



# Full wwPDB X-ray Structure Validation Report ⓘ

Aug 14, 2023 – 07:55 PM EDT

PDB ID : 1QZW  
Title : Crystal structure of the complete core of archaeal SRP and implications for inter-domain communication  
Authors : Rosendal, K.R.; Wild, K.; Montoya, G.; Sinning, I.  
Deposited on : 2003-09-18  
Resolution : 4.10 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35

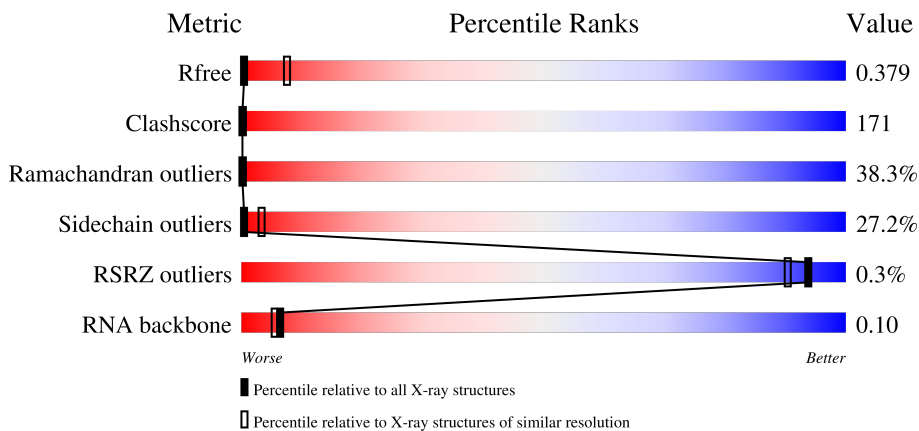
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 4.10 Å.

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







Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1193 (4.50-3.70)
Clashscore	141614	1003 (4.44-3.76)
Ramachandran outliers	138981	1005 (4.48-3.72)
Sidechain outliers	138945	1199 (4.50-3.70)
RSRZ outliers	127900	1034 (4.50-3.70)
RNA backbone	3102	1049 (5.04-3.00)

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  $\geq 3$ , 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	B	47	
1	D	47	
1	F	47	
1	H	47	

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Mol	Chain	Length	Quality of chain
2	A	440	 45% 41% 9%
2	C	440	 45% 41% 9%
2	E	440	 45% 41% 9%
2	G	440	 45% 40% 9%

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
1	GTP	B	179	X	-	-	-
1	GTP	D	179	X	-	-	-
1	GTP	F	179	X	-	-	-
1	GTP	H	179	X	-	-	-

## 2 Entry composition i

There are 2 unique types of molecules in this entry. The entry contains 17720 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 RNA chain called 7S RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	B	47	1031	452	197	332	50	0	0	0
1	D	47	1031	452	197	332	50	0	0	0
1	F	47	1031	452	197	332	50	0	0	0
1	H	47	1031	452	197	332	50	0	0	0

- Molecule 2 is a protein called Signal recognition 54 kDa protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	A	432	3399	2173	574	637	15	0	0	0
2	C	432	3399	2173	574	637	15	0	0	0
2	E	432	3399	2173	574	637	15	0	0	0
2	G	432	3399	2173	574	637	15	0	0	0

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	MET	-	expression tag	UNP Q97ZE7
A	-6	GLY	-	expression tag	UNP Q97ZE7
A	-5	HIS	-	expression tag	UNP Q97ZE7
A	-4	HIS	-	expression tag	UNP Q97ZE7
A	-3	HIS	-	expression tag	UNP Q97ZE7
A	-2	HIS	-	expression tag	UNP Q97ZE7
A	-1	HIS	-	expression tag	UNP Q97ZE7
A	0	HIS	-	expression tag	UNP Q97ZE7
C	-7	MET	-	expression tag	UNP Q97ZE7

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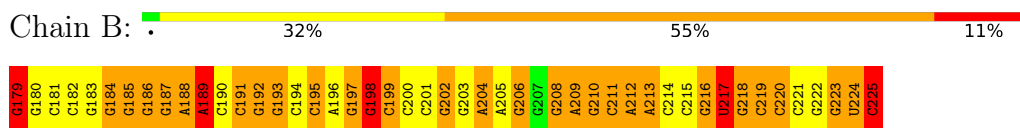
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Chain	Residue	Modelled	Actual	Comment	Reference
C	-6	GLY	-	expression tag	UNP Q97ZE7
C	-5	HIS	-	expression tag	UNP Q97ZE7
C	-4	HIS	-	expression tag	UNP Q97ZE7
C	-3	HIS	-	expression tag	UNP Q97ZE7
C	-2	HIS	-	expression tag	UNP Q97ZE7
C	-1	HIS	-	expression tag	UNP Q97ZE7
C	0	HIS	-	expression tag	UNP Q97ZE7
E	-7	MET	-	expression tag	UNP Q97ZE7
E	-6	GLY	-	expression tag	UNP Q97ZE7
E	-5	HIS	-	expression tag	UNP Q97ZE7
E	-4	HIS	-	expression tag	UNP Q97ZE7
E	-3	HIS	-	expression tag	UNP Q97ZE7
E	-2	HIS	-	expression tag	UNP Q97ZE7
E	-1	HIS	-	expression tag	UNP Q97ZE7
E	0	HIS	-	expression tag	UNP Q97ZE7
G	-7	MET	-	expression tag	UNP Q97ZE7
G	-6	GLY	-	expression tag	UNP Q97ZE7
G	-5	HIS	-	expression tag	UNP Q97ZE7
G	-4	HIS	-	expression tag	UNP Q97ZE7
G	-3	HIS	-	expression tag	UNP Q97ZE7
G	-2	HIS	-	expression tag	UNP Q97ZE7
G	-1	HIS	-	expression tag	UNP Q97ZE7
G	0	HIS	-	expression tag	UNP Q97ZE7

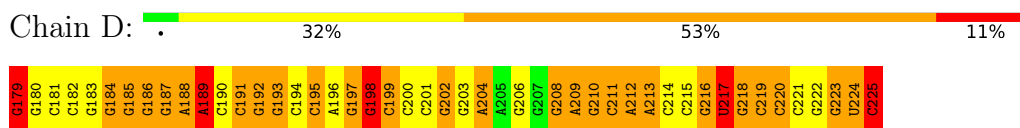
### 3 Residue-property plots [i](#)

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.

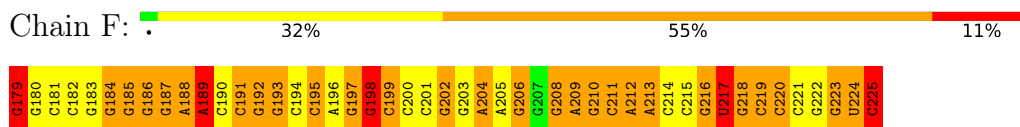
- Molecule 1: 7S RNA



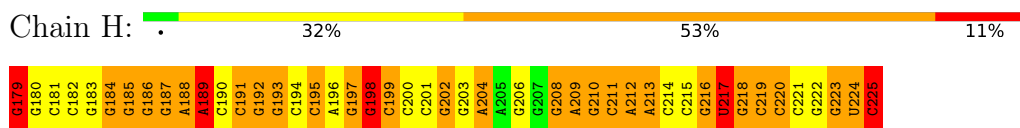
- Molecule 1: 7S RNA



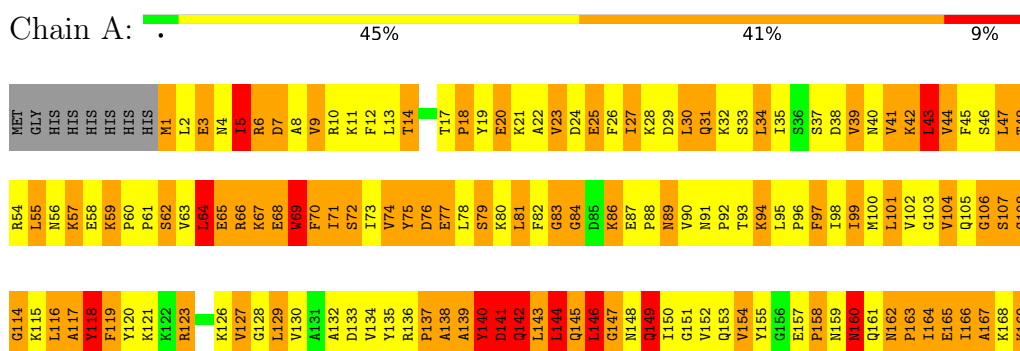
- Molecule 1: 7S RNA



- Molecule 1: 7S RNA



- Molecule 2: Signal recognition 54 kDa protein









## 4 Data and refinement statistics i

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	137.76Å 137.76Å 307.89Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	30.00 – 4.10 29.81 – 4.10	Depositor EDS
% Data completeness (in resolution range)	97.2 (30.00-4.10) 98.3 (29.81-4.10)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.09	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.90 (at 4.11Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.340 , 0.387 0.348 , 0.379	Depositor DCC
$R_{free}$ test set	4666 reflections (9.26%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	167.7	Xtrriage
Anisotropy	0.020	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.21 , 98.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	0.337 for -h,-k,l 0.339 for h,-h-k,-l 0.377 for -k,-h,-l	Xtrriage
$F_o, F_c$ correlation	0.89	EDS
Total number of atoms	17720	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	70.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.22% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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 i

### 5.1 Standard geometry i

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

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	B	0.88	0/1093	1.14	7/1706 (0.4%)
1	D	0.88	0/1093	1.14	7/1706 (0.4%)
1	F	0.88	0/1093	1.14	7/1706 (0.4%)
1	H	0.88	0/1093	1.14	7/1706 (0.4%)
2	A	0.63	0/3450	0.95	7/4636 (0.2%)
2	C	0.62	0/3450	0.96	7/4636 (0.2%)
2	E	0.62	0/3450	0.95	7/4636 (0.2%)
2	G	0.63	0/3450	0.95	7/4636 (0.2%)
All	All	0.69	0/18172	1.01	56/25368 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	1	0
1	D	1	0
1	F	1	0
1	H	1	0
All	All	4	0

There are no bond length outliers.

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	217	U	C5'-C4'-C3'	-14.93	92.11	116.00
1	F	217	U	C5'-C4'-C3'	-14.90	92.15	116.00
1	B	217	U	C5'-C4'-C3'	-14.90	92.16	116.00
1	D	217	U	C5'-C4'-C3'	-14.89	92.18	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	217	U	N1-C1'-C2'	13.30	131.29	114.00
1	H	217	U	N1-C1'-C2'	13.30	131.29	114.00
1	D	217	U	N1-C1'-C2'	13.28	131.26	114.00
1	F	217	U	N1-C1'-C2'	13.26	131.24	114.00
1	B	217	U	O3'-P-O5'	12.41	127.58	104.00
1	F	217	U	O3'-P-O5'	12.41	127.57	104.00
1	D	217	U	O3'-P-O5'	12.40	127.55	104.00
1	H	217	U	O3'-P-O5'	12.39	127.55	104.00
1	B	217	U	C5'-C4'-O4'	-10.04	97.05	109.10
1	D	217	U	C5'-C4'-O4'	-10.03	97.06	109.10
1	F	217	U	C5'-C4'-O4'	-10.03	97.06	109.10
1	H	217	U	C5'-C4'-O4'	-10.03	97.06	109.10
2	A	64	LEU	CA-CB-CG	-7.03	99.14	115.30
2	C	64	LEU	CA-CB-CG	-7.02	99.16	115.30
2	G	64	LEU	CA-CB-CG	-7.01	99.17	115.30
2	E	64	LEU	CA-CB-CG	-7.00	99.21	115.30
2	C	356	GLY	N-CA-C	-5.83	98.52	113.10
2	A	356	GLY	N-CA-C	-5.83	98.53	113.10
2	G	356	GLY	N-CA-C	-5.83	98.53	113.10
2	E	356	GLY	N-CA-C	-5.82	98.56	113.10
1	D	198	G	N9-C1'-C2'	-5.72	105.71	112.00
1	H	198	G	N9-C1'-C2'	-5.71	105.72	112.00
1	B	198	G	N9-C1'-C2'	-5.70	105.73	112.00
1	F	198	G	N9-C1'-C2'	-5.68	105.75	112.00
2	A	316	LYS	N-CA-C	-5.51	96.12	111.00
2	G	316	LYS	N-CA-C	-5.51	96.12	111.00
2	C	316	LYS	N-CA-C	-5.51	96.14	111.00
2	E	316	LYS	N-CA-C	-5.50	96.14	111.00
2	C	86	LYS	N-CA-C	-5.36	96.52	111.00
2	G	86	LYS	N-CA-C	-5.36	96.53	111.00
2	E	86	LYS	N-CA-C	-5.35	96.55	111.00
2	A	86	LYS	N-CA-C	-5.35	96.56	111.00
2	E	108	GLY	N-CA-C	-5.34	99.75	113.10
2	A	108	GLY	N-CA-C	-5.33	99.76	113.10
2	G	108	GLY	N-CA-C	-5.33	99.76	113.10
2	C	108	GLY	N-CA-C	-5.32	99.80	113.10
1	H	202	G	N9-C1'-C2'	-5.29	106.18	112.00
1	D	202	G	N9-C1'-C2'	-5.28	106.20	112.00
1	F	202	G	N9-C1'-C2'	-5.28	106.20	112.00
1	B	202	G	N9-C1'-C2'	-5.27	106.20	112.00
2	C	311	ASP	N-CA-C	-5.21	96.94	111.00
2	G	311	ASP	N-CA-C	-5.20	96.97	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	311	ASP	N-CA-C	-5.19	96.98	111.00
2	E	311	ASP	N-CA-C	-5.19	96.98	111.00
1	F	189	A	N9-C1'-C2'	-5.10	106.39	112.00
1	B	189	A	N9-C1'-C2'	-5.09	106.40	112.00
1	H	189	A	N9-C1'-C2'	-5.07	106.43	112.00
2	G	295	GLY	N-CA-C	-5.05	100.47	113.10
1	D	189	A	N9-C1'-C2'	-5.04	106.45	112.00
2	E	295	GLY	N-CA-C	-5.04	100.49	113.10
2	A	295	GLY	N-CA-C	-5.04	100.50	113.10
2	C	295	GLY	N-CA-C	-5.04	100.51	113.10

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	179	GTP	C3'
1	D	179	GTP	C3'
1	F	179	GTP	C3'
1	H	179	GTP	C3'

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	B	1031	0	514	96	1
1	D	1031	0	514	94	0
1	F	1031	0	514	93	1
1	H	1031	0	514	92	1
2	A	3399	0	3543	1366	5
2	C	3399	0	3543	1401	15
2	E	3399	0	3543	1413	17
2	G	3399	0	3543	1356	4
All	All	17720	0	16228	5797	22

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 171.

All (5797) 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)
2:A:59:LYS:O	2:A:59:LYS:HD3	1.18	1.34
2:A:151:GLY:HA2	2:G:151:GLY:CA	1.68	1.23
2:A:151:GLY:CA	2:G:151:GLY:HA2	1.73	1.18
2:E:48:THR:HA	2:E:51:ILE:HD12	1.29	1.15
2:C:153:GLN:HG3	2:E:153:GLN:CG	1.76	1.14
2:G:48:THR:HA	2:G:51:ILE:HD12	1.29	1.14
2:A:59:LYS:HZ1	2:A:61:PRO:HA	1.01	1.14
2:C:153:GLN:CG	2:E:153:GLN:HG3	1.76	1.14
2:E:243:ILE:HD12	2:E:269:PHE:H	1.10	1.14
2:C:48:THR:HA	2:C:51:ILE:HD12	1.29	1.13
2:A:48:THR:HA	2:A:51:ILE:HD12	1.29	1.11
2:C:177:ASN:CG	2:E:144:LEU:CD1	2.18	1.11
2:G:288:VAL:HA	2:G:291:ILE:HD11	1.33	1.10
2:C:288:VAL:HA	2:C:291:ILE:HD11	1.33	1.10
2:C:352:ILE:HG13	2:C:353:PRO:HD2	1.33	1.09
2:G:243:ILE:HD12	2:G:269:PHE:H	1.10	1.09
2:C:359:LEU:HB3	2:C:360:PRO:HD2	1.35	1.09
2:E:359:LEU:HB3	2:E:360:PRO:HD2	1.35	1.09
2:C:59:LYS:HZ1	2:C:61:PRO:HA	0.99	1.09
2:A:243:ILE:HD12	2:A:269:PHE:H	1.10	1.08
2:A:288:VAL:HA	2:A:291:ILE:HD11	1.33	1.08
2:C:177:ASN:CB	2:E:144:LEU:HD11	1.81	1.08
2:G:352:ILE:HG13	2:G:353:PRO:HD2	1.33	1.08
2:E:288:VAL:HA	2:E:291:ILE:HD11	1.33	1.08
2:E:352:ILE:HG13	2:E:353:PRO:HD2	1.33	1.08
2:C:145:GLN:HB2	2:C:146:LEU:HD23	1.35	1.08
2:C:243:ILE:HD12	2:C:269:PHE:H	1.09	1.08
2:A:30:LEU:HG	2:A:31:GLN:H	1.19	1.07
2:G:145:GLN:HB2	2:G:146:LEU:HD23	1.35	1.07
2:G:30:LEU:HG	2:G:31:GLN:H	1.19	1.07
2:A:159:ASN:ND2	2:E:162:ASN:HD22	1.52	1.06
2:C:59:LYS:NZ	2:C:61:PRO:HA	1.68	1.06
1:D:214:C:H2'	1:D:215:C:H5'	1.38	1.06
2:E:304:VAL:HG13	2:E:308:GLU:CD	1.74	1.06
2:A:352:ILE:HG13	2:A:353:PRO:HD2	1.33	1.06
2:E:399:ARG:HB3	2:E:399:ARG:HH11	1.18	1.06
2:E:59:LYS:HZ1	2:E:61:PRO:HA	1.19	1.05
1:B:214:C:H2'	1:B:215:C:H5'	1.38	1.05
1:H:214:C:H2'	1:H:215:C:H5'	1.38	1.05
2:A:329:LEU:HA	2:A:332:VAL:HG23	1.38	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:359:LEU:HB3	2:G:360:PRO:HD2	1.35	1.05
2:C:59:LYS:HZ1	2:C:61:PRO:CA	1.68	1.05
2:G:329:LEU:HA	2:G:332:VAL:HG23	1.38	1.05
2:A:59:LYS:HD3	2:A:59:LYS:C	1.77	1.04
2:E:145:GLN:HB2	2:E:146:LEU:HD23	1.35	1.04
2:C:243:ILE:HD12	2:C:269:PHE:N	1.72	1.04
2:A:43:LEU:HD23	2:A:43:LEU:H	1.22	1.04
2:E:30:LEU:HG	2:E:31:GLN:H	1.19	1.04
1:F:214:C:H2'	1:F:215:C:H5'	1.38	1.03
2:A:145:GLN:HB2	2:A:146:LEU:HD23	1.35	1.03
2:A:359:LEU:HB3	2:A:360:PRO:HD2	1.35	1.03
2:A:399:ARG:HB3	2:A:399:ARG:HH11	1.18	1.03
2:C:162:ASN:HD22	2:G:159:ASN:CG	1.60	1.03
2:G:399:ARG:HB3	2:G:399:ARG:HH11	1.18	1.03
2:C:30:LEU:HG	2:C:31:GLN:H	1.19	1.02
2:C:399:ARG:HB3	2:C:399:ARG:HH11	1.18	1.02
2:G:243:ILE:HD12	2:G:269:PHE:N	1.72	1.02
2:A:101:LEU:HB3	2:A:185:ASP:HA	1.40	1.02
2:A:243:ILE:HD12	2:A:269:PHE:N	1.72	1.02
2:C:59:LYS:NZ	2:C:61:PRO:CA	2.21	1.02
2:E:243:ILE:HD12	2:E:269:PHE:N	1.72	1.02
2:G:59:LYS:HZ1	2:G:61:PRO:HA	1.20	1.02
2:E:43:LEU:HD23	2:E:43:LEU:H	1.22	1.01
2:C:329:LEU:HA	2:C:332:VAL:HG23	1.38	1.01
2:E:101:LEU:HB3	2:E:185:ASP:HA	1.40	1.01
2:G:414:VAL:O	2:G:417:LEU:HG	1.61	1.01
1:F:197:G:H22	2:E:407:SER:HA	1.26	1.01
2:E:174:PHE:HA	2:E:177:ASN:HD22	1.26	1.01
2:E:304:VAL:HG13	2:E:308:GLU:OE1	1.61	1.01
1:H:197:G:H22	2:G:407:SER:HA	1.26	1.00
2:A:414:VAL:O	2:A:417:LEU:HG	1.61	1.00
2:C:174:PHE:HA	2:C:177:ASN:HD22	1.26	1.00
1:B:197:G:H22	2:A:407:SER:HA	1.26	1.00
2:C:43:LEU:H	2:C:43:LEU:HD23	1.22	1.00
2:G:43:LEU:HD23	2:G:43:LEU:H	1.22	1.00
2:A:174:PHE:HA	2:A:177:ASN:HD22	1.26	1.00
2:C:414:VAL:O	2:C:417:LEU:HG	1.61	1.00
2:E:414:VAL:O	2:E:417:LEU:HG	1.61	0.99
2:E:417:LEU:HB2	2:E:421:TYR:OH	1.62	0.99
2:G:269:PHE:HB3	2:G:279:LEU:HD11	1.44	0.99
2:C:417:LEU:HB2	2:C:421:TYR:OH	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:329:LEU:HA	2:E:332:VAL:HG23	1.38	0.99
2:G:101:LEU:HB3	2:G:185:ASP:HA	1.40	0.99
2:G:174:PHE:HA	2:G:177:ASN:HD22	1.26	0.99
2:A:417:LEU:HB2	2:A:421:TYR:OH	1.62	0.99
2:G:115:LYS:HZ3	2:G:278:GLU:HB2	1.21	0.99
2:A:30:LEU:HG	2:A:31:GLN:N	1.74	0.99
2:A:59:LYS:HZ1	2:A:61:PRO:CA	1.76	0.99
2:A:269:PHE:HB3	2:A:279:LEU:HD11	1.44	0.99
2:E:394:ILE:H	2:E:395:ILE:HD12	1.27	0.98
2:C:177:ASN:CG	2:E:144:LEU:HD11	1.80	0.98
2:C:144:LEU:HD11	2:E:177:ASN:CB	1.94	0.97
2:E:422:ASN:C	2:E:425:ASN:HD21	1.67	0.97
1:D:201:C:H2'	1:D:202:G:H8	1.30	0.97
2:C:101:LEU:HB3	2:C:185:ASP:HA	1.40	0.97
2:C:425:ASN:HD22	2:C:425:ASN:N	1.58	0.97
1:D:197:G:H22	2:C:407:SER:HA	1.26	0.97
2:E:38:ASP:HB2	2:E:252:LYS:HB3	1.45	0.97
2:G:417:LEU:HB2	2:G:421:TYR:OH	1.62	0.97
2:C:162:ASN:HD22	2:G:159:ASN:ND2	1.61	0.97
2:C:422:ASN:C	2:C:425:ASN:HD21	1.67	0.97
2:C:269:PHE:HB3	2:C:279:LEU:HD11	1.44	0.97
2:A:394:ILE:H	2:A:395:ILE:HD12	1.27	0.97
2:E:31:GLN:HA	2:E:34:LEU:HD11	1.46	0.97
2:E:115:LYS:HZ3	2:E:278:GLU:HB2	1.30	0.97
2:A:422:ASN:C	2:A:425:ASN:HD21	1.67	0.96
2:G:422:ASN:C	2:G:425:ASN:HD21	1.67	0.96
1:F:201:C:H2'	1:F:202:G:H8	1.29	0.96
2:C:115:LYS:HZ3	2:C:278:GLU:HB2	1.29	0.96
2:G:31:GLN:HA	2:G:34:LEU:HD11	1.46	0.96
1:H:201:C:H2'	1:H:202:G:H8	1.29	0.96
2:G:30:LEU:HG	2:G:31:GLN:N	1.74	0.96
2:G:146:LEU:HD23	2:G:146:LEU:H	1.29	0.96
2:A:31:GLN:HA	2:A:34:LEU:HD11	1.46	0.96
2:E:269:PHE:HB3	2:E:279:LEU:HD11	1.44	0.96
2:A:59:LYS:NZ	2:A:61:PRO:HA	1.78	0.95
2:E:425:ASN:HD22	2:E:425:ASN:N	1.58	0.95
2:C:38:ASP:HB2	2:C:252:LYS:HB3	1.45	0.95
2:C:394:ILE:H	2:C:395:ILE:HD12	1.27	0.95
2:G:394:ILE:H	2:G:395:ILE:HD12	1.26	0.95
2:E:30:LEU:HG	2:E:31:GLN:N	1.74	0.95
2:E:154:VAL:HG12	2:E:155:TYR:H	1.30	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:38:ASP:HB2	2:A:252:LYS:HB3	1.45	0.95
2:C:31:GLN:HA	2:C:34:LEU:HD11	1.46	0.94
2:C:177:ASN:CG	2:E:144:LEU:HD13	1.88	0.94
2:E:146:LEU:HD23	2:E:146:LEU:H	1.29	0.94
2:E:59:LYS:NZ	2:E:61:PRO:HA	1.83	0.94
2:E:267:ILE:HG22	2:E:268:LYS:H	1.33	0.94
2:A:59:LYS:O	2:A:59:LYS:CD	2.14	0.94
2:G:38:ASP:HB2	2:G:252:LYS:HB3	1.45	0.94
2:G:59:LYS:NZ	2:G:61:PRO:HA	1.83	0.94
2:A:146:LEU:HD23	2:A:146:LEU:H	1.29	0.94
2:G:154:VAL:HG12	2:G:155:TYR:H	1.30	0.94
2:A:174:PHE:HA	2:A:177:ASN:ND2	1.83	0.94
2:G:425:ASN:HD22	2:G:425:ASN:N	1.57	0.94
2:C:154:VAL:HG12	2:C:155:TYR:H	1.30	0.93
2:G:174:PHE:HA	2:G:177:ASN:ND2	1.83	0.93
2:G:55:LEU:HD22	2:G:55:LEU:H	1.34	0.93
2:G:132:ALA:HB3	2:G:185:ASP:O	1.68	0.93
2:A:55:LEU:HD22	2:A:55:LEU:H	1.34	0.93
2:C:30:LEU:HG	2:C:31:GLN:N	1.74	0.93
2:A:41:VAL:HA	2:A:44:VAL:HG23	1.51	0.93
2:A:132:ALA:HB3	2:A:185:ASP:O	1.68	0.93
2:C:132:ALA:HB3	2:C:185:ASP:O	1.68	0.93
2:C:174:PHE:HA	2:C:177:ASN:ND2	1.83	0.93
1:B:201:C:H2'	1:B:202:G:H8	1.29	0.93
2:C:357:ILE:HB	2:C:358:MET:SD	2.09	0.93
2:E:357:ILE:HB	2:E:358:MET:SD	2.09	0.93
2:A:357:ILE:HB	2:A:358:MET:SD	2.09	0.93
2:G:41:VAL:HA	2:G:44:VAL:HG23	1.51	0.93
2:C:146:LEU:HD23	2:C:146:LEU:H	1.29	0.92
2:E:304:VAL:CG1	2:E:308:GLU:OE1	2.16	0.92
2:A:257:LEU:HD12	2:A:258:SER:N	1.85	0.92
2:A:267:ILE:HG22	2:A:268:LYS:H	1.32	0.92
2:C:55:LEU:H	2:C:55:LEU:HD22	1.34	0.92
2:C:146:LEU:O	2:C:150:ILE:HG23	1.70	0.92
2:C:267:ILE:HG22	2:C:268:LYS:H	1.33	0.92
2:E:55:LEU:H	2:E:55:LEU:HD22	1.34	0.92
2:E:132:ALA:HB3	2:E:185:ASP:O	1.68	0.92
2:G:337:ILE:H	2:G:337:ILE:HD12	1.32	0.92
2:E:337:ILE:H	2:E:337:ILE:HD12	1.32	0.92
2:A:154:VAL:HG12	2:A:155:TYR:H	1.30	0.92
2:A:425:ASN:HD22	2:A:425:ASN:N	1.57	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:257:LEU:HD12	2:C:258:SER:N	1.85	0.92
2:C:337:ILE:HD12	2:C:337:ILE:H	1.32	0.92
2:E:174:PHE:HA	2:E:177:ASN:ND2	1.83	0.92
2:G:257:LEU:HD12	2:G:258:SER:N	1.85	0.92
2:G:10:ARG:HA	2:G:13:LEU:HG	1.52	0.92
2:C:10:ARG:HA	2:C:13:LEU:HG	1.52	0.92
2:E:10:ARG:HA	2:E:13:LEU:HG	1.52	0.91
2:E:257:LEU:HD12	2:E:258:SER:N	1.85	0.91
2:E:41:VAL:HA	2:E:44:VAL:HG23	1.51	0.91
2:A:146:LEU:O	2:A:150:ILE:HG23	1.70	0.91
2:E:66:ARG:HB2	2:E:66:ARG:HH11	1.34	0.91
2:A:143:LEU:HG	2:A:144:LEU:H	1.36	0.91
2:A:115:LYS:HZ3	2:A:278:GLU:HB2	1.35	0.91
2:A:303:LYS:HB2	2:A:342:MET:SD	2.11	0.91
2:G:357:ILE:HB	2:G:358:MET:SD	2.09	0.91
2:G:303:LYS:HB2	2:G:342:MET:SD	2.11	0.91
2:A:66:ARG:HH11	2:A:66:ARG:HB2	1.34	0.91
2:C:153:GLN:HG3	2:E:153:GLN:HG3	0.95	0.91
2:E:102:VAL:HG11	2:E:202:MET:HG3	1.53	0.91
2:G:267:ILE:HG22	2:G:268:LYS:H	1.33	0.91
2:G:287:PHE:O	2:G:291:ILE:HD13	1.71	0.91
2:A:337:ILE:H	2:A:337:ILE:HD12	1.32	0.91
2:C:91:ASN:HB3	2:C:92:PRO:HD2	1.53	0.91
2:A:102:VAL:HG11	2:A:202:MET:HG3	1.53	0.91
2:A:132:ALA:HB2	2:A:184:VAL:HG12	1.53	0.91
2:A:287:PHE:O	2:A:291:ILE:HD13	1.71	0.91
2:E:132:ALA:HB2	2:E:184:VAL:HG12	1.53	0.91
2:G:132:ALA:HB2	2:G:184:VAL:HG12	1.53	0.91
2:C:41:VAL:HA	2:C:44:VAL:HG23	1.51	0.90
2:C:66:ARG:HB2	2:C:66:ARG:HH11	1.34	0.90
2:C:369:ILE:HG22	2:C:373:LYS:NZ	1.87	0.90
2:G:146:LEU:O	2:G:150:ILE:HG23	1.70	0.90
2:G:369:ILE:HG22	2:G:373:LYS:NZ	1.87	0.90
2:A:91:ASN:HB3	2:A:92:PRO:HD2	1.53	0.90
2:E:146:LEU:O	2:E:150:ILE:HG23	1.70	0.90
2:E:369:ILE:HG22	2:E:373:LYS:NZ	1.87	0.90
2:G:143:LEU:HG	2:G:144:LEU:H	1.36	0.90
2:A:59:LYS:HZ2	2:A:60:PRO:C	1.73	0.90
2:A:10:ARG:HA	2:A:13:LEU:HG	1.52	0.90
2:A:57:LYS:O	2:A:58:GLU:HG3	1.72	0.90
2:C:287:PHE:O	2:C:291:ILE:HD13	1.71	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:57:LYS:O	2:E:58:GLU:HG3	1.72	0.90
2:G:57:LYS:O	2:G:58:GLU:HG3	1.72	0.90
2:G:66:ARG:HH11	2:G:66:ARG:HB2	1.34	0.90
2:G:144:LEU:HD23	2:G:145:GLN:H	1.37	0.90
2:C:303:LYS:HB2	2:C:342:MET:SD	2.11	0.90
2:C:132:ALA:HB2	2:C:184:VAL:HG12	1.53	0.90
2:E:91:ASN:HB3	2:E:92:PRO:HD2	1.53	0.90
2:E:303:LYS:HB2	2:E:342:MET:SD	2.11	0.90
2:A:144:LEU:HD23	2:A:145:GLN:H	1.37	0.89
2:C:215:ILE:HG23	2:C:242:VAL:HA	1.54	0.89
2:C:243:ILE:CD1	2:C:269:PHE:H	1.85	0.89
2:E:143:LEU:HG	2:E:144:LEU:H	1.36	0.89
2:E:287:PHE:O	2:E:291:ILE:HD13	1.71	0.89
2:A:215:ILE:HG23	2:A:242:VAL:HA	1.54	0.89
2:A:279:LEU:HD12	2:A:280:GLU:H	1.37	0.89
2:C:144:LEU:HD23	2:C:145:GLN:H	1.37	0.89
2:C:340:ARG:HD3	2:C:375:ARG:HH21	1.37	0.89
2:G:279:LEU:HD12	2:G:280:GLU:H	1.37	0.89
2:A:115:LYS:NZ	2:A:278:GLU:HB2	1.88	0.89
2:C:102:VAL:HG11	2:C:202:MET:HG3	1.53	0.89
2:A:384:MET:HG2	2:A:403:ILE:HD13	1.54	0.89
2:C:312:LYS:O	2:C:315:LYS:HD2	1.73	0.89
2:G:243:ILE:CD1	2:G:269:PHE:H	1.85	0.89
2:A:296:ASP:CG	2:A:297:ILE:H	1.76	0.89
2:C:57:LYS:O	2:C:58:GLU:HG3	1.72	0.89
2:C:115:LYS:NZ	2:C:278:GLU:HB2	1.88	0.89
2:C:162:ASN:ND2	2:G:159:ASN:ND2	2.20	0.89
2:G:340:ARG:HD3	2:G:375:ARG:HH21	1.37	0.89
2:G:102:VAL:HG11	2:G:202:MET:HG3	1.53	0.89
2:C:384:MET:HG2	2:C:403:ILE:HD13	1.54	0.89
2:E:150:ILE:HD11	2:E:152:VAL:HB	1.55	0.89
2:E:243:ILE:CD1	2:E:269:PHE:H	1.85	0.89
2:A:243:ILE:CD1	2:A:269:PHE:H	1.85	0.89
2:C:143:LEU:HG	2:C:144:LEU:H	1.36	0.89
2:G:91:ASN:HB3	2:G:92:PRO:HD2	1.53	0.89
2:G:115:LYS:NZ	2:G:278:GLU:HB2	1.88	0.89
2:A:74:VAL:CG2	2:A:75:TYR:H	1.87	0.88
2:E:144:LEU:HD23	2:E:145:GLN:H	1.37	0.88
2:G:74:VAL:CG2	2:G:75:TYR:H	1.87	0.88
2:G:296:ASP:CG	2:G:297:ILE:H	1.76	0.88
2:E:115:LYS:NZ	2:E:278:GLU:HB2	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:340:ARG:HD3	2:E:375:ARG:HH21	1.37	0.88
2:A:369:ILE:HG22	2:A:373:LYS:NZ	1.87	0.88
2:A:312:LYS:O	2:A:315:LYS:HD2	1.73	0.88
2:C:279:LEU:HD12	2:C:280:GLU:H	1.38	0.88
2:E:296:ASP:CG	2:E:297:ILE:H	1.76	0.88
2:E:419:GLU:C	2:E:421:TYR:H	1.77	0.88
2:C:74:VAL:CG2	2:C:75:TYR:H	1.87	0.88
2:E:74:VAL:CG2	2:E:75:TYR:H	1.86	0.88
2:G:384:MET:HG2	2:G:403:ILE:HD13	1.54	0.88
2:E:384:MET:HG2	2:E:403:ILE:HD13	1.54	0.88
2:G:2:LEU:HG	2:G:3:GLU:N	1.89	0.88
1:F:201:C:H2'	1:F:202:G:C8	2.09	0.87
2:E:389:LEU:HD23	2:E:389:LEU:H	1.38	0.87
2:G:215:ILE:HG23	2:G:242:VAL:HA	1.54	0.87
2:G:312:LYS:O	2:G:315:LYS:HD2	1.73	0.87
2:A:389:LEU:HD23	2:A:389:LEU:H	1.38	0.87
2:E:104:VAL:HG23	2:E:105:GLN:N	1.90	0.87
2:A:104:VAL:HG23	2:A:105:GLN:N	1.90	0.87
2:C:2:LEU:HG	2:C:3:GLU:N	1.89	0.87
1:D:201:C:H2'	1:D:202:G:C8	2.09	0.87
1:H:201:C:H2'	1:H:202:G:C8	2.09	0.87
2:C:123:ARG:HB3	2:C:123:ARG:HH11	1.40	0.87
2:C:296:ASP:CG	2:C:297:ILE:H	1.76	0.87
2:C:151:GLY:HA2	2:E:151:GLY:HA2	1.54	0.87
2:E:312:LYS:O	2:E:315:LYS:HD2	1.73	0.87
2:A:2:LEU:HG	2:A:3:GLU:N	1.89	0.87
2:G:335:GLN:HE22	2:G:355:LEU:HA	1.40	0.86
2:A:369:ILE:HG22	2:A:373:LYS:HZ2	1.36	0.86
2:E:279:LEU:HD12	2:E:280:GLU:H	1.37	0.86
2:G:150:ILE:HD11	2:G:152:VAL:HB	1.55	0.86
2:A:419:GLU:C	2:A:421:TYR:H	1.77	0.86
2:E:335:GLN:HE22	2:E:355:LEU:HA	1.40	0.86
2:G:378:LEU:HA	2:G:381:LEU:CD1	2.06	0.86
2:A:335:GLN:HE22	2:A:355:LEU:HA	1.41	0.86
2:E:2:LEU:HG	2:E:3:GLU:N	1.89	0.86
2:G:247:MET:HB2	2:G:272:THR:HA	1.56	0.86
1:B:201:C:H2'	1:B:202:G:C8	2.09	0.86
2:A:120:TYR:O	2:A:123:ARG:HB2	1.75	0.86
2:E:247:MET:HB2	2:E:272:THR:HA	1.56	0.86
2:A:123:ARG:HB3	2:A:123:ARG:HH11	1.40	0.86
2:C:177:ASN:ND2	2:E:144:LEU:CD1	2.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:304:VAL:CA	2:E:308:GLU:OE1	2.22	0.86
2:G:384:MET:HB3	2:G:388:GLU:CD	1.96	0.86
2:C:150:ILE:HD11	2:C:152:VAL:HB	1.55	0.86
2:G:120:TYR:O	2:G:123:ARG:HB2	1.75	0.86
2:A:59:LYS:NZ	2:A:61:PRO:CA	2.37	0.86
2:A:150:ILE:HD11	2:A:152:VAL:HB	1.55	0.86
2:C:247:MET:HB2	2:C:272:THR:HA	1.56	0.86
2:C:378:LEU:HA	2:C:381:LEU:CD1	2.05	0.86
2:E:123:ARG:HB3	2:E:123:ARG:HH11	1.40	0.86
2:G:389:LEU:HD23	2:G:389:LEU:H	1.38	0.86
2:A:340:ARG:HD3	2:A:375:ARG:HH21	1.37	0.85
2:E:120:TYR:O	2:E:123:ARG:HB2	1.75	0.85
2:E:333:TYR:HB2	2:E:381:LEU:HD13	1.58	0.85
2:G:104:VAL:HG23	2:G:105:GLN:N	1.90	0.85
2:G:419:GLU:C	2:G:421:TYR:H	1.77	0.85
2:E:215:ILE:HG23	2:E:242:VAL:HA	1.54	0.85
2:E:390:GLU:C	2:E:392:PRO:HD3	1.96	0.85
2:A:242:VAL:O	2:A:243:ILE:HD13	1.76	0.85
2:A:333:TYR:HB2	2:A:381:LEU:HD13	1.58	0.85
2:A:378:LEU:HA	2:A:381:LEU:CD1	2.05	0.85
2:A:390:GLU:C	2:A:392:PRO:HD3	1.96	0.85
2:G:123:ARG:HB3	2:G:123:ARG:HH11	1.40	0.85
2:C:104:VAL:HG23	2:C:105:GLN:N	1.90	0.85
2:C:389:LEU:HD23	2:C:389:LEU:H	1.38	0.85
1:B:191:C:H5'	1:B:192:G:OP2	1.77	0.85
2:A:106:GLY:HA2	2:A:109:LYS:HB2	1.59	0.85
2:A:250:THR:HG22	2:A:252:LYS:HD3	1.57	0.85
2:C:242:VAL:O	2:C:243:ILE:HD13	1.76	0.85
2:C:335:GLN:HE22	2:C:355:LEU:HA	1.41	0.85
2:C:74:VAL:HG23	2:C:75:TYR:N	1.92	0.85
2:C:144:LEU:HD11	2:E:177:ASN:HB3	1.57	0.85
2:G:250:THR:HG22	2:G:252:LYS:HD3	1.57	0.85
2:G:374:ILE:HD13	2:G:375:ARG:N	1.92	0.85
2:A:247:MET:HB2	2:A:272:THR:HA	1.56	0.85
2:A:374:ILE:HD13	2:A:375:ARG:N	1.92	0.85
2:A:384:MET:HB3	2:A:388:GLU:CD	1.96	0.85
2:E:378:LEU:HA	2:E:381:LEU:CD1	2.05	0.85
2:C:43:LEU:H	2:C:43:LEU:CD2	1.84	0.85
2:C:87:GLU:HA	2:C:87:GLU:OE2	1.77	0.85
2:E:74:VAL:CG2	2:E:75:TYR:N	2.40	0.85
2:G:242:VAL:O	2:G:243:ILE:HD13	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:390:GLU:C	2:G:392:PRO:HD3	1.96	0.85
2:C:120:TYR:O	2:C:123:ARG:HB2	1.75	0.84
2:G:333:TYR:HB2	2:G:381:LEU:HD13	1.58	0.84
1:H:191:C:H5'	1:H:192:G:OP2	1.77	0.84
2:G:204:GLU:O	2:G:208:VAL:HG22	1.78	0.84
1:D:191:C:H5'	1:D:192:G:OP2	1.77	0.84
2:A:425:ASN:HA	2:A:428:LEU:HB3	1.59	0.84
2:A:74:VAL:HG23	2:A:75:TYR:N	1.92	0.84
2:C:106:GLY:HA2	2:C:109:LYS:HB2	1.59	0.84
2:C:390:GLU:C	2:C:392:PRO:HD3	1.96	0.84
2:A:204:GLU:O	2:A:208:VAL:HG22	1.78	0.84
2:C:425:ASN:N	2:C:425:ASN:ND2	2.24	0.84
2:E:250:THR:HG22	2:E:252:LYS:HD3	1.57	0.84
2:E:384:MET:HB3	2:E:388:GLU:CD	1.97	0.84
2:G:60:PRO:HA	2:G:69:TRP:CE3	2.13	0.84
2:G:425:ASN:N	2:G:425:ASN:ND2	2.24	0.84
2:A:144:LEU:HD23	2:A:145:GLN:N	1.92	0.84
2:A:288:VAL:CA	2:A:291:ILE:HD11	2.08	0.84
2:C:250:THR:HG22	2:C:252:LYS:HD3	1.57	0.84
2:C:333:TYR:HB2	2:C:381:LEU:HD13	1.58	0.84
2:E:87:GLU:HA	2:E:87:GLU:OE2	1.77	0.84
2:G:9:VAL:O	2:G:12:PHE:HB3	1.78	0.84
2:A:243:ILE:HD11	2:A:268:LYS:HB2	1.60	0.84
2:C:144:LEU:HD23	2:C:145:GLN:N	1.92	0.84
2:C:419:GLU:C	2:C:421:TYR:H	1.77	0.84
2:E:242:VAL:O	2:E:243:ILE:HD13	1.76	0.84
2:E:395:ILE:HD12	2:E:395:ILE:H	1.43	0.84
2:G:425:ASN:HA	2:G:428:LEU:HB3	1.60	0.84
2:A:328:THR:HG22	2:A:329:LEU:HD12	1.60	0.84
2:C:374:ILE:HD13	2:C:375:ARG:N	1.92	0.84
2:E:74:VAL:HG23	2:E:75:TYR:N	1.92	0.84
2:G:328:THR:HG22	2:G:329:LEU:HD12	1.59	0.84
2:G:395:ILE:HD12	2:G:395:ILE:H	1.43	0.84
2:A:60:PRO:HA	2:A:69:TRP:CE3	2.13	0.84
2:A:180:ASP:C	2:A:181:ILE:HD12	1.98	0.84
2:C:177:ASN:CB	2:E:144:LEU:CD1	2.55	0.84
2:C:74:VAL:CG2	2:C:75:TYR:N	2.40	0.83
2:E:180:ASP:C	2:E:181:ILE:HD12	1.98	0.83
2:G:106:GLY:HA2	2:G:109:LYS:HB2	1.59	0.83
2:G:144:LEU:HD23	2:G:145:GLN:N	1.92	0.83
2:G:180:ASP:C	2:G:181:ILE:HD12	1.98	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:9:VAL:O	2:A:12:PHE:HB3	1.78	0.83
2:C:9:VAL:O	2:C:12:PHE:HB3	1.78	0.83
2:C:384:MET:HB3	2:C:388:GLU:CD	1.96	0.83
2:E:300:ILE:O	2:E:303:LYS:HG2	1.79	0.83
2:E:304:VAL:HA	2:E:308:GLU:OE1	1.78	0.83
2:A:87:GLU:HA	2:A:87:GLU:OE2	1.77	0.83
2:A:216:LEU:H	2:A:242:VAL:HG12	1.44	0.83
2:E:374:ILE:HD13	2:E:375:ARG:N	1.92	0.83
1:F:191:C:H5'	1:F:192:G:OP2	1.77	0.83
2:A:159:ASN:ND2	2:E:162:ASN:ND2	2.25	0.83
2:A:298:GLU:HA	2:A:301:LEU:HD13	1.60	0.83
2:E:60:PRO:HA	2:E:69:TRP:CE3	2.13	0.83
2:E:216:LEU:H	2:E:242:VAL:HG12	1.44	0.83
2:E:218:ILE:HD13	2:E:218:ILE:N	1.93	0.83
2:E:287:PHE:CE1	2:E:291:ILE:HD12	2.13	0.83
2:C:300:ILE:O	2:C:303:LYS:HG2	1.79	0.83
2:C:395:ILE:HD12	2:C:395:ILE:H	1.43	0.83
2:G:72:SER:O	2:G:76:ASP:HB2	1.79	0.83
2:C:216:LEU:H	2:C:242:VAL:HG12	1.44	0.83
2:G:74:VAL:HG23	2:G:75:TYR:N	1.92	0.83
2:C:352:ILE:CG1	2:C:353:PRO:HD2	2.08	0.83
2:E:267:ILE:HG22	2:E:268:LYS:N	1.93	0.83
2:G:216:LEU:H	2:G:242:VAL:HG12	1.44	0.83
2:G:298:GLU:HA	2:G:301:LEU:HD13	1.60	0.83
2:C:204:GLU:O	2:C:208:VAL:HG22	1.78	0.83
2:E:9:VAL:O	2:E:12:PHE:HB3	1.78	0.83
2:E:72:SER:O	2:E:76:ASP:HB2	1.79	0.83
2:E:144:LEU:HD23	2:E:145:GLN:N	1.92	0.83
2:E:328:THR:HG22	2:E:329:LEU:HD12	1.60	0.83
2:G:243:ILE:HD11	2:G:268:LYS:HB2	1.60	0.83
2:E:352:ILE:CG1	2:E:353:PRO:HD2	2.08	0.83
2:E:402:ARG:O	2:E:406:GLY:N	2.12	0.83
2:A:287:PHE:CE1	2:A:291:ILE:HD12	2.13	0.83
2:G:218:ILE:HD13	2:G:218:ILE:N	1.93	0.83
2:G:287:PHE:CE1	2:G:291:ILE:HD12	2.13	0.83
2:G:399:ARG:HH11	2:G:399:ARG:CB	1.92	0.83
2:A:218:ILE:HD13	2:A:218:ILE:N	1.93	0.82
2:C:60:PRO:HA	2:C:69:TRP:CE3	2.13	0.82
2:E:106:GLY:HA2	2:E:109:LYS:HB2	1.59	0.82
2:E:425:ASN:HA	2:E:428:LEU:HB3	1.59	0.82
2:A:74:VAL:CG2	2:A:75:TYR:N	2.40	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:167:ALA:O	2:A:171:VAL:HG23	1.79	0.82
2:A:267:ILE:HG22	2:A:268:LYS:N	1.93	0.82
2:C:180:ASP:C	2:C:181:ILE:HD12	1.98	0.82
2:G:74:VAL:CG2	2:G:75:TYR:N	2.40	0.82
2:G:288:VAL:CA	2:G:291:ILE:HD11	2.08	0.82
2:G:352:ILE:CG1	2:G:353:PRO:HD2	2.08	0.82
2:A:72:SER:O	2:A:76:ASP:HB2	1.79	0.82
2:C:399:ARG:HH11	2:C:399:ARG:CB	1.92	0.82
2:E:204:GLU:O	2:E:208:VAL:HG22	1.78	0.82
2:A:401:ARG:O	2:A:404:ALA:HB3	1.80	0.82
2:C:401:ARG:O	2:C:404:ALA:HB3	1.80	0.82
2:E:399:ARG:HH11	2:E:399:ARG:CB	1.92	0.82
2:G:401:ARG:O	2:G:404:ALA:HB3	1.80	0.82
2:A:41:VAL:HA	2:A:44:VAL:CG2	2.10	0.82
2:A:395:ILE:HD12	2:A:395:ILE:H	1.43	0.82
2:C:167:ALA:O	2:C:171:VAL:HG23	1.79	0.82
2:C:218:ILE:HD13	2:C:218:ILE:N	1.93	0.82
2:G:87:GLU:OE2	2:G:87:GLU:HA	1.77	0.82
2:A:352:ILE:CG1	2:A:353:PRO:HD2	2.08	0.82
2:C:287:PHE:CE1	2:C:291:ILE:HD12	2.13	0.82
2:E:167:ALA:O	2:E:171:VAL:HG23	1.79	0.82
2:G:402:ARG:O	2:G:406:GLY:N	2.12	0.82
2:A:300:ILE:O	2:A:303:LYS:HG2	1.78	0.82
2:A:425:ASN:N	2:A:425:ASN:ND2	2.24	0.82
2:C:144:LEU:CD1	2:E:177:ASN:CG	2.47	0.82
2:E:298:GLU:HA	2:E:301:LEU:HD13	1.60	0.82
2:A:378:LEU:O	2:A:381:LEU:HG	1.80	0.82
2:C:72:SER:O	2:C:76:ASP:HB2	1.79	0.82
2:C:328:THR:HG22	2:C:329:LEU:HD12	1.59	0.82
2:C:425:ASN:HA	2:C:428:LEU:HB3	1.59	0.82
2:G:167:ALA:O	2:G:171:VAL:HG23	1.79	0.82
2:G:267:ILE:HG22	2:G:268:LYS:N	1.93	0.82
2:C:12:PHE:HD2	2:C:13:LEU:HD23	1.45	0.82
2:C:243:ILE:HD11	2:C:268:LYS:HB2	1.60	0.82
2:E:243:ILE:HD11	2:E:268:LYS:HB2	1.60	0.82
1:D:195:C:O2	1:D:195:C:H2'	1.79	0.81
2:A:243:ILE:HG23	2:A:269:PHE:C	2.00	0.81
2:A:402:ARG:O	2:A:406:GLY:N	2.12	0.81
2:C:267:ILE:HG22	2:C:268:LYS:N	1.93	0.81
2:C:288:VAL:CA	2:C:291:ILE:HD11	2.08	0.81
2:C:402:ARG:O	2:C:406:GLY:N	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:90:VAL:HG12	2:E:268:LYS:HD3	1.62	0.81
2:E:378:LEU:O	2:E:381:LEU:HG	1.80	0.81
2:C:378:LEU:O	2:C:381:LEU:HG	1.80	0.81
2:E:12:PHE:HD2	2:E:13:LEU:HD23	1.45	0.81
2:E:336:ILE:HB	2:E:337:ILE:HD12	1.61	0.81
2:G:12:PHE:HD2	2:G:13:LEU:HD23	1.45	0.81
2:C:59:LYS:NZ	2:C:60:PRO:O	2.13	0.81
2:C:336:ILE:HB	2:C:337:ILE:HD12	1.61	0.81
2:E:288:VAL:CA	2:E:291:ILE:HD11	2.08	0.81
2:G:243:ILE:HG23	2:G:269:PHE:C	2.00	0.81
2:G:300:ILE:O	2:G:303:LYS:HG2	1.78	0.81
2:C:90:VAL:HG12	2:C:268:LYS:HD3	1.62	0.81
2:E:378:LEU:HA	2:E:381:LEU:HD11	1.63	0.81
2:G:90:VAL:HG12	2:G:268:LYS:HD3	1.63	0.81
2:C:41:VAL:HA	2:C:44:VAL:CG2	2.10	0.81
2:G:132:ALA:O	2:G:186:THR:HA	1.81	0.81
2:E:41:VAL:HA	2:E:44:VAL:CG2	2.10	0.81
2:A:399:ARG:HH11	2:A:399:ARG:CB	1.92	0.81
2:C:298:GLU:HA	2:C:301:LEU:HD13	1.60	0.81
2:G:378:LEU:O	2:G:381:LEU:HG	1.80	0.81
2:G:426:ARG:HA	2:G:429:LYS:HD3	1.63	0.81
2:E:401:ARG:O	2:E:404:ALA:HB3	1.80	0.81
2:C:120:TYR:HA	2:C:123:ARG:HG3	1.63	0.81
2:C:426:ARG:HA	2:C:429:LYS:HD3	1.63	0.81
2:E:243:ILE:HG23	2:E:269:PHE:C	2.00	0.81
2:G:336:ILE:O	2:G:339:LEU:HG	1.81	0.81
2:C:336:ILE:O	2:C:339:LEU:HG	1.81	0.80
2:G:336:ILE:HB	2:G:337:ILE:HD12	1.61	0.80
2:C:378:LEU:HA	2:C:381:LEU:HD11	1.63	0.80
2:G:41:VAL:HA	2:G:44:VAL:CG2	2.10	0.80
1:F:195:C:O2	1:F:195:C:H2'	1.79	0.80
2:A:132:ALA:O	2:A:186:THR:HA	1.81	0.80
2:C:132:ALA:O	2:C:186:THR:HA	1.81	0.80
2:E:346:SER:C	2:E:350:GLN:HE21	1.85	0.80
2:A:12:PHE:HD2	2:A:13:LEU:HD23	1.45	0.80
2:A:426:ARG:HA	2:A:429:LYS:HD3	1.63	0.80
2:E:300:ILE:HA	2:E:303:LYS:HE2	1.64	0.80
2:E:336:ILE:O	2:E:339:LEU:HG	1.81	0.80
2:E:426:ARG:HA	2:E:429:LYS:HD3	1.63	0.80
1:B:195:C:O2	1:B:195:C:H2'	1.79	0.80
2:C:243:ILE:HG23	2:C:269:PHE:C	2.00	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:27:ILE:O	2:G:30:LEU:HG	1.82	0.80
1:H:195:C:O2	1:H:195:C:H2'	1.79	0.80
2:A:27:ILE:O	2:A:30:LEU:HG	1.82	0.80
2:C:107:SER:C	2:C:109:LYS:H	1.84	0.80
2:E:107:SER:C	2:E:109:LYS:H	1.84	0.80
2:G:120:TYR:HA	2:G:123:ARG:HG3	1.63	0.80
2:G:315:LYS:HE2	2:G:315:LYS:N	1.97	0.80
2:A:336:ILE:HB	2:A:337:ILE:HD12	1.61	0.80
2:E:120:TYR:HA	2:E:123:ARG:HG3	1.63	0.80
2:A:90:VAL:HG12	2:A:268:LYS:HD3	1.63	0.80
2:C:242:VAL:O	2:C:267:ILE:HA	1.82	0.80
1:B:214:C:C2'	1:B:215:C:H5'	2.12	0.80
1:H:214:C:C2'	1:H:215:C:H5'	2.12	0.80
2:C:63:VAL:HG22	2:C:351:HIS:HB3	1.64	0.80
2:C:349:LEU:HB3	2:C:350:GLN:NE2	1.97	0.80
2:E:132:ALA:O	2:E:186:THR:HA	1.81	0.80
2:E:242:VAL:O	2:E:267:ILE:HA	1.82	0.80
2:G:300:ILE:HA	2:G:303:LYS:HE2	1.64	0.80
2:A:162:ASN:HD22	2:E:159:ASN:ND2	1.78	0.80
2:A:336:ILE:O	2:A:339:LEU:HG	1.81	0.80
2:C:177:ASN:HB3	2:E:144:LEU:HD11	1.62	0.80
2:E:111:THR:OG1	2:E:112:THR:N	2.15	0.80
2:G:111:THR:OG1	2:G:112:THR:N	2.15	0.80
2:C:27:ILE:O	2:C:30:LEU:HG	1.82	0.79
2:E:315:LYS:N	2:E:315:LYS:HE2	1.97	0.79
2:E:390:GLU:O	2:E:392:PRO:HD3	1.82	0.79
2:G:346:SER:C	2:G:350:GLN:HE21	1.85	0.79
2:A:373:LYS:O	2:A:376:ARG:HB2	1.82	0.79
2:A:107:SER:C	2:A:109:LYS:H	1.84	0.79
2:A:111:THR:OG1	2:A:112:THR:N	2.15	0.79
2:C:315:LYS:HE2	2:C:315:LYS:N	1.97	0.79
2:C:346:SER:C	2:C:350:GLN:HE21	1.85	0.79
2:G:417:LEU:HB2	2:G:421:TYR:CZ	2.18	0.79
1:D:214:C:C2'	1:D:215:C:H5'	2.12	0.79
2:A:99:ILE:HB	2:A:182:ILE:O	1.83	0.79
2:E:126:LYS:HB2	2:E:180:ASP:H	1.47	0.79
2:G:349:LEU:HB3	2:G:350:GLN:NE2	1.97	0.79
2:A:300:ILE:HA	2:A:303:LYS:HE2	1.64	0.79
2:A:315:LYS:HE2	2:A:315:LYS:N	1.97	0.79
2:A:346:SER:C	2:A:350:GLN:HE21	1.85	0.79
2:G:63:VAL:HG22	2:G:351:HIS:HB3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:216:LEU:HD23	2:A:217:VAL:N	1.98	0.79
2:C:37:SER:O	2:C:39:VAL:HG23	1.83	0.79
2:C:300:ILE:HA	2:C:303:LYS:HE2	1.64	0.79
2:C:373:LYS:O	2:C:376:ARG:HB2	1.82	0.79
2:G:99:ILE:HB	2:G:182:ILE:O	1.83	0.79
2:A:126:LYS:HB2	2:A:180:ASP:H	1.47	0.79
2:A:242:VAL:O	2:A:267:ILE:HA	1.82	0.79
2:A:417:LEU:HB2	2:A:421:TYR:CZ	2.18	0.79
2:C:417:LEU:HB2	2:C:421:TYR:CZ	2.18	0.79
2:E:349:LEU:HB3	2:E:350:GLN:NE2	1.97	0.79
2:A:37:SER:O	2:A:39:VAL:HG23	1.83	0.79
2:A:378:LEU:HA	2:A:381:LEU:HD11	1.63	0.79
2:E:373:LYS:O	2:E:376:ARG:HB2	1.82	0.79
2:A:349:LEU:HB3	2:A:350:GLN:NE2	1.97	0.79
2:C:126:LYS:HB2	2:C:180:ASP:H	1.47	0.79
2:C:390:GLU:O	2:C:392:PRO:HD3	1.82	0.79
2:G:216:LEU:HD23	2:G:217:VAL:N	1.98	0.79
2:A:120:TYR:HA	2:A:123:ARG:HG3	1.63	0.79
2:C:59:LYS:NZ	2:C:60:PRO:C	2.36	0.78
2:G:254:GLY:HA2	2:G:257:LEU:HD11	1.65	0.78
2:C:99:ILE:HB	2:C:182:ILE:O	1.83	0.78
2:E:27:ILE:O	2:E:30:LEU:HG	1.82	0.78
2:E:417:LEU:HB2	2:E:421:TYR:CZ	2.18	0.78
2:G:20:GLU:O	2:G:23:VAL:HB	1.84	0.78
2:G:242:VAL:O	2:G:267:ILE:HA	1.82	0.78
2:G:373:LYS:O	2:G:376:ARG:HB2	1.82	0.78
2:C:20:GLU:O	2:C:23:VAL:HB	1.83	0.78
2:C:202:MET:HA	2:C:205:MET:SD	2.24	0.78
2:C:244:ILE:HB	2:C:270:ILE:HD11	1.66	0.78
2:G:390:GLU:O	2:G:392:PRO:HD3	1.82	0.78
2:A:390:GLU:O	2:A:392:PRO:HD3	1.82	0.78
2:G:287:PHE:CZ	2:G:291:ILE:HD12	2.18	0.78
2:A:287:PHE:CZ	2:A:291:ILE:HD12	2.18	0.78
2:C:111:THR:OG1	2:C:112:THR:N	2.15	0.78
2:G:126:LYS:HB2	2:G:180:ASP:H	1.47	0.78
2:A:202:MET:HA	2:A:205:MET:SD	2.24	0.78
2:C:252:LYS:H	2:C:252:LYS:HD2	1.49	0.78
2:E:20:GLU:O	2:E:23:VAL:HB	1.83	0.78
2:E:143:LEU:O	2:E:146:LEU:HG	1.84	0.78
2:E:202:MET:HA	2:E:205:MET:SD	2.24	0.78
2:E:227:TYR:HB2	2:E:259:ALA:HB1	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:287:PHE:CZ	2:C:291:ILE:HD12	2.18	0.78
2:E:99:ILE:HB	2:E:182:ILE:O	1.83	0.78
2:G:37:SER:O	2:G:39:VAL:HG23	1.83	0.78
2:G:202:MET:HA	2:G:205:MET:SD	2.24	0.78
2:G:378:LEU:HA	2:G:381:LEU:HD11	1.63	0.78
2:A:143:LEU:O	2:A:146:LEU:HG	1.84	0.78
2:A:227:TYR:HB2	2:A:259:ALA:HB1	1.66	0.78
2:E:63:VAL:HG22	2:E:351:HIS:HB3	1.64	0.78
2:G:227:TYR:HB2	2:G:259:ALA:HB1	1.66	0.78
2:E:37:SER:O	2:E:39:VAL:HG23	1.83	0.77
2:E:287:PHE:CZ	2:E:291:ILE:HD12	2.18	0.77
2:G:30:LEU:CG	2:G:31:GLN:N	2.47	0.77
2:A:63:VAL:HG22	2:A:351:HIS:HB3	1.64	0.77
2:A:67:LYS:O	2:A:70:PHE:HB3	1.84	0.77
2:C:227:TYR:HB2	2:C:259:ALA:HB1	1.66	0.77
2:E:216:LEU:HD23	2:E:217:VAL:N	1.98	0.77
2:E:391:ASN:O	2:E:394:ILE:HG12	1.84	0.77
2:G:359:LEU:HB3	2:G:360:PRO:CD	2.12	0.77
2:A:20:GLU:O	2:A:23:VAL:HB	1.84	0.77
2:A:30:LEU:CG	2:A:31:GLN:N	2.47	0.77
2:A:252:LYS:H	2:A:252:LYS:HD2	1.49	0.77
2:E:252:LYS:H	2:E:252:LYS:HD2	1.49	0.77
2:G:107:SER:C	2:G:109:LYS:H	1.84	0.77
2:G:244:ILE:HB	2:G:270:ILE:HD11	1.66	0.77
2:G:395:ILE:HD12	2:G:395:ILE:N	1.99	0.77
2:A:159:ASN:CG	2:E:162:ASN:HD22	1.88	0.77
2:A:159:ASN:HB3	2:E:161:GLN:O	1.84	0.77
2:C:30:LEU:CG	2:C:31:GLN:N	2.47	0.77
2:E:417:LEU:HD13	2:E:421:TYR:CE2	2.20	0.77
1:F:214:C:C2'	1:F:215:C:H5'	2.12	0.77
2:C:120:TYR:HA	2:C:123:ARG:CG	2.15	0.77
2:C:143:LEU:O	2:C:146:LEU:HG	1.84	0.77
2:C:216:LEU:HD23	2:C:217:VAL:N	1.98	0.77
2:E:183:ILE:N	2:E:183:ILE:HD12	2.00	0.77
2:E:244:ILE:HB	2:E:270:ILE:HD11	1.66	0.77
2:E:395:ILE:HD12	2:E:395:ILE:N	1.99	0.77
2:G:417:LEU:HD13	2:G:421:TYR:CE2	2.20	0.77
2:A:183:ILE:HD12	2:A:183:ILE:N	2.00	0.77
2:A:254:GLY:HA2	2:A:257:LEU:HD11	1.65	0.77
2:C:183:ILE:HD12	2:C:183:ILE:N	2.00	0.77
2:G:67:LYS:O	2:G:70:PHE:HB3	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:391:ASN:O	2:G:394:ILE:HG12	1.85	0.77
2:A:391:ASN:O	2:A:394:ILE:HG12	1.85	0.77
2:E:425:ASN:N	2:E:425:ASN:ND2	2.24	0.77
2:A:5:ILE:C	2:A:7:ASP:H	1.87	0.77
2:A:244:ILE:HB	2:A:270:ILE:CD1	2.15	0.77
2:C:315:LYS:NZ	2:C:315:LYS:HB3	2.00	0.77
2:C:391:ASN:O	2:C:394:ILE:HG12	1.84	0.77
2:G:183:ILE:N	2:G:183:ILE:HD12	2.00	0.77
2:G:394:ILE:N	2:G:395:ILE:HD12	2.00	0.77
1:H:197:G:H2'	1:H:198:G:C1'	2.15	0.77
2:A:394:ILE:N	2:A:395:ILE:HD12	2.00	0.77
2:C:254:GLY:HA2	2:C:257:LEU:HD11	1.65	0.77
2:C:417:LEU:HD13	2:C:421:TYR:CE2	2.20	0.77
2:E:315:LYS:NZ	2:E:315:LYS:HB3	2.00	0.77
2:G:143:LEU:O	2:G:146:LEU:HG	1.84	0.77
2:G:417:LEU:HD12	2:G:418:LEU:N	2.00	0.77
2:G:425:ASN:CA	2:G:428:LEU:HB3	2.14	0.77
1:B:197:G:H2'	1:B:198:G:C1'	2.15	0.76
2:C:59:LYS:HZ2	2:C:61:PRO:N	1.83	0.76
2:C:395:ILE:HD12	2:C:395:ILE:N	1.99	0.76
2:A:47:LEU:HG	2:A:51:ILE:HD11	1.68	0.76
2:A:120:TYR:HA	2:A:123:ARG:CG	2.15	0.76
2:C:118:TYR:HB2	2:C:276:ILE:HD11	1.68	0.76
2:E:279:LEU:HD12	2:E:280:GLU:N	2.00	0.76
2:E:425:ASN:CA	2:E:428:LEU:HB3	2.14	0.76
2:G:373:LYS:HA	2:G:376:ARG:HG3	1.67	0.76
2:E:143:LEU:HG	2:E:144:LEU:N	2.00	0.76
2:A:244:ILE:HB	2:A:270:ILE:HD11	1.66	0.76
2:A:279:LEU:HD12	2:A:280:GLU:N	2.00	0.76
2:A:425:ASN:CA	2:A:428:LEU:HB3	2.14	0.76
2:C:40:ASN:OD1	2:C:43:LEU:HD21	1.86	0.76
2:C:67:LYS:O	2:C:70:PHE:HB3	1.84	0.76
2:C:425:ASN:CA	2:C:428:LEU:HB3	2.15	0.76
2:E:254:GLY:HA2	2:E:257:LEU:HD11	1.65	0.76
2:A:174:PHE:CA	2:A:177:ASN:ND2	2.49	0.76
2:C:5:ILE:C	2:C:7:ASP:H	1.87	0.76
2:E:30:LEU:CG	2:E:31:GLN:N	2.47	0.76
2:G:256:ALA:O	2:G:260:VAL:HG23	1.86	0.76
2:A:143:LEU:HG	2:A:144:LEU:N	2.00	0.76
2:A:291:ILE:HD13	2:A:291:ILE:H	1.51	0.76
2:A:395:ILE:HD12	2:A:395:ILE:N	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:417:LEU:HD12	2:A:418:LEU:N	2.00	0.76
2:C:47:LEU:HG	2:C:51:ILE:HD11	1.68	0.76
2:C:417:LEU:HD12	2:C:418:LEU:N	2.00	0.76
2:E:118:TYR:HB2	2:E:276:ILE:HD11	1.67	0.76
2:G:47:LEU:HG	2:G:51:ILE:HD11	1.68	0.76
2:G:174:PHE:CA	2:G:177:ASN:ND2	2.49	0.76
2:G:244:ILE:HB	2:G:270:ILE:CD1	2.15	0.76
2:G:252:LYS:H	2:G:252:LYS:HD2	1.49	0.76
2:A:256:ALA:O	2:A:260:VAL:HG23	1.86	0.76
2:E:195:GLU:HG3	2:E:196:THR:H	1.50	0.76
2:G:120:TYR:HA	2:G:123:ARG:CG	2.15	0.76
2:C:308:GLU:O	2:C:309:GLU:HG3	1.86	0.76
2:G:40:ASN:OD1	2:G:43:LEU:HD21	1.86	0.76
2:A:195:GLU:HG3	2:A:196:THR:H	1.50	0.76
2:C:256:ALA:O	2:C:260:VAL:HG23	1.86	0.76
2:E:67:LYS:O	2:E:70:PHE:HB3	1.84	0.76
2:G:291:ILE:HD13	2:G:291:ILE:H	1.51	0.76
2:A:417:LEU:HD13	2:A:421:TYR:CE2	2.20	0.76
2:E:120:TYR:HA	2:E:123:ARG:CG	2.15	0.76
2:E:267:ILE:HD12	2:E:267:ILE:N	2.01	0.76
2:G:118:TYR:HB2	2:G:276:ILE:HD11	1.68	0.76
2:G:267:ILE:HD12	2:G:267:ILE:N	2.01	0.76
2:G:348:VAL:HG23	2:G:349:LEU:H	1.51	0.76
2:A:118:TYR:HB2	2:A:276:ILE:HD11	1.68	0.75
2:A:373:LYS:HA	2:A:376:ARG:HG3	1.67	0.75
2:C:244:ILE:HB	2:C:270:ILE:CD1	2.15	0.75
2:A:376:ARG:HG3	2:A:376:ARG:HH21	1.51	0.75
2:C:267:ILE:N	2:C:267:ILE:HD12	2.01	0.75
2:E:47:LEU:HG	2:E:51:ILE:HD11	1.68	0.75
2:E:207:ASP:O	2:E:208:VAL:HG13	1.87	0.75
2:E:244:ILE:HB	2:E:270:ILE:CD1	2.15	0.75
2:G:5:ILE:C	2:G:7:ASP:H	1.87	0.75
2:G:348:VAL:HG23	2:G:349:LEU:N	2.01	0.75
2:A:267:ILE:HD12	2:A:267:ILE:N	2.01	0.75
2:C:195:GLU:HG3	2:C:196:THR:H	1.50	0.75
2:C:279:LEU:HD12	2:C:280:GLU:N	2.00	0.75
2:C:394:ILE:N	2:C:395:ILE:HD12	2.00	0.75
2:E:308:GLU:O	2:E:309:GLU:HG3	1.86	0.75
2:E:417:LEU:HD12	2:E:418:LEU:N	2.01	0.75
2:G:143:LEU:HG	2:G:144:LEU:N	2.00	0.75
2:G:257:LEU:O	2:G:261:VAL:HG23	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:197:G:H2'	1:D:198:G:C1'	2.15	0.75
1:F:197:G:H2'	1:F:198:G:C1'	2.15	0.75
2:A:40:ASN:OD1	2:A:43:LEU:HD21	1.86	0.75
2:A:348:VAL:HG23	2:A:349:LEU:N	2.01	0.75
2:E:389:LEU:HD23	2:E:389:LEU:N	2.01	0.75
1:F:214:C:H2'	1:F:215:C:C5'	2.16	0.75
2:C:359:LEU:HB3	2:C:360:PRO:CD	2.12	0.75
2:E:256:ALA:O	2:E:260:VAL:HG23	1.86	0.75
2:A:257:LEU:O	2:A:261:VAL:HG23	1.87	0.75
2:C:257:LEU:O	2:C:261:VAL:HG23	1.87	0.75
2:G:115:LYS:HZ3	2:G:278:GLU:CB	1.98	0.75
2:G:279:LEU:HD12	2:G:280:GLU:N	2.00	0.75
2:G:315:LYS:HB3	2:G:315:LYS:NZ	2.00	0.75
2:C:414:VAL:O	2:C:417:LEU:CG	2.35	0.75
2:C:417:LEU:HB2	2:C:421:TYR:HH	1.48	0.75
2:E:357:ILE:HD12	2:E:357:ILE:N	2.02	0.75
2:E:394:ILE:N	2:E:395:ILE:HD12	2.00	0.75
2:G:195:GLU:HG3	2:G:196:THR:H	1.50	0.75
2:A:154:VAL:HG12	2:A:155:TYR:N	2.02	0.75
2:E:174:PHE:CA	2:E:177:ASN:ND2	2.49	0.75
2:E:348:VAL:HG23	2:E:349:LEU:N	2.01	0.75
2:E:380:ALA:HA	2:E:383:SER:HB2	1.69	0.75
2:G:269:PHE:CB	2:G:279:LEU:HD11	2.17	0.75
2:A:48:THR:CA	2:A:51:ILE:HD12	2.15	0.75
2:C:304:VAL:HG13	2:C:308:GLU:HG2	1.69	0.75
2:E:5:ILE:C	2:E:7:ASP:H	1.87	0.75
2:E:40:ASN:OD1	2:E:43:LEU:HD21	1.86	0.75
2:E:376:ARG:HH11	2:E:409:LEU:CD2	2.00	0.75
2:A:315:LYS:NZ	2:A:315:LYS:HB3	2.00	0.74
2:E:291:ILE:HD13	2:E:291:ILE:H	1.51	0.74
2:G:376:ARG:HH11	2:G:409:LEU:CD2	2.00	0.74
2:C:177:ASN:ND2	2:E:144:LEU:HD11	2.01	0.74
2:C:380:ALA:HA	2:C:383:SER:HB2	1.69	0.74
1:B:216:G:H2'	1:B:217:U:H5''	1.70	0.74
2:A:151:GLY:HA2	2:G:151:GLY:HA2	0.82	0.74
2:C:54:ARG:HH11	2:C:73:ILE:HG23	1.52	0.74
2:C:174:PHE:CA	2:C:177:ASN:ND2	2.49	0.74
2:E:54:ARG:HH11	2:E:73:ILE:HG23	1.52	0.74
2:G:154:VAL:HG12	2:G:155:TYR:N	2.02	0.74
2:G:389:LEU:HD23	2:G:389:LEU:N	2.01	0.74
1:H:216:G:H2'	1:H:217:U:H5''	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:348:VAL:HG23	2:A:349:LEU:H	1.51	0.74
2:C:143:LEU:HG	2:C:144:LEU:N	2.00	0.74
2:C:291:ILE:HD13	2:C:291:ILE:H	1.51	0.74
2:C:347:LYS:O	2:C:351:HIS:HB2	1.88	0.74
2:C:357:ILE:N	2:C:357:ILE:HD12	2.02	0.74
2:C:373:LYS:HA	2:C:376:ARG:HG3	1.68	0.74
2:E:55:LEU:H	2:E:55:LEU:CD2	2.01	0.74
2:E:257:LEU:O	2:E:261:VAL:HG23	1.87	0.74
2:A:389:LEU:HD23	2:A:389:LEU:N	2.01	0.74
2:C:207:ASP:O	2:C:208:VAL:HG13	1.87	0.74
2:G:28:LYS:O	2:G:32:LYS:N	2.20	0.74
2:G:376:ARG:HG3	2:G:376:ARG:HH21	1.51	0.74
1:B:214:C:H2'	1:B:215:C:C5'	2.16	0.74
1:D:214:C:H2'	1:D:215:C:C5'	2.16	0.74
2:A:269:PHE:CB	2:A:279:LEU:HD11	2.17	0.74
2:A:347:LYS:O	2:A:351:HIS:HB2	1.88	0.74
2:A:414:VAL:O	2:A:417:LEU:CG	2.35	0.74
2:G:207:ASP:O	2:G:208:VAL:HG13	1.87	0.74
2:A:55:LEU:H	2:A:55:LEU:CD2	2.01	0.74
2:A:207:ASP:O	2:A:208:VAL:HG13	1.87	0.74
2:A:338:ALA:O	2:A:342:MET:N	2.21	0.74
2:A:357:ILE:N	2:A:357:ILE:HD12	2.02	0.74
2:E:28:LYS:O	2:E:32:LYS:N	2.20	0.74
2:G:143:LEU:CG	2:G:144:LEU:N	2.51	0.74
2:G:347:LYS:O	2:G:351:HIS:HB2	1.88	0.74
2:A:143:LEU:CG	2:A:144:LEU:N	2.51	0.74
2:A:376:ARG:HH11	2:A:409:LEU:CD2	2.00	0.74
2:C:28:LYS:O	2:C:32:LYS:N	2.20	0.74
2:C:348:VAL:HG23	2:C:349:LEU:N	2.01	0.74
2:C:348:VAL:HG23	2:C:349:LEU:H	1.51	0.74
2:E:376:ARG:HH21	2:E:376:ARG:HG3	1.51	0.74
2:A:54:ARG:HH11	2:A:73:ILE:HG23	1.52	0.74
2:C:24:ASP:O	2:C:27:ILE:HB	1.88	0.74
2:C:154:VAL:HG12	2:C:155:TYR:N	2.02	0.74
2:E:47:LEU:O	2:E:51:ILE:HG13	1.88	0.74
2:E:177:ASN:HB2	2:E:179:MET:SD	2.28	0.74
2:G:24:ASP:O	2:G:27:ILE:HB	1.88	0.74
2:G:55:LEU:H	2:G:55:LEU:CD2	2.01	0.74
2:G:177:ASN:HB2	2:G:179:MET:SD	2.28	0.74
2:A:24:ASP:O	2:A:27:ILE:HB	1.88	0.74
2:A:177:ASN:HB2	2:A:179:MET:SD	2.28	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:389:LEU:HD23	2:C:389:LEU:N	2.01	0.74
2:E:219:ASP:O	2:E:222:ILE:HG22	1.88	0.74
2:E:373:LYS:HA	2:E:376:ARG:HG3	1.67	0.74
2:C:55:LEU:H	2:C:55:LEU:CD2	2.01	0.73
2:C:376:ARG:HH11	2:C:409:LEU:CD2	2.00	0.73
2:G:414:VAL:HA	2:G:417:LEU:CG	2.18	0.73
2:C:177:ASN:HB2	2:C:179:MET:SD	2.28	0.73
2:E:99:ILE:HG21	2:E:183:ILE:HG23	1.70	0.73
2:G:47:LEU:O	2:G:51:ILE:HG13	1.88	0.73
2:G:54:ARG:HH11	2:G:73:ILE:HG23	1.52	0.73
2:C:47:LEU:O	2:C:51:ILE:HG13	1.88	0.73
2:G:59:LYS:O	2:G:59:LYS:HD3	1.88	0.73
2:G:129:LEU:HD13	2:G:154:VAL:HG22	1.70	0.73
2:G:219:ASP:O	2:G:222:ILE:HG22	1.88	0.73
1:D:216:G:H2'	1:D:217:U:H5''	1.70	0.73
2:A:380:ALA:HA	2:A:383:SER:HB2	1.69	0.73
2:C:129:LEU:HD13	2:C:154:VAL:HG22	1.70	0.73
2:C:263:THR:OG1	2:C:265:ALA:HB2	1.88	0.73
2:C:271:GLY:CA	2:C:279:LEU:HA	2.19	0.73
2:G:357:ILE:HD12	2:G:357:ILE:N	2.02	0.73
2:A:414:VAL:HA	2:A:417:LEU:CG	2.18	0.73
2:C:219:ASP:O	2:C:222:ILE:HG22	1.88	0.73
2:E:263:THR:OG1	2:E:265:ALA:HB2	1.88	0.73
2:E:271:GLY:CA	2:E:279:LEU:HA	2.19	0.73
1:H:214:C:H2'	1:H:215:C:C5'	2.16	0.73
2:C:329:LEU:HA	2:C:332:VAL:CG2	2.18	0.73
2:E:300:ILE:O	2:E:342:MET:HG3	1.89	0.73
2:G:369:ILE:HG22	2:G:373:LYS:HZ2	1.53	0.73
2:G:380:ALA:HA	2:G:383:SER:HB2	1.69	0.73
2:G:414:VAL:O	2:G:417:LEU:CG	2.35	0.73
2:C:269:PHE:CB	2:C:279:LEU:HD11	2.17	0.73
2:E:59:LYS:O	2:E:59:LYS:HD3	1.88	0.73
2:E:338:ALA:O	2:E:342:MET:N	2.21	0.73
2:E:347:LYS:O	2:E:351:HIS:HB2	1.88	0.73
2:E:414:VAL:HA	2:E:417:LEU:CG	2.18	0.73
2:G:374:ILE:C	2:G:376:ARG:H	1.92	0.73
2:A:28:LYS:O	2:A:32:LYS:N	2.20	0.73
2:A:340:ARG:NH1	2:A:345:LEU:HB2	2.04	0.73
2:C:159:ASN:ND2	2:G:162:ASN:HD22	1.87	0.73
2:C:340:ARG:NH1	2:C:345:LEU:HB2	2.04	0.73
1:B:197:G:H22	2:A:407:SER:CA	2.01	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:252:LYS:HD2	2:A:252:LYS:N	2.04	0.73
2:A:374:ILE:C	2:A:376:ARG:H	1.92	0.73
2:C:99:ILE:HG21	2:C:183:ILE:HG23	1.71	0.73
2:G:340:ARG:NH1	2:G:345:LEU:HB2	2.04	0.73
2:C:8:ALA:HA	2:C:11:LYS:HB3	1.71	0.73
2:C:129:LEU:N	2:C:129:LEU:HD12	2.04	0.73
2:C:224:GLN:HA	2:C:259:ALA:HB2	1.71	0.73
2:E:94:LYS:C	2:E:95:LEU:HD12	2.10	0.73
2:E:113:ALA:O	2:E:116:LEU:HB3	1.89	0.73
1:D:197:G:H22	2:C:407:SER:CA	2.01	0.72
2:A:115:LYS:HA	2:A:118:TYR:CD2	2.24	0.72
2:C:115:LYS:HA	2:C:118:TYR:CD2	2.24	0.72
2:C:138:ALA:O	2:C:139:ALA:O	2.07	0.72
2:C:252:LYS:HD2	2:C:252:LYS:N	2.04	0.72
2:C:369:ILE:HG22	2:C:373:LYS:HZ2	1.54	0.72
2:E:129:LEU:N	2:E:129:LEU:HD12	2.04	0.72
2:E:269:PHE:CB	2:E:279:LEU:HD11	2.17	0.72
2:G:8:ALA:HA	2:G:11:LYS:HB3	1.71	0.72
2:G:263:THR:OG1	2:G:265:ALA:HB2	1.88	0.72
2:A:414:VAL:HA	2:A:417:LEU:HG	1.70	0.72
2:C:48:THR:CA	2:C:51:ILE:HD12	2.15	0.72
2:C:144:LEU:HD11	2:E:177:ASN:CG	2.09	0.72
2:E:129:LEU:HD13	2:E:154:VAL:HG22	1.70	0.72
2:E:329:LEU:HA	2:E:332:VAL:CG2	2.18	0.72
2:E:374:ILE:C	2:E:376:ARG:H	1.92	0.72
2:G:300:ILE:O	2:G:342:MET:HG3	1.89	0.72
1:F:213:A:H2'	1:F:214:C:C6	2.24	0.72
1:H:213:A:H2'	1:H:214:C:C6	2.24	0.72
2:A:129:LEU:HD13	2:A:154:VAL:HG22	1.70	0.72
2:C:414:VAL:HA	2:C:417:LEU:CG	2.19	0.72
2:E:24:ASP:O	2:E:27:ILE:HB	1.88	0.72
2:E:252:LYS:HD2	2:E:252:LYS:N	2.04	0.72
1:F:216:G:H2'	1:F:217:U:H5''	1.70	0.72
2:C:26:PHE:CD2	2:C:27:ILE:HD13	2.25	0.72
2:C:113:ALA:O	2:C:116:LEU:HB3	1.89	0.72
2:C:123:ARG:HH11	2:C:123:ARG:CB	2.02	0.72
2:C:374:ILE:C	2:C:376:ARG:H	1.92	0.72
2:E:115:LYS:HA	2:E:118:TYR:CD2	2.24	0.72
2:E:154:VAL:HG12	2:E:155:TYR:N	2.02	0.72
2:E:348:VAL:HG23	2:E:349:LEU:H	1.51	0.72
2:G:123:ARG:HH11	2:G:123:ARG:CB	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:224:GLN:HA	2:G:259:ALA:HB2	1.71	0.72
2:A:219:ASP:O	2:A:222:ILE:HG22	1.88	0.72
2:A:300:ILE:O	2:A:342:MET:HG3	1.89	0.72
2:C:94:LYS:C	2:C:95:LEU:HD12	2.09	0.72
2:C:143:LEU:CG	2:C:144:LEU:N	2.51	0.72
2:E:8:ALA:HA	2:E:11:LYS:HB3	1.71	0.72
2:E:126:LYS:HB2	2:E:180:ASP:N	2.05	0.72
2:E:138:ALA:O	2:E:139:ALA:O	2.07	0.72
2:E:340:ARG:NH1	2:E:345:LEU:HB2	2.04	0.72
1:H:216:G:H2'	1:H:217:U:C4'	2.20	0.72
2:E:300:ILE:CA	2:E:303:LYS:HE2	2.20	0.72
2:G:129:LEU:HD12	2:G:129:LEU:N	2.04	0.72
1:F:216:G:H2'	1:F:217:U:C4'	2.20	0.72
2:A:94:LYS:C	2:A:95:LEU:HD12	2.09	0.72
2:C:74:VAL:HG22	2:C:75:TYR:H	1.55	0.72
2:E:197:LYS:O	2:E:200:GLU:HB3	1.89	0.72
2:E:271:GLY:HA3	2:E:279:LEU:HA	1.72	0.72
2:G:115:LYS:HA	2:G:118:TYR:CD2	2.24	0.72
2:G:252:LYS:HD2	2:G:252:LYS:N	2.04	0.72
2:A:271:GLY:CA	2:A:279:LEU:HA	2.19	0.72
2:C:71:ILE:O	2:C:74:VAL:N	2.23	0.72
2:E:224:GLN:HA	2:E:259:ALA:HB2	1.71	0.72
2:G:271:GLY:HA3	2:G:279:LEU:HA	1.72	0.72
1:D:216:G:H2'	1:D:217:U:C4'	2.20	0.72
1:F:215:C:H2'	1:F:216:G:O4'	1.90	0.72
2:A:224:GLN:HA	2:A:259:ALA:HB2	1.71	0.72
2:A:263:THR:OG1	2:A:265:ALA:HB2	1.88	0.72
2:C:271:GLY:HA3	2:C:279:LEU:HA	1.71	0.72
2:E:143:LEU:CG	2:E:144:LEU:N	2.51	0.72
2:E:414:VAL:HA	2:E:417:LEU:HG	1.70	0.72
2:G:26:PHE:CD2	2:G:27:ILE:HD13	2.25	0.72
2:G:48:THR:CA	2:G:51:ILE:HD12	2.15	0.72
2:G:126:LYS:HB2	2:G:180:ASP:N	2.05	0.72
1:B:213:A:H2'	1:B:214:C:C6	2.24	0.72
1:B:216:G:H2'	1:B:217:U:C4'	2.20	0.72
1:F:216:G:H2'	1:F:217:U:C5'	2.20	0.72
2:A:8:ALA:HA	2:A:11:LYS:HB3	1.71	0.72
2:A:26:PHE:CD2	2:A:27:ILE:HD13	2.25	0.72
2:A:99:ILE:HG21	2:A:183:ILE:HG23	1.70	0.72
2:A:106:GLY:CA	2:A:109:LYS:HB2	2.20	0.72
2:A:126:LYS:HB2	2:A:180:ASP:N	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:426:ARG:O	2:A:429:LYS:HG2	1.90	0.72
2:C:126:LYS:HB2	2:C:180:ASP:N	2.05	0.72
2:E:59:LYS:NZ	2:E:61:PRO:CA	2.52	0.72
2:E:369:ILE:HG22	2:E:373:LYS:HZ2	1.55	0.72
2:G:94:LYS:C	2:G:95:LEU:HD12	2.09	0.72
2:G:99:ILE:HG21	2:G:183:ILE:HG23	1.70	0.72
2:G:271:GLY:CA	2:G:279:LEU:HA	2.19	0.72
1:F:211:C:H4'	2:E:402:ARG:HG3	1.72	0.71
1:H:211:C:H4'	2:G:402:ARG:HG3	1.72	0.71
2:A:129:LEU:HD12	2:A:129:LEU:N	2.04	0.71
2:A:197:LYS:O	2:A:200:GLU:HB3	1.89	0.71
2:A:300:ILE:CA	2:A:303:LYS:HE2	2.20	0.71
2:A:418:LEU:HA	2:A:421:TYR:CD2	2.25	0.71
2:C:300:ILE:CA	2:C:303:LYS:HE2	2.20	0.71
2:C:346:SER:O	2:C:348:VAL:N	2.23	0.71
2:E:123:ARG:HH11	2:E:123:ARG:CB	2.02	0.71
2:G:74:VAL:HG22	2:G:75:TYR:H	1.55	0.71
2:G:418:LEU:HA	2:G:421:TYR:CD2	2.25	0.71
1:D:215:C:H2'	1:D:216:G:O4'	1.90	0.71
1:F:197:G:H22	2:E:407:SER:CA	2.01	0.71
2:A:48:THR:O	2:A:51:ILE:HB	1.91	0.71
2:A:113:ALA:O	2:A:116:LEU:HB3	1.89	0.71
2:A:271:GLY:HA3	2:A:279:LEU:HA	1.72	0.71
2:C:151:GLY:HA2	2:E:151:GLY:CA	2.20	0.71
2:C:177:ASN:HB3	2:E:144:LEU:CD1	2.20	0.71
2:C:376:ARG:HG3	2:C:376:ARG:HH21	1.51	0.71
2:C:426:ARG:O	2:C:429:LYS:HG2	1.90	0.71
2:E:201:GLU:O	2:E:205:MET:HG3	1.90	0.71
1:B:211:C:H4'	2:A:402:ARG:HG3	1.72	0.71
1:D:213:A:H2'	1:D:214:C:C6	2.24	0.71
2:A:24:ASP:HA	2:A:27:ILE:CG1	2.20	0.71
2:A:47:LEU:O	2:A:51:ILE:HG13	1.88	0.71
2:A:123:ARG:HH11	2:A:123:ARG:CB	2.02	0.71
2:A:377:TRP:CH2	2:A:417:LEU:HB3	2.26	0.71
2:C:300:ILE:O	2:C:342:MET:HG3	1.89	0.71
2:C:340:ARG:HD3	2:C:375:ARG:NH2	2.05	0.71
2:E:74:VAL:HG22	2:E:75:TYR:H	1.55	0.71
2:E:346:SER:O	2:E:348:VAL:N	2.23	0.71
2:E:426:ARG:O	2:E:429:LYS:HG2	1.90	0.71
2:G:346:SER:O	2:G:348:VAL:N	2.23	0.71
2:A:71:ILE:O	2:A:74:VAL:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:201:GLU:O	2:A:205:MET:HG3	1.90	0.71
2:E:414:VAL:O	2:E:417:LEU:CG	2.35	0.71
2:G:71:ILE:O	2:G:74:VAL:N	2.23	0.71
2:G:113:ALA:O	2:G:116:LEU:HB3	1.90	0.71
2:G:138:ALA:O	2:G:139:ALA:O	2.07	0.71
1:B:215:C:H2'	1:B:216:G:O4'	1.90	0.71
1:H:197:G:H22	2:G:407:SER:CA	2.01	0.71
2:C:276:ILE:HG23	2:C:277:ASP:OD1	1.90	0.71
2:C:337:ILE:HD12	2:C:337:ILE:N	2.05	0.71
2:G:106:GLY:CA	2:G:109:LYS:HB2	2.20	0.71
2:G:197:LYS:O	2:G:200:GLU:HB3	1.89	0.71
2:G:414:VAL:HA	2:G:417:LEU:HG	1.70	0.71
2:G:426:ARG:O	2:G:429:LYS:HG2	1.90	0.71
1:H:216:G:H2'	1:H:217:U:C5'	2.20	0.71
2:A:74:VAL:HG22	2:A:75:TYR:H	1.55	0.71
2:C:197:LYS:O	2:C:200:GLU:HB3	1.89	0.71
2:E:26:PHE:CD2	2:E:27:ILE:HD13	2.25	0.71
2:E:337:ILE:HD12	2:E:337:ILE:N	2.05	0.71
2:C:191:GLY:O	2:C:195:GLU:N	2.24	0.71
2:E:359:LEU:HB3	2:E:360:PRO:CD	2.12	0.71
2:G:48:THR:O	2:G:51:ILE:HB	1.91	0.71
2:G:261:VAL:O	2:G:263:THR:N	2.24	0.71
2:G:315:LYS:HE2	2:G:315:LYS:H	1.56	0.71
2:G:377:TRP:CH2	2:G:417:LEU:HB3	2.26	0.71
1:B:216:G:H2'	1:B:217:U:C5'	2.20	0.71
1:F:180:G:H4'	1:F:180:G:OP1	1.91	0.71
1:H:180:G:OP1	1:H:180:G:H4'	1.91	0.71
2:A:115:LYS:HA	2:A:118:TYR:HB3	1.73	0.71
2:A:137:PRO:O	2:A:139:ALA:N	2.23	0.71
2:A:138:ALA:O	2:A:139:ALA:O	2.07	0.71
2:A:340:ARG:HD3	2:A:375:ARG:NH2	2.06	0.71
2:A:346:SER:O	2:A:348:VAL:N	2.23	0.71
2:C:24:ASP:HA	2:C:27:ILE:CG1	2.20	0.71
2:C:377:TRP:CH2	2:C:417:LEU:HB3	2.26	0.71
2:C:414:VAL:HA	2:C:417:LEU:HG	1.70	0.71
2:G:91:ASN:CB	2:G:92:PRO:HD2	2.20	0.71
2:G:369:ILE:HG22	2:G:373:LYS:HZ1	1.55	0.71
1:D:211:C:H4'	2:C:402:ARG:HG3	1.72	0.71
2:E:106:GLY:CA	2:E:109:LYS:HB2	2.20	0.71
2:G:59:LYS:NZ	2:G:61:PRO:CA	2.52	0.71
2:A:337:ILE:HD12	2:A:337:ILE:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:287:PHE:O	2:C:290:ARG:HB3	1.91	0.71
2:C:291:ILE:C	2:C:292:LEU:HG	2.11	0.71
2:G:115:LYS:HA	2:G:118:TYR:HB3	1.73	0.71
1:B:180:G:OP1	1:B:180:G:H4'	1.91	0.70
1:H:215:C:H2'	1:H:216:G:O4'	1.90	0.70
2:A:287:PHE:O	2:A:290:ARG:HB3	1.91	0.70
2:C:201:GLU:O	2:C:205:MET:HG3	1.90	0.70
2:C:301:LEU:HD23	2:C:302:GLU:N	2.06	0.70
2:E:377:TRP:CH2	2:E:417:LEU:HB3	2.26	0.70
2:E:418:LEU:HA	2:E:421:TYR:CD2	2.25	0.70
2:G:24:ASP:HA	2:G:27:ILE:CG1	2.20	0.70
2:G:201:GLU:O	2:G:205:MET:HG3	1.90	0.70
2:G:287:PHE:O	2:G:290:ARG:HB3	1.91	0.70
2:G:300:ILE:CA	2:G:303:LYS:HE2	2.20	0.70
2:G:338:ALA:O	2:G:342:MET:N	2.21	0.70
1:D:180:G:H4'	1:D:180:G:OP1	1.91	0.70
2:A:261:VAL:O	2:A:263:THR:N	2.24	0.70
2:A:301:LEU:HD23	2:A:302:GLU:N	2.06	0.70
2:C:418:LEU:HA	2:C:421:TYR:CD2	2.25	0.70
2:E:137:PRO:O	2:E:139:ALA:N	2.23	0.70
2:E:315:LYS:HE2	2:E:315:LYS:H	1.56	0.70
2:G:301:LEU:HD23	2:G:302:GLU:N	2.06	0.70
2:A:71:ILE:O	2:A:72:SER:C	2.30	0.70
2:C:369:ILE:HG22	2:C:373:LYS:HZ1	1.55	0.70
2:E:24:ASP:HA	2:E:27:ILE:CG1	2.20	0.70
2:E:71:ILE:O	2:E:74:VAL:N	2.23	0.70
2:G:269:PHE:HB3	2:G:279:LEU:CD1	2.20	0.70
2:A:269:PHE:HB3	2:A:279:LEU:CD1	2.20	0.70
2:A:276:ILE:HG23	2:A:277:ASP:OD1	1.90	0.70
2:C:106:GLY:CA	2:C:109:LYS:HB2	2.20	0.70
2:C:269:PHE:HB3	2:C:279:LEU:CD1	2.20	0.70
2:G:276:ILE:HG23	2:G:277:ASP:OD1	1.90	0.70
2:G:329:LEU:HA	2:G:332:VAL:CG2	2.17	0.70
1:F:193:G:H2'	1:F:194:C:C6	2.27	0.70
2:A:59:LYS:NZ	2:A:60:PRO:O	2.23	0.70
2:A:115:LYS:HE2	2:A:275:LYS:O	1.92	0.70
2:C:115:LYS:HA	2:C:118:TYR:HB3	1.73	0.70
2:E:171:VAL:O	2:E:174:PHE:CD2	2.45	0.70
2:E:301:LEU:HD23	2:E:302:GLU:N	2.06	0.70
2:E:369:ILE:HG22	2:E:373:LYS:HZ1	1.54	0.70
2:G:145:GLN:HB2	2:G:146:LEU:CD2	2.19	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:216:G:H2'	1:D:217:U:C5'	2.20	0.70
2:C:71:ILE:O	2:C:72:SER:C	2.30	0.70
2:C:385:THR:N	2:C:388:GLU:OE1	2.25	0.70
2:E:226:ALA:O	2:E:227:TYR:C	2.30	0.70
2:E:276:ILE:HG23	2:E:277:ASP:OD1	1.90	0.70
2:E:340:ARG:HD3	2:E:375:ARG:NH2	2.05	0.70
2:E:354:GLY:HA2	2:E:368:LYS:HG3	1.73	0.70
2:G:59:LYS:HZ1	2:G:61:PRO:CA	2.01	0.70
2:G:71:ILE:O	2:G:72:SER:C	2.30	0.70
2:A:56:ASN:O	2:A:57:LYS:HG3	1.91	0.70
2:A:195:GLU:HG3	2:A:232:ARG:HH11	1.57	0.70
2:A:291:ILE:C	2:A:292:LEU:HG	2.11	0.70
2:C:226:ALA:O	2:C:227:TYR:C	2.30	0.70
2:E:48:THR:CA	2:E:51:ILE:HD12	2.15	0.70
2:E:191:GLY:O	2:E:195:GLU:N	2.24	0.70
2:E:287:PHE:O	2:E:290:ARG:HB3	1.91	0.70
2:E:385:THR:N	2:E:388:GLU:OE1	2.25	0.70
2:E:397:LYS:O	2:E:401:ARG:HG3	1.92	0.70
2:G:56:ASN:O	2:G:57:LYS:HG3	1.91	0.70
2:G:171:VAL:O	2:G:174:PHE:CD2	2.45	0.70
2:G:337:ILE:HD12	2:G:337:ILE:N	2.05	0.70
2:A:146:LEU:HD23	2:A:146:LEU:N	2.06	0.70
2:G:43:LEU:H	2:G:43:LEU:CD2	1.84	0.70
1:D:193:G:H2'	1:D:194:C:C6	2.27	0.70
2:A:171:VAL:O	2:A:174:PHE:CD2	2.45	0.70
2:A:329:LEU:HA	2:A:332:VAL:CG2	2.17	0.70
2:A:354:GLY:HA2	2:A:368:LYS:HG3	1.73	0.70
2:A:359:LEU:HB3	2:A:360:PRO:CD	2.12	0.70
2:A:396:ASP:OD2	2:A:399:ARG:HB2	1.92	0.70
2:C:48:THR:O	2:C:51:ILE:HB	1.91	0.70
2:C:145:GLN:HB2	2:C:146:LEU:CD2	2.19	0.70
2:C:146:LEU:HD23	2:C:146:LEU:N	2.06	0.70
2:C:171:VAL:O	2:C:174:PHE:CD2	2.45	0.70
2:C:396:ASP:OD2	2:C:399:ARG:HB2	1.92	0.70
2:E:43:LEU:HD23	2:E:43:LEU:N	2.04	0.70
2:E:63:VAL:O	2:E:64:LEU:HB2	1.92	0.70
2:G:191:GLY:O	2:G:195:GLU:N	2.24	0.70
2:A:140:TYR:O	2:A:143:LEU:HG	1.92	0.70
2:C:336:ILE:HG21	2:C:378:LEU:HD12	1.74	0.70
2:G:291:ILE:C	2:G:292:LEU:HG	2.11	0.70
2:A:46:SER:O	2:A:49:ALA:HB3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:397:LYS:O	2:C:401:ARG:HG3	1.92	0.69
2:E:71:ILE:O	2:E:72:SER:C	2.30	0.69
2:E:115:LYS:HE2	2:E:275:LYS:O	1.92	0.69
2:E:396:ASP:OD2	2:E:399:ARG:HB2	1.92	0.69
2:G:195:GLU:HG3	2:G:232:ARG:HH11	1.57	0.69
2:G:425:ASN:O	2:G:429:LYS:N	2.26	0.69
2:A:105:GLN:CD	2:A:106:GLY:H	1.96	0.69
2:C:46:SER:O	2:C:49:ALA:HB3	1.92	0.69
2:C:144:LEU:CD1	2:E:177:ASN:CB	2.70	0.69
2:C:297:ILE:HD12	2:C:298:GLU:N	2.07	0.69
2:G:115:LYS:HE2	2:G:275:LYS:O	1.92	0.69
2:G:143:LEU:O	2:G:145:GLN:N	2.25	0.69
2:G:281:THR:HG22	2:G:282:PHE:H	1.57	0.69
2:G:397:LYS:O	2:G:401:ARG:HG3	1.92	0.69
2:A:63:VAL:O	2:A:64:LEU:HB2	1.92	0.69
2:A:191:GLY:O	2:A:195:GLU:N	2.24	0.69
2:C:56:ASN:O	2:C:57:LYS:HG3	1.91	0.69
2:C:99:ILE:HG22	2:C:99:ILE:O	1.92	0.69
2:E:297:ILE:HD12	2:E:298:GLU:N	2.08	0.69
2:G:46:SER:O	2:G:49:ALA:HB3	1.92	0.69
2:G:415:ARG:HA	2:G:418:LEU:HD12	1.75	0.69
1:B:208:G:H2'	1:B:209:A:C8	2.28	0.69
2:A:315:LYS:HE2	2:A:315:LYS:H	1.56	0.69
2:A:339:LEU:HA	2:A:342:MET:HB3	1.74	0.69
2:A:397:LYS:O	2:A:401:ARG:HG3	1.92	0.69
2:C:177:ASN:HB3	2:E:144:LEU:HD21	1.73	0.69
2:C:233:PHE:C	2:C:235:GLN:N	2.43	0.69
2:C:339:LEU:HA	2:C:342:MET:HB3	1.74	0.69
2:C:415:ARG:HA	2:C:418:LEU:HD12	1.75	0.69
2:E:195:GLU:HG3	2:E:232:ARG:HH11	1.57	0.69
2:E:340:ARG:CD	2:E:375:ARG:HH21	2.06	0.69
2:G:105:GLN:CD	2:G:106:GLY:H	1.96	0.69
2:G:110:THR:O	2:G:111:THR:C	2.31	0.69
2:G:169:LYS:O	2:G:170:GLY:O	2.11	0.69
2:G:336:ILE:HG21	2:G:378:LEU:HD12	1.74	0.69
1:H:193:G:H2'	1:H:194:C:C6	2.27	0.69
2:C:115:LYS:HE2	2:C:275:LYS:O	1.92	0.69
2:C:425:ASN:O	2:C:429:LYS:N	2.26	0.69
2:E:110:THR:O	2:E:111:THR:C	2.30	0.69
2:E:291:ILE:C	2:E:292:LEU:HG	2.11	0.69
2:G:193:GLY:C	2:G:195:GLU:H	1.96	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:385:THR:N	2:G:388:GLU:OE1	2.25	0.69
2:G:396:ASP:OD2	2:G:399:ARG:HB2	1.92	0.69
2:A:281:THR:HG22	2:A:282:PHE:H	1.58	0.69
2:A:380:ALA:O	2:A:382:ASN:N	2.26	0.69
2:C:63:VAL:O	2:C:64:LEU:HB2	1.92	0.69
2:C:143:LEU:O	2:C:145:GLN:N	2.25	0.69
2:E:31:GLN:HA	2:E:34:LEU:CD1	2.22	0.69
2:E:56:ASN:O	2:E:57:LYS:HG3	1.91	0.69
2:E:169:LYS:O	2:E:170:GLY:O	2.11	0.69
2:E:269:PHE:HA	2:E:281:THR:O	1.93	0.69
2:G:354:GLY:HA2	2:G:368:LYS:HG3	1.73	0.69
2:A:130:VAL:HB	2:A:184:VAL:HG13	1.75	0.69
2:C:140:TYR:O	2:C:143:LEU:HG	1.92	0.69
2:C:169:LYS:O	2:C:170:GLY:O	2.11	0.69
2:E:48:THR:O	2:E:51:ILE:HB	1.91	0.69
2:E:140:TYR:O	2:E:143:LEU:HG	1.92	0.69
2:E:261:VAL:O	2:E:263:THR:N	2.24	0.69
2:G:140:TYR:O	2:G:143:LEU:HG	1.92	0.69
1:B:193:G:H2'	1:B:194:C:C6	2.27	0.69
2:A:28:LYS:HA	2:A:31:GLN:NE2	2.07	0.69
2:A:73:ILE:O	2:A:76:ASP:HB3	1.93	0.69
2:A:99:ILE:O	2:A:99:ILE:HG22	1.92	0.69
2:A:110:THR:O	2:A:111:THR:C	2.30	0.69
2:A:115:LYS:CA	2:A:118:TYR:HB3	2.23	0.69
2:A:226:ALA:O	2:A:227:TYR:C	2.30	0.69
2:A:269:PHE:HA	2:A:281:THR:O	1.93	0.69
2:A:271:GLY:HA2	2:A:278:GLU:O	1.93	0.69
2:A:339:LEU:HD23	2:A:339:LEU:H	1.57	0.69
2:A:415:ARG:HA	2:A:418:LEU:HD12	1.75	0.69
2:C:28:LYS:HA	2:C:31:GLN:NE2	2.07	0.69
2:C:115:LYS:HZ3	2:C:278:GLU:CB	2.04	0.69
2:C:115:LYS:CA	2:C:118:TYR:HB3	2.23	0.69
2:C:151:GLY:CA	2:E:151:GLY:HA2	2.23	0.69
2:C:281:THR:HG22	2:C:282:PHE:H	1.58	0.69
2:C:338:ALA:O	2:C:342:MET:N	2.21	0.69
2:E:99:ILE:HG22	2:E:99:ILE:O	1.92	0.69
2:E:105:GLN:CD	2:E:106:GLY:H	1.96	0.69
2:E:115:LYS:HA	2:E:118:TYR:HB3	1.73	0.69
2:E:143:LEU:O	2:E:145:GLN:N	2.26	0.69
2:E:145:GLN:HB2	2:E:146:LEU:CD2	2.19	0.69
2:E:269:PHE:HB3	2:E:279:LEU:CD1	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:339:LEU:HD23	2:E:339:LEU:H	1.57	0.69
2:E:425:ASN:O	2:E:429:LYS:N	2.26	0.69
2:G:130:VAL:HB	2:G:184:VAL:HG13	1.75	0.69
2:G:226:ALA:O	2:G:227:TYR:C	2.30	0.69
2:G:267:ILE:CG2	2:G:268:LYS:H	2.06	0.69
1:D:208:G:H2'	1:D:209:A:C8	2.28	0.69
1:F:208:G:H2'	1:F:209:A:C8	2.27	0.69
2:A:143:LEU:O	2:A:145:GLN:N	2.25	0.69
2:A:336:ILE:HG21	2:A:378:LEU:HD12	1.74	0.69
2:C:73:ILE:O	2:C:76:ASP:HB3	1.93	0.69
2:C:105:GLN:CD	2:C:106:GLY:H	1.96	0.69
2:C:137:PRO:O	2:C:139:ALA:N	2.23	0.69
2:G:31:GLN:HA	2:G:34:LEU:CD1	2.22	0.69
2:G:340:ARG:HD3	2:G:375:ARG:NH2	2.05	0.69
2:G:340:ARG:CD	2:G:375:ARG:HH21	2.06	0.69
2:C:130:VAL:HB	2:C:184:VAL:HG13	1.75	0.69
2:A:119:PHE:O	2:A:123:ARG:HG2	1.93	0.68
2:A:267:ILE:CG2	2:A:268:LYS:H	2.06	0.68
2:A:340:ARG:CD	2:A:375:ARG:HH21	2.06	0.68
2:C:59:LYS:HZ2	2:C:60:PRO:C	1.95	0.68
2:C:110:THR:O	2:C:111:THR:C	2.30	0.68
2:C:195:GLU:HG3	2:C:232:ARG:HH11	1.57	0.68
2:C:269:PHE:HA	2:C:281:THR:O	1.93	0.68
2:C:271:GLY:HA2	2:C:278:GLU:O	1.93	0.68
2:C:354:GLY:HA2	2:C:368:LYS:HG3	1.73	0.68
2:E:130:VAL:HB	2:E:184:VAL:HG13	1.75	0.68
2:E:170:GLY:O	2:E:171:VAL:C	2.32	0.68
2:E:233:PHE:C	2:E:235:GLN:N	2.43	0.68
2:E:345:LEU:HG	2:E:346:SER:H	1.58	0.68
2:E:380:ALA:O	2:E:382:ASN:N	2.26	0.68
2:G:380:ALA:O	2:G:382:ASN:N	2.26	0.68
2:A:385:THR:N	2:A:388:GLU:OE1	2.25	0.68
2:C:315:LYS:HE2	2:C:315:LYS:H	1.56	0.68
2:G:73:ILE:O	2:G:76:ASP:HB3	1.93	0.68
2:G:269:PHE:HD1	2:G:281:THR:HA	1.58	0.68
2:G:417:LEU:HD13	2:G:421:TYR:HE2	1.59	0.68
2:A:145:GLN:HB2	2:A:146:LEU:CD2	2.19	0.68
2:C:269:PHE:HD1	2:C:281:THR:HA	1.59	0.68
2:E:28:LYS:HA	2:E:31:GLN:NE2	2.07	0.68
2:E:415:ARG:HA	2:E:418:LEU:HD12	1.75	0.68
2:G:115:LYS:CA	2:G:118:TYR:HB3	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:419:GLU:C	2:G:421:TYR:N	2.47	0.68
2:G:63:VAL:O	2:G:64:LEU:HB2	1.92	0.68
2:G:119:PHE:O	2:G:123:ARG:HG2	1.93	0.68
2:A:417:LEU:HD13	2:A:421:TYR:HE2	1.59	0.68
2:C:63:VAL:H	2:C:351:HIS:CE1	2.12	0.68
2:C:232:ARG:O	2:C:233:PHE:HB3	1.94	0.68
2:C:417:LEU:HD13	2:C:421:TYR:HE2	1.59	0.68
2:C:425:ASN:ND2	2:C:426:ARG:H	1.92	0.68
2:E:46:SER:O	2:E:49:ALA:HB3	1.92	0.68
2:E:166:ILE:HG23	2:E:167:ALA:N	2.09	0.68
2:G:63:VAL:H	2:G:351:HIS:CE1	2.12	0.68
2:G:383:SER:O	2:G:384:MET:HG3	1.94	0.68
1:H:208:G:H2'	1:H:209:A:C8	2.27	0.68
2:A:63:VAL:H	2:A:351:HIS:CE1	2.12	0.68
2:A:86:LYS:HZ1	2:A:89:ASN:ND2	1.91	0.68
2:A:169:LYS:O	2:A:170:GLY:O	2.11	0.68
2:A:193:GLY:C	2:A:195:GLU:H	1.96	0.68
2:A:339:LEU:H	2:A:339:LEU:CD2	2.07	0.68
2:A:345:LEU:HG	2:A:346:SER:H	1.58	0.68
2:C:345:LEU:HG	2:C:346:SER:H	1.58	0.68
2:E:40:ASN:CG	2:E:43:LEU:HD21	2.14	0.68
2:E:115:LYS:CA	2:E:118:TYR:HB3	2.23	0.68
2:E:193:GLY:C	2:E:195:GLU:H	1.96	0.68
2:E:243:ILE:HG23	2:E:269:PHE:O	1.93	0.68
2:E:269:PHE:HD1	2:E:281:THR:HA	1.59	0.68
2:E:281:THR:HG22	2:E:282:PHE:H	1.58	0.68
2:E:425:ASN:ND2	2:E:426:ARG:H	1.92	0.68
2:G:28:LYS:HA	2:G:31:GLN:NE2	2.07	0.68
2:G:271:GLY:HA2	2:G:278:GLU:O	1.93	0.68
2:G:297:ILE:HD12	2:G:298:GLU:N	2.07	0.68
2:A:104:VAL:HG12	2:A:229:LEU:HD11	1.76	0.68
2:C:40:ASN:CG	2:C:43:LEU:HD21	2.14	0.68
2:C:59:LYS:HZ2	2:C:61:PRO:CA	2.07	0.68
2:C:383:SER:O	2:C:384:MET:HG3	1.94	0.68
2:G:40:ASN:CG	2:G:43:LEU:HD21	2.14	0.68
2:G:104:VAL:HG12	2:G:229:LEU:HD11	1.76	0.68
1:B:218:G:H2'	1:B:219:C:H5'	1.76	0.68
2:A:419:GLU:C	2:A:421:TYR:N	2.47	0.68
2:A:425:ASN:O	2:A:429:LYS:N	2.26	0.68
2:C:27:ILE:HA	2:C:30:LEU:HD23	1.76	0.68
2:C:161:GLN:O	2:G:159:ASN:HB3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:339:LEU:HD23	2:C:339:LEU:H	1.57	0.68
2:C:380:ALA:O	2:C:382:ASN:N	2.26	0.68
2:E:271:GLY:HA2	2:E:278:GLU:O	1.93	0.68
2:G:99:ILE:O	2:G:99:ILE:HG22	1.92	0.68
2:G:188:GLY:HA3	2:G:201:GLU:OE2	1.94	0.68
2:G:339:LEU:HD23	2:G:339:LEU:H	1.57	0.68
2:E:63:VAL:H	2:E:351:HIS:CE1	2.12	0.68
2:G:243:ILE:HG23	2:G:269:PHE:O	1.94	0.68
2:A:297:ILE:HD12	2:A:298:GLU:N	2.07	0.68
2:C:119:PHE:O	2:C:123:ARG:HG2	1.93	0.68
2:C:188:GLY:HA3	2:C:201:GLU:OE2	1.94	0.68
2:E:27:ILE:HA	2:E:30:LEU:HD23	1.76	0.68
2:E:188:GLY:HA3	2:E:201:GLU:OE2	1.94	0.68
2:E:339:LEU:HA	2:E:342:MET:HB3	1.74	0.68
2:A:31:GLN:HA	2:A:34:LEU:CD1	2.22	0.67
2:A:40:ASN:CG	2:A:43:LEU:HD21	2.14	0.67
2:A:61:PRO:O	2:A:62:SER:O	2.12	0.67
2:C:59:LYS:NZ	2:C:61:PRO:N	2.42	0.67
2:C:144:LEU:CD1	2:E:177:ASN:HB3	2.23	0.67
2:C:166:ILE:HG23	2:C:167:ALA:N	2.09	0.67
2:E:73:ILE:O	2:E:76:ASP:HB3	1.93	0.67
2:E:108:GLY:HA2	2:E:111:THR:OG1	1.94	0.67
2:G:27:ILE:HA	2:G:30:LEU:HD23	1.76	0.67
1:H:218:G:H2'	1:H:219:C:H5'	1.76	0.67
2:A:243:ILE:HG23	2:A:269:PHE:O	1.94	0.67
2:A:414:VAL:C	2:A:417:LEU:HG	2.15	0.67
2:C:2:LEU:CG	2:C:3:GLU:N	2.58	0.67
2:C:193:GLY:C	2:C:195:GLU:H	1.96	0.67
2:E:166:ILE:O	2:E:169:LYS:HB2	1.95	0.67
2:E:336:ILE:HG21	2:E:378:LEU:HD12	1.74	0.67
2:G:2:LEU:CG	2:G:3:GLU:N	2.58	0.67
2:G:339:LEU:HA	2:G:342:MET:HB3	1.74	0.67
2:C:61:PRO:O	2:C:62:SER:O	2.12	0.67
2:C:108:GLY:HA2	2:C:111:THR:OG1	1.94	0.67
2:E:71:ILE:HA	2:E:74:VAL:HG22	1.75	0.67
2:E:115:LYS:HZ3	2:E:278:GLU:CB	2.05	0.67
2:G:2:LEU:HG	2:G:3:GLU:H	1.60	0.67
2:G:71:ILE:HA	2:G:74:VAL:HG22	1.75	0.67
2:G:108:GLY:HA2	2:G:111:THR:OG1	1.94	0.67
2:G:269:PHE:HA	2:G:281:THR:O	1.93	0.67
2:A:27:ILE:HA	2:A:30:LEU:HD23	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:108:GLY:HA2	2:A:111:THR:OG1	1.94	0.67
2:A:383:SER:O	2:A:384:MET:HG3	1.94	0.67
2:E:119:PHE:O	2:E:123:ARG:HG2	1.93	0.67
2:G:61:PRO:O	2:G:62:SER:O	2.12	0.67
2:A:115:LYS:O	2:A:119:PHE:HB3	1.95	0.67
2:A:269:PHE:HD1	2:A:281:THR:HA	1.58	0.67
2:C:243:ILE:HG23	2:C:269:PHE:O	1.93	0.67
2:C:261:VAL:O	2:C:263:THR:N	2.24	0.67
2:E:383:SER:O	2:E:384:MET:HG3	1.94	0.67
2:G:137:PRO:O	2:G:139:ALA:N	2.23	0.67
2:E:104:VAL:HG12	2:E:229:LEU:HD11	1.76	0.67
2:G:115:LYS:O	2:G:119:PHE:HB3	1.95	0.67
2:G:166:ILE:O	2:G:169:LYS:HB2	1.95	0.67
1:F:196:A:C2'	1:F:197:G:H5'	2.25	0.67
2:A:166:ILE:O	2:A:169:LYS:HB2	1.95	0.67
2:A:170:GLY:O	2:A:171:VAL:C	2.31	0.67
2:A:425:ASN:ND2	2:A:426:ARG:H	1.92	0.67
2:C:71:ILE:HA	2:C:74:VAL:HG22	1.76	0.67
2:G:71:ILE:O	2:G:74:VAL:HG22	1.95	0.67
2:G:414:VAL:C	2:G:417:LEU:HG	2.15	0.67
1:D:218:G:H2'	1:D:219:C:H5'	1.76	0.67
2:A:166:ILE:HG23	2:A:167:ALA:N	2.09	0.67
2:G:385:THR:HG22	2:G:388:GLU:OE1	1.95	0.67
1:D:198:G:N2	2:C:408:GLY:HA3	2.10	0.67
2:A:2:LEU:CG	2:A:3:GLU:N	2.58	0.67
2:C:385:THR:HG22	2:C:388:GLU:OE1	1.95	0.67
2:E:28:LYS:HA	2:E:31:GLN:HB3	1.77	0.67
2:E:71:ILE:O	2:E:74:VAL:HG22	1.95	0.67
2:E:378:LEU:C	2:E:378:LEU:HD23	2.16	0.67
2:E:385:THR:HG22	2:E:388:GLU:OE1	1.95	0.67
2:G:166:ILE:HG23	2:G:167:ALA:N	2.09	0.67
2:A:287:PHE:O	2:A:290:ARG:N	2.28	0.67
2:A:385:THR:HG22	2:A:388:GLU:OE1	1.95	0.67
2:C:71:ILE:O	2:C:74:VAL:HG22	1.95	0.67
2:C:166:ILE:O	2:C:169:LYS:HB2	1.95	0.67
2:E:417:LEU:HD13	2:E:421:TYR:HE2	1.59	0.67
2:G:111:THR:O	2:G:112:THR:C	2.33	0.67
2:G:425:ASN:ND2	2:G:426:ARG:H	1.92	0.67
1:B:197:G:H2'	1:B:198:G:H1'	1.77	0.66
1:B:198:G:N2	2:A:408:GLY:HA3	2.10	0.66
2:A:71:ILE:HA	2:A:74:VAL:HG22	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:378:LEU:HD23	2:A:378:LEU:C	2.16	0.66
2:A:402:ARG:NH1	2:A:402:ARG:HB3	2.10	0.66
2:C:31:GLN:HA	2:C:34:LEU:CD1	2.22	0.66
2:E:35:ILE:HA	2:E:39:VAL:HB	1.77	0.66
2:E:61:PRO:O	2:E:62:SER:O	2.12	0.66
2:E:287:PHE:O	2:E:290:ARG:N	2.28	0.66
1:D:196:A:C2'	1:D:197:G:H5'	2.25	0.66
2:C:28:LYS:HA	2:C:31:GLN:HB3	1.77	0.66
2:C:232:ARG:O	2:C:233:PHE:CB	2.43	0.66
2:C:414:VAL:O	2:C:415:ARG:C	2.34	0.66
2:E:232:ARG:O	2:E:233:PHE:HB3	1.94	0.66
2:G:215:ILE:HG22	2:G:216:LEU:O	1.96	0.66
2:G:287:PHE:O	2:G:290:ARG:N	2.28	0.66
2:G:378:LEU:HD23	2:G:378:LEU:C	2.16	0.66
1:B:196:A:C2'	1:B:197:G:H5'	2.25	0.66
1:H:197:G:H2'	1:H:198:G:H1'	1.77	0.66
2:A:71:ILE:O	2:A:74:VAL:HG22	1.95	0.66
2:A:232:ARG:O	2:A:233:PHE:HB3	1.94	0.66
2:A:233:PHE:C	2:A:235:GLN:N	2.43	0.66
2:A:374:ILE:HG23	2:A:375:ARG:H	1.60	0.66
2:C:115:LYS:O	2:C:119:PHE:HB3	1.95	0.66
2:C:374:ILE:HG23	2:C:375:ARG:H	1.60	0.66
2:E:115:LYS:O	2:E:119:PHE:HB3	1.95	0.66
2:G:7:ASP:N	2:G:7:ASP:OD1	2.29	0.66
2:G:43:LEU:HD23	2:G:43:LEU:N	2.04	0.66
2:G:146:LEU:HD23	2:G:146:LEU:N	2.06	0.66
2:G:170:GLY:O	2:G:171:VAL:C	2.32	0.66
1:D:197:G:H2'	1:D:198:G:H1'	1.77	0.66
2:A:7:ASP:N	2:A:7:ASP:OD1	2.29	0.66
2:A:111:THR:O	2:A:112:THR:C	2.33	0.66
2:A:354:GLY:O	2:A:355:LEU:HD23	1.96	0.66
2:E:91:ASN:CB	2:E:92:PRO:HD2	2.20	0.66
2:E:267:ILE:CG2	2:E:268:LYS:H	2.06	0.66
2:G:101:LEU:O	2:G:186:THR:HG22	1.96	0.66
2:G:402:ARG:NH1	2:G:402:ARG:HB3	2.10	0.66
2:A:101:LEU:O	2:A:186:THR:HG22	1.95	0.66
2:A:188:GLY:HA3	2:A:201:GLU:OE2	1.94	0.66
2:C:104:VAL:HG12	2:C:229:LEU:HD11	1.76	0.66
2:C:392:PRO:C	2:C:395:ILE:HD11	2.16	0.66
2:E:70:PHE:O	2:E:73:ILE:HB	1.96	0.66
2:G:70:PHE:O	2:G:73:ILE:HB	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:132:ALA:CB	2:G:184:VAL:HG12	2.26	0.66
2:G:354:GLY:O	2:G:355:LEU:HD23	1.96	0.66
1:H:196:A:C2'	1:H:197:G:H5'	2.25	0.66
2:A:2:LEU:HG	2:A:3:GLU:H	1.60	0.66
2:A:232:ARG:O	2:A:233:PHE:CB	2.43	0.66
2:A:392:PRO:C	2:A:395:ILE:HD11	2.16	0.66
2:C:111:THR:O	2:C:112:THR:C	2.33	0.66
2:E:2:LEU:CG	2:E:3:GLU:N	2.58	0.66
2:E:354:GLY:O	2:E:355:LEU:HD23	1.96	0.66
2:G:345:LEU:HG	2:G:346:SER:H	1.58	0.66
1:F:198:G:N2	2:E:408:GLY:HA3	2.10	0.66
2:A:215:ILE:HG22	2:A:216:LEU:O	1.96	0.66
2:A:313:ILE:O	2:A:314:GLN:O	2.14	0.66
2:A:359:LEU:O	2:A:361:THR:HG23	1.96	0.66
2:C:101:LEU:O	2:C:186:THR:HG22	1.95	0.66
2:C:354:GLY:O	2:C:355:LEU:HD23	1.96	0.66
2:C:402:ARG:HB3	2:C:402:ARG:NH1	2.10	0.66
2:E:111:THR:O	2:E:112:THR:C	2.33	0.66
2:E:232:ARG:O	2:E:233:PHE:CB	2.43	0.66
2:E:313:ILE:O	2:E:314:GLN:O	2.14	0.66
2:E:374:ILE:HG23	2:E:375:ARG:H	1.60	0.66
2:E:391:ASN:OD1	2:E:394:ILE:HG23	1.96	0.66
2:E:402:ARG:HB3	2:E:402:ARG:NH1	2.10	0.66
2:G:166:ILE:HG23	2:G:167:ALA:H	1.61	0.66
2:G:297:ILE:CG1	2:G:298:GLU:H	2.09	0.66
1:F:197:G:H2'	1:F:198:G:H1'	1.77	0.66
2:A:35:ILE:HA	2:A:39:VAL:HB	1.77	0.66
2:A:59:LYS:C	2:A:59:LYS:CD	2.54	0.66
2:A:70:PHE:O	2:A:73:ILE:HB	1.96	0.66
2:C:82:PHE:O	2:C:84:GLY:N	2.29	0.66
2:E:173:ILE:O	2:E:176:LYS:N	2.29	0.66
2:G:232:ARG:O	2:G:233:PHE:HB3	1.94	0.66
2:G:313:ILE:O	2:G:314:GLN:O	2.14	0.66
2:G:330:ARG:HA	2:G:389:LEU:HD12	1.78	0.66
2:G:374:ILE:HG23	2:G:375:ARG:H	1.60	0.66
2:G:392:PRO:C	2:G:395:ILE:HD11	2.16	0.66
2:A:173:ILE:O	2:A:176:LYS:N	2.29	0.66
2:C:35:ILE:HA	2:C:39:VAL:HB	1.77	0.66
2:C:378:LEU:HD23	2:C:378:LEU:C	2.16	0.66
2:C:414:VAL:C	2:C:417:LEU:HG	2.15	0.66
2:E:330:ARG:HA	2:E:389:LEU:HD12	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:359:LEU:O	2:E:361:THR:HG23	1.96	0.66
2:G:173:ILE:O	2:G:176:LYS:N	2.29	0.66
1:F:218:G:H2'	1:F:219:C:H5'	1.76	0.66
2:A:330:ARG:HA	2:A:389:LEU:HD12	1.78	0.66
2:C:173:ILE:HG22	2:C:174:PHE:N	2.11	0.66
2:E:392:PRO:C	2:E:395:ILE:HD11	2.16	0.66
2:E:414:VAL:O	2:E:415:ARG:C	2.34	0.66
2:G:218:ILE:O	2:G:245:THR:N	2.29	0.66
2:G:232:ARG:O	2:G:233:PHE:CB	2.43	0.66
2:G:334:ALA:O	2:G:337:ILE:HD13	1.96	0.66
1:H:198:G:N2	2:G:408:GLY:HA3	2.10	0.65
1:H:211:C:H4'	2:G:402:ARG:CG	2.27	0.65
2:A:28:LYS:HA	2:A:31:GLN:HB3	1.77	0.65
2:A:82:PHE:O	2:A:84:GLY:N	2.29	0.65
2:A:104:VAL:CG1	2:A:229:LEU:HD11	2.27	0.65
2:A:132:ALA:CB	2:A:184:VAL:HG12	2.26	0.65
2:A:177:ASN:ND2	2:G:144:LEU:HD11	2.11	0.65
2:A:218:ILE:O	2:A:245:THR:N	2.29	0.65
2:A:334:ALA:O	2:A:337:ILE:HD13	1.96	0.65
2:C:340:ARG:CD	2:C:375:ARG:HH21	2.06	0.65
2:G:35:ILE:HA	2:G:39:VAL:HB	1.77	0.65
2:E:101:LEU:O	2:E:186:THR:HG22	1.95	0.65
2:E:146:LEU:HD23	2:E:146:LEU:N	2.06	0.65
2:G:102:VAL:O	2:G:216:LEU:HA	1.97	0.65
2:G:331:ASP:HA	2:G:334:ALA:CB	2.27	0.65
1:F:211:C:H4'	2:E:402:ARG:CG	2.27	0.65
1:H:179:GTP:H2'	1:H:179:GTP:N3	2.11	0.65
2:A:230:ALA:O	2:A:233:PHE:HB3	1.96	0.65
2:C:102:VAL:O	2:C:216:LEU:HA	1.97	0.65
2:C:391:ASN:OD1	2:C:394:ILE:HG23	1.96	0.65
2:E:105:GLN:O	2:E:106:GLY:O	2.14	0.65
2:G:359:LEU:O	2:G:361:THR:HG23	1.96	0.65
1:B:211:C:H4'	2:A:402:ARG:CG	2.27	0.65
1:D:211:C:H4'	2:C:402:ARG:CG	2.26	0.65
2:A:139:ALA:O	2:A:140:TYR:O	2.14	0.65
2:A:209:LEU:HD13	2:A:211:PRO:HD3	1.79	0.65
2:C:70:PHE:O	2:C:73:ILE:HB	1.96	0.65
2:C:215:ILE:HG22	2:C:216:LEU:O	1.96	0.65
2:E:246:LYS:HB3	2:E:249:GLY:HA3	1.78	0.65
2:E:297:ILE:CG1	2:E:298:GLU:H	2.09	0.65
2:C:139:ALA:O	2:C:140:TYR:O	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:170:GLY:O	2:C:171:VAL:C	2.31	0.65
2:E:82:PHE:O	2:E:84:GLY:N	2.29	0.65
2:E:269:PHE:HB3	2:E:280:GLU:O	1.97	0.65
2:E:316:LYS:HZ1	2:E:431:VAL:HG21	1.62	0.65
2:E:334:ALA:O	2:E:337:ILE:HD13	1.96	0.65
2:G:269:PHE:HB3	2:G:280:GLU:O	1.97	0.65
2:A:391:ASN:OD1	2:A:394:ILE:HG23	1.96	0.65
2:C:7:ASP:OD1	2:C:7:ASP:N	2.29	0.65
2:C:297:ILE:CG1	2:C:298:GLU:H	2.09	0.65
2:C:359:LEU:O	2:C:361:THR:HG23	1.96	0.65
2:E:215:ILE:HG22	2:E:216:LEU:O	1.96	0.65
2:E:230:ALA:O	2:E:233:PHE:HB3	1.96	0.65
2:E:414:VAL:C	2:E:417:LEU:HG	2.15	0.65
2:G:104:VAL:CG1	2:G:229:LEU:HD11	2.27	0.65
2:G:391:ASN:OD1	2:G:394:ILE:HG23	1.96	0.65
2:A:102:VAL:O	2:A:216:LEU:HA	1.97	0.65
2:A:105:GLN:O	2:A:106:GLY:O	2.14	0.65
2:C:105:GLN:O	2:C:106:GLY:O	2.14	0.65
2:C:173:ILE:O	2:C:176:LYS:N	2.29	0.65
2:C:218:ILE:O	2:C:245:THR:N	2.29	0.65
2:C:287:PHE:O	2:C:290:ARG:N	2.28	0.65
2:C:296:ASP:CG	2:C:297:ILE:N	2.49	0.65
2:C:313:ILE:O	2:C:314:GLN:O	2.14	0.65
2:C:330:ARG:HA	2:C:389:LEU:HD12	1.78	0.65
2:E:7:ASP:OD1	2:E:7:ASP:N	2.29	0.65
2:E:126:LYS:HG2	2:E:180:ASP:CG	2.17	0.65
2:E:143:LEU:HD12	2:E:144:LEU:N	2.12	0.65
2:G:41:VAL:O	2:G:42:LYS:C	2.35	0.65
2:G:296:ASP:CG	2:G:297:ILE:N	2.50	0.65
2:G:414:VAL:O	2:G:415:ARG:C	2.34	0.65
1:F:179:GTP:H2'	1:F:179:GTP:N3	2.11	0.65
2:A:12:PHE:CD2	2:A:13:LEU:HD23	2.30	0.65
2:A:28:LYS:CA	2:A:31:GLN:HB3	2.27	0.65
2:A:269:PHE:HB3	2:A:280:GLU:O	1.97	0.65
2:A:297:ILE:CG1	2:A:298:GLU:H	2.09	0.65
2:C:143:LEU:HD12	2:C:144:LEU:N	2.12	0.65
2:E:102:VAL:O	2:E:216:LEU:HA	1.97	0.65
2:G:28:LYS:CA	2:G:31:GLN:HB3	2.27	0.65
2:G:126:LYS:HG2	2:G:180:ASP:CG	2.17	0.65
2:G:209:LEU:HD13	2:G:211:PRO:HD3	1.79	0.65
2:A:32:LYS:O	2:A:34:LEU:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:43:LEU:HD23	2:A:43:LEU:N	2.04	0.65
2:A:414:VAL:HA	2:A:417:LEU:CD2	2.27	0.65
2:C:2:LEU:HG	2:C:3:GLU:H	1.60	0.65
2:C:230:ALA:O	2:C:233:PHE:HB3	1.96	0.65
2:E:166:ILE:HG23	2:E:167:ALA:H	1.60	0.65
2:E:218:ILE:O	2:E:245:THR:N	2.29	0.65
2:G:105:GLN:O	2:G:106:GLY:O	2.14	0.65
2:G:230:ALA:O	2:G:233:PHE:HB3	1.96	0.65
2:C:144:LEU:HD13	2:E:177:ASN:CG	2.17	0.65
2:C:311:ASP:HA	2:C:314:GLN:HG3	1.78	0.65
2:E:41:VAL:O	2:E:42:LYS:C	2.35	0.65
2:E:173:ILE:HG22	2:E:174:PHE:N	2.12	0.65
2:E:423:ASN:N	2:E:425:ASN:HD21	1.95	0.65
2:G:139:ALA:O	2:G:140:TYR:O	2.14	0.65
2:E:419:GLU:C	2:E:421:TYR:N	2.47	0.64
2:G:143:LEU:HD12	2:G:144:LEU:N	2.12	0.64
2:G:414:VAL:HA	2:G:417:LEU:CD2	2.27	0.64
2:A:5:ILE:N	2:A:7:ASP:OD1	2.31	0.64
2:C:12:PHE:CD2	2:C:13:LEU:HD23	2.30	0.64
2:C:43:LEU:HD23	2:C:43:LEU:N	2.04	0.64
2:C:126:LYS:HG2	2:C:180:ASP:CG	2.17	0.64
2:E:139:ALA:O	2:E:140:TYR:O	2.14	0.64
2:E:311:ASP:HA	2:E:314:GLN:HG3	1.78	0.64
2:G:32:LYS:O	2:G:34:LEU:N	2.30	0.64
2:G:233:PHE:C	2:G:235:GLN:N	2.43	0.64
2:A:414:VAL:CA	2:A:417:LEU:HG	2.27	0.64
2:C:104:VAL:CG1	2:C:229:LEU:HD11	2.27	0.64
2:C:166:ILE:HG23	2:C:167:ALA:H	1.61	0.64
2:C:316:LYS:HZ1	2:C:431:VAL:HG21	1.62	0.64
2:E:414:VAL:CA	2:E:417:LEU:HG	2.27	0.64
1:D:179:GTP:N3	1:D:179:GTP:H2'	2.11	0.64
2:A:126:LYS:HG2	2:A:180:ASP:CG	2.17	0.64
2:C:3:GLU:O	2:C:6:ARG:HB3	1.98	0.64
2:C:5:ILE:C	2:C:7:ASP:N	2.51	0.64
2:C:267:ILE:CG2	2:C:268:LYS:H	2.06	0.64
2:C:331:ASP:HA	2:C:334:ALA:CB	2.27	0.64
2:E:331:ASP:HA	2:E:334:ALA:CB	2.27	0.64
2:E:339:LEU:HD23	2:E:342:MET:HE2	1.80	0.64
2:E:354:GLY:HA3	2:E:367:LEU:HG	1.80	0.64
2:G:86:LYS:HZ1	2:G:89:ASN:ND2	1.95	0.64
1:B:179:GTP:H2'	1:B:179:GTP:N3	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:19:TYR:O	2:A:21:LYS:N	2.31	0.64
2:A:166:ILE:HG23	2:A:167:ALA:H	1.61	0.64
2:A:311:ASP:HA	2:A:314:GLN:HG3	1.78	0.64
2:C:28:LYS:CA	2:C:31:GLN:HB3	2.27	0.64
2:C:116:LEU:HG	2:C:117:ALA:N	2.13	0.64
2:E:70:PHE:O	2:E:74:VAL:HG13	1.98	0.64
2:G:82:PHE:O	2:G:84:GLY:N	2.29	0.64
2:G:116:LEU:HG	2:G:117:ALA:N	2.13	0.64
2:G:173:ILE:HG22	2:G:174:PHE:N	2.11	0.64
2:A:41:VAL:O	2:A:42:LYS:C	2.35	0.64
2:A:331:ASP:HA	2:A:334:ALA:CB	2.27	0.64
2:C:298:GLU:O	2:C:301:LEU:HB3	1.98	0.64
2:C:419:GLU:C	2:C:421:TYR:N	2.47	0.64
2:E:217:VAL:O	2:E:218:ILE:HG23	1.98	0.64
2:G:28:LYS:HA	2:G:31:GLN:HB3	1.77	0.64
2:A:4:ASN:HA	2:A:7:ASP:OD1	1.98	0.64
2:A:43:LEU:H	2:A:43:LEU:CD2	1.84	0.64
2:A:246:LYS:HB3	2:A:249:GLY:HA3	1.78	0.64
2:C:4:ASN:HA	2:C:7:ASP:OD1	1.98	0.64
2:C:246:LYS:HB3	2:C:249:GLY:HA3	1.78	0.64
2:C:269:PHE:HB3	2:C:280:GLU:O	1.97	0.64
2:C:399:ARG:O	2:C:400:MET:HB3	1.98	0.64
2:E:3:GLU:O	2:E:6:ARG:HB3	1.98	0.64
2:E:118:TYR:CB	2:E:276:ILE:HD11	2.28	0.64
2:E:399:ARG:HB3	2:E:399:ARG:NH1	2.03	0.64
2:E:399:ARG:O	2:E:400:MET:HB3	1.98	0.64
2:G:4:ASN:HA	2:G:7:ASP:OD1	1.98	0.64
2:G:5:ILE:N	2:G:7:ASP:OD1	2.31	0.64
2:G:298:GLU:O	2:G:301:LEU:HB3	1.98	0.64
2:A:298:GLU:O	2:A:301:LEU:HB3	1.98	0.64
2:A:399:ARG:O	2:A:400:MET:HB3	1.98	0.64
2:C:5:ILE:N	2:C:7:ASP:OD1	2.31	0.64
2:C:384:MET:HB3	2:C:388:GLU:OE2	1.98	0.64
2:E:104:VAL:CG1	2:E:229:LEU:HD11	2.27	0.64
2:E:116:LEU:HG	2:E:117:ALA:N	2.13	0.64
2:G:3:GLU:O	2:G:6:ARG:HB3	1.98	0.64
2:A:110:THR:OG1	2:A:111:THR:N	2.28	0.64
2:A:423:ASN:N	2:A:425:ASN:HD21	1.95	0.64
2:C:41:VAL:O	2:C:42:LYS:C	2.35	0.64
2:C:118:TYR:CB	2:C:276:ILE:HD11	2.28	0.64
2:E:28:LYS:CA	2:E:31:GLN:HB3	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:296:ASP:CG	2:E:297:ILE:N	2.49	0.64
2:A:143:LEU:HD12	2:A:144:LEU:N	2.12	0.64
2:C:70:PHE:O	2:C:74:VAL:HG13	1.98	0.64
2:C:334:ALA:O	2:C:337:ILE:HD13	1.96	0.64
2:C:423:ASN:N	2:C:425:ASN:HD21	1.95	0.64
2:E:12:PHE:CD2	2:E:13:LEU:HD23	2.30	0.64
2:E:242:VAL:N	2:E:266:THR:O	2.29	0.64
2:E:298:GLU:O	2:E:301:LEU:HB3	1.98	0.64
2:E:339:LEU:H	2:E:339:LEU:CD2	2.07	0.64
2:E:414:VAL:HA	2:E:417:LEU:CD2	2.27	0.64
2:G:308:GLU:O	2:G:309:GLU:HB2	1.98	0.64
2:A:148:ASN:C	2:A:150:ILE:H	2.02	0.63
2:A:297:ILE:HD12	2:A:298:GLU:H	1.64	0.63
2:C:328:THR:C	2:C:330:ARG:H	2.01	0.63
2:E:2:LEU:HG	2:E:3:GLU:H	1.60	0.63
2:G:242:VAL:N	2:G:266:THR:O	2.29	0.63
2:G:246:LYS:HB3	2:G:249:GLY:HA3	1.78	0.63
2:G:311:ASP:HA	2:G:314:GLN:HG3	1.78	0.63
2:G:414:VAL:CA	2:G:417:LEU:HG	2.27	0.63
2:A:47:LEU:HD11	2:A:77:GLU:HB3	1.80	0.63
2:C:115:LYS:O	2:C:119:PHE:N	2.26	0.63
2:C:146:LEU:HA	2:C:149:GLN:OE1	1.99	0.63
2:C:177:ASN:HB3	2:E:144:LEU:CD2	2.27	0.63
2:C:217:VAL:O	2:C:218:ILE:HG23	1.98	0.63
2:C:297:ILE:HD12	2:C:298:GLU:H	1.64	0.63
2:E:4:ASN:HA	2:E:7:ASP:OD1	1.98	0.63
2:E:5:ILE:N	2:E:7:ASP:OD1	2.30	0.63
2:G:126:LYS:HB3	2:G:179:MET:HG3	1.81	0.63
2:G:215:ILE:CG2	2:G:242:VAL:HA	2.27	0.63
2:A:75:TYR:HA	2:A:78:LEU:CD1	2.29	0.63
2:A:134:VAL:HG21	2:A:162:ASN:N	2.14	0.63
2:C:32:LYS:O	2:C:34:LEU:N	2.30	0.63
2:C:126:LYS:HB3	2:C:179:MET:HG3	1.81	0.63
2:C:354:GLY:HA3	2:C:367:LEU:HG	1.80	0.63
2:C:356:GLY:O	2:C:357:ILE:HG13	1.98	0.63
2:C:414:VAL:CA	2:C:417:LEU:HG	2.27	0.63
2:E:19:TYR:O	2:E:21:LYS:N	2.31	0.63
2:E:218:ILE:N	2:E:218:ILE:CD1	2.62	0.63
2:G:19:TYR:O	2:G:21:LYS:N	2.31	0.63
2:G:70:PHE:O	2:G:74:VAL:HG13	1.98	0.63
2:E:209:LEU:HD13	2:E:211:PRO:HD3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:356:GLY:O	2:E:357:ILE:HG13	1.98	0.63
2:G:399:ARG:O	2:G:400:MET:HB3	1.98	0.63
2:C:148:ASN:C	2:C:150:ILE:H	2.02	0.63
2:C:378:LEU:O	2:C:379:ALA:C	2.37	0.63
2:E:110:THR:OG1	2:E:111:THR:N	2.28	0.63
2:E:148:ASN:C	2:E:150:ILE:H	2.02	0.63
2:G:134:VAL:HG21	2:G:162:ASN:N	2.14	0.63
2:G:148:ASN:C	2:G:150:ILE:H	2.02	0.63
2:A:5:ILE:C	2:A:7:ASP:N	2.51	0.63
2:A:60:PRO:O	2:A:61:PRO:C	2.36	0.63
2:A:70:PHE:O	2:A:74:VAL:HG13	1.98	0.63
2:A:134:VAL:HG11	2:A:160:ASN:O	1.98	0.63
2:C:60:PRO:O	2:C:61:PRO:C	2.36	0.63
2:C:383:SER:C	2:C:384:MET:HG3	2.19	0.63
2:E:115:LYS:O	2:E:119:PHE:N	2.26	0.63
2:E:132:ALA:CB	2:E:184:VAL:HG12	2.26	0.63
2:G:134:VAL:HG11	2:G:160:ASN:O	1.98	0.63
2:G:217:VAL:O	2:G:218:ILE:HG23	1.98	0.63
2:G:303:LYS:HG3	2:G:342:MET:HB2	1.81	0.63
2:A:3:GLU:O	2:A:6:ARG:HB3	1.98	0.63
2:A:171:VAL:O	2:A:173:ILE:N	2.32	0.63
2:A:356:GLY:O	2:A:357:ILE:HG13	1.98	0.63
2:A:384:MET:HB3	2:A:388:GLU:OE2	1.98	0.63
2:C:75:TYR:HA	2:C:78:LEU:CD1	2.29	0.63
2:C:215:ILE:CG2	2:C:242:VAL:HA	2.27	0.63
2:C:376:ARG:HH11	2:C:409:LEU:HD21	1.63	0.63
2:E:126:LYS:HB3	2:E:179:MET:HG3	1.81	0.63
2:E:134:VAL:HG11	2:E:160:ASN:O	1.98	0.63
2:E:171:VAL:O	2:E:173:ILE:N	2.32	0.63
2:E:297:ILE:HD12	2:E:298:GLU:H	1.64	0.63
2:E:383:SER:C	2:E:384:MET:HG3	2.19	0.63
2:G:38:ASP:OD1	2:G:255:GLY:HA3	1.99	0.63
2:G:118:TYR:CB	2:G:276:ILE:HD11	2.28	0.63
1:D:197:G:N2	2:C:407:SER:HA	2.08	0.63
2:A:115:LYS:HZ3	2:A:278:GLU:CB	2.09	0.63
2:A:217:VAL:O	2:A:218:ILE:HG23	1.98	0.63
2:C:110:THR:OG1	2:C:111:THR:N	2.28	0.63
2:G:150:ILE:CD1	2:G:152:VAL:HB	2.29	0.63
2:G:326:LYS:HB3	2:G:327:LEU:HD12	1.80	0.63
2:G:326:LYS:C	2:G:327:LEU:HG	2.19	0.63
2:G:384:MET:HB3	2:G:388:GLU:OE2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:172:ASP:HA	2:A:175:VAL:HB	1.81	0.63
2:A:215:ILE:CG2	2:A:242:VAL:HA	2.27	0.63
2:A:314:GLN:O	2:A:315:LYS:C	2.38	0.63
2:A:316:LYS:HZ1	2:A:431:VAL:HG21	1.63	0.63
2:A:383:SER:C	2:A:384:MET:HG3	2.19	0.63
2:C:105:GLN:CD	2:C:106:GLY:N	2.53	0.63
2:E:38:ASP:OD1	2:E:255:GLY:HA3	1.99	0.63
2:E:75:TYR:HA	2:E:78:LEU:CD1	2.29	0.63
2:G:12:PHE:CD2	2:G:13:LEU:HD23	2.30	0.63
2:G:146:LEU:HA	2:G:149:GLN:OE1	1.99	0.63
2:G:202:MET:N	2:G:205:MET:SD	2.72	0.63
2:G:423:ASN:N	2:G:425:ASN:HD21	1.96	0.63
2:A:21:LYS:O	2:A:25:GLU:HG3	1.99	0.62
2:A:329:LEU:CA	2:A:332:VAL:HG23	2.23	0.62
2:A:414:VAL:O	2:A:415:ARG:C	2.34	0.62
2:C:19:TYR:O	2:C:21:LYS:N	2.31	0.62
2:C:38:ASP:OD1	2:C:255:GLY:HA3	1.99	0.62
2:C:172:ASP:HA	2:C:175:VAL:HB	1.81	0.62
2:C:209:LEU:HD13	2:C:211:PRO:HD3	1.79	0.62
2:E:202:MET:N	2:E:205:MET:SD	2.72	0.62
2:E:297:ILE:CD1	2:E:298:GLU:H	2.12	0.62
2:E:328:THR:C	2:E:330:ARG:H	2.01	0.62
2:G:260:VAL:CG1	2:G:267:ILE:HD11	2.29	0.62
2:G:297:ILE:HD12	2:G:298:GLU:H	1.64	0.62
2:G:300:ILE:N	2:G:303:LYS:HE2	2.14	0.62
2:G:378:LEU:O	2:G:379:ALA:C	2.37	0.62
2:G:383:SER:C	2:G:384:MET:HG3	2.19	0.62
2:A:115:LYS:O	2:A:119:PHE:N	2.26	0.62
2:A:126:LYS:HB3	2:A:179:MET:HG3	1.81	0.62
2:A:296:ASP:CG	2:A:297:ILE:N	2.49	0.62
2:A:297:ILE:CD1	2:A:298:GLU:H	2.12	0.62
2:A:326:LYS:C	2:A:327:LEU:HG	2.19	0.62
2:A:328:THR:C	2:A:330:ARG:H	2.01	0.62
2:C:202:MET:N	2:C:205:MET:SD	2.72	0.62
2:C:260:VAL:CG1	2:C:267:ILE:HD11	2.29	0.62
2:C:326:LYS:C	2:C:327:LEU:HG	2.19	0.62
2:C:339:LEU:HD23	2:C:342:MET:HE2	1.81	0.62
2:C:414:VAL:HA	2:C:417:LEU:CD2	2.27	0.62
2:E:32:LYS:O	2:E:34:LEU:N	2.30	0.62
2:E:378:LEU:O	2:E:379:ALA:C	2.37	0.62
2:A:38:ASP:OD1	2:A:255:GLY:HA3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:150:ILE:CD1	2:A:152:VAL:HB	2.29	0.62
2:A:173:ILE:HG22	2:A:174:PHE:N	2.12	0.62
2:A:202:MET:N	2:A:205:MET:SD	2.72	0.62
2:A:222:ILE:HG12	2:A:226:ALA:H	1.64	0.62
2:A:356:GLY:C	2:A:357:ILE:HG13	2.20	0.62
2:C:134:VAL:HG11	2:C:160:ASN:O	1.98	0.62
2:C:171:VAL:O	2:C:173:ILE:N	2.32	0.62
2:E:300:ILE:N	2:E:303:LYS:HE2	2.14	0.62
2:E:326:LYS:HB3	2:E:327:LEU:HD12	1.80	0.62
2:G:5:ILE:C	2:G:7:ASP:N	2.51	0.62
2:G:105:GLN:NE2	2:G:106:GLY:H	1.98	0.62
2:G:222:ILE:HG12	2:G:226:ALA:H	1.64	0.62
2:G:376:ARG:HH11	2:G:409:LEU:HD21	1.63	0.62
1:H:198:G:H21	2:G:408:GLY:HA3	1.64	0.62
2:A:173:ILE:HG22	2:A:177:ASN:HD21	1.65	0.62
2:A:303:LYS:HG3	2:A:342:MET:HB2	1.81	0.62
2:G:47:LEU:HD11	2:G:77:GLU:HB3	1.80	0.62
2:G:110:THR:OG1	2:G:111:THR:N	2.28	0.62
2:G:329:LEU:CA	2:G:332:VAL:HG23	2.23	0.62
2:A:105:GLN:NE2	2:A:106:GLY:H	1.98	0.62
2:A:308:GLU:O	2:A:309:GLU:HB2	1.98	0.62
2:A:378:LEU:O	2:A:378:LEU:HD23	1.99	0.62
2:C:297:ILE:CD1	2:C:298:GLU:H	2.12	0.62
2:E:331:ASP:HA	2:E:334:ALA:HB3	1.81	0.62
2:E:423:ASN:HA	2:E:426:ARG:HB2	1.81	0.62
2:G:21:LYS:O	2:G:25:GLU:HG3	1.99	0.62
2:G:118:TYR:OH	2:G:277:ASP:HB3	1.99	0.62
2:G:171:VAL:O	2:G:173:ILE:N	2.32	0.62
2:A:2:LEU:CG	2:A:3:GLU:H	2.12	0.62
2:A:55:LEU:HD22	2:A:55:LEU:N	2.12	0.62
2:A:121:LYS:C	2:A:123:ARG:H	2.03	0.62
2:A:143:LEU:O	2:A:144:LEU:C	2.38	0.62
2:A:399:ARG:HB3	2:A:399:ARG:NH1	2.03	0.62
2:A:405:GLU:O	2:A:408:GLY:N	2.32	0.62
2:C:21:LYS:O	2:C:25:GLU:HG3	1.99	0.62
2:C:47:LEU:HD11	2:C:77:GLU:HB3	1.81	0.62
2:C:134:VAL:HG21	2:C:162:ASN:N	2.14	0.62
2:C:314:GLN:O	2:C:315:LYS:C	2.38	0.62
2:C:356:GLY:C	2:C:357:ILE:HG13	2.20	0.62
2:C:405:GLU:O	2:C:408:GLY:N	2.32	0.62
2:E:105:GLN:NE2	2:E:106:GLY:H	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:173:ILE:HG22	2:E:177:ASN:HD21	1.65	0.62
2:E:405:GLU:O	2:E:408:GLY:N	2.32	0.62
2:G:75:TYR:HA	2:G:78:LEU:CD1	2.29	0.62
2:G:354:GLY:HA3	2:G:367:LEU:HG	1.80	0.62
2:G:378:LEU:O	2:G:378:LEU:HD23	1.99	0.62
2:A:242:VAL:N	2:A:266:THR:O	2.29	0.62
2:C:378:LEU:O	2:C:378:LEU:HD23	1.99	0.62
2:E:2:LEU:CG	2:E:3:GLU:H	2.12	0.62
2:E:47:LEU:HD11	2:E:77:GLU:HB3	1.81	0.62
2:E:260:VAL:CG1	2:E:267:ILE:HD11	2.29	0.62
2:E:356:GLY:C	2:E:357:ILE:HG13	2.20	0.62
2:G:143:LEU:O	2:G:144:LEU:C	2.38	0.62
2:G:297:ILE:CD1	2:G:298:GLU:H	2.12	0.62
2:G:356:GLY:O	2:G:357:ILE:HG13	1.98	0.62
2:A:105:GLN:CD	2:A:106:GLY:N	2.53	0.62
2:A:146:LEU:HA	2:A:149:GLN:OE1	1.99	0.62
2:A:260:VAL:CG1	2:A:267:ILE:HD11	2.29	0.62
2:C:303:LYS:HG3	2:C:342:MET:HB2	1.81	0.62
2:E:105:GLN:CD	2:E:106:GLY:N	2.53	0.62
2:E:146:LEU:HA	2:E:149:GLN:OE1	1.99	0.62
2:E:376:ARG:HH11	2:E:409:LEU:HD21	1.63	0.62
2:G:172:ASP:HA	2:G:175:VAL:HB	1.81	0.62
2:G:173:ILE:HG22	2:G:177:ASN:HD21	1.65	0.62
2:G:314:GLN:O	2:G:315:LYS:C	2.38	0.62
2:A:354:GLY:HA3	2:A:367:LEU:HG	1.80	0.62
2:C:132:ALA:CB	2:C:184:VAL:HG12	2.26	0.62
2:C:242:VAL:N	2:C:266:THR:O	2.29	0.62
2:C:300:ILE:N	2:C:303:LYS:HE2	2.14	0.62
2:C:326:LYS:HB3	2:C:327:LEU:HD12	1.80	0.62
2:C:337:ILE:O	2:C:338:ALA:C	2.38	0.62
2:E:134:VAL:HG21	2:E:162:ASN:N	2.14	0.62
2:E:326:LYS:C	2:E:327:LEU:HG	2.19	0.62
2:E:384:MET:HB3	2:E:388:GLU:OE2	1.98	0.62
2:A:91:ASN:CB	2:A:92:PRO:HD2	2.20	0.62
2:A:300:ILE:N	2:A:303:LYS:HE2	2.14	0.62
2:C:177:ASN:OD1	2:E:144:LEU:HD13	1.99	0.62
2:C:221:SER:HA	2:C:250:THR:CG2	2.30	0.62
2:E:172:ASP:HA	2:E:175:VAL:HB	1.81	0.62
2:E:339:LEU:HD23	2:E:339:LEU:N	2.15	0.62
2:C:331:ASP:HA	2:C:334:ALA:HB3	1.82	0.61
2:E:21:LYS:O	2:E:25:GLU:HG3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:86:LYS:NZ	2:E:89:ASN:ND2	2.48	0.61
2:E:221:SER:HA	2:E:250:THR:CG2	2.30	0.61
2:E:222:ILE:HG12	2:E:226:ALA:H	1.64	0.61
2:G:356:GLY:C	2:G:357:ILE:HG13	2.20	0.61
2:A:288:VAL:HA	2:A:291:ILE:CD1	2.22	0.61
2:A:329:LEU:HB2	2:A:392:PRO:HG2	1.82	0.61
2:C:49:ALA:O	2:C:52:LYS:N	2.34	0.61
2:C:91:ASN:CB	2:C:92:PRO:HD2	2.21	0.61
2:C:339:LEU:HD23	2:C:339:LEU:N	2.15	0.61
2:G:260:VAL:HG11	2:G:267:ILE:HD11	1.82	0.61
1:D:198:G:H21	2:C:408:GLY:HA3	1.64	0.61
2:A:69:TRP:O	2:A:70:PHE:C	2.39	0.61
2:A:116:LEU:HG	2:A:117:ALA:N	2.13	0.61
2:A:202:MET:CA	2:A:205:MET:SD	2.89	0.61
2:A:337:ILE:O	2:A:338:ALA:C	2.38	0.61
2:A:378:LEU:O	2:A:379:ALA:C	2.37	0.61
2:G:49:ALA:O	2:G:52:LYS:N	2.33	0.61
2:G:105:GLN:CD	2:G:106:GLY:N	2.53	0.61
2:G:121:LYS:C	2:G:123:ARG:H	2.03	0.61
2:G:169:LYS:O	2:G:170:GLY:C	2.39	0.61
2:A:118:TYR:CB	2:A:276:ILE:HD11	2.28	0.61
2:A:285:LYS:O	2:A:286:ARG:C	2.38	0.61
2:A:381:LEU:N	2:A:381:LEU:HD23	2.16	0.61
2:C:86:LYS:NZ	2:C:89:ASN:ND2	2.48	0.61
2:C:169:LYS:O	2:C:170:GLY:C	2.39	0.61
2:C:173:ILE:HG22	2:C:177:ASN:HD21	1.65	0.61
2:C:365:ASP:C	2:C:365:ASP:OD1	2.38	0.61
2:E:118:TYR:OH	2:E:277:ASP:HB3	1.99	0.61
2:E:260:VAL:HG11	2:E:267:ILE:HD11	1.82	0.61
2:E:378:LEU:O	2:E:378:LEU:HD23	1.99	0.61
2:E:384:MET:HG2	2:E:403:ILE:CD1	2.29	0.61
2:G:221:SER:HA	2:G:250:THR:CG2	2.30	0.61
2:G:329:LEU:HB2	2:G:392:PRO:HG2	1.82	0.61
2:G:339:LEU:HD23	2:G:339:LEU:N	2.15	0.61
2:G:339:LEU:HD23	2:G:342:MET:HE2	1.82	0.61
2:A:339:LEU:HD23	2:A:339:LEU:N	2.15	0.61
2:C:118:TYR:OH	2:C:277:ASP:HB3	1.99	0.61
2:C:136:ARG:NH1	2:C:137:PRO:HG2	2.15	0.61
2:C:173:ILE:N	2:C:173:ILE:HD13	2.16	0.61
2:C:202:MET:HA	2:C:205:MET:HB2	1.82	0.61
2:C:202:MET:CA	2:C:205:MET:SD	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:164:ILE:O	2:G:167:ALA:HB3	2.01	0.61
2:A:118:TYR:OH	2:A:277:ASP:HB3	1.99	0.61
2:A:376:ARG:HH11	2:A:409:LEU:HD21	1.63	0.61
2:C:105:GLN:NE2	2:C:106:GLY:H	1.98	0.61
2:C:267:ILE:CG2	2:C:268:LYS:N	2.64	0.61
2:E:121:LYS:C	2:E:123:ARG:H	2.03	0.61
2:E:132:ALA:HB2	2:E:184:VAL:CG1	2.29	0.61
2:E:202:MET:HA	2:E:205:MET:HB2	1.82	0.61
2:E:417:LEU:HD12	2:E:418:LEU:HD23	1.82	0.61
1:F:198:G:H21	2:E:408:GLY:HA3	1.64	0.61
2:A:136:ARG:NH1	2:A:137:PRO:HG2	2.15	0.61
2:A:202:MET:HA	2:A:205:MET:HB2	1.82	0.61
2:C:143:LEU:O	2:C:144:LEU:C	2.38	0.61
2:C:154:VAL:CG1	2:C:155:TYR:H	2.11	0.61
2:E:303:LYS:HG3	2:E:342:MET:HB2	1.80	0.61
2:E:314:GLN:O	2:E:315:LYS:C	2.38	0.61
2:A:157:GLU:O	2:A:160:ASN:HB3	2.01	0.61
2:A:169:LYS:O	2:A:170:GLY:C	2.39	0.61
2:E:215:ILE:HG23	2:E:241:SER:O	2.00	0.61
2:G:69:TRP:O	2:G:70:PHE:C	2.39	0.61
2:G:173:ILE:N	2:G:173:ILE:HD13	2.16	0.61
2:G:304:VAL:O	2:G:308:GLU:N	2.33	0.61
2:G:331:ASP:HA	2:G:334:ALA:HB3	1.82	0.61
1:F:219:C:H2'	1:F:220:C:H6	1.65	0.61
2:A:49:ALA:O	2:A:52:LYS:N	2.34	0.61
2:A:221:SER:HA	2:A:250:THR:CG2	2.30	0.61
2:C:222:ILE:HG12	2:C:226:ALA:H	1.64	0.61
2:C:275:LYS:HB2	2:C:278:GLU:HG3	1.83	0.61
2:E:5:ILE:C	2:E:7:ASP:N	2.51	0.61
2:E:69:TRP:O	2:E:70:PHE:C	2.39	0.61
2:E:285:LYS:O	2:E:286:ARG:C	2.38	0.61
2:E:380:ALA:HA	2:E:383:SER:CB	2.31	0.61
2:G:136:ARG:NH1	2:G:137:PRO:HG2	2.15	0.61
2:G:202:MET:HA	2:G:205:MET:HB2	1.82	0.61
2:A:326:LYS:HB3	2:A:327:LEU:HD12	1.80	0.61
2:A:331:ASP:HA	2:A:334:ALA:HB3	1.82	0.61
2:A:367:LEU:O	2:A:368:LYS:HE2	2.01	0.61
2:A:414:VAL:HA	2:A:417:LEU:HD21	1.83	0.61
2:C:285:LYS:O	2:C:286:ARG:C	2.38	0.61
2:C:339:LEU:H	2:C:339:LEU:CD2	2.07	0.61
2:E:60:PRO:O	2:E:61:PRO:C	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:283:ASN:O	2:A:284:ALA:C	2.40	0.60
2:C:164:ILE:O	2:C:167:ALA:HB3	2.01	0.60
2:C:260:VAL:HG11	2:C:267:ILE:HD11	1.82	0.60
2:C:283:ASN:O	2:C:284:ALA:C	2.39	0.60
2:C:417:LEU:HD12	2:C:418:LEU:HD23	1.82	0.60
2:E:49:ALA:O	2:E:52:LYS:N	2.33	0.60
2:E:77:GLU:OE1	2:E:77:GLU:HA	2.00	0.60
2:E:140:TYR:O	2:E:141:ASP:C	2.39	0.60
2:E:337:ILE:O	2:E:338:ALA:C	2.38	0.60
2:G:60:PRO:O	2:G:61:PRO:C	2.36	0.60
2:G:202:MET:CA	2:G:205:MET:SD	2.89	0.60
2:G:218:ILE:N	2:G:218:ILE:CD1	2.62	0.60
2:G:285:LYS:O	2:G:286:ARG:C	2.38	0.60
2:G:423:ASN:HA	2:G:426:ARG:HB2	1.81	0.60
1:B:198:G:H21	2:A:408:GLY:HA3	1.64	0.60
1:H:219:C:H2'	1:H:220:C:H6	1.65	0.60
2:C:140:TYR:O	2:C:141:ASP:C	2.39	0.60
2:C:298:GLU:C	2:C:301:LEU:HB3	2.22	0.60
2:C:423:ASN:HA	2:C:426:ARG:HB2	1.81	0.60
2:E:63:VAL:HG13	2:E:348:VAL:HA	1.83	0.60
2:E:215:ILE:CG2	2:E:242:VAL:HA	2.27	0.60
2:E:298:GLU:C	2:E:301:LEU:HB3	2.22	0.60
2:E:329:LEU:HB2	2:E:392:PRO:HG2	1.82	0.60
2:A:77:GLU:OE1	2:A:77:GLU:HA	2.00	0.60
2:C:380:ALA:HA	2:C:383:SER:CB	2.31	0.60
2:E:169:LYS:O	2:E:170:GLY:C	2.39	0.60
2:E:257:LEU:HD12	2:E:258:SER:H	1.66	0.60
2:E:304:VAL:O	2:E:308:GLU:N	2.34	0.60
2:E:308:GLU:O	2:E:309:GLU:CG	2.49	0.60
2:G:86:LYS:NZ	2:G:89:ASN:ND2	2.48	0.60
2:G:283:ASN:O	2:G:284:ALA:C	2.40	0.60
2:G:287:PHE:O	2:G:288:VAL:C	2.40	0.60
2:G:337:ILE:O	2:G:338:ALA:C	2.38	0.60
2:G:405:GLU:O	2:G:408:GLY:N	2.32	0.60
2:A:63:VAL:HA	2:A:351:HIS:CD2	2.37	0.60
2:A:164:ILE:O	2:A:167:ALA:HB3	2.01	0.60
2:A:254:GLY:O	2:A:257:LEU:HG	2.02	0.60
2:A:423:ASN:HA	2:A:426:ARG:HB2	1.81	0.60
2:C:25:GLU:O	2:C:26:PHE:C	2.40	0.60
2:C:304:VAL:O	2:C:308:GLU:N	2.33	0.60
2:C:315:LYS:HB3	2:C:315:LYS:HZ3	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:329:LEU:HB2	2:C:392:PRO:HG2	1.82	0.60
2:E:25:GLU:O	2:E:26:PHE:C	2.40	0.60
2:E:136:ARG:NH1	2:E:137:PRO:HG2	2.15	0.60
2:E:148:ASN:CG	2:E:149:GLN:N	2.55	0.60
2:E:380:ALA:O	2:E:382:ASN:OD1	2.20	0.60
2:G:63:VAL:HA	2:G:351:HIS:CD2	2.37	0.60
2:G:132:ALA:HB2	2:G:184:VAL:CG1	2.29	0.60
2:G:381:LEU:HD23	2:G:381:LEU:N	2.16	0.60
2:A:272:THR:OG1	2:A:278:GLU:HB3	2.02	0.60
2:A:339:LEU:HD23	2:A:342:MET:HE2	1.83	0.60
2:A:380:ALA:HA	2:A:383:SER:CB	2.31	0.60
2:C:50:LYS:O	2:C:53:GLU:HB2	2.02	0.60
2:C:310:TYR:C	2:C:312:LYS:N	2.52	0.60
2:C:367:LEU:O	2:C:368:LYS:HE2	2.01	0.60
2:E:106:GLY:O	2:E:107:SER:HB2	2.01	0.60
2:E:275:LYS:HB2	2:E:278:GLU:HG3	1.83	0.60
2:G:50:LYS:O	2:G:53:GLU:HB2	2.02	0.60
2:G:55:LEU:HD22	2:G:55:LEU:N	2.12	0.60
2:G:63:VAL:HG13	2:G:348:VAL:HA	1.84	0.60
2:G:77:GLU:HA	2:G:77:GLU:OE1	2.00	0.60
2:G:157:GLU:O	2:G:160:ASN:HB3	2.01	0.60
2:G:272:THR:OG1	2:G:278:GLU:HB3	2.02	0.60
2:G:328:THR:C	2:G:330:ARG:H	2.01	0.60
2:G:380:ALA:HA	2:G:383:SER:CB	2.31	0.60
1:B:219:C:H2'	1:B:220:C:H6	1.65	0.60
2:A:304:VAL:O	2:A:308:GLU:N	2.33	0.60
2:C:2:LEU:CG	2:C:3:GLU:H	2.12	0.60
2:C:63:VAL:HG13	2:C:348:VAL:HA	1.84	0.60
2:C:69:TRP:O	2:C:70:PHE:C	2.39	0.60
2:C:289:SER:HA	2:C:292:LEU:HD12	1.84	0.60
2:C:308:GLU:O	2:C:309:GLU:CG	2.49	0.60
2:C:380:ALA:O	2:C:382:ASN:OD1	2.20	0.60
2:E:272:THR:OG1	2:E:278:GLU:HB3	2.02	0.60
2:E:367:LEU:O	2:E:368:LYS:HE2	2.01	0.60
2:G:98:ILE:HG21	2:G:211:PRO:HA	1.84	0.60
2:G:275:LYS:HB2	2:G:278:GLU:HG3	1.83	0.60
2:G:358:MET:SD	2:G:358:MET:N	2.75	0.60
1:D:219:C:H2'	1:D:220:C:H6	1.65	0.60
2:A:50:LYS:O	2:A:53:GLU:HB2	2.02	0.60
2:A:86:LYS:NZ	2:A:89:ASN:ND2	2.48	0.60
2:A:115:LYS:NZ	2:A:273:GLY:O	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:215:ILE:HG23	2:A:241:SER:O	2.00	0.60
2:C:77:GLU:OE1	2:C:77:GLU:HA	2.00	0.60
2:C:157:GLU:O	2:C:160:ASN:HB3	2.01	0.60
2:C:284:ALA:O	2:C:285:LYS:C	2.40	0.60
2:A:260:VAL:HG11	2:A:267:ILE:HD11	1.82	0.60
2:A:374:ILE:O	2:A:376:ARG:N	2.33	0.60
2:C:68:GLU:O	2:C:71:ILE:HG12	2.02	0.60
2:C:121:LYS:C	2:C:123:ARG:H	2.03	0.60
2:C:132:ALA:HB2	2:C:184:VAL:CG1	2.29	0.60
2:C:215:ILE:HG23	2:C:241:SER:O	2.00	0.60
2:E:68:GLU:O	2:E:71:ILE:HG12	2.02	0.60
2:E:173:ILE:N	2:E:173:ILE:HD13	2.16	0.60
2:E:202:MET:CA	2:E:205:MET:SD	2.89	0.60
2:E:250:THR:HG22	2:E:252:LYS:CD	2.31	0.60
2:E:283:ASN:O	2:E:284:ALA:C	2.40	0.60
2:E:283:ASN:O	2:E:286:ARG:N	2.35	0.60
2:E:381:LEU:N	2:E:381:LEU:HD23	2.16	0.60
2:G:2:LEU:CG	2:G:3:GLU:H	2.12	0.60
2:G:115:LYS:O	2:G:119:PHE:N	2.26	0.60
2:G:254:GLY:O	2:G:257:LEU:HG	2.02	0.60
2:G:284:ALA:O	2:G:285:LYS:C	2.40	0.60
1:F:197:G:N2	2:E:407:SER:HA	2.08	0.60
2:A:71:ILE:HA	2:A:74:VAL:HG13	1.84	0.60
2:A:111:THR:HG1	2:A:112:THR:N	1.98	0.60
2:A:173:ILE:N	2:A:173:ILE:HD13	2.16	0.60
2:A:417:LEU:HD12	2:A:418:LEU:HD23	1.82	0.60
2:A:425:ASN:O	2:A:428:LEU:HB3	2.02	0.60
2:C:358:MET:SD	2:C:358:MET:N	2.75	0.60
2:C:384:MET:HG2	2:C:403:ILE:CD1	2.29	0.60
2:E:7:ASP:C	2:E:9:VAL:N	2.53	0.60
2:E:66:ARG:O	2:E:67:LYS:C	2.40	0.60
2:E:69:TRP:O	2:E:73:ILE:HG12	2.02	0.60
2:E:108:GLY:O	2:E:109:LYS:C	2.40	0.60
2:E:143:LEU:O	2:E:144:LEU:C	2.38	0.60
2:E:164:ILE:O	2:E:167:ALA:HB3	2.01	0.60
2:E:289:SER:HA	2:E:292:LEU:HD12	1.84	0.60
2:G:140:TYR:O	2:G:141:ASP:C	2.39	0.60
2:G:174:PHE:O	2:G:178:LYS:N	2.35	0.60
2:G:399:ARG:HB3	2:G:399:ARG:NH1	2.03	0.60
2:G:414:VAL:HA	2:G:417:LEU:HD21	1.83	0.60
2:A:283:ASN:O	2:A:286:ARG:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:297:ILE:O	2:A:298:GLU:C	2.41	0.60
2:A:298:GLU:C	2:A:301:LEU:HB3	2.22	0.60
2:C:98:ILE:HG21	2:C:211:PRO:HA	1.84	0.60
2:C:164:ILE:O	2:C:165:GLU:C	2.40	0.60
2:C:297:ILE:O	2:C:298:GLU:C	2.41	0.60
2:E:157:GLU:O	2:E:160:ASN:HB3	2.01	0.60
2:E:254:GLY:O	2:E:257:LEU:HG	2.02	0.60
2:G:215:ILE:HG23	2:G:241:SER:O	2.00	0.60
2:A:164:ILE:O	2:A:165:GLU:C	2.40	0.59
2:C:218:ILE:N	2:C:218:ILE:CD1	2.62	0.59
2:E:310:TYR:C	2:E:312:LYS:N	2.53	0.59
2:G:25:GLU:O	2:G:26:PHE:C	2.40	0.59
2:G:195:GLU:HG3	2:G:232:ARG:NH1	2.17	0.59
2:G:298:GLU:C	2:G:301:LEU:HB3	2.22	0.59
2:G:417:LEU:HD12	2:G:418:LEU:HD23	1.82	0.59
2:A:287:PHE:HA	2:A:290:ARG:HB3	1.83	0.59
2:C:210:LYS:HD3	2:C:210:LYS:N	2.18	0.59
2:C:287:PHE:O	2:C:288:VAL:C	2.40	0.59
2:C:414:VAL:HA	2:C:417:LEU:HD21	1.83	0.59
2:C:423:ASN:O	2:C:424:MET:C	2.40	0.59
2:E:123:ARG:HH11	2:E:123:ARG:CG	2.15	0.59
2:G:358:MET:O	2:G:358:MET:HG2	2.02	0.59
2:G:380:ALA:O	2:G:382:ASN:OD1	2.20	0.59
2:A:10:ARG:HG3	2:A:13:LEU:HD12	1.85	0.59
2:A:63:VAL:HG13	2:A:348:VAL:HA	1.84	0.59
2:A:108:GLY:O	2:A:109:LYS:C	2.40	0.59
2:A:127:VAL:HG21	2:A:152:VAL:CG1	2.32	0.59
2:A:148:ASN:CG	2:A:149:GLN:N	2.55	0.59
2:A:214:VAL:C	2:A:215:ILE:HD12	2.23	0.59
2:A:331:ASP:O	2:A:334:ALA:HB3	2.02	0.59
2:C:106:GLY:O	2:C:107:SER:HB2	2.02	0.59
2:C:283:ASN:O	2:C:286:ARG:N	2.35	0.59
2:C:425:ASN:O	2:C:428:LEU:HB3	2.02	0.59
2:E:55:LEU:HD22	2:E:55:LEU:N	2.12	0.59
2:E:86:LYS:HZ3	2:E:89:ASN:CG	2.05	0.59
2:G:283:ASN:O	2:G:286:ARG:N	2.35	0.59
2:G:287:PHE:HA	2:G:290:ARG:HB3	1.83	0.59
2:A:254:GLY:O	2:A:256:ALA:N	2.36	0.59
2:A:358:MET:SD	2:A:358:MET:N	2.75	0.59
2:C:69:TRP:O	2:C:73:ILE:HG12	2.02	0.59
2:C:175:VAL:O	2:C:178:LYS:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:254:GLY:O	2:C:256:ALA:N	2.36	0.59
2:C:254:GLY:O	2:C:257:LEU:HG	2.02	0.59
2:C:420:TRP:C	2:C:421:TYR:CD1	2.76	0.59
2:E:150:ILE:CD1	2:E:152:VAL:HB	2.29	0.59
2:E:174:PHE:O	2:E:178:LYS:N	2.35	0.59
2:G:104:VAL:HG23	2:G:105:GLN:H	1.68	0.59
2:G:148:ASN:CG	2:G:149:GLN:N	2.55	0.59
2:G:157:GLU:HB2	2:G:166:ILE:HD13	1.84	0.59
2:G:164:ILE:O	2:G:165:GLU:C	2.40	0.59
2:G:378:LEU:HA	2:G:381:LEU:HD12	1.83	0.59
2:A:98:ILE:HG21	2:A:211:PRO:HA	1.84	0.59
2:A:163:PRO:O	2:A:166:ILE:HG22	2.03	0.59
2:A:174:PHE:O	2:A:178:LYS:N	2.35	0.59
2:C:123:ARG:HH11	2:C:123:ARG:CG	2.15	0.59
2:C:204:GLU:O	2:C:205:MET:C	2.41	0.59
2:C:381:LEU:N	2:C:381:LEU:HD23	2.16	0.59
2:C:417:LEU:HD12	2:C:418:LEU:H	1.67	0.59
2:E:30:LEU:O	2:E:34:LEU:HD21	2.03	0.59
2:E:195:GLU:HG3	2:E:232:ARG:NH1	2.17	0.59
2:G:106:GLY:HA2	2:G:109:LYS:CB	2.32	0.59
2:G:210:LYS:HD3	2:G:210:LYS:N	2.18	0.59
2:G:310:TYR:C	2:G:312:LYS:N	2.53	0.59
2:G:331:ASP:O	2:G:334:ALA:HB3	2.02	0.59
2:A:43:LEU:O	2:A:46:SER:N	2.35	0.59
2:A:104:VAL:HG23	2:A:105:GLN:H	1.68	0.59
2:A:117:ALA:O	2:A:118:TYR:C	2.41	0.59
2:A:275:LYS:HB2	2:A:278:GLU:HG3	1.83	0.59
2:C:117:ALA:O	2:C:118:TYR:C	2.41	0.59
2:C:174:PHE:O	2:C:178:LYS:N	2.35	0.59
2:C:214:VAL:C	2:C:215:ILE:HD12	2.23	0.59
2:C:316:LYS:NZ	2:C:431:VAL:HG21	2.18	0.59
2:E:50:LYS:O	2:E:53:GLU:HB2	2.02	0.59
2:E:63:VAL:HA	2:E:351:HIS:CD2	2.37	0.59
2:E:254:GLY:O	2:E:256:ALA:N	2.36	0.59
2:E:296:ASP:O	2:E:298:GLU:N	2.36	0.59
2:E:417:LEU:HD12	2:E:418:LEU:H	1.67	0.59
2:G:68:GLU:O	2:G:71:ILE:HG12	2.02	0.59
2:G:297:ILE:O	2:G:298:GLU:C	2.41	0.59
2:G:384:MET:HG2	2:G:403:ILE:CD1	2.29	0.59
2:A:25:GLU:O	2:A:26:PHE:C	2.40	0.59
2:A:140:TYR:O	2:A:141:ASP:C	2.39	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:247:MET:SD	2:A:270:ILE:HG13	2.43	0.59
2:A:358:MET:HG2	2:A:358:MET:O	2.02	0.59
2:C:63:VAL:HA	2:C:351:HIS:CD2	2.37	0.59
2:C:66:ARG:O	2:C:67:LYS:C	2.40	0.59
2:C:108:GLY:O	2:C:109:LYS:C	2.40	0.59
2:C:329:LEU:CA	2:C:332:VAL:HG23	2.23	0.59
2:E:164:ILE:O	2:E:165:GLU:C	2.40	0.59
2:E:358:MET:O	2:E:358:MET:HG2	2.03	0.59
2:E:378:LEU:HA	2:E:381:LEU:HD12	1.83	0.59
2:E:425:ASN:O	2:E:428:LEU:HB3	2.02	0.59
2:G:71:ILE:HA	2:G:74:VAL:HG13	1.84	0.59
2:G:107:SER:C	2:G:109:LYS:N	2.56	0.59
2:G:204:GLU:O	2:G:205:MET:C	2.41	0.59
1:B:198:G:N3	1:B:198:G:H2'	2.17	0.59
2:A:66:ARG:O	2:A:67:LYS:C	2.40	0.59
2:A:106:GLY:O	2:A:107:SER:HB2	2.02	0.59
2:C:296:ASP:O	2:C:298:GLU:N	2.36	0.59
2:C:332:VAL:HG12	2:C:333:TYR:N	2.17	0.59
2:E:284:ALA:O	2:E:285:LYS:C	2.40	0.59
2:E:287:PHE:O	2:E:288:VAL:C	2.40	0.59
2:E:358:MET:SD	2:E:358:MET:N	2.75	0.59
2:E:414:VAL:HA	2:E:417:LEU:HD21	1.83	0.59
2:E:420:TRP:C	2:E:421:TYR:CD1	2.76	0.59
2:G:66:ARG:O	2:G:67:LYS:C	2.40	0.59
2:G:106:GLY:O	2:G:107:SER:HB2	2.01	0.59
2:G:214:VAL:C	2:G:215:ILE:HD12	2.23	0.59
2:G:247:MET:SD	2:G:270:ILE:HG13	2.43	0.59
2:G:288:VAL:CA	2:G:291:ILE:CD1	2.81	0.59
2:G:367:LEU:O	2:G:368:LYS:HE2	2.01	0.59
1:H:219:C:H2'	1:H:220:C:C6	2.38	0.59
2:A:332:VAL:HG12	2:A:333:TYR:N	2.17	0.59
2:A:378:LEU:HA	2:A:381:LEU:HD12	1.83	0.59
2:A:384:MET:HG2	2:A:403:ILE:CD1	2.29	0.59
2:C:150:ILE:CD1	2:C:152:VAL:HB	2.29	0.59
2:C:247:MET:SD	2:C:270:ILE:HG13	2.43	0.59
2:C:272:THR:OG1	2:C:278:GLU:HB3	2.02	0.59
2:E:24:ASP:HA	2:E:27:ILE:HG13	1.85	0.59
2:E:38:ASP:OD1	2:E:39:VAL:N	2.36	0.59
2:E:163:PRO:O	2:E:166:ILE:HG22	2.03	0.59
2:E:210:LYS:HD3	2:E:210:LYS:N	2.17	0.59
2:E:331:ASP:O	2:E:334:ALA:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:69:TRP:O	2:G:73:ILE:HG12	2.03	0.59
2:G:423:ASN:O	2:G:424:MET:C	2.40	0.59
1:H:198:G:H2'	1:H:198:G:N3	2.17	0.59
2:A:68:GLU:O	2:A:71:ILE:HG12	2.02	0.59
2:A:254:GLY:O	2:A:255:GLY:C	2.41	0.59
2:A:296:ASP:O	2:A:298:GLU:N	2.36	0.59
2:A:380:ALA:O	2:A:382:ASN:OD1	2.20	0.59
2:C:157:GLU:HB2	2:C:166:ILE:HD13	1.84	0.59
2:E:98:ILE:HG21	2:E:211:PRO:HA	1.84	0.59
2:E:127:VAL:HG21	2:E:152:VAL:CG1	2.32	0.59
2:E:154:VAL:CG1	2:E:155:TYR:H	2.11	0.59
2:E:287:PHE:HA	2:E:290:ARG:HB3	1.83	0.59
2:G:10:ARG:HG3	2:G:13:LEU:HD12	1.85	0.59
2:G:108:GLY:O	2:G:109:LYS:C	2.40	0.59
2:G:254:GLY:O	2:G:256:ALA:N	2.36	0.59
2:G:425:ASN:O	2:G:428:LEU:HB3	2.02	0.59
1:D:188:A:C8	2:C:399:ARG:NH2	2.71	0.58
2:A:38:ASP:OD1	2:A:39:VAL:N	2.36	0.58
2:A:195:GLU:HG3	2:A:232:ARG:NH1	2.17	0.58
2:A:233:PHE:CZ	2:A:240:GLY:HA3	2.38	0.58
2:A:328:THR:O	2:A:331:ASP:HB2	2.03	0.58
2:C:43:LEU:O	2:C:46:SER:N	2.35	0.58
2:C:127:VAL:HG21	2:C:152:VAL:CG1	2.32	0.58
2:C:148:ASN:CG	2:C:149:GLN:N	2.55	0.58
2:C:163:PRO:O	2:C:166:ILE:HG22	2.03	0.58
2:C:195:GLU:HG3	2:C:232:ARG:NH1	2.17	0.58
2:C:254:GLY:O	2:C:255:GLY:C	2.41	0.58
2:C:287:PHE:HA	2:C:290:ARG:HB3	1.83	0.58
2:C:331:ASP:O	2:C:334:ALA:HB3	2.02	0.58
2:E:71:ILE:HA	2:E:74:VAL:HG13	1.84	0.58
2:E:346:SER:O	2:E:349:LEU:N	2.36	0.58
2:G:303:LYS:CG	2:G:342:MET:HB2	2.34	0.58
1:F:188:A:C6	2:E:399:ARG:HG2	2.38	0.58
1:F:188:A:C8	2:E:399:ARG:NH2	2.71	0.58
2:A:144:LEU:O	2:A:145:GLN:O	2.22	0.58
2:A:289:SER:HA	2:A:292:LEU:HD12	1.84	0.58
2:C:209:LEU:C	2:C:209:LEU:CD2	2.72	0.58
2:C:303:LYS:CG	2:C:342:MET:HB2	2.34	0.58
2:E:117:ALA:O	2:E:118:TYR:C	2.41	0.58
2:E:247:MET:SD	2:E:270:ILE:HG13	2.43	0.58
2:E:296:ASP:OD1	2:E:297:ILE:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:297:ILE:O	2:E:298:GLU:C	2.41	0.58
2:G:257:LEU:HD12	2:G:258:SER:H	1.67	0.58
2:G:289:SER:HA	2:G:292:LEU:HD12	1.84	0.58
2:G:389:LEU:H	2:G:389:LEU:CD2	2.06	0.58
1:F:219:C:H2'	1:F:220:C:C6	2.38	0.58
1:H:188:A:C6	2:G:399:ARG:HG2	2.38	0.58
2:A:161:GLN:O	2:E:159:ASN:HB3	2.02	0.58
2:C:143:LEU:CD1	2:C:144:LEU:N	2.67	0.58
2:E:144:LEU:O	2:E:145:GLN:O	2.22	0.58
2:E:209:LEU:C	2:E:209:LEU:CD2	2.72	0.58
2:E:214:VAL:C	2:E:215:ILE:HD12	2.23	0.58
2:G:38:ASP:OD1	2:G:39:VAL:N	2.36	0.58
2:G:43:LEU:O	2:G:46:SER:N	2.35	0.58
2:G:144:LEU:O	2:G:145:GLN:O	2.22	0.58
2:G:254:GLY:O	2:G:255:GLY:C	2.41	0.58
2:G:316:LYS:HZ1	2:G:431:VAL:HG21	1.69	0.58
2:G:328:THR:O	2:G:331:ASP:HB2	2.03	0.58
1:D:188:A:C6	2:C:399:ARG:HG2	2.39	0.58
2:A:106:GLY:HA2	2:A:109:LYS:CB	2.32	0.58
2:A:197:LYS:O	2:A:201:GLU:HG3	2.04	0.58
2:A:218:ILE:N	2:A:218:ILE:CD1	2.62	0.58
2:A:303:LYS:CG	2:A:342:MET:HB2	2.34	0.58
2:A:346:SER:O	2:A:349:LEU:N	2.36	0.58
2:A:425:ASN:O	2:A:426:ARG:C	2.42	0.58
2:C:99:ILE:CG2	2:C:183:ILE:HA	2.33	0.58
2:C:300:ILE:HA	2:C:342:MET:HA	1.85	0.58
2:C:346:SER:O	2:C:349:LEU:N	2.36	0.58
2:C:420:TRP:C	2:C:421:TYR:HD1	2.07	0.58
2:E:153:GLN:HG2	2:E:154:VAL:N	2.18	0.58
2:E:188:GLY:HA3	2:E:201:GLU:CD	2.24	0.58
2:E:288:VAL:CA	2:E:291:ILE:CD1	2.81	0.58
2:G:26:PHE:CE2	2:G:27:ILE:HD13	2.38	0.58
2:G:163:PRO:O	2:G:166:ILE:HG22	2.03	0.58
2:G:197:LYS:O	2:G:201:GLU:HG3	2.04	0.58
2:G:316:LYS:NZ	2:G:431:VAL:HG21	2.18	0.58
2:G:332:VAL:HG12	2:G:333:TYR:N	2.17	0.58
2:G:346:SER:O	2:G:349:LEU:N	2.36	0.58
2:G:420:TRP:C	2:G:421:TYR:CD1	2.76	0.58
1:D:198:G:H2'	1:D:198:G:N3	2.17	0.58
1:D:219:C:H2'	1:D:220:C:C6	2.38	0.58
2:A:5:ILE:CG2	2:A:6:ARG:N	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:157:GLU:HB2	2:A:166:ILE:HD13	1.84	0.58
2:A:204:GLU:O	2:A:205:MET:C	2.41	0.58
2:C:38:ASP:OD1	2:C:39:VAL:N	2.36	0.58
2:C:153:GLN:HG2	2:C:154:VAL:N	2.18	0.58
2:C:188:GLY:HA3	2:C:201:GLU:CD	2.24	0.58
2:C:233:PHE:O	2:C:236:ALA:N	2.37	0.58
2:E:10:ARG:HG3	2:E:13:LEU:HD12	1.85	0.58
2:E:332:VAL:HG12	2:E:333:TYR:N	2.17	0.58
2:G:153:GLN:HG2	2:G:154:VAL:N	2.18	0.58
2:G:244:ILE:HD12	2:G:244:ILE:N	2.19	0.58
2:A:140:TYR:N	2:A:140:TYR:CD1	2.72	0.58
2:A:188:GLY:HA3	2:A:201:GLU:CD	2.24	0.58
2:A:196:THR:O	2:A:200:GLU:HB2	2.04	0.58
2:A:209:LEU:C	2:A:209:LEU:CD2	2.72	0.58
2:A:284:ALA:O	2:A:285:LYS:C	2.40	0.58
2:C:5:ILE:CG2	2:C:6:ARG:N	2.66	0.58
2:C:288:VAL:CA	2:C:291:ILE:CD1	2.81	0.58
2:C:358:MET:HG2	2:C:358:MET:O	2.02	0.58
2:E:175:VAL:O	2:E:178:LYS:N	2.34	0.58
2:E:204:GLU:O	2:E:205:MET:C	2.41	0.58
2:E:233:PHE:O	2:E:236:ALA:N	2.37	0.58
2:E:244:ILE:HD12	2:E:244:ILE:N	2.19	0.58
2:E:420:TRP:C	2:E:421:TYR:HD1	2.07	0.58
2:G:117:ALA:O	2:G:118:TYR:C	2.41	0.58
2:G:123:ARG:HH11	2:G:123:ARG:CG	2.15	0.58
2:G:127:VAL:HG21	2:G:152:VAL:CG1	2.32	0.58
2:G:209:LEU:CD2	2:G:209:LEU:C	2.72	0.58
2:G:233:PHE:O	2:G:236:ALA:N	2.37	0.58
2:G:300:ILE:HA	2:G:342:MET:HA	1.85	0.58
1:B:219:C:H2'	1:B:220:C:C6	2.38	0.58
1:F:198:G:H2'	1:F:198:G:N3	2.17	0.58
1:H:213:A:OP1	2:G:385:THR:HA	2.03	0.58
1:H:217:U:H3'	1:H:218:G:H5''	1.86	0.58
2:A:5:ILE:CG1	2:A:30:LEU:HA	2.34	0.58
2:A:64:LEU:HG	2:A:65:GLU:OE1	2.04	0.58
2:A:69:TRP:O	2:A:73:ILE:HG12	2.03	0.58
2:A:172:ASP:O	2:A:176:LYS:N	2.31	0.58
2:C:7:ASP:C	2:C:9:VAL:N	2.53	0.58
2:C:197:LYS:O	2:C:201:GLU:HG3	2.04	0.58
2:E:43:LEU:H	2:E:43:LEU:CD2	1.84	0.58
2:E:374:ILE:O	2:E:376:ARG:N	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:233:PHE:CZ	2:G:240:GLY:HA3	2.38	0.58
2:G:374:ILE:O	2:G:376:ARG:N	2.33	0.58
2:G:420:TRP:C	2:G:421:TYR:HD1	2.07	0.58
1:B:188:A:C8	2:A:399:ARG:NH2	2.71	0.58
1:D:213:A:OP1	2:C:385:THR:HA	2.03	0.58
1:H:188:A:C8	2:G:399:ARG:NH2	2.71	0.58
2:A:30:LEU:O	2:A:34:LEU:HD21	2.03	0.58
2:A:250:THR:CG2	2:A:252:LYS:HD3	2.33	0.58
2:C:71:ILE:HA	2:C:74:VAL:HG13	1.84	0.58
2:C:144:LEU:O	2:C:145:GLN:O	2.22	0.58
2:C:378:LEU:HA	2:C:381:LEU:HD12	1.83	0.58
2:C:425:ASN:O	2:C:426:ARG:C	2.42	0.58
2:E:5:ILE:CG1	2:E:30:LEU:HA	2.34	0.58
2:E:26:PHE:CE2	2:E:27:ILE:HD13	2.38	0.58
2:E:157:GLU:HB2	2:E:166:ILE:HD13	1.84	0.58
2:E:180:ASP:CB	2:E:181:ILE:HD12	2.34	0.58
2:E:254:GLY:O	2:E:255:GLY:C	2.41	0.58
2:E:303:LYS:CG	2:E:342:MET:HB2	2.33	0.58
2:G:5:ILE:CG1	2:G:30:LEU:HA	2.34	0.58
2:G:30:LEU:O	2:G:34:LEU:HD21	2.03	0.58
2:G:172:ASP:O	2:G:176:LYS:N	2.31	0.58
2:G:175:VAL:O	2:G:178:LYS:N	2.34	0.58
1:F:213:A:OP1	2:E:385:THR:HA	2.03	0.58
1:H:197:G:N2	2:G:407:SER:HA	2.08	0.58
2:A:99:ILE:CG2	2:A:183:ILE:HA	2.33	0.58
2:A:244:ILE:HD12	2:A:244:ILE:N	2.19	0.58
2:A:253:GLY:O	2:A:254:GLY:C	2.42	0.58
2:A:420:TRP:C	2:A:421:TYR:CD1	2.76	0.58
2:C:146:LEU:C	2:C:150:ILE:HG23	2.24	0.58
2:E:233:PHE:CZ	2:E:240:GLY:HA3	2.38	0.58
2:G:250:THR:CG2	2:G:252:LYS:HD3	2.33	0.58
2:G:296:ASP:O	2:G:298:GLU:N	2.36	0.58
2:A:35:ILE:HD13	2:A:35:ILE:N	2.19	0.58
2:A:159:ASN:HD21	2:E:162:ASN:ND2	2.02	0.58
2:A:423:ASN:O	2:A:424:MET:C	2.40	0.58
2:C:26:PHE:CE2	2:C:27:ILE:HD13	2.38	0.58
2:C:86:LYS:HZ1	2:C:89:ASN:ND2	2.02	0.58
2:C:233:PHE:CZ	2:C:240:GLY:HA3	2.38	0.58
2:C:412:GLU:HB3	2:C:416:GLU:OE2	2.04	0.58
2:E:297:ILE:CD1	2:E:298:GLU:HG3	2.34	0.58
2:G:5:ILE:CG2	2:G:6:ARG:N	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:99:ILE:CG2	2:G:183:ILE:HA	2.33	0.58
2:G:141:ASP:O	2:G:142:GLN:C	2.42	0.58
2:A:26:PHE:CE2	2:A:27:ILE:HD13	2.38	0.57
2:A:153:GLN:HG2	2:A:154:VAL:N	2.18	0.57
2:A:210:LYS:HD3	2:A:210:LYS:N	2.18	0.57
2:A:389:LEU:H	2:A:389:LEU:CD2	2.06	0.57
2:C:24:ASP:HA	2:C:27:ILE:HG13	1.85	0.57
2:C:30:LEU:O	2:C:34:LEU:HD21	2.03	0.57
2:C:195:GLU:HG3	2:C:196:THR:N	2.19	0.57
2:E:143:LEU:CD1	2:E:144:LEU:N	2.67	0.57
2:G:250:THR:HG22	2:G:252:LYS:CD	2.31	0.57
2:G:253:GLY:O	2:G:254:GLY:C	2.42	0.57
2:A:10:ARG:C	2:A:12:PHE:N	2.58	0.57
2:A:146:LEU:C	2:A:150:ILE:HG23	2.24	0.57
2:A:287:PHE:O	2:A:288:VAL:C	2.40	0.57
2:C:5:ILE:CG1	2:C:30:LEU:HA	2.34	0.57
2:C:244:ILE:N	2:C:244:ILE:HD12	2.19	0.57
2:E:197:LYS:O	2:E:201:GLU:HG3	2.04	0.57
2:E:295:GLY:O	2:E:298:GLU:OE2	2.23	0.57
2:E:381:LEU:N	2:E:384:MET:SD	2.77	0.57
2:G:2:LEU:O	2:G:3:GLU:C	2.43	0.57
2:G:143:LEU:CD1	2:G:144:LEU:N	2.67	0.57
2:G:243:ILE:CD1	2:G:269:PHE:N	2.55	0.57
2:G:297:ILE:CD1	2:G:298:GLU:HG3	2.34	0.57
2:G:417:LEU:HD12	2:G:418:LEU:H	1.67	0.57
1:B:213:A:OP1	2:A:385:THR:HA	2.03	0.57
1:D:217:U:H3'	1:D:218:G:H5''	1.86	0.57
2:A:81:LEU:HD12	2:A:81:LEU:C	2.25	0.57
2:A:123:ARG:HH11	2:A:123:ARG:CG	2.15	0.57
2:A:316:LYS:NZ	2:A:431:VAL:HG21	2.18	0.57
2:C:2:LEU:O	2:C:3:GLU:C	2.43	0.57
2:C:38:ASP:HB2	2:C:252:LYS:CB	2.28	0.57
2:C:55:LEU:HD22	2:C:55:LEU:N	2.12	0.57
2:E:5:ILE:CG2	2:E:6:ARG:N	2.66	0.57
2:E:64:LEU:HG	2:E:65:GLU:OE1	2.04	0.57
2:E:81:LEU:C	2:E:81:LEU:HD12	2.25	0.57
2:E:412:GLU:HB3	2:E:416:GLU:OE2	2.04	0.57
2:G:7:ASP:C	2:G:9:VAL:N	2.53	0.57
2:G:81:LEU:HG	2:G:82:PHE:N	2.19	0.57
2:G:171:VAL:N	2:G:174:PHE:HE2	2.02	0.57
2:G:188:GLY:HA3	2:G:201:GLU:CD	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:217:U:H3'	1:B:218:G:H5''	1.86	0.57
2:A:195:GLU:HG3	2:A:196:THR:N	2.19	0.57
2:A:420:TRP:C	2:A:421:TYR:HD1	2.07	0.57
2:C:5:ILE:O	2:C:8:ALA:N	2.37	0.57
2:C:171:VAL:N	2:C:174:PHE:HE2	2.02	0.57
2:C:250:THR:HG22	2:C:252:LYS:CD	2.32	0.57
2:C:328:THR:O	2:C:331:ASP:HB2	2.03	0.57
2:E:115:LYS:NZ	2:E:273:GLY:O	2.33	0.57
2:E:150:ILE:HD11	2:E:152:VAL:CB	2.31	0.57
2:E:316:LYS:NZ	2:E:431:VAL:HG21	2.18	0.57
2:E:335:GLN:HE22	2:E:355:LEU:CA	2.15	0.57
2:E:370:GLY:O	2:E:374:ILE:HG22	2.05	0.57
2:G:64:LEU:HG	2:G:65:GLU:OE1	2.04	0.57
2:G:102:VAL:CG1	2:G:202:MET:HG3	2.31	0.57
2:G:180:ASP:CB	2:G:181:ILE:HD12	2.34	0.57
2:G:196:THR:O	2:G:200:GLU:HB2	2.04	0.57
2:G:295:GLY:O	2:G:298:GLU:OE2	2.23	0.57
1:B:188:A:C6	2:A:399:ARG:HG2	2.39	0.57
1:H:195:C:O2	1:H:195:C:C2'	2.52	0.57
2:A:40:ASN:OD1	2:A:41:VAL:N	2.38	0.57
2:A:102:VAL:CG1	2:A:202:MET:HG3	2.31	0.57
2:A:241:SER:CB	2:A:268:LYS:HE3	2.34	0.57
2:C:140:TYR:N	2:C:140:TYR:CD1	2.72	0.57
2:C:141:ASP:O	2:C:142:GLN:C	2.42	0.57
2:E:102:VAL:CG1	2:E:202:MET:HG3	2.31	0.57
2:E:253:GLY:O	2:E:254:GLY:C	2.42	0.57
2:E:425:ASN:O	2:E:426:ARG:C	2.42	0.57
2:G:81:LEU:C	2:G:81:LEU:HD12	2.25	0.57
2:C:64:LEU:HG	2:C:65:GLU:OE1	2.04	0.57
2:C:180:ASP:CB	2:C:181:ILE:HD12	2.34	0.57
2:C:241:SER:CB	2:C:268:LYS:HE3	2.34	0.57
2:C:303:LYS:CB	2:C:342:MET:HB2	2.35	0.57
2:C:370:GLY:O	2:C:374:ILE:HG22	2.05	0.57
2:C:427:LEU:O	2:C:430:MET:HB2	2.05	0.57
2:E:34:LEU:O	2:E:37:SER:N	2.38	0.57
2:E:99:ILE:CG2	2:E:183:ILE:HA	2.33	0.57
2:E:134:VAL:HG21	2:E:162:ASN:H	1.69	0.57
2:E:196:THR:O	2:E:200:GLU:HB2	2.04	0.57
2:E:329:LEU:CA	2:E:332:VAL:HG23	2.24	0.57
2:G:24:ASP:HA	2:G:27:ILE:HG13	1.85	0.57
2:G:381:LEU:N	2:G:384:MET:SD	2.77	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:425:ASN:O	2:G:428:LEU:N	2.38	0.57
2:A:143:LEU:CD1	2:A:144:LEU:N	2.67	0.57
2:A:195:GLU:O	2:A:198:LEU:N	2.38	0.57
2:A:295:GLY:O	2:A:298:GLU:OE2	2.23	0.57
2:C:34:LEU:O	2:C:37:SER:N	2.38	0.57
2:C:81:LEU:C	2:C:81:LEU:HD12	2.25	0.57
2:C:107:SER:C	2:C:109:LYS:N	2.56	0.57
2:C:195:GLU:O	2:C:198:LEU:N	2.38	0.57
2:C:295:GLY:O	2:C:298:GLU:OE2	2.23	0.57
2:C:374:ILE:O	2:C:376:ARG:N	2.33	0.57
2:E:5:ILE:O	2:E:8:ALA:N	2.37	0.57
2:E:195:GLU:HG3	2:E:196:THR:N	2.19	0.57
2:G:35:ILE:HD13	2:G:35:ILE:N	2.19	0.57
2:G:111:THR:HG1	2:G:112:THR:N	2.01	0.57
2:G:140:TYR:N	2:G:140:TYR:CD1	2.72	0.57
2:A:5:ILE:O	2:A:8:ALA:N	2.37	0.57
2:A:24:ASP:HA	2:A:27:ILE:HG13	1.85	0.57
2:A:100:MET:HE3	2:A:206:TYR:HA	1.87	0.57
2:A:132:ALA:HB2	2:A:184:VAL:CG1	2.29	0.57
2:A:171:VAL:N	2:A:174:PHE:HE2	2.02	0.57
2:A:233:PHE:O	2:A:236:ALA:N	2.37	0.57
2:A:250:THR:HG22	2:A:252:LYS:CD	2.32	0.57
2:A:288:VAL:CA	2:A:291:ILE:CD1	2.81	0.57
2:A:297:ILE:CD1	2:A:298:GLU:HG3	2.34	0.57
2:A:425:ASN:O	2:A:428:LEU:N	2.38	0.57
2:C:10:ARG:HG3	2:C:13:LEU:HD12	1.85	0.57
2:C:102:VAL:CG1	2:C:202:MET:HG3	2.31	0.57
2:C:196:THR:O	2:C:200:GLU:HB2	2.04	0.57
2:C:253:GLY:O	2:C:254:GLY:C	2.43	0.57
2:C:297:ILE:CD1	2:C:298:GLU:HG3	2.34	0.57
2:C:381:LEU:N	2:C:384:MET:SD	2.77	0.57
2:E:40:ASN:OD1	2:E:41:VAL:N	2.38	0.57
2:E:141:ASP:O	2:E:144:LEU:N	2.38	0.57
2:E:423:ASN:O	2:E:424:MET:C	2.40	0.57
2:G:141:ASP:O	2:G:144:LEU:N	2.38	0.57
2:G:195:GLU:O	2:G:198:LEU:N	2.38	0.57
2:G:427:LEU:O	2:G:430:MET:HB2	2.05	0.57
1:H:212:A:H2'	1:H:213:A:O5'	2.04	0.57
2:A:180:ASP:CB	2:A:181:ILE:HD12	2.34	0.57
2:A:412:GLU:HB3	2:A:416:GLU:OE2	2.04	0.57
2:A:414:VAL:HG13	2:A:417:LEU:HD11	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:141:ASP:O	2:C:144:LEU:N	2.38	0.57
2:C:365:ASP:OD1	2:C:366:GLN:N	2.38	0.57
2:E:52:LYS:O	2:E:55:LEU:HD23	2.05	0.57
2:E:146:LEU:C	2:E:150:ILE:HG23	2.24	0.57
2:E:171:VAL:N	2:E:174:PHE:HE2	2.02	0.57
2:E:303:LYS:CB	2:E:342:MET:HB2	2.35	0.57
2:G:284:ALA:O	2:G:287:PHE:N	2.38	0.57
2:A:81:LEU:HG	2:A:82:PHE:N	2.19	0.57
2:A:141:ASP:O	2:A:144:LEU:N	2.38	0.57
2:A:303:LYS:CB	2:A:342:MET:HB2	2.35	0.57
2:A:381:LEU:N	2:A:384:MET:SD	2.77	0.57
2:A:391:ASN:HB3	2:A:394:ILE:HD13	1.87	0.57
2:C:40:ASN:OD1	2:C:41:VAL:N	2.38	0.57
2:C:103:GLY:O	2:C:104:VAL:O	2.23	0.57
2:C:288:VAL:HA	2:C:291:ILE:CD1	2.22	0.57
2:C:414:VAL:HG13	2:C:417:LEU:HD11	1.87	0.57
2:E:103:GLY:O	2:E:104:VAL:O	2.23	0.57
2:E:195:GLU:O	2:E:198:LEU:N	2.38	0.57
2:G:5:ILE:O	2:G:8:ALA:N	2.37	0.57
2:G:10:ARG:C	2:G:12:PHE:N	2.58	0.57
2:G:34:LEU:O	2:G:37:SER:N	2.38	0.57
2:G:129:LEU:HB2	2:G:154:VAL:HG13	1.87	0.57
2:G:348:VAL:CG2	2:G:349:LEU:H	2.17	0.57
2:A:7:ASP:C	2:A:9:VAL:N	2.53	0.56
2:A:119:PHE:CE1	2:A:123:ARG:NE	2.73	0.56
2:A:134:VAL:HG21	2:A:162:ASN:H	1.69	0.56
2:A:257:LEU:HD12	2:A:258:SER:H	1.67	0.56
2:A:284:ALA:O	2:A:287:PHE:N	2.38	0.56
2:C:52:LYS:O	2:C:55:LEU:HD23	2.05	0.56
2:C:139:ALA:O	2:C:140:TYR:C	2.44	0.56
2:C:301:LEU:CD2	2:C:302:GLU:N	2.69	0.56
2:C:425:ASN:O	2:C:428:LEU:N	2.38	0.56
2:E:2:LEU:O	2:E:3:GLU:C	2.43	0.56
2:E:107:SER:C	2:E:109:LYS:N	2.56	0.56
2:E:216:LEU:HD11	2:E:229:LEU:HD21	1.87	0.56
2:E:241:SER:CB	2:E:268:LYS:HE3	2.34	0.56
2:G:75:TYR:O	2:G:76:ASP:C	2.43	0.56
2:G:119:PHE:CE1	2:G:123:ARG:NE	2.73	0.56
2:G:228:ASP:O	2:G:229:LEU:C	2.43	0.56
2:G:412:GLU:HB3	2:G:416:GLU:OE2	2.04	0.56
1:B:195:C:O2	1:B:195:C:C2'	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:212:A:H2'	1:B:213:A:O5'	2.04	0.56
2:A:2:LEU:O	2:A:3:GLU:C	2.43	0.56
2:A:81:LEU:HD12	2:A:81:LEU:O	2.05	0.56
2:A:175:VAL:O	2:A:178:LYS:N	2.34	0.56
2:A:300:ILE:HA	2:A:342:MET:HA	1.85	0.56
2:A:310:TYR:C	2:A:312:LYS:N	2.53	0.56
2:A:348:VAL:CG2	2:A:349:LEU:H	2.17	0.56
2:A:414:VAL:O	2:A:418:LEU:HG	2.06	0.56
2:A:427:LEU:O	2:A:430:MET:HB2	2.05	0.56
2:C:27:ILE:O	2:C:31:GLN:HB3	2.06	0.56
2:E:104:VAL:HG23	2:E:105:GLN:H	1.68	0.56
2:E:301:LEU:CD2	2:E:302:GLU:N	2.68	0.56
2:E:304:VAL:C	2:E:308:GLU:OE1	2.44	0.56
2:E:326:LYS:N	2:E:326:LYS:HD2	2.20	0.56
2:E:328:THR:O	2:E:331:ASP:HB2	2.04	0.56
2:E:427:LEU:O	2:E:430:MET:HB2	2.05	0.56
2:G:52:LYS:O	2:G:55:LEU:HD23	2.05	0.56
2:G:370:GLY:O	2:G:374:ILE:HG22	2.05	0.56
2:G:422:ASN:C	2:G:425:ASN:ND2	2.50	0.56
2:G:425:ASN:O	2:G:426:ARG:C	2.42	0.56
1:D:212:A:H2'	1:D:213:A:O5'	2.04	0.56
1:F:217:U:H3'	1:F:218:G:H5''	1.86	0.56
2:A:34:LEU:O	2:A:37:SER:N	2.38	0.56
2:A:52:LYS:O	2:A:55:LEU:HD23	2.05	0.56
2:A:71:ILE:CA	2:A:74:VAL:HG22	2.36	0.56
2:A:141:ASP:O	2:A:142:GLN:C	2.42	0.56
2:A:228:ASP:O	2:A:229:LEU:C	2.43	0.56
2:C:86:LYS:HZ3	2:C:89:ASN:CG	2.08	0.56
2:C:115:LYS:NZ	2:C:273:GLY:O	2.33	0.56
2:C:119:PHE:CE1	2:C:123:ARG:NE	2.73	0.56
2:C:171:VAL:O	2:C:175:VAL:HG23	2.06	0.56
2:C:326:LYS:N	2:C:326:LYS:HD2	2.20	0.56
2:C:348:VAL:CG2	2:C:349:LEU:H	2.17	0.56
2:C:391:ASN:HB3	2:C:394:ILE:HD13	1.87	0.56
2:E:71:ILE:CA	2:E:74:VAL:HG22	2.35	0.56
2:E:140:TYR:HA	2:E:143:LEU:CD2	2.35	0.56
2:E:171:VAL:O	2:E:175:VAL:HG23	2.06	0.56
2:E:277:ASP:O	2:E:279:LEU:N	2.39	0.56
2:E:300:ILE:HA	2:E:342:MET:HA	1.86	0.56
2:E:391:ASN:HB3	2:E:394:ILE:CD1	2.36	0.56
2:G:31:GLN:O	2:G:34:LEU:HG	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:38:ASP:HB2	2:G:252:LYS:CB	2.28	0.56
2:G:71:ILE:O	2:G:73:ILE:N	2.39	0.56
2:G:71:ILE:CA	2:G:74:VAL:HG22	2.36	0.56
2:G:134:VAL:HG21	2:G:162:ASN:H	1.69	0.56
2:G:140:TYR:HD1	2:G:141:ASP:OD1	1.87	0.56
2:G:195:GLU:HG3	2:G:196:THR:N	2.19	0.56
2:G:241:SER:CB	2:G:268:LYS:HE3	2.34	0.56
2:A:71:ILE:O	2:A:73:ILE:N	2.39	0.56
2:A:241:SER:HA	2:A:266:THR:HB	1.87	0.56
2:C:340:ARG:NH2	2:C:345:LEU:H	2.04	0.56
2:C:384:MET:HB3	2:C:388:GLU:OE1	2.05	0.56
2:E:71:ILE:HA	2:E:74:VAL:CG2	2.35	0.56
2:E:198:LEU:O	2:E:201:GLU:HB2	2.06	0.56
2:E:233:PHE:O	2:E:237:SER:N	2.37	0.56
2:E:241:SER:HA	2:E:266:THR:HB	1.87	0.56
2:E:348:VAL:CG2	2:E:349:LEU:H	2.17	0.56
2:E:414:VAL:O	2:E:418:LEU:HG	2.05	0.56
2:G:81:LEU:HD12	2:G:81:LEU:O	2.05	0.56
2:G:303:LYS:CB	2:G:342:MET:HB2	2.35	0.56
2:G:414:VAL:O	2:G:418:LEU:HG	2.05	0.56
2:A:31:GLN:O	2:A:34:LEU:HG	2.06	0.56
2:A:109:LYS:HB2	2:A:109:LYS:HZ3	1.71	0.56
2:A:140:TYR:HA	2:A:143:LEU:CD2	2.35	0.56
2:A:171:VAL:O	2:A:175:VAL:HG23	2.06	0.56
2:A:415:ARG:HA	2:A:418:LEU:CD1	2.36	0.56
2:C:81:LEU:HD12	2:C:81:LEU:O	2.05	0.56
2:C:81:LEU:HG	2:C:82:PHE:N	2.19	0.56
2:C:140:TYR:HD1	2:C:141:ASP:OD1	1.88	0.56
2:C:228:ASP:O	2:C:229:LEU:C	2.43	0.56
2:E:227:TYR:CB	2:E:259:ALA:HB1	2.35	0.56
2:E:268:LYS:O	2:E:282:PHE:HB3	2.06	0.56
2:E:376:ARG:HG3	2:E:376:ARG:NH2	2.20	0.56
2:E:384:MET:HB3	2:E:388:GLU:OE1	2.05	0.56
2:E:425:ASN:O	2:E:428:LEU:N	2.38	0.56
2:G:115:LYS:NZ	2:G:273:GLY:O	2.33	0.56
2:G:326:LYS:HD2	2:G:326:LYS:N	2.21	0.56
2:G:384:MET:HB3	2:G:388:GLU:OE1	2.05	0.56
1:B:197:G:N2	2:A:407:SER:HA	2.08	0.56
1:F:211:C:O2	1:F:211:C:H2'	2.06	0.56
2:A:75:TYR:O	2:A:76:ASP:C	2.43	0.56
2:A:277:ASP:O	2:A:279:LEU:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:369:ILE:HA	2:A:371:GLU:OE1	2.06	0.56
2:C:134:VAL:HG21	2:C:162:ASN:H	1.69	0.56
2:C:150:ILE:HD11	2:C:152:VAL:CB	2.31	0.56
2:E:140:TYR:HD1	2:E:141:ASP:OD1	1.87	0.56
2:E:250:THR:O	2:E:251:ALA:HB2	2.06	0.56
2:G:27:ILE:O	2:G:31:GLN:N	2.31	0.56
2:G:119:PHE:HE2	2:G:120:TYR:CZ	2.24	0.56
2:G:146:LEU:C	2:G:150:ILE:HG23	2.24	0.56
2:G:391:ASN:HB3	2:G:394:ILE:HD13	1.87	0.56
2:A:197:LYS:HA	2:A:200:GLU:HB3	1.88	0.56
2:A:297:ILE:HG13	2:A:298:GLU:H	1.70	0.56
2:A:370:GLY:O	2:A:374:ILE:HG22	2.05	0.56
2:C:35:ILE:O	2:C:38:ASP:O	2.24	0.56
2:C:129:LEU:HB2	2:C:154:VAL:HG13	1.87	0.56
2:C:391:ASN:HB3	2:C:394:ILE:CD1	2.36	0.56
2:C:395:ILE:H	2:C:395:ILE:CD1	2.17	0.56
2:E:284:ALA:O	2:E:287:PHE:N	2.38	0.56
2:E:340:ARG:NH2	2:E:345:LEU:H	2.04	0.56
2:G:40:ASN:OD1	2:G:41:VAL:N	2.38	0.56
2:G:66:ARG:HH11	2:G:66:ARG:CB	2.15	0.56
2:G:197:LYS:HA	2:G:200:GLU:HB3	1.87	0.56
2:G:414:VAL:HG13	2:G:417:LEU:HD11	1.87	0.56
2:G:427:LEU:O	2:G:430:MET:N	2.35	0.56
1:D:196:A:H2'	1:D:197:G:O4'	2.06	0.56
2:A:35:ILE:O	2:A:38:ASP:O	2.24	0.56
2:A:71:ILE:HA	2:A:74:VAL:CG2	2.35	0.56
2:A:80:LYS:HA	2:A:84:GLY:HA2	1.88	0.56
2:A:243:ILE:CD1	2:A:269:PHE:N	2.55	0.56
2:A:300:ILE:C	2:A:303:LYS:HG2	2.26	0.56
2:C:8:ALA:CA	2:C:11:LYS:HB3	2.36	0.56
2:C:140:TYR:HA	2:C:143:LEU:CD2	2.35	0.56
2:C:284:ALA:O	2:C:287:PHE:N	2.38	0.56
2:E:140:TYR:N	2:E:140:TYR:CD1	2.72	0.56
2:E:172:ASP:O	2:E:175:VAL:HB	2.06	0.56
2:E:348:VAL:O	2:E:352:ILE:N	2.39	0.56
2:G:35:ILE:O	2:G:38:ASP:O	2.24	0.56
2:G:112:THR:O	2:G:113:ALA:C	2.44	0.56
2:G:277:ASP:O	2:G:279:LEU:N	2.39	0.56
2:G:301:LEU:CD2	2:G:302:GLU:N	2.68	0.56
2:G:391:ASN:HB3	2:G:394:ILE:CD1	2.36	0.56
1:H:196:A:H2'	1:H:197:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:140:TYR:HD1	2:A:141:ASP:OD1	1.87	0.56
2:A:384:MET:HB3	2:A:388:GLU:OE1	2.05	0.56
2:C:31:GLN:O	2:C:34:LEU:HG	2.06	0.56
2:C:71:ILE:HA	2:C:74:VAL:CG2	2.35	0.56
2:C:75:TYR:O	2:C:76:ASP:C	2.43	0.56
2:E:71:ILE:O	2:E:73:ILE:N	2.39	0.56
2:E:106:GLY:HA2	2:E:109:LYS:CB	2.32	0.56
2:G:27:ILE:O	2:G:31:GLN:HB3	2.06	0.56
2:G:71:ILE:HA	2:G:74:VAL:CG2	2.35	0.56
2:G:140:TYR:HA	2:G:143:LEU:CD2	2.35	0.56
2:G:198:LEU:O	2:G:201:GLU:HB2	2.06	0.56
2:G:250:THR:O	2:G:251:ALA:HB2	2.06	0.56
2:G:374:ILE:C	2:G:376:ARG:N	2.59	0.56
2:A:119:PHE:HE2	2:A:120:TYR:CZ	2.24	0.56
2:A:150:ILE:HD11	2:A:152:VAL:CB	2.31	0.56
2:A:198:LEU:O	2:A:201:GLU:HB2	2.06	0.56
2:C:80:LYS:HA	2:C:84:GLY:HA2	1.88	0.56
2:C:216:LEU:HD11	2:C:229:LEU:HD21	1.88	0.56
2:C:250:THR:O	2:C:251:ALA:HB2	2.06	0.56
2:C:414:VAL:O	2:C:418:LEU:HG	2.05	0.56
2:E:35:ILE:HD13	2:E:35:ILE:N	2.19	0.56
2:E:109:LYS:HB2	2:E:109:LYS:HZ3	1.71	0.56
2:E:119:PHE:CE1	2:E:123:ARG:NE	2.73	0.56
2:E:414:VAL:HG13	2:E:417:LEU:HD11	1.87	0.56
2:G:65:GLU:CD	2:G:65:GLU:H	2.10	0.56
2:G:80:LYS:HA	2:G:84:GLY:HA2	1.88	0.56
2:G:103:GLY:O	2:G:104:VAL:O	2.23	0.56
2:G:340:ARG:NH2	2:G:345:LEU:H	2.04	0.56
2:G:415:ARG:HA	2:G:418:LEU:CD1	2.36	0.56
1:F:212:A:H2'	1:F:213:A:O5'	2.05	0.55
2:C:35:ILE:N	2:C:35:ILE:HD13	2.19	0.55
2:C:71:ILE:O	2:C:73:ILE:N	2.39	0.55
2:C:227:TYR:CB	2:C:259:ALA:HB1	2.35	0.55
2:C:335:GLN:HE22	2:C:355:LEU:CA	2.15	0.55
2:C:391:ASN:C	2:C:393:ASN:H	2.10	0.55
2:E:337:ILE:H	2:E:337:ILE:CD1	2.10	0.55
2:E:369:ILE:HA	2:E:371:GLU:OE1	2.06	0.55
2:G:75:TYR:CA	2:G:78:LEU:HG	2.36	0.55
2:G:391:ASN:C	2:G:393:ASN:H	2.10	0.55
2:A:112:THR:O	2:A:113:ALA:C	2.44	0.55
2:A:340:ARG:NH2	2:A:345:LEU:H	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:391:ASN:HB3	2:A:394:ILE:CD1	2.36	0.55
2:C:109:LYS:HB2	2:C:109:LYS:HZ3	1.71	0.55
2:C:296:ASP:OD1	2:C:297:ILE:N	2.34	0.55
2:C:308:GLU:O	2:C:309:GLU:CB	2.55	0.55
2:E:31:GLN:O	2:E:34:LEU:HG	2.06	0.55
2:E:43:LEU:O	2:E:46:SER:N	2.35	0.55
2:E:81:LEU:HG	2:E:82:PHE:N	2.19	0.55
2:E:139:ALA:O	2:E:140:TYR:C	2.44	0.55
2:E:141:ASP:O	2:E:142:GLN:C	2.42	0.55
2:E:228:ASP:O	2:E:229:LEU:C	2.43	0.55
2:E:384:MET:CG	2:E:403:ILE:HD13	2.34	0.55
2:E:391:ASN:HB3	2:E:394:ILE:HD13	1.87	0.55
2:E:425:ASN:ND2	2:E:425:ASN:H	2.04	0.55
2:G:241:SER:HA	2:G:266:THR:HB	1.87	0.55
2:A:154:VAL:CG1	2:A:155:TYR:H	2.11	0.55
2:C:65:GLU:H	2:C:65:GLU:CD	2.09	0.55
2:C:119:PHE:HE2	2:C:120:TYR:CZ	2.24	0.55
2:C:257:LEU:HA	2:C:260:VAL:HG21	1.89	0.55
2:C:427:LEU:O	2:C:430:MET:N	2.35	0.55
2:E:8:ALA:CA	2:E:11:LYS:HB3	2.36	0.55
2:E:75:TYR:CA	2:E:78:LEU:HG	2.36	0.55
2:E:81:LEU:HD12	2:E:81:LEU:O	2.05	0.55
2:G:52:LYS:O	2:G:53:GLU:C	2.44	0.55
2:G:109:LYS:HB2	2:G:109:LYS:HZ3	1.70	0.55
2:A:38:ASP:HB2	2:A:252:LYS:CB	2.28	0.55
2:A:38:ASP:O	2:A:39:VAL:O	2.25	0.55
2:A:103:GLY:O	2:A:104:VAL:O	2.23	0.55
2:A:215:ILE:HD12	2:A:215:ILE:N	2.22	0.55
2:A:326:LYS:N	2:A:326:LYS:HD2	2.20	0.55
2:A:348:VAL:O	2:A:352:ILE:N	2.39	0.55
2:A:427:LEU:O	2:A:430:MET:N	2.35	0.55
2:C:71:ILE:CA	2:C:74:VAL:HG22	2.36	0.55
2:C:172:ASP:O	2:C:175:VAL:HB	2.06	0.55
2:C:277:ASP:O	2:C:279:LEU:N	2.39	0.55
2:E:129:LEU:HB2	2:E:154:VAL:HG13	1.87	0.55
2:E:415:ARG:HA	2:E:418:LEU:CD1	2.35	0.55
2:G:172:ASP:O	2:G:175:VAL:HB	2.06	0.55
2:G:215:ILE:HD12	2:G:215:ILE:N	2.22	0.55
2:G:233:PHE:O	2:G:237:SER:N	2.37	0.55
2:G:257:LEU:HA	2:G:260:VAL:HG21	1.89	0.55
2:G:339:LEU:H	2:G:339:LEU:CD2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:196:A:H2'	1:B:197:G:O4'	2.06	0.55
2:A:52:LYS:O	2:A:53:GLU:C	2.44	0.55
2:A:129:LEU:HB2	2:A:154:VAL:HG13	1.87	0.55
2:A:268:LYS:O	2:A:282:PHE:HB3	2.06	0.55
2:A:301:LEU:CD2	2:A:302:GLU:N	2.68	0.55
2:C:197:LYS:HA	2:C:200:GLU:HB3	1.88	0.55
2:C:268:LYS:O	2:C:282:PHE:HB3	2.06	0.55
2:E:27:ILE:O	2:E:31:GLN:HB3	2.06	0.55
2:E:35:ILE:O	2:E:38:ASP:O	2.24	0.55
2:E:197:LYS:HA	2:E:200:GLU:HB3	1.88	0.55
2:E:257:LEU:HA	2:E:260:VAL:HG21	1.89	0.55
2:E:297:ILE:O	2:E:299:SER:N	2.39	0.55
2:G:154:VAL:CG1	2:G:155:TYR:H	2.11	0.55
2:G:233:PHE:O	2:G:234:HIS:C	2.44	0.55
2:G:297:ILE:O	2:G:299:SER:N	2.39	0.55
1:F:196:A:H2'	1:F:197:G:O4'	2.06	0.55
2:A:27:ILE:O	2:A:31:GLN:N	2.31	0.55
2:A:27:ILE:O	2:A:31:GLN:HB3	2.06	0.55
2:A:183:ILE:N	2:A:183:ILE:CD1	2.69	0.55
2:A:250:THR:O	2:A:251:ALA:HB2	2.06	0.55
2:A:257:LEU:HA	2:A:260:VAL:HG21	1.89	0.55
2:A:374:ILE:C	2:A:376:ARG:N	2.59	0.55
2:C:52:LYS:O	2:C:53:GLU:C	2.44	0.55
2:C:75:TYR:CA	2:C:78:LEU:HG	2.36	0.55
2:C:115:LYS:O	2:C:119:PHE:CB	2.55	0.55
2:C:134:VAL:HB	2:C:161:GLN:HA	1.89	0.55
2:C:241:SER:HA	2:C:266:THR:HB	1.87	0.55
2:C:297:ILE:O	2:C:299:SER:N	2.39	0.55
2:C:348:VAL:O	2:C:352:ILE:N	2.39	0.55
2:E:80:LYS:HA	2:E:84:GLY:HA2	1.88	0.55
2:G:134:VAL:HB	2:G:161:GLN:HA	1.89	0.55
2:G:297:ILE:HG13	2:G:298:GLU:H	1.70	0.55
1:B:188:A:H8	1:B:188:A:OP1	1.90	0.55
2:A:172:ASP:O	2:A:175:VAL:HB	2.06	0.55
2:A:227:TYR:CB	2:A:259:ALA:HB1	2.35	0.55
2:C:198:LEU:O	2:C:201:GLU:HB2	2.06	0.55
2:C:233:PHE:HA	2:C:236:ALA:CB	2.37	0.55
2:C:300:ILE:C	2:C:303:LYS:HG2	2.26	0.55
2:C:376:ARG:HG3	2:C:376:ARG:NH2	2.20	0.55
2:E:112:THR:O	2:E:113:ALA:C	2.44	0.55
2:E:119:PHE:HE2	2:E:120:TYR:CZ	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:243:ILE:C	2:E:244:ILE:HD12	2.27	0.55
2:E:391:ASN:C	2:E:393:ASN:H	2.10	0.55
2:G:171:VAL:O	2:G:175:VAL:HG23	2.06	0.55
2:G:268:LYS:O	2:G:282:PHE:HB3	2.06	0.55
1:D:188:A:H8	1:D:188:A:OP1	1.90	0.55
1:H:188:A:H8	1:H:188:A:OP1	1.90	0.55
2:A:1:MET:CG	2:A:2:LEU:HD23	2.37	0.55
2:A:27:ILE:HA	2:A:30:LEU:CD2	2.37	0.55
2:A:134:VAL:HB	2:A:161:GLN:HA	1.89	0.55
2:A:167:ALA:O	2:A:168:LYS:C	2.45	0.55
2:A:233:PHE:O	2:A:234:HIS:C	2.44	0.55
2:A:233:PHE:HA	2:A:236:ALA:CB	2.37	0.55
2:C:1:MET:HG2	2:C:2:LEU:HD23	1.89	0.55
2:C:10:ARG:C	2:C:12:PHE:N	2.58	0.55
2:C:112:THR:O	2:C:113:ALA:C	2.44	0.55
2:C:297:ILE:HG13	2:C:298:GLU:H	1.70	0.55
2:C:425:ASN:ND2	2:C:425:ASN:H	2.04	0.55
2:E:1:MET:HG2	2:E:2:LEU:HD23	1.89	0.55
2:E:27:ILE:HA	2:E:30:LEU:CD2	2.37	0.55
2:E:38:ASP:O	2:E:39:VAL:O	2.25	0.55
2:E:75:TYR:O	2:E:76:ASP:C	2.43	0.55
2:E:143:LEU:HD12	2:E:143:LEU:C	2.27	0.55
2:E:308:GLU:O	2:E:309:GLU:CB	2.55	0.55
2:E:395:ILE:H	2:E:395:ILE:CD1	2.17	0.55
2:G:38:ASP:O	2:G:39:VAL:O	2.25	0.55
2:G:150:ILE:HD11	2:G:152:VAL:CB	2.31	0.55
2:G:216:LEU:HD11	2:G:229:LEU:HD21	1.88	0.55
2:G:233:PHE:HA	2:G:236:ALA:CB	2.37	0.55
2:G:243:ILE:C	2:G:244:ILE:HD12	2.27	0.55
2:G:348:VAL:O	2:G:352:ILE:N	2.39	0.55
2:G:369:ILE:HA	2:G:371:GLU:OE1	2.06	0.55
2:C:140:TYR:HA	2:C:143:LEU:HG	1.89	0.55
2:C:141:ASP:O	2:C:143:LEU:N	2.40	0.55
2:C:216:LEU:N	2:C:242:VAL:HG12	2.19	0.55
2:C:303:LYS:O	2:C:306:GLY:N	2.40	0.55
2:C:304:VAL:HG12	2:C:308:GLU:HB2	1.89	0.55
2:E:52:LYS:O	2:E:53:GLU:C	2.44	0.55
2:E:215:ILE:HD12	2:E:215:ILE:N	2.22	0.55
2:E:303:LYS:O	2:E:306:GLY:N	2.40	0.55
2:G:303:LYS:O	2:G:306:GLY:N	2.40	0.55
1:D:196:A:H2'	1:D:197:G:H5'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:211:C:O2	1:D:211:C:H2'	2.06	0.55
1:F:188:A:H8	1:F:188:A:OP1	1.90	0.55
1:H:198:G:H2'	1:H:199:C:O5'	2.06	0.55
2:A:75:TYR:CA	2:A:78:LEU:HG	2.36	0.55
2:A:79:SER:O	2:A:82:PHE:N	2.40	0.55
2:A:139:ALA:O	2:A:140:TYR:C	2.44	0.55
2:A:141:ASP:O	2:A:143:LEU:N	2.40	0.55
2:A:296:ASP:OD1	2:A:297:ILE:N	2.34	0.55
2:A:297:ILE:O	2:A:299:SER:N	2.39	0.55
2:C:27:ILE:HA	2:C:30:LEU:CD2	2.37	0.55
2:C:167:ALA:O	2:C:168:LYS:C	2.45	0.55
2:C:369:ILE:HA	2:C:371:GLU:OE1	2.06	0.55
2:C:421:TYR:N	2:C:421:TYR:CD1	2.74	0.55
2:E:65:GLU:CD	2:E:65:GLU:H	2.10	0.55
2:E:134:VAL:HB	2:E:161:GLN:HA	1.89	0.55
2:E:297:ILE:HG13	2:E:298:GLU:H	1.70	0.55
2:E:348:VAL:CG2	2:E:349:LEU:N	2.70	0.55
1:D:198:G:H2'	1:D:199:C:O5'	2.06	0.54
2:A:24:ASP:CA	2:A:27:ILE:HG12	2.38	0.54
2:A:75:TYR:C	2:A:75:TYR:CD2	2.79	0.54
2:A:303:LYS:O	2:A:306:GLY:N	2.40	0.54
2:C:100:MET:HE3	2:C:206:TYR:HA	1.89	0.54
2:C:104:VAL:HG23	2:C:105:GLN:H	1.68	0.54
2:C:143:LEU:HD12	2:C:143:LEU:C	2.27	0.54
2:C:233:PHE:O	2:C:237:SER:N	2.37	0.54
2:C:424:MET:O	2:C:428:LEU:N	2.36	0.54
2:E:38:ASP:HB2	2:E:252:LYS:CB	2.28	0.54
2:E:115:LYS:O	2:E:119:PHE:CB	2.55	0.54
2:E:172:ASP:O	2:E:176:LYS:N	2.31	0.54
2:E:389:LEU:H	2:E:389:LEU:CD2	2.06	0.54
2:G:140:TYR:HA	2:G:143:LEU:HG	1.89	0.54
2:G:300:ILE:C	2:G:303:LYS:HG2	2.26	0.54
2:G:335:GLN:HE22	2:G:355:LEU:CA	2.15	0.54
1:F:196:A:H2'	1:F:197:G:H5'	1.89	0.54
2:A:65:GLU:H	2:A:65:GLU:CD	2.10	0.54
2:A:335:GLN:HE22	2:A:355:LEU:CA	2.15	0.54
2:A:348:VAL:CG2	2:A:349:LEU:N	2.70	0.54
2:A:417:LEU:HD12	2:A:418:LEU:H	1.67	0.54
2:C:38:ASP:O	2:C:39:VAL:O	2.25	0.54
2:C:420:TRP:CE3	2:C:420:TRP:N	2.75	0.54
2:E:141:ASP:O	2:E:143:LEU:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:223:GLY:HA2	2:E:256:ALA:HB2	1.89	0.54
2:G:1:MET:HG2	2:G:2:LEU:HD23	1.89	0.54
2:G:24:ASP:CA	2:G:27:ILE:HG12	2.38	0.54
2:G:98:ILE:HB	2:G:212:ASP:H	1.73	0.54
2:G:143:LEU:HD12	2:G:143:LEU:C	2.27	0.54
2:G:216:LEU:N	2:G:242:VAL:HG12	2.19	0.54
2:G:223:GLY:HA2	2:G:256:ALA:HB2	1.90	0.54
1:D:184:G:H2'	1:D:185:G:O4'	2.08	0.54
2:A:1:MET:HG2	2:A:2:LEU:HD23	1.89	0.54
2:A:243:ILE:C	2:A:244:ILE:HD12	2.27	0.54
2:C:98:ILE:HB	2:C:212:ASP:H	1.73	0.54
2:C:223:GLY:HA2	2:C:256:ALA:HB2	1.90	0.54
2:C:281:THR:CG2	2:C:282:PHE:H	2.18	0.54
2:C:348:VAL:CG2	2:C:349:LEU:N	2.70	0.54
2:C:415:ARG:HA	2:C:418:LEU:CD1	2.35	0.54
2:C:422:ASN:C	2:C:425:ASN:ND2	2.50	0.54
2:E:135:TYR:CE1	2:E:188:GLY:HA2	2.43	0.54
2:E:233:PHE:HA	2:E:236:ALA:CB	2.37	0.54
2:E:300:ILE:C	2:E:303:LYS:HG2	2.26	0.54
2:E:420:TRP:N	2:E:420:TRP:CE3	2.75	0.54
2:G:26:PHE:O	2:G:30:LEU:N	2.36	0.54
2:G:141:ASP:O	2:G:143:LEU:N	2.40	0.54
2:C:23:VAL:O	2:C:27:ILE:HG12	2.08	0.54
2:C:215:ILE:HD12	2:C:215:ILE:N	2.22	0.54
2:E:10:ARG:C	2:E:12:PHE:N	2.58	0.54
2:G:1:MET:CG	2:G:2:LEU:HD23	2.37	0.54
2:G:79:SER:O	2:G:82:PHE:N	2.40	0.54
2:G:348:VAL:CG2	2:G:349:LEU:N	2.70	0.54
1:B:196:A:H2'	1:B:197:G:H5'	1.89	0.54
1:B:198:G:H2'	1:B:199:C:O5'	2.06	0.54
2:A:8:ALA:CA	2:A:11:LYS:HB3	2.36	0.54
2:A:216:LEU:HD11	2:A:229:LEU:HD21	1.88	0.54
2:C:106:GLY:HA2	2:C:109:LYS:CB	2.32	0.54
2:C:135:TYR:CE1	2:C:188:GLY:HA2	2.43	0.54
2:G:23:VAL:O	2:G:27:ILE:HG12	2.08	0.54
2:G:114:GLY:O	2:G:115:LYS:C	2.45	0.54
2:G:296:ASP:OD1	2:G:297:ILE:N	2.34	0.54
2:G:420:TRP:N	2:G:420:TRP:CE3	2.75	0.54
1:B:184:G:H2'	1:B:185:G:O4'	2.08	0.54
1:B:211:C:O2	1:B:211:C:H2'	2.06	0.54
2:A:135:TYR:CE1	2:A:188:GLY:HA2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:216:LEU:HD23	2:A:216:LEU:C	2.28	0.54
2:A:223:GLY:HA2	2:A:256:ALA:HB2	1.90	0.54
2:C:243:ILE:C	2:C:244:ILE:HD12	2.27	0.54
2:C:394:ILE:H	2:C:395:ILE:CD1	2.12	0.54
2:G:8:ALA:CA	2:G:11:LYS:HB3	2.36	0.54
2:G:27:ILE:HA	2:G:30:LEU:CD2	2.37	0.54
2:G:71:ILE:C	2:G:73:ILE:N	2.60	0.54
2:G:139:ALA:O	2:G:140:TYR:C	2.44	0.54
2:G:167:ALA:O	2:G:168:LYS:C	2.46	0.54
2:G:330:ARG:C	2:G:332:VAL:N	2.60	0.54
1:B:203:G:H2'	1:B:204:A:C4	2.43	0.54
1:D:203:G:H2'	1:D:204:A:C4	2.43	0.54
1:F:184:G:H2'	1:F:185:G:C1'	2.38	0.54
1:F:198:G:H2'	1:F:199:C:O5'	2.06	0.54
2:A:12:PHE:CZ	2:A:67:LYS:HB3	2.43	0.54
2:A:115:LYS:O	2:A:119:PHE:CB	2.55	0.54
2:A:140:TYR:HA	2:A:143:LEU:HG	1.89	0.54
2:C:233:PHE:O	2:C:234:HIS:C	2.44	0.54
2:E:167:ALA:O	2:E:168:LYS:C	2.46	0.54
2:E:224:GLN:O	2:E:227:TYR:HB2	2.08	0.54
2:E:414:VAL:HG12	2:E:418:LEU:HD21	1.90	0.54
2:G:135:TYR:CE1	2:G:188:GLY:HA2	2.43	0.54
2:G:425:ASN:ND2	2:G:425:ASN:H	2.04	0.54
2:A:47:LEU:O	2:A:48:THR:C	2.46	0.54
2:A:74:VAL:O	2:A:78:LEU:HG	2.08	0.54
2:A:224:GLN:O	2:A:227:TYR:HB2	2.08	0.54
2:A:414:VAL:HG12	2:A:418:LEU:HD21	1.90	0.54
2:C:12:PHE:CZ	2:C:67:LYS:HB3	2.43	0.54
2:C:26:PHE:O	2:C:30:LEU:N	2.36	0.54
2:C:47:LEU:O	2:C:48:THR:C	2.46	0.54
2:C:79:SER:O	2:C:82:PHE:N	2.40	0.54
2:E:79:SER:O	2:E:82:PHE:N	2.40	0.54
2:E:98:ILE:HB	2:E:212:ASP:H	1.73	0.54
2:E:111:THR:O	2:E:113:ALA:N	2.41	0.54
2:E:115:LYS:HD3	2:E:279:LEU:H	1.73	0.54
2:E:140:TYR:HA	2:E:143:LEU:HG	1.89	0.54
2:E:316:LYS:HZ2	2:E:316:LYS:HB3	1.73	0.54
2:E:340:ARG:CZ	2:E:345:LEU:HB2	2.38	0.54
2:E:358:MET:O	2:E:359:LEU:HD23	2.08	0.54
2:E:424:MET:O	2:E:428:LEU:N	2.36	0.54
2:G:144:LEU:CD2	2:G:145:GLN:N	2.69	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:184:G:H2'	1:F:185:G:O4'	2.08	0.54
2:A:114:GLY:O	2:A:115:LYS:C	2.45	0.54
2:A:143:LEU:HD12	2:A:143:LEU:C	2.27	0.54
2:A:216:LEU:N	2:A:242:VAL:HG12	2.19	0.54
2:A:391:ASN:C	2:A:393:ASN:H	2.10	0.54
2:A:417:LEU:CD1	2:A:421:TYR:CE2	2.91	0.54
2:C:24:ASP:CA	2:C:27:ILE:HG12	2.38	0.54
2:C:224:GLN:O	2:C:227:TYR:HB2	2.08	0.54
2:C:316:LYS:HZ2	2:C:316:LYS:HB3	1.73	0.54
2:C:340:ARG:CZ	2:C:345:LEU:HB2	2.38	0.54
2:E:24:ASP:CA	2:E:27:ILE:HG12	2.38	0.54
2:E:281:THR:HG22	2:E:282:PHE:N	2.23	0.54
2:E:288:VAL:HA	2:E:291:ILE:CD1	2.22	0.54
2:G:281:THR:HG22	2:G:282:PHE:N	2.23	0.54
2:G:377:TRP:HA	2:G:377:TRP:CE3	2.43	0.54
2:A:98:ILE:HB	2:A:212:ASP:H	1.73	0.54
2:A:291:ILE:HD13	2:A:291:ILE:N	2.20	0.54
2:A:371:GLU:HG3	2:A:372:GLU:HG3	1.90	0.54
2:A:420:TRP:N	2:A:420:TRP:CE3	2.75	0.54
2:C:329:LEU:CB	2:C:392:PRO:HG2	2.38	0.54
2:C:356:GLY:C	2:C:357:ILE:CG1	2.76	0.54
2:C:377:TRP:CE3	2:C:377:TRP:HA	2.43	0.54
2:C:399:ARG:HB3	2:C:399:ARG:NH1	2.03	0.54
2:C:399:ARG:HH11	2:C:399:ARG:CG	2.21	0.54
2:E:5:ILE:HG13	2:E:30:LEU:HA	1.90	0.54
2:E:110:THR:O	2:E:111:THR:O	2.26	0.54
2:G:115:LYS:O	2:G:119:PHE:CB	2.55	0.54
1:F:203:G:H2'	1:F:204:A:C4	2.43	0.53
1:H:196:A:H2'	1:H:197:G:H5'	1.89	0.53
2:A:23:VAL:O	2:A:27:ILE:HG12	2.08	0.53
2:A:75:TYR:HA	2:A:78:LEU:HD12	1.90	0.53
2:A:111:THR:O	2:A:113:ALA:N	2.41	0.53
2:A:276:ILE:O	2:A:276:ILE:HG13	2.09	0.53
2:C:136:ARG:HG2	2:C:137:PRO:HD2	1.89	0.53
2:E:129:LEU:C	2:E:154:VAL:HG13	2.29	0.53
2:E:144:LEU:CD2	2:E:145:GLN:N	2.69	0.53
2:E:153:GLN:HG2	2:E:154:VAL:H	1.73	0.53
2:E:257:LEU:O	2:E:260:VAL:HB	2.09	0.53
2:E:399:ARG:HA	2:E:402:ARG:HH12	1.73	0.53
2:G:75:TYR:HA	2:G:78:LEU:HD12	1.90	0.53
2:G:227:TYR:CB	2:G:259:ALA:HB1	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:295:GLY:HA3	2:G:298:GLU:OE2	2.08	0.53
1:H:203:G:H2'	1:H:204:A:C4	2.43	0.53
2:A:148:ASN:O	2:A:150:ILE:N	2.42	0.53
2:A:369:ILE:HG22	2:A:373:LYS:HZ1	1.73	0.53
2:C:129:LEU:C	2:C:154:VAL:HG13	2.29	0.53
2:C:219:ASP:C	2:C:221:SER:H	2.12	0.53
2:C:259:ALA:O	2:C:260:VAL:C	2.47	0.53
2:C:359:LEU:O	2:C:361:THR:N	2.42	0.53
2:C:361:THR:HB	2:C:362:PRO:HD2	1.91	0.53
2:E:23:VAL:O	2:E:27:ILE:HG12	2.08	0.53
2:E:399:ARG:HH11	2:E:399:ARG:CG	2.21	0.53
2:G:5:ILE:HG13	2:G:30:LEU:HA	1.90	0.53
2:G:260:VAL:O	2:G:261:VAL:C	2.46	0.53
2:G:276:ILE:HG13	2:G:276:ILE:O	2.09	0.53
2:G:304:VAL:HG12	2:G:308:GLU:HB2	1.89	0.53
1:H:211:C:O2	1:H:211:C:H2'	2.06	0.53
2:A:23:VAL:O	2:A:26:PHE:HB3	2.08	0.53
2:C:1:MET:CG	2:C:2:LEU:HD23	2.37	0.53
2:C:98:ILE:CD1	2:C:211:PRO:HA	2.38	0.53
2:C:267:ILE:N	2:C:267:ILE:CD1	2.71	0.53
2:E:1:MET:CG	2:E:2:LEU:HD23	2.37	0.53
2:E:9:VAL:HG21	2:E:292:LEU:HA	1.91	0.53
2:E:75:TYR:C	2:E:75:TYR:CD2	2.79	0.53
2:E:100:MET:HE3	2:E:206:TYR:HA	1.89	0.53
2:E:136:ARG:HG2	2:E:137:PRO:HD2	1.89	0.53
2:E:315:LYS:HB3	2:E:315:LYS:HZ3	1.73	0.53
2:G:12:PHE:CZ	2:G:67:LYS:HB3	2.43	0.53
2:G:98:ILE:CD1	2:G:211:PRO:HA	2.38	0.53
2:G:110:THR:O	2:G:111:THR:O	2.26	0.53
2:G:216:LEU:HD23	2:G:216:LEU:C	2.28	0.53
1:D:184:G:H2'	1:D:185:G:C1'	2.38	0.53
2:A:115:LYS:HD3	2:A:279:LEU:H	1.73	0.53
2:A:281:THR:HG22	2:A:282:PHE:N	2.23	0.53
2:A:330:ARG:C	2:A:332:VAL:N	2.60	0.53
2:A:417:LEU:CD1	2:A:418:LEU:HD23	2.39	0.53
2:C:23:VAL:O	2:C:26:PHE:HB3	2.08	0.53
2:C:106:GLY:HA2	2:C:109:LYS:CE	2.39	0.53
2:C:114:GLY:O	2:C:115:LYS:C	2.45	0.53
2:C:148:ASN:O	2:C:150:ILE:N	2.42	0.53
2:C:414:VAL:O	2:C:417:LEU:CD1	2.56	0.53
2:E:329:LEU:CB	2:E:392:PRO:HG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:356:GLY:C	2:E:357:ILE:CG1	2.76	0.53
2:E:427:LEU:O	2:E:430:MET:N	2.35	0.53
2:G:74:VAL:O	2:G:78:LEU:HG	2.08	0.53
2:G:111:THR:O	2:G:113:ALA:N	2.41	0.53
2:G:135:TYR:CZ	2:G:188:GLY:HA2	2.44	0.53
2:G:148:ASN:O	2:G:150:ILE:N	2.42	0.53
2:G:359:LEU:O	2:G:361:THR:N	2.42	0.53
1:B:212:A:C2'	1:B:213:A:O5'	2.57	0.53
2:A:110:THR:O	2:A:111:THR:O	2.26	0.53
2:A:281:THR:CG2	2:A:282:PHE:H	2.18	0.53
2:A:356:GLY:C	2:A:357:ILE:CG1	2.76	0.53
2:A:377:TRP:CZ2	2:A:417:LEU:HB3	2.44	0.53
2:A:399:ARG:HH11	2:A:399:ARG:CG	2.21	0.53
2:C:144:LEU:CD2	2:C:145:GLN:N	2.69	0.53
2:C:145:GLN:O	2:C:146:LEU:C	2.47	0.53
2:C:414:VAL:HG12	2:C:418:LEU:HD21	1.90	0.53
2:E:114:GLY:O	2:E:115:LYS:C	2.45	0.53
2:E:148:ASN:O	2:E:150:ILE:N	2.42	0.53
2:E:396:ASP:OD2	2:E:396:ASP:N	2.42	0.53
2:E:396:ASP:OD1	2:E:399:ARG:HG3	2.08	0.53
2:G:297:ILE:CG1	2:G:298:GLU:N	2.72	0.53
2:G:329:LEU:CB	2:G:392:PRO:HG2	2.38	0.53
2:G:340:ARG:CZ	2:G:345:LEU:HB2	2.38	0.53
2:G:356:GLY:C	2:G:357:ILE:CG1	2.76	0.53
1:D:212:A:C2'	1:D:213:A:O5'	2.57	0.53
1:H:184:G:H2'	1:H:185:G:O4'	2.08	0.53
2:A:136:ARG:HG2	2:A:137:PRO:HD2	1.89	0.53
2:A:414:VAL:O	2:A:417:LEU:CD1	2.56	0.53
2:C:72:SER:O	2:C:76:ASP:N	2.37	0.53
2:C:100:MET:HB3	2:C:214:VAL:HG22	1.90	0.53
2:C:216:LEU:HD23	2:C:216:LEU:C	2.28	0.53
2:C:257:LEU:O	2:C:260:VAL:HB	2.09	0.53
2:C:260:VAL:O	2:C:261:VAL:C	2.46	0.53
2:E:12:PHE:CZ	2:E:67:LYS:HB3	2.43	0.53
2:E:75:TYR:HA	2:E:78:LEU:HD12	1.90	0.53
2:G:106:GLY:HA2	2:G:109:LYS:CE	2.39	0.53
2:G:136:ARG:HG2	2:G:137:PRO:HD2	1.89	0.53
2:G:288:VAL:O	2:G:291:ILE:HG12	2.09	0.53
2:G:414:VAL:HG12	2:G:418:LEU:HD21	1.90	0.53
2:G:417:LEU:CD1	2:G:418:LEU:HD23	2.39	0.53
2:G:424:MET:HG3	2:G:425:ASN:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:184:G:H2'	1:B:185:G:C1'	2.38	0.53
1:B:210:G:O2'	1:B:211:C:O5'	2.27	0.53
1:F:212:A:C2'	1:F:213:A:O5'	2.57	0.53
2:A:132:ALA:CB	2:A:185:ASP:O	2.51	0.53
2:A:233:PHE:O	2:A:237:SER:N	2.37	0.53
2:A:288:VAL:O	2:A:291:ILE:HG12	2.09	0.53
2:A:295:GLY:HA3	2:A:298:GLU:OE2	2.08	0.53
2:A:303:LYS:HB2	2:A:342:MET:HB2	1.91	0.53
2:C:9:VAL:HG21	2:C:292:LEU:HA	1.91	0.53
2:C:115:LYS:HD3	2:C:279:LEU:H	1.73	0.53
2:C:350:GLN:H	2:C:350:GLN:CD	2.12	0.53
2:C:358:MET:O	2:C:359:LEU:HD23	2.08	0.53
2:C:396:ASP:OD2	2:C:396:ASP:N	2.42	0.53
2:E:74:VAL:O	2:E:78:LEU:HG	2.08	0.53
2:E:98:ILE:CD1	2:E:211:PRO:HA	2.39	0.53
2:E:303:LYS:HB2	2:E:342:MET:HB2	1.91	0.53
2:E:330:ARG:C	2:E:332:VAL:N	2.60	0.53
2:G:129:LEU:C	2:G:154:VAL:HG13	2.29	0.53
2:G:300:ILE:C	2:G:300:ILE:HD12	2.29	0.53
2:G:358:MET:O	2:G:359:LEU:HD23	2.08	0.53
2:G:371:GLU:HG3	2:G:372:GLU:HG3	1.90	0.53
2:A:106:GLY:HA2	2:A:109:LYS:CE	2.39	0.53
2:A:135:TYR:CZ	2:A:188:GLY:HA2	2.43	0.53
2:A:350:GLN:CD	2:A:350:GLN:H	2.12	0.53
2:C:108:GLY:CA	2:C:112:THR:HG23	2.39	0.53
2:C:110:THR:O	2:C:111:THR:O	2.27	0.53
2:C:146:LEU:CD2	2:C:146:LEU:N	2.68	0.53
2:C:230:ALA:O	2:C:231:SER:C	2.47	0.53
2:E:26:PHE:O	2:E:30:LEU:N	2.36	0.53
2:E:26:PHE:CZ	2:E:30:LEU:HD22	2.44	0.53
2:E:47:LEU:O	2:E:48:THR:C	2.46	0.53
2:E:66:ARG:HH11	2:E:66:ARG:CB	2.14	0.53
2:E:71:ILE:C	2:E:73:ILE:N	2.60	0.53
2:E:106:GLY:HA2	2:E:109:LYS:CE	2.39	0.53
2:E:359:LEU:O	2:E:361:THR:N	2.42	0.53
2:G:334:ALA:O	2:G:335:GLN:C	2.47	0.53
2:A:5:ILE:HG13	2:A:30:LEU:HA	1.90	0.53
2:A:129:LEU:C	2:A:154:VAL:HG13	2.29	0.53
2:A:149:GLN:OE1	2:A:150:ILE:HG22	2.09	0.53
2:A:216:LEU:CD2	2:A:217:VAL:N	2.71	0.53
2:C:135:TYR:CZ	2:C:188:GLY:HA2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:153:GLN:HG2	2:C:154:VAL:H	1.73	0.53
2:E:23:VAL:O	2:E:26:PHE:HB3	2.09	0.53
2:E:145:GLN:O	2:E:146:LEU:C	2.47	0.53
2:E:233:PHE:O	2:E:234:HIS:C	2.44	0.53
2:E:259:ALA:O	2:E:260:VAL:C	2.47	0.53
2:E:361:THR:HB	2:E:362:PRO:HD2	1.91	0.53
2:G:47:LEU:O	2:G:48:THR:C	2.46	0.53
2:G:100:MET:HB3	2:G:214:VAL:HG22	1.90	0.53
2:G:219:ASP:C	2:G:221:SER:N	2.63	0.53
2:G:224:GLN:O	2:G:227:TYR:HB2	2.08	0.53
2:G:361:THR:HB	2:G:362:PRO:HD2	1.91	0.53
2:G:399:ARG:HH11	2:G:399:ARG:CG	2.21	0.53
2:G:421:TYR:N	2:G:421:TYR:CD1	2.74	0.53
2:A:108:GLY:CA	2:A:112:THR:HG23	2.39	0.53
2:A:143:LEU:O	2:A:146:LEU:CG	2.57	0.53
2:A:144:LEU:CD2	2:A:145:GLN:N	2.69	0.53
2:A:260:VAL:O	2:A:261:VAL:C	2.46	0.53
2:A:304:VAL:HG12	2:A:308:GLU:HB2	1.89	0.53
2:A:377:TRP:HA	2:A:377:TRP:CE3	2.43	0.53
2:C:111:THR:O	2:C:113:ALA:N	2.41	0.53
2:C:295:GLY:HA3	2:C:298:GLU:OE2	2.08	0.53
2:C:371:GLU:HG3	2:C:372:GLU:HG3	1.90	0.53
2:C:417:LEU:CD1	2:C:418:LEU:HD23	2.39	0.53
2:E:216:LEU:CD2	2:E:217:VAL:N	2.71	0.53
2:E:291:ILE:HD13	2:E:291:ILE:N	2.21	0.53
2:E:374:ILE:C	2:E:376:ARG:N	2.59	0.53
2:E:377:TRP:HA	2:E:377:TRP:CE3	2.43	0.53
2:E:417:LEU:CD1	2:E:418:LEU:HD23	2.39	0.53
2:G:23:VAL:O	2:G:26:PHE:HB3	2.08	0.53
2:G:219:ASP:C	2:G:221:SER:H	2.12	0.53
2:G:226:ALA:O	2:G:229:LEU:HB3	2.09	0.53
2:G:257:LEU:O	2:G:260:VAL:HB	2.09	0.53
2:G:396:ASP:OD1	2:G:399:ARG:HG3	2.08	0.53
2:G:399:ARG:HA	2:G:402:ARG:HH12	1.73	0.53
2:G:414:VAL:O	2:G:417:LEU:CD1	2.56	0.53
2:A:257:LEU:O	2:A:260:VAL:HB	2.09	0.52
2:A:340:ARG:CZ	2:A:345:LEU:HB2	2.38	0.52
2:C:5:ILE:HG13	2:C:30:LEU:HA	1.90	0.52
2:C:74:VAL:O	2:C:78:LEU:HG	2.08	0.52
2:C:75:TYR:CD2	2:C:75:TYR:C	2.79	0.52
2:C:430:MET:HA	2:C:430:MET:CE	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:100:MET:HB3	2:E:214:VAL:HG22	1.90	0.52
2:E:132:ALA:CB	2:E:185:ASP:O	2.51	0.52
2:E:267:ILE:N	2:E:267:ILE:CD1	2.71	0.52
2:E:283:ASN:O	2:E:285:LYS:N	2.43	0.52
2:E:414:VAL:O	2:E:417:LEU:CD1	2.56	0.52
2:G:283:ASN:O	2:G:285:LYS:N	2.42	0.52
2:G:315:LYS:HB3	2:G:315:LYS:HZ3	1.74	0.52
1:F:196:A:N6	1:F:211:C:N3	2.57	0.52
2:A:2:LEU:CD2	2:A:3:GLU:H	2.23	0.52
2:A:26:PHE:CZ	2:A:30:LEU:HD22	2.44	0.52
2:A:98:ILE:CD1	2:A:211:PRO:HA	2.38	0.52
2:A:219:ASP:C	2:A:221:SER:H	2.12	0.52
2:A:335:GLN:O	2:A:336:ILE:C	2.48	0.52
2:A:358:MET:O	2:A:359:LEU:HD23	2.08	0.52
2:A:384:MET:CG	2:A:403:ILE:HD13	2.34	0.52
2:A:395:ILE:H	2:A:395:ILE:CD1	2.17	0.52
2:C:98:ILE:HD13	2:C:209:LEU:HD21	1.91	0.52
2:C:276:ILE:O	2:C:276:ILE:CG1	2.58	0.52
2:C:300:ILE:CA	2:C:342:MET:HA	2.39	0.52
2:C:303:LYS:HB2	2:C:342:MET:HB2	1.91	0.52
2:C:377:TRP:CZ2	2:C:417:LEU:HB3	2.44	0.52
2:C:399:ARG:HA	2:C:402:ARG:HH12	1.73	0.52
2:E:24:ASP:O	2:E:25:GLU:C	2.47	0.52
2:E:135:TYR:CZ	2:E:188:GLY:HA2	2.43	0.52
2:E:250:THR:CG2	2:E:252:LYS:HD3	2.33	0.52
2:E:295:GLY:HA3	2:E:298:GLU:OE2	2.08	0.52
2:E:334:ALA:O	2:E:335:GLN:C	2.47	0.52
2:E:377:TRP:CZ2	2:E:417:LEU:HB3	2.44	0.52
2:G:49:ALA:O	2:G:50:LYS:C	2.47	0.52
2:G:75:TYR:C	2:G:75:TYR:CD2	2.79	0.52
2:G:145:GLN:O	2:G:146:LEU:C	2.47	0.52
2:G:307:LEU:O	2:G:310:TYR:N	2.42	0.52
2:G:377:TRP:CZ2	2:G:417:LEU:HB3	2.44	0.52
1:B:197:G:H2'	1:B:198:G:O4'	2.09	0.52
2:A:49:ALA:O	2:A:50:LYS:C	2.47	0.52
2:A:329:LEU:CB	2:A:392:PRO:HG2	2.38	0.52
2:C:66:ARG:HH11	2:C:66:ARG:CB	2.14	0.52
2:C:116:LEU:O	2:C:119:PHE:HB3	2.09	0.52
2:C:417:LEU:CD1	2:C:421:TYR:CE2	2.91	0.52
2:E:2:LEU:CD2	2:E:3:GLU:H	2.23	0.52
2:E:108:GLY:CA	2:E:112:THR:HG23	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:288:VAL:O	2:E:291:ILE:HG12	2.09	0.52
2:E:359:LEU:C	2:E:361:THR:HG23	2.30	0.52
2:G:9:VAL:HG21	2:G:292:LEU:HA	1.90	0.52
2:G:115:LYS:HD3	2:G:279:LEU:H	1.73	0.52
2:G:276:ILE:O	2:G:276:ILE:CG1	2.58	0.52
2:G:303:LYS:HB2	2:G:342:MET:HB2	1.91	0.52
1:D:199:C:O5'	1:D:199:C:H6	1.92	0.52
1:F:197:G:H2'	1:F:198:G:O4'	2.09	0.52
2:A:307:LEU:O	2:A:310:TYR:N	2.42	0.52
2:A:421:TYR:N	2:A:421:TYR:CD1	2.74	0.52
2:C:26:PHE:CZ	2:C:30:LEU:HD22	2.44	0.52
2:C:110:THR:HG23	2:C:111:THR:H	1.74	0.52
2:C:132:ALA:CB	2:C:185:ASP:O	2.51	0.52
2:C:283:ASN:O	2:C:285:LYS:N	2.42	0.52
2:C:330:ARG:C	2:C:332:VAL:N	2.60	0.52
2:E:226:ALA:O	2:E:229:LEU:HB3	2.09	0.52
2:E:335:GLN:O	2:E:336:ILE:C	2.48	0.52
2:G:149:GLN:OE1	2:G:150:ILE:HG22	2.09	0.52
2:G:426:ARG:HB3	2:G:427:LEU:HD13	1.92	0.52
1:B:192:G:H2'	1:B:192:G:N3	2.24	0.52
1:H:212:A:C2'	1:H:213:A:O5'	2.57	0.52
2:A:9:VAL:HG21	2:A:292:LEU:HA	1.91	0.52
2:A:91:ASN:HB3	2:A:92:PRO:CD	2.35	0.52
2:A:300:ILE:C	2:A:300:ILE:HD12	2.29	0.52
2:A:334:ALA:O	2:A:335:GLN:C	2.47	0.52
2:A:399:ARG:HA	2:A:402:ARG:HH12	1.73	0.52
2:A:424:MET:HG3	2:A:425:ASN:N	2.24	0.52
2:A:426:ARG:HB3	2:A:427:LEU:HD13	1.92	0.52
2:C:226:ALA:O	2:C:229:LEU:HB3	2.09	0.52
2:C:287:PHE:HD1	2:C:290:ARG:NE	2.08	0.52
2:C:297:ILE:CG1	2:C:298:GLU:N	2.72	0.52
2:C:396:ASP:OD1	2:C:399:ARG:HG3	2.08	0.52
2:E:143:LEU:O	2:E:146:LEU:CG	2.57	0.52
2:E:417:LEU:CD1	2:E:421:TYR:CE2	2.91	0.52
2:G:71:ILE:HA	2:G:74:VAL:CG1	2.40	0.52
2:G:108:GLY:CA	2:G:112:THR:HG23	2.39	0.52
2:G:291:ILE:HD13	2:G:291:ILE:N	2.21	0.52
2:G:396:ASP:OD2	2:G:396:ASP:N	2.42	0.52
1:D:197:G:H2'	1:D:198:G:O4'	2.09	0.52
1:H:184:G:H2'	1:H:185:G:C1'	2.38	0.52
2:A:181:ILE:C	2:A:182:ILE:HD12	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:297:ILE:CG1	2:A:298:GLU:N	2.72	0.52
2:C:144:LEU:CD1	2:E:177:ASN:ND2	2.73	0.52
2:C:181:ILE:C	2:C:182:ILE:HD12	2.30	0.52
2:C:183:ILE:N	2:C:183:ILE:CD1	2.69	0.52
2:C:250:THR:CG2	2:C:252:LYS:HD3	2.33	0.52
2:C:276:ILE:O	2:C:276:ILE:HG13	2.09	0.52
2:E:30:LEU:O	2:E:34:LEU:CD2	2.58	0.52
2:G:21:LYS:O	2:G:22:ALA:C	2.48	0.52
2:G:106:GLY:O	2:G:107:SER:CB	2.57	0.52
2:G:285:LYS:O	2:G:287:PHE:N	2.43	0.52
2:G:287:PHE:HD1	2:G:290:ARG:NE	2.08	0.52
2:G:315:LYS:HB3	2:G:315:LYS:HZ2	1.75	0.52
1:D:183:G:C6	1:D:184:G:O6	2.63	0.52
1:H:197:G:H2'	1:H:198:G:O4'	2.09	0.52
2:A:98:ILE:HD13	2:A:209:LEU:HD21	1.91	0.52
2:A:107:SER:C	2:A:109:LYS:N	2.56	0.52
2:A:316:LYS:HZ2	2:A:316:LYS:HB3	1.74	0.52
2:A:333:TYR:HD1	2:A:381:LEU:HD12	1.75	0.52
2:A:389:LEU:N	2:A:389:LEU:CD2	2.70	0.52
2:C:2:LEU:CD2	2:C:3:GLU:H	2.22	0.52
2:C:288:VAL:O	2:C:291:ILE:HG12	2.09	0.52
2:E:104:VAL:HG23	2:E:105:GLN:O	2.10	0.52
2:E:106:GLY:O	2:E:107:SER:CB	2.57	0.52
2:E:216:LEU:HD23	2:E:216:LEU:C	2.28	0.52
2:E:281:THR:CG2	2:E:282:PHE:H	2.18	0.52
2:G:72:SER:O	2:G:76:ASP:N	2.37	0.52
2:G:116:LEU:O	2:G:119:PHE:HB3	2.09	0.52
2:G:335:GLN:O	2:G:336:ILE:C	2.48	0.52
1:B:199:C:O5'	1:B:199:C:H6	1.93	0.52
1:H:183:G:C6	1:H:184:G:O6	2.63	0.52
2:A:104:VAL:HG23	2:A:105:GLN:O	2.10	0.52
2:A:219:ASP:C	2:A:221:SER:N	2.63	0.52
2:A:259:ALA:O	2:A:260:VAL:C	2.47	0.52
2:A:287:PHE:HD1	2:A:290:ARG:NE	2.08	0.52
2:A:396:ASP:OD1	2:A:399:ARG:HG3	2.08	0.52
2:C:63:VAL:HG22	2:C:351:HIS:CB	2.38	0.52
2:C:247:MET:C	2:C:249:GLY:H	2.12	0.52
2:C:257:LEU:HD12	2:C:258:SER:H	1.67	0.52
2:C:285:LYS:O	2:C:287:PHE:N	2.43	0.52
2:E:230:ALA:O	2:E:231:SER:C	2.47	0.52
2:E:285:LYS:O	2:E:287:PHE:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:300:ILE:C	2:E:300:ILE:HD12	2.29	0.52
2:E:354:GLY:CA	2:E:368:LYS:HG3	2.39	0.52
2:E:421:TYR:N	2:E:421:TYR:CD1	2.75	0.52
2:G:153:GLN:HG2	2:G:154:VAL:H	1.73	0.52
2:G:396:ASP:OD2	2:G:399:ARG:CB	2.58	0.52
1:B:196:A:N6	1:B:211:C:N3	2.57	0.52
1:F:183:G:C6	1:F:184:G:O6	2.63	0.52
2:A:71:ILE:HA	2:A:74:VAL:CG1	2.40	0.52
2:A:106:GLY:O	2:A:107:SER:CB	2.57	0.52
2:A:238:PRO:C	2:A:240:GLY:N	2.63	0.52
2:A:283:ASN:O	2:A:285:LYS:N	2.42	0.52
2:A:359:LEU:O	2:A:361:THR:N	2.42	0.52
2:C:24:ASP:HA	2:C:27:ILE:HG12	1.92	0.52
2:C:71:ILE:C	2:C:73:ILE:N	2.60	0.52
2:C:104:VAL:HA	2:C:198:LEU:HD21	1.92	0.52
2:C:106:GLY:O	2:C:107:SER:CB	2.57	0.52
2:C:172:ASP:O	2:C:176:LYS:N	2.31	0.52
2:E:74:VAL:O	2:E:75:TYR:C	2.49	0.52
2:E:219:ASP:C	2:E:221:SER:N	2.63	0.52
2:E:247:MET:C	2:E:249:GLY:H	2.12	0.52
2:E:260:VAL:O	2:E:261:VAL:C	2.46	0.52
2:E:276:ILE:O	2:E:276:ILE:CG1	2.58	0.52
2:E:304:VAL:HG12	2:E:308:GLU:HB2	1.92	0.52
2:E:350:GLN:H	2:E:350:GLN:CD	2.12	0.52
2:G:91:ASN:HB3	2:G:92:PRO:CD	2.35	0.52
2:G:98:ILE:HD13	2:G:209:LEU:HD21	1.91	0.52
2:G:300:ILE:HG13	2:G:301:LEU:N	2.25	0.52
1:B:183:G:C6	1:B:184:G:O6	2.63	0.52
2:A:24:ASP:HA	2:A:27:ILE:HG12	1.92	0.52
2:A:40:ASN:HB3	2:A:43:LEU:HD21	1.92	0.52
2:A:100:MET:HB3	2:A:214:VAL:HG22	1.90	0.52
2:A:300:ILE:CA	2:A:342:MET:HA	2.39	0.52
2:C:424:MET:HG3	2:C:425:ASN:N	2.24	0.52
2:E:98:ILE:HD13	2:E:209:LEU:HD21	1.91	0.52
2:E:243:ILE:CD1	2:E:269:PHE:N	2.55	0.52
2:E:287:PHE:HD1	2:E:290:ARG:NE	2.08	0.52
2:E:297:ILE:CG1	2:E:298:GLU:N	2.72	0.52
2:E:307:LEU:O	2:E:310:TYR:N	2.42	0.52
2:E:424:MET:HG3	2:E:425:ASN:N	2.24	0.52
2:G:2:LEU:CD2	2:G:3:GLU:H	2.23	0.52
2:G:63:VAL:HG22	2:G:351:HIS:CB	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:104:VAL:HG23	2:G:105:GLN:O	2.10	0.52
2:G:230:ALA:O	2:G:231:SER:C	2.47	0.52
2:G:300:ILE:CA	2:G:342:MET:HA	2.39	0.52
1:D:192:G:H2'	1:D:192:G:N3	2.24	0.51
2:A:21:LYS:O	2:A:22:ALA:C	2.48	0.51
2:A:226:ALA:O	2:A:229:LEU:HB3	2.09	0.51
2:A:276:ILE:O	2:A:276:ILE:CG1	2.58	0.51
2:A:285:LYS:O	2:A:287:PHE:N	2.43	0.51
2:A:300:ILE:HG13	2:A:301:LEU:N	2.25	0.51
2:A:361:THR:HB	2:A:362:PRO:HD2	1.91	0.51
2:A:396:ASP:OD2	2:A:396:ASP:N	2.42	0.51
2:A:396:ASP:OD2	2:A:399:ARG:CB	2.58	0.51
2:C:71:ILE:HA	2:C:74:VAL:CG1	2.40	0.51
2:C:74:VAL:O	2:C:75:TYR:C	2.49	0.51
2:C:149:GLN:OE1	2:C:150:ILE:HG22	2.09	0.51
2:C:359:LEU:C	2:C:361:THR:HG23	2.30	0.51
2:E:49:ALA:O	2:E:50:LYS:C	2.47	0.51
2:E:219:ASP:C	2:E:221:SER:H	2.12	0.51
2:E:250:THR:O	2:E:251:ALA:CB	2.58	0.51
2:E:396:ASP:OD2	2:E:399:ARG:CB	2.58	0.51
2:G:40:ASN:HB3	2:G:43:LEU:HD21	1.92	0.51
2:G:301:LEU:HD23	2:G:301:LEU:C	2.31	0.51
2:G:384:MET:CG	2:G:403:ILE:HD13	2.34	0.51
2:G:417:LEU:HD12	2:G:418:LEU:CD2	2.40	0.51
1:F:192:G:N3	1:F:192:G:H2'	2.24	0.51
1:H:199:C:O5'	1:H:199:C:H6	1.92	0.51
2:A:24:ASP:O	2:A:25:GLU:C	2.47	0.51
2:A:145:GLN:O	2:A:146:LEU:C	2.47	0.51
2:A:359:LEU:C	2:A:361:THR:HG23	2.30	0.51
2:A:417:LEU:HD12	2:A:418:LEU:CD2	2.40	0.51
2:C:307:LEU:O	2:C:310:TYR:N	2.42	0.51
2:C:389:LEU:H	2:C:389:LEU:CD2	2.06	0.51
2:C:396:ASP:O	2:C:397:LYS:C	2.49	0.51
2:E:104:VAL:HA	2:E:198:LEU:HD21	1.92	0.51
2:E:149:GLN:OE1	2:E:150:ILE:HG22	2.09	0.51
2:E:296:ASP:O	2:E:297:ILE:C	2.48	0.51
2:G:74:VAL:O	2:G:75:TYR:C	2.49	0.51
2:G:99:ILE:O	2:G:99:ILE:CG2	2.58	0.51
1:F:188:A:C5	2:E:399:ARG:HG2	2.46	0.51
1:H:188:A:C5	2:G:399:ARG:HG2	2.46	0.51
2:A:146:LEU:H	2:A:146:LEU:CD2	2.06	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:153:GLN:HG2	2:A:154:VAL:H	1.73	0.51
2:C:75:TYR:HA	2:C:78:LEU:HD12	1.90	0.51
2:C:99:ILE:O	2:C:99:ILE:CG2	2.58	0.51
2:C:335:GLN:O	2:C:336:ILE:C	2.48	0.51
2:C:426:ARG:HB3	2:C:427:LEU:HD13	1.92	0.51
2:E:207:ASP:O	2:E:208:VAL:CG1	2.57	0.51
2:E:371:GLU:HG3	2:E:372:GLU:HG3	1.90	0.51
2:G:26:PHE:CZ	2:G:30:LEU:HD22	2.44	0.51
2:G:39:VAL:HA	2:G:255:GLY:CA	2.41	0.51
2:G:40:ASN:CB	2:G:43:LEU:HD21	2.41	0.51
2:G:104:VAL:HA	2:G:198:LEU:HD21	1.92	0.51
2:G:250:THR:O	2:G:251:ALA:CB	2.58	0.51
1:B:188:A:C5	2:A:399:ARG:HG2	2.46	0.51
1:F:210:G:O2'	1:F:211:C:O5'	2.27	0.51
1:H:192:G:H2'	1:H:192:G:N3	2.24	0.51
2:A:39:VAL:HA	2:A:255:GLY:CA	2.41	0.51
2:A:40:ASN:CB	2:A:43:LEU:HD21	2.40	0.51
2:A:110:THR:HG23	2:A:111:THR:H	1.74	0.51
2:A:301:LEU:HD23	2:A:301:LEU:C	2.31	0.51
2:C:24:ASP:O	2:C:25:GLU:C	2.47	0.51
2:C:98:ILE:CG2	2:C:209:LEU:HD11	2.41	0.51
2:C:118:TYR:CD2	2:C:119:PHE:N	2.79	0.51
2:C:250:THR:O	2:C:251:ALA:CB	2.58	0.51
2:C:300:ILE:C	2:C:300:ILE:HD12	2.29	0.51
2:C:334:ALA:O	2:C:335:GLN:C	2.47	0.51
2:E:21:LYS:O	2:E:22:ALA:C	2.48	0.51
2:E:27:ILE:O	2:E:31:GLN:N	2.31	0.51
2:E:40:ASN:CB	2:E:43:LEU:HD21	2.41	0.51
2:E:71:ILE:HA	2:E:74:VAL:CG1	2.40	0.51
2:E:199:LEU:HD23	2:E:199:LEU:H	1.76	0.51
2:E:203:LYS:O	2:E:204:GLU:C	2.49	0.51
2:E:216:LEU:N	2:E:242:VAL:HG12	2.19	0.51
2:G:146:LEU:H	2:G:146:LEU:CD2	2.06	0.51
2:G:259:ALA:O	2:G:260:VAL:C	2.46	0.51
2:G:396:ASP:O	2:G:397:LYS:C	2.49	0.51
2:A:98:ILE:CG2	2:A:209:LEU:HD11	2.41	0.51
2:A:199:LEU:HD23	2:A:199:LEU:H	1.76	0.51
2:A:296:ASP:O	2:A:297:ILE:C	2.48	0.51
2:A:355:LEU:O	2:A:356:GLY:O	2.29	0.51
2:C:21:LYS:O	2:C:22:ALA:C	2.48	0.51
2:C:49:ALA:O	2:C:50:LYS:C	2.47	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:39:VAL:HA	2:E:255:GLY:CA	2.41	0.51
2:E:301:LEU:HD23	2:E:301:LEU:C	2.31	0.51
2:E:402:ARG:HH21	2:E:403:ILE:HD11	1.75	0.51
2:G:30:LEU:O	2:G:34:LEU:CD2	2.58	0.51
2:G:171:VAL:O	2:G:174:PHE:HD2	1.93	0.51
2:G:333:TYR:HD1	2:G:381:LEU:HD12	1.75	0.51
1:F:199:C:O5'	1:F:199:C:H6	1.93	0.51
2:A:26:PHE:O	2:A:30:LEU:N	2.36	0.51
2:A:327:LEU:CB	2:A:330:ARG:HD3	2.41	0.51
2:A:402:ARG:HH21	2:A:403:ILE:HD11	1.75	0.51
2:C:30:LEU:O	2:C:34:LEU:CD2	2.58	0.51
2:C:114:GLY:O	2:C:118:TYR:N	2.44	0.51
2:C:219:ASP:C	2:C:221:SER:N	2.63	0.51
2:C:291:ILE:HD13	2:C:291:ILE:N	2.20	0.51
2:E:40:ASN:HB3	2:E:43:LEU:HD21	1.92	0.51
2:E:44:VAL:O	2:E:45:PHE:C	2.49	0.51
2:E:61:PRO:C	2:E:62:SER:O	2.49	0.51
2:E:98:ILE:CG2	2:E:209:LEU:HD11	2.41	0.51
2:E:118:TYR:CD2	2:E:119:PHE:N	2.79	0.51
2:E:181:ILE:C	2:E:182:ILE:HD12	2.30	0.51
2:E:289:SER:CA	2:E:292:LEU:HD12	2.40	0.51
2:E:327:LEU:CB	2:E:330:ARG:HD3	2.41	0.51
2:G:247:MET:C	2:G:249:GLY:H	2.12	0.51
2:G:417:LEU:CD1	2:G:421:TYR:CE2	2.91	0.51
1:D:196:A:N6	1:D:211:C:N3	2.57	0.51
2:A:30:LEU:O	2:A:34:LEU:CD2	2.58	0.51
2:A:104:VAL:HA	2:A:198:LEU:HD21	1.92	0.51
2:C:40:ASN:CB	2:C:43:LEU:HD21	2.40	0.51
2:C:171:VAL:O	2:C:174:PHE:HD2	1.93	0.51
2:E:86:LYS:HZ1	2:E:89:ASN:ND2	2.07	0.51
2:E:114:GLY:O	2:E:118:TYR:N	2.44	0.51
2:E:116:LEU:O	2:E:119:PHE:HB3	2.10	0.51
2:E:222:ILE:CD1	2:E:226:ALA:HA	2.41	0.51
2:E:276:ILE:O	2:E:276:ILE:HG13	2.09	0.51
2:E:300:ILE:HG13	2:E:301:LEU:N	2.25	0.51
2:E:426:ARG:HB3	2:E:427:LEU:HD13	1.92	0.51
2:G:24:ASP:O	2:G:25:GLU:C	2.47	0.51
2:G:98:ILE:CG2	2:G:209:LEU:HD11	2.41	0.51
2:G:327:LEU:CB	2:G:330:ARG:HD3	2.41	0.51
2:G:350:GLN:CD	2:G:350:GLN:H	2.12	0.51
2:G:402:ARG:HH21	2:G:403:ILE:HD11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:71:ILE:C	2:A:73:ILE:N	2.60	0.51
2:A:74:VAL:O	2:A:75:TYR:C	2.49	0.51
2:A:82:PHE:O	2:A:261:VAL:HG11	2.11	0.51
2:A:115:LYS:HA	2:A:118:TYR:CB	2.40	0.51
2:A:118:TYR:CD2	2:A:119:PHE:N	2.79	0.51
2:A:207:ASP:O	2:A:208:VAL:CG1	2.57	0.51
2:A:230:ALA:O	2:A:231:SER:C	2.47	0.51
2:C:39:VAL:HA	2:C:255:GLY:CA	2.41	0.51
2:C:40:ASN:HB3	2:C:43:LEU:HD21	1.92	0.51
2:C:216:LEU:CD2	2:C:217:VAL:N	2.71	0.51
2:C:300:ILE:HG13	2:C:301:LEU:N	2.25	0.51
2:C:410:GLU:O	2:C:411:VAL:C	2.50	0.51
2:E:300:ILE:CA	2:E:342:MET:HA	2.39	0.51
2:E:410:GLU:O	2:E:411:VAL:C	2.49	0.51
2:E:419:GLU:O	2:E:421:TYR:N	2.44	0.51
2:G:157:GLU:HB3	2:G:160:ASN:OD1	2.11	0.51
2:G:289:SER:CA	2:G:292:LEU:HD12	2.40	0.51
2:A:222:ILE:CD1	2:A:226:ALA:HA	2.41	0.51
2:C:222:ILE:CD1	2:C:226:ALA:HA	2.41	0.51
2:E:54:ARG:O	2:E:55:LEU:C	2.49	0.51
2:E:333:TYR:HD1	2:E:381:LEU:HD12	1.75	0.51
2:E:396:ASP:O	2:E:397:LYS:C	2.49	0.51
2:G:23:VAL:C	2:G:27:ILE:HG12	2.32	0.51
2:G:44:VAL:O	2:G:45:PHE:C	2.49	0.51
2:G:112:THR:O	2:G:114:GLY:N	2.44	0.51
2:G:118:TYR:CD2	2:G:119:PHE:N	2.79	0.51
2:G:355:LEU:O	2:G:356:GLY:O	2.29	0.51
2:G:419:GLU:O	2:G:421:TYR:N	2.44	0.51
1:D:210:G:N2	1:D:211:C:H41	2.09	0.51
1:F:210:G:N2	1:F:211:C:H41	2.09	0.51
2:A:209:LEU:O	2:A:210:LYS:HG2	2.11	0.51
2:A:313:ILE:O	2:A:314:GLN:C	2.50	0.51
2:A:419:GLU:O	2:A:421:TYR:N	2.44	0.51
2:C:61:PRO:C	2:C:62:SER:O	2.49	0.51
2:C:112:THR:O	2:C:114:GLY:N	2.44	0.51
2:C:209:LEU:O	2:C:210:LYS:HG2	2.11	0.51
2:C:288:VAL:O	2:C:289:SER:C	2.50	0.51
2:C:289:SER:CA	2:C:292:LEU:HD12	2.40	0.51
2:C:419:GLU:O	2:C:421:TYR:N	2.44	0.51
2:E:127:VAL:CG2	2:E:152:VAL:HG13	2.41	0.51
2:E:209:LEU:O	2:E:210:LYS:HG2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:279:LEU:CD1	2:E:280:GLU:N	2.74	0.51
2:E:297:ILE:O	2:E:301:LEU:N	2.22	0.51
2:G:181:ILE:C	2:G:182:ILE:HD12	2.30	0.51
2:G:238:PRO:C	2:G:240:GLY:N	2.63	0.51
2:G:313:ILE:O	2:G:314:GLN:C	2.50	0.51
2:G:376:ARG:HH11	2:G:409:LEU:HD22	1.75	0.51
2:A:47:LEU:O	2:A:49:ALA:N	2.44	0.50
2:A:250:THR:O	2:A:251:ALA:CB	2.58	0.50
2:A:410:GLU:O	2:A:411:VAL:C	2.49	0.50
2:C:23:VAL:C	2:C:27:ILE:HG12	2.32	0.50
2:C:396:ASP:OD2	2:C:399:ARG:CB	2.58	0.50
2:E:157:GLU:HB3	2:E:160:ASN:OD1	2.11	0.50
2:E:176:LYS:HD2	2:E:176:LYS:O	2.12	0.50
2:E:228:ASP:O	2:E:231:SER:HB2	2.12	0.50
2:E:238:PRO:C	2:E:240:GLY:N	2.63	0.50
2:E:313:ILE:O	2:E:314:GLN:C	2.50	0.50
2:E:355:LEU:O	2:E:356:GLY:O	2.29	0.50
2:E:376:ARG:HH11	2:E:409:LEU:HD22	1.75	0.50
2:G:47:LEU:O	2:G:49:ALA:N	2.44	0.50
2:G:86:LYS:HZ3	2:G:89:ASN:CG	2.13	0.50
2:G:333:TYR:CD1	2:G:381:LEU:HD12	2.47	0.50
2:G:354:GLY:CA	2:G:368:LYS:HG3	2.39	0.50
2:G:359:LEU:C	2:G:361:THR:HG23	2.30	0.50
2:A:157:GLU:HB3	2:A:160:ASN:OD1	2.11	0.50
2:A:176:LYS:HD2	2:A:176:LYS:O	2.12	0.50
2:A:247:MET:C	2:A:249:GLY:H	2.12	0.50
2:C:143:LEU:O	2:C:146:LEU:CG	2.57	0.50
2:C:203:LYS:O	2:C:204:GLU:C	2.49	0.50
2:C:296:ASP:O	2:C:297:ILE:C	2.48	0.50
2:C:301:LEU:HD23	2:C:301:LEU:C	2.31	0.50
2:C:327:LEU:CB	2:C:330:ARG:HD3	2.41	0.50
2:C:365:ASP:OD1	2:C:366:GLN:HB2	2.11	0.50
2:E:23:VAL:C	2:E:27:ILE:HG12	2.32	0.50
2:E:24:ASP:HA	2:E:27:ILE:HG12	1.92	0.50
2:E:47:LEU:O	2:E:49:ALA:N	2.44	0.50
2:E:75:TYR:HA	2:E:78:LEU:HG	1.94	0.50
2:E:205:MET:O	2:E:208:VAL:HG22	2.12	0.50
2:G:71:ILE:HD13	2:G:71:ILE:N	2.26	0.50
2:G:82:PHE:O	2:G:261:VAL:HG11	2.11	0.50
2:G:160:ASN:C	2:G:160:ASN:ND2	2.65	0.50
2:G:176:LYS:O	2:G:176:LYS:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:195:C:O2	1:D:195:C:C2'	2.52	0.50
1:F:198:G:N2	1:F:199:C:O4'	2.45	0.50
1:H:184:G:C6	1:H:185:G:C6	3.00	0.50
2:A:49:ALA:O	2:A:51:ILE:N	2.45	0.50
2:A:104:VAL:CG2	2:A:105:GLN:N	2.60	0.50
2:A:116:LEU:O	2:A:119:PHE:HB3	2.09	0.50
2:A:233:PHE:C	2:A:235:GLN:H	2.15	0.50
2:A:315:LYS:HB3	2:A:315:LYS:HZ2	1.73	0.50
2:A:333:TYR:CD1	2:A:381:LEU:HD12	2.47	0.50
2:A:354:GLY:CA	2:A:368:LYS:HG3	2.39	0.50
2:A:381:LEU:C	2:A:383:SER:N	2.65	0.50
2:C:157:GLU:HB3	2:C:160:ASN:OD1	2.11	0.50
2:C:163:PRO:HG2	2:C:164:ILE:HG13	1.93	0.50
2:C:402:ARG:HH21	2:C:403:ILE:HD11	1.75	0.50
2:E:111:THR:HG1	2:E:112:THR:N	2.07	0.50
2:E:269:PHE:CD1	2:E:281:THR:HA	2.44	0.50
2:E:297:ILE:C	2:E:299:SER:N	2.64	0.50
2:G:61:PRO:C	2:G:62:SER:O	2.49	0.50
2:G:203:LYS:O	2:G:204:GLU:C	2.49	0.50
2:G:296:ASP:O	2:G:297:ILE:C	2.49	0.50
2:G:428:LEU:C	2:G:428:LEU:HD13	2.32	0.50
1:B:210:G:N2	1:B:211:C:H41	2.09	0.50
1:D:188:A:C5	2:C:399:ARG:HG2	2.46	0.50
1:F:186:G:O2'	1:F:187:G:C8	2.59	0.50
1:H:196:A:N6	1:H:211:C:N3	2.57	0.50
2:A:63:VAL:HG22	2:A:351:HIS:CB	2.38	0.50
2:A:71:ILE:N	2:A:71:ILE:HD13	2.26	0.50
2:A:205:MET:O	2:A:208:VAL:HG22	2.12	0.50
2:A:289:SER:CA	2:A:292:LEU:HD12	2.40	0.50
2:A:401:ARG:O	2:A:405:GLU:HG2	2.12	0.50
2:A:425:ASN:ND2	2:A:425:ASN:H	2.04	0.50
2:C:44:VAL:O	2:C:45:PHE:C	2.49	0.50
2:C:104:VAL:HG23	2:C:105:GLN:O	2.10	0.50
2:C:333:TYR:HD1	2:C:381:LEU:HD12	1.75	0.50
2:E:29:ASP:O	2:E:30:LEU:C	2.50	0.50
2:E:63:VAL:HG22	2:E:351:HIS:CB	2.38	0.50
2:E:71:ILE:HD13	2:E:71:ILE:N	2.26	0.50
2:E:110:THR:HG23	2:E:111:THR:H	1.74	0.50
2:E:112:THR:O	2:E:114:GLY:N	2.44	0.50
2:E:315:LYS:HB3	2:E:315:LYS:HZ2	1.76	0.50
2:E:333:TYR:CD1	2:E:381:LEU:HD12	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:428:LEU:HD13	2:E:428:LEU:C	2.32	0.50
2:G:158:PRO:O	2:G:159:ASN:C	2.50	0.50
2:G:209:LEU:O	2:G:210:LYS:HG2	2.11	0.50
2:G:233:PHE:C	2:G:235:GLN:H	2.15	0.50
2:G:376:ARG:HG3	2:G:376:ARG:NH2	2.20	0.50
1:B:184:G:C6	1:B:185:G:C6	3.00	0.50
2:A:10:ARG:C	2:A:12:PHE:H	2.15	0.50
2:A:23:VAL:C	2:A:27:ILE:HG12	2.32	0.50
2:A:95:LEU:HD12	2:A:95:LEU:N	2.27	0.50
2:A:148:ASN:C	2:A:150:ILE:N	2.65	0.50
2:A:160:ASN:C	2:A:160:ASN:ND2	2.65	0.50
2:C:20:GLU:O	2:C:23:VAL:CB	2.59	0.50
2:C:91:ASN:HB3	2:C:92:PRO:CD	2.35	0.50
2:C:216:LEU:HD23	2:C:217:VAL:CA	2.42	0.50
2:G:49:ALA:O	2:G:51:ILE:N	2.45	0.50
2:G:75:TYR:HA	2:G:78:LEU:HG	1.94	0.50
2:G:223:GLY:HA2	2:G:256:ALA:CA	2.42	0.50
2:A:59:LYS:HZ2	2:A:61:PRO:N	2.08	0.50
2:A:101:LEU:O	2:A:186:THR:N	2.42	0.50
2:A:112:THR:O	2:A:114:GLY:N	2.44	0.50
2:A:158:PRO:O	2:A:159:ASN:C	2.50	0.50
2:A:428:LEU:C	2:A:428:LEU:HD13	2.32	0.50
2:C:47:LEU:O	2:C:49:ALA:N	2.44	0.50
2:C:269:PHE:CD1	2:C:281:THR:HA	2.44	0.50
2:C:313:ILE:O	2:C:314:GLN:C	2.50	0.50
2:C:355:LEU:O	2:C:356:GLY:O	2.29	0.50
2:C:357:ILE:N	2:C:357:ILE:CD1	2.70	0.50
2:C:384:MET:CG	2:C:403:ILE:HD13	2.34	0.50
2:E:148:ASN:C	2:E:150:ILE:N	2.65	0.50
2:E:216:LEU:HD23	2:E:217:VAL:CA	2.42	0.50
2:E:219:ASP:HB2	2:E:245:THR:OG1	2.12	0.50
2:E:300:ILE:HB	2:E:343:GLY:N	2.27	0.50
2:G:39:VAL:HG12	2:G:40:ASN:O	2.12	0.50
2:G:110:THR:HG23	2:G:111:THR:H	1.74	0.50
2:G:114:GLY:O	2:G:118:TYR:N	2.44	0.50
2:G:199:LEU:HD23	2:G:199:LEU:H	1.76	0.50
2:G:205:MET:O	2:G:208:VAL:HG22	2.12	0.50
2:G:207:ASP:O	2:G:208:VAL:CG1	2.57	0.50
2:G:424:MET:O	2:G:428:LEU:N	2.36	0.50
1:H:210:G:N2	1:H:211:C:H41	2.09	0.50
1:H:210:G:O2'	1:H:211:C:O5'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:44:VAL:O	2:A:45:PHE:C	2.49	0.50
2:A:114:GLY:O	2:A:118:TYR:N	2.44	0.50
2:A:127:VAL:CG2	2:A:152:VAL:HG13	2.41	0.50
2:A:203:LYS:O	2:A:204:GLU:C	2.49	0.50
2:A:348:VAL:O	2:A:349:LEU:C	2.50	0.50
2:A:424:MET:O	2:A:428:LEU:N	2.36	0.50
2:C:101:LEU:O	2:C:186:THR:N	2.42	0.50
2:C:168:LYS:O	2:C:169:LYS:C	2.50	0.50
2:C:176:LYS:HD2	2:C:176:LYS:O	2.12	0.50
2:C:390:GLU:CD	2:C:390:GLU:N	2.65	0.50
2:E:288:VAL:O	2:E:289:SER:C	2.50	0.50
2:E:354:GLY:C	2:E:355:LEU:HD23	2.32	0.50
2:E:430:MET:HA	2:E:430:MET:CE	2.30	0.50
2:G:54:ARG:O	2:G:55:LEU:C	2.49	0.50
2:G:140:TYR:O	2:G:141:ASP:O	2.30	0.50
2:G:216:LEU:CD2	2:G:217:VAL:N	2.71	0.50
2:G:222:ILE:CD1	2:G:226:ALA:HA	2.41	0.50
2:G:389:LEU:N	2:G:389:LEU:CD2	2.70	0.50
2:G:394:ILE:H	2:G:395:ILE:CD1	2.12	0.50
2:G:401:ARG:O	2:G:405:GLU:HG2	2.12	0.50
2:G:410:GLU:O	2:G:411:VAL:C	2.49	0.50
2:A:28:LYS:HA	2:A:31:GLN:CD	2.32	0.50
2:A:171:VAL:O	2:A:174:PHE:HD2	1.93	0.50
2:A:376:ARG:HH11	2:A:409:LEU:HD22	1.75	0.50
2:C:127:VAL:CG2	2:C:152:VAL:HG13	2.41	0.50
2:C:141:ASP:OD1	2:C:141:ASP:N	2.45	0.50
2:C:205:MET:O	2:C:208:VAL:HG22	2.12	0.50
2:C:207:ASP:O	2:C:208:VAL:CG1	2.58	0.50
2:C:219:ASP:HB2	2:C:245:THR:OG1	2.12	0.50
2:C:228:ASP:O	2:C:231:SER:HB2	2.12	0.50
2:E:10:ARG:C	2:E:12:PHE:H	2.15	0.50
2:E:140:TYR:O	2:E:141:ASP:O	2.30	0.50
2:E:141:ASP:OD1	2:E:141:ASP:N	2.45	0.50
2:E:163:PRO:HG2	2:E:164:ILE:HG13	1.93	0.50
2:E:308:GLU:C	2:E:309:GLU:HG3	2.31	0.50
2:E:333:TYR:O	2:E:337:ILE:CD1	2.60	0.50
2:G:127:VAL:CG2	2:G:152:VAL:HG13	2.41	0.50
2:G:202:MET:O	2:G:203:LYS:O	2.30	0.50
2:G:399:ARG:O	2:G:400:MET:CB	2.60	0.50
1:B:187:G:H1	1:B:217:U:H3	1.60	0.50
1:F:184:G:C6	1:F:185:G:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:187:G:H1	1:H:217:U:H3	1.59	0.50
2:A:191:GLY:O	2:A:194:GLU:C	2.50	0.50
2:A:219:ASP:HB2	2:A:245:THR:OG1	2.12	0.50
2:C:75:TYR:HA	2:C:78:LEU:HG	1.94	0.50
2:C:115:LYS:HA	2:C:118:TYR:CB	2.40	0.50
2:C:140:TYR:O	2:C:141:ASP:O	2.30	0.50
2:E:39:VAL:HG12	2:E:40:ASN:O	2.12	0.50
2:G:219:ASP:HB2	2:G:245:THR:OG1	2.12	0.50
2:A:61:PRO:C	2:A:62:SER:O	2.49	0.49
2:A:75:TYR:HA	2:A:78:LEU:HG	1.94	0.49
2:A:315:LYS:HB3	2:A:315:LYS:HZ3	1.76	0.49
2:A:390:GLU:CD	2:A:390:GLU:N	2.65	0.49
2:C:39:VAL:C	2:C:224:GLN:OE1	2.51	0.49
2:C:160:ASN:ND2	2:C:160:ASN:C	2.65	0.49
2:C:199:LEU:HD23	2:C:199:LEU:H	1.76	0.49
2:C:202:MET:O	2:C:203:LYS:O	2.30	0.49
2:C:427:LEU:O	2:C:428:LEU:C	2.51	0.49
2:E:49:ALA:O	2:E:51:ILE:N	2.45	0.49
2:E:87:GLU:OE2	2:E:87:GLU:CA	2.56	0.49
2:E:168:LYS:O	2:E:169:LYS:C	2.50	0.49
2:E:190:HIS:HB3	2:E:194:GLU:CB	2.42	0.49
2:E:390:GLU:CD	2:E:390:GLU:N	2.65	0.49
2:G:10:ARG:C	2:G:12:PHE:H	2.15	0.49
2:G:100:MET:HE3	2:G:206:TYR:HA	1.93	0.49
2:G:288:VAL:O	2:G:289:SER:C	2.50	0.49
1:B:192:G:C2	1:B:193:G:N7	2.80	0.49
1:B:198:G:N2	1:B:199:C:O4'	2.45	0.49
1:D:184:G:C6	1:D:185:G:C6	3.00	0.49
2:A:29:ASP:O	2:A:30:LEU:C	2.50	0.49
2:A:163:PRO:HG2	2:A:164:ILE:HG13	1.93	0.49
2:A:173:ILE:N	2:A:173:ILE:CD1	2.75	0.49
2:A:430:MET:HA	2:A:430:MET:CE	2.30	0.49
2:C:191:GLY:O	2:C:194:GLU:C	2.50	0.49
2:C:354:GLY:C	2:C:355:LEU:HD23	2.32	0.49
2:C:354:GLY:CA	2:C:368:LYS:HG3	2.39	0.49
2:E:39:VAL:C	2:E:224:GLN:OE1	2.51	0.49
2:E:82:PHE:O	2:E:261:VAL:HG11	2.11	0.49
2:E:191:GLY:O	2:E:194:GLU:C	2.50	0.49
2:G:228:ASP:O	2:G:231:SER:HB2	2.12	0.49
2:G:231:SER:O	2:G:233:PHE:N	2.45	0.49
1:D:198:G:N2	1:D:199:C:O4'	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:140:TYR:O	2:A:141:ASP:O	2.30	0.49
2:A:354:GLY:C	2:A:355:LEU:HD23	2.32	0.49
2:A:417:LEU:HD13	2:A:421:TYR:CZ	2.47	0.49
2:C:29:ASP:O	2:C:30:LEU:C	2.50	0.49
2:C:220:ALA:HB1	2:C:253:GLY:HA2	1.95	0.49
2:C:372:GLU:C	2:C:374:ILE:N	2.66	0.49
2:C:376:ARG:HH11	2:C:409:LEU:HD22	1.75	0.49
2:C:417:LEU:HD12	2:C:418:LEU:CD2	2.40	0.49
2:E:160:ASN:ND2	2:E:160:ASN:C	2.65	0.49
2:E:348:VAL:O	2:E:349:LEU:C	2.50	0.49
2:E:399:ARG:O	2:E:400:MET:CB	2.60	0.49
2:E:426:ARG:HG2	2:E:426:ARG:HH11	1.77	0.49
2:G:95:LEU:HD12	2:G:95:LEU:N	2.27	0.49
2:G:104:VAL:CG2	2:G:105:GLN:N	2.60	0.49
2:G:115:LYS:HA	2:G:118:TYR:CB	2.40	0.49
2:G:216:LEU:HD23	2:G:217:VAL:CA	2.42	0.49
2:G:220:ALA:HB1	2:G:253:GLY:HA2	1.95	0.49
2:G:333:TYR:O	2:G:336:ILE:HG12	2.12	0.49
2:G:395:ILE:H	2:G:395:ILE:CD1	2.17	0.49
2:G:427:LEU:O	2:G:428:LEU:C	2.51	0.49
2:A:190:HIS:HB3	2:A:194:GLU:CB	2.42	0.49
2:A:328:THR:HG22	2:A:329:LEU:N	2.27	0.49
2:C:10:ARG:C	2:C:12:PHE:H	2.14	0.49
2:C:39:VAL:HG12	2:C:40:ASN:O	2.12	0.49
2:C:49:ALA:O	2:C:51:ILE:N	2.45	0.49
2:C:173:ILE:N	2:C:173:ILE:CD1	2.75	0.49
2:C:281:THR:HG22	2:C:282:PHE:N	2.23	0.49
2:C:333:TYR:O	2:C:337:ILE:CD1	2.60	0.49
2:C:333:TYR:CD1	2:C:381:LEU:HD12	2.47	0.49
2:C:424:MET:C	2:C:425:ASN:HD22	2.15	0.49
2:E:247:MET:C	2:E:249:GLY:N	2.66	0.49
2:E:346:SER:CA	2:E:350:GLN:HE21	2.25	0.49
2:E:417:LEU:HD12	2:E:418:LEU:CD2	2.40	0.49
2:E:427:LEU:O	2:E:428:LEU:C	2.51	0.49
2:G:101:LEU:O	2:G:186:THR:N	2.42	0.49
2:G:148:ASN:C	2:G:150:ILE:N	2.65	0.49
2:G:328:THR:HG22	2:G:329:LEU:N	2.27	0.49
2:G:333:TYR:O	2:G:336:ILE:HB	2.12	0.49
2:G:336:ILE:O	2:G:337:ILE:C	2.50	0.49
2:A:228:ASP:O	2:A:231:SER:HB2	2.12	0.49
2:A:233:PHE:C	2:A:233:PHE:CD1	2.86	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:83:GLY:O	2:C:84:GLY:C	2.51	0.49
2:C:253:GLY:O	2:C:256:ALA:N	2.45	0.49
2:C:300:ILE:HB	2:C:343:GLY:N	2.27	0.49
2:C:376:ARG:O	2:C:377:TRP:C	2.50	0.49
2:C:381:LEU:C	2:C:383:SER:N	2.65	0.49
2:E:216:LEU:HD21	2:E:218:ILE:HG23	1.94	0.49
2:E:223:GLY:HA2	2:E:256:ALA:CA	2.42	0.49
2:E:373:LYS:HA	2:E:376:ARG:CG	2.41	0.49
2:E:417:LEU:O	2:E:420:TRP:N	2.45	0.49
2:G:39:VAL:C	2:G:224:GLN:OE1	2.51	0.49
2:G:143:LEU:O	2:G:146:LEU:CG	2.57	0.49
2:G:190:HIS:HB3	2:G:194:GLU:CB	2.42	0.49
2:G:233:PHE:C	2:G:233:PHE:CD1	2.86	0.49
2:G:348:VAL:O	2:G:349:LEU:C	2.50	0.49
2:G:417:LEU:O	2:G:420:TRP:N	2.45	0.49
1:D:187:G:H1	1:D:217:U:H3	1.60	0.49
2:A:39:VAL:C	2:A:224:GLN:OE1	2.51	0.49
2:A:39:VAL:HG12	2:A:40:ASN:O	2.12	0.49
2:A:202:MET:O	2:A:203:LYS:O	2.30	0.49
2:A:300:ILE:HB	2:A:343:GLY:N	2.27	0.49
2:A:333:TYR:O	2:A:336:ILE:HB	2.12	0.49
2:A:336:ILE:O	2:A:337:ILE:C	2.50	0.49
2:A:417:LEU:O	2:A:420:TRP:N	2.45	0.49
2:A:426:ARG:HG2	2:A:426:ARG:HH11	1.77	0.49
2:C:90:VAL:HG23	2:C:91:ASN:OD1	2.13	0.49
2:C:158:PRO:O	2:C:159:ASN:C	2.50	0.49
2:C:357:ILE:O	2:C:358:MET:HB3	2.13	0.49
2:C:389:LEU:N	2:C:389:LEU:CD2	2.70	0.49
2:C:417:LEU:O	2:C:420:TRP:N	2.45	0.49
2:C:428:LEU:C	2:C:428:LEU:HD13	2.32	0.49
2:E:28:LYS:HA	2:E:31:GLN:CD	2.32	0.49
2:E:90:VAL:HG23	2:E:91:ASN:OD1	2.13	0.49
2:E:102:VAL:HG22	2:E:215:ILE:O	2.13	0.49
2:E:115:LYS:HA	2:E:118:TYR:CB	2.40	0.49
2:E:171:VAL:O	2:E:174:PHE:HD2	1.93	0.49
2:E:202:MET:O	2:E:203:LYS:O	2.30	0.49
2:E:220:ALA:HB1	2:E:253:GLY:HA2	1.95	0.49
2:G:327:LEU:HB3	2:G:330:ARG:HD3	1.95	0.49
2:G:357:ILE:O	2:G:358:MET:HB3	2.13	0.49
2:G:390:GLU:N	2:G:390:GLU:CD	2.65	0.49
1:H:192:G:C2	1:H:193:G:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:198:G:N2	1:H:199:C:O4'	2.45	0.49
2:A:126:LYS:N	2:A:126:LYS:HD2	2.28	0.49
2:A:127:VAL:HG21	2:A:152:VAL:HG13	1.95	0.49
2:A:346:SER:CA	2:A:350:GLN:HE21	2.25	0.49
2:C:28:LYS:HA	2:C:31:GLN:CD	2.32	0.49
2:C:190:HIS:HB3	2:C:194:GLU:CB	2.42	0.49
2:C:216:LEU:HD21	2:C:218:ILE:HG23	1.94	0.49
2:C:238:PRO:C	2:C:240:GLY:N	2.63	0.49
2:C:247:MET:C	2:C:249:GLY:N	2.66	0.49
2:C:279:LEU:CD1	2:C:280:GLU:N	2.74	0.49
2:C:333:TYR:O	2:C:336:ILE:HB	2.12	0.49
2:C:417:LEU:HD13	2:C:421:TYR:CZ	2.47	0.49
2:E:126:LYS:HD2	2:E:126:LYS:N	2.28	0.49
2:E:401:ARG:O	2:E:405:GLU:HG2	2.12	0.49
2:E:402:ARG:HB3	2:E:402:ARG:HH11	1.77	0.49
2:E:417:LEU:HD13	2:E:421:TYR:CZ	2.47	0.49
2:E:420:TRP:N	2:E:420:TRP:HE3	2.11	0.49
2:G:25:GLU:O	2:G:29:ASP:N	2.37	0.49
2:G:141:ASP:OD1	2:G:141:ASP:N	2.45	0.49
2:G:191:GLY:O	2:G:194:GLU:C	2.50	0.49
2:G:333:TYR:O	2:G:337:ILE:CD1	2.60	0.49
1:D:192:G:C2	1:D:193:G:N7	2.80	0.49
1:F:187:G:H1	1:F:217:U:H3	1.59	0.49
2:A:90:VAL:HG23	2:A:91:ASN:OD1	2.13	0.49
2:A:216:LEU:HD23	2:A:217:VAL:CA	2.42	0.49
2:A:288:VAL:O	2:A:289:SER:C	2.50	0.49
2:A:333:TYR:O	2:A:336:ILE:HG12	2.12	0.49
2:A:396:ASP:O	2:A:397:LYS:C	2.49	0.49
2:C:95:LEU:HD12	2:C:95:LEU:N	2.27	0.49
2:C:148:ASN:C	2:C:150:ILE:N	2.65	0.49
2:C:297:ILE:O	2:C:301:LEU:N	2.22	0.49
2:C:401:ARG:O	2:C:405:GLU:HG2	2.12	0.49
2:E:372:GLU:C	2:E:374:ILE:N	2.66	0.49
2:G:90:VAL:HG23	2:G:91:ASN:OD1	2.13	0.49
2:A:72:SER:OG	2:A:73:ILE:N	2.46	0.49
2:A:141:ASP:OD1	2:A:141:ASP:N	2.45	0.49
2:A:216:LEU:HD21	2:A:218:ILE:HG23	1.94	0.49
2:A:223:GLY:HA2	2:A:256:ALA:CA	2.42	0.49
2:A:333:TYR:O	2:A:337:ILE:CD1	2.60	0.49
2:A:385:THR:O	2:A:388:GLU:HB2	2.13	0.49
2:A:399:ARG:O	2:A:400:MET:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:422:ASN:C	2:A:425:ASN:ND2	2.50	0.49
2:A:425:ASN:ND2	2:A:426:ARG:N	2.61	0.49
2:C:59:LYS:O	2:C:59:LYS:HD3	2.13	0.49
2:C:109:LYS:HZ3	2:C:109:LYS:CB	2.26	0.49
2:C:112:THR:OG1	2:C:113:ALA:N	2.46	0.49
2:C:243:ILE:CD1	2:C:268:LYS:HB2	2.38	0.49
2:C:336:ILE:O	2:C:337:ILE:C	2.50	0.49
2:C:346:SER:CA	2:C:350:GLN:HE21	2.25	0.49
2:C:385:THR:O	2:C:388:GLU:HB2	2.13	0.49
2:C:426:ARG:HG2	2:C:426:ARG:HH11	1.78	0.49
2:E:69:TRP:CD1	2:E:70:PHE:N	2.81	0.49
2:E:303:LYS:HG3	2:E:342:MET:CA	2.43	0.49
2:E:333:TYR:O	2:E:336:ILE:HB	2.12	0.49
2:E:333:TYR:O	2:E:336:ILE:HG12	2.12	0.49
2:G:24:ASP:HA	2:G:27:ILE:HG12	1.92	0.49
2:G:83:GLY:O	2:G:84:GLY:C	2.51	0.49
2:G:346:SER:CA	2:G:350:GLN:HE21	2.25	0.49
2:G:376:ARG:O	2:G:377:TRP:C	2.50	0.49
2:G:381:LEU:C	2:G:383:SER:H	2.16	0.49
2:G:426:ARG:HG2	2:G:426:ARG:HH11	1.78	0.49
1:F:210:G:HO2'	1:F:211:C:H6	1.58	0.49
2:A:25:GLU:O	2:A:28:LYS:N	2.46	0.49
2:A:114:GLY:O	2:A:116:LEU:N	2.46	0.49
2:A:220:ALA:HB1	2:A:253:GLY:HA2	1.95	0.49
2:A:274:GLU:O	2:A:275:LYS:O	2.31	0.49
2:A:427:LEU:O	2:A:428:LEU:C	2.51	0.49
2:C:114:GLY:O	2:C:116:LEU:N	2.46	0.49
2:C:223:GLY:HA2	2:C:256:ALA:CA	2.42	0.49
2:C:231:SER:O	2:C:233:PHE:N	2.45	0.49
2:C:346:SER:HA	2:C:350:GLN:NE2	2.28	0.49
2:E:304:VAL:CB	2:E:308:GLU:OE1	2.60	0.49
2:E:381:LEU:C	2:E:383:SER:N	2.65	0.49
2:G:114:GLY:O	2:G:116:LEU:N	2.46	0.49
2:G:163:PRO:HG2	2:G:164:ILE:HG13	1.93	0.49
2:G:303:LYS:HG3	2:G:342:MET:CA	2.43	0.49
2:G:354:GLY:C	2:G:355:LEU:HD23	2.32	0.49
2:A:77:GLU:OE1	2:A:80:LYS:HD2	2.13	0.48
2:A:115:LYS:HG2	2:A:276:ILE:C	2.34	0.48
2:A:136:ARG:HG2	2:A:136:ARG:HH11	1.78	0.48
2:A:192:TYR:CE1	2:A:229:LEU:HD13	2.48	0.48
2:A:267:ILE:N	2:A:267:ILE:CD1	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:269:PHE:CD1	2:A:281:THR:HA	2.44	0.48
2:A:303:LYS:HG3	2:A:342:MET:CA	2.43	0.48
2:A:374:ILE:CD1	2:A:375:ARG:N	2.73	0.48
2:A:420:TRP:N	2:A:420:TRP:HE3	2.11	0.48
2:C:77:GLU:OE1	2:C:80:LYS:HD2	2.13	0.48
2:C:303:LYS:HG3	2:C:342:MET:CA	2.43	0.48
2:C:417:LEU:HD13	2:C:421:TYR:OH	2.13	0.48
2:E:72:SER:OG	2:E:73:ILE:N	2.46	0.48
2:E:83:GLY:O	2:E:84:GLY:C	2.51	0.48
2:E:304:VAL:O	2:E:308:GLU:OE1	2.30	0.48
2:E:336:ILE:O	2:E:337:ILE:C	2.50	0.48
2:E:345:LEU:CG	2:E:346:SER:H	2.24	0.48
2:E:385:THR:O	2:E:388:GLU:HB2	2.13	0.48
2:G:20:GLU:O	2:G:23:VAL:CB	2.59	0.48
2:G:69:TRP:CD1	2:G:70:PHE:N	2.81	0.48
2:G:77:GLU:OE1	2:G:80:LYS:HD2	2.13	0.48
2:G:168:LYS:O	2:G:169:LYS:C	2.50	0.48
2:G:195:GLU:C	2:G:199:LEU:HD21	2.33	0.48
2:G:247:MET:C	2:G:249:GLY:N	2.66	0.48
2:A:102:VAL:HG22	2:A:215:ILE:O	2.13	0.48
2:A:374:ILE:HD13	2:A:375:ARG:H	1.76	0.48
2:C:69:TRP:CD1	2:C:70:PHE:N	2.81	0.48
2:C:82:PHE:O	2:C:261:VAL:HG11	2.11	0.48
2:C:94:LYS:O	2:C:95:LEU:HG	2.14	0.48
2:C:195:GLU:C	2:C:199:LEU:HD21	2.33	0.48
2:C:206:TYR:HD1	2:C:207:ASP:N	2.11	0.48
2:C:276:ILE:O	2:C:276:ILE:HD12	2.13	0.48
2:C:381:LEU:C	2:C:383:SER:H	2.16	0.48
2:C:384:MET:HG2	2:C:388:GLU:OE2	2.14	0.48
2:E:6:ARG:HB2	2:E:291:ILE:O	2.14	0.48
2:E:146:LEU:CD2	2:E:146:LEU:N	2.68	0.48
2:E:274:GLU:O	2:E:275:LYS:O	2.31	0.48
2:E:349:LEU:O	2:E:352:ILE:O	2.31	0.48
2:G:68:GLU:O	2:G:69:TRP:C	2.52	0.48
2:G:99:ILE:HD12	2:G:213:ASP:HB3	1.95	0.48
2:G:102:VAL:HG22	2:G:215:ILE:O	2.13	0.48
2:G:206:TYR:HD1	2:G:207:ASP:N	2.12	0.48
2:G:216:LEU:HD21	2:G:218:ILE:HG23	1.94	0.48
2:G:274:GLU:O	2:G:275:LYS:O	2.31	0.48
2:G:402:ARG:HB3	2:G:402:ARG:HH11	1.77	0.48
2:A:54:ARG:O	2:A:55:LEU:C	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:69:TRP:CD1	2:A:70:PHE:N	2.81	0.48
2:A:423:ASN:OD1	2:A:427:LEU:HD13	2.13	0.48
2:C:166:ILE:CG2	2:C:167:ALA:N	2.77	0.48
2:C:274:GLU:O	2:C:275:LYS:O	2.31	0.48
2:C:303:LYS:HE3	2:C:341:LYS:HB3	1.95	0.48
2:C:327:LEU:HB3	2:C:330:ARG:HD3	1.95	0.48
2:C:348:VAL:O	2:C:349:LEU:C	2.50	0.48
2:E:77:GLU:OE1	2:E:80:LYS:HD2	2.13	0.48
2:E:114:GLY:O	2:E:116:LEU:N	2.46	0.48
2:E:158:PRO:O	2:E:159:ASN:C	2.50	0.48
2:E:423:ASN:OD1	2:E:427:LEU:HD13	2.13	0.48
2:G:47:LEU:HG	2:G:51:ILE:CD1	2.42	0.48
2:G:115:LYS:HG2	2:G:276:ILE:C	2.33	0.48
2:G:300:ILE:HB	2:G:343:GLY:N	2.27	0.48
2:G:385:THR:O	2:G:388:GLU:HB2	2.13	0.48
1:F:192:G:C2	1:F:193:G:N7	2.80	0.48
2:A:327:LEU:HB3	2:A:330:ARG:HD3	1.95	0.48
2:A:346:SER:HA	2:A:350:GLN:NE2	2.29	0.48
2:A:417:LEU:HD13	2:A:421:TYR:OH	2.13	0.48
2:C:54:ARG:O	2:C:55:LEU:C	2.49	0.48
2:C:71:ILE:HD13	2:C:71:ILE:N	2.26	0.48
2:C:72:SER:OG	2:C:73:ILE:N	2.46	0.48
2:C:147:GLY:O	2:C:152:VAL:N	2.43	0.48
2:C:349:LEU:O	2:C:352:ILE:O	2.32	0.48
2:E:104:VAL:HA	2:E:198:LEU:CD2	2.43	0.48
2:E:231:SER:O	2:E:233:PHE:N	2.45	0.48
2:E:376:ARG:O	2:E:377:TRP:C	2.50	0.48
2:G:28:LYS:HA	2:G:31:GLN:CD	2.32	0.48
2:G:100:MET:HE1	2:G:205:MET:C	2.34	0.48
2:G:140:TYR:O	2:G:143:LEU:N	2.47	0.48
2:G:172:ASP:HA	2:G:175:VAL:CG2	2.43	0.48
2:G:346:SER:HA	2:G:350:GLN:NE2	2.29	0.48
2:G:423:ASN:OD1	2:G:427:LEU:HD13	2.13	0.48
2:A:99:ILE:O	2:A:99:ILE:CG2	2.58	0.48
2:A:195:GLU:C	2:A:199:LEU:HD21	2.33	0.48
2:A:216:LEU:O	2:A:242:VAL:HG12	2.14	0.48
2:A:231:SER:O	2:A:233:PHE:N	2.45	0.48
2:A:247:MET:C	2:A:249:GLY:N	2.66	0.48
2:C:123:ARG:CG	2:C:123:ARG:NH1	2.76	0.48
2:C:140:TYR:O	2:C:143:LEU:N	2.47	0.48
2:C:333:TYR:O	2:C:336:ILE:HG12	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:345:LEU:CG	2:C:346:SER:H	2.24	0.48
2:C:423:ASN:OD1	2:C:427:LEU:HD13	2.13	0.48
2:E:127:VAL:HG21	2:E:152:VAL:HG13	1.95	0.48
2:E:192:TYR:CE1	2:E:229:LEU:HD13	2.48	0.48
2:E:206:TYR:HD1	2:E:207:ASP:N	2.11	0.48
2:E:233:PHE:C	2:E:235:GLN:H	2.15	0.48
2:E:327:LEU:HB3	2:E:330:ARG:HD3	1.95	0.48
2:E:384:MET:HG2	2:E:388:GLU:OE2	2.14	0.48
2:E:424:MET:C	2:E:425:ASN:HD22	2.15	0.48
2:G:126:LYS:HD2	2:G:126:LYS:N	2.28	0.48
2:G:136:ARG:HG2	2:G:136:ARG:HH11	1.78	0.48
2:G:173:ILE:N	2:G:173:ILE:CD1	2.75	0.48
2:A:114:GLY:O	2:A:117:ALA:N	2.47	0.48
2:A:140:TYR:O	2:A:143:LEU:N	2.47	0.48
2:A:349:LEU:O	2:A:352:ILE:O	2.32	0.48
2:C:74:VAL:HG23	2:C:75:TYR:H	1.61	0.48
2:C:233:PHE:C	2:C:235:GLN:H	2.15	0.48
2:E:25:GLU:O	2:E:28:LYS:N	2.46	0.48
2:E:95:LEU:HD12	2:E:95:LEU:N	2.27	0.48
2:E:195:GLU:C	2:E:199:LEU:HD21	2.33	0.48
2:E:204:GLU:O	2:E:208:VAL:CG2	2.58	0.48
2:E:357:ILE:O	2:E:358:MET:HB3	2.13	0.48
2:E:411:VAL:HG12	2:E:412:GLU:N	2.29	0.48
2:E:417:LEU:HD13	2:E:421:TYR:OH	2.13	0.48
2:E:422:ASN:C	2:E:425:ASN:ND2	2.50	0.48
2:G:130:VAL:HB	2:G:184:VAL:CG1	2.44	0.48
2:G:372:GLU:C	2:G:374:ILE:N	2.66	0.48
1:H:184:G:H5''	1:H:185:G:OP2	2.14	0.48
2:A:83:GLY:O	2:A:84:GLY:C	2.51	0.48
2:A:206:TYR:HD1	2:A:207:ASP:N	2.11	0.48
2:C:75:TYR:O	2:C:78:LEU:N	2.47	0.48
2:C:114:GLY:O	2:C:117:ALA:N	2.47	0.48
2:C:170:GLY:O	2:C:173:ILE:CG1	2.62	0.48
2:C:192:TYR:CE1	2:C:229:LEU:HD13	2.48	0.48
2:C:233:PHE:HD1	2:C:236:ALA:HB3	1.79	0.48
2:C:313:ILE:O	2:C:315:LYS:HG2	2.13	0.48
2:C:374:ILE:C	2:C:376:ARG:N	2.59	0.48
2:C:411:VAL:HG12	2:C:412:GLU:N	2.29	0.48
2:E:20:GLU:O	2:E:23:VAL:CB	2.59	0.48
2:G:132:ALA:CB	2:G:185:ASP:O	2.51	0.48
2:G:170:GLY:O	2:G:173:ILE:CG1	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:184:G:H5''	1:B:185:G:OP2	2.14	0.48
2:A:86:LYS:HZ3	2:A:89:ASN:CG	2.16	0.48
2:A:129:LEU:HD11	2:A:152:VAL:HG11	1.96	0.48
2:A:345:LEU:CG	2:A:346:SER:H	2.24	0.48
2:A:403:ILE:O	2:A:407:SER:N	2.41	0.48
2:C:172:ASP:HA	2:C:175:VAL:CG2	2.44	0.48
2:C:399:ARG:O	2:C:400:MET:CB	2.60	0.48
2:E:115:LYS:HG2	2:E:276:ILE:C	2.33	0.48
2:E:140:TYR:O	2:E:143:LEU:N	2.47	0.48
2:E:146:LEU:O	2:E:149:GLN:N	2.47	0.48
2:E:173:ILE:N	2:E:173:ILE:CD1	2.75	0.48
2:E:299:SER:O	2:E:302:GLU:N	2.47	0.48
2:G:25:GLU:O	2:G:28:LYS:N	2.46	0.48
2:G:297:ILE:O	2:G:301:LEU:N	2.22	0.48
2:G:381:LEU:C	2:G:383:SER:N	2.65	0.48
2:A:6:ARG:HB2	2:A:291:ILE:O	2.14	0.48
2:A:168:LYS:O	2:A:169:LYS:C	2.50	0.48
2:A:313:ILE:O	2:A:315:LYS:HG2	2.13	0.48
2:A:357:ILE:O	2:A:358:MET:HB3	2.13	0.48
2:C:25:GLU:O	2:C:28:LYS:N	2.46	0.48
2:C:68:GLU:O	2:C:69:TRP:C	2.52	0.48
2:C:104:VAL:CG2	2:C:105:GLN:N	2.61	0.48
2:E:136:ARG:HG2	2:E:136:ARG:HH11	1.78	0.48
2:E:166:ILE:CG2	2:E:167:ALA:N	2.77	0.48
2:E:172:ASP:HA	2:E:175:VAL:CG2	2.44	0.48
2:E:195:GLU:CG	2:E:196:THR:H	2.25	0.48
2:E:303:LYS:HG3	2:E:342:MET:CB	2.44	0.48
2:G:34:LEU:N	2:G:34:LEU:HD23	2.29	0.48
2:G:94:LYS:O	2:G:95:LEU:HG	2.14	0.48
2:G:112:THR:OG1	2:G:113:ALA:N	2.46	0.48
2:G:216:LEU:O	2:G:242:VAL:HG12	2.14	0.48
2:G:279:LEU:CD1	2:G:280:GLU:N	2.74	0.48
2:G:287:PHE:O	2:G:290:ARG:CB	2.62	0.48
2:G:299:SER:O	2:G:302:GLU:N	2.47	0.48
2:G:316:LYS:HZ2	2:G:316:LYS:HB3	1.78	0.48
1:B:216:G:C2'	1:B:217:U:H5''	2.43	0.48
2:A:77:GLU:O	2:A:81:LEU:HB3	2.14	0.48
2:A:94:LYS:O	2:A:95:LEU:HG	2.14	0.48
2:A:253:GLY:O	2:A:256:ALA:N	2.45	0.48
2:A:308:GLU:O	2:A:309:GLU:CB	2.62	0.48
2:C:126:LYS:N	2:C:126:LYS:HD2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:420:TRP:N	2:C:420:TRP:HE3	2.11	0.48
2:E:112:THR:OG1	2:E:113:ALA:N	2.46	0.48
2:E:170:GLY:O	2:E:173:ILE:CG1	2.62	0.48
2:G:356:GLY:HA2	2:G:424:MET:HE1	1.95	0.48
2:G:417:LEU:HD13	2:G:421:TYR:CZ	2.47	0.48
2:A:170:GLY:O	2:A:173:ILE:CG1	2.62	0.47
2:C:6:ARG:HB2	2:C:291:ILE:O	2.14	0.47
2:C:98:ILE:HD13	2:C:209:LEU:CD2	2.44	0.47
2:C:99:ILE:HD12	2:C:213:ASP:HB3	1.95	0.47
2:C:104:VAL:HA	2:C:198:LEU:CD2	2.43	0.47
2:C:208:VAL:N	2:C:210:LYS:HZ2	2.12	0.47
2:C:303:LYS:HG3	2:C:342:MET:CB	2.44	0.47
2:C:328:THR:HG22	2:C:329:LEU:N	2.27	0.47
2:C:337:ILE:N	2:C:337:ILE:CD1	2.74	0.47
2:E:75:TYR:O	2:E:78:LEU:N	2.47	0.47
2:E:346:SER:HA	2:E:350:GLN:NE2	2.28	0.47
2:E:412:GLU:O	2:E:413:GLU:C	2.52	0.47
2:G:6:ARG:HB2	2:G:291:ILE:O	2.14	0.47
2:G:29:ASP:O	2:G:30:LEU:C	2.50	0.47
2:G:146:LEU:O	2:G:149:GLN:N	2.47	0.47
2:G:385:THR:HG23	2:G:388:GLU:H	1.79	0.47
2:G:420:TRP:N	2:G:420:TRP:HE3	2.11	0.47
2:A:99:ILE:HD12	2:A:213:ASP:HB3	1.95	0.47
2:A:104:VAL:HA	2:A:198:LEU:CD2	2.43	0.47
2:A:287:PHE:O	2:A:290:ARG:CB	2.62	0.47
2:A:297:ILE:C	2:A:299:SER:N	2.64	0.47
2:A:374:ILE:HD13	2:A:375:ARG:CA	2.44	0.47
2:C:102:VAL:HG22	2:C:215:ILE:O	2.13	0.47
2:C:115:LYS:HG2	2:C:276:ILE:C	2.34	0.47
2:C:162:ASN:ND2	2:G:159:ASN:HD21	2.05	0.47
2:C:402:ARG:HB3	2:C:402:ARG:HH11	1.77	0.47
2:E:60:PRO:HB3	2:E:69:TRP:CB	2.44	0.47
2:E:114:GLY:O	2:E:117:ALA:N	2.47	0.47
2:E:294:MET:C	2:E:294:MET:SD	2.92	0.47
2:G:98:ILE:HD13	2:G:209:LEU:CD2	2.44	0.47
2:G:114:GLY:O	2:G:117:ALA:N	2.47	0.47
2:G:233:PHE:HD1	2:G:236:ALA:HB3	1.79	0.47
2:G:276:ILE:O	2:G:276:ILE:HD12	2.13	0.47
2:G:294:MET:C	2:G:294:MET:SD	2.92	0.47
2:G:308:GLU:O	2:G:309:GLU:CB	2.62	0.47
2:G:349:LEU:O	2:G:352:ILE:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:377:TRP:CE3	2:G:377:TRP:CA	2.98	0.47
2:G:384:MET:HG2	2:G:388:GLU:OE2	2.14	0.47
2:A:66:ARG:HH11	2:A:66:ARG:CB	2.14	0.47
2:A:117:ALA:O	2:A:120:TYR:N	2.48	0.47
2:A:146:LEU:O	2:A:149:GLN:N	2.47	0.47
2:A:303:LYS:HG3	2:A:342:MET:CB	2.44	0.47
2:A:372:GLU:C	2:A:374:ILE:N	2.66	0.47
2:C:159:ASN:HB3	2:G:161:GLN:O	2.14	0.47
2:C:172:ASP:HA	2:C:175:VAL:CB	2.44	0.47
2:C:374:ILE:HD13	2:C:375:ARG:CA	2.44	0.47
2:C:412:GLU:O	2:C:413:GLU:C	2.52	0.47
2:E:303:LYS:HE3	2:E:341:LYS:HB3	1.95	0.47
2:G:72:SER:OG	2:G:73:ILE:N	2.46	0.47
2:G:192:TYR:CE1	2:G:229:LEU:HD13	2.48	0.47
2:G:313:ILE:O	2:G:315:LYS:HG2	2.13	0.47
1:B:218:G:H2'	1:B:218:G:N3	2.29	0.47
1:F:223:G:H2'	1:F:224:U:O5'	2.15	0.47
2:A:68:GLU:O	2:A:69:TRP:C	2.52	0.47
2:A:195:GLU:CG	2:A:196:THR:H	2.25	0.47
2:A:299:SER:O	2:A:302:GLU:N	2.47	0.47
2:A:376:ARG:HG3	2:A:376:ARG:NH2	2.20	0.47
2:A:402:ARG:HB3	2:A:402:ARG:HH11	1.77	0.47
2:A:412:GLU:O	2:A:413:GLU:C	2.52	0.47
2:C:297:ILE:C	2:C:299:SER:N	2.64	0.47
2:C:299:SER:O	2:C:302:GLU:N	2.47	0.47
2:C:356:GLY:HA2	2:C:424:MET:CE	2.45	0.47
2:C:377:TRP:CE3	2:C:377:TRP:CA	2.97	0.47
2:E:34:LEU:N	2:E:34:LEU:HD23	2.29	0.47
2:E:101:LEU:O	2:E:186:THR:N	2.42	0.47
2:E:233:PHE:C	2:E:233:PHE:CD1	2.86	0.47
2:E:233:PHE:HD1	2:E:236:ALA:HB3	1.79	0.47
2:E:298:GLU:H	2:E:298:GLU:HG3	1.55	0.47
2:E:313:ILE:O	2:E:315:LYS:HG2	2.13	0.47
2:E:328:THR:HG22	2:E:329:LEU:N	2.27	0.47
2:E:356:GLY:HA2	2:E:424:MET:CE	2.45	0.47
2:G:166:ILE:CG2	2:G:167:ALA:N	2.77	0.47
2:A:60:PRO:HB3	2:A:69:TRP:CB	2.44	0.47
2:A:165:GLU:HB2	2:A:166:ILE:H	1.53	0.47
2:A:166:ILE:CG2	2:A:167:ALA:N	2.77	0.47
2:A:170:GLY:HA2	2:A:173:ILE:HG12	1.97	0.47
2:A:233:PHE:O	2:A:235:GLN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:238:PRO:C	2:A:240:GLY:H	2.18	0.47
2:A:303:LYS:HE3	2:A:341:LYS:HB3	1.95	0.47
2:A:424:MET:C	2:A:425:ASN:HD22	2.15	0.47
2:C:34:LEU:N	2:C:34:LEU:HD23	2.29	0.47
2:C:65:GLU:OE1	2:C:65:GLU:N	2.48	0.47
2:C:129:LEU:HD11	2:C:152:VAL:HG11	1.96	0.47
2:C:166:ILE:CG2	2:C:167:ALA:H	2.27	0.47
2:E:233:PHE:O	2:E:235:GLN:N	2.48	0.47
2:E:381:LEU:C	2:E:383:SER:H	2.16	0.47
2:G:75:TYR:O	2:G:78:LEU:N	2.47	0.47
2:G:129:LEU:HD11	2:G:152:VAL:HG11	1.95	0.47
2:G:160:ASN:C	2:G:160:ASN:HD22	2.17	0.47
2:G:209:LEU:O	2:G:210:LYS:CB	2.62	0.47
2:G:345:LEU:CG	2:G:346:SER:H	2.24	0.47
2:G:378:LEU:C	2:G:378:LEU:CD2	2.83	0.47
2:G:412:GLU:O	2:G:413:GLU:C	2.52	0.47
1:H:218:G:H2'	1:H:218:G:N3	2.29	0.47
2:A:34:LEU:N	2:A:34:LEU:HD23	2.29	0.47
2:A:377:TRP:CZ3	2:A:417:LEU:HD23	2.50	0.47
2:A:411:VAL:HG12	2:A:412:GLU:N	2.29	0.47
2:C:146:LEU:O	2:C:149:GLN:N	2.47	0.47
2:C:298:GLU:CA	2:C:301:LEU:HB3	2.45	0.47
2:C:425:ASN:C	2:C:428:LEU:HB3	2.35	0.47
2:E:94:LYS:O	2:E:95:LEU:HG	2.13	0.47
2:E:130:VAL:HB	2:E:184:VAL:CG1	2.44	0.47
2:E:165:GLU:HB2	2:E:166:ILE:H	1.52	0.47
2:E:172:ASP:HA	2:E:175:VAL:CB	2.44	0.47
2:E:304:VAL:CG1	2:E:308:GLU:CD	2.62	0.47
2:E:331:ASP:CA	2:E:334:ALA:HB3	2.45	0.47
2:E:377:TRP:CE3	2:E:377:TRP:CA	2.98	0.47
2:G:65:GLU:OE1	2:G:65:GLU:N	2.48	0.47
2:G:77:GLU:O	2:G:81:LEU:HB3	2.14	0.47
2:G:303:LYS:HE3	2:G:341:LYS:HB3	1.95	0.47
2:G:377:TRP:CZ3	2:G:417:LEU:HD23	2.50	0.47
1:D:211:C:O4'	2:C:406:GLY:HA3	2.15	0.47
1:H:223:G:H2'	1:H:224:U:O5'	2.15	0.47
2:A:166:ILE:CG2	2:A:167:ALA:H	2.27	0.47
2:A:172:ASP:HA	2:A:175:VAL:CG2	2.43	0.47
2:A:263:THR:HG1	2:A:265:ALA:HB2	1.79	0.47
2:A:276:ILE:O	2:A:276:ILE:HD12	2.13	0.47
2:A:294:MET:SD	2:A:294:MET:C	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:376:ARG:O	2:A:377:TRP:C	2.50	0.47
2:A:377:TRP:CE3	2:A:377:TRP:CA	2.97	0.47
2:A:384:MET:HG2	2:A:388:GLU:OE2	2.14	0.47
2:A:388:GLU:CB	2:A:389:LEU:HD23	2.45	0.47
2:A:425:ASN:CG	2:A:426:ARG:H	2.18	0.47
2:C:60:PRO:HB3	2:C:69:TRP:CB	2.45	0.47
2:C:113:ALA:HA	2:C:116:LEU:HD23	1.96	0.47
2:C:117:ALA:O	2:C:120:TYR:N	2.48	0.47
2:C:127:VAL:HG21	2:C:152:VAL:HG13	1.95	0.47
2:C:136:ARG:HG2	2:C:136:ARG:HH11	1.78	0.47
2:C:170:GLY:C	2:C:174:PHE:CE2	2.88	0.47
2:C:182:ILE:C	2:C:183:ILE:HD12	2.35	0.47
2:C:195:GLU:CG	2:C:196:THR:H	2.25	0.47
2:C:210:LYS:N	2:C:211:PRO:CD	2.78	0.47
2:C:294:MET:SD	2:C:294:MET:C	2.92	0.47
2:C:328:THR:CG2	2:C:329:LEU:HD12	2.40	0.47
2:E:68:GLU:O	2:E:69:TRP:C	2.52	0.47
2:E:115:LYS:HD2	2:E:279:LEU:HB2	1.96	0.47
2:E:243:ILE:HD12	2:E:269:PHE:CA	2.43	0.47
2:E:276:ILE:O	2:E:276:ILE:HD12	2.14	0.47
2:E:339:LEU:CA	2:E:342:MET:HB3	2.45	0.47
2:G:60:PRO:HB3	2:G:69:TRP:CB	2.44	0.47
2:G:104:VAL:HA	2:G:198:LEU:CD2	2.43	0.47
2:G:117:ALA:O	2:G:120:TYR:N	2.48	0.47
2:G:119:PHE:CE2	2:G:120:TYR:CZ	3.03	0.47
2:G:171:VAL:HB	2:G:172:ASP:H	1.41	0.47
2:G:182:ILE:C	2:G:183:ILE:HD12	2.35	0.47
2:G:233:PHE:O	2:G:235:GLN:N	2.48	0.47
2:G:263:THR:HG1	2:G:265:ALA:HB2	1.80	0.47
2:G:298:GLU:CA	2:G:301:LEU:HB3	2.45	0.47
2:G:339:LEU:O	2:G:342:MET:N	2.48	0.47
2:G:374:ILE:CD1	2:G:375:ARG:N	2.73	0.47
2:G:388:GLU:CB	2:G:389:LEU:HD23	2.45	0.47
2:G:411:VAL:HG12	2:G:412:GLU:N	2.29	0.47
2:G:425:ASN:CG	2:G:426:ARG:H	2.18	0.47
1:B:223:G:H2'	1:B:224:U:O5'	2.15	0.47
1:D:184:G:H5''	1:D:185:G:OP2	2.14	0.47
1:F:184:G:H5''	1:F:185:G:OP2	2.14	0.47
2:A:47:LEU:HG	2:A:51:ILE:CD1	2.42	0.47
2:A:75:TYR:O	2:A:78:LEU:N	2.47	0.47
2:A:243:ILE:HG21	2:A:269:PHE:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:279:LEU:CD1	2:A:280:GLU:N	2.74	0.47
2:C:119:PHE:CE2	2:C:120:TYR:CZ	3.03	0.47
2:C:263:THR:HG1	2:C:265:ALA:HB2	1.78	0.47
2:C:297:ILE:CD1	2:C:298:GLU:N	2.75	0.47
2:C:331:ASP:CA	2:C:334:ALA:HB3	2.45	0.47
2:C:373:LYS:HA	2:C:376:ARG:CG	2.42	0.47
2:C:377:TRP:CZ3	2:C:417:LEU:HD23	2.50	0.47
2:E:161:GLN:O	2:E:162:ASN:HB2	2.15	0.47
2:E:182:ILE:C	2:E:183:ILE:HD12	2.35	0.47
2:E:298:GLU:CA	2:E:301:LEU:HB3	2.45	0.47
2:E:378:LEU:C	2:E:378:LEU:CD2	2.83	0.47
2:G:101:LEU:HD22	2:G:101:LEU:HA	1.53	0.47
2:G:195:GLU:CG	2:G:196:THR:H	2.25	0.47
2:G:374:ILE:HD13	2:G:375:ARG:H	1.76	0.47
2:G:374:ILE:HD13	2:G:375:ARG:CA	2.44	0.47
2:G:384:MET:HE1	2:G:389:LEU:HD22	1.97	0.47
2:G:417:LEU:HD13	2:G:421:TYR:OH	2.13	0.47
1:B:200:C:C2	1:B:201:C:C5	3.03	0.47
1:F:195:C:O2	1:F:195:C:C2'	2.52	0.47
1:F:211:C:O4'	2:E:406:GLY:HA3	2.15	0.47
1:H:200:C:C2	1:H:201:C:C5	3.03	0.47
2:A:115:LYS:HD2	2:A:279:LEU:HB2	1.96	0.47
2:A:209:LEU:HD13	2:A:211:PRO:HB3	1.97	0.47
2:A:233:PHE:HD1	2:A:236:ALA:HB3	1.79	0.47
2:A:311:ASP:OD1	2:A:311:ASP:N	2.31	0.47
2:A:385:THR:HG23	2:A:388:GLU:H	1.79	0.47
2:A:425:ASN:C	2:A:428:LEU:HB3	2.35	0.47
2:C:106:GLY:HA2	2:C:109:LYS:CG	2.45	0.47
2:C:425:ASN:ND2	2:C:426:ARG:N	2.61	0.47
2:E:40:ASN:C	2:E:43:LEU:HD11	2.35	0.47
2:E:160:ASN:C	2:E:160:ASN:HD22	2.17	0.47
2:E:209:LEU:O	2:E:210:LYS:CB	2.62	0.47
2:E:216:LEU:O	2:E:242:VAL:HG12	2.14	0.47
2:E:337:ILE:N	2:E:337:ILE:CD1	2.74	0.47
2:E:377:TRP:CZ3	2:E:417:LEU:HD23	2.50	0.47
2:G:24:ASP:O	2:G:25:GLU:O	2.33	0.47
2:G:59:LYS:HZ2	2:G:60:PRO:C	2.19	0.47
2:G:170:GLY:C	2:G:174:PHE:CE2	2.89	0.47
2:G:170:GLY:HA2	2:G:173:ILE:HG12	1.97	0.47
2:G:193:GLY:C	2:G:195:GLU:N	2.65	0.47
2:G:238:PRO:C	2:G:240:GLY:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:269:PHE:CD1	2:G:281:THR:HA	2.44	0.47
2:G:346:SER:O	2:G:347:LYS:C	2.53	0.47
1:D:200:C:C2	1:D:201:C:C5	3.03	0.47
1:D:218:G:H2'	1:D:218:G:N3	2.29	0.47
2:A:39:VAL:HA	2:A:255:GLY:N	2.30	0.47
2:A:40:ASN:C	2:A:43:LEU:HD11	2.35	0.47
2:A:168:LYS:O	2:A:169:LYS:O	2.34	0.47
2:A:170:GLY:C	2:A:174:PHE:CE2	2.89	0.47
2:A:243:ILE:HD12	2:A:269:PHE:CA	2.44	0.47
2:A:346:SER:O	2:A:347:LYS:C	2.54	0.47
2:C:111:THR:HG1	2:C:112:THR:N	2.12	0.47
2:C:115:LYS:HA	2:C:118:TYR:CG	2.50	0.47
2:C:176:LYS:HE2	2:E:141:ASP:HB3	1.96	0.47
2:C:209:LEU:O	2:C:210:LYS:CB	2.62	0.47
2:C:233:PHE:C	2:C:233:PHE:CD1	2.86	0.47
2:C:361:THR:HB	2:C:362:PRO:CD	2.45	0.47
2:E:77:GLU:O	2:E:81:LEU:HB3	2.14	0.47
2:E:106:GLY:HA2	2:E:109:LYS:CG	2.45	0.47
2:E:115:LYS:HA	2:E:118:TYR:CG	2.50	0.47
2:E:129:LEU:HD11	2:E:152:VAL:HG11	1.96	0.47
2:E:243:ILE:CD1	2:E:268:LYS:HB2	2.38	0.47
2:G:2:LEU:HD23	2:G:3:GLU:H	1.80	0.47
2:G:356:GLY:HA2	2:G:424:MET:CE	2.45	0.47
2:G:361:THR:HB	2:G:362:PRO:CD	2.45	0.47
2:A:108:GLY:O	2:A:112:THR:HG23	2.16	0.46
2:A:123:ARG:CG	2:A:123:ARG:NH1	2.76	0.46
2:A:140:TYR:CA	2:A:143:LEU:HG	2.46	0.46
2:A:172:ASP:HA	2:A:175:VAL:CB	2.44	0.46
2:A:180:ASP:HB3	2:A:181:ILE:HD12	1.97	0.46
2:A:209:LEU:O	2:A:210:LYS:CB	2.62	0.46
2:A:297:ILE:O	2:A:300:ILE:HG13	2.16	0.46
2:A:381:LEU:C	2:A:383:SER:H	2.16	0.46
2:C:47:LEU:HG	2:C:51:ILE:CD1	2.42	0.46
2:C:77:GLU:O	2:C:81:LEU:HB3	2.14	0.46
2:C:297:ILE:O	2:C:300:ILE:HG13	2.15	0.46
2:E:47:LEU:HG	2:E:51:ILE:CD1	2.42	0.46
2:E:65:GLU:OE1	2:E:65:GLU:N	2.48	0.46
2:E:99:ILE:HD12	2:E:213:ASP:HB3	1.95	0.46
2:E:106:GLY:HA2	2:E:109:LYS:HE2	1.97	0.46
2:E:129:LEU:N	2:E:129:LEU:CD1	2.73	0.46
2:E:170:GLY:C	2:E:174:PHE:CE2	2.89	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:210:LYS:N	2:E:211:PRO:CD	2.78	0.46
2:E:328:THR:CG2	2:E:329:LEU:HD12	2.40	0.46
2:E:374:ILE:HD13	2:E:375:ARG:CA	2.44	0.46
2:G:127:VAL:HG21	2:G:152:VAL:HG13	1.95	0.46
2:G:180:ASP:HB3	2:G:181:ILE:HD12	1.97	0.46
2:G:328:THR:C	2:G:330:ARG:N	2.68	0.46
2:A:209:LEU:HD22	2:A:210:LYS:C	2.36	0.46
2:A:219:ASP:HA	2:A:245:THR:O	2.15	0.46
2:A:334:ALA:HA	2:A:337:ILE:HD13	1.97	0.46
2:A:378:LEU:C	2:A:378:LEU:CD2	2.83	0.46
2:C:39:VAL:HA	2:C:255:GLY:N	2.30	0.46
2:C:40:ASN:C	2:C:43:LEU:HD11	2.35	0.46
2:C:160:ASN:C	2:C:160:ASN:HD22	2.17	0.46
2:C:233:PHE:O	2:C:235:GLN:N	2.48	0.46
2:C:388:GLU:CB	2:C:389:LEU:HD23	2.45	0.46
2:E:5:ILE:O	2:E:7:ASP:N	2.49	0.46
2:E:23:VAL:HG13	2:E:70:PHE:CZ	2.50	0.46
2:E:98:ILE:HD13	2:E:209:LEU:CD2	2.44	0.46
2:E:113:ALA:HA	2:E:116:LEU:HD23	1.96	0.46
2:E:117:ALA:O	2:E:120:TYR:N	2.48	0.46
2:E:140:TYR:CA	2:E:143:LEU:HG	2.46	0.46
2:E:206:TYR:CD1	2:E:206:TYR:C	2.88	0.46
2:E:238:PRO:C	2:E:240:GLY:H	2.18	0.46
2:E:299:SER:C	2:E:301:LEU:N	2.68	0.46
2:E:425:ASN:ND2	2:E:426:ARG:N	2.61	0.46
2:G:267:ILE:N	2:G:267:ILE:CD1	2.72	0.46
2:G:297:ILE:C	2:G:299:SER:N	2.64	0.46
2:A:110:THR:O	2:A:112:THR:OG1	2.33	0.46
2:A:152:VAL:O	2:A:152:VAL:HG12	2.15	0.46
2:A:201:GLU:HB3	2:A:205:MET:CE	2.45	0.46
2:A:210:LYS:N	2:A:211:PRO:CD	2.78	0.46
2:A:298:GLU:CA	2:A:301:LEU:HB3	2.45	0.46
2:A:339:LEU:O	2:A:342:MET:N	2.48	0.46
2:A:361:THR:HB	2:A:362:PRO:CD	2.45	0.46
2:C:139:ALA:HB3	2:C:140:TYR:CE1	2.50	0.46
2:C:308:GLU:C	2:C:309:GLU:HG3	2.34	0.46
2:C:328:THR:C	2:C:330:ARG:N	2.68	0.46
2:C:339:LEU:O	2:C:342:MET:N	2.48	0.46
2:C:385:THR:HG23	2:C:388:GLU:H	1.79	0.46
2:E:39:VAL:HA	2:E:255:GLY:N	2.30	0.46
2:E:108:GLY:O	2:E:112:THR:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:175:VAL:C	2:E:178:LYS:H	2.18	0.46
2:E:201:GLU:HB3	2:E:205:MET:CE	2.45	0.46
2:E:219:ASP:HA	2:E:245:THR:O	2.15	0.46
2:E:267:ILE:CG2	2:E:268:LYS:N	2.64	0.46
2:E:328:THR:C	2:E:330:ARG:N	2.68	0.46
2:E:331:ASP:HA	2:E:334:ALA:HB2	1.96	0.46
2:E:346:SER:O	2:E:347:LYS:C	2.53	0.46
2:E:361:THR:HB	2:E:362:PRO:CD	2.45	0.46
2:G:108:GLY:O	2:G:112:THR:HG23	2.15	0.46
2:G:168:LYS:O	2:G:169:LYS:O	2.33	0.46
2:G:173:ILE:CG2	2:G:174:PHE:N	2.75	0.46
2:G:271:GLY:HA2	2:G:279:LEU:HA	1.97	0.46
2:G:381:LEU:O	2:G:384:MET:N	2.49	0.46
1:D:223:G:H2'	1:D:224:U:O5'	2.14	0.46
1:F:218:G:H2'	1:F:218:G:N3	2.29	0.46
2:A:23:VAL:HG13	2:A:70:PHE:CZ	2.50	0.46
2:A:65:GLU:OE1	2:A:65:GLU:N	2.48	0.46
2:A:98:ILE:HD13	2:A:209:LEU:CD2	2.44	0.46
2:C:140:TYR:CA	2:C:143:LEU:HG	2.45	0.46
2:C:170:GLY:O	2:C:173:ILE:HG12	2.16	0.46
2:C:206:TYR:C	2:C:206:TYR:CD1	2.88	0.46
2:C:209:LEU:C	2:C:209:LEU:HD23	2.36	0.46
2:C:217:VAL:C	2:C:218:ILE:HD13	2.36	0.46
2:C:378:LEU:C	2:C:378:LEU:CD2	2.83	0.46
2:E:110:THR:O	2:E:112:THR:OG1	2.33	0.46
2:E:297:ILE:O	2:E:300:ILE:HG13	2.16	0.46
2:E:311:ASP:O	2:E:312:LYS:C	2.54	0.46
2:E:403:ILE:O	2:E:407:SER:N	2.41	0.46
2:E:425:ASN:CG	2:E:426:ARG:H	2.18	0.46
2:G:40:ASN:C	2:G:43:LEU:HD11	2.35	0.46
2:G:208:VAL:HG23	2:G:209:LEU:N	2.31	0.46
2:G:219:ASP:HA	2:G:245:THR:O	2.15	0.46
2:G:424:MET:C	2:G:425:ASN:HD22	2.15	0.46
1:B:211:C:O4'	2:A:406:GLY:HA3	2.15	0.46
1:H:186:G:H1'	1:H:219:C:O2	2.16	0.46
2:A:41:VAL:HA	2:A:44:VAL:HG21	1.96	0.46
2:A:112:THR:OG1	2:A:113:ALA:N	2.46	0.46
2:A:190:HIS:HB3	2:A:194:GLU:HB2	1.98	0.46
2:A:206:TYR:CD1	2:A:206:TYR:C	2.88	0.46
2:A:243:ILE:CD1	2:A:268:LYS:HB2	2.38	0.46
2:A:356:GLY:HA2	2:A:424:MET:CE	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:394:ILE:H	2:A:395:ILE:CD1	2.12	0.46
2:C:152:VAL:O	2:C:152:VAL:HG12	2.15	0.46
2:C:209:LEU:HD22	2:C:210:LYS:C	2.36	0.46
2:C:216:LEU:O	2:C:242:VAL:HG12	2.14	0.46
2:C:334:ALA:HA	2:C:337:ILE:HD13	1.97	0.46
2:E:127:VAL:HG23	2:E:128:GLY:N	2.30	0.46
2:E:253:GLY:O	2:E:256:ALA:N	2.45	0.46
2:E:381:LEU:O	2:E:384:MET:N	2.49	0.46
2:E:388:GLU:CB	2:E:389:LEU:HD23	2.45	0.46
2:G:39:VAL:HA	2:G:255:GLY:N	2.30	0.46
2:G:115:LYS:HD2	2:G:279:LEU:HB2	1.96	0.46
2:G:210:LYS:N	2:G:211:PRO:CD	2.78	0.46
2:G:270:ILE:HG23	2:G:271:GLY:N	2.31	0.46
2:G:303:LYS:HG3	2:G:342:MET:CB	2.44	0.46
2:G:425:ASN:C	2:G:428:LEU:HB3	2.35	0.46
1:B:186:G:O2'	1:B:187:G:C8	2.59	0.46
1:F:200:C:C2	1:F:201:C:C5	3.03	0.46
2:A:40:ASN:O	2:A:43:LEU:HD11	2.16	0.46
2:A:127:VAL:HG23	2:A:128:GLY:N	2.30	0.46
2:A:169:LYS:O	2:A:173:ILE:HD13	2.16	0.46
2:A:175:VAL:C	2:A:178:LYS:H	2.18	0.46
2:A:271:GLY:HA2	2:A:279:LEU:HA	1.97	0.46
2:A:299:SER:C	2:A:301:LEU:N	2.68	0.46
2:A:373:LYS:O	2:A:376:ARG:CB	2.60	0.46
2:C:23:VAL:HG13	2:C:70:PHE:CZ	2.50	0.46
2:C:140:TYR:C	2:C:143:LEU:HG	2.36	0.46
2:C:219:ASP:HA	2:C:245:THR:O	2.15	0.46
2:C:339:LEU:CA	2:C:342:MET:HB3	2.45	0.46
2:C:346:SER:O	2:C:347:LYS:C	2.54	0.46
2:E:146:LEU:O	2:E:147:GLY:C	2.53	0.46
2:E:339:LEU:O	2:E:342:MET:N	2.48	0.46
2:E:425:ASN:C	2:E:428:LEU:HB3	2.35	0.46
2:G:5:ILE:O	2:G:7:ASP:N	2.49	0.46
2:G:104:VAL:C	2:G:105:GLN:O	2.50	0.46
2:G:140:TYR:CA	2:G:143:LEU:HG	2.46	0.46
2:G:152:VAL:O	2:G:152:VAL:HG12	2.15	0.46
2:G:209:LEU:C	2:G:209:LEU:HD23	2.36	0.46
2:G:243:ILE:HD12	2:G:269:PHE:CA	2.44	0.46
2:G:297:ILE:O	2:G:300:ILE:HG13	2.16	0.46
2:G:331:ASP:CA	2:G:334:ALA:HB3	2.45	0.46
2:G:428:LEU:O	2:G:430:MET:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:186:G:H1'	1:B:219:C:O2	2.16	0.46
2:A:166:ILE:HA	2:A:169:LYS:HD2	1.98	0.46
2:A:208:VAL:HG23	2:A:209:LEU:N	2.31	0.46
2:C:175:VAL:C	2:C:178:LYS:H	2.18	0.46
2:C:243:ILE:CD1	2:C:269:PHE:N	2.55	0.46
2:C:381:LEU:O	2:C:384:MET:N	2.49	0.46
2:E:170:GLY:HA2	2:E:173:ILE:HG12	1.97	0.46
2:E:209:LEU:HD13	2:E:211:PRO:HB3	1.97	0.46
2:E:209:LEU:C	2:E:209:LEU:HD23	2.36	0.46
2:E:259:ALA:O	2:E:260:VAL:O	2.34	0.46
2:E:263:THR:HG1	2:E:265:ALA:HB2	1.79	0.46
2:E:284:ALA:O	2:E:288:VAL:N	2.49	0.46
2:E:381:LEU:HD23	2:E:381:LEU:H	1.81	0.46
2:E:385:THR:HG23	2:E:388:GLU:H	1.79	0.46
2:G:113:ALA:HA	2:G:116:LEU:HD23	1.97	0.46
2:G:170:GLY:O	2:G:173:ILE:HG12	2.16	0.46
2:G:172:ASP:HA	2:G:175:VAL:CB	2.44	0.46
2:G:190:HIS:HB3	2:G:194:GLU:HB2	1.98	0.46
2:G:201:GLU:HB3	2:G:205:MET:CE	2.45	0.46
2:G:281:THR:CG2	2:G:282:PHE:H	2.18	0.46
2:A:24:ASP:O	2:A:25:GLU:O	2.33	0.46
2:A:160:ASN:C	2:A:160:ASN:HD22	2.17	0.46
2:C:87:GLU:OE2	2:C:88:PRO:HD2	2.16	0.46
2:C:146:LEU:O	2:C:147:GLY:C	2.53	0.46
2:C:170:GLY:HA2	2:C:173:ILE:HG12	1.97	0.46
2:C:202:MET:HA	2:C:205:MET:CB	2.46	0.46
2:C:205:MET:O	2:C:208:VAL:CG2	2.64	0.46
2:C:288:VAL:O	2:C:291:ILE:CD1	2.64	0.46
2:E:99:ILE:O	2:E:99:ILE:CG2	2.58	0.46
2:E:117:ALA:CB	2:E:129:LEU:HD21	2.46	0.46
2:E:139:ALA:HB3	2:E:140:TYR:CE1	2.50	0.46
2:E:190:HIS:HB3	2:E:194:GLU:HB2	1.98	0.46
2:E:219:ASP:CA	2:E:245:THR:OG1	2.64	0.46
2:E:334:ALA:HA	2:E:337:ILE:HD13	1.97	0.46
2:G:139:ALA:HB3	2:G:140:TYR:CE1	2.50	0.46
1:B:195:C:H42	1:B:210:G:H2'	1.81	0.46
1:B:199:C:OP2	1:B:199:C:H3'	2.16	0.46
1:H:186:G:N3	1:H:219:C:N3	2.64	0.46
1:H:211:C:O4'	2:G:406:GLY:HA3	2.15	0.46
2:A:113:ALA:HA	2:A:116:LEU:HD23	1.96	0.46
2:A:117:ALA:CB	2:A:129:LEU:HD21	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:311:ASP:O	2:A:312:LYS:C	2.54	0.46
2:C:63:VAL:O	2:C:64:LEU:CB	2.63	0.46
2:C:161:GLN:O	2:C:162:ASN:HB2	2.15	0.46
2:C:173:ILE:O	2:C:174:PHE:C	2.54	0.46
2:C:190:HIS:HB3	2:C:194:GLU:HB2	1.98	0.46
2:C:209:LEU:HD13	2:C:211:PRO:HB3	1.97	0.46
2:C:259:ALA:O	2:C:260:VAL:O	2.34	0.46
2:C:274:GLU:O	2:C:278:GLU:HG3	2.16	0.46
2:G:40:ASN:O	2:G:43:LEU:HD11	2.16	0.46
2:G:115:LYS:HA	2:G:118:TYR:CG	2.50	0.46
2:G:166:ILE:CG2	2:G:167:ALA:H	2.27	0.46
2:G:243:ILE:HG21	2:G:269:PHE:HB2	1.97	0.46
2:G:274:GLU:O	2:G:278:GLU:HG3	2.16	0.46
2:G:349:LEU:C	2:G:349:LEU:HD23	2.36	0.46
2:G:403:ILE:O	2:G:407:SER:N	2.41	0.46
1:B:179:GTP:C2	1:B:180:G:H5''	2.51	0.46
1:F:186:G:N3	1:F:219:C:N3	2.64	0.46
1:H:179:GTP:C2	1:H:180:G:H5''	2.51	0.46
1:H:199:C:H3'	1:H:199:C:OP2	2.16	0.46
2:A:78:LEU:HB2	2:A:288:VAL:HG11	1.98	0.46
2:A:140:TYR:C	2:A:143:LEU:HG	2.36	0.46
2:A:173:ILE:O	2:A:174:PHE:C	2.54	0.46
2:A:209:LEU:C	2:A:209:LEU:HD23	2.36	0.46
2:A:328:THR:CG2	2:A:329:LEU:HD12	2.40	0.46
2:A:378:LEU:HD23	2:A:382:ASN:OD1	2.16	0.46
2:A:381:LEU:O	2:A:384:MET:N	2.49	0.46
2:A:417:LEU:CB	2:A:421:TYR:OH	2.51	0.46
2:A:428:LEU:O	2:A:430:MET:N	2.49	0.46
2:C:115:LYS:HD2	2:C:279:LEU:HB2	1.96	0.46
2:C:166:ILE:HA	2:C:169:LYS:HD2	1.98	0.46
2:C:176:LYS:CE	2:E:141:ASP:HB3	2.46	0.46
2:C:201:GLU:HB3	2:C:205:MET:CE	2.45	0.46
2:C:219:ASP:CA	2:C:245:THR:OG1	2.64	0.46
2:C:238:PRO:C	2:C:240:GLY:H	2.18	0.46
2:C:349:LEU:C	2:C:349:LEU:HD23	2.36	0.46
2:C:425:ASN:CG	2:C:426:ARG:H	2.18	0.46
2:C:428:LEU:O	2:C:430:MET:N	2.49	0.46
2:E:55:LEU:CD2	2:E:55:LEU:N	2.73	0.46
2:E:119:PHE:CE2	2:E:120:TYR:CE1	3.04	0.46
2:E:119:PHE:CE2	2:E:120:TYR:CZ	3.03	0.46
2:E:152:VAL:O	2:E:152:VAL:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:193:GLY:O	2:E:195:GLU:HG2	2.16	0.46
2:E:428:LEU:O	2:E:430:MET:N	2.49	0.46
2:G:166:ILE:HA	2:G:169:LYS:HD2	1.98	0.46
2:G:175:VAL:C	2:G:178:LYS:H	2.18	0.46
2:G:209:LEU:HD22	2:G:210:LYS:C	2.36	0.46
1:B:186:G:N3	1:B:219:C:N3	2.64	0.45
1:B:211:C:H2'	1:B:212:A:O5'	2.16	0.45
1:D:199:C:H3'	1:D:199:C:OP2	2.16	0.45
2:A:217:VAL:C	2:A:218:ILE:HD13	2.36	0.45
2:A:270:ILE:HG23	2:A:271:GLY:N	2.31	0.45
2:C:5:ILE:O	2:C:7:ASP:N	2.49	0.45
2:C:99:ILE:HG22	2:C:183:ILE:HA	1.98	0.45
2:C:108:GLY:O	2:C:112:THR:HG23	2.15	0.45
2:C:127:VAL:HG23	2:C:128:GLY:N	2.30	0.45
2:C:223:GLY:HA2	2:C:256:ALA:CB	2.46	0.45
2:C:378:LEU:HD23	2:C:382:ASN:OD1	2.16	0.45
2:C:381:LEU:HD23	2:C:381:LEU:H	1.81	0.45
2:E:140:TYR:HA	2:E:143:LEU:CG	2.46	0.45
2:E:170:GLY:O	2:E:173:ILE:HG12	2.16	0.45
2:G:65:GLU:CD	2:G:65:GLU:N	2.69	0.45
2:G:110:THR:O	2:G:112:THR:OG1	2.33	0.45
2:G:173:ILE:O	2:G:174:PHE:C	2.54	0.45
2:G:378:LEU:HD23	2:G:382:ASN:OD1	2.16	0.45
2:G:380:ALA:C	2:G:383:SER:H	2.20	0.45
2:G:426:ARG:HA	2:G:429:LYS:CD	2.41	0.45
1:B:214:C:C2'	1:B:215:C:C5'	2.89	0.45
2:A:106:GLY:HA2	2:A:109:LYS:CG	2.45	0.45
2:A:115:LYS:HA	2:A:118:TYR:CG	2.50	0.45
2:A:119:PHE:CE2	2:A:120:TYR:CZ	3.03	0.45
2:A:119:PHE:CE2	2:A:120:TYR:CE1	3.04	0.45
2:A:288:VAL:O	2:A:291:ILE:CD1	2.64	0.45
2:A:331:ASP:HA	2:A:334:ALA:HB2	1.96	0.45
2:A:349:LEU:C	2:A:349:LEU:HD23	2.36	0.45
2:A:380:ALA:C	2:A:383:SER:H	2.20	0.45
2:C:56:ASN:C	2:C:57:LYS:HG3	2.36	0.45
2:C:106:GLY:HA2	2:C:109:LYS:HE2	1.97	0.45
2:C:168:LYS:O	2:C:169:LYS:O	2.34	0.45
2:C:180:ASP:HB3	2:C:181:ILE:HD12	1.97	0.45
2:C:340:ARG:HD3	2:C:375:ARG:HE	1.81	0.45
2:C:432:LYS:HG2	2:C:432:LYS:O	2.17	0.45
2:E:65:GLU:CD	2:E:65:GLU:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:166:ILE:HA	2:E:169:LYS:HD2	1.98	0.45
2:E:209:LEU:HD22	2:E:210:LYS:C	2.36	0.45
2:E:217:VAL:C	2:E:218:ILE:HD13	2.36	0.45
2:G:23:VAL:HG13	2:G:70:PHE:CZ	2.50	0.45
2:G:70:PHE:O	2:G:73:ILE:CB	2.64	0.45
2:G:109:LYS:CB	2:G:109:LYS:HZ3	2.28	0.45
2:G:117:ALA:CB	2:G:129:LEU:HD21	2.46	0.45
2:G:119:PHE:CE2	2:G:120:TYR:CE1	3.04	0.45
1:D:211:C:H2'	1:D:212:A:O5'	2.16	0.45
1:F:199:C:H3'	1:F:199:C:OP2	2.16	0.45
2:A:20:GLU:O	2:A:23:VAL:CB	2.59	0.45
2:A:24:ASP:O	2:A:27:ILE:CB	2.63	0.45
2:A:44:VAL:O	2:A:47:LEU:N	2.50	0.45
2:A:115:LYS:HZ1	2:A:278:GLU:HB2	1.76	0.45
2:A:129:LEU:HD11	2:A:152:VAL:CG1	2.47	0.45
2:A:139:ALA:HB3	2:A:140:TYR:CE1	2.50	0.45
2:A:146:LEU:O	2:A:147:GLY:C	2.53	0.45
2:A:223:GLY:HA2	2:A:256:ALA:HA	1.99	0.45
2:A:373:LYS:HA	2:A:376:ARG:CG	2.42	0.45
2:C:40:ASN:O	2:C:43:LEU:HD11	2.16	0.45
2:C:116:LEU:CG	2:C:117:ALA:N	2.77	0.45
2:C:119:PHE:CE2	2:C:120:TYR:CE1	3.04	0.45
2:C:243:ILE:HG21	2:C:269:PHE:HB2	1.97	0.45
2:C:299:SER:C	2:C:301:LEU:N	2.68	0.45
2:C:331:ASP:HA	2:C:334:ALA:HB2	1.96	0.45
2:C:367:LEU:O	2:C:368:LYS:CB	2.65	0.45
2:C:380:ALA:C	2:C:383:SER:H	2.20	0.45
2:E:93:THR:HB	2:E:97:PHE:CZ	2.51	0.45
2:E:140:TYR:C	2:E:143:LEU:HG	2.36	0.45
2:E:173:ILE:O	2:E:174:PHE:C	2.54	0.45
2:E:217:VAL:O	2:E:218:ILE:CG2	2.64	0.45
2:E:223:GLY:HA2	2:E:256:ALA:CB	2.46	0.45
2:E:316:LYS:NZ	2:E:316:LYS:CB	2.79	0.45
2:G:71:ILE:O	2:G:75:TYR:N	2.50	0.45
2:G:127:VAL:HG23	2:G:128:GLY:N	2.30	0.45
2:G:205:MET:O	2:G:208:VAL:CG2	2.64	0.45
2:G:206:TYR:CD1	2:G:206:TYR:C	2.88	0.45
2:G:288:VAL:O	2:G:291:ILE:CD1	2.64	0.45
2:G:367:LEU:O	2:G:368:LYS:CB	2.65	0.45
1:H:216:G:C2'	1:H:217:U:H5''	2.43	0.45
2:A:93:THR:HB	2:A:97:PHE:CZ	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:147:GLY:O	2:A:152:VAL:N	2.43	0.45
2:A:257:LEU:HA	2:A:260:VAL:CG2	2.47	0.45
2:A:316:LYS:NZ	2:A:316:LYS:CB	2.79	0.45
2:A:372:GLU:C	2:A:374:ILE:H	2.20	0.45
2:C:2:LEU:HD23	2:C:3:GLU:H	1.80	0.45
2:C:24:ASP:O	2:C:27:ILE:CB	2.63	0.45
2:C:65:GLU:CD	2:C:65:GLU:N	2.69	0.45
2:C:71:ILE:O	2:C:75:TYR:N	2.50	0.45
2:C:169:LYS:O	2:C:173:ILE:HD13	2.16	0.45
2:C:316:LYS:NZ	2:C:316:LYS:CB	2.79	0.45
2:C:426:ARG:HA	2:C:429:LYS:CD	2.41	0.45
2:E:24:ASP:O	2:E:25:GLU:O	2.33	0.45
2:E:94:LYS:H	2:E:97:PHE:HE1	1.65	0.45
2:E:339:LEU:HA	2:E:342:MET:HE3	1.98	0.45
2:E:378:LEU:HD23	2:E:382:ASN:OD1	2.16	0.45
2:E:417:LEU:CB	2:E:421:TYR:OH	2.51	0.45
2:G:106:GLY:HA2	2:G:109:LYS:CG	2.45	0.45
2:G:106:GLY:HA2	2:G:109:LYS:HE2	1.97	0.45
2:G:146:LEU:O	2:G:147:GLY:C	2.53	0.45
2:G:299:SER:O	2:G:301:LEU:N	2.50	0.45
2:G:299:SER:C	2:G:301:LEU:N	2.68	0.45
2:G:340:ARG:HD3	2:G:375:ARG:HE	1.81	0.45
1:H:195:C:H42	1:H:210:G:H2'	1.81	0.45
2:A:52:LYS:CA	2:A:55:LEU:HD23	2.47	0.45
2:A:60:PRO:HA	2:A:69:TRP:CZ3	2.52	0.45
2:A:98:ILE:HD12	2:A:211:PRO:HA	1.98	0.45
2:A:170:GLY:O	2:A:173:ILE:HG12	2.16	0.45
2:A:192:TYR:CE1	2:A:222:ILE:HD12	2.52	0.45
2:A:205:MET:O	2:A:208:VAL:CG2	2.64	0.45
2:A:224:GLN:HA	2:A:259:ALA:CB	2.45	0.45
2:A:328:THR:C	2:A:330:ARG:N	2.68	0.45
2:C:24:ASP:O	2:C:25:GLU:O	2.33	0.45
2:C:78:LEU:HB2	2:C:288:VAL:HG11	1.98	0.45
2:C:94:LYS:H	2:C:97:PHE:HE1	1.65	0.45
2:C:98:ILE:HG21	2:C:211:PRO:CA	2.47	0.45
2:C:110:THR:O	2:C:112:THR:OG1	2.33	0.45
2:E:243:ILE:HG21	2:E:269:PHE:HB2	1.97	0.45
2:G:93:THR:HB	2:G:97:PHE:CZ	2.51	0.45
2:G:140:TYR:C	2:G:143:LEU:HG	2.36	0.45
2:G:219:ASP:CA	2:G:245:THR:OG1	2.64	0.45
2:G:311:ASP:O	2:G:312:LYS:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:354:GLY:HA2	2:G:368:LYS:CG	2.44	0.45
2:G:428:LEU:CD1	2:G:429:LYS:N	2.80	0.45
2:G:430:MET:CE	2:G:430:MET:HA	2.30	0.45
1:D:179:GTP:C2	1:D:180:G:H5''	2.51	0.45
1:D:186:G:N3	1:D:219:C:N3	2.64	0.45
2:A:5:ILE:O	2:A:7:ASP:N	2.49	0.45
2:A:87:GLU:OE2	2:A:88:PRO:HD2	2.16	0.45
2:A:140:TYR:HA	2:A:143:LEU:CG	2.46	0.45
2:A:259:ALA:O	2:A:260:VAL:O	2.34	0.45
2:A:260:VAL:HB	2:A:261:VAL:H	1.58	0.45
2:A:368:LYS:HB3	2:A:369:ILE:H	1.38	0.45
2:C:71:ILE:C	2:C:74:VAL:HG22	2.37	0.45
2:C:208:VAL:HG23	2:C:209:LEU:N	2.31	0.45
2:C:257:LEU:HA	2:C:260:VAL:CG2	2.47	0.45
2:C:359:LEU:CB	2:C:360:PRO:CD	2.87	0.45
2:C:372:GLU:C	2:C:374:ILE:H	2.20	0.45
2:E:2:LEU:HD23	2:E:3:GLU:H	1.80	0.45
2:E:60:PRO:HA	2:E:69:TRP:CZ3	2.52	0.45
2:E:87:GLU:OE2	2:E:88:PRO:HD2	2.16	0.45
2:E:91:ASN:HB3	2:E:92:PRO:CD	2.35	0.45
2:E:168:LYS:O	2:E:169:LYS:O	2.34	0.45
2:E:257:LEU:HA	2:E:260:VAL:CG2	2.47	0.45
2:E:270:ILE:HG23	2:E:271:GLY:N	2.31	0.45
2:E:281:THR:O	2:E:282:PHE:HB2	2.17	0.45
2:E:340:ARG:HD3	2:E:375:ARG:HE	1.81	0.45
2:E:400:MET:HA	2:E:403:ILE:HD12	1.99	0.45
2:E:428:LEU:CD1	2:E:429:LYS:N	2.80	0.45
2:G:78:LEU:HB2	2:G:288:VAL:HG11	1.98	0.45
2:G:123:ARG:CG	2:G:123:ARG:NH1	2.76	0.45
2:G:217:VAL:C	2:G:218:ILE:HD13	2.36	0.45
2:G:333:TYR:CD1	2:G:381:LEU:CD1	3.00	0.45
2:G:428:LEU:C	2:G:430:MET:H	2.20	0.45
1:D:186:G:H1'	1:D:219:C:O2	2.16	0.45
1:H:211:C:H2'	1:H:212:A:O5'	2.16	0.45
2:A:25:GLU:O	2:A:29:ASP:N	2.37	0.45
2:A:32:LYS:C	2:A:34:LEU:H	2.20	0.45
2:A:113:ALA:O	2:A:114:GLY:O	2.35	0.45
2:A:150:ILE:CG1	2:A:152:VAL:HB	2.47	0.45
2:A:161:GLN:O	2:A:162:ASN:HB2	2.15	0.45
2:A:182:ILE:C	2:A:183:ILE:HD12	2.35	0.45
2:A:209:LEU:HD13	2:A:211:PRO:CD	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:219:ASP:CA	2:A:245:THR:OG1	2.64	0.45
2:A:223:GLY:HA2	2:A:256:ALA:CB	2.46	0.45
2:C:193:GLY:O	2:C:195:GLU:HG2	2.16	0.45
2:C:225:LYS:O	2:C:226:ALA:C	2.55	0.45
2:C:243:ILE:HD12	2:C:269:PHE:CA	2.44	0.45
2:C:311:ASP:OD1	2:C:311:ASP:N	2.31	0.45
2:C:333:TYR:CD1	2:C:381:LEU:CD1	3.00	0.45
2:C:400:MET:HA	2:C:403:ILE:HD12	1.99	0.45
2:C:411:VAL:O	2:C:412:GLU:C	2.55	0.45
2:E:113:ALA:O	2:E:114:GLY:O	2.35	0.45
2:E:260:VAL:HG12	2:E:267:ILE:HD11	1.99	0.45
2:E:274:GLU:O	2:E:278:GLU:HG3	2.16	0.45
2:E:333:TYR:CD1	2:E:381:LEU:CD1	3.00	0.45
2:E:349:LEU:C	2:E:349:LEU:HD23	2.36	0.45
2:E:372:GLU:C	2:E:374:ILE:H	2.20	0.45
2:E:411:VAL:O	2:E:412:GLU:C	2.55	0.45
2:G:99:ILE:HG22	2:G:183:ILE:HA	1.98	0.45
2:G:307:LEU:O	2:G:310:TYR:HB2	2.17	0.45
2:G:417:LEU:CB	2:G:421:TYR:OH	2.51	0.45
1:D:198:G:C2'	1:D:199:C:O5'	2.65	0.45
1:H:188:A:C2	2:G:399:ARG:HG2	2.52	0.45
2:A:106:GLY:HA2	2:A:109:LYS:HE2	1.97	0.45
2:A:171:VAL:HB	2:A:172:ASP:H	1.41	0.45
2:A:299:SER:O	2:A:301:LEU:N	2.50	0.45
2:A:417:LEU:HB2	2:A:421:TYR:HH	1.77	0.45
2:A:428:LEU:CD1	2:A:429:LYS:N	2.80	0.45
2:A:432:LYS:O	2:A:432:LYS:HG2	2.17	0.45
2:C:115:LYS:HD2	2:C:279:LEU:CB	2.47	0.45
2:C:117:ALA:CB	2:C:129:LEU:HD21	2.46	0.45
2:C:129:LEU:N	2:C:129:LEU:CD1	2.73	0.45
2:C:270:ILE:HG23	2:C:271:GLY:N	2.31	0.45
2:C:287:PHE:O	2:C:290:ARG:CB	2.62	0.45
2:E:44:VAL:O	2:E:47:LEU:N	2.50	0.45
2:E:56:ASN:C	2:E:57:LYS:HG3	2.36	0.45
2:E:169:LYS:O	2:E:173:ILE:HD13	2.16	0.45
2:E:180:ASP:HB3	2:E:181:ILE:HD12	1.97	0.45
2:E:196:THR:HA	2:E:199:LEU:HD11	1.99	0.45
2:G:32:LYS:C	2:G:34:LEU:H	2.20	0.45
2:G:52:LYS:CA	2:G:55:LEU:HD23	2.47	0.45
2:G:161:GLN:O	2:G:162:ASN:HB2	2.15	0.45
2:G:192:TYR:CE1	2:G:222:ILE:HD12	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:334:ALA:HA	2:G:337:ILE:HD13	1.97	0.45
2:G:400:MET:HA	2:G:403:ILE:HD12	1.99	0.45
2:G:432:LYS:O	2:G:432:LYS:HG2	2.16	0.45
1:B:208:G:H8	1:B:208:G:OP2	2.00	0.45
1:D:188:A:C2	2:C:399:ARG:HG2	2.52	0.45
1:D:190:C:H4'	1:D:191:C:O2	2.17	0.45
1:F:208:G:OP2	1:F:208:G:H8	2.00	0.45
2:A:115:LYS:HD2	2:A:279:LEU:CB	2.47	0.45
2:A:193:GLY:O	2:A:195:GLU:HG2	2.16	0.45
2:A:331:ASP:CA	2:A:334:ALA:HB3	2.45	0.45
2:C:104:VAL:C	2:C:105:GLN:O	2.50	0.45
2:C:260:VAL:HG12	2:C:267:ILE:HD11	1.99	0.45
2:C:299:SER:O	2:C:301:LEU:N	2.50	0.45
2:C:316:LYS:NZ	2:C:316:LYS:HB3	2.32	0.45
2:E:99:ILE:HG22	2:E:183:ILE:HA	1.98	0.45
2:E:129:LEU:HD11	2:E:152:VAL:CG1	2.47	0.45
2:E:205:MET:O	2:E:208:VAL:CG2	2.64	0.45
2:E:367:LEU:O	2:E:368:LYS:CB	2.64	0.45
2:E:374:ILE:CD1	2:E:375:ARG:N	2.73	0.45
2:E:417:LEU:C	2:E:419:GLU:OE1	2.56	0.45
2:G:87:GLU:OE2	2:G:88:PRO:HD2	2.16	0.45
2:G:115:LYS:HD2	2:G:279:LEU:CB	2.47	0.45
2:G:126:LYS:HG2	2:G:180:ASP:OD2	2.17	0.45
2:G:129:LEU:HD11	2:G:152:VAL:CG1	2.47	0.45
2:G:193:GLY:O	2:G:195:GLU:HG2	2.16	0.45
2:G:196:THR:HA	2:G:199:LEU:HD11	1.99	0.45
2:G:253:GLY:O	2:G:256:ALA:N	2.45	0.45
2:G:373:LYS:O	2:G:376:ARG:CB	2.60	0.45
1:F:190:C:H4'	1:F:191:C:O2	2.17	0.45
1:F:195:C:H42	1:F:210:G:H2'	1.81	0.45
1:H:190:C:H4'	1:H:191:C:O2	2.17	0.45
2:A:2:LEU:HD23	2:A:3:GLU:H	1.80	0.45
2:A:281:THR:O	2:A:282:PHE:HB2	2.17	0.45
2:A:336:ILE:CG2	2:A:378:LEU:HD12	2.46	0.45
2:A:340:ARG:HD3	2:A:375:ARG:HE	1.81	0.45
2:A:346:SER:C	2:A:348:VAL:N	2.70	0.45
2:C:63:VAL:HA	2:C:351:HIS:CG	2.52	0.45
2:C:93:THR:HB	2:C:97:PHE:CZ	2.51	0.45
2:C:126:LYS:HG2	2:C:180:ASP:OD2	2.17	0.45
2:C:126:LYS:HG2	2:C:180:ASP:OD1	2.16	0.45
2:C:193:GLY:C	2:C:195:GLU:HG2	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:207:ASP:C	2:C:210:LYS:HZ2	2.20	0.45
2:C:243:ILE:CG2	2:C:269:PHE:C	2.81	0.45
2:E:40:ASN:O	2:E:43:LEU:HD11	2.16	0.45
2:E:52:LYS:CA	2:E:55:LEU:HD23	2.47	0.45
2:E:54:ARG:HA	2:E:58:GLU:OE2	2.17	0.45
2:E:71:ILE:O	2:E:75:TYR:N	2.50	0.45
2:E:71:ILE:C	2:E:74:VAL:HG22	2.37	0.45
2:E:221:SER:N	2:E:250:THR:HG21	2.32	0.45
2:E:288:VAL:O	2:E:291:ILE:CD1	2.64	0.45
2:E:297:ILE:CD1	2:E:298:GLU:N	2.75	0.45
2:E:299:SER:O	2:E:301:LEU:N	2.50	0.45
2:E:394:ILE:H	2:E:395:ILE:CD1	2.12	0.45
2:G:23:VAL:O	2:G:24:ASP:C	2.55	0.45
2:G:60:PRO:HA	2:G:69:TRP:CZ3	2.52	0.45
2:G:94:LYS:H	2:G:97:PHE:HE1	1.65	0.45
2:G:113:ALA:O	2:G:114:GLY:O	2.35	0.45
2:G:140:TYR:HA	2:G:143:LEU:CG	2.47	0.45
2:G:147:GLY:O	2:G:152:VAL:N	2.43	0.45
2:G:193:GLY:C	2:G:195:GLU:HG2	2.38	0.45
2:G:209:LEU:HD13	2:G:211:PRO:HB3	1.97	0.45
2:G:223:GLY:HA2	2:G:256:ALA:HA	1.99	0.45
2:G:331:ASP:HA	2:G:334:ALA:HB2	1.96	0.45
1:F:186:G:H1'	1:F:219:C:O2	2.16	0.44
1:H:202:G:C2	1:H:204:A:OP2	2.71	0.44
2:A:12:PHE:O	2:A:14:THR:N	2.45	0.44
2:A:56:ASN:C	2:A:57:LYS:HG3	2.36	0.44
2:A:65:GLU:CD	2:A:65:GLU:N	2.69	0.44
2:A:68:GLU:O	2:A:71:ILE:N	2.47	0.44
2:A:71:ILE:O	2:A:75:TYR:N	2.50	0.44
2:A:72:SER:O	2:A:76:ASP:N	2.37	0.44
2:A:101:LEU:HD22	2:A:101:LEU:HA	1.53	0.44
2:A:116:LEU:O	2:A:117:ALA:C	2.55	0.44
2:A:120:TYR:HA	2:A:123:ARG:HG2	1.99	0.44
2:A:193:GLY:C	2:A:195:GLU:N	2.65	0.44
2:A:252:LYS:H	2:A:252:LYS:CD	2.26	0.44
2:C:44:VAL:O	2:C:47:LEU:N	2.50	0.44
2:C:52:LYS:HA	2:C:55:LEU:HD23	2.00	0.44
2:C:192:TYR:CE1	2:C:222:ILE:HD12	2.52	0.44
2:C:255:GLY:O	2:C:256:ALA:O	2.36	0.44
2:E:98:ILE:HG21	2:E:211:PRO:CA	2.47	0.44
2:E:208:VAL:HG23	2:E:209:LEU:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:98:ILE:HD12	2:G:211:PRO:HA	1.98	0.44
2:G:243:ILE:CD1	2:G:268:LYS:HB2	2.38	0.44
2:G:257:LEU:HA	2:G:260:VAL:CG2	2.47	0.44
2:G:381:LEU:HD23	2:G:381:LEU:H	1.81	0.44
1:D:216:G:C2'	1:D:217:U:H5''	2.43	0.44
1:F:188:A:C2	2:E:399:ARG:HG2	2.52	0.44
1:F:211:C:H2'	1:F:212:A:O5'	2.17	0.44
1:H:198:G:C2'	1:H:199:C:O5'	2.65	0.44
2:A:17:THR:HB	2:A:18:PRO:HD2	1.99	0.44
2:A:31:GLN:C	2:A:34:LEU:HG	2.38	0.44
2:A:151:GLY:CA	2:G:151:GLY:CA	2.58	0.44
2:A:307:LEU:O	2:A:310:TYR:HB2	2.17	0.44
2:A:315:LYS:NZ	2:A:315:LYS:CB	2.76	0.44
2:A:336:ILE:HG22	2:A:337:ILE:N	2.32	0.44
2:A:417:LEU:N	2:A:419:GLU:OE1	2.51	0.44
2:C:52:LYS:CA	2:C:55:LEU:HD23	2.47	0.44
2:C:54:ARG:HA	2:C:58:GLU:OE2	2.17	0.44
2:C:140:TYR:HA	2:C:143:LEU:CG	2.46	0.44
2:E:26:PHE:O	2:E:27:ILE:C	2.56	0.44
2:E:115:LYS:HD2	2:E:279:LEU:CB	2.47	0.44
2:E:116:LEU:O	2:E:117:ALA:C	2.55	0.44
2:E:150:ILE:CG1	2:E:152:VAL:HB	2.47	0.44
2:E:193:GLY:C	2:E:195:GLU:HG2	2.38	0.44
2:E:289:SER:O	2:E:292:LEU:N	2.51	0.44
2:E:432:LYS:HG2	2:E:432:LYS:O	2.17	0.44
2:G:59:LYS:O	2:G:69:TRP:CH2	2.71	0.44
2:G:116:LEU:O	2:G:117:ALA:C	2.55	0.44
2:G:281:THR:O	2:G:282:PHE:HB2	2.17	0.44
2:G:302:GLU:O	2:G:305:LYS:HB3	2.17	0.44
2:G:364:GLU:HB3	2:G:365:ASP:H	1.58	0.44
2:G:373:LYS:HA	2:G:376:ARG:CG	2.41	0.44
1:B:188:A:C2	2:A:399:ARG:HA	2.52	0.44
1:D:202:G:C2	1:D:204:A:OP2	2.71	0.44
1:H:208:G:OP2	1:H:208:G:H8	2.00	0.44
2:A:54:ARG:HA	2:A:58:GLU:OE2	2.17	0.44
2:A:109:LYS:CB	2:A:109:LYS:HZ3	2.29	0.44
2:A:196:THR:HA	2:A:199:LEU:HD11	1.99	0.44
2:C:17:THR:HB	2:C:18:PRO:HD2	1.99	0.44
2:C:31:GLN:C	2:C:34:LEU:HG	2.38	0.44
2:C:119:PHE:HE2	2:C:120:TYR:CE1	2.36	0.44
2:C:129:LEU:HD11	2:C:152:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:140:TYR:CD1	2:C:141:ASP:OD1	2.70	0.44
2:C:144:LEU:O	2:C:145:GLN:C	2.56	0.44
2:C:196:THR:HA	2:C:199:LEU:HD11	1.99	0.44
2:E:78:LEU:HB2	2:E:288:VAL:HG11	1.98	0.44
2:E:126:LYS:HG2	2:E:180:ASP:OD1	2.17	0.44
2:E:126:LYS:HG2	2:E:180:ASP:OD2	2.17	0.44
2:E:192:TYR:CE1	2:E:222:ILE:HD12	2.52	0.44
2:E:202:MET:HA	2:E:205:MET:CB	2.46	0.44
2:E:307:LEU:O	2:E:310:TYR:HB2	2.17	0.44
2:E:372:GLU:O	2:E:374:ILE:N	2.50	0.44
2:G:31:GLN:C	2:G:34:LEU:HG	2.38	0.44
2:G:56:ASN:C	2:G:57:LYS:HG3	2.36	0.44
2:G:58:GLU:HB3	2:G:69:TRP:CZ2	2.53	0.44
2:G:72:SER:OG	2:G:73:ILE:HD13	2.17	0.44
2:G:103:GLY:C	2:G:104:VAL:O	2.56	0.44
2:G:150:ILE:CG1	2:G:152:VAL:HB	2.47	0.44
2:G:202:MET:HA	2:G:205:MET:CB	2.46	0.44
2:G:221:SER:N	2:G:250:THR:HG21	2.33	0.44
2:G:411:VAL:O	2:G:412:GLU:C	2.55	0.44
2:G:417:LEU:C	2:G:419:GLU:OE1	2.56	0.44
1:B:188:A:C2	2:A:399:ARG:HG2	2.52	0.44
1:F:188:A:C2	2:E:399:ARG:HA	2.52	0.44
2:A:19:TYR:O	2:A:22:ALA:N	2.50	0.44
2:A:23:VAL:O	2:A:24:ASP:C	2.55	0.44
2:A:42:LYS:HG3	2:A:43:LEU:N	2.33	0.44
2:A:58:GLU:HB3	2:A:69:TRP:CZ2	2.53	0.44
2:A:71:ILE:C	2:A:74:VAL:HG22	2.37	0.44
2:A:372:GLU:O	2:A:374:ILE:N	2.50	0.44
2:A:428:LEU:C	2:A:430:MET:H	2.20	0.44
2:C:32:LYS:C	2:C:34:LEU:H	2.20	0.44
2:C:42:LYS:HG3	2:C:43:LEU:N	2.33	0.44
2:C:60:PRO:HA	2:C:69:TRP:CZ3	2.52	0.44
2:C:118:TYR:CG	2:C:119:PHE:N	2.85	0.44
2:C:142:GLN:O	2:C:146:LEU:HD21	2.18	0.44
2:C:159:ASN:CB	2:G:161:GLN:O	2.65	0.44
2:C:428:LEU:C	2:C:430:MET:H	2.20	0.44
2:C:428:LEU:CD1	2:C:429:LYS:N	2.80	0.44
2:E:109:LYS:HE3	2:E:187:ALA:HB2	2.00	0.44
2:E:116:LEU:C	2:E:116:LEU:HD12	2.38	0.44
2:E:209:LEU:HD13	2:E:211:PRO:CD	2.46	0.44
2:E:255:GLY:O	2:E:256:ALA:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:356:GLY:HA2	2:E:424:MET:HE1	1.98	0.44
2:E:426:ARG:HG2	2:E:426:ARG:NH1	2.33	0.44
2:G:44:VAL:O	2:G:47:LEU:N	2.50	0.44
2:G:98:ILE:HG21	2:G:211:PRO:CA	2.47	0.44
2:G:119:PHE:HE2	2:G:120:TYR:CE1	2.36	0.44
2:G:142:GLN:O	2:G:146:LEU:HD21	2.18	0.44
2:G:169:LYS:O	2:G:173:ILE:HD13	2.16	0.44
2:G:346:SER:C	2:G:348:VAL:N	2.70	0.44
2:G:372:GLU:C	2:G:374:ILE:H	2.20	0.44
2:G:426:ARG:HG2	2:G:426:ARG:NH1	2.33	0.44
1:B:198:G:C2'	1:B:199:C:O5'	2.65	0.44
1:D:195:C:H42	1:D:210:G:H2'	1.81	0.44
1:D:208:G:H8	1:D:208:G:OP2	2.00	0.44
2:A:47:LEU:C	2:A:49:ALA:N	2.70	0.44
2:A:126:LYS:HG2	2:A:180:ASP:OD1	2.16	0.44
2:A:164:ILE:O	2:A:167:ALA:N	2.51	0.44
2:A:333:TYR:CD1	2:A:381:LEU:CD1	3.00	0.44
2:A:333:TYR:O	2:A:336:ILE:CG1	2.66	0.44
2:A:400:MET:HA	2:A:403:ILE:HD12	1.99	0.44
2:A:417:LEU:C	2:A:419:GLU:OE1	2.56	0.44
2:A:426:ARG:HG2	2:A:426:ARG:NH1	2.33	0.44
2:C:147:GLY:O	2:C:152:VAL:O	2.36	0.44
2:C:150:ILE:CG1	2:C:152:VAL:HB	2.47	0.44
2:C:202:MET:HA	2:C:205:MET:CG	2.48	0.44
2:C:217:VAL:O	2:C:218:ILE:CG2	2.64	0.44
2:C:221:SER:N	2:C:250:THR:HG21	2.32	0.44
2:C:289:SER:O	2:C:293:GLY:N	2.51	0.44
2:C:302:GLU:O	2:C:305:LYS:HB3	2.18	0.44
2:C:307:LEU:O	2:C:310:TYR:HB2	2.17	0.44
2:C:417:LEU:C	2:C:419:GLU:OE1	2.56	0.44
2:E:12:PHE:O	2:E:14:THR:N	2.45	0.44
2:E:333:TYR:HA	2:E:336:ILE:HG12	2.00	0.44
2:E:399:ARG:NH1	2:E:399:ARG:CG	2.80	0.44
2:E:428:LEU:C	2:E:430:MET:H	2.20	0.44
2:G:41:VAL:HA	2:G:44:VAL:HG21	1.96	0.44
2:G:147:GLY:O	2:G:152:VAL:O	2.36	0.44
2:G:198:LEU:O	2:G:201:GLU:N	2.50	0.44
2:G:259:ALA:O	2:G:260:VAL:O	2.34	0.44
2:G:289:SER:O	2:G:293:GLY:N	2.51	0.44
2:G:300:ILE:HB	2:G:342:MET:HA	1.99	0.44
2:G:417:LEU:N	2:G:419:GLU:OE1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:202:G:C2	1:B:204:A:OP2	2.71	0.44
1:B:225:CCC:O3'	1:B:225:CCC:OP2	2.36	0.44
1:D:188:A:C2	2:C:399:ARG:HA	2.52	0.44
1:F:179:GTP:C2	1:F:180:G:H5''	2.51	0.44
1:H:188:A:C2	2:G:399:ARG:HA	2.52	0.44
2:A:63:VAL:HA	2:A:351:HIS:CG	2.52	0.44
2:A:109:LYS:HE3	2:A:187:ALA:HB2	2.00	0.44
2:A:140:TYR:O	2:A:143:LEU:CG	2.65	0.44
2:A:144:LEU:O	2:A:145:GLN:C	2.56	0.44
2:A:316:LYS:NZ	2:A:316:LYS:HB3	2.32	0.44
2:A:354:GLY:HA2	2:A:368:LYS:CG	2.44	0.44
2:A:418:LEU:HA	2:A:421:TYR:CE2	2.53	0.44
2:C:43:LEU:O	2:C:44:VAL:C	2.55	0.44
2:C:59:LYS:O	2:C:69:TRP:CH2	2.71	0.44
2:C:68:GLU:O	2:C:71:ILE:N	2.47	0.44
2:C:113:ALA:O	2:C:114:GLY:O	2.35	0.44
2:C:115:LYS:O	2:C:118:TYR:HD2	2.00	0.44
2:C:281:THR:O	2:C:282:PHE:HB2	2.17	0.44
2:C:287:PHE:CE1	2:C:291:ILE:HG23	2.53	0.44
2:C:333:TYR:O	2:C:336:ILE:CG1	2.66	0.44
2:C:372:GLU:O	2:C:374:ILE:N	2.50	0.44
2:E:59:LYS:O	2:E:69:TRP:CH2	2.71	0.44
2:E:287:PHE:O	2:E:290:ARG:CB	2.62	0.44
2:E:287:PHE:CE1	2:E:291:ILE:HG23	2.53	0.44
2:E:302:GLU:O	2:E:305:LYS:HB3	2.18	0.44
2:E:336:ILE:HG22	2:E:337:ILE:N	2.32	0.44
2:E:417:LEU:N	2:E:419:GLU:OE1	2.51	0.44
2:G:115:LYS:O	2:G:118:TYR:HD2	2.00	0.44
2:G:144:LEU:O	2:G:145:GLN:C	2.56	0.44
2:G:223:GLY:HA2	2:G:256:ALA:CB	2.46	0.44
2:G:418:LEU:HA	2:G:421:TYR:CE2	2.53	0.44
1:F:216:G:C2'	1:F:217:U:H5''	2.43	0.44
2:A:26:PHE:O	2:A:27:ILE:C	2.56	0.44
2:A:60:PRO:HG3	2:A:66:ARG:HA	1.99	0.44
2:A:115:LYS:O	2:A:118:TYR:HD2	2.00	0.44
2:A:126:LYS:HG2	2:A:180:ASP:OD2	2.17	0.44
2:A:225:LYS:O	2:A:226:ALA:C	2.55	0.44
2:A:367:LEU:O	2:A:368:LYS:CB	2.65	0.44
2:A:411:VAL:O	2:A:412:GLU:C	2.55	0.44
2:C:98:ILE:HD12	2:C:211:PRO:HA	1.99	0.44
2:C:116:LEU:C	2:C:116:LEU:HD12	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:60:PRO:HG3	2:E:66:ARG:HA	2.00	0.44
2:E:98:ILE:HD12	2:E:211:PRO:HA	1.98	0.44
2:E:101:LEU:HD22	2:E:101:LEU:HA	1.53	0.44
2:E:225:LYS:O	2:E:226:ALA:C	2.55	0.44
2:E:333:TYR:O	2:E:336:ILE:CG1	2.66	0.44
2:G:47:LEU:C	2:G:49:ALA:N	2.70	0.44
2:G:126:LYS:HG2	2:G:180:ASP:OD1	2.17	0.44
2:G:204:GLU:O	2:G:208:VAL:CG2	2.58	0.44
2:G:287:PHE:O	2:G:290:ARG:CA	2.66	0.44
2:G:333:TYR:O	2:G:336:ILE:CG1	2.66	0.44
2:A:43:LEU:O	2:A:44:VAL:C	2.56	0.44
2:A:72:SER:OG	2:A:73:ILE:HD13	2.17	0.44
2:A:103:GLY:C	2:A:104:VAL:O	2.56	0.44
2:A:147:GLY:O	2:A:152:VAL:O	2.36	0.44
2:A:202:MET:HA	2:A:205:MET:CG	2.48	0.44
2:A:268:LYS:C	2:A:282:PHE:HB3	2.38	0.44
2:A:274:GLU:O	2:A:278:GLU:HG3	2.16	0.44
2:A:287:PHE:O	2:A:290:ARG:CA	2.66	0.44
2:C:26:PHE:O	2:C:27:ILE:C	2.56	0.44
2:C:115:LYS:CA	2:C:118:TYR:CD2	3.00	0.44
2:C:268:LYS:C	2:C:282:PHE:HB3	2.38	0.44
2:C:336:ILE:HG22	2:C:337:ILE:N	2.32	0.44
2:C:426:ARG:HG2	2:C:426:ARG:NH1	2.33	0.44
2:E:171:VAL:C	2:E:173:ILE:N	2.71	0.44
2:E:316:LYS:NZ	2:E:316:LYS:HB3	2.32	0.44
2:E:354:GLY:HA2	2:E:368:LYS:CG	2.44	0.44
2:G:60:PRO:HG3	2:G:66:ARG:HA	2.00	0.44
2:G:182:ILE:HD12	2:G:182:ILE:N	2.33	0.44
2:G:224:GLN:HA	2:G:259:ALA:CB	2.46	0.44
2:G:260:VAL:HG12	2:G:265:ALA:CB	2.48	0.44
2:G:289:SER:O	2:G:292:LEU:N	2.51	0.44
2:G:326:LYS:HB3	2:G:327:LEU:CD1	2.48	0.44
2:G:336:ILE:HG22	2:G:337:ILE:N	2.32	0.44
1:B:190:C:H4'	1:B:191:C:O2	2.17	0.44
1:D:225:CCC:O3'	1:D:225:CCC:OP2	2.36	0.44
1:F:202:G:C2	1:F:204:A:OP2	2.71	0.44
2:A:28:LYS:HA	2:A:31:GLN:CB	2.47	0.44
2:A:94:LYS:H	2:A:97:PHE:HE1	1.65	0.44
2:A:289:SER:O	2:A:292:LEU:N	2.51	0.44
2:A:289:SER:O	2:A:293:GLY:N	2.51	0.44
2:A:297:ILE:O	2:A:301:LEU:N	2.22	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:339:LEU:HD23	2:A:342:MET:CE	2.47	0.44
2:C:72:SER:OG	2:C:73:ILE:HD13	2.17	0.44
2:C:195:GLU:O	2:C:197:LYS:N	2.51	0.44
2:C:423:ASN:C	2:C:425:ASN:ND2	2.71	0.44
2:E:32:LYS:C	2:E:34:LEU:H	2.20	0.44
2:E:42:LYS:HG3	2:E:43:LEU:N	2.33	0.44
2:E:52:LYS:HA	2:E:55:LEU:HD23	2.00	0.44
2:E:72:SER:OG	2:E:73:ILE:HD13	2.17	0.44
2:E:109:LYS:CB	2:E:109:LYS:HZ3	2.30	0.44
2:E:164:ILE:O	2:E:167:ALA:N	2.51	0.44
2:E:260:VAL:HB	2:E:261:VAL:H	1.58	0.44
2:E:300:ILE:HB	2:E:342:MET:HA	2.00	0.44
2:G:26:PHE:O	2:G:27:ILE:C	2.56	0.44
2:G:28:LYS:HA	2:G:31:GLN:CB	2.47	0.44
2:G:118:TYR:CG	2:G:119:PHE:N	2.85	0.44
2:G:195:GLU:O	2:G:197:LYS:N	2.51	0.44
2:G:255:GLY:O	2:G:256:ALA:O	2.36	0.44
2:G:372:GLU:O	2:G:374:ILE:N	2.50	0.44
2:G:402:ARG:NH2	2:G:403:ILE:HG13	2.33	0.44
2:A:99:ILE:HG22	2:A:183:ILE:HA	1.98	0.43
2:A:255:GLY:O	2:A:256:ALA:O	2.36	0.43
2:A:419:GLU:HB2	2:A:420:TRP:CE3	2.53	0.43
2:C:216:LEU:CD2	2:C:218:ILE:HD12	2.48	0.43
2:C:260:VAL:HG12	2:C:265:ALA:CB	2.48	0.43
2:E:31:GLN:C	2:E:34:LEU:HG	2.38	0.43
2:E:100:MET:CE	2:E:206:TYR:HA	2.48	0.43
2:E:103:GLY:C	2:E:104:VAL:O	2.56	0.43
2:E:120:TYR:HA	2:E:123:ARG:HG2	1.98	0.43
2:E:142:GLN:O	2:E:146:LEU:HD21	2.18	0.43
2:E:260:VAL:HG12	2:E:265:ALA:CB	2.48	0.43
2:G:17:THR:HB	2:G:18:PRO:HD2	1.99	0.43
2:G:18:PRO:HB2	2:G:19:TYR:H	1.53	0.43
2:G:25:GLU:HB2	2:G:26:PHE:H	1.52	0.43
2:G:120:TYR:HA	2:G:123:ARG:HG2	1.98	0.43
2:G:188:GLY:HA3	2:G:201:GLU:OE1	2.18	0.43
2:G:209:LEU:HD13	2:G:211:PRO:CD	2.46	0.43
2:G:333:TYR:HA	2:G:336:ILE:HG12	2.00	0.43
2:G:415:ARG:O	2:G:417:LEU:N	2.47	0.43
2:G:425:ASN:ND2	2:G:426:ARG:N	2.61	0.43
2:A:182:ILE:HD12	2:A:182:ILE:N	2.33	0.43
2:A:302:GLU:O	2:A:305:LYS:HB3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:70:PHE:C	2:C:74:VAL:HG13	2.39	0.43
2:C:164:ILE:O	2:C:167:ALA:N	2.51	0.43
2:C:182:ILE:HD12	2:C:182:ILE:N	2.33	0.43
2:C:308:GLU:OE1	2:C:308:GLU:HA	2.18	0.43
2:E:7:ASP:O	2:E:8:ALA:C	2.57	0.43
2:E:47:LEU:C	2:E:49:ALA:N	2.70	0.43
2:E:58:GLU:HB3	2:E:69:TRP:CZ2	2.53	0.43
2:E:72:SER:O	2:E:76:ASP:N	2.37	0.43
2:E:75:TYR:HA	2:E:78:LEU:CG	2.48	0.43
2:E:144:LEU:O	2:E:145:GLN:C	2.56	0.43
2:E:147:GLY:O	2:E:152:VAL:O	2.36	0.43
2:E:202:MET:O	2:E:205:MET:HB2	2.18	0.43
2:E:418:LEU:HA	2:E:421:TYR:CE2	2.53	0.43
2:G:12:PHE:O	2:G:14:THR:N	2.45	0.43
2:G:71:ILE:C	2:G:74:VAL:HG22	2.37	0.43
2:G:225:LYS:O	2:G:226:ALA:C	2.55	0.43
2:G:315:LYS:NZ	2:G:315:LYS:CB	2.76	0.43
2:G:316:LYS:NZ	2:G:316:LYS:HB3	2.32	0.43
2:A:193:GLY:C	2:A:195:GLU:HG2	2.38	0.43
2:A:197:LYS:HA	2:A:200:GLU:CB	2.48	0.43
2:A:221:SER:N	2:A:250:THR:HG21	2.32	0.43
2:A:260:VAL:HG12	2:A:267:ILE:HD11	1.99	0.43
2:A:402:ARG:NH2	2:A:403:ILE:HG13	2.33	0.43
2:A:423:ASN:C	2:A:425:ASN:ND2	2.71	0.43
2:C:98:ILE:CG2	2:C:211:PRO:HA	2.48	0.43
2:C:223:GLY:HA2	2:C:256:ALA:HA	1.99	0.43
2:C:252:LYS:N	2:C:252:LYS:CD	2.77	0.43
2:C:287:PHE:O	2:C:290:ARG:CA	2.66	0.43
2:C:288:VAL:O	2:C:291:ILE:N	2.50	0.43
2:C:333:TYR:HA	2:C:336:ILE:HG12	2.00	0.43
2:C:410:GLU:O	2:C:413:GLU:CD	2.57	0.43
2:C:419:GLU:HB2	2:C:420:TRP:CE3	2.53	0.43
2:E:19:TYR:O	2:E:22:ALA:N	2.50	0.43
2:E:43:LEU:O	2:E:44:VAL:C	2.56	0.43
2:E:58:GLU:HB3	2:E:69:TRP:CH2	2.53	0.43
2:E:115:LYS:O	2:E:118:TYR:HD2	2.00	0.43
2:E:139:ALA:HB3	2:E:140:TYR:CD1	2.53	0.43
2:E:198:LEU:HA	2:E:201:GLU:OE1	2.18	0.43
2:E:223:GLY:HA2	2:E:256:ALA:HA	1.99	0.43
2:E:268:LYS:C	2:E:282:PHE:HB3	2.38	0.43
2:E:357:ILE:C	2:E:358:MET:SD	2.97	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:42:LYS:HG3	2:G:43:LEU:N	2.32	0.43
2:G:43:LEU:O	2:G:44:VAL:C	2.56	0.43
2:G:63:VAL:HA	2:G:351:HIS:CG	2.52	0.43
2:G:100:MET:CE	2:G:206:TYR:HA	2.48	0.43
2:G:109:LYS:HE3	2:G:187:ALA:HB2	1.99	0.43
2:G:164:ILE:O	2:G:167:ALA:N	2.51	0.43
2:G:316:LYS:NZ	2:G:316:LYS:CB	2.79	0.43
1:F:225:CCC:OP2	1:F:225:CCC:O3'	2.36	0.43
2:A:115:LYS:CD	2:A:279:LEU:H	2.32	0.43
2:A:119:PHE:HE2	2:A:120:TYR:CE1	2.36	0.43
2:A:188:GLY:HA3	2:A:201:GLU:OE1	2.19	0.43
2:A:300:ILE:HB	2:A:342:MET:HA	2.00	0.43
2:C:60:PRO:HG3	2:C:66:ARG:HA	2.00	0.43
2:C:137:PRO:HB2	2:C:138:ALA:H	1.68	0.43
2:C:289:SER:O	2:C:292:LEU:N	2.51	0.43
2:C:417:LEU:N	2:C:419:GLU:OE1	2.51	0.43
2:E:59:LYS:HZ2	2:E:61:PRO:N	2.16	0.43
2:E:95:LEU:HA	2:E:96:PRO:O	2.18	0.43
2:E:119:PHE:HE2	2:E:120:TYR:CE1	2.36	0.43
2:E:183:ILE:N	2:E:183:ILE:CD1	2.69	0.43
2:E:202:MET:HA	2:E:205:MET:CG	2.48	0.43
2:E:333:TYR:HD1	2:E:381:LEU:CD1	2.32	0.43
2:E:410:GLU:O	2:E:413:GLU:CD	2.57	0.43
2:E:419:GLU:HB2	2:E:420:TRP:CE3	2.53	0.43
2:G:58:GLU:HB3	2:G:69:TRP:CH2	2.54	0.43
2:G:197:LYS:HA	2:G:200:GLU:CB	2.48	0.43
2:G:202:MET:HA	2:G:205:MET:CG	2.48	0.43
2:G:287:PHE:CE1	2:G:291:ILE:HG23	2.53	0.43
2:A:98:ILE:HG21	2:A:211:PRO:CA	2.47	0.43
2:A:140:TYR:CD1	2:A:141:ASP:OD1	2.70	0.43
2:A:195:GLU:O	2:A:197:LYS:N	2.51	0.43
2:A:196:THR:OG1	2:A:232:ARG:NH1	2.52	0.43
2:A:287:PHE:CE1	2:A:291:ILE:HG23	2.53	0.43
2:A:410:GLU:O	2:A:413:GLU:CD	2.57	0.43
2:C:7:ASP:O	2:C:8:ALA:C	2.57	0.43
2:C:47:LEU:C	2:C:49:ALA:N	2.70	0.43
2:C:64:LEU:HD23	2:C:65:GLU:O	2.18	0.43
2:C:95:LEU:HA	2:C:96:PRO:O	2.18	0.43
2:C:130:VAL:HB	2:C:184:VAL:CG1	2.44	0.43
2:C:159:ASN:HB2	2:C:160:ASN:H	1.60	0.43
2:C:188:GLY:HA3	2:C:201:GLU:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:198:LEU:HA	2:C:201:GLU:OE1	2.18	0.43
2:C:308:GLU:O	2:C:309:GLU:HB2	2.19	0.43
2:E:23:VAL:O	2:E:24:ASP:C	2.55	0.43
2:E:63:VAL:HA	2:E:351:HIS:CG	2.52	0.43
2:E:64:LEU:HD23	2:E:65:GLU:O	2.19	0.43
2:E:144:LEU:HD23	2:E:145:GLN:HG2	2.00	0.43
2:E:182:ILE:HD12	2:E:182:ILE:N	2.33	0.43
2:E:216:LEU:O	2:E:217:VAL:HG13	2.19	0.43
2:E:287:PHE:O	2:E:290:ARG:CA	2.66	0.43
2:E:289:SER:O	2:E:293:GLY:N	2.51	0.43
2:E:427:LEU:N	2:E:427:LEU:CD1	2.82	0.43
2:G:19:TYR:O	2:G:22:ALA:N	2.50	0.43
2:G:75:TYR:HA	2:G:78:LEU:CG	2.48	0.43
2:G:140:TYR:CD1	2:G:141:ASP:OD1	2.70	0.43
2:G:268:LYS:C	2:G:282:PHE:HB3	2.38	0.43
2:G:410:GLU:O	2:G:413:GLU:CD	2.57	0.43
1:F:198:G:C2'	1:F:199:C:O5'	2.65	0.43
2:A:52:LYS:HA	2:A:55:LEU:HD23	1.99	0.43
2:A:201:GLU:C	2:A:205:MET:SD	2.97	0.43
2:A:216:LEU:CD2	2:A:218:ILE:HD12	2.48	0.43
2:A:376:ARG:NH2	2:A:376:ARG:CG	2.80	0.43
2:A:381:LEU:HD23	2:A:381:LEU:H	1.81	0.43
2:A:427:LEU:N	2:A:427:LEU:CD1	2.82	0.43
2:C:18:PRO:HB2	2:C:19:TYR:H	1.54	0.43
2:C:58:GLU:HB3	2:C:69:TRP:CZ2	2.53	0.43
2:C:109:LYS:HE3	2:C:187:ALA:HB2	2.00	0.43
2:C:114:GLY:C	2:C:116:LEU:N	2.71	0.43
2:C:139:ALA:HB3	2:C:140:TYR:CD1	2.54	0.43
2:C:202:MET:O	2:C:205:MET:HB2	2.18	0.43
2:C:333:TYR:HD1	2:C:381:LEU:CD1	2.32	0.43
2:E:117:ALA:O	2:E:119:PHE:N	2.52	0.43
2:E:140:TYR:CD1	2:E:141:ASP:OD1	2.70	0.43
2:E:195:GLU:O	2:E:197:LYS:N	2.51	0.43
2:E:339:LEU:HD23	2:E:342:MET:CE	2.47	0.43
2:E:423:ASN:C	2:E:425:ASN:ND2	2.71	0.43
2:G:52:LYS:HA	2:G:55:LEU:HD23	1.99	0.43
2:G:333:TYR:HD1	2:G:381:LEU:CD1	2.32	0.43
2:G:410:GLU:OE2	2:G:412:GLU:HG3	2.19	0.43
2:G:419:GLU:HB2	2:G:420:TRP:CE3	2.53	0.43
1:H:225:CCC:OP2	1:H:225:CCC:O3'	2.36	0.43
2:A:59:LYS:O	2:A:69:TRP:CH2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:100:MET:CE	2:A:206:TYR:HA	2.48	0.43
2:A:260:VAL:HG12	2:A:265:ALA:CB	2.48	0.43
2:A:410:GLU:OE2	2:A:412:GLU:HG3	2.19	0.43
2:C:100:MET:CE	2:C:206:TYR:HA	2.48	0.43
2:C:117:ALA:O	2:C:119:PHE:N	2.52	0.43
2:C:198:LEU:O	2:C:201:GLU:N	2.50	0.43
2:C:300:ILE:HB	2:C:342:MET:HA	2.00	0.43
2:E:18:PRO:HB2	2:E:19:TYR:H	1.53	0.43
2:E:81:LEU:C	2:E:81:LEU:CD1	2.86	0.43
2:E:115:LYS:CD	2:E:279:LEU:H	2.32	0.43
2:E:197:LYS:HA	2:E:200:GLU:CB	2.48	0.43
2:E:216:LEU:CD2	2:E:218:ILE:HD12	2.48	0.43
2:E:316:LYS:H	2:E:316:LYS:HG2	1.65	0.43
2:E:346:SER:C	2:E:348:VAL:N	2.70	0.43
2:G:70:PHE:C	2:G:74:VAL:HG13	2.39	0.43
2:G:208:VAL:N	2:G:210:LYS:NZ	2.67	0.43
2:G:339:LEU:HD23	2:G:342:MET:CE	2.47	0.43
1:B:220:C:O2	1:B:220:C:H2'	2.19	0.43
2:A:58:GLU:HB3	2:A:69:TRP:CH2	2.54	0.43
2:A:116:LEU:C	2:A:116:LEU:HD12	2.38	0.43
2:A:129:LEU:N	2:A:129:LEU:CD1	2.73	0.43
2:A:142:GLN:O	2:A:146:LEU:HD21	2.18	0.43
2:A:284:ALA:O	2:A:288:VAL:N	2.49	0.43
2:A:303:LYS:O	2:A:304:VAL:C	2.57	0.43
2:A:357:ILE:C	2:A:358:MET:SD	2.97	0.43
2:A:417:LEU:CD1	2:A:421:TYR:HE2	2.30	0.43
2:C:54:ARG:O	2:C:57:LYS:N	2.52	0.43
2:C:75:TYR:HA	2:C:78:LEU:CG	2.48	0.43
2:C:100:MET:HE1	2:C:205:MET:C	2.39	0.43
2:C:103:GLY:C	2:C:104:VAL:O	2.56	0.43
2:C:340:ARG:HH21	2:C:344:PRO:HA	1.83	0.43
2:E:14:THR:O	2:E:67:LYS:NZ	2.51	0.43
2:E:17:THR:HB	2:E:18:PRO:HD2	1.99	0.43
2:E:118:TYR:CG	2:E:119:PHE:N	2.85	0.43
2:E:176:LYS:O	2:E:178:LYS:NZ	2.51	0.43
2:E:188:GLY:HA3	2:E:201:GLU:OE1	2.18	0.43
2:E:201:GLU:C	2:E:205:MET:SD	2.97	0.43
2:E:340:ARG:HH21	2:E:344:PRO:HA	1.84	0.43
2:E:402:ARG:NH2	2:E:403:ILE:HG13	2.33	0.43
2:E:426:ARG:HA	2:E:429:LYS:CD	2.41	0.43
2:G:423:ASN:C	2:G:425:ASN:ND2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:202:G:C8	1:D:202:G:O5'	2.72	0.43
1:H:186:G:O2'	1:H:187:G:C8	2.59	0.43
2:A:117:ALA:O	2:A:119:PHE:N	2.52	0.43
2:A:144:LEU:HD23	2:A:145:GLN:HG2	2.00	0.43
2:A:426:ARG:HA	2:A:429:LYS:CD	2.41	0.43
2:C:23:VAL:O	2:C:24:ASP:C	2.55	0.43
2:C:197:LYS:HA	2:C:200:GLU:CB	2.48	0.43
2:C:201:GLU:C	2:C:205:MET:SD	2.97	0.43
2:C:209:LEU:HD13	2:C:211:PRO:CD	2.46	0.43
2:C:247:MET:SD	2:C:270:ILE:CG1	3.07	0.43
2:C:367:LEU:O	2:C:368:LYS:CE	2.67	0.43
2:C:402:ARG:NH2	2:C:403:ILE:HG13	2.33	0.43
2:C:418:LEU:HA	2:C:421:TYR:CE2	2.53	0.43
2:E:201:GLU:C	2:E:203:LYS:N	2.72	0.43
2:E:303:LYS:O	2:E:304:VAL:C	2.57	0.43
2:E:315:LYS:NZ	2:E:315:LYS:CB	2.76	0.43
2:E:380:ALA:C	2:E:383:SER:H	2.20	0.43
2:G:14:THR:O	2:G:67:LYS:NZ	2.51	0.43
2:G:95:LEU:HA	2:G:96:PRO:O	2.18	0.43
2:G:216:LEU:CD2	2:G:218:ILE:HD12	2.48	0.43
2:G:303:LYS:O	2:G:304:VAL:C	2.57	0.43
2:G:357:ILE:C	2:G:358:MET:SD	2.97	0.43
2:G:402:ARG:O	2:G:406:GLY:CA	2.67	0.43
1:B:223:G:C2'	1:B:224:U:O5'	2.67	0.43
1:F:223:G:C2'	1:F:224:U:O5'	2.67	0.43
2:A:50:LYS:O	2:A:51:ILE:C	2.57	0.43
2:A:54:ARG:O	2:A:57:LYS:N	2.52	0.43
2:A:70:PHE:C	2:A:74:VAL:HG13	2.39	0.43
2:A:130:VAL:HB	2:A:184:VAL:CG1	2.44	0.43
2:A:202:MET:HA	2:A:205:MET:CB	2.46	0.43
2:A:206:TYR:CD1	2:A:207:ASP:N	2.87	0.43
2:C:50:LYS:O	2:C:51:ILE:C	2.57	0.43
2:C:222:ILE:HD11	2:C:226:ALA:HA	2.01	0.43
2:E:70:PHE:C	2:E:74:VAL:HG13	2.39	0.43
2:E:247:MET:SD	2:E:270:ILE:CG1	3.07	0.43
2:G:54:ARG:HA	2:G:58:GLU:OE2	2.17	0.43
2:G:201:GLU:C	2:G:203:LYS:N	2.72	0.43
1:D:214:C:C2'	1:D:215:C:C5'	2.89	0.42
1:D:223:G:C2'	1:D:224:U:O5'	2.67	0.42
2:A:54:ARG:HH12	2:A:76:ASP:CG	2.23	0.42
2:A:72:SER:O	2:A:76:ASP:CB	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:75:TYR:HA	2:A:78:LEU:CG	2.48	0.42
2:A:118:TYR:CG	2:A:119:PHE:N	2.85	0.42
2:A:198:LEU:HA	2:A:201:GLU:OE1	2.18	0.42
2:A:208:VAL:N	2:A:210:LYS:NZ	2.67	0.42
2:A:333:TYR:HD1	2:A:381:LEU:CD1	2.32	0.42
2:C:116:LEU:O	2:C:117:ALA:C	2.55	0.42
2:C:140:TYR:HA	2:C:143:LEU:HD21	2.01	0.42
2:C:165:GLU:HB2	2:C:166:ILE:H	1.53	0.42
2:C:206:TYR:CD1	2:C:207:ASP:N	2.87	0.42
2:C:224:GLN:HA	2:C:259:ALA:CB	2.45	0.42
2:C:346:SER:C	2:C:348:VAL:N	2.70	0.42
2:E:2:LEU:O	2:E:5:ILE:HG22	2.18	0.42
2:E:50:LYS:O	2:E:51:ILE:C	2.57	0.42
2:E:222:ILE:HD11	2:E:226:ALA:HA	2.01	0.42
2:E:260:VAL:HG12	2:E:265:ALA:HB3	2.01	0.42
2:G:2:LEU:O	2:G:5:ILE:HG22	2.19	0.42
2:G:98:ILE:CG2	2:G:211:PRO:HA	2.48	0.42
2:G:183:ILE:N	2:G:183:ILE:CD1	2.69	0.42
2:G:196:THR:OG1	2:G:232:ARG:NH1	2.52	0.42
2:G:201:GLU:C	2:G:205:MET:SD	2.97	0.42
2:G:206:TYR:CD1	2:G:207:ASP:N	2.87	0.42
2:G:281:THR:CG2	2:G:282:PHE:N	2.82	0.42
1:D:210:G:O2'	1:D:211:C:O5'	2.27	0.42
1:H:195:C:N4	1:H:210:G:H3'	2.35	0.42
2:A:154:VAL:CG1	2:A:155:TYR:N	2.73	0.42
2:A:159:ASN:HB2	2:A:160:ASN:H	1.60	0.42
2:A:367:LEU:O	2:A:368:LYS:CE	2.67	0.42
2:C:10:ARG:O	2:C:13:LEU:N	2.53	0.42
2:C:27:ILE:CA	2:C:30:LEU:HD23	2.48	0.42
2:C:216:LEU:O	2:C:217:VAL:HG13	2.19	0.42
2:C:354:GLY:HA2	2:C:368:LYS:CG	2.44	0.42
2:E:24:ASP:O	2:E:27:ILE:CB	2.62	0.42
2:E:206:TYR:CD1	2:E:207:ASP:N	2.87	0.42
2:E:231:SER:O	2:E:234:HIS:N	2.52	0.42
2:G:116:LEU:C	2:G:116:LEU:HD12	2.38	0.42
2:G:144:LEU:HD23	2:G:145:GLN:HG2	2.00	0.42
2:G:202:MET:O	2:G:205:MET:HB2	2.18	0.42
2:G:223:GLY:O	2:G:226:ALA:N	2.52	0.42
2:G:340:ARG:HH21	2:G:344:PRO:HA	1.84	0.42
2:G:376:ARG:NH2	2:G:376:ARG:CG	2.80	0.42
2:G:399:ARG:NH1	2:G:399:ARG:CG	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:189:A:OP2	1:D:189:A:C8	2.73	0.42
1:H:202:G:C8	1:H:202:G:O5'	2.72	0.42
2:A:2:LEU:O	2:A:5:ILE:HG22	2.19	0.42
2:A:5:ILE:HD11	2:A:30:LEU:CB	2.50	0.42
2:A:7:ASP:C	2:A:9:VAL:H	2.22	0.42
2:A:95:LEU:HA	2:A:96:PRO:O	2.18	0.42
2:A:136:ARG:HH11	2:A:137:PRO:HG2	1.84	0.42
2:A:202:MET:O	2:A:205:MET:HB2	2.18	0.42
2:A:216:LEU:O	2:A:217:VAL:HG13	2.19	0.42
2:A:339:LEU:HA	2:A:342:MET:CE	2.49	0.42
2:A:340:ARG:HH21	2:A:344:PRO:HA	1.83	0.42
2:A:399:ARG:NH1	2:A:399:ARG:CG	2.80	0.42
2:C:2:LEU:O	2:C:5:ILE:HG22	2.18	0.42
2:C:39:VAL:HA	2:C:255:GLY:H	1.85	0.42
2:C:70:PHE:O	2:C:73:ILE:CB	2.64	0.42
2:C:204:GLU:O	2:C:208:VAL:CG2	2.58	0.42
2:C:339:LEU:HD23	2:C:342:MET:CE	2.47	0.42
2:C:357:ILE:C	2:C:358:MET:SD	2.97	0.42
2:C:374:ILE:CD1	2:C:375:ARG:N	2.73	0.42
2:C:403:ILE:O	2:C:407:SER:N	2.41	0.42
2:C:427:LEU:N	2:C:427:LEU:CD1	2.82	0.42
2:E:54:ARG:HH12	2:E:76:ASP:CG	2.23	0.42
2:E:70:PHE:O	2:E:73:ILE:CB	2.64	0.42
2:E:105:GLN:C	2:E:106:GLY:O	2.58	0.42
2:E:140:TYR:HA	2:E:143:LEU:HD21	2.01	0.42
2:E:389:LEU:N	2:E:389:LEU:CD2	2.70	0.42
2:G:117:ALA:O	2:G:119:PHE:N	2.52	0.42
1:F:189:A:C8	1:F:189:A:OP2	2.73	0.42
2:A:40:ASN:HB3	2:A:43:LEU:HD11	2.01	0.42
2:A:171:VAL:C	2:A:173:ILE:N	2.71	0.42
2:A:339:LEU:CA	2:A:342:MET:HB3	2.45	0.42
2:A:377:TRP:O	2:A:381:LEU:HD21	2.20	0.42
2:A:405:GLU:HG3	2:A:406:GLY:N	2.35	0.42
2:C:136:ARG:HA	2:C:137:PRO:HD2	1.65	0.42
2:C:144:LEU:HD23	2:C:145:GLN:HG2	2.00	0.42
2:C:196:THR:OG1	2:C:232:ARG:NH1	2.52	0.42
2:C:210:LYS:H	2:C:211:PRO:CD	2.33	0.42
2:C:280:GLU:O	2:C:281:THR:O	2.37	0.42
2:C:377:TRP:O	2:C:381:LEU:HD21	2.20	0.42
2:E:100:MET:HE1	2:E:205:MET:C	2.39	0.42
2:E:114:GLY:C	2:E:116:LEU:N	2.71	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:280:GLU:O	2:E:281:THR:O	2.37	0.42
2:E:336:ILE:CG2	2:E:378:LEU:HD12	2.46	0.42
2:E:412:GLU:O	2:E:414:VAL:N	2.53	0.42
2:G:7:ASP:O	2:G:8:ALA:C	2.57	0.42
2:G:105:GLN:C	2:G:106:GLY:O	2.58	0.42
2:G:198:LEU:HA	2:G:201:GLU:OE1	2.18	0.42
2:G:285:LYS:O	2:G:289:SER:N	2.53	0.42
2:G:328:THR:CG2	2:G:329:LEU:HD12	2.40	0.42
2:G:405:GLU:HG3	2:G:406:GLY:N	2.35	0.42
2:G:412:GLU:O	2:G:414:VAL:N	2.53	0.42
2:G:427:LEU:N	2:G:427:LEU:CD1	2.82	0.42
1:F:195:C:N4	1:F:210:G:H3'	2.35	0.42
1:F:202:G:C8	1:F:202:G:O5'	2.72	0.42
1:H:223:G:C2'	1:H:224:U:O5'	2.67	0.42
2:A:64:LEU:HD23	2:A:65:GLU:O	2.19	0.42
2:A:216:LEU:CG	2:A:217:VAL:N	2.83	0.42
2:A:217:VAL:O	2:A:218:ILE:CG2	2.64	0.42
2:A:219:ASP:OD2	2:A:220:ALA:N	2.53	0.42
2:A:223:GLY:O	2:A:226:ALA:N	2.52	0.42
2:A:247:MET:SD	2:A:270:ILE:CG1	3.07	0.42
2:A:280:GLU:O	2:A:281:THR:O	2.37	0.42
2:A:314:GLN:HB2	2:A:315:LYS:HE2	2.02	0.42
2:A:414:VAL:CG1	2:A:417:LEU:HD11	2.50	0.42
2:A:417:LEU:CD1	2:A:418:LEU:CD2	2.98	0.42
2:C:51:ILE:O	2:C:55:LEU:CD2	2.68	0.42
2:C:370:GLY:O	2:C:372:GLU:N	2.53	0.42
2:E:54:ARG:O	2:E:57:LYS:N	2.52	0.42
2:E:113:ALA:O	2:E:114:GLY:C	2.58	0.42
2:E:115:LYS:HA	2:E:118:TYR:HD2	1.81	0.42
2:E:123:ARG:CG	2:E:123:ARG:NH1	2.76	0.42
2:E:193:GLY:C	2:E:195:GLU:N	2.65	0.42
2:E:223:GLY:O	2:E:226:ALA:N	2.52	0.42
2:E:271:GLY:HA2	2:E:279:LEU:HA	1.97	0.42
2:G:54:ARG:HH12	2:G:76:ASP:CG	2.23	0.42
2:G:64:LEU:HD23	2:G:65:GLU:O	2.18	0.42
2:G:181:ILE:HD12	2:G:181:ILE:N	2.34	0.42
2:G:219:ASP:OD2	2:G:220:ALA:N	2.53	0.42
2:G:341:LYS:O	2:G:343:GLY:N	2.45	0.42
2:G:370:GLY:O	2:G:372:GLU:N	2.53	0.42
2:G:377:TRP:O	2:G:381:LEU:HD21	2.20	0.42
2:G:417:LEU:CD1	2:G:418:LEU:CD2	2.98	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:195:C:N4	1:D:210:G:H3'	2.35	0.42
2:A:118:TYR:CZ	2:A:277:ASP:HB3	2.55	0.42
2:A:202:MET:O	2:A:203:LYS:C	2.57	0.42
2:A:295:GLY:CA	2:A:298:GLU:OE2	2.67	0.42
2:A:333:TYR:HA	2:A:336:ILE:HG12	2.00	0.42
2:A:341:LYS:O	2:A:343:GLY:N	2.45	0.42
2:A:374:ILE:CD1	2:A:375:ARG:HG3	2.50	0.42
2:A:402:ARG:O	2:A:406:GLY:CA	2.67	0.42
2:C:115:LYS:CD	2:C:279:LEU:H	2.32	0.42
2:C:202:MET:O	2:C:203:LYS:C	2.57	0.42
2:C:208:VAL:N	2:C:210:LYS:NZ	2.67	0.42
2:C:223:GLY:O	2:C:226:ALA:N	2.52	0.42
2:C:255:GLY:O	2:C:256:ALA:C	2.58	0.42
2:C:258:SER:O	2:C:259:ALA:C	2.58	0.42
2:C:295:GLY:CA	2:C:298:GLU:OE2	2.67	0.42
2:E:28:LYS:HA	2:E:31:GLN:CB	2.47	0.42
2:E:98:ILE:CG2	2:E:211:PRO:HA	2.48	0.42
2:E:165:GLU:O	2:E:166:ILE:C	2.58	0.42
2:E:166:ILE:CG2	2:E:167:ALA:H	2.27	0.42
2:E:196:THR:OG1	2:E:232:ARG:NH1	2.52	0.42
2:E:202:MET:O	2:E:203:LYS:C	2.57	0.42
2:E:233:PHE:HA	2:E:236:ALA:HB2	2.02	0.42
2:E:255:GLY:O	2:E:256:ALA:C	2.58	0.42
2:E:258:SER:O	2:E:259:ALA:C	2.58	0.42
2:G:38:ASP:HB3	2:G:252:LYS:O	2.20	0.42
2:G:54:ARG:O	2:G:57:LYS:N	2.52	0.42
2:G:133:ASP:OD1	2:G:187:ALA:N	2.53	0.42
2:G:140:TYR:HA	2:G:143:LEU:HD21	2.01	0.42
2:G:210:LYS:H	2:G:211:PRO:CD	2.33	0.42
2:G:339:LEU:HA	2:G:342:MET:CE	2.49	0.42
1:D:220:C:H2'	1:D:220:C:O2	2.19	0.42
2:A:10:ARG:O	2:A:13:LEU:N	2.52	0.42
2:A:39:VAL:HA	2:A:255:GLY:H	1.84	0.42
2:A:51:ILE:O	2:A:55:LEU:CD2	2.68	0.42
2:A:87:GLU:HA	2:A:88:PRO:HD2	1.86	0.42
2:A:106:GLY:HA2	2:A:109:LYS:NZ	2.35	0.42
2:A:165:GLU:O	2:A:166:ILE:C	2.58	0.42
2:A:273:GLY:O	2:A:274:GLU:O	2.38	0.42
2:C:19:TYR:O	2:C:22:ALA:N	2.50	0.42
2:C:40:ASN:HB3	2:C:43:LEU:HD11	2.01	0.42
2:C:314:GLN:C	2:C:315:LYS:HG2	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:410:GLU:OE2	2:C:412:GLU:HG3	2.19	0.42
2:C:412:GLU:O	2:C:414:VAL:N	2.53	0.42
2:E:5:ILE:HD11	2:E:30:LEU:CB	2.50	0.42
2:E:32:LYS:C	2:E:34:LEU:N	2.73	0.42
2:E:68:GLU:O	2:E:71:ILE:N	2.47	0.42
2:E:176:LYS:HG3	2:E:177:ASN:OD1	2.20	0.42
2:E:233:PHE:HA	2:E:236:ALA:HB3	2.01	0.42
2:E:402:ARG:O	2:E:406:GLY:CA	2.67	0.42
2:G:106:GLY:HA2	2:G:109:LYS:NZ	2.35	0.42
2:G:118:TYR:CZ	2:G:277:ASP:HB3	2.55	0.42
2:G:258:SER:O	2:G:259:ALA:C	2.58	0.42
2:G:280:GLU:O	2:G:281:THR:O	2.37	0.42
2:A:70:PHE:O	2:A:73:ILE:CB	2.64	0.42
2:A:113:ALA:O	2:A:114:GLY:C	2.58	0.42
2:A:285:LYS:O	2:A:289:SER:N	2.53	0.42
2:C:7:ASP:C	2:C:9:VAL:H	2.22	0.42
2:C:120:TYR:HA	2:C:123:ARG:HG2	1.98	0.42
2:C:315:LYS:NZ	2:C:315:LYS:CB	2.76	0.42
2:E:40:ASN:HB3	2:E:43:LEU:HD11	2.01	0.42
2:E:82:PHE:CE1	2:E:257:LEU:CD1	3.03	0.42
2:E:285:LYS:O	2:E:289:SER:N	2.53	0.42
2:E:339:LEU:HA	2:E:342:MET:CE	2.49	0.42
2:G:51:ILE:O	2:G:55:LEU:CD2	2.68	0.42
2:G:68:GLU:O	2:G:71:ILE:N	2.46	0.42
2:G:115:LYS:HA	2:G:118:TYR:HD2	1.81	0.42
2:G:139:ALA:HB3	2:G:140:TYR:CD1	2.54	0.42
2:G:171:VAL:C	2:G:173:ILE:N	2.71	0.42
2:G:216:LEU:O	2:G:217:VAL:HG13	2.19	0.42
2:G:243:ILE:CG2	2:G:269:PHE:C	2.81	0.42
2:G:339:LEU:CA	2:G:342:MET:HB3	2.45	0.42
1:B:195:C:N4	1:B:210:G:H3'	2.35	0.42
1:F:184:G:C5	1:F:185:G:C5	3.08	0.42
2:A:63:VAL:O	2:A:64:LEU:CB	2.63	0.42
2:A:139:ALA:HB3	2:A:140:TYR:CD1	2.54	0.42
2:A:260:VAL:C	2:A:265:ALA:HB3	2.40	0.42
2:C:27:ILE:O	2:C:31:GLN:N	2.31	0.42
2:C:28:LYS:HA	2:C:31:GLN:CB	2.47	0.42
2:C:32:LYS:C	2:C:34:LEU:N	2.73	0.42
2:C:58:GLU:HB3	2:C:69:TRP:CH2	2.54	0.42
2:C:216:LEU:CG	2:C:217:VAL:N	2.83	0.42
2:C:237:SER:HA	2:C:238:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:247:MET:CG	2:C:270:ILE:HG13	2.50	0.42
2:C:285:LYS:O	2:C:289:SER:N	2.53	0.42
2:C:326:LYS:HB3	2:C:327:LEU:CD1	2.47	0.42
2:C:339:LEU:HA	2:C:342:MET:CE	2.49	0.42
2:C:374:ILE:HD13	2:C:375:ARG:HG3	2.02	0.42
2:C:374:ILE:CD1	2:C:375:ARG:HG3	2.50	0.42
2:E:10:ARG:O	2:E:13:LEU:N	2.52	0.42
2:E:26:PHE:CD2	2:E:27:ILE:N	2.88	0.42
2:E:51:ILE:O	2:E:55:LEU:CD2	2.68	0.42
2:E:208:VAL:N	2:E:210:LYS:NZ	2.67	0.42
2:E:250:THR:HB	2:E:251:ALA:H	1.52	0.42
2:E:252:LYS:H	2:E:252:LYS:CD	2.26	0.42
2:E:314:GLN:C	2:E:315:LYS:HG2	2.40	0.42
2:E:314:GLN:HB2	2:E:315:LYS:HE2	2.02	0.42
2:E:354:GLY:N	2:E:368:LYS:HE2	2.35	0.42
2:E:425:ASN:HA	2:E:428:LEU:CB	2.42	0.42
2:G:10:ARG:O	2:G:13:LEU:N	2.52	0.42
2:G:39:VAL:HA	2:G:255:GLY:H	1.84	0.42
2:G:129:LEU:HG	2:G:183:ILE:HD13	2.02	0.42
2:G:202:MET:O	2:G:203:LYS:C	2.57	0.42
2:G:233:PHE:HA	2:G:236:ALA:HB3	2.01	0.42
2:G:247:MET:CG	2:G:270:ILE:HG13	2.50	0.42
2:G:295:GLY:CA	2:G:298:GLU:OE2	2.67	0.42
2:G:314:GLN:HB2	2:G:315:LYS:HE2	2.02	0.42
2:G:374:ILE:CD1	2:G:375:ARG:HG3	2.50	0.42
1:B:202:G:H8	1:B:202:G:O5'	2.03	0.42
1:B:202:G:C8	1:B:202:G:O5'	2.72	0.42
1:D:222:G:H2'	1:D:223:G:O4'	2.20	0.42
1:H:188:A:C4	1:H:189:A:C8	3.08	0.42
1:H:222:G:H2'	1:H:223:G:O4'	2.20	0.42
2:A:86:LYS:HZ1	2:A:89:ASN:HD21	1.64	0.42
2:A:144:LEU:HD11	2:G:177:ASN:ND2	2.35	0.42
2:A:177:ASN:ND2	2:G:144:LEU:CD1	2.83	0.42
2:A:201:GLU:C	2:A:203:LYS:N	2.72	0.42
2:A:222:ILE:HD11	2:A:226:ALA:HA	2.01	0.42
2:A:306:GLY:O	2:A:310:TYR:CD1	2.73	0.42
2:A:339:LEU:N	2:A:342:MET:HE2	2.35	0.42
2:C:26:PHE:CD2	2:C:27:ILE:N	2.88	0.42
2:C:54:ARG:HH12	2:C:76:ASP:CG	2.23	0.42
2:C:129:LEU:HG	2:C:183:ILE:HD13	2.02	0.42
2:C:402:ARG:O	2:C:406:GLY:CA	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:425:ASN:HA	2:C:428:LEU:CB	2.42	0.42
2:E:137:PRO:HB2	2:E:138:ALA:H	1.68	0.42
2:E:210:LYS:H	2:E:211:PRO:CD	2.33	0.42
2:E:260:VAL:C	2:E:265:ALA:HB3	2.40	0.42
2:E:306:GLY:O	2:E:310:TYR:CD1	2.73	0.42
2:E:308:GLU:O	2:E:309:GLU:HB2	2.19	0.42
2:E:357:ILE:N	2:E:357:ILE:CD1	2.70	0.42
2:E:410:GLU:OE2	2:E:412:GLU:HG3	2.19	0.42
2:E:414:VAL:CG1	2:E:417:LEU:HD11	2.50	0.42
2:G:7:ASP:C	2:G:9:VAL:H	2.22	0.42
2:G:74:VAL:HG23	2:G:75:TYR:H	1.61	0.42
2:G:217:VAL:O	2:G:218:ILE:CG2	2.64	0.42
2:G:284:ALA:O	2:G:288:VAL:N	2.49	0.42
2:G:288:VAL:O	2:G:291:ILE:N	2.50	0.42
1:B:188:A:C4	1:B:189:A:C8	3.08	0.41
1:B:222:G:H2'	1:B:223:G:O4'	2.20	0.41
1:H:202:G:H8	1:H:202:G:O5'	2.03	0.41
1:H:218:G:N3	1:H:219:C:H5'	2.35	0.41
2:A:105:GLN:C	2:A:106:GLY:O	2.58	0.41
2:A:140:TYR:HA	2:A:143:LEU:HD21	2.01	0.41
2:A:260:VAL:HG12	2:A:265:ALA:HB3	2.01	0.41
2:C:99:ILE:HD12	2:C:99:ILE:HA	1.83	0.41
2:C:113:ALA:O	2:C:114:GLY:C	2.58	0.41
2:E:27:ILE:CA	2:E:30:LEU:HD23	2.48	0.41
2:E:203:LYS:HB3	2:E:204:GLU:H	1.71	0.41
2:E:224:GLN:HA	2:E:259:ALA:CB	2.46	0.41
2:E:288:VAL:O	2:E:291:ILE:N	2.50	0.41
2:E:359:LEU:CB	2:E:360:PRO:CD	2.87	0.41
2:E:367:LEU:O	2:E:368:LYS:CE	2.67	0.41
2:E:377:TRP:O	2:E:381:LEU:HD21	2.20	0.41
2:G:5:ILE:HD11	2:G:30:LEU:CB	2.50	0.41
2:G:35:ILE:CA	2:G:39:VAL:HB	2.48	0.41
2:G:129:LEU:N	2:G:129:LEU:CD1	2.73	0.41
2:G:216:LEU:CG	2:G:217:VAL:N	2.83	0.41
2:G:247:MET:SD	2:G:270:ILE:CG1	3.07	0.41
2:G:391:ASN:C	2:G:393:ASN:N	2.74	0.41
2:G:414:VAL:CG1	2:G:417:LEU:HD11	2.50	0.41
1:B:218:G:N3	1:B:219:C:H5'	2.35	0.41
1:D:184:G:C5	1:D:185:G:C5	3.08	0.41
1:H:189:A:C8	1:H:189:A:OP2	2.73	0.41
2:A:82:PHE:CE1	2:A:257:LEU:CD1	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:115:LYS:CA	2:A:118:TYR:CD2	3.00	0.41
2:A:233:PHE:HA	2:A:236:ALA:HB3	2.01	0.41
2:A:258:SER:O	2:A:259:ALA:C	2.58	0.41
2:A:370:GLY:O	2:A:372:GLU:N	2.53	0.41
2:A:424:MET:O	2:A:425:ASN:C	2.58	0.41
2:C:25:GLU:HB2	2:C:26:PHE:H	1.52	0.41
2:C:35:ILE:CD1	2:C:35:ILE:H	2.32	0.41
2:C:105:GLN:C	2:C:106:GLY:O	2.58	0.41
2:C:260:VAL:HG12	2:C:265:ALA:HB3	2.01	0.41
2:C:284:ALA:O	2:C:288:VAL:N	2.49	0.41
2:C:417:LEU:CD1	2:C:418:LEU:CD2	2.98	0.41
2:E:35:ILE:CA	2:E:39:VAL:HB	2.48	0.41
2:E:133:ASP:OD1	2:E:187:ALA:N	2.53	0.41
2:E:295:GLY:CA	2:E:298:GLU:OE2	2.68	0.41
2:E:370:GLY:O	2:E:372:GLU:N	2.53	0.41
2:E:373:LYS:O	2:E:376:ARG:CB	2.60	0.41
2:E:374:ILE:HD13	2:E:375:ARG:HG3	2.02	0.41
2:E:384:MET:HE1	2:E:389:LEU:HD22	2.02	0.41
2:G:24:ASP:O	2:G:27:ILE:CB	2.63	0.41
2:G:40:ASN:HB3	2:G:43:LEU:HD11	2.01	0.41
2:G:50:LYS:O	2:G:51:ILE:C	2.57	0.41
2:G:101:LEU:C	2:G:101:LEU:HD13	2.40	0.41
2:G:113:ALA:O	2:G:114:GLY:C	2.58	0.41
2:G:115:LYS:CD	2:G:279:LEU:H	2.32	0.41
2:G:165:GLU:O	2:G:166:ILE:C	2.58	0.41
2:G:295:GLY:C	2:G:298:GLU:OE2	2.59	0.41
1:B:184:G:C5	1:B:185:G:C5	3.08	0.41
1:B:189:A:C8	1:B:189:A:OP2	2.73	0.41
1:F:220:C:O2	1:F:220:C:H2'	2.19	0.41
2:A:7:ASP:O	2:A:8:ALA:C	2.57	0.41
2:A:38:ASP:HB3	2:A:252:LYS:O	2.20	0.41
2:A:210:LYS:H	2:A:211:PRO:CD	2.33	0.41
2:C:5:ILE:HD11	2:C:30:LEU:CB	2.50	0.41
2:C:12:PHE:O	2:C:14:THR:N	2.45	0.41
2:C:38:ASP:HB3	2:C:252:LYS:O	2.20	0.41
2:C:165:GLU:O	2:C:166:ILE:C	2.58	0.41
2:C:171:VAL:C	2:C:173:ILE:N	2.71	0.41
2:C:233:PHE:HA	2:C:236:ALA:HB2	2.02	0.41
2:C:295:GLY:C	2:C:298:GLU:OE2	2.59	0.41
2:C:303:LYS:O	2:C:304:VAL:C	2.57	0.41
2:E:59:LYS:HZ2	2:E:60:PRO:C	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:229:LEU:HD23	2:E:230:ALA:H	1.85	0.41
2:G:222:ILE:HD11	2:G:226:ALA:HA	2.01	0.41
2:G:260:VAL:HG12	2:G:267:ILE:HD11	1.99	0.41
2:G:273:GLY:O	2:G:274:GLU:O	2.38	0.41
1:B:210:G:HO2'	1:B:211:C:P	2.41	0.41
1:D:202:G:H8	1:D:202:G:O5'	2.03	0.41
1:D:218:G:N3	1:D:219:C:H5'	2.35	0.41
1:F:188:A:C4	1:F:189:A:C8	3.08	0.41
1:F:211:C:C2'	1:F:212:A:O5'	2.69	0.41
2:A:50:LYS:HZ1	2:A:54:ARG:HE	1.68	0.41
2:A:129:LEU:HG	2:A:183:ILE:HD13	2.02	0.41
2:A:133:ASP:OD1	2:A:187:ALA:N	2.53	0.41
2:A:295:GLY:C	2:A:298:GLU:OE2	2.59	0.41
2:A:314:GLN:C	2:A:315:LYS:HG2	2.40	0.41
2:A:412:GLU:O	2:A:414:VAL:N	2.53	0.41
2:C:219:ASP:OD2	2:C:220:ALA:N	2.53	0.41
2:C:306:GLY:O	2:C:310:TYR:CD1	2.73	0.41
2:C:374:ILE:HD13	2:C:375:ARG:H	1.76	0.41
2:C:391:ASN:C	2:C:393:ASN:N	2.74	0.41
2:C:400:MET:O	2:C:403:ILE:N	2.53	0.41
2:E:115:LYS:CA	2:E:118:TYR:HD2	2.34	0.41
2:E:219:ASP:OD2	2:E:220:ALA:N	2.53	0.41
2:E:243:ILE:CG2	2:E:269:PHE:C	2.81	0.41
2:E:247:MET:CG	2:E:270:ILE:HG13	2.50	0.41
2:E:374:ILE:CD1	2:E:375:ARG:HG3	2.50	0.41
2:E:381:LEU:N	2:E:381:LEU:CD2	2.80	0.41
2:E:424:MET:O	2:E:425:ASN:C	2.58	0.41
2:G:12:PHE:CZ	2:G:67:LYS:CB	3.04	0.41
2:G:136:ARG:HH11	2:G:137:PRO:HG2	1.84	0.41
2:G:173:ILE:HD13	2:G:173:ILE:H	1.84	0.41
2:G:254:GLY:O	2:G:257:LEU:CD1	2.69	0.41
2:G:306:GLY:O	2:G:310:TYR:CD1	2.73	0.41
2:G:314:GLN:C	2:G:315:LYS:HG2	2.40	0.41
2:G:315:LYS:HB2	2:G:316:LYS:H	1.58	0.41
2:G:339:LEU:N	2:G:342:MET:HE2	2.35	0.41
2:A:14:THR:O	2:A:67:LYS:NZ	2.51	0.41
2:A:26:PHE:CD2	2:A:27:ILE:N	2.88	0.41
2:A:30:LEU:HD12	2:A:34:LEU:HD21	2.03	0.41
2:A:98:ILE:CG2	2:A:211:PRO:HA	2.48	0.41
2:A:204:GLU:O	2:A:208:VAL:CG2	2.57	0.41
2:A:247:MET:CG	2:A:270:ILE:HG13	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:331:ASP:O	2:A:332:VAL:C	2.59	0.41
2:A:402:ARG:NH2	2:A:403:ILE:HD11	2.36	0.41
2:C:5:ILE:HD13	2:C:8:ALA:HB3	2.02	0.41
2:C:14:THR:O	2:C:67:LYS:NZ	2.51	0.41
2:C:80:LYS:O	2:C:81:LEU:C	2.59	0.41
2:C:101:LEU:HD22	2:C:101:LEU:HA	1.53	0.41
2:C:260:VAL:C	2:C:265:ALA:HB3	2.40	0.41
2:C:311:ASP:O	2:C:312:LYS:C	2.58	0.41
2:C:354:GLY:N	2:C:368:LYS:HE2	2.35	0.41
2:E:6:ARG:O	2:E:9:VAL:HB	2.21	0.41
2:E:38:ASP:HB3	2:E:252:LYS:O	2.20	0.41
2:E:43:LEU:O	2:E:45:PHE:N	2.54	0.41
2:E:129:LEU:HG	2:E:183:ILE:HD13	2.02	0.41
2:E:134:VAL:HG23	2:E:134:VAL:O	2.21	0.41
2:E:139:ALA:N	2:E:141:ASP:OD1	2.54	0.41
2:E:147:GLY:O	2:E:152:VAL:N	2.43	0.41
2:E:227:TYR:O	2:E:228:ASP:C	2.59	0.41
2:E:295:GLY:C	2:E:298:GLU:OE2	2.59	0.41
2:E:341:LYS:O	2:E:343:GLY:N	2.45	0.41
2:E:400:MET:O	2:E:403:ILE:N	2.53	0.41
2:E:405:GLU:HG3	2:E:406:GLY:N	2.35	0.41
2:E:414:VAL:C	2:E:416:GLU:N	2.70	0.41
2:G:243:ILE:HA	2:G:267:ILE:HG23	2.02	0.41
2:G:367:LEU:O	2:G:368:LYS:CE	2.67	0.41
2:G:379:ALA:O	2:G:380:ALA:O	2.39	0.41
2:G:400:MET:O	2:G:403:ILE:N	2.53	0.41
1:B:205:A:H3'	1:B:206:G:O4'	2.21	0.41
1:D:188:A:C4	1:D:189:A:C8	3.08	0.41
1:H:213:A:P	2:G:385:THR:HA	2.61	0.41
1:H:220:C:O2	1:H:220:C:H2'	2.19	0.41
2:A:1:MET:HG3	2:A:2:LEU:HD23	2.03	0.41
2:A:12:PHE:CZ	2:A:67:LYS:CB	3.04	0.41
2:A:55:LEU:C	2:A:57:LYS:H	2.24	0.41
2:A:115:LYS:CA	2:A:118:TYR:HD2	2.34	0.41
2:A:356:GLY:HA2	2:A:424:MET:HE3	2.02	0.41
2:A:400:MET:O	2:A:403:ILE:N	2.53	0.41
2:A:410:GLU:O	2:A:413:GLU:OE1	2.39	0.41
2:C:6:ARG:O	2:C:9:VAL:HB	2.21	0.41
2:C:12:PHE:CZ	2:C:67:LYS:CB	3.04	0.41
2:C:118:TYR:CZ	2:C:277:ASP:HB3	2.55	0.41
2:C:140:TYR:O	2:C:143:LEU:CG	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:154:VAL:CG1	2:C:155:TYR:N	2.73	0.41
2:C:176:LYS:HG3	2:C:177:ASN:OD1	2.20	0.41
2:C:233:PHE:HA	2:C:236:ALA:HB3	2.02	0.41
2:C:314:GLN:HB2	2:C:315:LYS:HE2	2.02	0.41
2:E:41:VAL:HA	2:E:44:VAL:HG21	1.96	0.41
2:E:79:SER:HB2	2:E:80:LYS:H	1.70	0.41
2:E:104:VAL:C	2:E:105:GLN:O	2.50	0.41
2:E:106:GLY:HA2	2:E:109:LYS:NZ	2.35	0.41
2:E:115:LYS:CA	2:E:118:TYR:CD2	3.00	0.41
2:E:118:TYR:CZ	2:E:277:ASP:HB3	2.55	0.41
2:E:202:MET:O	2:E:202:MET:HG2	2.20	0.41
2:E:273:GLY:O	2:E:274:GLU:O	2.38	0.41
2:E:420:TRP:O	2:E:421:TYR:HD1	2.04	0.41
2:G:5:ILE:HD13	2:G:8:ALA:HB3	2.02	0.41
2:G:114:GLY:C	2:G:116:LEU:N	2.71	0.41
2:G:115:LYS:CA	2:G:118:TYR:HD2	2.34	0.41
2:G:229:LEU:HD23	2:G:230:ALA:H	1.85	0.41
2:G:260:VAL:HG12	2:G:265:ALA:HB3	2.01	0.41
2:G:311:ASP:OD1	2:G:311:ASP:N	2.31	0.41
1:B:184:G:O6	1:B:185:G:C6	2.74	0.41
1:F:202:G:H8	1:F:202:G:O5'	2.03	0.41
2:A:104:VAL:C	2:A:105:GLN:O	2.50	0.41
2:A:227:TYR:O	2:A:228:ASP:C	2.59	0.41
2:A:262:ALA:O	2:A:263:THR:HG23	2.21	0.41
2:A:379:ALA:O	2:A:380:ALA:O	2.39	0.41
2:C:25:GLU:O	2:C:29:ASP:N	2.37	0.41
2:C:66:ARG:O	2:C:68:GLU:N	2.54	0.41
2:C:133:ASP:OD1	2:C:187:ALA:N	2.53	0.41
2:C:244:ILE:N	2:C:244:ILE:CD1	2.84	0.41
2:C:271:GLY:HA2	2:C:279:LEU:HA	1.97	0.41
2:C:336:ILE:CG2	2:C:378:LEU:HD12	2.46	0.41
2:C:379:ALA:O	2:C:380:ALA:O	2.39	0.41
2:C:405:GLU:HG3	2:C:406:GLY:N	2.35	0.41
2:C:414:VAL:C	2:C:416:GLU:N	2.70	0.41
2:C:414:VAL:CG1	2:C:417:LEU:HD11	2.50	0.41
2:E:39:VAL:HA	2:E:255:GLY:H	1.84	0.41
2:E:61:PRO:O	2:E:62:SER:C	2.59	0.41
2:E:134:VAL:CB	2:E:161:GLN:HA	2.50	0.41
2:E:164:ILE:O	2:E:165:GLU:O	2.39	0.41
2:E:376:ARG:NH2	2:E:376:ARG:CG	2.80	0.41
2:G:30:LEU:HD12	2:G:34:LEU:HD21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:82:PHE:CE1	2:G:257:LEU:CD1	3.03	0.41
2:G:182:ILE:CG2	2:G:183:ILE:N	2.84	0.41
2:G:217:VAL:C	2:G:218:ILE:HG23	2.41	0.41
2:G:227:TYR:O	2:G:228:ASP:C	2.59	0.41
2:G:297:ILE:CD1	2:G:298:GLU:N	2.75	0.41
2:G:374:ILE:HD13	2:G:375:ARG:HG3	2.02	0.41
2:G:410:GLU:O	2:G:413:GLU:OE1	2.39	0.41
2:G:420:TRP:O	2:G:421:TYR:HD1	2.04	0.41
1:B:188:A:C4	2:A:399:ARG:HG2	2.56	0.41
1:B:213:A:P	2:A:385:THR:HA	2.61	0.41
1:D:188:A:C4	2:C:399:ARG:HG2	2.56	0.41
1:D:211:C:C2'	1:D:212:A:O5'	2.69	0.41
2:A:12:PHE:HZ	2:A:67:LYS:CB	2.34	0.41
2:A:101:LEU:C	2:A:101:LEU:HD13	2.40	0.41
2:A:136:ARG:HA	2:A:137:PRO:HD2	1.65	0.41
2:A:141:ASP:O	2:A:144:LEU:HB3	2.21	0.41
2:A:254:GLY:O	2:A:257:LEU:CD1	2.69	0.41
2:A:362:PRO:O	2:A:363:SER:HB2	2.21	0.41
2:C:43:LEU:O	2:C:45:PHE:N	2.54	0.41
2:C:164:ILE:O	2:C:165:GLU:O	2.39	0.41
2:C:227:TYR:O	2:C:228:ASP:C	2.59	0.41
2:C:231:SER:O	2:C:234:HIS:N	2.51	0.41
2:E:12:PHE:CZ	2:E:67:LYS:CB	3.04	0.41
2:E:26:PHE:HD2	2:E:27:ILE:HD13	1.82	0.41
2:E:315:LYS:HB2	2:E:316:LYS:H	1.57	0.41
2:E:415:ARG:O	2:E:417:LEU:N	2.47	0.41
2:E:417:LEU:CD1	2:E:418:LEU:CD2	2.98	0.41
2:G:6:ARG:O	2:G:9:VAL:HB	2.21	0.41
2:G:32:LYS:C	2:G:34:LEU:N	2.73	0.41
2:G:123:ARG:HA	2:G:123:ARG:HD2	1.95	0.41
2:G:134:VAL:CB	2:G:161:GLN:HA	2.50	0.41
2:G:260:VAL:C	2:G:265:ALA:HB3	2.40	0.41
2:G:262:ALA:O	2:G:263:THR:HG23	2.21	0.41
2:G:377:TRP:CZ2	2:G:417:LEU:CB	3.04	0.41
1:B:211:C:C2'	1:B:212:A:O5'	2.69	0.41
1:F:188:A:C4	2:E:399:ARG:HG2	2.56	0.41
1:F:218:G:N3	1:F:219:C:H5'	2.35	0.41
1:F:222:G:H2'	1:F:223:G:O4'	2.20	0.41
1:H:184:G:C5	1:H:185:G:C5	3.08	0.41
2:A:5:ILE:HG22	2:A:6:ARG:N	2.36	0.41
2:A:5:ILE:HD13	2:A:8:ALA:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:6:ARG:O	2:A:9:VAL:HB	2.21	0.41
2:A:35:ILE:CA	2:A:39:VAL:HB	2.48	0.41
2:A:59:LYS:NZ	2:A:61:PRO:N	2.67	0.41
2:A:61:PRO:O	2:A:62:SER:C	2.59	0.41
2:A:66:ARG:O	2:A:68:GLU:N	2.54	0.41
2:A:94:LYS:C	2:A:95:LEU:CD1	2.87	0.41
2:A:139:ALA:N	2:A:141:ASP:OD1	2.54	0.41
2:A:169:LYS:O	2:A:173:ILE:CD1	2.69	0.41
2:A:182:ILE:CG2	2:A:183:ILE:N	2.84	0.41
2:A:199:LEU:O	2:A:200:GLU:C	2.58	0.41
2:A:226:ALA:O	2:A:227:TYR:O	2.39	0.41
2:A:276:ILE:O	2:A:276:ILE:CD1	2.69	0.41
2:A:320:VAL:HG12	2:A:321:MET:N	2.36	0.41
2:A:346:SER:CA	2:A:350:GLN:NE2	2.84	0.41
2:A:354:GLY:N	2:A:368:LYS:HE2	2.35	0.41
2:A:391:ASN:C	2:A:393:ASN:N	2.74	0.41
2:C:75:TYR:O	2:C:78:LEU:HG	2.21	0.41
2:C:79:SER:HB2	2:C:80:LYS:H	1.70	0.41
2:C:82:PHE:CE1	2:C:257:LEU:CD1	3.03	0.41
2:C:82:PHE:HB3	2:C:83:GLY:H	1.68	0.41
2:C:136:ARG:HH11	2:C:137:PRO:HG2	1.84	0.41
2:C:141:ASP:O	2:C:144:LEU:HB3	2.20	0.41
2:C:157:GLU:HA	2:C:158:PRO:HD3	1.89	0.41
2:C:201:GLU:O	2:C:203:LYS:N	2.54	0.41
2:C:262:ALA:O	2:C:263:THR:HG23	2.21	0.41
2:C:273:GLY:O	2:C:274:GLU:O	2.38	0.41
2:C:320:VAL:HG12	2:C:321:MET:N	2.36	0.41
2:C:370:GLY:HA2	2:C:373:LYS:HD2	2.03	0.41
2:C:377:TRP:CZ2	2:C:417:LEU:CB	3.04	0.41
2:C:410:GLU:O	2:C:413:GLU:OE1	2.39	0.41
2:C:420:TRP:O	2:C:421:TYR:HD1	2.04	0.41
2:C:424:MET:O	2:C:425:ASN:C	2.58	0.41
2:E:5:ILE:HD13	2:E:8:ALA:HB3	2.02	0.41
2:E:7:ASP:C	2:E:9:VAL:H	2.22	0.41
2:E:12:PHE:HZ	2:E:67:LYS:CB	2.34	0.41
2:E:55:LEU:C	2:E:57:LYS:H	2.24	0.41
2:E:63:VAL:HG13	2:E:351:HIS:HB3	2.03	0.41
2:E:86:LYS:HD3	2:E:86:LYS:C	2.41	0.41
2:E:101:LEU:C	2:E:101:LEU:HD13	2.40	0.41
2:E:127:VAL:C	2:E:181:ILE:O	2.59	0.41
2:E:136:ARG:HH11	2:E:137:PRO:HG2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:146:LEU:H	2:E:146:LEU:CD2	2.06	0.41
2:E:181:ILE:HD12	2:E:181:ILE:N	2.34	0.41
2:E:216:LEU:CG	2:E:217:VAL:N	2.83	0.41
2:E:217:VAL:C	2:E:218:ILE:HG23	2.41	0.41
2:E:254:GLY:O	2:E:257:LEU:CD1	2.69	0.41
2:E:276:ILE:O	2:E:276:ILE:CD1	2.69	0.41
2:E:377:TRP:CZ2	2:E:417:LEU:CB	3.04	0.41
2:E:380:ALA:CA	2:E:383:SER:HB2	2.47	0.41
2:G:47:LEU:CD1	2:G:77:GLU:HB3	2.50	0.41
2:G:55:LEU:C	2:G:57:LYS:H	2.24	0.41
2:G:139:ALA:N	2:G:141:ASP:OD1	2.54	0.41
2:G:175:VAL:HG23	2:G:175:VAL:H	1.65	0.41
2:G:199:LEU:O	2:G:200:GLU:C	2.58	0.41
2:G:243:ILE:HG22	2:G:244:ILE:N	2.36	0.41
2:G:331:ASP:O	2:G:332:VAL:C	2.59	0.41
2:G:424:MET:O	2:G:425:ASN:C	2.58	0.41
1:B:197:G:H22	2:A:407:SER:CB	2.34	0.41
1:D:184:G:O6	1:D:185:G:C6	2.74	0.41
1:H:184:G:O6	1:H:185:G:C6	2.74	0.41
2:A:75:TYR:O	2:A:78:LEU:HG	2.21	0.41
2:A:127:VAL:C	2:A:181:ILE:O	2.59	0.41
2:A:164:ILE:O	2:A:165:GLU:O	2.39	0.41
2:A:201:GLU:O	2:A:203:LYS:N	2.54	0.41
2:A:243:ILE:HA	2:A:267:ILE:HG23	2.02	0.41
2:A:337:ILE:N	2:A:337:ILE:CD1	2.74	0.41
2:A:374:ILE:HD13	2:A:375:ARG:HG3	2.02	0.41
2:A:420:TRP:O	2:A:421:TYR:HD1	2.04	0.41
2:C:26:PHE:HD2	2:C:27:ILE:HD13	1.82	0.41
2:C:101:LEU:C	2:C:101:LEU:HD13	2.40	0.41
2:C:153:GLN:CG	2:C:154:VAL:N	2.84	0.41
2:C:217:VAL:C	2:C:218:ILE:HG23	2.41	0.41
2:C:221:SER:HA	2:C:250:THR:HG21	2.03	0.41
2:C:364:GLU:HB3	2:C:365:ASP:H	1.59	0.41
2:E:159:ASN:HB2	2:E:160:ASN:H	1.60	0.41
2:E:199:LEU:O	2:E:200:GLU:C	2.58	0.41
2:E:246:LYS:HB3	2:E:249:GLY:CA	2.49	0.41
2:E:247:MET:CB	2:E:272:THR:HA	2.40	0.41
2:E:300:ILE:HA	2:E:303:LYS:CE	2.43	0.41
2:G:26:PHE:CD2	2:G:27:ILE:N	2.88	0.41
2:G:75:TYR:O	2:G:78:LEU:HG	2.21	0.41
2:G:121:LYS:C	2:G:123:ARG:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:176:LYS:HG3	2:G:177:ASN:OD1	2.20	0.41
2:G:194:GLU:O	2:G:195:GLU:C	2.59	0.41
2:G:346:SER:CA	2:G:350:GLN:NE2	2.84	0.41
1:B:192:G:N1	1:B:216:G:C2	2.89	0.40
1:F:208:G:OP2	1:F:208:G:C8	2.74	0.40
1:H:211:C:C2'	1:H:212:A:O5'	2.69	0.40
2:A:43:LEU:O	2:A:45:PHE:N	2.54	0.40
2:A:86:LYS:C	2:A:86:LYS:HD3	2.41	0.40
2:A:229:LEU:HD23	2:A:230:ALA:H	1.85	0.40
2:A:231:SER:O	2:A:234:HIS:N	2.52	0.40
2:A:310:TYR:O	2:A:313:ILE:N	2.50	0.40
2:C:41:VAL:HA	2:C:44:VAL:HG21	1.96	0.40
2:C:106:GLY:HA2	2:C:109:LYS:NZ	2.35	0.40
2:C:139:ALA:N	2:C:141:ASP:OD1	2.54	0.40
2:C:169:LYS:O	2:C:173:ILE:CD1	2.69	0.40
2:C:300:ILE:CG1	2:C:301:LEU:N	2.85	0.40
2:C:331:ASP:O	2:C:332:VAL:C	2.59	0.40
2:C:346:SER:CA	2:C:350:GLN:NE2	2.84	0.40
2:E:73:ILE:N	2:E:73:ILE:HD13	2.37	0.40
2:E:104:VAL:HG11	2:E:229:LEU:HD11	2.02	0.40
2:E:115:LYS:HZ1	2:E:278:GLU:HB2	1.81	0.40
2:E:169:LYS:O	2:E:173:ILE:CD1	2.69	0.40
2:E:262:ALA:O	2:E:263:THR:HG23	2.21	0.40
2:E:368:LYS:HB3	2:E:369:ILE:H	1.38	0.40
2:E:410:GLU:O	2:E:413:GLU:OE1	2.39	0.40
2:G:35:ILE:HD13	2:G:35:ILE:H	1.87	0.40
2:G:61:PRO:O	2:G:62:SER:C	2.59	0.40
2:G:164:ILE:O	2:G:165:GLU:O	2.39	0.40
2:G:165:GLU:HB2	2:G:166:ILE:H	1.53	0.40
2:G:169:LYS:O	2:G:173:ILE:CD1	2.69	0.40
2:G:300:ILE:CG1	2:G:301:LEU:N	2.85	0.40
2:G:354:GLY:N	2:G:368:LYS:HE2	2.35	0.40
1:D:192:G:N1	1:D:216:G:C2	2.89	0.40
1:D:208:G:OP2	1:D:208:G:C8	2.74	0.40
1:D:213:A:P	2:C:385:THR:HA	2.61	0.40
1:F:184:G:O6	1:F:185:G:C6	2.74	0.40
1:H:192:G:N1	1:H:216:G:C2	2.89	0.40
2:A:25:GLU:HB2	2:A:26:PHE:H	1.52	0.40
2:A:63:VAL:HG13	2:A:351:HIS:HB3	2.03	0.40
2:A:83:GLY:O	2:A:84:GLY:O	2.40	0.40
2:A:176:LYS:O	2:A:178:LYS:NZ	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:176:LYS:HG3	2:A:177:ASN:OD1	2.20	0.40
2:A:198:LEU:O	2:A:201:GLU:N	2.50	0.40
2:A:244:ILE:N	2:A:244:ILE:CD1	2.84	0.40
2:A:255:GLY:O	2:A:256:ALA:C	2.58	0.40
2:A:288:VAL:O	2:A:291:ILE:N	2.50	0.40
2:A:377:TRP:CZ2	2:A:417:LEU:CB	3.04	0.40
2:A:422:ASN:HA	2:A:425:ASN:OD1	2.22	0.40
2:C:35:ILE:HD13	2:C:35:ILE:H	1.87	0.40
2:C:115:LYS:HZ1	2:C:278:GLU:HB2	1.83	0.40
2:C:182:ILE:CG2	2:C:183:ILE:N	2.84	0.40
2:C:194:GLU:O	2:C:195:GLU:C	2.59	0.40
2:C:199:LEU:O	2:C:200:GLU:C	2.59	0.40
2:C:229:LEU:HD23	2:C:230:ALA:H	1.85	0.40
2:C:243:ILE:HA	2:C:267:ILE:HG23	2.02	0.40
2:E:201:GLU:O	2:E:203:LYS:N	2.54	0.40
2:E:243:ILE:HG22	2:E:244:ILE:N	2.36	0.40
2:E:331:ASP:O	2:E:332:VAL:C	2.59	0.40
2:E:383:SER:O	2:E:403:ILE:HG23	2.21	0.40
2:E:402:ARG:NH2	2:E:403:ILE:HD11	2.36	0.40
2:G:10:ARG:HG2	2:G:13:LEU:HB2	2.03	0.40
2:G:255:GLY:O	2:G:256:ALA:C	2.58	0.40
2:G:270:ILE:CG2	2:G:271:GLY:N	2.85	0.40
1:D:190:C:O2	1:D:190:C:H2'	2.22	0.40
2:A:181:ILE:HD12	2:A:181:ILE:N	2.34	0.40
2:A:237:SER:HA	2:A:238:PRO:HD3	1.89	0.40
2:A:270:ILE:CG2	2:A:271:GLY:N	2.85	0.40
2:A:384:MET:CE	2:A:389:LEU:HD22	2.52	0.40
2:C:12:PHE:HZ	2:C:67:LYS:CB	2.34	0.40
2:C:117:ALA:HB2	2:C:129:LEU:HD21	2.03	0.40
2:C:243:ILE:HG22	2:C:244:ILE:N	2.36	0.40
2:C:254:GLY:O	2:C:257:LEU:CD1	2.69	0.40
2:C:373:LYS:O	2:C:376:ARG:CB	2.60	0.40
2:C:383:SER:O	2:C:403:ILE:HG23	2.22	0.40
2:E:1:MET:HG3	2:E:2:LEU:HD23	2.03	0.40
2:E:30:LEU:HD12	2:E:34:LEU:HD21	2.03	0.40
2:E:195:GLU:O	2:E:196:THR:C	2.60	0.40
2:E:198:LEU:O	2:E:201:GLU:N	2.50	0.40
2:E:370:GLY:HA2	2:E:373:LYS:HD2	2.03	0.40
2:G:63:VAL:HG13	2:G:351:HIS:HB3	2.03	0.40
2:G:82:PHE:CE1	2:G:257:LEU:HD13	2.57	0.40
2:G:231:SER:O	2:G:234:HIS:N	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:244:ILE:N	2:G:244:ILE:CD1	2.84	0.40
2:G:370:GLY:HA2	2:G:373:LYS:HD2	2.03	0.40
2:A:134:VAL:O	2:A:134:VAL:HG23	2.21	0.40
2:A:134:VAL:CB	2:A:161:GLN:HA	2.50	0.40
2:A:153:GLN:CG	2:A:154:VAL:N	2.84	0.40
2:C:30:LEU:HD12	2:C:34:LEU:HD21	2.03	0.40
2:C:63:VAL:HG13	2:C:351:HIS:HB3	2.03	0.40
2:C:86:LYS:C	2:C:86:LYS:HD3	2.41	0.40
2:C:127:VAL:C	2:C:181:ILE:O	2.59	0.40
2:C:140:TYR:HE2	2:C:157:GLU:H	1.70	0.40
2:C:195:GLU:O	2:C:196:THR:C	2.60	0.40
2:C:276:ILE:O	2:C:276:ILE:CD1	2.69	0.40
2:C:298:GLU:H	2:C:298:GLU:HG3	1.55	0.40
2:C:303:LYS:HB3	2:C:338:ALA:HA	2.03	0.40
2:E:22:ALA:HA	2:E:25:GLU:OE2	2.22	0.40
2:E:25:GLU:HB2	2:E:26:PHE:H	1.52	0.40
2:E:73:ILE:O	2:E:74:VAL:C	2.60	0.40
2:E:82:PHE:CE1	2:E:257:LEU:HD13	2.57	0.40
2:E:86:LYS:NZ	2:E:89:ASN:CG	2.75	0.40
2:E:142:GLN:O	2:E:145:GLN:CG	2.70	0.40
2:E:194:GLU:O	2:E:195:GLU:C	2.59	0.40
2:E:362:PRO:O	2:E:363:SER:HB2	2.21	0.40
2:E:379:ALA:O	2:E:380:ALA:O	2.39	0.40
2:G:117:ALA:HB2	2:G:129:LEU:HD21	2.03	0.40
2:G:141:ASP:O	2:G:144:LEU:HB3	2.21	0.40
2:G:159:ASN:HB2	2:G:160:ASN:H	1.60	0.40
2:G:195:GLU:O	2:G:196:THR:C	2.60	0.40
2:G:202:MET:O	2:G:202:MET:HG2	2.20	0.40
2:G:226:ALA:O	2:G:227:TYR:O	2.39	0.40
2:G:411:VAL:O	2:G:413:GLU:N	2.55	0.40
1:F:205:A:H5''	1:F:206:G:OP2	2.22	0.40
1:H:190:C:O2	1:H:190:C:H2'	2.22	0.40
2:A:142:GLN:O	2:A:145:GLN:CG	2.70	0.40
2:A:217:VAL:C	2:A:218:ILE:HG23	2.41	0.40
2:A:300:ILE:CG1	2:A:301:LEU:N	2.85	0.40
2:C:82:PHE:CE1	2:C:257:LEU:HD13	2.56	0.40
2:C:82:PHE:HA	2:C:261:VAL:HG21	2.04	0.40
2:C:87:GLU:HA	2:C:88:PRO:HD2	1.86	0.40
2:C:144:LEU:HD11	2:E:177:ASN:ND2	2.37	0.40
2:C:339:LEU:HA	2:C:342:MET:HE3	2.02	0.40
2:C:409:LEU:HD23	2:C:409:LEU:HA	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:3:GLU:O	2:E:5:ILE:N	2.54	0.40
2:E:24:ASP:O	2:E:28:LYS:HG3	2.22	0.40
2:E:51:ILE:O	2:E:55:LEU:HD23	2.21	0.40
2:E:56:ASN:O	2:E:57:LYS:CG	2.68	0.40
2:E:66:ARG:O	2:E:68:GLU:N	2.54	0.40
2:E:140:TYR:O	2:E:143:LEU:CG	2.65	0.40
2:E:141:ASP:O	2:E:144:LEU:HB3	2.21	0.40
2:E:261:VAL:O	2:E:264:GLY:N	2.47	0.40
2:E:311:ASP:OD1	2:E:311:ASP:N	2.31	0.40
2:E:320:VAL:HG12	2:E:321:MET:N	2.36	0.40
2:G:43:LEU:O	2:G:45:PHE:N	2.54	0.40
2:G:66:ARG:O	2:G:68:GLU:N	2.54	0.40
2:G:83:GLY:O	2:G:84:GLY:O	2.40	0.40
2:G:142:GLN:O	2:G:145:GLN:CG	2.70	0.40
2:G:176:LYS:O	2:G:178:LYS:NZ	2.51	0.40
2:G:384:MET:CE	2:G:389:LEU:HD22	2.52	0.40
2:G:414:VAL:C	2:G:416:GLU:N	2.70	0.40

All (22) 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:C:59:LYS:O	2:E:361:THR:O[2_655]	1.08	1.12
2:C:315:LYS:CG	2:E:312:LYS:NZ[2_655]	1.56	0.64
2:C:61:PRO:CB	2:E:359:LEU:O[2_655]	1.59	0.61
2:C:361:THR:O	2:E:59:LYS:O[2_655]	1.59	0.61
2:A:59:LYS:CD	2:G:361:THR:O[2_665]	1.73	0.47
1:H:199:C:OP1	2:E:21:LYS:NZ[1_565]	1.83	0.37
2:C:315:LYS:CG	2:E:312:LYS:CE[2_655]	1.87	0.33
2:C:61:PRO:CG	2:E:360:PRO:CA[2_655]	1.90	0.30
2:C:58:GLU:CA	2:E:362:PRO:CB[2_655]	1.91	0.29
2:A:366:GLN:OE1	2:E:365:ASP:CG[2_555]	1.95	0.25
2:C:59:LYS:O	2:E:361:THR:C[2_655]	1.95	0.25
2:C:61:PRO:CD	2:E:360:PRO:CA[2_655]	1.96	0.24
2:A:362:PRO:CB	2:G:57:LYS:O[2_665]	1.99	0.21
2:C:308:GLU:CG	2:E:359:LEU:CD2[2_655]	2.04	0.16
2:C:59:LYS:C	2:E:361:THR:O[2_655]	2.07	0.13
2:A:361:THR:O	2:G:59:LYS:CD[2_665]	2.10	0.10
2:C:359:LEU:CD2	2:E:308:GLU:CB[2_655]	2.10	0.10
1:B:199:C:OP1	2:C:21:LYS:NZ[1_455]	2.11	0.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:366:GLN:OE1	2:E:365:ASP:OD1[2_555]	2.12	0.08
1:F:200:C:OP2	2:G:21:LYS:NZ[1_545]	2.14	0.06
2:C:362:PRO:C	2:E:59:LYS:CD[2_655]	2.14	0.06
2:C:61:PRO:CB	2:E:359:LEU:C[2_655]	2.19	0.01

## 5.3 Torsion angles [\(i\)](#)

### 5.3.1 Protein backbone [\(i\)](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	A	430/440 (98%)	142 (33%)	123 (29%)	165 (38%)	0	0
2	C	430/440 (98%)	143 (33%)	123 (29%)	164 (38%)	0	0
2	E	430/440 (98%)	143 (33%)	122 (28%)	165 (38%)	0	0
2	G	430/440 (98%)	142 (33%)	123 (29%)	165 (38%)	0	0
All	All	1720/1760 (98%)	570 (33%)	491 (28%)	659 (38%)	0	0

All (659) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	18	PRO
2	A	20	GLU
2	A	23	VAL
2	A	33	SER
2	A	39	VAL
2	A	44	VAL
2	A	62	SER
2	A	84	GLY
2	A	104	VAL
2	A	109	LYS
2	A	111	THR
2	A	112	THR
2	A	113	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	127	VAL
2	A	137	PRO
2	A	138	ALA
2	A	139	ALA
2	A	140	TYR
2	A	141	ASP
2	A	144	LEU
2	A	145	GLN
2	A	163	PRO
2	A	165	GLU
2	A	171	VAL
2	A	172	ASP
2	A	173	ILE
2	A	203	LYS
2	A	227	TYR
2	A	246	LYS
2	A	251	ALA
2	A	256	ALA
2	A	260	VAL
2	A	261	VAL
2	A	262	ALA
2	A	274	GLU
2	A	275	LYS
2	A	281	THR
2	A	284	ALA
2	A	297	ILE
2	A	299	SER
2	A	309	GLU
2	A	314	GLN
2	A	318	GLU
2	A	323	GLY
2	A	332	VAL
2	A	336	ILE
2	A	337	ILE
2	A	338	ALA
2	A	347	LYS
2	A	353	PRO
2	A	357	ILE
2	A	358	MET
2	A	364	GLU
2	A	368	LYS
2	A	369	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	371	GLU
2	A	379	ALA
2	A	380	ALA
2	A	398	SER
2	A	411	VAL
2	A	412	GLU
2	C	18	PRO
2	C	20	GLU
2	C	23	VAL
2	C	33	SER
2	C	39	VAL
2	C	44	VAL
2	C	62	SER
2	C	84	GLY
2	C	104	VAL
2	C	109	LYS
2	C	111	THR
2	C	112	THR
2	C	113	ALA
2	C	127	VAL
2	C	137	PRO
2	C	138	ALA
2	C	139	ALA
2	C	140	TYR
2	C	141	ASP
2	C	144	LEU
2	C	145	GLN
2	C	163	PRO
2	C	165	GLU
2	C	171	VAL
2	C	172	ASP
2	C	173	ILE
2	C	203	LYS
2	C	227	TYR
2	C	246	LYS
2	C	251	ALA
2	C	256	ALA
2	C	260	VAL
2	C	261	VAL
2	C	262	ALA
2	C	274	GLU
2	C	275	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	C	281	THR
2	C	284	ALA
2	C	297	ILE
2	C	299	SER
2	C	309	GLU
2	C	314	GLN
2	C	318	GLU
2	C	323	GLY
2	C	332	VAL
2	C	336	ILE
2	C	337	ILE
2	C	338	ALA
2	C	347	LYS
2	C	353	PRO
2	C	357	ILE
2	C	358	MET
2	C	364	GLU
2	C	368	LYS
2	C	369	ILE
2	C	371	GLU
2	C	379	ALA
2	C	380	ALA
2	C	398	SER
2	C	411	VAL
2	C	412	GLU
2	E	18	PRO
2	E	20	GLU
2	E	23	VAL
2	E	33	SER
2	E	39	VAL
2	E	44	VAL
2	E	62	SER
2	E	84	GLY
2	E	104	VAL
2	E	109	LYS
2	E	111	THR
2	E	112	THR
2	E	113	ALA
2	E	127	VAL
2	E	137	PRO
2	E	138	ALA
2	E	139	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	140	TYR
2	E	141	ASP
2	E	144	LEU
2	E	145	GLN
2	E	163	PRO
2	E	165	GLU
2	E	171	VAL
2	E	172	ASP
2	E	173	ILE
2	E	203	LYS
2	E	227	TYR
2	E	246	LYS
2	E	251	ALA
2	E	256	ALA
2	E	260	VAL
2	E	261	VAL
2	E	262	ALA
2	E	274	GLU
2	E	275	LYS
2	E	281	THR
2	E	284	ALA
2	E	297	ILE
2	E	299	SER
2	E	309	GLU
2	E	314	GLN
2	E	318	GLU
2	E	323	GLY
2	E	332	VAL
2	E	336	ILE
2	E	337	ILE
2	E	338	ALA
2	E	347	LYS
2	E	353	PRO
2	E	357	ILE
2	E	358	MET
2	E	364	GLU
2	E	368	LYS
2	E	369	ILE
2	E	371	GLU
2	E	379	ALA
2	E	380	ALA
2	E	398	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	411	VAL
2	E	412	GLU
2	G	18	PRO
2	G	20	GLU
2	G	23	VAL
2	G	33	SER
2	G	39	VAL
2	G	44	VAL
2	G	62	SER
2	G	84	GLY
2	G	104	VAL
2	G	109	LYS
2	G	111	THR
2	G	112	THR
2	G	113	ALA
2	G	127	VAL
2	G	137	PRO
2	G	138	ALA
2	G	139	ALA
2	G	140	TYR
2	G	141	ASP
2	G	144	LEU
2	G	145	GLN
2	G	163	PRO
2	G	165	GLU
2	G	171	VAL
2	G	172	ASP
2	G	173	ILE
2	G	203	LYS
2	G	227	TYR
2	G	246	LYS
2	G	251	ALA
2	G	256	ALA
2	G	260	VAL
2	G	261	VAL
2	G	262	ALA
2	G	274	GLU
2	G	275	LYS
2	G	281	THR
2	G	284	ALA
2	G	297	ILE
2	G	299	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	G	309	GLU
2	G	314	GLN
2	G	318	GLU
2	G	323	GLY
2	G	332	VAL
2	G	336	ILE
2	G	337	ILE
2	G	338	ALA
2	G	347	LYS
2	G	353	PRO
2	G	357	ILE
2	G	358	MET
2	G	364	GLU
2	G	368	LYS
2	G	369	ILE
2	G	371	GLU
2	G	379	ALA
2	G	380	ALA
2	G	398	SER
2	G	411	VAL
2	G	412	GLU
2	A	5	ILE
2	A	25	GLU
2	A	27	ILE
2	A	43	LEU
2	A	51	ILE
2	A	64	LEU
2	A	68	GLU
2	A	79	SER
2	A	83	GLY
2	A	106	GLY
2	A	107	SER
2	A	114	GLY
2	A	118	TYR
2	A	146	LEU
2	A	149	GLN
2	A	160	ASN
2	A	164	ILE
2	A	169	LYS
2	A	170	GLY
2	A	208	VAL
2	A	210	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	228	ASP
2	A	229	LEU
2	A	233	PHE
2	A	250	THR
2	A	254	GLY
2	A	255	GLY
2	A	270	ILE
2	A	271	GLY
2	A	276	ILE
2	A	278	GLU
2	A	293	GLY
2	A	322	GLU
2	A	346	SER
2	A	356	GLY
2	A	375	ARG
2	A	381	LEU
2	A	386	TYR
2	A	387	LYS
2	A	399	ARG
2	A	400	MET
2	A	417	LEU
2	A	426	ARG
2	A	429	LYS
2	C	5	ILE
2	C	25	GLU
2	C	27	ILE
2	C	43	LEU
2	C	51	ILE
2	C	64	LEU
2	C	68	GLU
2	C	79	SER
2	C	83	GLY
2	C	106	GLY
2	C	107	SER
2	C	114	GLY
2	C	118	TYR
2	C	146	LEU
2	C	149	GLN
2	C	160	ASN
2	C	164	ILE
2	C	169	LYS
2	C	170	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	C	208	VAL
2	C	210	LYS
2	C	228	ASP
2	C	229	LEU
2	C	233	PHE
2	C	250	THR
2	C	254	GLY
2	C	255	GLY
2	C	270	ILE
2	C	271	GLY
2	C	276	ILE
2	C	278	GLU
2	C	293	GLY
2	C	322	GLU
2	C	346	SER
2	C	356	GLY
2	C	375	ARG
2	C	381	LEU
2	C	386	TYR
2	C	387	LYS
2	C	399	ARG
2	C	400	MET
2	C	417	LEU
2	C	426	ARG
2	C	429	LYS
2	E	5	ILE
2	E	25	GLU
2	E	27	ILE
2	E	43	LEU
2	E	51	ILE
2	E	64	LEU
2	E	68	GLU
2	E	79	SER
2	E	83	GLY
2	E	106	GLY
2	E	107	SER
2	E	114	GLY
2	E	118	TYR
2	E	146	LEU
2	E	149	GLN
2	E	160	ASN
2	E	164	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	169	LYS
2	E	170	GLY
2	E	208	VAL
2	E	210	LYS
2	E	228	ASP
2	E	229	LEU
2	E	233	PHE
2	E	250	THR
2	E	254	GLY
2	E	255	GLY
2	E	270	ILE
2	E	271	GLY
2	E	276	ILE
2	E	278	GLU
2	E	293	GLY
2	E	322	GLU
2	E	344	PRO
2	E	346	SER
2	E	356	GLY
2	E	375	ARG
2	E	381	LEU
2	E	386	TYR
2	E	387	LYS
2	E	399	ARG
2	E	400	MET
2	E	417	LEU
2	E	426	ARG
2	E	429	LYS
2	G	5	ILE
2	G	25	GLU
2	G	27	ILE
2	G	43	LEU
2	G	51	ILE
2	G	64	LEU
2	G	68	GLU
2	G	79	SER
2	G	83	GLY
2	G	106	GLY
2	G	107	SER
2	G	114	GLY
2	G	118	TYR
2	G	146	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	G	149	GLN
2	G	160	ASN
2	G	164	ILE
2	G	169	LYS
2	G	170	GLY
2	G	208	VAL
2	G	210	LYS
2	G	228	ASP
2	G	229	LEU
2	G	233	PHE
2	G	250	THR
2	G	254	GLY
2	G	255	GLY
2	G	270	ILE
2	G	271	GLY
2	G	276	ILE
2	G	278	GLU
2	G	293	GLY
2	G	322	GLU
2	G	346	SER
2	G	356	GLY
2	G	375	ARG
2	G	381	LEU
2	G	386	TYR
2	G	387	LYS
2	G	399	ARG
2	G	400	MET
2	G	417	LEU
2	G	426	ARG
2	G	429	LYS
2	A	3	GLU
2	A	47	LEU
2	A	48	THR
2	A	49	ALA
2	A	53	GLU
2	A	55	LEU
2	A	57	LYS
2	A	67	LYS
2	A	76	ASP
2	A	142	GLN
2	A	147	GLY
2	A	167	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	189	ARG
2	A	196	THR
2	A	205	MET
2	A	231	SER
2	A	265	ALA
2	A	282	PHE
2	A	286	ARG
2	A	298	GLU
2	A	302	GLU
2	A	315	LYS
2	A	344	PRO
2	A	363	SER
2	A	373	LYS
2	A	413	GLU
2	C	3	GLU
2	C	47	LEU
2	C	48	THR
2	C	49	ALA
2	C	53	GLU
2	C	55	LEU
2	C	57	LYS
2	C	67	LYS
2	C	76	ASP
2	C	142	GLN
2	C	147	GLY
2	C	167	ALA
2	C	189	ARG
2	C	196	THR
2	C	205	MET
2	C	231	SER
2	C	265	ALA
2	C	282	PHE
2	C	286	ARG
2	C	298	GLU
2	C	302	GLU
2	C	315	LYS
2	C	344	PRO
2	C	363	SER
2	C	373	LYS
2	C	413	GLU
2	E	3	GLU
2	E	47	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	48	THR
2	E	49	ALA
2	E	53	GLU
2	E	55	LEU
2	E	57	LYS
2	E	67	LYS
2	E	76	ASP
2	E	142	GLN
2	E	147	GLY
2	E	167	ALA
2	E	189	ARG
2	E	196	THR
2	E	205	MET
2	E	231	SER
2	E	265	ALA
2	E	282	PHE
2	E	286	ARG
2	E	298	GLU
2	E	302	GLU
2	E	307	LEU
2	E	308	GLU
2	E	315	LYS
2	E	363	SER
2	E	373	LYS
2	E	413	GLU
2	G	3	GLU
2	G	47	LEU
2	G	48	THR
2	G	49	ALA
2	G	53	GLU
2	G	55	LEU
2	G	57	LYS
2	G	67	LYS
2	G	76	ASP
2	G	142	GLN
2	G	147	GLY
2	G	167	ALA
2	G	189	ARG
2	G	196	THR
2	G	205	MET
2	G	231	SER
2	G	265	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	G	282	PHE
2	G	286	ARG
2	G	298	GLU
2	G	302	GLU
2	G	315	LYS
2	G	344	PRO
2	G	363	SER
2	G	373	LYS
2	G	413	GLU
2	A	50	LYS
2	A	69	TRP
2	A	72	SER
2	A	117	ALA
2	A	226	ALA
2	A	263	THR
2	A	285	LYS
2	A	307	LEU
2	A	313	ILE
2	A	320	VAL
2	A	354	GLY
2	A	416	GLU
2	A	428	LEU
2	C	50	LYS
2	C	69	TRP
2	C	72	SER
2	C	117	ALA
2	C	226	ALA
2	C	263	THR
2	C	285	LYS
2	C	307	LEU
2	C	313	ILE
2	C	320	VAL
2	C	354	GLY
2	C	416	GLU
2	C	428	LEU
2	E	50	LYS
2	E	69	TRP
2	E	72	SER
2	E	117	ALA
2	E	226	ALA
2	E	263	THR
2	E	285	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	313	ILE
2	E	320	VAL
2	E	354	GLY
2	E	416	GLU
2	E	428	LEU
2	G	50	LYS
2	G	69	TRP
2	G	72	SER
2	G	117	ALA
2	G	226	ALA
2	G	263	THR
2	G	285	LYS
2	G	307	LEU
2	G	313	ILE
2	G	320	VAL
2	G	354	GLY
2	G	416	GLU
2	G	428	LEU
2	A	110	THR
2	A	272	THR
2	A	288	VAL
2	A	308	GLU
2	A	339	LEU
2	A	418	LEU
2	A	424	MET
2	C	110	THR
2	C	272	THR
2	C	288	VAL
2	C	339	LEU
2	C	418	LEU
2	C	424	MET
2	E	110	THR
2	E	272	THR
2	E	288	VAL
2	E	339	LEU
2	E	418	LEU
2	E	424	MET
2	G	110	THR
2	G	272	THR
2	G	288	VAL
2	G	308	GLU
2	G	339	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	G	418	LEU
2	G	424	MET
2	A	70	PHE
2	A	166	ILE
2	A	258	SER
2	A	351	HIS
2	A	362	PRO
2	A	394	ILE
2	C	70	PHE
2	C	166	ILE
2	C	258	SER
2	C	351	HIS
2	C	362	PRO
2	C	394	ILE
2	E	70	PHE
2	E	166	ILE
2	E	258	SER
2	E	351	HIS
2	E	362	PRO
2	E	394	ILE
2	G	70	PHE
2	G	166	ILE
2	G	258	SER
2	G	351	HIS
2	G	362	PRO
2	G	394	ILE
2	A	9	VAL
2	C	9	VAL
2	E	9	VAL
2	G	9	VAL
2	A	154	VAL
2	A	162	ASN
2	A	253	GLY
2	C	154	VAL
2	C	162	ASN
2	C	253	GLY
2	E	154	VAL
2	E	162	ASN
2	E	253	GLY
2	G	154	VAL
2	G	162	ASN
2	G	253	GLY

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Mol	Chain	Res	Type
2	A	74	VAL
2	C	74	VAL
2	C	158	PRO
2	E	74	VAL
2	G	74	VAL
2	G	158	PRO
2	A	158	PRO
2	A	300	ILE
2	E	158	PRO
2	E	300	ILE
2	G	300	ILE
2	A	71	ILE
2	C	71	ILE
2	C	300	ILE
2	E	71	ILE
2	G	71	ILE

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	A	370/377 (98%)	270 (73%)	100 (27%)	0	3
2	C	370/377 (98%)	269 (73%)	101 (27%)	0	3
2	E	370/377 (98%)	269 (73%)	101 (27%)	0	3
2	G	370/377 (98%)	270 (73%)	100 (27%)	0	3
All	All	1480/1508 (98%)	1078 (73%)	402 (27%)	0	3

All (402) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A	1	MET
2	A	5	ILE
2	A	6	ARG
2	A	7	ASP
2	A	14	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	30	LEU
2	A	31	GLN
2	A	34	LEU
2	A	41	VAL
2	A	42	LYS
2	A	43	LEU
2	A	53	GLU
2	A	59	LYS
2	A	64	LEU
2	A	65	GLU
2	A	66	ARG
2	A	69	TRP
2	A	75	TYR
2	A	77	GLU
2	A	81	LEU
2	A	89	ASN
2	A	94	LYS
2	A	97	PHE
2	A	99	ILE
2	A	101	LEU
2	A	109	LYS
2	A	110	THR
2	A	116	LEU
2	A	118	TYR
2	A	119	PHE
2	A	123	ARG
2	A	129	LEU
2	A	140	TYR
2	A	141	ASP
2	A	142	GLN
2	A	143	LEU
2	A	144	LEU
2	A	146	LEU
2	A	149	GLN
2	A	160	ASN
2	A	173	ILE
2	A	174	PHE
2	A	177	ASN
2	A	179	MET
2	A	184	VAL
2	A	194	GLU
2	A	196	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	199	LEU
2	A	202	MET
2	A	209	LEU
2	A	212	ASP
2	A	216	LEU
2	A	218	ILE
2	A	221	SER
2	A	228	ASP
2	A	229	LEU
2	A	233	PHE
2	A	237	SER
2	A	250	THR
2	A	266	THR
2	A	277	ASP
2	A	285	LYS
2	A	291	ILE
2	A	292	LEU
2	A	300	ILE
2	A	302	GLU
2	A	311	ASP
2	A	315	LYS
2	A	316	LYS
2	A	319	ASP
2	A	321	MET
2	A	327	LEU
2	A	330	ARG
2	A	333	TYR
2	A	339	LEU
2	A	350	GLN
2	A	351	HIS
2	A	353	PRO
2	A	357	ILE
2	A	358	MET
2	A	362	PRO
2	A	374	ILE
2	A	377	TRP
2	A	381	LEU
2	A	389	LEU
2	A	390	GLU
2	A	393	ASN
2	A	399	ARG
2	A	400	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A	402	ARG
2	A	419	GLU
2	A	420	TRP
2	A	421	TYR
2	A	424	MET
2	A	425	ASN
2	A	426	ARG
2	A	427	LEU
2	A	428	LEU
2	A	429	LYS
2	A	430	MET
2	C	1	MET
2	C	5	ILE
2	C	6	ARG
2	C	7	ASP
2	C	14	THR
2	C	30	LEU
2	C	31	GLN
2	C	34	LEU
2	C	41	VAL
2	C	42	LYS
2	C	43	LEU
2	C	53	GLU
2	C	59	LYS
2	C	64	LEU
2	C	65	GLU
2	C	66	ARG
2	C	69	TRP
2	C	75	TYR
2	C	77	GLU
2	C	81	LEU
2	C	89	ASN
2	C	94	LYS
2	C	97	PHE
2	C	99	ILE
2	C	101	LEU
2	C	109	LYS
2	C	110	THR
2	C	116	LEU
2	C	118	TYR
2	C	119	PHE
2	C	123	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	C	129	LEU
2	C	140	TYR
2	C	141	ASP
2	C	142	GLN
2	C	143	LEU
2	C	144	LEU
2	C	146	LEU
2	C	149	GLN
2	C	160	ASN
2	C	173	ILE
2	C	174	PHE
2	C	177	ASN
2	C	179	MET
2	C	184	VAL
2	C	194	GLU
2	C	196	THR
2	C	199	LEU
2	C	202	MET
2	C	209	LEU
2	C	212	ASP
2	C	216	LEU
2	C	218	ILE
2	C	221	SER
2	C	228	ASP
2	C	229	LEU
2	C	233	PHE
2	C	237	SER
2	C	250	THR
2	C	266	THR
2	C	277	ASP
2	C	285	LYS
2	C	291	ILE
2	C	292	LEU
2	C	300	ILE
2	C	302	GLU
2	C	308	GLU
2	C	311	ASP
2	C	315	LYS
2	C	316	LYS
2	C	319	ASP
2	C	321	MET
2	C	327	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	C	330	ARG
2	C	333	TYR
2	C	339	LEU
2	C	350	GLN
2	C	351	HIS
2	C	353	PRO
2	C	357	ILE
2	C	358	MET
2	C	362	PRO
2	C	374	ILE
2	C	377	TRP
2	C	381	LEU
2	C	389	LEU
2	C	390	GLU
2	C	393	ASN
2	C	399	ARG
2	C	400	MET
2	C	402	ARG
2	C	419	GLU
2	C	420	TRP
2	C	421	TYR
2	C	424	MET
2	C	425	ASN
2	C	426	ARG
2	C	427	LEU
2	C	428	LEU
2	C	429	LYS
2	C	430	MET
2	E	1	MET
2	E	5	ILE
2	E	6	ARG
2	E	7	ASP
2	E	14	THR
2	E	30	LEU
2	E	31	GLN
2	E	34	LEU
2	E	41	VAL
2	E	42	LYS
2	E	43	LEU
2	E	53	GLU
2	E	59	LYS
2	E	64	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	65	GLU
2	E	66	ARG
2	E	69	TRP
2	E	75	TYR
2	E	77	GLU
2	E	81	LEU
2	E	89	ASN
2	E	94	LYS
2	E	97	PHE
2	E	99	ILE
2	E	101	LEU
2	E	109	LYS
2	E	110	THR
2	E	116	LEU
2	E	118	TYR
2	E	119	PHE
2	E	123	ARG
2	E	129	LEU
2	E	140	TYR
2	E	141	ASP
2	E	142	GLN
2	E	143	LEU
2	E	144	LEU
2	E	146	LEU
2	E	149	GLN
2	E	160	ASN
2	E	173	ILE
2	E	174	PHE
2	E	177	ASN
2	E	179	MET
2	E	184	VAL
2	E	194	GLU
2	E	196	THR
2	E	199	LEU
2	E	202	MET
2	E	209	LEU
2	E	212	ASP
2	E	216	LEU
2	E	218	ILE
2	E	221	SER
2	E	228	ASP
2	E	229	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	233	PHE
2	E	237	SER
2	E	250	THR
2	E	266	THR
2	E	277	ASP
2	E	285	LYS
2	E	291	ILE
2	E	292	LEU
2	E	300	ILE
2	E	302	GLU
2	E	310	TYR
2	E	311	ASP
2	E	315	LYS
2	E	316	LYS
2	E	319	ASP
2	E	321	MET
2	E	327	LEU
2	E	330	ARG
2	E	333	TYR
2	E	339	LEU
2	E	350	GLN
2	E	351	HIS
2	E	353	PRO
2	E	357	ILE
2	E	358	MET
2	E	362	PRO
2	E	374	ILE
2	E	377	TRP
2	E	381	LEU
2	E	389	LEU
2	E	390	GLU
2	E	393	ASN
2	E	399	ARG
2	E	400	MET
2	E	402	ARG
2	E	419	GLU
2	E	420	TRP
2	E	421	TYR
2	E	424	MET
2	E	425	ASN
2	E	426	ARG
2	E	427	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	428	LEU
2	E	429	LYS
2	E	430	MET
2	G	1	MET
2	G	5	ILE
2	G	6	ARG
2	G	7	ASP
2	G	14	THR
2	G	30	LEU
2	G	31	GLN
2	G	34	LEU
2	G	41	VAL
2	G	42	LYS
2	G	43	LEU
2	G	53	GLU
2	G	59	LYS
2	G	64	LEU
2	G	65	GLU
2	G	66	ARG
2	G	69	TRP
2	G	75	TYR
2	G	77	GLU
2	G	81	LEU
2	G	89	ASN
2	G	94	LYS
2	G	97	PHE
2	G	99	ILE
2	G	101	LEU
2	G	109	LYS
2	G	110	THR
2	G	116	LEU
2	G	118	TYR
2	G	119	PHE
2	G	123	ARG
2	G	129	LEU
2	G	140	TYR
2	G	141	ASP
2	G	142	GLN
2	G	143	LEU
2	G	144	LEU
2	G	146	LEU
2	G	149	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	G	160	ASN
2	G	173	ILE
2	G	174	PHE
2	G	177	ASN
2	G	179	MET
2	G	184	VAL
2	G	194	GLU
2	G	196	THR
2	G	199	LEU
2	G	202	MET
2	G	209	LEU
2	G	212	ASP
2	G	216	LEU
2	G	218	ILE
2	G	221	SER
2	G	228	ASP
2	G	229	LEU
2	G	233	PHE
2	G	237	SER
2	G	250	THR
2	G	266	THR
2	G	277	ASP
2	G	285	LYS
2	G	291	ILE
2	G	292	LEU
2	G	300	ILE
2	G	302	GLU
2	G	311	ASP
2	G	315	LYS
2	G	316	LYS
2	G	319	ASP
2	G	321	MET
2	G	327	LEU
2	G	330	ARG
2	G	333	TYR
2	G	339	LEU
2	G	350	GLN
2	G	351	HIS
2	G	353	PRO
2	G	357	ILE
2	G	358	MET
2	G	362	PRO

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Mol	Chain	Res	Type
2	G	374	ILE
2	G	377	TRP
2	G	381	LEU
2	G	389	LEU
2	G	390	GLU
2	G	393	ASN
2	G	399	ARG
2	G	400	MET
2	G	402	ARG
2	G	419	GLU
2	G	420	TRP
2	G	421	TYR
2	G	424	MET
2	G	425	ASN
2	G	426	ARG
2	G	427	LEU
2	G	428	LEU
2	G	429	LYS
2	G	430	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (58) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	31	GLN
2	A	89	ASN
2	A	105	GLN
2	A	153	GLN
2	A	159	ASN
2	A	161	GLN
2	A	177	ASN
2	A	234	HIS
2	A	235	GLN
2	A	283	ASN
2	A	335	GLN
2	A	350	GLN
2	A	351	HIS
2	A	425	ASN
2	C	31	GLN
2	C	89	ASN
2	C	105	GLN
2	C	153	GLN
2	C	159	ASN

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Mol	Chain	Res	Type
2	C	161	GLN
2	C	162	ASN
2	C	177	ASN
2	C	234	HIS
2	C	235	GLN
2	C	283	ASN
2	C	335	GLN
2	C	350	GLN
2	C	351	HIS
2	C	425	ASN
2	E	31	GLN
2	E	89	ASN
2	E	105	GLN
2	E	153	GLN
2	E	159	ASN
2	E	161	GLN
2	E	162	ASN
2	E	177	ASN
2	E	234	HIS
2	E	235	GLN
2	E	283	ASN
2	E	335	GLN
2	E	350	GLN
2	E	351	HIS
2	E	425	ASN
2	G	31	GLN
2	G	89	ASN
2	G	105	GLN
2	G	153	GLN
2	G	159	ASN
2	G	161	GLN
2	G	177	ASN
2	G	234	HIS
2	G	235	GLN
2	G	283	ASN
2	G	335	GLN
2	G	350	GLN
2	G	351	HIS
2	G	425	ASN

### 5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	B	46/47 (97%)	31 (67%)	3 (6%)
1	D	46/47 (97%)	31 (67%)	3 (6%)
1	F	46/47 (97%)	31 (67%)	3 (6%)
1	H	46/47 (97%)	31 (67%)	3 (6%)
All	All	184/188 (97%)	124 (67%)	12 (6%)

All (124) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	B	181	C
1	B	182	C
1	B	184	G
1	B	185	G
1	B	186	G
1	B	187	G
1	B	188	A
1	B	189	A
1	B	191	C
1	B	192	G
1	B	193	G
1	B	195	C
1	B	197	G
1	B	198	G
1	B	199	C
1	B	204	A
1	B	206	G
1	B	208	G
1	B	209	A
1	B	211	C
1	B	212	A
1	B	213	A
1	B	216	G
1	B	217	U
1	B	218	G
1	B	219	C
1	B	220	C
1	B	221	C
1	B	223	G
1	B	224	U
1	B	225	CCC
1	D	181	C
1	D	182	C
1	D	184	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	D	185	G
1	D	186	G
1	D	187	G
1	D	188	A
1	D	189	A
1	D	191	C
1	D	192	G
1	D	193	G
1	D	195	C
1	D	197	G
1	D	198	G
1	D	199	C
1	D	204	A
1	D	206	G
1	D	208	G
1	D	209	A
1	D	211	C
1	D	212	A
1	D	213	A
1	D	216	G
1	D	217	U
1	D	218	G
1	D	219	C
1	D	220	C
1	D	221	C
1	D	223	G
1	D	224	U
1	D	225	CCC
1	F	181	C
1	F	182	C
1	F	184	G
1	F	185	G
1	F	186	G
1	F	187	G
1	F	188	A
1	F	189	A
1	F	191	C
1	F	192	G
1	F	193	G
1	F	195	C
1	F	197	G
1	F	198	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	F	199	C
1	F	204	A
1	F	206	G
1	F	208	G
1	F	209	A
1	F	211	C
1	F	212	A
1	F	213	A
1	F	216	G
1	F	217	U
1	F	218	G
1	F	219	C
1	F	220	C
1	F	221	C
1	F	223	G
1	F	224	U
1	F	225	CCC
1	H	181	C
1	H	182	C
1	H	184	G
1	H	185	G
1	H	186	G
1	H	187	G
1	H	188	A
1	H	189	A
1	H	191	C
1	H	192	G
1	H	193	G
1	H	195	C
1	H	197	G
1	H	198	G
1	H	199	C
1	H	204	A
1	H	206	G
1	H	208	G
1	H	209	A
1	H	211	C
1	H	212	A
1	H	213	A
1	H	216	G
1	H	217	U
1	H	218	G

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Mol	Chain	Res	Type
1	H	219	C
1	H	220	C
1	H	221	C
1	H	223	G
1	H	224	U
1	H	225	CCC

All (12) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	B	179	GTP
1	B	210	G
1	B	217	U
1	D	179	GTP
1	D	210	G
1	D	217	U
1	F	179	GTP
1	F	210	G
1	F	217	U
1	H	179	GTP
1	H	210	G
1	H	217	U

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

8 non-standard protein/DNA/RNA residues 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	$\# Z  > 2$
1	CCC	F	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	CCC	H	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	GTP	B	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)
1	CCC	D	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	CCC	B	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
1	GTP	H	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)
1	GTP	F	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.13	8 (25%)
1	GTP	D	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	CCC	F	225	1	-	7/7/35/36	0/3/3/3
1	CCC	H	225	1	-	7/7/35/36	0/3/3/3
1	GTP	B	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	CCC	D	225	1	-	7/7/35/36	0/3/3/3
1	CCC	B	225	1	-	7/7/35/36	0/3/3/3
1	GTP	H	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	GTP	F	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	GTP	D	179	1	1/1/7/7	4/18/38/38	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	H	179	GTP	PG-O1G	3.02	1.60	1.50
1	F	179	GTP	PG-O1G	3.02	1.60	1.50
1	B	179	GTP	PG-O1G	3.02	1.60	1.50
1	D	179	GTP	PG-O1G	3.01	1.60	1.50
1	F	179	GTP	C8-N7	-2.14	1.31	1.35
1	D	179	GTP	C8-N7	-2.10	1.31	1.35
1	B	179	GTP	C8-N7	-2.09	1.31	1.35
1	H	179	GTP	C8-N7	-2.09	1.31	1.35

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	179	GTP	PA-O3A-PB	-6.49	110.54	132.83
1	B	179	GTP	PA-O3A-PB	-6.49	110.57	132.83
1	D	179	GTP	PA-O3A-PB	-6.48	110.58	132.83
1	H	179	GTP	PA-O3A-PB	-6.48	110.60	132.83
1	B	179	GTP	O3G-PG-O2G	6.43	132.21	107.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	179	GTP	O3G-PG-O2G	6.43	132.20	107.64
1	F	179	GTP	O3G-PG-O2G	6.43	132.20	107.64
1	H	179	GTP	O3G-PG-O2G	6.42	132.19	107.64
1	B	225	CCC	O2'-C2'-C3'	3.58	111.65	105.08
1	F	225	CCC	O2'-C2'-C3'	3.58	111.64	105.08
1	H	225	CCC	O2'-C2'-C3'	3.57	111.63	105.08
1	D	225	CCC	O2'-C2'-C3'	3.57	111.62	105.08
1	F	225	CCC	O3'-PC-O1C	-3.36	106.90	115.76
1	B	225	CCC	O3'-PC-O1C	-3.35	106.92	115.76
1	D	225	CCC	O3'-PC-O1C	-3.35	106.92	115.76
1	H	225	CCC	O3'-PC-O1C	-3.34	106.94	115.76
1	D	225	CCC	O2C-PC-O1C	3.19	120.20	109.89
1	F	225	CCC	O2C-PC-O1C	3.19	120.19	109.89
1	B	225	CCC	O2C-PC-O1C	3.18	120.17	109.89
1	H	225	CCC	O2C-PC-O1C	3.18	120.16	109.89
1	D	179	GTP	PB-O3B-PG	-3.11	122.15	132.83
1	H	179	GTP	PB-O3B-PG	-3.10	122.19	132.83
1	F	179	GTP	PB-O3B-PG	-3.10	122.19	132.83
1	B	179	GTP	PB-O3B-PG	-3.10	122.19	132.83
1	H	179	GTP	O2G-PG-O1G	-2.89	99.38	110.68
1	D	179	GTP	O2G-PG-O1G	-2.89	99.39	110.68
1	B	179	GTP	O2G-PG-O1G	-2.88	99.40	110.68
1	F	179	GTP	O2G-PG-O1G	-2.88	99.41	110.68
1	F	179	GTP	O3G-PG-O1G	-2.67	100.21	110.68
1	H	179	GTP	O3G-PG-O1G	-2.67	100.23	110.68
1	D	179	GTP	O3G-PG-O1G	-2.67	100.23	110.68
1	B	179	GTP	O3G-PG-O1G	-2.67	100.24	110.68
1	B	225	CCC	O3'-C3'-C2'	-2.46	100.57	105.08
1	F	225	CCC	O3'-C3'-C2'	-2.45	100.58	105.08
1	D	225	CCC	O3'-C3'-C2'	-2.44	100.60	105.08
1	H	225	CCC	O3'-C3'-C2'	-2.44	100.60	105.08
1	F	225	CCC	C2'-C1'-N1	2.43	118.94	114.22
1	B	225	CCC	C2'-C1'-N1	2.43	118.94	114.22
1	D	225	CCC	C2'-C1'-N1	2.42	118.92	114.22
1	H	225	CCC	C2'-C1'-N1	2.41	118.90	114.22
1	D	179	GTP	O6-C6-C5	2.41	129.07	124.37
1	F	179	GTP	O6-C6-C5	2.39	129.04	124.37
1	F	179	GTP	O3B-PG-O1G	-2.39	97.93	111.19
1	D	179	GTP	O3B-PG-O1G	-2.39	97.94	111.19
1	B	179	GTP	O6-C6-C5	2.39	129.04	124.37
1	B	179	GTP	O3B-PG-O1G	-2.39	97.95	111.19
1	H	179	GTP	O6-C6-C5	2.38	129.03	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	179	GTP	O3B-PG-O1G	-2.38	97.99	111.19
1	F	179	GTP	O3'-C3'-C4'	-2.08	105.02	111.05
1	D	179	GTP	O3'-C3'-C4'	-2.08	105.04	111.05
1	B	179	GTP	O3'-C3'-C4'	-2.07	105.06	111.05
1	H	179	GTP	O3'-C3'-C4'	-2.07	105.06	111.05

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	179	GTP	C3'
1	D	179	GTP	C3'
1	F	179	GTP	C3'
1	H	179	GTP	C3'

All (44) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B	179	GTP	C5'-O5'-PA-O3A
1	B	179	GTP	C5'-O5'-PA-O1A
1	B	225	CCC	O4'-C4'-C5'-O5'
1	B	225	CCC	O4'-C1'-N1-C2
1	B	225	CCC	O4'-C1'-N1-C6
1	B	225	CCC	C2'-C1'-N1-C2
1	B	225	CCC	C2'-C1'-N1-C6
1	D	179	GTP	C5'-O5'-PA-O3A
1	D	179	GTP	C5'-O5'-PA-O1A
1	D	225	CCC	O4'-C4'-C5'-O5'
1	D	225	CCC	O4'-C1'-N1-C2
1	D	225	CCC	O4'-C1'-N1-C6
1	D	225	CCC	C2'-C1'-N1-C2
1	D	225	CCC	C2'-C1'-N1-C6
1	F	179	GTP	C5'-O5'-PA-O3A
1	F	179	GTP	C5'-O5'-PA-O1A
1	F	225	CCC	O4'-C4'-C5'-O5'
1	F	225	CCC	O4'-C1'-N1-C2
1	F	225	CCC	O4'-C1'-N1-C6
1	F	225	CCC	C2'-C1'-N1-C2
1	F	225	CCC	C2'-C1'-N1-C6
1	H	179	GTP	C5'-O5'-PA-O3A
1	H	179	GTP	C5'-O5'-PA-O1A
1	H	225	CCC	O4'-C4'-C5'-O5'
1	H	225	CCC	O4'-C1'-N1-C2

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Mol	Chain	Res	Type	Atoms
1	H	225	CCC	O4'-C1'-N1-C6
1	H	225	CCC	C2'-C1'-N1-C2
1	H	225	CCC	C2'-C1'-N1-C6
1	B	225	CCC	C3'-C4'-C5'-O5'
1	D	225	CCC	C3'-C4'-C5'-O5'
1	F	225	CCC	C3'-C4'-C5'-O5'
1	H	225	CCC	C3'-C4'-C5'-O5'
1	B	179	GTP	C4'-C5'-O5'-PA
1	D	179	GTP	C4'-C5'-O5'-PA
1	F	179	GTP	C4'-C5'-O5'-PA
1	H	179	GTP	C4'-C5'-O5'-PA
1	B	179	GTP	PB-O3B-PG-O3G
1	D	179	GTP	PB-O3B-PG-O3G
1	F	179	GTP	PB-O3B-PG-O3G
1	H	179	GTP	PB-O3B-PG-O3G
1	B	225	CCC	C4'-C5'-O5'-P
1	D	225	CCC	C4'-C5'-O5'-P
1	F	225	CCC	C4'-C5'-O5'-P
1	H	225	CCC	C4'-C5'-O5'-P

There are no ring outliers.

8 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	F	225	CCC	1	0
1	H	225	CCC	1	0
1	B	179	GTP	2	0
1	D	225	CCC	1	0
1	B	225	CCC	1	0
1	H	179	GTP	2	0
1	F	179	GTP	2	0
1	D	179	GTP	2	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 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 [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	B	45/47 (95%)	-0.26	0 100 100	71, 71, 71, 71	0
1	D	45/47 (95%)	-0.22	0 100 100	71, 71, 71, 71	0
1	F	45/47 (95%)	-0.27	0 100 100	71, 71, 71, 71	0
1	H	45/47 (95%)	-0.31	0 100 100	71, 71, 71, 71	0
2	A	432/440 (98%)	-0.66	0 100 100	71, 71, 71, 71	0
2	C	432/440 (98%)	-0.66	3 (0%) 87 82	71, 71, 71, 71	0
2	E	432/440 (98%)	-0.66	2 (0%) 91 85	71, 71, 71, 71	0
2	G	432/440 (98%)	-0.65	0 100 100	71, 71, 71, 71	0
All	All	1908/1948 (97%)	-0.62	5 (0%) 94 90	71, 71, 71, 71	0

All (5) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	C	323	GLY	3.1
2	E	318	GLU	2.7
2	C	318	GLU	2.3
2	C	322	GLU	2.1
2	E	322	GLU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
1	CCC	B	225	23/24	0.84	0.23	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
1	CCC	H	225	23/24	0.88	0.27	70,70,70,70	0
1	CCC	D	225	23/24	0.89	0.23	70,70,70,70	0
1	GTP	D	179	32/32	0.89	0.14	70,70,70,70	0
1	CCC	F	225	23/24	0.91	0.25	70,70,70,70	0
1	GTP	F	179	32/32	0.92	0.12	70,70,70,70	0
1	GTP	H	179	32/32	0.93	0.12	70,70,70,70	0
1	GTP	B	179	32/32	0.93	0.11	70,70,70,70	0

### 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 6.4 Ligands [i](#)

There are no ligands in this entry.

### 6.5 Other polymers [i](#)

There are no such residues in this entry.