



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 12:49 PM UTC

PDB ID : 3BLW / pdb_00003blw
Title : Yeast Isocitrate Dehydrogenase with Citrate and AMP Bound in the Regulatory Subunits
Authors : Taylor, A.B.; Hu, G.; Hart, P.J.; McAlister-Henn, L.
Deposited on : 2007-12-11
Resolution : 4.30 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

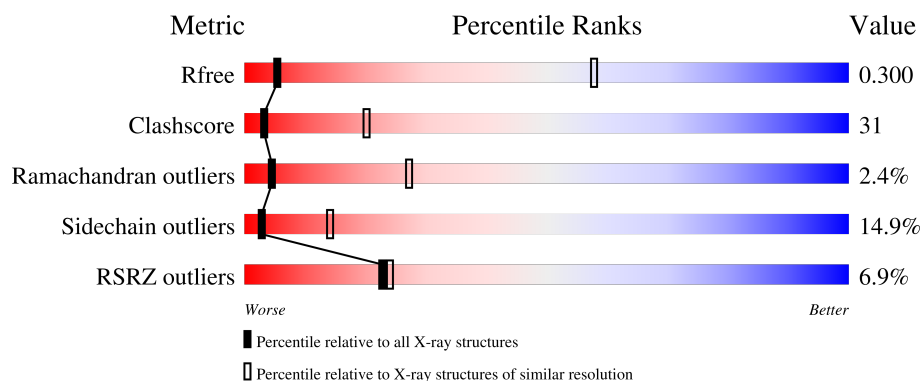
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1052 (4.70-3.90)
Clashscore	190562	1097 (4.70-3.90)
Ramachandran outliers	187476	1001 (4.70-3.90)
Sidechain outliers	187428	1007 (4.72-3.88)
RSRZ outliers	180081	1049 (4.70-3.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	349	<div> <div>9%</div> <div>50% 38% 7% 6%</div> </div>
1	C	349	<div> <div>9%</div> <div>52% 38% 7% .</div> </div>
1	E	349	<div> <div>5%</div> <div>51% 38% 7% .</div> </div>
1	G	349	<div> <div>%</div> <div>51% 36% 7% 6%</div> </div>
1	I	349	<div> <div>%</div> <div>50% 38% 7% 6%</div> </div>

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Mol	Chain	Length	Quality of chain
1	K	349	
1	M	349	
1	O	349	
2	B	354	
2	D	354	
2	F	354	
2	H	354	
2	J	354	
2	L	354	
2	N	354	
2	P	354	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	FLC	A	1001	-	-	X	-
3	FLC	C	1002	-	-	X	-
3	FLC	E	1003	-	-	X	-
3	FLC	G	1004	-	-	X	-
3	FLC	I	1005	-	-	X	-
3	FLC	M	1007	-	-	X	-
3	FLC	O	1008	-	-	X	-
4	AMP	K	2006	-	-	X	-

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 41694 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 Isocitrate dehydrogenase [NAD] subunit 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	329	Total	C	N	O	S	0	0	0
			2523	1594	440	482	7			
1	C	338	Total	C	N	O	S	0	0	0
			2599	1643	454	495	7			
1	E	338	Total	C	N	O	S	0	0	0
			2599	1643	454	495	7			
1	G	329	Total	C	N	O	S	0	0	0
			2523	1594	440	482	7			
1	I	329	Total	C	N	O	S	0	0	0
			2523	1594	440	482	7			
1	K	337	Total	C	N	O	S	0	0	0
			2590	1638	453	492	7			
1	M	339	Total	C	N	O	S	0	0	0
			2604	1646	455	496	7			
1	O	330	Total	C	N	O	S	0	0	0
			2527	1596	441	483	7			

- Molecule 2 is a protein called Isocitrate dehydrogenase [NAD] subunit 2.

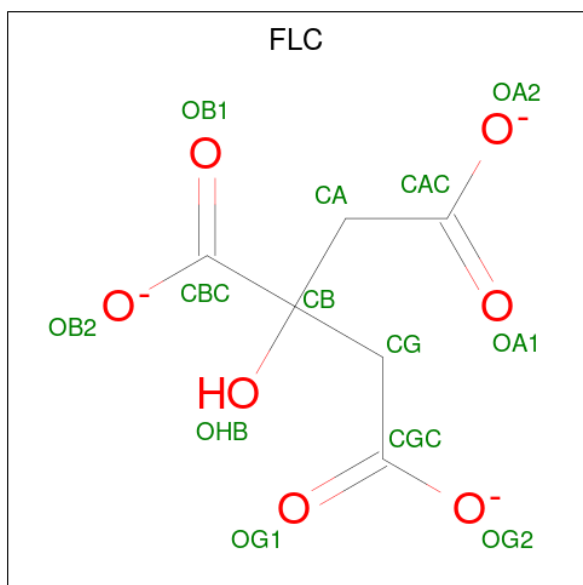
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			
2	D	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			
2	F	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			
2	H	346	Total	C	N	O	S	0	0	0
			2608	1646	447	509	6			
2	J	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			
2	L	346	Total	C	N	O	S	0	0	0
			2608	1646	447	509	6			

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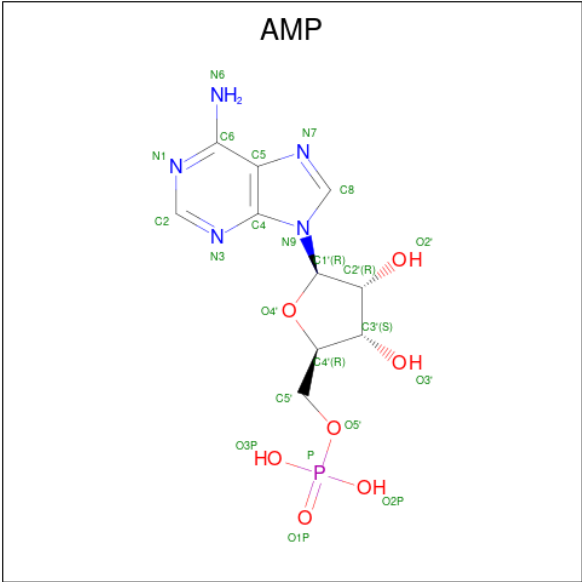
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	N	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			
2	P	347	Total	C	N	O	S	0	0	0
			2617	1652	449	510	6			

- Molecule 3 is CITRATE ANION (CCD ID: FLC) (formula: $C_6H_5O_7$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			13	6	7		
3	C	1	Total	C	O	0	0
			13	6	7		
3	E	1	Total	C	O	0	0
			13	6	7		
3	G	1	Total	C	O	0	0
			13	6	7		
3	I	1	Total	C	O	0	0
			13	6	7		
3	K	1	Total	C	O	0	0
			13	6	7		
3	M	1	Total	C	O	0	0
			13	6	7		
3	O	1	Total	C	O	0	0
			13	6	7		

- Molecule 4 is ADENOSINE MONOPHOSPHATE (CCD ID: AMP) (formula: $C_{10}H_{14}N_5O_7P$).

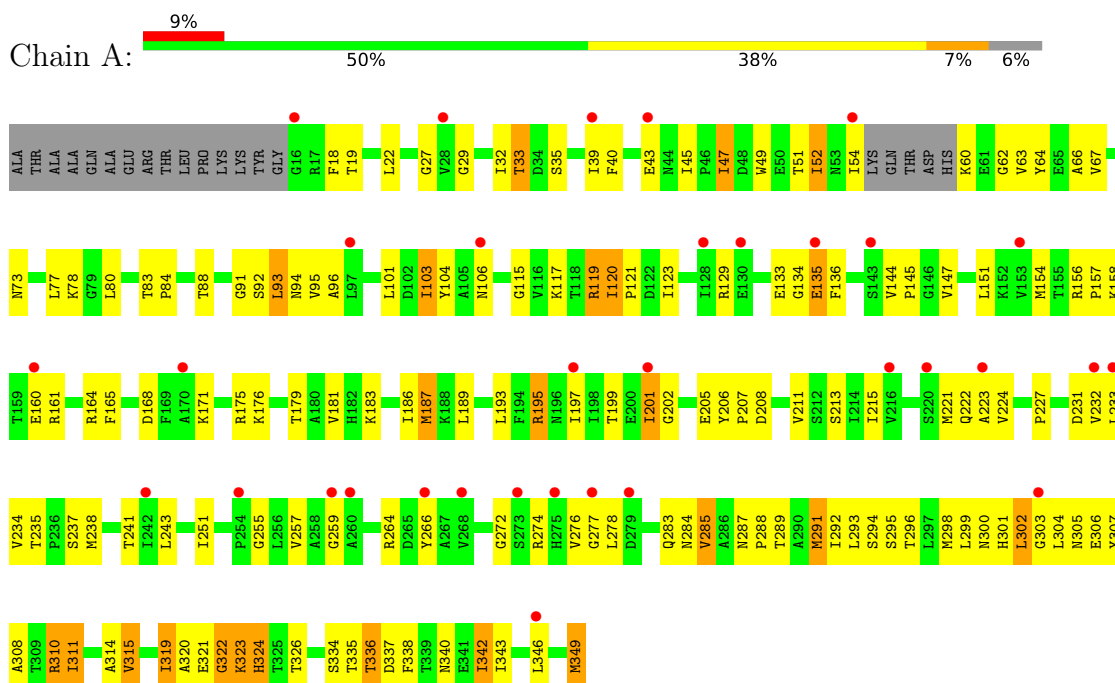


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	C	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	E	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	G	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	I	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	K	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	M	1	Total	C	N	O	P	0	0
			23	10	5	7	1		
4	O	1	Total	C	N	O	P	0	0
			23	10	5	7	1		

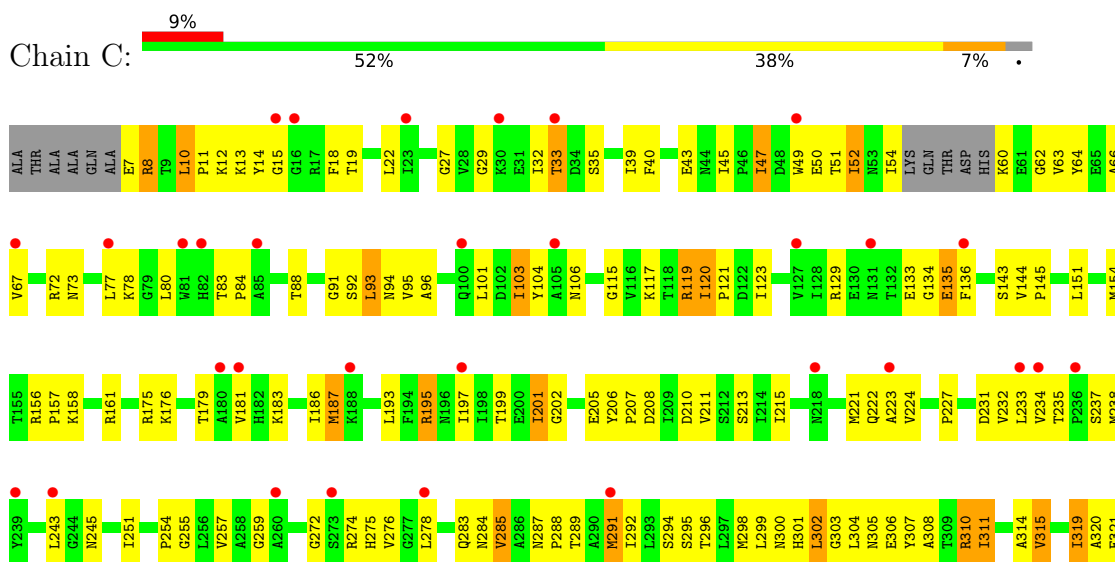
3 Residue-property plots [i](#)

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: Isocitrate dehydrogenase [NAD] subunit 1

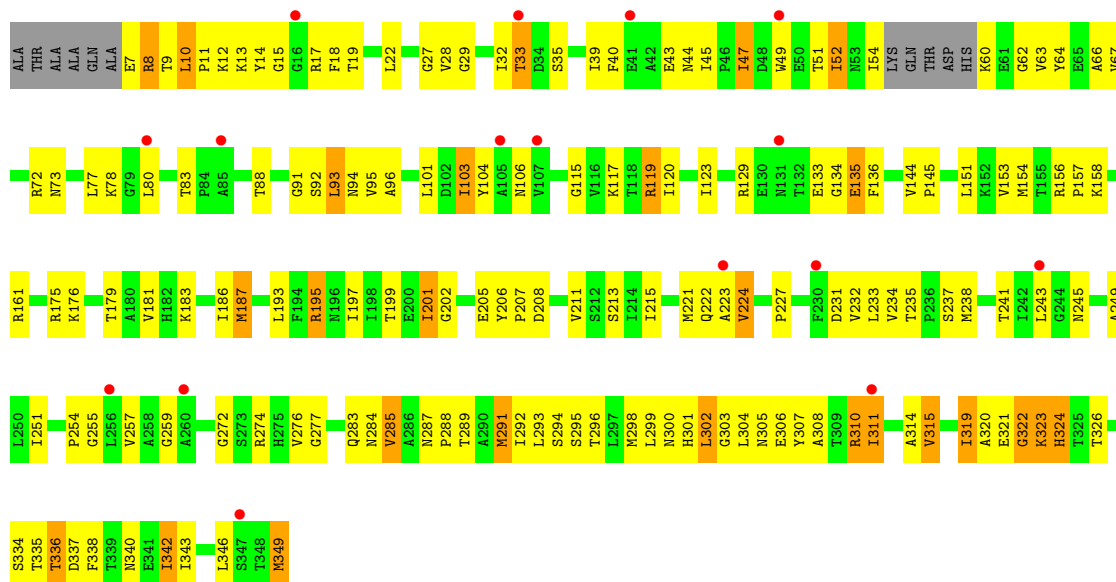


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

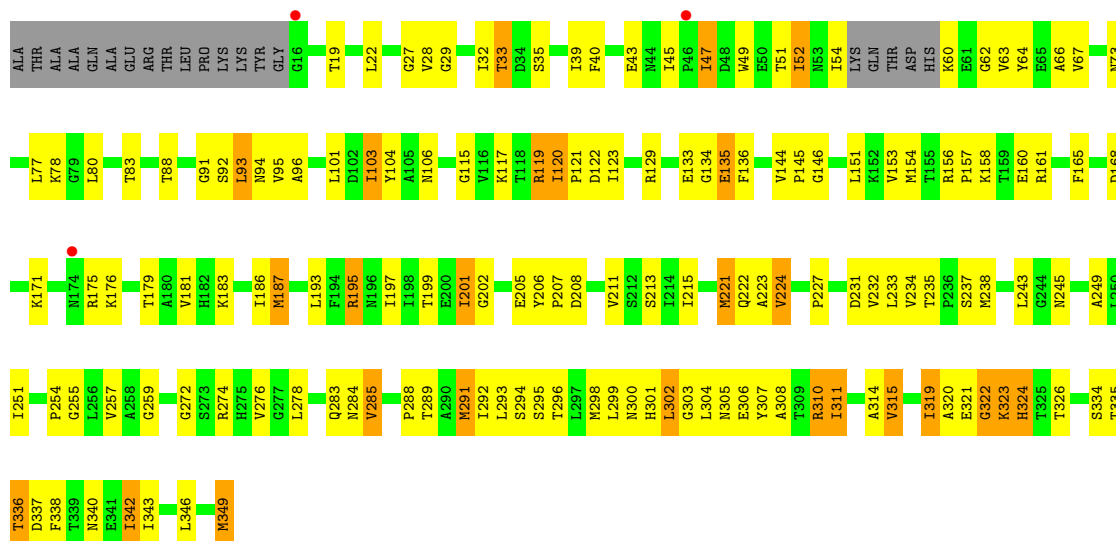




• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

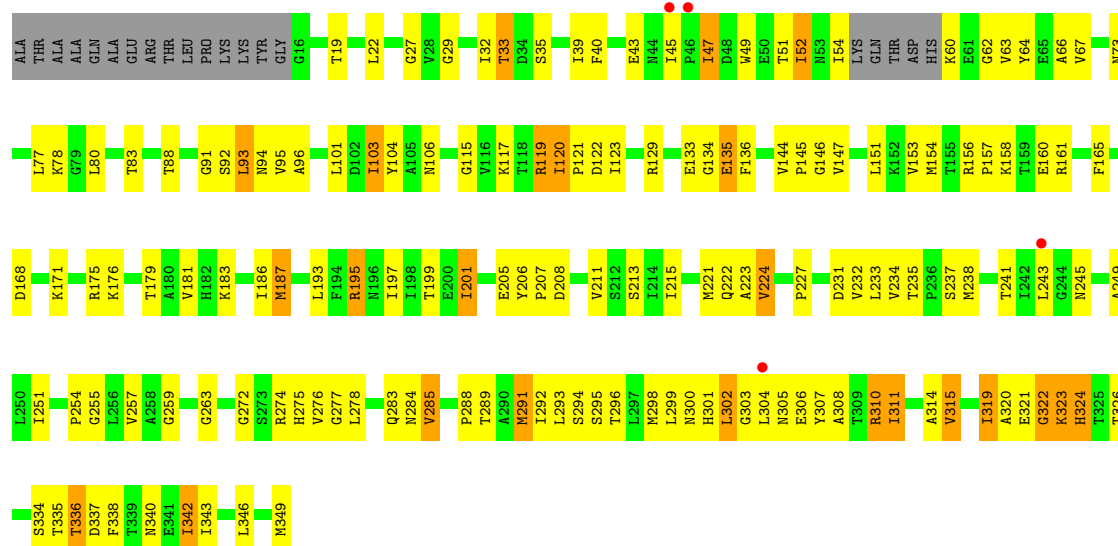


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

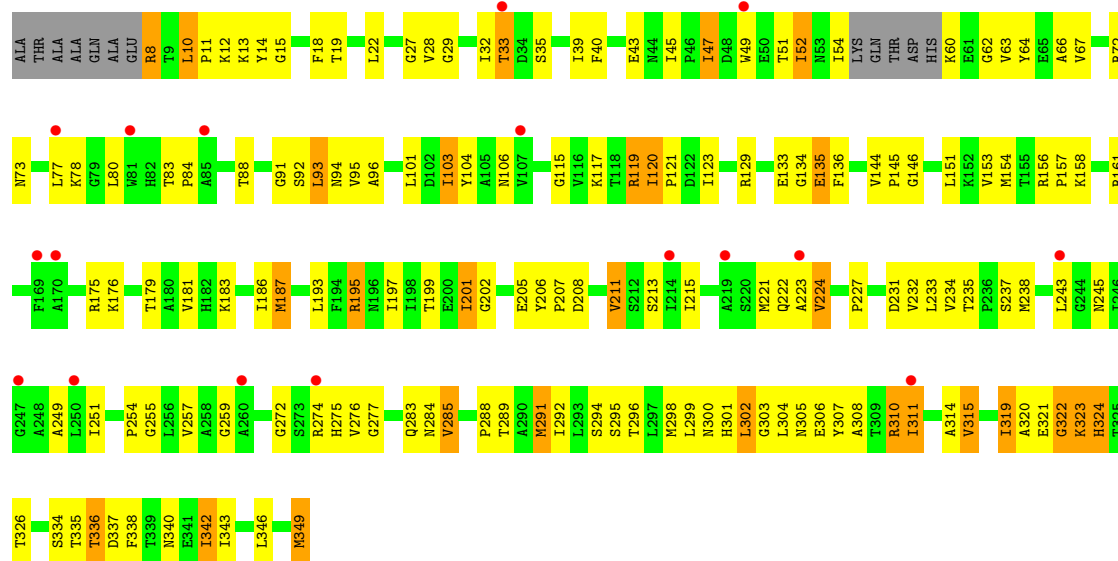


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

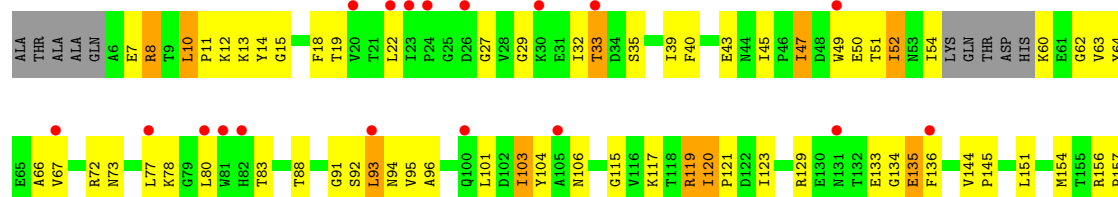


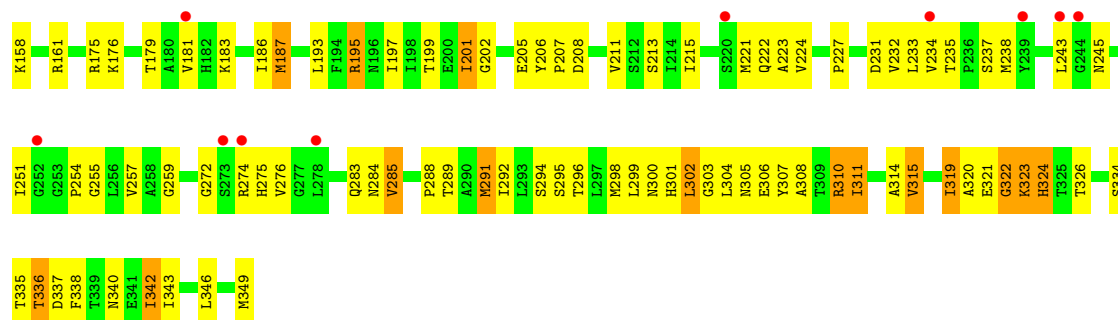


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

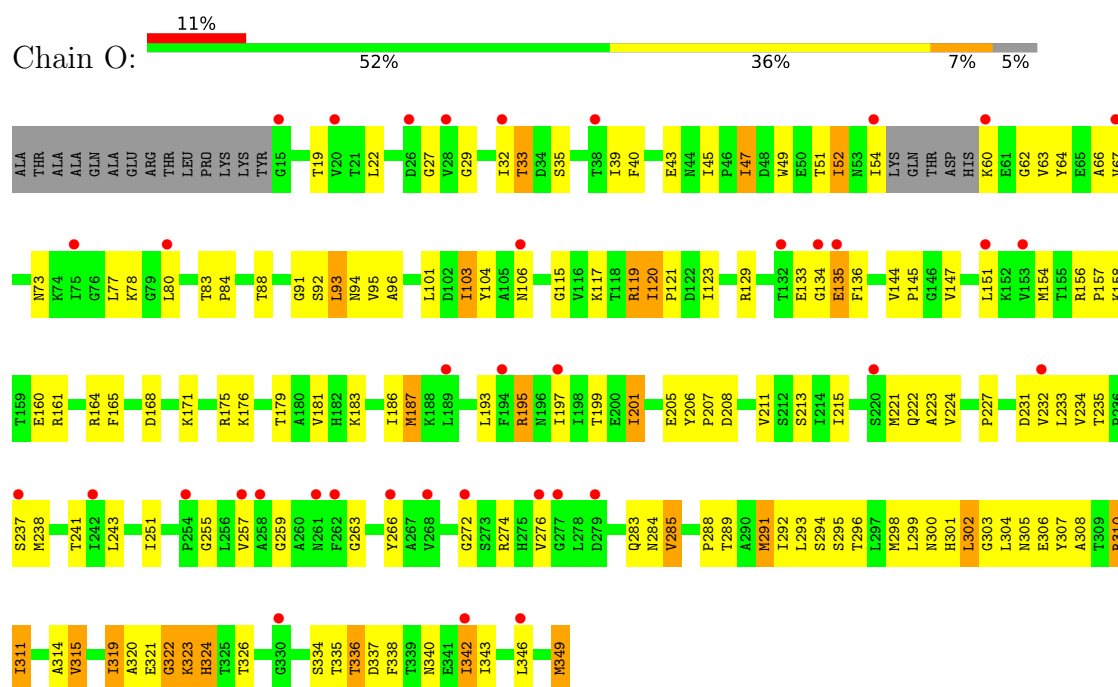


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

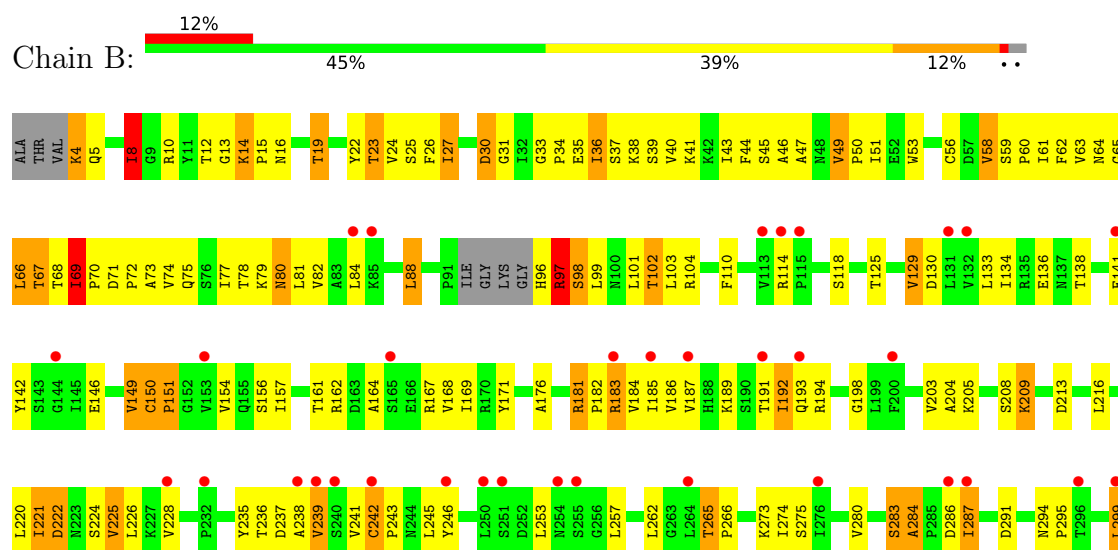


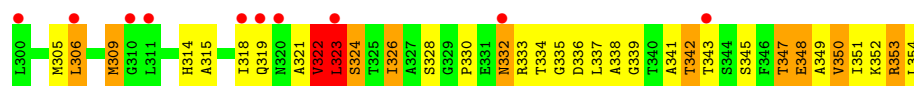


• Molecule 1: Isocitrate dehydrogenase [NAD] subunit 1

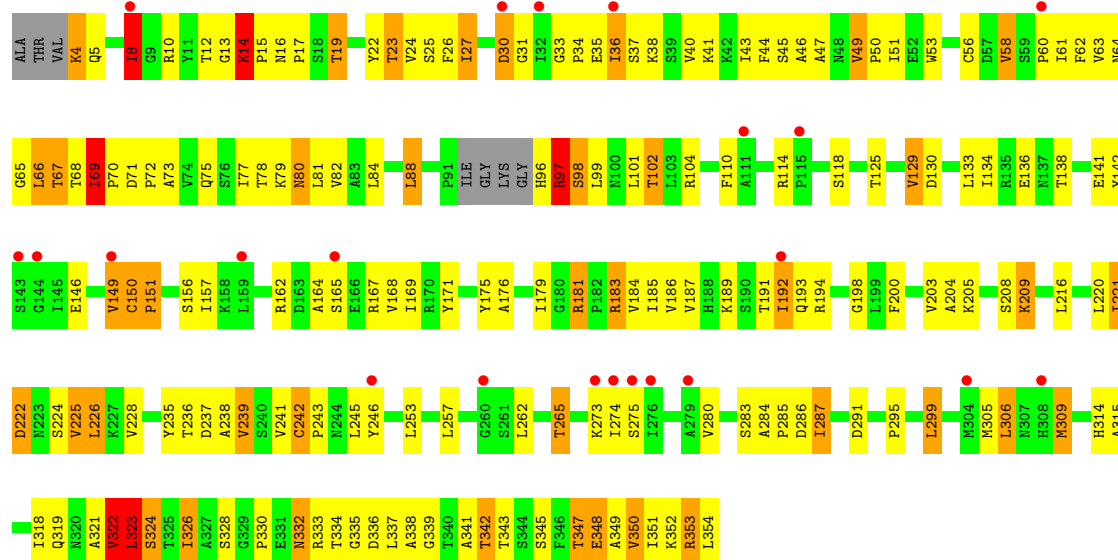


• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

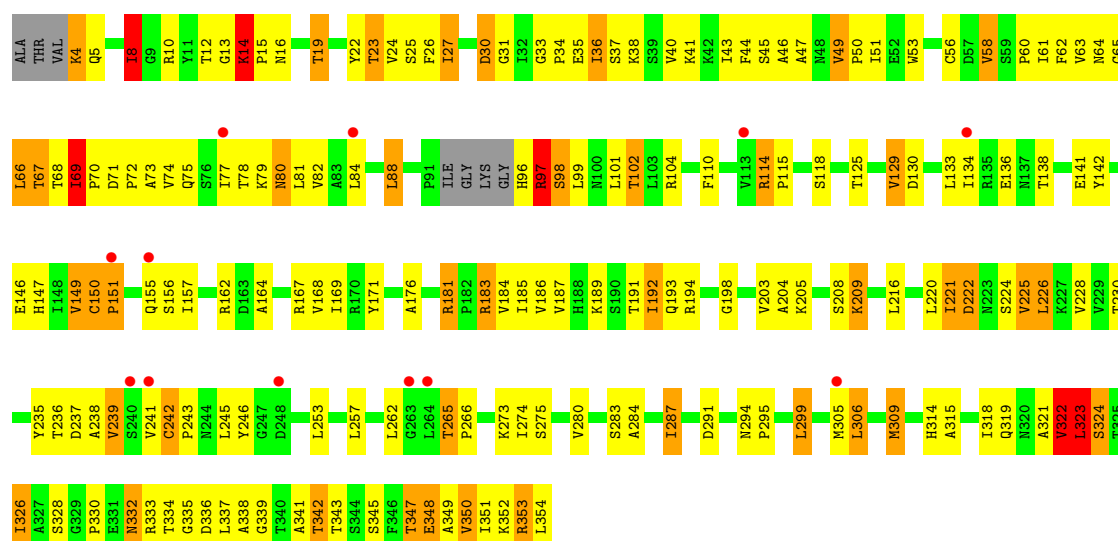




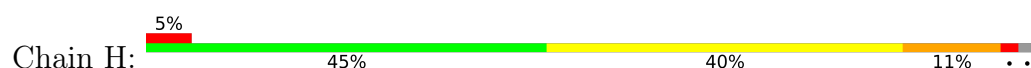
• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

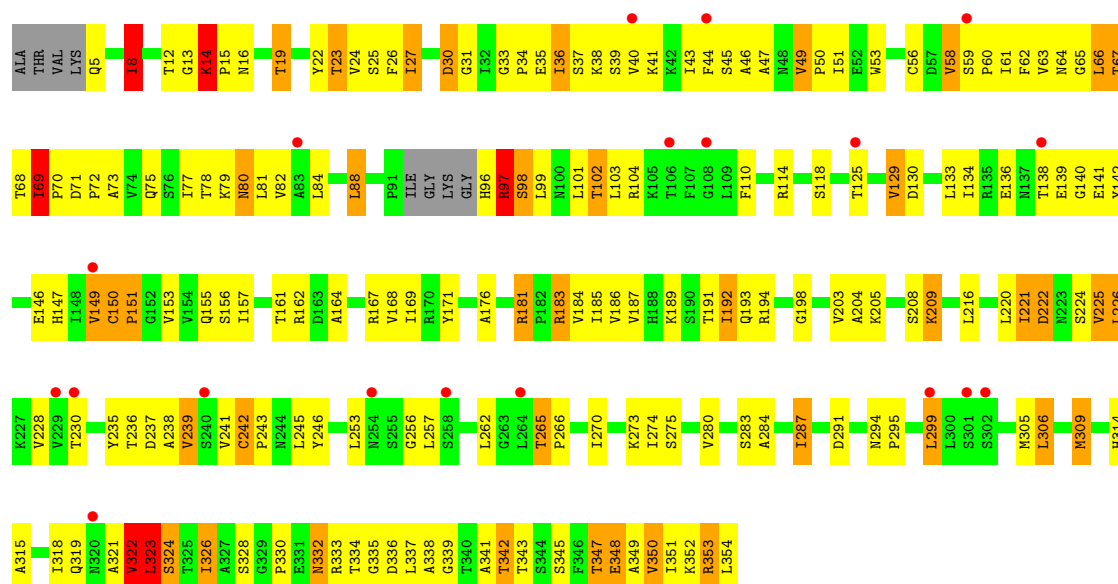


• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

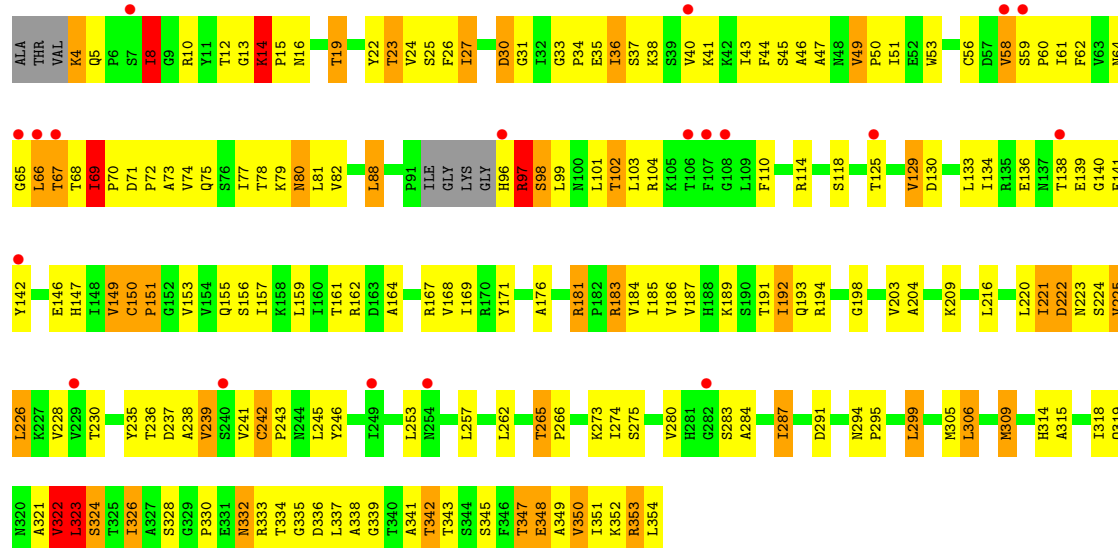


• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

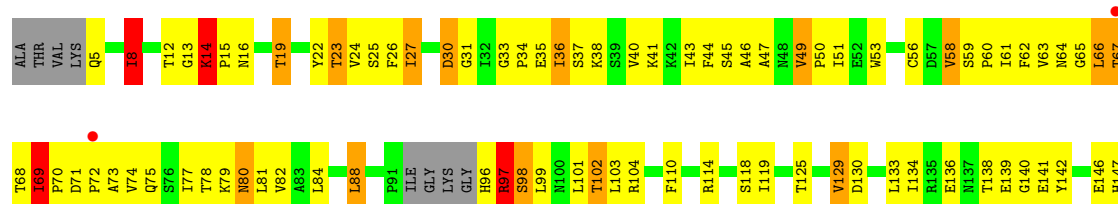
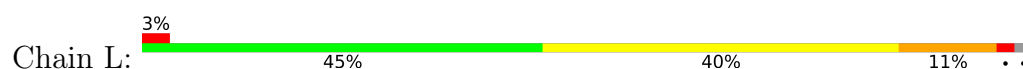


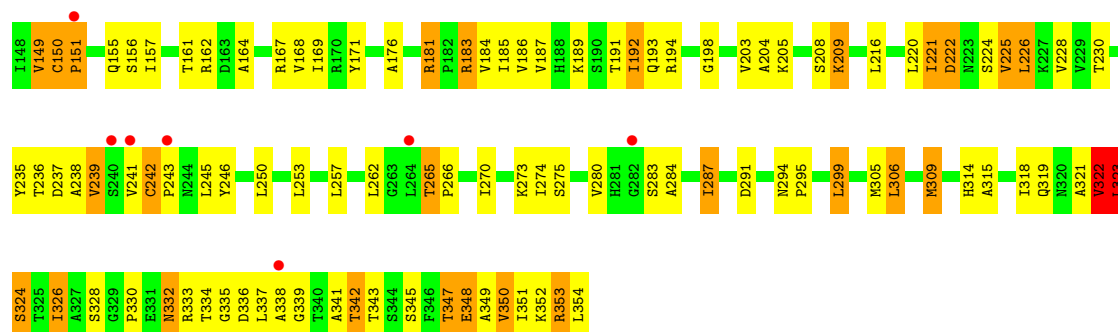


• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

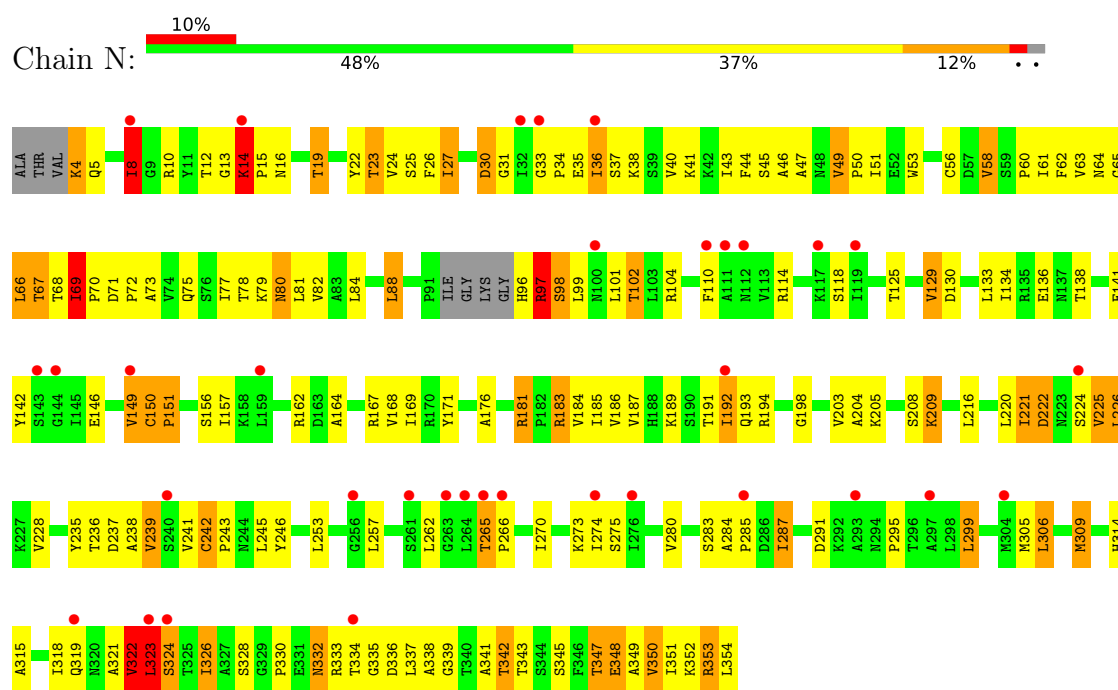


• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2

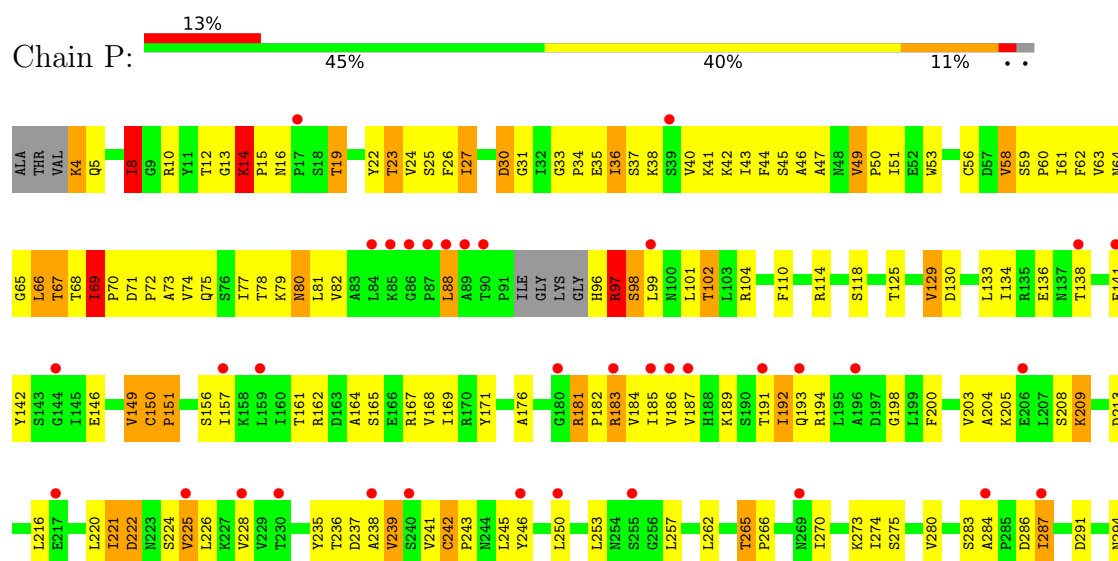




• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2



• Molecule 2: Isocitrate dehydrogenase [NAD] subunit 2





4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	113.16Å 116.35Å 163.62Å 98.96° 110.23° 106.63°	Depositor
Resolution (Å)	49.38 – 4.30 49.38 – 4.30	Depositor EDS
% Data completeness (in resolution range)	90.7 (49.38-4.30) 90.7 (49.38-4.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.72 (at 4.29Å)	Xtriage
Refinement program	PHENIX (phenix.refine)	Depositor
R, R_{free}	0.274 , 0.311 0.261 , 0.300	Depositor DCC
R_{free} test set	2238 reflections (4.58%)	wwPDB-VP
Wilson B-factor (Å ²)	139.2	Xtriage
Anisotropy	0.281	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 154.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.31$	Xtriage
Estimated twinning fraction	0.000 for k,h,-h-k-l	Xtriage
F_o, F_c correlation	0.85	EDS
Total number of atoms	41694	wwPDB-VP
Average B, all atoms (Å ²)	190.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 18.65% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.66	12/2565 (0.5%)	0.92	1/3467 (0.0%)
1	C	0.66	12/2643 (0.5%)	0.92	1/3571 (0.0%)
1	E	0.66	12/2643 (0.5%)	0.92	1/3571 (0.0%)
1	G	0.67	12/2565 (0.5%)	0.92	1/3467 (0.0%)
1	I	0.67	12/2565 (0.5%)	0.92	1/3467 (0.0%)
1	K	0.66	12/2634 (0.5%)	0.92	1/3559 (0.0%)
1	M	0.66	12/2648 (0.5%)	0.92	1/3578 (0.0%)
1	O	0.66	12/2569 (0.5%)	0.92	1/3472 (0.0%)
2	B	0.54	3/2663 (0.1%)	0.95	14/3621 (0.4%)
2	D	0.52	1/2663 (0.0%)	0.95	14/3621 (0.4%)
2	F	0.51	1/2663 (0.0%)	0.94	14/3621 (0.4%)
2	H	0.51	1/2654 (0.0%)	0.94	14/3610 (0.4%)
2	J	0.51	1/2663 (0.0%)	0.94	14/3621 (0.4%)
2	L	0.51	1/2654 (0.0%)	0.95	14/3610 (0.4%)
2	N	0.51	1/2663 (0.0%)	0.94	14/3621 (0.4%)
2	P	0.51	1/2663 (0.0%)	0.95	14/3621 (0.4%)
All	All	0.59	106/42118 (0.3%)	0.93	120/57098 (0.2%)

All (106) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	G	221	MET	SD-CE	7.25	1.97	1.79
1	O	349	MET	SD-CE	7.22	1.97	1.79
1	C	349	MET	SD-CE	7.20	1.97	1.79
1	I	349	MET	SD-CE	7.20	1.97	1.79
1	E	221	MET	SD-CE	7.20	1.97	1.79
1	E	349	MET	SD-CE	7.19	1.97	1.79
1	C	221	MET	SD-CE	7.19	1.97	1.79
1	A	221	MET	SD-CE	7.18	1.97	1.79
1	I	221	MET	SD-CE	7.18	1.97	1.79
1	K	349	MET	SD-CE	7.18	1.97	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	349	MET	SD-CE	7.17	1.97	1.79
1	G	349	MET	SD-CE	7.17	1.97	1.79
1	M	221	MET	SD-CE	7.17	1.97	1.79
1	O	221	MET	SD-CE	7.15	1.97	1.79
1	K	221	MET	SD-CE	7.15	1.97	1.79
1	M	349	MET	SD-CE	7.15	1.97	1.79
1	O	187	MET	SD-CE	6.82	1.96	1.79
1	G	187	MET	SD-CE	6.81	1.96	1.79
1	A	187	MET	SD-CE	6.81	1.96	1.79
1	I	187	MET	SD-CE	6.80	1.96	1.79
1	C	187	MET	SD-CE	6.79	1.96	1.79
1	K	187	MET	SD-CE	6.77	1.96	1.79
1	E	187	MET	SD-CE	6.76	1.96	1.79
1	M	187	MET	SD-CE	6.71	1.96	1.79
2	B	305	MET	SD-CE	6.41	1.95	1.79
1	M	154	MET	SD-CE	6.31	1.95	1.79
1	K	154	MET	SD-CE	6.30	1.95	1.79
1	O	298	MET	SD-CE	6.29	1.95	1.79
1	C	154	MET	SD-CE	6.28	1.95	1.79
1	G	298	MET	SD-CE	6.27	1.95	1.79
1	A	154	MET	SD-CE	6.26	1.95	1.79
1	O	154	MET	SD-CE	6.26	1.95	1.79
1	A	291	MET	SD-CE	6.25	1.95	1.79
1	E	298	MET	SD-CE	6.25	1.95	1.79
1	E	154	MET	SD-CE	6.24	1.95	1.79
1	E	291	MET	SD-CE	6.24	1.95	1.79
1	C	298	MET	SD-CE	6.23	1.95	1.79
1	G	349	MET	CG-SD	6.23	1.96	1.80
1	M	291	MET	SD-CE	6.23	1.95	1.79
1	I	291	MET	SD-CE	6.22	1.95	1.79
1	I	154	MET	SD-CE	6.21	1.95	1.79
1	K	291	MET	SD-CE	6.21	1.95	1.79
1	E	349	MET	CG-SD	6.20	1.96	1.80
1	O	291	MET	SD-CE	6.20	1.95	1.79
1	C	291	MET	SD-CE	6.19	1.95	1.79
1	C	349	MET	CG-SD	6.19	1.96	1.80
1	G	154	MET	SD-CE	6.18	1.95	1.79
1	M	298	MET	SD-CE	6.18	1.95	1.79
1	K	349	MET	CG-SD	6.18	1.96	1.80
1	G	291	MET	SD-CE	6.17	1.95	1.79
1	I	298	MET	SD-CE	6.17	1.95	1.79
1	A	298	MET	SD-CE	6.17	1.95	1.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	O	349	MET	CG-SD	6.17	1.96	1.80
1	K	298	MET	SD-CE	6.16	1.95	1.79
1	M	349	MET	CG-SD	6.16	1.96	1.80
1	I	349	MET	CG-SD	6.12	1.96	1.80
1	A	349	MET	CG-SD	6.11	1.96	1.80
1	C	154	MET	CG-SD	5.99	1.95	1.80
1	I	154	MET	CG-SD	5.99	1.95	1.80
1	A	154	MET	CG-SD	5.95	1.95	1.80
1	E	154	MET	CG-SD	5.93	1.95	1.80
1	G	154	MET	CG-SD	5.92	1.95	1.80
1	O	154	MET	CG-SD	5.92	1.95	1.80
1	K	154	MET	CG-SD	5.91	1.95	1.80
1	M	154	MET	CG-SD	5.90	1.95	1.80
1	G	291	MET	CG-SD	5.77	1.95	1.80
1	A	291	MET	CG-SD	5.75	1.95	1.80
1	E	291	MET	CG-SD	5.72	1.95	1.80
1	C	291	MET	CG-SD	5.72	1.95	1.80
1	I	291	MET	CG-SD	5.71	1.95	1.80
1	K	291	MET	CG-SD	5.71	1.95	1.80
1	M	187	MET	CG-SD	5.71	1.95	1.80
1	K	187	MET	CG-SD	5.70	1.95	1.80
1	I	187	MET	CG-SD	5.69	1.95	1.80
1	M	291	MET	CG-SD	5.69	1.95	1.80
1	A	187	MET	CG-SD	5.68	1.95	1.80
1	C	187	MET	CG-SD	5.67	1.95	1.80
1	O	291	MET	CG-SD	5.65	1.94	1.80
1	O	187	MET	CG-SD	5.65	1.94	1.80
1	E	187	MET	CG-SD	5.64	1.94	1.80
1	G	187	MET	CG-SD	5.62	1.94	1.80
1	O	298	MET	CG-SD	5.56	1.94	1.80
1	M	221	MET	CG-SD	5.54	1.94	1.80
1	C	298	MET	CG-SD	5.52	1.94	1.80
1	A	298	MET	CG-SD	5.52	1.94	1.80
1	G	221	MET	CG-SD	5.51	1.94	1.80
1	I	298	MET	CG-SD	5.51	1.94	1.80
1	I	221	MET	CG-SD	5.50	1.94	1.80
1	A	221	MET	CG-SD	5.50	1.94	1.80
1	E	298	MET	CG-SD	5.49	1.94	1.80
2	H	309	MET	SD-CE	5.49	1.93	1.79
1	O	221	MET	CG-SD	5.49	1.94	1.80
2	N	309	MET	SD-CE	5.49	1.93	1.79
1	G	298	MET	CG-SD	5.48	1.94	1.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	221	MET	CG-SD	5.48	1.94	1.80
2	D	309	MET	SD-CE	5.48	1.93	1.79
1	E	221	MET	CG-SD	5.48	1.94	1.80
1	K	221	MET	CG-SD	5.47	1.94	1.80
1	M	298	MET	CG-SD	5.46	1.94	1.80
2	J	309	MET	SD-CE	5.46	1.93	1.79
2	F	309	MET	SD-CE	5.45	1.93	1.79
2	L	309	MET	SD-CE	5.45	1.93	1.79
1	K	298	MET	CG-SD	5.45	1.94	1.80
2	B	309	MET	SD-CE	5.43	1.93	1.79
2	P	309	MET	SD-CE	5.43	1.93	1.79
2	B	305	MET	CG-SD	5.05	1.93	1.80

All (120) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	306	GLU	N-CA-C	-9.44	100.95	111.14
1	M	306	GLU	N-CA-C	-9.35	101.05	111.14
1	K	306	GLU	N-CA-C	-9.32	101.07	111.14
1	E	306	GLU	N-CA-C	-9.27	101.13	111.14
1	O	306	GLU	N-CA-C	-9.27	101.13	111.14
1	A	306	GLU	N-CA-C	-9.26	101.14	111.14
1	C	306	GLU	N-CA-C	-9.26	101.14	111.14
1	I	306	GLU	N-CA-C	-9.22	101.18	111.14
2	L	69	ILE	CA-C-N	6.79	128.32	119.84
2	L	69	ILE	C-N-CA	6.79	128.32	119.84
2	B	69	ILE	CA-C-N	6.77	128.30	119.84
2	B	69	ILE	C-N-CA	6.77	128.30	119.84
2	D	69	ILE	CA-C-N	6.76	128.30	119.84
2	D	69	ILE	C-N-CA	6.76	128.30	119.84
2	F	69	ILE	CA-C-N	6.76	128.29	119.84
2	F	69	ILE	C-N-CA	6.76	128.29	119.84
2	P	69	ILE	CA-C-N	6.76	128.29	119.84
2	P	69	ILE	C-N-CA	6.76	128.29	119.84
2	H	69	ILE	CA-C-N	6.71	128.22	119.84
2	H	69	ILE	C-N-CA	6.71	128.22	119.84
2	N	69	ILE	CA-C-N	6.69	128.20	119.84
2	N	69	ILE	C-N-CA	6.69	128.20	119.84
2	J	69	ILE	CA-C-N	6.67	128.18	119.84
2	J	69	ILE	C-N-CA	6.67	128.18	119.84
2	N	265	THR	CA-C-N	6.59	128.08	119.84
2	N	265	THR	C-N-CA	6.59	128.08	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L	265	THR	CA-C-N	6.59	128.07	119.84
2	L	265	THR	C-N-CA	6.59	128.07	119.84
2	P	265	THR	CA-C-N	6.58	128.07	119.84
2	P	265	THR	C-N-CA	6.58	128.07	119.84
2	J	265	THR	CA-C-N	6.57	128.05	119.84
2	J	265	THR	C-N-CA	6.57	128.05	119.84
2	F	265	THR	CA-C-N	6.57	128.05	119.84
2	F	265	THR	C-N-CA	6.57	128.05	119.84
2	H	265	THR	CA-C-N	6.55	128.03	119.84
2	H	265	THR	C-N-CA	6.55	128.03	119.84
2	B	265	THR	CA-C-N	6.52	127.99	119.84
2	B	265	THR	C-N-CA	6.52	127.99	119.84
2	D	265	THR	CA-C-N	6.51	127.98	119.84
2	D	265	THR	C-N-CA	6.51	127.98	119.84
2	P	181	ARG	CA-C-N	6.01	125.40	118.85
2	P	181	ARG	C-N-CA	6.01	125.40	118.85
2	J	181	ARG	CA-C-N	5.96	125.35	118.85
2	J	181	ARG	C-N-CA	5.96	125.35	118.85
2	H	181	ARG	CA-C-N	5.94	125.33	118.85
2	H	181	ARG	C-N-CA	5.94	125.33	118.85
2	F	181	ARG	CA-C-N	5.94	125.33	118.85
2	F	181	ARG	C-N-CA	5.94	125.33	118.85
2	L	181	ARG	CA-C-N	5.93	125.31	118.85
2	L	181	ARG	C-N-CA	5.93	125.31	118.85
2	B	181	ARG	CA-C-N	5.93	125.31	118.85
2	B	181	ARG	C-N-CA	5.93	125.31	118.85
2	D	181	ARG	CA-C-N	5.91	125.29	118.85
2	D	181	ARG	C-N-CA	5.91	125.29	118.85
2	N	181	ARG	CA-C-N	5.90	125.28	118.85
2	N	181	ARG	C-N-CA	5.90	125.28	118.85
2	J	150	CYS	CA-C-N	5.42	126.61	119.84
2	J	150	CYS	C-N-CA	5.42	126.61	119.84
2	D	150	CYS	CA-C-N	5.41	126.61	119.84
2	D	150	CYS	C-N-CA	5.41	126.61	119.84
2	B	8	ILE	N-CA-C	5.41	115.61	110.53
2	J	49	VAL	CA-C-N	5.40	126.59	119.84
2	J	49	VAL	C-N-CA	5.40	126.59	119.84
2	P	8	ILE	N-CA-C	5.39	115.60	110.53
2	H	49	VAL	CA-C-N	5.39	126.58	119.84
2	H	49	VAL	C-N-CA	5.39	126.58	119.84
2	B	49	VAL	CA-C-N	5.37	126.55	119.84
2	B	49	VAL	C-N-CA	5.37	126.55	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	N	8	ILE	N-CA-C	5.37	115.57	110.53
2	P	150	CYS	CA-C-N	5.37	126.55	119.84
2	P	150	CYS	C-N-CA	5.37	126.55	119.84
2	P	49	VAL	CA-C-N	5.36	126.54	119.84
2	P	49	VAL	C-N-CA	5.36	126.54	119.84
2	B	150	CYS	CA-C-N	5.36	126.54	119.84
2	B	150	CYS	C-N-CA	5.36	126.54	119.84
2	L	49	VAL	CA-C-N	5.36	126.54	119.84
2	L	49	VAL	C-N-CA	5.36	126.54	119.84
2	L	8	ILE	N-CA-C	5.34	115.55	110.53
2	H	8	ILE	N-CA-C	5.34	115.55	110.53
2	L	150	CYS	CA-C-N	5.34	126.52	119.84
2	L	150	CYS	C-N-CA	5.34	126.52	119.84
2	F	49	VAL	CA-C-N	5.33	126.51	119.84
2	F	49	VAL	C-N-CA	5.33	126.51	119.84
2	D	49	VAL	CA-C-N	5.33	126.50	119.84
2	D	49	VAL	C-N-CA	5.33	126.50	119.84
2	F	8	ILE	N-CA-C	5.33	115.54	110.53
2	H	150	CYS	CA-C-N	5.33	126.50	119.84
2	H	150	CYS	C-N-CA	5.33	126.50	119.84
2	F	150	CYS	CA-C-N	5.32	126.49	119.84
2	F	150	CYS	C-N-CA	5.32	126.49	119.84
2	N	49	VAL	CA-C-N	5.32	126.48	119.84
2	N	49	VAL	C-N-CA	5.32	126.48	119.84
2	D	8	ILE	N-CA-C	5.29	115.51	110.53
2	N	150	CYS	CA-C-N	5.28	126.44	119.84
2	N	150	CYS	C-N-CA	5.28	126.44	119.84
2	J	8	ILE	N-CA-C	5.28	115.49	110.53
2	P	242	CYS	N-CA-C	5.25	112.86	108.13
2	N	242	CYS	N-CA-C	5.21	112.82	108.13
2	N	284	ALA	CA-C-N	5.21	125.01	119.28
2	N	284	ALA	C-N-CA	5.21	125.01	119.28
2	H	242	CYS	N-CA-C	5.21	112.82	108.13
2	L	242	CYS	N-CA-C	5.19	112.80	108.13
2	D	284	ALA	CA-C-N	5.18	124.97	119.28
2	D	284	ALA	C-N-CA	5.18	124.97	119.28
2	D	242	CYS	N-CA-C	5.15	112.76	108.13
2	B	284	ALA	CA-C-N	5.14	124.94	119.28
2	B	284	ALA	C-N-CA	5.14	124.94	119.28
2	F	242	CYS	N-CA-C	5.14	112.76	108.13
2	F	284	ALA	CA-C-N	5.13	124.93	119.28
2	F	284	ALA	C-N-CA	5.13	124.93	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L	284	ALA	CA-C-N	5.12	124.91	119.28
2	L	284	ALA	C-N-CA	5.12	124.91	119.28
2	J	284	ALA	CA-C-N	5.09	124.88	119.28
2	J	284	ALA	C-N-CA	5.09	124.88	119.28
2	H	284	ALA	CA-C-N	5.09	124.88	119.28
2	H	284	ALA	C-N-CA	5.09	124.88	119.28
2	P	284	ALA	CA-C-N	5.08	124.87	119.28
2	P	284	ALA	C-N-CA	5.08	124.87	119.28
2	B	242	CYS	N-CA-C	5.08	112.70	108.13
2	J	242	CYS	N-CA-C	5.02	112.74	108.22

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2523	0	2559	160	0
1	C	2599	0	2641	151	0
1	E	2599	0	2641	164	0
1	G	2523	0	2559	143	1
1	I	2523	0	2559	146	0
1	K	2590	0	2635	164	0
1	M	2604	0	2646	147	0
1	O	2527	0	2562	143	0
2	B	2617	0	2662	189	2
2	D	2617	0	2662	201	0
2	F	2617	0	2662	191	0
2	H	2608	0	2649	193	0
2	J	2617	0	2662	202	0
2	L	2608	0	2649	202	0
2	N	2617	0	2662	180	2
2	P	2617	0	2662	209	1
3	A	13	0	5	5	0
3	C	13	0	5	4	0
3	E	13	0	5	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	G	13	0	5	5	0
3	I	13	0	5	5	0
3	K	13	0	5	3	0
3	M	13	0	5	5	0
3	O	13	0	5	5	0
4	A	23	0	12	2	0
4	C	23	0	12	2	0
4	E	23	0	12	6	0
4	G	23	0	12	1	0
4	I	23	0	12	3	0
4	K	23	0	12	9	0
4	M	23	0	12	3	0
4	O	23	0	12	0	0
All	All	41694	0	42208	2574	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 31.

All (2574) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:171:LYS:HZ2	1:E:72:ARG:NH2	1.27	1.32
2:B:213:ASP:HB3	1:I:122:ASP:OD2	1.23	1.27
2:D:285:PRO:HG3	2:P:286:ASP:OD2	1.42	1.20
2:D:285:PRO:CB	2:P:286:ASP:OD2	1.89	1.19
2:D:285:PRO:CG	2:P:286:ASP:OD2	1.91	1.19
1:A:64:TYR:CE1	2:P:63:VAL:HG13	1.76	1.18
1:A:171:LYS:NZ	1:E:72:ARG:NH2	1.94	1.14
1:K:135:GLU:HG3	1:K:238:MET:HB2	1.31	1.11
1:C:135:GLU:HG3	1:C:238:MET:HB2	1.32	1.10
1:M:135:GLU:HG3	1:M:238:MET:HB2	1.32	1.10
1:G:135:GLU:HG3	1:G:238:MET:HB2	1.32	1.09
1:O:135:GLU:HG3	1:O:238:MET:HB2	1.32	1.08
1:A:135:GLU:HG3	1:A:238:MET:HB2	1.31	1.06
1:I:135:GLU:HG3	1:I:238:MET:HB2	1.32	1.06
1:E:135:GLU:HG3	1:E:238:MET:HB2	1.32	1.05
1:K:72:ARG:CZ	1:O:171:LYS:HZ2	1.71	1.03
1:C:7:GLU:HB3	1:C:10:LEU:HD11	1.37	1.03
1:K:28:VAL:HG21	4:K:2006:AMP:HN61	1.17	1.02
2:B:213:ASP:CB	1:I:122:ASP:OD2	2.08	1.02
1:E:7:GLU:HB3	1:E:10:LEU:HD11	1.37	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:7:GLU:HB3	1:M:10:LEU:HD11	1.37	1.01
2:D:286:ASP:OD1	2:P:287:ILE:HD11	1.60	1.00
1:A:171:LYS:NZ	1:E:72:ARG:HH22	1.60	0.99
2:P:342:THR:HG23	2:P:345:SER:H	1.27	0.98
2:B:342:THR:HG23	2:B:345:SER:H	1.27	0.98
1:A:64:TYR:CE1	2:P:63:VAL:CG1	2.46	0.98
2:H:342:THR:HG23	2:H:345:SER:H	1.27	0.98
2:N:342:THR:HG23	2:N:345:SER:H	1.27	0.98
2:L:342:THR:HG23	2:L:345:SER:H	1.27	0.98
1:K:274:ARG:HG2	3:K:1006:FLC:OB1	1.65	0.97
2:J:342:THR:HG23	2:J:345:SER:H	1.28	0.96
1:K:12:LYS:HE3	1:O:168:ASP:OD2	1.66	0.96
2:D:342:THR:HG23	2:D:345:SER:H	1.27	0.96
1:C:119:ARG:HG2	2:D:125:THR:HG22	1.48	0.95
1:K:72:ARG:NH2	1:O:171:LYS:HZ2	1.64	0.94
1:A:171:LYS:HZ2	1:E:72:ARG:CZ	1.80	0.94
2:F:342:THR:HG23	2:F:345:SER:H	1.27	0.94
1:E:274:ARG:HG2	3:E:1003:FLC:OB1	1.68	0.94
1:K:277:GLY:HA2	4:K:2006:AMP:C8	2.03	0.93
1:K:72:ARG:NH2	1:O:171:LYS:NZ	2.17	0.93
2:D:285:PRO:HG3	2:P:286:ASP:CG	1.94	0.93
1:K:277:GLY:CA	4:K:2006:AMP:C8	2.52	0.93
2:H:322:VAL:HG12	2:H:350:VAL:HG13	1.52	0.92
2:J:322:VAL:HG12	2:J:350:VAL:HG13	1.52	0.92
2:N:322:VAL:HG12	2:N:350:VAL:HG13	1.52	0.91
2:D:136:GLU:HG2	2:D:168:VAL:HG21	1.53	0.91
2:B:136:GLU:HG2	2:B:168:VAL:HG21	1.53	0.91
2:N:136:GLU:HG2	2:N:168:VAL:HG21	1.53	0.91
2:F:322:VAL:HG12	2:F:350:VAL:HG13	1.52	0.90
2:J:136:GLU:HG2	2:J:168:VAL:HG21	1.53	0.90
2:D:322:VAL:HG12	2:D:350:VAL:HG13	1.52	0.90
1:I:168:ASP:OD2	1:M:12:LYS:HE3	1.70	0.90
1:C:275:HIS:HB3	4:C:2002:AMP:O2P	1.70	0.90
1:G:151:LEU:HD23	2:H:157:ILE:HG12	1.53	0.90
2:H:69:ILE:HD12	2:H:70:PRO:HD2	1.54	0.90
2:P:136:GLU:HG2	2:P:168:VAL:HG21	1.53	0.90
2:L:136:GLU:HG2	2:L:168:VAL:HG21	1.53	0.90
2:P:322:VAL:HG12	2:P:350:VAL:HG13	1.52	0.90
2:D:69:ILE:HD12	2:D:70:PRO:HD2	1.54	0.89
2:D:285:PRO:HB3	2:P:286:ASP:OD2	1.69	0.89
2:F:69:ILE:HD12	2:F:70:PRO:HD2	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:150:CYS:HB2	2:F:151:PRO:HD2	1.55	0.89
2:P:69:ILE:HD12	2:P:70:PRO:HD2	1.54	0.89
2:P:150:CYS:HB2	2:P:151:PRO:HD2	1.55	0.89
2:J:150:CYS:HB2	2:J:151:PRO:HD2	1.54	0.89
1:A:168:ASP:OD2	1:E:12:LYS:HE3	1.72	0.89
2:N:150:CYS:HB2	2:N:151:PRO:HD2	1.55	0.89
2:H:150:CYS:HB2	2:H:151:PRO:HD2	1.55	0.89
1:E:135:GLU:CG	1:E:238:MET:HB2	2.04	0.88
2:F:136:GLU:HG2	2:F:168:VAL:HG21	1.53	0.88
2:B:322:VAL:HG12	2:B:350:VAL:HG13	1.51	0.88
2:J:69:ILE:HD12	2:J:70:PRO:HD2	1.54	0.88
2:B:150:CYS:HB2	2:B:151:PRO:HD2	1.55	0.88
1:A:119:ARG:HG2	2:B:125:THR:HG22	1.56	0.88
2:L:322:VAL:HG12	2:L:350:VAL:HG13	1.52	0.88
1:K:135:GLU:CG	1:K:238:MET:HB2	2.03	0.88
1:C:135:GLU:CG	1:C:238:MET:HB2	2.04	0.88
1:I:135:GLU:CG	1:I:238:MET:HB2	2.04	0.88
1:C:72:ARG:NH2	1:G:171:LYS:HZ2	1.70	0.88
1:A:135:GLU:CG	1:A:238:MET:HB2	2.03	0.88
2:N:69:ILE:HD12	2:N:70:PRO:HD2	1.54	0.88
2:N:58:VAL:HG12	2:N:69:ILE:HD13	1.56	0.87
2:L:69:ILE:HD12	2:L:70:PRO:HD2	1.54	0.87
2:L:150:CYS:HB2	2:L:151:PRO:HD2	1.55	0.87
2:D:58:VAL:HG12	2:D:69:ILE:HD13	1.56	0.87
2:H:136:GLU:HG2	2:H:168:VAL:HG21	1.53	0.87
2:J:58:VAL:HG12	2:J:69:ILE:HD13	1.56	0.87
2:H:58:VAL:HG12	2:H:69:ILE:HD13	1.56	0.87
2:L:58:VAL:HG12	2:L:69:ILE:HD13	1.56	0.87
2:B:69:ILE:HD12	2:B:70:PRO:HD2	1.54	0.87
1:G:300:ASN:HA	1:G:305:ASN:HB3	1.57	0.87
1:C:12:LYS:HE3	1:G:168:ASP:OD2	1.73	0.87
1:E:300:ASN:HA	1:E:305:ASN:HB3	1.57	0.87
2:B:221:ILE:O	2:B:225:VAL:HG12	1.75	0.87
1:I:300:ASN:HA	1:I:305:ASN:HB3	1.57	0.87
1:G:135:GLU:CG	1:G:238:MET:HB2	2.04	0.86
1:C:300:ASN:HA	1:C:305:ASN:HB3	1.57	0.86
2:D:150:CYS:HB2	2:D:151:PRO:HD2	1.55	0.86
1:G:195:ARG:HG2	1:G:195:ARG:HH11	1.40	0.86
1:O:119:ARG:HG2	2:P:125:THR:HG22	1.56	0.86
1:A:195:ARG:HG2	1:A:195:ARG:HH11	1.40	0.86
2:L:221:ILE:O	2:L:225:VAL:HG12	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:135:GLU:CG	1:M:238:MET:HB2	2.03	0.86
1:O:195:ARG:HG2	1:O:195:ARG:HH11	1.40	0.86
1:C:187:MET:HE2	2:D:156:SER:HB3	1.55	0.86
1:M:300:ASN:HA	1:M:305:ASN:HB3	1.57	0.86
1:O:135:GLU:CG	1:O:238:MET:HB2	2.04	0.86
1:A:300:ASN:HA	1:A:305:ASN:HB3	1.57	0.86
2:B:58:VAL:HG12	2:B:69:ILE:HD13	1.56	0.86
2:F:58:VAL:HG12	2:F:69:ILE:HD13	1.56	0.86
1:K:195:ARG:HG2	1:K:195:ARG:HH11	1.40	0.86
1:K:300:ASN:HA	1:K:305:ASN:HB3	1.57	0.86
2:P:58:VAL:HG12	2:P:69:ILE:HD13	1.56	0.86
1:O:241:THR:OG1	3:O:1008:FLC:OA2	1.94	0.86
1:C:195:ARG:HG2	1:C:195:ARG:HH11	1.40	0.85
2:F:221:ILE:O	2:F:225:VAL:HG12	1.75	0.85
2:H:221:ILE:O	2:H:225:VAL:HG12	1.75	0.85
1:I:195:ARG:HG2	1:I:195:ARG:HH11	1.41	0.85
2:J:221:ILE:O	2:J:225:VAL:HG12	1.75	0.85
2:D:221:ILE:O	2:D:225:VAL:HG12	1.75	0.85
1:M:83:THR:OG1	3:M:1007:FLC:OG2	1.95	0.84
2:P:221:ILE:O	2:P:225:VAL:HG12	1.75	0.84
1:O:300:ASN:HA	1:O:305:ASN:HB3	1.57	0.84
1:M:195:ARG:HG2	1:M:195:ARG:HH11	1.41	0.84
1:E:195:ARG:HG2	1:E:195:ARG:HH11	1.40	0.84
2:N:221:ILE:O	2:N:225:VAL:HG12	1.75	0.84
1:E:7:GLU:HB3	1:E:10:LEU:CD1	2.08	0.83
1:E:187:MET:HE2	2:F:156:SER:HB3	1.60	0.83
1:I:314:ALA:HB2	1:I:346:LEU:HD13	1.62	0.82
1:M:195:ARG:HH11	1:M:195:ARG:CG	1.93	0.82
1:C:314:ALA:HB2	1:C:346:LEU:HD13	1.62	0.82
1:K:195:ARG:HH11	1:K:195:ARG:CG	1.93	0.82
1:M:7:GLU:HB3	1:M:10:LEU:CD1	2.08	0.82
1:G:195:ARG:HH11	1:G:195:ARG:CG	1.93	0.82
1:C:195:ARG:HH11	1:C:195:ARG:CG	1.93	0.81
1:E:195:ARG:HH11	1:E:195:ARG:CG	1.93	0.81
1:O:195:ARG:HH11	1:O:195:ARG:CG	1.93	0.81
1:O:314:ALA:HB2	1:O:346:LEU:HD13	1.62	0.81
1:A:64:TYR:CZ	2:P:63:VAL:CG1	2.64	0.81
1:C:7:GLU:HB3	1:C:10:LEU:CD1	2.08	0.81
1:I:195:ARG:HH11	1:I:195:ARG:CG	1.93	0.81
1:A:195:ARG:HH11	1:A:195:ARG:CG	1.93	0.81
2:H:67:THR:HG21	2:H:96:HIS:N	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:277:GLY:HA2	4:K:2006:AMP:H8	1.44	0.81
2:B:67:THR:HG21	2:B:96:HIS:N	1.96	0.81
1:K:12:LYS:HE3	1:O:168:ASP:CG	2.06	0.80
1:A:314:ALA:HB2	1:A:346:LEU:HD13	1.62	0.80
2:J:318:ILE:HA	2:J:322:VAL:HG21	1.64	0.80
2:L:67:THR:HG21	2:L:96:HIS:N	1.96	0.80
2:N:333:ARG:HB2	2:N:339:GLY:HA3	1.63	0.80
2:B:333:ARG:HB2	2:B:339:GLY:HA3	1.63	0.80
1:K:314:ALA:HB2	1:K:346:LEU:HD13	1.62	0.80
1:G:314:ALA:HB2	1:G:346:LEU:HD13	1.62	0.80
1:I:92:SER:HB3	1:I:95:VAL:HG22	1.63	0.80
2:J:67:THR:HG21	2:J:96:HIS:N	1.96	0.80
1:C:92:SER:HB3	1:C:95:VAL:HG22	1.63	0.80
2:H:333:ARG:HB2	2:H:339:GLY:HA3	1.63	0.80
1:K:92:SER:HB3	1:K:95:VAL:HG22	1.63	0.80
1:M:119:ARG:HG2	2:N:125:THR:HG22	1.63	0.80
2:P:67:THR:HG21	2:P:96:HIS:N	1.96	0.80
2:P:318:ILE:HA	2:P:322:VAL:HG21	1.64	0.80
1:M:187:MET:HE2	2:N:156:SER:HB3	1.61	0.80
1:M:314:ALA:HB2	1:M:346:LEU:HD13	1.62	0.80
2:N:67:THR:HG21	2:N:96:HIS:N	1.96	0.80
1:G:92:SER:HB3	1:G:95:VAL:HG22	1.63	0.80
1:E:92:SER:HB3	1:E:95:VAL:HG22	1.63	0.80
1:M:92:SER:HB3	1:M:95:VAL:HG22	1.63	0.80
2:N:318:ILE:HA	2:N:322:VAL:HG21	1.64	0.80
1:O:93:LEU:HA	1:O:96:ALA:HB3	1.64	0.80
1:I:93:LEU:HA	1:I:96:ALA:HB3	1.64	0.79
2:L:333:ARG:HB2	2:L:339:GLY:HA3	1.63	0.79
2:D:67:THR:HG21	2:D:96:HIS:N	1.96	0.79
2:N:61:ILE:HG22	2:N:62:PHE:H	1.47	0.79
2:B:61:ILE:HG22	2:B:62:PHE:H	1.47	0.79
1:G:93:LEU:HA	1:G:96:ALA:HB3	1.64	0.79
2:J:71:ASP:O	2:J:75:GLN:HG2	1.83	0.79
2:J:333:ARG:HB2	2:J:339:GLY:HA3	1.63	0.79
2:P:61:ILE:HG22	2:P:62:PHE:H	1.47	0.79
2:P:333:ARG:HB2	2:P:339:GLY:HA3	1.63	0.79
1:C:93:LEU:HA	1:C:96:ALA:HB3	1.64	0.79
2:F:67:THR:HG21	2:F:96:HIS:N	1.96	0.79
2:F:333:ARG:HB2	2:F:339:GLY:HA3	1.63	0.79
1:K:151:LEU:HD23	2:L:157:ILE:HG12	1.64	0.79
1:O:92:SER:HB3	1:O:95:VAL:HG22	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:92:SER:HB3	1:A:95:VAL:HG22	1.63	0.79
2:D:71:ASP:O	2:D:75:GLN:HG2	1.82	0.79
2:D:286:ASP:OD1	2:P:287:ILE:CD1	2.29	0.79
2:H:318:ILE:HA	2:H:322:VAL:HG21	1.64	0.79
2:L:71:ASP:O	2:L:75:GLN:HG2	1.83	0.79
1:E:314:ALA:HB2	1:E:346:LEU:HD13	1.62	0.79
2:D:61:ILE:HG22	2:D:62:PHE:H	1.48	0.79
2:P:71:ASP:O	2:P:75:GLN:HG2	1.83	0.79
2:F:61:ILE:HG22	2:F:62:PHE:H	1.48	0.79
2:N:71:ASP:O	2:N:75:GLN:HG2	1.82	0.79
2:D:318:ILE:HA	2:D:322:VAL:HG21	1.64	0.78
2:D:333:ARG:HB2	2:D:339:GLY:HA3	1.63	0.78
2:L:318:ILE:HA	2:L:322:VAL:HG21	1.64	0.78
1:M:93:LEU:HA	1:M:96:ALA:HB3	1.64	0.78
2:H:71:ASP:O	2:H:75:GLN:HG2	1.82	0.78
2:J:61:ILE:HG22	2:J:62:PHE:H	1.48	0.78
1:K:12:LYS:CE	1:O:168:ASP:OD2	2.31	0.78
2:B:71:ASP:O	2:B:75:GLN:HG2	1.82	0.78
2:H:61:ILE:HG22	2:H:62:PHE:H	1.48	0.78
2:F:318:ILE:HA	2:F:322:VAL:HG21	1.64	0.78
1:I:151:LEU:HD23	2:J:157:ILE:HG12	1.66	0.78
1:C:119:ARG:CG	2:D:125:THR:HG22	2.13	0.78
2:B:318:ILE:HA	2:B:322:VAL:HG21	1.64	0.77
2:F:71:ASP:O	2:F:75:GLN:HG2	1.82	0.77
2:L:61:ILE:HG22	2:L:62:PHE:H	1.48	0.77
1:M:323:LYS:HE3	1:M:323:LYS:H	1.49	0.77
1:E:93:LEU:HA	1:E:96:ALA:HB3	1.64	0.77
1:K:93:LEU:HA	1:K:96:ALA:HB3	1.64	0.77
1:A:93:LEU:HA	1:A:96:ALA:HB3	1.64	0.77
1:E:323:LYS:HE3	1:E:323:LYS:H	1.50	0.77
2:F:130:ASP:HB3	2:F:236:THR:HG23	1.67	0.76
1:G:323:LYS:HE3	1:G:323:LYS:H	1.50	0.76
2:L:130:ASP:HB3	2:L:236:THR:HG23	1.67	0.76
1:O:323:LYS:HE3	1:O:323:LYS:H	1.49	0.76
2:D:286:ASP:CG	2:P:287:ILE:HD11	2.10	0.76
1:A:187:MET:HE2	2:B:156:SER:HB3	1.66	0.76
2:J:130:ASP:HB3	2:J:236:THR:HG23	1.67	0.76
1:I:323:LYS:HE3	1:I:323:LYS:H	1.49	0.76
2:B:97:ARG:HG3	2:B:102:THR:HG23	1.68	0.76
2:P:130:ASP:HB3	2:P:236:THR:HG23	1.67	0.76
1:A:168:ASP:OD2	1:E:12:LYS:CE	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:97:ARG:HG3	2:D:102:THR:HG23	1.68	0.76
2:N:97:ARG:HG3	2:N:102:THR:HG23	1.68	0.76
1:K:14:TYR:OH	1:O:165:PHE:HA	1.85	0.75
2:P:97:ARG:HG3	2:P:102:THR:HG23	1.68	0.75
1:K:323:LYS:H	1:K:323:LYS:HE3	1.49	0.75
2:H:97:ARG:HG3	2:H:102:THR:HG23	1.68	0.75
2:D:285:PRO:HG2	2:P:287:ILE:HD13	1.66	0.75
1:I:187:MET:HE2	2:J:156:SER:HB3	1.68	0.75
2:D:130:ASP:HB3	2:D:236:THR:HG23	1.68	0.75
1:I:171:LYS:HZ2	1:M:72:ARG:NH2	1.84	0.75
2:J:351:ILE:O	2:J:354:LEU:HB3	1.87	0.75
1:O:187:MET:HE2	2:P:156:SER:HB3	1.67	0.75
1:A:323:LYS:HE3	1:A:323:LYS:H	1.50	0.74
1:C:323:LYS:H	1:C:323:LYS:HE3	1.49	0.74
2:H:130:ASP:HB3	2:H:236:THR:HG23	1.68	0.74
2:B:351:ILE:O	2:B:354:LEU:HB3	1.87	0.74
2:N:130:ASP:HB3	2:N:236:THR:HG23	1.67	0.74
2:F:97:ARG:HG3	2:F:102:THR:HG23	1.68	0.74
1:K:277:GLY:HA3	4:K:2006:AMP:N7	2.02	0.74
2:B:130:ASP:HB3	2:B:236:THR:HG23	1.67	0.74
2:J:97:ARG:HG3	2:J:102:THR:HG23	1.68	0.74
1:K:28:VAL:HG21	4:K:2006:AMP:N6	1.99	0.74
2:L:351:ILE:O	2:L:354:LEU:HB3	1.87	0.74
1:A:64:TYR:CZ	2:P:63:VAL:HG13	2.22	0.74
2:J:41:LYS:HG2	2:J:53:TRP:CD1	2.23	0.74
2:L:97:ARG:HG3	2:L:102:THR:HG23	1.68	0.74
2:P:41:LYS:HG2	2:P:53:TRP:CD1	2.23	0.74
2:F:41:LYS:HG2	2:F:53:TRP:CD1	2.23	0.74
2:H:41:LYS:HG2	2:H:53:TRP:CD1	2.23	0.74
2:B:41:LYS:HG2	2:B:53:TRP:CD1	2.23	0.73
2:D:41:LYS:HG2	2:D:53:TRP:CD1	2.23	0.73
2:D:351:ILE:O	2:D:354:LEU:HB3	1.87	0.73
2:H:351:ILE:O	2:H:354:LEU:HB3	1.87	0.73
1:E:151:LEU:HD23	2:F:157:ILE:HG12	1.71	0.73
2:P:351:ILE:O	2:P:354:LEU:HB3	1.87	0.73
1:K:72:ARG:CZ	1:O:171:LYS:NZ	2.52	0.73
2:N:351:ILE:O	2:N:354:LEU:HB3	1.87	0.73
2:L:41:LYS:HG2	2:L:53:TRP:CD1	2.23	0.73
1:K:119:ARG:HG2	2:L:125:THR:HG22	1.70	0.73
1:C:72:ARG:CZ	1:G:171:LYS:HZ2	2.00	0.72
2:F:351:ILE:O	2:F:354:LEU:HB3	1.87	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:72:ARG:HH22	1:O:171:LYS:NZ	1.84	0.72
2:N:41:LYS:HG2	2:N:53:TRP:CD1	2.23	0.72
1:C:72:ARG:NH2	1:G:171:LYS:NZ	2.38	0.71
1:E:277:GLY:CA	4:E:2003:AMP:C8	2.74	0.71
2:L:348:GLU:O	2:L:352:LYS:HG2	1.91	0.71
2:F:348:GLU:O	2:F:352:LYS:HG2	1.91	0.71
2:D:348:GLU:O	2:D:352:LYS:HG2	1.90	0.71
1:G:28:VAL:HG21	4:G:2004:AMP:HN61	1.55	0.71
2:H:348:GLU:O	2:H:352:LYS:HG2	1.90	0.71
1:E:28:VAL:HG21	4:E:2003:AMP:HN61	1.55	0.70
2:P:348:GLU:O	2:P:352:LYS:HG2	1.90	0.70
2:B:235:TYR:O	2:B:238:ALA:HB2	1.91	0.70
2:D:235:TYR:O	2:D:238:ALA:HB2	1.91	0.70
2:B:348:GLU:O	2:B:352:LYS:HG2	1.91	0.70
2:J:235:TYR:O	2:J:238:ALA:HB2	1.91	0.70
2:J:348:GLU:O	2:J:352:LYS:HG2	1.90	0.70
2:L:235:TYR:O	2:L:238:ALA:HB2	1.91	0.70
1:E:277:GLY:HA2	4:E:2003:AMP:H8	1.57	0.70
2:N:348:GLU:O	2:N:352:LYS:HG2	1.90	0.70
2:H:235:TYR:O	2:H:238:ALA:HB2	1.92	0.70
2:H:322:VAL:HB	2:H:323:LEU:HD23	1.74	0.70
1:C:52:ILE:HD12	1:C:66:ALA:HA	1.74	0.69
2:D:322:VAL:HB	2:D:323:LEU:HD23	1.74	0.69
2:N:322:VAL:HB	2:N:323:LEU:HD23	1.74	0.69
2:P:235:TYR:O	2:P:238:ALA:HB2	1.92	0.69
1:K:52:ILE:HD12	1:K:66:ALA:HA	1.75	0.69
1:O:52:ILE:HD12	1:O:66:ALA:HA	1.75	0.69
1:E:195:ARG:HG2	1:E:195:ARG:NH1	2.07	0.69
1:G:52:ILE:HD12	1:G:66:ALA:HA	1.75	0.69
2:J:322:VAL:HB	2:J:323:LEU:HD23	1.74	0.69
1:K:33:THR:HG23	1:K:291:MET:HE3	1.75	0.69
1:A:64:TYR:CD1	2:P:63:VAL:HG13	2.28	0.69
2:F:235:TYR:O	2:F:238:ALA:HB2	1.91	0.69
1:G:305:ASN:HA	1:G:308:ALA:HB3	1.75	0.69
1:I:259:GLY:H	1:I:294:SER:HB3	1.58	0.69
2:N:235:TYR:O	2:N:238:ALA:HB2	1.91	0.69
1:E:33:THR:HG23	1:E:291:MET:HE3	1.75	0.69
1:E:305:ASN:HA	1:E:308:ALA:HB3	1.75	0.69
1:I:33:THR:HG23	1:I:291:MET:HE3	1.75	0.69
2:L:322:VAL:HB	2:L:323:LEU:HD23	1.74	0.69
1:M:195:ARG:HG2	1:M:195:ARG:NH1	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:THR:HG23	1:A:291:MET:HE3	1.75	0.68
1:A:64:TYR:CZ	2:P:63:VAL:HG11	2.28	0.68
1:C:259:GLY:H	1:C:294:SER:HB3	1.58	0.68
1:E:52:ILE:HD12	1:E:66:ALA:HA	1.74	0.68
1:K:187:MET:HE2	2:L:156:SER:HB3	1.76	0.68
1:O:305:ASN:HA	1:O:308:ALA:HB3	1.76	0.68
2:P:322:VAL:HB	2:P:323:LEU:HD23	1.74	0.68
2:B:322:VAL:HB	2:B:323:LEU:HD23	1.74	0.68
1:O:33:THR:HG23	1:O:291:MET:HE3	1.75	0.68
1:M:52:ILE:HD12	1:M:66:ALA:HA	1.75	0.68
1:M:33:THR:HG23	1:M:291:MET:HE3	1.75	0.68
1:M:259:GLY:H	1:M:294:SER:HB3	1.58	0.68
2:P:274:ILE:HG22	2:P:275:SER:N	2.09	0.68
1:C:33:THR:HG23	1:C:291:MET:HE3	1.75	0.68
1:C:305:ASN:HA	1:C:308:ALA:HB3	1.76	0.68
2:J:274:ILE:HG22	2:J:275:SER:N	2.09	0.68
1:A:52:ILE:HD12	1:A:66:ALA:HA	1.74	0.68
1:I:305:ASN:HA	1:I:308:ALA:HB3	1.75	0.68
1:E:259:GLY:H	1:E:294:SER:HB3	1.58	0.68
1:G:259:GLY:H	1:G:294:SER:HB3	1.58	0.68
1:I:151:LEU:CD1	2:L:147:HIS:CD2	2.77	0.68
1:K:195:ARG:HG2	1:K:195:ARG:NH1	2.07	0.68
1:M:305:ASN:HA	1:M:308:ALA:HB3	1.76	0.68
1:O:259:GLY:H	1:O:294:SER:HB3	1.58	0.68
2:H:274:ILE:HG22	2:H:275:SER:N	2.09	0.68
1:K:259:GLY:H	1:K:294:SER:HB3	1.58	0.68
2:D:274:ILE:HG22	2:D:275:SER:N	2.09	0.67
2:F:322:VAL:HB	2:F:323:LEU:HD23	1.74	0.67
1:E:323:LYS:HE3	1:E:323:LYS:N	2.09	0.67
1:K:305:ASN:HA	1:K:308:ALA:HB3	1.76	0.67
1:M:323:LYS:HE3	1:M:323:LYS:N	2.09	0.67
1:C:323:LYS:HE3	1:C:323:LYS:N	2.09	0.67
1:I:52:ILE:HD12	1:I:66:ALA:HA	1.74	0.67
1:A:160:GLU:OE1	1:E:8:ARG:NH2	2.27	0.67
2:D:351:ILE:HG23	2:D:354:LEU:HD23	1.77	0.67
2:H:322:VAL:CG1	2:H:350:VAL:HG13	2.24	0.67
2:J:351:ILE:HG23	2:J:354:LEU:HD23	1.77	0.67
2:L:274:ILE:HG22	2:L:275:SER:N	2.09	0.67
2:P:351:ILE:HG23	2:P:354:LEU:HD23	1.77	0.67
1:A:305:ASN:HA	1:A:308:ALA:HB3	1.76	0.67
1:C:195:ARG:HG2	1:C:195:ARG:NH1	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:150:CYS:CB	2:H:151:PRO:HD2	2.25	0.67
1:O:323:LYS:HE3	1:O:323:LYS:N	2.09	0.67
1:A:259:GLY:H	1:A:294:SER:HB3	1.58	0.67
1:G:323:LYS:HE3	1:G:323:LYS:N	2.10	0.67
2:P:326:ILE:HG21	2:P:350:VAL:HA	1.77	0.67
2:B:351:ILE:HG23	2:B:354:LEU:HD23	1.77	0.67
1:I:119:ARG:HG2	2:J:125:THR:HG22	1.77	0.67
1:I:195:ARG:HG2	1:I:195:ARG:NH1	2.07	0.67
2:L:351:ILE:HG23	2:L:354:LEU:HD23	1.77	0.67
1:A:323:LYS:HE3	1:A:323:LYS:N	2.10	0.67
2:B:150:CYS:CB	2:B:151:PRO:HD2	2.25	0.67
2:D:322:VAL:CG1	2:D:350:VAL:HG13	2.24	0.67
2:H:164:ALA:O	2:H:168:VAL:HG23	1.95	0.67
2:L:40:VAL:HG22	2:L:299:LEU:HD13	1.77	0.67
2:D:164:ALA:O	2:D:168:VAL:HG23	1.95	0.66
2:F:150:CYS:CB	2:F:151:PRO:HD2	2.25	0.66
2:F:274:ILE:HG22	2:F:275:SER:N	2.09	0.66
2:F:322:VAL:CG1	2:F:350:VAL:HG13	2.24	0.66
1:G:195:ARG:HG2	1:G:195:ARG:NH1	2.07	0.66
1:I:323:LYS:HE3	1:I:323:LYS:N	2.09	0.66
2:J:326:ILE:HG21	2:J:350:VAL:HA	1.77	0.66
1:K:323:LYS:HE3	1:K:323:LYS:N	2.09	0.66
2:D:40:VAL:HG22	2:D:299:LEU:HD13	1.77	0.66
1:E:277:GLY:CA	4:E:2003:AMP:H8	2.07	0.66
2:N:326:ILE:HG21	2:N:350:VAL:HA	1.77	0.66
2:P:164:ALA:O	2:P:168:VAL:HG23	1.95	0.66
2:B:164:ALA:O	2:B:168:VAL:HG23	1.95	0.66
2:H:326:ILE:HG21	2:H:350:VAL:HA	1.77	0.66
2:B:274:ILE:HG22	2:B:275:SER:N	2.09	0.66
2:F:40:VAL:HG22	2:F:299:LEU:HD13	1.77	0.66
2:N:351:ILE:HG23	2:N:354:LEU:HD23	1.77	0.66
1:O:323:LYS:O	1:O:324:HIS:HB2	1.96	0.66
2:D:17:PRO:HB2	2:J:62:PHE:CD2	2.30	0.66
2:N:164:ALA:O	2:N:168:VAL:HG23	1.95	0.66
1:O:151:LEU:HD23	2:P:157:ILE:HG12	1.78	0.66
2:N:274:ILE:HG22	2:N:275:SER:N	2.09	0.66
2:D:150:CYS:CB	2:D:151:PRO:HD2	2.25	0.66
1:G:33:THR:HG23	1:G:291:MET:HE3	1.75	0.66
2:L:326:ILE:HG21	2:L:350:VAL:HA	1.77	0.66
2:F:164:ALA:O	2:F:168:VAL:HG23	1.95	0.66
2:H:351:ILE:HG23	2:H:354:LEU:HD23	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:333:ARG:O	2:B:341:ALA:HB3	1.96	0.66
1:E:323:LYS:O	1:E:324:HIS:HB2	1.95	0.66
2:F:326:ILE:HG21	2:F:350:VAL:HA	1.77	0.66
2:P:40:VAL:HG22	2:P:299:LEU:HD13	1.77	0.66
2:B:322:VAL:CG1	2:B:350:VAL:HG13	2.24	0.65
2:B:326:ILE:HG21	2:B:350:VAL:HA	1.77	0.65
1:K:323:LYS:O	1:K:324:HIS:HB2	1.96	0.65
2:D:326:ILE:HG21	2:D:350:VAL:HA	1.77	0.65
1:G:323:LYS:O	1:G:324:HIS:HB2	1.96	0.65
2:H:40:VAL:HG22	2:H:299:LEU:HD13	1.77	0.65
2:B:291:ASP:OD2	2:B:343:THR:HB	1.97	0.65
2:N:40:VAL:HG22	2:N:299:LEU:HD13	1.77	0.65
1:A:195:ARG:HG2	1:A:195:ARG:NH1	2.07	0.65
2:D:291:ASP:OD2	2:D:343:THR:HB	1.97	0.65
2:J:40:VAL:HG22	2:J:299:LEU:HD13	1.77	0.65
1:M:323:LYS:O	1:M:324:HIS:HB2	1.96	0.65
2:B:40:VAL:HG22	2:B:299:LEU:HD13	1.77	0.65
2:F:333:ARG:O	2:F:341:ALA:HB3	1.96	0.65
2:F:351:ILE:HG23	2:F:354:LEU:HD23	1.77	0.65
2:J:164:ALA:O	2:J:168:VAL:HG23	1.95	0.65
1:A:168:ASP:OD2	1:E:12:LYS:NZ	2.29	0.65
1:A:323:LYS:O	1:A:324:HIS:HB2	1.95	0.65
2:D:333:ARG:O	2:D:341:ALA:HB3	1.96	0.65
2:H:333:ARG:O	2:H:341:ALA:HB3	1.96	0.65
2:L:164:ALA:O	2:L:168:VAL:HG23	1.95	0.65
1:G:187:MET:HE2	2:H:156:SER:HB3	1.78	0.65
2:J:322:VAL:CG1	2:J:350:VAL:HG13	2.24	0.65
2:P:333:ARG:O	2:P:341:ALA:HB3	1.96	0.65
2:N:322:VAL:CG1	2:N:350:VAL:HG13	2.24	0.65
2:J:333:ARG:O	2:J:341:ALA:HB3	1.96	0.64
2:N:333:ARG:O	2:N:341:ALA:HB3	1.96	0.64
2:P:150:CYS:CB	2:P:151:PRO:HD2	2.25	0.64
1:A:171:LYS:NZ	1:E:72:ARG:CZ	2.50	0.64
1:C:323:LYS:O	1:C:324:HIS:HB2	1.96	0.64
1:I:323:LYS:O	1:I:324:HIS:HB2	1.96	0.64
2:L:291:ASP:OD2	2:L:343:THR:HB	1.97	0.64
1:O:119:ARG:CG	2:P:125:THR:HG22	2.25	0.64
1:E:277:GLY:HA2	4:E:2003:AMP:C8	2.31	0.64
2:F:97:ARG:HA	2:F:97:ARG:HE	1.62	0.64
2:P:322:VAL:CG1	2:P:350:VAL:HG13	2.24	0.64
1:A:119:ARG:CG	2:B:125:THR:HG22	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:12:LYS:CE	1:G:168:ASP:OD2	2.44	0.64
2:L:333:ARG:O	2:L:341:ALA:HB3	1.96	0.64
2:P:291:ASP:OD2	2:P:343:THR:HB	1.97	0.64
2:H:291:ASP:OD2	2:H:343:THR:HB	1.97	0.64
2:J:97:ARG:HA	2:J:97:ARG:HE	1.62	0.64
2:J:291:ASP:OD2	2:J:343:THR:HB	1.97	0.64
1:K:14:TYR:CE2	1:O:165:PHE:HD1	2.16	0.64
2:D:97:ARG:HA	2:D:97:ARG:HE	1.62	0.64
2:L:150:CYS:CB	2:L:151:PRO:HD2	2.25	0.64
2:P:97:ARG:HA	2:P:97:ARG:HE	1.62	0.64
1:A:181:VAL:HB	1:A:235:THR:HG22	1.80	0.64
1:C:12:LYS:HE3	1:G:168:ASP:CG	2.23	0.64
2:L:97:ARG:HA	2:L:97:ARG:HE	1.62	0.64
2:N:97:ARG:HA	2:N:97:ARG:HE	1.62	0.64
2:N:291:ASP:OD2	2:N:343:THR:HB	1.97	0.64
2:B:97:ARG:HA	2:B:97:ARG:HE	1.62	0.64
2:F:291:ASP:OD2	2:F:343:THR:HB	1.97	0.64
1:K:72:ARG:HH22	1:O:171:LYS:HZ1	1.46	0.64
1:E:181:VAL:HB	1:E:235:THR:HG22	1.80	0.63
1:G:181:VAL:HB	1:G:235:THR:HG22	1.80	0.63
2:N:150:CYS:CB	2:N:151:PRO:HD2	2.25	0.63
2:P:67:THR:CG2	2:P:96:HIS:N	2.61	0.63
1:I:181:VAL:HB	1:I:235:THR:HG22	1.80	0.63
2:J:67:THR:CG2	2:J:96:HIS:N	2.62	0.63
2:L:322:VAL:CG1	2:L:350:VAL:HG13	2.24	0.63
2:H:97:ARG:HA	2:H:97:ARG:HE	1.62	0.63
2:L:67:THR:CG2	2:L:96:HIS:N	2.61	0.63
2:J:43:ILE:HD13	2:J:350:VAL:HG11	1.81	0.63
2:N:67:THR:CG2	2:N:96:HIS:N	2.62	0.63
2:P:60:PRO:HG3	2:P:99:LEU:HD13	1.81	0.63
1:E:315:VAL:O	1:E:319:ILE:HG23	1.99	0.63
1:M:315:VAL:O	1:M:319:ILE:HG23	1.99	0.63
2:D:58:VAL:HG12	2:D:69:ILE:CD1	2.29	0.63
2:B:58:VAL:HG12	2:B:69:ILE:CD1	2.29	0.63
2:H:67:THR:CG2	2:H:96:HIS:N	2.62	0.63
2:N:58:VAL:HG12	2:N:69:ILE:CD1	2.29	0.63
2:N:60:PRO:HG3	2:N:99:LEU:HD13	1.81	0.63
1:O:181:VAL:HB	1:O:235:THR:HG22	1.80	0.62
2:F:43:ILE:HD13	2:F:350:VAL:HG11	1.81	0.62
2:L:43:ILE:HD13	2:L:350:VAL:HG11	1.81	0.62
2:F:60:PRO:HG3	2:F:99:LEU:HD13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:72:ARG:NH1	1:O:171:LYS:HZ2	1.97	0.62
1:K:315:VAL:O	1:K:319:ILE:HG23	1.99	0.62
1:O:315:VAL:O	1:O:319:ILE:HG23	1.99	0.62
1:I:315:VAL:O	1:I:319:ILE:HG23	1.99	0.62
2:P:334:THR:HG22	2:P:335:GLY:H	1.64	0.62
2:B:67:THR:CG2	2:B:96:HIS:N	2.62	0.62
1:C:315:VAL:O	1:C:319:ILE:HG23	1.99	0.62
1:K:277:GLY:CA	4:K:2006:AMP:N7	2.62	0.62
1:O:195:ARG:HG2	1:O:195:ARG:NH1	2.07	0.62
2:B:60:PRO:HG3	2:B:99:LEU:HD13	1.81	0.62
1:K:181:VAL:HB	1:K:235:THR:HG22	1.80	0.62
2:L:60:PRO:HG3	2:L:99:LEU:HD13	1.81	0.62
1:O:187:MET:HE3	2:P:141:GLU:O	1.99	0.62
2:B:43:ILE:HD13	2:B:350:VAL:HG11	1.81	0.62
2:D:43:ILE:HD13	2:D:350:VAL:HG11	1.81	0.62
2:F:67:THR:CG2	2:F:96:HIS:N	2.62	0.62
2:J:58:VAL:HG12	2:J:69:ILE:CD1	2.29	0.62
1:M:181:VAL:HB	1:M:235:THR:HG22	1.80	0.62
1:A:64:TYR:CE2	2:P:63:VAL:HG22	2.34	0.62
1:A:315:VAL:O	1:A:319:ILE:HG23	1.99	0.62
1:C:181:VAL:HB	1:C:235:THR:HG22	1.80	0.62
1:I:92:SER:OG	3:I:1005:FLC:OG2	2.15	0.62
2:J:60:PRO:HG3	2:J:99:LEU:HD13	1.81	0.62
2:P:43:ILE:HD13	2:P:350:VAL:HG11	1.81	0.62
1:A:160:GLU:CD	1:E:8:ARG:NH2	2.58	0.61
2:D:67:THR:CG2	2:D:96:HIS:N	2.62	0.61
2:L:58:VAL:HG12	2:L:69:ILE:CD1	2.29	0.61
2:N:334:THR:HG22	2:N:335:GLY:H	1.65	0.61
1:C:119:ARG:HD2	2:D:125:THR:O	2.00	0.61
2:H:186:VAL:HG23	2:H:216:LEU:HD11	1.83	0.61
2:J:150:CYS:CB	2:J:151:PRO:HD2	2.25	0.61
2:D:60:PRO:HG3	2:D:99:LEU:HD13	1.81	0.61
2:D:334:THR:HG22	2:D:335:GLY:H	1.65	0.61
1:G:92:SER:OG	3:G:1004:FLC:OG2	2.17	0.61
2:H:60:PRO:HG3	2:H:99:LEU:HD13	1.81	0.61
1:I:307:TYR:O	1:I:311:ILE:HG23	2.01	0.61
1:A:307:TYR:O	1:A:311:ILE:HG23	2.01	0.61
2:F:334:THR:HG22	2:F:335:GLY:H	1.65	0.61
2:L:334:THR:HG22	2:L:335:GLY:H	1.65	0.61
1:O:307:TYR:O	1:O:311:ILE:HG23	2.01	0.61
2:D:186:VAL:HG23	2:D:216:LEU:HD11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:151:LEU:HD23	2:N:157:ILE:HG12	1.82	0.61
1:M:307:TYR:O	1:M:311:ILE:HG23	2.00	0.61
2:F:58:VAL:HG12	2:F:69:ILE:CD1	2.29	0.61
1:A:168:ASP:CG	1:E:12:LYS:HE3	2.25	0.61
2:B:334:THR:HG22	2:B:335:GLY:H	1.65	0.61
1:G:315:VAL:O	1:G:319:ILE:HG23	1.99	0.61
1:I:168:ASP:OD2	1:M:12:LYS:CE	2.47	0.61
1:K:115:GLY:HA3	1:K:320:ALA:HA	1.83	0.61
2:F:186:VAL:HG23	2:F:216:LEU:HD11	1.83	0.61
1:I:115:GLY:HA3	1:I:320:ALA:HA	1.83	0.61
2:J:186:VAL:HG23	2:J:216:LEU:HD11	1.83	0.61
1:K:307:TYR:O	1:K:311:ILE:HG23	2.00	0.61
2:N:36:ILE:HG12	2:N:295:PRO:HA	1.83	0.61
2:B:186:VAL:HG23	2:B:216:LEU:HD11	1.83	0.61
1:G:115:GLY:HA3	1:G:320:ALA:HA	1.83	0.61
1:G:307:TYR:O	1:G:311:ILE:HG23	2.01	0.61
2:P:12:THR:HB	2:P:81:LEU:HD12	1.83	0.61
1:K:277:GLY:CA	4:K:2006:AMP:H8	2.02	0.60
1:A:115:GLY:HA3	1:A:320:ALA:HA	1.83	0.60
1:A:171:LYS:HZ1	1:E:72:ARG:HH22	1.48	0.60
2:H:43:ILE:HD13	2:H:350:VAL:HG11	1.81	0.60
2:H:306:LEU:HD12	2:H:309:MET:CE	2.31	0.60
2:J:334:THR:HG22	2:J:335:GLY:H	1.65	0.60
1:M:115:GLY:HA3	1:M:320:ALA:HA	1.83	0.60
2:B:306:LEU:HD12	2:B:309:MET:CE	2.32	0.60
1:C:35:SER:O	1:C:39:ILE:HG13	2.01	0.60
2:D:306:LEU:HD12	2:D:309:MET:CE	2.31	0.60
2:P:58:VAL:HG12	2:P:69:ILE:CD1	2.29	0.60
1:C:307:TYR:O	1:C:311:ILE:HG23	2.01	0.60
1:G:35:SER:O	1:G:39:ILE:HG13	2.02	0.60
1:M:35:SER:O	1:M:39:ILE:HG13	2.02	0.60
2:N:67:THR:HG23	2:N:97:ARG:HB3	1.83	0.60
2:B:12:THR:HB	2:B:81:LEU:HD12	1.83	0.60
2:B:351:ILE:HA	2:B:354:LEU:HB2	1.84	0.60
2:F:351:ILE:HA	2:F:354:LEU:HB2	1.84	0.60
2:H:351:ILE:HA	2:H:354:LEU:HB2	1.84	0.60
2:N:306:LEU:HD12	2:N:309:MET:CE	2.31	0.60
2:P:36:ILE:HG12	2:P:295:PRO:HA	1.83	0.60
2:D:36:ILE:HG12	2:D:295:PRO:HA	1.83	0.60
1:E:245:ASN:ND2	2:F:222:ASP:HA	2.16	0.60
1:I:35:SER:O	1:I:39:ILE:HG13	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:36:ILE:HG12	2:J:295:PRO:HA	1.83	0.60
2:J:306:LEU:HD12	2:J:309:MET:CE	2.32	0.60
2:L:351:ILE:HA	2:L:354:LEU:HB2	1.84	0.60
2:N:186:VAL:HG23	2:N:216:LEU:HD11	1.83	0.60
2:P:295:PRO:HB2	2:P:299:LEU:HD22	1.84	0.60
2:P:306:LEU:HD12	2:P:309:MET:CE	2.32	0.60
1:E:119:ARG:HG2	2:F:125:THR:HG22	1.84	0.60
1:E:307:TYR:O	1:E:311:ILE:HG23	2.00	0.60
1:K:300:ASN:OD1	1:K:305:ASN:HB2	2.02	0.60
1:E:151:LEU:CD1	2:H:147:HIS:CD2	2.84	0.60
2:F:306:LEU:HD12	2:F:309:MET:CE	2.32	0.60
2:H:58:VAL:HG12	2:H:69:ILE:CD1	2.29	0.60
2:H:295:PRO:HB2	2:H:299:LEU:HD22	1.84	0.60
2:J:351:ILE:HA	2:J:354:LEU:HB2	1.84	0.60
2:N:43:ILE:HD13	2:N:350:VAL:HG11	1.81	0.60
2:D:351:ILE:HA	2:D:354:LEU:HB2	1.83	0.60
1:E:115:GLY:HA3	1:E:320:ALA:HA	1.83	0.60
2:F:36:ILE:HG12	2:F:295:PRO:HA	1.83	0.60
2:F:149:VAL:HG21	2:H:149:VAL:HG21	1.83	0.60
2:L:12:THR:HB	2:L:81:LEU:HD12	1.83	0.60
1:G:197:ILE:O	1:G:201:ILE:HG23	2.02	0.60
1:I:300:ASN:OD1	1:I:305:ASN:HB2	2.02	0.60
1:K:35:SER:O	1:K:39:ILE:HG13	2.02	0.60
1:M:300:ASN:OD1	1:M:305:ASN:HB2	2.02	0.60
1:O:115:GLY:HA3	1:O:320:ALA:HA	1.83	0.60
2:P:186:VAL:HG23	2:P:216:LEU:HD11	1.83	0.60
1:A:197:ILE:O	1:A:201:ILE:HG23	2.02	0.59
1:C:115:GLY:HA3	1:C:320:ALA:HA	1.83	0.59
1:E:300:ASN:OD1	1:E:305:ASN:HB2	2.02	0.59
2:H:314:HIS:O	2:H:318:ILE:HG13	2.02	0.59
2:J:12:THR:HB	2:J:81:LEU:HD12	1.83	0.59
2:L:306:LEU:HD12	2:L:309:MET:CE	2.32	0.59
2:L:314:HIS:O	2:L:318:ILE:HG13	2.02	0.59
2:P:44:PHE:CD2	2:P:49:VAL:HG21	2.37	0.59
2:B:295:PRO:HB2	2:B:299:LEU:HD22	1.84	0.59
1:G:92:SER:CB	3:G:1004:FLC:OG2	2.50	0.59
2:J:155:GLN:NE2	2:L:155:GLN:OE1	2.33	0.59
2:L:67:THR:HG23	2:L:97:ARG:HB3	1.84	0.59
2:L:186:VAL:HG23	2:L:216:LEU:HD11	1.83	0.59
2:N:12:THR:HB	2:N:81:LEU:HD12	1.83	0.59
2:N:314:HIS:O	2:N:318:ILE:HG13	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:300:ASN:OD1	1:A:305:ASN:HB2	2.02	0.59
1:C:197:ILE:O	1:C:201:ILE:HG23	2.02	0.59
2:D:12:THR:HB	2:D:81:LEU:HD12	1.83	0.59
2:D:44:PHE:CD2	2:D:49:VAL:HG21	2.37	0.59
2:F:314:HIS:O	2:F:318:ILE:HG13	2.02	0.59
2:B:67:THR:HG23	2:B:97:ARG:HB3	1.83	0.59
2:B:322:VAL:O	2:B:324:SER:N	2.36	0.59
1:E:35:SER:O	1:E:39:ILE:HG13	2.02	0.59
2:F:67:THR:HG23	2:F:97:ARG:HB3	1.83	0.59
2:F:322:VAL:O	2:F:324:SER:N	2.36	0.59
2:H:12:THR:HB	2:H:81:LEU:HD12	1.83	0.59
1:M:83:THR:OG1	3:M:1007:FLC:CGC	2.49	0.59
2:N:253:LEU:HD23	2:N:253:LEU:C	2.28	0.59
2:N:322:VAL:O	2:N:324:SER:N	2.36	0.59
1:O:300:ASN:OD1	1:O:305:ASN:HB2	2.02	0.59
2:B:44:PHE:CD2	2:B:49:VAL:HG21	2.38	0.59
1:C:300:ASN:OD1	1:C:305:ASN:HB2	2.02	0.59
1:I:153:VAL:HG11	2:L:149:VAL:O	2.02	0.59
2:L:133:LEU:HD23	2:L:133:LEU:C	2.28	0.59
2:D:314:HIS:O	2:D:318:ILE:HG13	2.02	0.59
1:E:197:ILE:O	1:E:201:ILE:HG23	2.02	0.59
1:I:168:ASP:CG	1:M:12:LYS:HE3	2.28	0.59
2:J:253:LEU:C	2:J:253:LEU:HD23	2.28	0.59
2:N:44:PHE:CD2	2:N:49:VAL:HG21	2.38	0.59
2:P:351:ILE:HA	2:P:354:LEU:HB2	1.84	0.59
1:A:183:LYS:HE2	2:B:142:TYR:OH	2.02	0.59
2:D:253:LEU:HD23	2:D:253:LEU:C	2.28	0.59
2:F:12:THR:HB	2:F:81:LEU:HD12	1.83	0.59
2:F:44:PHE:CD2	2:F:49:VAL:HG21	2.37	0.59
2:H:36:ILE:HG12	2:H:295:PRO:HA	1.83	0.59
2:J:44:PHE:CD2	2:J:49:VAL:HG21	2.37	0.59
2:L:322:VAL:O	2:L:324:SER:N	2.36	0.59
2:L:323:LEU:HD23	2:L:323:LEU:H	1.68	0.59
1:M:183:LYS:HE2	2:N:142:TYR:OH	2.03	0.59
1:M:197:ILE:O	1:M:201:ILE:HG23	2.02	0.59
2:N:295:PRO:HB2	2:N:299:LEU:HD22	1.84	0.59
2:D:322:VAL:O	2:D:324:SER:N	2.36	0.59
1:G:300:ASN:OD1	1:G:305:ASN:HB2	2.02	0.59
2:H:334:THR:HG22	2:H:335:GLY:H	1.65	0.59
2:J:322:VAL:O	2:J:324:SER:N	2.36	0.59
2:L:36:ILE:HG12	2:L:295:PRO:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:351:ILE:HA	2:N:354:LEU:HB2	1.84	0.59
1:O:183:LYS:HE2	2:P:142:TYR:OH	2.03	0.59
2:F:295:PRO:HB2	2:F:299:LEU:HD22	1.84	0.59
2:B:36:ILE:HG12	2:B:295:PRO:HA	1.83	0.58
2:D:67:THR:HG23	2:D:97:ARG:HB3	1.83	0.58
2:H:133:LEU:C	2:H:133:LEU:HD23	2.28	0.58
2:L:44:PHE:CD2	2:L:49:VAL:HG21	2.37	0.58
2:P:322:VAL:O	2:P:324:SER:N	2.36	0.58
1:C:151:LEU:HD23	2:D:157:ILE:HG12	1.85	0.58
2:D:133:LEU:HD23	2:D:133:LEU:C	2.28	0.58
2:F:189:LYS:HB2	2:F:221:ILE:HD11	1.86	0.58
1:I:338:PHE:O	1:I:342:ILE:HG12	2.04	0.58
2:J:133:LEU:HD23	2:J:133:LEU:C	2.28	0.58
2:L:253:LEU:HD23	2:L:253:LEU:C	2.28	0.58
1:O:35:SER:O	1:O:39:ILE:HG13	2.02	0.58
2:P:67:THR:HG23	2:P:97:ARG:HB3	1.84	0.58
1:A:35:SER:O	1:A:39:ILE:HG13	2.02	0.58
2:D:189:LYS:HB2	2:D:221:ILE:HD11	1.85	0.58
1:E:338:PHE:O	1:E:342:ILE:HG12	2.04	0.58
2:F:133:LEU:HD23	2:F:133:LEU:C	2.28	0.58
2:J:295:PRO:HB2	2:J:299:LEU:HD22	1.84	0.58
2:B:253:LEU:C	2:B:253:LEU:HD23	2.28	0.58
1:C:338:PHE:O	1:C:342:ILE:HG12	2.04	0.58
2:D:295:PRO:HB2	2:D:299:LEU:HD22	1.84	0.58
1:K:338:PHE:O	1:K:342:ILE:HG12	2.04	0.58
1:M:338:PHE:O	1:M:342:ILE:HG12	2.03	0.58
2:P:253:LEU:HD23	2:P:253:LEU:C	2.28	0.58
2:P:314:HIS:O	2:P:318:ILE:HG13	2.02	0.58
2:H:253:LEU:HD23	2:H:253:LEU:C	2.28	0.58
2:J:314:HIS:O	2:J:318:ILE:HG13	2.02	0.58
2:N:64:ASN:C	2:N:66:LEU:H	2.12	0.58
2:N:189:LYS:HB2	2:N:221:ILE:HD11	1.85	0.58
2:B:64:ASN:C	2:B:66:LEU:H	2.12	0.58
2:F:253:LEU:HD23	2:F:253:LEU:C	2.28	0.58
1:O:338:PHE:O	1:O:342:ILE:HG12	2.04	0.58
2:B:133:LEU:HD23	2:B:133:LEU:C	2.28	0.58
2:B:314:HIS:O	2:B:318:ILE:HG13	2.03	0.58
1:G:338:PHE:O	1:G:342:ILE:HG12	2.04	0.58
2:H:44:PHE:CD2	2:H:49:VAL:HG21	2.38	0.58
2:H:64:ASN:C	2:H:66:LEU:H	2.12	0.58
2:J:67:THR:HG23	2:J:97:ARG:HB3	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:197:ILE:O	1:K:201:ILE:HG23	2.02	0.58
1:O:197:ILE:O	1:O:201:ILE:HG23	2.02	0.58
1:A:338:PHE:O	1:A:342:ILE:HG12	2.04	0.58
2:D:187:VAL:HB	2:D:242:CYS:HB3	1.86	0.58
2:F:64:ASN:C	2:F:66:LEU:H	2.12	0.58
2:H:67:THR:HG23	2:H:97:ARG:HB3	1.83	0.58
2:H:187:VAL:HB	2:H:242:CYS:HB3	1.86	0.58
1:I:197:ILE:O	1:I:201:ILE:HG23	2.02	0.58
2:P:323:LEU:HD23	2:P:323:LEU:H	1.68	0.58
2:B:101:LEU:HD23	2:B:104:ARG:HH12	1.69	0.58
2:B:187:VAL:HB	2:B:242:CYS:HB3	1.86	0.58
2:B:189:LYS:HB2	2:B:221:ILE:HD11	1.85	0.58
1:C:72:ARG:HH22	1:G:171:LYS:NZ	2.01	0.58
1:E:93:LEU:HA	1:E:96:ALA:CB	2.34	0.58
2:P:133:LEU:C	2:P:133:LEU:HD23	2.28	0.58
1:G:80:LEU:HD11	1:G:274:ARG:HG3	1.86	0.57
2:J:187:VAL:HB	2:J:242:CYS:HB3	1.86	0.57
1:M:119:ARG:CG	2:N:125:THR:HG22	2.32	0.57
2:P:64:ASN:C	2:P:66:LEU:H	2.11	0.57
2:H:322:VAL:O	2:H:324:SER:N	2.36	0.57
2:N:133:LEU:HD23	2:N:133:LEU:C	2.28	0.57
1:A:151:LEU:HD23	2:B:157:ILE:HG12	1.85	0.57
2:H:101:LEU:HD23	2:H:104:ARG:HH12	1.69	0.57
1:K:93:LEU:HA	1:K:96:ALA:CB	2.34	0.57
2:L:295:PRO:HB2	2:L:299:LEU:HD22	1.84	0.57
2:P:187:VAL:HB	2:P:242:CYS:HB3	1.86	0.57
1:A:80:LEU:HD11	1:A:274:ARG:HG3	1.86	0.57
1:E:183:LYS:HE2	2:F:142:TYR:OH	2.05	0.57
2:H:189:LYS:HB2	2:H:221:ILE:HD11	1.85	0.57
2:L:23:THR:O	2:L:80:ASN:HB3	2.05	0.57
2:L:51:ILE:HD11	2:L:309:MET:HE1	1.87	0.57
2:L:64:ASN:C	2:L:66:LEU:H	2.12	0.57
2:L:189:LYS:HB2	2:L:221:ILE:HD11	1.85	0.57
2:N:101:LEU:HD23	2:N:104:ARG:HH12	1.70	0.57
2:N:323:LEU:HD23	2:N:323:LEU:H	1.68	0.57
2:B:323:LEU:HD23	2:B:323:LEU:H	1.68	0.57
2:D:101:LEU:HD23	2:D:104:ARG:HH12	1.69	0.57
2:F:147:HIS:CD2	1:G:151:LEU:CD1	2.87	0.57
2:J:64:ASN:C	2:J:66:LEU:H	2.12	0.57
2:J:323:LEU:HD23	2:J:323:LEU:H	1.68	0.57
2:L:187:VAL:HB	2:L:242:CYS:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:23:THR:O	2:B:80:ASN:HB3	2.05	0.57
2:F:51:ILE:HD11	2:F:309:MET:HE1	1.87	0.57
2:H:23:THR:O	2:H:80:ASN:HB3	2.05	0.57
2:J:101:LEU:HD23	2:J:104:ARG:HH12	1.70	0.57
2:N:68:THR:HG22	2:N:69:ILE:N	2.20	0.57
2:P:61:ILE:HG22	2:P:62:PHE:N	2.19	0.57
1:C:80:LEU:HD11	1:C:274:ARG:HG3	1.86	0.57
2:D:23:THR:O	2:D:80:ASN:HB3	2.05	0.57
2:D:323:LEU:HD23	2:D:323:LEU:H	1.68	0.57
2:F:68:THR:HG22	2:F:69:ILE:N	2.20	0.57
2:F:187:VAL:HB	2:F:242:CYS:HB3	1.86	0.57
2:L:189:LYS:HD3	2:L:221:ILE:HD11	1.87	0.57
1:M:80:LEU:HD11	1:M:274:ARG:HG3	1.87	0.57
1:M:255:GLY:HA3	4:M:2007:AMP:N1	2.20	0.57
2:D:64:ASN:C	2:D:66:LEU:H	2.12	0.57
2:F:189:LYS:HD3	2:F:221:ILE:HD11	1.87	0.57
2:J:23:THR:O	2:J:80:ASN:HB3	2.05	0.57
2:P:23:THR:O	2:P:80:ASN:HB3	2.05	0.57
1:C:83:THR:OG1	3:C:1002:FLC:OG2	2.22	0.57
1:G:129:ARG:CZ	1:G:274:ARG:HH12	2.18	0.57
2:N:51:ILE:HD11	2:N:309:MET:HE1	1.87	0.57
1:O:129:ARG:CZ	1:O:274:ARG:HH12	2.18	0.57
2:P:189:LYS:HB2	2:P:221:ILE:HD11	1.85	0.57
1:A:165:PHE:HA	1:E:14:TYR:OH	2.05	0.57
2:B:68:THR:HG22	2:B:69:ILE:N	2.20	0.57
1:C:14:TYR:OH	1:G:165:PHE:HA	2.04	0.57
2:H:189:LYS:HD3	2:H:221:ILE:HD11	1.87	0.57
1:I:93:LEU:HA	1:I:96:ALA:CB	2.34	0.57
2:J:189:LYS:HB2	2:J:221:ILE:HD11	1.85	0.57
2:L:101:LEU:HD23	2:L:104:ARG:HH12	1.69	0.57
1:A:164:ARG:HH22	1:E:8:ARG:NH2	2.03	0.56
2:F:323:LEU:HD23	2:F:323:LEU:H	1.68	0.56
2:H:51:ILE:HD11	2:H:309:MET:HE1	1.87	0.56
2:J:51:ILE:HD11	2:J:309:MET:HE1	1.87	0.56
2:N:187:VAL:HB	2:N:242:CYS:HB3	1.86	0.56
2:P:51:ILE:HD11	2:P:309:MET:HE1	1.87	0.56
2:D:51:ILE:HD11	2:D:309:MET:HE1	1.87	0.56
2:D:285:PRO:HG3	2:P:286:ASP:CB	2.35	0.56
1:E:129:ARG:CZ	1:E:274:ARG:HH12	2.18	0.56
1:I:263:GLY:O	1:M:15:GLY:N	2.31	0.56
2:L:68:THR:HG22	2:L:69:ILE:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:129:ARG:CZ	1:M:274:ARG:HH12	2.18	0.56
1:O:80:LEU:HD11	1:O:274:ARG:HG3	1.87	0.56
2:P:101:LEU:HD23	2:P:104:ARG:HH12	1.69	0.56
2:B:16:ASN:O	2:B:19:THR:O	2.24	0.56
2:B:51:ILE:HD11	2:B:309:MET:HE1	1.87	0.56
2:H:181:ARG:HD3	2:H:238:ALA:N	2.20	0.56
1:I:45:ILE:HG12	1:I:307:TYR:CD2	2.41	0.56
1:I:151:LEU:HD11	2:L:147:HIS:CD2	2.40	0.56
1:I:171:LYS:NZ	1:M:50:GLU:OE1	2.36	0.56
2:J:68:THR:HG22	2:J:69:ILE:N	2.20	0.56
1:K:45:ILE:HG12	1:K:307:TYR:CD2	2.41	0.56
2:L:181:ARG:HD3	2:L:238:ALA:N	2.21	0.56
2:N:23:THR:O	2:N:80:ASN:HB3	2.05	0.56
2:N:181:ARG:HD3	2:N:238:ALA:N	2.21	0.56
2:N:189:LYS:HD3	2:N:221:ILE:HD11	1.87	0.56
1:O:183:LYS:HE3	1:O:186:ILE:HD12	1.87	0.56
2:P:16:ASN:O	2:P:19:THR:O	2.24	0.56
2:P:181:ARG:HD3	2:P:238:ALA:N	2.21	0.56
2:P:189:LYS:HD3	2:P:221:ILE:HD11	1.87	0.56
2:B:189:LYS:HD3	2:B:221:ILE:HD11	1.87	0.56
1:C:210:ASP:OD2	2:P:42:LYS:NZ	2.26	0.56
1:G:45:ILE:HG12	1:G:307:TYR:CD2	2.41	0.56
2:J:189:LYS:HD3	2:J:221:ILE:HD11	1.87	0.56
2:N:16:ASN:O	2:N:19:THR:O	2.24	0.56
1:A:183:LYS:HE3	1:A:186:ILE:HD12	1.87	0.56
2:D:16:ASN:O	2:D:19:THR:O	2.24	0.56
2:F:181:ARG:HD3	2:F:238:ALA:N	2.21	0.56
1:I:144:VAL:HB	1:I:145:PRO:HD2	1.88	0.56
1:K:14:TYR:HH	1:O:165:PHE:HA	1.71	0.56
1:K:129:ARG:CZ	1:K:274:ARG:HH12	2.18	0.56
2:P:68:THR:HG22	2:P:69:ILE:N	2.20	0.56
1:C:45:ILE:HG12	1:C:307:TYR:CD2	2.41	0.56
1:C:210:ASP:CG	2:P:42:LYS:HZ1	2.10	0.56
1:G:183:LYS:HE3	1:G:186:ILE:HD12	1.87	0.56
1:I:80:LEU:HD11	1:I:274:ARG:HG3	1.87	0.56
2:L:69:ILE:HD12	2:L:70:PRO:CD	2.34	0.56
1:M:45:ILE:HG12	1:M:307:TYR:CD2	2.41	0.56
1:C:183:LYS:HE3	1:C:186:ILE:HD12	1.87	0.56
1:E:183:LYS:HE3	1:E:186:ILE:HD12	1.87	0.56
2:F:23:THR:O	2:F:80:ASN:HB3	2.05	0.56
1:K:80:LEU:HD11	1:K:274:ARG:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:144:VAL:HB	1:O:145:PRO:HD2	1.88	0.56
1:C:183:LYS:HE2	2:D:142:TYR:OH	2.06	0.56
1:E:45:ILE:HG12	1:E:307:TYR:CD2	2.41	0.56
1:O:93:LEU:HA	1:O:96:ALA:CB	2.34	0.56
2:P:14:LYS:HD3	2:P:14:LYS:O	2.06	0.56
1:A:129:ARG:CZ	1:A:274:ARG:HH12	2.18	0.56
2:D:68:THR:HG22	2:D:69:ILE:N	2.20	0.56
2:F:101:LEU:HD23	2:F:104:ARG:HH12	1.70	0.56
2:H:323:LEU:HD23	2:H:323:LEU:H	1.68	0.56
1:I:314:ALA:CB	1:I:346:LEU:HD13	2.35	0.56
2:J:306:LEU:HB3	2:J:315:ALA:HB2	1.88	0.56
1:K:144:VAL:HB	1:K:145:PRO:HD2	1.88	0.56
1:M:195:ARG:HH11	1:M:195:ARG:CB	2.19	0.56
2:N:61:ILE:HG22	2:N:62:PHE:N	2.19	0.56
1:O:274:ARG:NH1	3:O:1008:FLC:OB1	2.39	0.56
1:A:187:MET:HE3	2:B:141:GLU:O	2.06	0.56
1:A:301:HIS:O	1:E:17:ARG:NH1	2.39	0.56
2:B:181:ARG:HD3	2:B:238:ALA:N	2.21	0.56
2:B:326:ILE:HG12	2:B:350:VAL:HG23	1.88	0.56
2:D:14:LYS:O	2:D:14:LYS:HD3	2.06	0.56
2:H:14:LYS:O	2:H:14:LYS:HD3	2.06	0.56
2:H:68:THR:HG22	2:H:69:ILE:N	2.20	0.56
2:J:274:ILE:HG22	2:J:275:SER:H	1.71	0.56
2:L:14:LYS:O	2:L:14:LYS:HD3	2.06	0.56
1:M:183:LYS:HE3	1:M:186:ILE:HD12	1.87	0.56
1:A:52:ILE:CD1	1:A:66:ALA:HA	2.36	0.55
2:B:14:LYS:O	2:B:14:LYS:HD3	2.06	0.55
1:C:8:ARG:NH2	1:G:160:GLU:OE1	2.38	0.55
1:C:144:VAL:HB	1:C:145:PRO:HD2	1.88	0.55
2:F:326:ILE:HG12	2:F:350:VAL:HG23	1.88	0.55
2:H:16:ASN:O	2:H:19:THR:O	2.24	0.55
1:I:52:ILE:CD1	1:I:66:ALA:HA	2.36	0.55
2:J:61:ILE:HG22	2:J:62:PHE:N	2.19	0.55
2:D:17:PRO:HB2	2:J:62:PHE:HD2	1.72	0.55
2:F:16:ASN:O	2:F:19:THR:O	2.24	0.55
1:I:254:PRO:HG3	2:J:226:LEU:HD11	1.87	0.55
1:K:314:ALA:CB	1:K:346:LEU:HD13	2.35	0.55
2:L:306:LEU:HB3	2:L:315:ALA:HB2	1.88	0.55
2:D:181:ARG:HD3	2:D:238:ALA:N	2.21	0.55
2:D:189:LYS:HD3	2:D:221:ILE:HD11	1.87	0.55
1:G:195:ARG:HH11	1:G:195:ARG:CB	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:306:LEU:HB3	2:H:315:ALA:HB2	1.88	0.55
1:I:129:ARG:CZ	1:I:274:ARG:HH12	2.18	0.55
1:I:183:LYS:HE3	1:I:186:ILE:HD12	1.87	0.55
2:J:181:ARG:HD3	2:J:238:ALA:N	2.21	0.55
1:C:129:ARG:CZ	1:C:274:ARG:HH12	2.18	0.55
1:E:52:ILE:CD1	1:E:66:ALA:HA	2.36	0.55
1:E:314:ALA:CB	1:E:346:LEU:HD13	2.35	0.55
2:F:306:LEU:HB3	2:F:315:ALA:HB2	1.88	0.55
1:O:45:ILE:HG12	1:O:307:TYR:CD2	2.41	0.55
1:O:274:ARG:HG2	3:O:1008:FLC:OB1	2.06	0.55
1:A:45:ILE:HG12	1:A:307:TYR:CD2	2.41	0.55
1:A:165:PHE:HD1	1:E:14:TYR:CE2	2.25	0.55
2:B:97:ARG:O	2:B:98:SER:C	2.50	0.55
2:B:274:ILE:HG22	2:B:275:SER:H	1.71	0.55
1:E:187:MET:HE3	2:F:141:GLU:O	2.06	0.55
2:F:14:LYS:O	2:F:14:LYS:HD3	2.06	0.55
1:G:52:ILE:CD1	1:G:66:ALA:HA	2.37	0.55
2:H:61:ILE:HG22	2:H:62:PHE:N	2.19	0.55
1:K:195:ARG:HH11	1:K:195:ARG:CB	2.19	0.55
2:L:97:ARG:O	2:L:98:SER:C	2.50	0.55
2:N:326:ILE:HG12	2:N:350:VAL:HG23	1.88	0.55
2:P:306:LEU:HB3	2:P:315:ALA:HB2	1.88	0.55
2:D:69:ILE:HD12	2:D:70:PRO:CD	2.34	0.55
2:D:97:ARG:O	2:D:98:SER:C	2.50	0.55
1:E:80:LEU:HD11	1:E:274:ARG:HG3	1.87	0.55
1:E:144:VAL:HB	1:E:145:PRO:HD2	1.88	0.55
1:G:144:VAL:HB	1:G:145:PRO:HD2	1.88	0.55
1:K:183:LYS:HE3	1:K:186:ILE:HD12	1.87	0.55
2:N:14:LYS:O	2:N:14:LYS:HD3	2.06	0.55
2:N:97:ARG:O	2:N:98:SER:C	2.50	0.55
1:C:93:LEU:HA	1:C:96:ALA:CB	2.34	0.55
1:C:195:ARG:HH11	1:C:195:ARG:CB	2.19	0.55
1:M:144:VAL:HB	1:M:145:PRO:HD2	1.88	0.55
1:I:160:GLU:OE1	1:M:8:ARG:NH2	2.40	0.55
1:I:195:ARG:HH11	1:I:195:ARG:CB	2.19	0.55
2:J:16:ASN:O	2:J:19:THR:O	2.24	0.55
1:M:52:ILE:CD1	1:M:66:ALA:HA	2.37	0.55
1:A:195:ARG:HH11	1:A:195:ARG:CB	2.19	0.55
1:C:187:MET:HE3	2:D:141:GLU:O	2.07	0.55
2:F:274:ILE:HG22	2:F:275:SER:H	1.71	0.55
2:L:16:ASN:O	2:L:19:THR:O	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:52:ILE:CD1	1:O:66:ALA:HA	2.37	0.55
2:N:306:LEU:HB3	2:N:315:ALA:HB2	1.88	0.55
1:E:32:ILE:CG1	1:E:288:PRO:HA	2.38	0.54
1:E:195:ARG:HH11	1:E:195:ARG:CB	2.19	0.54
2:H:326:ILE:HG22	2:H:353:ARG:HG3	1.90	0.54
1:M:314:ALA:CB	1:M:346:LEU:HD13	2.35	0.54
2:B:326:ILE:HG22	2:B:353:ARG:HG3	1.89	0.54
1:C:52:ILE:CD1	1:C:66:ALA:HA	2.36	0.54
2:D:61:ILE:HG22	2:D:62:PHE:N	2.20	0.54
2:D:306:LEU:HB3	2:D:315:ALA:HB2	1.88	0.54
1:E:241:THR:OG1	3:E:1003:FLC:OA2	2.16	0.54
1:G:224:VAL:HG11	2:H:257:LEU:HG	1.90	0.54
2:H:326:ILE:HG12	2:H:350:VAL:HG23	1.88	0.54
2:J:14:LYS:O	2:J:14:LYS:HD3	2.06	0.54
1:O:195:ARG:HH11	1:O:195:ARG:CB	2.19	0.54
2:P:97:ARG:O	2:P:98:SER:C	2.50	0.54
1:A:160:GLU:CD	1:E:8:ARG:HH21	2.15	0.54
1:C:32:ILE:CG1	1:C:288:PRO:HA	2.38	0.54
1:I:45:ILE:HG22	1:I:47:ILE:HG22	1.90	0.54
2:J:97:ARG:O	2:J:98:SER:C	2.50	0.54
2:L:326:ILE:HG12	2:L:350:VAL:HG23	1.88	0.54
1:M:45:ILE:HG22	1:M:47:ILE:HG22	1.90	0.54
2:P:274:ILE:HG22	2:P:275:SER:H	1.71	0.54
2:B:306:LEU:HB3	2:B:315:ALA:HB2	1.88	0.54
1:C:43:GLU:OE1	1:C:310:ARG:HD3	2.08	0.54
1:E:62:GLY:C	1:E:64:TYR:N	2.65	0.54
2:F:326:ILE:HG22	2:F:353:ARG:HG3	1.89	0.54
1:K:43:GLU:OE1	1:K:310:ARG:HD3	2.08	0.54
2:P:326:ILE:HG12	2:P:350:VAL:HG23	1.88	0.54
1:A:32:ILE:CG1	1:A:288:PRO:HA	2.38	0.54
1:C:314:ALA:CB	1:C:346:LEU:HD13	2.35	0.54
1:M:32:ILE:CG1	1:M:288:PRO:HA	2.38	0.54
1:E:45:ILE:HG22	1:E:47:ILE:HG22	1.90	0.54
2:H:97:ARG:O	2:H:98:SER:C	2.50	0.54
2:J:326:ILE:HG12	2:J:350:VAL:HG23	1.88	0.54
2:P:323:LEU:N	2:P:326:ILE:HG23	2.23	0.54
1:A:43:GLU:OE1	1:A:310:ARG:HD3	2.08	0.54
1:C:45:ILE:HG22	1:C:47:ILE:HG22	1.90	0.54
2:F:97:ARG:O	2:F:98:SER:C	2.50	0.54
1:G:32:ILE:CG1	1:G:288:PRO:HA	2.38	0.54
1:I:120:ILE:HG13	2:J:125:THR:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:323:LEU:N	2:J:326:ILE:HG23	2.23	0.54
1:M:93:LEU:HA	1:M:96:ALA:CB	2.35	0.54
1:O:32:ILE:CG1	1:O:288:PRO:HA	2.37	0.54
1:G:305:ASN:HA	1:G:308:ALA:CB	2.38	0.54
2:L:323:LEU:N	2:L:326:ILE:HG23	2.23	0.54
2:L:326:ILE:HG22	2:L:353:ARG:HG3	1.90	0.54
1:M:187:MET:HE3	2:N:141:GLU:O	2.08	0.54
2:N:274:ILE:HG22	2:N:275:SER:H	1.71	0.54
2:N:326:ILE:HG22	2:N:353:ARG:HG3	1.89	0.54
1:A:45:ILE:HG22	1:A:47:ILE:HG22	1.90	0.54
2:D:273:LYS:HG3	2:D:274:ILE:HD12	1.90	0.54
2:D:326:ILE:HG12	2:D:350:VAL:HG23	1.88	0.54
1:K:72:ARG:NH1	1:O:171:LYS:NZ	2.55	0.54
1:A:314:ALA:CB	1:A:346:LEU:HD13	2.35	0.54
2:H:323:LEU:N	2:H:326:ILE:HG23	2.23	0.54
2:J:326:ILE:HG12	2:J:350:VAL:CG2	2.38	0.54
1:O:45:ILE:HG22	1:O:47:ILE:HG22	1.90	0.54
1:A:93:LEU:HA	1:A:96:ALA:CB	2.34	0.53
1:K:52:ILE:CD1	1:K:66:ALA:HA	2.37	0.53
2:F:323:LEU:N	2:F:326:ILE:HG23	2.23	0.53
1:K:62:GLY:C	1:K:64:TYR:N	2.65	0.53
2:D:323:LEU:N	2:D:326:ILE:HG23	2.23	0.53
1:E:43:GLU:OE1	1:E:310:ARG:HD3	2.08	0.53
2:F:273:LYS:HG3	2:F:274:ILE:HD12	1.91	0.53
1:G:187:MET:HE3	2:H:141:GLU:O	2.08	0.53
1:G:314:ALA:CB	1:G:346:LEU:HD13	2.35	0.53
2:H:273:LYS:HG3	2:H:274:ILE:HD12	1.91	0.53
2:J:4:LYS:HE3	2:J:10:ARG:HH22	1.73	0.53
2:J:31:GLY:O	2:J:34:PRO:HD2	2.09	0.53
2:J:69:ILE:HD12	2:J:70:PRO:CD	2.34	0.53
2:L:273:LYS:HG3	2:L:274:ILE:HD12	1.90	0.53
2:N:323:LEU:N	2:N:326:ILE:HG23	2.23	0.53
1:A:144:VAL:HB	1:A:145:PRO:HD2	1.88	0.53
1:A:305:ASN:HA	1:A:308:ALA:CB	2.38	0.53
2:D:318:ILE:HA	2:D:322:VAL:CG2	2.38	0.53
2:H:31:GLY:O	2:H:34:PRO:HD2	2.09	0.53
1:O:62:GLY:C	1:O:64:TYR:N	2.65	0.53
1:O:106:ASN:HB3	1:O:129:ARG:HG2	1.91	0.53
2:P:318:ILE:HA	2:P:322:VAL:CG2	2.38	0.53
2:P:326:ILE:HG22	2:P:353:ARG:HG3	1.89	0.53
2:B:273:LYS:HG3	2:B:274:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:4:LYS:HE3	2:F:10:ARG:HH22	1.74	0.53
2:F:31:GLY:O	2:F:34:PRO:HD2	2.09	0.53
1:G:45:ILE:HG22	1:G:47:ILE:HG22	1.90	0.53
2:J:147:HIS:CD2	1:K:151:LEU:CD1	2.91	0.53
1:K:32:ILE:CG1	1:K:288:PRO:HA	2.38	0.53
2:P:4:LYS:HE3	2:P:10:ARG:HH22	1.74	0.53
1:C:106:ASN:HB3	1:C:129:ARG:HG2	1.91	0.53
2:D:4:LYS:HE3	2:D:10:ARG:HH22	1.74	0.53
2:D:326:ILE:HG22	2:D:353:ARG:HG3	1.90	0.53
2:F:69:ILE:HD12	2:F:70:PRO:CD	2.34	0.53
1:G:119:ARG:HG2	2:H:125:THR:HG22	1.90	0.53
1:O:43:GLU:OE1	1:O:310:ARG:HD3	2.08	0.53
2:D:165:SER:HG	2:D:200:PHE:HD1	1.55	0.53
2:F:326:ILE:HG12	2:F:350:VAL:CG2	2.39	0.53
2:F:330:PRO:HA	2:F:333:ARG:HG3	1.91	0.53
2:H:318:ILE:HA	2:H:322:VAL:CG2	2.37	0.53
1:I:32:ILE:CG1	1:I:288:PRO:HA	2.38	0.53
1:M:305:ASN:HA	1:M:308:ALA:CB	2.38	0.53
2:N:326:ILE:HG12	2:N:350:VAL:CG2	2.38	0.53
1:A:62:GLY:C	1:A:64:TYR:N	2.65	0.53
2:B:61:ILE:HG22	2:B:62:PHE:N	2.19	0.53
2:D:274:ILE:HG22	2:D:275:SER:H	1.71	0.53
2:H:274:ILE:HG22	2:H:275:SER:H	1.71	0.53
1:I:171:LYS:HZ2	1:M:72:ARG:CZ	2.21	0.53
2:L:31:GLY:O	2:L:34:PRO:HD2	2.09	0.53
1:M:43:GLU:OE1	1:M:310:ARG:HD3	2.08	0.53
1:O:305:ASN:HA	1:O:308:ALA:CB	2.38	0.53
2:P:31:GLY:O	2:P:34:PRO:HD2	2.09	0.53
2:B:323:LEU:N	2:B:326:ILE:HG23	2.23	0.53
1:C:206:TYR:N	1:C:207:PRO:HD3	2.24	0.53
2:F:97:ARG:CG	2:F:102:THR:HG23	2.39	0.53
1:G:206:TYR:N	1:G:207:PRO:HD3	2.24	0.53
2:J:326:ILE:C	2:J:328:SER:H	2.17	0.53
1:K:45:ILE:HG22	1:K:47:ILE:HG22	1.90	0.53
1:M:62:GLY:C	1:M:64:TYR:N	2.65	0.53
2:N:31:GLY:O	2:N:34:PRO:HD2	2.09	0.53
2:N:69:ILE:HD12	2:N:70:PRO:CD	2.34	0.53
2:B:31:GLY:O	2:B:34:PRO:HD2	2.09	0.53
2:B:326:ILE:HG12	2:B:350:VAL:CG2	2.39	0.53
1:C:305:ASN:HA	1:C:308:ALA:CB	2.38	0.53
1:E:27:GLY:C	1:E:29:GLY:H	2.17	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:254:PRO:HG3	2:F:226:LEU:HD11	1.91	0.53
1:G:43:GLU:OE1	1:G:310:ARG:HD3	2.08	0.53
1:G:62:GLY:C	1:G:64:TYR:N	2.65	0.53
1:G:93:LEU:HA	1:G:96:ALA:CB	2.34	0.53
2:J:318:ILE:HA	2:J:322:VAL:CG2	2.38	0.53
1:K:27:GLY:C	1:K:29:GLY:H	2.17	0.53
1:K:187:MET:HE3	2:L:141:GLU:O	2.09	0.53
2:N:330:PRO:HA	2:N:333:ARG:HG3	1.91	0.53
1:O:27:GLY:C	1:O:29:GLY:H	2.17	0.53
2:P:326:ILE:C	2:P:328:SER:H	2.17	0.53
1:E:206:TYR:N	1:E:207:PRO:HD3	2.25	0.52
2:H:326:ILE:HG12	2:H:350:VAL:CG2	2.39	0.52
2:H:330:PRO:HA	2:H:333:ARG:HG3	1.91	0.52
1:M:27:GLY:C	1:M:29:GLY:H	2.17	0.52
1:A:287:ASN:H	4:A:2001:AMP:HN62	1.57	0.52
2:B:4:LYS:HE3	2:B:10:ARG:HH22	1.74	0.52
2:H:97:ARG:CG	2:H:102:THR:HG23	2.39	0.52
1:I:43:GLU:OE1	1:I:310:ARG:HD3	2.08	0.52
2:J:273:LYS:HG3	2:J:274:ILE:HD12	1.91	0.52
1:M:106:ASN:HB3	1:M:129:ARG:HG2	1.91	0.52
2:D:31:GLY:O	2:D:34:PRO:HD2	2.09	0.52
1:G:106:ASN:HB3	1:G:129:ARG:HG2	1.91	0.52
1:I:206:TYR:N	1:I:207:PRO:HD3	2.25	0.52
2:L:118:SER:OG	2:L:129:VAL:HG13	2.10	0.52
2:N:273:LYS:HG3	2:N:274:ILE:HD12	1.91	0.52
1:A:106:ASN:HB3	1:A:129:ARG:HG2	1.91	0.52
1:A:206:TYR:N	1:A:207:PRO:HD3	2.25	0.52
2:F:326:ILE:C	2:F:328:SER:H	2.17	0.52
1:I:62:GLY:C	1:I:64:TYR:N	2.65	0.52
2:J:326:ILE:HG22	2:J:353:ARG:HG3	1.89	0.52
2:N:118:SER:OG	2:N:129:VAL:HG13	2.10	0.52
2:P:326:ILE:HG12	2:P:350:VAL:CG2	2.39	0.52
2:B:330:PRO:HA	2:B:333:ARG:HG3	1.91	0.52
2:D:118:SER:OG	2:D:129:VAL:HG13	2.10	0.52
2:H:69:ILE:HD12	2:H:70:PRO:CD	2.33	0.52
1:K:12:LYS:NZ	1:O:168:ASP:OD2	2.42	0.52
1:O:206:TYR:N	1:O:207:PRO:HD3	2.25	0.52
1:A:27:GLY:C	1:A:29:GLY:H	2.17	0.52
2:B:36:ILE:CG1	2:B:295:PRO:HA	2.40	0.52
2:D:330:PRO:HA	2:D:333:ARG:HG3	1.91	0.52
1:K:206:TYR:N	1:K:207:PRO:HD3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:326:ILE:C	2:L:328:SER:H	2.17	0.52
2:L:330:PRO:HA	2:L:333:ARG:HG3	1.91	0.52
2:N:4:LYS:HE3	2:N:10:ARG:HH22	1.74	0.52
2:N:322:VAL:O	2:N:323:LEU:C	2.53	0.52
2:D:326:ILE:C	2:D:328:SER:H	2.17	0.52
1:E:305:ASN:HA	1:E:308:ALA:CB	2.38	0.52
2:L:318:ILE:HA	2:L:322:VAL:CG2	2.38	0.52
2:L:326:ILE:HG12	2:L:350:VAL:CG2	2.39	0.52
2:H:322:VAL:O	2:H:323:LEU:C	2.53	0.52
1:I:224:VAL:HG11	2:J:257:LEU:HG	1.91	0.52
2:J:97:ARG:CG	2:J:102:THR:HG23	2.39	0.52
2:N:326:ILE:C	2:N:328:SER:H	2.17	0.52
2:P:322:VAL:O	2:P:323:LEU:C	2.53	0.52
2:B:118:SER:OG	2:B:129:VAL:HG13	2.10	0.52
2:D:326:ILE:HG12	2:D:350:VAL:CG2	2.39	0.52
2:H:326:ILE:C	2:H:328:SER:H	2.17	0.52
1:K:8:ARG:NH2	1:O:160:GLU:CD	2.68	0.52
2:P:36:ILE:CG1	2:P:295:PRO:HA	2.40	0.52
2:B:322:VAL:O	2:B:323:LEU:C	2.53	0.52
2:B:326:ILE:C	2:B:328:SER:H	2.17	0.52
1:E:106:ASN:HB3	1:E:129:ARG:HG2	1.91	0.52
1:E:153:VAL:HG11	2:H:149:VAL:O	2.10	0.52
2:J:330:PRO:HA	2:J:333:ARG:HG3	1.91	0.52
2:L:61:ILE:HG22	2:L:62:PHE:N	2.20	0.52
2:L:274:ILE:HG22	2:L:275:SER:H	1.71	0.52
1:O:314:ALA:CB	1:O:346:LEU:HD13	2.35	0.52
1:A:195:ARG:CG	1:A:195:ARG:NH1	2.63	0.51
2:H:118:SER:OG	2:H:129:VAL:HG13	2.10	0.51
1:I:305:ASN:HA	1:I:308:ALA:CB	2.38	0.51
1:E:323:LYS:H	1:E:323:LYS:CE	2.23	0.51
4:I:2005:AMP:O3P	4:I:2005:AMP:H4'	2.10	0.51
1:K:193:LEU:HD11	1:K:197:ILE:HD11	1.92	0.51
1:K:305:ASN:HA	1:K:308:ALA:CB	2.38	0.51
1:M:206:TYR:N	1:M:207:PRO:HD3	2.25	0.51
2:P:330:PRO:HA	2:P:333:ARG:HG3	1.91	0.51
1:C:62:GLY:C	1:C:64:TYR:N	2.65	0.51
2:J:155:GLN:OE1	2:L:155:GLN:NE2	2.42	0.51
2:P:273:LYS:HG3	2:P:274:ILE:HD12	1.90	0.51
1:A:193:LEU:HD11	1:A:197:ILE:HD11	1.92	0.51
1:E:193:LEU:HD11	1:E:197:ILE:HD11	1.92	0.51
2:F:61:ILE:HG22	2:F:62:PHE:N	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:27:GLY:C	1:G:29:GLY:H	2.17	0.51
2:H:36:ILE:CG1	2:H:295:PRO:HA	2.40	0.51
2:L:36:ILE:CG1	2:L:295:PRO:HA	2.40	0.51
2:N:36:ILE:CG1	2:N:295:PRO:HA	2.40	0.51
2:P:118:SER:OG	2:P:129:VAL:HG13	2.10	0.51
1:I:106:ASN:HB3	1:I:129:ARG:HG2	1.91	0.51
1:M:193:LEU:HD11	1:M:197:ILE:HD11	1.92	0.51
1:C:119:ARG:CD	2:D:125:THR:O	2.58	0.51
1:C:254:PRO:HG3	2:D:226:LEU:HD11	1.91	0.51
2:F:323:LEU:HD23	2:F:323:LEU:N	2.26	0.51
1:I:277:GLY:HA2	4:I:2005:AMP:H5'2	1.93	0.51
2:J:118:SER:OG	2:J:129:VAL:HG13	2.10	0.51
2:D:322:VAL:O	2:D:323:LEU:C	2.53	0.51
2:F:36:ILE:CG1	2:F:295:PRO:HA	2.40	0.51
2:P:69:ILE:HD12	2:P:70:PRO:CD	2.34	0.51
1:C:7:GLU:HA	1:C:7:GLU:OE1	2.10	0.51
2:D:189:LYS:HD3	2:D:221:ILE:CD1	2.41	0.51
1:E:7:GLU:OE1	1:E:7:GLU:HA	2.10	0.51
1:K:106:ASN:HB3	1:K:129:ARG:HG2	1.91	0.51
1:O:323:LYS:H	1:O:323:LYS:CE	2.23	0.51
2:P:189:LYS:HD3	2:P:221:ILE:CD1	2.41	0.51
2:P:323:LEU:HD23	2:P:323:LEU:N	2.26	0.51
1:C:27:GLY:C	1:C:29:GLY:H	2.17	0.51
2:D:97:ARG:CG	2:D:102:THR:HG23	2.39	0.51
2:F:322:VAL:O	2:F:323:LEU:C	2.53	0.51
2:J:322:VAL:O	2:J:323:LEU:C	2.53	0.51
2:L:323:LEU:HD23	2:L:323:LEU:N	2.26	0.51
2:P:97:ARG:CG	2:P:102:THR:HG23	2.39	0.51
2:B:323:LEU:HD23	2:B:323:LEU:N	2.26	0.51
2:D:36:ILE:CG1	2:D:295:PRO:HA	2.40	0.51
2:F:118:SER:OG	2:F:129:VAL:HG13	2.10	0.51
1:K:72:ARG:NH2	1:O:171:LYS:HZ1	2.01	0.51
1:A:64:TYR:OH	2:P:63:VAL:HG11	2.11	0.50
2:B:97:ARG:CG	2:B:102:THR:HG23	2.39	0.50
1:E:245:ASN:HD22	2:F:222:ASP:HA	1.75	0.50
2:H:189:LYS:HD3	2:H:221:ILE:CD1	2.41	0.50
2:L:189:LYS:HD3	2:L:221:ILE:CD1	2.41	0.50
1:O:119:ARG:HD2	2:P:125:THR:O	2.12	0.50
1:C:323:LYS:H	1:C:323:LYS:CE	2.23	0.50
2:F:189:LYS:HD3	2:F:221:ILE:CD1	2.41	0.50
1:I:249:ALA:CB	2:J:230:THR:HG23	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:323:LYS:H	1:I:323:LYS:CE	2.23	0.50
2:L:61:ILE:HD11	2:L:70:PRO:HA	1.94	0.50
2:L:243:PRO:HD2	2:L:246:TYR:HD2	1.77	0.50
2:L:322:VAL:O	2:L:323:LEU:C	2.53	0.50
1:A:92:SER:OG	3:A:1001:FLC:OG2	2.27	0.50
1:K:254:PRO:HG3	2:L:226:LEU:HD11	1.93	0.50
2:B:213:ASP:CA	1:I:122:ASP:OD2	2.58	0.50
2:H:61:ILE:HD11	2:H:70:PRO:HA	1.94	0.50
2:H:323:LEU:HD23	2:H:323:LEU:N	2.26	0.50
2:J:69:ILE:HD11	2:J:73:ALA:HB3	1.94	0.50
2:J:189:LYS:HD3	2:J:221:ILE:CD1	2.41	0.50
2:J:323:LEU:HD23	2:J:323:LEU:N	2.26	0.50
2:L:349:ALA:O	2:L:353:ARG:HD3	2.12	0.50
2:N:334:THR:HB	2:N:336:ASP:OD1	2.12	0.50
1:O:193:LEU:HD11	1:O:197:ILE:HD11	1.92	0.50
2:D:69:ILE:HD11	2:D:73:ALA:HB3	1.94	0.50
2:D:243:PRO:HD2	2:D:246:TYR:HD2	1.77	0.50
1:E:283:GLN:HB3	1:E:285:VAL:HG13	1.94	0.50
2:F:61:ILE:HD11	2:F:70:PRO:HA	1.94	0.50
1:I:171:LYS:NZ	1:M:72:ARG:NH2	2.58	0.50
4:I:2005:AMP:O3P	2:J:223:ASN:ND2	2.45	0.50
2:J:36:ILE:CG1	2:J:295:PRO:HA	2.40	0.50
1:K:299:LEU:HB2	1:K:308:ALA:HB2	1.94	0.50
1:M:257:VAL:HG12	1:M:272:GLY:HA3	1.94	0.50
1:O:186:ILE:HD13	2:P:142:TYR:CD2	2.47	0.50
1:O:299:LEU:HB2	1:O:308:ALA:HB2	1.94	0.50
1:A:241:THR:OG1	3:A:1001:FLC:OA2	2.24	0.50
1:A:283:GLN:HB3	1:A:285:VAL:HG13	1.94	0.50
2:D:323:LEU:HD23	2:D:323:LEU:N	2.26	0.50
1:E:255:GLY:O	1:E:289:THR:HB	2.12	0.50
2:F:349:ALA:O	2:F:353:ARG:HD3	2.11	0.50
1:G:342:ILE:O	1:G:346:LEU:HB2	2.12	0.50
3:I:1005:FLC:OG1	3:I:1005:FLC:OHB	2.30	0.50
1:M:299:LEU:HB2	1:M:308:ALA:HB2	1.94	0.50
3:M:1007:FLC:OG1	3:M:1007:FLC:OHB	2.30	0.50
2:N:323:LEU:HD23	2:N:323:LEU:N	2.26	0.50
2:P:69:ILE:HD11	2:P:73:ALA:HB3	1.94	0.50
2:B:349:ALA:O	2:B:353:ARG:HD3	2.12	0.50
1:C:14:TYR:CE2	1:G:165:PHE:HD1	2.30	0.50
1:C:257:VAL:HG12	1:C:272:GLY:HA3	1.94	0.50
1:E:257:VAL:HG12	1:E:272:GLY:HA3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:193:LEU:HD11	1:I:197:ILE:HD11	1.93	0.50
2:J:71:ASP:N	2:J:72:PRO:HD2	2.27	0.50
2:J:274:ILE:CG2	2:J:275:SER:N	2.75	0.50
1:K:283:GLN:HB3	1:K:285:VAL:HG13	1.94	0.50
3:K:1006:FLC:OG1	3:K:1006:FLC:OHB	2.30	0.50
2:L:69:ILE:HD11	2:L:73:ALA:HB3	1.94	0.50
1:M:7:GLU:OE1	1:M:7:GLU:HA	2.11	0.50
1:O:176:LYS:HE3	1:O:208:ASP:O	2.12	0.50
2:P:61:ILE:HD11	2:P:70:PRO:HA	1.94	0.50
2:P:274:ILE:CG2	2:P:275:SER:N	2.75	0.50
2:P:334:THR:HB	2:P:336:ASP:OD1	2.12	0.50
1:A:342:ILE:O	1:A:346:LEU:HB2	2.12	0.50
2:B:243:PRO:HD2	2:B:246:TYR:HD2	1.77	0.50
1:C:104:TYR:CE2	1:C:161:ARG:HG2	2.47	0.50
1:C:283:GLN:HB3	1:C:285:VAL:HG13	1.94	0.50
2:D:46:ALA:HB2	2:D:351:ILE:HD13	1.94	0.50
2:D:334:THR:HB	2:D:336:ASP:OD1	2.12	0.50
2:F:274:ILE:CG2	2:F:275:SER:N	2.75	0.50
2:J:349:ALA:O	2:J:353:ARG:HD3	2.11	0.50
1:M:176:LYS:HE3	1:M:208:ASP:O	2.12	0.50
2:N:349:ALA:O	2:N:353:ARG:HD3	2.12	0.50
1:O:104:TYR:CE2	1:O:161:ARG:HG2	2.47	0.50
2:P:165:SER:HG	2:P:200:PHE:HD1	1.58	0.50
2:P:243:PRO:HD2	2:P:246:TYR:HD2	1.77	0.50
2:B:189:LYS:HD3	2:B:221:ILE:CD1	2.41	0.50
2:F:134:ILE:HD13	2:F:239:VAL:HG13	1.94	0.50
2:F:334:THR:HB	2:F:336:ASP:OD1	2.12	0.50
1:G:193:LEU:HD11	1:G:197:ILE:HD11	1.92	0.50
3:G:1004:FLC:OG1	3:G:1004:FLC:OHB	2.30	0.50
2:H:243:PRO:HD2	2:H:246:TYR:HD2	1.77	0.50
1:I:27:GLY:C	1:I:29:GLY:H	2.17	0.50
1:K:255:GLY:O	1:K:289:THR:HB	2.12	0.50
2:L:134:ILE:HD13	2:L:239:VAL:HG13	1.94	0.50
1:A:257:VAL:HG12	1:A:272:GLY:HA3	1.94	0.49
1:C:176:LYS:HE3	1:C:208:ASP:O	2.12	0.49
2:D:71:ASP:N	2:D:72:PRO:HD2	2.27	0.49
1:G:151:LEU:CD2	2:H:157:ILE:HG12	2.34	0.49
1:G:255:GLY:O	1:G:289:THR:HB	2.12	0.49
1:K:104:TYR:CE2	1:K:161:ARG:HG2	2.47	0.49
2:L:334:THR:HB	2:L:336:ASP:OD1	2.12	0.49
2:P:46:ALA:HB2	2:P:351:ILE:HD13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:46:ALA:HB2	2:B:351:ILE:HD13	1.94	0.49
2:B:134:ILE:HD13	2:B:239:VAL:HG13	1.94	0.49
1:C:255:GLY:O	1:C:289:THR:HB	2.12	0.49
1:C:342:ILE:O	1:C:346:LEU:HB2	2.12	0.49
1:E:342:ILE:O	1:E:346:LEU:HB2	2.12	0.49
2:H:69:ILE:HD11	2:H:73:ALA:HB3	1.94	0.49
2:H:134:ILE:HD13	2:H:239:VAL:HG13	1.94	0.49
1:I:283:GLN:HB3	1:I:285:VAL:HG13	1.94	0.49
2:L:71:ASP:N	2:L:72:PRO:HD2	2.27	0.49
1:M:195:ARG:CG	1:M:195:ARG:NH1	2.63	0.49
2:N:69:ILE:HD11	2:N:73:ALA:HB3	1.94	0.49
2:N:97:ARG:CG	2:N:102:THR:HG23	2.39	0.49
2:N:101:LEU:HD23	2:N:104:ARG:NH1	2.27	0.49
1:O:283:GLN:HB3	1:O:285:VAL:HG13	1.94	0.49
2:P:349:ALA:O	2:P:353:ARG:HD3	2.12	0.49
1:A:186:ILE:HD13	2:B:142:TYR:CD2	2.47	0.49
2:B:69:ILE:HD11	2:B:73:ALA:HB3	1.94	0.49
1:C:22:LEU:HD11	1:C:33:THR:HG22	1.95	0.49
1:C:193:LEU:HD11	1:C:197:ILE:HD11	1.92	0.49
1:C:245:ASN:ND2	2:D:222:ASP:HA	2.27	0.49
1:C:274:ARG:HG2	3:C:1002:FLC:OB1	2.11	0.49
2:D:4:LYS:CE	2:D:10:ARG:HH22	2.25	0.49
1:G:257:VAL:HG12	1:G:272:GLY:HA3	1.94	0.49
1:G:299:LEU:HB2	1:G:308:ALA:HB2	1.94	0.49
1:K:15:GLY:N	1:O:263:GLY:O	2.34	0.49
1:K:176:LYS:HE3	1:K:208:ASP:O	2.12	0.49
1:M:22:LEU:HD11	1:M:33:THR:HG22	1.95	0.49
1:M:255:GLY:O	1:M:289:THR:HB	2.12	0.49
1:M:342:ILE:O	1:M:346:LEU:HB2	2.12	0.49
2:N:71:ASP:N	2:N:72:PRO:HD2	2.27	0.49
2:P:4:LYS:CE	2:P:10:ARG:HH22	2.25	0.49
1:A:119:ARG:HD2	2:B:125:THR:O	2.11	0.49
2:B:4:LYS:CE	2:B:10:ARG:HH22	2.25	0.49
2:B:71:ASP:N	2:B:72:PRO:HD2	2.27	0.49
2:D:136:GLU:OE2	2:D:138:THR:HB	2.13	0.49
1:G:176:LYS:HE3	1:G:208:ASP:O	2.12	0.49
1:I:165:PHE:HA	1:M:14:TYR:OH	2.12	0.49
2:J:4:LYS:CE	2:J:10:ARG:HH22	2.25	0.49
2:J:334:THR:HB	2:J:336:ASP:OD1	2.12	0.49
1:O:67:VAL:HG13	1:O:101:LEU:HD21	1.94	0.49
2:B:334:THR:HB	2:B:336:ASP:OD1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:67:VAL:HG13	1:C:101:LEU:HD21	1.94	0.49
2:D:101:LEU:HD23	2:D:104:ARG:NH1	2.27	0.49
1:G:249:ALA:CB	2:H:230:THR:HG23	2.42	0.49
1:I:160:GLU:CD	1:M:8:ARG:HH21	2.20	0.49
2:L:97:ARG:CG	2:L:102:THR:HG23	2.39	0.49
2:N:169:ILE:HD13	2:N:204:ALA:HB2	1.95	0.49
1:O:342:ILE:O	1:O:346:LEU:HB2	2.12	0.49
1:A:22:LEU:HD11	1:A:33:THR:HG22	1.95	0.49
2:B:318:ILE:HA	2:B:322:VAL:CG2	2.38	0.49
2:D:61:ILE:HD11	2:D:70:PRO:HA	1.94	0.49
2:F:46:ALA:HB2	2:F:351:ILE:HD13	1.94	0.49
2:F:243:PRO:HD2	2:F:246:TYR:HD2	1.77	0.49
2:H:349:ALA:O	2:H:353:ARG:HD3	2.11	0.49
1:I:104:TYR:CE2	1:I:161:ARG:HG2	2.47	0.49
1:I:255:GLY:O	1:I:289:THR:HB	2.12	0.49
2:J:243:PRO:HD2	2:J:246:TYR:HD2	1.77	0.49
1:K:257:VAL:HG12	1:K:272:GLY:HA3	1.94	0.49
2:N:189:LYS:HD3	2:N:221:ILE:CD1	2.41	0.49
1:A:104:TYR:CE2	1:A:161:ARG:HG2	2.47	0.49
2:D:349:ALA:O	2:D:353:ARG:HD3	2.12	0.49
1:E:67:VAL:HG13	1:E:101:LEU:HD21	1.94	0.49
2:H:274:ILE:CG2	2:H:275:SER:N	2.75	0.49
2:H:334:THR:HB	2:H:336:ASP:OD1	2.12	0.49
1:I:67:VAL:HG13	1:I:101:LEU:HD21	1.94	0.49
2:J:101:LEU:HD23	2:J:104:ARG:NH1	2.27	0.49
1:K:22:LEU:HD11	1:K:33:THR:HG22	1.95	0.49
2:L:46:ALA:HB2	2:L:351:ILE:HD13	1.94	0.49
2:N:46:ALA:HB2	2:N:351:ILE:HD13	1.94	0.49
1:A:176:LYS:HE3	1:A:208:ASP:O	2.12	0.49
1:A:255:GLY:O	1:A:289:THR:HB	2.12	0.49
2:H:71:ASP:N	2:H:72:PRO:HD2	2.27	0.49
2:H:103:LEU:HD12	2:H:103:LEU:HA	1.68	0.49
2:H:136:GLU:OE2	2:H:138:THR:HB	2.13	0.49
1:I:151:LEU:HD12	2:L:147:HIS:CD2	2.48	0.49
1:I:257:VAL:HG12	1:I:272:GLY:HA3	1.94	0.49
1:I:299:LEU:HB2	1:I:308:ALA:HB2	1.94	0.49
1:K:342:ILE:O	1:K:346:LEU:HB2	2.12	0.49
1:M:104:TYR:CE2	1:M:161:ARG:HG2	2.47	0.49
2:N:134:ILE:HD13	2:N:239:VAL:HG13	1.94	0.49
2:P:71:ASP:N	2:P:72:PRO:HD2	2.27	0.49
2:P:101:LEU:HD23	2:P:104:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ARG:HH11	1:A:195:ARG:HB3	1.78	0.49
1:C:299:LEU:HB2	1:C:308:ALA:HB2	1.94	0.49
2:D:134:ILE:HD13	2:D:239:VAL:HG13	1.94	0.49
2:F:71:ASP:N	2:F:72:PRO:HD2	2.27	0.49
2:J:61:ILE:HD11	2:J:70:PRO:HA	1.94	0.49
2:J:149:VAL:HG21	2:L:149:VAL:HG21	1.94	0.49
1:M:14:TYR:O	1:M:15:GLY:C	2.56	0.49
1:M:283:GLN:HB3	1:M:285:VAL:HG13	1.94	0.49
2:N:4:LYS:CE	2:N:10:ARG:HH22	2.25	0.49
2:P:136:GLU:OE2	2:P:138:THR:HB	2.13	0.49
2:B:61:ILE:HD11	2:B:70:PRO:HA	1.94	0.49
2:B:274:ILE:CG2	2:B:275:SER:N	2.75	0.49
2:D:274:ILE:CG2	2:D:275:SER:N	2.75	0.49
2:H:101:LEU:HD23	2:H:104:ARG:NH1	2.27	0.49
2:J:33:GLY:O	2:J:36:ILE:HG22	2.13	0.49
2:N:61:ILE:HD11	2:N:70:PRO:HA	1.94	0.49
2:N:243:PRO:HD2	2:N:246:TYR:HD2	1.77	0.49
2:N:322:VAL:C	2:N:326:ILE:HG23	2.38	0.49
1:O:257:VAL:HG12	1:O:272:GLY:HA3	1.94	0.49
1:A:64:TYR:CE1	2:P:63:VAL:HG11	2.41	0.48
1:A:323:LYS:H	1:A:323:LYS:CE	2.23	0.48
2:D:169:ILE:HD13	2:D:204:ALA:HB2	1.95	0.48
1:E:292:ILE:O	1:E:296:THR:HG23	2.13	0.48
2:F:33:GLY:O	2:F:36:ILE:HG22	2.13	0.48
2:F:101:LEU:HD23	2:F:104:ARG:NH1	2.27	0.48
2:F:318:ILE:HA	2:F:322:VAL:CG2	2.38	0.48
1:I:146:GLY:O	2:J:161:THR:HA	2.13	0.48
1:I:176:LYS:HE3	1:I:208:ASP:O	2.12	0.48
1:I:195:ARG:HH11	1:I:195:ARG:HB3	1.78	0.48
2:J:136:GLU:OE2	2:J:138:THR:HB	2.13	0.48
2:J:153:VAL:HG11	2:L:149:VAL:CG2	2.43	0.48
2:J:337:LEU:O	2:J:338:ALA:HB3	2.13	0.48
1:M:104:TYR:CZ	1:M:161:ARG:HG2	2.49	0.48
1:M:292:ILE:O	1:M:296:THR:HG23	2.13	0.48
1:A:164:ARG:HH22	1:E:8:ARG:HH21	1.61	0.48
2:B:33:GLY:O	2:B:36:ILE:HG22	2.13	0.48
2:B:189:LYS:HE2	2:B:192:ILE:HD12	1.95	0.48
1:C:10:LEU:HB3	1:C:11:PRO:CD	2.43	0.48
2:F:4:LYS:CE	2:F:10:ARG:HH22	2.25	0.48
1:K:67:VAL:HG13	1:K:101:LEU:HD21	1.94	0.48
1:M:67:VAL:HG13	1:M:101:LEU:HD21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:136:GLU:OE2	2:N:138:THR:HB	2.13	0.48
1:O:104:TYR:CZ	1:O:161:ARG:HG2	2.49	0.48
3:O:1008:FLC:OG1	3:O:1008:FLC:OHB	2.30	0.48
2:D:189:LYS:HE2	2:D:192:ILE:HD12	1.95	0.48
1:E:299:LEU:HB2	1:E:308:ALA:HB2	1.94	0.48
2:F:69:ILE:HD11	2:F:73:ALA:HB3	1.94	0.48
2:H:46:ALA:HB2	2:H:351:ILE:HD13	1.94	0.48
2:H:189:LYS:HE2	2:H:192:ILE:HD12	1.95	0.48
2:J:46:ALA:HB2	2:J:351:ILE:HD13	1.94	0.48
2:L:322:VAL:C	2:L:326:ILE:HG23	2.39	0.48
1:M:10:LEU:HB3	1:M:11:PRO:CD	2.43	0.48
1:O:133:GLU:OE1	1:O:158:LYS:HD2	2.13	0.48
1:O:255:GLY:O	1:O:289:THR:HB	2.12	0.48
2:P:322:VAL:C	2:P:326:ILE:HG23	2.39	0.48
1:A:175:ARG:NH1	1:A:231:ASP:OD1	2.47	0.48
2:B:101:LEU:HD23	2:B:104:ARG:NH1	2.27	0.48
2:B:169:ILE:HD12	2:B:203:VAL:HG12	1.96	0.48
2:B:189:LYS:CG	2:B:192:ILE:HD13	2.44	0.48
1:C:199:THR:HA	1:C:211:VAL:HG11	1.96	0.48
1:C:292:ILE:O	1:C:296:THR:HG23	2.13	0.48
1:E:10:LEU:HB3	1:E:11:PRO:CD	2.43	0.48
1:E:104:TYR:CZ	1:E:161:ARG:HG2	2.49	0.48
1:E:104:TYR:CE2	1:E:161:ARG:HG2	2.47	0.48
1:G:67:VAL:HG13	1:G:101:LEU:HD21	1.94	0.48
1:G:104:TYR:CE2	1:G:161:ARG:HG2	2.47	0.48
2:H:322:VAL:C	2:H:326:ILE:HG23	2.39	0.48
1:I:199:THR:HA	1:I:211:VAL:HG11	1.96	0.48
2:J:189:LYS:CG	2:J:192:ILE:HD13	2.44	0.48
2:J:322:VAL:C	2:J:326:ILE:HG23	2.39	0.48
2:L:33:GLY:O	2:L:36:ILE:HG22	2.13	0.48
2:L:337:LEU:O	2:L:338:ALA:HB3	2.14	0.48
2:N:274:ILE:CG2	2:N:275:SER:N	2.75	0.48
1:O:292:ILE:O	1:O:296:THR:HG23	2.14	0.48
2:F:136:GLU:OE2	2:F:138:THR:HB	2.13	0.48
2:F:169:ILE:HD13	2:F:204:ALA:HB2	1.95	0.48
2:F:189:LYS:HE2	2:F:192:ILE:HD12	1.95	0.48
1:G:22:LEU:HD11	1:G:33:THR:HG22	1.95	0.48
1:G:292:ILE:O	1:G:296:THR:HG23	2.13	0.48
1:I:133:GLU:HG2	1:I:134:GLY:H	1.78	0.48
1:I:175:ARG:NH1	1:I:231:ASP:OD1	2.47	0.48
2:J:134:ILE:HD13	2:J:239:VAL:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:319:GLN:O	2:J:321:ALA:O	2.32	0.48
2:L:101:LEU:HD23	2:L:104:ARG:NH1	2.27	0.48
2:L:189:LYS:HE2	2:L:192:ILE:HD12	1.95	0.48
2:N:189:LYS:HE2	2:N:192:ILE:HD12	1.95	0.48
2:N:318:ILE:HA	2:N:322:VAL:CG2	2.37	0.48
2:N:319:GLN:O	2:N:321:ALA:O	2.32	0.48
2:P:169:ILE:HD13	2:P:204:ALA:HB2	1.95	0.48
2:B:319:GLN:O	2:B:324:SER:HB2	2.14	0.48
1:G:104:TYR:CZ	1:G:161:ARG:HG2	2.49	0.48
1:M:19:THR:O	1:M:73:ASN:HB3	2.14	0.48
2:N:33:GLY:O	2:N:36:ILE:HG22	2.13	0.48
2:N:337:LEU:O	2:N:338:ALA:HB3	2.14	0.48
1:O:22:LEU:HD11	1:O:33:THR:HG22	1.95	0.48
2:P:134:ILE:HD13	2:P:239:VAL:HG13	1.94	0.48
2:P:319:GLN:O	2:P:324:SER:HB2	2.14	0.48
1:A:133:GLU:HG2	1:A:134:GLY:H	1.79	0.48
1:A:133:GLU:OE1	1:A:158:LYS:HD2	2.13	0.48
1:C:19:THR:O	1:C:73:ASN:HB3	2.14	0.48
1:C:175:ARG:NH1	1:C:231:ASP:OD1	2.47	0.48
2:D:189:LYS:CG	2:D:192:ILE:HD13	2.44	0.48
1:G:283:GLN:HB3	1:G:285:VAL:HG13	1.94	0.48
1:I:104:TYR:CZ	1:I:161:ARG:HG2	2.49	0.48
1:I:342:ILE:O	1:I:346:LEU:HB2	2.12	0.48
2:J:189:LYS:HE2	2:J:192:ILE:HD12	1.95	0.48
1:K:133:GLU:OE1	1:K:158:LYS:HD2	2.13	0.48
1:K:224:VAL:HG11	2:L:257:LEU:HG	1.96	0.48
1:K:323:LYS:H	1:K:323:LYS:CE	2.23	0.48
1:M:133:GLU:HG2	1:M:134:GLY:H	1.78	0.48
2:N:189:LYS:CG	2:N:192:ILE:HD13	2.44	0.48
2:P:189:LYS:HE2	2:P:192:ILE:HD12	1.95	0.48
1:A:104:TYR:CZ	1:A:161:ARG:HG2	2.49	0.48
1:A:199:THR:HA	1:A:211:VAL:HG11	1.96	0.48
1:A:292:ILE:O	1:A:296:THR:HG23	2.13	0.48
1:A:299:LEU:HB2	1:A:308:ALA:HB2	1.94	0.48
2:B:181:ARG:HH11	2:B:238:ALA:H	1.62	0.48
2:B:228:VAL:HG12	2:B:257:LEU:HD11	1.96	0.48
2:D:319:GLN:O	2:D:324:SER:HB2	2.14	0.48
1:E:176:LYS:HE3	1:E:208:ASP:O	2.12	0.48
1:E:199:THR:HA	1:E:211:VAL:HG11	1.96	0.48
2:F:169:ILE:HD12	2:F:203:VAL:HG12	1.96	0.48
2:F:322:VAL:C	2:F:326:ILE:HG23	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:169:ILE:HD13	2:H:204:ALA:HB2	1.95	0.48
1:I:133:GLU:OE1	1:I:158:LYS:HD2	2.13	0.48
1:I:292:ILE:O	1:I:296:THR:HG23	2.13	0.48
1:K:133:GLU:HG2	1:K:134:GLY:H	1.78	0.48
1:K:195:ARG:HH11	1:K:195:ARG:HB3	1.78	0.48
2:L:319:GLN:O	2:L:321:ALA:O	2.32	0.48
2:N:169:ILE:HD12	2:N:203:VAL:HG12	1.96	0.48
2:P:319:GLN:O	2:P:321:ALA:O	2.32	0.48
2:B:69:ILE:HD12	2:B:70:PRO:CD	2.34	0.48
1:C:133:GLU:HG2	1:C:134:GLY:H	1.78	0.48
1:G:133:GLU:OE1	1:G:158:LYS:HD2	2.13	0.48
2:H:169:ILE:HD12	2:H:203:VAL:HG12	1.96	0.48
2:H:228:VAL:HG12	2:H:257:LEU:CD1	2.44	0.48
2:J:253:LEU:HD23	2:J:253:LEU:O	2.14	0.48
1:K:8:ARG:HH21	1:O:160:GLU:CD	2.22	0.48
1:K:104:TYR:CZ	1:K:161:ARG:HG2	2.49	0.48
2:L:169:ILE:HD13	2:L:204:ALA:HB2	1.95	0.48
2:L:228:VAL:HG12	2:L:257:LEU:CD1	2.44	0.48
1:O:199:THR:HA	1:O:211:VAL:HG11	1.96	0.48
2:P:169:ILE:HD12	2:P:203:VAL:HG12	1.96	0.48
2:P:189:LYS:CG	2:P:192:ILE:HD13	2.44	0.48
2:P:253:LEU:HD23	2:P:253:LEU:O	2.14	0.48
1:A:67:VAL:HG13	1:A:101:LEU:HD21	1.94	0.48
2:B:169:ILE:HD13	2:B:204:ALA:HB2	1.95	0.48
2:B:295:PRO:O	2:B:299:LEU:HB2	2.14	0.48
2:B:319:GLN:O	2:B:321:ALA:O	2.32	0.48
2:D:228:VAL:HG12	2:D:257:LEU:HD11	1.96	0.48
2:D:322:VAL:C	2:D:326:ILE:HG23	2.38	0.48
1:E:175:ARG:NH1	1:E:231:ASP:OD1	2.47	0.48
1:E:224:VAL:HG11	2:F:257:LEU:HG	1.95	0.48
2:F:149:VAL:O	1:G:153:VAL:HG11	2.13	0.48
2:F:228:VAL:HG12	2:F:257:LEU:CD1	2.44	0.48
1:G:133:GLU:HG2	1:G:134:GLY:H	1.78	0.48
1:G:195:ARG:HH11	1:G:195:ARG:HB3	1.78	0.48
2:H:319:GLN:O	2:H:321:ALA:O	2.32	0.48
1:I:22:LEU:HD11	1:I:33:THR:HG22	1.95	0.48
2:J:228:VAL:HG12	2:J:257:LEU:CD1	2.44	0.48
1:K:8:ARG:NH2	1:O:164:ARG:HH22	2.12	0.48
1:K:205:GLU:HB2	1:K:206:TYR:CD1	2.49	0.48
2:L:136:GLU:OE2	2:L:138:THR:HB	2.13	0.48
2:L:189:LYS:CG	2:L:192:ILE:HD13	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:205:GLU:HB2	1:M:206:TYR:CD1	2.49	0.48
2:N:181:ARG:HH11	2:N:238:ALA:H	1.62	0.48
2:N:228:VAL:HG12	2:N:257:LEU:CD1	2.44	0.48
2:N:319:GLN:O	2:N:324:SER:HB2	2.14	0.48
1:O:205:GLU:HB2	1:O:206:TYR:CD1	2.49	0.48
1:C:14:TYR:O	1:C:15:GLY:C	2.56	0.47
1:I:19:THR:O	1:I:73:ASN:HB3	2.14	0.47
2:J:169:ILE:HD13	2:J:204:ALA:HB2	1.95	0.47
1:K:183:LYS:HE2	2:L:142:TYR:OH	2.14	0.47
2:N:295:PRO:O	2:N:299:LEU:HB2	2.14	0.47
1:O:133:GLU:HG2	1:O:134:GLY:H	1.78	0.47
2:P:228:VAL:HG12	2:P:257:LEU:CD1	2.44	0.47
2:P:337:LEU:O	2:P:338:ALA:HB3	2.14	0.47
2:D:319:GLN:O	2:D:321:ALA:O	2.32	0.47
1:E:133:GLU:OE1	1:E:158:LYS:HD2	2.13	0.47
1:K:8:ARG:NH2	1:O:160:GLU:OE1	2.47	0.47
1:K:14:TYR:O	1:K:15:GLY:C	2.56	0.47
1:K:292:ILE:O	1:K:296:THR:HG23	2.13	0.47
2:L:319:GLN:O	2:L:324:SER:HB2	2.14	0.47
1:M:133:GLU:OE1	1:M:158:LYS:HD2	2.13	0.47
1:M:199:THR:HA	1:M:211:VAL:HG11	1.96	0.47
1:O:19:THR:O	1:O:73:ASN:HB3	2.14	0.47
2:B:322:VAL:C	2:B:326:ILE:HG23	2.39	0.47
1:C:104:TYR:CZ	1:C:161:ARG:HG2	2.49	0.47
1:C:205:GLU:HB2	1:C:206:TYR:CD1	2.49	0.47
2:D:253:LEU:HD23	2:D:253:LEU:O	2.14	0.47
2:F:253:LEU:HD23	2:F:253:LEU:O	2.14	0.47
2:H:319:GLN:O	2:H:324:SER:HB2	2.14	0.47
2:J:26:PHE:O	2:J:27:ILE:HB	2.15	0.47
1:K:10:LEU:HB3	1:K:11:PRO:CD	2.43	0.47
1:K:175:ARG:NH1	1:K:231:ASP:OD1	2.47	0.47
1:M:175:ARG:NH1	1:M:231:ASP:OD1	2.47	0.47
1:M:195:ARG:HH11	1:M:195:ARG:HB3	1.78	0.47
1:O:175:ARG:NH1	1:O:231:ASP:OD1	2.47	0.47
2:D:209:LYS:HB3	2:D:209:LYS:HE3	1.36	0.47
1:E:29:GLY:O	1:E:33:THR:OG1	2.33	0.47
2:F:26:PHE:O	2:F:27:ILE:HB	2.15	0.47
2:F:189:LYS:HG3	2:F:189:LYS:O	2.15	0.47
2:H:33:GLY:O	2:H:36:ILE:HG22	2.13	0.47
1:M:255:GLY:CA	4:M:2007:AMP:N1	2.77	0.47
2:P:33:GLY:O	2:P:36:ILE:HG22	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:136:GLU:OE2	2:B:138:THR:HB	2.13	0.47
1:C:133:GLU:OE1	1:C:158:LYS:HD2	2.13	0.47
2:D:33:GLY:O	2:D:36:ILE:HG22	2.13	0.47
1:E:12:LYS:HB2	1:E:73:ASN:HA	1.97	0.47
1:E:133:GLU:HG2	1:E:134:GLY:H	1.78	0.47
1:E:205:GLU:HB2	1:E:206:TYR:CD1	2.49	0.47
1:G:47:ILE:C	1:G:47:ILE:HD13	2.40	0.47
1:G:183:LYS:HE2	2:H:142:TYR:OH	2.13	0.47
1:G:199:THR:HA	1:G:211:VAL:HG11	1.96	0.47
1:G:323:LYS:H	1:G:323:LYS:CE	2.23	0.47
2:H:189:LYS:CG	2:H:192:ILE:HD13	2.44	0.47
2:N:26:PHE:O	2:N:27:ILE:HB	2.15	0.47
2:N:228:VAL:HG12	2:N:257:LEU:HD11	1.96	0.47
2:P:228:VAL:HG12	2:P:257:LEU:HD11	1.96	0.47
1:A:64:TYR:CE2	2:P:63:VAL:CG2	2.97	0.47
2:F:189:LYS:CG	2:F:192:ILE:HD13	2.44	0.47
2:F:228:VAL:HG12	2:F:257:LEU:HD11	1.96	0.47
1:G:349:MET:HE2	1:G:349:MET:HB3	1.84	0.47
2:H:337:LEU:O	2:H:338:ALA:HB3	2.14	0.47
1:K:19:THR:O	1:K:73:ASN:HB3	2.14	0.47
1:K:29:GLY:O	1:K:33:THR:OG1	2.33	0.47
1:A:19:THR:O	1:A:73:ASN:HB3	2.14	0.47
2:B:26:PHE:O	2:B:27:ILE:HB	2.15	0.47
2:B:337:LEU:O	2:B:338:ALA:HB3	2.14	0.47
2:B:341:ALA:HB1	2:B:345:SER:OG	2.15	0.47
1:C:29:GLY:O	1:C:33:THR:OG1	2.33	0.47
2:D:228:VAL:HG12	2:D:257:LEU:CD1	2.44	0.47
1:E:22:LEU:HD11	1:E:33:THR:HG22	1.95	0.47
1:E:151:LEU:HD11	2:H:147:HIS:CD2	2.50	0.47
1:E:195:ARG:HH11	1:E:195:ARG:HB3	1.79	0.47
2:F:319:GLN:O	2:F:321:ALA:O	2.32	0.47
2:F:337:LEU:O	2:F:338:ALA:HB3	2.14	0.47
1:G:175:ARG:NH1	1:G:231:ASP:OD1	2.47	0.47
1:G:205:GLU:HB2	1:G:206:TYR:CD1	2.49	0.47
1:G:245:ASN:ND2	2:H:222:ASP:HA	2.30	0.47
2:H:189:LYS:HG3	2:H:189:LYS:O	2.15	0.47
2:H:295:PRO:O	2:H:299:LEU:HB2	2.14	0.47
2:H:341:ALA:HB1	2:H:345:SER:OG	2.15	0.47
1:I:153:VAL:HG21	2:L:149:VAL:O	2.14	0.47
2:J:169:ILE:HD12	2:J:203:VAL:HG12	1.96	0.47
1:K:47:ILE:HD13	1:K:47:ILE:C	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:26:PHE:O	2:L:27:ILE:HB	2.15	0.47
2:L:181:ARG:HH11	2:L:238:ALA:H	1.62	0.47
2:L:274:ILE:CG2	2:L:275:SER:N	2.75	0.47
1:M:29:GLY:O	1:M:33:THR:OG1	2.33	0.47
2:N:253:LEU:HD23	2:N:253:LEU:O	2.14	0.47
1:O:195:ARG:HH11	1:O:195:ARG:HB3	1.78	0.47
2:P:26:PHE:O	2:P:27:ILE:HB	2.15	0.47
1:A:293:LEU:HD23	1:A:293:LEU:HA	1.62	0.47
2:B:26:PHE:HE2	2:B:37:SER:OG	1.98	0.47
2:B:253:LEU:HD23	2:B:253:LEU:O	2.14	0.47
1:C:195:ARG:HH11	1:C:195:ARG:HB3	1.78	0.47
3:C:1002:FLC:OG1	3:C:1002:FLC:OHB	2.30	0.47
1:E:60:LYS:O	1:E:60:LYS:HG2	2.15	0.47
2:F:295:PRO:O	2:F:299:LEU:HB2	2.14	0.47
1:M:47:ILE:C	1:M:47:ILE:HD13	2.40	0.47
1:M:47:ILE:HD11	1:M:49:TRP:CE3	2.50	0.47
2:P:110:PHE:CE1	2:P:167:ARG:HG3	2.50	0.47
1:A:47:ILE:HD11	1:A:49:TRP:CE3	2.50	0.47
1:A:47:ILE:HD13	1:A:47:ILE:C	2.40	0.47
2:B:189:LYS:O	2:B:189:LYS:HG3	2.15	0.47
1:C:47:ILE:HD11	1:C:49:TRP:CE3	2.50	0.47
1:C:101:LEU:HB2	1:C:103:ILE:HG13	1.97	0.47
1:E:14:TYR:O	1:E:15:GLY:C	2.56	0.47
2:F:341:ALA:HB1	2:F:345:SER:OG	2.15	0.47
1:I:47:ILE:HD13	1:I:47:ILE:C	2.40	0.47
1:I:205:GLU:HB2	1:I:206:TYR:CD1	2.49	0.47
2:J:189:LYS:O	2:J:189:LYS:HG3	2.15	0.47
2:N:110:PHE:CE1	2:N:167:ARG:HG3	2.50	0.47
2:N:318:ILE:HG22	2:N:323:LEU:HD21	1.97	0.47
1:O:101:LEU:HB2	1:O:103:ILE:HG13	1.97	0.47
1:O:293:LEU:HD23	1:O:293:LEU:HA	1.62	0.47
2:P:181:ARG:HH11	2:P:238:ALA:H	1.62	0.47
2:D:285:PRO:HD3	2:P:286:ASP:HB2	1.97	0.47
2:D:341:ALA:HB1	2:D:345:SER:OG	2.15	0.47
2:J:147:HIS:CD2	1:K:151:LEU:HD11	2.50	0.47
2:J:319:GLN:O	2:J:324:SER:HB2	2.14	0.47
1:K:199:THR:HA	1:K:211:VAL:HG11	1.96	0.47
2:L:110:PHE:CE1	2:L:167:ARG:HG3	2.50	0.47
2:B:228:VAL:HG12	2:B:257:LEU:CD1	2.44	0.46
2:B:265:THR:HA	2:B:266:PRO:HD3	1.64	0.46
2:D:26:PHE:O	2:D:27:ILE:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:169:ILE:HD12	2:D:203:VAL:HG12	1.96	0.46
2:D:189:LYS:HG3	2:D:189:LYS:O	2.15	0.46
1:E:27:GLY:C	1:E:29:GLY:N	2.73	0.46
2:F:319:GLN:O	2:F:324:SER:HB2	2.14	0.46
2:J:110:PHE:CE1	2:J:167:ARG:HG3	2.50	0.46
2:J:181:ARG:HH11	2:J:238:ALA:H	1.62	0.46
2:J:341:ALA:HB1	2:J:345:SER:OG	2.15	0.46
1:K:60:LYS:O	1:K:60:LYS:HG2	2.15	0.46
2:L:228:VAL:HG12	2:L:257:LEU:HD11	1.96	0.46
2:L:253:LEU:HD23	2:L:253:LEU:O	2.14	0.46
2:L:318:ILE:HG22	2:L:323:LEU:HD21	1.97	0.46
1:O:288:PRO:HG3	1:O:335:THR:HG23	1.97	0.46
1:A:288:PRO:HG3	1:A:335:THR:HG23	1.97	0.46
2:D:295:PRO:O	2:D:299:LEU:HB2	2.14	0.46
2:D:337:LEU:O	2:D:338:ALA:HB3	2.14	0.46
1:E:19:THR:O	1:E:73:ASN:HB3	2.14	0.46
1:G:60:LYS:O	1:G:60:LYS:HG2	2.15	0.46
1:G:221:MET:HG3	2:H:256:GLY:CA	2.45	0.46
2:H:26:PHE:HE2	2:H:37:SER:OG	1.98	0.46
2:L:26:PHE:HE2	2:L:37:SER:OG	1.98	0.46
2:L:169:ILE:HD12	2:L:203:VAL:HG12	1.96	0.46
1:O:47:ILE:HD11	1:O:49:TRP:CE3	2.50	0.46
1:O:232:VAL:C	1:O:233:LEU:HD23	2.41	0.46
2:P:189:LYS:HG3	2:P:189:LYS:O	2.15	0.46
1:C:232:VAL:C	1:C:233:LEU:HD23	2.41	0.46
2:H:26:PHE:O	2:H:27:ILE:HB	2.15	0.46
2:H:318:ILE:HG22	2:H:323:LEU:HD21	1.97	0.46
1:I:60:LYS:O	1:I:60:LYS:HG2	2.14	0.46
2:J:224:SER:O	2:J:228:VAL:HG23	2.15	0.46
2:L:224:SER:O	2:L:228:VAL:HG23	2.16	0.46
1:M:288:PRO:HG3	1:M:335:THR:HG23	1.97	0.46
2:N:26:PHE:HE2	2:N:37:SER:OG	1.98	0.46
2:N:224:SER:O	2:N:228:VAL:HG23	2.15	0.46
2:N:341:ALA:HB1	2:N:345:SER:OG	2.15	0.46
1:O:147:VAL:HG13	2:P:161:THR:HG22	1.98	0.46
1:A:27:GLY:C	1:A:29:GLY:N	2.73	0.46
1:A:29:GLY:O	1:A:33:THR:OG1	2.33	0.46
1:A:101:LEU:HB2	1:A:103:ILE:HG13	1.97	0.46
1:A:266:TYR:O	1:E:15:GLY:HA2	2.15	0.46
1:E:47:ILE:C	1:E:47:ILE:HD13	2.40	0.46
1:E:47:ILE:HD11	1:E:49:TRP:CE3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:101:LEU:HB2	1:G:103:ILE:HG13	1.97	0.46
1:G:232:VAL:C	1:G:233:LEU:HD23	2.41	0.46
2:H:110:PHE:CE1	2:H:167:ARG:HG3	2.50	0.46
1:I:101:LEU:HB2	1:I:103:ILE:HG13	1.97	0.46
1:O:47:ILE:C	1:O:47:ILE:HD13	2.40	0.46
2:P:253:LEU:C	2:P:253:LEU:CD2	2.89	0.46
1:A:60:LYS:O	1:A:60:LYS:HG2	2.15	0.46
1:A:205:GLU:HB2	1:A:206:TYR:CD1	2.49	0.46
1:A:206:TYR:CE2	1:E:72:ARG:HD3	2.51	0.46
1:C:47:ILE:HD13	1:C:47:ILE:C	2.40	0.46
2:D:253:LEU:C	2:D:253:LEU:CD2	2.89	0.46
3:E:1003:FLC:OG1	3:E:1003:FLC:OHB	2.30	0.46
2:F:209:LYS:HE3	2:F:209:LYS:HB3	1.36	0.46
2:F:253:LEU:C	2:F:253:LEU:CD2	2.89	0.46
1:G:19:THR:O	1:G:73:ASN:HB3	2.14	0.46
2:H:228:VAL:HG12	2:H:257:LEU:HD11	1.96	0.46
2:H:253:LEU:HD23	2:H:253:LEU:O	2.14	0.46
2:J:295:PRO:O	2:J:299:LEU:HB2	2.14	0.46
1:K:101:LEU:HB2	1:K:103:ILE:HG13	1.97	0.46
2:L:295:PRO:O	2:L:299:LEU:HB2	2.14	0.46
1:M:232:VAL:C	1:M:233:LEU:HD23	2.40	0.46
1:M:275:HIS:HB3	4:M:2007:AMP:O3P	2.14	0.46
2:P:295:PRO:O	2:P:299:LEU:HB2	2.14	0.46
2:B:110:PHE:CE1	2:B:167:ARG:HG3	2.50	0.46
1:C:119:ARG:HG2	2:D:125:THR:CG2	2.33	0.46
2:D:224:SER:O	2:D:228:VAL:HG23	2.15	0.46
2:F:181:ARG:HH11	2:F:238:ALA:H	1.62	0.46
2:H:186:VAL:CG2	2:H:216:LEU:HD11	2.46	0.46
2:J:228:VAL:HG12	2:J:257:LEU:HD11	1.96	0.46
1:M:60:LYS:O	1:M:60:LYS:HG2	2.15	0.46
2:F:318:ILE:HG22	2:F:323:LEU:HD21	1.97	0.46
2:F:321:ALA:O	2:F:322:VAL:O	2.34	0.46
1:I:47:ILE:HD11	1:I:49:TRP:CE3	2.50	0.46
2:J:26:PHE:HE2	2:J:37:SER:OG	1.98	0.46
2:J:44:PHE:O	2:J:49:VAL:HG22	2.16	0.46
1:K:232:VAL:O	1:K:233:LEU:HD23	2.16	0.46
2:L:44:PHE:O	2:L:49:VAL:HG22	2.16	0.46
1:M:119:ARG:HD2	2:N:125:THR:O	2.15	0.46
1:O:27:GLY:C	1:O:29:GLY:N	2.73	0.46
1:O:232:VAL:O	1:O:233:LEU:HD23	2.16	0.46
2:P:209:LYS:HE3	2:P:209:LYS:HB3	1.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:147:VAL:HG13	2:B:161:THR:HG22	1.98	0.46
2:B:224:SER:O	2:B:228:VAL:HG23	2.16	0.46
2:D:110:PHE:CE1	2:D:167:ARG:HG3	2.50	0.46
2:F:110:PHE:CE1	2:F:167:ARG:HG3	2.50	0.46
2:F:224:SER:O	2:F:228:VAL:HG23	2.15	0.46
2:H:253:LEU:C	2:H:253:LEU:CD2	2.89	0.46
1:I:232:VAL:O	1:I:233:LEU:HD23	2.16	0.46
1:K:12:LYS:HB2	1:K:73:ASN:HA	1.97	0.46
1:K:119:ARG:HD2	2:L:125:THR:O	2.15	0.46
2:L:186:VAL:CG2	2:L:216:LEU:HD11	2.46	0.46
2:L:189:LYS:HG3	2:L:189:LYS:O	2.15	0.46
2:N:186:VAL:CG2	2:N:216:LEU:HD11	2.46	0.46
2:P:26:PHE:HE2	2:P:37:SER:OG	1.98	0.46
2:P:318:ILE:HG22	2:P:323:LEU:HD21	1.97	0.46
1:E:101:LEU:HB2	1:E:103:ILE:HG13	1.97	0.46
2:F:26:PHE:HE2	2:F:37:SER:OG	1.98	0.46
1:G:29:GLY:O	1:G:33:THR:OG1	2.33	0.46
1:I:233:LEU:HD12	1:I:243:LEU:HD13	1.98	0.46
2:J:273:LYS:HE3	2:J:274:ILE:HD11	1.98	0.46
1:K:47:ILE:HD11	1:K:49:TRP:CE3	2.50	0.46
1:M:12:LYS:HB2	1:M:73:ASN:HA	1.97	0.46
2:N:44:PHE:O	2:N:49:VAL:HG22	2.16	0.46
2:P:44:PHE:O	2:P:49:VAL:HG22	2.16	0.46
2:P:341:ALA:HB1	2:P:345:SER:OG	2.15	0.46
2:B:321:ALA:O	2:B:322:VAL:O	2.34	0.46
1:C:27:GLY:C	1:C:29:GLY:N	2.73	0.46
1:E:92:SER:C	1:E:94:ASN:H	2.24	0.46
1:G:47:ILE:HD11	1:G:49:TRP:CE3	2.50	0.46
1:G:288:PRO:HG3	1:G:335:THR:HG23	1.97	0.46
2:H:273:LYS:HE3	2:H:274:ILE:HD11	1.98	0.46
2:L:341:ALA:HB1	2:L:345:SER:OG	2.15	0.46
2:P:224:SER:O	2:P:228:VAL:HG23	2.15	0.46
1:A:232:VAL:C	1:A:233:LEU:HD23	2.41	0.45
1:C:8:ARG:HH21	1:G:160:GLU:CD	2.24	0.45
1:C:232:VAL:O	1:C:233:LEU:HD23	2.16	0.45
1:C:342:ILE:HG12	1:C:342:ILE:H	1.62	0.45
2:D:189:LYS:HG2	2:D:192:ILE:HD13	1.98	0.45
2:F:265:THR:HA	2:F:266:PRO:HD3	1.63	0.45
2:H:44:PHE:O	2:H:49:VAL:HG22	2.16	0.45
1:I:29:GLY:O	1:I:33:THR:OG1	2.33	0.45
1:K:233:LEU:HD12	1:K:243:LEU:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:273:LYS:HE3	2:L:274:ILE:HD11	1.98	0.45
1:M:232:VAL:O	1:M:233:LEU:HD23	2.16	0.45
2:P:321:ALA:O	2:P:322:VAL:O	2.34	0.45
2:D:44:PHE:O	2:D:49:VAL:HG22	2.16	0.45
2:D:62:PHE:CE1	2:D:67:THR:HG22	2.52	0.45
1:G:146:GLY:O	2:H:161:THR:HA	2.16	0.45
2:H:181:ARG:HH11	2:H:238:ALA:H	1.62	0.45
1:I:27:GLY:C	1:I:29:GLY:N	2.73	0.45
1:I:78:LYS:C	1:I:291:MET:HE1	2.41	0.45
1:I:232:VAL:C	1:I:233:LEU:HD23	2.41	0.45
1:K:27:GLY:C	1:K:29:GLY:N	2.73	0.45
1:K:146:GLY:O	2:L:161:THR:HA	2.16	0.45
2:L:209:LYS:HB3	2:L:209:LYS:HE3	1.36	0.45
2:L:220:LEU:O	2:L:221:ILE:C	2.60	0.45
2:L:253:LEU:C	2:L:253:LEU:CD2	2.89	0.45
2:L:305:MET:HG2	2:L:309:MET:HE2	1.98	0.45
2:L:326:ILE:HG21	2:L:350:VAL:HG22	1.98	0.45
1:M:27:GLY:C	1:M:29:GLY:N	2.73	0.45
1:M:78:LYS:C	1:M:291:MET:HE1	2.41	0.45
1:M:101:LEU:HB2	1:M:103:ILE:HG13	1.97	0.45
2:N:273:LYS:HE3	2:N:274:ILE:HD11	1.98	0.45
1:O:179:THR:HB	1:O:233:LEU:HD22	1.98	0.45
2:B:189:LYS:HE2	2:B:192:ILE:CD1	2.47	0.45
2:B:189:LYS:HG2	2:B:192:ILE:HD13	1.98	0.45
2:D:181:ARG:HH11	2:D:238:ALA:H	1.62	0.45
1:E:78:LYS:C	1:E:291:MET:HE1	2.41	0.45
1:G:92:SER:C	1:G:94:ASN:H	2.25	0.45
1:G:251:ILE:HD11	1:G:257:VAL:HG22	1.99	0.45
2:L:24:VAL:HG11	2:L:53:TRP:HZ3	1.82	0.45
2:L:287:ILE:O	2:L:287:ILE:HG23	2.17	0.45
1:M:179:THR:HB	1:M:233:LEU:HD22	1.98	0.45
2:N:189:LYS:HG3	2:N:189:LYS:O	2.15	0.45
2:P:59:SER:HA	2:P:60:PRO:HD3	1.86	0.45
2:P:265:THR:O	2:P:280:VAL:HG22	2.17	0.45
1:A:78:LYS:C	1:A:291:MET:HE1	2.41	0.45
2:B:318:ILE:HG22	2:B:323:LEU:HD21	1.97	0.45
1:C:120:ILE:HA	1:C:121:PRO:HD3	1.76	0.45
2:D:273:LYS:HE3	2:D:274:ILE:HD11	1.98	0.45
1:E:115:GLY:CA	1:E:320:ALA:HA	2.47	0.45
1:E:232:VAL:O	1:E:233:LEU:HD23	2.16	0.45
2:F:189:LYS:HE2	2:F:192:ILE:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:78:LYS:C	1:G:291:MET:HE1	2.41	0.45
2:H:326:ILE:HG21	2:H:350:VAL:HG22	1.98	0.45
2:J:253:LEU:C	2:J:253:LEU:CD2	2.89	0.45
1:K:120:ILE:HG13	2:L:125:THR:HG21	1.97	0.45
1:K:249:ALA:CB	2:L:230:THR:HG23	2.47	0.45
1:M:92:SER:C	1:M:94:ASN:H	2.25	0.45
1:M:323:LYS:H	1:M:323:LYS:CE	2.23	0.45
2:N:189:LYS:HE2	2:N:192:ILE:CD1	2.47	0.45
2:N:253:LEU:C	2:N:253:LEU:CD2	2.89	0.45
2:P:189:LYS:HE2	2:P:192:ILE:CD1	2.47	0.45
1:A:32:ILE:HG13	1:A:288:PRO:HA	1.99	0.45
1:A:233:LEU:HD12	1:A:243:LEU:HD13	1.98	0.45
1:C:340:ASN:O	1:C:343:ILE:HG13	2.17	0.45
2:D:189:LYS:HE2	2:D:192:ILE:CD1	2.47	0.45
1:E:232:VAL:C	1:E:233:LEU:HD23	2.41	0.45
1:E:288:PRO:HG3	1:E:335:THR:HG23	1.98	0.45
2:F:44:PHE:O	2:F:49:VAL:HG22	2.16	0.45
2:F:155:GLN:OE1	2:H:155:GLN:NE2	2.46	0.45
2:F:265:THR:O	2:F:280:VAL:HG22	2.17	0.45
1:I:187:MET:HE2	2:J:156:SER:CB	2.43	0.45
1:I:245:ASN:ND2	2:J:222:ASP:HA	2.31	0.45
1:I:288:PRO:HG3	1:I:335:THR:HG23	1.98	0.45
2:J:43:ILE:HD12	2:J:299:LEU:HD21	1.99	0.45
1:K:179:THR:HB	1:K:233:LEU:HD22	1.98	0.45
1:K:232:VAL:C	1:K:233:LEU:HD23	2.41	0.45
2:N:321:ALA:O	2:N:322:VAL:O	2.34	0.45
1:O:233:LEU:HD12	1:O:243:LEU:HD13	1.98	0.45
1:A:340:ASN:O	1:A:343:ILE:HG13	2.17	0.45
2:B:44:PHE:O	2:B:49:VAL:HG22	2.16	0.45
2:B:265:THR:O	2:B:280:VAL:HG22	2.17	0.45
1:C:12:LYS:HB2	1:C:73:ASN:HA	1.97	0.45
1:C:120:ILE:HG13	2:D:125:THR:HG21	1.99	0.45
2:D:146:GLU:HB3	2:D:156:SER:HA	1.99	0.45
2:D:321:ALA:O	2:D:322:VAL:O	2.34	0.45
1:E:224:VAL:HG21	2:F:253:LEU:HD21	1.99	0.45
2:F:186:VAL:CG2	2:F:216:LEU:HD11	2.46	0.45
2:F:305:MET:HG2	2:F:309:MET:HE2	1.99	0.45
2:H:265:THR:HA	2:H:266:PRO:HD3	1.63	0.45
1:I:151:LEU:HD13	2:J:155:GLN:NE2	2.31	0.45
2:J:305:MET:HG2	2:J:309:MET:HE2	1.98	0.45
2:L:321:ALA:O	2:L:322:VAL:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:340:ASN:O	1:M:343:ILE:HG13	2.17	0.45
2:N:189:LYS:HG2	2:N:192:ILE:HD13	1.98	0.45
1:A:136:PHE:CD1	1:A:237:SER:HB2	2.52	0.45
1:A:232:VAL:O	1:A:233:LEU:HD23	2.16	0.45
3:A:1001:FLC:OG1	3:A:1001:FLC:OHB	2.30	0.45
2:B:62:PHE:CE1	2:B:67:THR:HG22	2.52	0.45
1:C:32:ILE:HG13	1:C:288:PRO:HA	1.99	0.45
2:D:26:PHE:HE2	2:D:37:SER:OG	1.98	0.45
2:D:318:ILE:HG22	2:D:323:LEU:HD21	1.97	0.45
1:E:179:THR:HB	1:E:233:LEU:HD22	1.98	0.45
2:F:43:ILE:HD12	2:F:299:LEU:HD21	1.99	0.45
1:G:249:ALA:HB1	2:H:230:THR:HG23	1.98	0.45
1:G:321:GLU:O	1:G:322:GLY:C	2.60	0.45
2:H:321:ALA:O	2:H:322:VAL:O	2.34	0.45
2:J:321:ALA:O	2:J:322:VAL:O	2.34	0.45
1:K:115:GLY:CA	1:K:320:ALA:HA	2.47	0.45
1:K:136:PHE:CD1	1:K:237:SER:HB2	2.52	0.45
2:L:30:ASP:OD2	2:L:88:LEU:HA	2.17	0.45
2:N:287:ILE:O	2:N:287:ILE:HG23	2.17	0.45
2:N:305:MET:HG2	2:N:309:MET:HE2	1.98	0.45
2:N:326:ILE:HG21	2:N:350:VAL:HG22	1.98	0.45
2:P:43:ILE:HD12	2:P:299:LEU:HD21	1.99	0.45
2:P:186:VAL:CG2	2:P:216:LEU:HD11	2.46	0.45
2:B:253:LEU:C	2:B:253:LEU:CD2	2.89	0.45
1:C:179:THR:HB	1:C:233:LEU:HD22	1.98	0.45
1:C:251:ILE:HD11	1:C:257:VAL:HG22	1.99	0.45
1:C:288:PRO:HG3	1:C:335:THR:HG23	1.97	0.45
2:D:326:ILE:HG21	2:D:350:VAL:HG22	1.99	0.45
2:F:189:LYS:HG2	2:F:192:ILE:HD13	1.98	0.45
1:G:340:ASN:O	1:G:343:ILE:HG13	2.17	0.45
2:H:62:PHE:CE1	2:H:67:THR:HG22	2.52	0.45
1:I:136:PHE:CD1	1:I:237:SER:HB2	2.52	0.45
1:I:340:ASN:O	1:I:343:ILE:HG13	2.17	0.45
1:K:288:PRO:HG3	1:K:335:THR:HG23	1.97	0.45
1:K:340:ASN:O	1:K:343:ILE:HG13	2.17	0.45
2:L:62:PHE:CE1	2:L:67:THR:HG22	2.51	0.45
2:L:146:GLU:HB3	2:L:156:SER:HA	1.99	0.45
2:L:189:LYS:HG2	2:L:192:ILE:HD13	1.98	0.45
2:P:24:VAL:HG11	2:P:53:TRP:HZ3	1.82	0.45
2:P:62:PHE:CE1	2:P:67:THR:HG22	2.51	0.45
2:P:220:LEU:O	2:P:221:ILE:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:294:ASN:HA	2:B:295:PRO:HD2	1.74	0.45
2:F:220:LEU:O	2:F:221:ILE:C	2.60	0.45
2:F:287:ILE:HG23	2:F:287:ILE:O	2.17	0.45
1:G:232:VAL:O	1:G:233:LEU:HD23	2.16	0.45
1:G:283:GLN:CB	1:G:285:VAL:HG13	2.47	0.45
2:J:62:PHE:CE1	2:J:67:THR:HG22	2.52	0.45
2:J:318:ILE:HG22	2:J:323:LEU:HD21	1.97	0.45
1:M:283:GLN:CB	1:M:285:VAL:HG13	2.47	0.45
2:N:220:LEU:O	2:N:221:ILE:C	2.60	0.45
1:O:32:ILE:HG13	1:O:288:PRO:HA	1.99	0.45
1:O:92:SER:C	1:O:94:ASN:H	2.25	0.45
1:O:251:ILE:HD11	1:O:257:VAL:HG22	1.99	0.45
1:O:283:GLN:CB	1:O:285:VAL:HG13	2.47	0.45
2:P:30:ASP:OD2	2:P:88:LEU:HA	2.17	0.45
2:P:265:THR:HA	2:P:266:PRO:HD3	1.63	0.45
2:P:305:MET:HG2	2:P:309:MET:HE2	1.98	0.45
1:A:115:GLY:CA	1:A:320:ALA:HA	2.47	0.45
2:B:30:ASP:OD2	2:B:88:LEU:HA	2.17	0.45
2:B:146:GLU:HB3	2:B:156:SER:HA	1.99	0.45
2:B:149:VAL:O	2:B:150:CYS:HB3	2.17	0.45
2:D:30:ASP:OD2	2:D:88:LEU:HA	2.17	0.45
2:D:97:ARG:HG3	2:D:102:THR:CG2	2.44	0.45
1:E:233:LEU:HD12	1:E:243:LEU:HD13	1.98	0.45
1:E:321:GLU:O	1:E:322:GLY:C	2.60	0.45
1:G:115:GLY:CA	1:G:320:ALA:HA	2.47	0.45
2:H:306:LEU:HD12	2:H:309:MET:HE1	1.99	0.45
1:I:115:GLY:CA	1:I:320:ALA:HA	2.47	0.45
1:I:283:GLN:CB	1:I:285:VAL:HG13	2.47	0.45
2:J:189:LYS:HG2	2:J:192:ILE:HD13	1.98	0.45
2:J:189:LYS:C	2:J:191:THR:H	2.25	0.45
1:K:78:LYS:C	1:K:291:MET:HE1	2.41	0.45
1:M:32:ILE:HG13	1:M:288:PRO:HA	1.99	0.45
1:O:29:GLY:O	1:O:33:THR:OG1	2.33	0.45
2:P:273:LYS:HE3	2:P:274:ILE:HD11	1.98	0.45
1:A:92:SER:C	1:A:94:ASN:H	2.25	0.44
2:B:12:THR:HB	2:B:81:LEU:CD1	2.47	0.44
1:C:83:THR:HA	1:C:84:PRO:HD3	1.80	0.44
1:C:283:GLN:CB	1:C:285:VAL:HG13	2.47	0.44
2:F:24:VAL:HG11	2:F:53:TRP:HZ3	1.82	0.44
2:F:62:PHE:CE1	2:F:67:THR:HG22	2.52	0.44
1:G:233:LEU:HD12	1:G:243:LEU:HD13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:224:SER:O	2:H:228:VAL:HG23	2.15	0.44
2:H:265:THR:O	2:H:280:VAL:HG22	2.17	0.44
2:J:8:ILE:HG21	2:J:171:TYR:HB2	2.00	0.44
2:J:265:THR:O	2:J:280:VAL:HG22	2.17	0.44
1:K:92:SER:C	1:K:94:ASN:H	2.25	0.44
1:K:245:ASN:ND2	2:L:222:ASP:HA	2.31	0.44
1:M:251:ILE:HD11	1:M:257:VAL:HG22	1.99	0.44
2:N:62:PHE:CE1	2:N:67:THR:HG22	2.52	0.44
2:N:306:LEU:HD12	2:N:309:MET:HE1	2.00	0.44
1:O:78:LYS:C	1:O:291:MET:HE1	2.41	0.44
1:A:179:THR:HB	1:A:233:LEU:HD22	1.98	0.44
1:A:287:ASN:HA	1:A:288:PRO:HD3	1.85	0.44
1:C:136:PHE:CD1	1:C:237:SER:HB2	2.52	0.44
2:D:285:PRO:HB2	2:P:286:ASP:OD2	2.03	0.44
1:E:340:ASN:O	1:E:343:ILE:HG13	2.17	0.44
2:F:30:ASP:OD2	2:F:88:LEU:HA	2.17	0.44
2:H:189:LYS:HG2	2:H:192:ILE:HD13	1.98	0.44
2:J:30:ASP:OD2	2:J:88:LEU:HA	2.17	0.44
2:J:146:GLU:HB3	2:J:156:SER:HA	1.99	0.44
1:K:120:ILE:HA	1:K:121:PRO:HD3	1.76	0.44
1:K:251:ILE:HD11	1:K:257:VAL:HG22	1.99	0.44
1:K:283:GLN:CB	1:K:285:VAL:HG13	2.47	0.44
1:K:349:MET:HE2	1:K:349:MET:HB3	1.84	0.44
2:L:8:ILE:HG21	2:L:171:TYR:HB2	1.99	0.44
2:L:265:THR:O	2:L:280:VAL:HG22	2.17	0.44
2:N:43:ILE:HD12	2:N:299:LEU:HD21	1.99	0.44
2:B:24:VAL:HG11	2:B:53:TRP:HZ3	1.82	0.44
2:B:326:ILE:HG21	2:B:350:VAL:HG22	1.98	0.44
1:C:78:LYS:C	1:C:291:MET:HE1	2.41	0.44
2:D:287:ILE:O	2:D:287:ILE:HG23	2.16	0.44
2:F:273:LYS:HE3	2:F:274:ILE:HD11	1.98	0.44
2:F:326:ILE:HG21	2:F:350:VAL:HG22	1.99	0.44
2:H:12:THR:HB	2:H:81:LEU:CD1	2.47	0.44
2:H:189:LYS:HE2	2:H:192:ILE:CD1	2.47	0.44
2:H:189:LYS:C	2:H:191:THR:N	2.76	0.44
1:I:32:ILE:HG13	1:I:288:PRO:HA	1.99	0.44
1:I:92:SER:C	1:I:94:ASN:H	2.25	0.44
1:K:32:ILE:HG13	1:K:288:PRO:HA	1.99	0.44
1:K:158:LYS:HG2	1:K:161:ARG:NH2	2.33	0.44
1:K:321:GLU:O	1:K:322:GLY:C	2.60	0.44
1:M:115:GLY:CA	1:M:320:ALA:HA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:136:PHE:CD1	1:M:237:SER:HB2	2.52	0.44
1:M:186:ILE:HD13	2:N:142:TYR:CD2	2.52	0.44
2:B:181:ARG:HD3	2:B:238:ALA:H	1.83	0.44
2:D:149:VAL:O	2:D:150:CYS:HB3	2.17	0.44
2:F:306:LEU:HD12	2:F:309:MET:HE1	2.00	0.44
1:G:179:THR:HB	1:G:233:LEU:HD22	1.98	0.44
2:H:43:ILE:HD12	2:H:299:LEU:HD21	1.99	0.44
2:H:146:GLU:HB3	2:H:156:SER:HA	1.99	0.44
2:H:181:ARG:HD3	2:H:238:ALA:H	1.83	0.44
1:I:92:SER:CB	3:I:1005:FLC:OG2	2.65	0.44
2:J:189:LYS:C	2:J:191:THR:N	2.76	0.44
2:L:189:LYS:HE2	2:L:192:ILE:CD1	2.47	0.44
2:N:30:ASP:OD2	2:N:88:LEU:HA	2.17	0.44
1:O:120:ILE:HA	1:O:121:PRO:HD3	1.76	0.44
1:O:136:PHE:CD1	1:O:237:SER:HB2	2.52	0.44
2:P:181:ARG:HD3	2:P:238:ALA:H	1.83	0.44
2:P:189:LYS:C	2:P:191:THR:H	2.25	0.44
1:C:60:LYS:O	1:C:60:LYS:HG2	2.15	0.44
2:D:183:ARG:O	2:D:238:ALA:O	2.36	0.44
2:D:220:LEU:O	2:D:221:ILE:C	2.60	0.44
2:D:265:THR:O	2:D:280:VAL:HG22	2.17	0.44
2:D:305:MET:HG2	2:D:309:MET:HE2	1.99	0.44
2:J:183:ARG:O	2:J:238:ALA:O	2.36	0.44
2:J:220:LEU:O	2:J:221:ILE:C	2.60	0.44
1:M:43:GLU:OE1	1:M:310:ARG:NH1	2.51	0.44
1:M:245:ASN:ND2	2:N:222:ASP:HA	2.32	0.44
2:N:149:VAL:O	2:N:150:CYS:HB3	2.17	0.44
2:P:183:ARG:O	2:P:238:ALA:O	2.36	0.44
2:P:294:ASN:HA	2:P:295:PRO:HD2	1.73	0.44
2:B:25:SER:HB3	2:B:56:CYS:SG	2.58	0.44
2:B:183:ARG:NH1	2:B:237:ASP:OD2	2.51	0.44
2:B:273:LYS:HE3	2:B:274:ILE:HD11	1.98	0.44
1:C:92:SER:C	1:C:94:ASN:H	2.25	0.44
1:C:321:GLU:O	1:C:322:GLY:C	2.60	0.44
2:D:8:ILE:HG21	2:D:171:TYR:HB2	2.00	0.44
2:D:24:VAL:HG11	2:D:53:TRP:HZ3	1.82	0.44
2:D:25:SER:HB3	2:D:56:CYS:SG	2.58	0.44
1:E:136:PHE:CD1	1:E:237:SER:HB2	2.52	0.44
1:E:283:GLN:CB	1:E:285:VAL:HG13	2.47	0.44
2:F:146:GLU:HB3	2:F:156:SER:HA	1.99	0.44
2:F:189:LYS:C	2:F:191:THR:H	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:8:ILE:HG21	2:H:171:TYR:HB2	1.99	0.44
2:H:287:ILE:O	2:H:287:ILE:HG23	2.17	0.44
1:I:171:LYS:NZ	1:M:72:ARG:HH22	2.16	0.44
1:M:321:GLU:O	1:M:322:GLY:C	2.60	0.44
1:A:251:ILE:HD11	1:A:257:VAL:HG22	1.99	0.44
1:A:274:ARG:HG2	3:A:1001:FLC:OB1	2.18	0.44
2:B:8:ILE:HG21	2:B:171:TYR:HB2	2.00	0.44
2:B:186:VAL:CG2	2:B:216:LEU:HD11	2.46	0.44
2:B:220:LEU:O	2:B:221:ILE:C	2.60	0.44
1:C:233:LEU:HD12	1:C:243:LEU:HD13	1.98	0.44
1:E:251:ILE:HD11	1:E:257:VAL:HG22	1.99	0.44
2:F:183:ARG:O	2:F:238:ALA:O	2.36	0.44
1:G:101:LEU:HD12	1:G:103:ILE:HD11	1.99	0.44
1:G:136:PHE:CD1	1:G:237:SER:HB2	2.52	0.44
1:G:158:LYS:HG2	1:G:161:ARG:NH2	2.33	0.44
3:G:1004:FLC:OA1	3:G:1004:FLC:OB1	2.36	0.44
2:H:30:ASP:OD2	2:H:88:LEU:HA	2.17	0.44
2:J:24:VAL:HG11	2:J:53:TRP:HZ3	1.82	0.44
2:J:183:ARG:NH1	2:J:237:ASP:OD2	2.50	0.44
1:K:43:GLU:OE1	1:K:310:ARG:NH1	2.51	0.44
1:K:336:THR:HG22	1:K:337:ASP:N	2.33	0.44
2:N:265:THR:O	2:N:280:VAL:HG22	2.17	0.44
1:O:101:LEU:HD12	1:O:103:ILE:HD11	1.99	0.44
1:O:321:GLU:O	1:O:322:GLY:C	2.60	0.44
1:O:340:ASN:O	1:O:343:ILE:HG13	2.17	0.44
2:P:8:ILE:HG21	2:P:171:TYR:HB2	2.00	0.44
2:P:189:LYS:HG2	2:P:192:ILE:HD13	1.98	0.44
2:P:287:ILE:O	2:P:287:ILE:HG23	2.17	0.44
1:A:283:GLN:CB	1:A:285:VAL:HG13	2.47	0.44
2:B:287:ILE:HG23	2:B:287:ILE:O	2.17	0.44
1:C:72:ARG:CZ	1:G:171:LYS:NZ	2.76	0.44
2:D:64:ASN:O	2:D:66:LEU:N	2.48	0.44
2:F:348:GLU:H	2:F:348:GLU:HG2	1.62	0.44
2:H:189:LYS:C	2:H:191:THR:H	2.25	0.44
1:I:241:THR:OG1	3:I:1005:FLC:OA2	2.31	0.44
3:M:1007:FLC:OA1	3:M:1007:FLC:OB1	2.36	0.44
3:O:1008:FLC:OB1	3:O:1008:FLC:OA1	2.36	0.44
1:A:158:LYS:HG2	1:A:161:ARG:NH2	2.33	0.44
2:B:142:TYR:N	2:B:142:TYR:CD1	2.86	0.44
2:B:189:LYS:C	2:B:191:THR:H	2.26	0.44
2:D:142:TYR:N	2:D:142:TYR:CD1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:101:LEU:HD12	1:E:103:ILE:HD11	1.99	0.44
2:F:8:ILE:HG21	2:F:171:TYR:HB2	2.00	0.44
2:F:25:SER:HB3	2:F:56:CYS:SG	2.58	0.44
2:F:183:ARG:NH1	2:F:237:ASP:OD2	2.51	0.44
1:G:43:GLU:OE1	1:G:310:ARG:NH1	2.51	0.44
2:H:24:VAL:HG11	2:H:53:TRP:HZ3	1.82	0.44
2:H:64:ASN:O	2:H:66:LEU:N	2.48	0.44
2:H:149:VAL:O	2:H:150:CYS:HB3	2.17	0.44
1:I:43:GLU:OE1	1:I:310:ARG:NH1	2.51	0.44
2:J:149:VAL:O	1:K:153:VAL:HG21	2.18	0.44
2:J:189:LYS:HE2	2:J:192:ILE:CD1	2.47	0.44
1:M:233:LEU:HD12	1:M:243:LEU:HD13	1.98	0.44
2:N:189:LYS:C	2:N:191:THR:N	2.76	0.44
1:O:83:THR:HA	1:O:84:PRO:HD3	1.80	0.44
2:P:25:SER:HB3	2:P:56:CYS:SG	2.58	0.44
2:P:149:VAL:O	2:P:150:CYS:HB3	2.18	0.44
1:A:43:GLU:OE1	1:A:310:ARG:NH1	2.51	0.43
1:A:266:TYR:O	1:E:15:GLY:CA	2.66	0.43
1:A:342:ILE:HG12	1:A:342:ILE:H	1.62	0.43
1:E:32:ILE:HG13	1:E:288:PRO:HA	1.99	0.43
2:F:189:LYS:C	2:F:191:THR:N	2.76	0.43
2:J:25:SER:HB3	2:J:56:CYS:SG	2.58	0.43
2:J:103:LEU:HA	2:J:103:LEU:HD12	1.69	0.43
2:J:186:VAL:CG2	2:J:216:LEU:HD11	2.46	0.43
2:N:146:GLU:HB3	2:N:156:SER:HA	1.99	0.43
1:A:349:MET:HE2	1:A:349:MET:HB3	1.84	0.43
1:C:8:ARG:NH2	1:G:160:GLU:CD	2.76	0.43
1:C:158:LYS:HG2	1:C:161:ARG:NH2	2.33	0.43
1:I:147:VAL:HG13	2:J:159:LEU:HD11	1.99	0.43
1:I:195:ARG:O	1:I:199:THR:HG23	2.19	0.43
2:L:25:SER:HB3	2:L:56:CYS:SG	2.58	0.43
2:L:43:ILE:HD12	2:L:299:LEU:HD21	1.99	0.43
1:M:101:LEU:HD12	1:M:103:ILE:HD11	1.99	0.43
2:N:24:VAL:HG11	2:N:53:TRP:HZ3	1.82	0.43
2:P:189:LYS:C	2:P:191:THR:N	2.76	0.43
1:A:101:LEU:HD12	1:A:103:ILE:HD11	1.99	0.43
1:A:321:GLU:O	1:A:322:GLY:C	2.60	0.43
2:D:43:ILE:HD12	2:D:299:LEU:HD21	1.99	0.43
2:H:221:ILE:N	2:H:221:ILE:HD12	2.34	0.43
2:H:299:LEU:HD12	2:H:299:LEU:HA	1.86	0.43
2:H:305:MET:HG2	2:H:309:MET:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:179:THR:HB	1:I:233:LEU:HD22	1.98	0.43
2:J:47:ALA:HB2	2:J:354:LEU:HD11	2.01	0.43
2:J:287:ILE:HG23	2:J:287:ILE:O	2.17	0.43
2:J:326:ILE:HD12	2:J:332:ASN:HB3	2.01	0.43
2:L:103:LEU:HD12	2:L:103:LEU:HA	1.68	0.43
2:L:274:ILE:CG2	2:L:275:SER:H	2.31	0.43
2:N:221:ILE:O	2:N:222:ASP:C	2.61	0.43
2:N:274:ILE:CG2	2:N:275:SER:H	2.31	0.43
2:B:209:LYS:HE3	2:B:209:LYS:HB3	1.36	0.43
2:B:348:GLU:H	2:B:348:GLU:HG2	1.62	0.43
3:C:1002:FLC:OB1	3:C:1002:FLC:OA1	2.36	0.43
1:E:277:GLY:HA3	4:E:2003:AMP:C8	2.51	0.43
2:F:221:ILE:N	2:F:221:ILE:HD12	2.33	0.43
2:H:25:SER:HB3	2:H:56:CYS:SG	2.58	0.43
2:H:142:TYR:N	2:H:142:TYR:CD1	2.86	0.43
2:H:326:ILE:HD12	2:H:332:ASN:HB3	2.01	0.43
1:I:251:ILE:HD11	1:I:257:VAL:HG22	1.99	0.43
2:J:326:ILE:HG21	2:J:350:VAL:HG22	1.98	0.43
1:K:8:ARG:HH21	1:O:164:ARG:HH22	1.66	0.43
1:K:277:GLY:N	4:K:2006:AMP:C8	2.87	0.43
2:L:221:ILE:O	2:L:222:ASP:C	2.61	0.43
1:M:120:ILE:HA	1:M:121:PRO:HD3	1.76	0.43
2:N:189:LYS:C	2:N:191:THR:H	2.25	0.43
2:N:265:THR:HA	2:N:266:PRO:HD3	1.64	0.43
1:O:195:ARG:O	1:O:199:THR:HG23	2.19	0.43
2:P:146:GLU:HB3	2:P:156:SER:HA	1.99	0.43
2:B:183:ARG:O	2:B:238:ALA:O	2.36	0.43
1:C:101:LEU:HD12	1:C:103:ILE:HD11	1.99	0.43
1:C:195:ARG:O	1:C:199:THR:HG23	2.18	0.43
2:D:186:VAL:CG2	2:D:216:LEU:HD11	2.46	0.43
2:F:326:ILE:HD12	2:F:332:ASN:HB3	2.01	0.43
2:H:77:ILE:O	2:H:80:ASN:O	2.37	0.43
2:J:348:GLU:H	2:J:348:GLU:HG2	1.63	0.43
2:L:142:TYR:N	2:L:142:TYR:CD1	2.86	0.43
2:L:183:ARG:O	2:L:238:ALA:O	2.36	0.43
2:L:326:ILE:HD12	2:L:332:ASN:HB3	2.01	0.43
1:M:336:THR:HG22	1:M:337:ASP:N	2.33	0.43
2:N:64:ASN:O	2:N:66:LEU:N	2.48	0.43
2:P:183:ARG:NH1	2:P:237:ASP:OD2	2.50	0.43
1:A:91:GLY:O	1:A:92:SER:C	2.62	0.43
1:C:91:GLY:O	1:C:92:SER:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:115:GLY:CA	1:C:320:ALA:HA	2.47	0.43
1:C:135:GLU:CD	1:C:238:MET:HB2	2.44	0.43
2:D:189:LYS:C	2:D:191:THR:H	2.26	0.43
2:D:221:ILE:O	2:D:222:ASP:C	2.61	0.43
2:D:306:LEU:HD12	2:D:309:MET:HE1	2.00	0.43
1:E:135:GLU:CD	1:E:238:MET:HB2	2.44	0.43
1:G:32:ILE:HG13	1:G:288:PRO:HA	1.99	0.43
1:G:336:THR:HG22	1:G:337:ASP:N	2.33	0.43
1:I:321:GLU:O	1:I:322:GLY:C	2.60	0.43
1:I:336:THR:HG22	1:I:337:ASP:N	2.33	0.43
3:K:1006:FLC:OB1	3:K:1006:FLC:OA1	2.36	0.43
1:M:158:LYS:HG2	1:M:161:ARG:NH2	2.33	0.43
1:O:115:GLY:CA	1:O:320:ALA:HA	2.47	0.43
2:P:142:TYR:CD1	2:P:142:TYR:N	2.86	0.43
2:P:326:ILE:HG21	2:P:350:VAL:HG22	1.99	0.43
2:D:46:ALA:CB	2:D:351:ILE:HD13	2.49	0.43
1:E:91:GLY:O	1:E:92:SER:C	2.62	0.43
1:E:336:THR:HG22	1:E:337:ASP:N	2.33	0.43
3:E:1003:FLC:OB1	3:E:1003:FLC:OA1	2.36	0.43
2:H:47:ALA:HB2	2:H:354:LEU:HD11	2.01	0.43
1:I:91:GLY:O	1:I:92:SER:C	2.62	0.43
2:J:149:VAL:O	2:J:150:CYS:HB3	2.18	0.43
2:L:77:ILE:O	2:L:80:ASN:O	2.37	0.43
1:O:43:GLU:OE1	1:O:310:ARG:NH1	2.51	0.43
1:A:195:ARG:O	1:A:199:THR:HG23	2.19	0.43
2:D:236:THR:O	2:D:236:THR:HG22	2.19	0.43
1:E:43:GLU:OE1	1:E:310:ARG:NH1	2.51	0.43
2:F:46:ALA:CB	2:F:351:ILE:HD13	2.49	0.43
1:G:83:THR:HB	2:H:191:THR:HG23	2.01	0.43
1:I:158:LYS:HG2	1:I:161:ARG:NH2	2.33	0.43
1:I:323:LYS:O	1:I:324:HIS:CB	2.67	0.43
1:K:101:LEU:HD12	1:K:103:ILE:HD11	1.99	0.43
1:K:135:GLU:CD	1:K:238:MET:HB2	2.44	0.43
2:N:46:ALA:HB3	2:N:354:LEU:CD2	2.49	0.43
1:O:181:VAL:HG21	1:O:243:LEU:CD1	2.49	0.43
2:P:306:LEU:HD12	2:P:309:MET:HE1	2.00	0.43
2:P:326:ILE:HD12	2:P:332:ASN:HB3	2.01	0.43
1:A:336:THR:HG22	1:A:337:ASP:N	2.33	0.43
3:A:1001:FLC:OB1	3:A:1001:FLC:OA1	2.36	0.43
2:D:326:ILE:HD12	2:D:332:ASN:HB3	2.01	0.43
1:E:158:LYS:HG2	1:E:161:ARG:NH2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:47:ALA:HB2	2:F:354:LEU:HD11	2.01	0.43
2:F:97:ARG:HG3	2:F:102:THR:CG2	2.44	0.43
2:F:149:VAL:O	2:F:150:CYS:HB3	2.18	0.43
2:H:176:ALA:HA	2:H:239:VAL:HG21	2.01	0.43
2:H:220:LEU:O	2:H:221:ILE:C	2.60	0.43
1:I:101:LEU:HD12	1:I:103:ILE:HD11	1.99	0.43
1:I:119:ARG:HD2	2:J:125:THR:O	2.19	0.43
2:J:149:VAL:O	1:K:153:VAL:HG11	2.18	0.43
2:J:221:ILE:HD12	2:J:221:ILE:N	2.33	0.43
2:L:183:ARG:NH1	2:L:237:ASP:OD2	2.51	0.43
2:L:189:LYS:C	2:L:191:THR:H	2.26	0.43
2:L:265:THR:HA	2:L:266:PRO:HD3	1.63	0.43
1:M:195:ARG:O	1:M:199:THR:HG23	2.18	0.43
2:N:25:SER:HB3	2:N:56:CYS:SG	2.58	0.43
1:O:91:GLY:O	1:O:92:SER:C	2.62	0.43
2:P:12:THR:HB	2:P:81:LEU:CD1	2.47	0.43
2:P:46:ALA:HB3	2:P:354:LEU:CD2	2.49	0.43
2:P:77:ILE:O	2:P:80:ASN:O	2.37	0.43
2:P:221:ILE:O	2:P:222:ASP:C	2.61	0.43
2:P:221:ILE:N	2:P:221:ILE:HD12	2.34	0.43
2:B:194:ARG:O	2:B:198:GLY:HA3	2.19	0.43
1:C:181:VAL:HG21	1:C:243:LEU:CD1	2.49	0.43
2:D:189:LYS:C	2:D:191:THR:N	2.76	0.43
1:G:181:VAL:HG21	1:G:243:LEU:CD1	2.49	0.43
1:G:195:ARG:O	1:G:199:THR:HG23	2.19	0.43
2:J:299:LEU:HD12	2:J:299:LEU:HA	1.86	0.43
2:L:46:ALA:CB	2:L:351:ILE:HD13	2.49	0.43
2:N:183:ARG:O	2:N:238:ALA:O	2.36	0.43
1:O:336:THR:HG22	1:O:337:ASP:N	2.33	0.43
2:B:274:ILE:CG2	2:B:275:SER:H	2.31	0.42
2:D:183:ARG:NH1	2:D:237:ASP:OD2	2.50	0.42
1:G:254:PRO:HG3	2:H:226:LEU:HD11	2.00	0.42
2:H:183:ARG:O	2:H:238:ALA:O	2.36	0.42
2:H:294:ASN:HA	2:H:295:PRO:HD2	1.74	0.42
2:J:46:ALA:HB3	2:J:354:LEU:CD2	2.49	0.42
2:J:181:ARG:HD3	2:J:238:ALA:H	1.83	0.42
2:L:24:VAL:CG1	2:L:53:TRP:HZ3	2.32	0.42
2:L:181:ARG:HD3	2:L:238:ALA:H	1.83	0.42
2:L:299:LEU:HD12	2:L:299:LEU:HA	1.86	0.42
1:M:284:ASN:O	1:M:334:SER:HB2	2.19	0.42
1:O:135:GLU:CD	1:O:238:MET:HB2	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:47:ALA:HB2	2:P:354:LEU:HD11	2.01	0.42
1:A:299:LEU:HA	1:A:302:LEU:CD1	2.49	0.42
2:B:43:ILE:HD12	2:B:299:LEU:HD21	1.99	0.42
2:B:46:ALA:CB	2:B:351:ILE:HD13	2.49	0.42
2:B:221:ILE:HD12	2:B:221:ILE:N	2.33	0.42
2:B:306:LEU:HD12	2:B:309:MET:HE1	2.00	0.42
2:D:221:ILE:HD12	2:D:221:ILE:N	2.34	0.42
1:E:299:LEU:HA	1:E:302:LEU:CD1	2.49	0.42
2:F:236:THR:HG22	2:F:236:THR:O	2.19	0.42
2:F:294:ASN:HA	2:F:295:PRO:HD2	1.74	0.42
2:H:24:VAL:CG1	2:H:53:TRP:HZ3	2.33	0.42
3:I:1005:FLC:OA1	3:I:1005:FLC:OB1	2.36	0.42
2:J:221:ILE:O	2:J:222:ASP:C	2.61	0.42
2:J:274:ILE:CG2	2:J:275:SER:H	2.31	0.42
1:K:151:LEU:CD2	2:L:157:ILE:HG12	2.43	0.42
1:K:299:LEU:HA	1:K:302:LEU:CD1	2.50	0.42
2:L:46:ALA:HB3	2:L:354:LEU:CD2	2.49	0.42
2:L:294:ASN:HA	2:L:295:PRO:HD2	1.74	0.42
2:N:176:ALA:HA	2:N:239:VAL:HG21	2.01	0.42
1:O:158:LYS:HG2	1:O:161:ARG:NH2	2.33	0.42
2:P:176:ALA:HA	2:P:239:VAL:HG21	2.01	0.42
2:P:236:THR:O	2:P:236:THR:HG22	2.19	0.42
1:E:195:ARG:O	1:E:199:THR:HG23	2.19	0.42
2:F:77:ILE:O	2:F:80:ASN:O	2.37	0.42
2:F:142:TYR:N	2:F:142:TYR:CD1	2.86	0.42
1:G:201:ILE:O	1:G:201:ILE:HG13	2.20	0.42
2:H:236:THR:HG22	2:H:236:THR:O	2.19	0.42
2:J:176:ALA:HA	2:J:239:VAL:HG21	2.01	0.42
2:N:236:THR:HG22	2:N:236:THR:O	2.19	0.42
2:P:24:VAL:CG1	2:P:53:TRP:HZ3	2.32	0.42
1:A:277:GLY:HA2	4:A:2001:AMP:H5'2	2.01	0.42
1:A:284:ASN:O	1:A:334:SER:HB2	2.19	0.42
2:B:326:ILE:HD12	2:B:332:ASN:HB3	2.01	0.42
2:D:77:ILE:O	2:D:80:ASN:O	2.37	0.42
1:E:293:LEU:HD23	1:E:293:LEU:HA	1.62	0.42
1:G:278:LEU:HD23	1:G:278:LEU:HA	1.90	0.42
1:I:47:ILE:HD11	1:I:49:TRP:CD2	2.55	0.42
2:J:46:ALA:CB	2:J:351:ILE:HD13	2.49	0.42
2:J:142:TYR:N	2:J:142:TYR:CD1	2.86	0.42
2:J:306:LEU:HD12	2:J:309:MET:HE1	2.00	0.42
2:L:221:ILE:HD12	2:L:221:ILE:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:47:ILE:HD11	1:M:49:TRP:CD2	2.55	0.42
1:M:201:ILE:O	1:M:201:ILE:HG13	2.19	0.42
1:A:201:ILE:O	1:A:201:ILE:HG13	2.20	0.42
2:D:12:THR:HB	2:D:81:LEU:CD1	2.47	0.42
2:D:181:ARG:HD3	2:D:238:ALA:H	1.82	0.42
1:E:40:PHE:CD1	1:E:45:ILE:HD12	2.55	0.42
2:H:46:ALA:CB	2:H:351:ILE:HD13	2.49	0.42
1:I:120:ILE:HA	1:I:121:PRO:HD3	1.76	0.42
1:K:284:ASN:O	1:K:334:SER:HB2	2.19	0.42
2:N:8:ILE:HG21	2:N:171:TYR:HB2	2.00	0.42
2:N:221:ILE:N	2:N:221:ILE:HD12	2.33	0.42
1:O:47:ILE:HD11	1:O:49:TRP:CD2	2.55	0.42
1:O:60:LYS:O	1:O:60:LYS:HG2	2.15	0.42
2:B:46:ALA:HB3	2:B:354:LEU:CD2	2.49	0.42
2:B:59:SER:HA	2:B:60:PRO:HD3	1.86	0.42
2:B:176:ALA:HA	2:B:239:VAL:HG21	2.02	0.42
1:C:43:GLU:OE1	1:C:310:ARG:NH1	2.51	0.42
1:C:299:LEU:HA	1:C:302:LEU:CD1	2.49	0.42
2:D:169:ILE:HG21	2:D:204:ALA:HA	2.02	0.42
2:F:221:ILE:O	2:F:222:ASP:C	2.61	0.42
1:G:27:GLY:C	1:G:29:GLY:N	2.73	0.42
1:G:40:PHE:CD1	1:G:45:ILE:HD12	2.55	0.42
1:G:47:ILE:HD11	1:G:49:TRP:CD2	2.55	0.42
2:H:194:ARG:O	2:H:198:GLY:HA3	2.19	0.42
2:J:265:THR:HA	2:J:266:PRO:HD3	1.63	0.42
1:K:181:VAL:HG21	1:K:243:LEU:CD1	2.49	0.42
2:L:176:ALA:HA	2:L:239:VAL:HG21	2.02	0.42
2:L:306:LEU:HD12	2:L:309:MET:HE1	2.00	0.42
2:N:46:ALA:CB	2:N:351:ILE:HD13	2.49	0.42
2:N:142:TYR:N	2:N:142:TYR:CD1	2.86	0.42
1:A:40:PHE:CD1	1:A:45:ILE:HD12	2.55	0.42
1:A:264:ARG:O	1:E:13:LYS:HG2	2.19	0.42
2:B:236:THR:O	2:B:236:THR:HG22	2.19	0.42
2:D:46:ALA:HB3	2:D:354:LEU:CD2	2.49	0.42
1:E:340:ASN:HA	1:E:343:ILE:HG13	2.01	0.42
2:F:46:ALA:HB3	2:F:354:LEU:CD2	2.49	0.42
2:F:64:ASN:O	2:F:66:LEU:N	2.48	0.42
1:G:299:LEU:HA	1:G:302:LEU:CD1	2.49	0.42
2:L:149:VAL:O	2:L:150:CYS:HB3	2.18	0.42
1:M:181:VAL:HG21	1:M:243:LEU:CD1	2.49	0.42
2:B:169:ILE:HG21	2:B:204:ALA:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:176:ALA:HA	2:F:239:VAL:HG21	2.01	0.42
2:F:181:ARG:HD3	2:F:238:ALA:H	1.82	0.42
1:G:193:LEU:O	1:G:197:ILE:HG13	2.20	0.42
1:G:221:MET:HG3	2:H:256:GLY:HA3	2.02	0.42
1:I:201:ILE:HG13	1:I:201:ILE:O	2.20	0.42
2:J:26:PHE:O	2:J:27:ILE:CB	2.68	0.42
1:K:40:PHE:CD1	1:K:45:ILE:HD12	2.55	0.42
2:L:194:ARG:O	2:L:198:GLY:HA3	2.19	0.42
2:L:236:THR:O	2:L:236:THR:HG22	2.19	0.42
2:L:250:LEU:HD23	2:L:250:LEU:HA	1.82	0.42
2:L:347:THR:O	2:L:351:ILE:HG13	2.20	0.42
1:M:13:LYS:HD2	1:M:18:PHE:CE1	2.54	0.42
1:M:92:SER:OG	3:M:1007:FLC:HG2	2.19	0.42
1:M:299:LEU:HA	1:M:302:LEU:CD1	2.50	0.42
2:N:77:ILE:O	2:N:80:ASN:O	2.37	0.42
2:N:194:ARG:O	2:N:198:GLY:HA3	2.19	0.42
1:A:47:ILE:HD11	1:A:49:TRP:CD2	2.55	0.42
1:E:13:LYS:HD2	1:E:18:PHE:CE1	2.55	0.42
2:F:24:VAL:CG1	2:F:53:TRP:HZ3	2.33	0.42
1:G:284:ASN:O	1:G:334:SER:HB2	2.19	0.42
2:H:46:ALA:HB3	2:H:354:LEU:CD2	2.49	0.42
2:J:24:VAL:CG1	2:J:53:TRP:HZ3	2.33	0.42
1:K:13:LYS:HD2	1:K:18:PHE:CE1	2.55	0.42
2:N:141:GLU:C	2:N:142:TYR:HD1	2.28	0.42
2:P:169:ILE:HG21	2:P:204:ALA:HA	2.02	0.42
2:B:64:ASN:O	2:B:66:LEU:N	2.48	0.42
2:B:221:ILE:O	2:B:222:ASP:C	2.61	0.42
1:C:7:GLU:O	1:C:10:LEU:HD12	2.20	0.42
1:C:40:PHE:CD1	1:C:45:ILE:HD12	2.55	0.42
1:C:47:ILE:HD11	1:C:49:TRP:CD2	2.55	0.42
1:C:201:ILE:O	1:C:201:ILE:HG13	2.19	0.42
1:C:288:PRO:O	1:C:292:ILE:HG13	2.20	0.42
2:D:15:PRO:HG3	2:D:22:TYR:CZ	2.55	0.42
2:D:24:VAL:CG1	2:D:53:TRP:HZ3	2.33	0.42
2:D:141:GLU:C	2:D:142:TYR:HD1	2.28	0.42
2:D:274:ILE:CG2	2:D:275:SER:H	2.31	0.42
2:D:322:VAL:HG12	2:D:350:VAL:CG1	2.37	0.42
2:F:142:TYR:OH	2:F:245:LEU:HD12	2.20	0.42
1:G:91:GLY:O	1:G:92:SER:C	2.62	0.42
1:G:120:ILE:HA	1:G:121:PRO:HD3	1.76	0.42
2:H:221:ILE:O	2:H:222:ASP:C	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:347:THR:O	2:H:351:ILE:HG13	2.20	0.42
1:I:284:ASN:O	1:I:334:SER:HB2	2.19	0.42
1:K:195:ARG:O	1:K:199:THR:HG23	2.19	0.42
2:L:47:ALA:HB2	2:L:354:LEU:HD11	2.01	0.42
2:L:59:SER:HA	2:L:60:PRO:HD3	1.86	0.42
2:L:97:ARG:HG3	2:L:102:THR:CG2	2.44	0.42
2:L:141:GLU:C	2:L:142:TYR:HD1	2.28	0.42
2:N:347:THR:O	2:N:351:ILE:HG13	2.20	0.42
1:O:299:LEU:HA	1:O:302:LEU:CD1	2.49	0.42
2:P:26:PHE:O	2:P:27:ILE:CB	2.68	0.42
1:A:193:LEU:O	1:A:197:ILE:HG13	2.20	0.41
2:B:142:TYR:OH	2:B:245:LEU:HD12	2.20	0.41
2:B:205:LYS:O	2:B:208:SER:HB3	2.20	0.41
1:C:50:GLU:OE1	1:G:171:LYS:NZ	2.41	0.41
2:D:205:LYS:O	2:D:208:SER:HB3	2.20	0.41
1:E:201:ILE:O	1:E:201:ILE:HG13	2.19	0.41
1:E:284:ASN:O	1:E:334:SER:HB2	2.19	0.41
2:F:194:ARG:O	2:F:198:GLY:HA3	2.19	0.41
1:G:135:GLU:CD	1:G:238:MET:HB2	2.44	0.41
1:G:202:GLY:HA3	1:G:211:VAL:HG21	2.02	0.41
2:H:209:LYS:HE3	2:H:209:LYS:HB3	1.36	0.41
1:I:181:VAL:HG21	1:I:243:LEU:CD1	2.49	0.41
2:J:142:TYR:OH	2:J:245:LEU:HD12	2.20	0.41
2:J:194:ARG:O	2:J:198:GLY:HA3	2.19	0.41
2:J:347:THR:O	2:J:351:ILE:HG13	2.20	0.41
1:K:193:LEU:O	1:K:197:ILE:HG13	2.20	0.41
1:M:7:GLU:O	1:M:10:LEU:HD12	2.20	0.41
1:M:91:GLY:O	1:M:92:SER:C	2.62	0.41
1:M:135:GLU:CD	1:M:238:MET:HB2	2.44	0.41
1:M:193:LEU:O	1:M:197:ILE:HG13	2.20	0.41
1:M:301:HIS:C	1:M:303:GLY:H	2.28	0.41
1:M:342:ILE:HG12	1:M:342:ILE:H	1.62	0.41
2:N:326:ILE:HD12	2:N:332:ASN:HB3	2.01	0.41
2:N:343:THR:O	2:N:347:THR:OG1	2.38	0.41
1:O:40:PHE:CD1	1:O:45:ILE:HD12	2.55	0.41
2:B:15:PRO:HG3	2:B:22:TYR:CZ	2.55	0.41
1:C:284:ASN:O	1:C:334:SER:HB2	2.19	0.41
1:C:336:THR:HG22	1:C:337:ASP:N	2.33	0.41
1:C:340:ASN:HA	1:C:343:ILE:HG13	2.02	0.41
2:D:343:THR:O	2:D:347:THR:OG1	2.38	0.41
2:F:141:GLU:C	2:F:142:TYR:HD1	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:306:LEU:HD23	2:F:315:ALA:HA	2.02	0.41
2:F:322:VAL:HG13	2:F:354:LEU:HA	2.02	0.41
1:G:288:PRO:O	1:G:292:ILE:HG13	2.20	0.41
1:G:340:ASN:HA	1:G:343:ILE:HG13	2.01	0.41
2:H:343:THR:O	2:H:347:THR:OG1	2.38	0.41
2:J:77:ILE:O	2:J:80:ASN:O	2.37	0.41
1:K:201:ILE:O	1:K:201:ILE:HG13	2.19	0.41
2:L:139:GLU:HB2	2:L:140:GLY:H	1.58	0.41
2:N:209:LYS:HB3	2:N:209:LYS:HE3	1.36	0.41
1:O:288:PRO:O	1:O:292:ILE:HG13	2.20	0.41
1:A:288:PRO:O	1:A:292:ILE:HG13	2.20	0.41
2:B:103:LEU:HD12	2:B:103:LEU:HA	1.69	0.41
2:B:141:GLU:C	2:B:142:TYR:HD1	2.28	0.41
2:D:336:ASP:O	2:D:337:LEU:HD23	2.21	0.41
2:D:347:THR:O	2:D:351:ILE:HG13	2.20	0.41
1:E:288:PRO:O	1:E:292:ILE:HG13	2.20	0.41
1:I:40:PHE:CD1	1:I:45:ILE:HD12	2.55	0.41
1:I:299:LEU:HA	1:I:302:LEU:CD1	2.49	0.41
1:I:301:HIS:C	1:I:303:GLY:H	2.28	0.41
1:K:119:ARG:CG	2:L:125:THR:HG22	2.45	0.41
2:L:119:ILE:HD13	2:L:119:ILE:HA	1.88	0.41
2:N:12:THR:HB	2:N:81:LEU:CD1	2.47	0.41
2:N:183:ARG:NH1	2:N:237:ASP:OD2	2.51	0.41
2:N:348:GLU:H	2:N:348:GLU:HG2	1.63	0.41
1:O:223:ALA:O	1:O:227:PRO:HG3	2.21	0.41
1:A:181:VAL:HG21	1:A:243:LEU:CD1	2.49	0.41
2:B:47:ALA:HB2	2:B:354:LEU:HD11	2.01	0.41
2:B:77:ILE:O	2:B:80:ASN:O	2.37	0.41
1:C:187:MET:HE2	2:D:156:SER:CB	2.40	0.41
1:C:275:HIS:CB	4:C:2002:AMP:O2P	2.57	0.41
2:D:322:VAL:HG13	2:D:354:LEU:HA	2.02	0.41
1:E:83:THR:HB	2:F:191:THR:HG23	2.02	0.41
1:E:181:VAL:HG21	1:E:243:LEU:CD1	2.50	0.41
2:F:15:PRO:HG3	2:F:22:TYR:CZ	2.55	0.41
2:F:169:ILE:HG21	2:F:204:ALA:HA	2.02	0.41
2:F:205:LYS:O	2:F:208:SER:HB3	2.21	0.41
2:F:336:ASP:O	2:F:337:LEU:HD23	2.21	0.41
2:F:343:THR:O	2:F:347:THR:OG1	2.38	0.41
2:H:336:ASP:O	2:H:337:LEU:HD23	2.20	0.41
2:J:322:VAL:HG13	2:J:354:LEU:HA	2.02	0.41
1:K:47:ILE:HD11	1:K:49:TRP:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:91:GLY:O	1:K:92:SER:C	2.62	0.41
1:K:301:HIS:C	1:K:303:GLY:H	2.28	0.41
2:L:189:LYS:C	2:L:191:THR:N	2.76	0.41
1:M:40:PHE:CD1	1:M:45:ILE:HD12	2.55	0.41
1:M:202:GLY:HA3	1:M:211:VAL:HG21	2.02	0.41
1:O:193:LEU:O	1:O:197:ILE:HG13	2.20	0.41
2:P:142:TYR:OH	2:P:245:LEU:HD12	2.20	0.41
2:P:205:LYS:O	2:P:208:SER:HB3	2.20	0.41
2:P:306:LEU:HD23	2:P:315:ALA:HA	2.02	0.41
1:A:202:GLY:HA3	1:A:211:VAL:HG21	2.03	0.41
1:C:301:HIS:C	1:C:303:GLY:H	2.28	0.41
1:E:7:GLU:C	1:E:9:THR:H	2.29	0.41
1:E:193:LEU:O	1:E:197:ILE:HG13	2.20	0.41
1:G:156:ARG:N	1:G:157:PRO:CD	2.84	0.41
2:H:15:PRO:HG3	2:H:22:TYR:CZ	2.55	0.41
2:J:150:CYS:CB	2:J:151:PRO:CD	2.97	0.41
1:K:83:THR:HA	1:K:84:PRO:HD3	1.80	0.41
1:K:340:ASN:HA	1:K:343:ILE:HG13	2.01	0.41
2:L:336:ASP:O	2:L:337:LEU:HD23	2.21	0.41
2:L:348:GLU:H	2:L:348:GLU:HG2	1.62	0.41
1:M:288:PRO:O	1:M:292:ILE:HG13	2.20	0.41
2:N:26:PHE:O	2:N:27:ILE:CB	2.68	0.41
2:N:47:ALA:HB2	2:N:354:LEU:HD11	2.01	0.41
1:O:284:ASN:O	1:O:334:SER:HB2	2.19	0.41
2:P:46:ALA:CB	2:P:351:ILE:HD13	2.49	0.41
2:P:141:GLU:C	2:P:142:TYR:HD1	2.28	0.41
1:A:120:ILE:HA	1:A:121:PRO:HD3	1.76	0.41
1:A:135:GLU:CD	1:A:238:MET:HB2	2.45	0.41
2:D:299:LEU:HD12	2:D:299:LEU:HA	1.86	0.41
1:E:47:ILE:HD11	1:E:49:TRP:CD2	2.55	0.41
1:E:249:ALA:CB	2:F:230:THR:HG23	2.50	0.41
2:H:142:TYR:OH	2:H:245:LEU:HD12	2.20	0.41
2:H:183:ARG:NH1	2:H:237:ASP:OD2	2.51	0.41
1:I:193:LEU:O	1:I:197:ILE:HG13	2.20	0.41
1:I:224:VAL:HG21	2:J:253:LEU:HD21	2.03	0.41
1:I:275:HIS:CE1	2:J:223:ASN:ND2	2.88	0.41
2:N:142:TYR:OH	2:N:245:LEU:HD12	2.20	0.41
1:O:201:ILE:O	1:O:201:ILE:HG13	2.20	0.41
1:O:340:ASN:HA	1:O:343:ILE:HG13	2.01	0.41
1:O:349:MET:HE2	1:O:349:MET:HB3	1.84	0.41
2:P:70:PRO:O	2:P:74:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:194:ARG:O	2:P:198:GLY:HA3	2.19	0.41
2:P:274:ILE:CG2	2:P:275:SER:H	2.31	0.41
2:P:322:VAL:HG13	2:P:354:LEU:HA	2.02	0.41
2:P:347:THR:O	2:P:351:ILE:HG13	2.20	0.41
1:A:83:THR:HA	1:A:84:PRO:HD3	1.80	0.41
2:B:24:VAL:CG1	2:B:53:TRP:HZ3	2.33	0.41
2:B:347:THR:O	2:B:351:ILE:HG13	2.20	0.41
1:C:202:GLY:HA3	1:C:211:VAL:HG21	2.03	0.41
2:D:142:TYR:OH	2:D:245:LEU:HD12	2.20	0.41
2:D:176:ALA:HA	2:D:239:VAL:HG21	2.01	0.41
2:D:306:LEU:HD23	2:D:315:ALA:HA	2.03	0.41
2:D:334:THR:HG22	2:D:335:GLY:N	2.35	0.41
2:F:114:ARG:HA	2:F:115:PRO:HD3	1.85	0.41
1:I:160:GLU:CD	1:M:8:ARG:NH2	2.78	0.41
2:J:139:GLU:HB2	2:J:140:GLY:H	1.57	0.41
2:L:306:LEU:HD23	2:L:315:ALA:HA	2.02	0.41
2:N:15:PRO:HG3	2:N:22:TYR:CZ	2.55	0.41
2:P:64:ASN:O	2:P:66:LEU:N	2.48	0.41
1:A:223:ALA:O	1:A:227:PRO:HG3	2.21	0.41
1:A:299:LEU:O	1:A:300:ASN:C	2.64	0.41
2:B:336:ASP:O	2:B:337:LEU:HD23	2.21	0.41
2:B:343:THR:O	2:B:347:THR:OG1	2.38	0.41
2:D:26:PHE:CE1	2:D:84:LEU:HD23	2.56	0.41
2:D:47:ALA:HB2	2:D:354:LEU:HD11	2.01	0.41
2:D:194:ARG:O	2:D:198:GLY:HA3	2.19	0.41
1:E:301:HIS:C	1:E:303:GLY:H	2.28	0.41
2:F:12:THR:HB	2:F:81:LEU:CD1	2.47	0.41
2:F:26:PHE:CE1	2:F:84:LEU:HD23	2.56	0.41
1:G:293:LEU:HD23	1:G:293:LEU:HA	1.62	0.41
2:H:59:SER:HA	2:H:60:PRO:HD3	1.86	0.41
2:H:141:GLU:C	2:H:142:TYR:HD1	2.28	0.41
1:I:288:PRO:O	1:I:292:ILE:HG13	2.20	0.41
2:J:15:PRO:HG3	2:J:22:TYR:CZ	2.55	0.41
2:J:236:THR:O	2:J:236:THR:HG22	2.19	0.41
1:K:156:ARG:N	1:K:157:PRO:CD	2.84	0.41
2:L:12:THR:HB	2:L:81:LEU:CD1	2.47	0.41
2:L:64:ASN:O	2:L:66:LEU:N	2.48	0.41
1:M:95:VAL:HG23	1:M:96:ALA:N	2.36	0.41
1:M:340:ASN:HA	1:M:343:ILE:HG13	2.01	0.41
2:N:150:CYS:CB	2:N:151:PRO:CD	2.97	0.41
1:O:156:ARG:N	1:O:157:PRO:CD	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:15:PRO:HG3	2:P:22:TYR:CZ	2.55	0.41
2:P:44:PHE:HD2	2:P:49:VAL:HG21	1.85	0.41
1:A:101:LEU:HB2	1:A:103:ILE:CG1	2.51	0.41
1:A:278:LEU:HD23	1:A:278:LEU:HA	1.91	0.41
1:A:340:ASN:HA	1:A:343:ILE:HG13	2.02	0.41
2:B:299:LEU:HD12	2:B:299:LEU:HA	1.86	0.41
1:C:13:LYS:HD2	1:C:18:PHE:CE1	2.54	0.41
1:C:156:ARG:N	1:C:157:PRO:CD	2.84	0.41
1:C:186:ILE:HD13	2:D:142:TYR:CD2	2.56	0.41
1:C:223:ALA:O	1:C:227:PRO:HG3	2.21	0.41
1:C:278:LEU:HD23	1:C:278:LEU:HA	1.90	0.41
1:E:223:ALA:O	1:E:227:PRO:HG3	2.21	0.41
1:E:349:MET:HE2	1:E:349:MET:HB3	1.84	0.41
2:F:149:VAL:CG2	2:H:153:VAL:HG11	2.51	0.41
1:G:323:LYS:O	1:G:324:HIS:CB	2.67	0.41
2:H:205:LYS:O	2:H:208:SER:HB3	2.20	0.41
2:H:274:ILE:CG2	2:H:275:SER:H	2.31	0.41
2:H:322:VAL:HG13	2:H:354:LEU:HA	2.02	0.41
1:I:101:LEU:HB2	1:I:103:ILE:CG1	2.51	0.41
2:J:12:THR:HB	2:J:81:LEU:CD1	2.47	0.41
2:J:97:ARG:HG3	2:J:102:THR:CG2	2.44	0.41
2:J:141:GLU:C	2:J:142:TYR:HD1	2.28	0.41
2:J:169:ILE:HG21	2:J:204:ALA:HA	2.02	0.41
2:J:334:THR:HG22	2:J:335:GLY:N	2.35	0.41
2:J:336:ASP:O	2:J:337:LEU:HD23	2.20	0.41
1:K:15:GLY:HA2	1:O:266:TYR:O	2.20	0.41
1:K:299:LEU:O	1:K:300:ASN:C	2.64	0.41
2:L:15:PRO:HG3	2:L:22:TYR:CZ	2.55	0.41
2:L:26:PHE:CE1	2:L:84:LEU:HD23	2.56	0.41
2:L:64:ASN:C	2:L:66:LEU:N	2.79	0.41
2:L:343:THR:O	2:L:347:THR:OG1	2.38	0.41
1:M:323:LYS:O	1:M:324:HIS:CB	2.67	0.41
2:N:24:VAL:CG1	2:N:53:TRP:HZ3	2.33	0.41
2:N:26:PHE:CE1	2:N:84:LEU:HD23	2.56	0.41
2:N:205:LYS:O	2:N:208:SER:HB3	2.20	0.41
2:N:336:ASP:O	2:N:337:LEU:HD23	2.21	0.41
1:O:95:VAL:HG23	1:O:96:ALA:N	2.36	0.41
1:O:301:HIS:C	1:O:303:GLY:H	2.28	0.41
2:P:63:VAL:HG12	2:P:64:ASN:ND2	2.36	0.41
1:A:18:PHE:HZ	1:E:44:ASN:HD22	1.69	0.41
2:B:26:PHE:O	2:B:27:ILE:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:283:SER:O	2:B:284:ALA:C	2.64	0.41
1:E:156:ARG:N	1:E:157:PRO:CD	2.84	0.41
1:E:202:GLY:HA3	1:E:211:VAL:HG21	2.03	0.41
1:E:340:ASN:HA	1:E:343:ILE:CG1	2.51	0.41
2:F:147:HIS:CD2	1:G:151:LEU:HD12	2.54	0.41
2:F:274:ILE:CG2	2:F:275:SER:H	2.31	0.41
1:G:299:LEU:O	1:G:300:ASN:C	2.64	0.41
2:H:26:PHE:CE1	2:H:84:LEU:HD23	2.56	0.41
1:I:223:ALA:O	1:I:227:PRO:HG3	2.21	0.41
2:J:153:VAL:HG11	2:L:149:VAL:HG21	2.02	0.41
1:K:95:VAL:HG23	1:K:96:ALA:N	2.36	0.41
1:O:195:ARG:CG	1:O:195:ARG:NH1	2.63	0.41
1:A:156:ARG:N	1:A:157:PRO:CD	2.84	0.40
2:B:70:PRO:O	2:B:74:VAL:HG23	2.21	0.40
1:C:193:LEU:O	1:C:197:ILE:HG13	2.20	0.40
1:C:299:LEU:O	1:C:300:ASN:C	2.64	0.40
2:D:63:VAL:HG12	2:D:64:ASN:ND2	2.36	0.40
2:F:70:PRO:O	2:F:74:VAL:HG23	2.21	0.40
2:H:306:LEU:HD23	2:H:315:ALA:HA	2.03	0.40
1:I:83:THR:HB	2:J:191:THR:HG23	2.04	0.40
1:I:278:LEU:HD23	1:I:278:LEU:HA	1.90	0.40
2:J:64:ASN:C	2:J:66:LEU:N	2.79	0.40
1:O:101:LEU:HB2	1:O:103:ILE:CG1	2.51	0.40
2:P:250:LEU:HD23	2:P:250:LEU:HA	1.82	0.40
1:A:18:PHE:HZ	1:E:44:ASN:ND2	2.19	0.40
1:A:301:HIS:C	1:A:303:GLY:H	2.28	0.40
1:E:311:ILE:O	1:E:315:VAL:HG12	2.22	0.40
1:E:323:LYS:O	1:E:324:HIS:CB	2.67	0.40
2:F:63:VAL:HG12	2:F:64:ASN:ND2	2.36	0.40
2:H:139:GLU:HB2	2:H:140:GLY:H	1.57	0.40
1:I:156:ARG:N	1:I:157:PRO:CD	2.84	0.40
1:I:165:PHE:HD1	1:M:14:TYR:CE2	2.39	0.40
1:I:340:ASN:HA	1:I:343:ILE:HG13	2.01	0.40
1:K:288:PRO:O	1:K:292:ILE:HG13	2.20	0.40
2:L:63:VAL:HG12	2:L:64:ASN:ND2	2.36	0.40
2:L:70:PRO:O	2:L:74:VAL:HG23	2.21	0.40
2:L:142:TYR:OH	2:L:245:LEU:HD12	2.20	0.40
1:M:223:ALA:O	1:M:227:PRO:HG3	2.21	0.40
2:N:306:LEU:HD23	2:N:315:ALA:HA	2.02	0.40
1:A:189:LEU:HB3	2:B:154:VAL:HG11	2.04	0.40
2:B:63:VAL:HG12	2:B:64:ASN:ND2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:322:VAL:HG13	2:B:354:LEU:HA	2.02	0.40
1:C:287:ASN:HA	1:C:288:PRO:HD3	1.85	0.40
2:D:97:ARG:HA	2:D:97:ARG:NE	2.33	0.40
1:G:301:HIS:C	1:G:303:GLY:H	2.28	0.40
2:H:63:VAL:HG12	2:H:64:ASN:ND2	2.36	0.40
2:J:59:SER:HA	2:J:60:PRO:HD3	1.86	0.40
1:K:275:HIS:NE2	2:L:226:LEU:HD12	2.37	0.40
2:L:150:CYS:CB	2:L:151:PRO:CD	2.97	0.40
2:L:270:ILE:HA	2:L:275:SER:OG	2.22	0.40
1:M:101:LEU:HB2	1:M:103:ILE:CG1	2.51	0.40
1:M:156:ARG:N	1:M:157:PRO:CD	2.84	0.40
2:N:270:ILE:HA	2:N:275:SER:OG	2.22	0.40
1:O:299:LEU:O	1:O:300:ASN:C	2.64	0.40
2:P:150:CYS:CB	2:P:151:PRO:CD	2.97	0.40
2:B:26:PHE:CE1	2:B:84:LEU:HD23	2.56	0.40
2:B:39:SER:OG	2:B:347:THR:HG23	2.22	0.40
2:B:189:LYS:C	2:B:191:THR:N	2.76	0.40
1:C:340:ASN:HA	1:C:343:ILE:CG1	2.52	0.40
1:E:101:LEU:HB2	1:E:103:ILE:CG1	2.51	0.40
1:E:287:ASN:HA	1:E:288:PRO:HD3	1.86	0.40
2:F:147:HIS:CD2	1:G:151:LEU:HD11	2.56	0.40
2:F:347:THR:O	2:F:351:ILE:HG13	2.20	0.40
2:H:169:ILE:HG21	2:H:204:ALA:HA	2.02	0.40
2:J:70:PRO:O	2:J:74:VAL:HG23	2.21	0.40
1:K:101:LEU:HB2	1:K:103:ILE:CG1	2.52	0.40
1:K:202:GLY:HA3	1:K:211:VAL:HG21	2.03	0.40
1:K:223:ALA:O	1:K:227:PRO:HG3	2.21	0.40
1:K:311:ILE:O	1:K:315:VAL:HG12	2.22	0.40
1:M:254:PRO:HG3	2:N:226:LEU:HD11	2.02	0.40
2:N:142:TYR:N	2:N:142:TYR:HD1	2.20	0.40
2:N:181:ARG:HD3	2:N:238:ALA:H	1.83	0.40
2:P:97:ARG:HG3	2:P:102:THR:CG2	2.44	0.40
2:P:270:ILE:HA	2:P:275:SER:OG	2.22	0.40
2:P:336:ASP:O	2:P:337:LEU:HD23	2.21	0.40
2:B:182:PRO:HD2	2:B:237:ASP:HB2	2.04	0.40
2:B:306:LEU:HD23	2:B:315:ALA:HA	2.03	0.40
1:C:311:ILE:O	1:C:315:VAL:HG12	2.22	0.40
2:D:175:TYR:CE1	2:D:179:ILE:HD13	2.57	0.40
1:E:7:GLU:O	1:E:10:LEU:HD12	2.20	0.40
1:G:223:ALA:O	1:G:227:PRO:HG3	2.21	0.40
3:G:1004:FLC:OA1	3:G:1004:FLC:CB	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:39:SER:OG	2:H:347:THR:HG23	2.22	0.40
2:H:270:ILE:HA	2:H:275:SER:OG	2.22	0.40
1:I:293:LEU:HA	1:I:293:LEU:HD23	1.62	0.40
2:J:294:ASN:HA	2:J:295:PRO:HD2	1.73	0.40
2:J:306:LEU:HD23	2:J:315:ALA:HA	2.03	0.40
2:J:343:THR:O	2:J:347:THR:OG1	2.39	0.40
2:L:205:LYS:O	2:L:208:SER:HB3	2.21	0.40
2:L:322:VAL:HG13	2:L:354:LEU:HA	2.02	0.40
1:M:311:ILE:O	1:M:315:VAL:HG12	2.22	0.40
1:M:340:ASN:HA	1:M:343:ILE:CG1	2.52	0.40
2:N:63:VAL:HG12	2:N:64:ASN:ND2	2.36	0.40
2:P:182:PRO:HD2	2:P:237:ASP:HB2	2.04	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)
2:B:286:ASP:OD2	2:N:285:PRO:CG[1_565]	1.88	0.32
2:B:286:ASP:OD2	2:N:285:PRO:CB[1_565]	1.90	0.30
1:G:122:ASP:OD2	2:P:213:ASP:CB[1_565]	2.15	0.05

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	325/349 (93%)	295 (91%)	27 (8%)	3 (1%)	14	49
1	C	334/349 (96%)	300 (90%)	31 (9%)	3 (1%)	14	49
1	E	334/349 (96%)	300 (90%)	31 (9%)	3 (1%)	14	49
1	G	325/349 (93%)	295 (91%)	27 (8%)	3 (1%)	14	49
1	I	325/349 (93%)	295 (91%)	27 (8%)	3 (1%)	14	49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	K	333/349 (95%)	300 (90%)	30 (9%)	3 (1%)	14	49
1	M	335/349 (96%)	301 (90%)	31 (9%)	3 (1%)	14	49
1	O	326/349 (93%)	296 (91%)	27 (8%)	3 (1%)	14	49
2	B	343/354 (97%)	289 (84%)	42 (12%)	12 (4%)	3	20
2	D	343/354 (97%)	289 (84%)	41 (12%)	13 (4%)	2	19
2	F	343/354 (97%)	289 (84%)	41 (12%)	13 (4%)	2	19
2	H	342/354 (97%)	288 (84%)	41 (12%)	13 (4%)	2	19
2	J	343/354 (97%)	289 (84%)	41 (12%)	13 (4%)	2	19
2	L	342/354 (97%)	288 (84%)	41 (12%)	13 (4%)	2	19
2	N	343/354 (97%)	290 (84%)	40 (12%)	13 (4%)	2	19
2	P	343/354 (97%)	289 (84%)	41 (12%)	13 (4%)	2	19
All	All	5379/5624 (96%)	4693 (87%)	559 (10%)	127 (2%)	4	27

All (127) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	304	LEU
2	B	97	ARG
2	B	151	PRO
2	B	322	VAL
2	B	323	LEU
1	C	304	LEU
2	D	97	ARG
2	D	151	PRO
2	D	322	VAL
2	D	323	LEU
1	E	304	LEU
2	F	97	ARG
2	F	151	PRO
2	F	322	VAL
2	F	323	LEU
1	G	304	LEU
2	H	97	ARG
2	H	151	PRO
2	H	322	VAL
2	H	323	LEU
1	I	304	LEU
2	J	97	ARG

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Mol	Chain	Res	Type
2	J	151	PRO
2	J	322	VAL
2	J	323	LEU
1	K	304	LEU
2	L	97	ARG
2	L	151	PRO
2	L	322	VAL
2	L	323	LEU
1	M	304	LEU
2	N	97	ARG
2	N	151	PRO
2	N	322	VAL
2	N	323	LEU
1	O	304	LEU
2	P	97	ARG
2	P	151	PRO
2	P	322	VAL
2	P	323	LEU
1	A	322	GLY
2	B	13	GLY
2	B	98	SER
1	C	322	GLY
2	D	13	GLY
2	D	98	SER
1	E	322	GLY
2	F	13	GLY
2	F	98	SER
1	G	322	GLY
2	H	13	GLY
2	H	98	SER
1	I	322	GLY
2	J	13	GLY
2	J	98	SER
1	K	322	GLY
2	L	13	GLY
2	L	98	SER
1	M	322	GLY
2	N	13	GLY
2	N	98	SER
1	O	322	GLY
2	P	13	GLY
2	P	98	SER

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Mol	Chain	Res	Type
1	A	310	ARG
2	B	79	LYS
2	B	332	ASN
1	C	310	ARG
2	D	79	LYS
2	D	332	ASN
1	E	310	ARG
2	F	79	LYS
2	F	332	ASN
1	G	310	ARG
2	H	79	LYS
2	H	332	ASN
1	I	310	ARG
2	J	79	LYS
2	J	332	ASN
1	K	310	ARG
2	L	79	LYS
2	L	332	ASN
1	M	310	ARG
2	N	79	LYS
2	N	332	ASN
1	O	310	ARG
2	P	79	LYS
2	P	332	ASN
2	B	239	VAL
2	D	239	VAL
2	F	239	VAL
2	H	239	VAL
2	J	239	VAL
2	L	239	VAL
2	N	239	VAL
2	P	239	VAL
2	B	65	GLY
2	D	65	GLY
2	F	27	ILE
2	F	65	GLY
2	H	27	ILE
2	H	65	GLY
2	J	65	GLY
2	L	27	ILE
2	L	65	GLY
2	N	65	GLY

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Mol	Chain	Res	Type
2	P	27	ILE
2	P	65	GLY
2	B	27	ILE
2	B	50	PRO
2	D	27	ILE
2	D	50	PRO
2	F	50	PRO
2	H	50	PRO
2	J	27	ILE
2	J	50	PRO
2	L	50	PRO
2	N	27	ILE
2	N	50	PRO
2	P	50	PRO
2	D	14	LYS
2	F	14	LYS
2	H	14	LYS
2	J	14	LYS
2	L	14	LYS
2	N	14	LYS
2	P	14	LYS

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	274/289 (95%)	240 (88%)	34 (12%)	4	18
1	C	282/289 (98%)	245 (87%)	37 (13%)	4	17
1	E	282/289 (98%)	246 (87%)	36 (13%)	4	17
1	G	274/289 (95%)	240 (88%)	34 (12%)	4	18
1	I	274/289 (95%)	240 (88%)	34 (12%)	4	18
1	K	281/289 (97%)	244 (87%)	37 (13%)	4	16
1	M	282/289 (98%)	246 (87%)	36 (13%)	4	17
1	O	274/289 (95%)	240 (88%)	34 (12%)	4	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B	293/297 (99%)	243 (83%)	50 (17%)	2	11
2	D	293/297 (99%)	243 (83%)	50 (17%)	2	11
2	F	293/297 (99%)	243 (83%)	50 (17%)	2	11
2	H	292/297 (98%)	243 (83%)	49 (17%)	2	12
2	J	293/297 (99%)	243 (83%)	50 (17%)	2	11
2	L	292/297 (98%)	243 (83%)	49 (17%)	2	12
2	N	293/297 (99%)	243 (83%)	50 (17%)	2	11
2	P	293/297 (99%)	243 (83%)	50 (17%)	2	11
All	All	4565/4688 (97%)	3885 (85%)	680 (15%)	3	14

All (680) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	THR
1	A	47	ILE
1	A	51	THR
1	A	52	ILE
1	A	54	ILE
1	A	63	VAL
1	A	77	LEU
1	A	88	THR
1	A	93	LEU
1	A	103	ILE
1	A	117	LYS
1	A	119	ARG
1	A	120	ILE
1	A	123	ILE
1	A	135	GLU
1	A	195	ARG
1	A	201	ILE
1	A	213	SER
1	A	215	ILE
1	A	222	GLN
1	A	224	VAL
1	A	234	VAL
1	A	276	VAL
1	A	285	VAL
1	A	295	SER
1	A	302	LEU

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Mol	Chain	Res	Type
1	A	311	ILE
1	A	315	VAL
1	A	319	ILE
1	A	323	LYS
1	A	324	HIS
1	A	326	THR
1	A	336	THR
1	A	342	ILE
2	B	4	LYS
2	B	5	GLN
2	B	8	ILE
2	B	14	LYS
2	B	19	THR
2	B	23	THR
2	B	30	ASP
2	B	35	GLU
2	B	36	ILE
2	B	38	LYS
2	B	45	SER
2	B	58	VAL
2	B	66	LEU
2	B	67	THR
2	B	69	ILE
2	B	78	THR
2	B	80	ASN
2	B	82	VAL
2	B	88	LEU
2	B	97	ARG
2	B	102	THR
2	B	114	ARG
2	B	129	VAL
2	B	149	VAL
2	B	162	ARG
2	B	183	ARG
2	B	184	VAL
2	B	185	ILE
2	B	192	ILE
2	B	193	GLN
2	B	209	LYS
2	B	221	ILE
2	B	222	ASP
2	B	225	VAL

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Mol	Chain	Res	Type
2	B	226	LEU
2	B	241	VAL
2	B	262	LEU
2	B	283	SER
2	B	287	ILE
2	B	299	LEU
2	B	306	LEU
2	B	322	VAL
2	B	323	LEU
2	B	324	SER
2	B	326	ILE
2	B	342	THR
2	B	347	THR
2	B	348	GLU
2	B	350	VAL
2	B	353	ARG
1	C	8	ARG
1	C	10	LEU
1	C	33	THR
1	C	47	ILE
1	C	51	THR
1	C	52	ILE
1	C	54	ILE
1	C	63	VAL
1	C	77	LEU
1	C	88	THR
1	C	93	LEU
1	C	103	ILE
1	C	117	LYS
1	C	119	ARG
1	C	120	ILE
1	C	123	ILE
1	C	135	GLU
1	C	143	SER
1	C	195	ARG
1	C	201	ILE
1	C	213	SER
1	C	215	ILE
1	C	222	GLN
1	C	224	VAL
1	C	234	VAL
1	C	276	VAL

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Mol	Chain	Res	Type
1	C	285	VAL
1	C	295	SER
1	C	302	LEU
1	C	311	ILE
1	C	315	VAL
1	C	319	ILE
1	C	323	LYS
1	C	324	HIS
1	C	326	THR
1	C	336	THR
1	C	342	ILE
2	D	4	LYS
2	D	5	GLN
2	D	8	ILE
2	D	14	LYS
2	D	19	THR
2	D	23	THR
2	D	30	ASP
2	D	35	GLU
2	D	36	ILE
2	D	38	LYS
2	D	45	SER
2	D	58	VAL
2	D	66	LEU
2	D	67	THR
2	D	69	ILE
2	D	78	THR
2	D	80	ASN
2	D	82	VAL
2	D	88	LEU
2	D	97	ARG
2	D	102	THR
2	D	114	ARG
2	D	129	VAL
2	D	149	VAL
2	D	162	ARG
2	D	183	ARG
2	D	184	VAL
2	D	185	ILE
2	D	192	ILE
2	D	193	GLN
2	D	209	LYS

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Mol	Chain	Res	Type
2	D	221	ILE
2	D	222	ASP
2	D	225	VAL
2	D	226	LEU
2	D	241	VAL
2	D	262	LEU
2	D	283	SER
2	D	287	ILE
2	D	299	LEU
2	D	306	LEU
2	D	322	VAL
2	D	323	LEU
2	D	324	SER
2	D	326	ILE
2	D	342	THR
2	D	347	THR
2	D	348	GLU
2	D	350	VAL
2	D	353	ARG
1	E	8	ARG
1	E	10	LEU
1	E	33	THR
1	E	47	ILE
1	E	51	THR
1	E	52	ILE
1	E	54	ILE
1	E	63	VAL
1	E	77	LEU
1	E	88	THR
1	E	93	LEU
1	E	103	ILE
1	E	117	LYS
1	E	119	ARG
1	E	120	ILE
1	E	123	ILE
1	E	135	GLU
1	E	195	ARG
1	E	201	ILE
1	E	213	SER
1	E	215	ILE
1	E	222	GLN
1	E	224	VAL

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Mol	Chain	Res	Type
1	E	234	VAL
1	E	276	VAL
1	E	285	VAL
1	E	295	SER
1	E	302	LEU
1	E	311	ILE
1	E	315	VAL
1	E	319	ILE
1	E	323	LYS
1	E	324	HIS
1	E	326	THR
1	E	336	THR
1	E	342	ILE
2	F	4	LYS
2	F	5	GLN
2	F	8	ILE
2	F	14	LYS
2	F	19	THR
2	F	23	THR
2	F	30	ASP
2	F	35	GLU
2	F	36	ILE
2	F	38	LYS
2	F	45	SER
2	F	58	VAL
2	F	66	LEU
2	F	67	THR
2	F	69	ILE
2	F	78	THR
2	F	80	ASN
2	F	82	VAL
2	F	88	LEU
2	F	97	ARG
2	F	102	THR
2	F	114	ARG
2	F	129	VAL
2	F	149	VAL
2	F	162	ARG
2	F	183	ARG
2	F	184	VAL
2	F	185	ILE
2	F	192	ILE

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Mol	Chain	Res	Type
2	F	193	GLN
2	F	209	LYS
2	F	221	ILE
2	F	222	ASP
2	F	225	VAL
2	F	226	LEU
2	F	241	VAL
2	F	262	LEU
2	F	283	SER
2	F	287	ILE
2	F	299	LEU
2	F	306	LEU
2	F	322	VAL
2	F	323	LEU
2	F	324	SER
2	F	326	ILE
2	F	342	THR
2	F	347	THR
2	F	348	GLU
2	F	350	VAL
2	F	353	ARG
1	G	33	THR
1	G	47	ILE
1	G	51	THR
1	G	52	ILE
1	G	54	ILE
1	G	63	VAL
1	G	77	LEU
1	G	88	THR
1	G	93	LEU
1	G	103	ILE
1	G	117	LYS
1	G	119	ARG
1	G	120	ILE
1	G	123	ILE
1	G	135	GLU
1	G	195	ARG
1	G	201	ILE
1	G	213	SER
1	G	215	ILE
1	G	222	GLN
1	G	224	VAL

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Mol	Chain	Res	Type
1	G	234	VAL
1	G	276	VAL
1	G	285	VAL
1	G	295	SER
1	G	302	LEU
1	G	311	ILE
1	G	315	VAL
1	G	319	ILE
1	G	323	LYS
1	G	324	HIS
1	G	326	THR
1	G	336	THR
1	G	342	ILE
2	H	5	GLN
2	H	8	ILE
2	H	14	LYS
2	H	19	THR
2	H	23	THR
2	H	30	ASP
2	H	35	GLU
2	H	36	ILE
2	H	38	LYS
2	H	45	SER
2	H	58	VAL
2	H	66	LEU
2	H	67	THR
2	H	69	ILE
2	H	78	THR
2	H	80	ASN
2	H	82	VAL
2	H	88	LEU
2	H	97	ARG
2	H	102	THR
2	H	114	ARG
2	H	129	VAL
2	H	149	VAL
2	H	162	ARG
2	H	183	ARG
2	H	184	VAL
2	H	185	ILE
2	H	192	ILE
2	H	193	GLN

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Mol	Chain	Res	Type
2	H	209	LYS
2	H	221	ILE
2	H	222	ASP
2	H	225	VAL
2	H	226	LEU
2	H	241	VAL
2	H	262	LEU
2	H	283	SER
2	H	287	ILE
2	H	299	LEU
2	H	306	LEU
2	H	322	VAL
2	H	323	LEU
2	H	324	SER
2	H	326	ILE
2	H	342	THR
2	H	347	THR
2	H	348	GLU
2	H	350	VAL
2	H	353	ARG
1	I	33	THR
1	I	47	ILE
1	I	51	THR
1	I	52	ILE
1	I	54	ILE
1	I	63	VAL
1	I	77	LEU
1	I	88	THR
1	I	93	LEU
1	I	103	ILE
1	I	117	LYS
1	I	119	ARG
1	I	120	ILE
1	I	123	ILE
1	I	135	GLU
1	I	195	ARG
1	I	201	ILE
1	I	213	SER
1	I	215	ILE
1	I	222	GLN
1	I	224	VAL
1	I	234	VAL

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Mol	Chain	Res	Type
1	I	276	VAL
1	I	285	VAL
1	I	295	SER
1	I	302	LEU
1	I	311	ILE
1	I	315	VAL
1	I	319	ILE
1	I	323	LYS
1	I	324	HIS
1	I	326	THR
1	I	336	THR
1	I	342	ILE
2	J	4	LYS
2	J	5	GLN
2	J	8	ILE
2	J	14	LYS
2	J	19	THR
2	J	23	THR
2	J	30	ASP
2	J	35	GLU
2	J	36	ILE
2	J	38	LYS
2	J	45	SER
2	J	58	VAL
2	J	66	LEU
2	J	67	THR
2	J	69	ILE
2	J	78	THR
2	J	80	ASN
2	J	82	VAL
2	J	88	LEU
2	J	97	ARG
2	J	102	THR
2	J	114	ARG
2	J	129	VAL
2	J	149	VAL
2	J	162	ARG
2	J	183	ARG
2	J	184	VAL
2	J	185	ILE
2	J	192	ILE
2	J	193	GLN

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Mol	Chain	Res	Type
2	J	209	LYS
2	J	221	ILE
2	J	222	ASP
2	J	225	VAL
2	J	226	LEU
2	J	241	VAL
2	J	262	LEU
2	J	283	SER
2	J	287	ILE
2	J	299	LEU
2	J	306	LEU
2	J	322	VAL
2	J	323	LEU
2	J	324	SER
2	J	326	ILE
2	J	342	THR
2	J	347	THR
2	J	348	GLU
2	J	350	VAL
2	J	353	ARG
1	K	8	ARG
1	K	10	LEU
1	K	33	THR
1	K	47	ILE
1	K	51	THR
1	K	52	ILE
1	K	54	ILE
1	K	63	VAL
1	K	77	LEU
1	K	88	THR
1	K	93	LEU
1	K	103	ILE
1	K	117	LYS
1	K	119	ARG
1	K	120	ILE
1	K	123	ILE
1	K	135	GLU
1	K	195	ARG
1	K	201	ILE
1	K	211	VAL
1	K	213	SER
1	K	215	ILE

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Mol	Chain	Res	Type
1	K	222	GLN
1	K	224	VAL
1	K	234	VAL
1	K	276	VAL
1	K	285	VAL
1	K	295	SER
1	K	302	LEU
1	K	311	ILE
1	K	315	VAL
1	K	319	ILE
1	K	323	LYS
1	K	324	HIS
1	K	326	THR
1	K	336	THR
1	K	342	ILE
2	L	5	GLN
2	L	8	ILE
2	L	14	LYS
2	L	19	THR
2	L	23	THR
2	L	30	ASP
2	L	35	GLU
2	L	36	ILE
2	L	38	LYS
2	L	45	SER
2	L	58	VAL
2	L	66	LEU
2	L	67	THR
2	L	69	ILE
2	L	78	THR
2	L	80	ASN
2	L	82	VAL
2	L	88	LEU
2	L	97	ARG
2	L	102	THR
2	L	114	ARG
2	L	129	VAL
2	L	149	VAL
2	L	162	ARG
2	L	183	ARG
2	L	184	VAL
2	L	185	ILE

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Mol	Chain	Res	Type
2	L	192	ILE
2	L	193	GLN
2	L	209	LYS
2	L	221	ILE
2	L	222	ASP
2	L	225	VAL
2	L	226	LEU
2	L	241	VAL
2	L	262	LEU
2	L	283	SER
2	L	287	ILE
2	L	299	LEU
2	L	306	LEU
2	L	322	VAL
2	L	323	LEU
2	L	324	SER
2	L	326	ILE
2	L	342	THR
2	L	347	THR
2	L	348	GLU
2	L	350	VAL
2	L	353	ARG
1	M	8	ARG
1	M	10	LEU
1	M	33	THR
1	M	47	ILE
1	M	51	THR
1	M	52	ILE
1	M	54	ILE
1	M	63	VAL
1	M	77	LEU
1	M	88	THR
1	M	93	LEU
1	M	103	ILE
1	M	117	LYS
1	M	119	ARG
1	M	120	ILE
1	M	123	ILE
1	M	135	GLU
1	M	195	ARG
1	M	201	ILE
1	M	213	SER

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Mol	Chain	Res	Type
1	M	215	ILE
1	M	222	GLN
1	M	224	VAL
1	M	234	VAL
1	M	276	VAL
1	M	285	VAL
1	M	295	SER
1	M	302	LEU
1	M	311	ILE
1	M	315	VAL
1	M	319	ILE
1	M	323	LYS
1	M	324	HIS
1	M	326	THR
1	M	336	THR
1	M	342	ILE
2	N	4	LYS
2	N	5	GLN
2	N	8	ILE
2	N	14	LYS
2	N	19	THR
2	N	23	THR
2	N	30	ASP
2	N	35	GLU
2	N	36	ILE
2	N	38	LYS
2	N	45	SER
2	N	58	VAL
2	N	66	LEU
2	N	67	THR
2	N	69	ILE
2	N	78	THR
2	N	80	ASN
2	N	82	VAL
2	N	88	LEU
2	N	97	ARG
2	N	102	THR
2	N	114	ARG
2	N	129	VAL
2	N	149	VAL
2	N	162	ARG
2	N	183	ARG

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Mol	Chain	Res	Type
2	N	184	VAL
2	N	185	ILE
2	N	192	ILE
2	N	193	GLN
2	N	209	LYS
2	N	221	ILE
2	N	222	ASP
2	N	225	VAL
2	N	226	LEU
2	N	241	VAL
2	N	262	LEU
2	N	283	SER
2	N	287	ILE
2	N	299	LEU
2	N	306	LEU
2	N	322	VAL
2	N	323	LEU
2	N	324	SER
2	N	326	ILE
2	N	342	THR
2	N	347	THR
2	N	348	GLU
2	N	350	VAL
2	N	353	ARG
1	O	33	THR
1	O	47	ILE
1	O	51	THR
1	O	52	ILE
1	O	54	ILE
1	O	63	VAL
1	O	77	LEU
1	O	88	THR
1	O	93	LEU
1	O	103	ILE
1	O	117	LYS
1	O	119	ARG
1	O	120	ILE
1	O	123	ILE
1	O	135	GLU
1	O	195	ARG
1	O	201	ILE
1	O	213	SER

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Mol	Chain	Res	Type
1	O	215	ILE
1	O	222	GLN
1	O	224	VAL
1	O	234	VAL
1	O	276	VAL
1	O	285	VAL
1	O	295	SER
1	O	302	LEU
1	O	311	ILE
1	O	315	VAL
1	O	319	ILE
1	O	323	LYS
1	O	324	HIS
1	O	326	THR
1	O	336	THR
1	O	342	ILE
2	P	4	LYS
2	P	5	GLN
2	P	8	ILE
2	P	14	LYS
2	P	19	THR
2	P	23	THR
2	P	30	ASP
2	P	35	GLU
2	P	36	ILE
2	P	38	LYS
2	P	45	SER
2	P	58	VAL
2	P	66	LEU
2	P	67	THR
2	P	69	ILE
2	P	78	THR
2	P	80	ASN
2	P	82	VAL
2	P	88	LEU
2	P	97	ARG
2	P	102	THR
2	P	114	ARG
2	P	129	VAL
2	P	149	VAL
2	P	162	ARG
2	P	183	ARG

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Mol	Chain	Res	Type
2	P	184	VAL
2	P	185	ILE
2	P	192	ILE
2	P	193	GLN
2	P	209	LYS
2	P	221	ILE
2	P	222	ASP
2	P	225	VAL
2	P	226	LEU
2	P	241	VAL
2	P	262	LEU
2	P	283	SER
2	P	287	ILE
2	P	299	LEU
2	P	306	LEU
2	P	322	VAL
2	P	323	LEU
2	P	324	SER
2	P	326	ILE
2	P	342	THR
2	P	347	THR
2	P	348	GLU
2	P	350	VAL
2	P	353	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (76) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	82	HIS
1	A	90	HIS
1	A	283	GLN
2	B	64	ASN
2	B	96	HIS
2	B	193	GLN
2	B	314	HIS
1	C	73	ASN
1	C	82	HIS
1	C	90	HIS
1	C	141	HIS
1	C	245	ASN
1	C	283	GLN
2	D	64	ASN

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Mol	Chain	Res	Type
2	D	96	HIS
2	D	193	GLN
2	D	223	ASN
2	D	269	ASN
2	D	314	HIS
1	E	44	ASN
1	E	73	ASN
1	E	82	HIS
1	E	90	HIS
1	E	245	ASN
1	E	283	GLN
2	F	64	ASN
2	F	96	HIS
2	F	193	GLN
2	F	269	ASN
2	F	314	HIS
1	G	73	ASN
1	G	82	HIS
1	G	90	HIS
1	G	245	ASN
1	G	283	GLN
2	H	64	ASN
2	H	193	GLN
2	H	269	ASN
1	I	73	ASN
1	I	82	HIS
1	I	90	HIS
1	I	245	ASN
1	I	283	GLN
2	J	64	ASN
2	J	96	HIS
2	J	193	GLN
2	J	223	ASN
2	J	269	ASN
2	J	314	HIS
1	K	73	ASN
1	K	82	HIS
1	K	90	HIS
1	K	245	ASN
1	K	283	GLN
1	K	301	HIS
2	L	64	ASN

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Mol	Chain	Res	Type
2	L	193	GLN
2	L	314	HIS
1	M	73	ASN
1	M	82	HIS
1	M	90	HIS
1	M	141	HIS
1	M	245	ASN
1	M	283	GLN
2	N	64	ASN
2	N	96	HIS
2	N	193	GLN
2	N	223	ASN
2	N	314	HIS
1	O	82	HIS
1	O	90	HIS
1	O	283	GLN
2	P	193	GLN
2	P	223	ASN
2	P	269	ASN
2	P	314	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

16 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
4	AMP	E	2003	-	25,25,25	1.44	4 (16%)	37,38,38	1.98	9 (24%)
4	AMP	O	2008	-	25,25,25	1.44	4 (16%)	37,38,38	1.99	9 (24%)
3	FLC	O	1008	-	12,12,12	3.59	8 (66%)	17,17,17	1.42	1 (5%)
4	AMP	C	2002	-	25,25,25	1.44	4 (16%)	37,38,38	1.98	9 (24%)
3	FLC	G	1004	-	12,12,12	3.59	7 (58%)	17,17,17	1.42	1 (5%)
3	FLC	K	1006	-	12,12,12	3.59	7 (58%)	17,17,17	1.41	1 (5%)
4	AMP	I	2005	-	25,25,25	1.43	4 (16%)	37,38,38	1.98	9 (24%)
4	AMP	M	2007	-	25,25,25	1.45	4 (16%)	37,38,38	1.98	9 (24%)
4	AMP	K	2006	-	25,25,25	1.44	4 (16%)	37,38,38	1.98	9 (24%)
3	FLC	E	1003	-	12,12,12	3.58	6 (50%)	17,17,17	1.42	1 (5%)
3	FLC	A	1001	-	12,12,12	3.58	6 (50%)	17,17,17	1.43	1 (5%)
3	FLC	I	1005	-	12,12,12	3.57	7 (58%)	17,17,17	1.40	1 (5%)
3	FLC	M	1007	-	12,12,12	3.58	8 (66%)	17,17,17	1.42	1 (5%)
4	AMP	A	2001	-	25,25,25	1.46	4 (16%)	37,38,38	2.00	9 (24%)
4	AMP	G	2004	-	25,25,25	1.44	4 (16%)	37,38,38	1.99	9 (24%)
3	FLC	C	1002	-	12,12,12	3.59	6 (50%)	17,17,17	1.43	1 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	AMP	E	2003	-	-	4/10/26/26	0/3/3/3
4	AMP	O	2008	-	-	2/10/26/26	0/3/3/3
3	FLC	O	1008	-	-	8/16/16/16	-
4	AMP	C	2002	-	-	5/10/26/26	0/3/3/3
3	FLC	G	1004	-	-	8/16/16/16	-
3	FLC	K	1006	-	-	8/16/16/16	-
4	AMP	I	2005	-	-	1/10/26/26	0/3/3/3
4	AMP	M	2007	-	-	6/10/26/26	0/3/3/3
4	AMP	K	2006	-	-	2/10/26/26	0/3/3/3
3	FLC	E	1003	-	-	8/16/16/16	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	FLC	A	1001	-	-	8/16/16/16	-
3	FLC	I	1005	-	-	8/16/16/16	-
3	FLC	M	1007	-	-	8/16/16/16	-
4	AMP	A	2001	-	-	1/10/26/26	0/3/3/3
4	AMP	G	2004	-	-	4/10/26/26	0/3/3/3
3	FLC	C	1002	-	-	8/16/16/16	-

All (87) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	1002	FLC	OB1-CBC	6.12	1.41	1.22
3	G	1004	FLC	OB1-CBC	6.08	1.41	1.22
3	E	1003	FLC	OB1-CBC	6.07	1.41	1.22
3	A	1001	FLC	OB1-CBC	6.07	1.41	1.22
3	K	1006	FLC	OB1-CBC	6.06	1.41	1.22
3	I	1005	FLC	OB1-CBC	6.04	1.41	1.22
3	M	1007	FLC	OB1-CBC	6.03	1.41	1.22
3	O	1008	FLC	OB1-CBC	6.01	1.40	1.22
3	O	1008	FLC	OG1-CGC	5.98	1.41	1.22
3	G	1004	FLC	OG1-CGC	5.96	1.41	1.22
3	E	1003	FLC	OG1-CGC	5.96	1.41	1.22
3	M	1007	FLC	OA1-CAC	5.96	1.41	1.22
3	C	1002	FLC	OA1-CAC	5.95	1.41	1.22
3	O	1008	FLC	OA1-CAC	5.95	1.41	1.22
3	A	1001	FLC	OG1-CGC	5.94	1.41	1.22
3	M	1007	FLC	OG1-CGC	5.93	1.41	1.22
3	C	1002	FLC	OG1-CGC	5.93	1.41	1.22
3	I	1005	FLC	OA1-CAC	5.93	1.41	1.22
3	K	1006	FLC	OA1-CAC	5.92	1.41	1.22
3	G	1004	FLC	OA1-CAC	5.92	1.41	1.22
3	E	1003	FLC	OA1-CAC	5.92	1.41	1.22
3	K	1006	FLC	OG1-CGC	5.91	1.41	1.22
3	I	1005	FLC	OG1-CGC	5.91	1.41	1.22
3	A	1001	FLC	OA1-CAC	5.91	1.41	1.22
4	A	2001	AMP	C5-C4	4.80	1.47	1.39
4	G	2004	AMP	C5-C4	4.76	1.47	1.39
4	E	2003	AMP	C5-C4	4.74	1.47	1.39
4	O	2008	AMP	C5-C4	4.73	1.47	1.39
4	M	2007	AMP	C5-C4	4.72	1.47	1.39
4	K	2006	AMP	C5-C4	4.71	1.47	1.39
4	C	2002	AMP	C5-C4	4.71	1.47	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	I	2005	AMP	C5-C4	4.70	1.47	1.39
3	K	1006	FLC	OG2-CGC	-3.50	1.19	1.30
3	M	1007	FLC	OG2-CGC	-3.46	1.19	1.30
3	C	1002	FLC	OA2-CAC	-3.45	1.19	1.30
3	O	1008	FLC	OG2-CGC	-3.45	1.19	1.30
3	C	1002	FLC	OG2-CGC	-3.44	1.19	1.30
3	G	1004	FLC	OG2-CGC	-3.44	1.19	1.30
3	G	1004	FLC	OA2-CAC	-3.43	1.19	1.30
3	E	1003	FLC	OG2-CGC	-3.43	1.19	1.30
3	I	1005	FLC	OG2-CGC	-3.42	1.19	1.30
3	K	1006	FLC	OA2-CAC	-3.42	1.19	1.30
3	A	1001	FLC	OG2-CGC	-3.42	1.19	1.30
3	A	1001	FLC	OA2-CAC	-3.41	1.19	1.30
3	I	1005	FLC	OA2-CAC	-3.40	1.19	1.30
3	O	1008	FLC	OA2-CAC	-3.40	1.19	1.30
3	E	1003	FLC	OA2-CAC	-3.40	1.19	1.30
3	M	1007	FLC	OA2-CAC	-3.37	1.19	1.30
3	K	1006	FLC	OB2-CBC	-3.08	1.19	1.30
3	E	1003	FLC	OB2-CBC	-3.08	1.19	1.30
3	C	1002	FLC	OB2-CBC	-3.08	1.19	1.30
3	A	1001	FLC	OB2-CBC	-3.08	1.19	1.30
3	G	1004	FLC	OB2-CBC	-3.05	1.19	1.30
3	I	1005	FLC	OB2-CBC	-3.03	1.19	1.30
3	O	1008	FLC	OB2-CBC	-3.03	1.19	1.30
3	M	1007	FLC	OB2-CBC	-3.02	1.19	1.30
4	C	2002	AMP	C5-C6	2.78	1.48	1.41
4	K	2006	AMP	C5-C6	2.78	1.48	1.41
4	M	2007	AMP	C5-C6	2.78	1.48	1.41
4	O	2008	AMP	C5-C6	2.77	1.48	1.41
4	I	2005	AMP	C5-C6	2.76	1.48	1.41
4	A	2001	AMP	C5-C6	2.76	1.48	1.41
4	E	2003	AMP	C5-C6	2.76	1.48	1.41
4	G	2004	AMP	C5-C6	2.75	1.48	1.41
4	K	2006	AMP	C8-N7	2.40	1.36	1.31
4	M	2007	AMP	C8-N7	2.40	1.36	1.31
4	A	2001	AMP	C8-N7	2.38	1.36	1.31
4	C	2002	AMP	C8-N7	2.36	1.36	1.31
4	G	2004	AMP	C8-N7	2.35	1.36	1.31
4	O	2008	AMP	C8-N7	2.35	1.36	1.31
4	I	2005	AMP	C8-N7	2.33	1.36	1.31
4	E	2003	AMP	C8-N7	2.32	1.36	1.31
4	A	2001	AMP	C5-N7	-2.29	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	K	2006	AMP	C5-N7	-2.24	1.35	1.39
4	G	2004	AMP	C5-N7	-2.24	1.35	1.39
4	M	2007	AMP	C5-N7	-2.24	1.35	1.39
4	C	2002	AMP	C5-N7	-2.24	1.35	1.39
4	E	2003	AMP	C5-N7	-2.23	1.35	1.39
4	O	2008	AMP	C5-N7	-2.22	1.35	1.39
4	I	2005	AMP	C5-N7	-2.19	1.35	1.39
3	K	1006	FLC	CA-CB	2.10	1.56	1.54
3	M	1007	FLC	CA-CB	2.08	1.56	1.54
3	I	1005	FLC	CA-CB	2.05	1.56	1.54
3	M	1007	FLC	CG-CB	2.04	1.56	1.54
3	O	1008	FLC	CA-CB	2.02	1.56	1.54
3	O	1008	FLC	CG-CB	2.02	1.56	1.54
3	G	1004	FLC	CG-CB	2.01	1.56	1.54

All (80) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	2001	AMP	C5-C4-N3	-5.90	118.59	126.72
4	O	2008	AMP	C5-C4-N3	-5.85	118.66	126.72
4	G	2004	AMP	C5-C4-N3	-5.84	118.67	126.72
4	K	2006	AMP	C5-C4-N3	-5.84	118.67	126.72
4	M	2007	AMP	C5-C4-N3	-5.84	118.67	126.72
4	E	2003	AMP	C5-C4-N3	-5.82	118.70	126.72
4	C	2002	AMP	C5-C4-N3	-5.82	118.70	126.72
4	I	2005	AMP	C5-C4-N3	-5.82	118.70	126.72
4	A	2001	AMP	N3-C4-N9	4.66	135.10	127.17
4	G	2004	AMP	N3-C4-N9	4.62	135.03	127.17
4	O	2008	AMP	N3-C4-N9	4.62	135.02	127.17
4	E	2003	AMP	N3-C4-N9	4.62	135.02	127.17
4	C	2002	AMP	N3-C4-N9	4.60	134.99	127.17
4	K	2006	AMP	N3-C4-N9	4.59	134.97	127.17
4	I	2005	AMP	N3-C4-N9	4.58	134.96	127.17
4	M	2007	AMP	N3-C4-N9	4.58	134.96	127.17
4	A	2001	AMP	C2-N3-C4	3.72	120.93	111.83
4	O	2008	AMP	C2-N3-C4	3.72	120.91	111.83
4	G	2004	AMP	C2-N3-C4	3.71	120.89	111.83
4	C	2002	AMP	C2-N3-C4	3.70	120.87	111.83
4	K	2006	AMP	C2-N3-C4	3.70	120.87	111.83
4	E	2003	AMP	C2-N3-C4	3.69	120.85	111.83
3	A	1001	FLC	OB2-CBC-CB	3.69	120.21	113.14
4	M	2007	AMP	C2-N3-C4	3.69	120.83	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	I	2005	AMP	C2-N3-C4	3.67	120.80	111.83
3	C	1002	FLC	OB2-CBC-CB	3.66	120.17	113.14
3	E	1003	FLC	OB2-CBC-CB	3.65	120.14	113.14
3	K	1006	FLC	OB2-CBC-CB	3.65	120.13	113.14
3	M	1007	FLC	OB2-CBC-CB	3.64	120.13	113.14
3	G	1004	FLC	OB2-CBC-CB	3.64	120.13	113.14
3	O	1008	FLC	OB2-CBC-CB	3.62	120.08	113.14
3	I	1005	FLC	OB2-CBC-CB	3.57	119.99	113.14
4	A	2001	AMP	C4-C5-N7	-3.51	106.57	110.58
4	I	2005	AMP	C4-C5-N7	-3.49	106.59	110.58
4	O	2008	AMP	C4-C5-N7	-3.49	106.59	110.58
4	G	2004	AMP	C4-C5-N7	-3.48	106.60	110.58
4	K	2006	AMP	C4-C5-N7	-3.47	106.61	110.58
4	C	2002	AMP	C4-C5-N7	-3.46	106.62	110.58
4	M	2007	AMP	C4-C5-N7	-3.46	106.62	110.58
4	E	2003	AMP	C4-C5-N7	-3.46	106.63	110.58
4	O	2008	AMP	N3-C2-N1	-3.23	123.70	128.58
4	C	2002	AMP	N3-C2-N1	-3.22	123.71	128.58
4	K	2006	AMP	N3-C2-N1	-3.22	123.71	128.58
4	A	2001	AMP	N3-C2-N1	-3.21	123.72	128.58
4	G	2004	AMP	N3-C2-N1	-3.21	123.73	128.58
4	E	2003	AMP	N3-C2-N1	-3.20	123.73	128.58
4	M	2007	AMP	N3-C2-N1	-3.18	123.76	128.58
4	I	2005	AMP	N3-C2-N1	-3.16	123.80	128.58
4	A	2001	AMP	C4-N9-C8	2.64	108.51	105.74
4	C	2002	AMP	C4-N9-C8	2.60	108.47	105.74
4	O	2008	AMP	C4-N9-C8	2.60	108.47	105.74
4	E	2003	AMP	C4-N9-C8	2.59	108.46	105.74
4	G	2004	AMP	C4-N9-C8	2.58	108.45	105.74
4	A	2001	AMP	C5-N7-C8	2.58	107.51	103.45
4	I	2005	AMP	C4-N9-C8	2.57	108.44	105.74
4	G	2004	AMP	C5-N7-C8	2.56	107.47	103.45
4	K	2006	AMP	C4-N9-C8	2.56	108.42	105.74
4	M	2007	AMP	C4-N9-C8	2.56	108.42	105.74
4	I	2005	AMP	C3'-C2'-C1'	2.55	106.29	101.46
4	C	2002	AMP	C5-N7-C8	2.54	107.45	103.45
4	K	2006	AMP	C3'-C2'-C1'	2.54	106.27	101.46
4	O	2008	AMP	C5-N7-C8	2.54	107.44	103.45
4	G	2004	AMP	C3'-C2'-C1'	2.53	106.26	101.46
4	I	2005	AMP	C5-N7-C8	2.53	107.43	103.45
4	E	2003	AMP	C5-N7-C8	2.53	107.43	103.45
4	K	2006	AMP	C5-N7-C8	2.53	107.42	103.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	O	2008	AMP	C3'-C2'-C1'	2.53	106.24	101.46
4	E	2003	AMP	C3'-C2'-C1'	2.52	106.23	101.46
4	C	2002	AMP	C3'-C2'-C1'	2.52	106.22	101.46
4	A	2001	AMP	C3'-C2'-C1'	2.51	106.21	101.46
4	M	2007	AMP	C5-N7-C8	2.51	107.39	103.45
4	M	2007	AMP	C3'-C2'-C1'	2.51	106.21	101.46
4	G	2004	AMP	C6-C5-N7	2.11	136.15	132.09
4	C	2002	AMP	C6-C5-N7	2.10	136.13	132.09
4	O	2008	AMP	C6-C5-N7	2.09	136.11	132.09
4	E	2003	AMP	C6-C5-N7	2.09	136.11	132.09
4	I	2005	AMP	C6-C5-N7	2.08	136.10	132.09
4	A	2001	AMP	C6-C5-N7	2.07	136.07	132.09
4	M	2007	AMP	C6-C5-N7	2.06	136.06	132.09
4	K	2006	AMP	C6-C5-N7	2.06	136.06	132.09

There are no chirality outliers.

All (89) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1001	FLC	CA-CB-CG-CGC
3	A	1001	FLC	CBC-CB-CG-CGC
3	A	1001	FLC	OHB-CB-CG-CGC
3	C	1002	FLC	CA-CB-CG-CGC
3	C	1002	FLC	CBC-CB-CG-CGC
3	C	1002	FLC	OHB-CB-CG-CGC
3	E	1003	FLC	CA-CB-CG-CGC
3	E	1003	FLC	CBC-CB-CG-CGC
3	E	1003	FLC	OHB-CB-CG-CGC
3	G	1004	FLC	CA-CB-CG-CGC
3	G	1004	FLC	CBC-CB-CG-CGC
3	G	1004	FLC	OHB-CB-CG-CGC
3	I	1005	FLC	CA-CB-CG-CGC
3	I	1005	FLC	CBC-CB-CG-CGC
3	I	1005	FLC	OHB-CB-CG-CGC
3	K	1006	FLC	CA-CB-CG-CGC
3	K	1006	FLC	CBC-CB-CG-CGC
3	K	1006	FLC	OHB-CB-CG-CGC
3	M	1007	FLC	CA-CB-CG-CGC
3	M	1007	FLC	CBC-CB-CG-CGC
3	M	1007	FLC	OHB-CB-CG-CGC
3	O	1008	FLC	CA-CB-CG-CGC
3	O	1008	FLC	CBC-CB-CG-CGC

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Mol	Chain	Res	Type	Atoms
3	O	1008	FLC	OHB-CB-CG-CGC
4	C	2002	AMP	C5'-O5'-P-O1P
4	C	2002	AMP	C5'-O5'-P-O2P
4	C	2002	AMP	C5'-O5'-P-O3P
4	E	2003	AMP	C5'-O5'-P-O3P
4	I	2005	AMP	C4'-C5'-O5'-P
4	M	2007	AMP	C5'-O5'-P-O2P
4	M	2007	AMP	C5'-O5'-P-O3P
4	C	2002	AMP	O4'-C4'-C5'-O5'
4	C	2002	AMP	C3'-C4'-C5'-O5'
4	G	2004	AMP	C3'-C4'-C5'-O5'
4	K	2006	AMP	C3'-C4'-C5'-O5'
4	M	2007	AMP	C3'-C4'-C5'-O5'
4	G	2004	AMP	O4'-C4'-C5'-O5'
4	M	2007	AMP	O4'-C4'-C5'-O5'
4	O	2008	AMP	O4'-C4'-C5'-O5'
4	K	2006	AMP	O4'-C4'-C5'-O5'
4	E	2003	AMP	C5'-O5'-P-O1P
4	G	2004	AMP	C5'-O5'-P-O1P
3	A	1001	FLC	CAC-CA-CB-CBC
3	C	1002	FLC	CAC-CA-CB-CBC
3	E	1003	FLC	CAC-CA-CB-CBC
3	G	1004	FLC	CAC-CA-CB-CBC
3	I	1005	FLC	CAC-CA-CB-CBC
3	K	1006	FLC	CAC-CA-CB-CBC
3	M	1007	FLC	CAC-CA-CB-CBC
3	O	1008	FLC	CAC-CA-CB-CBC
3	I	1005	FLC	CAC-CA-CB-OHB
4	O	2008	AMP	C3'-C4'-C5'-O5'
3	C	1002	FLC	CAC-CA-CB-OHB
4	E	2003	AMP	C5'-O5'-P-O2P
4	M	2007	AMP	C2'-C1'-N9-C8
3	A	1001	FLC	CAC-CA-CB-OHB
3	E	1003	FLC	CAC-CA-CB-OHB
3	G	1004	FLC	CAC-CA-CB-OHB
3	K	1006	FLC	CAC-CA-CB-OHB
3	M	1007	FLC	CAC-CA-CB-OHB
3	O	1008	FLC	CAC-CA-CB-OHB
4	E	2003	AMP	C3'-C4'-C5'-O5'
3	A	1001	FLC	CA-CB-CBC-OB2
3	C	1002	FLC	CA-CB-CBC-OB2
3	E	1003	FLC	CA-CB-CBC-OB2

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Mol	Chain	Res	Type	Atoms
3	G	1004	FLC	CA-CB-CBC-OB2
3	I	1005	FLC	CA-CB-CBC-OB2
3	K	1006	FLC	CA-CB-CBC-OB2
3	M	1007	FLC	CA-CB-CBC-OB2
3	O	1008	FLC	CA-CB-CBC-OB2
4	A	2001	AMP	C4'-C5'-O5'-P
3	A	1001	FLC	CG-CB-CBC-OB2
3	C	1002	FLC	CG-CB-CBC-OB2
3	E	1003	FLC	CG-CB-CBC-OB2
3	G	1004	FLC	CG-CB-CBC-OB2
3	I	1005	FLC	CG-CB-CBC-OB2
3	K	1006	FLC	CG-CB-CBC-OB2
3	M	1007	FLC	CG-CB-CBC-OB2
3	O	1008	FLC	CG-CB-CBC-OB2
4	G	2004	AMP	C5'-O5'-P-O3P
3	A	1001	FLC	OHB-CB-CBC-OB2
3	C	1002	FLC	OHB-CB-CBC-OB2
3	E	1003	FLC	OHB-CB-CBC-OB2
3	G	1004	FLC	OHB-CB-CBC-OB2
3	I	1005	FLC	OHB-CB-CBC-OB2
3	K	1006	FLC	OHB-CB-CBC-OB2
3	M	1007	FLC	OHB-CB-CBC-OB2
3	O	1008	FLC	OHB-CB-CBC-OB2
4	M	2007	AMP	O4'-C1'-N9-C8

There are no ring outliers.

15 monomers are involved in 62 short contacts:

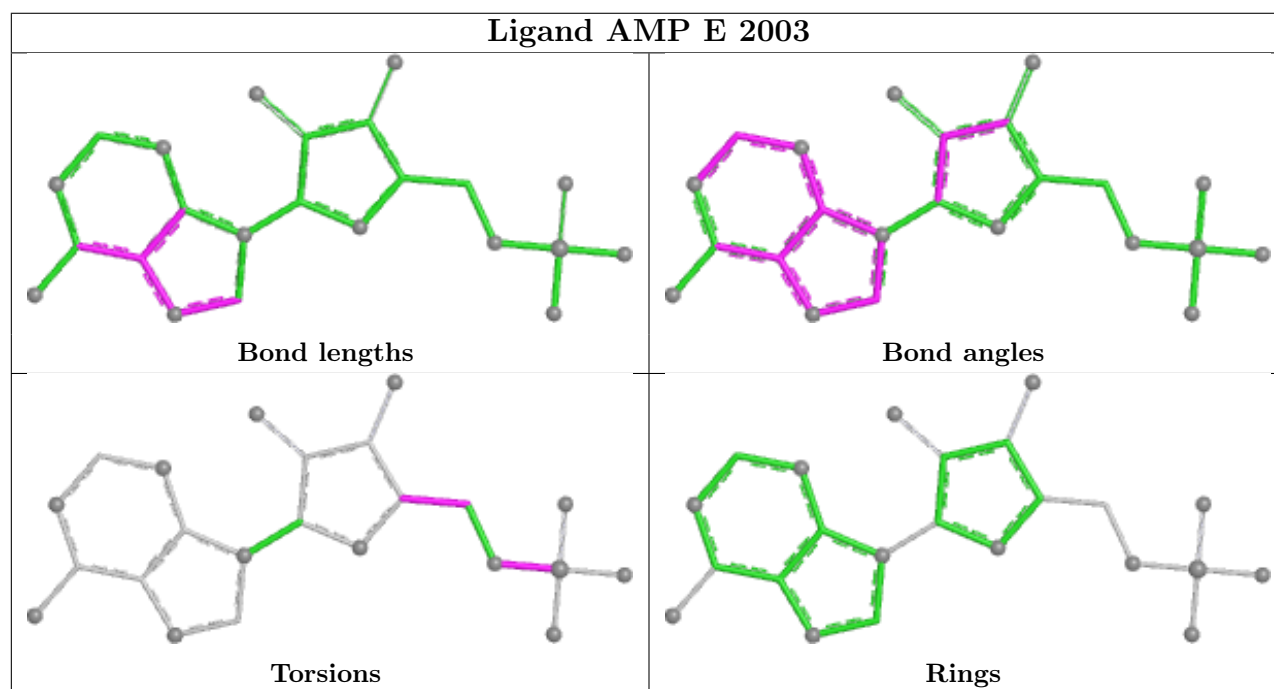
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	E	2003	AMP	6	0
3	O	1008	FLC	5	0
4	C	2002	AMP	2	0
3	G	1004	FLC	5	0
3	K	1006	FLC	3	0
4	I	2005	AMP	3	0
4	M	2007	AMP	3	0
4	K	2006	AMP	9	0
3	E	1003	FLC	4	0
3	A	1001	FLC	5	0
3	I	1005	FLC	5	0
3	M	1007	FLC	5	0
4	A	2001	AMP	2	0

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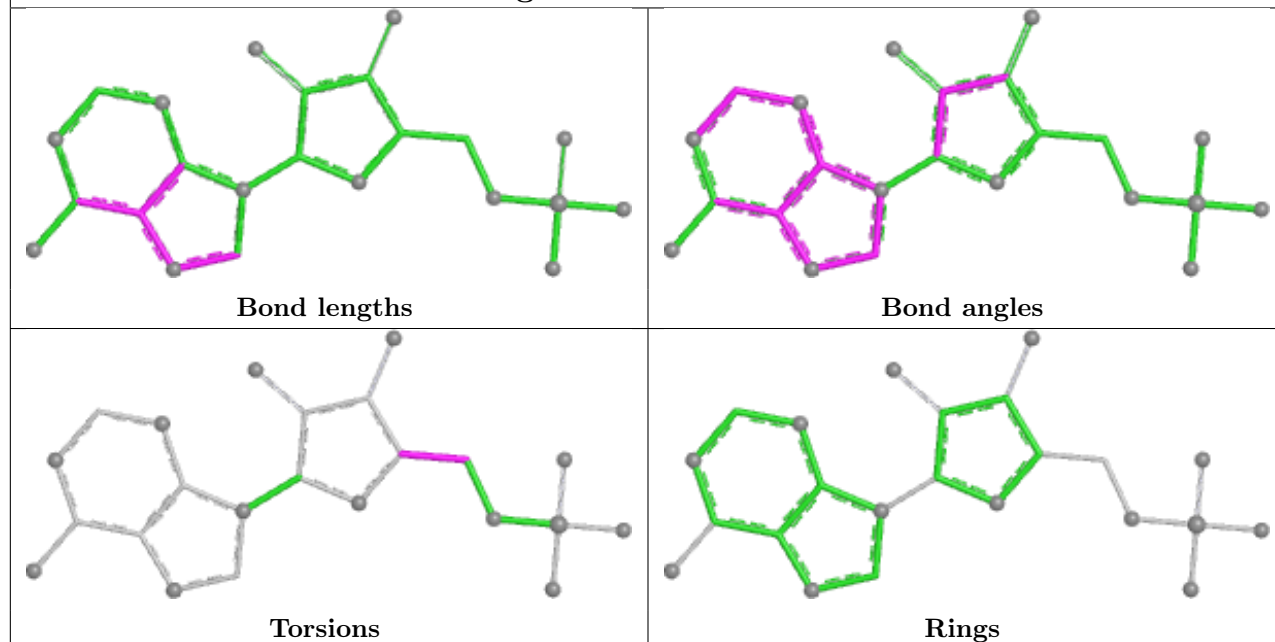
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Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	G	2004	AMP	1	0
3	C	1002	FLC	4	0

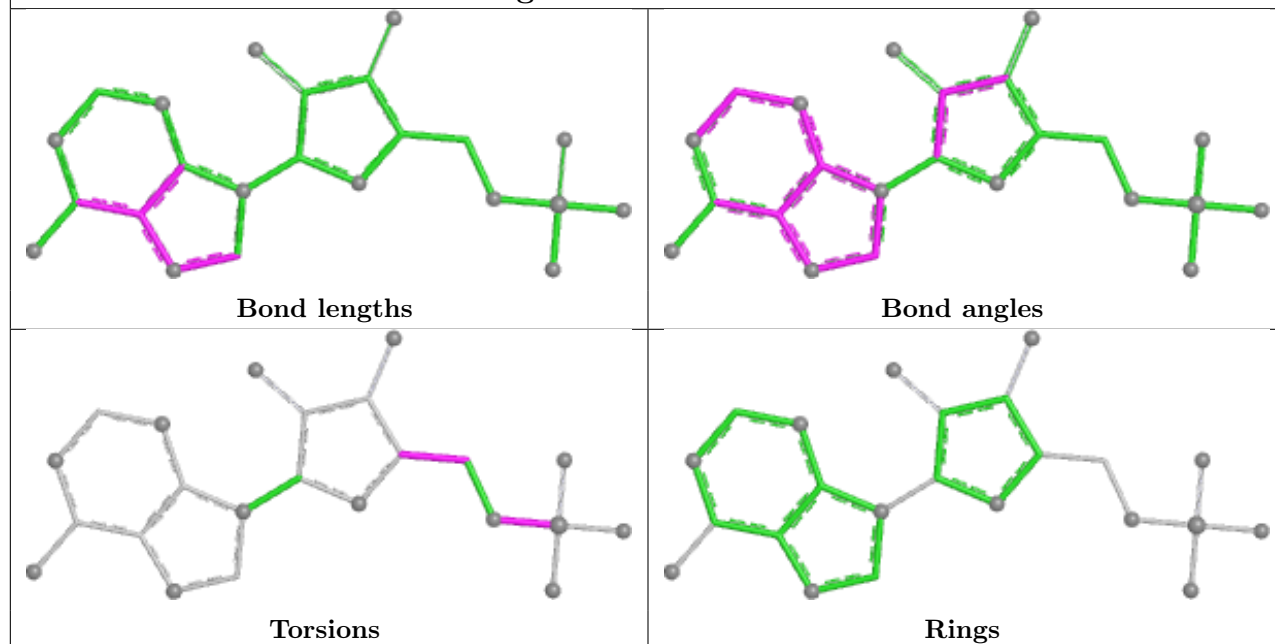
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



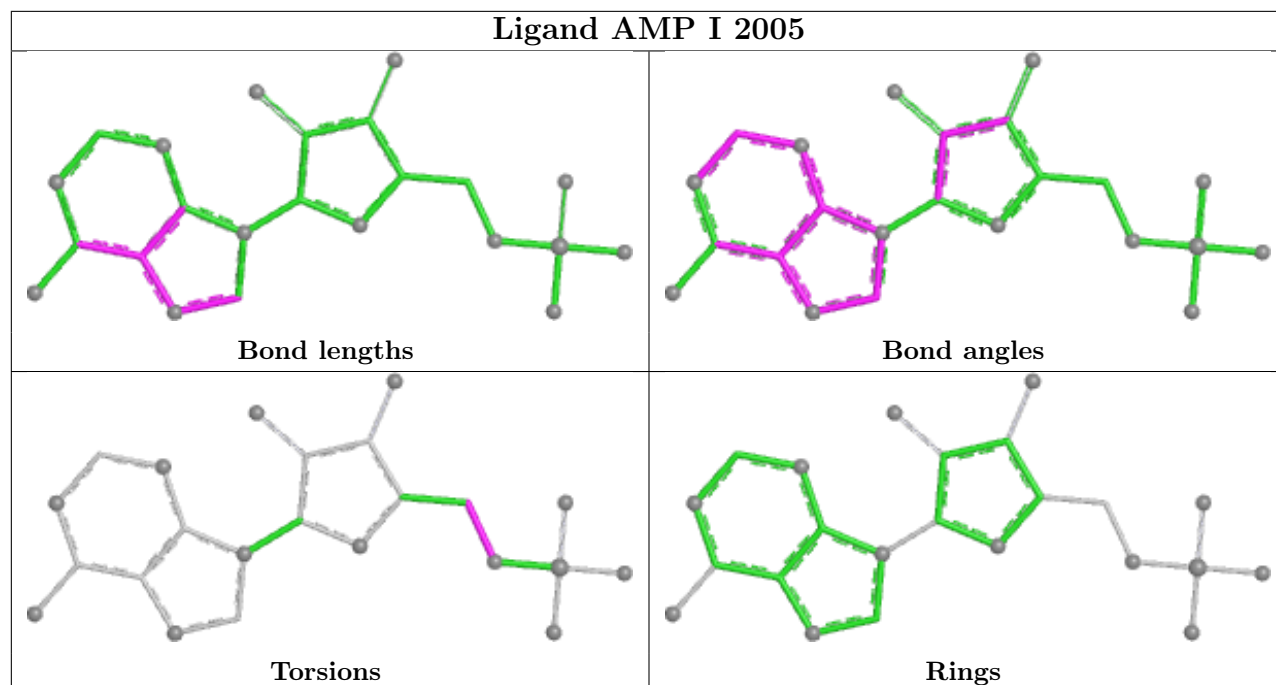
Ligand AMP O 2008



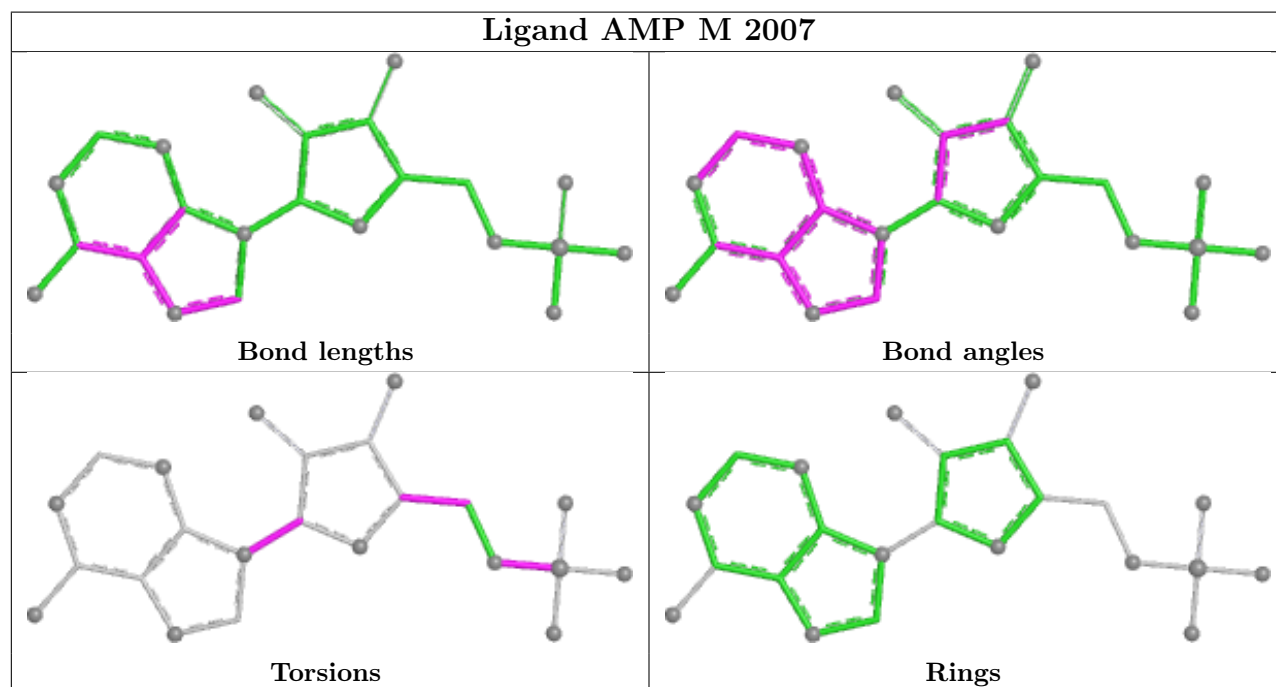
Ligand AMP C 2002



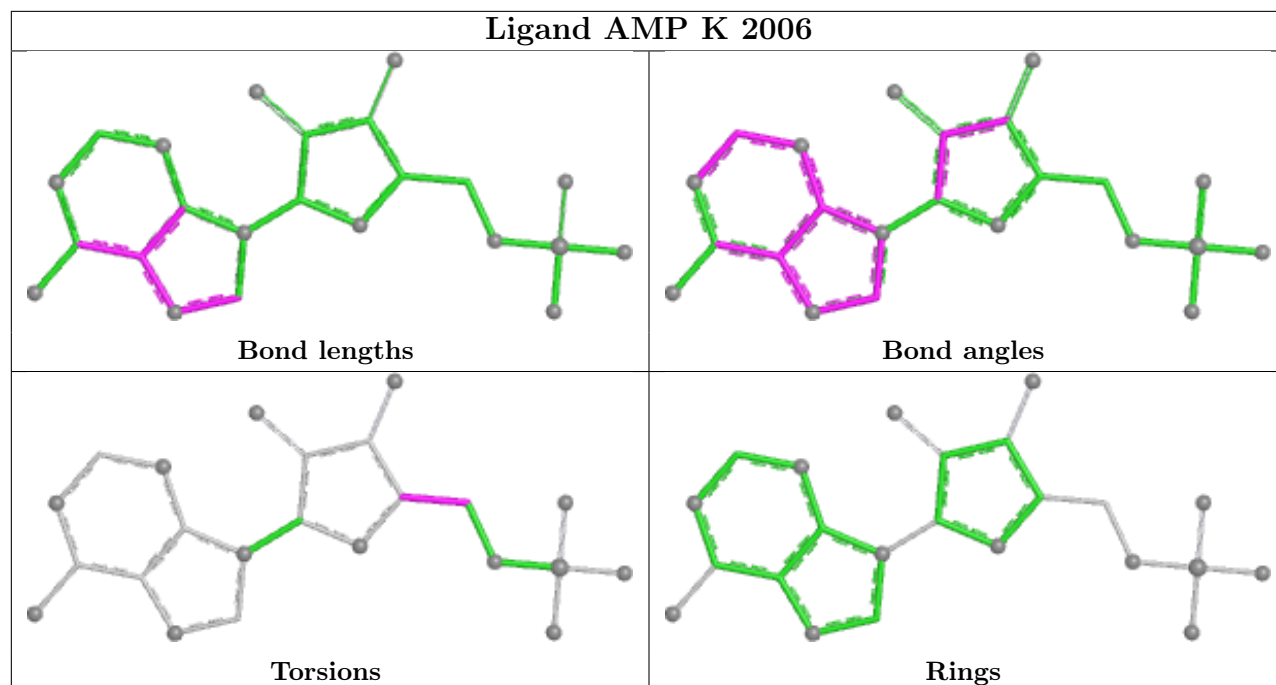
Ligand AMP I 2005



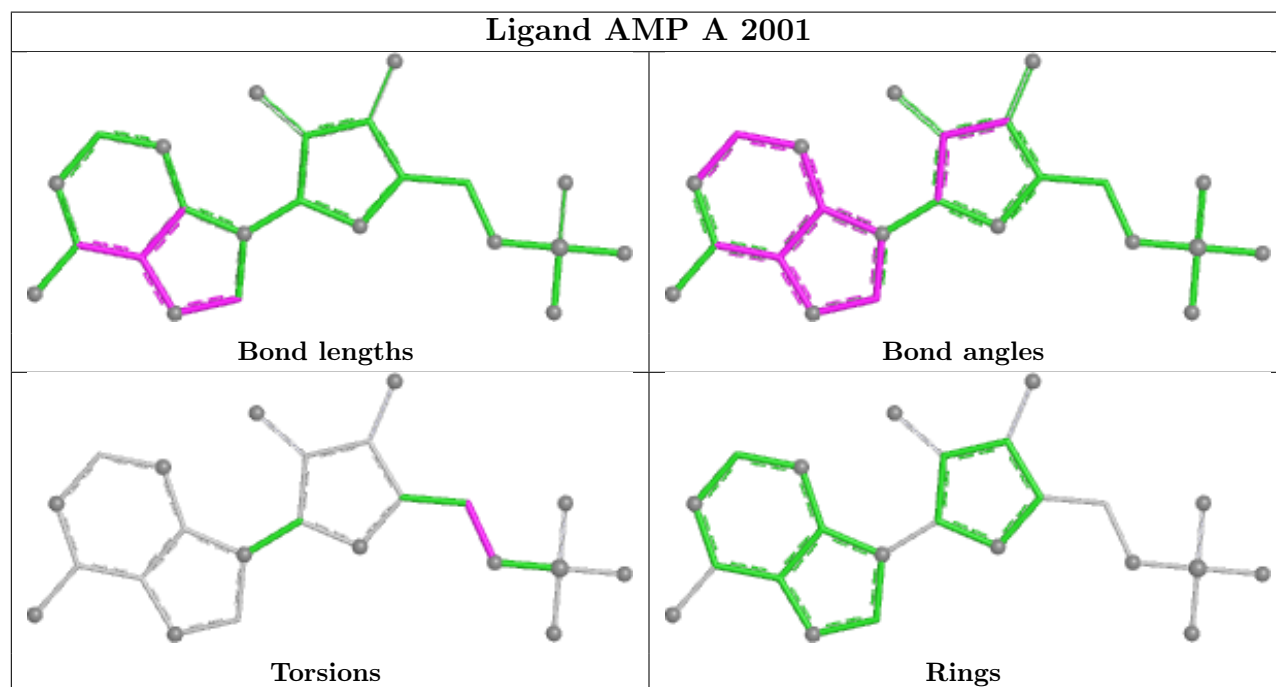
Ligand AMP M 2007

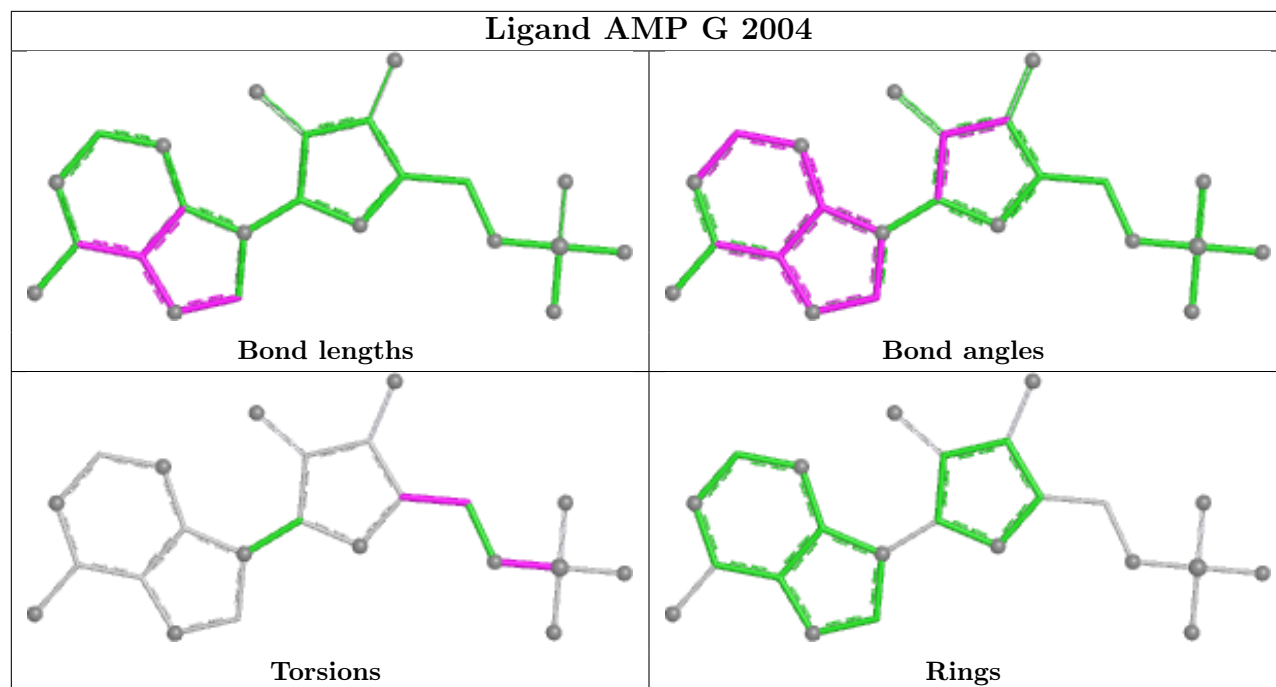


Ligand AMP K 2006



Ligand AMP A 2001





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ > 2		OWAB(Å ²)	Q < 0.9
1	A	329/349 (94%)	0.79	33 (10%)	12 16	120, 159, 225, 290	0
1	C	338/349 (96%)	0.76	32 (9%)	14 17	120, 151, 227, 309	0
1	E	338/349 (96%)	0.45	16 (4%)	36 32	121, 194, 255, 288	0
1	G	329/349 (94%)	0.14	3 (0%)	81 66	122, 185, 247, 313	0
1	I	329/349 (94%)	0.14	4 (1%)	76 61	120, 176, 240, 331	0
1	K	337/349 (96%)	0.45	17 (5%)	34 31	121, 195, 256, 286	0
1	M	339/349 (97%)	0.69	28 (8%)	17 21	120, 151, 210, 264	0
1	O	330/349 (94%)	0.75	38 (11%)	9 13	120, 159, 234, 295	0
2	B	347/354 (98%)	0.95	44 (12%)	8 12	120, 162, 233, 325	0
2	D	347/354 (98%)	0.66	22 (6%)	26 26	121, 185, 269, 309	0
2	F	347/354 (98%)	0.39	12 (3%)	47 37	129, 234, 299, 325	0
2	H	346/354 (97%)	0.56	19 (5%)	30 29	123, 237, 317, 353	0
2	J	347/354 (98%)	0.54	19 (5%)	30 29	124, 229, 302, 357	0
2	L	346/354 (97%)	0.35	9 (2%)	57 44	137, 230, 289, 322	0
2	N	347/354 (98%)	0.73	34 (9%)	13 17	120, 186, 270, 304	0
2	P	347/354 (98%)	0.98	47 (13%)	7 11	120, 162, 234, 316	0
All	All	5443/5624 (96%)	0.58	377 (6%)	23 24	120, 185, 276, 357	0

All (377) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	P	85	LYS	7.3
1	M	23	ILE	6.6
2	B	296	THR	6.3
2	P	86	GLY	5.9
2	D	276	ILE	5.8

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Mol	Chain	Res	Type	RSRZ
2	N	111	ALA	5.7
1	C	77	LEU	5.7
2	H	44	PHE	5.6
1	M	81	TRP	5.5
1	C	81	TRP	5.3
2	H	40	VAL	5.3
2	P	323	LEU	5.2
2	P	84	LEU	5.2
2	P	299	LEU	5.2
1	M	33	THR	5.1
2	N	276	ILE	4.9
2	B	84	LEU	4.9
2	B	323	LEU	4.8
1	A	232	VAL	4.8
2	B	85	LYS	4.7
2	P	296	THR	4.6
1	M	77	LEU	4.4
1	E	260	ALA	4.3
2	B	240	SER	4.3
1	C	30	LYS	4.2
2	D	30	ASP	4.0
2	F	241	VAL	4.0
2	N	324	SER	4.0
2	H	59	SER	4.0
1	C	23	ILE	3.9
2	B	310	GLY	3.9
2	N	265	THR	3.9
2	L	241	VAL	3.9
1	C	33	THR	3.8
2	B	299	LEU	3.8
1	A	143	SER	3.8
2	H	240	SER	3.8
2	N	32	ILE	3.8
2	D	115	PRO	3.8
2	L	264	LEU	3.8
2	B	232	PRO	3.7
1	C	234	VAL	3.7
1	O	135	GLU	3.7
2	P	87	PRO	3.7
1	C	239	TYR	3.7
2	B	239	VAL	3.7
1	C	67	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
1	I	304	LEU	3.6
2	J	40	VAL	3.6
2	P	187	VAL	3.6
2	H	320	ASN	3.6
2	D	192	ILE	3.5
1	M	67	VAL	3.5
1	A	242	ILE	3.5
1	A	135	GLU	3.5
2	P	240	SER	3.5
2	D	279	ALA	3.5
1	O	342	ILE	3.5
2	P	88	LEU	3.5
1	K	260	ALA	3.5
2	P	318	ILE	3.5
1	M	273	SER	3.4
2	N	192	ILE	3.4
1	O	232	VAL	3.4
2	B	187	VAL	3.4
2	P	238	ALA	3.4
2	F	264	LEU	3.4
2	B	238	ALA	3.4
1	K	247	GLY	3.4
1	M	80	LEU	3.4
1	M	243	LEU	3.3
2	B	250	LEU	3.3
1	C	197	ILE	3.3
2	B	319	GLN	3.3
2	H	302	SER	3.3
1	I	46	PRO	3.3
2	B	228	VAL	3.3
1	O	276	VAL	3.3
1	C	243	LEU	3.3
1	E	131	ASN	3.3
1	O	277	GLY	3.3
1	C	330	GLY	3.2
1	A	277	GLY	3.2
1	K	33	THR	3.2
1	C	233	LEU	3.2
2	P	141	GLU	3.2
2	B	287	ILE	3.2
2	P	185	ILE	3.2
1	M	131	ASN	3.2

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Mol	Chain	Res	Type	RSRZ
2	B	264	LEU	3.1
2	N	266	PRO	3.1
1	M	234	VAL	3.1
2	D	165	SER	3.1
1	M	93	LEU	3.1
2	N	149	VAL	3.1
1	O	346	LEU	3.1
2	H	229	VAL	3.1
2	D	274	ILE	3.1
1	C	49	TRP	3.0
1	K	170	ALA	3.0
2	B	242	CYS	3.0
2	D	273	LYS	3.0
2	N	264	LEU	3.0
1	A	260	ALA	3.0
2	H	125	THR	3.0
2	J	240	SER	3.0
2	D	8	ILE	3.0
2	D	304	MET	3.0
2	P	206	GLU	3.0
2	J	125	THR	3.0
2	L	240	SER	3.0
2	B	185	ILE	3.0
1	M	274	ARG	3.0
2	N	36	ILE	3.0
1	K	77	LEU	3.0
2	F	134	ILE	3.0
2	H	138	THR	3.0
2	P	298	LEU	3.0
2	P	183	ARG	3.0
2	N	323	LEU	3.0
2	P	217	GLU	3.0
2	F	77	ILE	2.9
1	K	311	ILE	2.9
1	C	260	ALA	2.9
2	B	144	GLY	2.9
2	N	14	LYS	2.9
1	A	346	LEU	2.9
1	O	67	VAL	2.9
2	P	159	LEU	2.9
1	A	160	GLU	2.9
2	D	111	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	M	100	GLN	2.9
1	K	169	PHE	2.9
2	P	300	LEU	2.9
1	A	275	HIS	2.9
1	I	45	ILE	2.9
2	B	276	ILE	2.9
2	J	67	THR	2.9
1	O	38	THR	2.8
2	H	299	LEU	2.8
1	O	272	GLY	2.8
2	J	282	GLY	2.8
1	A	233	LEU	2.8
1	E	311	ILE	2.8
1	M	49	TRP	2.8
2	P	295	PRO	2.8
1	G	174	ASN	2.8
1	O	330	GLY	2.8
2	N	144	GLY	2.8
2	J	59	SER	2.8
1	G	46	PRO	2.8
2	D	149	VAL	2.8
1	E	85	ALA	2.8
2	B	132	VAL	2.7
2	B	254	ASN	2.7
2	P	186	VAL	2.7
1	O	80	LEU	2.7
1	O	132	THR	2.7
2	P	90	THR	2.7
2	P	319	GLN	2.7
2	J	229	VAL	2.7
1	A	220	SER	2.7
1	O	220	SER	2.7
2	P	287	ILE	2.7
1	K	85	ALA	2.7
2	J	108	GLY	2.7
1	K	49	TRP	2.7
2	N	119	ILE	2.7
2	B	300	LEU	2.7
1	O	266	TYR	2.7
2	P	246	TYR	2.7
2	N	8	ILE	2.7
2	P	157	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	97	LEU	2.7
1	O	279	ASP	2.6
1	O	268	VAL	2.6
2	D	260	GLY	2.6
2	J	66	LEU	2.6
2	N	304	MET	2.6
1	C	218	ASN	2.6
1	K	250	LEU	2.6
1	M	26	ASP	2.6
2	F	155	GLN	2.6
2	J	254	ASN	2.6
2	P	196	ALA	2.6
2	B	246	TYR	2.6
2	N	240	SER	2.6
2	B	318	ILE	2.6
1	E	223	ALA	2.6
1	O	26	ASP	2.6
1	A	201	ILE	2.6
1	O	197	ILE	2.6
1	E	107	VAL	2.6
1	K	81	TRP	2.5
1	K	243	LEU	2.5
1	C	127	VAL	2.5
2	P	228	VAL	2.5
2	D	275	SER	2.5
2	N	33	GLY	2.5
2	H	254	ASN	2.5
1	O	254	PRO	2.5
1	A	223	ALA	2.5
1	M	136	PHE	2.5
2	H	106	THR	2.5
1	A	279	ASP	2.5
2	N	261	SER	2.5
1	A	39	ILE	2.5
1	C	236	PRO	2.5
1	K	107	VAL	2.5
2	H	83	ALA	2.5
2	J	106	THR	2.5
2	J	138	THR	2.5
2	D	159	LEU	2.5
2	N	274	ILE	2.5
1	A	268	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	181	VAL	2.5
2	L	282	GLY	2.5
2	N	293	ALA	2.5
2	P	191	THR	2.4
1	A	303	GLY	2.4
2	P	354	LEU	2.4
1	K	274	ARG	2.4
2	F	305	MET	2.4
1	O	151	LEU	2.4
2	N	159	LEU	2.4
1	A	106	ASN	2.4
1	A	266	TYR	2.4
2	H	230	THR	2.4
1	M	244	GLY	2.4
1	O	262	PHE	2.4
2	N	143	SER	2.4
1	O	189	LEU	2.4
2	B	153	VAL	2.4
1	A	259	GLY	2.4
1	M	252	GLY	2.4
1	M	105	ALA	2.4
1	O	258	ALA	2.4
2	B	306	LEU	2.4
2	L	243	PRO	2.4
2	B	141	GLU	2.4
2	P	99	LEU	2.4
1	C	273	SER	2.4
1	K	219	ALA	2.4
1	K	223	ALA	2.4
2	D	32	ILE	2.4
1	A	54	ILE	2.3
2	J	58	VAL	2.3
2	B	311	LEU	2.3
1	C	82	HIS	2.3
2	N	285	PRO	2.3
2	F	263	GLY	2.3
2	N	263	GLY	2.3
1	O	32	ILE	2.3
1	O	242	ILE	2.3
2	P	230	THR	2.3
2	N	224	SER	2.3
2	P	250	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
2	F	248	ASP	2.3
2	D	144	GLY	2.3
2	P	89	ALA	2.3
1	A	28	VAL	2.3
2	P	302	SER	2.3
2	J	107	PHE	2.3
2	D	36	ILE	2.3
1	C	223	ALA	2.3
2	N	112	ASN	2.3
2	P	138	THR	2.3
2	H	258	SER	2.3
2	J	7	SER	2.3
1	C	136	PHE	2.3
2	P	144	GLY	2.3
1	O	15	GLY	2.3
1	M	181	VAL	2.3
2	B	131	LEU	2.3
2	P	193	GLN	2.3
2	H	301	SER	2.3
2	N	117	LYS	2.3
1	O	20	VAL	2.3
1	E	49	TRP	2.2
1	M	239	TYR	2.2
2	B	343	THR	2.2
2	J	249	ILE	2.2
1	A	170	ALA	2.2
1	E	243	LEU	2.2
2	H	264	LEU	2.2
2	D	308	HIS	2.2
1	C	105	ALA	2.2
2	B	115	PRO	2.2
1	C	291	MET	2.2
1	O	237	SER	2.2
2	P	322	VAL	2.2
1	O	194	PHE	2.2
2	D	246	TYR	2.2
1	M	278	LEU	2.2
2	F	84	LEU	2.2
1	M	20	VAL	2.2
1	O	28	VAL	2.2
2	B	114	ARG	2.2
2	B	191	THR	2.2

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Mol	Chain	Res	Type	RSRZ
2	F	113	VAL	2.2
1	C	100	GLN	2.2
1	O	54	ILE	2.2
2	B	200	PHE	2.2
1	M	22	LEU	2.2
1	E	16	GLY	2.2
2	L	67	THR	2.2
2	P	255	SER	2.2
2	B	193	GLN	2.2
1	O	153	VAL	2.2
1	I	243	LEU	2.2
2	N	319	GLN	2.2
1	A	43	GLU	2.2
1	E	41	GLU	2.2
1	C	15	GLY	2.2
2	D	60	PRO	2.2
1	O	257	VAL	2.2
1	C	16	GLY	2.1
1	M	24	PRO	2.1
2	N	100	ASN	2.1
2	N	334	THR	2.1
2	P	39	SER	2.1
2	H	108	GLY	2.1
2	L	338	ALA	2.1
1	O	261	ASN	2.1
1	M	82	HIS	2.1
1	A	273	SER	2.1
1	A	130	GLU	2.1
2	P	284	ALA	2.1
1	C	188	LYS	2.1
2	N	110	PHE	2.1
1	O	106	ASN	2.1
2	B	113	VAL	2.1
2	J	96	HIS	2.1
1	M	220	SER	2.1
1	O	75	ILE	2.1
1	A	153	VAL	2.1
1	E	347	SER	2.1
2	N	297	ALA	2.1
1	K	214	ILE	2.1
2	B	286	ASP	2.1
1	E	80	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	M	30	LYS	2.1
1	A	128	ILE	2.1
1	C	85	ALA	2.1
2	F	240	SER	2.1
1	C	278	LEU	2.1
1	A	197	ILE	2.1
1	G	16	GLY	2.1
1	O	134	GLY	2.1
2	P	269	ASN	2.1
1	A	216	VAL	2.1
2	H	149	VAL	2.1
2	J	142	TYR	2.0
1	C	180	ALA	2.0
2	N	256	GLY	2.0
2	P	180	GLY	2.0
2	B	320	ASN	2.0
2	B	332	ASN	2.0
2	P	225	VAL	2.0
2	B	183	ARG	2.0
1	E	256	LEU	2.0
1	A	16	GLY	2.0
1	E	105	ALA	2.0
1	A	254	PRO	2.0
1	C	131	ASN	2.0
2	F	151	PRO	2.0
2	L	72	PRO	2.0
2	L	151	PRO	2.0
2	P	17	PRO	2.0
1	E	33	THR	2.0
2	B	165	SER	2.0
2	B	251	SER	2.0
2	B	255	SER	2.0
2	D	143	SER	2.0
1	E	230	PHE	2.0
2	J	65	GLY	2.0
1	O	60	LYS	2.0

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

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

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

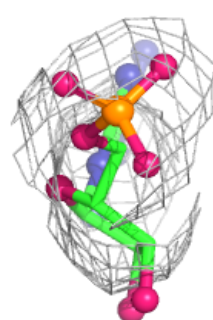
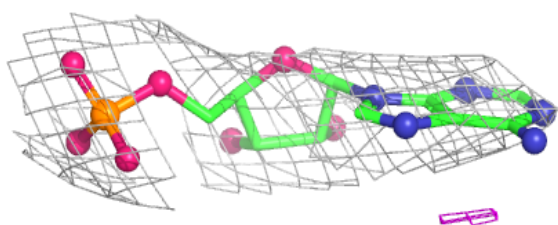
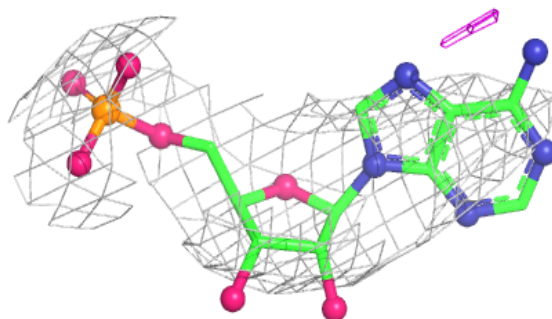
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
4	AMP	G	2004	23/23	0.77	0.14	164,164,164,164	0
4	AMP	K	2006	23/23	0.77	0.19	240,240,240,240	0
3	FLC	C	1002	13/13	0.79	0.18	179,179,179,179	0
4	AMP	A	2001	23/23	0.79	0.15	150,150,150,150	0
4	AMP	O	2008	23/23	0.79	0.14	135,135,135,135	0
4	AMP	E	2003	23/23	0.83	0.15	215,215,215,215	0
4	AMP	C	2002	23/23	0.85	0.14	148,148,148,148	0
3	FLC	G	1004	13/13	0.86	0.09	192,192,192,192	0
3	FLC	I	1005	13/13	0.86	0.12	185,185,185,185	0
3	FLC	M	1007	13/13	0.86	0.16	158,158,158,158	0
3	FLC	A	1001	13/13	0.87	0.20	121,121,121,121	0
4	AMP	M	2007	23/23	0.87	0.12	137,137,137,137	0
4	AMP	I	2005	23/23	0.87	0.10	162,162,162,162	0
3	FLC	E	1003	13/13	0.88	0.09	173,173,173,173	0
3	FLC	O	1008	13/13	0.88	0.16	148,148,148,148	0
3	FLC	K	1006	13/13	0.90	0.10	155,155,155,155	0

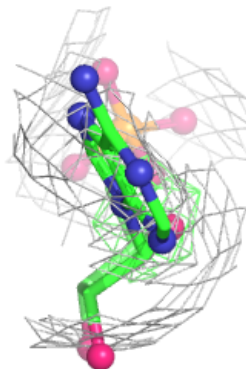
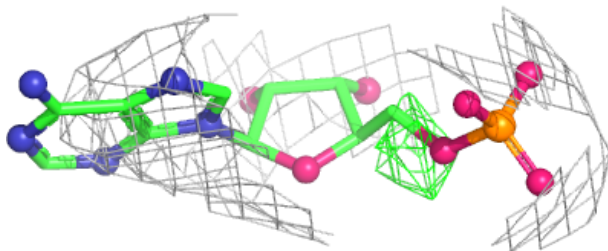
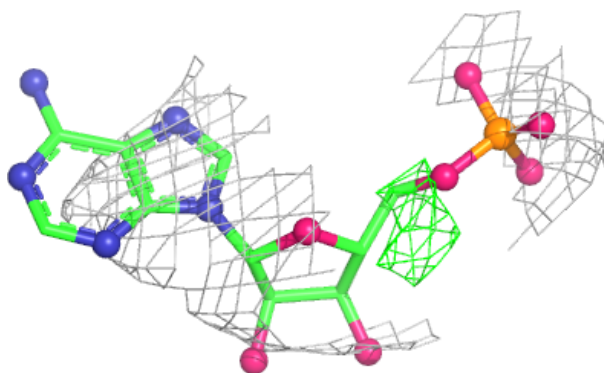
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around AMP G 2004:

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

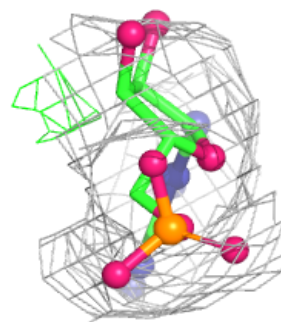
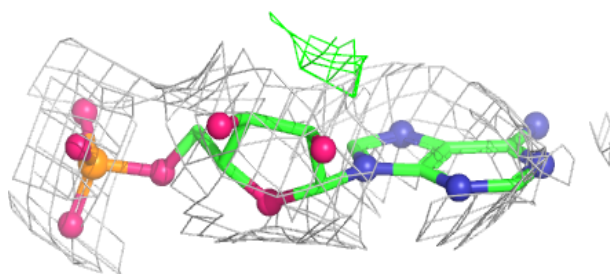
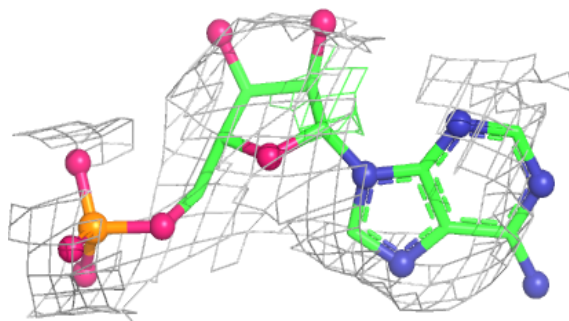
**Electron density around AMP K 2006:**

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

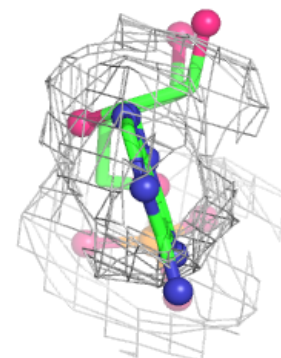
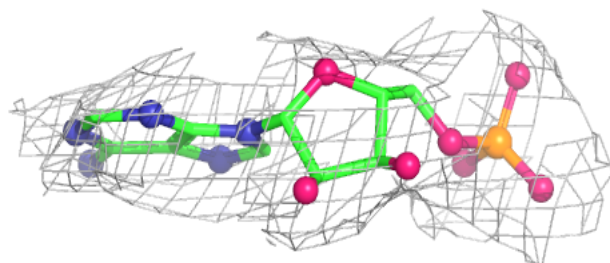
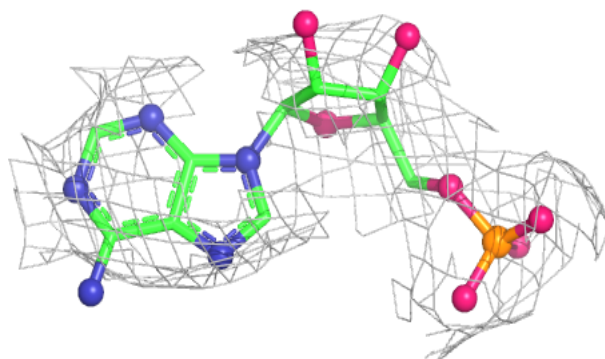


Electron density around AMP A 2001:

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

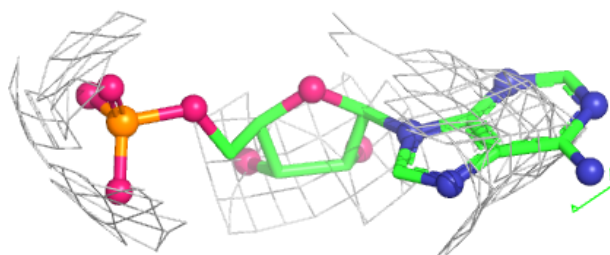
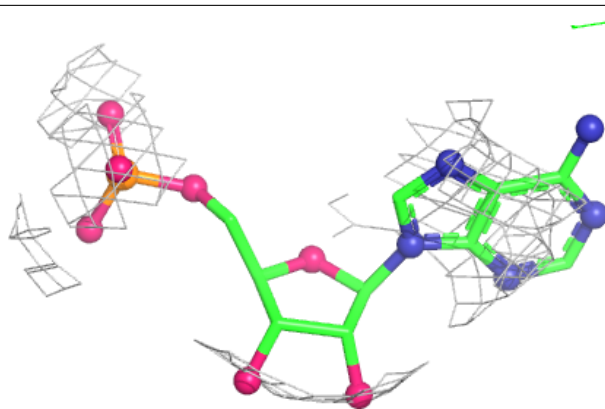
**Electron density around AMP O 2008:**

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

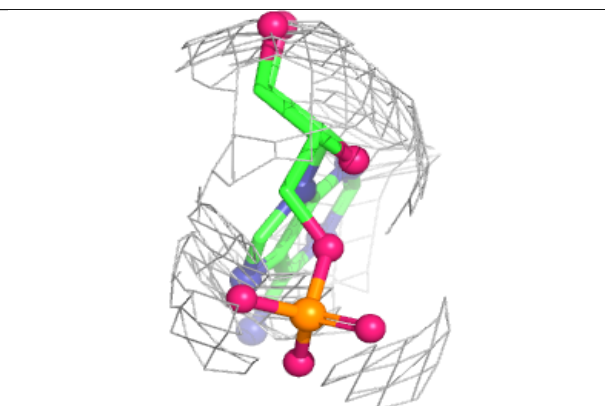
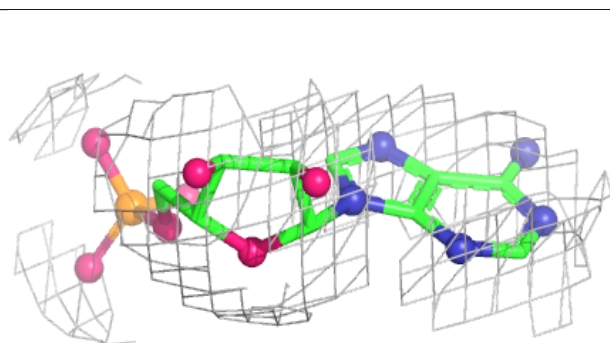
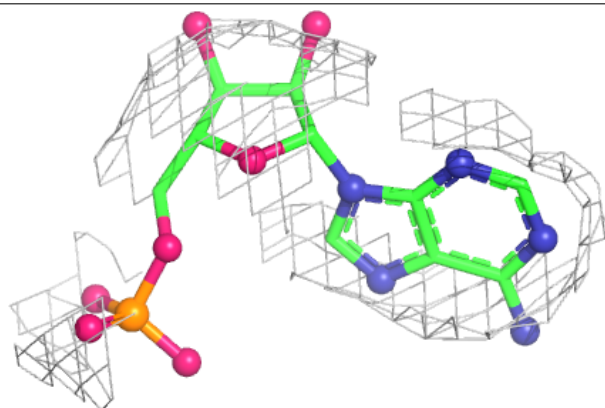


Electron density around AMP E 2003:

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

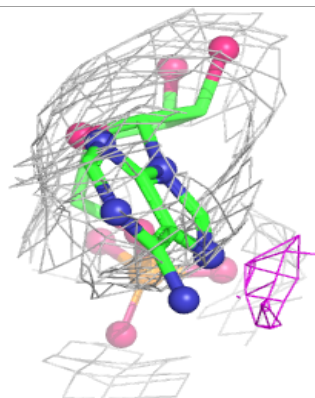
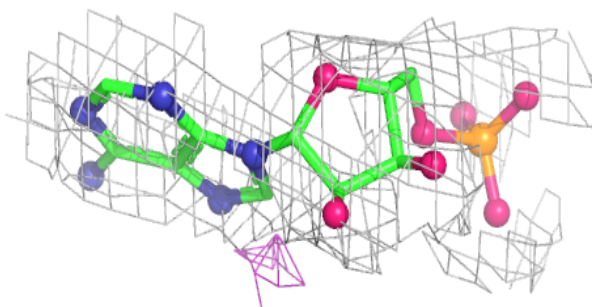
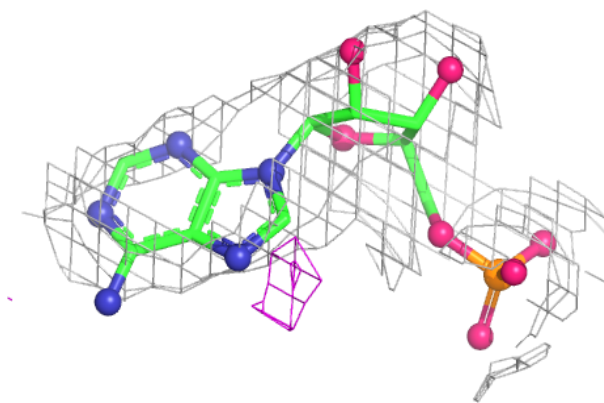
**Electron density around AMP C 2002:**

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

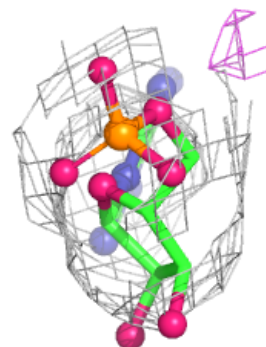
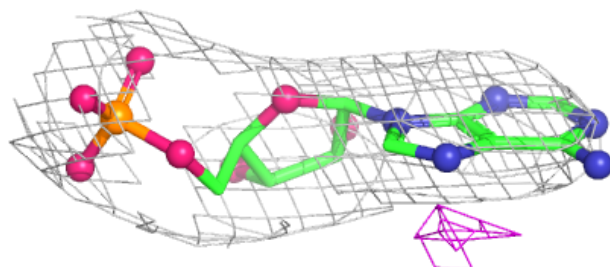
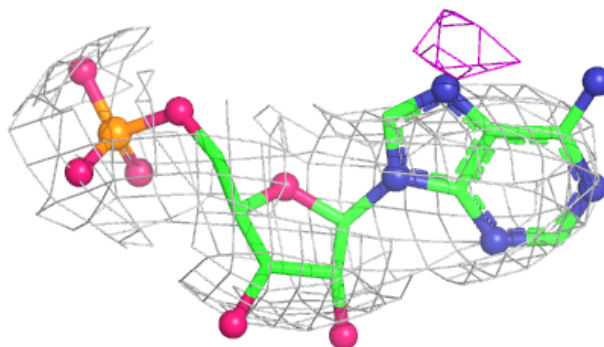


Electron density around AMP M 2007:

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

**Electron density around AMP I 2005:**

$2mF_o - DF_c$ (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.