	1.51
1	H	197	PHE	CD2-CE2	-5.15	1.28	1.39
1	J	341	GLU	CG-CD	5.15	1.59	1.51
1	A	66	TRP	CE3-CZ3	-5.15	1.29	1.38
1	C	261	PHE	CD2-CE2	-5.15	1.28	1.39
1	A	168	LEU	CG-CD1	-5.14	1.32	1.51
1	K	343	THR	CB-CG2	-5.14	1.35	1.52
1	D	141	TYR	CG-CD2	-5.14	1.32	1.39
1	K	172	ARG	CB-CG	-5.14	1.38	1.52
1	C	345	ASP	CB-CG	-5.13	1.41	1.51
1	B	198	PHE	CD1-CE1	-5.13	1.28	1.39
1	D	66	TRP	CG-CD1	-5.13	1.29	1.36
1	C	322	PRO	CB-CG	-5.13	1.24	1.50
1	E	253	PRO	CG-CD	-5.13	1.33	1.50
1	I	214	TYR	CG-CD2	-5.13	1.32	1.39
1	A	109	PHE	CE1-CZ	-5.12	1.27	1.37
1	D	146	PHE	CD1-CE1	-5.12	1.29	1.39
1	A	325	PHE	CD2-CE2	-5.12	1.29	1.39
1	D	154	PHE	CE1-CZ	-5.12	1.27	1.37
1	D	331	THR	CB-CG2	-5.11	1.35	1.52
1	K	325	PHE	CG-CD1	-5.11	1.31	1.38
1	E	293	TYR	CG-CD2	-5.11	1.32	1.39
1	D	75	ILE	CB-CG2	-5.11	1.37	1.52
1	C	141	TYR	CE2-CZ	-5.10	1.31	1.38
1	H	109	PHE	CD2-CE2	-5.10	1.29	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	172	ARG	CZ-NH1	-5.10	1.26	1.33
1	A	260	PHE	CD1-CE1	-5.10	1.29	1.39
1	B	196	ILE	CB-CG2	-5.09	1.37	1.52
1	E	294	PHE	CD2-CE2	-5.09	1.29	1.39
1	D	155	VAL	CB-CG1	-5.09	1.42	1.52
1	A	204	PHE	CE1-CZ	-5.09	1.27	1.37
1	F	134	HIS	CA-CB	-5.09	1.42	1.53
1	I	154	PHE	CE2-CZ	-5.09	1.27	1.37
1	A	214	TYR	CD1-CE1	-5.08	1.31	1.39
1	E	136	VAL	CB-CG1	-5.08	1.42	1.52
1	B	36	TRP	CE3-CZ3	-5.07	1.29	1.38
1	E	36	TRP	CZ3-CH2	-5.07	1.31	1.40
1	H	337	GLU	CB-CG	5.07	1.61	1.52
1	C	226	THR	CB-CG2	-5.07	1.35	1.52
1	F	267	TRP	CB-CG	-5.07	1.41	1.50
1	B	39	GLU	CG-CD	-5.06	1.44	1.51
1	C	267	TRP	CZ2-CH2	-5.06	1.27	1.37
1	K	353	VAL	CB-CG2	-5.06	1.42	1.52
1	K	64	GLU	CG-CD	5.06	1.59	1.51
1	B	327	GLU	CD-OE1	5.05	1.31	1.25
1	H	204	PHE	CE1-CZ	-5.05	1.27	1.37
1	K	340	ASP	CB-CG	5.05	1.62	1.51
1	D	204	PHE	CG-CD1	-5.05	1.31	1.38
1	E	288	SER	CB-OG	-5.04	1.35	1.42
1	A	345	ASP	CB-CG	-5.03	1.41	1.51
1	C	120	PHE	CD2-CE2	-5.02	1.29	1.39
1	D	197	PHE	CG-CD2	-5.02	1.31	1.38
1	E	41	ASN	CB-CG	-5.02	1.39	1.51
1	E	102	TRP	CE3-CZ3	-5.01	1.29	1.38
1	C	202	GLU	CD-OE1	-5.01	1.20	1.25
1	D	324	PRO	CG-CD	-5.01	1.34	1.50
1	E	123	ILE	CB-CG2	-5.01	1.37	1.52
1	B	323	SER	CB-OG	-5.01	1.35	1.42
1	H	257	PHE	CG-CD2	-5.01	1.31	1.38
1	B	255	PRO	CG-CD	-5.01	1.34	1.50
1	F	146	PHE	CG-CD1	-5.00	1.31	1.38
1	L	101	ASP	CB-CG	-5.00	1.41	1.51
1	L	350	ILE	CB-CG2	-5.00	1.37	1.52

All (162) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L	159	ASP	CB-CG-OD1	-19.02	101.19	118.30
1	L	159	ASP	CB-CG-OD2	16.90	133.51	118.30
1	K	340	ASP	CB-CG-OD1	12.31	129.38	118.30
1	L	175	ASP	CB-CG-OD2	-12.23	107.29	118.30
1	D	340	ASP	CB-CG-OD1	11.47	128.63	118.30
1	E	340	ASP	CB-CG-OD1	11.22	128.40	118.30
1	L	54	ARG	NE-CZ-NH2	-11.21	114.69	120.30
1	C	286	ASP	CB-CG-OD1	10.74	127.96	118.30
1	B	306	ASP	CB-CG-OD1	10.36	127.62	118.30
1	D	159	ASP	CB-CG-OD2	10.35	127.61	118.30
1	C	199	ASP	CB-CG-OD1	10.26	127.53	118.30
1	A	159	ASP	CB-CG-OD2	10.07	127.37	118.30
1	I	159	ASP	CB-CG-OD2	9.86	127.17	118.30
1	E	142	ASP	CB-CG-OD1	-9.81	109.47	118.30
1	A	77	ARG	NE-CZ-NH1	9.71	125.16	120.30
1	B	340	ASP	CB-CG-OD1	9.67	127.00	118.30
1	H	159	ASP	CB-CG-OD2	9.65	126.99	118.30
1	A	94	ARG	NE-CZ-NH2	9.55	125.08	120.30
1	I	199	ASP	CB-CG-OD1	9.54	126.89	118.30
1	G	199	ASP	CB-CG-OD1	-9.49	109.76	118.30
1	D	340	ASP	CB-CG-OD2	-9.41	109.83	118.30
1	B	306	ASP	CB-CG-OD2	-9.21	110.01	118.30
1	I	248	ASP	CB-CG-OD2	9.09	126.48	118.30
1	I	159	ASP	CB-CG-OD1	-8.94	110.25	118.30
1	D	312	ARG	NE-CZ-NH1	8.75	124.67	120.30
1	L	305	ASP	CB-CG-OD2	-8.67	110.50	118.30
1	A	190	ASP	CB-CG-OD1	8.52	125.97	118.30
1	B	333	ASP	CB-CG-OD1	8.38	125.84	118.30
1	A	333	ASP	CB-CG-OD2	8.38	125.84	118.30
1	K	334	ASP	CB-CG-OD1	8.36	125.82	118.30
1	C	340	ASP	CB-CG-OD2	-8.19	110.93	118.30
1	A	306	ASP	CB-CG-OD2	-8.15	110.97	118.30
1	B	340	ASP	CB-CG-OD2	-8.06	111.05	118.30
1	B	77	ARG	NE-CZ-NH2	-8.03	116.28	120.30
1	C	340	ASP	CB-CG-OD1	8.03	125.52	118.30
1	L	305	ASP	CB-CG-OD1	7.95	125.46	118.30
1	C	92	MET	CG-SD-CE	-7.82	87.69	100.20
1	B	88	ARG	NE-CZ-NH2	-7.82	116.39	120.30
1	E	292	ARG	NE-CZ-NH1	7.81	124.20	120.30
1	D	159	ASP	CB-CG-OD1	-7.70	111.37	118.30
1	F	312	ARG	NE-CZ-NH1	7.68	124.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	313	ARG	NE-CZ-NH2	-7.68	116.46	120.30
1	A	190	ASP	CB-CG-OD2	-7.67	111.40	118.30
1	I	69	ASP	CB-CG-OD1	7.66	125.19	118.30
1	L	340	ASP	CB-CG-OD2	-7.56	111.50	118.30
1	A	159	ASP	CB-CG-OD1	-7.55	111.51	118.30
1	B	334	ASP	CB-CG-OD1	7.50	125.05	118.30
1	K	152	ARG	NE-CZ-NH2	-7.46	116.57	120.30
1	L	202	GLU	CG-CD-OE1	-7.44	103.42	118.30
1	B	218	HIS	N-CA-C	7.43	131.07	111.00
1	E	159	ASP	CB-CG-OD2	7.31	124.88	118.30
1	F	199	ASP	CB-CG-OD2	7.30	124.87	118.30
1	F	242	ASP	CB-CG-OD1	7.22	124.80	118.30
1	G	107	ASP	CB-CG-OD2	-7.17	111.85	118.30
1	B	159	ASP	CB-CG-OD2	7.12	124.71	118.30
1	A	242	ASP	CB-CG-OD2	-7.12	111.89	118.30
1	C	199	ASP	CB-CG-OD2	-7.03	111.97	118.30
1	K	333	ASP	O-C-N	-7.00	111.49	122.70
1	C	270	ARG	NE-CZ-NH2	6.97	123.79	120.30
1	L	340	ASP	CB-CG-OD1	6.86	124.47	118.30
1	L	77	ARG	NE-CZ-NH1	6.85	123.72	120.30
1	K	199	ASP	CB-CG-OD1	6.80	124.42	118.30
1	E	327	GLU	OE1-CD-OE2	6.73	131.38	123.30
1	C	345	ASP	CB-CG-OD2	-6.71	112.27	118.30
1	I	305	ASP	CB-CG-OD1	6.69	124.32	118.30
1	K	77	ARG	NE-CZ-NH1	6.69	123.64	120.30
1	D	357	GLU	OE1-CD-OE2	6.64	131.27	123.30
1	E	133	ARG	NE-CZ-NH2	-6.60	117.00	120.30
1	J	107	ASP	CB-CG-OD2	-6.59	112.36	118.30
1	L	266	ARG	NE-CZ-NH2	6.56	123.58	120.30
1	L	142	ASP	CB-CG-OD2	6.45	124.11	118.30
1	A	104	LEU	CB-CG-CD2	-6.44	100.06	111.00
1	B	201	GLU	OE1-CD-OE2	-6.42	115.59	123.30
1	F	69	ASP	CB-CG-OD1	-6.42	112.53	118.30
1	C	247	LEU	CA-CB-CG	6.41	130.05	115.30
1	D	266	ARG	NE-CZ-NH2	6.40	123.50	120.30
1	K	199	ASP	CB-CG-OD2	-6.39	112.55	118.30
1	K	266	ARG	NE-CZ-NH1	6.38	123.49	120.30
1	G	334	ASP	CB-CG-OD1	6.37	124.04	118.30
1	J	94	ARG	NE-CZ-NH2	-6.36	117.12	120.30
1	E	159	ASP	CB-CG-OD1	-6.34	112.59	118.30
1	B	142	ASP	CB-CG-OD1	-6.27	112.65	118.30
1	B	199	ASP	CB-CG-OD1	6.17	123.85	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	K	305	ASP	CB-CG-OD1	6.16	123.84	118.30
1	L	347	LEU	CB-CG-CD1	6.15	121.46	111.00
1	A	312	ARG	NE-CZ-NH1	-6.10	117.25	120.30
1	A	345	ASP	CB-CG-OD1	-6.08	112.83	118.30
1	J	246	LEU	CB-CG-CD1	6.07	121.32	111.00
1	E	340	ASP	CB-CG-OD2	-6.07	112.84	118.30
1	A	242	ASP	CB-CG-OD1	6.05	123.74	118.30
1	J	254	ASN	C-N-CD	-6.02	107.36	120.60
1	D	248	ASP	CB-CG-OD2	6.00	123.70	118.30
1	A	340	ASP	CB-CG-OD1	5.98	123.68	118.30
1	F	248	ASP	CB-CG-OD2	-5.97	112.92	118.30
1	C	325	PHE	CB-CG-CD1	5.97	124.98	120.80
1	H	152	ARG	NE-CZ-NH1	-5.92	117.34	120.30
1	J	312	ARG	NE-CZ-NH1	5.91	123.26	120.30
1	C	270	ARG	NE-CZ-NH1	-5.91	117.34	120.30
1	D	105	GLU	OE1-CD-OE2	-5.86	116.27	123.30
1	K	159	ASP	CB-CG-OD2	5.86	123.57	118.30
1	C	339	LEU	CA-CB-CG	5.83	128.72	115.30
1	E	351	LEU	CB-CG-CD2	-5.83	101.08	111.00
1	K	340	ASP	OD1-CG-OD2	-5.83	112.22	123.30
1	J	247	LEU	CB-CG-CD1	-5.80	101.14	111.00
1	D	248	ASP	CB-CG-OD1	-5.78	113.10	118.30
1	A	199	ASP	CB-CG-OD2	5.74	123.47	118.30
1	L	242	ASP	CB-CG-OD2	5.72	123.45	118.30
1	H	306	ASP	CB-CG-OD1	5.68	123.42	118.30
1	B	345	ASP	CB-CG-OD1	5.67	123.41	118.30
1	E	339	LEU	CA-CB-CG	5.67	128.33	115.30
1	A	217	ARG	NE-CZ-NH1	5.65	123.12	120.30
1	E	88	ARG	NE-CZ-NH1	5.65	123.12	120.30
1	K	107	ASP	CB-CG-OD2	-5.65	113.22	118.30
1	F	242	ASP	CB-CG-OD2	-5.64	113.22	118.30
1	K	152	ARG	NH1-CZ-NH2	5.64	125.60	119.40
1	K	98	LEU	CB-CG-CD2	5.63	120.58	111.00
1	G	142	ASP	CB-CG-OD1	-5.62	113.24	118.30
1	I	345	ASP	CB-CG-OD1	5.60	123.34	118.30
1	I	199	ASP	CB-CG-OD2	-5.60	113.26	118.30
1	L	211	ASP	CB-CG-OD2	5.59	123.33	118.30
1	D	306	ASP	CB-CG-OD1	5.58	123.33	118.30
1	B	172	ARG	NE-CZ-NH1	5.57	123.09	120.30
1	G	340	ASP	CB-CG-OD2	-5.55	113.31	118.30
1	K	313	ARG	NE-CZ-NH2	-5.54	117.53	120.30
1	H	159	ASP	CB-CG-OD1	-5.51	113.34	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	K	351	LEU	CB-CG-CD1	-5.50	101.64	111.00
1	B	77	ARG	NE-CZ-NH1	5.50	123.05	120.30
1	L	54	ARG	CB-CG-CD	-5.49	97.32	111.60
1	B	142	ASP	CB-CG-OD2	5.48	123.23	118.30
1	G	159	ASP	CB-CG-OD2	5.47	123.22	118.30
1	C	266	ARG	NE-CZ-NH2	-5.43	117.58	120.30
1	I	337	GLU	OE1-CD-OE2	-5.39	116.83	123.30
1	F	313	ARG	NE-CZ-NH1	5.39	122.99	120.30
1	K	334	ASP	OD1-CG-OD2	-5.37	113.10	123.30
1	L	217	ARG	NE-CZ-NH2	5.35	122.97	120.30
1	A	292	ARG	NE-CZ-NH1	5.32	122.96	120.30
1	L	286	ASP	CB-CG-OD1	5.32	123.08	118.30
1	B	333	ASP	CB-CG-OD2	-5.29	113.54	118.30
1	B	312	ARG	O-C-N	-5.29	114.24	122.70
1	A	174	LEU	CB-CG-CD1	-5.25	102.07	111.00
1	E	311	LEU	CA-CB-CG	5.23	127.33	115.30
1	G	199	ASP	CB-CG-OD2	5.23	123.00	118.30
1	L	286	ASP	CB-CG-OD2	-5.22	113.60	118.30
1	C	248	ASP	CB-CG-OD1	-5.21	113.61	118.30
1	H	242	ASP	CB-CG-OD2	-5.21	113.61	118.30
1	I	70	LEU	CB-CG-CD2	5.20	119.83	111.00
1	K	305	ASP	CB-CG-OD2	-5.19	113.63	118.30
1	E	327	GLU	CG-CD-OE2	-5.17	107.97	118.30
1	F	318	LEU	CA-CB-CG	5.16	127.18	115.30
1	L	199	ASP	CB-CG-OD2	-5.13	113.68	118.30
1	C	141	TYR	CA-CB-CG	5.10	123.10	113.40
1	I	115	TYR	CA-CB-CG	5.09	123.08	113.40
1	H	199	ASP	CB-CG-OD1	5.09	122.88	118.30
1	I	69	ASP	CB-CG-OD2	-5.08	113.73	118.30
1	E	202	GLU	OE1-CD-OE2	5.07	129.38	123.30
1	K	152	ARG	NE-CZ-NH1	-5.06	117.77	120.30
1	L	179	LEU	CB-CG-CD2	-5.04	102.42	111.00
1	I	172	ARG	NE-CZ-NH2	-5.03	117.78	120.30
1	B	266	ARG	NE-CZ-NH2	-5.02	117.79	120.30
1	C	318	LEU	CB-CG-CD2	-5.02	102.47	111.00
1	L	202	GLU	CG-CD-OE2	5.01	128.33	118.30
1	K	333	ASP	CA-C-N	5.01	128.23	117.20

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	215	GLY	Mainchain

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	2610	0	2529	56	0
1	B	2610	0	2529	88	0
1	C	2610	0	2529	62	0
1	D	2610	0	2529	58	0
1	E	2610	0	2529	74	0
1	F	2610	0	2528	96	0
1	G	2610	0	2529	140	0
1	H	2610	0	2529	98	0
1	I	2610	0	2528	91	0
1	J	2610	0	2529	215	0
1	K	2610	0	2529	87	0
1	L	2610	0	2529	116	0
2	A	1	0	0	0	0
2	B	1	0	0	1	0
2	C	1	0	0	0	0
2	D	1	0	0	1	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
2	I	1	0	0	0	0
2	J	1	0	0	0	0
2	K	1	0	0	0	0
2	L	1	0	0	2	0
3	A	29	0	0	2	0
3	B	29	0	0	3	0
3	C	29	0	0	1	0
3	D	29	0	0	2	0
3	E	29	0	0	0	0
3	F	29	0	0	0	0
3	G	29	0	0	4	0
3	H	29	0	0	1	0
3	I	29	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	J	29	0	0	2	0
3	K	29	0	0	5	0
3	L	29	0	0	5	0
4	A	1	0	0	2	0
4	B	5	0	0	1	0
4	C	3	0	0	0	0
4	D	1	0	0	0	0
4	E	2	0	0	0	0
4	F	3	0	0	1	0
4	G	1	0	0	1	0
4	H	1	0	0	0	0
4	K	3	0	0	1	0
4	L	1	0	0	0	0
All	All	31701	0	30346	1148	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 19.

All (1148) 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)
3:B:402:A1D5C:C07	3:B:402:A1D5C:C08	1.77	1.51
3:D:402:A1D5C:C07	3:D:402:A1D5C:C08	1.77	1.49
3:C:402:A1D5C:C08	3:C:402:A1D5C:C07	1.74	1.38
3:A:402:A1D5C:C07	3:A:402:A1D5C:C08	1.74	1.34
1:B:217:ARG:HB2	1:B:220:ALA:CB	1.67	1.24
1:B:217:ARG:CB	1:B:220:ALA:HB3	1.77	1.13
1:F:34:SER:OG	1:L:280:GLU:OE1	1.67	1.10
1:B:217:ARG:HB3	1:B:309:PRO:HB3	1.36	1.06
1:J:66:TRP:NE1	1:J:336:GLU:OE2	1.88	1.05
1:F:130:THR:O	1:F:132:LYS:N	1.93	1.02
1:L:212:SER:O	1:L:217:ARG:NH1	1.96	0.97
1:B:217:ARG:O	1:B:217:ARG:NE	1.97	0.97
1:F:232:ALA:O	1:L:54:ARG:NH2	1.96	0.97
1:B:217:ARG:HB2	1:B:220:ALA:HB3	0.98	0.96
1:B:217:ARG:CB	1:B:309:PRO:HB3	1.97	0.95
1:J:130:THR:O	1:J:132:LYS:N	2.00	0.95
1:L:202:GLU:OE2	3:L:402:A1D5C:N26	2.01	0.94
1:C:132:LYS:HZ2	1:C:132:LYS:HB2	1.31	0.93
1:H:347:LEU:O	1:H:349:LYS:N	2.01	0.93
1:J:265:ALA:O	1:J:268:PHE:N	2.01	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:212:SER:O	1:K:217:ARG:NH1	2.03	0.92
1:L:159:ASP:OD2	3:L:402:A1D5C:C25	2.19	0.90
1:I:212:SER:O	1:I:217:ARG:NH1	2.06	0.88
1:G:49:ASN:OD1	1:G:51:SER:N	2.07	0.87
1:G:69:ASP:OD1	1:G:94:ARG:NH1	2.07	0.87
1:K:216:SER:OG	1:K:306:ASP:OD1	1.93	0.85
1:B:217:ARG:HG3	1:B:313:ARG:HH12	1.40	0.85
1:B:68:ASN:HB3	1:B:94:ARG:NH1	1.93	0.84
1:A:68:ASN:HB3	1:A:94:ARG:NH1	1.93	0.84
1:B:228:HIS:O	1:B:235:THR:OG1	1.94	0.84
1:F:34:SER:OG	1:L:280:GLU:CD	2.16	0.84
1:B:217:ARG:HB3	1:B:309:PRO:CB	2.07	0.83
1:L:159:ASP:OD2	1:L:202:GLU:OE2	1.96	0.83
1:I:68:ASN:HB3	1:I:94:ARG:HH12	1.44	0.83
1:E:179:LEU:O	1:E:181:LEU:N	2.12	0.83
1:C:132:LYS:HZ3	1:C:190:ASP:HB3	1.42	0.83
1:G:68:ASN:O	1:G:94:ARG:NH1	2.12	0.82
1:J:249:LEU:HD12	1:J:321:ILE:HD11	1.62	0.82
1:A:68:ASN:HB3	1:A:94:ARG:HH12	1.42	0.82
1:H:228:HIS:O	1:H:235:THR:OG1	1.99	0.81
1:F:232:ALA:C	1:L:54:ARG:HH22	1.84	0.81
1:G:158:THR:O	1:G:249:LEU:HA	1.81	0.81
1:J:73:LEU:O	1:J:75:ILE:N	2.14	0.81
1:I:169:GLU:OE1	1:I:172:ARG:NH2	2.15	0.80
1:L:159:ASP:OD2	3:L:402:A1D5C:N26	2.15	0.80
1:G:199:ASP:OD1	1:G:200:GLY:N	2.15	0.80
1:H:172:ARG:O	1:H:174:LEU:N	2.16	0.79
1:J:228:HIS:O	1:J:235:THR:OG1	2.01	0.79
1:K:91:ILE:O	1:K:95:ILE:HD12	1.82	0.78
1:C:40:LYS:HB3	1:C:242:ASP:OD1	1.82	0.78
1:A:212:SER:O	1:A:217:ARG:NH1	2.16	0.77
1:L:236:SER:O	1:L:238:LEU:N	2.17	0.77
1:G:212:SER:O	1:G:217:ARG:NH1	2.18	0.77
1:G:157:ALA:O	1:G:162:VAL:HG23	1.85	0.76
1:H:295:GLN:O	1:H:297:TYR:N	2.18	0.76
1:I:328:VAL:O	1:I:331:THR:OG1	2.01	0.76
1:J:355:VAL:O	1:J:358:TYR:N	2.17	0.76
1:J:88:ARG:HG3	1:J:123:ILE:HD11	1.67	0.76
1:G:157:ALA:N	1:G:334:ASP:OD1	2.19	0.75
1:G:335:ASN:ND2	1:G:337:GLU:OE2	2.18	0.75
1:J:69:ASP:CG	1:J:94:ARG:HH22	1.88	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:217:ARG:H	1:B:220:ALA:H	1.31	0.74
1:C:132:LYS:NZ	1:C:190:ASP:HB3	2.01	0.74
1:H:69:ASP:OD1	1:H:94:ARG:NH1	2.21	0.73
1:K:128:ASN:O	1:K:130:THR:N	2.21	0.73
1:C:111:SER:OG	1:C:112:GLN:N	2.16	0.73
1:J:151:ASN:O	1:J:151:ASN:ND2	2.20	0.73
1:C:132:LYS:HZ2	1:C:132:LYS:CB	2.01	0.73
1:A:47:ILE:HD12	1:A:357:GLU:OE2	1.89	0.73
1:H:177:LYS:NZ	1:H:361:LEU:O	2.18	0.73
1:G:177:LYS:O	1:G:180:SER:OG	2.07	0.72
1:L:47:ILE:HG13	1:L:270:ARG:NH2	2.03	0.72
1:G:228:HIS:O	1:G:235:THR:OG1	2.07	0.72
1:D:212:SER:O	1:D:217:ARG:NH1	2.22	0.72
1:F:285:LYS:HZ1	1:F:286:ASP:CG	1.93	0.72
1:H:158:THR:OG1	1:H:334:ASP:OD2	2.07	0.72
1:J:69:ASP:OD2	1:J:94:ARG:NH2	2.19	0.72
1:H:283:LEU:HD12	1:H:283:LEU:H	1.55	0.71
1:D:205:LEU:O	1:D:206:HIS:ND1	2.22	0.71
1:G:264:SER:O	1:G:267:TRP:N	2.22	0.71
1:A:38:GLU:OE2	1:C:147:SER:OG	2.08	0.71
1:I:36:TRP:CD1	1:I:37:PRO:HD3	2.26	0.71
1:F:233:ARG:NH2	1:L:58:GLU:OE1	2.24	0.71
1:G:279:HIS:O	1:G:282:GLY:N	2.19	0.71
1:L:106:ILE:HD13	1:L:106:ILE:N	2.04	0.70
1:H:140:HIS:ND1	1:H:142:ASP:OD1	2.24	0.70
1:J:40:LYS:HB3	1:J:242:ASP:OD1	1.92	0.70
1:E:92:MET:CE	1:E:106:ILE:HD11	2.23	0.69
1:A:68:ASN:CB	1:A:94:ARG:HH12	2.04	0.69
1:D:179:LEU:O	1:D:181:LEU:N	2.25	0.69
1:A:149:TRP:O	1:A:152:ARG:N	2.23	0.69
1:I:277:GLU:O	1:I:281:LEU:HD12	1.93	0.69
1:H:285:LYS:O	1:H:287:HIS:N	2.26	0.68
1:I:252:ALA:HB1	1:I:253:PRO:HD2	1.76	0.68
1:B:68:ASN:HB3	1:B:94:ARG:HH12	1.57	0.68
1:F:212:SER:O	1:F:217:ARG:NH1	2.27	0.68
1:J:35:ALA:C	1:J:37:PRO:HD2	2.14	0.68
1:K:279:HIS:O	1:K:281:LEU:N	2.27	0.67
1:J:109:PHE:CE1	1:J:120:PHE:HB2	2.29	0.67
1:K:133:ARG:NH2	1:K:242:ASP:OD2	2.26	0.67
1:H:61:SER:O	1:H:61:SER:OG	2.10	0.67
1:J:71:GLN:HA	1:J:74:LEU:HD12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:159:ASP:OD2	2:L:401:ZN:ZN	1.42	0.67
1:B:34:SER:OG	1:B:35:ALA:N	2.28	0.67
1:G:130:THR:O	1:G:132:LYS:N	2.28	0.67
1:I:284:LEU:HD23	1:I:287:HIS:CG	2.30	0.67
1:J:133:ARG:O	1:J:134:HIS:ND1	2.27	0.67
1:D:66:TRP:O	1:D:71:GLN:HG3	1.94	0.66
1:I:222:LYS:O	1:I:226:THR:OG1	2.13	0.66
1:E:175:ASP:O	1:E:177:LYS:N	2.28	0.66
1:I:349:LYS:O	1:I:353:VAL:HG23	1.96	0.66
1:J:274:ILE:O	1:J:278:LEU:HD12	1.95	0.66
1:L:263:ASN:ND2	1:L:316:PRO:HA	2.10	0.66
1:J:328:VAL:O	1:J:331:THR:OG1	2.10	0.66
1:C:229:PRO:O	1:C:230:PRO:C	2.31	0.65
1:F:285:LYS:HE3	1:F:286:ASP:OD2	1.96	0.65
1:J:100:ALA:HA	1:J:179:LEU:HD12	1.79	0.65
1:B:248:ASP:OD2	3:B:402:A1D5C:N24	2.30	0.65
1:G:92:MET:HG2	1:G:104:LEU:HD13	1.77	0.65
1:I:133:ARG:NH2	1:I:242:ASP:OD2	2.28	0.65
1:G:140:HIS:O	1:G:140:HIS:ND1	2.29	0.65
1:L:305:ASP:O	1:L:307:HIS:N	2.29	0.65
1:L:328:VAL:O	1:L:331:THR:OG1	2.15	0.65
1:B:49:ASN:OD1	1:B:52:ALA:N	2.25	0.65
1:E:211:ASP:O	1:E:212:SER:HB3	1.96	0.65
1:J:271:LEU:HB3	1:J:294:PHE:CD2	2.32	0.65
1:E:92:MET:HE2	1:E:106:ILE:HD11	1.79	0.64
1:E:206:HIS:ND1	1:K:314:GLY:O	2.30	0.64
1:J:43:HIS:NE2	1:J:358:TYR:O	2.29	0.64
1:H:155:VAL:O	1:H:156:GLY:C	2.33	0.64
1:I:177:LYS:O	1:I:180:SER:OG	2.14	0.64
1:K:158:THR:OG1	1:K:334:ASP:OD1	2.15	0.64
1:G:261:PHE:O	1:G:264:SER:OG	2.16	0.63
1:I:169:GLU:OE2	1:I:172:ARG:NH2	2.31	0.63
1:G:158:THR:N	1:G:334:ASP:OD1	2.30	0.63
1:J:348:ASN:O	1:J:352:GLN:HG3	1.99	0.63
1:B:217:ARG:HG3	1:B:313:ARG:NH1	2.13	0.63
1:K:349:LYS:O	1:K:353:VAL:HG23	1.99	0.63
1:J:66:TRP:CE2	1:J:336:GLU:OE2	2.52	0.63
1:L:228:HIS:O	1:L:235:THR:OG1	2.17	0.63
1:K:98:LEU:HB3	1:K:175:ASP:OD2	1.99	0.63
1:G:300:GLY:HA3	1:J:300:GLY:HA3	1.80	0.63
1:L:202:GLU:OE2	2:L:401:ZN:ZN	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:212:SER:O	1:E:217:ARG:NH1	2.31	0.62
1:I:256:THR:OG1	1:I:323:SER:O	2.17	0.62
1:G:281:LEU:HD12	1:G:281:LEU:N	2.14	0.62
1:A:207:TRP:HZ2	1:A:304:GLN:HB2	1.65	0.62
1:E:333:ASP:O	1:E:338:ASN:ND2	2.33	0.62
1:I:333:ASP:O	1:I:335:ASN:N	2.33	0.62
1:J:36:TRP:CZ3	1:J:132:LYS:CB	2.81	0.62
1:J:61:SER:OG	1:J:61:SER:O	2.12	0.62
1:L:66:TRP:O	1:L:71:GLN:HG3	1.99	0.62
1:C:68:ASN:O	1:C:94:ARG:NH1	2.31	0.62
1:F:285:LYS:HE3	1:F:286:ASP:CG	2.19	0.62
1:F:233:ARG:HA	1:L:54:ARG:HH22	1.63	0.62
1:I:77:ARG:HG3	1:I:143:SER:HB3	1.82	0.62
1:I:111:SER:OG	1:I:112:GLN:N	2.31	0.62
1:J:248:ASP:OD2	3:J:402:A1D5C:N24	2.33	0.61
1:G:211:ASP:O	1:G:212:SER:HB3	2.00	0.61
1:I:124:ILE:HD12	1:I:124:ILE:N	2.15	0.61
1:J:274:ILE:HG22	1:J:350:ILE:HG23	1.80	0.61
1:J:279:HIS:NE2	1:J:287:HIS:O	2.33	0.61
1:B:159:ASP:OD2	2:B:401:ZN:ZN	1.47	0.61
1:B:217:ARG:CA	1:B:220:ALA:HB3	2.30	0.61
1:J:61:SER:O	1:J:63:SER:N	2.33	0.61
1:J:69:ASP:CG	1:J:94:ARG:HH12	2.03	0.61
1:J:192:SER:OG	1:J:193:LEU:N	2.31	0.61
1:I:88:ARG:O	1:I:92:MET:HG3	1.99	0.61
1:I:158:THR:OG1	1:I:334:ASP:OD1	2.17	0.61
1:I:284:LEU:CD2	1:I:287:HIS:ND1	2.63	0.61
1:B:217:ARG:N	1:B:220:ALA:H	1.97	0.61
1:B:65:MET:HG3	1:B:169:GLU:HB2	1.83	0.61
1:G:333:ASP:O	1:G:335:ASN:OD1	2.19	0.61
1:H:212:SER:O	1:H:214:TYR:N	2.33	0.61
1:L:236:SER:O	1:L:239:HIS:N	2.32	0.61
3:G:402:A1D5C:O17	3:G:402:A1D5C:C28	2.48	0.61
1:G:353:VAL:O	1:G:356:LEU:N	2.33	0.60
1:H:347:LEU:O	1:H:348:ASN:C	2.38	0.60
1:D:159:ASP:OD2	2:D:401:ZN:ZN	1.50	0.60
1:G:288:SER:OG	1:G:291:GLY:N	2.34	0.60
1:E:34:SER:OG	1:E:35:ALA:N	2.35	0.60
1:L:345:ASP:O	1:L:349:LYS:HG3	2.01	0.60
1:J:40:LYS:CB	1:J:242:ASP:OD1	2.48	0.60
1:L:348:ASN:O	1:L:352:GLN:HG3	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:236:SER:O	1:L:237:GLN:C	2.36	0.60
1:B:199:ASP:OD1	1:B:200:GLY:N	2.33	0.60
1:I:169:GLU:CD	1:I:172:ARG:NH2	2.54	0.60
1:J:254:ASN:N	1:J:255:PRO:HD3	2.16	0.60
1:E:106:ILE:HG22	1:E:107:ASP:N	2.16	0.60
1:G:65:MET:HG3	1:G:169:GLU:HB2	1.83	0.59
1:J:36:TRP:CZ3	1:J:132:LYS:HB3	2.37	0.59
1:A:92:MET:SD	1:A:106:ILE:HD11	2.42	0.59
1:C:95:ILE:HG21	1:C:104:LEU:HD21	1.84	0.59
1:G:340:ASP:O	1:G:342:SER:N	2.35	0.59
1:H:345:ASP:O	1:H:349:LYS:HG3	2.01	0.59
1:J:284:LEU:HG	1:J:346:ASN:OD1	2.01	0.59
1:J:311:LEU:O	1:J:314:GLY:N	2.30	0.59
1:F:39:GLU:HB2	1:F:133:ARG:NH1	2.17	0.59
1:H:347:LEU:C	1:H:349:LYS:N	2.56	0.59
1:D:71:GLN:N	1:D:72:PRO:CD	2.65	0.59
1:G:122:ASN:ND2	1:G:215:GLY:O	2.23	0.59
1:G:307:HIS:O	1:G:308:ILE:C	2.38	0.59
1:H:328:VAL:O	1:H:331:THR:OG1	2.18	0.59
1:K:68:ASN:HB3	1:K:94:ARG:NH1	2.18	0.59
1:A:211:ASP:O	1:A:212:SER:HB3	2.00	0.59
1:F:70:LEU:HG	1:F:70:LEU:O	2.02	0.59
1:H:348:ASN:O	1:H:352:GLN:HG3	2.03	0.59
1:E:175:ASP:O	1:E:178:LEU:N	2.33	0.59
1:G:166:MET:SD	1:G:250:ILE:HG21	2.43	0.59
1:H:348:ASN:O	1:H:352:GLN:NE2	2.36	0.59
1:L:36:TRP:CG	1:L:37:PRO:HD3	2.38	0.59
1:F:175:ASP:O	1:F:178:LEU:N	2.29	0.59
1:J:40:LYS:HG3	1:J:41:ASN:OD1	2.03	0.59
1:I:92:MET:CE	1:I:106:ILE:HD11	2.32	0.58
1:F:232:ALA:CA	1:L:54:ARG:NH1	2.66	0.58
1:F:285:LYS:NZ	1:F:286:ASP:OD1	2.25	0.58
1:G:285:LYS:NZ	1:G:286:ASP:OD1	2.28	0.58
1:A:116:GLY:HA2	1:H:114:PRO:O	2.03	0.58
1:F:36:TRP:CG	1:F:37:PRO:HD3	2.38	0.58
1:J:65:MET:HG3	1:J:169:GLU:HB2	1.85	0.58
1:G:149:TRP:CE3	1:G:150:ASN:HB2	2.38	0.58
1:J:94:ARG:NH2	1:J:168:LEU:HB3	2.18	0.58
1:D:177:LYS:O	1:D:180:SER:OG	2.21	0.58
1:G:169:GLU:O	1:G:172:ARG:N	2.36	0.58
3:B:402:A1D5C:C08	1:E:262:PRO:HG3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:205:LEU:O	1:C:206:HIS:ND1	2.36	0.58
1:K:201:GLU:OE1	1:K:202:GLU:HG2	2.04	0.58
1:B:306:ASP:OD1	4:B:501:HOH:O	2.17	0.58
1:C:295:GLN:O	1:C:297:TYR:N	2.37	0.58
1:J:223:MET:HB2	1:J:238:LEU:HD21	1.86	0.57
1:J:278:LEU:HB3	1:J:284:LEU:HD11	1.86	0.57
1:B:308:ILE:O	1:B:312:ARG:HG3	2.04	0.57
1:F:231:GLY:C	1:L:54:ARG:NH1	2.57	0.57
1:K:149:TRP:O	1:K:152:ARG:N	2.32	0.57
1:E:308:ILE:O	1:E:312:ARG:HG3	2.03	0.57
1:E:328:VAL:O	1:E:329:TRP:C	2.42	0.57
1:G:36:TRP:CG	1:G:37:PRO:HD3	2.40	0.57
1:H:344:ILE:O	1:H:348:ASN:HB2	2.04	0.57
1:F:232:ALA:C	1:L:54:ARG:NH2	2.50	0.57
1:B:217:ARG:CB	1:B:220:ALA:CB	2.57	0.57
1:H:281:LEU:HB3	1:H:283:LEU:HD11	1.87	0.57
1:B:36:TRP:CD2	1:B:37:PRO:HD3	2.40	0.57
1:E:174:LEU:O	1:E:178:LEU:HG	2.05	0.57
1:H:62:ILE:HB	1:H:345:ASP:CG	2.25	0.57
1:J:132:LYS:CE	1:J:190:ASP:HB3	2.35	0.57
1:J:278:LEU:O	1:J:284:LEU:HD13	2.05	0.57
1:K:221:ALA:O	1:K:225:SER:OG	2.18	0.57
1:L:158:THR:O	1:L:160:SER:HA	2.04	0.57
1:L:253:PRO:O	1:L:254:ASN:HB2	2.05	0.57
1:F:285:LYS:NZ	1:F:286:ASP:CG	2.59	0.56
1:L:36:TRP:CD2	1:L:37:PRO:HD3	2.39	0.56
1:A:231:GLY:O	1:A:232:ALA:O	2.24	0.56
1:A:303:ILE:N	1:A:303:ILE:HD13	2.19	0.56
1:F:138:ALA:HA	1:F:196:ILE:O	2.05	0.56
1:I:354:PHE:C	1:I:354:PHE:CD1	2.76	0.56
1:K:36:TRP:N	1:K:37:PRO:CD	2.68	0.56
1:K:208:SER:O	1:K:210:GLN:N	2.38	0.56
1:I:36:TRP:HA	1:I:39:GLU:HG3	1.87	0.56
1:B:49:ASN:OD1	1:B:51:SER:N	2.38	0.56
1:G:169:GLU:OE2	1:G:172:ARG:NH2	2.32	0.56
1:B:211:ASP:O	1:B:212:SER:HB3	2.05	0.56
1:J:265:ALA:O	1:J:267:TRP:N	2.38	0.56
1:C:228:HIS:O	1:C:235:THR:OG1	2.22	0.56
1:D:180:SER:O	1:D:181:LEU:HD23	2.06	0.56
1:F:35:ALA:O	1:F:36:TRP:C	2.43	0.56
1:F:128:ASN:O	1:F:130:THR:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:231:GLY:O	1:L:281:LEU:HD22	2.05	0.56
1:J:336:GLU:O	1:J:337:GLU:C	2.44	0.56
1:L:68:ASN:HB3	1:L:94:ARG:NH1	2.21	0.56
1:L:121:SER:O	1:L:199:ASP:HB2	2.05	0.56
1:F:66:TRP:O	1:F:71:GLN:HB2	2.05	0.56
1:K:94:ARG:NH2	1:K:97:ARG:NH1	2.54	0.56
1:G:86:ALA:O	1:G:89:GLN:HB2	2.06	0.56
1:G:343:THR:O	1:G:347:LEU:HD12	2.06	0.56
1:J:133:ARG:O	1:J:134:HIS:CG	2.59	0.56
1:F:155:VAL:O	1:F:156:GLY:C	2.44	0.55
1:J:163:PRO:HB3	1:J:247:LEU:HB2	1.88	0.55
1:H:229:PRO:O	1:H:230:PRO:C	2.44	0.55
1:J:346:ASN:O	1:J:350:ILE:HG13	2.07	0.55
1:G:138:ALA:O	1:G:246:LEU:HD12	2.05	0.55
1:H:99:GLN:O	1:H:100:ALA:O	2.25	0.55
1:L:177:LYS:O	1:L:180:SER:OG	2.15	0.55
1:A:199:ASP:OD1	1:A:200:GLY:N	2.38	0.55
1:F:232:ALA:CA	1:L:54:ARG:HH12	2.19	0.55
1:D:289:LEU:O	1:D:292:ARG:HG3	2.06	0.55
1:K:49:ASN:OD1	1:K:49:ASN:O	2.25	0.55
1:J:36:TRP:CD1	1:J:37:PRO:HD3	2.42	0.55
1:L:109:PHE:CZ	1:L:120:PHE:HB2	2.42	0.55
1:G:128:ASN:OD1	1:G:128:ASN:N	2.37	0.55
1:G:162:VAL:HB	1:G:163:PRO:HD3	1.89	0.55
1:C:104:LEU:N	1:C:104:LEU:HD23	2.21	0.55
1:F:158:THR:O	1:F:249:LEU:HA	2.07	0.55
1:L:105:GLU:C	1:L:106:ILE:HD13	2.27	0.55
1:G:70:LEU:O	1:G:74:LEU:HD12	2.07	0.55
1:H:285:LYS:HG3	1:H:286:ASP:N	2.21	0.55
1:L:109:PHE:CE1	1:L:120:PHE:HB2	2.41	0.55
1:F:360:HIS:O	1:F:361:LEU:HD23	2.07	0.54
1:H:92:MET:HG2	1:H:104:LEU:HD13	1.88	0.54
1:J:36:TRP:CZ3	1:J:133:ARG:HG3	2.42	0.54
1:J:359:LEU:HB2	1:J:361:LEU:HG	1.89	0.54
1:K:212:SER:O	1:K:213:LEU:C	2.45	0.54
1:L:41:ASN:N	1:L:41:ASN:OD1	2.40	0.54
1:B:314:GLY:HA3	1:K:206:HIS:HB3	1.88	0.54
1:H:103:VAL:HG12	1:H:103:VAL:O	2.07	0.54
1:J:149:TRP:O	1:J:152:ARG:HG3	2.08	0.54
1:K:252:ALA:HB1	1:K:253:PRO:HD2	1.88	0.54
1:L:77:ARG:HG2	1:L:143:SER:HB3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:92:MET:HE2	1:L:106:ILE:HD11	1.89	0.54
1:A:47:ILE:HD13	1:A:270:ARG:NH2	2.23	0.54
1:C:292:ARG:O	1:C:295:GLN:NE2	2.40	0.54
1:J:69:ASP:OD1	1:J:94:ARG:NH1	2.37	0.54
1:E:302:VAL:HG22	1:E:303:ILE:O	2.07	0.54
1:J:141:TYR:HD2	1:J:197:PHE:O	1.91	0.54
1:J:178:LEU:O	1:J:180:SER:N	2.41	0.54
1:J:280:GLU:O	1:J:280:GLU:HG3	2.07	0.54
1:K:109:PHE:CZ	1:K:120:PHE:HB2	2.43	0.54
1:H:57:ALA:HB3	1:H:283:LEU:HD23	1.90	0.54
1:H:272:GLN:CD	1:H:296:ASN:OD1	2.45	0.54
1:J:191:LEU:HD12	1:J:242:ASP:OD2	2.08	0.54
1:I:228:HIS:O	1:I:235:THR:OG1	2.25	0.54
1:L:71:GLN:N	1:L:72:PRO:CD	2.71	0.54
1:B:285:LYS:O	1:B:286:ASP:C	2.46	0.54
1:I:277:GLU:HG3	1:I:281:LEU:HD12	1.89	0.54
1:J:36:TRP:HZ3	1:J:133:ARG:N	2.06	0.54
1:J:70:LEU:C	1:J:70:LEU:HD12	2.27	0.54
1:J:158:THR:HG22	1:J:250:ILE:O	2.07	0.54
1:E:179:LEU:C	1:E:181:LEU:H	2.08	0.54
1:F:231:GLY:C	1:L:54:ARG:CZ	2.76	0.54
1:I:54:ARG:O	1:I:58:GLU:HG3	2.07	0.54
1:I:249:LEU:HD12	1:I:321:ILE:HD11	1.90	0.54
1:B:217:ARG:CB	1:B:309:PRO:CB	2.77	0.53
1:C:308:ILE:O	1:C:312:ARG:HG3	2.07	0.53
1:E:88:ARG:HG3	1:E:123:ILE:HD11	1.90	0.53
1:F:256:THR:O	1:F:256:THR:OG1	2.24	0.53
1:B:92:MET:SD	1:B:106:ILE:HD11	2.47	0.53
1:A:217:ARG:HD2	4:A:501:HOH:O	2.07	0.53
1:C:77:ARG:HG2	1:C:143:SER:HB3	1.90	0.53
1:J:351:LEU:O	1:J:354:PHE:N	2.42	0.53
1:E:353:VAL:O	1:E:357:GLU:HG3	2.08	0.53
1:K:72:PRO:HB2	1:K:90:HIS:CD2	2.44	0.53
1:L:43:HIS:O	1:L:266:ARG:NH2	2.36	0.53
1:F:210:GLN:HG3	4:F:501:HOH:O	2.08	0.53
1:I:92:MET:O	1:I:93:GLN:C	2.47	0.53
1:D:201:GLU:HG3	1:D:306:ASP:OD2	2.09	0.53
1:F:231:GLY:HA2	1:L:54:ARG:NE	2.23	0.53
1:B:40:LYS:HG3	1:B:41:ASN:OD1	2.09	0.53
1:A:207:TRP:CZ2	1:A:304:GLN:HB2	2.43	0.53
1:J:102:TRP:CZ3	1:J:127:LEU:HG	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:172:ARG:HH11	1:K:172:ARG:HG2	1.73	0.53
1:G:335:ASN:OD1	1:G:335:ASN:N	2.41	0.53
1:J:268:PHE:O	1:J:271:LEU:N	2.34	0.53
1:B:78:TYR:CE1	1:B:81:SER:HB3	2.44	0.53
1:B:207:TRP:HZ2	1:B:304:GLN:HB2	1.74	0.53
1:H:36:TRP:N	1:H:37:PRO:CD	2.72	0.53
1:F:206:HIS:ND1	1:I:313:ARG:O	2.34	0.53
1:J:61:SER:O	1:J:64:GLU:N	2.42	0.53
1:J:69:ASP:CA	1:J:94:ARG:HH12	2.22	0.53
1:B:231:GLY:O	1:B:232:ALA:C	2.45	0.53
1:F:285:LYS:CE	1:F:286:ASP:CG	2.78	0.53
1:G:354:PHE:CD1	1:G:354:PHE:C	2.82	0.53
1:J:71:GLN:N	1:J:72:PRO:CD	2.72	0.53
1:K:165:ALA:O	1:K:166:MET:C	2.43	0.52
1:D:159:ASP:OD2	3:D:402:A1D5C:N26	2.42	0.52
1:J:69:ASP:CG	1:J:94:ARG:NH2	2.61	0.52
1:K:52:ALA:O	1:K:56:ILE:HG12	2.08	0.52
1:K:102:TRP:CZ3	1:K:127:LEU:HG	2.44	0.52
1:H:117:TYR:O	1:H:118:ARG:HG2	2.08	0.52
1:I:170:LEU:C	1:I:170:LEU:HD23	2.30	0.52
1:H:45:PRO:HG3	1:H:270:ARG:HD3	1.90	0.52
1:D:211:ASP:O	1:D:212:SER:HB3	2.08	0.52
1:G:92:MET:SD	1:G:106:ILE:HD11	2.50	0.52
1:J:170:LEU:HD11	1:J:355:VAL:HG21	1.90	0.52
1:K:127:LEU:O	1:K:128:ASN:HB2	2.09	0.52
1:G:321:ILE:HG23	1:G:321:ILE:O	2.10	0.52
1:H:246:LEU:HD23	1:H:319:HIS:CD2	2.44	0.52
1:K:49:ASN:OD1	1:K:49:ASN:C	2.47	0.52
1:A:62:ILE:HG13	1:A:62:ILE:O	2.10	0.52
1:A:228:HIS:HB2	1:A:237:GLN:HG2	1.91	0.52
1:H:157:ALA:HA	1:H:161:ALA:HB3	1.90	0.52
1:J:135:LEU:O	1:J:193:LEU:HD12	2.09	0.52
1:L:181:LEU:HD23	1:L:181:LEU:N	2.24	0.52
1:B:299:TYR:HD2	1:B:301:GLY:O	1.93	0.52
1:C:108:THR:HG22	1:C:109:PHE:N	2.24	0.52
1:C:132:LYS:HE3	1:C:190:ASP:OD2	2.09	0.52
1:E:206:HIS:HB3	1:K:314:GLY:HA3	1.91	0.52
1:J:140:HIS:O	1:J:160:SER:HB2	2.10	0.52
1:B:217:ARG:HB2	1:B:220:ALA:HB2	1.81	0.52
1:E:99:GLN:HB3	1:E:179:LEU:HD11	1.92	0.52
1:I:308:ILE:O	1:I:309:PRO:C	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:213:LEU:O	1:J:214:TYR:C	2.44	0.52
1:A:92:MET:CE	1:A:106:ILE:HD11	2.40	0.52
1:G:223:MET:HB3	1:G:238:LEU:HD23	1.92	0.52
1:J:293:TYR:CZ	1:J:343:THR:HG23	2.44	0.52
1:K:90:HIS:O	1:K:91:ILE:C	2.48	0.52
1:E:106:ILE:CG2	1:E:107:ASP:N	2.74	0.51
1:H:135:LEU:HD23	1:H:193:LEU:CD1	2.39	0.51
1:I:212:SER:O	1:I:213:LEU:C	2.45	0.51
1:J:97:ARG:O	1:J:97:ARG:HG3	2.09	0.51
1:J:257:PHE:CD2	1:J:294:PHE:HE1	2.29	0.51
1:J:268:PHE:O	1:J:271:LEU:HB2	2.10	0.51
1:L:211:ASP:O	1:L:212:SER:HB3	2.09	0.51
1:B:72:PRO:HG2	1:B:90:HIS:CE1	2.46	0.51
1:A:71:GLN:N	1:A:72:PRO:CD	2.72	0.51
1:E:155:VAL:HG23	1:E:155:VAL:O	2.10	0.51
1:B:49:ASN:OD1	1:B:49:ASN:C	2.49	0.51
1:J:281:LEU:HB2	1:J:283:LEU:HD11	1.91	0.51
1:J:345:ASP:O	1:J:349:LYS:HG3	2.10	0.51
1:K:100:ALA:HA	1:K:179:LEU:HD12	1.91	0.51
1:F:128:ASN:O	1:F:129:PRO:C	2.49	0.51
1:G:39:GLU:C	1:G:133:ARG:NH2	2.63	0.51
1:G:349:LYS:O	1:G:353:VAL:HG23	2.10	0.51
1:A:47:ILE:HD13	1:A:270:ARG:HH22	1.75	0.51
1:C:219:LEU:O	1:C:220:ALA:C	2.44	0.51
1:G:38:GLU:O	1:G:40:LYS:N	2.43	0.51
1:J:69:ASP:HA	1:J:94:ARG:NH1	2.26	0.51
1:C:132:LYS:CE	1:C:190:ASP:OD2	2.58	0.51
1:E:36:TRP:N	1:E:37:PRO:CD	2.74	0.51
1:G:94:ARG:HH21	1:G:97:ARG:NH1	2.09	0.51
1:H:347:LEU:C	1:H:349:LYS:H	2.14	0.51
1:L:150:ASN:HB3	1:L:152:ARG:HG3	1.92	0.51
1:D:112:GLN:OE1	1:D:116:GLY:HA2	2.11	0.51
1:E:139:CYS:SG	1:E:140:HIS:N	2.80	0.51
1:F:127:LEU:O	1:F:128:ASN:HB2	2.11	0.51
1:J:279:HIS:O	1:J:282:GLY:N	2.27	0.51
1:K:335:ASN:C	1:K:335:ASN:OD1	2.46	0.51
1:C:36:TRP:CD1	1:C:37:PRO:HD3	2.46	0.51
1:F:355:VAL:O	1:F:358:TYR:N	2.43	0.51
1:G:248:ASP:OD2	1:G:305:ASP:OD2	2.28	0.51
1:G:285:LYS:HD2	1:G:286:ASP:H	1.75	0.51
1:I:51:SER:O	1:I:54:ARG:N	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:248:ASP:O	1:F:249:LEU:HB2	2.11	0.51
1:G:57:ALA:O	1:G:349:LYS:HE2	2.10	0.51
1:G:207:TRP:CE3	3:G:402:A1D5C:C16	2.94	0.51
1:I:49:ASN:OD1	1:I:49:ASN:O	2.29	0.51
1:I:49:ASN:O	1:I:51:SER:N	2.44	0.51
1:J:77:ARG:HG3	1:J:143:SER:HB3	1.93	0.51
1:B:179:LEU:O	1:B:181:LEU:N	2.44	0.50
1:B:233:ARG:NH2	1:G:80:GLY:O	2.44	0.50
1:E:206:HIS:CE1	1:K:314:GLY:O	2.64	0.50
1:I:65:MET:O	1:I:65:MET:HG2	2.11	0.50
1:B:36:TRP:CG	1:B:37:PRO:HD3	2.47	0.50
1:J:109:PHE:CZ	1:J:120:PHE:HB2	2.46	0.50
1:J:149:TRP:C	1:J:151:ASN:H	2.15	0.50
3:K:402:A1D5C:C01	4:K:503:HOH:O	2.59	0.50
1:L:304:GLN:O	1:L:305:ASP:HB2	2.10	0.50
1:A:231:GLY:O	1:A:232:ALA:C	2.49	0.50
1:C:191:LEU:HD13	1:C:242:ASP:OD2	2.12	0.50
1:D:102:TRP:CE3	1:D:125:SER:OG	2.64	0.50
1:D:279:HIS:O	1:D:281:LEU:N	2.44	0.50
1:J:128:ASN:N	1:J:129:PRO:CD	2.74	0.50
1:J:168:LEU:O	1:J:171:ALA:HB3	2.11	0.50
1:B:148:HIS:N	1:B:148:HIS:CD2	2.79	0.50
1:I:247:LEU:HD22	1:I:320:LEU:HD12	1.94	0.50
1:I:305:ASP:O	1:I:307:HIS:N	2.44	0.50
1:J:88:ARG:O	1:J:92:MET:HG3	2.11	0.50
1:J:291:GLY:O	1:J:292:ARG:O	2.29	0.50
1:L:263:ASN:HD22	1:L:316:PRO:HA	1.73	0.50
1:C:158:THR:O	1:C:249:LEU:HA	2.12	0.50
1:J:257:PHE:CD2	1:J:294:PHE:CE1	2.99	0.50
1:D:247:LEU:HD23	1:D:247:LEU:N	2.26	0.50
1:G:157:ALA:HB3	1:G:334:ASP:OD1	2.11	0.50
1:H:71:GLN:N	1:H:72:PRO:CD	2.74	0.50
1:H:133:ARG:NH2	1:H:242:ASP:OD2	2.45	0.50
1:J:39:GLU:HB3	1:J:133:ARG:NH1	2.27	0.50
1:J:347:LEU:O	1:J:349:LYS:N	2.44	0.50
1:K:159:ASP:OD1	3:K:402:A1D5C:C25	2.59	0.50
1:B:206:HIS:CG	1:E:314:GLY:HA3	2.46	0.50
1:B:279:HIS:HE1	1:B:287:HIS:O	1.95	0.50
1:D:310:PHE:O	1:D:311:LEU:C	2.48	0.50
1:E:180:SER:O	1:E:181:LEU:HD23	2.12	0.50
1:I:57:ALA:HB1	1:I:349:LYS:HD3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:308:ILE:HB	1:I:309:PRO:HD3	1.93	0.50
1:J:135:LEU:HD23	1:J:193:LEU:HD13	1.94	0.50
1:J:160:SER:C	1:J:163:PRO:HD2	2.32	0.50
1:K:87:ALA:O	1:K:91:ILE:HG13	2.12	0.50
1:L:202:GLU:OE2	3:L:402:A1D5C:C25	2.57	0.50
1:B:33:ALA:O	1:B:34:SER:O	2.29	0.50
1:H:70:LEU:O	1:H:74:LEU:HD12	2.12	0.50
1:J:102:TRP:CD2	1:J:127:LEU:HD21	2.46	0.50
1:B:39:GLU:O	1:B:40:LYS:C	2.49	0.50
1:D:36:TRP:N	1:D:37:PRO:CD	2.75	0.50
1:D:219:LEU:O	1:D:220:ALA:C	2.47	0.50
1:H:165:ALA:O	1:H:166:MET:C	2.50	0.50
1:J:278:LEU:C	1:J:284:LEU:HD13	2.32	0.50
1:J:347:LEU:C	1:J:349:LYS:N	2.64	0.50
1:L:354:PHE:O	1:L:355:VAL:C	2.50	0.50
1:C:212:SER:O	1:C:217:ARG:NH1	2.40	0.49
1:E:68:ASN:HB3	1:E:94:ARG:NH1	2.27	0.49
1:E:175:ASP:O	1:E:176:LYS:C	2.47	0.49
1:K:250:ILE:HG22	1:K:251:GLY:N	2.26	0.49
1:L:37:PRO:O	1:L:40:LYS:HE3	2.12	0.49
1:H:256:THR:OG1	1:H:323:SER:O	2.30	0.49
1:J:271:LEU:HB3	1:J:294:PHE:CE2	2.47	0.49
1:J:296:ASN:OD1	1:J:296:ASN:N	2.38	0.49
1:B:299:TYR:CD2	1:B:301:GLY:O	2.66	0.49
1:I:92:MET:HE2	1:I:106:ILE:HD11	1.94	0.49
1:I:157:ALA:O	1:I:162:VAL:HG23	2.11	0.49
1:D:179:LEU:C	1:D:181:LEU:H	2.15	0.49
1:G:279:HIS:CE1	1:G:289:LEU:HG	2.48	0.49
1:L:77:ARG:CG	1:L:143:SER:HB3	2.42	0.49
1:E:120:PHE:CD1	1:E:120:PHE:N	2.79	0.49
1:F:232:ALA:HA	1:L:54:ARG:HH12	1.75	0.49
1:L:308:ILE:HB	1:L:309:PRO:HD3	1.94	0.49
1:B:201:GLU:HG3	1:B:306:ASP:OD2	2.12	0.49
1:A:250:ILE:HG22	1:A:251:GLY:N	2.27	0.49
1:G:152:ARG:O	1:G:332:MET:HE3	2.13	0.49
1:G:305:ASP:OD1	1:G:306:ASP:N	2.46	0.49
1:H:89:GLN:O	1:H:93:GLN:HG3	2.12	0.49
1:J:49:ASN:C	1:J:49:ASN:OD1	2.51	0.49
1:J:274:ILE:O	1:J:274:ILE:HG22	2.12	0.49
1:L:137:LEU:HD12	1:L:245:VAL:HB	1.93	0.49
1:L:159:ASP:CG	3:L:402:A1D5C:C25	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:181:LEU:O	1:L:182:LYS:C	2.50	0.49
1:A:249:LEU:HD12	1:A:321:ILE:HD11	1.95	0.49
1:G:236:SER:O	1:G:239:HIS:N	2.45	0.49
1:L:360:HIS:O	1:L:361:LEU:HD23	2.13	0.49
1:A:311:LEU:O	1:A:313:ARG:N	2.46	0.49
1:D:36:TRP:CG	1:D:37:PRO:HD3	2.48	0.49
1:E:56:ILE:O	1:E:56:ILE:HG22	2.11	0.49
1:E:349:LYS:O	1:E:353:VAL:HG23	2.13	0.49
1:F:39:GLU:CB	1:F:133:ARG:NH1	2.76	0.49
1:G:78:TYR:CE1	1:G:81:SER:HB3	2.48	0.49
1:H:172:ARG:O	1:H:173:ALA:C	2.51	0.49
1:I:276:HIS:O	1:I:279:HIS:N	2.45	0.49
1:J:36:TRP:CZ3	1:J:132:LYS:HB2	2.48	0.49
1:J:216:SER:HB2	1:J:309:PRO:HG2	1.95	0.49
1:B:211:ASP:HA	1:B:214:TYR:OH	2.13	0.49
1:F:34:SER:HB2	1:L:280:GLU:HA	1.94	0.49
1:F:100:ALA:HA	1:F:179:LEU:CD1	2.43	0.49
1:J:174:LEU:HD22	1:J:356:LEU:HD11	1.95	0.49
1:L:71:GLN:N	1:L:72:PRO:HD2	2.28	0.49
1:F:211:ASP:CG	1:F:211:ASP:O	2.50	0.49
1:G:207:TRP:CZ3	3:G:402:A1D5C:O17	2.66	0.49
1:A:333:ASP:O	1:A:335:ASN:N	2.44	0.48
1:I:292:ARG:NH2	1:I:295:GLN:HG2	2.28	0.48
1:J:102:TRP:HA	1:J:127:LEU:CD2	2.43	0.48
1:J:169:GLU:OE2	1:J:172:ARG:NH2	2.43	0.48
1:K:49:ASN:O	1:K:50:SER:C	2.50	0.48
1:D:104:LEU:HD23	1:D:125:SER:HB2	1.94	0.48
1:E:162:VAL:HB	1:E:163:PRO:HD3	1.95	0.48
1:H:285:LYS:HG3	1:H:286:ASP:H	1.78	0.48
1:J:278:LEU:HB3	1:J:284:LEU:CD1	2.44	0.48
1:K:212:SER:O	1:K:214:TYR:N	2.46	0.48
1:L:49:ASN:OD1	1:L:49:ASN:C	2.52	0.48
1:C:226:THR:O	1:C:227:PRO:C	2.48	0.48
1:E:75:ILE:HG13	1:E:76:GLU:O	2.13	0.48
1:E:295:GLN:O	1:E:297:TYR:N	2.46	0.48
1:G:135:LEU:O	1:G:193:LEU:HD12	2.14	0.48
1:G:206:HIS:HB3	1:J:314:GLY:HA3	1.94	0.48
1:J:132:LYS:HE3	1:J:190:ASP:HB3	1.96	0.48
1:J:168:LEU:O	1:J:171:ALA:N	2.46	0.48
1:K:162:VAL:O	1:K:166:MET:HG3	2.14	0.48
1:L:78:TYR:CE1	1:L:81:SER:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:56:ILE:HD12	1:E:356:LEU:CD1	2.43	0.48
1:F:49:ASN:OD1	1:F:49:ASN:C	2.52	0.48
1:G:78:TYR:CE2	1:G:145:TYR:HD2	2.31	0.48
3:J:402:A1D5C:C28	3:J:402:A1D5C:O17	2.61	0.48
1:K:128:ASN:O	1:K:129:PRO:C	2.51	0.48
1:K:250:ILE:CG2	1:K:251:GLY:N	2.76	0.48
1:G:162:VAL:HB	1:G:163:PRO:CD	2.44	0.48
1:H:111:SER:OG	1:H:112:GLN:N	2.45	0.48
1:I:49:ASN:O	1:I:50:SER:C	2.50	0.48
1:J:69:ASP:N	1:J:94:ARG:HH12	2.11	0.48
1:J:154:PHE:O	1:J:155:VAL:CG1	2.62	0.48
1:L:199:ASP:OD1	1:L:200:GLY:N	2.45	0.48
1:A:77:ARG:HG3	1:A:143:SER:HB3	1.96	0.48
1:G:39:GLU:O	1:G:133:ARG:NH2	2.47	0.48
1:H:212:SER:O	1:H:213:LEU:C	2.52	0.48
1:H:321:ILE:HG23	1:H:321:ILE:O	2.13	0.48
1:I:212:SER:O	1:I:214:TYR:N	2.47	0.48
1:J:263:ASN:N	1:J:263:ASN:HD22	2.11	0.48
1:E:142:ASP:N	1:E:142:ASP:OD1	2.34	0.48
1:H:249:LEU:HD12	1:H:321:ILE:HD11	1.95	0.48
1:K:149:TRP:O	1:K:150:ASN:C	2.52	0.48
1:L:223:MET:O	1:L:225:SER:N	2.47	0.48
1:B:137:LEU:HD12	1:B:245:VAL:HB	1.96	0.48
1:D:292:ARG:HG3	1:D:292:ARG:HH11	1.77	0.48
1:G:70:LEU:O	1:G:74:LEU:CD1	2.61	0.48
1:G:288:SER:OG	1:G:289:LEU:N	2.42	0.48
1:H:305:ASP:OD1	1:H:306:ASP:N	2.43	0.48
1:K:128:ASN:N	1:K:128:ASN:OD1	2.47	0.48
1:K:205:LEU:O	1:K:206:HIS:ND1	2.47	0.48
1:D:112:GLN:HG3	1:D:113:THR:N	2.28	0.47
1:I:248:ASP:OD2	3:I:402:A1D5C:N24	2.48	0.47
1:J:149:TRP:O	1:J:152:ARG:N	2.46	0.47
1:L:172:ARG:O	1:L:173:ALA:C	2.51	0.47
1:F:274:ILE:HD13	1:F:353:VAL:HG12	1.96	0.47
1:H:340:ASP:OD1	1:H:342:SER:N	2.46	0.47
1:J:160:SER:O	1:J:163:PRO:HD2	2.14	0.47
1:J:278:LEU:O	1:J:283:LEU:HD12	2.15	0.47
1:K:78:TYR:O	1:K:84:SER:HB2	2.15	0.47
1:L:38:GLU:O	1:L:41:ASN:OD1	2.32	0.47
1:B:302:VAL:HG22	1:B:303:ILE:O	2.15	0.47
1:A:100:ALA:HA	1:A:179:LEU:CD1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:347:LEU:O	1:H:350:ILE:N	2.48	0.47
1:I:144:LYS:HG2	1:I:146:PHE:CE2	2.49	0.47
1:D:347:LEU:O	1:D:348:ASN:C	2.50	0.47
1:G:192:SER:OG	1:G:193:LEU:N	2.46	0.47
1:B:36:TRP:N	1:B:37:PRO:HD2	2.29	0.47
1:C:289:LEU:O	1:C:292:ARG:HG3	2.15	0.47
1:E:73:LEU:O	1:E:77:ARG:NH1	2.47	0.47
1:G:73:LEU:O	1:G:77:ARG:NH1	2.48	0.47
1:G:252:ALA:HB1	1:G:253:PRO:HD2	1.96	0.47
1:H:285:LYS:O	1:H:287:HIS:HB2	2.14	0.47
1:B:77:ARG:HG2	1:B:143:SER:HB3	1.97	0.47
1:C:155:VAL:O	1:C:155:VAL:HG23	2.10	0.47
1:C:285:LYS:NZ	1:C:286:ASP:OD1	2.45	0.47
1:G:206:HIS:O	1:G:207:TRP:C	2.52	0.47
1:H:89:GLN:O	1:H:93:GLN:CG	2.62	0.47
1:L:305:ASP:C	1:L:307:HIS:H	2.18	0.47
1:B:292:ARG:HG3	1:B:292:ARG:HH11	1.78	0.47
1:A:47:ILE:HG13	1:A:48:LEU:N	2.29	0.47
1:D:49:ASN:O	1:D:50:SER:C	2.53	0.47
1:D:231:GLY:O	1:D:232:ALA:C	2.52	0.47
1:F:178:LEU:O	1:F:181:LEU:HG	2.15	0.47
1:F:285:LYS:O	1:F:286:ASP:HB2	2.14	0.47
1:G:264:SER:O	1:G:265:ALA:C	2.53	0.47
1:H:99:GLN:HB2	1:H:175:ASP:OD2	2.15	0.47
1:K:88:ARG:HG3	1:K:123:ILE:HD11	1.96	0.47
1:E:78:TYR:O	1:E:81:SER:HB3	2.15	0.47
1:F:223:MET:HB3	1:F:238:LEU:HD23	1.96	0.47
1:H:360:HIS:O	1:H:361:LEU:HD23	2.14	0.47
1:I:211:ASP:O	1:I:212:SER:HB3	2.14	0.47
1:D:64:GLU:O	1:D:68:ASN:HB2	2.15	0.47
1:G:70:LEU:HG	1:G:74:LEU:HD11	1.97	0.47
3:G:402:A1D5C:C28	3:G:402:A1D5C:C16	2.93	0.47
1:I:100:ALA:HB2	1:I:175:ASP:OD1	2.15	0.47
1:E:110:LEU:HD21	1:E:117:TYR:CD2	2.50	0.47
3:H:402:A1D5C:O17	3:H:402:A1D5C:C28	2.62	0.47
1:J:98:LEU:HB3	1:J:175:ASP:OD2	2.15	0.47
1:K:285:LYS:HE3	1:K:286:ASP:OD1	2.15	0.47
1:D:128:ASN:OD1	1:D:128:ASN:N	2.47	0.46
1:G:140:HIS:O	1:G:140:HIS:CG	2.67	0.46
1:I:305:ASP:C	1:I:307:HIS:H	2.18	0.46
1:K:110:LEU:HD12	1:K:118:ARG:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:270:ARG:O	1:K:274:ILE:HG13	2.15	0.46
1:K:308:ILE:HB	1:K:309:PRO:HD3	1.97	0.46
1:B:172:ARG:HG2	1:B:172:ARG:O	2.14	0.46
1:F:49:ASN:OD1	1:F:51:SER:N	2.49	0.46
1:G:68:ASN:OD1	1:G:68:ASN:N	2.49	0.46
1:K:281:LEU:HB2	1:K:283:LEU:HD12	1.97	0.46
1:A:299:TYR:CD2	1:A:300:GLY:O	2.68	0.46
1:D:36:TRP:CD1	1:D:37:PRO:HD3	2.51	0.46
1:F:71:GLN:N	1:F:72:PRO:CD	2.78	0.46
1:F:170:LEU:C	1:F:170:LEU:HD23	2.36	0.46
1:G:246:LEU:HD23	1:G:319:HIS:CE1	2.50	0.46
1:G:328:VAL:O	1:G:334:ASP:HB2	2.15	0.46
1:H:182:LYS:HD3	1:H:182:LYS:N	2.31	0.46
1:L:308:ILE:O	1:L:312:ARG:HG3	2.15	0.46
1:F:179:LEU:C	1:F:181:LEU:H	2.19	0.46
1:F:206:HIS:O	1:F:207:TRP:C	2.54	0.46
1:F:249:LEU:HD12	1:F:321:ILE:HD11	1.98	0.46
1:G:308:ILE:HB	1:G:309:PRO:HD3	1.97	0.46
1:H:284:LEU:HD23	1:H:287:HIS:CG	2.51	0.46
1:J:72:PRO:HG2	1:J:90:HIS:CE1	2.50	0.46
1:J:157:ALA:O	1:J:162:VAL:HG23	2.15	0.46
1:J:253:PRO:C	1:J:255:PRO:HD3	2.36	0.46
1:K:249:LEU:HD12	1:K:321:ILE:HD11	1.97	0.46
1:C:108:THR:CG2	1:C:109:PHE:N	2.78	0.46
1:F:39:GLU:OE1	1:F:133:ARG:NH1	2.48	0.46
1:G:46:ALA:HB3	1:G:360:HIS:HA	1.96	0.46
1:H:54:ARG:HA	1:H:283:LEU:CD2	2.44	0.46
1:I:148:HIS:CE1	1:I:153:VAL:HG22	2.50	0.46
1:J:62:ILE:O	1:J:66:TRP:HB2	2.16	0.46
1:J:283:LEU:HD12	1:J:283:LEU:H	1.81	0.46
1:L:249:LEU:HD12	1:L:321:ILE:HD11	1.97	0.46
1:B:92:MET:CE	1:B:106:ILE:HD11	2.45	0.46
1:B:181:LEU:N	1:B:181:LEU:HD23	2.30	0.46
1:F:226:THR:O	1:F:236:SER:HA	2.15	0.46
1:H:281:LEU:HB3	1:H:283:LEU:CD1	2.46	0.46
1:I:72:PRO:HG2	1:I:90:HIS:CE1	2.50	0.46
1:I:77:ARG:CG	1:I:143:SER:HB3	2.44	0.46
1:J:191:LEU:CD1	1:J:242:ASP:OD2	2.64	0.46
1:C:221:ALA:O	1:C:222:LYS:C	2.52	0.46
1:D:160:SER:C	1:D:163:PRO:HD2	2.36	0.46
1:D:295:GLN:O	1:D:297:TYR:N	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:212:SER:O	1:E:213:LEU:HB2	2.16	0.46
1:F:92:MET:SD	1:F:106:ILE:HD11	2.56	0.46
1:G:141:TYR:O	1:G:141:TYR:CD1	2.68	0.46
1:H:66:TRP:O	1:H:66:TRP:CD1	2.69	0.46
1:I:108:THR:HG22	1:I:109:PHE:N	2.29	0.46
1:I:284:LEU:HD22	1:I:287:HIS:ND1	2.29	0.46
1:J:279:HIS:C	1:J:281:LEU:H	2.18	0.46
1:J:329:TRP:O	1:J:331:THR:HG23	2.15	0.46
1:K:158:THR:O	1:K:160:SER:HA	2.16	0.46
1:A:217:ARG:CD	4:A:501:HOH:O	2.61	0.46
1:K:201:GLU:HB2	1:K:306:ASP:OD2	2.15	0.46
1:L:274:ILE:HD13	1:L:353:VAL:HG12	1.97	0.46
1:B:217:ARG:CA	1:B:220:ALA:H	2.29	0.46
1:F:34:SER:CB	1:L:280:GLU:HA	2.46	0.46
1:G:48:LEU:HB2	1:G:53:LEU:HD21	1.96	0.46
1:L:268:PHE:CD1	1:L:268:PHE:O	2.69	0.46
1:I:335:ASN:C	1:I:335:ASN:OD1	2.53	0.46
1:D:148:HIS:NE2	1:D:153:VAL:HG22	2.31	0.45
1:E:150:ASN:O	1:E:151:ASN:CB	2.64	0.45
1:F:100:ALA:N	1:F:179:LEU:HD11	2.31	0.45
1:I:134:HIS:HA	1:I:192:SER:O	2.16	0.45
1:J:248:ASP:O	1:J:249:LEU:HB2	2.15	0.45
1:K:127:LEU:O	1:K:128:ASN:CB	2.64	0.45
1:B:319:HIS:CE1	1:B:321:ILE:HG21	2.51	0.45
1:C:302:VAL:HG22	1:C:303:ILE:N	2.31	0.45
1:I:207:TRP:CD1	1:I:207:TRP:C	2.89	0.45
1:I:304:GLN:OE1	1:I:308:ILE:HG13	2.16	0.45
1:J:266:ARG:NH1	1:J:267:TRP:CE2	2.84	0.45
1:B:180:SER:C	1:B:181:LEU:HD23	2.37	0.45
1:F:70:LEU:HB2	1:F:165:ALA:HB2	1.98	0.45
1:G:321:ILE:O	1:G:321:ILE:CG2	2.64	0.45
1:H:64:GLU:O	1:H:68:ASN:HB2	2.17	0.45
1:J:69:ASP:CA	1:J:94:ARG:NH1	2.79	0.45
1:K:252:ALA:O	1:K:255:PRO:HD3	2.17	0.45
1:B:217:ARG:HA	1:B:221:ALA:H	1.81	0.45
1:A:87:ALA:O	1:A:88:ARG:C	2.53	0.45
1:C:349:LYS:O	1:C:353:VAL:HG23	2.15	0.45
1:F:162:VAL:HB	1:F:163:PRO:HD3	1.99	0.45
1:G:154:PHE:N	1:G:332:MET:SD	2.89	0.45
1:I:57:ALA:CB	1:I:349:LYS:HD3	2.46	0.45
1:J:109:PHE:CB	1:J:218:HIS:CE1	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:199:ASP:OD1	1:J:200:GLY:N	2.45	0.45
1:K:105:GLU:C	1:K:106:ILE:HD13	2.37	0.45
1:L:302:VAL:HG22	1:L:303:ILE:N	2.31	0.45
1:A:300:GLY:O	1:A:301:GLY:O	2.35	0.45
1:E:62:ILE:O	1:E:66:TRP:HB2	2.16	0.45
1:G:100:ALA:HB1	1:G:127:LEU:HD21	1.98	0.45
1:H:304:GLN:HA	1:H:304:GLN:OE1	2.17	0.45
1:K:140:HIS:ND1	1:K:142:ASP:OD1	2.49	0.45
1:B:132:LYS:HA	1:B:228:HIS:NE2	2.32	0.45
1:C:308:ILE:N	1:C:309:PRO:CD	2.79	0.45
1:C:314:GLY:HA3	1:D:206:HIS:HB3	1.99	0.45
1:F:100:ALA:HA	1:F:179:LEU:HD12	1.98	0.45
1:F:308:ILE:HB	1:F:309:PRO:HD3	1.99	0.45
1:G:288:SER:HG	1:G:291:GLY:N	2.14	0.45
1:L:40:LYS:HB3	1:L:242:ASP:OD1	2.16	0.45
1:L:112:GLN:NE2	1:L:117:TYR:CZ	2.85	0.45
1:B:226:THR:O	1:B:227:PRO:C	2.54	0.45
1:G:79:PRO:HG2	1:G:204:PHE:CZ	2.52	0.45
1:I:163:PRO:HB3	1:I:247:LEU:HB2	1.99	0.45
1:J:48:LEU:N	1:J:357:GLU:OE2	2.44	0.45
1:J:158:THR:OG1	1:J:334:ASP:OD1	2.31	0.45
1:L:325:PHE:O	1:L:326:PRO:C	2.53	0.45
1:C:229:PRO:O	1:C:230:PRO:O	2.34	0.45
1:F:36:TRP:HD1	1:L:280:GLU:HG3	1.81	0.45
1:F:229:PRO:O	1:F:230:PRO:C	2.53	0.45
1:G:40:LYS:HA	1:G:133:ARG:NH2	2.32	0.45
1:G:227:PRO:HA	1:G:235:THR:O	2.17	0.45
1:G:281:LEU:HB2	1:G:283:LEU:CD1	2.47	0.45
1:G:329:TRP:HZ3	1:J:263:ASN:HA	1.82	0.45
1:I:284:LEU:HD23	1:I:287:HIS:CB	2.46	0.45
1:J:36:TRP:HD1	1:J:37:PRO:HD3	1.80	0.45
1:J:344:ILE:O	1:J:348:ASN:HB2	2.16	0.45
1:K:105:GLU:O	1:K:106:ILE:HD13	2.16	0.45
1:L:254:ASN:N	1:L:255:PRO:CD	2.80	0.45
1:L:270:ARG:HA	1:L:270:ARG:HD2	1.85	0.45
1:A:208:SER:OG	1:A:211:ASP:HB3	2.17	0.45
1:A:212:SER:O	1:A:213:LEU:C	2.55	0.45
1:D:71:GLN:N	1:D:72:PRO:HD2	2.31	0.45
1:E:99:GLN:O	1:E:100:ALA:C	2.53	0.45
1:E:277:GLU:O	1:E:277:GLU:HG3	2.17	0.45
1:F:91:ILE:O	1:F:95:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:229:PRO:O	1:I:230:PRO:C	2.55	0.45
1:J:64:GLU:O	1:J:67:GLN:HB2	2.16	0.45
1:J:136:VAL:HG11	1:J:241:MET:HE3	1.99	0.45
1:J:159:ASP:HB2	1:J:249:LEU:CD2	2.47	0.45
1:J:161:ALA:O	1:J:162:VAL:C	2.54	0.45
1:J:266:ARG:CG	1:J:266:ARG:HH11	2.30	0.45
1:J:281:LEU:HB2	1:J:283:LEU:CD1	2.46	0.45
1:J:347:LEU:C	1:J:349:LYS:H	2.20	0.45
1:K:72:PRO:HG2	1:K:90:HIS:NE2	2.31	0.45
1:F:92:MET:HG2	1:F:104:LEU:HD13	1.98	0.45
1:J:43:HIS:CD2	1:J:358:TYR:CE1	3.05	0.45
1:J:265:ALA:O	1:J:266:ARG:C	2.54	0.45
1:J:329:TRP:O	1:J:330:HIS:C	2.55	0.45
1:A:36:TRP:N	1:A:37:PRO:CD	2.80	0.44
1:C:231:GLY:O	1:C:232:ALA:C	2.54	0.44
1:I:170:LEU:HD23	1:I:170:LEU:O	2.17	0.44
1:E:208:SER:OG	1:E:211:ASP:HB3	2.17	0.44
1:J:128:ASN:N	1:J:128:ASN:ND2	2.65	0.44
1:J:208:SER:O	1:J:210:GLN:N	2.50	0.44
1:D:229:PRO:O	1:D:230:PRO:C	2.55	0.44
1:F:285:LYS:CE	1:F:286:ASP:OD2	2.65	0.44
1:G:113:THR:HG22	1:G:214:TYR:CE2	2.52	0.44
1:I:207:TRP:CD1	1:I:208:SER:N	2.86	0.44
1:I:297:TYR:CG	1:I:297:TYR:O	2.70	0.44
1:A:277:GLU:O	1:A:278:LEU:C	2.54	0.44
1:C:95:ILE:CG2	1:C:104:LEU:HD21	2.45	0.44
1:D:104:LEU:CD2	1:D:125:SER:HB2	2.47	0.44
1:F:71:GLN:OE1	1:F:336:GLU:OE2	2.35	0.44
1:F:232:ALA:C	1:L:54:ARG:HH12	2.21	0.44
1:I:270:ARG:O	1:I:274:ILE:HG13	2.17	0.44
1:J:87:ALA:O	1:J:91:ILE:HG13	2.18	0.44
1:J:133:ARG:HB3	1:J:191:LEU:HD12	1.99	0.44
1:K:279:HIS:C	1:K:281:LEU:H	2.19	0.44
1:L:76:GLU:HB2	1:L:153:VAL:CG1	2.48	0.44
1:L:228:HIS:HA	1:L:229:PRO:C	2.37	0.44
1:B:231:GLY:O	1:B:232:ALA:O	2.36	0.44
3:A:402:A1D5C:C08	1:D:262:PRO:HG3	2.48	0.44
1:C:39:GLU:HB3	1:C:133:ARG:NH1	2.32	0.44
1:D:201:GLU:HG2	1:D:213:LEU:HD23	1.98	0.44
1:F:175:ASP:O	1:F:176:LYS:C	2.54	0.44
1:H:300:GLY:HA3	1:I:300:GLY:HA3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:155:VAL:O	1:J:156:GLY:C	2.56	0.44
1:K:207:TRP:HZ2	1:K:304:GLN:HB2	1.82	0.44
1:G:297:TYR:O	1:G:297:TYR:CG	2.71	0.44
1:H:76:GLU:HG3	1:H:153:VAL:HG13	1.99	0.44
1:H:172:ARG:O	1:H:175:ASP:N	2.36	0.44
1:J:49:ASN:OD1	1:J:52:ALA:N	2.35	0.44
1:J:189:PRO:HD2	1:J:189:PRO:O	2.17	0.44
1:J:243:LEU:HG	1:J:244:LEU:N	2.33	0.44
1:B:52:ALA:O	1:B:55:GLN:N	2.51	0.44
1:C:297:TYR:CE1	1:C:298:SER:O	2.71	0.44
1:I:74:LEU:C	1:I:75:ILE:HG23	2.38	0.44
1:C:92:MET:HE3	1:C:106:ILE:HD11	2.00	0.44
1:E:134:HIS:O	1:E:242:ASP:HB2	2.18	0.44
1:G:152:ARG:O	1:G:332:MET:CE	2.66	0.44
1:H:285:LYS:CG	1:H:286:ASP:H	2.31	0.44
1:J:132:LYS:NZ	1:J:190:ASP:HB3	2.32	0.44
1:K:279:HIS:C	1:K:281:LEU:N	2.71	0.44
1:B:68:ASN:CB	1:B:94:ARG:HH12	2.29	0.44
1:C:162:VAL:HB	1:C:163:PRO:HD3	2.00	0.44
1:E:345:ASP:O	1:E:349:LYS:HG3	2.18	0.44
1:F:206:HIS:O	1:F:208:SER:HB3	2.17	0.44
1:I:123:ILE:C	1:I:124:ILE:HD12	2.39	0.44
1:J:113:THR:HG22	1:J:214:TYR:CE1	2.53	0.44
1:J:315:VAL:HG12	1:J:316:PRO:N	2.32	0.44
1:K:65:MET:HG3	1:K:169:GLU:HB2	2.00	0.44
1:B:238:LEU:O	1:B:239:HIS:C	2.53	0.43
1:B:278:LEU:HB3	1:B:284:LEU:HD13	2.00	0.43
1:A:229:PRO:O	1:A:230:PRO:C	2.53	0.43
1:C:132:LYS:NZ	1:C:190:ASP:CB	2.76	0.43
1:C:297:TYR:CD1	1:C:298:SER:O	2.71	0.43
1:D:279:HIS:C	1:D:281:LEU:H	2.22	0.43
1:F:180:SER:C	1:F:181:LEU:HD23	2.38	0.43
1:G:109:PHE:CZ	1:G:215:GLY:HA2	2.53	0.43
1:G:205:LEU:HD21	1:J:239:HIS:NE2	2.33	0.43
3:K:402:A1D5C:C11	3:K:402:A1D5C:C06	2.94	0.43
1:L:71:GLN:HA	1:L:74:LEU:HD12	2.00	0.43
1:L:307:HIS:O	1:L:310:PHE:N	2.46	0.43
1:A:231:GLY:C	1:A:232:ALA:O	2.57	0.43
1:A:349:LYS:O	1:A:353:VAL:HG23	2.19	0.43
1:C:248:ASP:OD2	1:C:305:ASP:OD2	2.36	0.43
1:E:98:LEU:HB3	1:E:175:ASP:OD2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:109:PHE:HZ	1:G:215:GLY:HA2	1.83	0.43
1:J:124:ILE:N	1:J:124:ILE:HD12	2.33	0.43
1:J:189:PRO:O	1:J:189:PRO:CD	2.65	0.43
1:J:233:ARG:NH2	1:K:80:GLY:O	2.51	0.43
1:C:249:LEU:HD12	1:C:321:ILE:HD11	1.99	0.43
1:D:100:ALA:HA	1:D:179:LEU:CD1	2.49	0.43
1:F:36:TRP:CD1	1:F:37:PRO:HD3	2.53	0.43
1:F:157:ALA:O	1:F:162:VAL:HG23	2.19	0.43
1:G:146:PHE:O	1:G:147:SER:O	2.36	0.43
1:G:254:ASN:N	1:G:255:PRO:CD	2.81	0.43
1:H:283:LEU:HD12	1:H:283:LEU:N	2.29	0.43
1:J:149:TRP:O	1:J:151:ASN:N	2.50	0.43
1:L:170:LEU:O	1:L:171:ALA:C	2.55	0.43
1:C:175:ASP:O	1:C:176:LYS:C	2.56	0.43
1:F:233:ARG:HG2	1:L:54:ARG:NH2	2.33	0.43
1:F:270:ARG:O	1:F:274:ILE:HG13	2.18	0.43
1:G:57:ALA:HB1	1:G:349:LYS:HE2	2.00	0.43
1:I:34:SER:OG	1:I:35:ALA:N	2.50	0.43
1:B:112:GLN:OE1	1:B:117:TYR:CE1	2.71	0.43
1:B:228:HIS:HA	1:B:229:PRO:C	2.38	0.43
1:C:276:HIS:O	1:C:279:HIS:HB3	2.19	0.43
1:H:88:ARG:HG3	1:H:123:ILE:HD11	2.01	0.43
1:I:68:ASN:CB	1:I:94:ARG:HH12	2.24	0.43
1:B:34:SER:HG	1:B:35:ALA:H	1.61	0.43
1:B:100:ALA:HA	1:B:179:LEU:HD12	2.01	0.43
1:A:177:LYS:O	1:A:180:SER:OG	2.29	0.43
1:F:85:TYR:HD1	1:F:88:ARG:HH12	1.66	0.43
1:G:49:ASN:OD1	1:G:51:SER:CA	2.66	0.43
1:H:272:GLN:OE1	1:H:296:ASN:OD1	2.36	0.43
1:I:35:ALA:O	1:I:37:PRO:HD2	2.19	0.43
1:K:65:MET:O	1:K:66:TRP:C	2.56	0.43
1:L:257:PHE:HE1	1:L:322:PRO:HD3	1.84	0.43
1:A:85:TYR:OH	1:L:55:GLN:CG	2.67	0.43
1:C:231:GLY:O	1:C:232:ALA:O	2.36	0.43
1:G:40:LYS:HB3	1:G:242:ASP:OD1	2.18	0.43
1:H:99:GLN:O	1:H:100:ALA:C	2.56	0.43
1:I:52:ALA:O	1:I:53:LEU:C	2.56	0.43
1:I:132:LYS:O	1:I:240:GLY:HA3	2.19	0.43
1:J:45:PRO:HB2	1:J:357:GLU:HB3	2.00	0.43
1:J:130:THR:O	1:J:132:LYS:CA	2.67	0.43
1:L:92:MET:CE	1:L:106:ILE:HD11	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:268:PHE:CD1	1:L:268:PHE:C	2.92	0.43
1:G:211:ASP:O	1:G:212:SER:CB	2.67	0.43
1:H:36:TRP:CD1	1:H:37:PRO:HD3	2.52	0.43
1:J:101:ASP:O	1:J:127:LEU:HD22	2.19	0.43
1:J:102:TRP:HA	1:J:127:LEU:HD23	2.00	0.43
1:J:270:ARG:O	1:J:274:ILE:HG13	2.19	0.43
1:K:36:TRP:CD2	1:K:132:LYS:HD2	2.53	0.43
1:B:349:LYS:O	1:B:353:VAL:HG23	2.18	0.43
1:C:90:HIS:O	1:C:94:ARG:HG2	2.18	0.43
1:D:114:PRO:O	1:I:116:GLY:HA2	2.19	0.43
1:E:75:ILE:HG12	1:E:75:ILE:O	2.19	0.43
1:E:207:TRP:HZ2	1:E:304:GLN:HB2	1.84	0.43
1:F:78:TYR:CE1	1:F:81:SER:HB3	2.54	0.43
1:F:181:LEU:O	1:F:182:LYS:HG2	2.19	0.43
1:F:232:ALA:HA	1:L:54:ARG:NH1	2.31	0.43
1:F:300:GLY:CA	1:H:301:GLY:H	2.32	0.43
1:G:149:TRP:CZ3	1:G:150:ASN:HB2	2.53	0.43
1:G:281:LEU:HB2	1:G:283:LEU:HD12	2.01	0.43
1:G:285:LYS:C	1:G:287:HIS:N	2.71	0.43
1:J:305:ASP:O	1:J:307:HIS:N	2.52	0.43
1:B:67:GLN:HG3	1:B:68:ASN:N	2.34	0.43
1:A:75:ILE:O	1:A:77:ARG:HG2	2.19	0.43
1:D:100:ALA:HA	1:D:179:LEU:HD12	2.01	0.43
1:D:166:MET:HG2	1:D:348:ASN:OD1	2.18	0.43
1:E:281:LEU:HB2	1:E:283:LEU:HD12	2.01	0.43
1:G:36:TRP:CD1	1:G:37:PRO:HD3	2.54	0.43
1:G:86:ALA:O	1:G:90:HIS:N	2.45	0.43
1:G:169:GLU:O	1:G:170:LEU:C	2.56	0.43
1:I:56:ILE:HD12	1:I:356:LEU:CD1	2.49	0.43
1:I:252:ALA:HB1	1:I:253:PRO:CD	2.47	0.43
1:J:100:ALA:HA	1:J:179:LEU:CD1	2.47	0.43
1:L:128:ASN:N	1:L:129:PRO:CD	2.81	0.43
1:B:336:GLU:O	1:B:337:GLU:C	2.55	0.42
1:C:97:ARG:O	1:C:97:ARG:HG2	2.17	0.42
1:D:49:ASN:O	1:D:49:ASN:OD1	2.36	0.42
1:E:169:GLU:O	1:E:169:GLU:HG3	2.16	0.42
1:F:36:TRP:N	1:F:37:PRO:CD	2.82	0.42
1:G:344:ILE:O	1:G:348:ASN:HB2	2.18	0.42
1:H:174:LEU:O	1:H:175:ASP:C	2.57	0.42
1:H:191:LEU:HD21	1:H:358:TYR:CD1	2.53	0.42
1:J:269:GLU:O	1:J:271:LEU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:402:A1D5C:O17	3:K:402:A1D5C:C28	2.67	0.42
1:A:311:LEU:O	1:A:312:ARG:C	2.57	0.42
1:E:106:ILE:CG2	1:E:107:ASP:H	2.33	0.42
1:B:231:GLY:C	1:B:232:ALA:O	2.57	0.42
1:J:267:TRP:CZ2	1:J:358:TYR:CE2	3.06	0.42
1:J:292:ARG:HG3	1:J:292:ARG:HH11	1.83	0.42
1:L:62:ILE:HG12	1:L:341:GLU:HG2	2.01	0.42
1:L:68:ASN:HB3	1:L:94:ARG:HH12	1.85	0.42
1:L:180:SER:O	1:L:182:LYS:HE3	2.20	0.42
1:A:144:LYS:HG2	1:A:146:PHE:CE2	2.55	0.42
1:D:231:GLY:O	1:D:232:ALA:O	2.37	0.42
1:F:219:LEU:O	1:F:220:ALA:C	2.54	0.42
1:G:71:GLN:HA	1:G:74:LEU:CD1	2.48	0.42
1:G:159:ASP:N	1:G:160:SER:HA	2.34	0.42
1:G:348:ASN:O	1:G:352:GLN:HG3	2.19	0.42
1:H:92:MET:O	1:H:93:GLN:C	2.58	0.42
1:J:141:TYR:CD1	1:J:141:TYR:O	2.73	0.42
1:A:56:ILE:O	1:A:57:ALA:C	2.55	0.42
1:E:149:TRP:CE3	1:E:150:ASN:HB2	2.55	0.42
1:G:40:LYS:N	1:G:133:ARG:HH21	2.18	0.42
1:G:265:ALA:O	1:G:266:ARG:C	2.54	0.42
1:J:191:LEU:HG	1:J:192:SER:N	2.33	0.42
1:B:277:GLU:O	1:B:278:LEU:C	2.53	0.42
1:C:92:MET:CE	1:C:106:ILE:HD11	2.49	0.42
1:I:149:TRP:CE3	1:I:150:ASN:HB2	2.55	0.42
1:I:353:VAL:O	1:I:354:PHE:C	2.56	0.42
1:J:135:LEU:HD13	1:J:358:TYR:CG	2.55	0.42
1:J:140:HIS:ND1	1:J:142:ASP:OD1	2.52	0.42
1:J:149:TRP:C	1:J:151:ASN:N	2.73	0.42
1:L:132:LYS:HA	1:L:228:HIS:NE2	2.35	0.42
1:A:353:VAL:O	1:A:354:PHE:C	2.57	0.42
1:E:128:ASN:OD1	1:E:128:ASN:N	2.52	0.42
1:G:118:ARG:NH2	4:G:501:HOH:O	2.53	0.42
1:G:229:PRO:HB2	1:G:230:PRO:HD2	2.01	0.42
1:G:333:ASP:C	1:G:335:ASN:OD1	2.58	0.42
1:H:71:GLN:OE1	1:H:336:GLU:OE2	2.37	0.42
1:J:154:PHE:O	1:J:155:VAL:HG12	2.19	0.42
1:J:164:CYS:O	1:J:165:ALA:C	2.57	0.42
1:J:321:ILE:HG13	1:J:322:PRO:HD2	2.02	0.42
1:K:85:TYR:O	1:K:86:ALA:C	2.55	0.42
1:E:174:LEU:HD22	1:E:356:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:238:LEU:C	1:E:240:GLY:N	2.70	0.42
1:F:149:TRP:CE3	1:F:150:ASN:HB2	2.55	0.42
1:J:92:MET:HE3	1:J:104:LEU:HD13	2.01	0.42
1:J:94:ARG:HE	1:J:94:ARG:HB3	1.62	0.42
1:K:128:ASN:N	1:K:129:PRO:HD3	2.33	0.42
1:L:65:MET:HG3	1:L:169:GLU:HB2	2.01	0.42
1:L:128:ASN:N	1:L:128:ASN:OD1	2.53	0.42
1:A:157:ALA:O	1:A:162:VAL:HG23	2.20	0.42
1:D:174:LEU:O	1:D:175:ASP:C	2.57	0.42
1:E:181:LEU:C	1:E:182:LYS:HG2	2.40	0.42
1:F:163:PRO:HB3	1:F:247:LEU:HB2	2.02	0.42
1:F:308:ILE:N	1:F:309:PRO:HD2	2.34	0.42
1:G:140:HIS:NE2	1:G:159:ASP:OD1	2.52	0.42
1:H:304:GLN:OE1	1:H:308:ILE:HG13	2.19	0.42
1:I:247:LEU:CD2	1:I:320:LEU:HD12	2.49	0.42
1:I:254:ASN:N	1:I:255:PRO:CD	2.83	0.42
1:J:254:ASN:N	1:J:255:PRO:CD	2.83	0.42
1:J:263:ASN:HD22	1:J:263:ASN:H	1.68	0.42
1:J:279:HIS:CD2	1:J:287:HIS:O	2.73	0.42
1:L:274:ILE:HD11	1:L:357:GLU:OE1	2.19	0.42
1:B:49:ASN:O	1:B:53:LEU:HG	2.20	0.42
1:A:340:ASP:OD1	1:K:286:ASP:OD2	2.37	0.42
1:E:49:ASN:O	1:E:52:ALA:HB3	2.20	0.42
1:E:348:ASN:O	1:E:349:LYS:C	2.57	0.42
1:G:142:ASP:OD1	1:G:142:ASP:N	2.40	0.42
1:G:288:SER:OG	1:G:290:GLU:N	2.53	0.42
1:J:69:ASP:CG	1:J:94:ARG:NH1	2.72	0.42
1:J:91:ILE:O	1:J:95:ILE:HG13	2.19	0.42
1:J:113:THR:HB	1:J:114:PRO:HD2	2.01	0.42
1:J:165:ALA:O	1:J:166:MET:C	2.55	0.42
1:D:150:ASN:O	1:D:151:ASN:HB2	2.20	0.41
1:F:38:GLU:O	1:F:41:ASN:HB2	2.20	0.41
1:F:323:SER:HA	1:F:324:PRO:HA	1.76	0.41
1:G:310:PHE:O	1:G:311:LEU:C	2.58	0.41
1:H:223:MET:HB3	1:H:238:LEU:HD23	2.02	0.41
1:I:263:ASN:OD1	1:I:263:ASN:N	2.46	0.41
1:J:49:ASN:OD1	1:J:49:ASN:O	2.38	0.41
1:L:47:ILE:HG13	1:L:270:ARG:HH22	1.80	0.41
1:L:288:SER:C	1:L:290:GLU:N	2.73	0.41
1:B:110:LEU:CD2	1:B:117:TYR:HD2	2.32	0.41
1:C:132:LYS:HZ1	1:C:190:ASP:CG	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:92:MET:O	1:D:93:GLN:C	2.56	0.41
1:D:359:LEU:O	1:D:360:HIS:C	2.58	0.41
1:E:64:GLU:O	1:E:65:MET:C	2.55	0.41
1:F:90:HIS:O	1:F:91:ILE:C	2.58	0.41
1:G:70:LEU:O	1:G:70:LEU:HG	2.18	0.41
1:G:108:THR:HG23	1:G:120:PHE:O	2.20	0.41
1:H:96:GLN:HG3	1:H:104:LEU:HD11	2.02	0.41
1:L:272:GLN:HG2	1:L:294:PHE:O	2.20	0.41
1:B:292:ARG:HG3	1:B:292:ARG:NH1	2.35	0.41
1:H:54:ARG:HA	1:H:283:LEU:HD21	2.02	0.41
1:H:160:SER:OG	1:H:163:PRO:HG2	2.21	0.41
1:H:212:SER:O	1:H:217:ARG:NH1	2.53	0.41
1:H:285:LYS:CG	1:H:286:ASP:N	2.83	0.41
1:J:279:HIS:C	1:J:281:LEU:N	2.72	0.41
1:J:355:VAL:O	1:J:357:GLU:N	2.53	0.41
1:K:68:ASN:HB3	1:K:94:ARG:HH12	1.83	0.41
1:K:113:THR:HB	1:K:114:PRO:HD2	2.03	0.41
1:B:68:ASN:HB3	1:B:94:ARG:HH11	1.77	0.41
1:C:88:ARG:HG3	1:C:123:ILE:HD11	2.02	0.41
1:C:241:MET:HE1	1:C:244:LEU:HB2	2.02	0.41
1:E:50:SER:O	1:E:51:SER:C	2.55	0.41
1:E:109:PHE:CE1	1:E:120:PHE:HB2	2.55	0.41
1:G:141:TYR:CD2	1:G:198:PHE:O	2.74	0.41
1:J:36:TRP:CZ3	1:J:133:ARG:N	2.86	0.41
1:J:150:ASN:O	1:J:151:ASN:HB3	2.21	0.41
1:J:150:ASN:O	1:J:151:ASN:CB	2.69	0.41
1:J:170:LEU:HD23	1:J:170:LEU:O	2.20	0.41
1:J:270:ARG:O	1:J:274:ILE:HD12	2.21	0.41
1:K:246:LEU:HD23	1:K:319:HIS:CD2	2.55	0.41
1:K:279:HIS:HE1	1:K:287:HIS:O	2.03	0.41
1:L:182:LYS:HD3	1:L:182:LYS:H	1.85	0.41
1:B:144:LYS:HD3	1:B:146:PHE:CE2	2.56	0.41
1:D:264:SER:O	1:D:265:ALA:C	2.58	0.41
1:F:39:GLU:HB2	1:F:133:ARG:HH11	1.81	0.41
1:G:34:SER:OG	1:G:35:ALA:N	2.51	0.41
1:H:117:TYR:O	1:H:118:ARG:CG	2.69	0.41
1:A:68:ASN:CB	1:A:94:ARG:NH1	2.70	0.41
1:E:92:MET:HE1	1:E:106:ILE:HD11	2.00	0.41
1:F:253:PRO:O	1:F:254:ASN:C	2.58	0.41
1:F:300:GLY:HA3	1:H:301:GLY:H	1.85	0.41
1:I:109:PHE:CZ	1:I:120:PHE:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:70:LEU:CD1	1:J:74:LEU:HD11	2.50	0.41
1:J:285:LYS:H	1:J:346:ASN:HD21	1.68	0.41
1:J:336:GLU:O	1:J:338:ASN:N	2.53	0.41
1:K:136:VAL:HG22	1:K:194:GLN:HB3	2.03	0.41
1:K:307:HIS:O	1:K:308:ILE:C	2.58	0.41
1:L:95:ILE:O	1:L:95:ILE:HG22	2.20	0.41
1:L:178:LEU:O	1:L:180:SER:N	2.53	0.41
1:L:354:PHE:CD1	1:L:354:PHE:C	2.94	0.41
1:B:94:ARG:HH21	1:B:97:ARG:NH1	2.19	0.41
1:C:233:ARG:NH2	1:I:80:GLY:O	2.54	0.41
1:D:92:MET:CE	1:D:106:ILE:HD11	2.51	0.41
1:E:95:ILE:O	1:E:96:GLN:C	2.58	0.41
1:F:232:ALA:N	1:L:54:ARG:CZ	2.84	0.41
1:F:253:PRO:O	1:F:254:ASN:HB2	2.21	0.41
1:H:46:ALA:O	1:H:47:ILE:C	2.58	0.41
1:H:69:ASP:OD1	1:H:94:ARG:HD3	2.21	0.41
1:H:99:GLN:C	1:H:100:ALA:O	2.59	0.41
1:H:150:ASN:O	1:H:151:ASN:HB2	2.20	0.41
1:J:297:TYR:O	1:J:297:TYR:CG	2.74	0.41
1:K:100:ALA:HA	1:K:179:LEU:CD1	2.50	0.41
1:K:163:PRO:HB3	1:K:247:LEU:HB2	2.03	0.41
1:L:94:ARG:HH21	1:L:97:ARG:HH11	1.68	0.41
1:L:347:LEU:HD23	1:L:347:LEU:HA	1.84	0.41
1:B:102:TRP:CE3	1:B:125:SER:OG	2.72	0.41
1:B:263:ASN:OD1	3:K:402:A1D5C:C12	2.68	0.41
1:H:336:GLU:O	1:H:337:GLU:C	2.58	0.41
1:I:170:LEU:HD21	1:I:174:LEU:HD12	2.02	0.41
1:J:170:LEU:HD23	1:J:170:LEU:C	2.41	0.41
1:J:354:PHE:O	1:J:355:VAL:O	2.38	0.41
1:K:90:HIS:CE1	1:K:94:ARG:HG3	2.55	0.41
1:K:172:ARG:HG2	1:K:172:ARG:NH1	2.34	0.41
1:A:221:ALA:O	1:A:222:LYS:C	2.57	0.41
1:C:360:HIS:C	1:C:361:LEU:HD23	2.41	0.41
1:D:92:MET:CE	1:D:106:ILE:CD1	2.98	0.41
1:E:344:ILE:O	1:E:345:ASP:C	2.57	0.41
1:G:71:GLN:N	1:G:72:PRO:HD2	2.35	0.41
1:G:197:PHE:CD1	1:G:197:PHE:N	2.88	0.41
1:H:163:PRO:O	1:H:164:CYS:C	2.57	0.41
1:H:276:HIS:O	1:H:276:HIS:ND1	2.54	0.41
1:I:247:LEU:N	1:I:247:LEU:HD23	2.36	0.41
1:K:90:HIS:ND1	1:K:90:HIS:C	2.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:222:LYS:O	1:K:226:THR:OG1	2.26	0.41
1:K:247:LEU:HD22	1:K:320:LEU:HD12	2.03	0.41
1:A:85:TYR:CZ	1:L:55:GLN:HG2	2.56	0.41
1:G:223:MET:HB3	1:G:238:LEU:CD2	2.51	0.41
1:G:327:GLU:C	1:G:329:TRP:H	2.24	0.41
1:I:213:LEU:O	1:I:217:ARG:HG3	2.20	0.41
1:J:47:ILE:HG12	1:J:48:LEU:N	2.36	0.41
1:J:211:ASP:O	1:J:212:SER:HB3	2.21	0.41
1:J:226:THR:O	1:J:227:PRO:C	2.58	0.41
1:K:35:ALA:C	1:K:37:PRO:HD2	2.41	0.41
1:K:267:TRP:CZ2	1:K:358:TYR:CE2	3.09	0.41
1:B:116:GLY:O	1:B:118:ARG:HG2	2.19	0.40
1:C:150:ASN:O	1:C:151:ASN:HB2	2.21	0.40
1:D:335:ASN:OD1	1:D:338:ASN:ND2	2.54	0.40
1:G:253:PRO:HB3	1:G:340:ASP:OD2	2.21	0.40
1:H:172:ARG:C	1:H:174:LEU:N	2.75	0.40
1:J:36:TRP:CH2	1:J:132:LYS:C	2.94	0.40
1:J:137:LEU:O	1:J:167:MET:CE	2.70	0.40
1:J:264:SER:O	1:J:265:ALA:C	2.57	0.40
1:L:236:SER:C	1:L:238:LEU:N	2.73	0.40
1:D:177:LYS:HE2	1:D:177:LYS:HB3	1.93	0.40
1:E:167:MET:HB3	1:E:167:MET:HE2	1.98	0.40
1:H:338:ASN:N	1:H:338:ASN:HD22	2.19	0.40
1:J:207:TRP:HZ2	1:J:304:GLN:HB2	1.86	0.40
1:J:285:LYS:HG3	1:J:286:ASP:N	2.36	0.40
1:D:205:LEU:O	1:D:206:HIS:CG	2.74	0.40
1:E:302:VAL:HG22	1:E:303:ILE:N	2.36	0.40
1:G:38:GLU:C	1:G:40:LYS:H	2.25	0.40
1:G:46:ALA:CB	1:G:360:HIS:HA	2.51	0.40
1:G:229:PRO:O	1:G:230:PRO:C	2.58	0.40
1:G:268:PHE:O	1:G:271:LEU:HB2	2.22	0.40
1:H:133:ARG:O	1:H:191:LEU:HA	2.21	0.40
1:H:305:ASP:CG	1:H:306:ASP:H	2.21	0.40
1:J:135:LEU:HD23	1:J:193:LEU:CD1	2.50	0.40
1:J:158:THR:O	1:J:249:LEU:HA	2.21	0.40
1:J:266:ARG:NH1	1:J:266:ARG:HG3	2.37	0.40
1:B:247:LEU:N	1:B:247:LEU:HD23	2.35	0.40
1:A:299:TYR:O	1:A:300:GLY:O	2.40	0.40
1:D:278:LEU:HB3	1:D:284:LEU:HD13	2.02	0.40
1:E:181:LEU:O	1:E:182:LYS:CB	2.67	0.40
1:E:181:LEU:O	1:E:182:LYS:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:39:GLU:C	1:G:133:ARG:HH21	2.25	0.40
1:G:157:ALA:CA	1:G:334:ASP:OD1	2.69	0.40
1:G:236:SER:O	1:G:238:LEU:N	2.54	0.40
1:G:311:LEU:HD12	1:G:317:VAL:HG23	2.02	0.40
1:H:158:THR:OG1	1:H:334:ASP:CG	2.60	0.40
1:J:41:ASN:OD1	1:J:41:ASN:N	2.53	0.40
1:J:199:ASP:O	1:J:200:GLY:C	2.60	0.40
1:J:268:PHE:O	1:J:269:GLU:C	2.60	0.40
1:K:133:ARG:HE	1:K:242:ASP:CG	2.25	0.40
1:A:47:ILE:CD1	1:A:357:GLU:OE2	2.66	0.40
1:A:254:ASN:N	1:A:255:PRO:CD	2.84	0.40
1:C:65:MET:HG3	1:C:169:GLU:HB2	2.02	0.40
1:C:213:LEU:HB2	1:C:217:ARG:HD3	2.04	0.40
1:C:270:ARG:HH11	1:C:270:ARG:HD2	1.61	0.40
1:C:353:VAL:O	1:C:357:GLU:HG3	2.22	0.40
1:D:138:ALA:O	1:D:246:LEU:HD12	2.22	0.40
1:E:38:GLU:O	1:E:39:GLU:C	2.55	0.40
1:E:100:ALA:HA	1:E:179:LEU:HD12	2.02	0.40
1:G:206:HIS:O	1:G:207:TRP:O	2.39	0.40
1:J:342:SER:O	1:J:346:ASN:HB2	2.22	0.40
1:L:113:THR:O	1:L:115:TYR:N	2.55	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	319/329 (97%)	286 (90%)	30 (9%)	3 (1%)	17 44
1	B	319/329 (97%)	288 (90%)	26 (8%)	5 (2%)	9 29
1	C	319/329 (97%)	290 (91%)	24 (8%)	5 (2%)	9 29
1	D	319/329 (97%)	288 (90%)	24 (8%)	7 (2%)	6 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	E	319/329 (97%)	282 (88%)	28 (9%)	9 (3%)	5 15
1	F	319/329 (97%)	277 (87%)	36 (11%)	6 (2%)	8 24
1	G	319/329 (97%)	260 (82%)	45 (14%)	14 (4%)	2 7
1	H	319/329 (97%)	273 (86%)	35 (11%)	11 (3%)	3 12
1	I	319/329 (97%)	270 (85%)	42 (13%)	7 (2%)	6 21
1	J	319/329 (97%)	252 (79%)	47 (15%)	20 (6%)	1 3
1	K	319/329 (97%)	282 (88%)	29 (9%)	8 (2%)	5 18
1	L	319/329 (97%)	274 (86%)	38 (12%)	7 (2%)	6 21
All	All	3828/3948 (97%)	3322 (87%)	404 (11%)	102 (3%)	5 16

All (102) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	34	SER
1	B	218	HIS
1	B	232	ALA
1	A	232	ALA
1	A	301	GLY
1	D	180	SER
1	D	207	TRP
1	D	212	SER
1	E	175	ASP
1	E	180	SER
1	F	131	ALA
1	F	132	LYS
1	G	147	SER
1	G	207	TRP
1	G	212	SER
1	G	341	GLU
1	H	100	ALA
1	H	173	ALA
1	H	213	LEU
1	H	286	ASP
1	H	296	ASN
1	H	348	ASN
1	I	298	SER
1	J	74	LEU
1	J	131	ALA
1	J	151	ASN

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Mol	Chain	Res	Type
1	J	179	LEU
1	J	297	TYR
1	J	355	VAL
1	K	179	LEU
1	L	224	ALA
1	L	237	GLN
1	A	300	GLY
1	C	207	TRP
1	C	306	ASP
1	E	156	GLY
1	E	176	LYS
1	E	300	GLY
1	F	180	SER
1	G	131	ALA
1	G	156	GLY
1	G	282	GLY
1	H	156	GLY
1	I	50	SER
1	I	213	LEU
1	J	62	ILE
1	J	155	VAL
1	J	266	ARG
1	J	292	ARG
1	J	330	HIS
1	J	337	GLU
1	J	348	ASN
1	K	292	ARG
1	L	306	ASP
1	B	180	SER
1	C	232	ALA
1	D	156	GLY
1	E	212	SER
1	G	296	ASN
1	G	300	GLY
1	G	354	PHE
1	H	172	ARG
1	H	200	GLY
1	I	201	GLU
1	J	212	SER
1	K	207	TRP
1	C	212	SER
1	D	232	ALA

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Mol	Chain	Res	Type
1	G	39	GLU
1	H	212	SER
1	I	306	ASP
1	I	329	TRP
1	J	280	GLU
1	J	329	TRP
1	K	213	LEU
1	K	280	GLU
1	K	333	ASP
1	L	114	PRO
1	L	220	ALA
1	B	217	ARG
1	D	280	GLU
1	E	100	ALA
1	E	207	TRP
1	E	306	ASP
1	F	306	ASP
1	I	36	TRP
1	J	218	HIS
1	K	128	ASN
1	F	212	SER
1	J	200	GLY
1	J	129	PRO
1	L	156	GLY
1	F	156	GLY
1	G	72	PRO
1	G	328	VAL
1	H	234	GLY
1	C	300	GLY
1	L	254	ASN
1	G	251	GLY
1	K	208	SER
1	D	300	GLY
1	J	254	ASN

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	284/290 (98%)	269 (95%)	15 (5%)	22	52
1	B	284/290 (98%)	263 (93%)	21 (7%)	13	36
1	C	284/290 (98%)	263 (93%)	21 (7%)	13	36
1	D	284/290 (98%)	259 (91%)	25 (9%)	10	28
1	E	284/290 (98%)	259 (91%)	25 (9%)	10	28
1	F	284/290 (98%)	261 (92%)	23 (8%)	11	32
1	G	284/290 (98%)	256 (90%)	28 (10%)	8	22
1	H	284/290 (98%)	263 (93%)	21 (7%)	13	36
1	I	284/290 (98%)	258 (91%)	26 (9%)	9	26
1	J	284/290 (98%)	254 (89%)	30 (11%)	6	19
1	K	284/290 (98%)	257 (90%)	27 (10%)	8	24
1	L	284/290 (98%)	257 (90%)	27 (10%)	8	24
All	All	3408/3480 (98%)	3119 (92%)	289 (8%)	10	30

All (289) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	50	SER
1	B	51	SER
1	B	67	GLN
1	B	75	ILE
1	B	94	ARG
1	B	97	ARG
1	B	113	THR
1	B	121	SER
1	B	128	ASN
1	B	130	THR
1	B	152	ARG
1	B	167	MET
1	B	179	LEU
1	B	180	SER
1	B	206	HIS
1	B	217	ARG
1	B	259	ASN
1	B	284	LEU
1	B	290	GLU
1	B	297	TYR
1	B	312	ARG
1	A	51	SER

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Mol	Chain	Res	Type
1	A	63	SER
1	A	67	GLN
1	A	77	ARG
1	A	94	ARG
1	A	105	GLU
1	A	130	THR
1	A	132	LYS
1	A	143	SER
1	A	167	MET
1	A	180	SER
1	A	284	LEU
1	A	297	TYR
1	A	327	GLU
1	A	342	SER
1	C	51	SER
1	C	63	SER
1	C	70	LEU
1	C	94	ARG
1	C	97	ARG
1	C	118	ARG
1	C	119	SER
1	C	121	SER
1	C	132	LYS
1	C	143	SER
1	C	147	SER
1	C	155	VAL
1	C	176	LYS
1	C	180	SER
1	C	182	LYS
1	C	204	PHE
1	C	209	PRO
1	C	284	LEU
1	C	295	GLN
1	C	297	TYR
1	C	312	ARG
1	D	47	ILE
1	D	51	SER
1	D	60	THR
1	D	75	ILE
1	D	84	SER
1	D	97	ARG
1	D	105	GLU

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Mol	Chain	Res	Type
1	D	110	LEU
1	D	119	SER
1	D	128	ASN
1	D	130	THR
1	D	147	SER
1	D	158	THR
1	D	160	SER
1	D	176	LYS
1	D	179	LEU
1	D	180	SER
1	D	182	LYS
1	D	205	LEU
1	D	242	ASP
1	D	280	GLU
1	D	284	LEU
1	D	295	GLN
1	D	296	ASN
1	D	342	SER
1	E	50	SER
1	E	51	SER
1	E	58	GLU
1	E	61	SER
1	E	63	SER
1	E	75	ILE
1	E	81	SER
1	E	84	SER
1	E	92	MET
1	E	101	ASP
1	E	105	GLU
1	E	106	ILE
1	E	113	THR
1	E	148	HIS
1	E	179	LEU
1	E	180	SER
1	E	182	LYS
1	E	192	SER
1	E	204	PHE
1	E	205	LEU
1	E	270	ARG
1	E	280	GLU
1	E	284	LEU
1	E	297	TYR

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Mol	Chain	Res	Type
1	E	312	ARG
1	F	34	SER
1	F	50	SER
1	F	51	SER
1	F	70	LEU
1	F	71	GLN
1	F	97	ARG
1	F	107	ASP
1	F	111	SER
1	F	137	LEU
1	F	180	SER
1	F	205	LEU
1	F	208	SER
1	F	238	LEU
1	F	242	ASP
1	F	280	GLU
1	F	284	LEU
1	F	285	LYS
1	F	288	SER
1	F	290	GLU
1	F	292	ARG
1	F	295	GLN
1	F	297	TYR
1	F	342	SER
1	G	50	SER
1	G	51	SER
1	G	60	THR
1	G	61	SER
1	G	63	SER
1	G	68	ASN
1	G	97	ARG
1	G	118	ARG
1	G	126	THR
1	G	128	ASN
1	G	130	THR
1	G	133	ARG
1	G	147	SER
1	G	150	ASN
1	G	151	ASN
1	G	179	LEU
1	G	180	SER
1	G	182	LYS

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Mol	Chain	Res	Type
1	G	242	ASP
1	G	259	ASN
1	G	281	LEU
1	G	284	LEU
1	G	288	SER
1	G	292	ARG
1	G	295	GLN
1	G	297	TYR
1	G	312	ARG
1	G	318	LEU
1	H	61	SER
1	H	71	GLN
1	H	74	LEU
1	H	76	GLU
1	H	84	SER
1	H	92	MET
1	H	130	THR
1	H	143	SER
1	H	147	SER
1	H	160	SER
1	H	176	LYS
1	H	179	LEU
1	H	182	LYS
1	H	208	SER
1	H	233	ARG
1	H	270	ARG
1	H	283	LEU
1	H	297	TYR
1	H	298	SER
1	H	312	ARG
1	H	342	SER
1	I	40	LYS
1	I	51	SER
1	I	60	THR
1	I	67	GLN
1	I	72	PRO
1	I	93	GLN
1	I	94	ARG
1	I	105	GLU
1	I	130	THR
1	I	143	SER
1	I	147	SER

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Mol	Chain	Res	Type
1	I	158	THR
1	I	176	LYS
1	I	179	LEU
1	I	180	SER
1	I	201	GLU
1	I	213	LEU
1	I	247	LEU
1	I	259	ASN
1	I	266	ARG
1	I	269	GLU
1	I	281	LEU
1	I	288	SER
1	I	297	TYR
1	I	312	ARG
1	I	337	GLU
1	J	34	SER
1	J	36	TRP
1	J	47	ILE
1	J	60	THR
1	J	61	SER
1	J	69	ASP
1	J	70	LEU
1	J	97	ARG
1	J	121	SER
1	J	132	LYS
1	J	140	HIS
1	J	143	SER
1	J	148	HIS
1	J	150	ASN
1	J	152	ARG
1	J	179	LEU
1	J	180	SER
1	J	182	LYS
1	J	191	LEU
1	J	216	SER
1	J	259	ASN
1	J	260	PHE
1	J	263	ASN
1	J	266	ARG
1	J	290	GLU
1	J	296	ASN
1	J	297	TYR

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Mol	Chain	Res	Type
1	J	312	ARG
1	J	321	ILE
1	J	346	ASN
1	K	50	SER
1	K	51	SER
1	K	63	SER
1	K	64	GLU
1	K	70	LEU
1	K	71	GLN
1	K	89	GLN
1	K	94	ARG
1	K	97	ARG
1	K	141	TYR
1	K	143	SER
1	K	151	ASN
1	K	158	THR
1	K	160	SER
1	K	179	LEU
1	K	180	SER
1	K	182	LYS
1	K	216	SER
1	K	225	SER
1	K	233	ARG
1	K	242	ASP
1	K	284	LEU
1	K	285	LYS
1	K	297	TYR
1	K	312	ARG
1	K	337	GLU
1	K	341	GLU
1	L	40	LYS
1	L	41	ASN
1	L	48	LEU
1	L	51	SER
1	L	54	ARG
1	L	55	GLN
1	L	60	THR
1	L	63	SER
1	L	93	GLN
1	L	94	ARG
1	L	105	GLU
1	L	107	ASP

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Mol	Chain	Res	Type
1	L	113	THR
1	L	118	ARG
1	L	125	SER
1	L	128	ASN
1	L	143	SER
1	L	147	SER
1	L	180	SER
1	L	182	LYS
1	L	193	LEU
1	L	205	LEU
1	L	222	LYS
1	L	242	ASP
1	L	262	PRO
1	L	284	LEU
1	L	312	ARG

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

Mol	Chain	Res	Type
1	I	41	ASN
1	K	43	HIS
1	K	44	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 24 ligands modelled in this entry, 12 are monoatomic - leaving 12 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	A1D5C	J	402	-	31,33,33	3.65	14 (45%)	38,48,48	2.39	14 (36%)
3	A1D5C	C	402	-	31,33,33	4.28	16 (51%)	38,48,48	3.83	20 (52%)
3	A1D5C	I	402	2	31,33,33	3.93	13 (41%)	38,48,48	3.26	16 (42%)
3	A1D5C	A	402	2	31,33,33	4.00	16 (51%)	38,48,48	4.06	18 (47%)
3	A1D5C	D	402	2	31,33,33	4.09	15 (48%)	38,48,48	3.87	21 (55%)
3	A1D5C	G	402	2	31,33,33	3.77	14 (45%)	38,48,48	2.57	15 (39%)
3	A1D5C	L	402	-	31,33,33	3.68	15 (48%)	38,48,48	2.12	13 (34%)
3	A1D5C	E	402	2	31,33,33	3.61	10 (32%)	38,48,48	2.68	13 (34%)
3	A1D5C	H	402	-	31,33,33	3.68	14 (45%)	38,48,48	2.83	14 (36%)
3	A1D5C	F	402	2	31,33,33	3.69	13 (41%)	38,48,48	3.19	17 (44%)
3	A1D5C	K	402	-	31,33,33	3.39	15 (48%)	38,48,48	3.37	15 (39%)
3	A1D5C	B	402	2	31,33,33	4.06	13 (41%)	38,48,48	3.61	18 (47%)

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	A1D5C	J	402	-	-	2/12/39/39	0/5/5/5
3	A1D5C	C	402	-	-	4/12/39/39	0/5/5/5
3	A1D5C	I	402	2	-	4/12/39/39	0/5/5/5
3	A1D5C	A	402	2	-	4/12/39/39	0/5/5/5
3	A1D5C	D	402	2	-	6/12/39/39	0/5/5/5
3	A1D5C	G	402	2	-	1/12/39/39	0/5/5/5
3	A1D5C	L	402	-	-	2/12/39/39	0/5/5/5
3	A1D5C	E	402	2	-	4/12/39/39	0/5/5/5
3	A1D5C	H	402	-	-	3/12/39/39	0/5/5/5
3	A1D5C	F	402	2	-	4/12/39/39	0/5/5/5
3	A1D5C	K	402	-	-	3/12/39/39	0/5/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	A1D5C	B	402	2	-	4/12/39/39	0/5/5/5

All (168) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	402	A1D5C	C08-C07	15.09	1.77	1.52
3	B	402	A1D5C	C08-C07	14.97	1.77	1.52
3	C	402	A1D5C	C08-C07	13.26	1.74	1.52
3	A	402	A1D5C	C08-C07	13.21	1.74	1.52
3	I	402	A1D5C	C08-C07	12.90	1.74	1.52
3	E	402	A1D5C	C08-C07	12.33	1.73	1.52
3	F	402	A1D5C	C08-C07	12.00	1.72	1.52
3	H	402	A1D5C	C08-C07	11.48	1.71	1.52
3	L	402	A1D5C	C08-C07	11.29	1.71	1.52
3	K	402	A1D5C	C08-C07	10.97	1.71	1.52
3	J	402	A1D5C	C08-C07	10.44	1.70	1.52
3	G	402	A1D5C	C16-N15	10.36	1.47	1.36
3	C	402	A1D5C	C16-N15	9.63	1.46	1.36
3	J	402	A1D5C	C16-N15	9.50	1.46	1.36
3	G	402	A1D5C	C08-C07	8.98	1.67	1.52
3	A	402	A1D5C	C05-N04	8.60	1.65	1.47
3	L	402	A1D5C	C16-N15	8.49	1.45	1.36
3	D	402	A1D5C	C05-N04	7.85	1.64	1.47
3	B	402	A1D5C	C02-N04	7.81	1.57	1.35
3	B	402	A1D5C	C05-N04	7.78	1.63	1.47
3	I	402	A1D5C	C05-N04	7.61	1.63	1.47
3	E	402	A1D5C	C16-N15	7.57	1.44	1.36
3	A	402	A1D5C	C02-N04	7.36	1.56	1.35
3	C	402	A1D5C	C05-N04	7.28	1.62	1.47
3	I	402	A1D5C	C16-N15	7.13	1.43	1.36
3	H	402	A1D5C	C16-N15	7.03	1.43	1.36
3	F	402	A1D5C	C16-N15	6.91	1.43	1.36
3	C	402	A1D5C	C02-N04	6.84	1.55	1.35
3	F	402	A1D5C	C05-N04	6.82	1.61	1.47
3	G	402	A1D5C	C05-N04	6.68	1.61	1.47
3	A	402	A1D5C	C06-C05	6.56	1.65	1.52
3	H	402	A1D5C	C05-N04	6.55	1.61	1.47
3	B	402	A1D5C	C06-C05	6.52	1.65	1.52
3	D	402	A1D5C	C02-N04	6.43	1.53	1.35
3	C	402	A1D5C	C06-C05	6.35	1.65	1.52
3	E	402	A1D5C	C05-N04	6.33	1.60	1.47
3	B	402	A1D5C	C16-N15	6.30	1.42	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	H	402	A1D5C	C14-N15	6.20	1.50	1.38
3	J	402	A1D5C	C05-N04	6.19	1.60	1.47
3	D	402	A1D5C	C06-C05	6.18	1.64	1.52
3	I	402	A1D5C	C02-N04	6.17	1.53	1.35
3	G	402	A1D5C	C08-N04	-6.14	1.33	1.46
3	A	402	A1D5C	C16-N15	6.01	1.42	1.36
3	G	402	A1D5C	C14-N15	6.00	1.49	1.38
3	K	402	A1D5C	C14-N15	5.84	1.49	1.38
3	I	402	A1D5C	C06-C05	5.79	1.63	1.52
3	H	402	A1D5C	C06-C05	5.76	1.63	1.52
3	K	402	A1D5C	C05-N04	5.68	1.59	1.47
3	F	402	A1D5C	C02-N04	5.63	1.51	1.35
3	L	402	A1D5C	C08-N04	-5.63	1.34	1.46
3	J	402	A1D5C	C08-N04	-5.63	1.34	1.46
3	L	402	A1D5C	C05-N04	5.57	1.59	1.47
3	H	402	A1D5C	C02-N04	5.54	1.51	1.35
3	C	402	A1D5C	C14-N15	5.44	1.48	1.38
3	E	402	A1D5C	C02-N04	5.35	1.50	1.35
3	K	402	A1D5C	C06-C05	5.34	1.63	1.52
3	F	402	A1D5C	O09-C10	5.34	1.46	1.37
3	E	402	A1D5C	C14-N15	5.26	1.48	1.38
3	F	402	A1D5C	C14-N15	5.20	1.48	1.38
3	K	402	A1D5C	C16-N15	5.20	1.41	1.36
3	J	402	A1D5C	C02-N04	5.13	1.50	1.35
3	E	402	A1D5C	C06-C05	5.10	1.62	1.52
3	F	402	A1D5C	C06-C05	5.05	1.62	1.52
3	L	402	A1D5C	C06-C05	5.04	1.62	1.52
3	D	402	A1D5C	C20-C19	4.88	1.56	1.46
3	L	402	A1D5C	C14-N15	4.88	1.47	1.38
3	C	402	A1D5C	O09-C10	4.80	1.45	1.37
3	J	402	A1D5C	C14-N15	4.74	1.47	1.38
3	E	402	A1D5C	C08-N04	-4.65	1.36	1.46
3	L	402	A1D5C	C02-N04	4.63	1.48	1.35
3	I	402	A1D5C	C18-C16	-4.56	1.43	1.50
3	K	402	A1D5C	C08-N04	-4.56	1.37	1.46
3	G	402	A1D5C	C28-C27	-4.52	1.34	1.41
3	F	402	A1D5C	C08-N04	-4.48	1.37	1.46
3	K	402	A1D5C	C02-N04	4.44	1.48	1.35
3	I	402	A1D5C	C14-N15	4.36	1.46	1.38
3	C	402	A1D5C	C29-C10	4.27	1.48	1.40
3	A	402	A1D5C	C14-N15	4.25	1.46	1.38
3	I	402	A1D5C	C08-N04	-4.14	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	I	402	A1D5C	C20-C19	4.13	1.54	1.46
3	H	402	A1D5C	C08-N04	-4.05	1.38	1.46
3	D	402	A1D5C	C19-C18	4.05	1.40	1.34
3	G	402	A1D5C	C02-N04	4.04	1.47	1.35
3	D	402	A1D5C	C14-N15	4.01	1.46	1.38
3	J	402	A1D5C	C20-C19	4.01	1.54	1.46
3	J	402	A1D5C	C06-C07	-3.89	1.31	1.52
3	A	402	A1D5C	C08-N04	-3.74	1.38	1.46
3	D	402	A1D5C	C16-N15	3.74	1.40	1.36
3	A	402	A1D5C	O09-C10	3.68	1.43	1.37
3	G	402	A1D5C	C12-C11	3.67	1.46	1.38
3	G	402	A1D5C	C06-C07	-3.67	1.32	1.52
3	L	402	A1D5C	C22-C23	3.66	1.48	1.41
3	A	402	A1D5C	C22-C23	3.65	1.48	1.41
3	G	402	A1D5C	C06-C05	3.63	1.59	1.52
3	L	402	A1D5C	O09-C10	3.60	1.43	1.37
3	C	402	A1D5C	C08-N04	-3.53	1.39	1.46
3	J	402	A1D5C	C06-C05	3.50	1.59	1.52
3	C	402	A1D5C	C29-C18	3.43	1.52	1.45
3	I	402	A1D5C	O09-C10	3.43	1.43	1.37
3	B	402	A1D5C	C14-N15	3.43	1.45	1.38
3	G	402	A1D5C	C20-C19	3.39	1.53	1.46
3	H	402	A1D5C	C22-C23	3.36	1.47	1.41
3	E	402	A1D5C	C06-C07	-3.30	1.34	1.52
3	L	402	A1D5C	C20-C19	3.29	1.53	1.46
3	H	402	A1D5C	O09-C10	3.27	1.43	1.37
3	D	402	A1D5C	C28-C27	-3.25	1.36	1.41
3	D	402	A1D5C	C29-C18	3.24	1.52	1.45
3	C	402	A1D5C	C20-C19	3.23	1.53	1.46
3	K	402	A1D5C	C23-N24	-3.21	1.28	1.38
3	J	402	A1D5C	C22-C23	3.18	1.47	1.41
3	L	402	A1D5C	C06-C07	-3.18	1.35	1.52
3	H	402	A1D5C	C18-C16	-3.17	1.46	1.50
3	I	402	A1D5C	O17-C16	-3.17	1.17	1.23
3	E	402	A1D5C	C18-C16	-3.14	1.46	1.50
3	J	402	A1D5C	C12-C11	3.14	1.45	1.38
3	K	402	A1D5C	C20-C19	3.13	1.52	1.46
3	B	402	A1D5C	C06-C07	-3.08	1.36	1.52
3	L	402	A1D5C	C19-C18	3.06	1.39	1.34
3	E	402	A1D5C	O09-C10	3.02	1.42	1.37
3	D	402	A1D5C	C13-C14	-3.01	1.34	1.39
3	D	402	A1D5C	O09-C10	2.96	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	402	A1D5C	C06-C07	-2.96	1.36	1.52
3	C	402	A1D5C	C19-C18	2.95	1.39	1.34
3	G	402	A1D5C	C19-C18	2.92	1.39	1.34
3	I	402	A1D5C	C06-C07	-2.88	1.37	1.52
3	A	402	A1D5C	C06-C07	-2.87	1.37	1.52
3	C	402	A1D5C	C22-C23	2.86	1.46	1.41
3	G	402	A1D5C	C23-C27	-2.84	1.32	1.42
3	H	402	A1D5C	C06-C07	-2.83	1.37	1.52
3	D	402	A1D5C	C08-N04	-2.79	1.40	1.46
3	G	402	A1D5C	C23-N24	-2.78	1.30	1.38
3	F	402	A1D5C	C06-C07	-2.74	1.37	1.52
3	F	402	A1D5C	C23-N24	-2.74	1.30	1.38
3	K	402	A1D5C	C06-C07	-2.73	1.37	1.52
3	D	402	A1D5C	C06-C07	-2.70	1.38	1.52
3	C	402	A1D5C	C12-C11	2.69	1.44	1.38
3	B	402	A1D5C	C23-C27	-2.65	1.33	1.42
3	A	402	A1D5C	C20-C19	2.61	1.51	1.46
3	B	402	A1D5C	C08-N04	-2.59	1.41	1.46
3	K	402	A1D5C	C18-C16	-2.58	1.46	1.50
3	L	402	A1D5C	C12-C11	2.55	1.44	1.38
3	H	402	A1D5C	C28-C27	-2.55	1.37	1.41
3	J	402	A1D5C	O09-C10	2.51	1.41	1.37
3	F	402	A1D5C	C12-C11	2.49	1.44	1.38
3	A	402	A1D5C	C23-N24	-2.49	1.30	1.38
3	K	402	A1D5C	O17-C16	-2.46	1.18	1.23
3	H	402	A1D5C	C23-N24	-2.43	1.31	1.38
3	B	402	A1D5C	C19-C18	2.41	1.38	1.34
3	A	402	A1D5C	C29-C10	2.40	1.45	1.40
3	H	402	A1D5C	C20-C19	2.37	1.51	1.46
3	B	402	A1D5C	O09-C10	2.37	1.41	1.37
3	A	402	A1D5C	C18-C16	-2.36	1.47	1.50
3	D	402	A1D5C	C23-N24	-2.34	1.31	1.38
3	B	402	A1D5C	C23-N24	-2.28	1.31	1.38
3	J	402	A1D5C	C18-C16	-2.26	1.47	1.50
3	L	402	A1D5C	C27-N26	2.24	1.45	1.38
3	J	402	A1D5C	C19-C18	2.23	1.38	1.34
3	K	402	A1D5C	C22-C23	2.18	1.45	1.41
3	C	402	A1D5C	C29-C14	2.17	1.45	1.41
3	I	402	A1D5C	C28-C27	-2.12	1.38	1.41
3	L	402	A1D5C	C23-N24	-2.11	1.32	1.38
3	A	402	A1D5C	O17-C16	-2.10	1.19	1.23
3	A	402	A1D5C	C12-C11	2.10	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	F	402	A1D5C	C20-C19	2.07	1.50	1.46
3	K	402	A1D5C	C22-C21	-2.04	1.32	1.36
3	F	402	A1D5C	C18-C16	-2.03	1.47	1.50
3	K	402	A1D5C	O09-C10	2.02	1.41	1.37
3	B	402	A1D5C	C12-C11	2.00	1.43	1.38

All (194) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	402	A1D5C	C01-C02-N04	13.25	133.68	118.26
3	K	402	A1D5C	C14-N15-C16	-12.63	103.45	111.38
3	A	402	A1D5C	C07-C08-N04	11.57	117.10	102.75
3	B	402	A1D5C	C07-C08-N04	11.27	116.73	102.75
3	I	402	A1D5C	C14-N15-C16	-10.34	104.89	111.38
3	C	402	A1D5C	O03-C02-N04	9.72	132.95	121.02
3	I	402	A1D5C	C18-C16-N15	9.60	112.26	106.88
3	D	402	A1D5C	O17-C16-N15	-8.87	112.29	126.36
3	F	402	A1D5C	C29-C18-C16	8.63	110.22	105.31
3	H	402	A1D5C	C14-N15-C16	-8.61	105.97	111.38
3	C	402	A1D5C	C29-C18-C16	8.53	110.16	105.31
3	G	402	A1D5C	C14-N15-C16	-8.29	106.17	111.38
3	F	402	A1D5C	C07-C08-N04	7.82	112.45	102.75
3	C	402	A1D5C	C05-N04-C08	-7.62	91.83	111.55
3	K	402	A1D5C	C18-C16-N15	7.56	111.11	106.88
3	F	402	A1D5C	C01-C02-N04	7.52	127.01	118.26
3	E	402	A1D5C	C07-C08-N04	7.50	112.05	102.75
3	D	402	A1D5C	O17-C16-C18	7.40	137.43	127.71
3	D	402	A1D5C	O09-C10-C11	-7.36	106.59	123.87
3	D	402	A1D5C	O09-C10-C29	7.29	133.25	117.70
3	J	402	A1D5C	C14-N15-C16	-7.26	106.82	111.38
3	B	402	A1D5C	C05-N04-C08	-6.95	93.56	111.55
3	H	402	A1D5C	C01-C02-N04	6.95	126.34	118.26
3	D	402	A1D5C	C14-N15-C16	-6.90	107.05	111.38
3	B	402	A1D5C	O09-C07-C08	6.79	124.69	108.19
3	E	402	A1D5C	C01-C02-N04	6.77	126.13	118.26
3	G	402	A1D5C	C18-C16-N15	6.75	110.67	106.88
3	C	402	A1D5C	O09-C10-C29	6.72	132.02	117.70
3	E	402	A1D5C	C14-N15-C16	-6.34	107.39	111.38
3	H	402	A1D5C	C07-C08-N04	6.33	110.60	102.75
3	D	402	A1D5C	O03-C02-N04	6.20	128.63	121.02
3	C	402	A1D5C	O09-C07-C08	6.19	123.23	108.19
3	B	402	A1D5C	C06-C05-N04	6.19	110.59	103.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	I	402	A1D5C	C01-C02-N04	6.17	125.44	118.26
3	B	402	A1D5C	C01-C02-N04	6.09	125.34	118.26
3	D	402	A1D5C	C18-C16-N15	6.06	110.28	106.88
3	A	402	A1D5C	C14-N15-C16	-6.06	107.57	111.38
3	D	402	A1D5C	C05-N04-C08	-5.97	96.10	111.55
3	F	402	A1D5C	C14-C29-C10	5.86	123.36	117.79
3	A	402	A1D5C	C05-N04-C08	-5.81	96.53	111.55
3	C	402	A1D5C	C14-N15-C16	-5.80	107.74	111.38
3	C	402	A1D5C	O09-C10-C11	-5.72	110.43	123.87
3	C	402	A1D5C	C07-C08-N04	5.66	109.78	102.75
3	B	402	A1D5C	O03-C02-N04	5.64	127.94	121.02
3	A	402	A1D5C	O09-C10-C29	5.61	129.66	117.70
3	A	402	A1D5C	O09-C10-C11	-5.31	111.39	123.87
3	D	402	A1D5C	C06-C05-N04	5.29	109.53	103.28
3	B	402	A1D5C	C14-N15-C16	-5.26	108.08	111.38
3	D	402	A1D5C	C10-O09-C07	5.25	137.94	120.21
3	F	402	A1D5C	C14-N15-C16	-5.24	108.09	111.38
3	H	402	A1D5C	C18-C16-N15	5.22	109.81	106.88
3	A	402	A1D5C	O03-C02-C01	-5.15	101.81	122.03
3	G	402	A1D5C	C20-C19-C18	-5.09	119.42	129.63
3	J	402	A1D5C	C01-C02-N04	5.07	124.16	118.26
3	K	402	A1D5C	C06-C05-N04	-5.06	97.29	103.28
3	I	402	A1D5C	C05-N04-C08	-4.84	99.03	111.55
3	I	402	A1D5C	O17-C16-C18	-4.68	121.56	127.71
3	F	402	A1D5C	C05-N04-C08	-4.67	99.46	111.55
3	K	402	A1D5C	C07-C08-N04	4.67	108.54	102.75
3	A	402	A1D5C	O09-C07-C08	4.65	119.49	108.19
3	E	402	A1D5C	C05-N04-C08	-4.59	99.68	111.55
3	C	402	A1D5C	O03-C02-C01	-4.53	104.26	122.03
3	L	402	A1D5C	C14-N15-C16	-4.45	108.58	111.38
3	A	402	A1D5C	C06-C05-N04	4.44	108.53	103.28
3	B	402	A1D5C	O09-C10-C29	4.44	127.16	117.70
3	C	402	A1D5C	C05-N04-C02	4.36	136.41	124.03
3	J	402	A1D5C	C18-C16-N15	4.36	109.32	106.88
3	A	402	A1D5C	C29-C18-C16	4.35	107.78	105.31
3	K	402	A1D5C	C01-C02-N04	4.35	123.32	118.26
3	H	402	A1D5C	C05-N04-C08	-4.34	100.32	111.55
3	L	402	A1D5C	C05-N04-C08	-4.32	100.37	111.55
3	J	402	A1D5C	C05-N04-C08	-4.31	100.40	111.55
3	K	402	A1D5C	C14-C29-C10	4.31	121.89	117.79
3	D	402	A1D5C	O09-C07-C08	4.29	118.61	108.19
3	A	402	A1D5C	C10-O09-C07	4.28	134.69	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	I	402	A1D5C	O09-C07-C08	4.23	118.46	108.19
3	A	402	A1D5C	O17-C16-N15	-4.23	119.66	126.36
3	B	402	A1D5C	O09-C10-C11	-4.21	113.97	123.87
3	K	402	A1D5C	O09-C07-C06	4.13	123.05	108.63
3	C	402	A1D5C	C10-O09-C07	4.08	134.01	120.21
3	J	402	A1D5C	C06-C05-N04	-4.04	98.50	103.28
3	K	402	A1D5C	C05-N04-C08	-4.02	101.14	111.55
3	I	402	A1D5C	C07-C08-N04	3.97	107.67	102.75
3	B	402	A1D5C	O03-C02-C01	-3.90	106.70	122.03
3	C	402	A1D5C	C01-C02-N04	3.89	122.79	118.26
3	K	402	A1D5C	C20-C19-C18	-3.88	121.85	129.63
3	I	402	A1D5C	C06-C05-N04	3.86	107.84	103.28
3	B	402	A1D5C	O17-C16-N15	-3.77	120.38	126.36
3	E	402	A1D5C	C14-C29-C10	3.72	121.32	117.79
3	F	402	A1D5C	O09-C07-C06	3.63	121.31	108.63
3	K	402	A1D5C	O17-C16-N15	-3.62	120.61	126.36
3	C	402	A1D5C	C06-C05-N04	3.59	107.52	103.28
3	A	402	A1D5C	C05-N04-C02	3.58	134.20	124.03
3	H	402	A1D5C	C20-C19-C18	-3.54	122.53	129.63
3	L	402	A1D5C	O17-C16-C18	3.52	132.33	127.71
3	H	402	A1D5C	C14-C29-C10	3.49	121.11	117.79
3	C	402	A1D5C	C28-C20-C19	3.48	128.45	118.94
3	K	402	A1D5C	C29-C18-C16	3.47	107.28	105.31
3	G	402	A1D5C	C10-C29-C18	-3.44	128.24	136.13
3	L	402	A1D5C	C19-C18-C16	3.44	133.77	119.96
3	L	402	A1D5C	O17-C16-N15	-3.42	120.94	126.36
3	F	402	A1D5C	C19-C18-C16	3.41	133.69	119.96
3	B	402	A1D5C	C10-O09-C07	3.39	131.67	120.21
3	L	402	A1D5C	C20-C28-C27	3.39	126.70	120.57
3	A	402	A1D5C	O17-C16-C18	3.37	132.13	127.71
3	D	402	A1D5C	C07-C08-N04	3.35	106.91	102.75
3	E	402	A1D5C	O09-C07-C06	3.33	120.26	108.63
3	F	402	A1D5C	C10-O09-C07	3.25	131.19	120.21
3	B	402	A1D5C	C05-N04-C02	3.20	133.13	124.03
3	L	402	A1D5C	C14-C29-C10	3.14	120.78	117.79
3	K	402	A1D5C	C22-C21-C20	-3.13	116.52	120.90
3	B	402	A1D5C	C19-C18-C16	3.10	132.42	119.96
3	D	402	A1D5C	C19-C18-C16	3.10	132.41	119.96
3	D	402	A1D5C	C13-C14-N15	-3.09	124.57	130.87
3	A	402	A1D5C	C19-C18-C16	3.06	132.27	119.96
3	I	402	A1D5C	O09-C10-C11	-3.06	116.69	123.87
3	G	402	A1D5C	O09-C07-C08	-3.06	100.77	108.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L	402	A1D5C	C07-C08-N04	3.05	106.53	102.75
3	K	402	A1D5C	C29-C14-N15	3.04	112.58	108.04
3	L	402	A1D5C	C29-C18-C16	3.02	107.02	105.31
3	L	402	A1D5C	C22-C21-C20	-3.00	116.70	120.90
3	H	402	A1D5C	O09-C07-C06	3.00	119.09	108.63
3	D	402	A1D5C	C20-C28-C27	2.98	125.96	120.57
3	B	402	A1D5C	C18-C16-N15	2.97	108.55	106.88
3	G	402	A1D5C	C14-C29-C18	2.95	111.33	106.61
3	D	402	A1D5C	O03-C02-C01	-2.94	110.49	122.03
3	E	402	A1D5C	C19-C18-C16	2.90	131.63	119.96
3	L	402	A1D5C	O09-C07-C06	2.89	118.74	108.63
3	E	402	A1D5C	C29-C18-C16	2.89	106.95	105.31
3	J	402	A1D5C	O09-C07-C06	-2.88	98.55	108.63
3	J	402	A1D5C	C07-C08-N04	2.88	106.33	102.75
3	F	402	A1D5C	O17-C16-C18	2.86	131.47	127.71
3	C	402	A1D5C	C14-C29-C10	2.86	120.51	117.79
3	E	402	A1D5C	C10-C29-C18	-2.84	129.62	136.13
3	A	402	A1D5C	O03-C02-N04	2.84	124.50	121.02
3	I	402	A1D5C	C20-C28-C27	2.83	125.69	120.57
3	G	402	A1D5C	C20-C28-C27	2.79	125.61	120.57
3	G	402	A1D5C	C14-C29-C10	2.77	120.42	117.79
3	E	402	A1D5C	C18-C16-N15	2.76	108.43	106.88
3	E	402	A1D5C	C20-C19-C18	-2.76	124.09	129.63
3	K	402	A1D5C	C20-C28-C27	2.76	125.56	120.57
3	F	402	A1D5C	C11-C10-C29	-2.75	114.57	120.15
3	J	402	A1D5C	C20-C28-C27	2.73	125.51	120.57
3	J	402	A1D5C	C19-C18-C16	2.72	130.89	119.96
3	D	402	A1D5C	C14-C29-C10	-2.70	115.23	117.79
3	I	402	A1D5C	C28-C20-C19	2.68	126.26	118.94
3	I	402	A1D5C	O09-C10-C29	2.68	123.41	117.70
3	H	402	A1D5C	O03-C02-C01	-2.66	111.58	122.03
3	J	402	A1D5C	C10-C29-C18	-2.66	130.05	136.13
3	F	402	A1D5C	C22-C21-C20	-2.65	117.19	120.90
3	C	402	A1D5C	C21-C20-C19	-2.64	112.24	121.22
3	I	402	A1D5C	C21-C20-C28	-2.64	115.08	118.58
3	H	402	A1D5C	C29-C18-C16	2.63	106.80	105.31
3	G	402	A1D5C	O09-C10-C29	-2.62	112.12	117.70
3	G	402	A1D5C	C22-C21-C20	-2.60	117.27	120.90
3	J	402	A1D5C	O09-C07-C08	2.58	114.46	108.19
3	J	402	A1D5C	C22-C21-C20	-2.58	117.29	120.90
3	G	402	A1D5C	C19-C18-C16	2.57	130.30	119.96
3	H	402	A1D5C	C20-C28-C27	2.57	125.22	120.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	J	402	A1D5C	C14-C29-C10	2.56	120.23	117.79
3	H	402	A1D5C	C22-C21-C20	-2.56	117.31	120.90
3	E	402	A1D5C	C10-O09-C07	2.56	128.86	120.21
3	B	402	A1D5C	O17-C16-C18	2.55	131.06	127.71
3	K	402	A1D5C	C19-C18-C16	2.54	130.18	119.96
3	D	402	A1D5C	C29-C14-N15	2.54	111.84	108.04
3	G	402	A1D5C	C06-C05-N04	2.52	106.25	103.28
3	H	402	A1D5C	C19-C18-C16	2.51	130.05	119.96
3	D	402	A1D5C	C05-N04-C02	2.49	131.09	124.03
3	H	402	A1D5C	C10-C29-C18	-2.43	130.57	136.13
3	G	402	A1D5C	C05-N04-C08	-2.43	105.28	111.55
3	F	402	A1D5C	O03-C02-N04	-2.39	118.09	121.02
3	A	402	A1D5C	C18-C16-N15	2.36	108.20	106.88
3	G	402	A1D5C	C07-C08-N04	2.36	105.68	102.75
3	F	402	A1D5C	C10-C29-C18	-2.35	130.75	136.13
3	C	402	A1D5C	C06-C07-C08	-2.34	98.76	104.39
3	L	402	A1D5C	C10-C29-C18	-2.34	130.77	136.13
3	C	402	A1D5C	O17-C16-C18	-2.31	124.67	127.71
3	I	402	A1D5C	O03-C02-C01	-2.30	113.00	122.03
3	D	402	A1D5C	C06-C07-C08	-2.29	98.89	104.39
3	E	402	A1D5C	O03-C02-C01	-2.26	113.15	122.03
3	D	402	A1D5C	C01-C02-N04	2.25	120.88	118.26
3	F	402	A1D5C	O17-C16-N15	-2.24	122.81	126.36
3	A	402	A1D5C	C20-C28-C27	2.22	124.59	120.57
3	C	402	A1D5C	C29-C14-N15	2.22	111.36	108.04
3	L	402	A1D5C	C20-C19-C18	-2.21	125.19	129.63
3	F	402	A1D5C	C06-C05-N04	2.15	105.82	103.28
3	C	402	A1D5C	C20-C28-C27	2.12	124.41	120.57
3	B	402	A1D5C	C14-C29-C10	2.12	119.81	117.79
3	G	402	A1D5C	C10-O09-C07	-2.11	113.08	120.21
3	J	402	A1D5C	C20-C19-C18	-2.08	125.45	129.63
3	F	402	A1D5C	C18-C16-N15	-2.07	105.72	106.88
3	I	402	A1D5C	C05-N04-C02	2.06	129.89	124.03
3	I	402	A1D5C	C10-O09-C07	2.06	127.16	120.21
3	B	402	A1D5C	C29-C18-C16	2.03	106.46	105.31

There are no chirality outliers.

All (41) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	402	A1D5C	C16-C18-C19-C20
3	A	402	A1D5C	C16-C18-C19-C20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
3	C	402	A1D5C	C29-C18-C19-C20
3	C	402	A1D5C	C16-C18-C19-C20
3	D	402	A1D5C	C06-C07-O09-C10
3	D	402	A1D5C	C08-C07-O09-C10
3	D	402	A1D5C	C16-C18-C19-C20
3	E	402	A1D5C	C06-C07-O09-C10
3	E	402	A1D5C	C16-C18-C19-C20
3	F	402	A1D5C	C06-C07-O09-C10
3	F	402	A1D5C	C08-C07-O09-C10
3	F	402	A1D5C	C16-C18-C19-C20
3	H	402	A1D5C	C16-C18-C19-C20
3	I	402	A1D5C	C29-C18-C19-C20
3	I	402	A1D5C	C16-C18-C19-C20
3	J	402	A1D5C	C06-C07-O09-C10
3	J	402	A1D5C	C08-C07-O09-C10
3	K	402	A1D5C	C16-C18-C19-C20
3	L	402	A1D5C	C06-C07-O09-C10
3	L	402	A1D5C	C08-C07-O09-C10
3	A	402	A1D5C	C29-C10-O09-C07
3	C	402	A1D5C	C29-C10-O09-C07
3	E	402	A1D5C	C29-C18-C19-C20
3	F	402	A1D5C	C29-C18-C19-C20
3	K	402	A1D5C	C29-C18-C19-C20
3	I	402	A1D5C	C29-C10-O09-C07
3	A	402	A1D5C	C11-C10-O09-C07
3	D	402	A1D5C	C11-C10-O09-C07
3	I	402	A1D5C	C11-C10-O09-C07
3	K	402	A1D5C	C06-C07-O09-C10
3	D	402	A1D5C	C29-C10-O09-C07
3	B	402	A1D5C	C29-C18-C19-C20
3	A	402	A1D5C	C29-C18-C19-C20
3	B	402	A1D5C	C11-C10-O09-C07
3	C	402	A1D5C	C11-C10-O09-C07
3	B	402	A1D5C	C29-C10-O09-C07
3	H	402	A1D5C	C11-C10-O09-C07
3	E	402	A1D5C	C08-C07-O09-C10
3	D	402	A1D5C	C29-C18-C19-C20
3	H	402	A1D5C	C29-C18-C19-C20
3	G	402	A1D5C	C11-C10-O09-C07

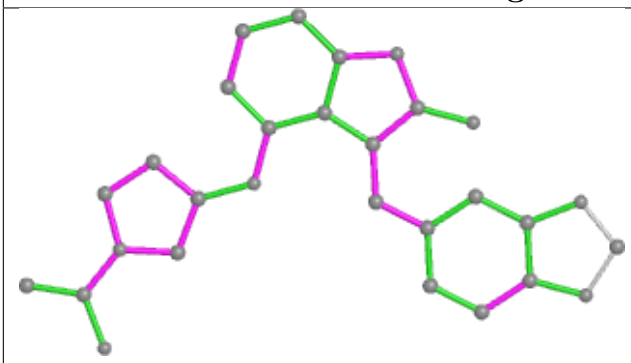
There are no ring outliers.

10 monomers are involved in 26 short contacts:

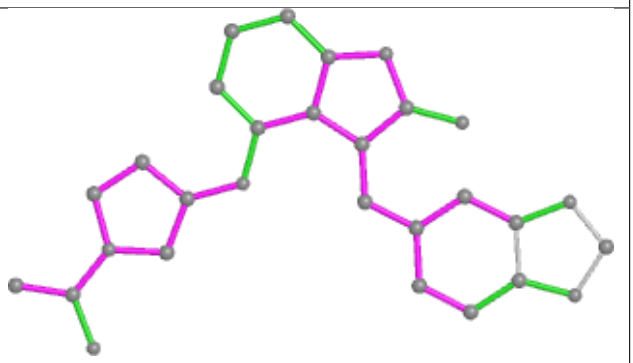
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	J	402	A1D5C	2	0
3	C	402	A1D5C	1	0
3	I	402	A1D5C	1	0
3	A	402	A1D5C	2	0
3	D	402	A1D5C	2	0
3	G	402	A1D5C	4	0
3	L	402	A1D5C	5	0
3	H	402	A1D5C	1	0
3	K	402	A1D5C	5	0
3	B	402	A1D5C	3	0

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

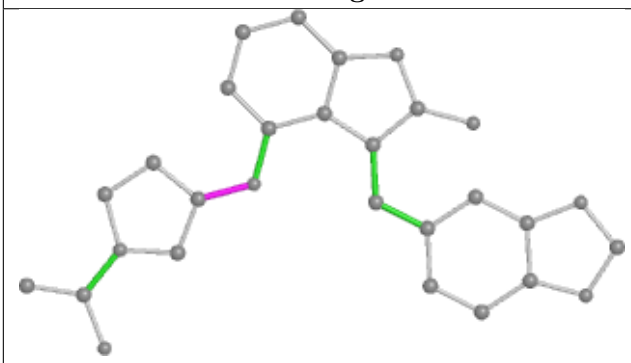
Ligand A1D5C J 402



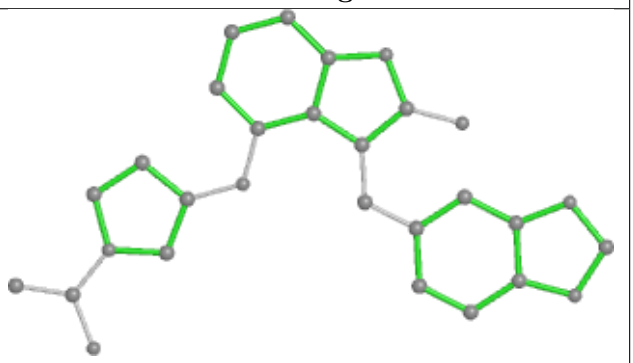
Bond lengths



Bond angles

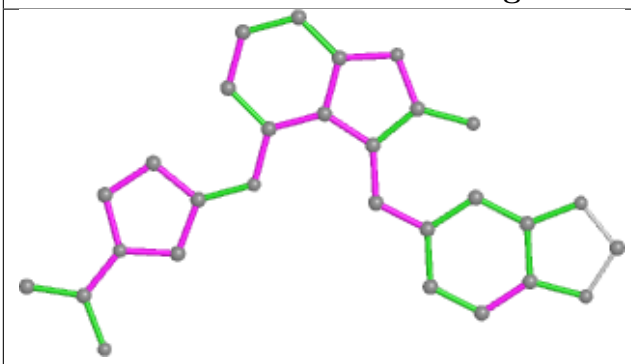


Torsions



Rings

Ligand A1D5C C 402



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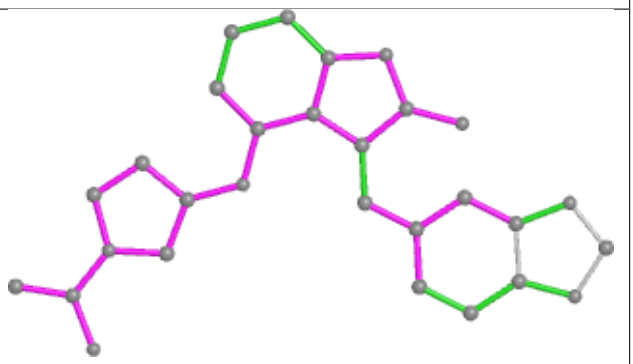

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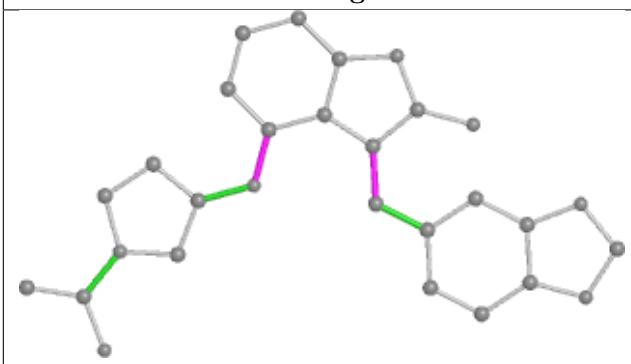

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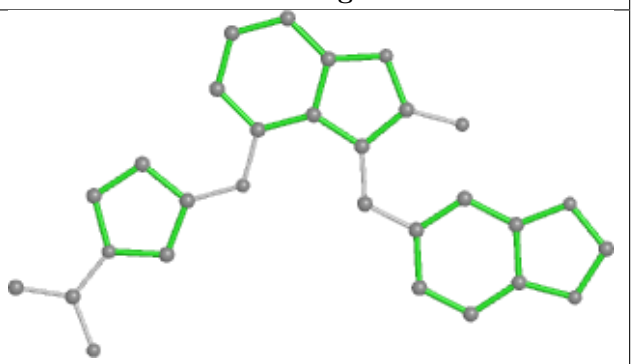
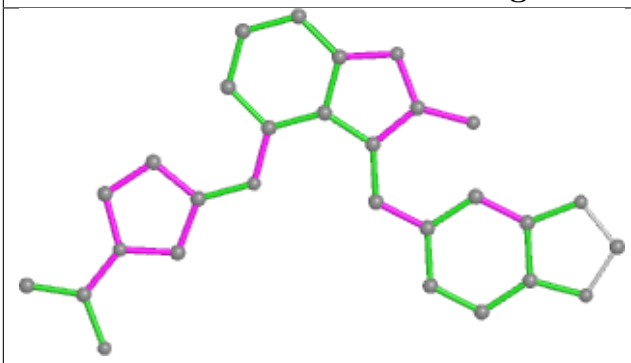


Rings

Ligand A1D5C I 402



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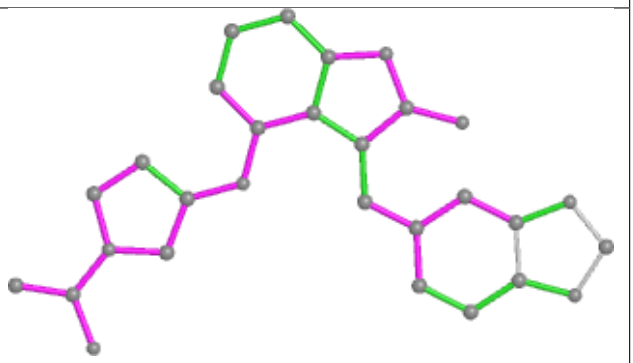
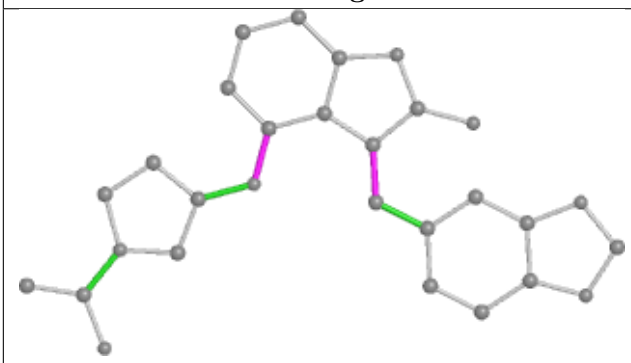


Bond angles



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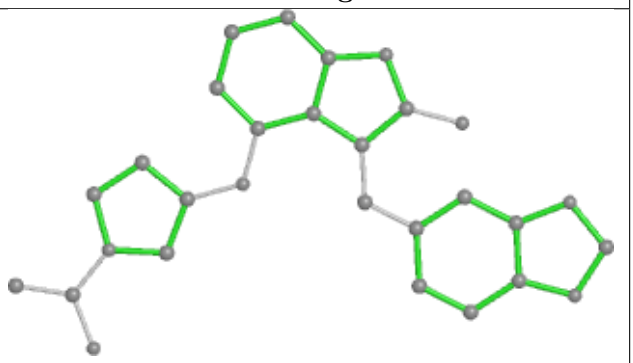
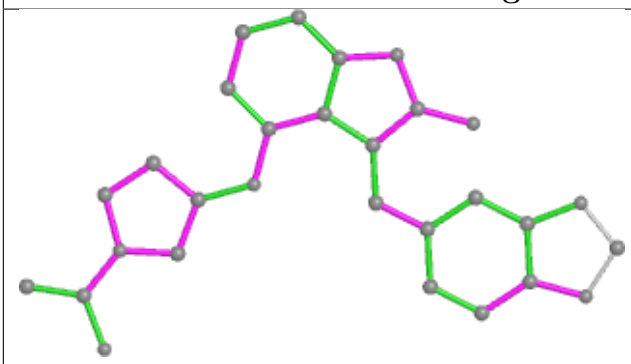


Rings

Ligand A1D5C A 402



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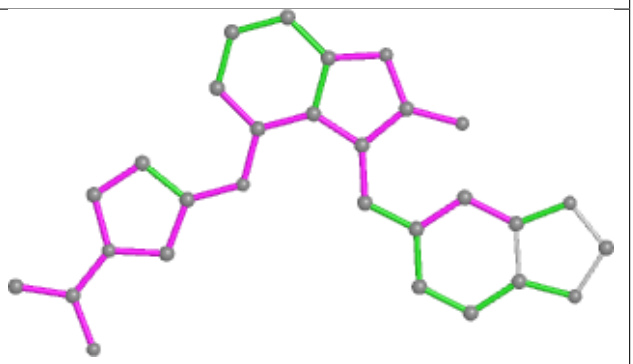
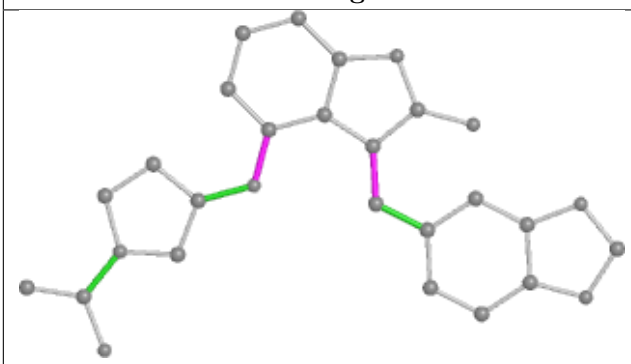


Bond angles



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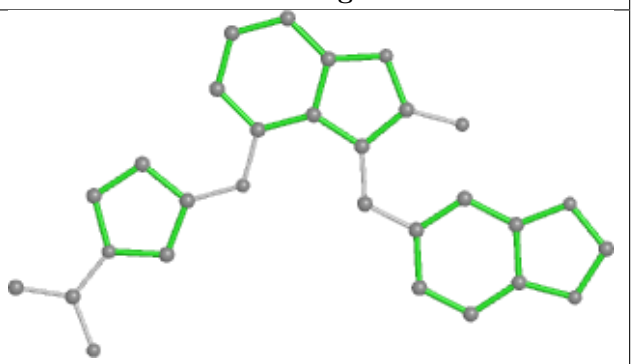
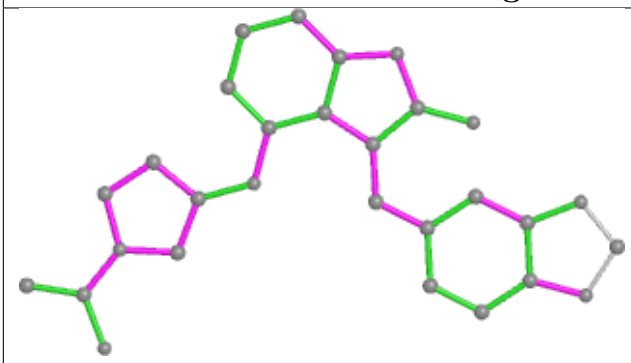


Rings

Ligand A1D5C D 402



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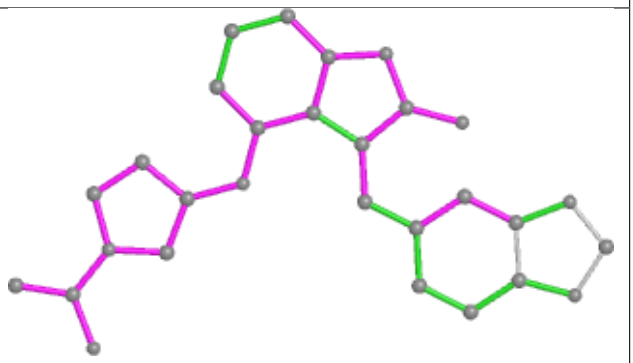
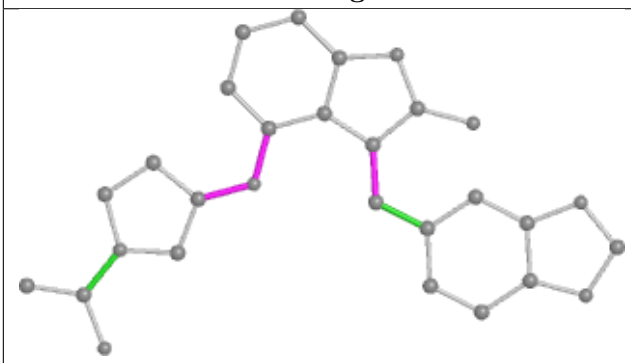


Bond angles



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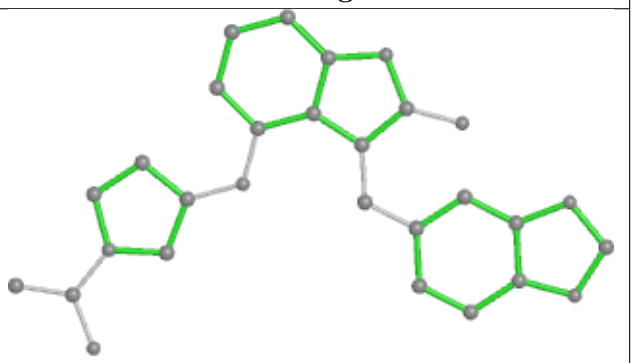
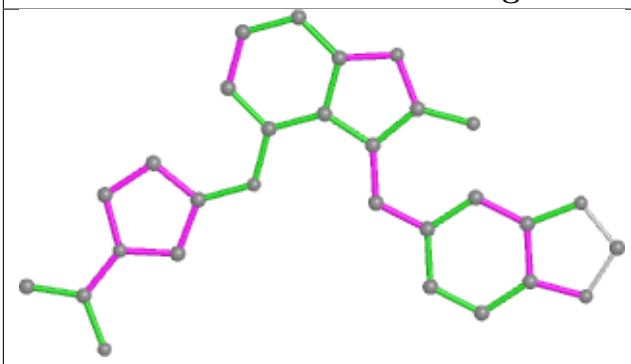


Rings

Ligand A1D5C G 402



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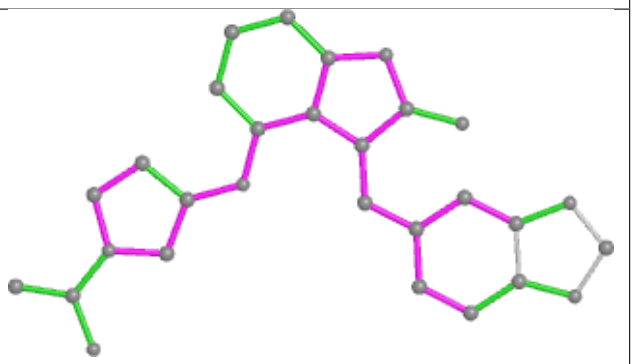

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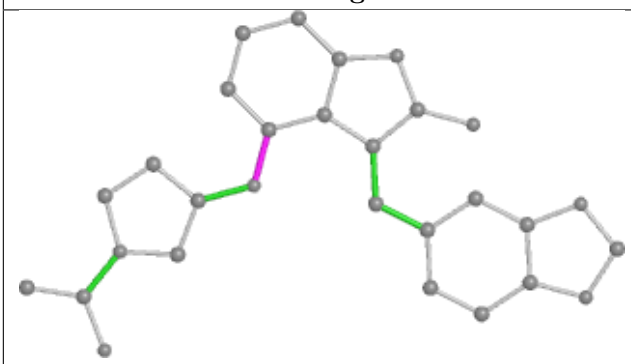

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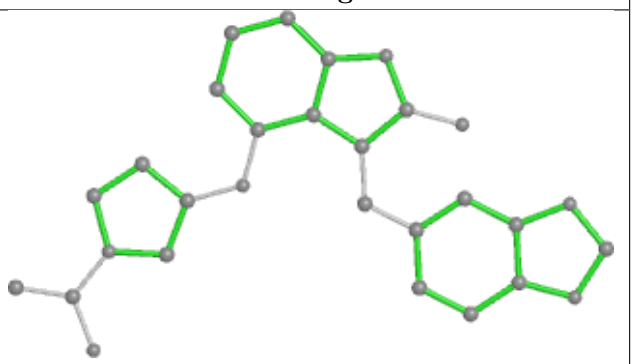
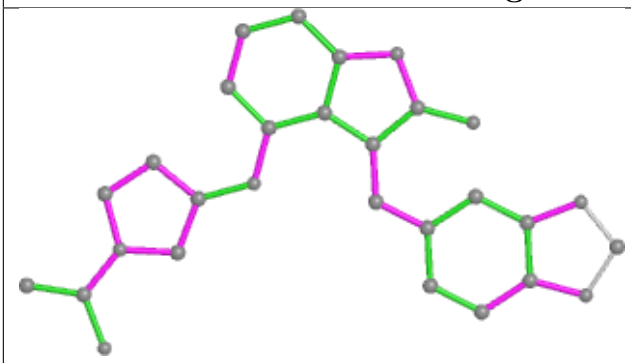


Rings

Ligand A1D5C L 402



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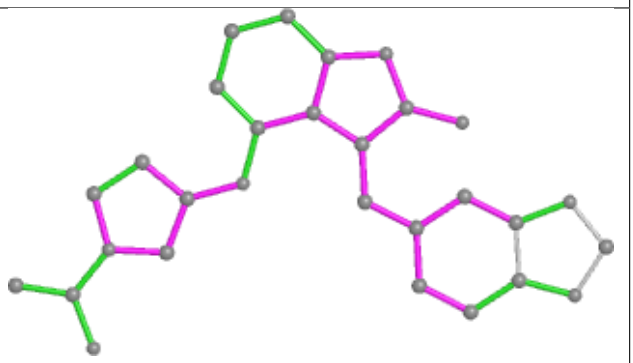

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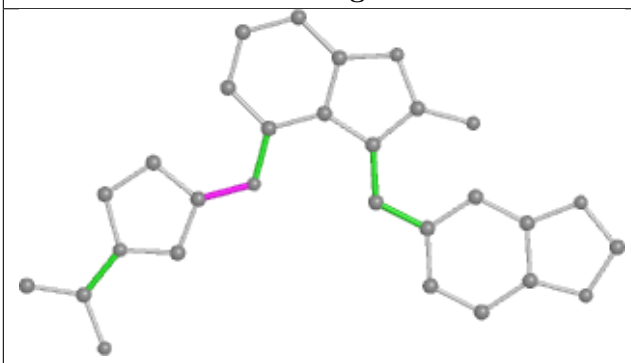

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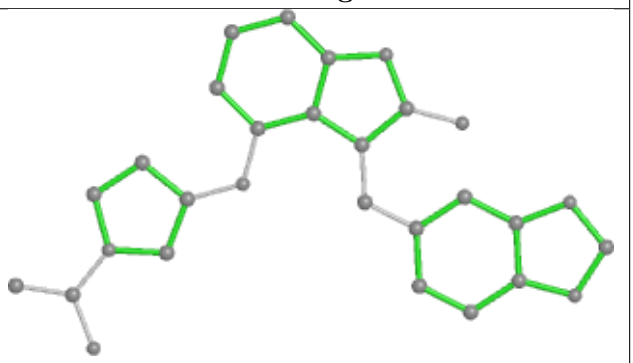
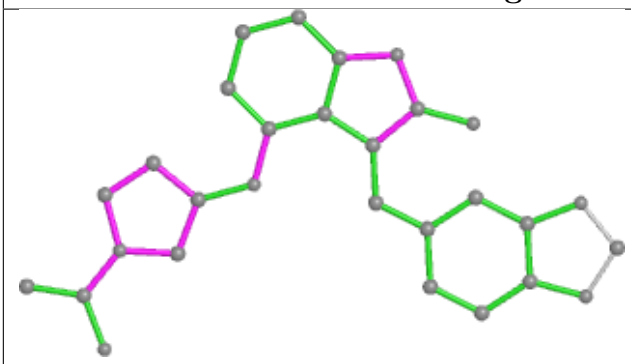


Rings

Ligand A1D5C E 402



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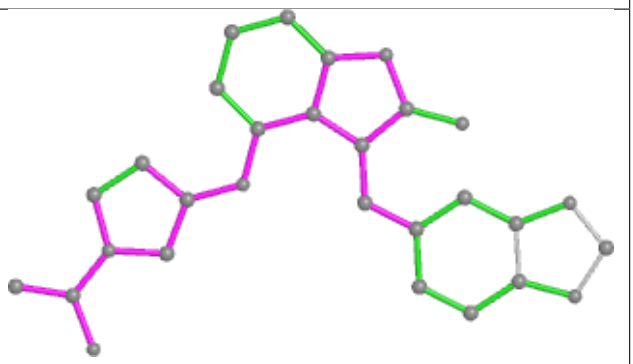

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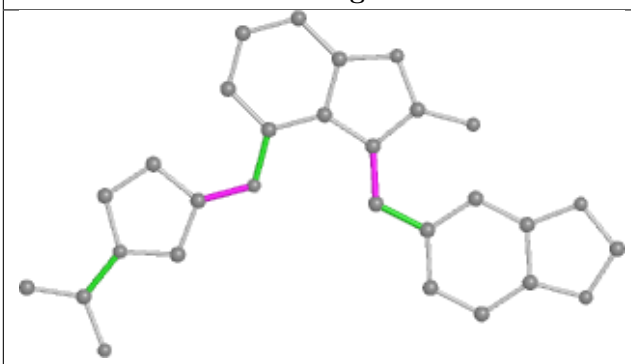

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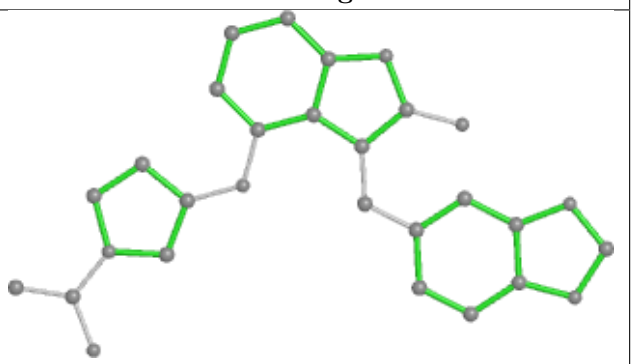
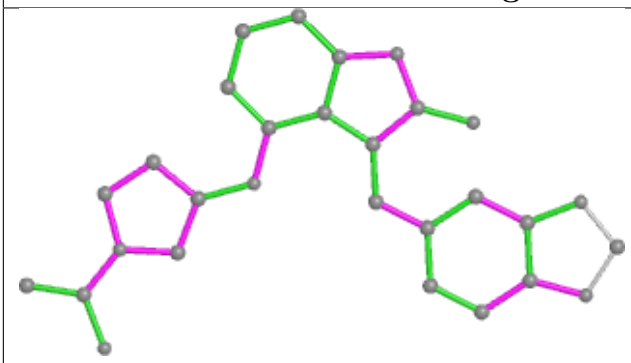
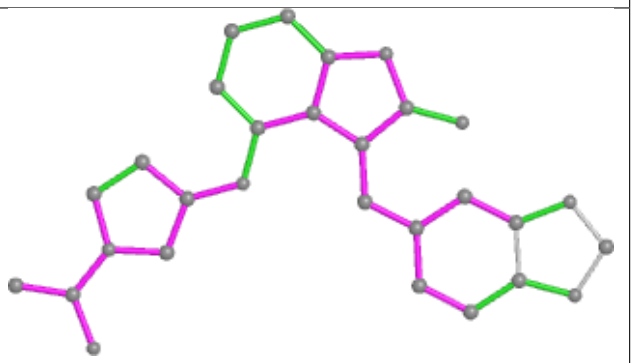


Rings

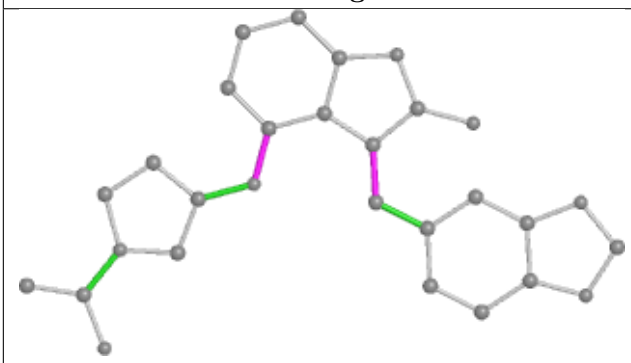
Ligand A1D5C H 402



Bond lengths



Bond angles



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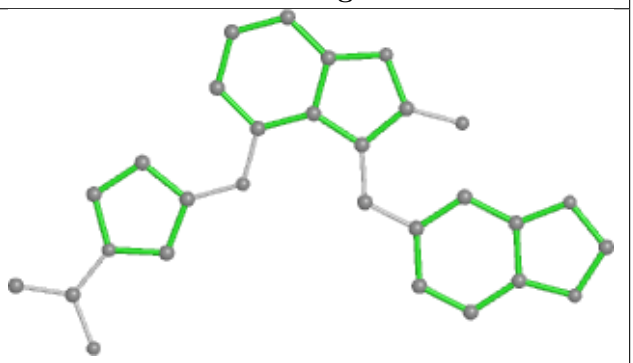
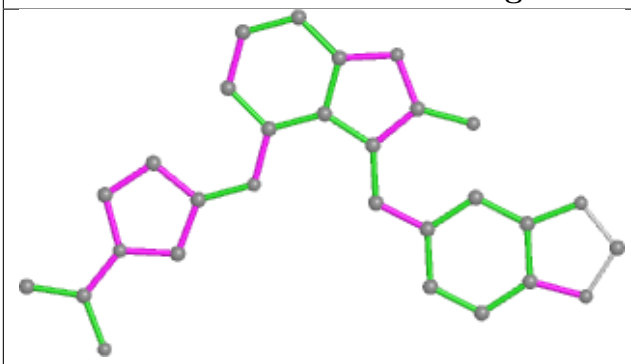


Rings

Ligand A1D5C F 402



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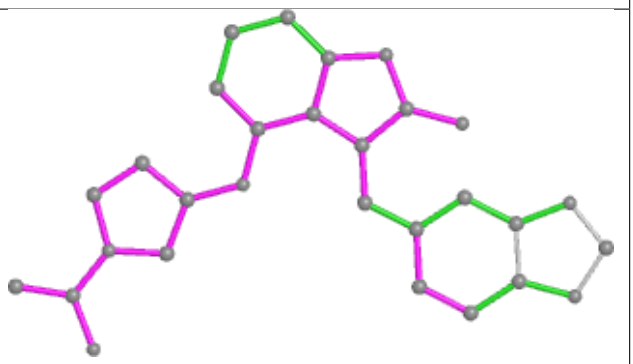

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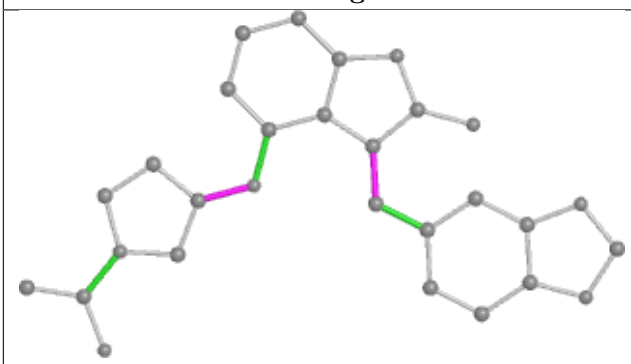

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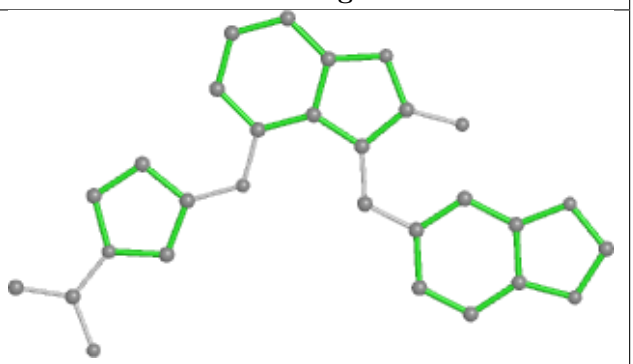
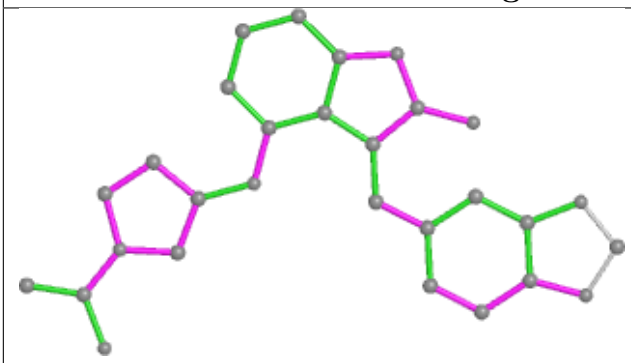
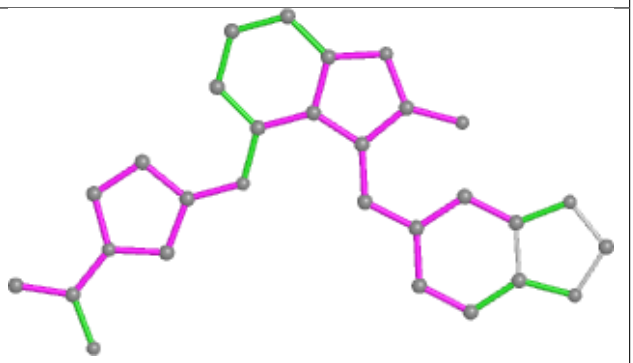


Rings

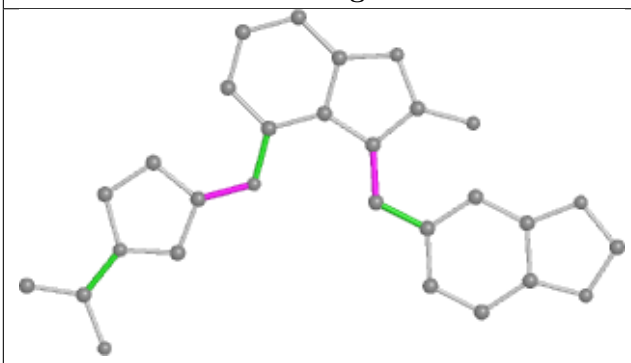
Ligand A1D5C K 402



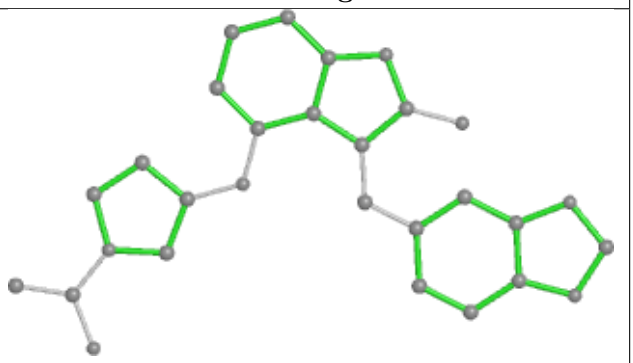
Bond lengths



Bond angles

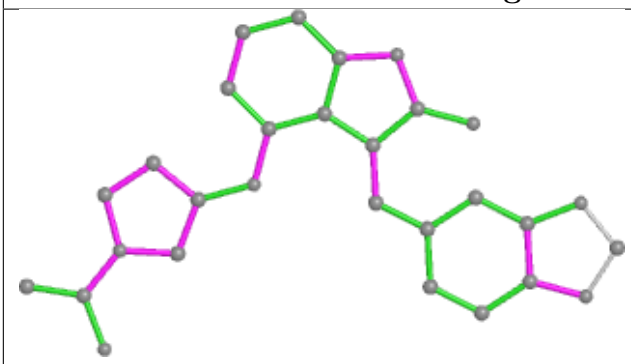


Torsions

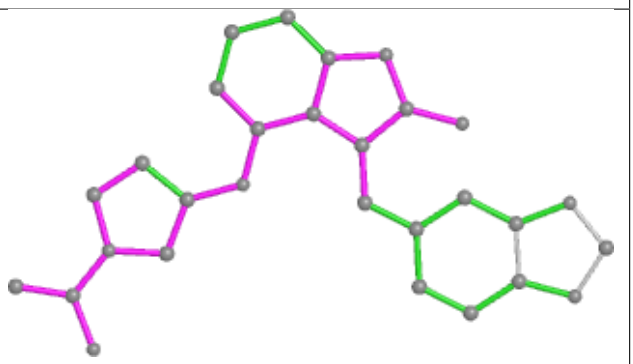


Rings

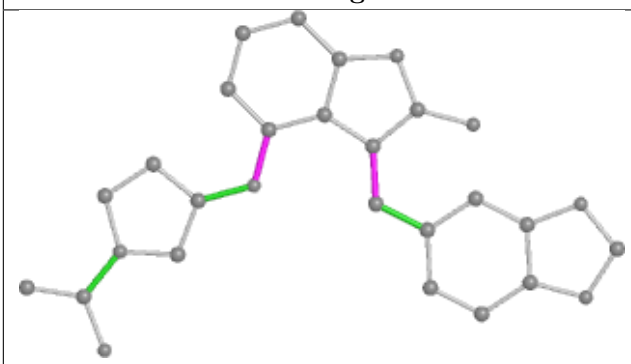
Ligand A1D5C B 402



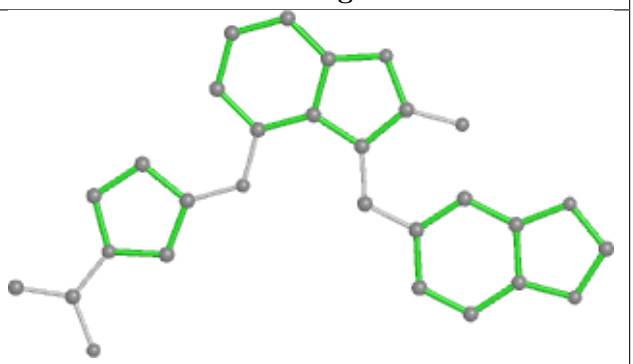
Bond lengths



Bond angles



Torsions



Rings

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	322/329 (97%)	-0.40	4 (1%)	79	73	19, 35, 70, 125	0
1	B	322/329 (97%)	-0.43	3 (0%)	84	80	16, 36, 66, 105	0
1	C	322/329 (97%)	-0.45	3 (0%)	84	80	18, 39, 72, 136	0
1	D	322/329 (97%)	-0.38	3 (0%)	84	80	22, 39, 69, 122	0
1	E	322/329 (97%)	-0.40	2 (0%)	89	86	19, 42, 73, 110	0
1	F	322/329 (97%)	-0.28	2 (0%)	89	86	25, 45, 75, 98	0
1	G	322/329 (97%)	0.20	14 (4%)	35	25	40, 75, 110, 135	0
1	H	322/329 (97%)	-0.02	2 (0%)	89	86	34, 61, 94, 135	0
1	I	322/329 (97%)	0.00	7 (2%)	62	52	29, 54, 90, 116	0
1	J	322/329 (97%)	0.47	15 (4%)	31	22	48, 87, 116, 150	0
1	K	322/329 (97%)	-0.16	4 (1%)	79	73	24, 47, 74, 136	0
1	L	322/329 (97%)	-0.20	5 (1%)	72	65	27, 45, 84, 130	0
All	All	3864/3948 (97%)	-0.17	64 (1%)	70	63	16, 48, 97, 150	0

All (64) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	K	33	ALA	9.6
1	C	33	ALA	7.9
1	A	33	ALA	6.9
1	G	33	ALA	5.7
1	D	33	ALA	5.6
1	E	33	ALA	4.9
1	J	34	SER	4.7
1	L	33	ALA	4.5
1	J	46	ALA	4.4
1	D	34	SER	4.1
1	L	34	SER	3.9

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Mol	Chain	Res	Type	RSRZ
1	H	33	ALA	3.7
1	B	33	ALA	3.7
1	J	361	LEU	3.7
1	J	323	SER	3.7
1	L	35	ALA	3.6
1	L	298	SER	3.6
1	I	302	VAL	3.6
1	K	297	TYR	3.5
1	I	301	GLY	3.2
1	B	217	ARG	3.1
1	J	177	LYS	3.1
1	A	34	SER	3.0
1	G	115	TYR	3.0
1	E	117	TYR	2.9
1	F	298	SER	2.9
1	G	205	LEU	2.9
1	G	151	ASN	2.9
1	J	299	TYR	2.9
1	C	297	TYR	2.7
1	G	339	LEU	2.6
1	K	301	GLY	2.6
1	G	189	PRO	2.6
1	G	337	GLU	2.6
1	F	207	TRP	2.5
1	G	301	GLY	2.5
1	G	152	ARG	2.4
1	J	189	PRO	2.4
1	G	325	PHE	2.4
1	K	34	SER	2.4
1	I	297	TYR	2.4
1	J	263	ASN	2.4
1	B	34	SER	2.4
1	J	301	GLY	2.4
1	J	104	LEU	2.4
1	G	297	TYR	2.3
1	D	297	TYR	2.3
1	G	328	VAL	2.3
1	J	68	ASN	2.3
1	L	189	PRO	2.3
1	I	296	ASN	2.2
1	J	47	ILE	2.2
1	G	329	TRP	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	149	TRP	2.1
1	I	206	HIS	2.1
1	G	149	TRP	2.1
1	C	34	SER	2.1
1	H	302	VAL	2.1
1	J	278	LEU	2.1
1	I	287	HIS	2.1
1	J	181	LEU	2.0
1	J	64	GLU	2.0
1	I	293	TYR	2.0
1	A	206	HIS	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{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	A1D5C	E	402	29/29	0.91	0.24	36,63,93,96	0
3	A1D5C	J	402	29/29	0.92	0.31	64,81,113,115	0
3	A1D5C	G	402	29/29	0.93	0.38	50,98,120,128	0
3	A1D5C	I	402	29/29	0.93	0.33	43,71,107,119	0
3	A1D5C	A	402	29/29	0.93	0.32	32,59,85,89	0
3	A1D5C	B	402	29/29	0.94	0.23	30,44,78,88	0
3	A1D5C	H	402	29/29	0.94	0.28	54,67,94,100	0
3	A1D5C	L	402	29/29	0.94	0.41	43,79,115,120	0
3	A1D5C	F	402	29/29	0.96	0.36	42,70,101,111	0
3	A1D5C	D	402	29/29	0.96	0.27	32,51,89,98	0
3	A1D5C	C	402	29/29	0.96	0.24	33,59,93,96	0
3	A1D5C	K	402	29/29	0.97	0.20	38,53,84,93	0

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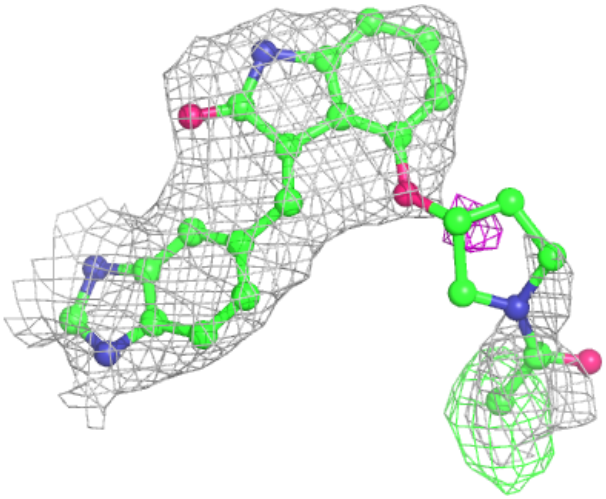
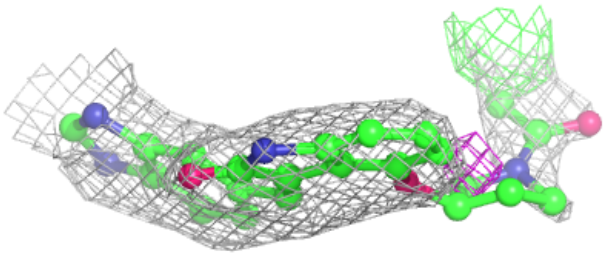
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	ZN	G	401	1/1	0.97	0.08	52,52,52,52	0
2	ZN	K	401	1/1	0.99	0.09	34,34,34,34	0
2	ZN	L	401	1/1	0.99	0.11	78,78,78,78	0
2	ZN	E	401	1/1	0.99	0.10	33,33,33,33	0
2	ZN	F	401	1/1	0.99	0.08	35,35,35,35	0
2	ZN	A	401	1/1	0.99	0.07	28,28,28,28	0
2	ZN	H	401	1/1	0.99	0.11	52,52,52,52	0
2	ZN	J	401	1/1	0.99	0.07	53,53,53,53	0
2	ZN	I	401	1/1	1.00	0.08	40,40,40,40	0
2	ZN	C	401	1/1	1.00	0.09	29,29,29,29	0
2	ZN	D	401	1/1	1.00	0.11	36,36,36,36	0
2	ZN	B	401	1/1	1.00	0.10	31,31,31,31	0

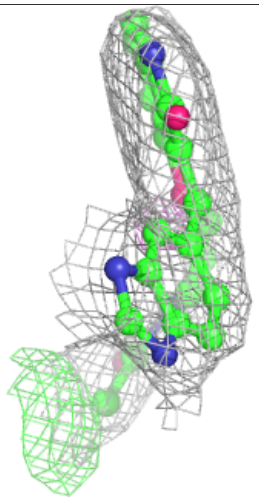
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around A1D5C E 402:

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

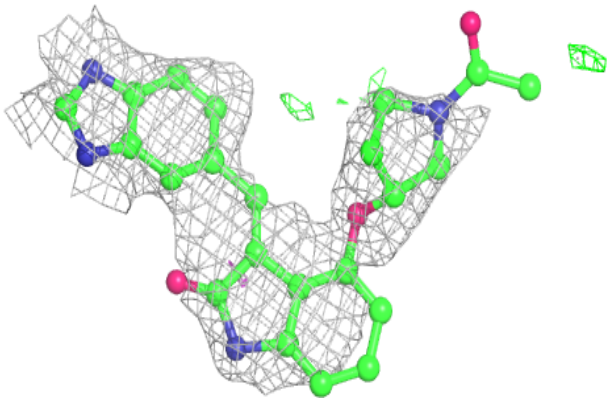


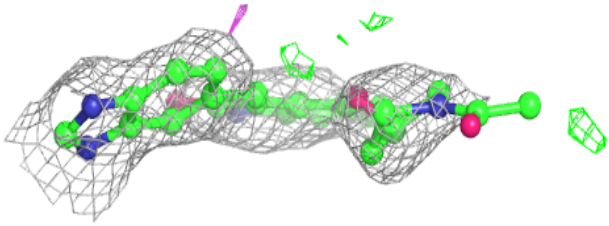


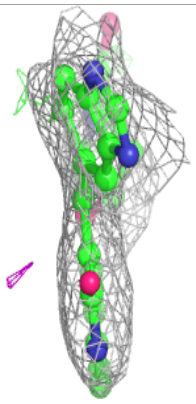


Electron density around A1D5C J 402:

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

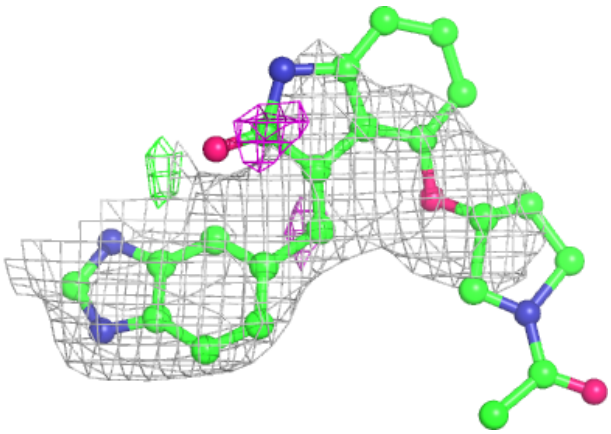


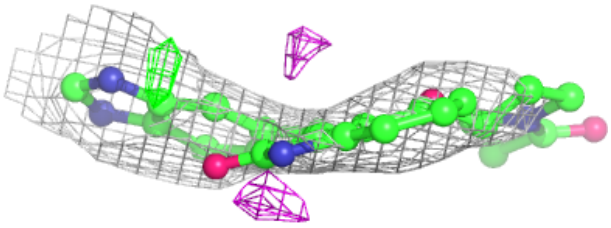


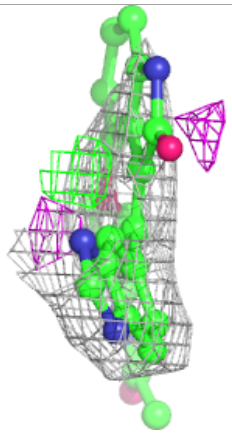


Electron density around A1D5C G 402:

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

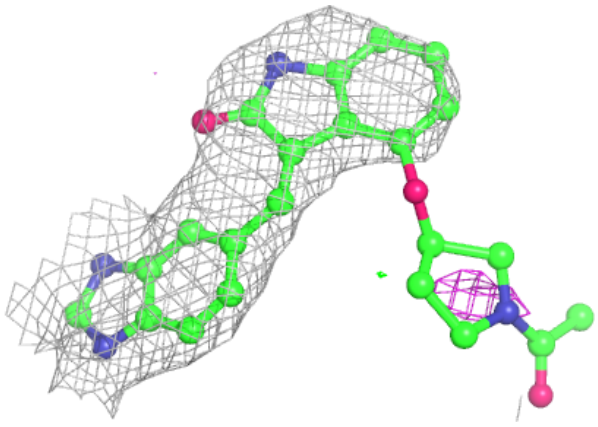


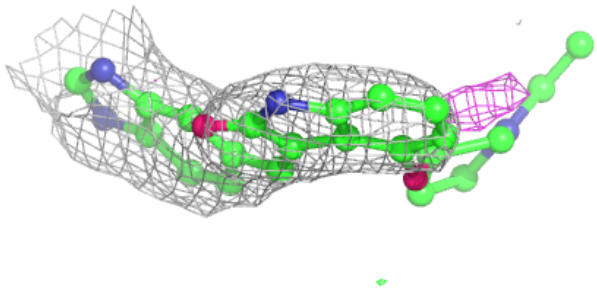


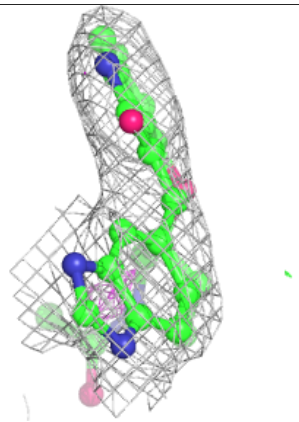


Electron density around A1D5C I 402:

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

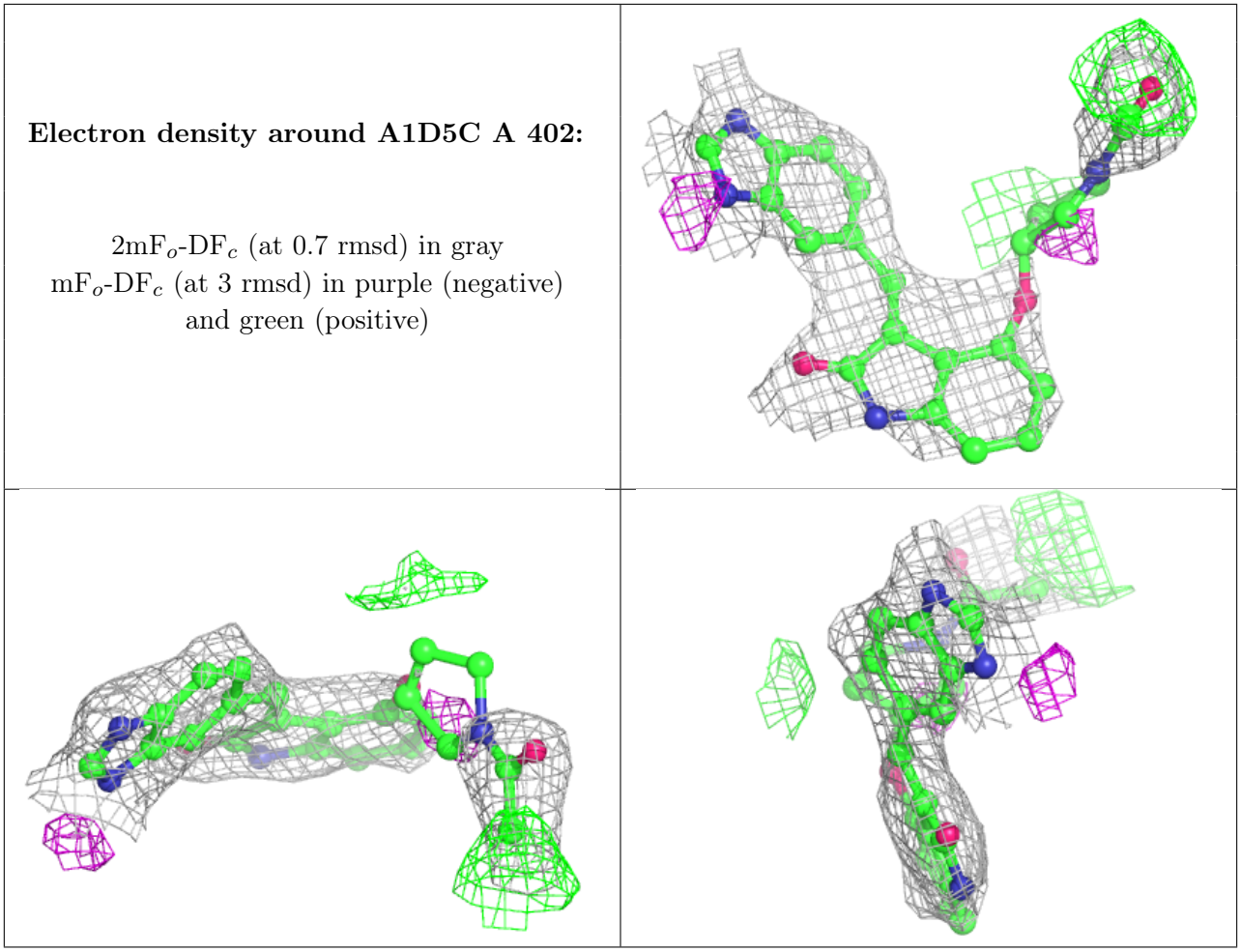






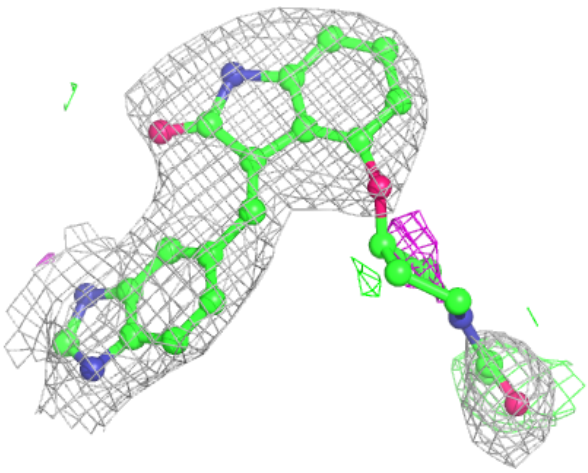
Electron density around A1D5C A 402:

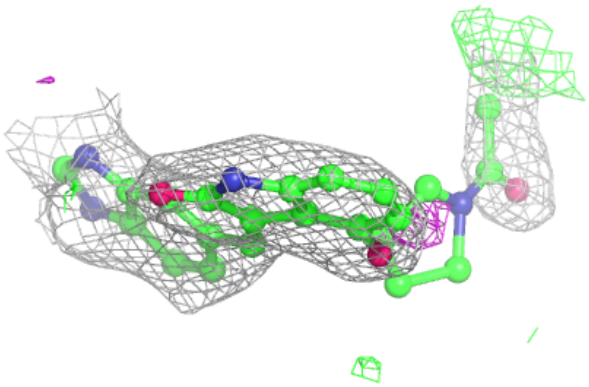
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

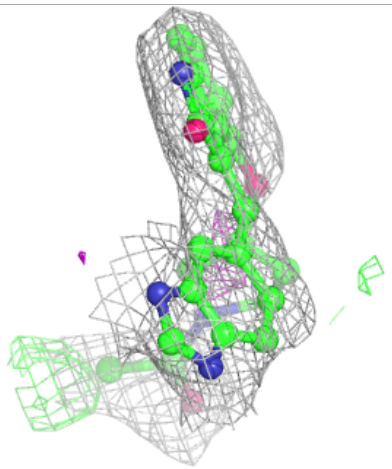


Electron density around A1D5C B 402:

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

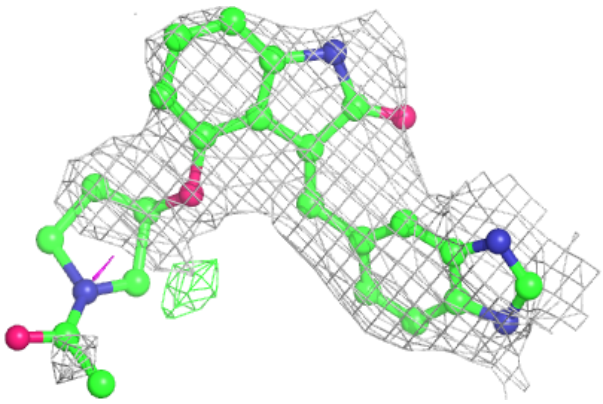


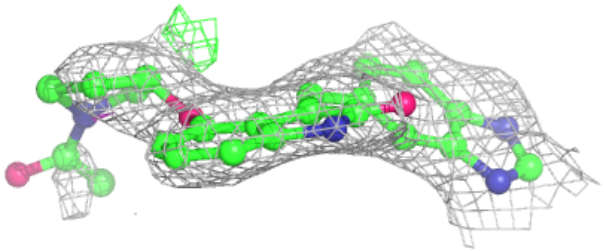


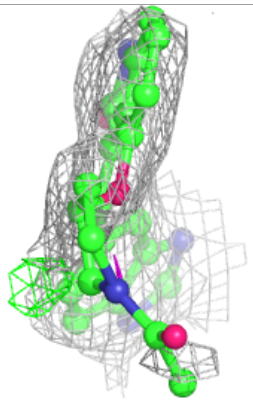


Electron density around A1D5C H 402:

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

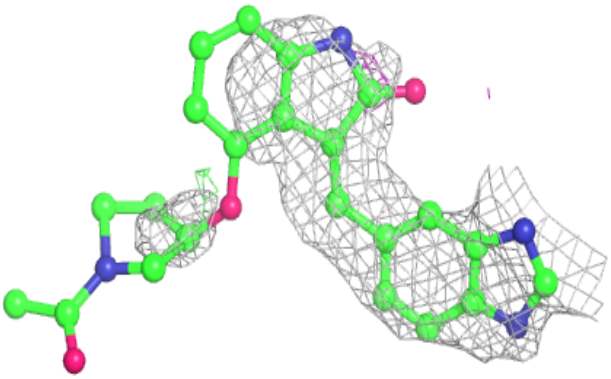


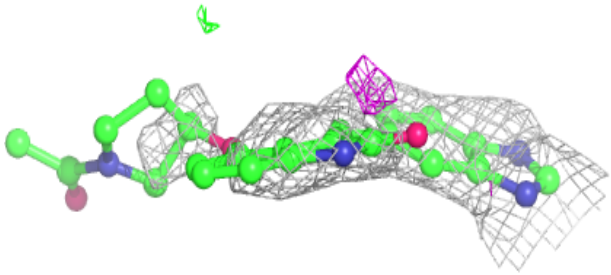


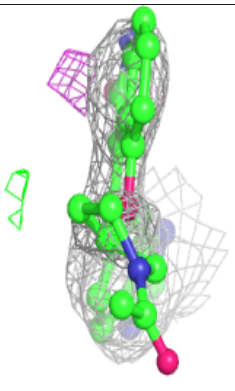


Electron density around A1D5C L 402:

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

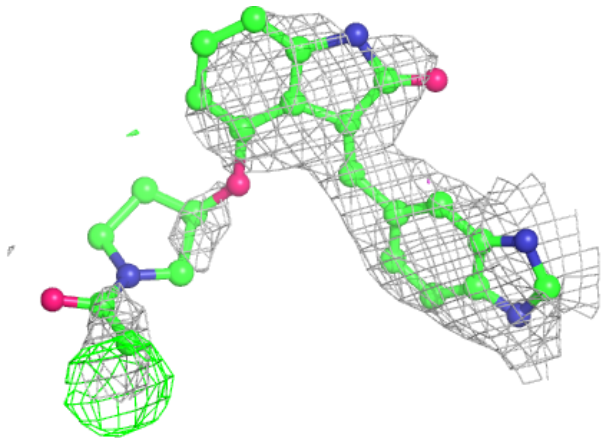


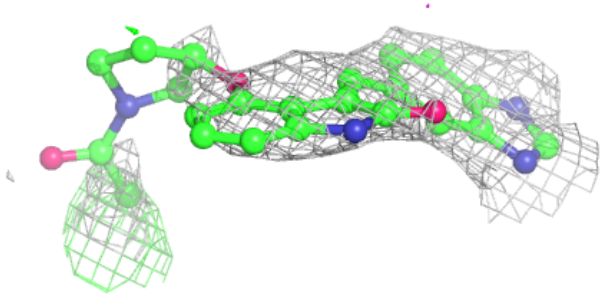


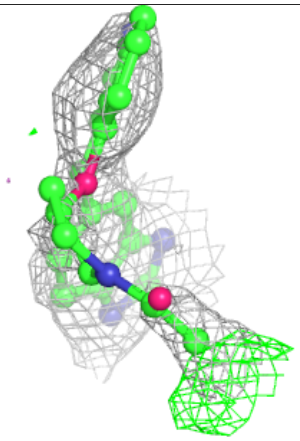


Electron density around A1D5C F 402:

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

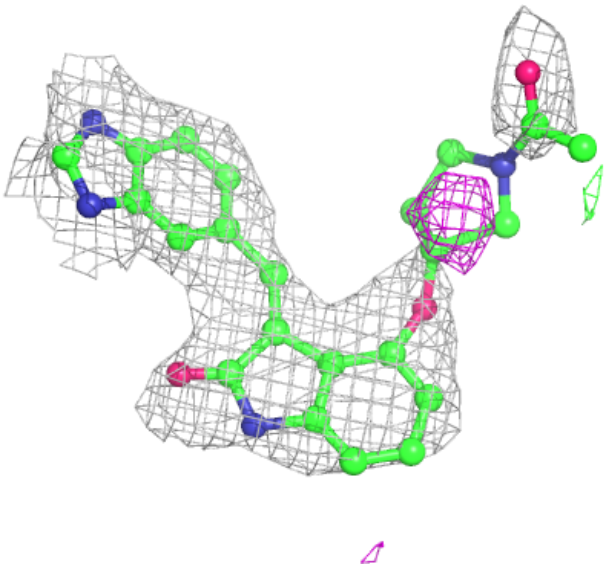


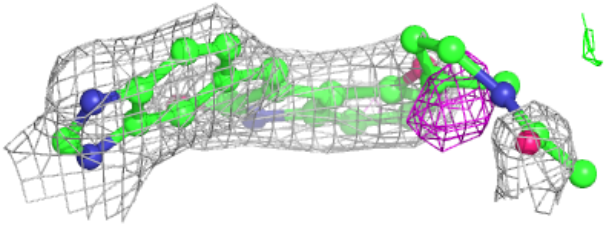


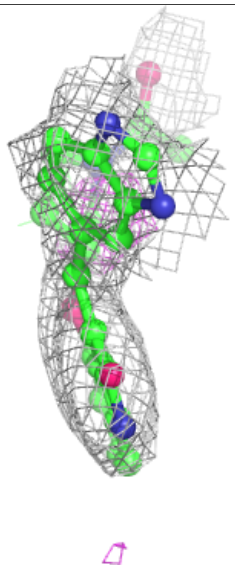


Electron density around A1D5C D 402:

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

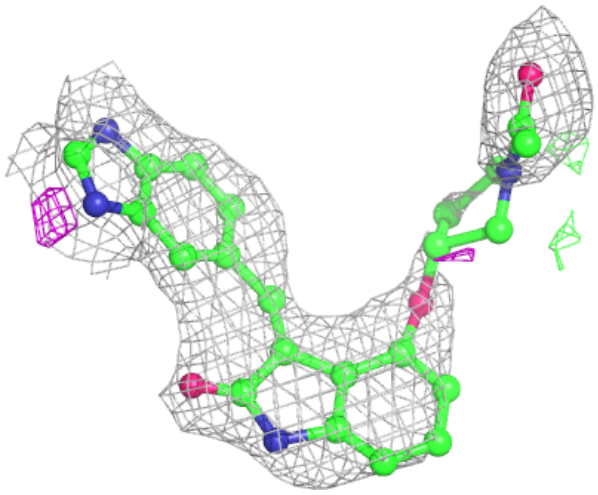


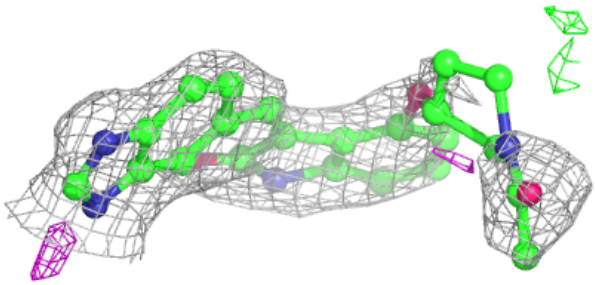


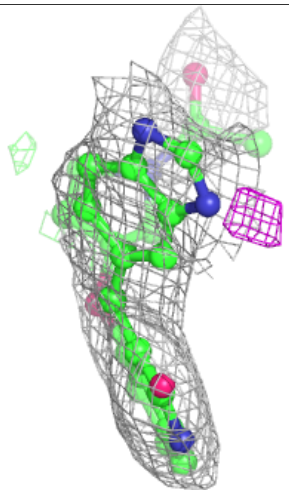


Electron density around A1D5C C 402:

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

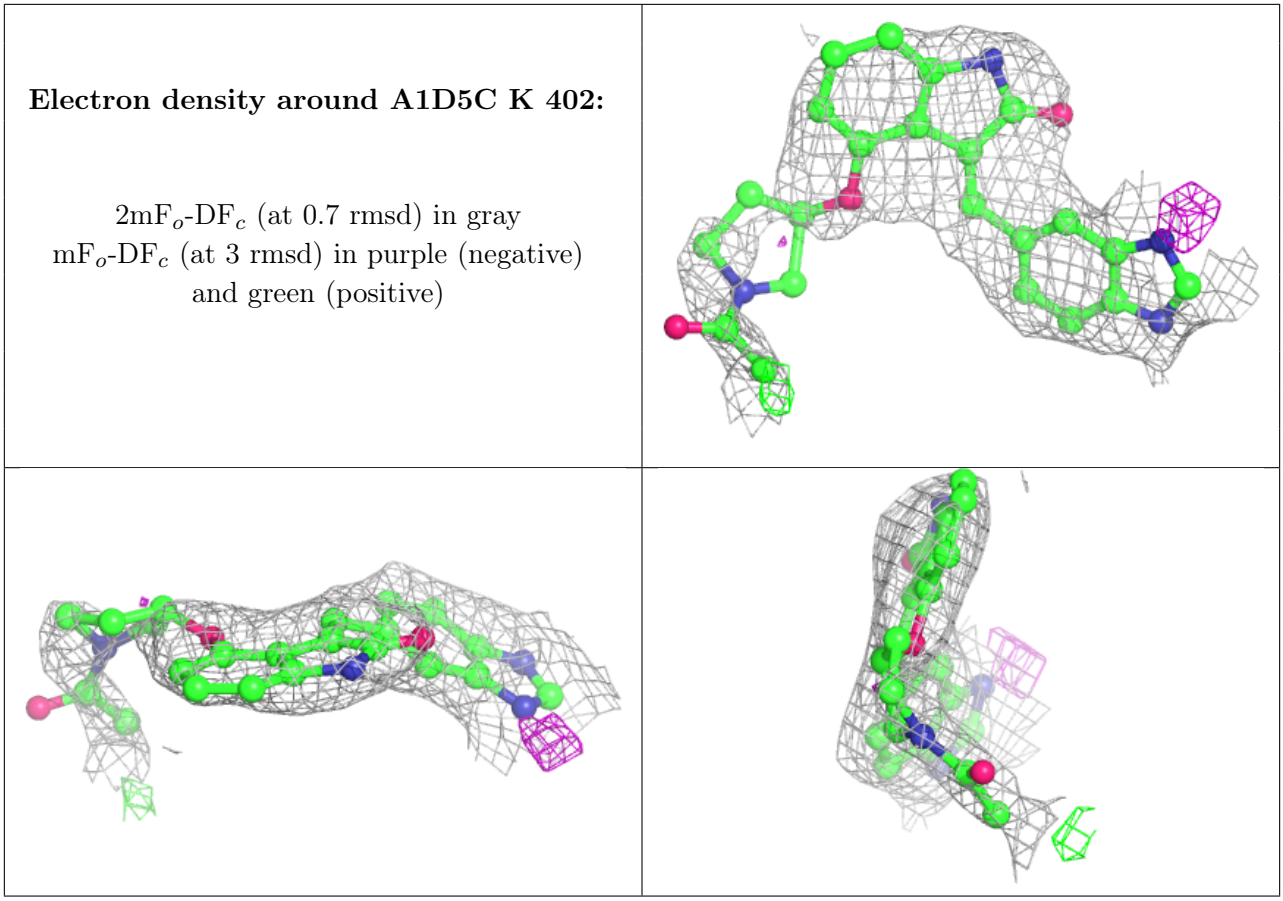






Electron density around A1D5C K 402:

$2mF_o$-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.