Full wwPDB X-ray Structure Validation Report ⓘ

Jun 18, 2024 – 02:53 AM EDT

PDB ID	:	3RYO
Title	:	Crystal Structure of Enhanced Intracellular Survival (Eis) Protein from Mycobacterium tuberculosis with Acetyl CoA
Authors	:	Kim, K.H.; An, D.R.; Yoon, J.Y.; Kim, H.S.; Yoon, H.J.; Song, J.; Im, H.N.; Kim, J.; Kim, D.J.; Lee, S.J.; Kim, H.J.; Lee, J.Y.; Suh, S.W.
Deposited on	:	2011-05-11
Resolution	:	2.80 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:

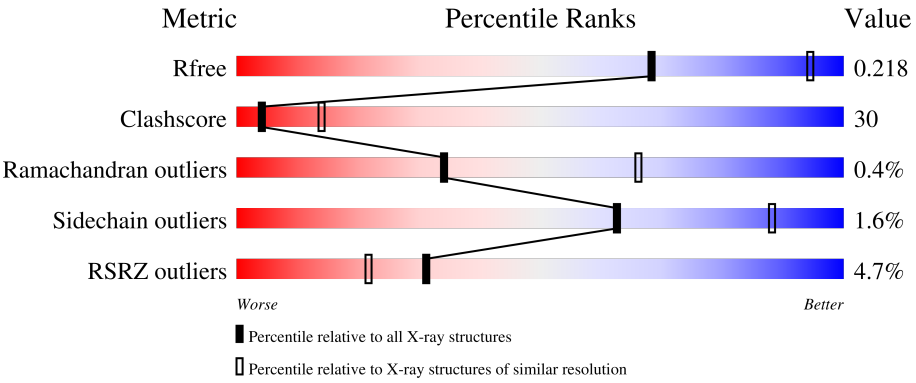
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.80 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	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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	428	3% 60% 32% 7%
1	B	428	3% 61% 32% 7%
1	C	428	4% 60% 32% 7%
1	D	428	3% 57% 35% • 7%

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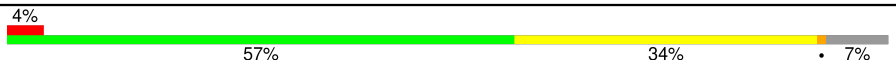
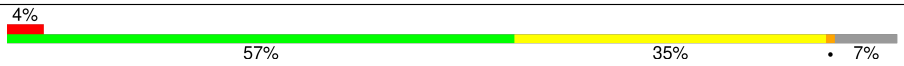
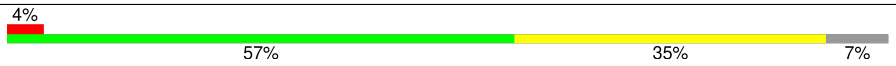
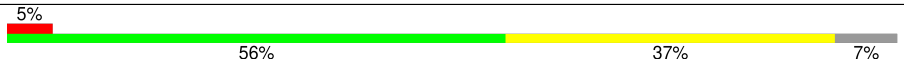
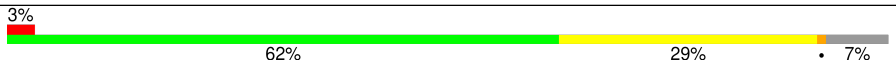
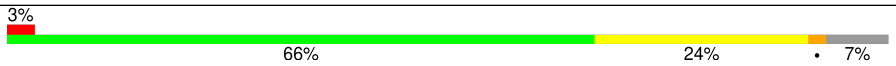
Mol	Chain	Length	Quality of chain
1	E	428	
1	F	428	
1	G	428	
1	H	428	
1	I	428	
1	J	428	
1	K	428	
1	L	428	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 37731 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 Enhanced intracellular survival protein.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	B	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	C	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	D	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	E	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	F	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	G	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	H	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	I	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	J	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	K	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			
1	L	396	Total	C	N	O	S	Se	0	0	0
			3053	1921	560	560	5	7			

There are 240 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-19	MSE	-	EXPRESSION TAG	UNP P71727
A	-18	GLY	-	EXPRESSION TAG	UNP P71727
A	-17	SER	-	EXPRESSION TAG	UNP P71727
A	-16	SER	-	EXPRESSION TAG	UNP P71727
A	-15	HIS	-	EXPRESSION TAG	UNP P71727

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-14	HIS	-	EXPRESSION TAG	UNP P71727
A	-13	HIS	-	EXPRESSION TAG	UNP P71727
A	-12	HIS	-	EXPRESSION TAG	UNP P71727
A	-11	HIS	-	EXPRESSION TAG	UNP P71727
A	-10	HIS	-	EXPRESSION TAG	UNP P71727
A	-9	SER	-	EXPRESSION TAG	UNP P71727
A	-8	SER	-	EXPRESSION TAG	UNP P71727
A	-7	GLY	-	EXPRESSION TAG	UNP P71727
A	-6	LEU	-	EXPRESSION TAG	UNP P71727
A	-5	VAL	-	EXPRESSION TAG	UNP P71727
A	-4	PRO	-	EXPRESSION TAG	UNP P71727
A	-3	ARG	-	EXPRESSION TAG	UNP P71727
A	-2	GLY	-	EXPRESSION TAG	UNP P71727
A	-1	SER	-	EXPRESSION TAG	UNP P71727
A	0	HIS	-	EXPRESSION TAG	UNP P71727
B	-19	MSE	-	EXPRESSION TAG	UNP P71727
B	-18	GLY	-	EXPRESSION TAG	UNP P71727
B	-17	SER	-	EXPRESSION TAG	UNP P71727
B	-16	SER	-	EXPRESSION TAG	UNP P71727
B	-15	HIS	-	EXPRESSION TAG	UNP P71727
B	-14	HIS	-	EXPRESSION TAG	UNP P71727
B	-13	HIS	-	EXPRESSION TAG	UNP P71727
B	-12	HIS	-	EXPRESSION TAG	UNP P71727
B	-11	HIS	-	EXPRESSION TAG	UNP P71727
B	-10	HIS	-	EXPRESSION TAG	UNP P71727
B	-9	SER	-	EXPRESSION TAG	UNP P71727
B	-8	SER	-	EXPRESSION TAG	UNP P71727
B	-7	GLY	-	EXPRESSION TAG	UNP P71727
B	-6	LEU	-	EXPRESSION TAG	UNP P71727
B	-5	VAL	-	EXPRESSION TAG	UNP P71727
B	-4	PRO	-	EXPRESSION TAG	UNP P71727
B	-3	ARG	-	EXPRESSION TAG	UNP P71727
B	-2	GLY	-	EXPRESSION TAG	UNP P71727
B	-1	SER	-	EXPRESSION TAG	UNP P71727
B	0	HIS	-	EXPRESSION TAG	UNP P71727
C	-19	MSE	-	EXPRESSION TAG	UNP P71727
C	-18	GLY	-	EXPRESSION TAG	UNP P71727
C	-17	SER	-	EXPRESSION TAG	UNP P71727
C	-16	SER	-	EXPRESSION TAG	UNP P71727
C	-15	HIS	-	EXPRESSION TAG	UNP P71727
C	-14	HIS	-	EXPRESSION TAG	UNP P71727
C	-13	HIS	-	EXPRESSION TAG	UNP P71727

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-12	HIS	-	EXPRESSION TAG	UNP P71727
C	-11	HIS	-	EXPRESSION TAG	UNP P71727
C	-10	HIS	-	EXPRESSION TAG	UNP P71727
C	-9	SER	-	EXPRESSION TAG	UNP P71727
C	-8	SER	-	EXPRESSION TAG	UNP P71727
C	-7	GLY	-	EXPRESSION TAG	UNP P71727
C	-6	LEU	-	EXPRESSION TAG	UNP P71727
C	-5	VAL	-	EXPRESSION TAG	UNP P71727
C	-4	PRO	-	EXPRESSION TAG	UNP P71727
C	-3	ARG	-	EXPRESSION TAG	UNP P71727
C	-2	GLY	-	EXPRESSION TAG	UNP P71727
C	-1	SER	-	EXPRESSION TAG	UNP P71727
C	0	HIS	-	EXPRESSION TAG	UNP P71727
D	-19	MSE	-	EXPRESSION TAG	UNP P71727
D	-18	GLY	-	EXPRESSION TAG	UNP P71727
D	-17	SER	-	EXPRESSION TAG	UNP P71727
D	-16	SER	-	EXPRESSION TAG	UNP P71727
D	-15	HIS	-	EXPRESSION TAG	UNP P71727
D	-14	HIS	-	EXPRESSION TAG	UNP P71727
D	-13	HIS	-	EXPRESSION TAG	UNP P71727
D	-12	HIS	-	EXPRESSION TAG	UNP P71727
D	-11	HIS	-	EXPRESSION TAG	UNP P71727
D	-10	HIS	-	EXPRESSION TAG	UNP P71727
D	-9	SER	-	EXPRESSION TAG	UNP P71727
D	-8	SER	-	EXPRESSION TAG	UNP P71727
D	-7	GLY	-	EXPRESSION TAG	UNP P71727
D	-6	LEU	-	EXPRESSION TAG	UNP P71727
D	-5	VAL	-	EXPRESSION TAG	UNP P71727
D	-4	PRO	-	EXPRESSION TAG	UNP P71727
D	-3	ARG	-	EXPRESSION TAG	UNP P71727
D	-2	GLY	-	EXPRESSION TAG	UNP P71727
D	-1	SER	-	EXPRESSION TAG	UNP P71727
D	0	HIS	-	EXPRESSION TAG	UNP P71727
E	-19	MSE	-	EXPRESSION TAG	UNP P71727
E	-18	GLY	-	EXPRESSION TAG	UNP P71727
E	-17	SER	-	EXPRESSION TAG	UNP P71727
E	-16	SER	-	EXPRESSION TAG	UNP P71727
E	-15	HIS	-	EXPRESSION TAG	UNP P71727
E	-14	HIS	-	EXPRESSION TAG	UNP P71727
E	-13	HIS	-	EXPRESSION TAG	UNP P71727
E	-12	HIS	-	EXPRESSION TAG	UNP P71727
E	-11	HIS	-	EXPRESSION TAG	UNP P71727

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Chain	Residue	Modelled	Actual	Comment	Reference
E	-10	HIS	-	EXPRESSION TAG	UNP P71727
E	-9	SER	-	EXPRESSION TAG	UNP P71727
E	-8	SER	-	EXPRESSION TAG	UNP P71727
E	-7	GLY	-	EXPRESSION TAG	UNP P71727
E	-6	LEU	-	EXPRESSION TAG	UNP P71727
E	-5	VAL	-	EXPRESSION TAG	UNP P71727
E	-4	PRO	-	EXPRESSION TAG	UNP P71727
E	-3	ARG	-	EXPRESSION TAG	UNP P71727
E	-2	GLY	-	EXPRESSION TAG	UNP P71727
E	-1	SER	-	EXPRESSION TAG	UNP P71727
E	0	HIS	-	EXPRESSION TAG	UNP P71727
F	-19	MSE	-	EXPRESSION TAG	UNP P71727
F	-18	GLY	-	EXPRESSION TAG	UNP P71727
F	-17	SER	-	EXPRESSION TAG	UNP P71727
F	-16	SER	-	EXPRESSION TAG	UNP P71727
F	-15	HIS	-	EXPRESSION TAG	UNP P71727
F	-14	HIS	-	EXPRESSION TAG	UNP P71727
F	-13	HIS	-	EXPRESSION TAG	UNP P71727
F	-12	HIS	-	EXPRESSION TAG	UNP P71727
F	-11	HIS	-	EXPRESSION TAG	UNP P71727
F	-10	HIS	-	EXPRESSION TAG	UNP P71727
F	-9	SER	-	EXPRESSION TAG	UNP P71727
F	-8	SER	-	EXPRESSION TAG	UNP P71727
F	-7	GLY	-	EXPRESSION TAG	UNP P71727
F	-6	LEU	-	EXPRESSION TAG	UNP P71727
F	-5	VAL	-	EXPRESSION TAG	UNP P71727
F	-4	PRO	-	EXPRESSION TAG	UNP P71727
F	-3	ARG	-	EXPRESSION TAG	UNP P71727
F	-2	GLY	-	EXPRESSION TAG	UNP P71727
F	-1	SER	-	EXPRESSION TAG	UNP P71727
F	0	HIS	-	EXPRESSION TAG	UNP P71727
G	-19	MSE	-	EXPRESSION TAG	UNP P71727
G	-18	GLY	-	EXPRESSION TAG	UNP P71727
G	-17	SER	-	EXPRESSION TAG	UNP P71727
G	-16	SER	-	EXPRESSION TAG	UNP P71727
G	-15	HIS	-	EXPRESSION TAG	UNP P71727
G	-14	HIS	-	EXPRESSION TAG	UNP P71727
G	-13	HIS	-	EXPRESSION TAG	UNP P71727
G	-12	HIS	-	EXPRESSION TAG	UNP P71727
G	-11	HIS	-	EXPRESSION TAG	UNP P71727
G	-10	HIS	-	EXPRESSION TAG	UNP P71727
G	-9	SER	-	EXPRESSION TAG	UNP P71727

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-8	SER	-	EXPRESSION TAG	UNP P71727
G	-7	GLY	-	EXPRESSION TAG	UNP P71727
G	-6	LEU	-	EXPRESSION TAG	UNP P71727
G	-5	VAL	-	EXPRESSION TAG	UNP P71727
G	-4	PRO	-	EXPRESSION TAG	UNP P71727
G	-3	ARG	-	EXPRESSION TAG	UNP P71727
G	-2	GLY	-	EXPRESSION TAG	UNP P71727
G	-1	SER	-	EXPRESSION TAG	UNP P71727
G	0	HIS	-	EXPRESSION TAG	UNP P71727
H	-19	MSE	-	EXPRESSION TAG	UNP P71727
H	-18	GLY	-	EXPRESSION TAG	UNP P71727
H	-17	SER	-	EXPRESSION TAG	UNP P71727
H	-16	SER	-	EXPRESSION TAG	UNP P71727
H	-15	HIS	-	EXPRESSION TAG	UNP P71727
H	-14	HIS	-	EXPRESSION TAG	UNP P71727
H	-13	HIS	-	EXPRESSION TAG	UNP P71727
H	-12	HIS	-	EXPRESSION TAG	UNP P71727
H	-11	HIS	-	EXPRESSION TAG	UNP P71727
H	-10	HIS	-	EXPRESSION TAG	UNP P71727
H	-9	SER	-	EXPRESSION TAG	UNP P71727
H	-8	SER	-	EXPRESSION TAG	UNP P71727
H	-7	GLY	-	EXPRESSION TAG	UNP P71727
H	-6	LEU	-	EXPRESSION TAG	UNP P71727
H	-5	VAL	-	EXPRESSION TAG	UNP P71727
H	-4	PRO	-	EXPRESSION TAG	UNP P71727
H	-3	ARG	-	EXPRESSION TAG	UNP P71727
H	-2	GLY	-	EXPRESSION TAG	UNP P71727
H	-1	SER	-	EXPRESSION TAG	UNP P71727
H	0	HIS	-	EXPRESSION TAG	UNP P71727
I	-19	MSE	-	EXPRESSION TAG	UNP P71727
I	-18	GLY	-	EXPRESSION TAG	UNP P71727
I	-17	SER	-	EXPRESSION TAG	UNP P71727
I	-16	SER	-	EXPRESSION TAG	UNP P71727
I	-15	HIS	-	EXPRESSION TAG	UNP P71727
I	-14	HIS	-	EXPRESSION TAG	UNP P71727
I	-13	HIS	-	EXPRESSION TAG	UNP P71727
I	-12	HIS	-	EXPRESSION TAG	UNP P71727
I	-11	HIS	-	EXPRESSION TAG	UNP P71727
I	-10	HIS	-	EXPRESSION TAG	UNP P71727
I	-9	SER	-	EXPRESSION TAG	UNP P71727
I	-8	SER	-	EXPRESSION TAG	UNP P71727
I	-7	GLY	-	EXPRESSION TAG	UNP P71727

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Chain	Residue	Modelled	Actual	Comment	Reference
I	-6	LEU	-	EXPRESSION TAG	UNP P71727
I	-5	VAL	-	EXPRESSION TAG	UNP P71727
I	-4	PRO	-	EXPRESSION TAG	UNP P71727
I	-3	ARG	-	EXPRESSION TAG	UNP P71727
I	-2	GLY	-	EXPRESSION TAG	UNP P71727
I	-1	SER	-	EXPRESSION TAG	UNP P71727
I	0	HIS	-	EXPRESSION TAG	UNP P71727
J	-19	MSE	-	EXPRESSION TAG	UNP P71727
J	-18	GLY	-	EXPRESSION TAG	UNP P71727
J	-17	SER	-	EXPRESSION TAG	UNP P71727
J	-16	SER	-	EXPRESSION TAG	UNP P71727
J	-15	HIS	-	EXPRESSION TAG	UNP P71727
J	-14	HIS	-	EXPRESSION TAG	UNP P71727
J	-13	HIS	-	EXPRESSION TAG	UNP P71727
J	-12	HIS	-	EXPRESSION TAG	UNP P71727
J	-11	HIS	-	EXPRESSION TAG	UNP P71727
J	-10	HIS	-	EXPRESSION TAG	UNP P71727
J	-9	SER	-	EXPRESSION TAG	UNP P71727
J	-8	SER	-	EXPRESSION TAG	UNP P71727
J	-7	GLY	-	EXPRESSION TAG	UNP P71727
J	-6	LEU	-	EXPRESSION TAG	UNP P71727
J	-5	VAL	-	EXPRESSION TAG	UNP P71727
J	-4	PRO	-	EXPRESSION TAG	UNP P71727
J	-3	ARG	-	EXPRESSION TAG	UNP P71727
J	-2	GLY	-	EXPRESSION TAG	UNP P71727
J	-1	SER	-	EXPRESSION TAG	UNP P71727
J	0	HIS	-	EXPRESSION TAG	UNP P71727
K	-19	MSE	-	EXPRESSION TAG	UNP P71727
K	-18	GLY	-	EXPRESSION TAG	UNP P71727
K	-17	SER	-	EXPRESSION TAG	UNP P71727
K	-16	SER	-	EXPRESSION TAG	UNP P71727
K	-15	HIS	-	EXPRESSION TAG	UNP P71727
K	-14	HIS	-	EXPRESSION TAG	UNP P71727
K	-13	HIS	-	EXPRESSION TAG	UNP P71727
K	-12	HIS	-	EXPRESSION TAG	UNP P71727
K	-11	HIS	-	EXPRESSION TAG	UNP P71727
K	-10	HIS	-	EXPRESSION TAG	UNP P71727
K	-9	SER	-	EXPRESSION TAG	UNP P71727
K	-8	SER	-	EXPRESSION TAG	UNP P71727
K	-7	GLY	-	EXPRESSION TAG	UNP P71727
K	-6	LEU	-	EXPRESSION TAG	UNP P71727
K	-5	VAL	-	EXPRESSION TAG	UNP P71727

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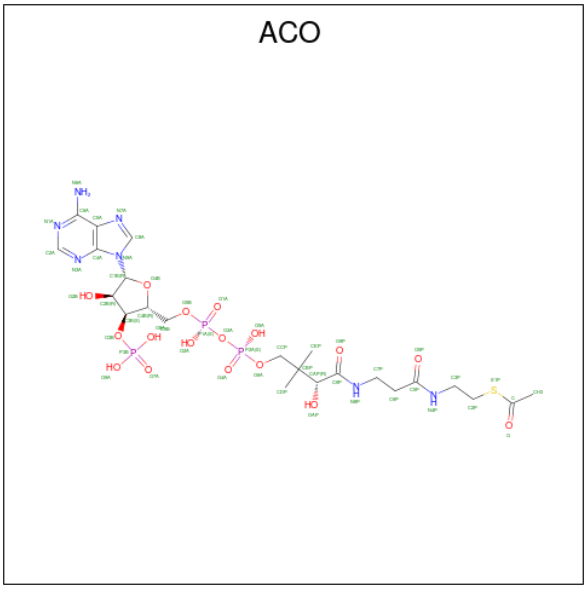
Chain	Residue	Modelled	Actual	Comment	Reference
K	-4	PRO	-	EXPRESSION TAG	UNP P71727
K	-3	ARG	-	EXPRESSION TAG	UNP P71727
K	-2	GLY	-	EXPRESSION TAG	UNP P71727
K	-1	SER	-	EXPRESSION TAG	UNP P71727
K	0	HIS	-	EXPRESSION TAG	UNP P71727
L	-19	MSE	-	EXPRESSION TAG	UNP P71727
L	-18	GLY	-	EXPRESSION TAG	UNP P71727
L	-17	SER	-	EXPRESSION TAG	UNP P71727
L	-16	SER	-	EXPRESSION TAG	UNP P71727
L	-15	HIS	-	EXPRESSION TAG	UNP P71727
L	-14	HIS	-	EXPRESSION TAG	UNP P71727
L	-13	HIS	-	EXPRESSION TAG	UNP P71727
L	-12	HIS	-	EXPRESSION TAG	UNP P71727
L	-11	HIS	-	EXPRESSION TAG	UNP P71727
L	-10	HIS	-	EXPRESSION TAG	UNP P71727
L	-9	SER	-	EXPRESSION TAG	UNP P71727
L	-8	SER	-	EXPRESSION TAG	UNP P71727
L	-7	GLY	-	EXPRESSION TAG	UNP P71727
L	-6	LEU	-	EXPRESSION TAG	UNP P71727
L	-5	VAL	-	EXPRESSION TAG	UNP P71727
L	-4	PRO	-	EXPRESSION TAG	UNP P71727
L	-3	ARG	-	EXPRESSION TAG	UNP P71727
L	-2	GLY	-	EXPRESSION TAG	UNP P71727
L	-1	SER	-	EXPRESSION TAG	UNP P71727
L	0	HIS	-	EXPRESSION TAG	UNP P71727

- Molecule 2 is ACETYL COENZYME *A (three-letter code: ACO) (formula: $C_{23}H_{38}N_7O_{17}P_3S$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	B	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	C	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	D	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	E	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	F	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	G	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	H	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	I	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	J	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	K	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		
2	L	1	Total	C	N	O	P	S	0	0
			51	23	7	17	3	1		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	46	Total	O	0	0
			46	46		
3	B	74	Total	O	0	0
			74	74		
3	C	54	Total	O	0	0
			54	54		
3	D	51	Total	O	0	0
			51	51		
3	E	47	Total	O	0	0
			47	47		
3	F	48	Total	O	0	0
			48	48		
3	G	31	Total	O	0	0
			31	31		
3	H	39	Total	O	0	0
			39	39		

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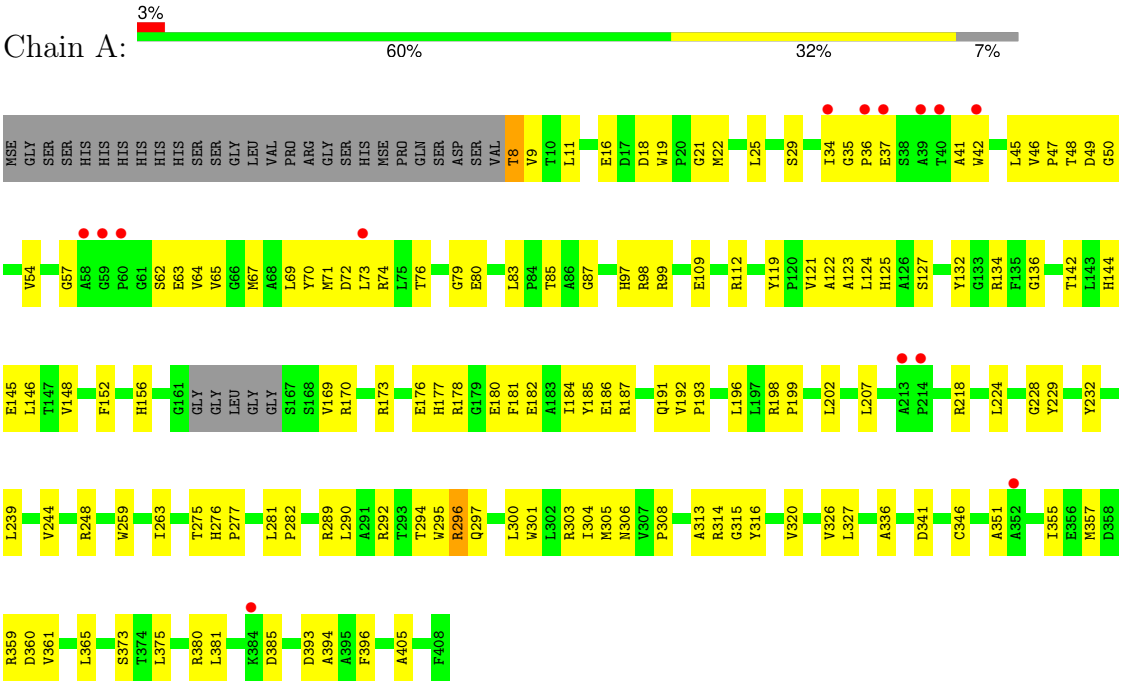
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	I	17	Total O 17 17	0	0
3	J	9	Total O 9 9	0	0
3	K	29	Total O 29 29	0	0
3	L	38	Total O 38 38	0	0

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.

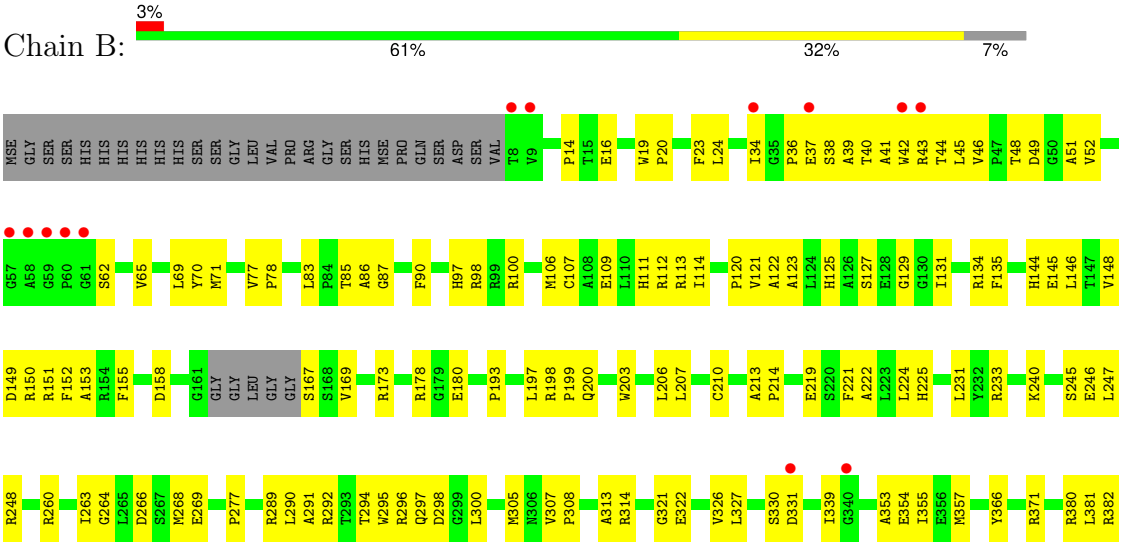
• Molecule 1: Enhanced intracellular survival protein

Chain A:



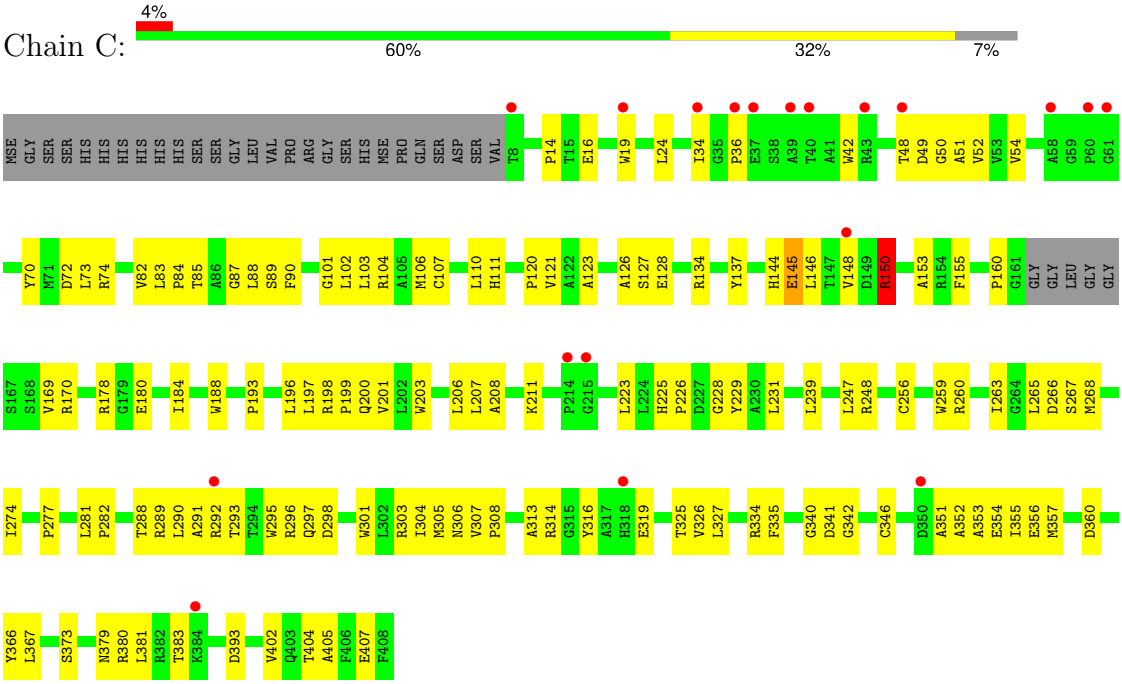
• Molecule 1: Enhanced intracellular survival protein

Chain B:



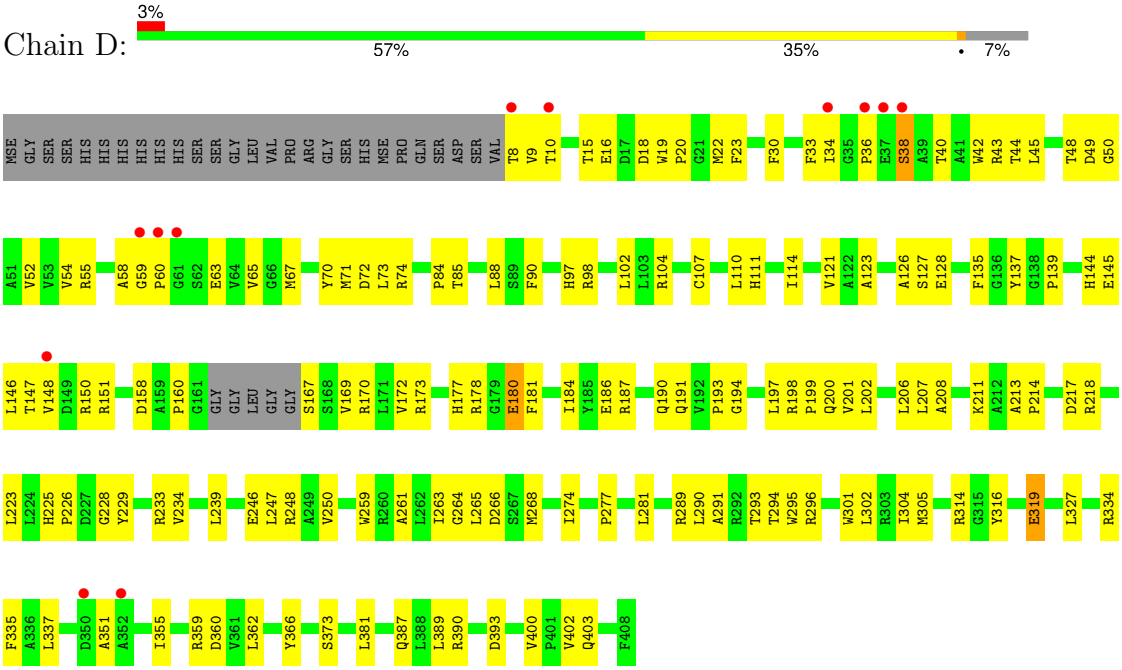
• Molecule 1: Enhanced intracellular survival protein

Chain C:



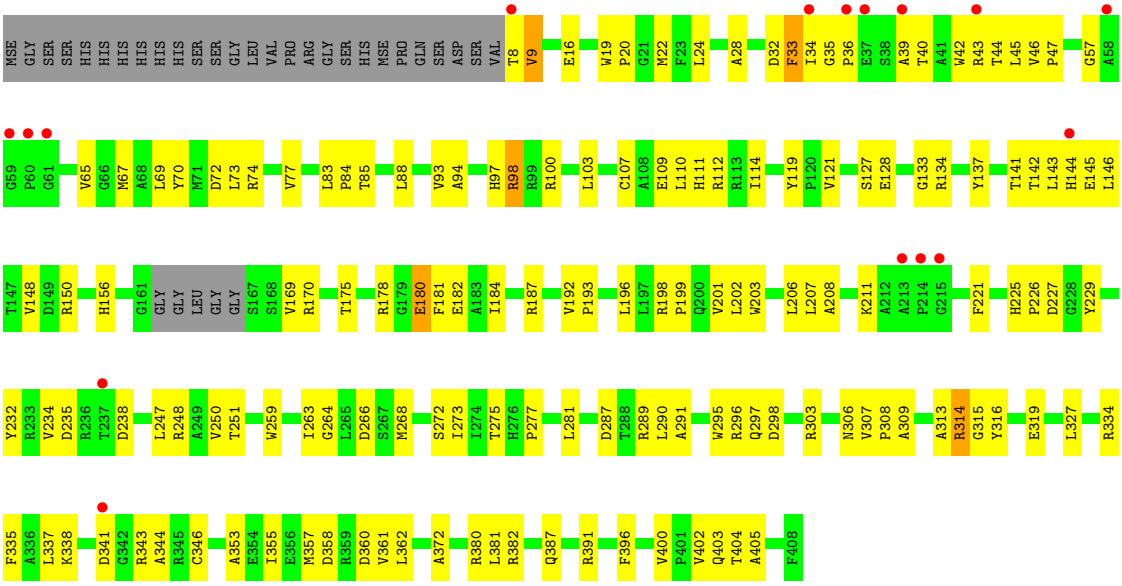
• Molecule 1: Enhanced intracellular survival protein

Chain D:



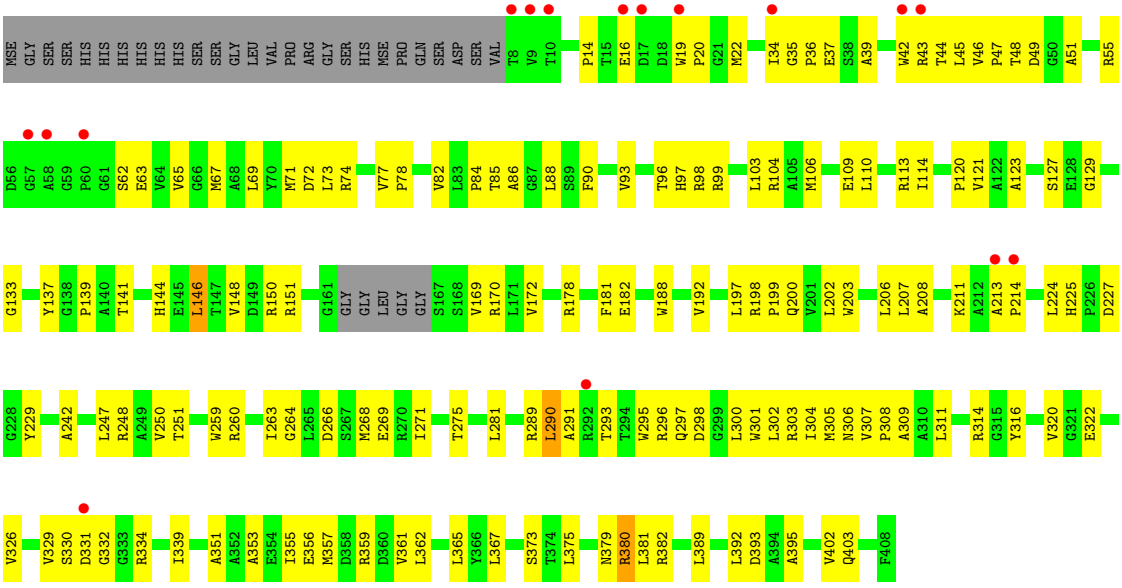
• Molecule 1: Enhanced intracellular survival protein

Chain E:



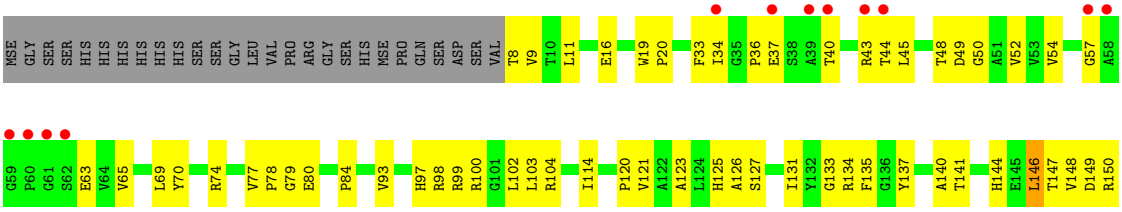
• Molecule 1: Enhanced intracellular survival protein

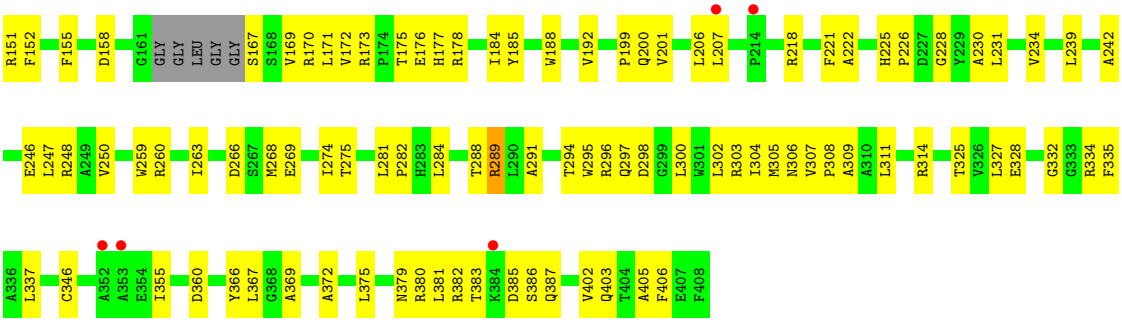
Chain F:



• Molecule 1: Enhanced intracellular survival protein

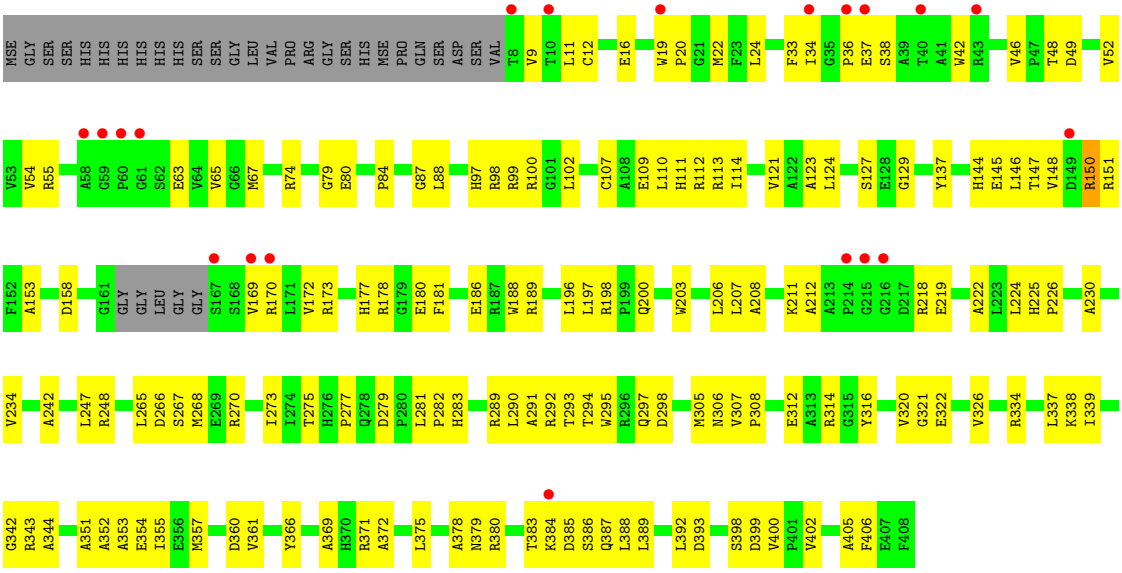
Chain G:





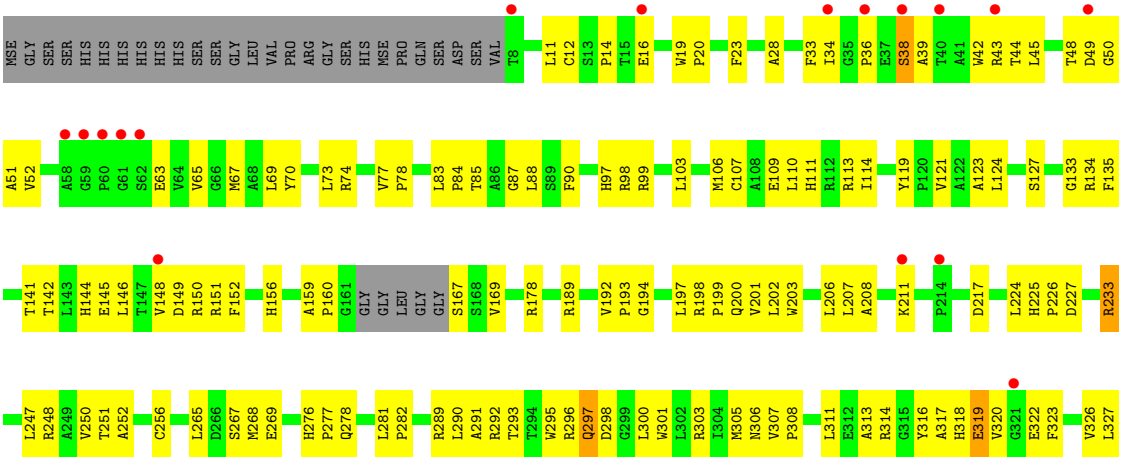
• Molecule 1: Enhanced intracellular survival protein

Chain H:



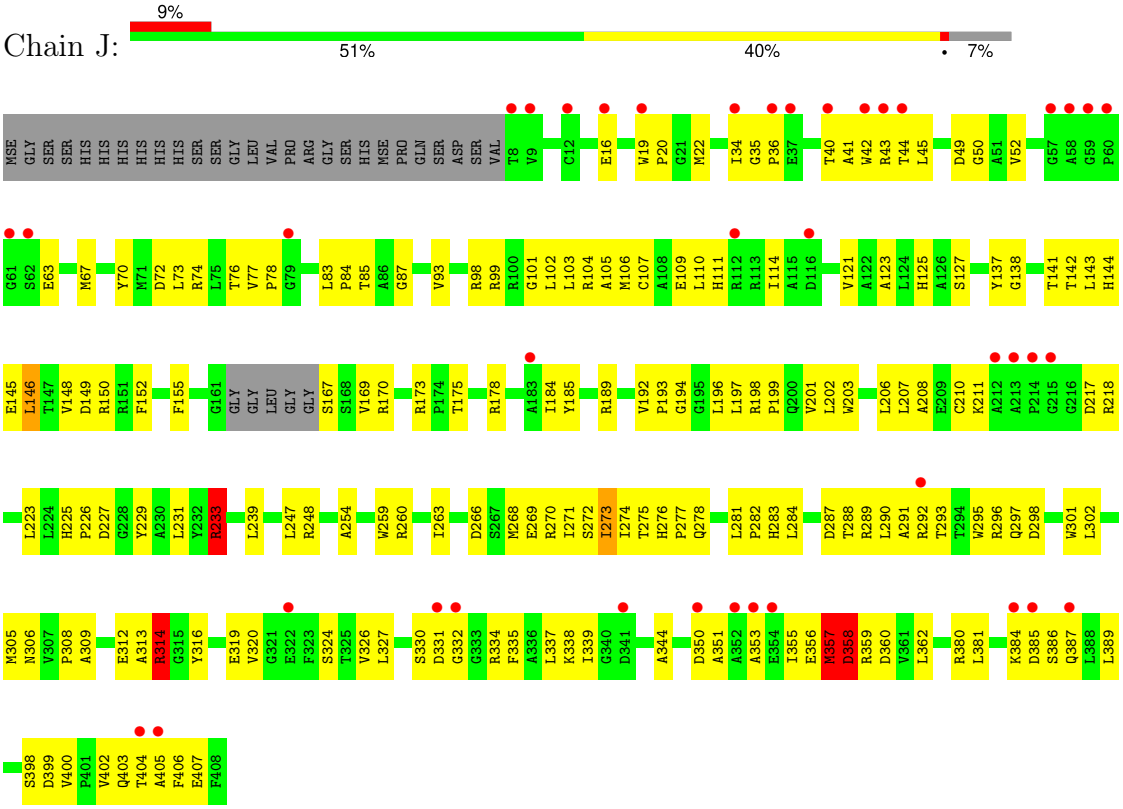
• Molecule 1: Enhanced intracellular survival protein

Chain I:



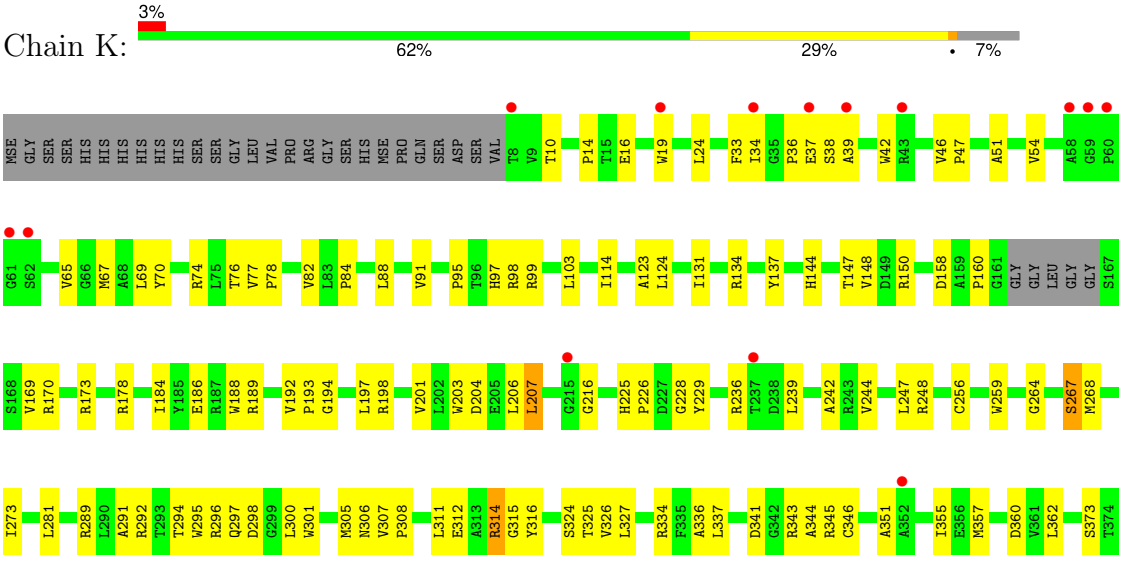
• Molecule 1: Enhanced intracellular survival protein

Chain J:



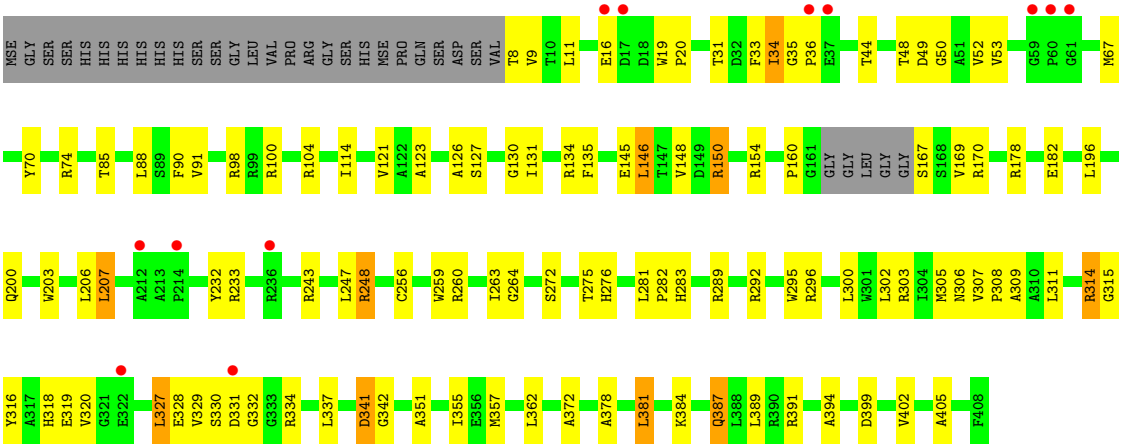
• Molecule 1: Enhanced intracellular survival protein

Chain K:



• Molecule 1: Enhanced intracellular survival protein

Chain L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	108.13Å 150.19Å 184.38Å 90.00° 103.05° 90.00°	Depositor
Resolution (Å)	29.94 – 2.80 29.94 – 2.80	Depositor EDS
% Data completeness (in resolution range)	93.4 (29.94-2.80) 95.2 (29.94-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	5.87 (at 2.80Å)	Xtriage
Refinement program	PHENIX 1.6.4_486	Depositor
R, R_{free}	0.192 , 0.248 0.219 , 0.218	Depositor DCC
R_{free} test set	13782 reflections (9.98%)	wwPDB-VP
Wilson B-factor (Å^2)	40.1	Xtriage
Anisotropy	0.343	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.38 , 46.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	37731	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.23% 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: ACO

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.44	0/3115	0.63	0/4226
1	B	0.41	0/3115	0.62	0/4226
1	C	0.41	0/3115	0.61	0/4226
1	D	0.41	0/3115	0.63	1/4226 (0.0%)
1	E	0.41	0/3115	0.62	0/4226
1	F	0.43	0/3115	0.62	1/4226 (0.0%)
1	G	0.39	0/3115	0.59	0/4226
1	H	0.39	0/3115	0.57	0/4226
1	I	0.35	0/3115	0.58	0/4226
1	J	0.37	0/3115	0.59	0/4226
1	K	0.37	0/3115	0.57	0/4226
1	L	0.41	0/3115	0.62	1/4226 (0.0%)
All	All	0.40	0/37380	0.60	3/50712 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
1	F	0	1
1	J	0	2
All	All	0	5

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	88	LEU	CA-CB-CG	5.76	128.56	115.30
1	L	35	GLY	N-CA-C	5.63	127.18	113.10
1	D	337	LEU	CA-CB-CG	5.35	127.61	115.30

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	296	ARG	Sidechain
1	C	150	ARG	Sidechain
1	F	380	ARG	Sidechain
1	J	233	ARG	Sidechain
1	J	314	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3053	0	3020	157	0
1	B	3053	0	3020	173	0
1	C	3053	0	3020	199	0
1	D	3053	0	3020	214	0
1	E	3053	0	3020	204	2
1	F	3053	0	3020	235	0
1	G	3053	0	3020	182	0
1	H	3053	0	3020	239	0
1	I	3053	0	3020	250	0
1	J	3053	0	3020	219	1
1	K	3053	0	3020	164	1
1	L	3053	0	3018	84	2
2	A	51	0	34	6	0
2	B	51	0	33	4	0
2	C	51	0	34	12	0
2	D	51	0	33	2	0
2	E	51	0	34	8	0
2	F	51	0	33	5	0
2	G	51	0	33	6	0
2	H	51	0	33	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	I	51	0	34	7	0
2	J	51	0	34	3	0
2	K	51	0	34	10	0
2	L	51	0	33	5	0
3	A	46	0	0	2	0
3	B	74	0	0	6	0
3	C	54	0	0	6	0
3	D	51	0	0	5	0
3	E	47	0	0	2	0
3	F	48	0	0	2	0
3	G	31	0	0	3	0
3	H	39	0	0	4	0
3	I	17	0	0	1	0
3	J	9	0	0	6	0
3	K	29	0	0	4	0
3	L	38	0	0	3	0
All	All	37731	0	36640	2186	3

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 30.

All (2186) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:22:MSE:HE2	1:F:42:TRP:CH2	1.32	1.64
1:C:357:MSE:HE2	1:C:381:LEU:CD1	1.21	1.57
1:F:357:MSE:HE2	1:F:381:LEU:CD1	1.27	1.57
1:D:148:VAL:CG2	1:D:291:ALA:HA	1.31	1.55
1:H:354:GLU:HA	1:H:384:LYS:NZ	1.18	1.51
1:F:22:MSE:CE	1:F:42:TRP:CH2	1.88	1.49
1:I:357:MSE:CE	1:I:381:LEU:HD13	1.39	1.48
1:C:148:VAL:CG2	1:C:291:ALA:HA	1.44	1.48
1:F:144:HIS:NE2	1:F:296:ARG:NH1	1.66	1.44
1:F:42:TRP:CE2	1:F:69:LEU:CD2	2.02	1.41
1:C:148:VAL:HG22	1:C:291:ALA:CA	1.51	1.40
1:D:148:VAL:HG22	1:D:291:ALA:CA	1.50	1.39
1:F:42:TRP:NE1	1:F:69:LEU:HD22	1.38	1.38
1:E:148:VAL:CG2	1:E:291:ALA:HA	1.56	1.35
1:K:244:VAL:CG2	1:K:273:ILE:HD11	1.58	1.34
1:F:42:TRP:CZ2	1:F:69:LEU:HD23	1.61	1.33
1:C:357:MSE:CE	1:C:381:LEU:CD1	2.06	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:357:MSE:HE2	1:I:381:LEU:CD1	1.58	1.31
1:H:180:GLU:OE2	1:H:224:LEU:HD21	1.20	1.29
1:G:40:THR:O	1:G:44:THR:HG22	1.30	1.28
1:B:85:THR:HG23	1:B:121:VAL:O	1.18	1.28
1:I:44:THR:O	1:I:45:LEU:HD23	1.31	1.28
1:K:244:VAL:HG21	1:K:273:ILE:CD1	1.63	1.28
1:K:244:VAL:HB	1:K:273:ILE:CG1	1.63	1.27
1:I:357:MSE:CE	1:I:381:LEU:CD1	2.10	1.26
1:A:180:GLU:OE2	1:A:224:LEU:HD21	1.21	1.26
1:C:52:VAL:CG2	1:C:110:LEU:HD11	1.67	1.24
1:E:148:VAL:HG22	1:E:291:ALA:CA	1.67	1.23
1:H:34:ILE:HB	1:H:37:GLU:CG	1.66	1.23
1:H:354:GLU:CA	1:H:384:LYS:NZ	2.03	1.22
1:H:169:VAL:HG13	1:H:224:LEU:O	1.12	1.22
1:K:244:VAL:CB	1:K:273:ILE:HG12	1.69	1.21
1:G:150:ARG:HD3	1:G:268:MSE:O	1.34	1.21
1:G:11:LEU:HD11	1:G:52:VAL:CG2	1.69	1.21
1:C:106:MSE:O	1:C:110:LEU:HD13	1.37	1.20
1:I:34:ILE:HG22	1:I:36:PRO:HD2	1.18	1.18
1:C:52:VAL:HG21	1:C:110:LEU:CD1	1.72	1.18
1:D:150:ARG:NH2	1:D:266:ASP:HA	1.59	1.18
1:B:180:GLU:OE2	1:B:224:LEU:HD21	1.44	1.16
1:H:169:VAL:HG13	1:H:224:LEU:C	1.62	1.16
1:F:22:MSE:CE	1:F:42:TRP:CZ2	2.28	1.16
1:F:357:MSE:CE	1:F:381:LEU:CD1	2.24	1.16
1:E:146:LEU:HD12	1:E:275:THR:CG2	1.76	1.15
1:E:327:LEU:HD11	1:E:357:MSE:HE3	1.18	1.15
1:K:244:VAL:HG11	1:K:273:ILE:HD13	1.24	1.15
1:D:34:ILE:HG22	1:D:36:PRO:HD2	1.26	1.14
1:D:40:THR:O	1:D:44:THR:HG22	1.44	1.14
1:L:34:ILE:HG22	1:L:36:PRO:HD2	1.28	1.14
1:B:150:ARG:HD3	1:B:268:MSE:O	1.47	1.14
1:H:34:ILE:HB	1:H:37:GLU:HG2	1.14	1.14
1:G:11:LEU:HD11	1:G:52:VAL:HG21	1.27	1.13
1:H:385:ASP:OD2	1:H:387:GLN:HG2	1.45	1.13
1:I:148:VAL:HG22	1:I:291:ALA:HA	1.25	1.13
1:G:222:ALA:HB2	1:G:231:LEU:HD23	1.27	1.13
1:C:357:MSE:CE	1:C:381:LEU:HD13	1.73	1.13
1:I:323:PHE:HB2	1:I:391:ARG:NH1	1.64	1.12
1:F:121:VAL:HG12	1:F:304:ILE:HA	1.30	1.12
1:F:22:MSE:HE1	1:F:42:TRP:CZ2	1.84	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:106:MSE:O	1:C:110:LEU:CD1	1.98	1.12
1:E:146:LEU:CD1	1:E:275:THR:HG21	1.80	1.12
1:C:145:GLU:CB	1:C:295:TRP:HB3	1.81	1.11
1:I:149:ASP:OD2	1:I:152:PHE:HE1	1.30	1.11
1:C:357:MSE:HE2	1:C:381:LEU:HD11	1.29	1.11
1:D:146:LEU:HD21	1:D:148:VAL:CG2	1.80	1.10
1:F:121:VAL:HA	1:F:305:MSE:HG2	1.32	1.10
1:I:148:VAL:CG2	1:I:291:ALA:HA	1.79	1.10
1:J:203:TRP:O	1:J:207:LEU:HD13	1.51	1.10
1:C:357:MSE:HE2	1:C:381:LEU:CG	1.82	1.10
1:D:146:LEU:HD21	1:D:148:VAL:HG23	1.13	1.10
1:H:178:ARG:NH1	1:H:207:LEU:CD1	2.15	1.10
1:I:148:VAL:HG13	1:I:290:LEU:O	1.51	1.10
1:K:327:LEU:HD11	1:K:357:MSE:HE3	1.35	1.09
1:C:145:GLU:HB2	1:C:295:TRP:HB3	1.22	1.09
1:D:33:PHE:HE1	1:D:38:SER:OG	1.36	1.09
1:D:146:LEU:CD2	1:D:148:VAL:HG23	1.81	1.08
1:E:44:THR:HG21	1:E:201:VAL:HG11	1.35	1.08
1:C:178:ARG:HD2	1:C:207:LEU:HD11	1.33	1.08
1:H:169:VAL:CG1	1:H:224:LEU:O	2.01	1.08
1:D:10:THR:HG21	1:H:384:LYS:HD2	1.36	1.08
1:F:150:ARG:HD3	1:F:268:MSE:O	1.52	1.07
1:J:357:MSE:HE1	1:J:362:LEU:HB2	1.25	1.07
1:D:148:VAL:HG13	1:D:290:LEU:C	1.75	1.07
1:F:42:TRP:CZ2	1:F:69:LEU:CD2	2.32	1.06
1:I:149:ASP:OD2	1:I:152:PHE:CE1	2.06	1.06
1:C:357:MSE:HE2	1:C:381:LEU:HD13	1.09	1.06
1:F:42:TRP:NE1	1:F:69:LEU:CD2	2.12	1.06
1:G:222:ALA:HB2	1:G:231:LEU:CD2	1.85	1.06
1:F:357:MSE:CE	1:F:381:LEU:HD13	1.84	1.05
1:H:354:GLU:CA	1:H:384:LYS:HZ1	1.64	1.05
1:G:150:ARG:CD	1:G:268:MSE:O	2.04	1.05
1:J:74:ARG:HD3	1:J:84:PRO:HA	1.39	1.05
1:E:327:LEU:CD1	1:E:357:MSE:HE3	1.86	1.04
1:H:178:ARG:NH1	1:H:207:LEU:HD12	1.73	1.04
1:K:327:LEU:CD1	1:K:357:MSE:HE3	1.87	1.04
1:G:44:THR:HG21	1:G:201:VAL:HG11	1.39	1.04
1:D:193:PRO:HD3	1:D:400:VAL:HG21	1.38	1.04
1:F:357:MSE:HE2	1:F:381:LEU:HD11	1.07	1.04
1:H:109:GLU:O	1:H:112:ARG:HG2	1.57	1.04
1:G:104:ARG:NH2	2:G:501:ACO:O8A	1.91	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:34:ILE:CB	1:H:37:GLU:HG2	1.87	1.03
1:C:121:VAL:HA	1:C:305:MSE:HG2	1.37	1.03
1:H:33:PHE:CE1	1:H:38:SER:OG	2.10	1.03
1:C:107:CYS:O	1:C:111:HIS:ND1	1.91	1.03
1:C:178:ARG:HD2	1:C:207:LEU:CD1	1.88	1.03
1:E:295:TRP:HZ2	1:E:297:GLN:NE2	1.54	1.02
1:F:72:ASP:C	1:F:73:LEU:HD12	1.79	1.02
1:J:34:ILE:HG22	1:J:36:PRO:HD2	1.09	1.02
1:G:175:THR:HA	1:G:207:LEU:HD11	1.34	1.02
1:I:169:VAL:HG22	1:I:225:HIS:HB2	1.38	1.01
1:C:357:MSE:HB3	1:C:381:LEU:HD13	1.41	1.01
1:J:34:ILE:HG22	1:J:36:PRO:CD	1.90	1.01
1:J:43:ARG:HH11	1:J:43:ARG:HA	1.23	1.01
1:B:42:TRP:NE1	1:B:90:PHE:CE2	2.29	1.01
1:A:355:ILE:HD11	1:A:381:LEU:HD13	1.41	1.01
1:E:146:LEU:HD12	1:E:275:THR:HG21	1.06	1.01
1:G:11:LEU:CD1	1:G:52:VAL:CG2	2.38	1.01
1:F:34:ILE:HG22	1:F:36:PRO:HD2	1.37	1.00
1:H:34:ILE:HB	1:H:37:GLU:CD	1.80	1.00
1:K:314:ARG:NH1	1:K:315:GLY:O	1.93	1.00
1:F:357:MSE:HE2	1:F:381:LEU:HD13	1.06	1.00
1:E:295:TRP:CZ2	1:E:297:GLN:NE2	2.30	1.00
1:C:34:ILE:HG22	1:C:36:PRO:HD2	1.43	1.00
1:C:357:MSE:CE	1:C:381:LEU:HD11	1.81	1.00
1:F:356:GLU:O	1:F:381:LEU:HD12	1.62	1.00
1:K:244:VAL:CB	1:K:273:ILE:CD1	2.39	1.00
1:A:73:LEU:CD1	1:A:87:GLY:HA3	1.91	1.00
1:L:34:ILE:CG2	1:L:36:PRO:HD2	1.92	1.00
1:I:323:PHE:HB2	1:I:391:ARG:HH11	1.18	0.99
1:F:22:MSE:CE	1:F:42:TRP:HH2	1.48	0.99
1:D:178:ARG:HG3	1:D:207:LEU:HD11	1.42	0.99
1:C:357:MSE:HE2	1:C:381:LEU:CD2	1.93	0.99
1:H:150:ARG:HD3	1:H:151:ARG:N	1.78	0.99
1:H:295:TRP:CZ2	1:H:297:GLN:NE2	2.30	0.99
1:E:358:ASP:O	1:E:361:VAL:HG12	1.60	0.98
1:F:357:MSE:CE	1:F:381:LEU:HD11	1.88	0.98
1:I:357:MSE:HE3	1:I:381:LEU:CD1	1.91	0.98
1:C:104:ARG:NH2	3:C:635:HOH:O	1.95	0.98
1:D:148:VAL:CG2	1:D:291:ALA:CA	2.24	0.98
1:B:85:THR:CG2	1:B:121:VAL:O	2.12	0.97
1:H:180:GLU:OE2	1:H:224:LEU:CD2	2.11	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:150:ARG:HH21	1:C:266:ASP:HA	1.29	0.97
1:E:148:VAL:HG13	1:E:290:LEU:C	1.84	0.97
1:E:156:HIS:CE1	1:F:380:ARG:NH1	2.33	0.97
1:B:45:LEU:HD11	1:B:199:PRO:HG2	1.43	0.97
1:I:45:LEU:HD11	1:I:199:PRO:HG2	1.46	0.97
1:J:189:ARG:HH11	1:J:197:LEU:HD13	1.28	0.97
1:F:42:TRP:CE2	1:F:69:LEU:HD21	1.98	0.96
1:H:295:TRP:HZ2	1:H:297:GLN:NE2	1.63	0.96
1:J:405:ALA:HB3	3:J:602:HOH:O	1.64	0.96
1:K:144:HIS:NE2	1:K:296:ARG:NH1	2.13	0.96
1:J:227:ASP:OD2	3:J:603:HOH:O	1.84	0.96
1:K:244:VAL:HG11	1:K:273:ILE:CD1	1.95	0.96
1:C:144:HIS:CD2	1:C:277:PRO:HG3	2.01	0.95
1:G:303:ARG:NH1	1:G:305:MSE:SE	2.49	0.95
1:E:34:ILE:HG22	1:E:36:PRO:HD2	1.48	0.95
1:E:297:GLN:HG3	1:F:289:ARG:HD3	1.47	0.95
1:H:354:GLU:HA	1:H:384:LYS:HZ2	1.29	0.95
1:A:85:THR:HG23	1:A:121:VAL:O	1.66	0.95
1:A:178:ARG:HG3	1:A:207:LEU:HD11	1.46	0.95
1:B:148:VAL:HG22	1:B:291:ALA:HA	1.47	0.94
1:E:93:VAL:O	1:E:98:ARG:NH2	2.00	0.94
1:I:34:ILE:CG2	1:I:36:PRO:HD2	1.96	0.94
1:A:320:VAL:CG2	1:A:394:ALA:HB1	1.97	0.94
1:D:8:THR:N	1:H:353:ALA:H	1.64	0.94
1:H:98:ARG:HH21	1:H:99:ARG:NH2	1.64	0.94
1:F:121:VAL:CG1	1:F:304:ILE:HA	1.97	0.94
1:G:9:VAL:CG1	1:G:54:VAL:CG1	2.46	0.94
1:J:295:TRP:HZ2	1:J:297:GLN:NE2	1.67	0.93
1:C:178:ARG:CD	1:C:207:LEU:HD11	1.98	0.93
1:C:357:MSE:CE	1:C:381:LEU:CD2	2.46	0.93
1:H:385:ASP:CG	1:H:387:GLN:HG2	1.87	0.93
1:I:356:GLU:O	1:I:381:LEU:HD12	1.67	0.93
1:K:193:PRO:HD3	1:K:400:VAL:HG11	1.51	0.93
1:J:34:ILE:CG2	1:J:36:PRO:HD2	1.98	0.92
1:K:193:PRO:CD	1:K:400:VAL:CG1	2.48	0.92
1:C:355:ILE:HD11	1:C:381:LEU:HD21	1.48	0.92
1:G:355:ILE:HD11	1:G:381:LEU:HD21	1.52	0.92
1:I:193:PRO:HD3	1:I:400:VAL:HG21	1.49	0.92
1:K:244:VAL:CG1	1:K:273:ILE:HD13	1.98	0.92
1:H:146:LEU:HD23	1:H:275:THR:HG22	1.50	0.92
1:E:193:PRO:HD3	1:E:400:VAL:HG21	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:145:GLU:HB3	1:D:295:TRP:HB3	1.49	0.91
1:I:357:MSE:HE3	1:I:381:LEU:HD11	1.51	0.91
1:H:178:ARG:HH11	1:H:207:LEU:CD1	1.81	0.91
1:F:42:TRP:HE1	1:F:69:LEU:HD22	1.35	0.91
1:H:385:ASP:OD2	1:H:387:GLN:CG	2.17	0.91
1:I:327:LEU:HD23	1:I:328:GLU:N	1.85	0.91
1:G:44:THR:CG2	1:G:201:VAL:HG11	2.00	0.91
1:D:193:PRO:CD	1:D:400:VAL:CG2	2.48	0.91
1:J:40:THR:O	1:J:44:THR:HG22	1.71	0.91
1:C:357:MSE:HB3	1:C:381:LEU:CD1	2.00	0.91
1:H:144:HIS:CD2	1:H:277:PRO:HG3	2.05	0.91
1:I:193:PRO:CD	1:I:400:VAL:HG23	2.00	0.90
1:A:73:LEU:O	1:A:85:THR:N	2.04	0.90
1:B:145:GLU:HB3	1:B:295:TRP:HB3	1.51	0.90
1:C:121:VAL:HG12	1:C:304:ILE:HA	1.50	0.90
1:E:193:PRO:CD	1:E:400:VAL:HG23	2.01	0.90
1:H:178:ARG:HH12	1:H:207:LEU:HD12	1.33	0.90
1:J:203:TRP:O	1:J:207:LEU:CD1	2.20	0.90
1:K:244:VAL:CB	1:K:273:ILE:CG1	2.36	0.90
1:I:323:PHE:CB	1:I:391:ARG:NH1	2.34	0.90
1:I:289:ARG:HD3	1:J:297:GLN:HG3	1.53	0.89
1:J:206:LEU:O	1:J:206:LEU:HD23	1.72	0.89
1:D:10:THR:OG1	1:H:384:LYS:HD3	1.72	0.89
1:F:199:PRO:HD2	1:F:202:LEU:HD12	1.55	0.89
1:D:42:TRP:NE1	1:D:90:PHE:CZ	2.41	0.89
1:J:144:HIS:NE2	1:J:296:ARG:NH1	2.21	0.89
1:I:52:VAL:HG13	1:I:110:LEU:HD21	1.53	0.89
1:K:148:VAL:HG22	1:K:291:ALA:HA	1.54	0.89
1:F:98:ARG:HG2	1:F:99:ARG:HG2	1.54	0.89
1:D:65:VAL:HG11	1:D:97:HIS:CE1	2.06	0.89
1:G:65:VAL:HG11	1:G:97:HIS:CE1	2.08	0.88
1:K:314:ARG:NH2	1:K:396:PHE:O	2.06	0.88
1:F:357:MSE:HB3	1:F:381:LEU:HD13	1.53	0.88
1:I:193:PRO:HD3	1:I:400:VAL:CG2	2.03	0.88
1:J:405:ALA:CB	3:J:602:HOH:O	2.20	0.88
1:B:144:HIS:NE2	1:B:296:ARG:NH1	2.22	0.88
1:E:144:HIS:HE1	1:E:296:ARG:HE	1.22	0.88
1:J:295:TRP:CZ2	1:J:297:GLN:NE2	2.41	0.88
1:A:73:LEU:HD11	1:A:87:GLY:HA3	1.53	0.88
1:A:144:HIS:NE2	1:A:296:ARG:NH1	2.22	0.88
1:G:144:HIS:NE2	1:G:296:ARG:NH1	2.22	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:144:HIS:CE1	1:B:296:ARG:HH11	1.91	0.87
1:K:193:PRO:CD	1:K:400:VAL:HG11	2.04	0.87
1:E:146:LEU:CD1	1:E:275:THR:CG2	2.46	0.87
1:E:206:LEU:HD23	1:E:206:LEU:O	1.74	0.87
1:I:289:ARG:HD3	1:J:297:GLN:CG	2.05	0.87
1:B:233:ARG:NH1	3:B:627:HOH:O	2.01	0.87
1:A:180:GLU:OE2	1:A:224:LEU:CD2	2.17	0.87
1:I:52:VAL:HG13	1:I:110:LEU:CD2	2.05	0.87
1:K:206:LEU:HD23	1:K:206:LEU:O	1.73	0.87
1:E:109:GLU:OE1	1:E:112:ARG:NH2	2.07	0.86
1:A:314:ARG:NH2	1:A:396:PHE:O	2.08	0.86
1:A:34:ILE:HG22	1:A:36:PRO:HD2	1.55	0.86
1:F:22:MSE:HE3	1:F:42:TRP:CH2	2.05	0.86
1:F:22:MSE:HE3	1:F:42:TRP:HH2	1.36	0.86
1:I:327:LEU:HD23	1:I:327:LEU:C	1.94	0.86
1:F:98:ARG:HG3	1:F:99:ARG:NH1	1.90	0.86
1:J:357:MSE:HE1	1:J:362:LEU:CB	2.05	0.86
1:H:196:LEU:HB2	1:H:406:PHE:CE2	2.11	0.86
1:F:206:LEU:O	1:F:206:LEU:HD23	1.73	0.86
1:J:193:PRO:HD3	1:J:400:VAL:HG21	1.58	0.86
1:G:148:VAL:HG22	1:G:291:ALA:HA	1.56	0.86
1:E:193:PRO:CD	1:E:400:VAL:CG2	2.54	0.86
1:F:208:ALA:O	1:F:211:LYS:HG2	1.74	0.86
1:G:222:ALA:CB	1:G:231:LEU:HD23	2.06	0.86
1:I:148:VAL:HG22	1:I:291:ALA:CA	2.05	0.86
1:K:244:VAL:CG1	1:K:273:ILE:CD1	2.54	0.85
1:B:40:THR:O	1:B:44:THR:HG23	1.76	0.85
1:D:43:ARG:HA	1:D:43:ARG:HH11	1.40	0.85
1:H:178:ARG:NH1	1:H:207:LEU:HD11	1.90	0.85
1:K:244:VAL:CG2	1:K:273:ILE:CG1	2.53	0.85
1:E:206:LEU:HD23	1:E:206:LEU:C	1.96	0.85
1:E:357:MSE:HB2	1:E:361:VAL:HG11	1.58	0.85
1:A:34:ILE:HD12	1:A:37:GLU:OE1	1.77	0.85
1:C:356:GLU:O	1:C:381:LEU:HD12	1.77	0.85
1:H:206:LEU:HD23	1:H:206:LEU:O	1.76	0.85
1:I:193:PRO:CD	1:I:400:VAL:CG2	2.54	0.85
1:H:150:ARG:HH11	1:H:150:ARG:C	1.80	0.85
1:E:297:GLN:CG	1:F:289:ARG:HD3	2.06	0.85
1:F:71:MSE:HB2	1:F:73:LEU:HD11	1.55	0.85
1:J:206:LEU:HD23	1:J:206:LEU:C	1.97	0.85
1:C:193:PRO:HB2	1:C:402:VAL:HG22	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:150:ARG:NH2	1:D:266:ASP:CA	2.39	0.84
1:A:72:ASP:OD1	1:A:119:TYR:OH	1.92	0.84
1:D:10:THR:HG21	1:H:384:LYS:CD	2.06	0.84
1:G:248:ARG:NH2	1:G:405:ALA:O	2.09	0.84
1:I:206:LEU:C	1:I:206:LEU:HD23	1.97	0.84
1:D:193:PRO:HD3	1:D:400:VAL:CG2	2.06	0.84
1:J:357:MSE:HE3	1:J:358:ASP:O	1.77	0.84
1:H:196:LEU:HB2	1:H:406:PHE:HE2	1.43	0.84
1:I:44:THR:O	1:I:45:LEU:CD2	2.23	0.84
1:B:123:ALA:HB1	1:B:300:LEU:HD11	1.58	0.84
1:C:148:VAL:CG2	1:C:291:ALA:CA	2.29	0.84
1:F:188:TRP:CH2	1:F:248:ARG:NH1	2.46	0.84
1:J:208:ALA:O	1:J:211:LYS:HG2	1.77	0.84
1:A:145:GLU:HB3	1:A:295:TRP:HB3	1.59	0.84
1:H:109:GLU:OE1	1:H:112:ARG:HD3	1.77	0.84
1:I:206:LEU:HD23	1:I:206:LEU:O	1.77	0.84
1:E:193:PRO:HD3	1:E:400:VAL:CG2	2.07	0.84
1:I:267:SER:O	1:I:268:MSE:HE2	1.78	0.84
1:F:357:MSE:HB3	1:F:381:LEU:CD1	2.08	0.83
1:I:323:PHE:CB	1:I:391:ARG:HH11	1.90	0.83
1:F:34:ILE:HG22	1:F:36:PRO:CD	2.08	0.83
1:G:327:LEU:HD23	1:G:328:GLU:N	1.92	0.83
1:I:23:PHE:HE1	1:I:38:SER:HG	1.24	0.83
1:D:40:THR:O	1:D:44:THR:CG2	2.25	0.83
1:G:303:ARG:HH11	1:G:305:MSE:SE	2.08	0.83
1:K:244:VAL:CG2	1:K:273:ILE:CD1	2.31	0.83
1:K:337:LEU:HD12	1:K:345:ARG:O	1.78	0.83
1:E:145:GLU:CB	1:E:295:TRP:HB3	2.08	0.83
1:G:188:TRP:CH2	1:G:248:ARG:NH1	2.47	0.82
1:F:303:ARG:NH1	1:F:359:ARG:HH11	1.76	0.82
1:G:11:LEU:CD1	1:G:52:VAL:HG22	2.07	0.82
1:I:200:GLN:HA	1:I:200:GLN:HE21	1.44	0.82
1:D:193:PRO:CD	1:D:400:VAL:HG23	2.10	0.82
1:H:34:ILE:N	1:H:37:GLU:OE1	2.12	0.82
1:D:144:HIS:CD2	1:D:277:PRO:HG3	2.15	0.82
1:K:193:PRO:HD2	1:K:400:VAL:HG13	1.61	0.82
1:K:289:ARG:NH2	1:L:126:ALA:O	2.13	0.81
1:F:206:LEU:HD23	1:F:206:LEU:C	2.01	0.81
1:A:178:ARG:CG	1:A:207:LEU:HD11	2.11	0.80
1:F:192:VAL:HG11	1:F:403:GLN:HB2	1.63	0.80
1:B:42:TRP:HZ2	1:B:90:PHE:CE1	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:150:ARG:CD	1:F:268:MSE:O	2.30	0.80
1:C:206:LEU:HD23	1:C:206:LEU:O	1.80	0.80
1:I:98:ARG:HG2	1:I:99:ARG:HG2	1.63	0.80
1:G:327:LEU:HD23	1:G:327:LEU:C	2.01	0.80
1:D:145:GLU:CB	1:D:295:TRP:HB3	2.10	0.80
1:K:244:VAL:HB	1:K:273:ILE:HG12	0.84	0.80
1:G:381:LEU:HD23	1:G:381:LEU:C	2.01	0.80
1:J:78:PRO:HG2	1:J:314:ARG:HH21	1.47	0.80
1:E:145:GLU:HB3	1:E:295:TRP:HB3	1.62	0.80
1:G:9:VAL:HG13	1:G:54:VAL:HG12	1.63	0.80
1:B:169:VAL:CG2	1:B:225:HIS:HD2	1.93	0.80
1:E:44:THR:CG2	1:E:201:VAL:HG11	2.10	0.80
1:D:145:GLU:OE2	1:D:295:TRP:CB	2.30	0.79
1:G:34:ILE:HG22	1:G:36:PRO:HD2	1.62	0.79
1:H:206:LEU:HD23	1:H:206:LEU:C	2.02	0.79
1:G:43:ARG:HH11	1:G:43:ARG:HA	1.47	0.79
1:J:271:ILE:N	1:J:271:ILE:HD12	1.96	0.79
1:B:169:VAL:CG2	1:B:225:HIS:CD2	2.65	0.79
1:C:150:ARG:NH2	1:C:266:ASP:HA	1.96	0.79
1:E:144:HIS:CE1	1:E:296:ARG:HE	2.00	0.79
1:F:14:PRO:HD2	1:F:51:ALA:O	1.82	0.79
1:K:193:PRO:HD2	1:K:400:VAL:CG1	2.12	0.79
1:I:34:ILE:HG22	1:I:36:PRO:CD	2.09	0.79
1:E:144:HIS:HE1	1:E:296:ARG:NE	1.80	0.79
1:A:327:LEU:HD13	1:A:355:ILE:HG23	1.64	0.79
1:E:144:HIS:CE1	1:E:296:ARG:HG3	2.18	0.79
1:I:107:CYS:O	1:I:111:HIS:ND1	2.15	0.79
1:H:169:VAL:CG2	1:H:225:HIS:HB2	2.12	0.79
1:E:148:VAL:HG13	1:E:290:LEU:O	1.82	0.78
1:F:71:MSE:CB	1:F:73:LEU:HD11	2.13	0.78
1:I:45:LEU:CD1	1:I:199:PRO:HG2	2.12	0.78
1:E:314:ARG:NH2	1:E:396:PHE:O	2.17	0.78
1:F:303:ARG:CZ	1:F:359:ARG:HH11	1.96	0.78
1:H:169:VAL:HG22	1:H:225:HIS:HB2	1.65	0.78
1:I:144:HIS:NE2	1:I:296:ARG:NH1	2.31	0.78
1:K:206:LEU:HD23	1:K:206:LEU:C	2.04	0.78
1:K:381:LEU:HD23	1:K:382:ARG:N	1.98	0.78
1:F:98:ARG:HE	1:F:99:ARG:NH2	1.82	0.78
1:F:65:VAL:HG11	1:F:97:HIS:CE1	2.18	0.78
1:G:218:ARG:NH2	1:G:239:LEU:HD21	1.97	0.78
1:C:146:LEU:HD11	1:C:291:ALA:C	2.04	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:178:ARG:HH11	1:C:207:LEU:HD12	1.50	0.78
1:D:148:VAL:HG21	1:D:291:ALA:HA	1.59	0.78
1:F:42:TRP:CD1	1:F:46:VAL:HG21	2.19	0.78
1:H:98:ARG:NH2	1:H:99:ARG:NH2	2.31	0.78
1:H:121:VAL:HA	1:H:305:MSE:HG2	1.66	0.77
1:L:318:HIS:CE1	1:L:342:GLY:HA3	2.19	0.77
1:J:78:PRO:HG2	1:J:314:ARG:NH2	2.00	0.77
1:K:65:VAL:HG11	1:K:97:HIS:CE1	2.20	0.77
1:D:146:LEU:HD23	1:D:147:THR:N	1.98	0.77
1:H:146:LEU:HD23	1:H:275:THR:CG2	2.14	0.77
1:B:206:LEU:HD23	1:B:206:LEU:O	1.85	0.77
1:E:192:VAL:HG11	1:E:403:GLN:HB2	1.65	0.77
1:F:34:ILE:HB	1:F:37:GLU:HG2	1.66	0.77
1:H:383:THR:HG21	1:H:389:LEU:HB2	1.66	0.77
1:D:148:VAL:HG13	1:D:290:LEU:O	1.83	0.77
1:E:334:ARG:HD3	1:E:353:ALA:HB2	1.67	0.77
1:B:144:HIS:CD2	1:B:277:PRO:HG3	2.20	0.77
1:E:307:VAL:HB	1:E:308:PRO:HD3	1.66	0.77
1:F:34:ILE:CG2	1:F:36:PRO:HD2	2.13	0.77
1:K:98:ARG:HG2	1:K:99:ARG:HG2	1.66	0.76
1:B:14:PRO:HD2	1:B:51:ALA:O	1.84	0.76
1:H:169:VAL:HG22	1:H:225:HIS:CB	2.16	0.76
1:G:9:VAL:HG13	1:G:54:VAL:CG1	2.16	0.76
1:I:38:SER:HB2	1:I:42:TRP:CZ2	2.19	0.76
1:D:34:ILE:CG2	1:D:36:PRO:HD2	2.11	0.76
1:D:44:THR:HG21	1:D:201:VAL:HG21	1.67	0.76
1:C:52:VAL:HG21	1:C:110:LEU:HD11	0.83	0.76
1:D:169:VAL:HG22	1:D:225:HIS:HB2	1.67	0.76
1:D:206:LEU:O	1:D:206:LEU:HD23	1.84	0.76
1:A:73:LEU:HB2	1:A:85:THR:O	1.86	0.76
1:F:22:MSE:HE2	1:F:42:TRP:CZ3	2.14	0.76
1:F:330:SER:O	3:F:629:HOH:O	2.02	0.76
1:C:145:GLU:HG2	1:C:274:ILE:CD1	2.15	0.76
1:J:150:ARG:HD3	1:J:268:MSE:O	1.86	0.76
1:A:320:VAL:HG21	1:A:394:ALA:CB	2.16	0.76
1:B:169:VAL:HG13	1:B:224:LEU:C	2.06	0.76
1:I:43:ARG:HA	1:I:43:ARG:HH11	1.49	0.76
1:B:24:LEU:HD13	1:D:173:ARG:HG2	1.68	0.75
1:E:144:HIS:CE1	1:E:296:ARG:NE	2.54	0.75
1:G:40:THR:O	1:G:44:THR:CG2	2.24	0.75
1:A:178:ARG:HH11	1:A:207:LEU:HD12	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:VAL:HG22	1:A:394:ALA:HB1	1.68	0.75
1:B:169:VAL:HG22	1:B:225:HIS:CB	2.17	0.75
1:C:121:VAL:CA	1:C:305:MSE:HG2	2.16	0.75
1:C:355:ILE:HD11	1:C:381:LEU:CD2	2.15	0.75
1:H:109:GLU:O	1:H:112:ARG:CG	2.33	0.75
1:C:326:VAL:CG1	1:C:353:ALA:HA	2.16	0.75
1:A:42:TRP:CD1	1:A:69:LEU:HD21	2.21	0.75
1:A:65:VAL:HG11	1:A:97:HIS:CE1	2.21	0.75
1:A:73:LEU:HD12	1:A:87:GLY:CA	2.17	0.75
1:C:134:ARG:NH1	2:C:501:ACO:H1B	2.00	0.75
1:J:44:THR:HG21	1:J:201:VAL:HG21	1.68	0.75
1:B:169:VAL:HG23	1:B:225:HIS:HD2	1.52	0.75
1:I:169:VAL:HG22	1:I:225:HIS:CB	2.17	0.75
1:J:193:PRO:CD	1:J:400:VAL:HG23	2.16	0.75
1:B:150:ARG:CD	1:B:268:MSE:O	2.31	0.75
1:D:355:ILE:HD11	1:D:381:LEU:HD13	1.68	0.75
1:J:74:ARG:CD	1:J:84:PRO:HA	2.17	0.75
1:D:10:THR:CG2	1:H:384:LYS:HD2	2.14	0.75
1:J:193:PRO:HD3	1:J:400:VAL:CG2	2.16	0.75
1:C:357:MSE:CB	1:C:381:LEU:HD13	2.17	0.75
1:I:148:VAL:CG1	1:I:290:LEU:O	2.31	0.75
1:I:355:ILE:HD11	1:I:381:LEU:CG	2.17	0.75
1:C:144:HIS:NE2	1:C:277:PRO:HG3	2.02	0.75
1:J:270:ARG:C	1:J:271:ILE:HD12	2.07	0.74
1:G:126:ALA:O	1:H:289:ARG:NH2	2.21	0.74
1:E:360:ASP:OD2	1:E:380:ARG:NH2	2.20	0.74
1:F:98:ARG:NE	1:F:99:ARG:CZ	2.50	0.74
1:B:169:VAL:HG13	1:B:224:LEU:O	1.86	0.74
1:D:74:ARG:HD3	1:D:84:PRO:HA	1.69	0.74
1:B:144:HIS:HB3	1:B:146:LEU:HD11	1.69	0.74
1:B:380:ARG:O	3:B:604:HOH:O	2.06	0.74
1:E:83:LEU:HD21	1:E:313:ALA:HB1	1.68	0.74
1:I:320:VAL:HG23	1:J:319:GLU:HB3	1.69	0.74
1:C:127:SER:HB3	2:C:501:ACO:H22	1.68	0.74
1:I:289:ARG:CD	1:J:297:GLN:HG3	2.17	0.74
1:A:365:LEU:HD21	1:A:375:LEU:HD12	1.70	0.74
1:C:357:MSE:HE3	1:C:381:LEU:HD11	1.68	0.74
1:J:355:ILE:HD11	1:J:381:LEU:HD13	1.70	0.74
1:K:355:ILE:HD11	1:K:381:LEU:HD21	1.70	0.74
1:B:206:LEU:HD23	1:B:206:LEU:C	2.07	0.74
1:I:169:VAL:HG13	1:I:224:LEU:O	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:339:ILE:HG12	1:J:344:ALA:HB2	1.70	0.74
1:C:70:TYR:HA	1:C:87:GLY:O	1.87	0.73
1:J:193:PRO:CG	1:J:400:VAL:HG23	2.18	0.73
1:C:206:LEU:HD23	1:C:206:LEU:C	2.08	0.73
1:A:145:GLU:CB	1:A:295:TRP:HB3	2.17	0.73
1:B:145:GLU:CB	1:B:295:TRP:HB3	2.17	0.73
1:A:121:VAL:HG13	1:A:303:ARG:O	1.88	0.73
1:D:145:GLU:OE2	1:D:295:TRP:HB2	1.86	0.73
1:G:175:THR:CA	1:G:207:LEU:HD11	2.16	0.73
1:J:43:ARG:HA	1:J:43:ARG:NH1	2.02	0.73
1:D:193:PRO:CD	1:D:400:VAL:HG21	2.12	0.73
1:E:33:PHE:CD1	1:E:33:PHE:C	2.62	0.73
1:G:44:THR:HG21	1:G:201:VAL:CG1	2.18	0.73
1:E:156:HIS:CE1	1:F:380:ARG:HH12	2.07	0.73
1:J:178:ARG:HD2	1:J:207:LEU:CD2	2.19	0.73
1:I:148:VAL:HG13	1:I:290:LEU:C	2.09	0.72
1:G:169:VAL:HG22	1:G:225:HIS:HB2	1.71	0.72
1:I:38:SER:O	1:I:42:TRP:CD1	2.41	0.72
1:J:85:THR:HG23	1:J:121:VAL:HG23	1.71	0.72
1:L:31:THR:HG23	3:L:621:HOH:O	1.88	0.72
1:C:314:ARG:NH1	1:C:366:TYR:O	2.22	0.72
1:H:48:THR:O	1:H:49:ASP:OD1	2.08	0.72
1:I:307:VAL:HB	1:I:308:PRO:HD3	1.70	0.72
1:C:120:PRO:O	1:C:305:MSE:HB2	1.88	0.72
1:F:303:ARG:HH12	1:F:359:ARG:NH1	1.86	0.72
1:H:107:CYS:O	1:H:111:HIS:ND1	2.21	0.72
1:K:98:ARG:HG3	1:K:99:ARG:NH1	2.04	0.72
1:C:357:MSE:CE	1:C:381:LEU:HD22	2.20	0.72
1:I:200:GLN:HA	1:I:200:GLN:NE2	2.04	0.72
1:J:178:ARG:HD2	1:J:207:LEU:HD21	1.69	0.72
1:I:327:LEU:O	1:I:335:PHE:N	2.22	0.72
1:E:156:HIS:NE2	1:F:380:ARG:NH1	2.38	0.72
1:H:98:ARG:HG2	1:H:99:ARG:HG2	1.72	0.72
1:E:150:ARG:HD3	1:E:268:MSE:O	1.90	0.72
1:B:42:TRP:O	1:B:46:VAL:HB	1.89	0.71
1:F:326:VAL:HG12	1:F:353:ALA:HA	1.72	0.71
1:H:322:GLU:OE1	1:H:338:LYS:HE2	1.90	0.71
1:I:337:LEU:HD12	1:I:345:ARG:O	1.89	0.71
1:I:357:MSE:HE2	1:I:381:LEU:HD13	0.72	0.71
1:F:98:ARG:HE	1:F:99:ARG:CZ	2.03	0.71
1:I:276:HIS:HD2	1:I:278:GLN:H	1.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:303:ARG:NH1	1:F:359:ARG:NH1	2.37	0.71
1:I:355:ILE:CD1	1:I:381:LEU:HD11	2.20	0.71
1:D:146:LEU:HD11	1:D:291:ALA:HB1	1.71	0.71
1:D:206:LEU:HD23	1:D:206:LEU:C	2.11	0.71
1:E:297:GLN:HG3	1:F:289:ARG:CD	2.19	0.71
1:I:83:LEU:HD21	1:I:313:ALA:HB1	1.71	0.71
1:K:201:VAL:O	1:K:204:ASP:HB2	1.89	0.71
1:H:178:ARG:HH11	1:H:207:LEU:HD11	1.50	0.71
1:B:178:ARG:NH1	1:B:207:LEU:HD12	2.06	0.71
1:D:146:LEU:HD23	1:D:146:LEU:C	2.10	0.71
1:J:110:LEU:O	1:J:114:ILE:HG13	1.91	0.71
1:A:320:VAL:HG21	1:A:394:ALA:HB1	1.69	0.71
1:C:319:GLU:O	1:D:319:GLU:O	2.08	0.71
1:E:358:ASP:O	1:E:361:VAL:CG1	2.38	0.71
1:F:16:GLU:HA	1:F:19:TRP:CD1	2.26	0.71
1:G:289:ARG:NH1	1:H:298:ASP:OD2	2.23	0.71
1:D:150:ARG:CZ	1:D:266:ASP:HA	2.19	0.71
1:E:127:SER:HB3	2:E:501:ACO:H22	1.71	0.71
1:I:169:VAL:CG2	1:I:225:HIS:HB2	2.19	0.71
1:C:148:VAL:HG21	1:C:291:ALA:CB	2.21	0.71
1:D:18:ASP:OD2	1:D:55:ARG:NH2	2.24	0.71
1:E:297:GLN:OE1	1:F:289:ARG:CD	2.38	0.71
1:I:289:ARG:CG	1:J:298:ASP:OD1	2.39	0.71
1:J:193:PRO:CD	1:J:400:VAL:CG2	2.69	0.71
1:K:244:VAL:HG21	1:K:273:ILE:HD11	0.77	0.71
1:A:320:VAL:CG2	1:A:394:ALA:CB	2.68	0.70
1:C:110:LEU:HD12	1:C:110:LEU:H	1.56	0.70
1:C:407:GLU:HB2	3:C:636:HOH:O	1.91	0.70
1:D:33:PHE:CE1	1:D:38:SER:CB	2.73	0.70
1:I:65:VAL:HG11	1:I:97:HIS:CE1	2.26	0.70
1:A:73:LEU:CD1	1:A:87:GLY:CA	2.67	0.70
1:B:314:ARG:NH1	1:B:366:TYR:O	2.24	0.70
1:C:334:ARG:HD3	1:C:351:ALA:O	1.91	0.70
1:D:33:PHE:CE1	1:D:38:SER:OG	2.22	0.70
1:J:337:LEU:HD11	1:J:339:ILE:HD11	1.72	0.70
1:C:357:MSE:SE	1:C:381:LEU:HD13	2.41	0.70
1:G:33:PHE:O	1:G:34:ILE:HG13	1.92	0.70
1:D:52:VAL:HG13	1:D:110:LEU:HD21	1.74	0.70
1:F:121:VAL:HG12	1:F:304:ILE:CA	2.16	0.70
1:E:65:VAL:HG11	1:E:97:HIS:CE1	2.26	0.70
1:I:148:VAL:HG21	1:I:291:ALA:HA	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:44:THR:HG21	1:J:201:VAL:HG11	1.72	0.70
1:J:197:LEU:O	1:J:199:PRO:HD3	1.90	0.70
1:A:73:LEU:HD12	1:A:87:GLY:HA3	1.74	0.70
1:B:48:THR:O	1:B:49:ASP:CG	2.30	0.70
1:B:127:SER:HB3	2:B:501:ACO:H22	1.71	0.70
1:C:85:THR:HG23	1:C:121:VAL:O	1.91	0.70
1:I:217:ASP:OD1	1:I:233:ARG:NH1	2.24	0.70
1:D:217:ASP:HB3	1:D:233:ARG:HD2	1.72	0.70
1:I:355:ILE:HG12	1:I:356:GLU:N	2.07	0.70
1:G:50:GLY:HA2	1:G:70:TYR:CE1	2.27	0.69
1:H:354:GLU:HA	1:H:384:LYS:HZ1	0.83	0.69
1:K:123:ALA:HB1	1:K:300:LEU:HD11	1.73	0.69
1:G:16:GLU:O	1:G:19:TRP:HD1	1.75	0.69
1:J:149:ASP:OD2	1:J:152:PHE:CE1	2.44	0.69
1:C:357:MSE:HE1	1:C:381:LEU:CD2	2.20	0.69
1:D:8:THR:HG23	1:D:9:VAL:N	2.05	0.69
1:G:281:LEU:HB3	1:G:282:PRO:HD3	1.73	0.69
1:L:256:CYS:O	1:L:260:ARG:HG3	1.91	0.69
1:C:148:VAL:CG2	1:C:291:ALA:CB	2.69	0.69
1:G:98:ARG:HD2	1:L:264:GLY:CA	2.23	0.69
1:I:355:ILE:HD11	1:I:381:LEU:HD11	1.73	0.69
1:K:178:ARG:NH1	1:K:207:LEU:HD23	2.06	0.69
1:A:248:ARG:NH2	1:A:405:ALA:O	2.22	0.69
1:D:48:THR:O	1:D:49:ASP:CG	2.30	0.69
1:B:221:PHE:CE2	1:E:28:ALA:HA	2.28	0.69
1:G:149:ASP:OD2	1:G:152:PHE:CE2	2.45	0.69
1:K:314:ARG:HD3	1:K:316:TYR:CE2	2.27	0.69
1:B:178:ARG:HG3	1:B:207:LEU:HD11	1.73	0.69
1:C:34:ILE:CG2	1:C:36:PRO:HD2	2.21	0.69
1:D:178:ARG:CG	1:D:207:LEU:HD11	2.19	0.69
1:C:146:LEU:HD11	1:C:291:ALA:O	1.92	0.69
1:D:150:ARG:NH2	1:D:266:ASP:O	2.26	0.69
1:G:149:ASP:OD2	1:G:152:PHE:HE2	1.74	0.69
1:I:44:THR:O	1:I:44:THR:HG22	1.91	0.69
1:C:178:ARG:HH21	1:C:200:GLN:NE2	1.90	0.69
1:D:8:THR:HG23	1:D:9:VAL:H	1.57	0.69
1:E:127:SER:H	2:E:501:ACO:H21	1.58	0.69
1:L:372:ALA:HB1	1:L:381:LEU:HD21	1.75	0.69
1:E:42:TRP:CH2	1:E:67:MSE:HE1	2.27	0.69
1:I:327:LEU:C	1:I:327:LEU:CD2	2.61	0.69
1:K:34:ILE:HG22	1:K:36:PRO:HD2	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:266:ASP:OD1	1:I:98:ARG:HD2	1.92	0.68
1:K:14:PRO:HD2	1:K:51:ALA:O	1.93	0.68
1:I:355:ILE:HG12	1:I:356:GLU:H	1.58	0.68
1:B:327:LEU:HD11	1:B:357:MSE:HE3	1.73	0.68
1:J:357:MSE:CE	1:J:362:LEU:HB2	2.14	0.68
1:K:216:GLY:HA2	1:K:236:ARG:HE	1.57	0.68
1:A:121:VAL:HG12	1:A:122:ALA:N	2.08	0.68
1:B:380:ARG:NE	3:B:633:HOH:O	2.26	0.68
1:I:114:ILE:CG2	1:I:305:MSE:HE2	2.24	0.68
1:J:149:ASP:OD2	1:J:152:PHE:HE1	1.76	0.68
1:K:188:TRP:CZ2	1:K:248:ARG:NH1	2.61	0.68
1:B:169:VAL:HG22	1:B:225:HIS:HB2	1.76	0.68
1:G:44:THR:HG21	1:G:201:VAL:HG21	1.76	0.68
1:D:10:THR:OG1	1:H:384:LYS:CD	2.41	0.68
1:H:203:TRP:O	1:H:207:LEU:HG	1.93	0.68
1:I:98:ARG:HG3	1:I:99:ARG:NH1	2.09	0.68
1:A:373:SER:HB3	1:A:393:ASP:OD2	1.94	0.68
1:I:198:ARG:HG2	1:I:203:TRP:CD1	2.29	0.68
1:L:34:ILE:HG22	1:L:36:PRO:CD	2.17	0.68
1:E:193:PRO:HD2	1:E:400:VAL:HG23	1.74	0.67
1:K:311:LEU:HD21	1:K:362:LEU:HD11	1.75	0.67
1:F:188:TRP:CZ2	1:F:248:ARG:NH1	2.62	0.67
1:G:295:TRP:HZ2	1:G:297:GLN:NE2	1.91	0.67
1:G:300:LEU:HD21	1:G:302:LEU:HD21	1.76	0.67
1:H:197:LEU:HD12	1:H:198:ARG:N	2.09	0.67
1:H:385:ASP:OD1	1:H:387:GLN:N	2.26	0.67
1:D:73:LEU:O	1:D:85:THR:N	2.15	0.67
1:G:355:ILE:CD1	1:G:381:LEU:HD21	2.23	0.67
1:I:339:ILE:HD13	1:I:344:ALA:HB2	1.74	0.67
1:C:144:HIS:CD2	1:C:277:PRO:CG	2.76	0.67
1:G:120:PRO:O	1:G:305:MSE:HB2	1.94	0.67
1:H:399:ASP:OD2	3:H:619:HOH:O	2.11	0.67
1:I:107:CYS:C	1:I:111:HIS:HD1	1.98	0.67
1:I:337:LEU:HD13	1:I:346:CYS:HB2	1.76	0.67
1:C:357:MSE:CE	1:C:381:LEU:HD21	2.24	0.67
1:D:150:ARG:HH21	1:D:266:ASP:C	1.96	0.67
1:F:22:MSE:HE2	1:F:42:TRP:HH2	1.09	0.67
1:G:146:LEU:HD22	1:G:275:THR:HG21	1.75	0.67
1:K:189:ARG:NH1	1:K:197:LEU:HD13	2.10	0.67
1:K:327:LEU:HD13	1:K:357:MSE:HE3	1.73	0.67
1:D:193:PRO:HD2	1:D:400:VAL:HG23	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:148:VAL:HA	1:E:290:LEU:O	1.94	0.67
1:F:121:VAL:HB	1:F:303:ARG:O	1.95	0.67
1:I:289:ARG:HD3	1:J:297:GLN:CD	2.15	0.67
1:D:217:ASP:HB3	1:D:233:ARG:CD	2.24	0.67
1:D:247:LEU:HD23	1:D:247:LEU:C	2.15	0.67
1:J:41:ALA:HA	1:J:44:THR:CG2	2.25	0.67
1:B:14:PRO:HD3	1:B:52:VAL:HA	1.75	0.66
1:E:40:THR:O	1:E:44:THR:HG22	1.95	0.66
1:F:73:LEU:HD12	1:F:73:LEU:N	2.09	0.66
1:B:149:ASP:OD2	1:B:152:PHE:CE2	2.49	0.66
1:D:104:ARG:HG3	1:D:135:PHE:HE1	1.59	0.66
1:E:297:GLN:OE1	1:F:289:ARG:HD3	1.96	0.66
1:H:385:ASP:OD1	1:H:387:GLN:HG2	1.96	0.66
1:B:40:THR:O	1:B:44:THR:CG2	2.42	0.66
1:B:109:GLU:OE1	1:B:112:ARG:HD3	1.95	0.66
1:G:295:TRP:CZ2	1:G:297:GLN:NE2	2.64	0.66
1:H:196:LEU:HD13	1:H:406:PHE:CZ	2.31	0.66
1:K:312:GLU:OE1	1:K:346:CYS:N	2.27	0.66
1:G:307:VAL:HG13	1:G:311:LEU:HD11	1.76	0.66
1:K:267:SER:O	1:K:268:MSE:HE2	1.96	0.66
1:D:49:ASP:C	1:D:49:ASP:OD1	2.34	0.66
1:A:48:THR:O	1:A:49:ASP:OD1	2.13	0.66
1:A:177:HIS:O	1:A:181:PHE:CD2	2.49	0.66
1:F:295:TRP:CZ2	1:F:297:GLN:HB3	2.31	0.66
1:J:206:LEU:C	1:J:206:LEU:CD2	2.64	0.66
1:K:188:TRP:CE2	1:K:248:ARG:NH1	2.64	0.66
1:A:8:THR:HA	1:A:57:GLY:HA2	1.78	0.66
1:E:156:HIS:NE2	1:F:380:ARG:CZ	2.58	0.66
1:J:381:LEU:HD11	1:J:389:LEU:HD21	1.76	0.66
1:E:206:LEU:C	1:E:206:LEU:CD2	2.64	0.66
1:K:381:LEU:HD23	1:K:381:LEU:C	2.16	0.66
1:H:146:LEU:HD13	1:H:293:THR:HA	1.77	0.66
1:A:73:LEU:N	1:A:85:THR:O	2.29	0.65
1:B:247:LEU:HD23	1:B:248:ARG:N	2.11	0.65
1:C:306:ASN:OD1	1:C:308:PRO:HD2	1.95	0.65
1:F:365:LEU:HD21	1:F:375:LEU:HD12	1.77	0.65
1:I:178:ARG:HD2	1:I:207:LEU:CD1	2.26	0.65
1:I:124:LEU:HD12	1:I:301:TRP:HB2	1.77	0.65
1:C:106:MSE:O	1:C:110:LEU:HD12	1.93	0.65
1:B:169:VAL:HG22	1:B:225:HIS:CD2	2.30	0.65
1:I:45:LEU:HD11	1:I:199:PRO:CG	2.24	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:42:TRP:CZ2	1:B:90:PHE:CE1	2.85	0.65
1:B:292:ARG:NH1	1:B:294:THR:HG22	2.12	0.65
1:C:178:ARG:CG	1:C:207:LEU:HD11	2.26	0.65
1:D:148:VAL:HA	1:D:290:LEU:O	1.96	0.65
1:E:314:ARG:HD3	1:E:316:TYR:CZ	2.32	0.65
1:G:98:ARG:CD	1:L:264:GLY:HA2	2.27	0.65
1:G:327:LEU:C	1:G:327:LEU:CD2	2.65	0.65
1:I:193:PRO:HD2	1:I:400:VAL:HG23	1.79	0.65
1:F:150:ARG:NH2	1:F:266:ASP:OD1	2.29	0.65
1:G:170:ARG:HD2	1:I:63:GLU:OE1	1.97	0.65
1:H:198:ARG:HD2	1:H:203:TRP:CE2	2.31	0.65
1:J:189:ARG:NH1	1:J:197:LEU:HD13	2.08	0.65
1:C:146:LEU:HD21	1:C:291:ALA:HB1	1.78	0.65
1:C:357:MSE:HE1	1:C:381:LEU:HD21	1.79	0.65
1:D:67:MSE:HE2	1:D:90:PHE:HB3	1.78	0.65
1:G:69:LEU:C	1:G:69:LEU:HD12	2.17	0.65
1:I:198:ARG:HD2	1:I:203:TRP:CE2	2.32	0.65
1:I:206:LEU:C	1:I:206:LEU:CD2	2.65	0.65
1:I:337:LEU:HD11	1:I:344:ALA:HB1	1.79	0.65
1:I:355:ILE:HD11	1:I:381:LEU:CD1	2.26	0.65
1:C:326:VAL:HG11	1:C:353:ALA:HA	1.77	0.65
1:G:178:ARG:HH21	1:G:200:GLN:NE2	1.94	0.65
1:H:178:ARG:HG3	1:H:207:LEU:HD11	1.77	0.65
1:H:342:GLY:O	1:H:343:ARG:HD2	1.97	0.65
1:L:34:ILE:CG2	1:L:36:PRO:CD	2.73	0.65
1:C:48:THR:O	1:C:49:ASP:OD1	2.14	0.65
1:F:16:GLU:HA	1:F:19:TRP:NE1	2.11	0.65
1:J:74:ARG:CZ	1:J:84:PRO:HB3	2.26	0.65
1:B:292:ARG:HH11	1:B:294:THR:HG22	1.61	0.65
1:F:103:LEU:HD22	2:F:501:ACO:H121	1.79	0.65
1:L:178:ARG:HH21	1:L:200:GLN:NE2	1.95	0.65
1:A:121:VAL:HG22	1:A:304:ILE:HA	1.78	0.64
1:E:44:THR:HG21	1:E:201:VAL:CG1	2.20	0.64
1:G:9:VAL:CG1	1:G:54:VAL:HG13	2.25	0.64
1:I:23:PHE:HE1	1:I:38:SER:OG	1.80	0.64
1:I:217:ASP:CG	1:I:233:ARG:NH1	2.50	0.64
1:K:192:VAL:HG11	1:K:403:GLN:HB2	1.79	0.64
1:B:85:THR:HG23	1:B:121:VAL:C	2.14	0.64
1:B:246:GLU:OE1	1:B:248:ARG:NE	2.22	0.64
1:C:148:VAL:HG13	1:C:290:LEU:C	2.17	0.64
1:D:246:GLU:OE1	1:D:248:ARG:NE	2.19	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:146:LEU:HD22	1:H:146:LEU:N	2.11	0.64
1:H:354:GLU:CA	1:H:384:LYS:HZ3	2.03	0.64
1:A:123:ALA:HB1	1:A:300:LEU:HD11	1.79	0.64
1:G:250:VAL:O	1:G:250:VAL:HG12	1.95	0.64
1:L:319:GLU:OE1	1:L:319:GLU:N	2.30	0.64
1:E:148:VAL:HG22	1:E:291:ALA:HA	0.72	0.64
1:I:320:VAL:HA	1:J:319:GLU:O	1.98	0.64
1:D:197:LEU:HD12	3:D:608:HOH:O	1.98	0.64
1:E:227:ASP:HB3	1:E:250:VAL:HG22	1.78	0.64
1:F:35:GLY:N	1:F:36:PRO:HD2	2.11	0.64
1:J:72:ASP:OD1	1:J:74:ARG:NH1	2.30	0.64
1:I:103:LEU:HD22	2:I:501:ACO:H121	1.79	0.64
1:J:43:ARG:HH11	1:J:43:ARG:CA	2.04	0.64
1:J:44:THR:CG2	1:J:201:VAL:HG11	2.27	0.64
1:H:34:ILE:CB	1:H:37:GLU:CD	2.63	0.64
1:J:227:ASP:HB2	1:J:254:ALA:HB2	1.80	0.64
1:C:148:VAL:HG21	1:C:291:ALA:HB2	1.80	0.64
1:D:259:TRP:O	1:D:263:ILE:HG12	1.97	0.64
1:E:145:GLU:HB2	1:E:295:TRP:HB3	1.78	0.64
1:I:127:SER:HB3	2:I:501:ACO:H22	1.80	0.64
1:A:34:ILE:HB	1:A:37:GLU:HG2	1.78	0.64
1:B:381:LEU:HD23	1:B:381:LEU:C	2.18	0.64
1:C:355:ILE:CD1	1:C:381:LEU:HD21	2.24	0.64
1:J:143:LEU:HD21	1:J:404:THR:HG21	1.77	0.64
1:A:42:TRP:CD1	1:A:69:LEU:CD2	2.81	0.64
1:C:54:VAL:HG11	1:C:102:LEU:HD22	1.79	0.64
1:D:72:ASP:O	1:D:73:LEU:HD23	1.98	0.64
1:F:98:ARG:HG3	1:F:99:ARG:HH11	1.63	0.64
1:H:34:ILE:HG22	1:H:36:PRO:HD2	1.79	0.64
1:K:247:LEU:HD23	1:K:248:ARG:N	2.11	0.64
1:B:107:CYS:O	1:B:111:HIS:ND1	2.26	0.63
1:K:193:PRO:CD	1:K:400:VAL:HG13	2.18	0.63
1:D:139:PRO:HB2	3:D:627:HOH:O	1.97	0.63
1:H:148:VAL:HG22	1:H:291:ALA:HA	1.80	0.63
1:D:98:ARG:HD2	1:E:264:GLY:CA	2.28	0.63
1:I:303:ARG:HH11	1:I:305:MSE:SE	2.31	0.63
1:B:85:THR:HG22	1:B:86:ALA:N	2.14	0.63
1:D:72:ASP:OD1	1:D:74:ARG:NH1	2.30	0.63
1:F:74:ARG:HB3	1:F:82:VAL:CG1	2.29	0.63
1:H:312:GLU:HG2	1:H:344:ALA:O	1.99	0.63
1:J:194:GLY:O	1:J:405:ALA:HB2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:121:VAL:CG1	1:A:122:ALA:N	2.62	0.63
1:D:144:HIS:NE2	1:D:296:ARG:NH1	2.47	0.63
1:E:146:LEU:O	1:E:272:SER:HA	1.97	0.63
1:K:188:TRP:NE1	1:K:403:GLN:OE1	2.30	0.63
1:C:110:LEU:HD12	1:C:110:LEU:N	2.13	0.63
1:F:34:ILE:HB	1:F:37:GLU:CG	2.28	0.63
1:I:375:LEU:HD21	1:J:283:HIS:CE1	2.34	0.63
1:J:196:LEU:HG	1:J:405:ALA:CB	2.29	0.63
1:A:98:ARG:HH11	1:A:99:ARG:NH2	1.97	0.63
1:D:42:TRP:NE1	1:D:90:PHE:CE2	2.65	0.63
1:I:73:LEU:HB2	1:I:85:THR:O	1.98	0.63
1:C:404:THR:HG22	1:C:405:ALA:O	1.99	0.63
1:H:306:ASN:OD1	1:H:308:PRO:HD2	1.98	0.63
1:J:45:LEU:HD11	1:J:199:PRO:HG2	1.80	0.63
1:C:121:VAL:CG1	1:C:304:ILE:HA	2.28	0.62
1:C:178:ARG:NH1	1:C:207:LEU:HD12	2.12	0.62
1:C:247:LEU:HD13	3:C:650:HOH:O	1.98	0.62
1:J:312:GLU:HG2	1:J:344:ALA:O	1.98	0.62
1:B:145:GLU:OE2	1:B:295:TRP:CB	2.47	0.62
1:I:150:ARG:HG2	1:I:269:GLU:O	1.99	0.62
1:D:373:SER:HB3	1:D:393:ASP:OD2	2.00	0.62
1:E:127:SER:HB3	2:E:501:ACO:C2P	2.29	0.62
1:F:355:ILE:HD11	1:F:381:LEU:HD21	1.81	0.62
1:I:148:VAL:HG22	1:I:290:LEU:O	2.00	0.62
1:I:199:PRO:HB2	1:I:201:VAL:HG12	1.80	0.62
1:B:45:LEU:CD1	1:B:199:PRO:HG2	2.26	0.62
1:E:355:ILE:HD11	1:E:381:LEU:HD13	1.80	0.62
1:F:98:ARG:CG	1:F:99:ARG:NH1	2.62	0.62
1:I:38:SER:HB2	1:I:42:TRP:CE2	2.35	0.62
1:A:74:ARG:O	1:A:196:LEU:HD23	1.98	0.62
1:C:127:SER:CB	2:C:501:ACO:H22	2.29	0.62
1:D:114:ILE:HG22	1:D:305:MSE:HE2	1.80	0.62
1:I:247:LEU:HD23	1:I:248:ARG:N	2.13	0.62
1:J:98:ARG:HD2	1:K:264:GLY:CA	2.29	0.62
1:D:54:VAL:HG11	1:D:102:LEU:HD13	1.81	0.62
1:F:334:ARG:HD3	1:F:351:ALA:O	1.99	0.62
1:I:52:VAL:CG1	1:I:110:LEU:HD21	2.29	0.62
1:K:314:ARG:HD3	1:K:316:TYR:CZ	2.35	0.62
1:B:240:LYS:HB3	1:B:269:GLU:HB2	1.81	0.62
2:C:501:ACO:O5P	2:C:501:ACO:H141	1.98	0.62
1:K:244:VAL:CG2	1:K:273:ILE:HG12	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:314:ARG:NH1	1:E:315:GLY:O	2.31	0.62
1:K:314:ARG:HH11	1:K:314:ARG:CG	2.13	0.62
1:D:144:HIS:HD2	1:D:277:PRO:HG3	1.64	0.62
1:I:306:ASN:OD1	1:I:308:PRO:HD2	2.00	0.62
1:L:387:GLN:HE22	1:L:391:ARG:NH2	1.97	0.62
1:G:167:SER:N	3:G:603:HOH:O	2.33	0.62
1:G:325:THR:O	1:G:337:LEU:N	2.26	0.61
1:I:107:CYS:HB3	1:I:111:HIS:CE1	2.34	0.61
1:J:247:LEU:HD23	1:J:248:ARG:N	2.15	0.61
1:B:98:ARG:HD2	1:D:264:GLY:CA	2.30	0.61
1:B:381:LEU:HD23	1:B:382:ARG:N	2.15	0.61
1:F:110:LEU:O	1:F:114:ILE:HG13	1.99	0.61
1:E:247:LEU:HD23	1:E:248:ARG:N	2.14	0.61
1:G:381:LEU:C	1:G:381:LEU:CD2	2.68	0.61
1:A:144:HIS:CE1	1:A:296:ARG:NH1	2.68	0.61
1:A:173:ARG:HG3	1:C:24:LEU:HD13	1.82	0.61
1:B:23:PHE:HE1	1:B:42:TRP:HZ3	1.47	0.61
1:G:100:ARG:NH1	1:L:167:SER:OG	2.34	0.61
1:G:121:VAL:HG12	1:G:304:ILE:HA	1.82	0.61
1:G:218:ARG:HH21	1:G:239:LEU:HD21	1.65	0.61
1:H:145:GLU:HB3	1:H:295:TRP:HB3	1.81	0.61
1:I:52:VAL:CG1	1:I:110:LEU:CD2	2.76	0.61
1:I:169:VAL:HG13	1:I:224:LEU:C	2.21	0.61
1:E:144:HIS:CD2	1:E:277:PRO:HG3	2.35	0.61
1:F:206:LEU:C	1:F:206:LEU:CD2	2.68	0.61
1:B:383:THR:CG2	1:B:389:LEU:HD21	2.30	0.61
1:E:144:HIS:CE1	1:E:296:ARG:CD	2.83	0.61
1:F:242:ALA:HB2	1:F:268:MSE:HG3	1.82	0.61
1:F:303:ARG:NH2	1:F:359:ARG:NH1	2.49	0.61
1:H:354:GLU:CB	1:H:384:LYS:NZ	2.63	0.61
1:I:289:ARG:CD	1:J:297:GLN:CD	2.69	0.61
1:K:247:LEU:HD23	1:K:247:LEU:C	2.20	0.61
1:F:14:PRO:CD	1:F:51:ALA:O	2.48	0.61
1:K:76:THR:O	1:K:193:PRO:HA	1.99	0.61
1:B:149:ASP:OD2	1:B:152:PHE:HE2	1.83	0.61
1:E:19:TRP:N	1:E:20:PRO:HD2	2.16	0.61
1:G:123:ALA:HB2	1:G:302:LEU:CD2	2.30	0.61
1:J:289:ARG:O	1:J:292:ARG:HG3	1.99	0.61
1:B:49:ASP:C	1:B:49:ASP:OD1	2.38	0.61
1:C:101:GLY:HA2	2:C:501:ACO:O2A	2.01	0.61
1:E:107:CYS:O	1:E:111:HIS:ND1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:19:TRP:N	1:H:20:PRO:HD2	2.16	0.61
1:J:203:TRP:C	1:J:207:LEU:HD13	2.19	0.61
1:A:45:LEU:HD13	1:A:71:MSE:HE2	1.83	0.61
1:B:109:GLU:O	1:B:112:ARG:HG2	2.01	0.61
1:C:295:TRP:CZ2	1:C:297:GLN:NE2	2.69	0.61
1:D:16:GLU:HA	1:D:19:TRP:CD1	2.36	0.61
1:D:177:HIS:HB3	1:D:180:GLU:HG3	1.81	0.61
1:G:302:LEU:HD11	1:G:367:LEU:HD11	1.83	0.61
1:G:311:LEU:HD22	1:G:346:CYS:SG	2.40	0.61
1:I:293:THR:O	3:I:608:HOH:O	2.17	0.61
1:I:289:ARG:CD	1:J:297:GLN:OE1	2.48	0.60
1:B:198:ARG:HD2	1:B:203:TRP:CE2	2.36	0.60
1:G:77:VAL:HB	1:G:78:PRO:HD2	1.82	0.60
1:B:42:TRP:HZ2	1:B:90:PHE:CD1	2.20	0.60
1:E:103:LEU:HD22	2:E:501:ACO:H142	1.83	0.60
1:D:177:HIS:ND1	1:D:180:GLU:OE1	2.20	0.60
1:G:34:ILE:CG2	1:G:36:PRO:HD2	2.31	0.60
1:G:289:ARG:HH11	1:H:298:ASP:CG	2.03	0.60
1:I:247:LEU:HD23	1:I:247:LEU:C	2.21	0.60
1:H:146:LEU:CD2	1:H:275:THR:HG22	2.26	0.60
1:H:150:ARG:NH1	1:H:150:ARG:O	2.33	0.60
1:I:167:SER:OG	1:L:100:ARG:NH1	2.33	0.60
1:C:106:MSE:C	1:C:110:LEU:HD13	2.19	0.60
1:D:148:VAL:CG1	1:D:290:LEU:HB3	2.32	0.60
1:G:303:ARG:HH12	1:G:305:MSE:SE	2.32	0.60
1:H:267:SER:C	1:H:268:MSE:HE2	2.22	0.60
1:F:170:ARG:O	1:F:172:VAL:HG13	2.02	0.60
1:F:357:MSE:SE	1:F:381:LEU:HD13	2.51	0.60
1:H:107:CYS:C	1:H:111:HIS:HD1	2.04	0.60
1:H:169:VAL:CG1	1:H:224:LEU:C	2.55	0.60
1:B:34:ILE:HB	1:B:37:GLU:HG2	1.82	0.60
1:B:246:GLU:CD	1:B:248:ARG:HE	2.03	0.60
1:I:289:ARG:NH1	1:J:298:ASP:OD2	2.35	0.60
1:K:184:ILE:HG21	1:K:228:GLY:HA2	1.82	0.60
1:K:206:LEU:C	1:K:206:LEU:CD2	2.70	0.60
1:B:34:ILE:HG22	1:B:36:PRO:HD2	1.82	0.60
1:D:33:PHE:CE1	1:D:38:SER:HB2	2.36	0.60
1:H:34:ILE:CB	1:H:37:GLU:OE1	2.50	0.60
1:H:314:ARG:NH1	1:H:366:TYR:O	2.35	0.60
1:L:381:LEU:C	1:L:381:LEU:HD12	2.21	0.60
1:F:98:ARG:HH11	1:F:99:ARG:NH2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:337:LEU:HD13	1:K:346:CYS:HB2	1.84	0.60
1:F:121:VAL:HA	1:F:305:MSE:CG	2.20	0.59
1:J:35:GLY:N	1:J:36:PRO:HD2	2.17	0.59
1:J:193:PRO:HG2	1:J:400:VAL:HG23	1.82	0.59
1:A:178:ARG:NH1	1:A:207:LEU:HD12	2.16	0.59
1:E:296:ARG:HB3	1:F:293:THR:HB	1.84	0.59
1:E:319:GLU:O	1:F:320:VAL:HA	2.02	0.59
1:F:303:ARG:HH22	1:F:359:ARG:NH1	2.00	0.59
1:H:65:VAL:HG11	1:H:97:HIS:CE1	2.37	0.59
1:B:383:THR:HG22	1:B:389:LEU:HD21	1.83	0.59
1:C:297:GLN:OE1	1:D:289:ARG:CZ	2.50	0.59
1:D:10:THR:CG2	1:H:384:LYS:CD	2.77	0.59
1:K:19:TRP:HZ3	1:K:42:TRP:HE3	1.50	0.59
1:B:131:ILE:HG12	2:B:501:ACO:C6A	2.32	0.59
1:E:33:PHE:CD1	1:E:34:ILE:N	2.70	0.59
1:J:270:ARG:NH1	1:J:270:ARG:HB2	2.17	0.59
1:J:271:ILE:N	1:J:271:ILE:CD1	2.65	0.59
1:A:132:TYR:OH	2:A:501:ACO:H31	2.03	0.59
1:E:114:ILE:CG2	1:E:119:TYR:HB2	2.33	0.59
1:F:303:ARG:NH2	1:F:359:ARG:HH11	2.01	0.59
1:H:150:ARG:HD3	1:H:150:ARG:C	2.22	0.59
1:A:314:ARG:NH1	1:A:316:TYR:CD2	2.71	0.59
1:B:16:GLU:HA	1:B:19:TRP:CD1	2.37	0.59
1:D:234:VAL:HG23	3:D:626:HOH:O	2.03	0.59
1:H:206:LEU:C	1:H:206:LEU:CD2	2.70	0.59
1:I:99:ARG:NH1	2:I:501:ACO:O5A	2.35	0.59
1:D:247:LEU:HD23	1:D:248:ARG:N	2.18	0.59
1:I:250:VAL:HG23	1:I:251:THR:HG23	1.85	0.59
1:B:169:VAL:CG2	1:B:225:HIS:HB2	2.32	0.59
1:C:16:GLU:HA	1:C:19:TRP:CD1	2.38	0.59
1:H:385:ASP:OD1	1:H:386:SER:N	2.36	0.59
1:I:225:HIS:CE1	1:I:226:PRO:HD2	2.38	0.59
1:D:10:THR:HG21	1:H:384:LYS:CE	2.33	0.59
1:D:52:VAL:HG13	1:D:110:LEU:CD2	2.32	0.59
1:D:98:ARG:HD2	1:E:264:GLY:HA2	1.85	0.59
1:I:289:ARG:HD3	1:J:297:GLN:OE1	2.02	0.59
1:A:42:TRP:NE1	1:A:69:LEU:HD21	2.18	0.58
1:H:34:ILE:HG13	1:H:37:GLU:OE1	2.03	0.58
1:B:167:SER:N	3:B:621:HOH:O	2.35	0.58
1:B:169:VAL:HG22	1:B:225:HIS:CG	2.38	0.58
1:E:142:THR:HG22	1:E:144:HIS:CD2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:247:LEU:HD23	1:E:247:LEU:C	2.24	0.58
1:F:71:MSE:O	1:F:73:LEU:HD13	2.03	0.58
1:G:69:LEU:HD12	1:G:69:LEU:O	2.02	0.58
1:H:127:SER:HB3	2:H:501:ACO:H22	1.84	0.58
1:L:329:VAL:O	1:L:332:GLY:N	2.30	0.58
1:L:330:SER:O	1:L:331:ASP:HB2	2.03	0.58
1:A:173:ARG:HB2	1:A:176:GLU:OE1	2.03	0.58
1:C:107:CYS:C	1:C:111:HIS:HD1	1.98	0.58
1:A:16:GLU:HA	1:A:19:TRP:CD1	2.38	0.58
1:C:355:ILE:HG12	1:C:381:LEU:HD11	1.85	0.58
1:D:150:ARG:NH2	1:D:266:ASP:C	2.55	0.58
1:F:326:VAL:CG1	1:F:353:ALA:HA	2.32	0.58
1:G:9:VAL:HG11	1:G:54:VAL:CG1	2.32	0.58
1:A:34:ILE:HG22	1:A:36:PRO:CD	2.32	0.58
1:A:306:ASN:OD1	1:A:308:PRO:HD2	2.02	0.58
1:E:148:VAL:CG2	1:E:291:ALA:CA	2.48	0.58
1:G:33:PHE:O	1:G:34:ILE:CG1	2.51	0.58
1:J:247:LEU:HD23	1:J:247:LEU:C	2.23	0.58
1:E:44:THR:HG23	1:E:45:LEU:HG	1.86	0.58
1:I:19:TRP:N	1:I:20:PRO:HD2	2.18	0.58
1:J:52:VAL:CG1	1:J:110:LEU:HD21	2.34	0.58
1:A:187:ARG:O	1:A:191:GLN:HG3	2.04	0.58
1:C:150:ARG:NH1	1:C:150:ARG:O	2.36	0.58
1:H:34:ILE:CG2	1:H:36:PRO:HD2	2.33	0.58
1:K:188:TRP:CH2	1:K:248:ARG:NH1	2.71	0.58
1:F:320:VAL:HG11	1:F:395:ALA:HA	1.86	0.58
1:H:79:GLY:O	1:H:80:GLU:HB2	2.02	0.58
1:J:98:ARG:CD	1:K:264:GLY:HA2	2.34	0.58
1:A:327:LEU:CD1	1:A:355:ILE:HG23	2.33	0.58
1:H:150:ARG:NH2	1:H:266:ASP:OD1	2.37	0.58
1:I:355:ILE:HD11	1:I:381:LEU:HG	1.84	0.58
1:D:218:ARG:HH21	1:D:239:LEU:HD21	1.69	0.58
1:I:193:PRO:CG	1:I:400:VAL:HG23	2.33	0.58
2:I:501:ACO:H4B	2:I:501:ACO:O8A	2.04	0.58
1:J:273:ILE:HG12	1:J:274:ILE:N	2.18	0.57
1:E:8:THR:O	1:E:57:GLY:N	2.37	0.57
1:E:199:PRO:HD2	1:E:202:LEU:HD12	1.85	0.57
1:F:242:ALA:HB3	1:F:271:ILE:CD1	2.35	0.57
1:H:107:CYS:HB3	1:H:111:HIS:CE1	2.39	0.57
1:J:400:VAL:HG23	1:J:400:VAL:O	2.04	0.57
1:A:146:LEU:HD13	1:A:275:THR:HG22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:145:GLU:OE2	1:D:295:TRP:HB3	2.02	0.57
1:G:225:HIS:CG	1:G:226:PRO:HD2	2.38	0.57
1:J:102:LEU:O	1:J:103:LEU:C	2.42	0.57
1:K:69:LEU:HD12	1:K:69:LEU:O	2.03	0.57
1:C:198:ARG:HD2	1:C:203:TRP:CE2	2.39	0.57
1:D:33:PHE:O	1:D:34:ILE:HD13	2.04	0.57
1:J:16:GLU:HA	1:J:19:TRP:CD1	2.39	0.57
1:A:361:VAL:HG13	1:A:375:LEU:HD13	1.85	0.57
1:C:110:LEU:CD1	1:C:110:LEU:H	2.17	0.57
1:E:156:HIS:NE2	1:F:380:ARG:NH2	2.52	0.57
1:H:326:VAL:HG21	1:H:352:ALA:O	2.04	0.57
1:E:144:HIS:CE1	1:E:296:ARG:CG	2.88	0.57
1:I:225:HIS:ND1	1:I:226:PRO:HD2	2.18	0.57
1:K:131:ILE:HG12	2:K:501:ACO:C6A	2.34	0.57
1:E:69:LEU:HD12	1:E:69:LEU:O	2.04	0.57
1:I:149:ASP:OD2	1:I:152:PHE:CD1	2.55	0.57
1:B:77:VAL:HB	1:B:78:PRO:HD2	1.86	0.57
1:C:52:VAL:CG2	1:C:110:LEU:CD1	2.55	0.57
1:F:71:MSE:C	1:F:73:LEU:CD1	2.72	0.57
1:F:250:VAL:HG23	1:F:251:THR:HG23	1.86	0.57
1:G:16:GLU:HA	1:G:19:TRP:CD1	2.39	0.57
1:H:225:HIS:CG	1:H:226:PRO:HD2	2.40	0.57
1:C:134:ARG:NH1	2:C:501:ACO:C1B	2.67	0.57
1:D:18:ASP:O	1:D:22:MSE:HG3	2.05	0.57
1:G:65:VAL:CG1	1:G:97:HIS:CE1	2.86	0.57
1:I:357:MSE:HE2	1:I:381:LEU:CG	2.31	0.57
1:I:375:LEU:O	1:I:380:ARG:HB2	2.05	0.57
1:K:198:ARG:HG2	1:K:203:TRP:CD1	2.40	0.57
1:B:193:PRO:O	1:B:402:VAL:HG23	2.05	0.57
1:B:247:LEU:HD23	1:B:247:LEU:C	2.25	0.57
1:D:127:SER:H	2:D:501:ACO:H21	1.69	0.57
1:E:387:GLN:HE22	1:E:391:ARG:NH2	2.03	0.57
1:H:148:VAL:HG21	1:H:281:LEU:HD21	1.86	0.57
1:G:242:ALA:HB2	1:G:268:MSE:HG3	1.86	0.56
1:H:169:VAL:HG21	1:H:225:HIS:HB2	1.86	0.56
1:A:34:ILE:HB	1:A:37:GLU:OE1	2.05	0.56
1:A:50:GLY:HA2	1:A:70:TYR:CE2	2.40	0.56
1:B:43:ARG:HH11	1:B:43:ARG:HA	1.69	0.56
1:D:16:GLU:O	1:D:19:TRP:HD1	1.88	0.56
1:F:34:ILE:HB	1:F:37:GLU:CD	2.24	0.56
1:G:311:LEU:N	1:G:311:LEU:HD12	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:197:LEU:HD12	1:H:198:ARG:H	1.69	0.56
1:K:158:ASP:OD2	3:K:604:HOH:O	2.17	0.56
1:K:355:ILE:CD1	1:K:381:LEU:HD21	2.34	0.56
1:A:83:LEU:HD21	1:A:313:ALA:HB1	1.86	0.56
1:F:242:ALA:HB3	1:F:271:ILE:HD13	1.88	0.56
1:G:222:ALA:HA	1:G:230:ALA:O	2.04	0.56
1:H:109:GLU:CD	1:H:112:ARG:HD3	2.26	0.56
1:K:292:ARG:CG	3:K:605:HOH:O	2.54	0.56
1:K:242:ALA:HB2	1:K:268:MSE:SE	2.55	0.56
1:A:381:LEU:C	1:A:381:LEU:HD12	2.26	0.56
1:G:34:ILE:HB	1:G:37:GLU:HG2	1.87	0.56
1:J:217:ASP:HB3	1:J:233:ARG:HD2	1.87	0.56
1:I:323:PHE:CG	1:I:391:ARG:HD3	2.39	0.56
1:D:193:PRO:CG	1:D:400:VAL:CG2	2.84	0.56
1:E:193:PRO:CG	1:E:400:VAL:HG23	2.35	0.56
1:J:41:ALA:C	1:J:44:THR:HG22	2.26	0.56
1:J:142:THR:O	1:J:277:PRO:HD3	2.05	0.56
1:A:85:THR:HG23	1:A:121:VAL:C	2.25	0.56
1:B:144:HIS:CE1	1:B:296:ARG:NH1	2.63	0.56
1:I:225:HIS:CG	1:I:226:PRO:HD2	2.40	0.56
1:I:342:GLY:O	1:I:343:ARG:CG	2.54	0.56
1:I:342:GLY:O	1:I:343:ARG:HG3	2.05	0.56
1:J:41:ALA:CA	1:J:44:THR:HG22	2.36	0.56
1:J:107:CYS:O	1:J:111:HIS:ND1	2.38	0.56
1:K:324:SER:O	1:K:325:THR:HB	2.04	0.56
1:C:267:SER:O	1:C:268:MSE:HE2	2.06	0.56
1:H:196:LEU:HD12	1:H:406:PHE:CE2	2.41	0.56
1:I:150:ARG:HD3	1:I:268:MSE:O	2.06	0.56
1:B:83:LEU:HD21	1:B:313:ALA:HB1	1.87	0.55
1:D:193:PRO:O	1:D:402:VAL:HG23	2.06	0.55
1:I:48:THR:O	1:I:49:ASP:OD1	2.24	0.55
1:J:127:SER:HB3	2:J:501:ACO:H22	1.89	0.55
1:B:38:SER:O	1:B:39:ALA:C	2.45	0.55
1:B:52:VAL:CG1	1:B:113:ARG:NH1	2.70	0.55
1:C:83:LEU:HD21	1:C:313:ALA:HB1	1.89	0.55
1:I:296:ARG:HD3	1:J:293:THR:OG1	2.05	0.55
1:A:355:ILE:HD11	1:A:381:LEU:CD1	2.28	0.55
1:D:43:ARG:HA	1:D:43:ARG:NH1	2.16	0.55
1:D:58:ALA:CB	1:H:384:LYS:HG3	2.37	0.55
1:E:43:ARG:HH11	1:E:43:ARG:HA	1.69	0.55
1:E:178:ARG:O	1:E:182:GLU:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:208:ALA:O	1:E:211:LYS:HG2	2.06	0.55
1:E:221:PHE:O	1:E:232:TYR:CD1	2.59	0.55
1:J:314:ARG:HD3	1:J:316:TYR:CZ	2.41	0.55
1:K:134:ARG:NH1	2:K:501:ACO:H1B	2.22	0.55
1:A:109:GLU:OE2	1:A:112:ARG:NH2	2.39	0.55
1:A:134:ARG:NH1	2:A:501:ACO:H1B	2.21	0.55
1:C:356:GLU:C	1:C:381:LEU:HD12	2.26	0.55
1:H:208:ALA:O	1:H:211:LYS:HG2	2.06	0.55
1:I:356:GLU:OE2	1:I:382:ARG:NE	2.32	0.55
1:K:400:VAL:HG13	1:K:400:VAL:O	2.07	0.55
1:L:33:PHE:O	1:L:34:ILE:HG12	2.06	0.55
1:L:259:TRP:O	1:L:263:ILE:HG12	2.05	0.55
1:B:23:PHE:CE1	1:B:42:TRP:HZ3	2.24	0.55
1:C:153:ALA:HA	1:C:290:LEU:CD1	2.36	0.55
1:C:247:LEU:C	1:C:247:LEU:HD23	2.26	0.55
1:F:42:TRP:CD2	1:F:69:LEU:HD21	2.40	0.55
1:F:43:ARG:HA	1:F:43:ARG:HH11	1.71	0.55
1:F:259:TRP:CE2	1:F:281:LEU:HD22	2.42	0.55
1:K:34:ILE:HB	1:K:37:GLU:HG2	1.88	0.55
1:D:206:LEU:C	1:D:206:LEU:CD2	2.75	0.55
1:G:355:ILE:HD11	1:G:381:LEU:CD2	2.33	0.55
1:K:192:VAL:CG1	1:K:403:GLN:HB2	2.36	0.55
1:B:150:ARG:CZ	1:B:266:ASP:HA	2.37	0.55
1:C:144:HIS:NE2	1:C:296:ARG:NH1	2.54	0.55
1:C:160:PRO:HG2	1:C:256:CYS:SG	2.46	0.55
1:D:327:LEU:O	1:D:335:PHE:N	2.39	0.55
1:A:35:GLY:N	1:A:36:PRO:HD2	2.22	0.55
1:C:178:ARG:HG3	1:C:207:LEU:HD11	1.89	0.55
1:F:123:ALA:HB1	1:F:300:LEU:HD11	1.89	0.55
1:K:297:GLN:CG	1:L:289:ARG:HD3	2.36	0.55
1:H:146:LEU:CD2	1:H:275:THR:CG2	2.84	0.55
1:J:196:LEU:HG	1:J:405:ALA:HB1	1.88	0.55
1:K:192:VAL:HG11	1:K:403:GLN:CG	2.36	0.55
1:D:148:VAL:HG21	1:D:291:ALA:CB	2.36	0.55
1:J:50:GLY:HA2	1:J:70:TYR:CE1	2.41	0.55
1:H:22:MSE:HE2	1:H:42:TRP:CZ3	2.42	0.54
1:K:160:PRO:HG2	1:K:256:CYS:CB	2.37	0.54
1:A:123:ALA:HA	1:A:301:TRP:O	2.07	0.54
1:C:88:LEU:HD12	1:C:88:LEU:N	2.22	0.54
1:C:199:PRO:HB2	1:C:201:VAL:HG12	1.89	0.54
1:C:206:LEU:C	1:C:206:LEU:CD2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:175:THR:HA	1:E:207:LEU:HD11	1.90	0.54
1:J:334:ARG:NH1	1:J:350:ASP:O	2.40	0.54
1:D:400:VAL:HG23	1:D:400:VAL:O	2.07	0.54
1:H:188:TRP:CH2	1:H:248:ARG:NH1	2.75	0.54
1:H:196:LEU:CD1	1:H:406:PHE:CE2	2.90	0.54
1:H:212:ALA:HB2	1:H:219:GLU:N	2.21	0.54
1:I:39:ALA:O	1:I:43:ARG:HG2	2.07	0.54
1:J:326:VAL:O	1:J:355:ILE:HG22	2.06	0.54
1:L:381:LEU:HD12	1:L:381:LEU:O	2.07	0.54
1:A:34:ILE:CG2	1:A:36:PRO:HD2	2.33	0.54
1:C:367:LEU:O	1:C:402:VAL:HG21	2.08	0.54
1:H:19:TRP:HZ3	1:H:42:TRP:HE3	1.55	0.54
1:H:198:ARG:HG2	1:H:203:TRP:CD1	2.43	0.54
1:I:52:VAL:HG13	1:I:110:LEU:HD23	1.86	0.54
1:J:101:GLY:O	1:J:104:ARG:HB3	2.08	0.54
1:D:186:GLU:O	1:D:190:GLN:HG3	2.06	0.54
1:F:77:VAL:HB	1:F:78:PRO:HD2	1.90	0.54
1:F:330:SER:O	1:F:331:ASP:HB2	2.07	0.54
1:G:9:VAL:HG11	1:G:102:LEU:HD21	1.90	0.54
1:H:34:ILE:HB	1:H:37:GLU:OE1	2.05	0.54
1:D:148:VAL:HG13	1:D:290:LEU:HB3	1.90	0.54
1:J:98:ARG:NH2	1:J:99:ARG:NH2	2.56	0.54
1:A:34:ILE:HB	1:A:37:GLU:CG	2.37	0.54
1:D:10:THR:CB	1:H:384:LYS:CD	2.86	0.54
1:D:314:ARG:O	1:D:316:TYR:CE1	2.61	0.54
1:G:385:ASP:C	1:G:385:ASP:OD1	2.46	0.54
1:K:77:VAL:HB	1:K:78:PRO:HD2	1.90	0.54
1:K:373:SER:HB3	1:K:393:ASP:OD2	2.08	0.54
1:A:98:ARG:HD3	1:F:264:GLY:HA2	1.89	0.54
1:B:41:ALA:O	1:B:45:LEU:N	2.35	0.54
1:C:148:VAL:HG13	1:C:290:LEU:HB3	1.90	0.54
1:D:44:THR:HG21	1:D:201:VAL:HG11	1.90	0.54
1:E:248:ARG:NH2	1:E:405:ALA:O	2.41	0.54
1:F:144:HIS:CE1	1:F:296:ARG:HH12	2.23	0.54
1:G:74:ARG:HD3	1:G:84:PRO:HA	1.89	0.54
1:G:103:LEU:HD22	2:G:501:ACO:H133	1.90	0.54
1:A:297:GLN:HG3	1:B:289:ARG:HD3	1.88	0.54
1:B:107:CYS:C	1:B:111:HIS:HD1	2.11	0.54
1:C:247:LEU:HD23	1:C:248:ARG:N	2.23	0.54
1:D:304:ILE:O	1:D:359:ARG:NH1	2.40	0.54
1:B:19:TRP:N	1:B:20:PRO:HD2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:145:GLU:HB3	1:C:295:TRP:HB3	1.82	0.54
1:E:192:VAL:HG11	1:E:403:GLN:CB	2.35	0.54
1:H:247:LEU:HD23	1:H:248:ARG:N	2.23	0.54
1:I:42:TRP:CD1	1:I:42:TRP:N	2.74	0.54
1:K:203:TRP:O	1:K:207:LEU:HD22	2.07	0.54
1:L:123:ALA:HB1	1:L:300:LEU:HD11	1.88	0.54
1:D:146:LEU:CD2	1:D:146:LEU:C	2.76	0.53
1:E:22:MSE:HE2	1:E:67:MSE:HE3	1.88	0.53
1:H:34:ILE:O	1:H:37:GLU:HG2	2.08	0.53
1:H:247:LEU:HD12	1:H:273:ILE:CD1	2.38	0.53
1:A:45:LEU:CD1	1:A:71:MSE:CE	2.85	0.53
1:B:98:ARG:HD2	1:D:264:GLY:HA3	1.90	0.53
1:G:311:LEU:HD12	1:G:311:LEU:H	1.73	0.53
1:J:72:ASP:O	1:J:73:LEU:HD23	2.07	0.53
1:J:77:VAL:HB	1:J:78:PRO:HD2	1.89	0.53
1:D:225:HIS:CE1	1:D:226:PRO:HD2	2.44	0.53
1:E:387:GLN:NE2	1:E:391:ARG:NH2	2.57	0.53
1:F:192:VAL:CG1	1:F:403:GLN:HB2	2.36	0.53
1:I:192:VAL:HG11	1:I:403:GLN:HB2	1.90	0.53
1:B:42:TRP:NE1	1:B:90:PHE:CD2	2.70	0.53
1:B:85:THR:CG2	1:B:86:ALA:N	2.72	0.53
1:B:206:LEU:C	1:B:206:LEU:CD2	2.75	0.53
1:E:74:ARG:HD3	1:E:84:PRO:HA	1.90	0.53
1:I:293:THR:HB	1:J:296:ARG:HB3	1.89	0.53
1:K:169:VAL:HG22	1:K:225:HIS:HB2	1.91	0.53
1:B:178:ARG:HH11	1:B:207:LEU:HD12	1.71	0.53
1:D:121:VAL:HG12	1:D:304:ILE:HA	1.91	0.53
1:D:381:LEU:HD11	1:D:389:LEU:HD21	1.90	0.53
1:E:146:LEU:HB2	1:E:273:ILE:HG23	1.90	0.53
1:E:297:GLN:CD	1:F:289:ARG:HD3	2.28	0.53
1:F:197:LEU:O	1:F:199:PRO:HD3	2.09	0.53
1:G:188:TRP:CZ2	1:G:248:ARG:NH1	2.77	0.53
1:D:16:GLU:HA	1:D:19:TRP:NE1	2.24	0.53
1:E:355:ILE:HG13	1:E:382:ARG:O	2.09	0.53
1:G:259:TRP:O	1:G:263:ILE:HG12	2.09	0.53
2:G:501:ACO:O8A	2:G:501:ACO:H4B	2.08	0.53
1:H:144:HIS:HD2	1:H:277:PRO:HG3	1.66	0.53
1:B:100:ARG:NH2	1:D:167:SER:OG	2.42	0.53
1:C:259:TRP:CE2	1:C:281:LEU:HD22	2.44	0.53
1:D:181:PHE:HD1	1:D:229:TYR:CG	2.26	0.53
1:D:259:TRP:CE2	1:D:281:LEU:HD22	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:144:HIS:HE1	1:E:296:ARG:CD	2.20	0.53
1:G:40:THR:C	1:G:44:THR:HG22	2.21	0.53
1:K:244:VAL:HB	1:K:273:ILE:CD1	2.15	0.53
1:L:48:THR:O	1:L:49:ASP:OD1	2.26	0.53
1:E:107:CYS:HB3	1:E:111:HIS:CE1	2.44	0.53
1:E:297:GLN:HG2	1:E:298:ASP:N	2.24	0.53
1:H:98:ARG:NE	1:H:99:ARG:CZ	2.71	0.53
1:B:23:PHE:HE1	1:B:42:TRP:CZ3	2.26	0.53
1:C:89:SER:O	1:C:90:PHE:HB2	2.09	0.53
1:E:143:LEU:HD21	1:E:404:THR:CB	2.39	0.53
1:I:114:ILE:HG22	1:I:305:MSE:HE2	1.90	0.53
1:I:289:ARG:CD	1:J:297:GLN:CG	2.80	0.53
1:L:145:GLU:HB3	1:L:295:TRP:HB3	1.89	0.53
1:F:43:ARG:HH11	1:F:43:ARG:CA	2.22	0.53
1:F:314:ARG:O	1:F:316:TYR:CE1	2.62	0.53
1:G:192:VAL:HG11	1:G:403:GLN:HB2	1.90	0.53
1:I:44:THR:O	1:I:44:THR:CG2	2.56	0.53
1:J:34:ILE:HG22	1:J:36:PRO:CG	2.38	0.53
1:F:77:VAL:HB	1:F:78:PRO:CD	2.39	0.52
1:F:198:ARG:HD2	1:F:203:TRP:CE2	2.44	0.52
1:G:372:ALA:HB1	1:G:381:LEU:HD13	1.91	0.52
1:J:330:SER:O	1:J:331:ASP:HB2	2.09	0.52
1:L:34:ILE:HG23	1:L:36:PRO:HD2	1.89	0.52
1:A:45:LEU:HD12	1:A:71:MSE:CE	2.39	0.52
1:A:199:PRO:HD2	1:A:202:LEU:HD12	1.90	0.52
1:B:98:ARG:HD2	1:D:264:GLY:HA2	1.92	0.52
1:B:355:ILE:HD11	1:B:381:LEU:HD21	1.90	0.52
1:D:98:ARG:CD	1:E:264:GLY:HA2	2.39	0.52
1:F:22:MSE:HE1	1:F:42:TRP:HZ2	1.65	0.52
1:F:39:ALA:O	1:F:43:ARG:HG2	2.08	0.52
1:G:150:ARG:HG2	1:G:269:GLU:O	2.09	0.52
1:I:289:ARG:HG3	1:J:298:ASP:OD1	2.09	0.52
1:I:372:ALA:HB3	1:I:393:ASP:OD1	2.09	0.52
1:I:390:ARG:HD3	1:J:399:ASP:OD2	2.08	0.52
1:I:400:VAL:HG23	1:I:400:VAL:O	2.08	0.52
1:J:19:TRP:N	1:J:20:PRO:HD2	2.24	0.52
1:A:127:SER:HB3	2:A:501:ACO:H22	1.89	0.52
1:D:8:THR:N	1:H:353:ALA:HB3	2.24	0.52
1:E:381:LEU:HD12	1:E:381:LEU:O	2.10	0.52
1:I:289:ARG:CZ	1:J:297:GLN:OE1	2.57	0.52
1:J:193:PRO:CG	1:J:400:VAL:CG2	2.86	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:42:TRP:HA	1:A:46:VAL:HG23	1.92	0.52
1:A:156:HIS:CE1	1:B:380:ARG:NH1	2.78	0.52
1:B:145:GLU:OE2	1:B:295:TRP:HB3	2.08	0.52
1:B:326:VAL:HB	1:B:354:GLU:H	1.75	0.52
1:C:146:LEU:HD12	1:C:292:ARG:O	2.10	0.52
1:K:307:VAL:HB	1:K:308:PRO:HD3	1.92	0.52
1:B:69:LEU:C	1:B:69:LEU:HD12	2.30	0.52
1:C:170:ARG:HD2	1:F:63:GLU:CD	2.29	0.52
1:D:63:GLU:OE1	1:E:170:ARG:HD2	2.10	0.52
1:E:110:LEU:O	1:E:114:ILE:HG13	2.09	0.52
1:F:71:MSE:O	1:F:73:LEU:CD1	2.58	0.52
1:F:192:VAL:HG11	1:F:403:GLN:CB	2.39	0.52
1:G:123:ALA:CB	1:G:302:LEU:HD23	2.39	0.52
1:G:406:PHE:O	3:G:629:HOH:O	2.18	0.52
1:H:339:ILE:HG12	1:H:344:ALA:HB2	1.90	0.52
1:J:207:LEU:HD12	1:J:207:LEU:N	2.24	0.52
1:K:98:ARG:HE	1:K:99:ARG:NH2	2.08	0.52
1:C:180:GLU:O	1:C:184:ILE:HG13	2.09	0.52
2:E:501:ACO:H4B	2:E:501:ACO:O8A	2.08	0.52
1:F:361:VAL:HG13	1:F:375:LEU:HD13	1.90	0.52
1:H:145:GLU:OE2	1:H:295:TRP:CB	2.58	0.52
1:I:198:ARG:NH1	1:I:206:LEU:CD1	2.73	0.52
1:I:293:THR:OG1	1:J:296:ARG:HD3	2.10	0.52
1:K:311:LEU:O	1:K:316:TYR:OH	2.13	0.52
1:A:121:VAL:HA	1:A:305:MSE:HG2	1.90	0.52
2:B:501:ACO:H4B	2:B:501:ACO:O8A	2.10	0.52
1:D:107:CYS:O	1:D:111:HIS:ND1	2.39	0.52
1:E:196:LEU:HD12	1:E:405:ALA:HB3	1.91	0.52
1:F:98:ARG:HH11	1:F:99:ARG:HH21	1.57	0.52
1:H:385:ASP:OD1	1:H:385:ASP:C	2.48	0.52
1:I:267:SER:C	1:I:268:MSE:HE2	2.29	0.52
1:J:52:VAL:HG12	1:J:110:LEU:HD21	1.90	0.52
1:C:316:TYR:O	1:C:342:GLY:HA2	2.10	0.52
1:F:73:LEU:N	1:F:73:LEU:CD1	2.73	0.52
1:B:197:LEU:O	1:B:199:PRO:HD3	2.09	0.52
1:D:402:VAL:HG12	3:D:621:HOH:O	2.09	0.52
1:E:141:THR:HG22	1:E:402:VAL:HG11	1.93	0.52
1:F:120:PRO:O	1:F:305:MSE:HB2	2.10	0.52
1:F:133:GLY:HA2	1:F:137:TYR:O	2.10	0.52
1:G:98:ARG:HD2	1:L:264:GLY:HA2	1.88	0.52
1:G:289:ARG:NH1	1:H:298:ASP:CG	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:52:VAL:CG1	1:I:110:LEU:HD23	2.39	0.52
1:B:155:PHE:CZ	1:B:260:ARG:HA	2.44	0.51
1:I:178:ARG:HD2	1:I:207:LEU:HD11	1.92	0.51
1:I:200:GLN:HE21	1:I:200:GLN:CA	2.15	0.51
1:A:276:HIS:HB2	1:A:277:PRO:HD2	1.92	0.51
1:B:24:LEU:HD13	1:D:173:ARG:CG	2.37	0.51
1:B:330:SER:O	1:B:331:ASP:HB2	2.09	0.51
1:D:250:VAL:HG12	1:D:250:VAL:O	2.09	0.51
1:G:98:ARG:HD2	1:L:264:GLY:HA3	1.90	0.51
1:H:144:HIS:CD2	1:H:277:PRO:CG	2.88	0.51
1:B:178:ARG:CG	1:B:207:LEU:HD11	2.40	0.51
1:B:219:GLU:HG3	3:B:623:HOH:O	2.09	0.51
1:C:357:MSE:CG	1:C:381:LEU:HD13	2.40	0.51
1:G:43:ARG:HA	1:G:43:ARG:NH1	2.21	0.51
1:I:23:PHE:CE1	1:I:38:SER:OG	2.56	0.51
1:K:225:HIS:CG	1:K:226:PRO:HD2	2.46	0.51
1:A:314:ARG:HG2	1:A:315:GLY:O	2.10	0.51
1:A:381:LEU:HD12	1:A:381:LEU:O	2.11	0.51
1:C:74:ARG:HD3	1:C:84:PRO:HA	1.93	0.51
1:E:156:HIS:HE2	1:F:380:ARG:NH2	2.08	0.51
1:E:181:PHE:HD1	1:E:229:TYR:CG	2.29	0.51
1:H:98:ARG:NE	1:H:99:ARG:NH1	2.57	0.51
1:I:208:ALA:O	1:I:211:LYS:HG2	2.10	0.51
1:I:323:PHE:CD2	1:I:391:ARG:HD3	2.45	0.51
1:K:314:ARG:HH11	1:K:314:ARG:HG2	1.74	0.51
1:B:200:GLN:HA	1:B:200:GLN:NE2	2.25	0.51
1:F:72:ASP:O	1:F:73:LEU:HD12	2.11	0.51
1:F:247:LEU:HD23	1:F:248:ARG:N	2.25	0.51
1:I:323:PHE:CE2	1:I:391:ARG:HB3	2.45	0.51
1:I:355:ILE:HD11	1:I:381:LEU:HD21	1.93	0.51
1:L:314:ARG:HD3	1:L:315:GLY:O	2.11	0.51
1:D:150:ARG:NE	1:D:265:LEU:O	2.44	0.51
1:D:208:ALA:O	1:D:211:LYS:HG2	2.10	0.51
1:B:42:TRP:CZ2	1:B:90:PHE:CD1	2.99	0.51
1:C:150:ARG:HH21	1:C:266:ASP:CA	2.13	0.51
1:C:340:GLY:O	1:C:341:ASP:HB2	2.11	0.51
1:D:148:VAL:HG22	1:D:291:ALA:HA	0.56	0.51
1:H:107:CYS:HB3	1:H:111:HIS:HE1	1.76	0.51
1:A:45:LEU:CD1	1:A:71:MSE:HE2	2.40	0.51
1:A:98:ARG:CD	1:F:264:GLY:HA2	2.41	0.51
1:B:34:ILE:HB	1:B:37:GLU:OE1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:327:LEU:O	1:C:335:PHE:N	2.44	0.51
1:G:284:LEU:HD23	1:H:378:ALA:HB1	1.92	0.51
1:G:289:ARG:NE	1:H:297:GLN:OE1	2.43	0.51
1:J:178:ARG:CD	1:J:207:LEU:HD21	2.38	0.51
1:F:39:ALA:O	1:F:43:ARG:CG	2.59	0.51
1:F:144:HIS:CD2	1:F:296:ARG:NH1	2.68	0.51
1:F:260:ARG:HG2	1:F:260:ARG:HH11	1.76	0.51
1:G:184:ILE:HG21	1:G:228:GLY:HA2	1.91	0.51
1:H:354:GLU:CB	1:H:384:LYS:HZ1	2.20	0.51
1:I:317:ALA:HB3	1:I:394:ALA:O	2.11	0.51
1:E:128:GLU:HA	1:F:289:ARG:NH2	2.26	0.51
1:I:178:ARG:CG	1:I:207:LEU:HD11	2.41	0.51
1:I:355:ILE:HG13	1:I:383:THR:HB	1.92	0.51
1:J:41:ALA:CA	1:J:44:THR:CG2	2.89	0.51
1:B:144:HIS:HB3	1:B:146:LEU:CD1	2.39	0.50
1:B:247:LEU:O	1:B:248:ARG:HD3	2.11	0.50
1:C:357:MSE:HB3	1:C:381:LEU:HD12	1.90	0.50
1:E:341:ASP:OD2	1:E:343:ARG:NH2	2.44	0.50
1:G:93:VAL:HG23	2:G:501:ACO:H132	1.93	0.50
1:I:114:ILE:HG23	1:I:119:TYR:HB2	1.92	0.50
1:I:197:LEU:HD12	1:I:198:ARG:H	1.77	0.50
1:I:311:LEU:HD13	1:I:337:LEU:HD22	1.93	0.50
2:K:501:ACO:H52A	3:K:622:HOH:O	2.10	0.50
1:G:375:LEU:HD21	1:H:283:HIS:CE1	2.46	0.50
1:I:369:ALA:HB2	1:I:402:VAL:HG11	1.93	0.50
1:J:263:ILE:O	1:J:263:ILE:HG22	2.11	0.50
1:B:34:ILE:HB	1:B:37:GLU:CG	2.41	0.50
1:F:16:GLU:O	1:F:19:TRP:CD1	2.64	0.50
1:F:34:ILE:HG22	1:F:36:PRO:CG	2.40	0.50
1:F:127:SER:HB3	2:F:501:ACO:H22	1.94	0.50
1:F:379:ASN:ND2	1:F:382:ARG:HD3	2.26	0.50
1:G:104:ARG:HG3	1:G:135:PHE:HE1	1.77	0.50
1:G:250:VAL:O	1:G:250:VAL:CG1	2.59	0.50
1:G:289:ARG:HG3	1:H:129:GLY:HA3	1.91	0.50
1:K:198:ARG:HD2	1:K:203:TRP:CE2	2.47	0.50
1:D:148:VAL:CG2	1:D:291:ALA:CB	2.88	0.50
1:J:98:ARG:HD2	1:K:264:GLY:HA3	1.93	0.50
1:C:198:ARG:NH1	1:C:206:LEU:CD1	2.75	0.50
1:E:156:HIS:HE2	1:F:380:ARG:HH22	1.59	0.50
1:G:385:ASP:OD1	1:G:387:GLN:N	2.45	0.50
1:I:217:ASP:CG	1:I:233:ARG:HH11	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:16:GLU:HA	1:K:19:TRP:CD1	2.46	0.50
1:C:373:SER:HB3	1:C:393:ASP:OD2	2.11	0.50
1:J:405:ALA:N	3:J:602:HOH:O	2.09	0.50
1:L:334:ARG:HD2	1:L:351:ALA:O	2.11	0.50
1:C:178:ARG:HH21	1:C:200:GLN:HE21	1.57	0.50
1:C:293:THR:N	3:C:604:HOH:O	2.03	0.50
1:C:295:TRP:HZ2	1:C:297:GLN:NE2	2.08	0.50
1:D:181:PHE:HD1	1:D:229:TYR:CD2	2.30	0.50
1:E:187:ARG:NH2	1:E:250:VAL:HG21	2.27	0.50
1:E:192:VAL:HG11	1:E:403:GLN:CG	2.42	0.50
1:E:341:ASP:OD1	1:E:341:ASP:O	2.30	0.50
1:F:16:GLU:O	1:F:19:TRP:HD1	1.95	0.50
1:H:247:LEU:O	1:H:248:ARG:HD3	2.11	0.50
1:J:225:HIS:CG	1:J:226:PRO:HD2	2.46	0.50
1:J:297:GLN:HG2	1:J:298:ASP:N	2.26	0.50
1:K:192:VAL:HG11	1:K:403:GLN:CB	2.42	0.50
1:G:9:VAL:HG12	1:G:54:VAL:HG13	1.92	0.50
1:G:172:VAL:HB	1:G:177:HIS:CD2	2.47	0.50
1:I:107:CYS:HB3	1:I:111:HIS:HE1	1.75	0.50
1:I:141:THR:HG22	1:I:402:VAL:HG21	1.92	0.50
1:J:339:ILE:HG12	1:J:344:ALA:CB	2.40	0.50
1:L:178:ARG:HG3	1:L:207:LEU:HD21	1.94	0.50
1:L:327:LEU:C	1:L:327:LEU:CD2	2.79	0.50
1:C:326:VAL:HG21	1:C:352:ALA:O	2.11	0.50
1:E:85:THR:HG23	1:E:121:VAL:HG23	1.93	0.50
1:F:148:VAL:HG13	1:F:271:ILE:HB	1.94	0.50
1:G:9:VAL:HG11	1:G:54:VAL:HG11	1.93	0.50
1:H:34:ILE:O	1:H:37:GLU:CG	2.60	0.50
1:H:98:ARG:HD2	1:J:266:ASP:OD2	2.12	0.50
1:C:325:THR:OG1	1:C:326:VAL:N	2.45	0.49
1:D:48:THR:O	1:D:49:ASP:OD1	2.30	0.49
1:E:400:VAL:HG23	1:E:400:VAL:O	2.11	0.49
1:G:16:GLU:HA	1:G:19:TRP:NE1	2.27	0.49
1:G:381:LEU:CD2	1:G:381:LEU:O	2.59	0.49
1:H:42:TRP:CH2	1:H:67:MSE:HE1	2.47	0.49
1:H:145:GLU:C	1:H:146:LEU:HD22	2.32	0.49
1:K:334:ARG:HD2	1:K:351:ALA:O	2.12	0.49
1:A:336:ALA:O	1:A:346:CYS:HA	2.12	0.49
1:B:266:ASP:H	1:E:98:ARG:HH11	1.59	0.49
1:D:178:ARG:NH1	1:D:207:LEU:HD12	2.27	0.49
1:E:88:LEU:N	1:E:88:LEU:HD12	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:98:ARG:NE	1:F:99:ARG:NH2	2.55	0.49
1:G:48:THR:O	1:G:49:ASP:OD1	2.30	0.49
1:I:77:VAL:HB	1:I:78:PRO:CD	2.42	0.49
1:K:381:LEU:C	1:K:381:LEU:CD2	2.79	0.49
1:L:182:GLU:HA	1:L:203:TRP:CZ2	2.47	0.49
1:A:73:LEU:CB	1:A:85:THR:O	2.59	0.49
1:A:173:ARG:CG	1:C:24:LEU:HD13	2.42	0.49
1:B:307:VAL:HB	1:B:308:PRO:HD3	1.94	0.49
1:C:266:ASP:OD2	1:F:98:ARG:HD2	2.12	0.49
1:F:225:HIS:HD1	1:F:227:ASP:H	1.60	0.49
1:F:259:TRP:CZ2	1:F:281:LEU:HD22	2.48	0.49
1:H:188:TRP:CZ2	1:H:248:ARG:NH1	2.80	0.49
1:H:292:ARG:HA	3:H:605:HOH:O	2.13	0.49
1:C:145:GLU:HG2	1:C:274:ILE:HD13	1.95	0.49
1:C:326:VAL:HB	1:C:354:GLU:H	1.76	0.49
1:F:19:TRP:N	1:F:20:PRO:HD2	2.26	0.49
1:H:145:GLU:CB	1:H:295:TRP:HB3	2.41	0.49
1:J:76:THR:O	1:J:193:PRO:HA	2.12	0.49
1:A:79:GLY:O	1:A:80:GLU:HB2	2.12	0.49
1:F:121:VAL:HG12	1:F:305:MSE:H	1.76	0.49
1:I:276:HIS:HD2	1:I:278:GLN:N	2.08	0.49
1:I:323:PHE:HB3	1:I:391:ARG:NH1	2.25	0.49
1:I:355:ILE:HD11	1:I:381:LEU:CD2	2.42	0.49
1:J:83:LEU:HD11	1:J:313:ALA:CB	2.42	0.49
1:K:169:VAL:HG12	1:K:170:ARG:N	2.27	0.49
1:D:172:VAL:HB	1:D:177:HIS:CD2	2.48	0.49
1:D:223:LEU:HD13	1:D:261:ALA:HB1	1.95	0.49
1:F:42:TRP:CD1	1:F:69:LEU:HD22	2.34	0.49
1:F:141:THR:HG22	1:F:402:VAL:HG11	1.93	0.49
1:H:34:ILE:CB	1:H:37:GLU:CG	2.58	0.49
1:K:10:THR:O	1:K:54:VAL:HA	2.12	0.49
1:L:150:ARG:NH1	1:L:263:ILE:O	2.43	0.49
1:L:381:LEU:HD11	1:L:389:LEU:HD21	1.95	0.49
1:B:231:LEU:HB2	1:B:245:SER:OG	2.11	0.49
1:C:155:PHE:CE2	1:C:260:ARG:HA	2.47	0.49
1:G:123:ALA:HB2	1:G:302:LEU:HD23	1.95	0.49
1:H:147:THR:OG1	1:H:294:THR:HG21	2.12	0.49
1:K:51:ALA:HA	1:K:69:LEU:HB3	1.94	0.49
1:D:148:VAL:HG13	1:D:290:LEU:CB	2.42	0.49
1:E:16:GLU:HA	1:E:19:TRP:CD1	2.46	0.49
1:E:72:ASP:O	1:E:73:LEU:HD23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:35:GLY:N	1:F:36:PRO:CD	2.75	0.49
1:F:303:ARG:HD3	1:F:305:MSE:SE	2.62	0.49
1:G:98:ARG:CD	1:L:264:GLY:CA	2.86	0.49
1:H:295:TRP:CH2	1:H:297:GLN:NE2	2.66	0.49
1:J:98:ARG:HD2	1:K:264:GLY:HA2	1.93	0.49
1:A:314:ARG:HH22	1:A:396:PHE:C	2.15	0.49
1:A:320:VAL:HG21	1:A:394:ALA:HB3	1.94	0.49
1:D:150:ARG:NE	1:D:268:MSE:O	2.46	0.49
1:E:198:ARG:CZ	1:E:206:LEU:HD12	2.43	0.49
1:F:150:ARG:CZ	1:F:266:ASP:HA	2.43	0.49
1:H:33:PHE:CZ	1:H:38:SER:OG	2.55	0.49
1:B:145:GLU:OE2	1:B:295:TRP:HB2	2.12	0.49
1:C:50:GLY:HA2	1:C:70:TYR:CE1	2.48	0.49
1:E:114:ILE:HG22	1:E:119:TYR:HB2	1.94	0.49
1:F:295:TRP:HZ2	1:F:297:GLN:NE2	2.11	0.49
1:F:311:LEU:HD21	1:F:362:LEU:HD11	1.95	0.49
1:G:54:VAL:HG11	1:G:102:LEU:HD22	1.95	0.49
1:I:178:ARG:HG3	1:I:207:LEU:HD11	1.95	0.49
1:J:169:VAL:HG11	1:J:223:LEU:HB3	1.95	0.49
1:A:125:HIS:HE1	3:A:618:HOH:O	1.94	0.48
1:B:42:TRP:HD1	1:B:71:MSE:HE3	1.78	0.48
1:C:134:ARG:CZ	2:C:501:ACO:H1B	2.43	0.48
1:D:144:HIS:CD2	1:D:277:PRO:CG	2.92	0.48
1:E:314:ARG:HD3	1:E:316:TYR:CE2	2.48	0.48
1:H:144:HIS:NE2	1:H:277:PRO:HG3	2.27	0.48
1:H:170:ARG:O	1:H:172:VAL:HG13	2.11	0.48
1:H:297:GLN:HG2	1:H:298:ASP:N	2.28	0.48
1:J:43:ARG:NH1	1:J:43:ARG:CA	2.69	0.48
1:J:357:MSE:HE1	1:J:362:LEU:CA	2.42	0.48
1:K:360:ASP:OD2	1:K:380:ARG:NH2	2.45	0.48
1:L:311:LEU:HD21	1:L:362:LEU:HD11	1.95	0.48
2:B:501:ACO:O5P	2:B:501:ACO:H141	2.13	0.48
1:C:200:GLN:NE2	1:C:200:GLN:HA	2.28	0.48
1:G:11:LEU:HD12	1:G:52:VAL:CG2	2.37	0.48
1:G:114:ILE:HG22	1:G:305:MSE:HE2	1.94	0.48
1:G:307:VAL:HB	1:G:308:PRO:HD3	1.95	0.48
1:I:178:ARG:CD	1:I:207:LEU:HD11	2.42	0.48
1:K:229:TYR:N	1:K:248:ARG:O	2.45	0.48
1:K:297:GLN:HG3	1:L:289:ARG:HD3	1.94	0.48
1:B:48:THR:O	1:B:49:ASP:OD1	2.30	0.48
1:B:65:VAL:HG11	1:B:97:HIS:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:148:VAL:HG13	1:B:290:LEU:O	2.14	0.48
1:D:148:VAL:HG21	1:D:291:ALA:CA	2.26	0.48
1:E:148:VAL:HG21	1:E:281:LEU:HD21	1.95	0.48
1:F:46:VAL:CG2	1:F:69:LEU:HD13	2.44	0.48
1:I:70:TYR:HB3	1:I:88:LEU:HD23	1.94	0.48
1:I:227:ASP:HB3	1:I:250:VAL:HG22	1.95	0.48
1:J:146:LEU:O	1:J:272:SER:HA	2.13	0.48
1:J:184:ILE:HG21	1:J:229:TYR:HD1	1.78	0.48
1:K:103:LEU:HB2	2:K:501:ACO:O6A	2.14	0.48
1:K:383:THR:HG21	1:K:389:LEU:HG	1.94	0.48
1:A:145:GLU:HB3	1:A:295:TRP:CB	2.38	0.48
1:C:239:LEU:O	1:C:268:MSE:HE1	2.13	0.48
1:E:381:LEU:HD12	1:E:381:LEU:C	2.34	0.48
1:G:140:ALA:O	1:G:369:ALA:HB2	2.13	0.48
1:H:34:ILE:CG1	1:H:37:GLU:OE1	2.61	0.48
1:J:77:VAL:HB	1:J:78:PRO:CD	2.43	0.48
1:K:316:TYR:CE1	1:K:344:ALA:HB2	2.48	0.48
1:C:155:PHE:CZ	1:C:260:ARG:HA	2.48	0.48
1:D:137:TYR:O	1:D:360:ASP:HB2	2.13	0.48
1:G:222:ALA:CB	1:G:231:LEU:CD2	2.75	0.48
1:B:326:VAL:CG1	1:B:353:ALA:HA	2.44	0.48
1:C:150:ARG:HD3	1:C:265:LEU:O	2.13	0.48
1:C:307:VAL:HB	1:C:308:PRO:HD3	1.96	0.48
1:D:33:PHE:O	1:D:34:ILE:CD1	2.62	0.48
1:F:144:HIS:CE1	1:F:296:ARG:NH1	2.67	0.48
1:H:145:GLU:OE2	1:H:295:TRP:HB3	2.14	0.48
1:J:295:TRP:CZ2	1:J:297:GLN:HB3	2.49	0.48
1:B:42:TRP:NE1	1:B:90:PHE:CZ	2.72	0.48
1:B:98:ARG:CD	1:D:264:GLY:HA2	2.43	0.48
1:D:9:VAL:O	1:H:352:ALA:HB1	2.14	0.48
1:E:144:HIS:NE2	1:E:277:PRO:HG3	2.29	0.48
1:F:74:ARG:HB3	1:F:82:VAL:HG11	1.95	0.48
1:F:139:PRO:HD3	1:F:301:TRP:CZ3	2.49	0.48
1:G:133:GLY:HA2	1:G:137:TYR:O	2.13	0.48
1:I:70:TYR:HA	1:I:87:GLY:O	2.14	0.48
1:J:404:THR:HG22	1:J:405:ALA:O	2.14	0.48
1:A:144:HIS:HB3	1:A:146:LEU:HD11	1.95	0.48
1:A:263:ILE:HG22	1:A:263:ILE:O	2.13	0.48
1:B:34:ILE:CG2	1:B:36:PRO:HD2	2.44	0.48
1:B:371:ARG:NH2	3:B:652:HOH:O	2.46	0.48
1:D:19:TRP:N	1:D:20:PRO:HD2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:88:LEU:HD11	1:D:137:TYR:OH	2.13	0.48
1:D:247:LEU:C	1:D:247:LEU:CD2	2.80	0.48
1:F:306:ASN:HB3	1:F:309:ALA:HB3	1.95	0.48
1:G:360:ASP:OD2	1:G:380:ARG:NH2	2.46	0.48
1:D:63:GLU:CD	1:E:170:ARG:HD2	2.34	0.48
1:F:71:MSE:HB2	1:F:73:LEU:CD1	2.37	0.48
1:J:338:LYS:O	1:J:344:ALA:HA	2.13	0.48
1:D:400:VAL:CG2	1:D:400:VAL:O	2.62	0.48
1:I:134:ARG:CZ	2:I:501:ACO:H1B	2.44	0.48
1:J:141:THR:HG22	1:J:402:VAL:HG21	1.95	0.48
1:L:307:VAL:HB	1:L:308:PRO:HD3	1.95	0.48
1:C:303:ARG:HH11	1:C:305:MSE:SE	2.47	0.47
1:D:334:ARG:HD3	1:D:351:ALA:O	2.14	0.47
1:F:74:ARG:HD3	1:F:84:PRO:HA	1.95	0.47
1:F:367:LEU:O	1:F:402:VAL:CG2	2.62	0.47
1:G:379:ASN:OD1	1:G:382:ARG:HG2	2.14	0.47
1:H:34:ILE:CA	1:H:37:GLU:HG2	2.43	0.47
1:I:148:VAL:CB	1:I:290:LEU:O	2.62	0.47
1:I:296:ARG:HB3	1:J:293:THR:HB	1.95	0.47
1:A:184:ILE:HG21	1:A:228:GLY:HA2	1.96	0.47
1:B:145:GLU:C	1:B:146:LEU:HD12	2.34	0.47
1:C:148:VAL:HG13	1:C:290:LEU:O	2.15	0.47
1:G:8:THR:O	1:G:57:GLY:N	2.46	0.47
1:I:44:THR:HG21	1:I:201:VAL:HB	1.96	0.47
1:J:155:PHE:CZ	1:J:260:ARG:HA	2.49	0.47
1:K:103:LEU:HD22	2:K:501:ACO:H121	1.95	0.47
1:A:21:GLY:HA3	1:A:64:VAL:CG2	2.44	0.47
1:B:381:LEU:C	1:B:381:LEU:CD2	2.83	0.47
1:C:281:LEU:HB3	1:C:282:PRO:HD3	1.96	0.47
1:D:8:THR:N	1:H:353:ALA:N	2.47	0.47
1:D:225:HIS:ND1	1:D:226:PRO:HD2	2.29	0.47
1:I:14:PRO:HD2	1:I:51:ALA:O	2.14	0.47
1:J:145:GLU:HB3	1:J:295:TRP:HB3	1.96	0.47
1:K:314:ARG:NH1	1:K:314:ARG:CG	2.72	0.47
1:L:33:PHE:CD1	1:L:34:ILE:N	2.82	0.47
1:D:8:THR:N	1:H:353:ALA:CB	2.78	0.47
1:D:10:THR:CG2	1:H:384:LYS:HE3	2.44	0.47
1:E:192:VAL:CG1	1:E:403:GLN:HB2	2.39	0.47
1:H:98:ARG:HH21	1:H:99:ARG:HH21	1.52	0.47
1:H:247:LEU:HD23	1:H:247:LEU:C	2.34	0.47
1:I:289:ARG:HG2	1:J:298:ASP:OD1	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:218:ARG:HH21	1:J:239:LEU:HD21	1.79	0.47
1:A:326:VAL:HG21	1:A:351:ALA:HB3	1.95	0.47
1:B:150:ARG:NH2	1:B:266:ASP:OD1	2.48	0.47
1:D:42:TRP:NE1	1:D:90:PHE:CE1	2.77	0.47
1:F:109:GLU:O	1:F:113:ARG:HG3	2.14	0.47
1:F:357:MSE:HB3	1:F:381:LEU:HD12	1.90	0.47
1:G:171:LEU:HD21	1:I:28:ALA:CB	2.45	0.47
1:H:137:TYR:O	1:H:360:ASP:HB2	2.14	0.47
1:K:98:ARG:NE	1:K:99:ARG:CZ	2.78	0.47
1:C:225:HIS:CG	1:C:226:PRO:HD2	2.50	0.47
1:D:16:GLU:O	1:D:19:TRP:CD1	2.67	0.47
1:D:65:VAL:CG1	1:D:97:HIS:CE1	2.88	0.47
1:E:314:ARG:O	1:E:316:TYR:CE1	2.67	0.47
1:E:360:ASP:CG	1:E:380:ARG:HH22	2.17	0.47
1:G:218:ARG:HD2	1:G:234:VAL:HB	1.96	0.47
1:J:146:LEU:HD22	1:J:275:THR:HG21	1.97	0.47
1:J:169:VAL:CG1	1:J:223:LEU:HB3	2.44	0.47
1:C:198:ARG:NH1	1:C:206:LEU:HD12	2.30	0.47
1:C:355:ILE:HD11	1:C:381:LEU:CG	2.44	0.47
1:D:193:PRO:CG	1:D:400:VAL:HG23	2.44	0.47
1:D:314:ARG:HG3	1:D:316:TYR:CZ	2.49	0.47
1:E:111:HIS:CD2	1:E:303:ARG:HD3	2.49	0.47
1:G:131:ILE:O	1:G:134:ARG:HG2	2.14	0.47
1:G:158:ASP:HB3	1:H:379:ASN:O	2.14	0.47
1:H:109:GLU:OE1	1:H:112:ARG:CD	2.56	0.47
1:I:193:PRO:CG	1:I:400:VAL:CG2	2.92	0.47
1:I:318:HIS:C	1:I:320:VAL:H	2.18	0.47
1:B:264:GLY:O	1:E:98:ARG:NE	2.43	0.47
1:D:15:THR:HG23	1:D:55:ARG:HH22	1.80	0.47
1:D:114:ILE:CG2	1:D:305:MSE:HE2	2.45	0.47
1:D:225:HIS:CG	1:D:226:PRO:HD2	2.49	0.47
1:F:43:ARG:HB3	1:F:43:ARG:NH1	2.29	0.47
1:F:93:VAL:HG23	2:F:501:ACO:H132	1.97	0.47
1:J:35:GLY:N	1:J:36:PRO:CD	2.78	0.47
1:J:45:LEU:CD1	1:J:199:PRO:HG2	2.43	0.47
1:J:109:GLU:HA	1:J:109:GLU:OE2	2.15	0.47
1:K:336:ALA:O	1:K:346:CYS:HA	2.15	0.47
1:A:314:ARG:NH2	1:A:396:PHE:C	2.68	0.47
1:B:51:ALA:CB	1:B:69:LEU:HB3	2.45	0.47
1:D:98:ARG:HD2	1:E:264:GLY:HA3	1.95	0.47
1:D:294:THR:O	1:D:295:TRP:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:250:VAL:HG23	1:E:251:THR:HG23	1.96	0.47
1:H:150:ARG:HH21	1:H:266:ASP:HA	1.80	0.47
1:H:281:LEU:O	1:H:282:PRO:C	2.54	0.47
1:A:276:HIS:HB2	1:A:277:PRO:CD	2.44	0.47
1:D:387:GLN:HG3	1:D:390:ARG:HH21	1.80	0.47
1:G:307:VAL:CG1	1:G:311:LEU:HD11	2.45	0.47
1:G:314:ARG:NH1	1:G:366:TYR:O	2.47	0.47
1:H:11:LEU:HD11	1:H:52:VAL:HG22	1.96	0.47
1:H:360:ASP:OD2	1:H:380:ARG:NH2	2.47	0.47
1:I:74:ARG:HD3	1:I:84:PRO:HA	1.97	0.47
1:I:318:HIS:O	1:I:320:VAL:N	2.44	0.47
1:J:150:ARG:HB3	1:J:271:ILE:HD13	1.97	0.47
1:J:155:PHE:CE1	1:J:260:ARG:HA	2.50	0.47
1:J:218:ARG:NH2	1:J:239:LEU:HD21	2.30	0.47
1:K:239:LEU:O	1:K:268:MSE:HE1	2.15	0.47
1:K:259:TRP:CZ2	1:K:281:LEU:HD22	2.49	0.47
1:E:114:ILE:HG23	1:E:119:TYR:HB2	1.98	0.46
1:E:314:ARG:HH11	1:E:314:ARG:CG	2.29	0.46
1:F:289:ARG:O	1:F:291:ALA:N	2.47	0.46
1:F:392:LEU:O	1:F:393:ASP:C	2.53	0.46
1:G:44:THR:HG21	1:G:201:VAL:CG2	2.43	0.46
1:G:355:ILE:HG13	1:G:383:THR:HB	1.98	0.46
1:I:320:VAL:O	1:I:320:VAL:HG13	2.15	0.46
1:J:332:GLY:O	1:J:335:PHE:CE1	2.68	0.46
1:A:145:GLU:C	1:A:146:LEU:HD12	2.36	0.46
1:H:100:ARG:N	3:H:601:HOH:O	2.09	0.46
1:H:361:VAL:HG13	1:H:375:LEU:HD13	1.95	0.46
1:A:121:VAL:CG1	1:A:122:ALA:H	2.27	0.46
1:B:198:ARG:NH1	1:B:206:LEU:HD12	2.30	0.46
1:B:327:LEU:CD1	1:B:357:MSE:HE3	2.44	0.46
1:C:120:PRO:C	1:C:305:MSE:HB2	2.35	0.46
1:C:379:ASN:HB2	1:D:160:PRO:HD3	1.97	0.46
1:D:314:ARG:NH1	1:D:366:TYR:O	2.48	0.46
1:E:77:VAL:HG11	1:E:83:LEU:HD12	1.97	0.46
1:E:221:PHE:O	1:E:232:TYR:CE1	2.68	0.46
1:G:385:ASP:OD1	1:G:386:SER:N	2.48	0.46
1:H:369:ALA:HB2	1:H:402:VAL:HG11	1.97	0.46
1:I:251:THR:O	1:I:252:ALA:C	2.52	0.46
1:B:109:GLU:O	1:B:112:ARG:CG	2.63	0.46
1:E:259:TRP:O	1:E:263:ILE:HG12	2.14	0.46
1:G:372:ALA:HB1	1:G:381:LEU:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:198:ARG:CD	1:I:203:TRP:CE2	2.99	0.46
1:I:247:LEU:C	1:I:247:LEU:CD2	2.83	0.46
1:L:275:THR:OG1	1:L:276:HIS:N	2.47	0.46
1:A:186:GLU:OE1	1:A:186:GLU:HA	2.15	0.46
1:A:192:VAL:HG12	1:A:193:PRO:O	2.15	0.46
1:B:146:LEU:HD12	1:B:146:LEU:N	2.30	0.46
1:C:126:ALA:HB1	1:C:128:GLU:O	2.16	0.46
1:C:314:ARG:HD2	1:C:366:TYR:CE1	2.51	0.46
1:F:121:VAL:CA	1:F:305:MSE:HG2	2.22	0.46
1:H:98:ARG:CZ	1:H:99:ARG:CZ	2.93	0.46
1:H:169:VAL:HG22	1:H:225:HIS:CA	2.45	0.46
1:J:385:ASP:OD1	1:J:386:SER:N	2.48	0.46
1:K:379:ASN:HB2	1:L:160:PRO:HD3	1.98	0.46
1:E:47:PRO:HG2	1:E:70:TYR:CE1	2.51	0.46
1:E:128:GLU:CA	1:F:289:ARG:NH2	2.79	0.46
1:H:42:TRP:HA	1:H:46:VAL:HG23	1.98	0.46
1:I:38:SER:O	1:I:42:TRP:CG	2.68	0.46
1:I:318:HIS:CE1	1:I:342:GLY:HA3	2.50	0.46
1:I:342:GLY:C	1:I:343:ARG:HG3	2.36	0.46
1:K:292:ARG:HG3	3:K:605:HOH:O	2.16	0.46
1:A:127:SER:H	2:A:501:ACO:H21	1.80	0.46
1:B:109:GLU:O	1:B:113:ARG:HG3	2.16	0.46
1:D:10:THR:CB	1:H:384:LYS:HD2	2.45	0.46
1:G:33:PHE:C	1:G:34:ILE:HG13	2.35	0.46
1:G:297:GLN:CG	1:G:298:ASP:N	2.79	0.46
1:G:379:ASN:O	1:H:158:ASP:HB3	2.16	0.46
1:G:381:LEU:HD23	1:G:381:LEU:O	2.16	0.46
1:H:218:ARG:HD2	1:H:234:VAL:HB	1.98	0.46
1:I:281:LEU:HB3	1:I:282:PRO:HD3	1.98	0.46
1:J:63:GLU:OE1	1:K:170:ARG:HD2	2.16	0.46
1:K:19:TRP:HZ3	1:K:42:TRP:CE3	2.33	0.46
1:K:77:VAL:HB	1:K:78:PRO:CD	2.46	0.46
2:L:501:ACO:O5P	2:L:501:ACO:H141	2.16	0.46
1:D:145:GLU:HB2	1:D:295:TRP:HE3	1.80	0.46
1:D:199:PRO:O	1:D:200:GLN:C	2.54	0.46
1:L:131:ILE:HG12	2:L:501:ACO:C6A	2.46	0.46
1:L:146:LEU:O	1:L:272:SER:HA	2.16	0.46
1:L:327:LEU:HD23	1:L:328:GLU:N	2.31	0.46
1:A:18:ASP:O	1:A:19:TRP:C	2.54	0.46
1:B:144:HIS:NE2	1:B:277:PRO:HG3	2.29	0.46
1:C:42:TRP:NE1	1:C:90:PHE:CE2	2.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:233:ARG:HD2	3:D:612:HOH:O	2.14	0.46
1:D:304:ILE:HG13	1:D:362:LEU:HD23	1.97	0.46
1:E:128:GLU:HA	1:F:289:ARG:HH21	1.80	0.46
1:F:49:ASP:C	1:F:49:ASP:OD1	2.54	0.46
1:H:19:TRP:N	1:H:20:PRO:CD	2.79	0.46
1:H:339:ILE:HG12	1:H:344:ALA:CB	2.46	0.46
1:K:375:LEU:HD21	1:L:283:HIS:CE1	2.51	0.46
1:L:70:TYR:HB3	1:L:88:LEU:HD23	1.97	0.46
1:A:34:ILE:CD1	1:A:37:GLU:OE1	2.56	0.46
1:C:188:TRP:CH2	1:C:248:ARG:NH1	2.84	0.46
1:D:33:PHE:CZ	1:D:38:SER:CB	2.99	0.46
1:F:247:LEU:HD23	1:F:247:LEU:C	2.35	0.46
1:J:185:TYR:CE2	1:J:198:ARG:HB2	2.51	0.46
1:K:38:SER:O	1:K:39:ALA:C	2.55	0.46
1:I:146:LEU:HA	1:I:292:ARG:O	2.16	0.45
1:I:378:ALA:HB1	1:J:284:LEU:HD23	1.98	0.45
1:J:287:ASP:HB3	1:J:290:LEU:HD12	1.97	0.45
1:J:288:THR:HG23	3:J:606:HOH:O	2.16	0.45
1:K:312:GLU:HG2	1:K:344:ALA:O	2.16	0.45
1:A:98:ARG:O	1:A:99:ARG:HB2	2.16	0.45
1:H:11:LEU:HD12	1:H:12:CYS:N	2.30	0.45
1:H:281:LEU:HB3	1:H:282:PRO:HD3	1.98	0.45
1:H:354:GLU:CB	1:H:384:LYS:HZ3	2.28	0.45
1:H:380:ARG:HD2	1:H:380:ARG:HA	1.81	0.45
1:J:149:ASP:OD2	1:J:152:PHE:CD1	2.70	0.45
1:J:381:LEU:O	1:J:381:LEU:HD12	2.16	0.45
1:D:194:GLY:HA3	1:D:403:GLN:O	2.16	0.45
1:E:8:THR:O	1:E:57:GLY:HA2	2.16	0.45
1:E:289:ARG:HD3	1:F:297:GLN:HG3	1.99	0.45
1:H:196:LEU:CD1	1:H:406:PHE:CZ	2.98	0.45
1:I:16:GLU:HA	1:I:19:TRP:CD1	2.51	0.45
1:J:314:ARG:HD3	1:J:316:TYR:CE2	2.52	0.45
1:A:69:LEU:C	1:A:69:LEU:HD12	2.37	0.45
1:A:385:ASP:C	1:A:385:ASP:OD1	2.54	0.45
1:D:274:ILE:HD13	1:D:274:ILE:N	2.31	0.45
1:F:67:MSE:HE2	1:F:90:PHE:HB3	1.98	0.45
1:G:185:TYR:CD1	1:G:185:TYR:C	2.89	0.45
1:G:248:ARG:HH22	1:G:405:ALA:HA	1.82	0.45
1:I:67:MSE:N	1:I:106:MSE:SE	3.00	0.45
1:I:134:ARG:NH1	2:I:501:ACO:H1B	2.31	0.45
1:I:150:ARG:HG3	1:I:151:ARG:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:308:PRO:HA	1:I:346:CYS:SG	2.57	0.45
1:J:206:LEU:HD21	1:J:231:LEU:HD11	1.98	0.45
1:L:123:ALA:HB2	1:L:302:LEU:HD23	1.98	0.45
1:L:306:ASN:ND2	1:L:309:ALA:HB2	2.30	0.45
1:B:322:GLU:HA	1:B:339:ILE:O	2.17	0.45
1:D:202:LEU:HA	1:D:202:LEU:HD23	1.69	0.45
1:F:104:ARG:NH2	2:F:501:ACO:O8A	2.49	0.45
1:F:182:GLU:HG2	1:F:203:TRP:CE2	2.51	0.45
1:G:150:ARG:HG3	1:G:151:ARG:N	2.31	0.45
1:J:125:HIS:CE1	1:J:407:GLU:HA	2.50	0.45
1:K:173:ARG:HG2	1:K:173:ARG:HH11	1.82	0.45
1:K:281:LEU:HD12	1:K:281:LEU:O	2.16	0.45
1:A:16:GLU:HA	1:A:19:TRP:NE1	2.32	0.45
1:A:98:ARG:NH1	1:A:99:ARG:NH2	2.65	0.45
1:B:34:ILE:HB	1:B:37:GLU:CD	2.37	0.45
1:C:144:HIS:HD2	1:C:277:PRO:HG3	1.70	0.45
1:C:178:ARG:HH11	1:C:207:LEU:CD1	2.25	0.45
2:C:501:ACO:O5P	2:C:501:ACO:N8P	2.49	0.45
1:E:39:ALA:O	1:E:43:ARG:HG2	2.17	0.45
1:E:142:THR:HG21	1:E:144:HIS:NE2	2.32	0.45
1:H:173:ARG:HG2	1:K:24:LEU:HD13	1.99	0.45
1:K:67:MSE:HE3	1:K:67:MSE:HB2	1.94	0.45
1:A:259:TRP:CZ2	1:A:281:LEU:HD22	2.52	0.45
1:D:85:THR:HG23	1:D:121:VAL:O	2.16	0.45
1:D:123:ALA:HB2	1:D:302:LEU:HD23	1.99	0.45
1:F:34:ILE:HG22	1:F:36:PRO:HG2	1.98	0.45
1:F:55:ARG:HB3	1:F:62:SER:HB2	1.98	0.45
1:H:153:ALA:HA	1:H:290:LEU:CD1	2.47	0.45
1:H:222:ALA:HA	1:H:230:ALA:O	2.17	0.45
1:H:265:LEU:HD23	1:K:95:PRO:HB3	1.98	0.45
1:J:259:TRP:CE2	1:J:281:LEU:HD22	2.52	0.45
1:K:389:LEU:HD23	1:K:389:LEU:HA	1.78	0.45
1:A:145:GLU:HB2	1:A:295:TRP:HB3	1.98	0.45
1:C:153:ALA:HA	1:C:290:LEU:HD13	1.98	0.45
1:H:98:ARG:NH2	1:H:99:ARG:CZ	2.79	0.45
1:H:98:ARG:HG3	1:H:99:ARG:NH1	2.31	0.45
1:J:83:LEU:HD21	1:J:313:ALA:HB1	1.98	0.45
1:J:106:MSE:O	1:J:110:LEU:HG	2.17	0.45
1:K:247:LEU:C	1:K:247:LEU:CD2	2.85	0.45
2:L:501:ACO:O5P	2:L:501:ACO:N8P	2.48	0.45
1:B:125:HIS:CE1	1:B:407:GLU:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:107:CYS:HB3	1:E:111:HIS:HE1	1.82	0.45
1:E:297:GLN:OE1	1:F:289:ARG:NE	2.49	0.45
1:H:188:TRP:HH2	1:H:405:ALA:HB2	1.81	0.45
1:H:270:ARG:NH1	3:H:620:HOH:O	2.34	0.45
1:I:148:VAL:CG2	1:I:290:LEU:O	2.65	0.45
1:I:318:HIS:HA	1:I:341:ASP:OD1	2.16	0.45
1:J:50:GLY:CA	1:J:70:TYR:CE1	3.00	0.45
1:K:74:ARG:HD3	1:K:84:PRO:HA	1.98	0.45
1:K:98:ARG:CG	1:K:99:ARG:NH1	2.77	0.45
1:L:281:LEU:HB3	1:L:282:PRO:HD3	1.99	0.45
1:A:169:VAL:HG22	1:A:170:ARG:N	2.30	0.45
1:B:150:ARG:HG2	1:B:269:GLU:C	2.37	0.45
1:D:52:VAL:CG1	1:D:110:LEU:CD2	2.95	0.45
1:F:307:VAL:HB	1:F:308:PRO:HD3	1.99	0.45
1:I:43:ARG:HH11	1:I:43:ARG:CA	2.25	0.45
1:I:276:HIS:CD2	1:I:278:GLN:H	2.27	0.45
1:L:318:HIS:CE1	1:L:341:ASP:O	2.70	0.45
1:A:142:THR:HG21	1:A:296:ARG:NH2	2.32	0.44
1:B:145:GLU:HB2	1:B:295:TRP:HE3	1.83	0.44
1:C:380:ARG:NH1	1:D:158:ASP:OD2	2.45	0.44
1:G:380:ARG:NH1	1:H:158:ASP:OD2	2.48	0.44
1:H:87:GLY:HA2	1:H:123:ALA:O	2.16	0.44
2:I:501:ACO:O5P	2:I:501:ACO:H141	2.17	0.44
1:J:297:GLN:CG	1:J:298:ASP:N	2.80	0.44
1:J:327:LEU:HD12	1:J:355:ILE:HG23	1.98	0.44
1:K:70:TYR:HB3	1:K:88:LEU:HD23	1.98	0.44
1:A:289:ARG:HG3	1:B:129:GLY:HA3	1.99	0.44
1:B:114:ILE:HG22	1:B:305:MSE:HE2	1.98	0.44
1:F:42:TRP:CD1	1:F:46:VAL:CG2	2.96	0.44
1:F:198:ARG:HD2	1:F:203:TRP:CZ2	2.51	0.44
1:H:16:GLU:HA	1:H:19:TRP:CD1	2.51	0.44
1:H:146:LEU:N	1:H:146:LEU:CD2	2.78	0.44
1:I:145:GLU:HB3	1:I:295:TRP:HB3	1.99	0.44
1:I:194:GLY:HA3	1:I:403:GLN:O	2.16	0.44
1:J:247:LEU:C	1:J:247:LEU:CD2	2.84	0.44
1:A:70:TYR:O	1:A:70:TYR:CD1	2.70	0.44
1:D:50:GLY:HA2	1:D:70:TYR:CE2	2.53	0.44
1:D:218:ARG:HD2	1:D:234:VAL:HB	1.99	0.44
1:I:67:MSE:HE2	1:I:90:PHE:HB3	1.99	0.44
1:I:334:ARG:HD3	1:I:351:ALA:O	2.17	0.44
1:K:103:LEU:N	2:K:501:ACO:O2A	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:400:VAL:CG1	1:K:400:VAL:O	2.65	0.44
2:C:501:ACO:O8A	2:C:501:ACO:H4B	2.17	0.44
1:F:123:ALA:HB2	1:F:302:LEU:HD23	1.99	0.44
1:F:178:ARG:O	1:F:182:GLU:HG3	2.17	0.44
1:G:16:GLU:HA	1:G:19:TRP:HE1	1.82	0.44
1:H:242:ALA:HB2	1:H:268:MSE:HG3	1.99	0.44
1:I:65:VAL:CG1	1:I:97:HIS:CE1	2.99	0.44
1:A:134:ARG:CZ	2:A:501:ACO:H1B	2.48	0.44
1:E:9:VAL:O	1:E:9:VAL:HG12	2.16	0.44
1:J:74:ARG:CD	1:J:84:PRO:CA	2.93	0.44
1:J:184:ILE:HG21	1:J:229:TYR:CD1	2.53	0.44
1:J:327:LEU:CD1	1:J:355:ILE:HG23	2.48	0.44
1:J:400:VAL:CG2	1:J:400:VAL:O	2.66	0.44
1:K:194:GLY:HA3	1:K:403:GLN:O	2.17	0.44
1:L:134:ARG:CZ	2:L:501:ACO:H1B	2.48	0.44
1:E:44:THR:HG21	1:E:201:VAL:HG21	1.98	0.44
1:E:247:LEU:C	1:E:247:LEU:CD2	2.86	0.44
1:G:121:VAL:HA	1:G:305:MSE:HG2	1.99	0.44
1:G:150:ARG:HG2	1:G:269:GLU:C	2.38	0.44
1:L:130:GLY:N	3:L:628:HOH:O	2.47	0.44
1:L:320:VAL:HG21	1:L:394:ALA:CB	2.47	0.44
1:C:121:VAL:HB	1:C:303:ARG:O	2.17	0.44
1:C:170:ARG:HD2	1:F:63:GLU:OE2	2.18	0.44
1:C:206:LEU:HD21	1:C:231:LEU:CD1	2.47	0.44
1:C:292:ARG:HG2	1:C:293:THR:O	2.18	0.44
1:F:146:LEU:HD22	1:F:275:THR:HG21	2.00	0.44
1:F:181:PHE:HE1	1:F:224:LEU:HD13	1.83	0.44
1:H:9:VAL:HB	1:H:55:ARG:O	2.17	0.44
1:H:34:ILE:C	1:H:37:GLU:HG2	2.38	0.44
1:H:198:ARG:NH1	1:H:206:LEU:HD12	2.33	0.44
1:I:198:ARG:NH1	1:I:206:LEU:HD12	2.33	0.44
1:G:63:GLU:OE1	1:L:170:ARG:HD2	2.17	0.44
1:I:289:ARG:NH1	1:J:297:GLN:OE1	2.50	0.44
1:J:305:MSE:HA	1:J:359:ARG:HH21	1.83	0.44
1:K:188:TRP:CG	1:K:248:ARG:HD2	2.52	0.44
1:L:320:VAL:CG2	1:L:394:ALA:HB1	2.48	0.44
2:A:501:ACO:H62	2:A:501:ACO:O9P	2.18	0.44
1:C:296:ARG:HD3	1:D:293:THR:OG1	2.18	0.44
1:D:23:PHE:CE1	1:D:42:TRP:CZ3	3.06	0.44
1:G:48:THR:O	1:G:49:ASP:CG	2.56	0.44
1:G:147:THR:OG1	1:G:294:THR:HG21	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:88:LEU:HB2	1:H:124:LEU:HB3	2.00	0.44
1:H:337:LEU:HD11	1:H:344:ALA:HB1	2.00	0.44
1:J:41:ALA:HA	1:J:44:THR:HG21	2.00	0.44
1:J:326:VAL:CG1	1:J:353:ALA:HA	2.48	0.44
1:A:45:LEU:HD21	1:A:199:PRO:HG2	1.99	0.43
1:A:360:ASP:CG	1:A:380:ARG:HH22	2.21	0.43
1:B:222:ALA:HB2	1:B:231:LEU:HD23	1.99	0.43
1:E:225:HIS:CG	1:E:226:PRO:HD2	2.53	0.43
1:F:42:TRP:O	1:F:46:VAL:HB	2.18	0.43
1:F:295:TRP:CZ2	1:F:297:GLN:CB	3.01	0.43
1:F:329:VAL:HB	1:F:332:GLY:HA3	2.00	0.43
1:I:160:PRO:HG2	1:I:256:CYS:CB	2.47	0.43
1:A:41:ALA:O	1:A:45:LEU:HB2	2.18	0.43
1:E:46:VAL:HA	1:E:47:PRO:HD3	1.88	0.43
1:E:69:LEU:HD12	1:E:69:LEU:C	2.39	0.43
1:H:200:GLN:HA	1:H:200:GLN:OE1	2.18	0.43
1:I:317:ALA:CB	1:I:394:ALA:O	2.66	0.43
1:J:85:THR:CG2	1:J:121:VAL:HG23	2.44	0.43
1:K:34:ILE:CG2	1:K:36:PRO:HD2	2.44	0.43
1:K:186:GLU:OE1	1:K:186:GLU:HA	2.18	0.43
1:A:144:HIS:CD2	1:A:296:ARG:HG3	2.53	0.43
1:A:281:LEU:N	1:A:282:PRO:CD	2.82	0.43
1:B:198:ARG:HD2	1:B:203:TRP:CZ2	2.53	0.43
1:C:72:ASP:O	1:C:73:LEU:HD23	2.18	0.43
1:D:59:GLY:O	1:D:60:PRO:C	2.57	0.43
1:E:308:PRO:HD3	1:E:335:PHE:CE2	2.53	0.43
1:E:337:LEU:HD13	1:E:346:CYS:HB2	2.01	0.43
1:F:150:ARG:HG3	1:F:151:ARG:N	2.33	0.43
1:J:281:LEU:O	1:J:282:PRO:C	2.54	0.43
1:L:247:LEU:HD23	1:L:248:ARG:N	2.33	0.43
1:D:169:VAL:HG12	1:D:170:ARG:N	2.33	0.43
1:F:19:TRP:HB2	1:F:20:PRO:CD	2.48	0.43
1:G:19:TRP:N	1:G:20:PRO:HD2	2.33	0.43
1:I:69:LEU:C	1:I:69:LEU:HD12	2.38	0.43
1:J:202:LEU:CD1	1:J:406:PHE:CE2	3.01	0.43
1:K:193:PRO:CG	1:K:400:VAL:CG1	2.96	0.43
1:K:326:VAL:CG1	1:K:334:ARG:HG2	2.49	0.43
1:L:19:TRP:HB2	1:L:20:PRO:CD	2.47	0.43
1:B:150:ARG:HG2	1:B:269:GLU:O	2.18	0.43
1:B:153:ALA:CB	1:B:263:ILE:HD12	2.47	0.43
1:C:137:TYR:O	1:C:360:ASP:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:259:TRP:O	1:C:263:ILE:HG12	2.18	0.43
1:D:334:ARG:CD	1:D:351:ALA:O	2.67	0.43
1:E:198:ARG:HD2	1:E:203:TRP:CE2	2.53	0.43
1:F:298:ASP:OD2	1:F:301:TRP:CZ2	2.72	0.43
1:G:125:HIS:HE1	3:G:629:HOH:O	2.00	0.43
1:H:295:TRP:CH2	1:H:297:GLN:HB3	2.53	0.43
1:K:98:ARG:HH21	1:K:99:ARG:NH2	2.17	0.43
1:K:188:TRP:CD2	1:K:248:ARG:NH1	2.82	0.43
1:D:30:PHE:HB2	1:D:33:PHE:HB2	1.99	0.43
1:D:52:VAL:CG1	1:D:110:LEU:HD21	2.47	0.43
1:D:123:ALA:HA	1:D:301:TRP:O	2.19	0.43
1:E:307:VAL:HB	1:E:308:PRO:CD	2.44	0.43
1:F:44:THR:O	1:F:45:LEU:HD23	2.19	0.43
1:G:282:PRO:O	1:G:288:THR:HG22	2.19	0.43
1:I:133:GLY:C	1:I:135:PHE:H	2.22	0.43
1:I:393:ASP:O	1:I:397:ALA:HB2	2.19	0.43
1:J:93:VAL:HG23	2:J:501:ACO:H132	1.99	0.43
1:J:137:TYR:O	1:J:360:ASP:HB2	2.19	0.43
1:K:327:LEU:HD13	1:K:355:ILE:HG23	2.00	0.43
1:L:127:SER:HB3	2:L:501:ACO:H22	2.01	0.43
1:L:316:TYR:O	1:L:342:GLY:HA2	2.19	0.43
1:A:148:VAL:HA	1:A:290:LEU:O	2.18	0.43
1:B:213:ALA:HA	1:B:214:PRO:HD2	1.86	0.43
1:D:58:ALA:HB2	1:H:384:LYS:HG3	2.01	0.43
1:E:287:ASP:OD1	1:F:129:GLY:HA3	2.18	0.43
1:E:372:ALA:HB1	1:E:381:LEU:HD21	2.01	0.43
1:G:146:LEU:HA	1:G:146:LEU:HD12	1.79	0.43
1:H:24:LEU:HD13	1:J:173:ARG:CG	2.49	0.43
1:J:45:LEU:HD13	1:J:73:LEU:HD21	2.01	0.43
1:J:324:SER:OG	1:J:338:LYS:HD2	2.19	0.43
1:L:121:VAL:HA	1:L:305:MSE:HG2	2.01	0.43
1:L:355:ILE:HD11	1:L:381:LEU:HD13	2.00	0.43
1:A:63:GLU:OE1	1:F:170:ARG:HD2	2.18	0.43
1:D:10:THR:CG2	1:H:384:LYS:CE	2.96	0.43
1:E:42:TRP:N	1:E:42:TRP:CD1	2.87	0.43
1:E:142:THR:CG2	1:E:144:HIS:NE2	2.82	0.43
1:G:225:HIS:O	1:G:226:PRO:C	2.56	0.43
1:G:247:LEU:HD23	1:G:248:ARG:N	2.34	0.43
1:G:289:ARG:HD3	1:H:298:ASP:OD1	2.19	0.43
1:G:297:GLN:HG2	1:G:298:ASP:N	2.33	0.43
1:H:145:GLU:OE2	1:H:295:TRP:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:123:ALA:HB2	1:J:302:LEU:HD23	1.99	0.43
1:K:69:LEU:HD12	1:K:69:LEU:C	2.38	0.43
1:C:266:ASP:C	1:C:268:MSE:H	2.22	0.43
1:E:193:PRO:CG	1:E:400:VAL:CG2	2.94	0.43
1:E:193:PRO:HG2	1:E:400:VAL:HG23	2.00	0.43
1:H:121:VAL:CA	1:H:305:MSE:HG2	2.41	0.43
1:H:150:ARG:HD3	1:H:151:ARG:CA	2.47	0.43
1:H:371:ARG:HE	1:H:371:ARG:HB3	1.56	0.43
1:I:297:GLN:CG	1:I:298:ASP:N	2.81	0.43
1:I:385:ASP:OD2	1:I:388:LEU:HB2	2.19	0.43
1:L:49:ASP:OD1	1:L:49:ASP:O	2.37	0.43
1:A:152:PHE:HE1	1:D:151:ARG:HB3	1.83	0.43
1:A:178:ARG:O	1:A:182:GLU:HG3	2.19	0.43
1:A:292:ARG:O	1:A:294:THR:HG23	2.19	0.43
1:D:45:LEU:HB2	1:D:71:MSE:HE2	2.01	0.43
1:E:73:LEU:O	1:E:85:THR:N	2.33	0.43
1:F:289:ARG:O	1:F:290:LEU:C	2.57	0.43
1:F:306:ASN:OD1	1:F:308:PRO:HD2	2.19	0.43
1:F:322:GLU:HA	1:F:339:ILE:O	2.18	0.43
1:G:306:ASN:HB3	1:G:309:ALA:HB3	2.00	0.43
1:H:169:VAL:CG2	1:H:225:HIS:CD2	3.02	0.43
1:H:196:LEU:CB	1:H:406:PHE:CE2	2.95	0.43
2:H:501:ACO:O5P	2:H:501:ACO:N8P	2.52	0.43
1:I:50:GLY:HA2	1:I:70:TYR:CE1	2.54	0.43
1:J:192:VAL:HG11	1:J:403:GLN:HB2	2.01	0.43
1:J:217:ASP:OD2	1:J:233:ARG:NH1	2.51	0.43
1:J:334:ARG:HD2	1:J:351:ALA:O	2.19	0.43
1:K:306:ASN:OD1	1:K:308:PRO:HD2	2.19	0.43
1:K:341:ASP:O	1:K:343:ARG:HG3	2.18	0.43
1:L:378:ALA:O	3:L:611:HOH:O	2.21	0.43
1:A:76:THR:O	1:A:193:PRO:HA	2.20	0.42
1:A:98:ARG:HD3	1:F:264:GLY:CA	2.49	0.42
1:B:24:LEU:CD1	1:D:173:ARG:HG2	2.45	0.42
1:D:187:ARG:O	1:D:191:GLN:HG3	2.18	0.42
1:E:297:GLN:OE1	1:F:289:ARG:CZ	2.67	0.42
1:G:99:ARG:NH1	2:G:501:ACO:O5A	2.52	0.42
1:H:11:LEU:CD1	1:H:52:VAL:HG22	2.49	0.42
1:H:247:LEU:C	1:H:247:LEU:CD2	2.87	0.42
1:H:334:ARG:HD2	1:H:351:ALA:O	2.19	0.42
1:H:387:GLN:HG3	1:H:388:LEU:N	2.34	0.42
1:J:138:GLY:O	1:J:301:TRP:HA	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:381:LEU:HD12	1:J:381:LEU:C	2.40	0.42
1:L:11:LEU:HD12	1:L:53:VAL:O	2.19	0.42
1:B:247:LEU:C	1:B:247:LEU:CD2	2.87	0.42
1:C:208:ALA:O	1:C:211:LYS:HG2	2.19	0.42
1:E:145:GLU:HB3	1:E:295:TRP:CB	2.42	0.42
1:F:137:TYR:CD2	1:F:303:ARG:HB2	2.54	0.42
1:J:150:ARG:HG2	1:J:269:GLU:O	2.17	0.42
1:K:225:HIS:O	1:K:226:PRO:C	2.56	0.42
2:K:501:ACO:O5P	2:K:501:ACO:H141	2.19	0.42
1:L:281:LEU:N	1:L:282:PRO:HD2	2.35	0.42
1:A:69:LEU:HD12	1:A:69:LEU:O	2.19	0.42
1:A:303:ARG:HH11	1:A:305:MSE:SE	2.53	0.42
1:A:359:ARG:NH1	3:A:610:HOH:O	2.53	0.42
1:C:144:HIS:HD2	1:C:277:PRO:CD	2.32	0.42
1:C:200:GLN:HE21	1:C:200:GLN:HA	1.84	0.42
1:D:184:ILE:HG21	1:D:228:GLY:HA2	2.01	0.42
1:H:54:VAL:HG11	1:H:102:LEU:HD22	2.01	0.42
1:I:109:GLU:O	1:I:113:ARG:HG3	2.19	0.42
1:I:123:ALA:HB1	1:I:300:LEU:HD11	2.01	0.42
1:K:147:THR:HB	1:K:294:THR:HG21	2.01	0.42
1:A:11:LEU:HD13	1:A:54:VAL:HG22	2.02	0.42
1:A:185:TYR:C	1:A:185:TYR:CD1	2.92	0.42
1:A:259:TRP:CE2	1:A:281:LEU:HD22	2.55	0.42
1:B:14:PRO:CD	1:B:51:ALA:O	2.63	0.42
1:C:314:ARG:O	1:C:316:TYR:CE1	2.72	0.42
1:E:128:GLU:C	1:F:289:ARG:NH2	2.73	0.42
1:I:33:PHE:CG	1:I:34:ILE:N	2.88	0.42
1:I:289:ARG:NE	1:J:297:GLN:OE1	2.53	0.42
1:I:327:LEU:HD23	1:I:328:GLU:CA	2.49	0.42
1:L:88:LEU:HD23	1:L:88:LEU:HA	1.78	0.42
1:L:330:SER:O	1:L:331:ASP:CB	2.67	0.42
1:A:124:LEU:C	1:A:124:LEU:HD12	2.39	0.42
1:A:181:PHE:HD1	1:A:229:TYR:CG	2.38	0.42
1:C:367:LEU:O	1:C:402:VAL:CG2	2.66	0.42
1:E:133:GLY:HA2	1:E:137:TYR:O	2.19	0.42
1:E:134:ARG:N	3:E:629:HOH:O	2.45	0.42
1:E:146:LEU:HD12	1:E:275:THR:HG22	1.85	0.42
1:E:148:VAL:HG13	1:E:291:ALA:N	2.32	0.42
1:H:112:ARG:HG3	1:H:113:ARG:N	2.34	0.42
1:I:83:LEU:HD21	1:I:313:ALA:CB	2.46	0.42
1:I:357:MSE:CE	1:I:381:LEU:CD2	2.98	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:42:TRP:HA	1:A:46:VAL:CG2	2.50	0.42
1:A:136:GLY:O	1:A:303:ARG:HG3	2.20	0.42
1:B:321:GLY:O	1:B:322:GLU:C	2.58	0.42
1:C:110:LEU:CD1	1:C:110:LEU:N	2.80	0.42
1:E:327:LEU:HD13	1:E:357:MSE:HE3	1.89	0.42
1:G:311:LEU:H	1:G:311:LEU:CD1	2.32	0.42
1:H:279:ASP:O	1:H:282:PRO:HD2	2.18	0.42
1:I:11:LEU:HD12	1:I:12:CYS:N	2.34	0.42
1:I:110:LEU:O	1:I:114:ILE:HG13	2.20	0.42
1:K:297:GLN:HG2	1:K:298:ASP:N	2.35	0.42
1:L:206:LEU:HD23	1:L:207:LEU:HD13	2.01	0.42
1:A:25:LEU:O	1:A:29:SER:HB2	2.20	0.42
1:A:63:GLU:OE1	1:F:170:ARG:HB3	2.19	0.42
1:A:314:ARG:NH1	1:A:315:GLY:O	2.52	0.42
1:B:87:GLY:HA2	1:B:123:ALA:O	2.20	0.42
1:C:308:PRO:HA	1:C:346:CYS:SG	2.60	0.42
1:C:357:MSE:HE1	1:C:381:LEU:HD22	1.92	0.42
1:D:44:THR:CG2	1:D:201:VAL:HG11	2.49	0.42
2:D:501:ACO:OAP	1:E:266:ASP:OD2	2.38	0.42
1:E:281:LEU:HD23	1:E:291:ALA:HB1	2.00	0.42
1:G:155:PHE:CZ	1:G:260:ARG:HA	2.54	0.42
1:G:171:LEU:HD11	1:G:221:PHE:HB3	2.01	0.42
1:H:11:LEU:HD11	1:H:52:VAL:CG2	2.49	0.42
1:H:188:TRP:CH2	1:H:405:ALA:HB2	2.54	0.42
1:I:156:HIS:CE1	1:J:380:ARG:NH1	2.88	0.42
1:J:102:LEU:O	1:J:105:ALA:N	2.53	0.42
1:K:297:GLN:CD	1:L:289:ARG:HD3	2.39	0.42
1:L:114:ILE:HG22	1:L:305:MSE:HE2	2.02	0.42
1:A:357:MSE:HE2	1:A:381:LEU:HB2	2.01	0.42
1:A:380:ARG:HD2	1:B:158:ASP:OD2	2.19	0.42
1:B:297:GLN:CG	1:B:298:ASP:N	2.82	0.42
1:E:127:SER:CB	2:E:501:ACO:C2P	2.96	0.42
1:E:235:ASP:HB3	1:E:238:ASP:O	2.19	0.42
1:F:200:GLN:NE2	1:F:200:GLN:HA	2.35	0.42
1:F:303:ARG:HH11	1:F:305:MSE:SE	2.53	0.42
1:G:247:LEU:HD23	1:G:247:LEU:C	2.40	0.42
1:H:326:VAL:CG1	1:H:353:ALA:HA	2.50	0.42
2:J:501:ACO:O8A	2:J:501:ACO:H4B	2.20	0.42
1:K:124:LEU:HD23	1:K:137:TYR:CE2	2.54	0.42
1:K:134:ARG:CZ	2:K:501:ACO:H1B	2.50	0.42
1:K:379:ASN:CB	1:L:160:PRO:HD3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:259:TRP:O	1:L:263:ILE:CG1	2.68	0.42
1:C:103:LEU:HD22	2:C:501:ACO:H133	2.01	0.42
1:C:268:MSE:HE2	1:C:268:MSE:HA	2.02	0.42
1:C:288:THR:HG23	1:C:289:ARG:N	2.35	0.42
1:F:98:ARG:NH1	1:F:99:ARG:NH2	2.67	0.42
1:F:298:ASP:OD2	1:F:301:TRP:HZ2	2.02	0.42
1:G:173:ARG:HD2	1:G:176:GLU:OE2	2.19	0.42
1:H:63:GLU:OE1	1:J:170:ARG:HD2	2.20	0.42
1:H:109:GLU:C	1:H:112:ARG:HG2	2.33	0.42
1:H:307:VAL:HB	1:H:308:PRO:HD3	2.02	0.42
1:I:148:VAL:HA	1:I:290:LEU:O	2.19	0.42
1:I:387:GLN:O	1:I:391:ARG:HG3	2.20	0.42
1:J:40:THR:OG1	1:J:41:ALA:N	2.53	0.42
1:K:173:ARG:HG2	1:K:173:ARG:NH1	2.35	0.42
1:K:327:LEU:HD12	1:K:355:ILE:O	2.20	0.42
1:A:218:ARG:NH2	1:A:239:LEU:HD21	2.34	0.42
1:C:169:VAL:HG22	1:F:96:THR:CG2	2.50	0.42
1:E:45:LEU:HD21	1:E:199:PRO:HG2	2.02	0.42
1:F:151:ARG:CZ	1:F:269:GLU:HG3	2.50	0.42
1:F:229:TYR:CD1	1:F:229:TYR:C	2.93	0.42
1:G:45:LEU:HD21	1:G:199:PRO:HG2	2.02	0.42
1:H:314:ARG:O	1:H:316:TYR:CE1	2.73	0.42
1:J:384:LYS:HG2	1:J:384:LYS:O	2.20	0.42
1:K:298:ASP:OD2	1:K:301:TRP:NE1	2.47	0.42
2:K:501:ACO:O5P	2:K:501:ACO:N8P	2.53	0.42
1:L:327:LEU:HG	1:L:357:MSE:HE3	2.02	0.42
1:C:74:ARG:HB3	1:C:82:VAL:CG1	2.49	0.41
1:E:110:LEU:HD23	1:E:110:LEU:HA	1.84	0.41
1:F:213:ALA:HA	1:F:214:PRO:HD2	1.92	0.41
1:H:110:LEU:O	1:H:114:ILE:HG13	2.20	0.41
1:I:142:THR:O	1:I:277:PRO:HD3	2.20	0.41
1:J:42:TRP:O	1:J:43:ARG:C	2.58	0.41
1:J:72:ASP:CG	1:J:74:ARG:HH12	2.24	0.41
1:K:327:LEU:HD11	1:K:357:MSE:CE	2.26	0.41
1:L:16:GLU:HA	1:L:19:TRP:CD1	2.55	0.41
1:A:232:TYR:HB3	1:A:244:VAL:HG22	2.02	0.41
1:B:297:GLN:HG2	1:B:298:ASP:N	2.35	0.41
1:C:123:ALA:HA	1:C:301:TRP:O	2.20	0.41
1:C:169:VAL:HG22	1:F:96:THR:HG22	2.01	0.41
2:E:501:ACO:O9P	2:E:501:ACO:H131	2.20	0.41
1:I:297:GLN:HG3	1:I:298:ASP:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:148:VAL:HG22	1:J:291:ALA:HA	2.01	0.41
1:J:360:ASP:OD2	1:J:380:ARG:NH2	2.53	0.41
1:K:259:TRP:CE2	1:K:281:LEU:HD22	2.55	0.41
1:A:47:PRO:O	1:A:48:THR:C	2.59	0.41
1:C:197:LEU:HB3	3:C:627:HOH:O	2.19	0.41
1:D:44:THR:HG21	1:D:201:VAL:CG2	2.44	0.41
1:D:58:ALA:HB1	1:H:384:LYS:HG3	2.01	0.41
1:D:281:LEU:HD12	1:D:281:LEU:O	2.20	0.41
1:F:181:PHE:CE1	1:F:224:LEU:HD13	2.55	0.41
1:F:314:ARG:HG3	1:F:316:TYR:CE1	2.55	0.41
1:I:114:ILE:HG21	1:I:305:MSE:HE2	2.00	0.41
1:J:83:LEU:HD11	1:J:313:ALA:HB1	2.02	0.41
1:J:405:ALA:CA	3:J:602:HOH:O	2.53	0.41
1:L:67:MSE:HE2	1:L:90:PHE:HB3	2.02	0.41
1:B:86:ALA:O	1:B:122:ALA:HA	2.19	0.41
1:C:14:PRO:HD2	1:C:51:ALA:O	2.20	0.41
1:C:297:GLN:HG2	1:C:298:ASP:N	2.35	0.41
1:E:93:VAL:HG12	1:E:94:ALA:O	2.20	0.41
1:I:276:HIS:ND1	1:I:403:GLN:HG2	2.35	0.41
1:I:319:GLU:HB3	1:J:320:VAL:HG23	2.01	0.41
1:I:375:LEU:CD2	1:J:283:HIS:CE1	3.02	0.41
1:K:91:VAL:O	2:K:501:ACO:N4P	2.53	0.41
1:K:188:TRP:CZ3	1:K:248:ARG:NH1	2.88	0.41
1:K:305:MSE:HE3	1:K:305:MSE:HB3	1.75	0.41
1:A:22:MSE:HE3	1:A:67:MSE:HE3	2.02	0.41
1:B:149:ASP:OD2	1:B:152:PHE:CD2	2.73	0.41
1:C:134:ARG:HH12	2:C:501:ACO:H1B	1.82	0.41
1:C:380:ARG:O	3:C:614:HOH:O	2.22	0.41
1:F:85:THR:HG22	1:F:86:ALA:N	2.34	0.41
1:G:127:SER:H	2:G:501:ACO:H21	1.84	0.41
1:G:307:VAL:CG1	1:G:311:LEU:CD1	2.98	0.41
1:H:177:HIS:O	1:H:181:PHE:CD2	2.74	0.41
1:J:169:VAL:HG22	1:J:225:HIS:HB2	2.02	0.41
1:L:232:TYR:HA	1:L:243:ARG:O	2.21	0.41
1:B:134:ARG:HG3	1:B:135:PHE:CD1	2.56	0.41
1:C:144:HIS:CE1	1:C:296:ARG:NH1	2.88	0.41
1:E:148:VAL:CG2	1:E:291:ALA:CB	2.97	0.41
1:E:387:GLN:O	1:E:391:ARG:HG3	2.20	0.41
1:F:314:ARG:HG3	1:F:316:TYR:CZ	2.56	0.41
1:G:206:LEU:HD21	1:G:231:LEU:CD1	2.50	0.41
1:H:169:VAL:HG22	1:H:225:HIS:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:320:VAL:HG22	1:H:321:GLY:N	2.36	0.41
1:I:334:ARG:CD	1:I:351:ALA:O	2.68	0.41
1:L:67:MSE:O	1:L:91:VAL:HA	2.21	0.41
1:A:35:GLY:N	1:A:36:PRO:CD	2.83	0.41
1:B:150:ARG:HG3	1:B:151:ARG:N	2.36	0.41
1:C:148:VAL:HA	1:C:290:LEU:O	2.20	0.41
1:D:104:ARG:HG3	1:D:135:PHE:CE1	2.48	0.41
1:E:32:ASP:OD1	1:E:33:PHE:N	2.54	0.41
1:E:169:VAL:HG22	1:E:170:ARG:N	2.34	0.41
1:E:362:LEU:HD12	1:E:362:LEU:HA	1.86	0.41
1:F:289:ARG:C	1:F:291:ALA:N	2.74	0.41
1:F:373:SER:HA	1:F:389:LEU:HD22	2.02	0.41
1:G:54:VAL:HG11	1:G:102:LEU:CD2	2.49	0.41
1:J:22:MSE:HB3	1:J:67:MSE:CE	2.51	0.41
1:J:98:ARG:NH2	1:J:99:ARG:CZ	2.84	0.41
1:J:276:HIS:CD2	1:J:278:GLN:H	2.39	0.41
1:J:357:MSE:HB3	1:J:381:LEU:CB	2.50	0.41
1:K:33:PHE:CG	1:K:34:ILE:N	2.89	0.41
1:B:167:SER:OG	1:E:100:ARG:NH1	2.53	0.41
1:B:207:LEU:O	1:B:210:CYS:HB2	2.20	0.41
1:B:383:THR:HG21	1:B:389:LEU:CD2	2.51	0.41
1:D:213:ALA:HA	1:D:214:PRO:HD2	1.85	0.41
1:E:33:PHE:C	1:E:33:PHE:HD1	2.19	0.41
1:F:98:ARG:NE	1:F:99:ARG:NH1	2.68	0.41
1:I:225:HIS:CG	1:I:226:PRO:CD	3.04	0.41
1:I:322:GLU:HA	1:I:339:ILE:O	2.20	0.41
1:J:207:LEU:O	1:J:210:CYS:HB2	2.21	0.41
1:A:290:LEU:HD23	1:A:290:LEU:HA	1.88	0.41
1:B:70:TYR:HA	1:B:87:GLY:O	2.21	0.41
1:B:167:SER:OG	1:E:100:ARG:CZ	2.69	0.41
1:B:198:ARG:HG2	1:B:203:TRP:CD1	2.56	0.41
1:C:70:TYR:CA	1:C:87:GLY:O	2.66	0.41
1:C:148:VAL:HG22	1:C:291:ALA:HA	0.56	0.41
1:C:188:TRP:CZ2	1:C:248:ARG:NH1	2.89	0.41
1:C:223:LEU:O	1:C:229:TYR:HA	2.21	0.41
1:D:8:THR:CG2	1:D:9:VAL:H	2.19	0.41
1:D:126:ALA:HB1	1:D:128:GLU:O	2.21	0.41
1:D:198:ARG:HA	1:D:199:PRO:HD3	1.80	0.41
1:E:34:ILE:HG22	1:E:35:GLY:N	2.34	0.41
1:E:306:ASN:HB3	1:E:309:ALA:HB3	2.03	0.41
1:F:34:ILE:CG2	1:F:36:PRO:HG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:103:LEU:HD22	2:F:501:ACO:CCP	2.50	0.41
1:F:150:ARG:NH2	1:F:263:ILE:O	2.51	0.41
1:F:169:VAL:HG23	1:F:224:LEU:O	2.21	0.41
1:G:33:PHE:CG	1:G:34:ILE:N	2.89	0.41
1:G:141:THR:HG22	1:G:402:VAL:HG11	2.02	0.41
1:G:246:GLU:HG2	1:G:248:ARG:HG2	2.02	0.41
1:G:274:ILE:N	1:G:274:ILE:HD13	2.36	0.41
1:G:367:LEU:O	1:G:402:VAL:CG2	2.69	0.41
1:H:100:ARG:NH1	1:J:167:SER:OG	2.54	0.41
1:H:186:GLU:OE2	1:H:189:ARG:NH1	2.52	0.41
1:H:372:ALA:N	1:H:393:ASP:OD1	2.54	0.41
1:I:98:ARG:HE	1:I:99:ARG:NH2	2.18	0.41
1:I:300:LEU:HG	1:I:301:TRP:N	2.35	0.41
1:I:326:VAL:HG11	1:I:352:ALA:O	2.21	0.41
1:J:385:ASP:OD1	1:J:387:GLN:N	2.45	0.41
1:L:49:ASP:OD1	1:L:49:ASP:C	2.59	0.41
1:C:184:ILE:HG21	1:C:228:GLY:HA2	2.02	0.41
1:C:355:ILE:HG13	1:C:383:THR:HB	2.02	0.41
1:F:120:PRO:C	1:F:121:VAL:HG13	2.41	0.41
1:G:328:GLU:HB2	1:G:334:ARG:HG3	2.03	0.41
1:H:355:ILE:CD1	1:H:392:LEU:HD11	2.50	0.41
1:I:314:ARG:O	1:I:316:TYR:CE1	2.74	0.41
1:J:202:LEU:HD23	1:J:202:LEU:HA	1.86	0.41
1:A:124:LEU:HD12	1:A:301:TRP:HB2	2.02	0.40
1:A:144:HIS:HB3	1:A:146:LEU:CD1	2.51	0.40
1:B:120:PRO:C	1:B:121:VAL:HG13	2.41	0.40
1:B:169:VAL:HG22	1:B:225:HIS:CA	2.51	0.40
1:E:93:VAL:HG23	2:E:501:ACO:H132	2.03	0.40
1:E:180:GLU:O	1:E:184:ILE:HG13	2.21	0.40
1:H:98:ARG:CG	1:H:99:ARG:NH1	2.84	0.40
1:I:189:ARG:HH11	1:I:197:LEU:HD13	1.87	0.40
1:I:314:ARG:NH1	1:I:366:TYR:O	2.54	0.40
1:I:357:MSE:HB3	1:I:381:LEU:HD12	2.03	0.40
1:K:70:TYR:HB3	1:K:88:LEU:CD2	2.52	0.40
1:L:33:PHE:CD1	1:L:33:PHE:C	2.95	0.40
1:A:98:ARG:NH1	1:A:99:ARG:CZ	2.85	0.40
1:B:173:ARG:HG2	1:E:24:LEU:HD13	2.02	0.40
1:C:101:GLY:CA	2:C:501:ACO:O2A	2.68	0.40
1:C:144:HIS:CD2	1:C:277:PRO:CD	3.04	0.40
1:D:144:HIS:CE1	1:D:296:ARG:NH1	2.89	0.40
1:D:250:VAL:O	1:D:250:VAL:CG1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:234:VAL:HG23	3:E:614:HOH:O	2.21	0.40
1:E:338:LYS:O	1:E:344:ALA:HA	2.21	0.40
1:F:46:VAL:HA	1:F:47:PRO:HD3	1.91	0.40
1:F:49:ASP:OD1	1:F:49:ASP:O	2.39	0.40
1:G:69:LEU:C	1:G:69:LEU:CD1	2.87	0.40
1:G:79:GLY:O	1:G:80:GLU:HB2	2.21	0.40
1:I:202:LEU:HD23	1:I:202:LEU:HA	1.84	0.40
1:I:356:GLU:C	1:I:357:MSE:HG2	2.42	0.40
1:J:70:TYR:HA	1:J:87:GLY:O	2.21	0.40
1:B:42:TRP:HA	1:B:46:VAL:HG23	2.02	0.40
1:B:48:THR:O	1:B:49:ASP:CB	2.67	0.40
1:C:74:ARG:O	1:C:196:LEU:HA	2.21	0.40
1:D:145:GLU:HB2	1:D:295:TRP:HB3	1.99	0.40
1:F:48:THR:O	1:F:49:ASP:OD1	2.39	0.40
1:H:74:ARG:HD3	1:H:84:PRO:HA	2.03	0.40
1:H:150:ARG:HD2	1:H:268:MSE:O	2.21	0.40
1:H:398:SER:OG	1:H:400:VAL:O	2.33	0.40
1:I:85:THR:HG23	1:I:121:VAL:HG23	2.03	0.40
1:L:50:GLY:HA2	1:L:70:TYR:CE1	2.57	0.40
1:B:298:ASP:OD1	1:B:298:ASP:O	2.39	0.40
1:C:247:LEU:C	1:C:247:LEU:CD2	2.89	0.40
1:F:46:VAL:HG22	1:F:69:LEU:HD13	2.04	0.40
1:J:45:LEU:HD13	1:J:73:LEU:CD2	2.52	0.40
1:J:398:SER:OG	1:J:400:VAL:O	2.30	0.40
1:A:198:ARG:HA	1:A:199:PRO:HD3	1.93	0.40
1:D:48:THR:O	1:D:49:ASP:CB	2.70	0.40
1:E:319:GLU:HG3	3:F:628:HOH:O	2.21	0.40
1:G:77:VAL:HB	1:G:78:PRO:CD	2.49	0.40
1:G:327:LEU:O	1:G:335:PHE:N	2.55	0.40
1:H:355:ILE:HD11	1:H:357:MSE:HE2	2.03	0.40
1:I:159:ALA:HA	1:I:160:PRO:HD2	1.83	0.40
1:J:306:ASN:OD1	1:J:308:PRO:HD2	2.21	0.40
1:K:46:VAL:HA	1:K:47:PRO:HD3	1.96	0.40
1:K:74:ARG:HB3	1:K:82:VAL:HG13	2.03	0.40
1:K:192:VAL:O	1:K:193:PRO:C	2.60	0.40
1:L:74:ARG:O	1:L:196:LEU:HA	2.21	0.40
1:L:135:PHE:O	1:L:303:ARG:NE	2.54	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:9:VAL:CG1	1:L:8:THR:OG1[2_545]	1.66	0.54
1:J:49:ASP:OD1	1:K:345:ARG:NH1[2_645]	1.83	0.37
1:E:9:VAL:O	1:L:8:THR:OG1[2_545]	2.14	0.06

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	392/428 (92%)	375 (96%)	15 (4%)	2 (0%)	29	61
1	B	392/428 (92%)	373 (95%)	18 (5%)	1 (0%)	41	72
1	C	392/428 (92%)	374 (95%)	18 (5%)	0	100	100
1	D	392/428 (92%)	376 (96%)	15 (4%)	1 (0%)	41	72
1	E	392/428 (92%)	376 (96%)	16 (4%)	0	100	100
1	F	392/428 (92%)	369 (94%)	22 (6%)	1 (0%)	41	72
1	G	392/428 (92%)	379 (97%)	12 (3%)	1 (0%)	41	72
1	H	392/428 (92%)	377 (96%)	15 (4%)	0	100	100
1	I	392/428 (92%)	365 (93%)	23 (6%)	4 (1%)	15	44
1	J	392/428 (92%)	357 (91%)	31 (8%)	4 (1%)	15	44
1	K	392/428 (92%)	367 (94%)	23 (6%)	2 (0%)	29	61
1	L	392/428 (92%)	370 (94%)	21 (5%)	1 (0%)	41	72
All	All	4704/5136 (92%)	4458 (95%)	229 (5%)	17 (0%)	34	66

All (17) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	9	VAL
1	I	319	GLU
1	I	357	MSE
1	I	397	ALA
1	J	175	THR

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Mol	Chain	Res	Type
1	J	309	ALA
1	J	357	MSE
1	J	358	ASP
1	B	62	SER
1	F	290	LEU
1	I	265	LEU
1	L	405	ALA
1	A	62	SER
1	D	319	GLU
1	K	295	TRP
1	G	332	GLY
1	K	114	ILE

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	311/327 (95%)	309 (99%)	2 (1%)	86	96
1	B	311/327 (95%)	310 (100%)	1 (0%)	92	98
1	C	311/327 (95%)	309 (99%)	2 (1%)	86	96
1	D	311/327 (95%)	309 (99%)	2 (1%)	86	96
1	E	311/327 (95%)	306 (98%)	5 (2%)	62	88
1	F	311/327 (95%)	308 (99%)	3 (1%)	76	93
1	G	311/327 (95%)	309 (99%)	2 (1%)	86	96
1	H	311/327 (95%)	310 (100%)	1 (0%)	92	98
1	I	311/327 (95%)	308 (99%)	3 (1%)	76	93
1	J	311/327 (95%)	304 (98%)	7 (2%)	50	82
1	K	311/327 (95%)	307 (99%)	4 (1%)	69	91
1	L	311/327 (95%)	285 (92%)	26 (8%)	11	31
All	All	3732/3924 (95%)	3674 (98%)	58 (2%)	62	88

All (58) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	8	THR
1	A	341	ASP
1	B	106	MSE
1	C	145	GLU
1	C	150	ARG
1	D	38	SER
1	D	180	GLU
1	E	9	VAL
1	E	33	PHE
1	E	98	ARG
1	E	180	GLU
1	E	314	ARG
1	F	106	MSE
1	F	146	LEU
1	F	207	LEU
1	G	146	LEU
1	G	289	ARG
1	H	150	ARG
1	I	38	SER
1	I	233	ARG
1	I	297	GLN
1	J	146	LEU
1	J	233	ARG
1	J	273	ILE
1	J	314	ARG
1	J	356	GLU
1	J	357	MSE
1	J	358	ASP
1	K	150	ARG
1	K	207	LEU
1	K	267	SER
1	K	314	ARG
1	L	9	VAL
1	L	34	ILE
1	L	44	THR
1	L	52	VAL
1	L	85	THR
1	L	98	ARG
1	L	104	ARG
1	L	146	LEU
1	L	148	VAL
1	L	150	ARG
1	L	154	ARG

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Mol	Chain	Res	Type
1	L	169	VAL
1	L	207	LEU
1	L	233	ARG
1	L	248	ARG
1	L	292	ARG
1	L	296	ARG
1	L	314	ARG
1	L	327	LEU
1	L	337	LEU
1	L	341	ASP
1	L	381	LEU
1	L	384	LYS
1	L	387	GLN
1	L	399	ASP
1	L	402	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (34) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	125	HIS
1	A	200	GLN
1	A	379	ASN
1	B	125	HIS
1	B	200	GLN
1	C	200	GLN
1	C	255	HIS
1	C	276	HIS
1	D	125	HIS
1	E	144	HIS
1	E	387	GLN
1	F	125	HIS
1	F	200	GLN
1	F	297	GLN
1	G	125	HIS
1	G	200	GLN
1	G	297	GLN
1	G	387	GLN
1	H	144	HIS
1	H	177	HIS
1	H	387	GLN
1	I	200	GLN
1	I	276	HIS

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Mol	Chain	Res	Type
1	I	297	GLN
1	I	318	HIS
1	J	125	HIS
1	J	177	HIS
1	J	283	HIS
1	J	318	HIS
1	K	125	HIS
1	K	200	GLN
1	L	200	GLN
1	L	318	HIS
1	L	387	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

12 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	ACO	G	501	-	47,53,53	1.72	7 (14%)	60,79,79	1.82	11 (18%)
2	ACO	J	501	-	47,53,53	1.62	7 (14%)	60,79,79	2.04	14 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	ACO	D	501	-	47,53,53	1.65	7 (14%)	60,79,79	2.25	13 (21%)
2	ACO	I	501	-	47,53,53	1.70	8 (17%)	60,79,79	1.80	9 (15%)
2	ACO	H	501	-	47,53,53	1.67	7 (14%)	60,79,79	1.95	14 (23%)
2	ACO	K	501	-	47,53,53	1.67	7 (14%)	60,79,79	2.14	15 (25%)
2	ACO	L	501	-	47,53,53	1.76	8 (17%)	60,79,79	1.96	14 (23%)
2	ACO	E	501	-	47,53,53	1.69	7 (14%)	60,79,79	2.02	15 (25%)
2	ACO	C	501	-	47,53,53	1.66	9 (19%)	60,79,79	1.78	14 (23%)
2	ACO	B	501	-	47,53,53	1.76	8 (17%)	60,79,79	2.06	15 (25%)
2	ACO	F	501	-	47,53,53	1.77	9 (19%)	60,79,79	1.95	12 (20%)
2	ACO	A	501	-	47,53,53	1.71	7 (14%)	60,79,79	2.12	15 (25%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	ACO	G	501	-	-	10/47/67/67	0/3/3/3
2	ACO	J	501	-	-	18/47/67/67	0/3/3/3
2	ACO	D	501	-	-	15/47/67/67	0/3/3/3
2	ACO	I	501	-	-	14/47/67/67	0/3/3/3
2	ACO	H	501	-	-	15/47/67/67	0/3/3/3
2	ACO	K	501	-	-	16/47/67/67	0/3/3/3
2	ACO	L	501	-	-	9/47/67/67	0/3/3/3
2	ACO	E	501	-	-	14/47/67/67	0/3/3/3
2	ACO	C	501	-	-	15/47/67/67	0/3/3/3
2	ACO	B	501	-	-	14/47/67/67	0/3/3/3
2	ACO	F	501	-	-	16/47/67/67	0/3/3/3
2	ACO	A	501	-	-	11/47/67/67	0/3/3/3

All (91) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	G	501	ACO	C9P-N8P	5.36	1.46	1.33
2	A	501	ACO	C5P-N4P	5.27	1.45	1.33
2	L	501	ACO	C5P-N4P	5.27	1.45	1.33
2	I	501	ACO	C9P-N8P	5.13	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	501	ACO	C5P-N4P	5.11	1.45	1.33
2	E	501	ACO	C9P-N8P	5.09	1.45	1.33
2	K	501	ACO	C5P-N4P	5.04	1.45	1.33
2	E	501	ACO	C5P-N4P	5.01	1.45	1.33
2	B	501	ACO	C9P-N8P	4.98	1.45	1.33
2	H	501	ACO	C5P-N4P	4.94	1.45	1.33
2	I	501	ACO	C5P-N4P	4.93	1.45	1.33
2	B	501	ACO	C5P-N4P	4.93	1.45	1.33
2	C	501	ACO	C9P-N8P	4.90	1.45	1.33
2	D	501	ACO	C5P-N4P	4.89	1.45	1.33
2	J	501	ACO	C9P-N8P	4.88	1.45	1.33
2	J	501	ACO	C5P-N4P	4.88	1.45	1.33
2	K	501	ACO	C9P-N8P	4.83	1.45	1.33
2	D	501	ACO	C9P-N8P	4.82	1.44	1.33
2	F	501	ACO	C9P-N8P	4.81	1.44	1.33
2	L	501	ACO	C9P-N8P	4.79	1.44	1.33
2	A	501	ACO	C9P-N8P	4.77	1.44	1.33
2	H	501	ACO	C9P-N8P	4.75	1.44	1.33
2	G	501	ACO	C5P-N4P	4.69	1.44	1.33
2	B	501	ACO	C2B-C3B	-4.45	1.43	1.53
2	C	501	ACO	C5P-N4P	4.45	1.43	1.33
2	G	501	ACO	C2B-C3B	-4.31	1.43	1.53
2	F	501	ACO	C2B-C3B	-4.15	1.43	1.53
2	A	501	ACO	C2B-C3B	-4.14	1.43	1.53
2	L	501	ACO	C2B-C3B	-4.13	1.44	1.53
2	H	501	ACO	C2B-C3B	-3.97	1.44	1.53
2	L	501	ACO	OAP-CAP	-3.74	1.35	1.42
2	C	501	ACO	C2B-C3B	-3.69	1.44	1.53
2	E	501	ACO	C6A-N6A	3.61	1.47	1.34
2	I	501	ACO	C2B-C3B	-3.57	1.45	1.53
2	K	501	ACO	C2B-C3B	-3.55	1.45	1.53
2	D	501	ACO	OAP-CAP	-3.52	1.36	1.42
2	E	501	ACO	C2B-C3B	-3.49	1.45	1.53
2	K	501	ACO	C6A-N6A	3.45	1.46	1.34
2	I	501	ACO	C6A-N6A	3.45	1.46	1.34
2	J	501	ACO	C2B-C3B	-3.41	1.45	1.53
2	D	501	ACO	C2B-C3B	-3.40	1.45	1.53
2	B	501	ACO	OAP-CAP	-3.39	1.36	1.42
2	A	501	ACO	C6A-N6A	3.35	1.46	1.34
2	D	501	ACO	C6A-N6A	3.35	1.46	1.34
2	C	501	ACO	C6A-N6A	3.34	1.46	1.34
2	H	501	ACO	C6A-N6A	3.34	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L	501	ACO	C6A-N6A	3.33	1.46	1.34
2	J	501	ACO	C6A-N6A	3.29	1.45	1.34
2	F	501	ACO	C6A-N6A	3.27	1.45	1.34
2	G	501	ACO	C6A-N6A	3.26	1.45	1.34
2	B	501	ACO	C6A-N6A	3.21	1.45	1.34
2	H	501	ACO	OAP-CAP	-3.18	1.36	1.42
2	F	501	ACO	OAP-CAP	-3.16	1.36	1.42
2	G	501	ACO	OAP-CAP	-3.14	1.36	1.42
2	K	501	ACO	OAP-CAP	-3.10	1.36	1.42
2	I	501	ACO	OAP-CAP	-3.03	1.37	1.42
2	A	501	ACO	OAP-CAP	-2.98	1.37	1.42
2	E	501	ACO	OAP-CAP	-2.98	1.37	1.42
2	C	501	ACO	C3B-C4B	-2.88	1.45	1.52
2	F	501	ACO	C3B-C4B	-2.87	1.45	1.52
2	I	501	ACO	C3B-C4B	-2.79	1.45	1.52
2	J	501	ACO	OAP-CAP	-2.75	1.37	1.42
2	E	501	ACO	C3B-C4B	-2.74	1.45	1.52
2	H	501	ACO	C3B-C4B	-2.69	1.46	1.52
2	K	501	ACO	C3B-C4B	-2.69	1.46	1.52
2	G	501	ACO	C3B-C4B	-2.68	1.46	1.52
2	C	501	ACO	OAP-CAP	-2.64	1.37	1.42
2	J	501	ACO	C3B-C4B	-2.52	1.46	1.52
2	A	501	ACO	C3B-C4B	-2.49	1.46	1.52
2	B	501	ACO	C3B-C4B	-2.48	1.46	1.52
2	F	501	ACO	P3B-O3B	-2.47	1.55	1.59
2	L	501	ACO	P3B-O3B	-2.44	1.55	1.59
2	E	501	ACO	C5B-C4B	-2.41	1.44	1.51
2	H	501	ACO	C5B-C4B	-2.30	1.44	1.51
2	D	501	ACO	C3B-C4B	-2.30	1.47	1.52
2	L	501	ACO	C3B-C4B	-2.28	1.47	1.52
2	I	501	ACO	C5B-C4B	-2.24	1.44	1.51
2	D	501	ACO	C5B-C4B	-2.18	1.45	1.51
2	C	501	ACO	C5B-C4B	-2.16	1.45	1.51
2	C	501	ACO	C2A-N3A	2.16	1.35	1.32
2	F	501	ACO	C5B-C4B	-2.15	1.45	1.51
2	K	501	ACO	C5B-C4B	-2.13	1.45	1.51
2	J	501	ACO	C5B-C4B	-2.13	1.45	1.51
2	F	501	ACO	C2A-N3A	2.11	1.35	1.32
2	B	501	ACO	P2A-O3A	2.10	1.61	1.59
2	B	501	ACO	P3B-O3B	-2.08	1.55	1.59
2	L	501	ACO	CCP-CBP	2.04	1.55	1.52
2	A	501	ACO	C2A-N3A	2.04	1.35	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	G	501	ACO	O2B-C2B	-2.01	1.38	1.43
2	I	501	ACO	C2A-N3A	2.01	1.35	1.32
2	C	501	ACO	P3B-O3B	-2.01	1.56	1.59

All (161) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	501	ACO	O4B-C1B-N9A	8.14	119.54	108.75
2	D	501	ACO	O6A-CCP-CBP	7.73	122.97	110.55
2	D	501	ACO	O4B-C1B-N9A	7.59	118.81	108.75
2	K	501	ACO	O6A-CCP-CBP	7.39	122.42	110.55
2	L	501	ACO	O6A-CCP-CBP	7.18	122.09	110.55
2	J	501	ACO	O4B-C1B-N9A	7.18	118.26	108.75
2	K	501	ACO	O4B-C1B-N9A	6.95	117.96	108.75
2	J	501	ACO	O6A-CCP-CBP	6.84	121.54	110.55
2	B	501	ACO	O4B-C1B-N9A	6.77	117.73	108.75
2	C	501	ACO	O4B-C1B-N9A	6.71	117.64	108.75
2	F	501	ACO	C2P-C3P-N4P	6.65	126.30	112.41
2	I	501	ACO	O6A-CCP-CBP	6.40	120.84	110.55
2	F	501	ACO	O4B-C1B-N9A	6.39	117.22	108.75
2	E	501	ACO	O6A-CCP-CBP	6.30	120.68	110.55
2	H	501	ACO	O4B-C1B-N9A	6.26	117.05	108.75
2	I	501	ACO	N3A-C2A-N1A	-5.76	120.86	128.67
2	B	501	ACO	O6A-CCP-CBP	5.71	119.72	110.55
2	I	501	ACO	O4B-C1B-N9A	5.61	116.19	108.75
2	A	501	ACO	N3A-C2A-N1A	-5.47	121.25	128.67
2	E	501	ACO	O4B-C1B-N9A	5.43	115.95	108.75
2	B	501	ACO	N3A-C2A-N1A	-5.42	121.31	128.67
2	H	501	ACO	N3A-C2A-N1A	-5.39	121.36	128.67
2	L	501	ACO	O4B-C1B-N9A	5.32	115.80	108.75
2	K	501	ACO	N3A-C2A-N1A	-5.30	121.48	128.67
2	E	501	ACO	N3A-C2A-N1A	-5.21	121.61	128.67
2	G	501	ACO	O4B-C1B-N9A	5.16	115.59	108.75
2	D	501	ACO	C2P-C3P-N4P	5.14	123.14	112.41
2	L	501	ACO	C2P-C3P-N4P	5.10	123.06	112.41
2	D	501	ACO	N3A-C2A-N1A	-4.97	121.92	128.67
2	F	501	ACO	N3A-C2A-N1A	-4.88	122.05	128.67
2	F	501	ACO	O6A-CCP-CBP	4.86	118.35	110.55
2	G	501	ACO	N3A-C2A-N1A	-4.71	122.28	128.67
2	C	501	ACO	N3A-C2A-N1A	-4.66	122.34	128.67
2	L	501	ACO	N3A-C2A-N1A	-4.63	122.38	128.67
2	A	501	ACO	O6A-CCP-CBP	4.63	117.98	110.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	J	501	ACO	N3A-C2A-N1A	-4.62	122.40	128.67
2	D	501	ACO	C1B-N9A-C4A	-4.62	118.52	126.64
2	H	501	ACO	O6A-CCP-CBP	4.36	117.56	110.55
2	G	501	ACO	O6A-CCP-CBP	4.35	117.55	110.55
2	G	501	ACO	C2P-C3P-N4P	4.22	121.23	112.41
2	K	501	ACO	C1B-N9A-C4A	-4.20	119.26	126.64
2	G	501	ACO	C6P-C5P-N4P	4.04	123.71	116.34
2	A	501	ACO	CAP-C9P-N8P	4.02	124.11	116.48
2	D	501	ACO	C6P-C5P-N4P	3.99	123.61	116.34
2	B	501	ACO	C4B-O4B-C1B	-3.95	106.31	109.92
2	C	501	ACO	O6A-CCP-CBP	3.90	116.82	110.55
2	E	501	ACO	CAP-C9P-N8P	3.81	123.72	116.48
2	A	501	ACO	C1B-N9A-C4A	-3.80	119.97	126.64
2	E	501	ACO	C2P-C3P-N4P	3.77	120.28	112.41
2	H	501	ACO	C2P-C3P-N4P	3.76	120.26	112.41
2	E	501	ACO	C1B-N9A-C4A	-3.75	120.06	126.64
2	J	501	ACO	C2P-C3P-N4P	3.68	120.09	112.41
2	J	501	ACO	CAP-C9P-N8P	3.65	123.41	116.48
2	H	501	ACO	CAP-C9P-N8P	3.63	123.37	116.48
2	K	501	ACO	C4B-O4B-C1B	-3.62	106.61	109.92
2	A	501	ACO	C7P-N8P-C9P	-3.61	116.06	122.55
2	B	501	ACO	C2P-C3P-N4P	3.61	119.94	112.41
2	L	501	ACO	CAP-C9P-N8P	3.58	123.27	116.48
2	G	501	ACO	CAP-C9P-N8P	3.48	123.09	116.48
2	H	501	ACO	C1B-N9A-C4A	-3.41	120.65	126.64
2	D	501	ACO	C3P-N4P-C5P	-3.37	116.56	122.82
2	A	501	ACO	C2P-C3P-N4P	3.36	119.43	112.41
2	K	501	ACO	C2P-C3P-N4P	3.33	119.37	112.41
2	B	501	ACO	O5P-C5P-N4P	-3.33	116.50	123.03
2	H	501	ACO	C4B-O4B-C1B	-3.32	106.88	109.92
2	L	501	ACO	C6P-C5P-N4P	3.32	122.39	116.34
2	E	501	ACO	O5P-C5P-N4P	-3.28	116.59	123.03
2	E	501	ACO	C6P-C5P-N4P	3.28	122.31	116.34
2	B	501	ACO	C1B-N9A-C4A	-3.26	120.92	126.64
2	I	501	ACO	C1B-N9A-C4A	-3.26	120.92	126.64
2	K	501	ACO	CAP-C9P-N8P	3.19	122.53	116.48
2	J	501	ACO	C1B-N9A-C4A	-3.14	121.12	126.64
2	D	501	ACO	O5P-C5P-N4P	-3.14	116.87	123.03
2	J	501	ACO	C3P-N4P-C5P	-3.11	117.04	122.82
2	B	501	ACO	C6P-C5P-N4P	3.10	121.99	116.34
2	D	501	ACO	C4B-O4B-C1B	-3.09	107.09	109.92
2	F	501	ACO	C4B-O4B-C1B	-3.07	107.11	109.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	501	ACO	C6P-C7P-N8P	3.07	118.53	112.00
2	K	501	ACO	O5B-C5B-C4B	3.04	119.36	108.99
2	F	501	ACO	C1B-N9A-C4A	-3.04	121.31	126.64
2	C	501	ACO	C1B-N9A-C4A	-3.03	121.33	126.64
2	J	501	ACO	C6P-C5P-N4P	3.02	121.84	116.34
2	J	501	ACO	C3B-C2B-C1B	3.01	106.51	99.89
2	E	501	ACO	C7P-N8P-C9P	-2.98	117.19	122.55
2	I	501	ACO	C3B-C2B-C1B	2.98	106.43	99.89
2	B	501	ACO	CAP-C9P-N8P	2.94	122.07	116.48
2	A	501	ACO	C6P-C5P-N4P	2.92	121.67	116.34
2	H	501	ACO	C6P-C5P-N4P	2.90	121.63	116.34
2	L	501	ACO	C4B-O4B-C1B	-2.87	107.30	109.92
2	C	501	ACO	C3P-N4P-C5P	-2.86	117.50	122.82
2	K	501	ACO	C6P-C5P-N4P	2.84	121.51	116.34
2	G	501	ACO	O5P-C5P-N4P	-2.83	117.47	123.03
2	C	501	ACO	O5P-C5P-N4P	-2.82	117.50	123.03
2	B	501	ACO	C3B-C2B-C1B	2.78	106.00	99.89
2	C	501	ACO	O5B-C5B-C4B	2.77	118.42	108.99
2	C	501	ACO	C2P-C3P-N4P	2.76	118.17	112.41
2	E	501	ACO	C7P-C6P-C5P	2.73	116.94	112.39
2	I	501	ACO	O5B-C5B-C4B	2.73	118.27	108.99
2	K	501	ACO	O5P-C5P-N4P	-2.70	117.73	123.03
2	A	501	ACO	O5B-C5B-C4B	2.68	118.13	108.99
2	K	501	ACO	C3B-C2B-C1B	2.68	105.78	99.89
2	G	501	ACO	C3B-C2B-C1B	2.67	105.75	99.89
2	H	501	ACO	C3B-C2B-C1B	2.65	105.73	99.89
2	G	501	ACO	O5B-C5B-C4B	2.65	118.03	108.99
2	A	501	ACO	C3B-C2B-C1B	2.64	105.70	99.89
2	H	501	ACO	O9P-C9P-N8P	-2.64	117.40	122.98
2	B	501	ACO	O5B-C5B-C4B	2.63	117.93	108.99
2	B	501	ACO	C7P-C6P-C5P	2.60	116.73	112.39
2	D	501	ACO	CAP-C9P-N8P	2.58	121.37	116.48
2	K	501	ACO	C5B-C4B-C3B	-2.53	105.95	114.38
2	F	501	ACO	O5B-C5B-C4B	2.53	117.61	108.99
2	A	501	ACO	C4B-O4B-C1B	-2.52	107.62	109.92
2	J	501	ACO	O5B-C5B-C4B	2.51	117.56	108.99
2	G	501	ACO	C4B-O4B-C1B	-2.51	107.63	109.92
2	E	501	ACO	O9P-C9P-N8P	-2.47	117.75	122.98
2	C	501	ACO	C3B-C2B-C1B	2.46	105.31	99.89
2	I	501	ACO	C6P-C5P-N4P	2.45	120.81	116.34
2	A	501	ACO	C2P-S1P-C	2.45	113.19	101.42
2	H	501	ACO	O5P-C5P-N4P	-2.44	118.23	123.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E	501	ACO	C3P-N4P-C5P	-2.43	118.29	122.82
2	D	501	ACO	CDP-CBP-CCP	2.43	112.24	108.22
2	F	501	ACO	C6P-C5P-N4P	2.41	120.74	116.34
2	J	501	ACO	C4B-O4B-C1B	-2.39	107.74	109.92
2	D	501	ACO	C3B-C2B-C1B	2.37	105.10	99.89
2	J	501	ACO	O9P-C9P-N8P	-2.34	118.02	122.98
2	F	501	ACO	CAP-C9P-N8P	2.33	120.91	116.48
2	J	501	ACO	O5P-C5P-N4P	-2.33	118.45	123.03
2	C	501	ACO	C6P-C5P-N4P	2.33	120.59	116.34
2	H	501	ACO	C7P-N8P-C9P	-2.32	118.38	122.55
2	G	501	ACO	C1B-N9A-C4A	-2.32	122.56	126.64
2	C	501	ACO	O2A-P1A-O3A	2.31	113.51	107.27
2	L	501	ACO	C2P-S1P-C	2.31	112.52	101.42
2	A	501	ACO	O3B-C3B-C2B	-2.31	103.41	111.68
2	B	501	ACO	C2P-S1P-C	2.28	112.38	101.42
2	I	501	ACO	C2P-S1P-C	2.28	112.38	101.42
2	K	501	ACO	C7P-C6P-C5P	2.27	116.18	112.39
2	E	501	ACO	O2A-P1A-O3A	2.26	113.39	107.27
2	L	501	ACO	O5P-C5P-N4P	-2.24	118.64	123.03
2	B	501	ACO	O3B-C3B-C2B	-2.24	103.66	111.68
2	F	501	ACO	P3B-O3B-C3B	-2.23	117.47	123.43
2	E	501	ACO	C6P-C7P-N8P	2.22	116.72	112.00
2	C	501	ACO	CAP-C9P-N8P	2.20	120.67	116.48
2	K	501	ACO	O4B-C4B-C3B	2.20	109.55	104.92
2	L	501	ACO	C3B-C2B-C1B	2.20	104.72	99.89
2	L	501	ACO	C1B-N9A-C4A	-2.19	122.80	126.64
2	F	501	ACO	C2P-S1P-C	2.18	111.92	101.42
2	A	501	ACO	O9P-C9P-N8P	-2.18	118.37	122.98
2	L	501	ACO	O9P-C9P-N8P	-2.18	118.37	122.98
2	L	501	ACO	O5B-C5B-C4B	2.18	116.42	108.99
2	H	501	ACO	C3P-N4P-C5P	-2.16	118.81	122.82
2	E	501	ACO	C4B-O4B-C1B	-2.12	107.98	109.92
2	L	501	ACO	O3B-C3B-C2B	-2.10	104.13	111.68
2	F	501	ACO	CEP-CBP-CCP	2.10	111.70	108.22
2	D	501	ACO	C7P-C6P-C5P	2.10	115.89	112.39
2	B	501	ACO	O4B-C4B-C3B	2.09	109.32	104.92
2	J	501	ACO	C6P-C7P-N8P	2.06	116.39	112.00
2	K	501	ACO	C7P-N8P-C9P	-2.06	118.84	122.55
2	C	501	ACO	C5B-C4B-C3B	-2.02	107.66	114.38
2	I	501	ACO	CAP-C9P-N8P	2.01	120.30	116.48
2	C	501	ACO	C2P-S1P-C	2.01	111.09	101.42
2	A	501	ACO	O5P-C5P-N4P	-2.00	119.10	123.03

There are no chirality outliers.

All (167) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	501	ACO	O4B-C4B-C5B-O5B
2	A	501	ACO	C5B-O5B-P1A-O2A
2	A	501	ACO	C5B-O5B-P1A-O3A
2	A	501	ACO	CDP-CBP-CCP-O6A
2	A	501	ACO	CEP-CBP-CCP-O6A
2	A	501	ACO	CAP-CBP-CCP-O6A
2	A	501	ACO	O-C-S1P-C2P
2	A	501	ACO	CH3-C-S1P-C2P
2	B	501	ACO	C4B-C3B-O3B-P3B
2	B	501	ACO	O4B-C4B-C5B-O5B
2	B	501	ACO	C5B-O5B-P1A-O1A
2	B	501	ACO	C5B-O5B-P1A-O2A
2	B	501	ACO	C5B-O5B-P1A-O3A
2	B	501	ACO	CDP-CBP-CCP-O6A
2	B	501	ACO	CEP-CBP-CCP-O6A
2	B	501	ACO	CAP-CBP-CCP-O6A
2	B	501	ACO	C5P-C6P-C7P-N8P
2	B	501	ACO	O-C-S1P-C2P
2	B	501	ACO	CH3-C-S1P-C2P
2	C	501	ACO	C4B-C3B-O3B-P3B
2	C	501	ACO	O4B-C4B-C5B-O5B
2	C	501	ACO	C5B-O5B-P1A-O1A
2	C	501	ACO	C5B-O5B-P1A-O2A
2	C	501	ACO	C5B-O5B-P1A-O3A
2	C	501	ACO	C5P-C6P-C7P-N8P
2	C	501	ACO	S1P-C2P-C3P-N4P
2	C	501	ACO	O-C-S1P-C2P
2	C	501	ACO	CH3-C-S1P-C2P
2	D	501	ACO	O4B-C4B-C5B-O5B
2	D	501	ACO	C5B-O5B-P1A-O1A
2	D	501	ACO	C5B-O5B-P1A-O2A
2	D	501	ACO	C5B-O5B-P1A-O3A
2	D	501	ACO	CDP-CBP-CCP-O6A
2	D	501	ACO	CEP-CBP-CCP-O6A
2	D	501	ACO	CAP-CBP-CCP-O6A
2	D	501	ACO	S1P-C2P-C3P-N4P
2	D	501	ACO	O-C-S1P-C2P
2	D	501	ACO	CH3-C-S1P-C2P
2	E	501	ACO	O4B-C4B-C5B-O5B
2	E	501	ACO	C5B-O5B-P1A-O2A

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Mol	Chain	Res	Type	Atoms
2	E	501	ACO	C5B-O5B-P1A-O3A
2	E	501	ACO	CDP-CBP-CCP-O6A
2	E	501	ACO	CEP-CBP-CCP-O6A
2	E	501	ACO	CAP-CBP-CCP-O6A
2	E	501	ACO	C5P-C6P-C7P-N8P
2	E	501	ACO	S1P-C2P-C3P-N4P
2	E	501	ACO	O-C-S1P-C2P
2	E	501	ACO	CH3-C-S1P-C2P
2	F	501	ACO	O4B-C4B-C5B-O5B
2	F	501	ACO	C5B-O5B-P1A-O1A
2	F	501	ACO	C5B-O5B-P1A-O2A
2	F	501	ACO	C5B-O5B-P1A-O3A
2	F	501	ACO	CDP-CBP-CCP-O6A
2	F	501	ACO	CEP-CBP-CCP-O6A
2	F	501	ACO	CAP-CBP-CCP-O6A
2	F	501	ACO	S1P-C2P-C3P-N4P
2	F	501	ACO	O-C-S1P-C2P
2	F	501	ACO	CH3-C-S1P-C2P
2	G	501	ACO	CEP-CBP-CCP-O6A
2	G	501	ACO	O-C-S1P-C2P
2	G	501	ACO	CH3-C-S1P-C2P
2	H	501	ACO	O4B-C4B-C5B-O5B
2	H	501	ACO	C5B-O5B-P1A-O1A
2	H	501	ACO	C5B-O5B-P1A-O2A
2	H	501	ACO	C5B-O5B-P1A-O3A
2	H	501	ACO	CDP-CBP-CCP-O6A
2	H	501	ACO	CEP-CBP-CCP-O6A
2	H	501	ACO	CAP-CBP-CCP-O6A
2	H	501	ACO	C5P-C6P-C7P-N8P
2	H	501	ACO	O-C-S1P-C2P
2	H	501	ACO	CH3-C-S1P-C2P
2	I	501	ACO	C4B-C3B-O3B-P3B
2	I	501	ACO	O4B-C4B-C5B-O5B
2	I	501	ACO	C5B-O5B-P1A-O1A
2	I	501	ACO	C5B-O5B-P1A-O2A
2	I	501	ACO	C5B-O5B-P1A-O3A
2	I	501	ACO	CDP-CBP-CCP-O6A
2	I	501	ACO	CEP-CBP-CCP-O6A
2	I	501	ACO	CAP-CBP-CCP-O6A
2	I	501	ACO	S1P-C2P-C3P-N4P
2	I	501	ACO	O-C-S1P-C2P
2	I	501	ACO	CH3-C-S1P-C2P

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Mol	Chain	Res	Type	Atoms
2	J	501	ACO	C4B-C3B-O3B-P3B
2	J	501	ACO	O4B-C4B-C5B-O5B
2	J	501	ACO	C5B-O5B-P1A-O1A
2	J	501	ACO	C5B-O5B-P1A-O2A
2	J	501	ACO	C5B-O5B-P1A-O3A
2	J	501	ACO	CDP-CBP-CCP-O6A
2	J	501	ACO	CEP-CBP-CCP-O6A
2	J	501	ACO	CAP-CBP-CCP-O6A
2	J	501	ACO	S1P-C2P-C3P-N4P
2	J	501	ACO	O-C-S1P-C2P
2	J	501	ACO	CH3-C-S1P-C2P
2	K	501	ACO	C4B-C3B-O3B-P3B
2	K	501	ACO	C3B-C4B-C5B-O5B
2	K	501	ACO	O4B-C4B-C5B-O5B
2	K	501	ACO	C5B-O5B-P1A-O1A
2	K	501	ACO	C5B-O5B-P1A-O3A
2	K	501	ACO	CDP-CBP-CCP-O6A
2	K	501	ACO	CEP-CBP-CCP-O6A
2	K	501	ACO	CAP-CBP-CCP-O6A
2	K	501	ACO	C5P-C6P-C7P-N8P
2	K	501	ACO	S1P-C2P-C3P-N4P
2	K	501	ACO	O-C-S1P-C2P
2	K	501	ACO	CH3-C-S1P-C2P
2	L	501	ACO	C5P-C6P-C7P-N8P
2	L	501	ACO	S1P-C2P-C3P-N4P
2	L	501	ACO	O-C-S1P-C2P
2	L	501	ACO	CH3-C-S1P-C2P
2	C	501	ACO	C3B-C4B-C5B-O5B
2	D	501	ACO	C3B-C4B-C5B-O5B
2	E	501	ACO	C3B-C4B-C5B-O5B
2	G	501	ACO	O4B-C4B-C5B-O5B
2	I	501	ACO	C3B-C4B-C5B-O5B
2	L	501	ACO	O4B-C4B-C5B-O5B
2	D	501	ACO	C4B-C3B-O3B-P3B
2	E	501	ACO	C4B-C3B-O3B-P3B
2	H	501	ACO	C4B-C3B-O3B-P3B
2	L	501	ACO	C4B-C3B-O3B-P3B
2	F	501	ACO	C6P-C7P-N8P-C9P
2	G	501	ACO	C6P-C7P-N8P-C9P
2	B	501	ACO	C3B-C4B-C5B-O5B
2	F	501	ACO	C3B-C4B-C5B-O5B
2	G	501	ACO	C2B-C3B-O3B-P3B

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Mol	Chain	Res	Type	Atoms
2	G	501	ACO	C4B-C3B-O3B-P3B
2	A	501	ACO	C3B-C4B-C5B-O5B
2	H	501	ACO	C3B-C4B-C5B-O5B
2	J	501	ACO	C3B-C4B-C5B-O5B
2	J	501	ACO	C5P-C6P-C7P-N8P
2	G	501	ACO	C3B-C4B-C5B-O5B
2	L	501	ACO	C3B-C4B-C5B-O5B
2	D	501	ACO	C6P-C7P-N8P-C9P
2	C	501	ACO	C2B-C3B-O3B-P3B
2	F	501	ACO	C2B-C3B-O3B-P3B
2	F	501	ACO	C4B-C3B-O3B-P3B
2	D	501	ACO	C9P-CAP-CBP-CDP
2	K	501	ACO	C9P-CAP-CBP-CDP
2	F	501	ACO	P1A-O3A-P2A-O4A
2	H	501	ACO	P1A-O3A-P2A-O4A
2	K	501	ACO	P1A-O3A-P2A-O4A
2	C	501	ACO	CDP-CBP-CCP-O6A
2	G	501	ACO	CDP-CBP-CCP-O6A
2	A	501	ACO	C6P-C7P-N8P-C9P
2	C	501	ACO	C3P-C2P-S1P-C
2	L	501	ACO	C6P-C7P-N8P-C9P
2	K	501	ACO	C5B-O5B-P1A-O2A
2	J	501	ACO	P2A-O3A-P1A-O2A
2	C	501	ACO	C3B-O3B-P3B-O8A
2	E	501	ACO	C3B-O3B-P3B-O8A
2	K	501	ACO	C3B-O3B-P3B-O8A
2	L	501	ACO	C3B-O3B-P3B-O8A
2	J	501	ACO	C6P-C7P-N8P-C9P
2	I	501	ACO	C6P-C7P-N8P-C9P
2	E	501	ACO	C2B-C3B-O3B-P3B
2	B	501	ACO	P1A-O3A-P2A-O4A
2	I	501	ACO	C5P-C6P-C7P-N8P
2	D	501	ACO	OAP-CAP-CBP-CEP
2	J	501	ACO	P2A-O3A-P1A-O1A
2	J	501	ACO	P1A-O3A-P2A-O5A
2	J	501	ACO	C3B-O3B-P3B-O8A
2	A	501	ACO	C4B-C3B-O3B-P3B
2	C	501	ACO	CEP-CBP-CCP-O6A
2	G	501	ACO	CAP-CBP-CCP-O6A
2	B	501	ACO	P1A-O3A-P2A-O5A
2	F	501	ACO	P1A-O3A-P2A-O5A
2	H	501	ACO	P2A-O3A-P1A-O2A

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Mol	Chain	Res	Type	Atoms
2	H	501	ACO	P1A-O3A-P2A-O5A

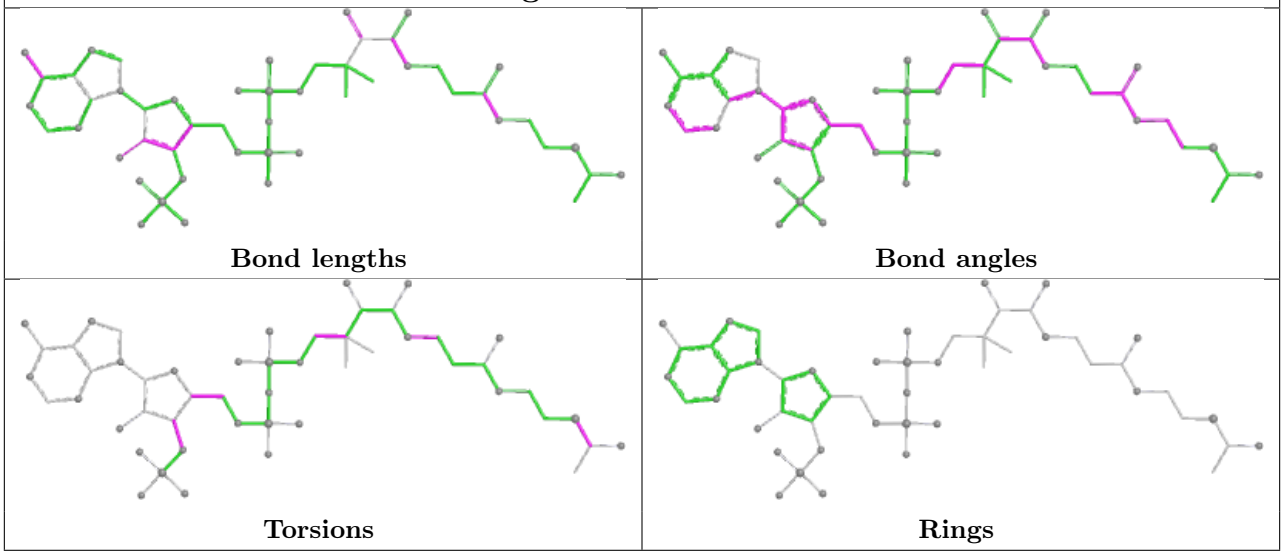
There are no ring outliers.

12 monomers are involved in 70 short contacts:

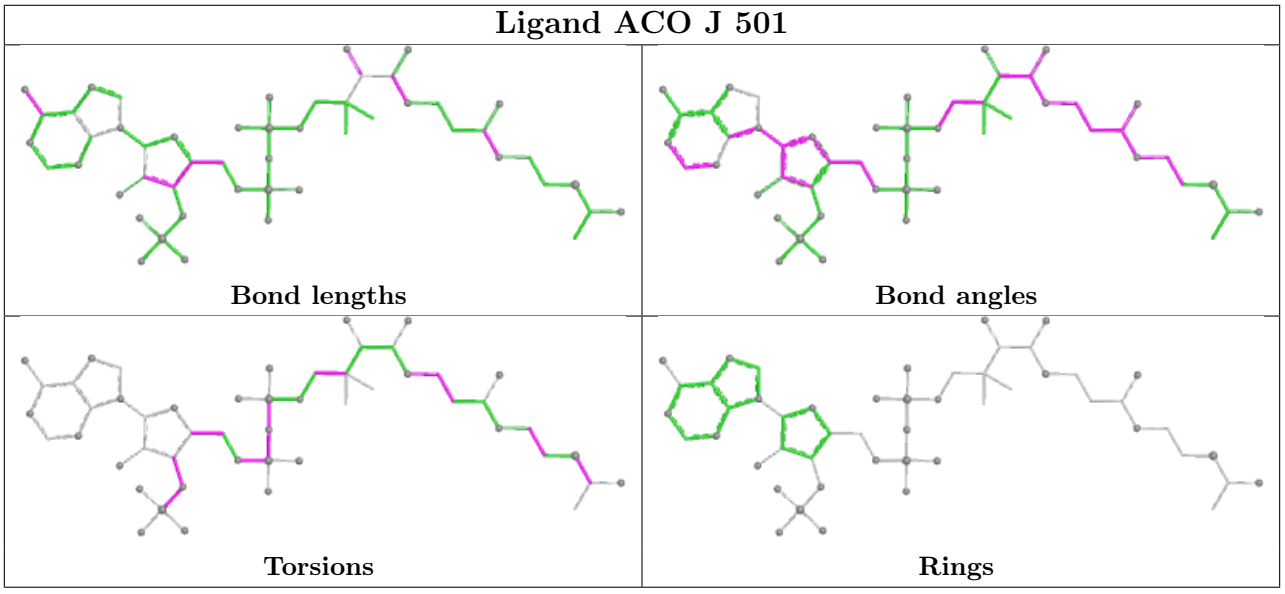
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	G	501	ACO	6	0
2	J	501	ACO	3	0
2	D	501	ACO	2	0
2	I	501	ACO	7	0
2	H	501	ACO	2	0
2	K	501	ACO	10	0
2	L	501	ACO	5	0
2	E	501	ACO	8	0
2	C	501	ACO	12	0
2	B	501	ACO	4	0
2	F	501	ACO	5	0
2	A	501	ACO	6	0

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.

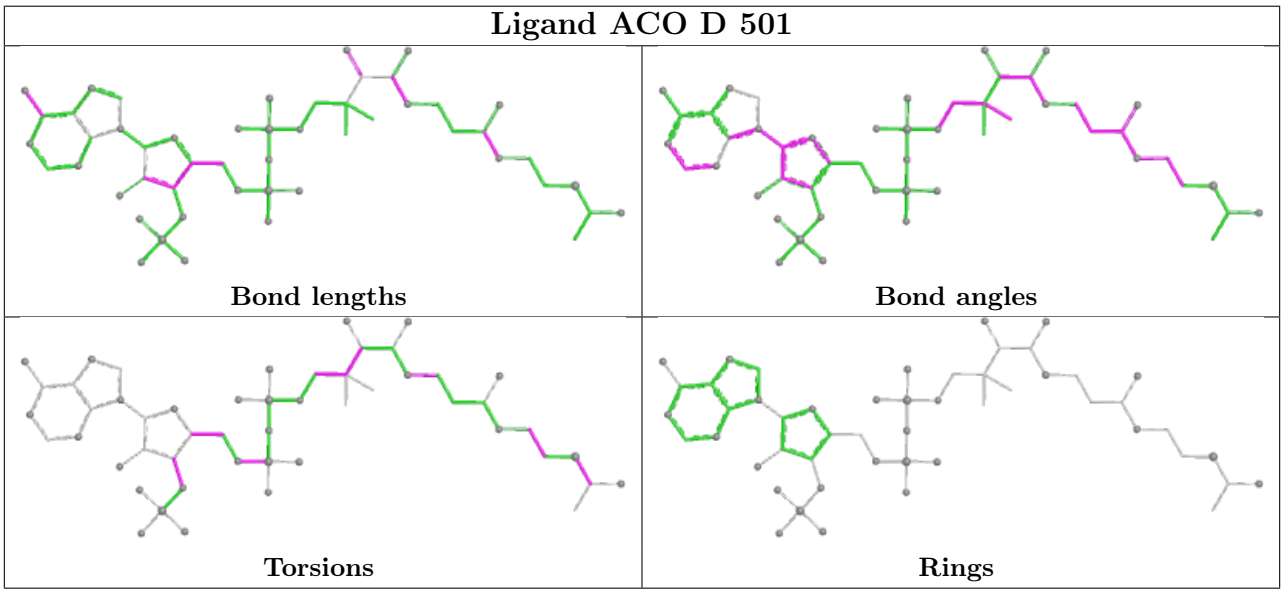
Ligand ACO G 501



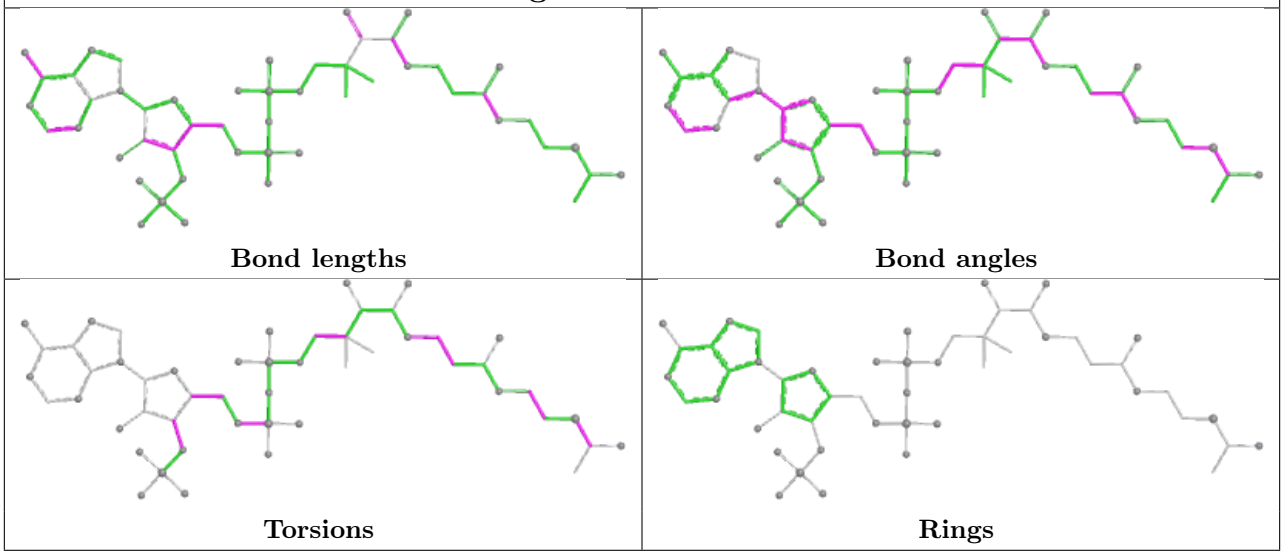
Ligand ACO J 501



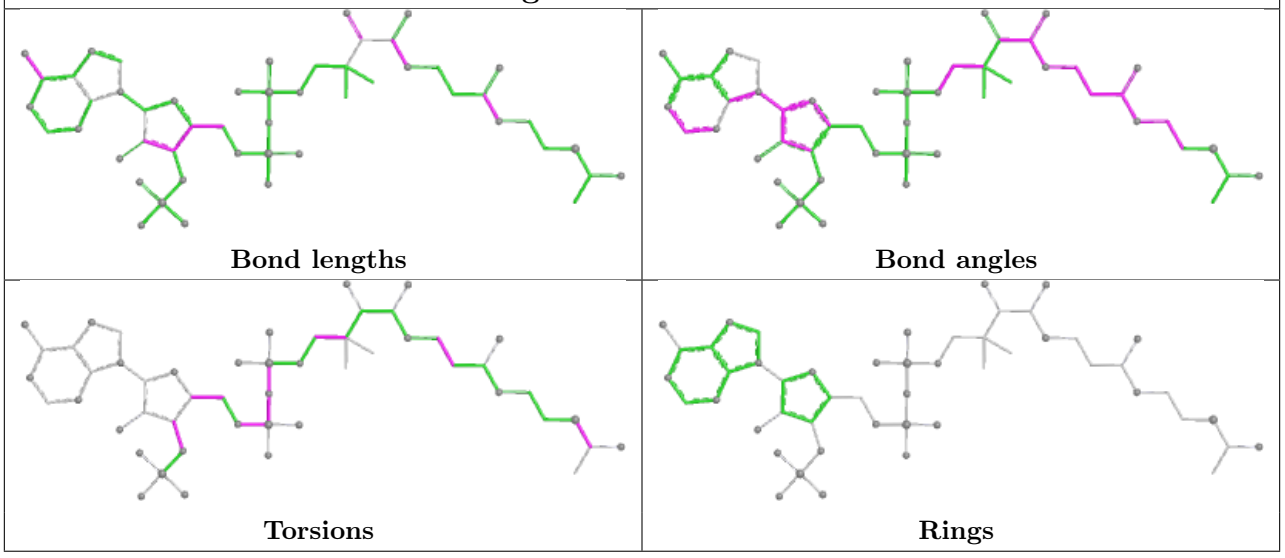
Ligand ACO D 501



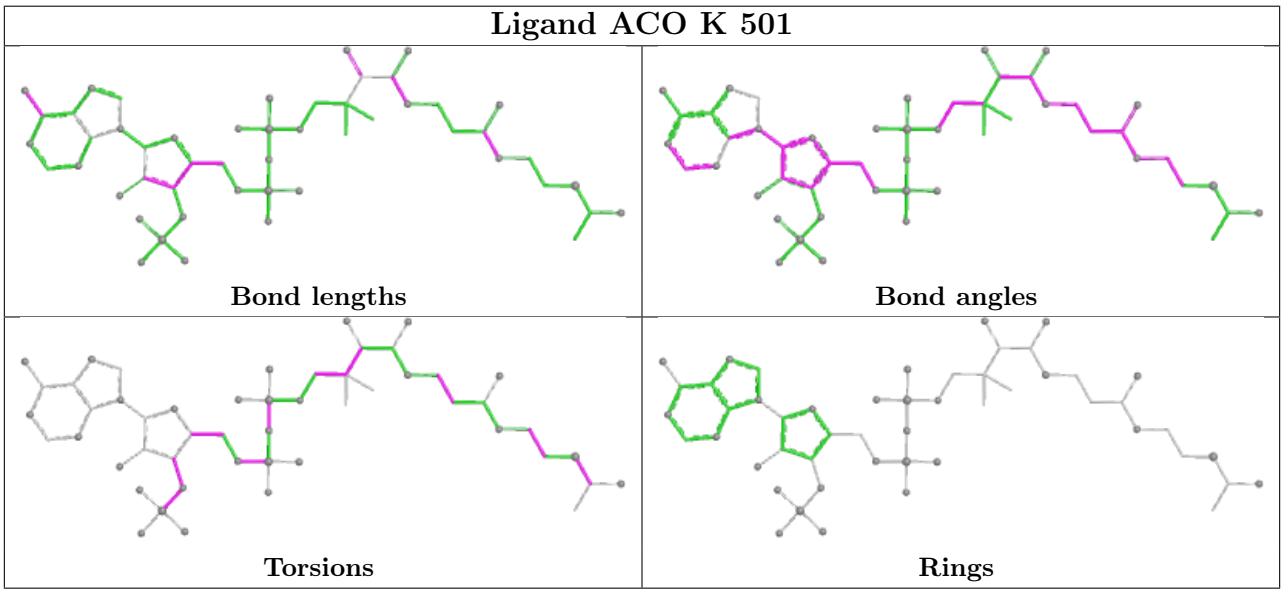
Ligand ACO I 501



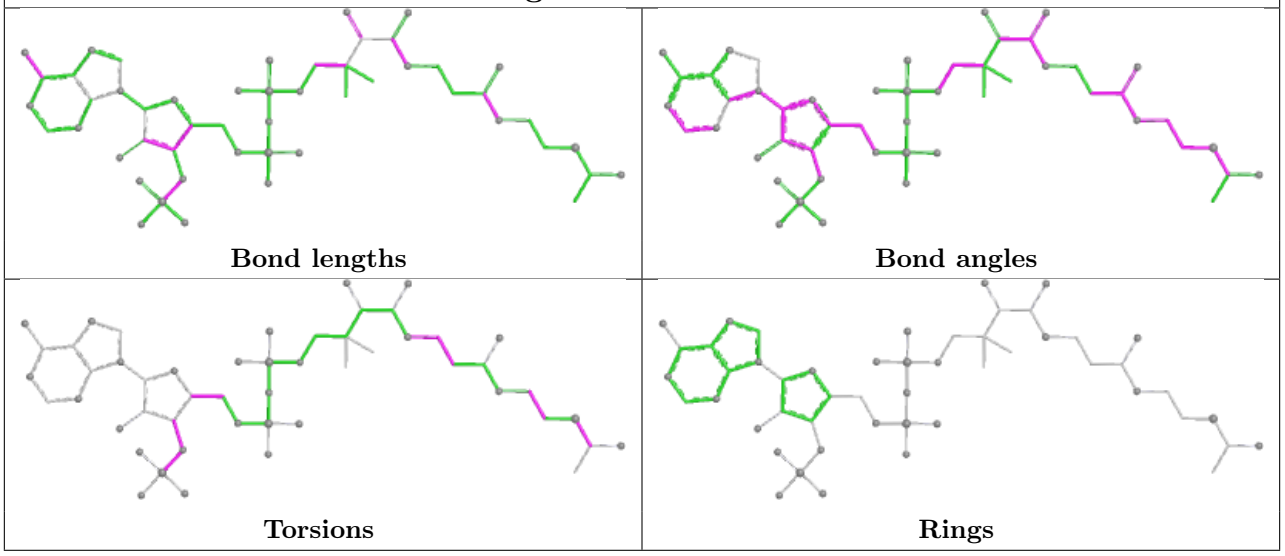
Ligand ACO H 501



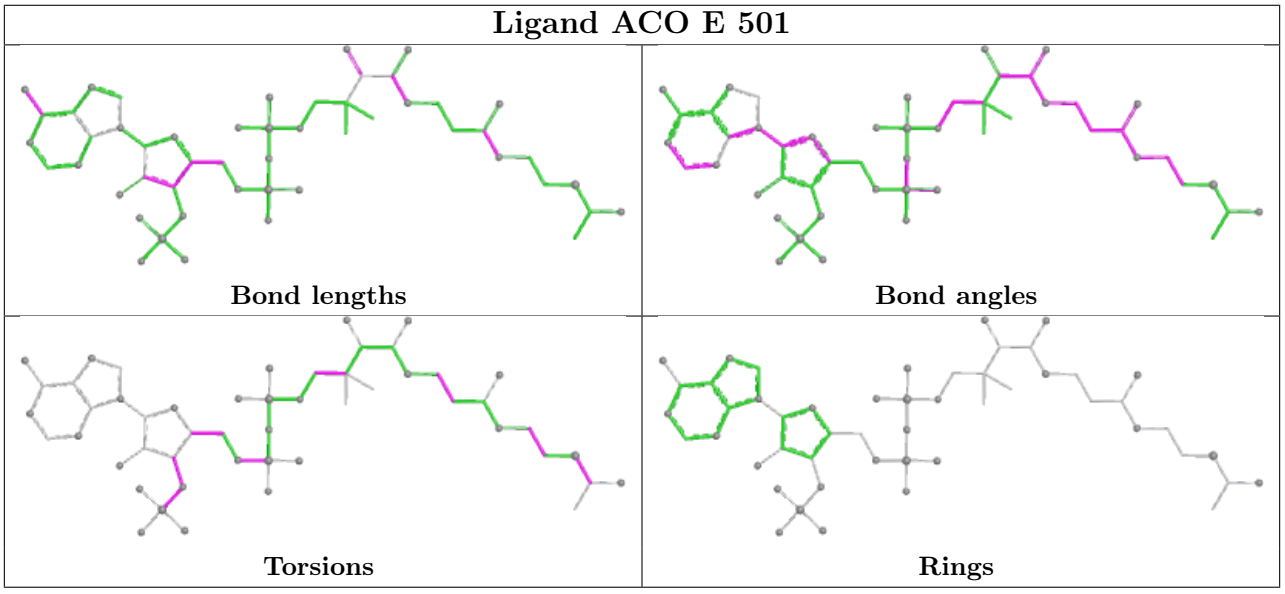
Ligand ACO K 501



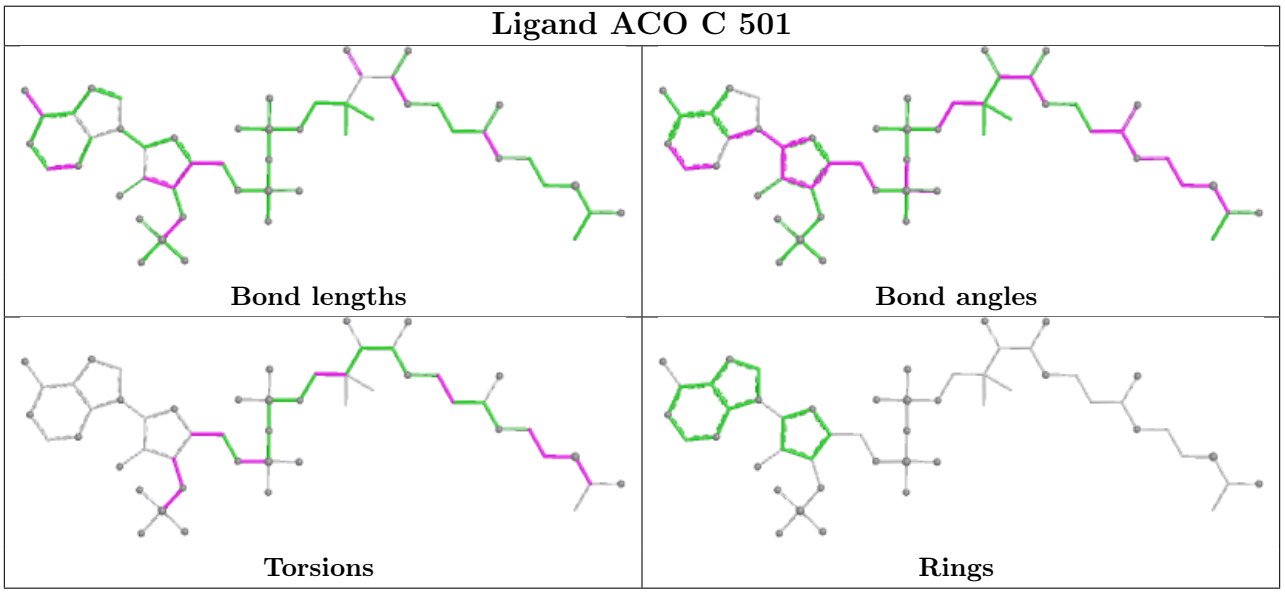
Ligand ACO L 501



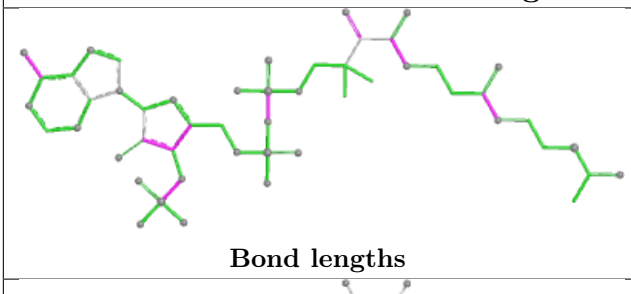
Ligand ACO E 501



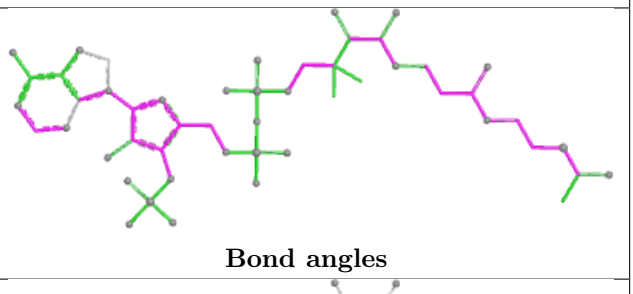
Ligand ACO C 501



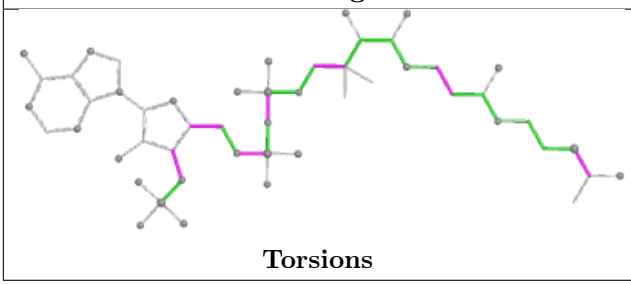
Ligand ACO B 501



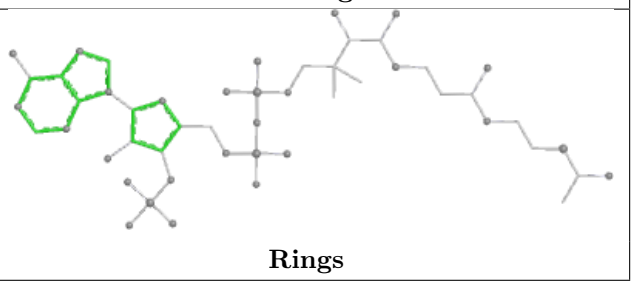
Bond lengths



Bond angles

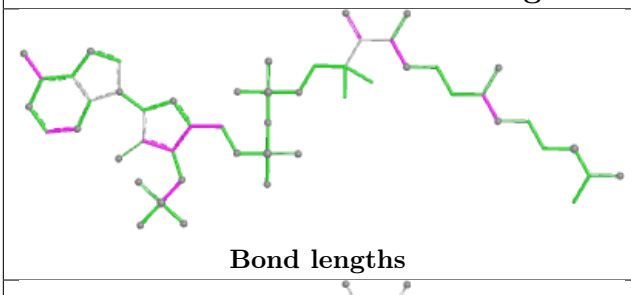


Torsions

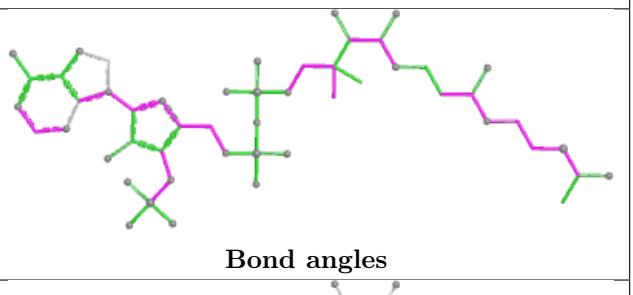


Rings

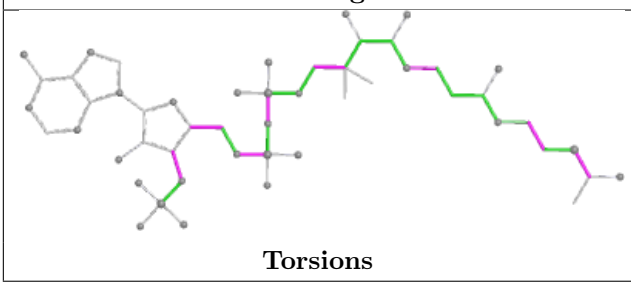
Ligand ACO F 501



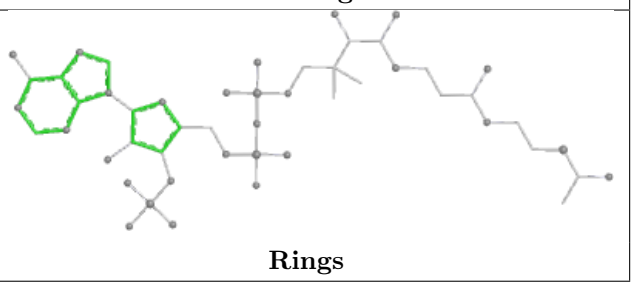
Bond lengths



Bond angles

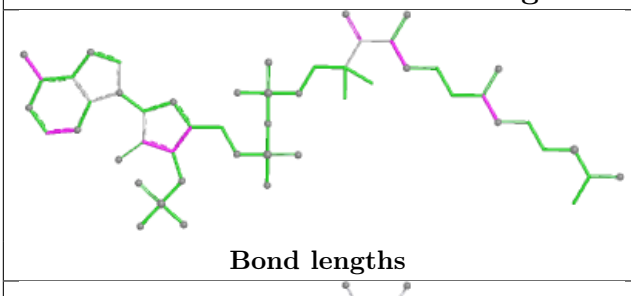


Torsions

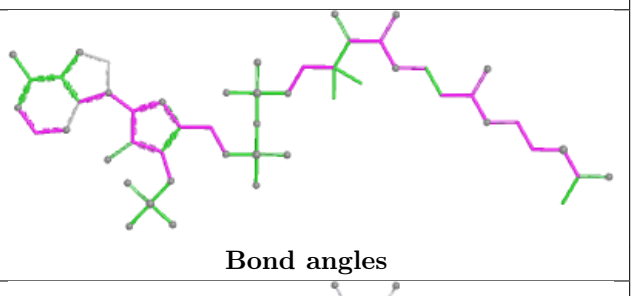


Rings

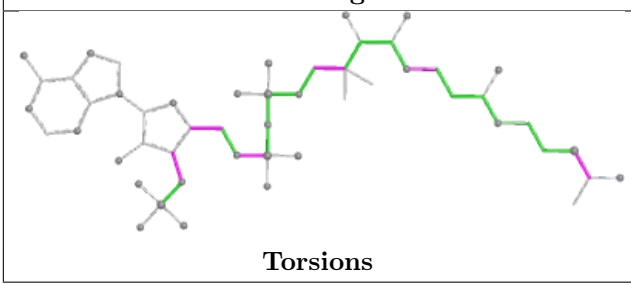
Ligand ACO A 501



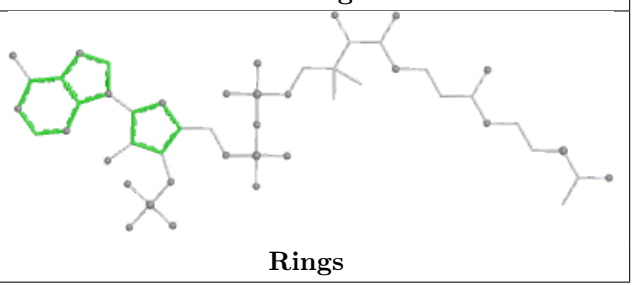
Bond lengths



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	389/428 (90%)	-0.28	14 (3%)	42	32	16, 28, 63, 139	0
1	B	389/428 (90%)	-0.22	13 (3%)	46	36	18, 27, 65, 161	0
1	C	389/428 (90%)	-0.12	19 (4%)	29	20	21, 30, 66, 152	0
1	D	389/428 (90%)	-0.19	12 (3%)	49	39	18, 29, 65, 144	0
1	E	389/428 (90%)	-0.19	16 (4%)	37	27	17, 30, 66, 158	0
1	F	389/428 (90%)	-0.15	16 (4%)	37	27	20, 30, 72, 125	0
1	G	389/428 (90%)	-0.07	17 (4%)	34	24	22, 35, 67, 162	0
1	H	389/428 (90%)	-0.06	20 (5%)	28	19	23, 36, 72, 165	0
1	I	389/428 (90%)	0.20	25 (6%)	19	12	24, 47, 78, 163	0
1	J	389/428 (90%)	0.34	40 (10%)	6	3	24, 51, 81, 166	0
1	K	389/428 (90%)	-0.01	14 (3%)	42	32	24, 43, 78, 157	0
1	L	389/428 (90%)	-0.25	12 (3%)	49	39	23, 35, 69, 160	0
All	All	4668/5136 (90%)	-0.08	218 (4%)	31	22	16, 35, 74, 166	0

All (218) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	60	PRO	11.8
1	K	61	GLY	10.7
1	J	60	PRO	10.7
1	F	42	TRP	10.6
1	E	60	PRO	10.2
1	G	61	GLY	9.5
1	I	60	PRO	9.1
1	D	60	PRO	8.0
1	E	58	ALA	7.8
1	K	60	PRO	7.8
1	J	59	GLY	7.6

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Mol	Chain	Res	Type	RSRZ
1	J	34	ILE	7.4
1	J	58	ALA	7.4
1	G	60	PRO	6.9
1	A	60	PRO	6.9
1	F	60	PRO	6.8
1	I	61	GLY	6.6
1	I	8	THR	6.5
1	B	60	PRO	6.4
1	H	34	ILE	6.3
1	A	59	GLY	6.0
1	D	8	THR	5.9
1	E	59	GLY	5.8
1	D	61	GLY	5.8
1	B	59	GLY	5.5
1	K	34	ILE	5.5
1	H	61	GLY	5.4
1	B	42	TRP	5.4
1	K	59	GLY	5.3
1	H	8	THR	5.2
1	G	59	GLY	5.2
1	B	58	ALA	5.0
1	C	60	PRO	5.0
1	I	58	ALA	4.9
1	I	349	THR	4.8
1	L	60	PRO	4.8
1	E	36	PRO	4.8
1	C	37	GLU	4.7
1	K	43	ARG	4.6
1	C	61	GLY	4.5
1	F	9	VAL	4.5
1	J	352	ALA	4.5
1	A	58	ALA	4.4
1	J	8	THR	4.4
1	A	34	ILE	4.4
1	C	43	ARG	4.4
1	H	43	ARG	4.4
1	G	352	ALA	4.4
1	C	36	PRO	4.3
1	H	59	GLY	4.3
1	I	38	SER	4.3
1	E	39	ALA	4.2
1	H	384	LYS	4.2

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Mol	Chain	Res	Type	RSRZ
1	C	39	ALA	4.2
1	J	62	SER	4.1
1	E	214	PRO	4.1
1	I	34	ILE	4.1
1	D	10	THR	4.0
1	J	384	LYS	4.0
1	C	58	ALA	4.0
1	J	36	PRO	4.0
1	C	34	ILE	3.9
1	D	148	VAL	3.8
1	L	61	GLY	3.8
1	D	36	PRO	3.8
1	I	341	ASP	3.7
1	C	384	LYS	3.6
1	L	59	GLY	3.6
1	J	405	ALA	3.6
1	I	59	GLY	3.6
1	J	19	TRP	3.6
1	G	62	SER	3.6
1	B	61	GLY	3.6
1	A	36	PRO	3.6
1	H	214	PRO	3.6
1	J	331	ASP	3.6
1	G	43	ARG	3.4
1	A	39	ALA	3.4
1	B	57	GLY	3.4
1	G	57	GLY	3.4
1	K	19	TRP	3.4
1	H	37	GLU	3.3
1	E	34	ILE	3.3
1	F	213	ALA	3.3
1	H	216	GLY	3.3
1	E	61	GLY	3.3
1	J	341	ASP	3.2
1	B	34	ILE	3.2
1	C	40	THR	3.2
1	C	350	ASP	3.2
1	H	36	PRO	3.2
1	J	37	GLU	3.2
1	L	37	GLU	3.2
1	L	214	PRO	3.2
1	B	37	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	43	ARG	3.2
1	K	58	ALA	3.2
1	L	36	PRO	3.2
1	I	384	LYS	3.1
1	D	38	SER	3.1
1	E	37	GLU	3.1
1	J	215	GLY	3.1
1	K	8	THR	3.1
1	G	39	ALA	3.1
1	J	44	THR	3.1
1	G	214	PRO	3.1
1	A	73	LEU	3.1
1	A	213	ALA	3.0
1	I	321	GLY	3.0
1	K	39	ALA	3.0
1	J	112	ARG	3.0
1	F	43	ARG	3.0
1	D	350	ASP	3.0
1	I	353	ALA	3.0
1	A	384	LYS	3.0
1	F	8	THR	3.0
1	H	40	THR	2.9
1	I	352	ALA	2.9
1	G	58	ALA	2.9
1	D	37	GLU	2.9
1	B	8	THR	2.9
1	J	43	ARG	2.9
1	G	34	ILE	2.8
1	J	61	GLY	2.8
1	L	16	GLU	2.8
1	G	37	GLU	2.8
1	C	214	PRO	2.8
1	G	44	THR	2.8
1	I	62	SER	2.8
1	I	16	GLU	2.8
1	C	215	GLY	2.7
1	A	214	PRO	2.7
1	I	148	VAL	2.7
1	A	352	ALA	2.7
1	J	292	ARG	2.7
1	H	58	ALA	2.7
1	C	8	THR	2.7

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Mol	Chain	Res	Type	RSRZ
1	E	144	HIS	2.7
1	E	215	GLY	2.7
1	I	214	PRO	2.6
1	C	292	ARG	2.6
1	J	57	GLY	2.6
1	F	34	ILE	2.6
1	K	37	GLU	2.6
1	E	43	ARG	2.6
1	L	322	GLU	2.6
1	F	19	TRP	2.6
1	G	384	LYS	2.5
1	I	211	LYS	2.5
1	C	19	TRP	2.5
1	K	62	SER	2.5
1	I	36	PRO	2.5
1	B	9	VAL	2.5
1	B	331	ASP	2.5
1	F	58	ALA	2.5
1	J	42	TRP	2.5
1	E	237	THR	2.5
1	H	215	GLY	2.5
1	A	37	GLU	2.5
1	G	207	LEU	2.5
1	F	16	GLU	2.4
1	F	57	GLY	2.4
1	G	40	THR	2.4
1	D	59	GLY	2.4
1	J	116	ASP	2.4
1	J	12	CYS	2.4
1	I	345	ARG	2.4
1	A	40	THR	2.3
1	J	183	ALA	2.3
1	K	215	GLY	2.3
1	J	212	ALA	2.3
1	K	237	THR	2.3
1	I	40	THR	2.3
1	L	212	ALA	2.3
1	H	167	SER	2.3
1	C	148	VAL	2.3
1	E	213	ALA	2.3
1	L	17	ASP	2.3
1	E	341	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	353	ALA	2.2
1	F	17	ASP	2.2
1	B	340	GLY	2.2
1	I	43	ARG	2.2
1	L	331	ASP	2.2
1	A	42	TRP	2.2
1	J	322	GLU	2.2
1	J	332	GLY	2.2
1	J	385	ASP	2.2
1	H	149	ASP	2.2
1	I	399	ASP	2.2
1	J	404	THR	2.2
1	J	353	ALA	2.1
1	C	318	HIS	2.1
1	J	214	PRO	2.1
1	F	10	THR	2.1
1	H	170	ARG	2.1
1	J	354	GLU	2.1
1	K	352	ALA	2.1
1	F	214	PRO	2.1
1	F	331	ASP	2.1
1	J	16	GLU	2.1
1	D	34	ILE	2.0
1	D	352	ALA	2.0
1	H	10	THR	2.0
1	J	213	ALA	2.0
1	H	169	VAL	2.0
1	F	292	ARG	2.0
1	J	350	ASP	2.0
1	E	8	THR	2.0
1	J	9	VAL	2.0
1	I	49	ASP	2.0
1	I	350	ASP	2.0
1	J	79	GLY	2.0
1	C	48	THR	2.0
1	J	387	GLN	2.0
1	L	236	ARG	2.0
1	H	19	TRP	2.0
1	J	40	THR	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)

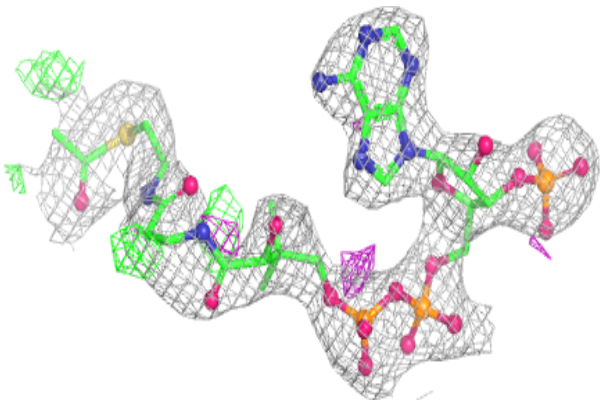
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

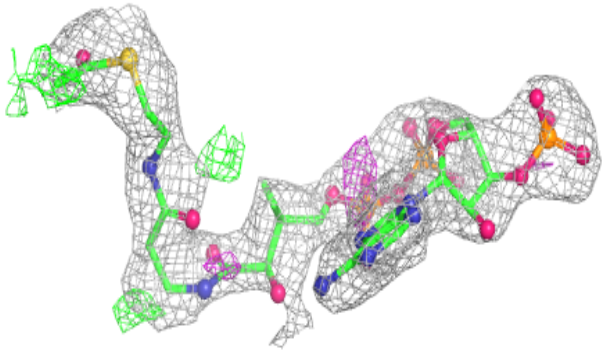
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	ACO	H	501	51/51	0.82	0.28	41,57,73,81	0
2	ACO	J	501	51/51	0.82	0.28	54,68,82,89	0
2	ACO	I	501	51/51	0.84	0.26	44,63,78,97	0
2	ACO	E	501	51/51	0.85	0.25	38,57,82,89	0
2	ACO	D	501	51/51	0.86	0.23	34,51,70,81	0
2	ACO	C	501	51/51	0.88	0.23	33,50,71,83	0
2	ACO	F	501	51/51	0.89	0.21	34,48,66,73	0
2	ACO	K	501	51/51	0.89	0.22	45,56,70,77	0
2	ACO	A	501	51/51	0.90	0.20	30,46,67,81	0
2	ACO	L	501	51/51	0.90	0.18	26,38,61,72	0
2	ACO	B	501	51/51	0.91	0.17	29,42,54,61	0
2	ACO	G	501	51/51	0.92	0.17	28,40,60,73	0

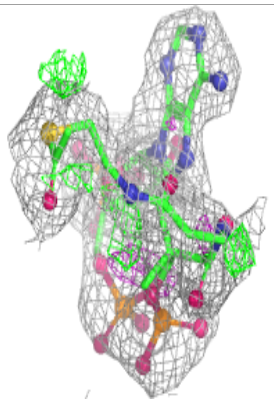
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around ACO H 501:

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

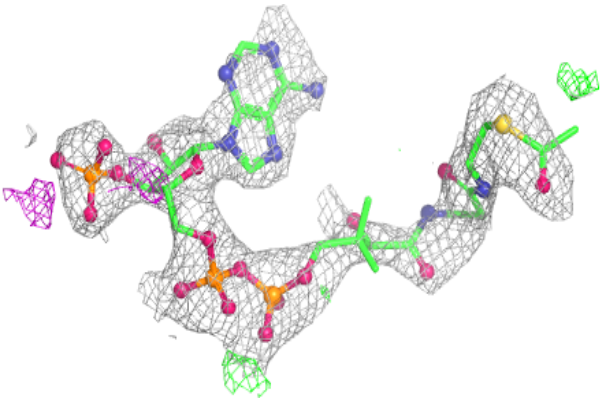


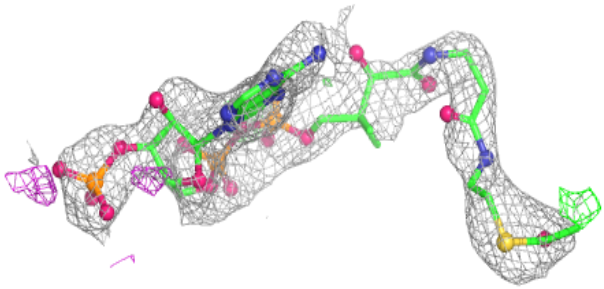


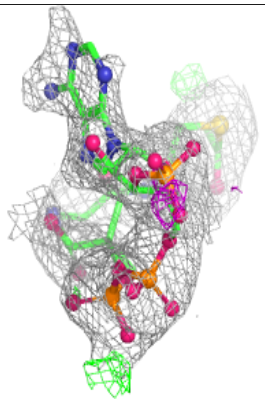


Electron density around ACO J 501:

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

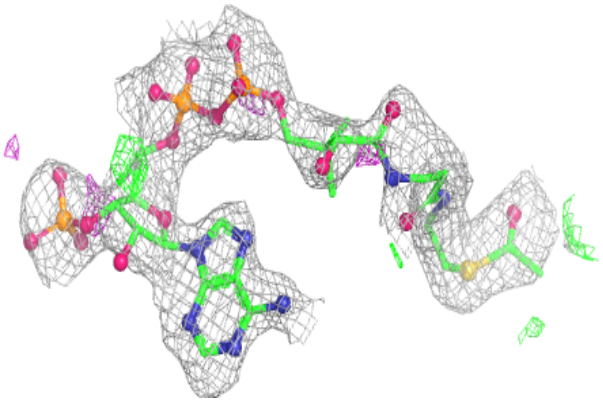


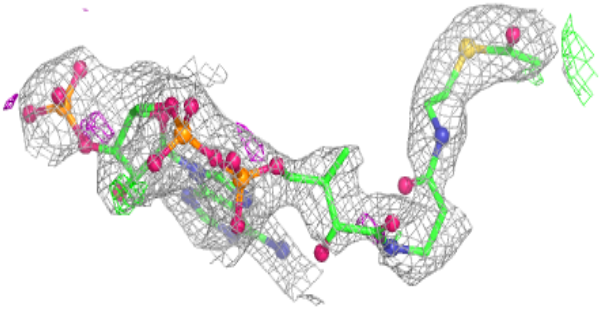


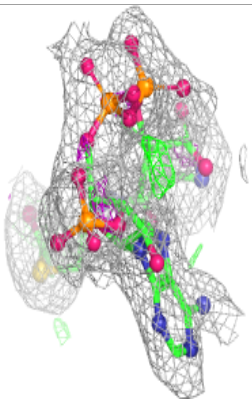


Electron density around ACO I 501:

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

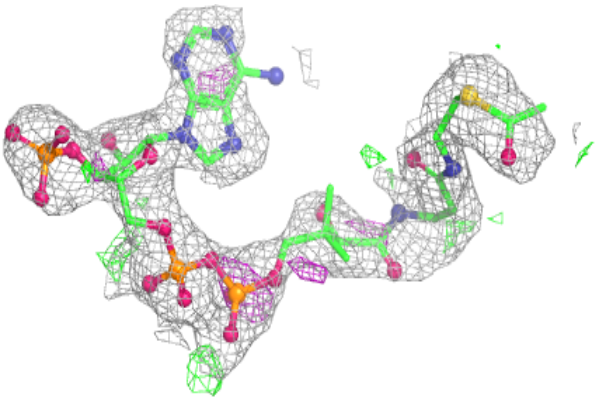


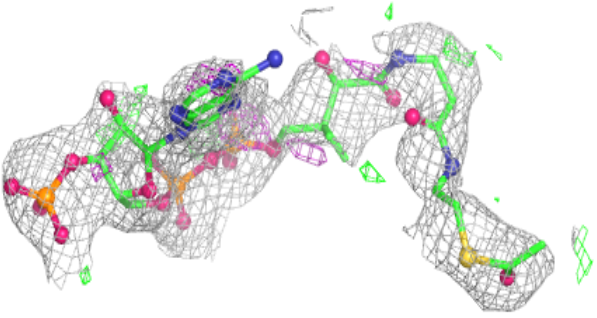


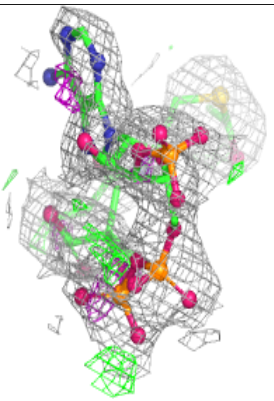


Electron density around ACO E 501:

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

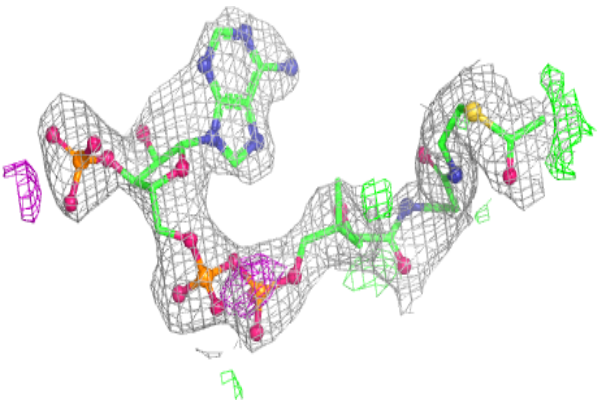


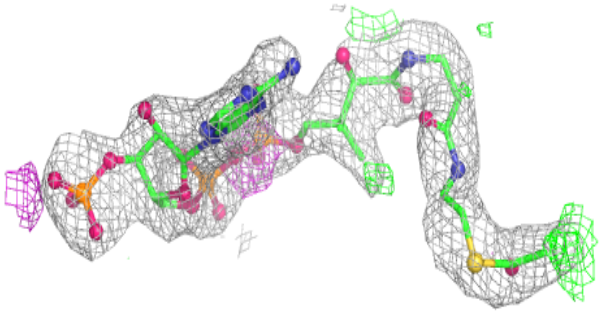


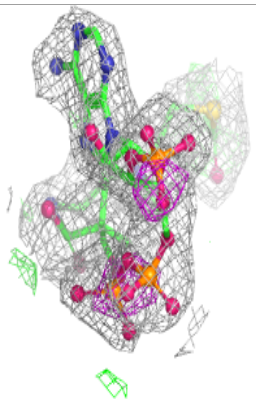


Electron density around ACO D 501:

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

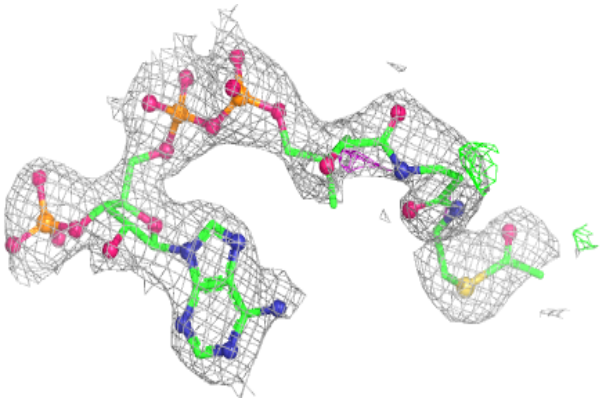


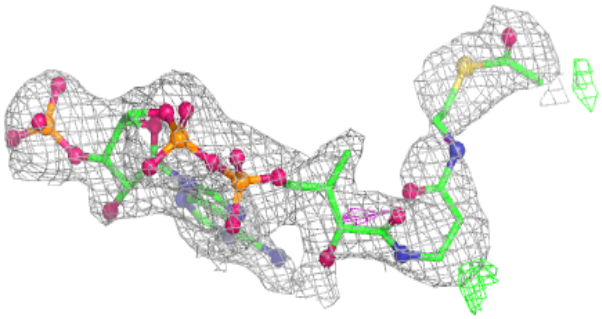


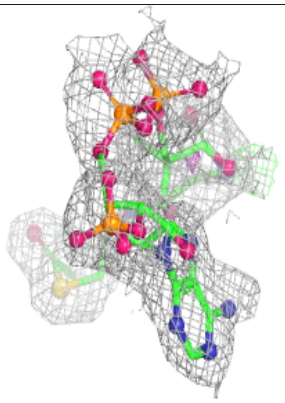


Electron density around ACO C 501:

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

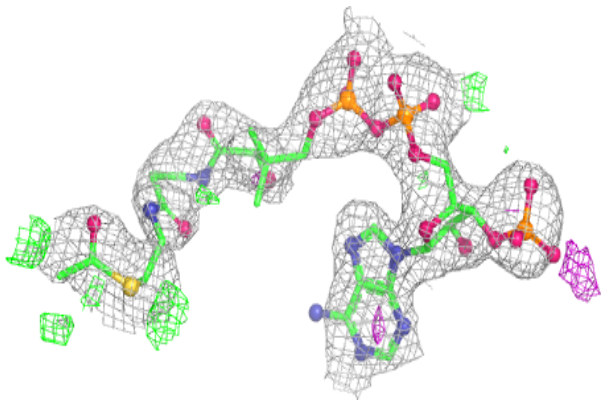


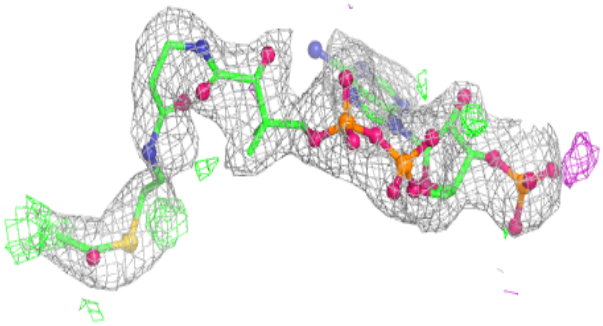




Electron density around ACO F 501:

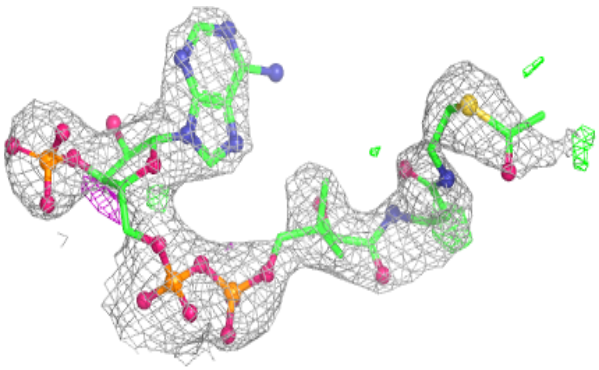
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

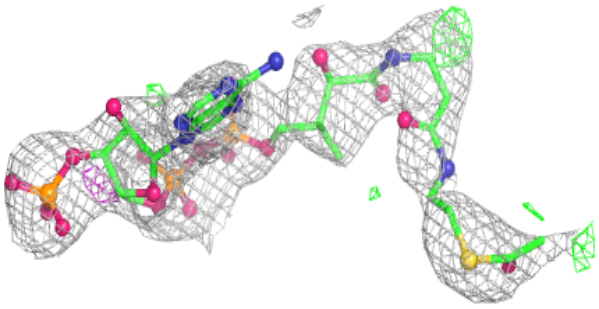


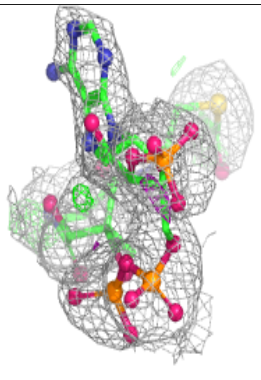


Electron density around ACO K 501:

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

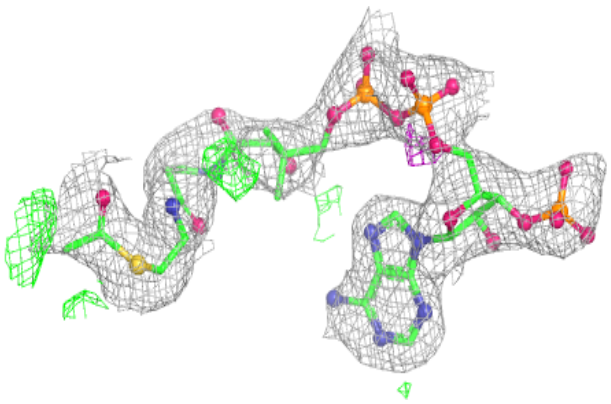


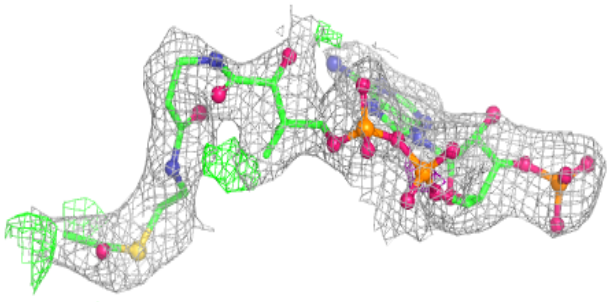


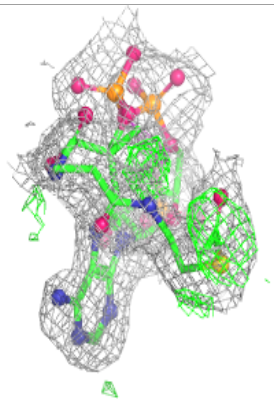


Electron density around ACO A 501:

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

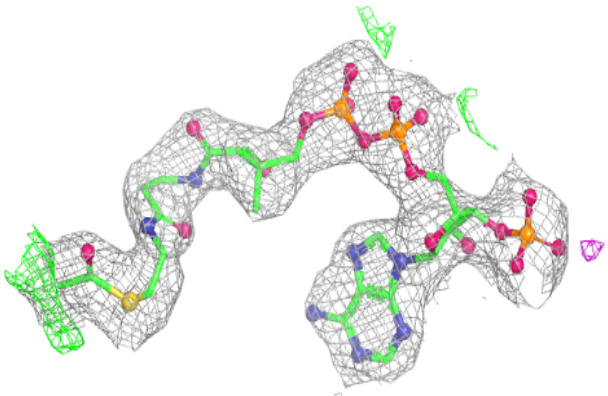


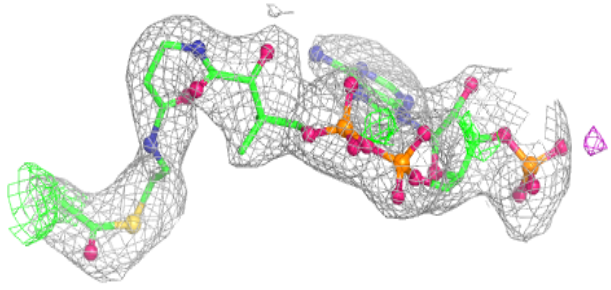


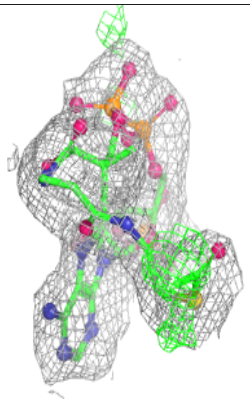


Electron density around ACO L 501:

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

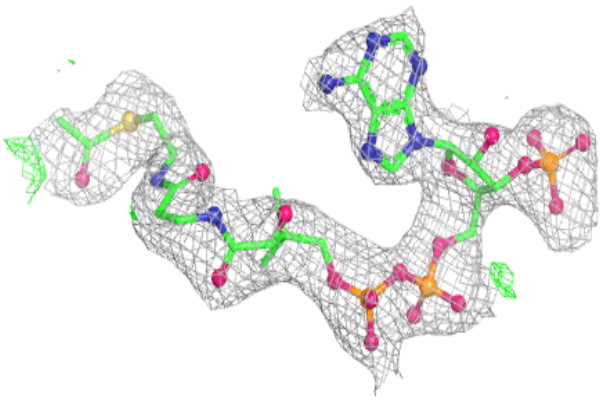


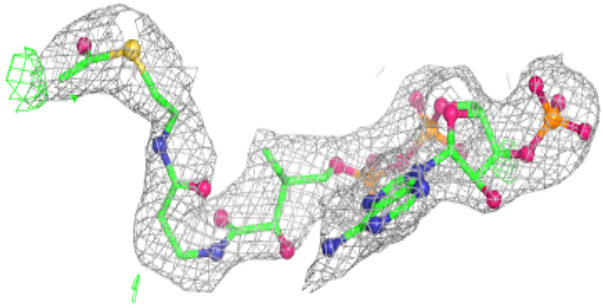


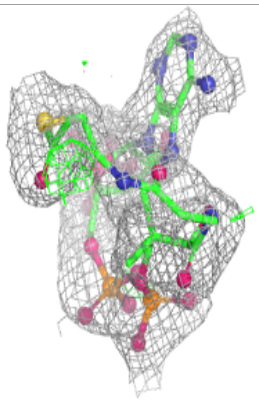


Electron density around ACO B 501:

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

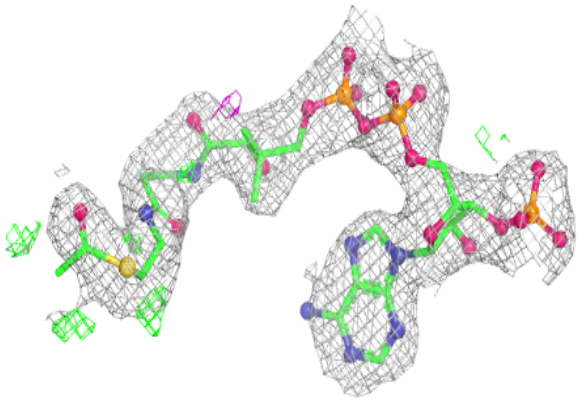


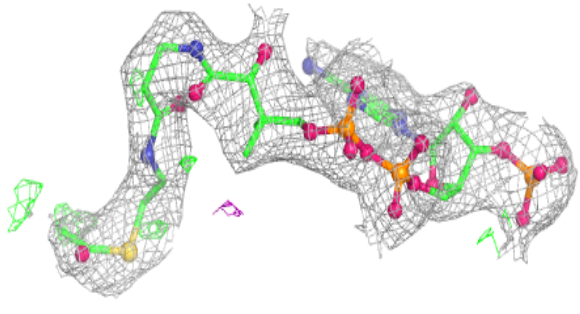


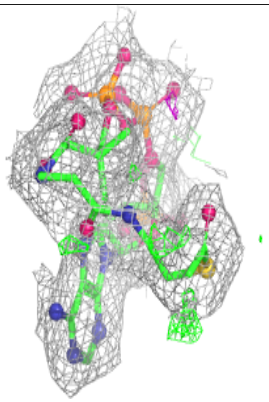


Electron density around ACO G 501:

$2mF_o$-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.