



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 16, 2014 – 06:31 PM BST

PDB ID : 4V4O  
Title : Crystal Structure of the Chaperonin Complex Cpn60/Cpn10/(ADP)7 from Thermus Thermophilus  
Authors : Shimamura, T.; Koike-Takeshita, A.; Yokoyama, K.; Masui, R.; Murai, N.; Yoshida, M.; Taguchi, H.; Iwata, S.  
Deposited on : 2004-05-23  
Resolution : 2.80 Å(reported)

This is a full wwPDB 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 <http://wwpdb.org/ValidationPDFNotes.html>

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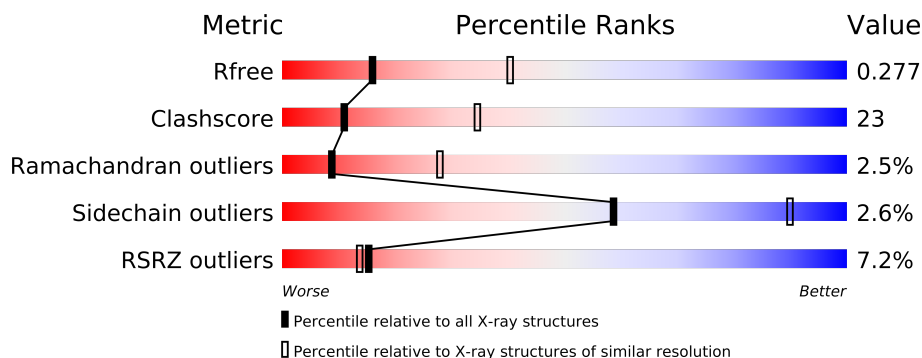
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.16 November 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable23397  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable23397

# 1 Overall quality at a glance

The reported resolution of this entry is 2.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	66092	1799 (2.80-2.80)
Clashscore	79885	2295 (2.80-2.80)
Ramachandran outliers	78287	2252 (2.80-2.80)
Sidechain outliers	78261	2254 (2.80-2.80)
RSRZ outliers	66119	1802 (2.80-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	543	
1	B	543	
1	C	543	
1	D	543	
1	E	543	
1	F	543	
1	G	543	
1	H	543	
1	I	543	
1	J	543	
1	K	543	
1	L	543	
1	M	543	
1	N	543	

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Mol	Chain	Length	Quality of chain
1	a	543	
1	b	543	
1	c	543	
1	d	543	
1	e	543	
1	f	543	
1	g	543	
1	h	543	
1	i	543	
1	j	543	
1	k	543	
1	l	543	
1	m	543	
1	n	543	
2	O	100	
2	P	100	
2	Q	100	
2	R	100	
2	S	100	
2	T	100	
2	U	100	
2	o	100	
2	p	100	
2	q	100	
2	r	100	
2	s	100	
2	t	100	
2	u	100	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
3	MG	A	601	-	X
3	MG	B	601	-	X
3	MG	D	601	-	X
3	MG	F	601	-	X
3	MG	a	601	-	X
3	MG	b	601	-	X
3	MG	c	601	-	X
3	MG	d	601	-	X
3	MG	e	601	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
3	MG	f	601	-	X
3	MG	g	601	-	X
4	ADP	f	602	-	X
5	DMS	H	601	-	X
5	DMS	J	601	-	X
5	DMS	h	601	-	X
5	DMS	j	601	-	X
5	DMS	k	601	-	X
5	DMS	l	601	-	X
5	DMS	m	601	-	X
5	DMS	n	701	-	X

## 2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 121267 atoms, of which 0 are hydrogen and 0 are deuterium.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called cpn60(GroEL).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	B	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	C	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	D	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	E	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	F	529	Total	C	N	O	S	0	0	0
			3974	2495	689	785	5			
1	G	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	H	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	I	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	J	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	K	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	L	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	M	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	N	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	a	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	b	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	c	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	d	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	e	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	f	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	g	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	h	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	i	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	j	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	k	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	l	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	m	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	n	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			

- Molecule 2 is a protein called cpn10(GroES).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	O	96	Total	C	N	O		0	0	0
			739	470	126	143				
2	P	94	Total	C	N	O		0	0	0
			723	460	123	140				
2	Q	96	Total	C	N	O		0	0	0
			739	470	126	143				
2	R	96	Total	C	N	O		0	0	0
			739	470	126	143				
2	S	96	Total	C	N	O		0	0	0
			739	470	126	143				
2	T	96	Total	C	N	O		0	0	0
			739	470	126	143				
2	U	96	Total	C	N	O		0	0	0
			739	470	126	143				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	o	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	p	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	q	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	r	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	s	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	t	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	u	96	Total	C	N	O	0	0	0
			739	470	126	143			

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

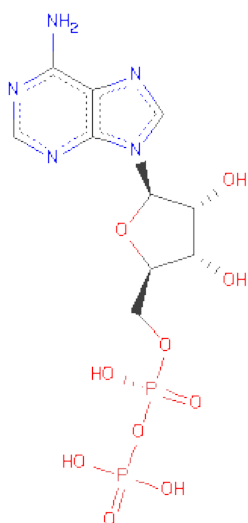
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	G	1	Total	Mg	0	0
			1	1		
3	D	1	Total	Mg	0	0
			1	1		
3	E	1	Total	Mg	0	0
			1	1		
3	g	1	Total	Mg	0	0
			1	1		
3	B	1	Total	Mg	0	0
			1	1		
3	e	1	Total	Mg	0	0
			1	1		
3	C	1	Total	Mg	0	0
			1	1		
3	a	1	Total	Mg	0	0
			1	1		
3	c	1	Total	Mg	0	0
			1	1		
3	A	1	Total	Mg	0	0
			1	1		
3	f	1	Total	Mg	0	0
			1	1		
3	d	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	b	1	Total	Mg	0	0
			1	1		
3	F	1	Total	Mg	0	0
			1	1		

- Molecule 4 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	C	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	D	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	E	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	F	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	G	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	a	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	b	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

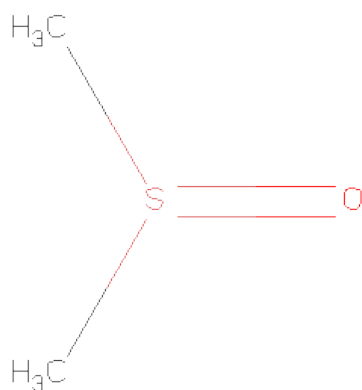
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	c	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	d	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	e	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	f	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	g	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

- Molecule 5 is DIMETHYL SULFOXIDE (three-letter code: DMS) (formula: C<sub>2</sub>H<sub>6</sub>OS).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	H	1	Total	C	O	S	0	0
			4	2	1	1		
5	I	1	Total	C	O	S	0	0
			4	2	1	1		
5	J	1	Total	C	O	S	0	0
			4	2	1	1		
5	K	1	Total	C	O	S	0	0
			4	2	1	1		
5	L	1	Total	C	O	S	0	0
			4	2	1	1		
5	M	1	Total	C	O	S	0	0
			4	2	1	1		

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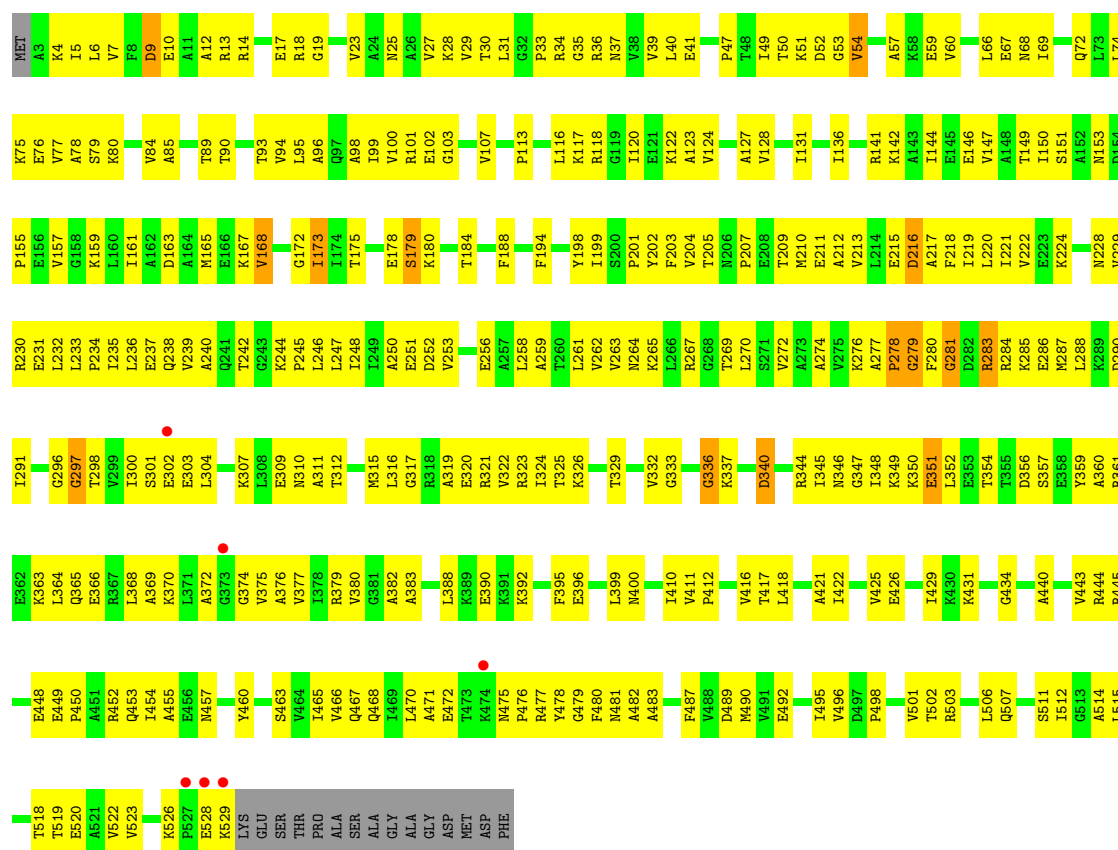
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	N	1	Total 4	C 2	O 1	S 1	0	0
5	h	1	Total 4	C 2	O 1	S 1	0	0
5	i	1	Total 4	C 2	O 1	S 1	0	0
5	j	1	Total 4	C 2	O 1	S 1	0	0
5	k	1	Total 4	C 2	O 1	S 1	0	0
5	l	1	Total 4	C 2	O 1	S 1	0	0
5	m	1	Total 4	C 2	O 1	S 1	0	0
5	n	1	Total 4	C 2	O 1	S 1	0	0

### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

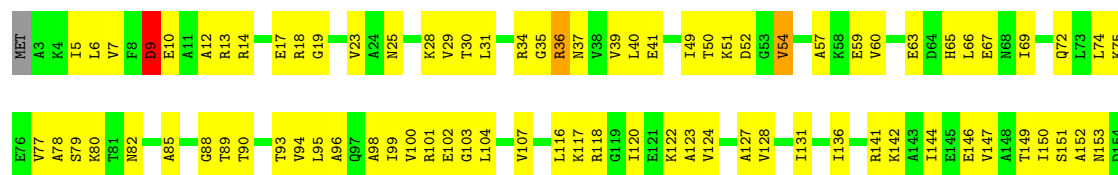
#### • Molecule 1: cpn60(GroEL)

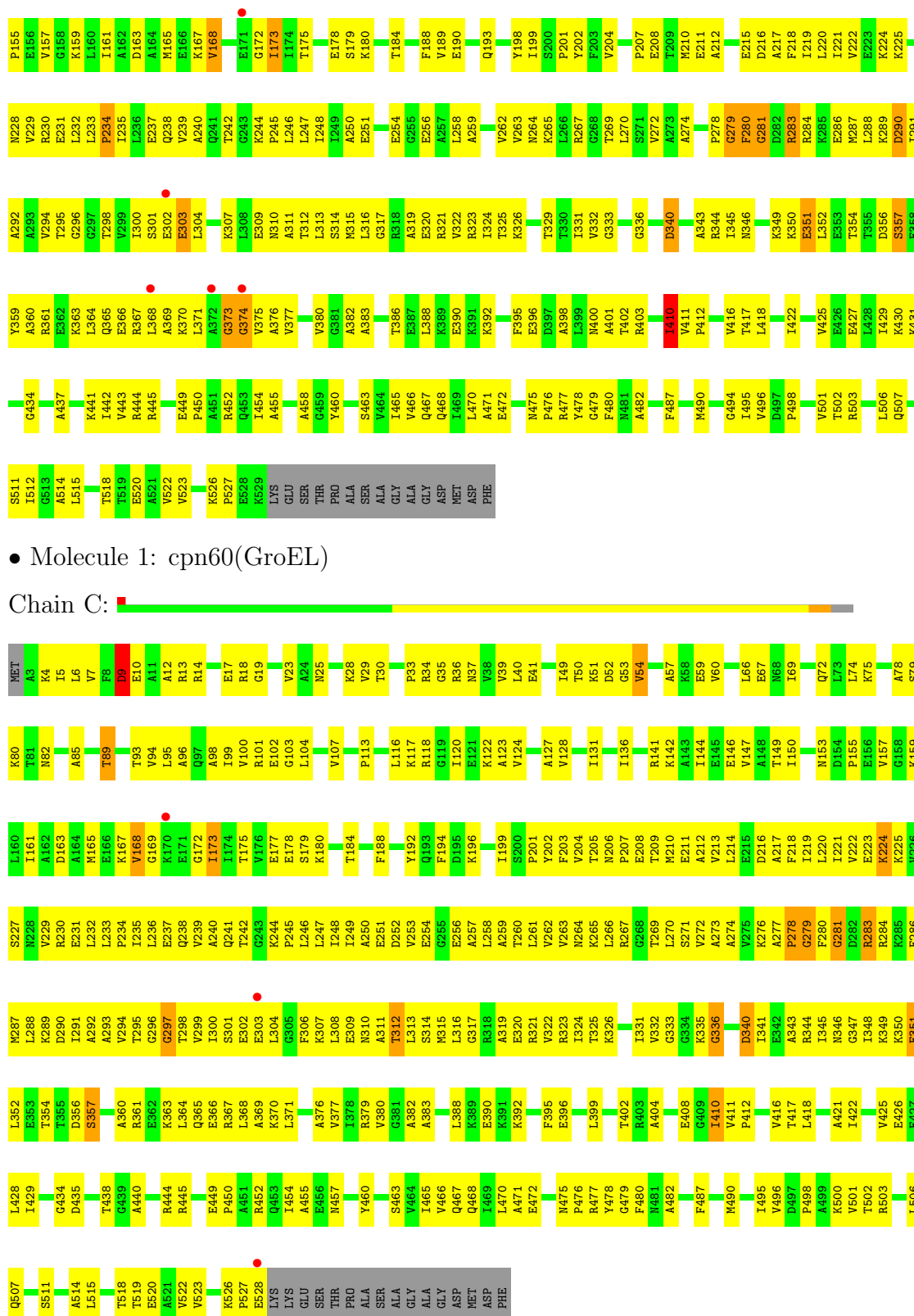
Chain A:

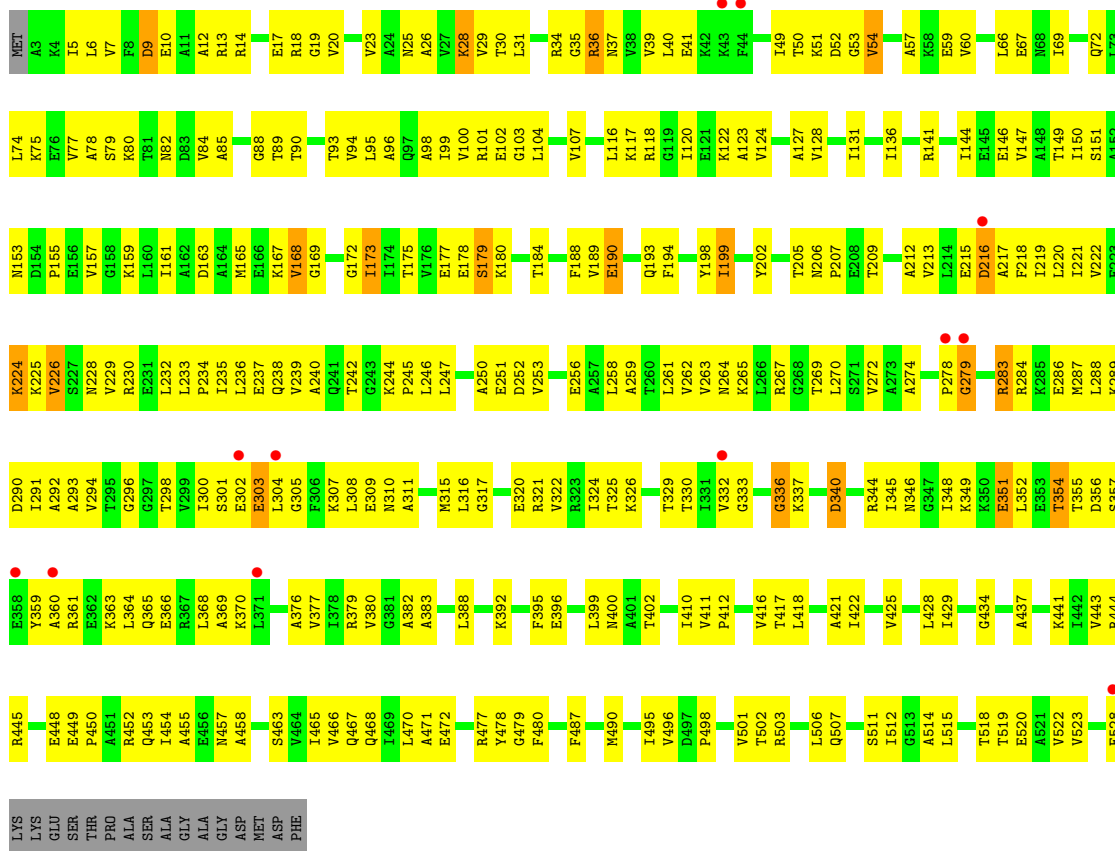


#### • Molecule 1: cpn60(GroEL)

Chain B:

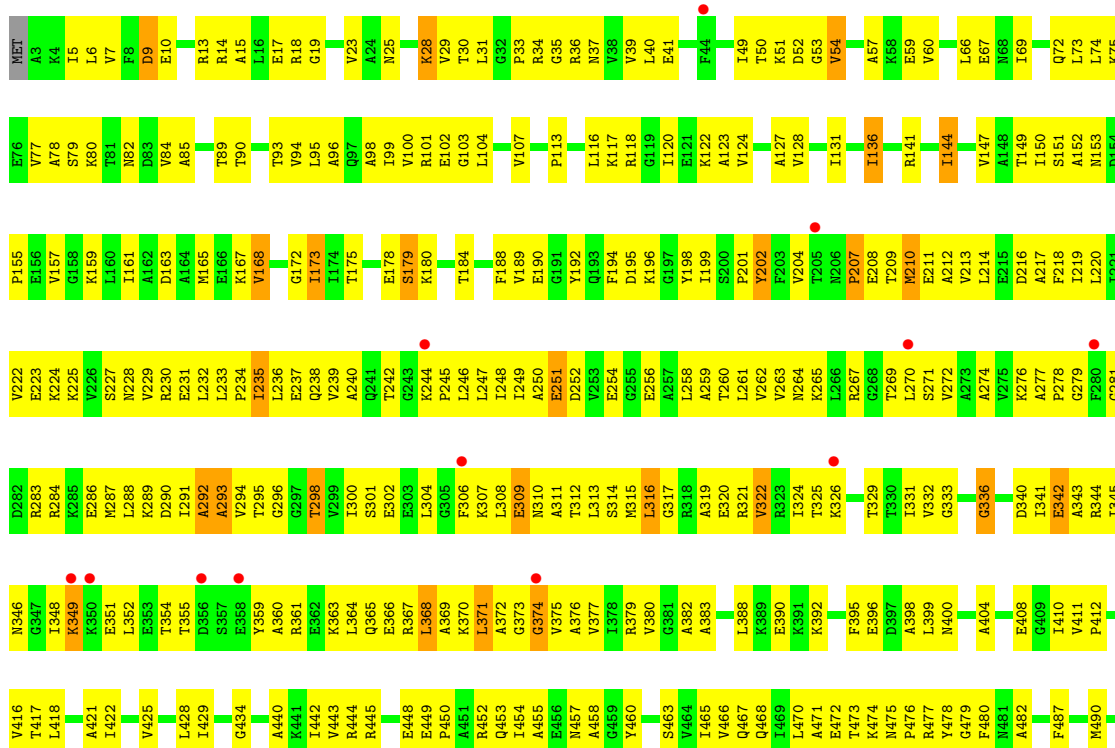






- Molecule 1: cpn60(GroEL)

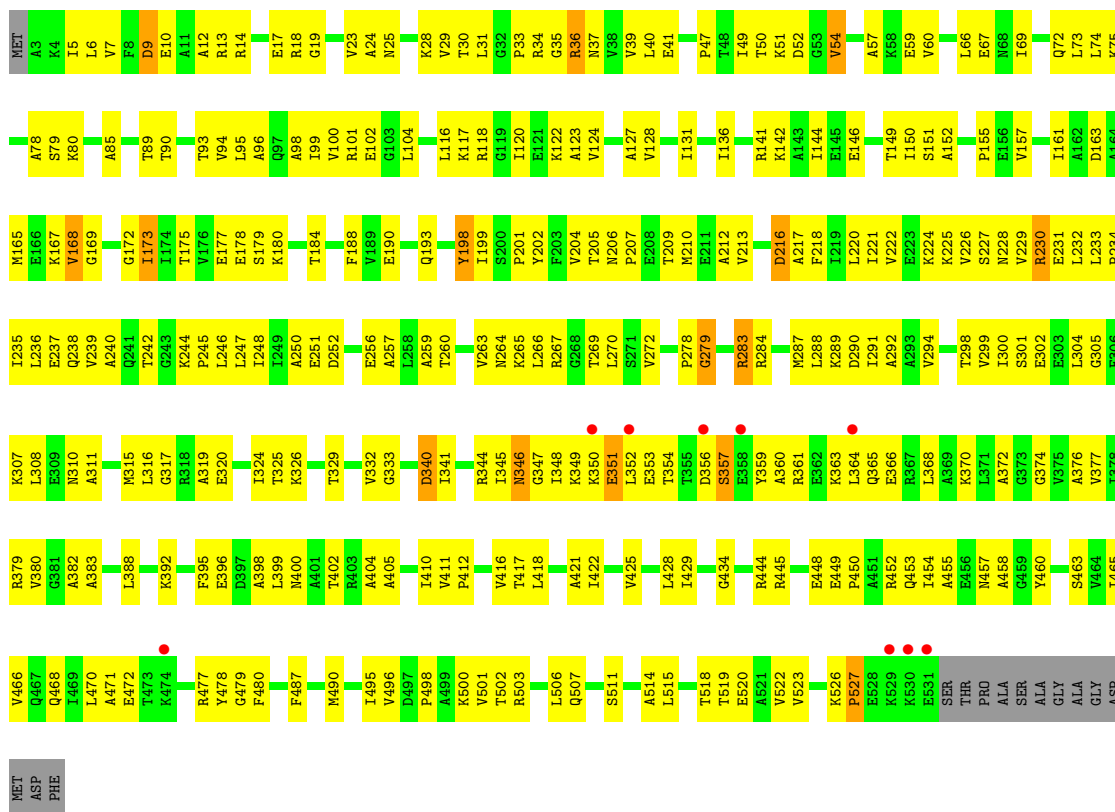
Chain E:





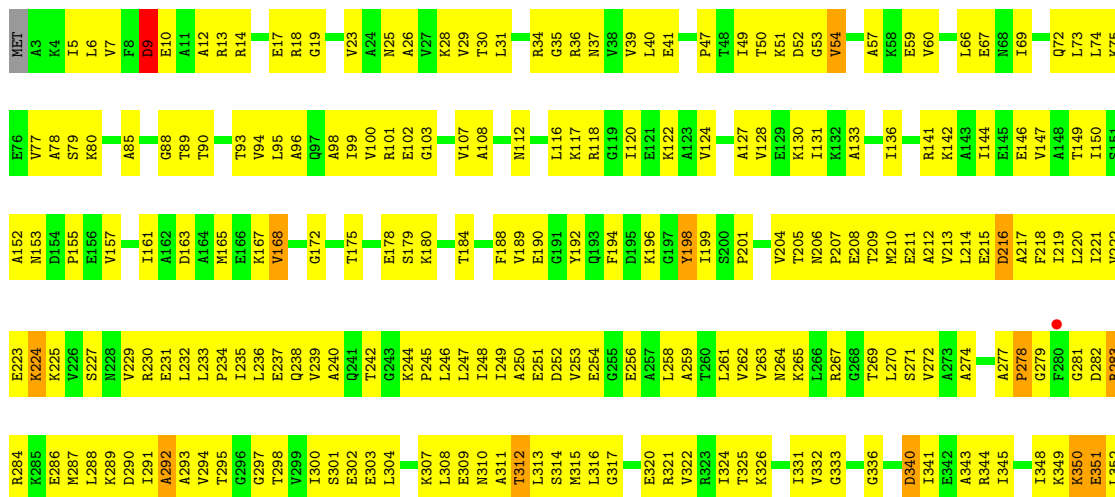
• Molecule 1: cpn60(GroEL)

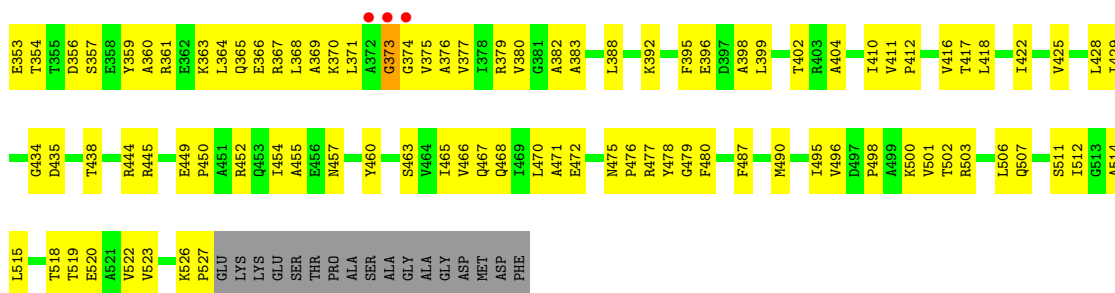
Chain F:



• Molecule 1: cpn60(GroEL)

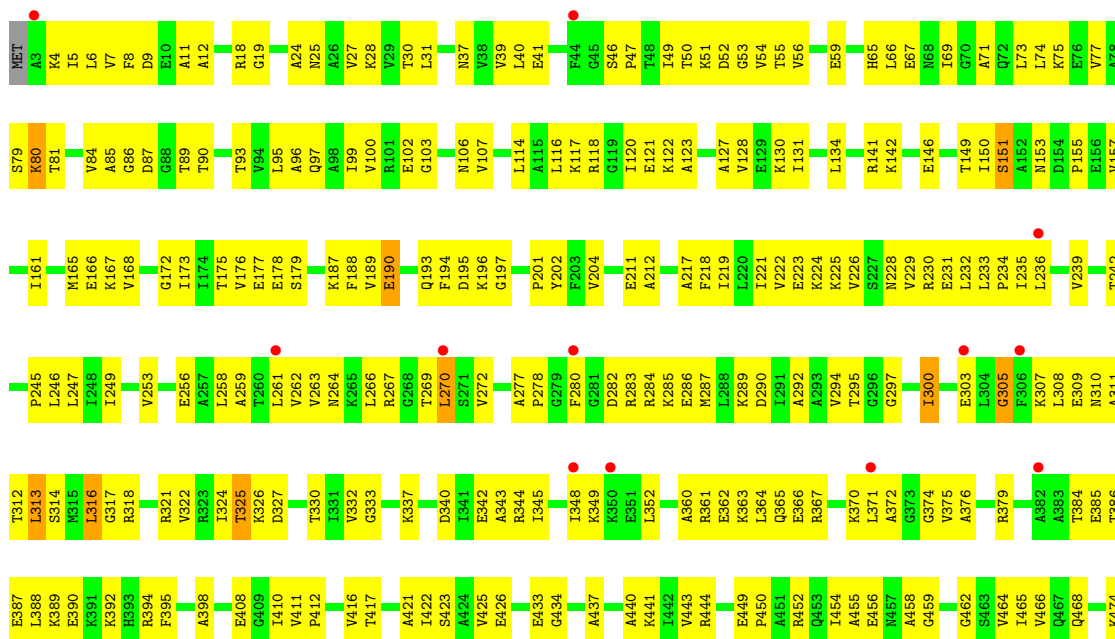
Chain G:





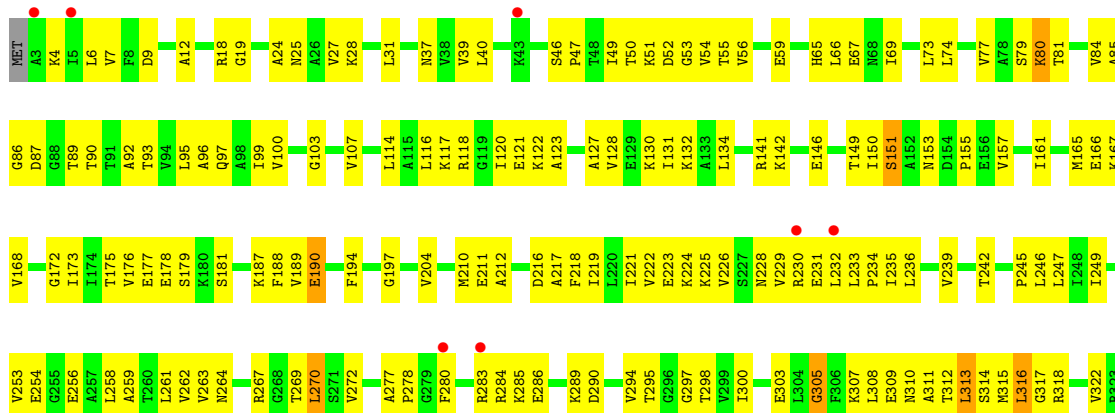
• Molecule 1: cpn60(GroEL)

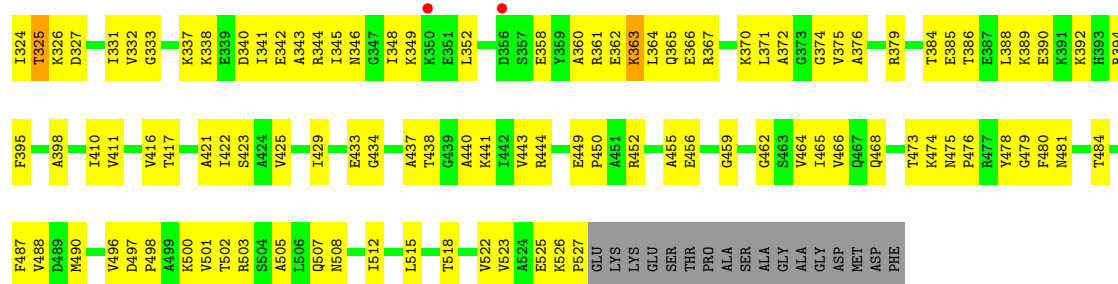
Chain H:



• Molecule 1: cpn60(GroEL)

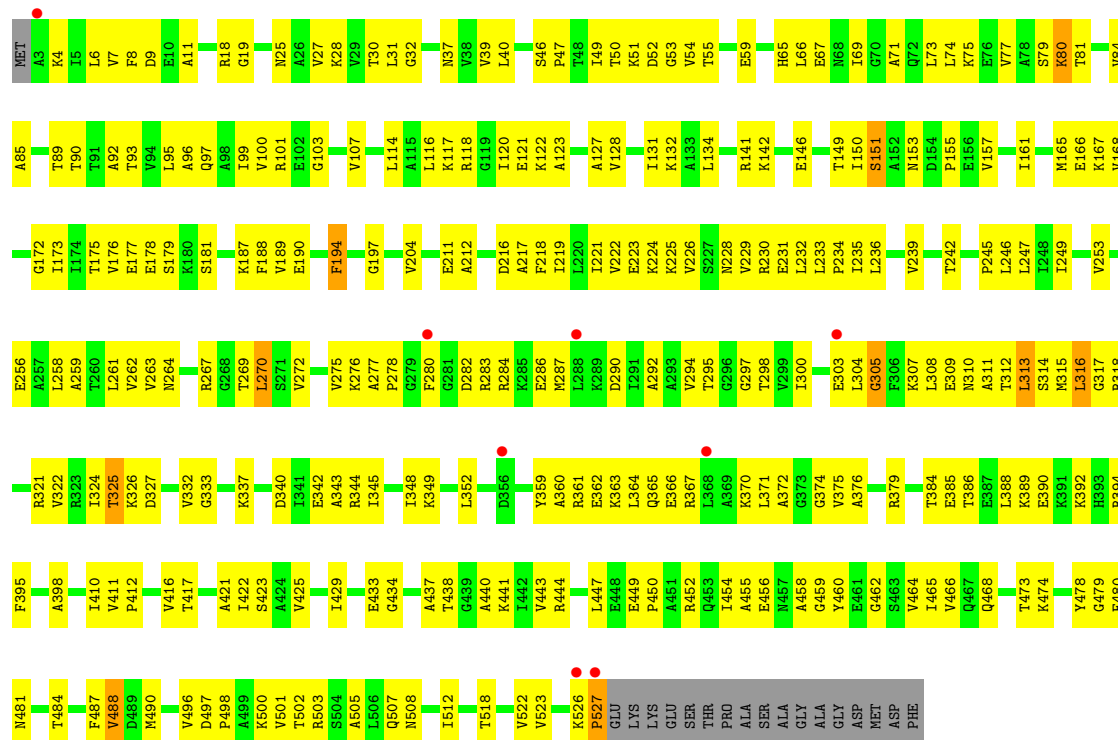
Chain I:





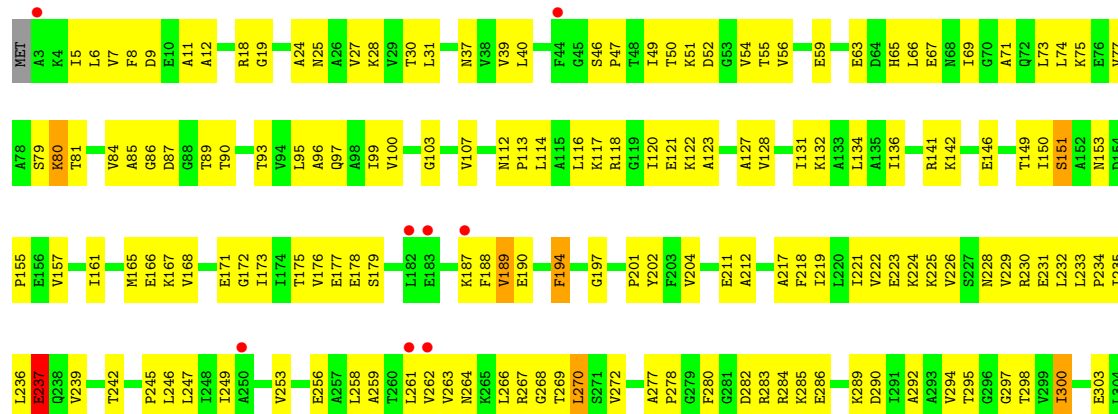
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Chain J:

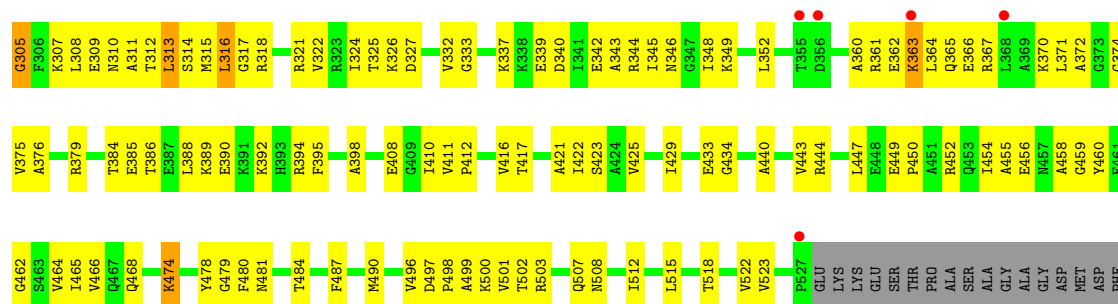


• Molecule 1: cpn60(GroEL)

Chain K:

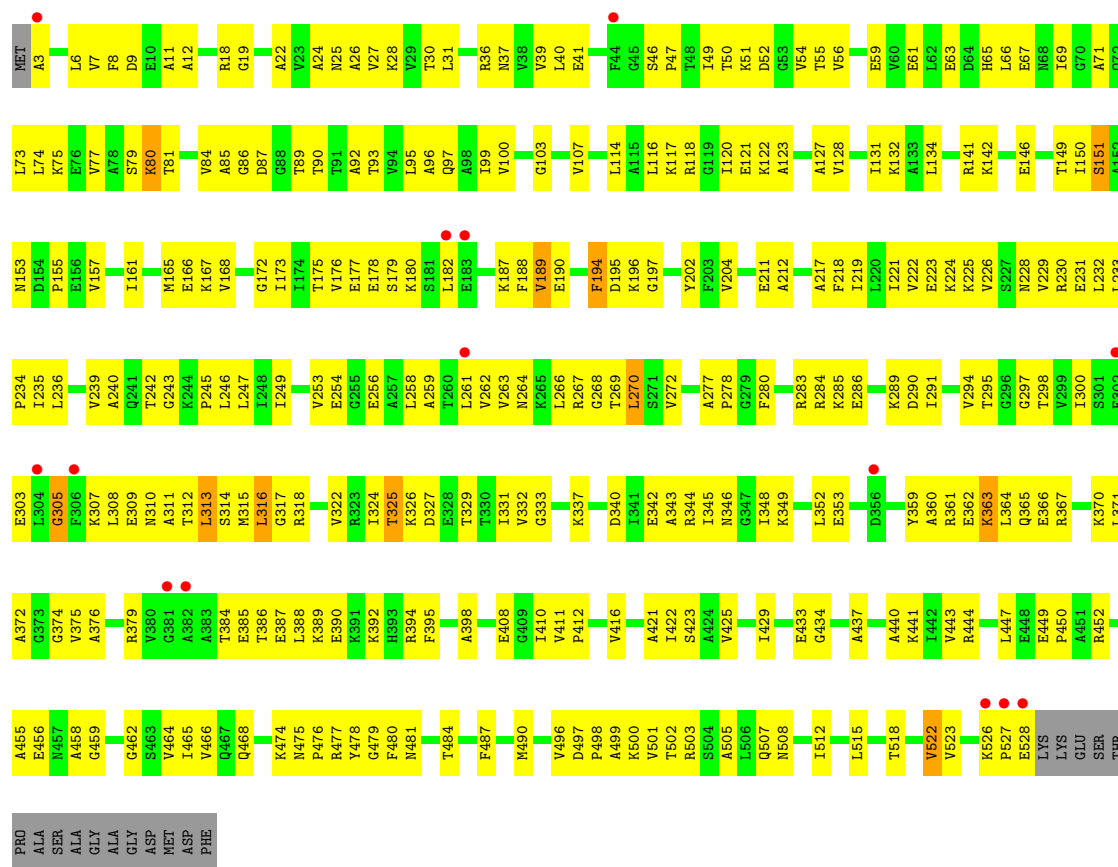






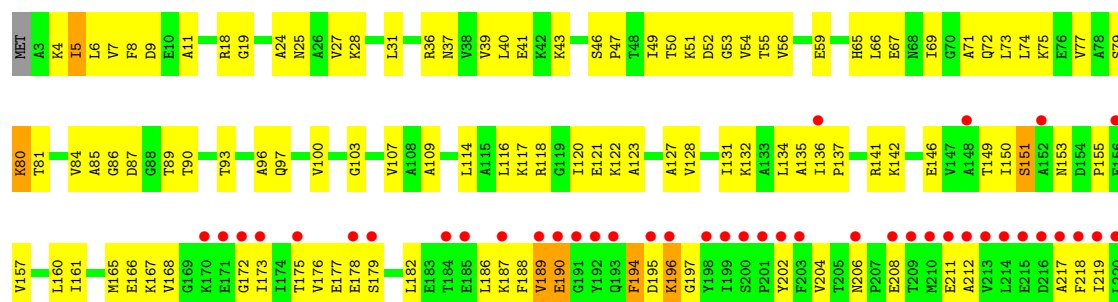
• Molecule 1: cpn60(GroEL)

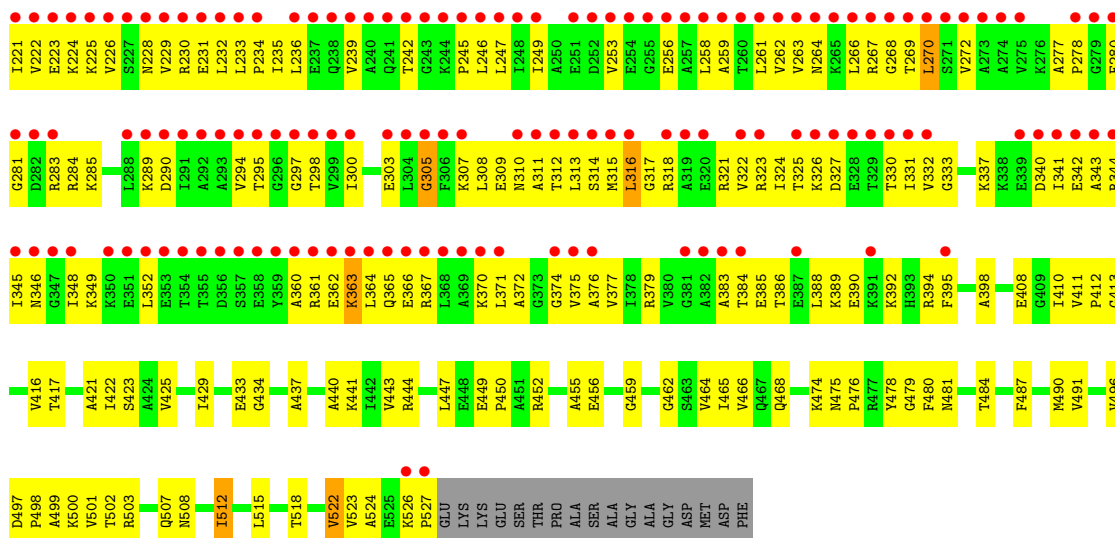
Chain L:



• Molecule 1: cpn60(GroEL)

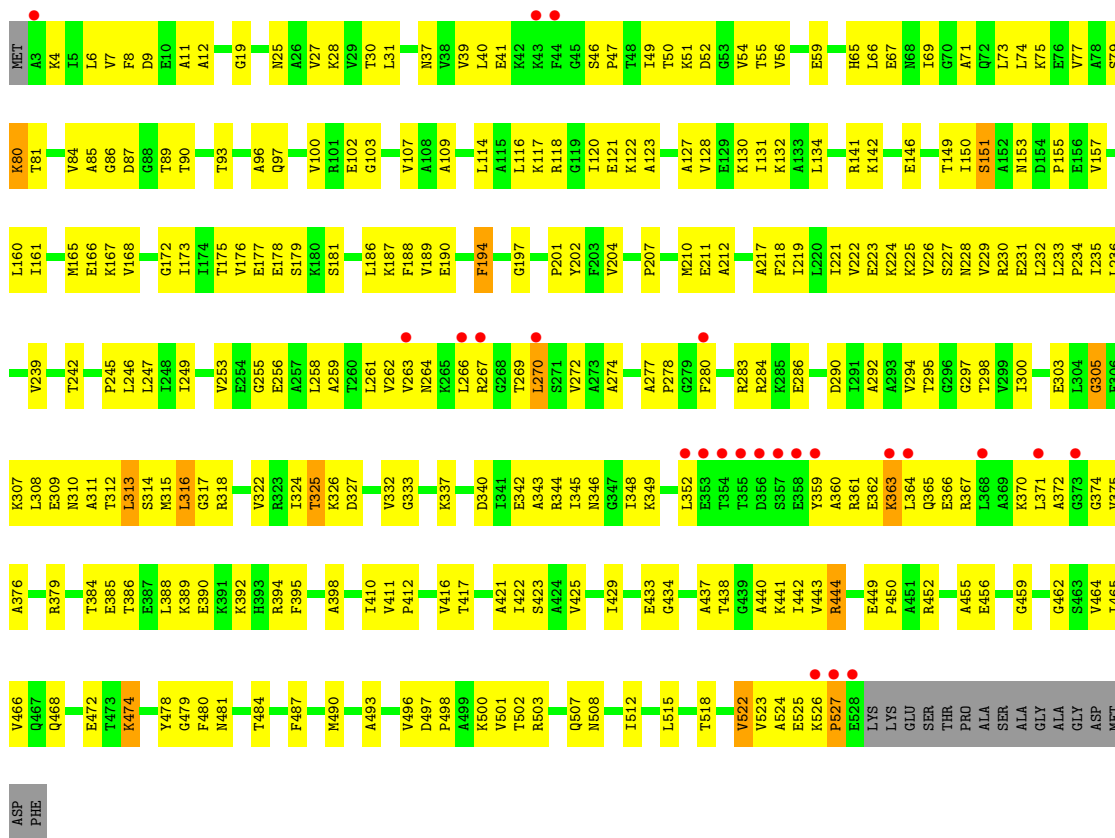
Chain M:





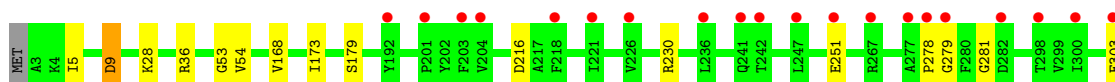
• Molecule 1: cpn60(GroEL)

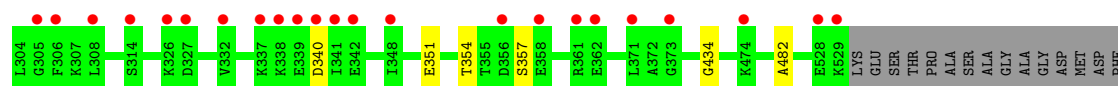
Chain N:



• Molecule 1: cpn60(GroEL)

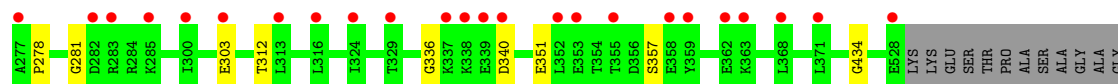
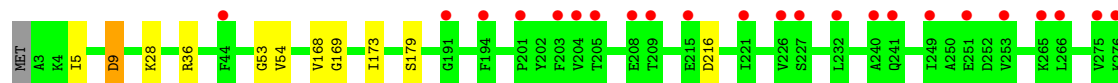
Chain a:





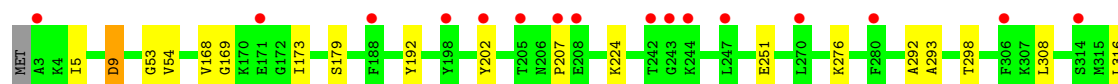
• Molecule 1: cpn60(GroEL)

Chain b:



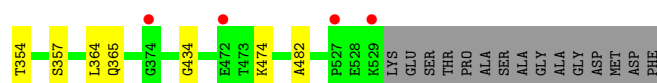
• Molecule 1: cpn60(GroEL)

Chain c:



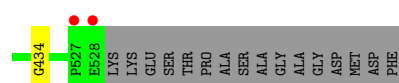
• Molecule 1: cpn60(GroEL)

Chain d:



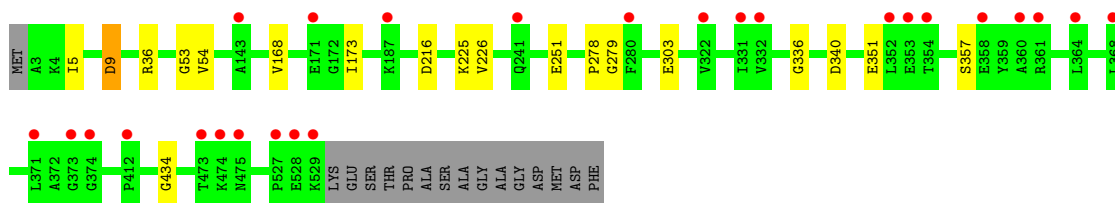
• Molecule 1: cpn60(GroEL)

Chain e:



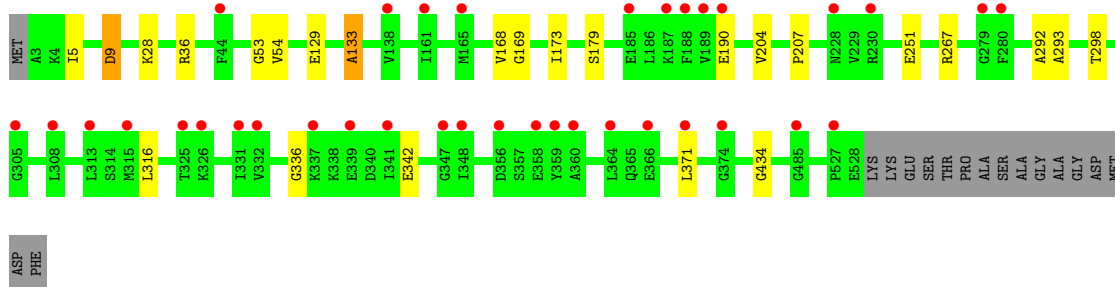
• Molecule 1: cpn60(GroEL)

Chain f:



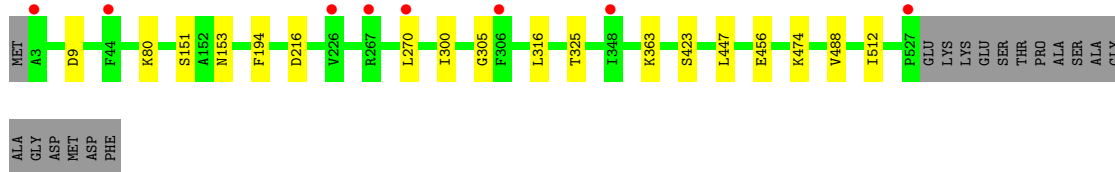
- Molecule 1: cpn60(GroEL)

Chain g:



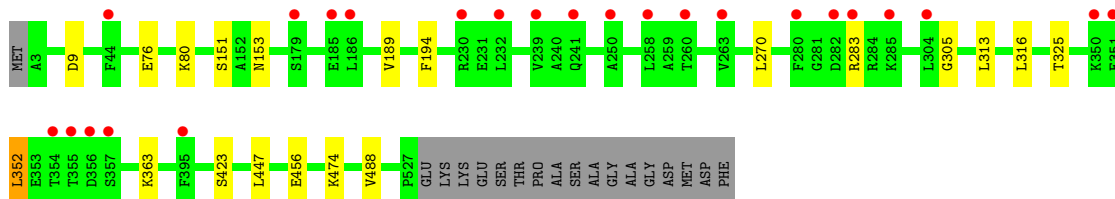
- Molecule 1: cpn60(GroEL)

Chain h:



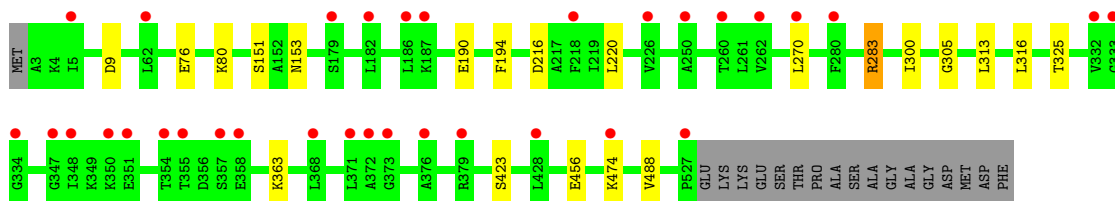
- Molecule 1: cpn60(GroEL)

Chain i:



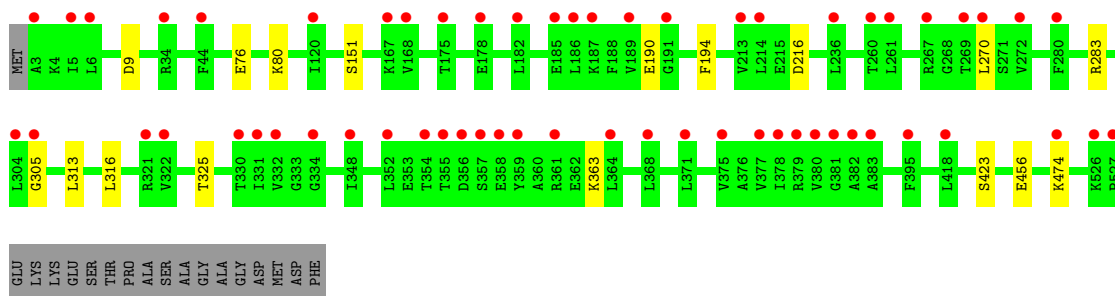
- Molecule 1: cpn60(GroEL)

Chain j:



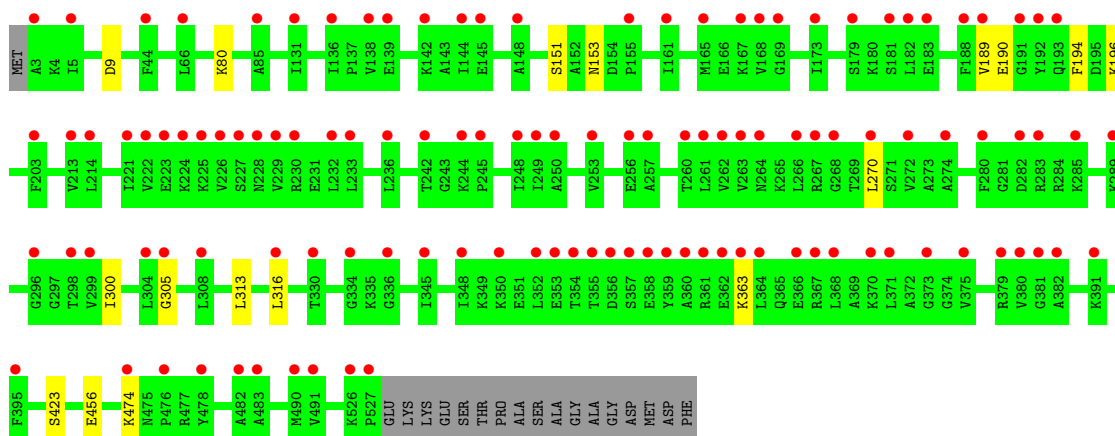
- Molecule 1: cpn60(GroEL)

Chain k:



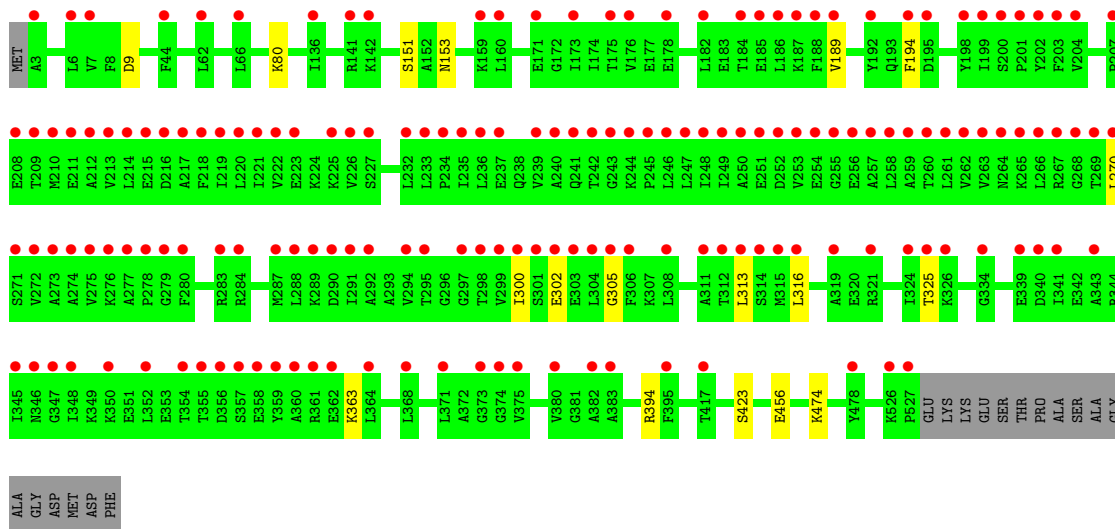
• Molecule 1: cpn60(GroEL)

Chain l:



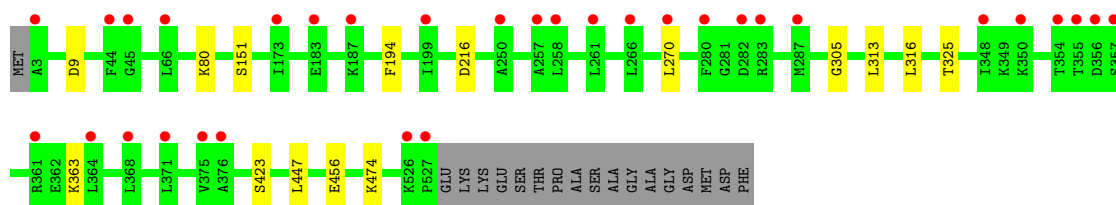
• Molecule 1: cpn60(GroEL)

Chain m:



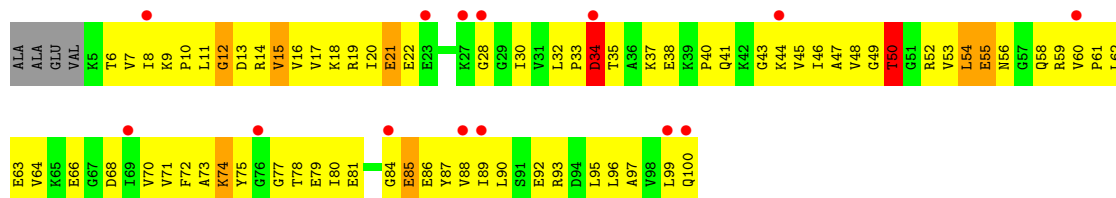
• Molecule 1: cpn60(GroEL)

Chain n:



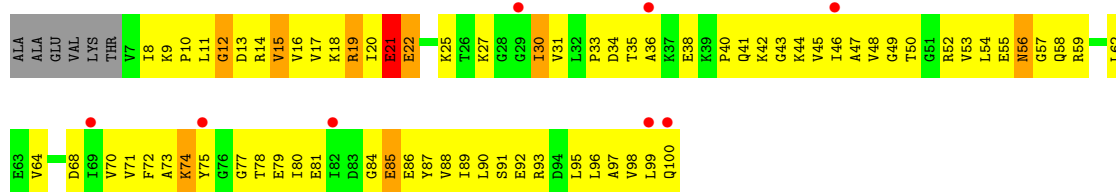
• Molecule 2: cpn10(GroES)

Chain O:



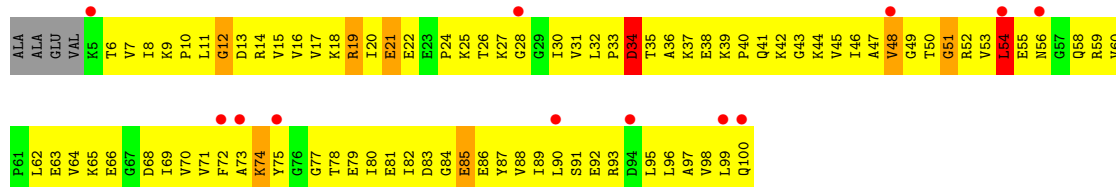
• Molecule 2: cpn10(GroES)

Chain P:



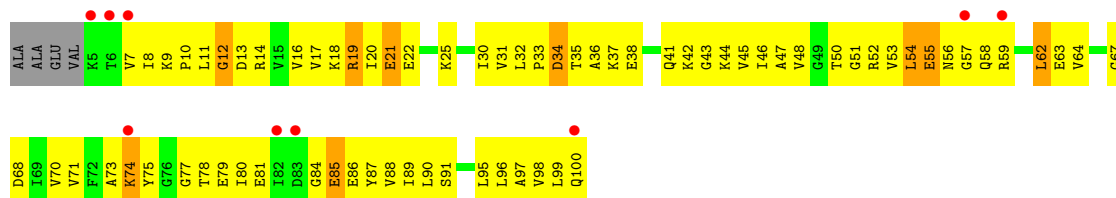
• Molecule 2: cpn10(GroES)

Chain Q:



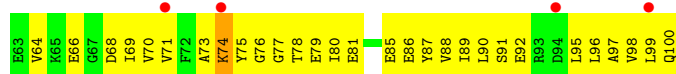
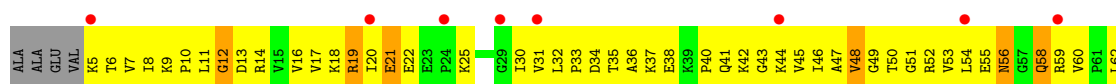
• Molecule 2: cpn10(GroES)

Chain R:



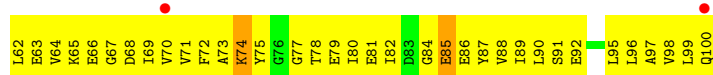
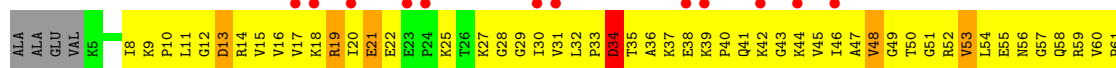
• Molecule 2: cpn10(GroES)

Chain S:



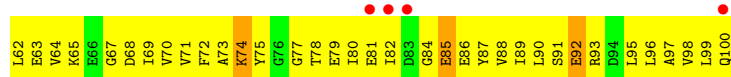
• Molecule 2: cpn10(GroES)

Chain T:



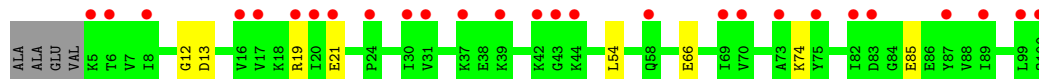
• Molecule 2: cpn10(GroES)

Chain U:



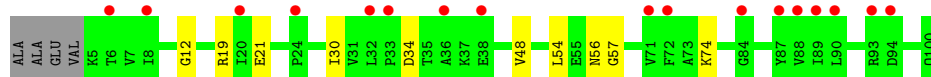
• Molecule 2: cpn10(GroES)

Chain o:



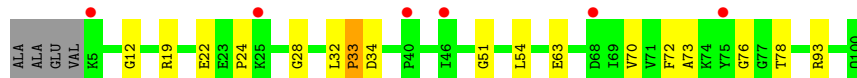
• Molecule 2: cpn10(GroES)

Chain p:



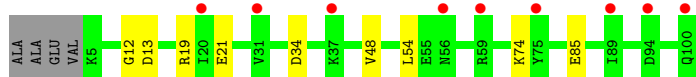
• Molecule 2: cpn10(GroES)

Chain q:



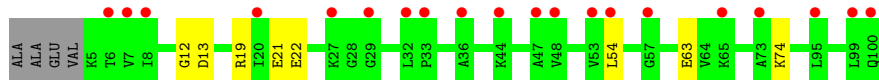
• Molecule 2: cpn10(GroES)

Chain r:



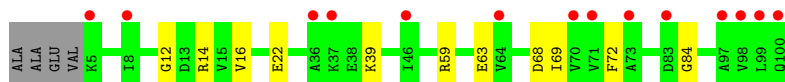
- Molecule 2: cpn10(GroES)

Chain s:



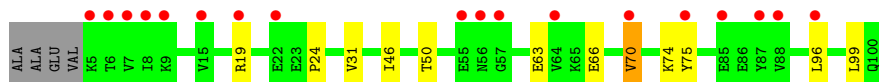
- Molecule 2: cpn10(GroES)

Chain t:



- Molecule 2: cpn10(GroES)

Chain u:





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	140.38Å 156.42Å 273.15Å 82.88° 85.35° 68.52°	Depositor
Resolution (Å)	39.98 – 2.80 39.98 – 2.80	Depositor EDS
% Data completeness (in resolution range)	81.3 (39.98-2.80) 81.4 (39.98-2.80)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.35 (at 2.81Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.239 , 0.279 0.238 , 0.277	Depositor DCC
$R_{free}$ test set	12690 reflections (3.04%)	DCC
Wilson B-factor (Å <sup>2</sup> )	55.6	Xtriage
Anisotropy	0.047	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 40.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 429625 reflections	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	121267	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.53% of the height of the origin peak. No significant pseudotranslation is detected.*

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

## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, DMS, ADP

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	A	0.44	0/3989	0.65	0/5383
1	B	0.43	1/3989 (0.0%)	0.65	1/5383 (0.0%)
1	C	0.45	0/3980	0.67	0/5372
1	D	0.42	0/3980	0.65	1/5372 (0.0%)
1	E	0.43	0/3980	0.64	0/5372
1	F	0.39	0/4007	0.63	0/5406
1	G	0.41	0/3971	0.64	0/5360
1	H	0.36	0/3980	0.60	0/5372
1	I	0.37	0/3971	0.60	0/5360
1	J	0.40	0/3971	0.62	0/5360
1	K	0.39	1/3971 (0.0%)	0.62	0/5360
1	L	0.38	0/3980	0.60	0/5372
1	M	0.39	1/3971 (0.0%)	0.62	1/5360 (0.0%)
1	N	0.38	0/3980	0.63	1/5372 (0.0%)
1	a	0.41	0/3989	0.64	0/5383
1	b	0.40	0/3980	0.63	0/5372
1	c	0.39	0/3989	0.64	0/5383
1	d	0.39	0/3989	0.62	0/5383
1	e	0.37	0/3980	0.62	0/5372
1	f	0.34	0/3989	0.59	0/5383
1	g	0.41	1/3980 (0.0%)	0.62	1/5372 (0.0%)
1	h	0.40	0/3971	0.62	1/5360 (0.0%)
1	i	0.36	1/3971 (0.0%)	0.60	0/5360
1	j	0.35	0/3971	0.61	1/5360 (0.0%)
1	k	0.34	0/3971	0.59	0/5360
1	l	0.33	0/3971	0.59	0/5360
1	m	0.36	1/3971 (0.0%)	0.59	0/5360
1	n	0.34	0/3971	0.58	0/5360
2	O	0.40	0/746	0.68	0/1003
2	P	0.54	0/730	0.77	0/982
2	Q	0.39	0/746	0.70	2/1003 (0.2%)
2	R	0.42	0/746	0.69	0/1003

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
2	S	0.42	0/746	0.72	1/1003 (0.1%)
2	T	0.39	0/746	0.67	0/1003
2	U	0.46	0/746	0.72	0/1003
2	o	0.52	0/746	0.71	0/1003
2	p	0.40	0/746	0.68	0/1003
2	q	0.38	0/746	0.72	0/1003
2	r	0.41	0/746	0.67	0/1003
2	s	0.53	0/746	0.76	0/1003
2	t	0.31	0/746	0.64	0/1003
2	u	0.30	0/746	0.62	0/1003
All	All	0.39	6/121841 (0.0%)	0.63	10/164393 (0.0%)

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	g	133	ALA	CA-CB	-13.30	1.24	1.52
1	m	394	ARG	CZ-NH2	-8.93	1.21	1.33
1	K	237	GLU	CD-OE1	-5.26	1.19	1.25
1	M	512	ILE	CB-CG2	5.16	1.68	1.52
1	B	410	ILE	CB-CG2	5.08	1.68	1.52
1	i	352	LEU	CG-CD2	-5.03	1.33	1.51

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	444	ARG	NE-CZ-NH1	7.31	123.96	120.30
1	g	133	ALA	CB-CA-C	-7.31	99.13	110.10
1	j	283	ARG	CG-CD-NE	5.69	123.75	111.80
2	Q	51	GLY	N-CA-C	-5.32	99.81	113.10
1	M	512	ILE	CG1-CB-CG2	5.29	123.03	111.40
1	h	512	ILE	CG1-CB-CG2	5.25	122.96	111.40
2	Q	54	LEU	CA-CB-CG	5.18	127.20	115.30
2	S	58	GLN	CA-CB-CG	5.13	124.69	113.40
1	D	190	GLU	N-CA-C	5.08	124.71	111.00
1	B	410	ILE	CG1-CB-CG2	5.05	122.51	111.40

There are no chirality outliers.

There are no planarity outliers.

## 5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3956	0	4129	361	0
1	B	3956	0	4129	347	0
1	C	3947	0	4116	427	1
1	D	3947	0	4116	335	0
1	E	3947	0	4116	419	3
1	F	3974	0	4148	316	0
1	G	3938	0	4110	376	0
1	H	3947	0	4116	322	0
1	I	3938	0	4110	306	0
1	J	3938	0	4110	317	0
1	K	3938	0	4110	314	1
1	L	3947	0	4116	367	1
1	M	3938	0	4110	426	0
1	N	3947	0	4116	335	4
1	a	3956	0	4129	0	0
1	b	3947	0	4116	0	0
1	c	3956	0	4129	0	0
1	d	3956	0	4129	0	4
1	e	3947	0	4116	0	0
1	f	3956	0	4129	0	0
1	g	3947	0	4116	0	4
1	h	3938	0	4110	0	0
1	i	3938	0	4110	0	0
1	j	3938	0	4110	0	0
1	k	3938	0	4110	0	0
1	l	3938	0	4110	0	0
1	m	3938	0	4110	0	0
1	n	3938	0	4110	0	0
2	O	739	0	786	153	0
2	P	723	0	766	154	0
2	Q	739	0	786	217	0
2	R	739	0	786	137	0
2	S	739	0	786	158	0
2	T	739	0	786	196	0
2	U	739	0	786	171	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	o	739	0	786	0	0
2	p	739	0	786	0	0
2	q	739	0	786	0	0
2	r	739	0	786	0	0
2	s	739	0	786	0	0
2	t	739	0	786	0	0
2	u	739	0	786	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
3	a	1	0	0	0	0
3	b	1	0	0	0	0
3	c	1	0	0	0	0
3	d	1	0	0	0	0
3	e	1	0	0	0	0
3	f	1	0	0	0	0
3	g	1	0	0	0	0
4	A	27	0	12	1	0
4	B	27	0	12	1	0
4	C	27	0	12	1	0
4	D	27	0	12	1	0
4	E	27	0	12	5	0
4	F	27	0	12	2	0
4	G	27	0	12	1	0
4	a	27	0	12	0	0
4	b	27	0	12	0	0
4	c	27	0	12	0	0
4	d	27	0	12	0	0
4	e	27	0	12	0	0
4	f	27	0	12	0	0
4	g	27	0	12	0	0
5	H	4	0	6	3	0
5	I	4	0	6	0	0
5	J	4	0	6	0	0
5	K	4	0	6	0	0
5	L	4	0	6	0	0
5	M	4	0	6	0	0
5	N	4	0	6	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	h	4	0	6	0	0
5	i	4	0	6	0	0
5	j	4	0	6	0	0
5	k	4	0	6	0	0
5	l	4	0	6	0	0
5	m	4	0	6	0	0
5	n	4	0	6	0	0
All	All	121267	0	126522	5603	9

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 23.

All (5603) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:150:ILE:HD11	1:D:495:ILE:HA	1.22	1.21
1:K:283:ARG:NH2	1:K:367:ARG:HD3	2.09	1.20
1:K:283:ARG:HH21	1:K:367:ARG:CD	2.35	1.19
1:I:283:ARG:NH2	1:I:367:ARG:HD3	2.14	1.18
1:E:229:VAL:HG21	2:S:36:ALA:HB2	2.51	1.15
2:T:19:ARG:HD3	2:T:40:PRO:HG2	2.73	1.15
2:Q:70:VAL:HG12	2:Q:71:VAL:H	2.23	1.15
1:A:350:LYS:HB3	1:B:208:GLU:HG2	7.47	1.14
1:L:235:ILE:HD11	1:L:311:ALA:HB3	1.33	1.14
1:N:235:ILE:HD11	1:N:311:ALA:HB3	1.29	1.14
1:M:235:ILE:HD11	1:M:311:ALA:HB3	1.40	1.14
1:D:173:ILE:HD11	1:D:365:GLN:HG3	1.16	1.14
1:M:182:LEU:HD11	1:N:363:LYS:NZ	1.62	1.13
1:L:189:VAL:HG12	1:L:190:GLU:H	1.13	1.12
1:E:230:ARG:NH2	2:S:38:GLU:OE2	3.38	1.12
2:Q:81:GLU:HG3	2:Q:85:GLU:H	1.70	1.12
1:H:235:ILE:HD11	1:H:311:ALA:HB3	1.35	1.12
2:O:54:LEU:HD21	2:P:57:GLY:H	1.10	1.12
1:B:150:ILE:HD11	1:B:495:ILE:HA	1.33	1.12
1:I:283:ARG:HH21	1:I:367:ARG:CD	2.36	1.11
2:P:100:GLN:HB3	2:Q:7:VAL:HB	2.58	1.11
1:E:150:ILE:HD11	1:E:495:ILE:HA	1.25	1.11
1:L:182:LEU:HD11	1:M:363:LYS:NZ	1.80	1.11
1:G:150:ILE:HD11	1:G:495:ILE:HA	1.30	1.11
1:J:325:THR:HG22	1:J:327:ASP:H	1.13	1.10
2:Q:92:GLU:HA	2:Q:95:LEU:HD12	2.16	1.10
1:L:243:GLY:HA2	1:M:228:ASN:CB	1.80	1.10
1:K:235:ILE:HD11	1:K:311:ALA:HB3	1.30	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:150:ILE:HD11	1:C:495:ILE:HA	1.19	1.10
1:H:325:THR:HG22	1:H:327:ASP:H	1.15	1.10
1:L:182:LEU:HD11	1:M:363:LYS:HZ3	1.09	1.09
1:L:243:GLY:HA2	1:M:228:ASN:HB2	1.04	1.09
1:I:283:ARG:HH11	1:I:363:LYS:HE3	1.66	1.09
1:F:150:ILE:HD11	1:F:495:ILE:HA	1.23	1.09
1:A:150:ILE:HD11	1:A:495:ILE:HA	1.28	1.08
1:I:217:ALA:HB2	1:I:245:PRO:HG2	1.41	1.08
1:M:136:ILE:HB	1:M:410:ILE:HG13	1.34	1.07
2:U:48:VAL:HG12	2:U:62:LEU:HD12	1.32	1.07
1:E:256:GLU:HB3	2:S:35:THR:HB	2.39	1.07
1:F:283:ARG:HH12	1:F:363:LYS:HD2	3.94	1.06
1:H:217:ALA:HB2	1:H:245:PRO:HG2	1.37	1.06
1:I:325:THR:HG22	1:I:327:ASP:H	1.17	1.06
1:M:189:VAL:HG12	1:M:190:GLU:H	0.95	1.06
1:N:325:THR:HG22	1:N:327:ASP:H	1.18	1.06
1:K:325:THR:HG22	1:K:327:ASP:H	1.17	1.06
1:I:235:ILE:HD11	1:I:311:ALA:HB3	1.31	1.05
1:N:189:VAL:HG11	1:N:333:GLY:HA2	1.36	1.05
1:J:217:ALA:HB2	1:J:245:PRO:HG2	1.46	1.05
1:A:168:VAL:HG12	1:A:172:GLY:HA3	1.39	1.04
2:P:48:VAL:HG12	2:P:62:LEU:HD12	1.39	1.04
2:O:48:VAL:HG12	2:O:62:LEU:HD12	1.32	1.04
1:G:168:VAL:HG12	1:G:172:GLY:HA3	1.40	1.04
1:B:229:VAL:HG21	2:P:36:ALA:HB2	1.39	1.04
1:L:325:THR:HG22	1:L:327:ASP:H	1.23	1.04
1:L:182:LEU:CD1	1:M:363:LYS:HZ3	1.74	1.04
1:E:240:ALA:HA	1:E:270:LEU:HD13	1.39	1.04
1:F:235:ILE:HD11	1:F:311:ALA:HB3	1.74	1.03
1:M:182:LEU:HD11	1:N:363:LYS:CE	1.87	1.03
1:N:50:THR:HG22	1:N:52:ASP:H	1.29	1.03
1:L:217:ALA:HB2	1:L:245:PRO:HG2	1.38	1.03
1:A:350:LYS:HB3	1:B:208:GLU:CG	8.04	1.03
1:D:168:VAL:HG12	1:D:172:GLY:HA3	1.41	1.03
1:J:283:ARG:HG3	1:J:363:LYS:NZ	3.75	1.03
1:A:237:GLU:HB3	2:O:28:GLY:HA3	2.25	1.02
1:B:251:GLU:HG3	1:B:284:ARG:HH12	1.21	1.02
1:K:283:ARG:HH21	1:K:367:ARG:HD3	1.87	1.02
1:K:332:VAL:HG22	1:K:375:VAL:HG11	1.88	1.02
1:I:189:VAL:HG12	1:I:190:GLU:H	1.32	1.02
1:J:235:ILE:HD11	1:J:311:ALA:HB3	1.39	1.02
1:D:7:VAL:HG21	1:D:66:LEU:HD11	1.42	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:243:GLY:CA	1:M:228:ASN:HB2	1.99	1.02
1:J:283:ARG:NH1	1:J:363:LYS:HE3	1.98	1.02
1:E:212:ALA:HB3	1:E:324:ILE:HB	2.44	1.02
1:B:343:ALA:HB2	1:C:207:PRO:HB3	1.42	1.02
2:O:84:GLY:HA3	2:U:27:LYS:HD2	2.88	1.02
1:G:283:ARG:NH1	1:G:363:LYS:HD2	3.49	1.02
1:B:168:VAL:HG12	1:B:172:GLY:HA3	1.42	1.01
1:M:217:ALA:HB2	1:M:245:PRO:HG2	1.43	1.01
1:K:217:ALA:HB2	1:K:245:PRO:HG2	1.41	1.01
1:M:325:THR:HG22	1:M:327:ASP:H	1.23	1.01
1:N:217:ALA:HB2	1:N:245:PRO:HG2	1.42	1.01
1:G:50:THR:HG22	1:G:51:LYS:H	1.26	1.01
1:F:235:ILE:HD11	1:F:311:ALA:CB	2.30	1.00
1:F:168:VAL:HG12	1:F:172:GLY:HA3	1.44	1.00
2:O:70:VAL:HG11	2:O:95:LEU:HD22	1.40	1.00
2:O:15:VAL:HG21	2:O:95:LEU:HD11	1.43	1.00
1:E:50:THR:HG22	1:E:52:ASP:H	1.26	1.00
1:B:212:ALA:HB3	1:B:324:ILE:HB	1.66	1.00
1:F:283:ARG:NH1	1:F:363:LYS:HD2	3.61	0.99
1:G:352:LEU:HD13	1:G:364:LEU:HB2	4.88	0.99
1:K:189:VAL:HG12	1:K:190:GLU:H	1.26	0.99
1:C:168:VAL:HG12	1:C:172:GLY:HA3	1.43	0.99
2:P:12:GLY:O	2:P:13:ASP:HB3	3.74	0.99
1:I:50:THR:HG22	1:I:52:ASP:H	1.23	0.99
1:L:50:THR:HG22	1:L:52:ASP:H	1.27	0.99
1:M:189:VAL:CG1	1:M:190:GLU:H	1.72	0.98
1:E:168:VAL:HG12	1:E:172:GLY:HA3	1.50	0.98
1:I:283:ARG:HH21	1:I:367:ARG:HD3	1.92	0.98
1:F:7:VAL:HG21	1:F:66:LEU:HD11	1.53	0.98
1:H:283:ARG:NH2	1:H:367:ARG:HD3	2.06	0.98
1:E:7:VAL:HG21	1:E:66:LEU:HD11	1.64	0.98
2:T:96:LEU:HA	2:U:14:ARG:HH11	1.29	0.98
1:M:323:ARG:NH2	1:M:392:LYS:HE2	1.79	0.97
2:O:48:VAL:CG1	2:O:62:LEU:HD12	2.03	0.97
1:E:352:LEU:HD13	1:E:364:LEU:HB2	1.44	0.97
1:J:50:THR:HG22	1:J:52:ASP:H	1.33	0.97
1:M:182:LEU:CD1	1:N:363:LYS:HE2	1.94	0.97
1:F:50:THR:HG22	1:F:52:ASP:H	1.44	0.97
1:A:50:THR:HG22	1:A:51:LYS:H	1.33	0.97
1:H:283:ARG:HH21	1:H:367:ARG:HD3	1.82	0.96
1:H:50:THR:HG22	1:H:52:ASP:H	1.37	0.96
1:M:178:GLU:N	1:M:321:ARG:NH1	2.13	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:50:THR:HG22	1:M:52:ASP:H	1.29	0.96
1:G:325:THR:HG22	1:G:326:LYS:H	1.75	0.96
1:G:50:THR:HG22	1:G:52:ASP:H	1.36	0.96
1:M:189:VAL:HG12	1:M:190:GLU:N	1.80	0.96
1:C:50:THR:HG22	1:C:51:LYS:H	1.31	0.96
1:E:50:THR:HG22	1:E:51:LYS:H	1.31	0.95
1:B:50:THR:HG22	1:B:52:ASP:H	1.34	0.95
1:H:189:VAL:HG11	1:H:333:GLY:HA2	1.47	0.95
2:R:54:LEU:HD21	2:S:55:GLU:HA	3.34	0.95
1:K:283:ARG:HH11	1:K:363:LYS:HE3	1.71	0.95
2:O:54:LEU:HD13	2:P:55:GLU:O	4.00	0.95
1:C:7:VAL:HG21	1:C:66:LEU:HD11	1.45	0.95
1:N:526:LYS:HG3	1:N:527:PRO:HD2	1.48	0.95
1:D:50:THR:HG22	1:D:52:ASP:H	1.26	0.95
1:D:212:ALA:HB3	1:D:324:ILE:HB	1.53	0.95
2:R:70:VAL:HG11	2:R:95:LEU:HD22	1.46	0.95
2:Q:70:VAL:HG11	2:Q:95:LEU:HD22	1.46	0.95
1:M:176:VAL:O	1:M:323:ARG:NH1	1.98	0.95
1:B:50:THR:HG22	1:B:51:LYS:H	1.38	0.95
1:L:410:ILE:HD12	1:L:496:VAL:HG11	1.47	0.95
1:J:189:VAL:HG12	1:J:190:GLU:H	1.31	0.95
1:E:298:THR:HG23	1:E:304:LEU:HD23	1.48	0.94
1:C:237:GLU:HB3	2:Q:28:GLY:HA3	1.48	0.94
1:D:50:THR:HG22	1:D:51:LYS:H	1.29	0.94
2:P:15:VAL:HG21	2:P:95:LEU:HD11	1.46	0.94
1:C:240:ALA:HA	1:C:270:LEU:HD13	1.98	0.94
1:F:50:THR:HG22	1:F:51:LYS:H	1.31	0.94
1:H:189:VAL:HG12	1:H:190:GLU:H	1.30	0.94
2:O:52:ARG:NH2	2:P:53:VAL:HB	1.81	0.94
1:G:235:ILE:HG12	1:G:311:ALA:HB3	2.19	0.93
2:P:70:VAL:HG11	2:P:95:LEU:HD22	1.50	0.93
1:K:50:THR:HG22	1:K:52:ASP:H	1.39	0.93
1:D:283:ARG:NH1	1:D:363:LYS:HD3	4.67	0.93
1:A:50:THR:HG22	1:A:52:ASP:H	1.29	0.93
2:Q:13:ASP:HA	2:Q:62:LEU:HD21	2.12	0.93
2:T:69:ILE:HB	2:T:99:LEU:HB2	2.38	0.93
1:J:168:VAL:HG12	1:J:172:GLY:HA3	1.51	0.93
2:S:12:GLY:O	2:S:13:ASP:HB3	1.65	0.93
1:L:270:LEU:HD22	1:L:272:VAL:HG13	1.60	0.92
1:M:168:VAL:HG12	1:M:172:GLY:HA3	1.51	0.92
1:K:168:VAL:HG12	1:K:172:GLY:HA3	1.51	0.92
1:N:189:VAL:HG12	1:N:190:GLU:H	1.34	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:235:ILE:HD11	1:G:311:ALA:HB3	1.49	0.92
2:S:48:VAL:HG12	2:S:62:LEU:HD13	2.04	0.92
1:J:283:ARG:HG3	1:J:363:LYS:HZ2	3.21	0.92
1:C:325:THR:HG22	1:C:326:LYS:H	1.54	0.92
1:B:283:ARG:NH1	1:B:363:LYS:HD2	4.06	0.91
1:E:325:THR:HG22	1:E:326:LYS:H	1.32	0.91
1:M:498:PRO:HB2	1:M:501:VAL:HG23	1.62	0.91
1:C:251:GLU:HG3	1:C:284:ARG:HH12	1.33	0.91
1:E:227:SER:HB3	1:E:254:GLU:HG3	1.50	0.91
2:T:70:VAL:HG11	2:T:95:LEU:HD22	1.52	0.91
1:D:235:ILE:HG21	1:D:311:ALA:HB3	4.20	0.91
1:F:212:ALA:HB3	1:F:324:ILE:HB	1.52	0.91
1:L:234:PRO:HG3	1:L:309:GLU:HA	1.62	0.91
1:D:173:ILE:CD1	1:D:365:GLN:HG3	2.01	0.91
1:L:180:LYS:O	1:M:281:GLY:HA3	2.02	0.91
1:K:498:PRO:HB2	1:K:501:VAL:HG23	1.52	0.91
1:N:46:SER:HB2	1:N:47:PRO:HD2	1.53	0.90
1:C:312:THR:HB	1:C:315:MET:HG2	2.86	0.90
2:T:81:GLU:HA	2:T:85:GLU:O	2.02	0.90
1:A:212:ALA:HB3	1:A:324:ILE:HB	1.67	0.90
1:I:50:THR:HG22	1:I:51:LYS:H	1.36	0.90
1:N:526:LYS:CG	1:N:527:PRO:HD2	2.01	0.90
1:M:384:THR:HA	1:N:280:PHE:CE1	2.06	0.90
1:L:168:VAL:HG12	1:L:172:GLY:HA3	1.54	0.90
1:L:498:PRO:HB2	1:L:501:VAL:HG23	1.58	0.90
2:T:20:ILE:HD12	2:T:42:LYS:HG3	4.88	0.90
1:J:40:LEU:HD23	1:J:59:GLU:HG3	1.53	0.90
1:J:270:LEU:HD22	1:J:272:VAL:HG13	1.65	0.90
1:H:498:PRO:HB2	1:H:501:VAL:HG23	1.55	0.90
1:H:46:SER:HB2	1:H:47:PRO:HD2	1.60	0.90
1:J:46:SER:HB2	1:J:47:PRO:HD2	1.54	0.90
1:I:168:VAL:HG12	1:I:172:GLY:HA3	1.53	0.90
1:B:219:ILE:HD13	1:B:295:THR:HG21	2.82	0.89
1:M:182:LEU:CD1	1:N:363:LYS:CE	2.51	0.89
1:J:50:THR:HG22	1:J:51:LYS:H	1.44	0.89
1:L:180:LYS:CB	1:M:281:GLY:HA2	2.03	0.89
1:D:173:ILE:HD11	1:D:365:GLN:CG	2.02	0.89
2:P:79:GLU:O	2:P:80:ILE:HG13	2.13	0.89
2:P:100:GLN:HB3	2:Q:7:VAL:CB	3.54	0.89
1:H:168:VAL:HG12	1:H:172:GLY:HA3	1.53	0.89
1:A:350:LYS:CB	1:B:208:GLU:HG2	7.96	0.89
1:C:227:SER:HB3	1:C:254:GLU:HG3	2.20	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:410:ILE:HD12	1:M:496:VAL:HG11	1.52	0.89
2:U:74:LYS:HD2	2:U:75:TYR:N	4.79	0.89
2:P:41:GLN:OE1	2:Q:80:ILE:HG12	1.73	0.89
1:K:270:LEU:HD22	1:K:272:VAL:HG13	1.61	0.89
1:N:50:THR:HG22	1:N:51:LYS:H	1.38	0.88
1:G:283:ARG:HH12	1:G:363:LYS:HD2	3.76	0.88
2:S:5:LYS:HG2	2:S:6:THR:H	5.08	0.88
1:H:410:ILE:HD12	1:H:496:VAL:HG11	1.56	0.88
2:O:54:LEU:HD21	2:P:57:GLY:N	1.87	0.88
1:M:136:ILE:HB	1:M:410:ILE:CG1	2.02	0.88
2:Q:20:ILE:HG13	2:Q:43:GLY:HA2	1.78	0.88
1:A:7:VAL:HG21	1:A:66:LEU:HD11	1.56	0.88
2:R:13:ASP:HA	2:R:62:LEU:HD21	3.55	0.88
1:B:511:SER:O	1:B:515:LEU:HD23	1.73	0.88
1:N:283:ARG:NH1	1:N:363:LYS:HE3	1.89	0.88
1:L:182:LEU:CD1	1:M:363:LYS:NZ	2.38	0.88
1:I:385:GLU:HB2	1:J:280:PHE:CD2	2.07	0.88
1:K:179:SER:HB2	1:K:379:ARG:HB3	1.58	0.88
1:L:189:VAL:HG12	1:L:190:GLU:N	1.89	0.88
1:K:235:ILE:CD1	1:K:311:ALA:HB3	2.02	0.88
2:P:13:ASP:HA	2:P:62:LEU:HD21	2.10	0.88
1:A:235:ILE:HG21	1:A:311:ALA:HB3	3.61	0.88
1:M:372:ALA:C	1:M:374:GLY:H	1.75	0.88
1:J:189:VAL:HG11	1:J:333:GLY:HA2	1.56	0.88
1:N:410:ILE:HD12	1:N:496:VAL:HG11	1.56	0.88
1:K:234:PRO:HG3	1:K:309:GLU:HA	1.56	0.88
2:S:13:ASP:HA	2:S:62:LEU:HD21	1.55	0.88
2:S:70:VAL:HG11	2:S:95:LEU:HD22	1.56	0.88
1:L:40:LEU:HD23	1:L:59:GLU:HG3	1.54	0.88
1:E:209:THR:HG22	1:E:211:GLU:HG3	1.55	0.88
2:U:15:VAL:HG11	2:U:95:LEU:HD22	4.58	0.88
1:A:246:LEU:HB3	1:A:272:VAL:HG12	1.56	0.88
1:L:46:SER:HB2	1:L:47:PRO:HD2	1.61	0.88
1:I:345:ILE:O	1:I:348:ILE:HG22	1.74	0.88
1:M:182:LEU:HD11	1:N:363:LYS:HE2	1.51	0.87
1:L:179:SER:HB2	1:L:379:ARG:HB3	1.57	0.87
2:U:48:VAL:CG1	2:U:62:LEU:HD12	2.04	0.87
1:N:168:VAL:HG12	1:N:172:GLY:HA3	1.54	0.87
1:I:267:ARG:O	1:J:256:GLU:HG3	2.13	0.87
1:J:283:ARG:HH11	1:J:363:LYS:HE3	1.59	0.87
2:Q:32:LEU:HG	2:Q:33:PRO:HD2	1.56	0.87
1:B:7:VAL:HG21	1:B:66:LEU:HD11	1.56	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:46:SER:HB2	1:K:47:PRO:HD2	1.55	0.87
1:G:235:ILE:HD11	1:G:311:ALA:CB	2.04	0.87
1:L:59:GLU:O	1:M:4:LYS:HG3	1.79	0.87
1:K:50:THR:HG22	1:K:51:LYS:H	1.40	0.87
1:N:149:THR:HG23	1:N:155:PRO:HA	1.60	0.87
1:J:498:PRO:HB2	1:J:501:VAL:HG23	1.57	0.87
2:Q:81:GLU:CG	2:Q:85:GLU:H	2.43	0.87
1:L:50:THR:HG22	1:L:51:LYS:H	1.39	0.87
1:N:345:ILE:O	1:N:348:ILE:HG22	1.80	0.87
1:I:234:PRO:HG3	1:I:309:GLU:HA	1.58	0.87
1:E:246:LEU:HB3	1:E:272:VAL:HG12	1.66	0.86
1:G:7:VAL:HG21	1:G:66:LEU:HD11	1.60	0.86
1:J:345:ILE:O	1:J:348:ILE:HG22	1.75	0.86
2:P:100:GLN:CB	2:Q:7:VAL:HB	3.51	0.86
2:T:17:VAL:HG22	2:T:45:VAL:HA	3.01	0.86
1:A:237:GLU:CB	2:O:28:GLY:HA3	2.78	0.86
2:O:13:ASP:HB2	2:O:62:LEU:HD21	1.76	0.86
1:F:246:LEU:HB3	1:F:272:VAL:HG12	1.77	0.86
1:N:498:PRO:HB2	1:N:501:VAL:HG23	1.57	0.86
1:M:179:SER:HB2	1:M:379:ARG:HB3	1.57	0.86
1:D:173:ILE:HD12	1:D:366:GLU:HA	2.33	0.86
1:M:323:ARG:NH1	1:M:392:LYS:NZ	2.24	0.86
2:Q:55:GLU:HG3	2:R:55:GLU:HG2	1.58	0.86
1:M:182:LEU:CD1	1:N:363:LYS:NZ	2.39	0.86
1:J:283:ARG:HH21	1:J:367:ARG:HD3	1.92	0.86
1:C:50:THR:HG22	1:C:52:ASP:H	1.40	0.86
1:I:270:LEU:HD22	1:I:272:VAL:HG13	1.55	0.86
1:L:149:THR:HG23	1:L:155:PRO:HA	1.58	0.86
1:N:179:SER:HB2	1:N:379:ARG:HB3	1.60	0.86
2:Q:70:VAL:HG12	2:Q:71:VAL:N	2.43	0.86
2:U:70:VAL:HG11	2:U:95:LEU:HD22	1.56	0.85
2:O:54:LEU:CD2	2:P:57:GLY:H	1.87	0.85
1:I:46:SER:HB2	1:I:47:PRO:HD2	1.57	0.85
1:E:224:LYS:HE2	1:E:301:SER:HA	1.56	0.85
1:G:201:PRO:O	1:G:204:VAL:HG22	3.61	0.85
1:K:40:LEU:HD23	1:K:59:GLU:HG3	1.61	0.85
1:H:179:SER:HB2	1:H:379:ARG:HB3	1.58	0.85
1:E:235:ILE:HG12	1:E:311:ALA:HB3	1.58	0.85
1:E:289:LYS:HE3	1:F:202:TYR:OH	4.26	0.85
1:I:410:ILE:HD12	1:I:496:VAL:HG11	1.56	0.85
1:C:214:LEU:HB3	1:C:245:PRO:HB3	2.71	0.85
1:M:323:ARG:HH22	1:M:392:LYS:HE2	1.40	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:81:GLU:HG3	2:Q:85:GLU:N	2.48	0.85
1:N:235:ILE:CD1	1:N:311:ALA:HB3	2.06	0.85
1:H:270:LEU:HD22	1:H:272:VAL:HG13	1.60	0.85
1:I:498:PRO:HB2	1:I:501:VAL:HG23	1.58	0.85
1:J:149:THR:HG23	1:J:155:PRO:HA	1.58	0.85
2:Q:54:LEU:HD12	2:Q:55:GLU:H	3.99	0.85
1:H:50:THR:HG22	1:H:51:LYS:H	1.48	0.85
1:M:270:LEU:HD22	1:M:272:VAL:HG13	1.56	0.85
1:E:229:VAL:HG11	2:S:32:LEU:HD22	3.23	0.84
1:K:149:THR:HG23	1:K:155:PRO:HA	1.59	0.84
1:M:50:THR:HG22	1:M:51:LYS:H	1.40	0.84
1:M:40:LEU:HD23	1:M:59:GLU:HG3	1.60	0.84
1:J:332:VAL:HG22	1:J:375:VAL:HG11	1.85	0.84
1:L:235:ILE:CD1	1:L:311:ALA:HB3	2.08	0.84
2:U:13:ASP:HB2	2:U:62:LEU:HD21	1.58	0.84
1:M:235:ILE:CD1	1:M:311:ALA:HB3	2.14	0.84
1:A:218:PHE:HB3	1:A:316:LEU:HD13	1.82	0.84
1:J:77:VAL:HG13	1:J:80:LYS:HE2	1.69	0.84
1:N:40:LEU:HD23	1:N:59:GLU:HG3	1.58	0.84
1:G:117:LYS:HG3	1:G:514:ALA:HB1	1.60	0.84
1:M:182:LEU:HD11	1:N:363:LYS:HZ1	1.37	0.84
1:L:85:ALA:HB1	1:L:501:VAL:HG22	1.60	0.84
1:H:40:LEU:HD23	1:H:59:GLU:HG3	1.59	0.84
1:G:224:LYS:HE2	1:G:301:SER:HA	6.04	0.84
1:G:209:THR:HG22	1:G:211:GLU:HG3	4.94	0.84
1:J:283:ARG:NH2	1:J:367:ARG:HD3	2.12	0.84
1:M:46:SER:HB2	1:M:47:PRO:HD2	1.59	0.84
1:L:268:GLY:O	1:M:256:GLU:HG3	1.78	0.84
1:I:179:SER:HB2	1:I:379:ARG:HB3	1.60	0.84
1:I:235:ILE:CD1	1:I:311:ALA:HB3	2.08	0.84
1:M:323:ARG:CZ	1:M:392:LYS:HE2	2.07	0.84
1:A:117:LYS:HG3	1:A:514:ALA:HB1	1.63	0.84
1:L:345:ILE:O	1:L:348:ILE:HG22	1.99	0.84
1:N:270:LEU:HD22	1:N:272:VAL:HG13	1.63	0.84
1:I:189:VAL:HG11	1:I:333:GLY:HA2	1.58	0.84
1:J:235:ILE:CD1	1:J:311:ALA:HB3	2.08	0.84
2:P:21:GLU:O	2:P:22:GLU:O	1.95	0.83
2:R:79:GLU:O	2:R:80:ILE:HG13	2.06	0.83
1:K:345:ILE:O	1:K:348:ILE:HG22	1.79	0.83
1:E:229:VAL:CG2	2:S:36:ALA:HB2	3.47	0.83
2:Q:90:LEU:H	2:Q:90:LEU:HD23	3.75	0.83
1:N:74:LEU:HD21	1:N:93:THR:HG23	1.60	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:325:THR:HG22	1:B:326:LYS:H	1.48	0.83
2:S:96:LEU:CD2	2:T:14:ARG:HH12	6.59	0.83
1:M:323:ARG:CZ	1:M:392:LYS:HZ1	1.89	0.83
1:J:179:SER:HB2	1:J:379:ARG:HB3	1.61	0.83
1:A:511:SER:O	1:A:515:LEU:HD23	1.95	0.83
1:M:149:THR:HG23	1:M:155:PRO:HA	1.60	0.83
1:H:149:THR:HG23	1:H:155:PRO:HA	1.62	0.83
1:D:246:LEU:HB3	1:D:272:VAL:HG12	1.64	0.83
1:J:410:ILE:HD12	1:J:496:VAL:HG11	1.61	0.83
1:B:117:LYS:HG3	1:B:514:ALA:HB1	1.59	0.83
1:K:410:ILE:HD12	1:K:496:VAL:HG11	1.61	0.83
1:B:228:ASN:HD22	1:B:231:GLU:HG3	1.43	0.83
1:M:345:ILE:O	1:M:348:ILE:HG22	1.86	0.83
1:G:240:ALA:HA	1:G:270:LEU:HD13	1.83	0.82
1:C:117:LYS:HG3	1:C:514:ALA:HB1	1.61	0.82
1:B:246:LEU:HB3	1:B:272:VAL:HG12	1.71	0.82
1:C:218:PHE:CE1	1:C:244:LYS:HD2	5.13	0.82
1:M:178:GLU:O	1:M:321:ARG:NH2	2.12	0.82
1:F:259:ALA:O	1:F:263:VAL:HG23	1.90	0.82
1:L:180:LYS:HB2	1:M:281:GLY:HA2	1.60	0.82
1:L:37:ASN:OD1	1:M:515:LEU:HD12	1.78	0.82
2:R:100:GLN:HB3	2:S:7:VAL:HB	3.07	0.82
1:E:144:ILE:HD12	1:E:165:MET:HG2	1.62	0.82
1:F:117:LYS:HG3	1:F:514:ALA:HB1	1.63	0.82
1:M:234:PRO:HG3	1:M:309:GLU:HA	1.59	0.82
1:J:234:PRO:HG3	1:J:309:GLU:HA	1.61	0.82
1:C:312:THR:HG22	1:C:314:SER:H	2.36	0.82
1:A:66:LEU:HD22	1:A:522:VAL:HG11	1.61	0.82
1:I:149:THR:HG23	1:I:155:PRO:HA	1.59	0.82
1:A:283:ARG:NH1	1:A:363:LYS:HD2	3.64	0.82
1:M:247:LEU:HD22	1:M:322:VAL:HG11	1.62	0.82
1:H:74:LEU:HD21	1:H:93:THR:HG23	1.62	0.82
1:G:348:ILE:HD11	1:G:367:ARG:NE	2.81	0.82
1:M:136:ILE:N	1:M:410:ILE:O	2.12	0.82
1:C:236:LEU:HB2	2:Q:30:ILE:HD11	1.61	0.81
2:Q:79:GLU:O	2:Q:80:ILE:HG13	1.78	0.81
1:C:237:GLU:CB	2:Q:28:GLY:HA3	2.09	0.81
1:I:74:LEU:HD21	1:I:93:THR:HG23	1.67	0.81
1:I:283:ARG:NH1	1:I:363:LYS:HE3	2.00	0.81
1:H:235:ILE:CD1	1:H:311:ALA:HB3	2.10	0.81
1:J:283:ARG:NH1	1:J:363:LYS:HB2	3.70	0.81
1:M:178:GLU:N	1:M:321:ARG:HH12	1.76	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:283:ARG:NH1	1:E:363:LYS:HD2	2.93	0.81
1:M:85:ALA:HB1	1:M:501:VAL:HG22	1.62	0.81
1:B:66:LEU:HD22	1:B:522:VAL:HG11	1.67	0.81
1:G:227:SER:HB3	1:G:254:GLU:HG3	2.30	0.81
1:I:40:LEU:HD23	1:I:59:GLU:HG3	1.60	0.81
2:T:11:LEU:O	2:T:14:ARG:HD2	3.32	0.81
1:E:66:LEU:HD22	1:E:522:VAL:HG11	1.62	0.81
1:C:224:LYS:HE2	1:C:301:SER:HA	6.04	0.81
1:M:59:GLU:O	1:N:4:LYS:HG3	2.26	0.81
1:H:345:ILE:O	1:H:348:ILE:HG22	1.80	0.81
1:E:117:LYS:HG3	1:E:514:ALA:HB1	1.62	0.81
1:B:283:ARG:HH12	1:B:363:LYS:HD2	4.28	0.81
1:G:246:LEU:HB3	1:G:272:VAL:HG12	1.61	0.81
1:N:234:PRO:HG3	1:N:309:GLU:HA	1.61	0.81
1:I:116:LEU:O	1:I:120:ILE:HG13	1.81	0.81
2:Q:44:LYS:HA	2:Q:68:ASP:O	2.05	0.81
1:K:295:THR:HG22	1:K:318:ARG:N	2.00	0.81
2:P:41:GLN:HG2	2:P:74:LYS:HB3	1.63	0.80
1:L:180:LYS:HB3	1:M:281:GLY:HA2	1.75	0.80
2:Q:92:GLU:HA	2:Q:95:LEU:CD1	2.98	0.80
1:E:301:SER:HB2	1:E:304:LEU:HB3	6.28	0.80
1:D:259:ALA:O	1:D:263:VAL:HG23	1.82	0.80
1:J:295:THR:HG22	1:J:318:ARG:N	2.00	0.80
1:F:66:LEU:HD22	1:F:522:VAL:HG11	1.63	0.80
2:Q:19:ARG:HD3	2:Q:40:PRO:HG2	2.77	0.80
2:Q:100:GLN:HB3	2:R:7:VAL:HB	1.63	0.80
1:D:117:LYS:HG3	1:D:514:ALA:HB1	1.63	0.80
1:D:50:THR:HG22	1:D:52:ASP:N	1.96	0.80
1:F:307:LYS:HE3	2:U:34:ASP:O	1.81	0.80
2:T:98:VAL:O	2:U:8:ILE:HG23	4.39	0.80
1:C:66:LEU:HD22	1:C:522:VAL:HG11	1.72	0.80
1:B:201:PRO:O	1:B:204:VAL:HG23	1.81	0.80
1:L:295:THR:HG22	1:L:318:ARG:N	1.97	0.80
2:Q:73:ALA:O	2:Q:74:LYS:HG2	4.19	0.80
2:T:96:LEU:HD23	2:U:14:ARG:NH1	1.97	0.80
1:B:251:GLU:HG3	1:B:284:ARG:NH1	1.97	0.80
1:L:77:VAL:HG13	1:L:80:LYS:HE2	1.63	0.80
1:G:66:LEU:HD22	1:G:522:VAL:HG11	1.63	0.79
1:H:85:ALA:HB1	1:H:501:VAL:HG22	1.64	0.79
1:I:246:LEU:HB3	1:I:272:VAL:HG12	1.74	0.79
1:N:37:ASN:HD21	1:N:51:LYS:HE2	1.55	0.79
1:B:289:LYS:HE2	1:C:202:TYR:OH	1.82	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:150:ILE:CD1	1:C:495:ILE:HA	2.07	0.79
1:M:385:GLU:HB2	1:N:280:PHE:CE2	2.27	0.79
2:S:56:ASN:HB3	2:S:58:GLN:HG3	5.78	0.79
1:C:223:GLU:O	1:C:251:GLU:HB2	2.55	0.79
1:F:511:SER:O	1:F:515:LEU:HD23	1.86	0.79
1:M:178:GLU:C	1:M:321:ARG:HH12	1.85	0.79
1:E:98:ALA:HB2	1:E:449:GLU:HG3	1.68	0.79
1:E:149:THR:HG23	1:E:155:PRO:HA	1.65	0.79
1:D:511:SER:O	1:D:515:LEU:HD23	1.83	0.79
1:H:234:PRO:HG3	1:H:309:GLU:HA	1.66	0.79
1:A:307:LYS:HE3	2:P:34:ASP:O	1.83	0.79
2:O:45:VAL:HG21	2:O:64:VAL:HG11	1.74	0.79
1:E:50:THR:HG22	1:E:52:ASP:N	1.98	0.79
2:R:97:ALA:HA	2:S:11:LEU:CD1	2.23	0.79
1:M:362:GLU:O	1:M:365:GLN:HB2	1.92	0.79
2:P:15:VAL:HG12	2:P:45:VAL:HG13	1.63	0.78
1:L:189:VAL:CG1	1:L:190:GLU:H	1.94	0.78
1:J:74:LEU:HD21	1:J:93:THR:HG23	1.65	0.78
2:U:20:ILE:H	2:U:43:GLY:HA2	3.62	0.78
1:H:295:THR:HG22	1:H:318:ARG:N	2.01	0.78
2:S:53:VAL:HG22	2:S:59:ARG:HG2	1.99	0.78
1:D:66:LEU:HD22	1:D:522:VAL:HG11	1.64	0.78
1:J:228:ASN:HD21	1:J:230:ARG:HB3	1.49	0.78
1:I:422:ILE:HG23	1:I:444:ARG:HG3	1.66	0.78
2:Q:70:VAL:CG1	2:Q:71:VAL:H	2.79	0.78
1:B:50:THR:HG22	1:B:52:ASP:N	2.06	0.78
1:N:295:THR:HG22	1:N:318:ARG:N	1.99	0.78
1:A:285:LYS:HD3	1:B:202:TYR:OH	8.38	0.78
1:H:7:VAL:HG21	1:H:66:LEU:HD11	1.77	0.78
1:E:69:ILE:HD11	1:F:41:GLU:HB2	1.66	0.78
1:C:218:PHE:HB3	1:C:316:LEU:HD13	1.65	0.78
1:H:77:VAL:HG13	1:H:80:LYS:HE2	1.69	0.78
1:I:295:THR:HG22	1:I:318:ARG:N	2.01	0.78
1:M:229:VAL:HG23	1:M:256:GLU:HB3	1.65	0.78
1:E:511:SER:O	1:E:515:LEU:HD23	1.92	0.78
1:J:116:LEU:O	1:J:120:ILE:HG13	1.84	0.78
1:C:149:THR:HG23	1:C:155:PRO:HA	1.76	0.78
1:D:150:ILE:HD11	1:D:495:ILE:CA	2.10	0.78
2:O:15:VAL:HG12	2:O:45:VAL:HG13	1.66	0.78
1:H:283:ARG:HH21	1:H:367:ARG:CD	2.24	0.78
1:A:173:ILE:HD12	1:A:366:GLU:HA	1.65	0.78
1:N:362:GLU:O	1:N:365:GLN:HB2	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:352:LEU:HD21	1:F:364:LEU:HB2	2.01	0.78
1:C:511:SER:O	1:C:515:LEU:HD23	1.87	0.78
1:D:173:ILE:HD12	1:D:369:ALA:HB2	1.65	0.77
2:O:48:VAL:HG23	2:O:66:GLU:HG3	3.05	0.77
1:I:332:VAL:HG22	1:I:375:VAL:HG11	1.66	0.77
1:E:267:ARG:HD3	2:S:31:VAL:HG21	1.65	0.77
2:T:52:ARG:HH21	2:U:53:VAL:HB	1.49	0.77
1:K:362:GLU:O	1:K:365:GLN:HB2	1.84	0.77
1:I:228:ASN:HD21	1:I:230:ARG:HB3	1.49	0.77
1:H:267:ARG:O	1:I:256:GLU:HG3	2.08	0.77
2:R:97:ALA:HA	2:S:11:LEU:HD13	1.95	0.77
1:E:351:GLU:HG3	1:F:326:LYS:NZ	2.00	0.77
1:G:218:PHE:CE1	1:G:244:LYS:HD2	4.98	0.77
1:K:249:ILE:O	1:K:249:ILE:HG22	1.84	0.77
1:K:116:LEU:O	1:K:120:ILE:HG13	1.95	0.77
1:B:229:VAL:HG21	2:P:36:ALA:CB	2.14	0.77
1:G:312:THR:HG22	1:G:314:SER:H	2.38	0.77
1:L:116:LEU:O	1:L:120:ILE:HG13	1.98	0.77
1:L:37:ASN:HD21	1:L:51:LYS:HE2	1.50	0.77
1:H:277:ALA:HB3	1:H:284:ARG:HD2	1.71	0.77
1:C:248:ILE:HD12	1:C:261:LEU:HD21	2.51	0.77
1:N:464:VAL:HG12	1:N:468:GLN:HE21	1.48	0.77
1:F:50:THR:HG22	1:F:51:LYS:N	2.03	0.77
1:N:85:ALA:HB1	1:N:501:VAL:HG22	1.67	0.77
1:L:7:VAL:HG21	1:L:66:LEU:HD11	1.79	0.77
2:T:19:ARG:CD	2:T:40:PRO:HG2	3.36	0.77
2:Q:71:VAL:HG12	2:Q:96:LEU:HD12	2.40	0.77
1:I:85:ALA:HB1	1:I:501:VAL:HG22	1.67	0.77
1:M:307:LYS:HE3	1:M:310:ASN:ND2	2.19	0.77
1:N:235:ILE:HD11	1:N:311:ALA:CB	2.15	0.77
1:C:201:PRO:O	1:C:204:VAL:HG23	2.29	0.77
1:H:228:ASN:HD21	1:H:230:ARG:HB3	1.58	0.77
1:C:498:PRO:O	1:C:501:VAL:HG22	1.90	0.77
1:B:230:ARG:NH2	2:P:38:GLU:OE2	2.17	0.76
1:A:116:LEU:O	1:A:120:ILE:HG13	1.97	0.76
2:T:54:LEU:HD11	2:U:55:GLU:HA	1.66	0.76
1:E:247:LEU:HD22	1:E:322:VAL:HG11	1.66	0.76
1:G:301:SER:HB2	1:G:304:LEU:HB3	1.65	0.76
1:J:219:ILE:HD12	1:J:295:THR:HG23	1.72	0.76
1:N:283:ARG:HH11	1:N:363:LYS:HE3	1.50	0.76
1:M:283:ARG:NH1	1:M:363:LYS:HE3	2.00	0.76
1:K:189:VAL:HG11	1:K:333:GLY:HA2	1.66	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:56:ASN:HB2	2:R:58:GLN:HG3	1.99	0.76
1:D:50:THR:HG22	1:D:51:LYS:N	2.01	0.76
1:H:219:ILE:HD12	1:H:295:THR:HG23	1.67	0.76
1:K:422:ILE:HG23	1:K:444:ARG:HG3	1.67	0.76
1:L:54:VAL:HG22	1:L:89:THR:HG21	1.67	0.76
1:C:178:GLU:HG3	1:C:388:LEU:HD21	1.66	0.76
1:M:74:LEU:HD21	1:M:93:THR:HG23	1.67	0.76
1:L:235:ILE:HD11	1:L:311:ALA:CB	2.18	0.76
1:D:136:ILE:HD11	1:D:477:ARG:NH2	2.09	0.76
1:H:114:LEU:HD12	1:N:459:GLY:HA3	1.77	0.76
1:N:84:VAL:HG12	1:N:500:LYS:HE2	1.68	0.76
2:Q:16:VAL:HG12	2:Q:46:ILE:HB	2.59	0.76
1:N:189:VAL:CG1	1:N:333:GLY:HA2	2.15	0.76
1:M:295:THR:HG22	1:M:318:ARG:N	2.05	0.76
1:K:194:PHE:CD1	1:K:278:PRO:HB3	2.27	0.76
1:L:229:VAL:HG23	1:L:256:GLU:HB3	1.73	0.76
1:C:283:ARG:NH1	1:C:363:LYS:HB3	2.51	0.76
1:A:50:THR:HG22	1:A:52:ASP:N	2.01	0.76
1:M:332:VAL:HG13	1:M:377:VAL:HG21	1.68	0.76
2:Q:10:PRO:HG3	2:Q:47:ALA:O	2.06	0.76
1:E:235:ILE:HD12	1:E:311:ALA:CB	4.02	0.76
1:N:189:VAL:HG12	1:N:190:GLU:N	2.00	0.76
1:L:59:GLU:O	1:M:4:LYS:HE3	1.86	0.76
1:H:116:LEU:O	1:H:120:ILE:HG13	2.01	0.76
1:G:98:ALA:HB2	1:G:449:GLU:HG3	1.74	0.76
2:S:10:PRO:HB2	2:S:14:ARG:O	1.86	0.75
1:A:235:ILE:CG2	1:A:311:ALA:HB3	3.92	0.75
1:D:69:ILE:HD11	1:E:41:GLU:HB2	1.68	0.75
1:L:283:ARG:NH2	1:L:367:ARG:HD3	2.17	0.75
1:M:228:ASN:HD21	1:M:230:ARG:HB3	1.50	0.75
1:H:189:VAL:CG1	1:H:333:GLY:HA2	2.16	0.75
1:A:120:ILE:O	1:A:124:VAL:HG23	1.93	0.75
1:K:385:GLU:HB2	1:L:280:PHE:CE2	2.41	0.75
1:D:116:LEU:O	1:D:120:ILE:HG13	1.87	0.75
1:A:41:GLU:HB2	1:G:69:ILE:HD11	1.90	0.75
2:S:96:LEU:HA	2:T:14:ARG:CZ	3.79	0.75
2:T:96:LEU:HA	2:U:14:ARG:NH1	2.01	0.75
1:M:323:ARG:CZ	1:M:392:LYS:CE	2.64	0.75
1:N:219:ILE:HD12	1:N:295:THR:HG23	1.69	0.75
1:M:464:VAL:HG12	1:M:468:GLN:HE21	1.52	0.75
1:K:300:ILE:HG21	1:K:308:LEU:HD23	1.69	0.75
1:J:362:GLU:O	1:J:365:GLN:HB2	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:P:48:VAL:CG1	2:P:62:LEU:HD12	2.15	0.75
1:A:233:LEU:O	1:A:237:GLU:HG3	1.90	0.75
1:N:526:LYS:CD	1:N:527:PRO:HD2	2.15	0.75
1:M:361:ARG:O	1:M:365:GLN:HG2	1.89	0.75
1:B:301:SER:HB2	1:B:304:LEU:HB3	1.68	0.75
1:D:120:ILE:O	1:D:124:VAL:HG23	1.86	0.75
1:F:301:SER:HB2	1:F:304:LEU:HB3	1.67	0.75
1:K:74:LEU:HD21	1:K:93:THR:HG23	1.67	0.75
1:H:422:ILE:HG23	1:H:444:ARG:HG3	1.73	0.75
1:I:290:ASP:OD1	1:I:371:LEU:HD11	1.89	0.75
1:C:98:ALA:HB2	1:C:449:GLU:HG3	1.66	0.75
2:S:41:GLN:OE1	2:T:80:ILE:HG13	2.53	0.75
1:G:50:THR:HG22	1:G:51:LYS:N	2.01	0.75
2:R:96:LEU:O	2:S:14:ARG:HD3	2.14	0.75
1:B:498:PRO:O	1:B:501:VAL:HG22	1.87	0.75
2:Q:96:LEU:HD23	2:R:14:ARG:HH21	1.49	0.75
1:G:477:ARG:HH11	1:G:477:ARG:HG3	1.76	0.75
1:G:150:ILE:CD1	1:G:495:ILE:HA	2.15	0.75
1:D:98:ALA:HB2	1:D:449:GLU:HG3	1.73	0.75
1:G:511:SER:O	1:G:515:LEU:HD23	1.88	0.75
1:J:85:ALA:HB1	1:J:501:VAL:HG22	1.71	0.75
1:E:50:THR:HG22	1:E:51:LYS:N	2.01	0.75
1:K:189:VAL:HG12	1:K:190:GLU:N	2.01	0.75
1:H:37:ASN:HD21	1:H:51:LYS:HE2	1.51	0.75
1:B:50:THR:HG22	1:B:51:LYS:N	2.07	0.75
1:D:218:PHE:HB3	1:D:316:LEU:HD13	1.72	0.75
1:L:283:ARG:NH1	1:L:363:LYS:HE3	2.01	0.75
1:J:194:PHE:CD1	1:J:278:PRO:HB3	2.21	0.75
1:D:235:ILE:HD11	1:D:311:ALA:HB3	1.67	0.74
2:U:81:GLU:HA	2:U:86:GLU:HA	2.03	0.74
1:K:189:VAL:CG1	1:K:333:GLY:HA2	2.37	0.74
1:E:349:LYS:HG3	1:E:368:LEU:HD11	1.69	0.74
1:H:189:VAL:HG12	1:H:190:GLU:N	2.05	0.74
1:A:259:ALA:O	1:A:263:VAL:HG23	1.88	0.74
1:M:503:ARG:HH11	1:M:507:GLN:HE22	1.39	0.74
1:F:522:VAL:HG22	1:G:39:VAL:HB	1.79	0.74
1:J:229:VAL:HG23	1:J:256:GLU:HB3	1.69	0.74
1:E:498:PRO:O	1:E:501:VAL:HG22	1.86	0.74
1:F:98:ALA:HB2	1:F:449:GLU:HG3	1.67	0.74
1:K:7:VAL:HG21	1:K:66:LEU:HD11	1.74	0.74
1:G:178:GLU:HG3	1:G:388:LEU:HD21	1.69	0.74
1:B:150:ILE:CD1	1:B:495:ILE:HA	2.16	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:214:LEU:HB3	1:C:245:PRO:CB	3.04	0.74
1:F:50:THR:HG22	1:F:52:ASP:N	2.12	0.74
1:A:50:THR:HG22	1:A:51:LYS:N	2.07	0.74
1:K:37:ASN:HD21	1:K:51:LYS:HE2	1.52	0.74
1:I:229:VAL:HG23	1:I:256:GLU:HB3	1.68	0.74
1:K:212:ALA:HB3	1:K:324:ILE:HB	1.77	0.74
1:N:503:ARG:HH11	1:N:507:GLN:HE22	1.38	0.74
1:M:459:GLY:HA3	1:N:114:LEU:HD12	1.69	0.74
2:Q:96:LEU:HA	2:R:14:ARG:HE	1.53	0.74
2:Q:51:GLY:HA3	2:Q:60:VAL:O	2.69	0.74
1:I:37:ASN:HD21	1:I:51:LYS:HE2	1.59	0.74
2:R:96:LEU:HA	2:S:14:ARG:HE	1.67	0.74
1:H:246:LEU:HB3	1:H:272:VAL:HG12	1.69	0.74
1:A:72:GLN:HE22	1:A:75:LYS:NZ	2.00	0.74
1:N:229:VAL:HG23	1:N:256:GLU:HB3	1.74	0.74
1:G:229:VAL:HG21	2:U:36:ALA:HB2	1.69	0.74
1:H:229:VAL:HG23	1:H:256:GLU:HB3	1.75	0.74
1:L:180:LYS:C	1:M:281:GLY:HA3	2.11	0.74
1:K:85:ALA:HB1	1:K:501:VAL:HG22	1.70	0.74
1:K:77:VAL:HG13	1:K:80:LYS:HE2	1.69	0.74
1:B:178:GLU:HG3	1:B:388:LEU:HD21	1.69	0.74
1:M:323:ARG:NH2	1:M:392:LYS:CE	2.50	0.74
1:M:37:ASN:HD21	1:M:51:LYS:HE2	1.52	0.74
1:H:459:GLY:HA3	1:I:114:LEU:HD12	1.85	0.74
2:S:8:ILE:HG21	2:S:16:VAL:HG21	1.73	0.74
1:J:37:ASN:HD21	1:J:51:LYS:HE2	1.53	0.74
1:F:233:LEU:O	1:F:237:GLU:HG3	1.88	0.74
1:I:503:ARG:HH11	1:I:507:GLN:HE22	1.36	0.74
1:J:189:VAL:HG12	1:J:190:GLU:N	2.03	0.74
1:D:307:LYS:HE3	2:S:34:ASP:HB3	4.22	0.74
1:B:259:ALA:O	1:B:263:VAL:HG23	1.87	0.74
1:J:217:ALA:CB	1:J:245:PRO:HG2	2.26	0.74
1:H:232:LEU:HD22	1:H:236:LEU:HD22	1.79	0.74
1:M:136:ILE:O	1:M:410:ILE:N	2.19	0.73
2:P:96:LEU:HB3	2:Q:89:ILE:HG21	1.70	0.73
2:S:100:GLN:OE1	2:T:9:LYS:HE2	1.88	0.73
1:M:235:ILE:HD11	1:M:311:ALA:CB	2.23	0.73
1:J:283:ARG:HH21	1:J:367:ARG:HH11	3.33	0.73
1:M:77:VAL:HG13	1:M:80:LYS:HE2	1.68	0.73
1:I:77:VAL:HG13	1:I:80:LYS:HE2	1.71	0.73
1:M:323:ARG:NH1	1:M:392:LYS:HE2	2.03	0.73
1:M:246:LEU:HB3	1:M:272:VAL:HG12	1.68	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:120:ILE:O	1:E:124:VAL:HG23	1.99	0.73
1:I:7:VAL:HG21	1:I:66:LEU:HD11	1.69	0.73
1:G:120:ILE:O	1:G:124:VAL:HG23	1.88	0.73
2:T:32:LEU:HG	2:T:33:PRO:HD2	1.67	0.73
1:D:235:ILE:HD11	1:D:311:ALA:CB	2.18	0.73
1:M:7:VAL:HG21	1:M:66:LEU:HD11	1.70	0.73
1:H:194:PHE:CD1	1:H:278:PRO:HB3	2.32	0.73
1:B:149:THR:HG23	1:B:155:PRO:HA	1.69	0.73
1:C:136:ILE:HD11	1:C:477:ARG:NH2	2.03	0.73
1:N:50:THR:HG22	1:N:52:ASP:N	2.08	0.73
1:B:218:PHE:HB3	1:B:316:LEU:HD13	1.76	0.73
1:G:312:THR:HB	1:G:315:MET:HG2	2.57	0.73
1:K:219:ILE:HD12	1:K:295:THR:HG23	1.74	0.73
1:C:236:LEU:CB	2:Q:30:ILE:HD11	2.18	0.73
1:A:149:THR:HG23	1:A:155:PRO:HA	1.71	0.73
1:M:277:ALA:HB3	1:M:284:ARG:HD2	1.72	0.73
1:A:34:ARG:HH12	1:G:118:ARG:HH22	1.36	0.73
1:N:277:ALA:HB3	1:N:284:ARG:HD2	1.73	0.73
2:Q:18:LYS:HG2	2:Q:87:TYR:CD2	2.24	0.73
1:E:218:PHE:CE1	1:E:244:LYS:HD2	2.24	0.73
1:B:136:ILE:HD11	1:B:477:ARG:HH21	1.68	0.73
1:I:219:ILE:HD12	1:I:295:THR:HG23	1.68	0.73
1:A:98:ALA:HB2	1:A:449:GLU:HG3	1.73	0.73
1:B:98:ALA:HB2	1:B:449:GLU:HG3	1.70	0.73
1:E:150:ILE:CD1	1:E:495:ILE:HA	2.12	0.73
1:B:284:ARG:O	1:B:288:LEU:HG	2.14	0.73
2:S:13:ASP:OD1	2:S:13:ASP:O	2.07	0.73
1:M:422:ILE:HG23	1:M:444:ARG:HG3	1.78	0.73
1:C:120:ILE:O	1:C:124:VAL:HG23	1.89	0.73
2:O:14:ARG:HE	2:U:96:LEU:HA	1.85	0.73
1:G:50:THR:HG22	1:G:52:ASP:N	2.07	0.73
1:D:235:ILE:CG2	1:D:311:ALA:HB3	4.28	0.73
1:K:410:ILE:HB	1:K:496:VAL:CG1	2.19	0.73
1:L:194:PHE:CD1	1:L:278:PRO:HB3	2.23	0.73
1:J:300:ILE:HG21	1:J:308:LEU:HD23	1.76	0.73
1:A:237:GLU:CG	2:O:28:GLY:HA3	2.45	0.73
1:M:212:ALA:HB3	1:M:324:ILE:HB	1.71	0.73
1:N:410:ILE:HB	1:N:496:VAL:CG1	2.24	0.73
1:N:246:LEU:HB3	1:N:272:VAL:HG12	1.69	0.73
1:H:290:ASP:OD1	1:H:371:LEU:HD11	1.89	0.73
2:P:25:LYS:HG2	2:P:31:VAL:HG22	1.92	0.73
1:I:300:ILE:HG21	1:I:308:LEU:HD23	1.74	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:61:PRO:HG3	2:U:59:ARG:NH2	7.43	0.72
1:H:300:ILE:HG21	1:H:308:LEU:HD23	1.69	0.72
2:Q:80:ILE:HG12	2:Q:81:GLU:H	4.25	0.72
1:K:246:LEU:HB3	1:K:272:VAL:HG12	1.69	0.72
1:L:422:ILE:HG23	1:L:444:ARG:HG3	1.71	0.72
1:J:422:ILE:HG23	1:J:444:ARG:HG3	1.70	0.72
2:S:96:LEU:HD22	2:T:14:ARG:HH12	6.69	0.72
2:P:13:ASP:HB2	2:P:62:LEU:HD21	1.71	0.72
1:C:217:ALA:HB2	1:C:245:PRO:HB2	1.69	0.72
1:A:422:ILE:HG23	1:A:444:ARG:HG3	1.71	0.72
1:B:230:ARG:HH21	2:P:38:GLU:CD	1.92	0.72
1:M:189:VAL:HG11	1:M:333:GLY:HA2	1.69	0.72
1:F:235:ILE:CD1	1:F:311:ALA:HB3	2.25	0.72
2:S:14:ARG:HH11	2:S:14:ARG:HG3	1.55	0.72
2:S:5:LYS:CG	2:S:6:THR:H	4.67	0.72
1:I:74:LEU:HD12	1:I:512:ILE:HD12	1.82	0.72
1:N:361:ARG:O	1:N:365:GLN:HG2	1.92	0.72
1:N:384:THR:HG22	1:N:386:THR:H	1.54	0.72
1:H:362:GLU:O	1:H:365:GLN:HB2	1.90	0.72
1:E:229:VAL:HG21	2:S:36:ALA:CB	2.97	0.72
1:M:283:ARG:HH11	1:M:363:LYS:HE3	1.59	0.72
1:M:410:ILE:HB	1:M:496:VAL:CG1	2.19	0.72
1:H:217:ALA:CB	1:H:245:PRO:HG2	2.19	0.72
2:P:10:PRO:HB2	2:P:14:ARG:O	2.17	0.72
1:G:218:PHE:HB3	1:G:316:LEU:HD13	1.72	0.72
1:L:297:GLY:HA3	1:L:317:GLY:H	1.54	0.72
1:L:503:ARG:HH11	1:L:507:GLN:HE22	1.37	0.72
1:H:235:ILE:HD11	1:H:311:ALA:CB	2.23	0.72
2:O:81:GLU:HG3	2:O:85:GLU:H	1.55	0.72
1:H:283:ARG:HH12	1:H:364:LEU:CD1	2.33	0.72
1:G:235:ILE:CD1	1:G:311:ALA:HB3	2.20	0.72
1:N:7:VAL:HG21	1:N:66:LEU:HD11	1.70	0.72
1:I:464:VAL:HG12	1:I:468:GLN:HE21	1.55	0.72
1:J:277:ALA:HB3	1:J:284:ARG:HD2	1.74	0.72
1:C:212:ALA:HB3	1:C:324:ILE:HB	1.72	0.72
1:N:422:ILE:HG23	1:N:444:ARG:HG3	1.72	0.72
1:L:246:LEU:HB3	1:L:272:VAL:HG12	1.73	0.72
1:C:225:LYS:HG3	1:C:252:ASP:HB3	4.04	0.72
1:A:359:TYR:CE2	1:A:363:LYS:HE2	3.69	0.72
1:D:498:PRO:O	1:D:501:VAL:HG22	1.91	0.72
1:E:178:GLU:HG3	1:E:388:LEU:HD21	1.72	0.72
1:F:150:ILE:CD1	1:F:495:ILE:HA	2.11	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:233:LEU:O	1:C:237:GLU:HG3	1.90	0.72
1:C:235:ILE:HD11	1:C:311:ALA:HB3	1.70	0.72
1:M:219:ILE:HD12	1:M:295:THR:HG23	1.71	0.72
1:G:230:ARG:NH2	2:U:38:GLU:OE2	2.22	0.72
1:J:361:ARG:O	1:J:365:GLN:HG2	1.90	0.72
1:N:277:ALA:CB	1:N:284:ARG:HD2	2.26	0.72
2:S:73:ALA:HB1	2:S:75:TYR:CE2	2.32	0.72
1:F:498:PRO:O	1:F:501:VAL:HG22	1.89	0.72
1:L:384:THR:HG22	1:L:386:THR:H	1.55	0.72
1:E:269:THR:HG21	2:S:30:ILE:HA	1.72	0.72
1:M:224:LYS:HG2	1:M:225:LYS:N	2.05	0.72
1:K:229:VAL:HG23	1:K:256:GLU:HB3	1.75	0.72
1:N:224:LYS:HG2	1:N:225:LYS:N	2.05	0.72
1:L:228:ASN:HD21	1:L:230:ARG:HB3	1.54	0.72
1:L:74:LEU:HD21	1:L:93:THR:HG23	1.70	0.72
2:Q:70:VAL:HG11	2:Q:95:LEU:CD2	2.36	0.71
2:R:8:ILE:HG21	2:R:16:VAL:HG21	1.72	0.71
1:L:243:GLY:CA	1:M:228:ASN:CB	2.63	0.71
1:C:50:THR:HG22	1:C:51:LYS:N	2.03	0.71
1:J:74:LEU:HD12	1:J:512:ILE:CD1	2.20	0.71
1:J:267:ARG:O	1:K:256:GLU:HG3	1.95	0.71
1:F:217:ALA:HB2	1:F:245:PRO:HB2	1.72	0.71
1:L:247:LEU:HD22	1:L:322:VAL:HG11	1.80	0.71
1:K:54:VAL:HG22	1:K:89:THR:HG21	1.84	0.71
1:K:235:ILE:HD11	1:K:311:ALA:CB	2.16	0.71
2:P:20:ILE:HG13	2:P:43:GLY:HA2	1.71	0.71
1:M:206:ASN:ND2	1:M:389:LYS:HE2	2.05	0.71
1:H:503:ARG:HH11	1:H:507:GLN:HE22	1.37	0.71
2:T:10:PRO:HG3	2:T:47:ALA:O	1.89	0.71
2:O:54:LEU:HG	2:P:55:GLU:O	1.90	0.71
1:B:136:ILE:O	1:B:410:ILE:HG22	2.56	0.71
1:G:149:THR:HG23	1:G:155:PRO:HA	1.70	0.71
1:E:450:PRO:O	1:E:454:ILE:HG13	2.11	0.71
1:J:384:THR:HG22	1:J:386:THR:H	1.54	0.71
1:L:464:VAL:HG12	1:L:468:GLN:HE21	1.55	0.71
1:F:19:GLY:HA3	1:F:67:GLU:O	1.91	0.71
1:D:136:ILE:HD11	1:D:477:ARG:HH21	1.63	0.71
1:F:136:ILE:HD11	1:F:477:ARG:HH21	1.56	0.71
1:B:69:ILE:HD11	1:C:41:GLU:HB2	1.83	0.71
1:M:300:ILE:HG21	1:M:308:LEU:HD23	1.71	0.71
1:I:362:GLU:O	1:I:365:GLN:HB2	1.96	0.71
1:I:361:ARG:O	1:I:365:GLN:HG2	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:48:VAL:CG1	2:T:62:LEU:HD12	4.50	0.71
1:L:84:VAL:HG12	1:L:500:LYS:HE2	1.77	0.71
1:H:84:VAL:HG12	1:H:500:LYS:HE2	1.70	0.71
1:J:224:LYS:HG2	1:J:225:LYS:N	2.09	0.71
1:F:149:THR:HG23	1:F:155:PRO:HA	1.77	0.71
1:N:283:ARG:NH2	1:N:367:ARG:HD3	2.04	0.71
1:F:136:ILE:O	1:F:410:ILE:HG22	2.36	0.71
1:J:283:ARG:HG3	1:J:363:LYS:HZ1	3.43	0.71
1:L:410:ILE:HB	1:L:496:VAL:CG1	2.21	0.71
1:L:74:LEU:HD12	1:L:512:ILE:HD12	1.72	0.71
1:G:498:PRO:O	1:G:501:VAL:HG22	1.92	0.71
1:H:224:LYS:HG2	1:H:225:LYS:N	2.08	0.71
1:J:232:LEU:HD22	1:J:236:LEU:HD22	1.71	0.71
1:B:229:VAL:HG12	1:B:233:LEU:HD11	1.85	0.71
1:I:189:VAL:HG12	1:I:190:GLU:N	2.07	0.71
1:J:189:VAL:CG1	1:J:333:GLY:HA2	2.28	0.71
1:L:283:ARG:HH12	1:L:364:LEU:HD12	1.56	0.71
2:T:100:GLN:HE22	2:U:9:LYS:NZ	6.51	0.71
1:L:182:LEU:HD11	1:M:363:LYS:HZ1	1.92	0.71
1:L:50:THR:HG22	1:L:52:ASP:N	2.05	0.71
1:E:222:VAL:HG22	1:E:300:ILE:HD12	2.45	0.71
1:K:224:LYS:HG2	1:K:225:LYS:N	2.06	0.71
2:R:73:ALA:HB1	2:R:75:TYR:CE2	2.36	0.71
1:K:283:ARG:NH1	1:K:363:LYS:HE3	2.06	0.71
1:A:236:LEU:HB2	2:O:30:ILE:HD11	1.90	0.71
1:I:50:THR:HG22	1:I:52:ASP:N	2.04	0.71
1:F:118:ARG:HH22	1:G:34:ARG:HH12	1.41	0.71
1:N:228:ASN:HD21	1:N:230:ARG:HB3	1.56	0.71
1:D:382:ALA:HB3	1:D:388:LEU:HB2	1.75	0.71
1:I:224:LYS:HG2	1:I:225:LYS:N	2.07	0.71
1:A:350:LYS:O	1:B:208:GLU:HA	7.27	0.71
2:O:79:GLU:HG2	2:O:88:VAL:HG22	1.95	0.71
2:R:56:ASN:ND2	2:S:55:GLU:O	3.30	0.71
1:M:116:LEU:O	1:M:120:ILE:HG13	1.91	0.71
1:J:7:VAL:HG21	1:J:66:LEU:HD11	1.73	0.71
1:L:277:ALA:HB3	1:L:284:ARG:HD2	1.77	0.71
2:P:13:ASP:OD2	2:P:92:GLU:HB2	1.91	0.70
1:L:217:ALA:CB	1:L:245:PRO:HG2	2.20	0.70
1:B:219:ILE:HD13	1:B:295:THR:CG2	3.16	0.70
1:D:50:THR:CG2	1:D:52:ASP:H	2.03	0.70
1:F:229:VAL:HG12	1:F:233:LEU:HD11	1.71	0.70
1:A:366:GLU:O	1:A:370:LYS:HG3	1.98	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:247:LEU:HD22	1:K:322:VAL:HG11	1.92	0.70
1:K:464:VAL:HG12	1:K:468:GLN:HE21	1.56	0.70
2:R:20:ILE:HG13	2:R:43:GLY:HA2	1.74	0.70
1:L:224:LYS:HG2	1:L:225:LYS:N	2.06	0.70
1:D:118:ARG:HH22	1:E:34:ARG:HH12	1.50	0.70
2:O:97:ALA:HA	2:P:11:LEU:HG	1.86	0.70
2:Q:26:THR:HG22	2:Q:32:LEU:HD21	5.62	0.70
1:M:323:ARG:NH1	1:M:392:LYS:CE	2.53	0.70
1:J:410:ILE:HB	1:J:496:VAL:CG1	2.23	0.70
1:K:228:ASN:HD21	1:K:230:ARG:HB3	1.55	0.70
1:A:69:ILE:HD11	1:B:41:GLU:HB2	1.72	0.70
1:K:84:VAL:HG12	1:K:500:LYS:HE2	1.72	0.70
2:T:100:GLN:OXT	2:U:6:THR:HG23	2.75	0.70
2:P:48:VAL:HG12	2:P:62:LEU:HD13	2.52	0.70
1:C:246:LEU:HB3	1:C:272:VAL:HG12	1.72	0.70
1:J:246:LEU:HB3	1:J:272:VAL:HG12	1.73	0.70
1:K:361:ARG:O	1:K:365:GLN:HG2	1.91	0.70
2:Q:89:ILE:HG22	2:Q:89:ILE:O	2.20	0.70
1:C:247:LEU:HD22	1:C:322:VAL:HG11	2.34	0.70
1:F:85:ALA:HB1	1:F:501:VAL:HG12	1.84	0.70
1:H:384:THR:HG22	1:H:386:THR:H	1.55	0.70
1:N:290:ASP:OD1	1:N:371:LEU:HD11	1.93	0.70
1:A:368:LEU:O	1:A:368:LEU:HD12	1.92	0.70
1:M:384:THR:HG22	1:M:386:THR:H	1.58	0.70
1:K:277:ALA:HB3	1:K:284:ARG:HD2	1.76	0.70
1:J:290:ASP:OD1	1:J:371:LEU:HD11	1.91	0.70
1:D:284:ARG:O	1:D:288:LEU:HG	1.91	0.70
2:Q:58:GLN:HG2	2:Q:59:ARG:N	4.93	0.70
1:A:118:ARG:HH22	1:B:34:ARG:HH12	1.59	0.70
1:L:526:LYS:CD	1:L:527:PRO:HD2	2.21	0.70
1:G:284:ARG:O	1:G:288:LEU:HG	1.91	0.70
1:N:194:PHE:CD1	1:N:278:PRO:HB3	2.26	0.70
2:Q:8:ILE:HD12	2:Q:8:ILE:N	2.07	0.70
1:D:366:GLU:O	1:D:370:LYS:HG3	1.91	0.70
1:N:116:LEU:O	1:N:120:ILE:HG13	1.92	0.70
1:M:84:VAL:HG12	1:M:500:LYS:HE2	1.78	0.70
1:J:464:VAL:HG12	1:J:468:GLN:HE21	1.56	0.70
2:S:20:ILE:HG13	2:S:43:GLY:HA2	1.79	0.70
1:N:77:VAL:HG13	1:N:80:LYS:HE2	1.74	0.70
1:J:74:LEU:HD12	1:J:512:ILE:HD12	1.72	0.70
1:C:352:LEU:HD23	1:C:364:LEU:HD12	2.63	0.70
1:H:212:ALA:HB3	1:H:324:ILE:HB	1.75	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:361:ARG:O	1:L:365:GLN:HG2	1.98	0.70
1:A:526:LYS:HD3	1:A:529:LYS:CE	2.22	0.70
1:D:522:VAL:HG22	1:E:39:VAL:HB	1.74	0.70
1:B:422:ILE:HG23	1:B:444:ARG:HG3	1.77	0.70
1:D:234:PRO:O	1:D:238:GLN:HG3	1.91	0.70
1:D:23:VAL:HG22	1:D:60:VAL:HG11	1.72	0.70
1:B:352:LEU:HD21	1:B:364:LEU:HB2	1.73	0.70
1:M:283:ARG:NH2	1:M:367:ARG:HD3	2.08	0.69
1:C:224:LYS:H	1:C:224:LYS:HD2	4.45	0.69
1:D:94:VAL:HG12	1:D:449:GLU:HB3	1.74	0.69
1:I:277:ALA:HB3	1:I:284:ARG:HD2	1.74	0.69
1:G:373:GLY:O	1:G:375:VAL:N	2.25	0.69
1:J:283:ARG:HH11	1:J:363:LYS:CE	2.55	0.69
1:L:212:ALA:HB3	1:L:324:ILE:HB	1.81	0.69
1:I:84:VAL:HG12	1:I:500:LYS:HE2	1.74	0.69
1:C:422:ILE:HG23	1:C:444:ARG:HG3	1.79	0.69
1:C:348:ILE:HD12	1:C:367:ARG:NE	4.54	0.69
1:M:323:ARG:CZ	1:M:392:LYS:NZ	2.53	0.69
1:C:352:LEU:HD21	1:C:364:LEU:HB2	1.90	0.69
1:F:120:ILE:O	1:F:124:VAL:HG23	1.98	0.69
1:I:54:VAL:HG22	1:I:89:THR:HG21	1.74	0.69
1:L:277:ALA:CB	1:L:284:ARG:HD2	2.30	0.69
1:I:384:THR:HG22	1:I:386:THR:H	1.56	0.69
1:D:96:ALA:O	1:D:100:VAL:HG23	2.16	0.69
1:M:54:VAL:HG22	1:M:89:THR:HG21	1.73	0.69
1:J:249:ILE:O	1:J:249:ILE:HG22	2.01	0.69
1:B:136:ILE:HD11	1:B:477:ARG:NH2	2.16	0.69
1:I:217:ALA:CB	1:I:245:PRO:HG2	2.23	0.69
2:Q:19:ARG:HB3	2:Q:40:PRO:HB2	3.79	0.69
1:E:515:LEU:HD12	1:F:49:ILE:HG21	1.73	0.69
1:E:116:LEU:O	1:E:120:ILE:HG13	2.04	0.69
1:J:54:VAL:HG22	1:J:89:THR:HG21	1.81	0.69
1:F:234:PRO:O	1:F:238:GLN:HG3	1.92	0.69
2:S:48:VAL:CG1	2:S:62:LEU:HD13	2.93	0.69
1:I:235:ILE:HD11	1:I:311:ALA:CB	2.17	0.69
1:D:50:THR:HG21	1:D:52:ASP:HB3	1.75	0.69
1:H:410:ILE:HB	1:H:496:VAL:CG1	2.23	0.69
1:L:219:ILE:HD12	1:L:295:THR:HG23	1.74	0.69
1:C:136:ILE:HD11	1:C:477:ARG:HH21	1.57	0.69
1:J:264:ASN:HB3	1:J:269:THR:HB	1.73	0.69
1:A:233:LEU:HD23	2:O:30:ILE:HG21	2.22	0.69
2:S:10:PRO:HG3	2:S:47:ALA:O	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:234:PRO:CG	1:L:309:GLU:HA	2.27	0.69
1:L:269:THR:HA	1:M:256:GLU:CG	2.23	0.69
1:A:363:LYS:C	1:A:365:GLN:H	2.23	0.69
1:H:277:ALA:CB	1:H:284:ARG:HD2	2.25	0.69
1:N:212:ALA:HB3	1:N:324:ILE:HB	1.78	0.69
1:A:178:GLU:HG3	1:A:388:LEU:HD21	1.83	0.69
2:U:77:GLY:HA3	2:U:90:LEU:HD23	1.75	0.69
1:H:264:ASN:HB3	1:H:269:THR:HB	1.78	0.69
1:D:149:THR:HG23	1:D:155:PRO:HA	1.73	0.69
1:E:229:VAL:HG11	2:S:32:LEU:CD2	3.68	0.69
2:R:13:ASP:HB2	2:R:62:LEU:HD11	1.75	0.69
2:R:81:GLU:HG3	2:R:85:GLU:H	1.58	0.69
1:C:298:THR:HG23	1:C:304:LEU:CD1	7.70	0.69
1:I:410:ILE:HB	1:I:496:VAL:CG1	2.23	0.69
1:H:283:ARG:NH1	1:H:363:LYS:HE3	2.07	0.69
1:D:222:VAL:HG22	1:D:300:ILE:HD12	1.94	0.69
1:G:224:LYS:HB3	1:G:302:GLU:OE1	1.92	0.69
1:A:498:PRO:O	1:A:501:VAL:HG22	1.93	0.69
1:L:360:ALA:O	1:L:363:LYS:HG3	2.57	0.69
1:M:277:ALA:CB	1:M:284:ARG:HD2	2.26	0.69
1:M:268:GLY:HA3	1:N:227:SER:HB2	1.75	0.69
1:E:279:GLY:C	1:E:284:ARG:HB3	2.70	0.68
1:M:307:LYS:HE3	1:M:310:ASN:HD21	1.75	0.68
1:F:345:ILE:HG23	1:F:368:LEU:HD13	1.77	0.68
1:E:235:ILE:O	1:E:239:VAL:HG23	1.92	0.68
1:M:366:GLU:O	1:M:370:LYS:HG3	1.94	0.68
1:I:325:THR:HG22	1:I:327:ASP:N	2.01	0.68
1:H:283:ARG:HG2	1:H:363:LYS:HZ2	1.89	0.68
1:J:50:THR:HG22	1:J:52:ASP:N	2.12	0.68
1:N:526:LYS:HG3	1:N:527:PRO:CD	2.21	0.68
1:K:384:THR:HG22	1:K:386:THR:H	1.59	0.68
1:G:72:GLN:HE22	1:G:75:LYS:NZ	1.91	0.68
1:A:325:THR:HG22	1:A:326:LYS:H	1.65	0.68
1:C:307:LYS:HB3	1:C:310:ASN:HD22	1.71	0.68
1:L:290:ASP:OD1	1:L:371:LEU:HD11	1.93	0.68
1:G:259:ALA:O	1:G:263:VAL:HG23	1.94	0.68
1:B:118:ARG:HH22	1:C:34:ARG:HH12	1.48	0.68
1:E:527:PRO:O	1:E:528:GLU:HB2	1.93	0.68
2:O:9:LYS:HB2	2:U:98:VAL:O	2.14	0.68
1:F:136:ILE:HD11	1:F:477:ARG:NH2	2.12	0.68
1:H:283:ARG:HH11	1:H:363:LYS:HE3	1.58	0.68
1:K:408:GLU:OE2	1:K:500:LYS:HG3	2.55	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:352:LEU:HD21	1:D:364:LEU:HB2	1.76	0.68
1:C:118:ARG:HH22	1:D:34:ARG:HH12	1.38	0.68
1:G:212:ALA:HB3	1:G:324:ILE:HB	1.73	0.68
1:F:279:GLY:C	1:F:284:ARG:HB3	2.13	0.68
1:F:72:GLN:HE22	1:F:75:LYS:NZ	1.90	0.68
1:B:235:ILE:HD11	1:B:316:LEU:HD21	1.75	0.68
2:U:73:ALA:HB1	2:U:75:TYR:CE2	2.29	0.68
2:U:74:LYS:NZ	2:U:75:TYR:HB3	6.45	0.68
1:G:223:GLU:O	1:G:251:GLU:HB2	2.56	0.68
1:I:59:GLU:O	1:J:4:LYS:HG3	1.92	0.68
1:D:279:GLY:C	1:D:284:ARG:HB3	2.14	0.68
1:C:450:PRO:O	1:C:454:ILE:HG13	1.94	0.68
1:G:189:VAL:CG1	1:G:190:GLU:N	2.56	0.68
1:H:464:VAL:HG12	1:H:468:GLN:HE21	1.58	0.68
2:O:14:ARG:HH11	2:O:14:ARG:HG3	1.57	0.68
2:O:10:PRO:HB2	2:O:14:ARG:O	2.24	0.68
1:A:150:ILE:CD1	1:A:495:ILE:HA	2.19	0.68
1:B:246:LEU:HB3	1:B:272:VAL:CG1	2.43	0.68
1:C:326:LYS:HD3	1:C:326:LYS:O	4.53	0.68
1:E:325:THR:HG22	1:E:326:LYS:N	2.08	0.68
1:M:222:VAL:HG12	1:M:224:LYS:H	1.58	0.68
1:I:352:LEU:HD23	1:I:364:LEU:HD22	5.53	0.68
1:E:136:ILE:HD11	1:E:477:ARG:HH21	1.99	0.68
2:P:12:GLY:O	2:P:13:ASP:CB	3.84	0.68
2:P:13:ASP:OD1	2:P:92:GLU:HB3	5.11	0.68
1:H:283:ARG:HH12	1:H:364:LEU:HD12	1.64	0.68
1:A:202:TYR:OH	1:G:289:LYS:HE2	1.94	0.68
1:N:247:LEU:HD22	1:N:322:VAL:HG11	1.78	0.68
1:I:366:GLU:O	1:I:370:LYS:HG3	1.94	0.68
1:F:263:VAL:O	1:F:267:ARG:HB2	2.15	0.68
2:R:98:VAL:HG23	2:S:11:LEU:HD11	2.25	0.68
1:G:258:LEU:HA	1:G:261:LEU:HD12	2.28	0.68
2:U:32:LEU:HD12	2:U:36:ALA:HB1	5.18	0.68
1:C:72:GLN:HE22	1:C:75:LYS:NZ	1.90	0.68
1:C:96:ALA:O	1:C:100:VAL:HG23	1.92	0.68
1:E:307:LYS:HB3	1:E:310:ASN:HD22	1.58	0.68
2:R:80:ILE:HG22	2:R:81:GLU:N	2.17	0.68
1:A:150:ILE:HD11	1:A:495:ILE:CA	2.17	0.68
1:F:270:LEU:HG	1:F:272:VAL:HG13	1.76	0.68
1:B:522:VAL:HG22	1:C:39:VAL:HB	1.82	0.68
1:G:222:VAL:HA	1:G:300:ILE:HB	2.22	0.68
1:H:103:GLY:O	1:H:107:VAL:HG23	2.09	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:P:80:ILE:HG22	2:P:81:GLU:N	2.09	0.68
1:C:236:LEU:HB2	2:Q:30:ILE:CD1	2.23	0.68
1:E:50:THR:CG2	1:E:52:ASP:H	2.04	0.68
2:S:5:LYS:HG2	2:S:6:THR:N	4.73	0.68
1:A:263:VAL:O	1:A:267:ARG:HB2	3.07	0.68
1:H:222:VAL:HG12	1:H:224:LYS:H	1.64	0.68
1:B:373:GLY:O	1:B:375:VAL:N	2.27	0.68
1:F:69:ILE:HD11	1:G:41:GLU:HB2	1.75	0.68
2:O:20:ILE:HG13	2:O:43:GLY:HA2	1.76	0.67
1:H:222:VAL:HG12	1:H:223:GLU:N	2.12	0.67
1:E:422:ILE:HG23	1:E:444:ARG:HG3	1.80	0.67
1:E:264:ASN:OD1	2:S:30:ILE:HG23	1.94	0.67
2:T:99:LEU:O	2:T:100:GLN:HG3	5.15	0.67
2:U:10:PRO:HB2	2:U:14:ARG:O	1.95	0.67
1:K:232:LEU:HD22	1:K:236:LEU:HD22	1.76	0.67
1:N:300:ILE:HG21	1:N:308:LEU:HD23	1.75	0.67
1:K:503:ARG:HH11	1:K:507:GLN:HE22	1.42	0.67
1:E:256:GLU:OE1	2:S:36:ALA:HA	1.94	0.67
2:U:8:ILE:HD12	2:U:8:ILE:N	2.09	0.67
1:I:234:PRO:CG	1:I:309:GLU:HA	2.25	0.67
1:B:189:VAL:CG1	1:B:190:GLU:N	2.57	0.67
1:H:96:ALA:O	1:H:100:VAL:HG23	2.00	0.67
1:I:459:GLY:HA3	1:J:114:LEU:HD12	1.74	0.67
1:L:300:ILE:HG21	1:L:308:LEU:HD23	1.81	0.67
2:P:38:GLU:OE1	2:P:74:LYS:NZ	2.27	0.67
2:R:14:ARG:HH11	2:R:14:ARG:HG3	1.73	0.67
1:C:345:ILE:CG1	1:C:368:LEU:HD23	6.98	0.67
1:K:74:LEU:HD12	1:K:512:ILE:HD12	1.77	0.67
1:B:228:ASN:ND2	1:B:231:GLU:HG3	2.09	0.67
1:K:277:ALA:CB	1:K:284:ARG:HD2	2.28	0.67
1:G:94:VAL:HG12	1:G:449:GLU:HB3	1.82	0.67
1:H:361:ARG:O	1:H:365:GLN:HG2	2.01	0.67
2:S:80:ILE:HG22	2:S:81:GLU:N	2.09	0.67
1:G:422:ILE:HG23	1:G:444:ARG:HG3	1.75	0.67
1:A:301:SER:HB2	1:A:304:LEU:HB3	1.77	0.67
2:Q:15:VAL:HG12	2:Q:16:VAL:H	3.96	0.67
2:Q:79:GLU:C	2:Q:80:ILE:HG13	2.15	0.67
1:A:136:ILE:HD11	1:A:477:ARG:HH21	1.67	0.67
1:J:219:ILE:HD12	1:J:295:THR:CG2	2.26	0.67
1:J:277:ALA:CB	1:J:284:ARG:HD2	2.27	0.67
1:N:222:VAL:HG12	1:N:224:LYS:H	1.64	0.67
1:I:194:PHE:CD1	1:I:278:PRO:HB3	2.30	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:157:VAL:HG21	1:J:395:PHE:CE2	2.32	0.67
1:L:372:ALA:O	1:L:374:GLY:N	2.26	0.67
1:G:225:LYS:HG3	1:G:252:ASP:HB3	3.99	0.67
1:D:515:LEU:HD12	1:E:49:ILE:HG21	2.10	0.67
1:K:222:VAL:HG12	1:K:223:GLU:N	2.13	0.67
1:H:249:ILE:HG22	1:H:249:ILE:O	1.93	0.67
2:U:81:GLU:HG3	2:U:85:GLU:H	1.59	0.67
1:A:50:THR:CG2	1:A:52:ASP:H	2.07	0.67
1:D:325:THR:HG22	1:D:326:LYS:H	1.60	0.67
1:G:217:ALA:HB2	1:G:245:PRO:HB2	1.89	0.67
1:L:503:ARG:NH1	1:L:507:GLN:HE22	1.93	0.67
1:K:222:VAL:HG12	1:K:224:LYS:H	1.68	0.67
1:C:19:GLY:HA3	1:C:67:GLU:O	1.95	0.67
1:M:157:VAL:HG21	1:M:395:PHE:CE2	2.32	0.67
1:A:455:ALA:HB1	1:A:465:ILE:HD12	1.76	0.67
2:O:10:PRO:HG3	2:O:47:ALA:O	2.19	0.67
2:Q:55:GLU:CG	2:R:55:GLU:HG2	2.24	0.67
1:C:78:ALA:O	1:C:89:THR:HG22	1.95	0.67
1:B:50:THR:CG2	1:B:52:ASP:H	2.11	0.67
1:L:180:LYS:O	1:M:281:GLY:CA	2.61	0.67
1:I:385:GLU:HB2	1:J:280:PHE:CE2	2.30	0.67
1:A:279:GLY:C	1:A:284:ARG:HB3	2.16	0.67
1:I:74:LEU:HD12	1:I:512:ILE:CD1	2.30	0.67
2:P:8:ILE:HD12	2:P:8:ILE:N	2.10	0.67
1:N:249:ILE:O	1:N:249:ILE:HG22	1.94	0.67
1:F:96:ALA:O	1:F:100:VAL:HG23	1.94	0.67
1:K:290:ASP:OD1	1:K:371:LEU:HD11	1.98	0.67
2:T:22:GLU:OE1	2:T:37:LYS:HB3	5.70	0.67
2:R:10:PRO:HG3	2:R:47:ALA:O	2.26	0.67
1:B:325:THR:HG22	1:B:326:LYS:N	2.11	0.67
2:U:51:GLY:HA2	2:U:62:LEU:HD21	3.35	0.67
1:B:240:ALA:HA	1:B:270:LEU:HD13	2.00	0.67
1:N:217:ALA:CB	1:N:245:PRO:HG2	2.24	0.67
1:E:351:GLU:HG3	1:F:326:LYS:HZ1	1.59	0.67
1:F:50:THR:CG2	1:F:52:ASP:H	2.18	0.67
1:C:50:THR:HG22	1:C:52:ASP:N	2.10	0.67
1:M:234:PRO:CG	1:M:309:GLU:HA	2.24	0.67
1:F:173:ILE:HD12	1:F:366:GLU:HA	2.02	0.67
1:B:235:ILE:HD12	1:B:311:ALA:CB	2.49	0.66
1:L:40:LEU:HD23	1:L:59:GLU:CG	2.25	0.66
1:H:31:LEU:HD13	1:H:90:THR:HG22	1.76	0.66
2:R:48:VAL:HG12	2:R:62:LEU:CD1	4.45	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:116:LEU:O	1:G:120:ILE:HG13	1.95	0.66
1:L:408:GLU:OE2	1:L:500:LYS:HG3	1.94	0.66
1:C:184:THR:HG23	1:C:380:VAL:HA	1.77	0.66
2:O:73:ALA:HB1	2:O:75:TYR:CE2	2.35	0.66
1:E:72:GLN:HE22	1:E:75:LYS:NZ	2.02	0.66
1:H:524:ALA:HA	1:N:41:GLU:HG2	1.77	0.66
2:T:98:VAL:C	2:U:8:ILE:HG23	5.22	0.66
2:U:53:VAL:HG22	2:U:59:ARG:HG2	1.77	0.66
1:H:234:PRO:CG	1:H:309:GLU:HA	2.32	0.66
1:B:85:ALA:HB1	1:B:501:VAL:HG12	1.78	0.66
1:E:96:ALA:O	1:E:100:VAL:HG23	2.19	0.66
1:N:157:VAL:HG21	1:N:395:PHE:CZ	2.30	0.66
2:O:54:LEU:CD2	2:P:57:GLY:N	2.53	0.66
1:E:290:ASP:HB3	1:E:371:LEU:HD21	1.77	0.66
1:K:234:PRO:CG	1:K:309:GLU:HA	2.23	0.66
1:H:74:LEU:HD12	1:H:512:ILE:CD1	2.29	0.66
1:H:54:VAL:HG22	1:H:89:THR:HG21	1.78	0.66
1:G:249:ILE:HD11	1:G:331:ILE:HD11	2.64	0.66
1:M:290:ASP:OD1	1:M:371:LEU:HD11	1.96	0.66
1:D:150:ILE:CD1	1:D:495:ILE:HA	2.14	0.66
1:J:40:LEU:HD23	1:J:59:GLU:CG	2.25	0.66
1:K:385:GLU:HB2	1:L:280:PHE:CD2	2.31	0.66
1:D:72:GLN:HE22	1:D:75:LYS:NZ	2.01	0.66
1:N:219:ILE:HD12	1:N:295:THR:CG2	2.25	0.66
1:F:455:ALA:HB1	1:F:465:ILE:HD12	1.81	0.66
1:I:219:ILE:HD12	1:I:295:THR:CG2	2.26	0.66
1:A:240:ALA:HA	1:A:270:LEU:HD13	1.96	0.66
2:T:20:ILE:HG13	2:T:43:GLY:HA2	1.76	0.66
2:S:96:LEU:HD23	2:T:14:ARG:HH12	5.70	0.66
1:C:277:ALA:HB1	1:C:284:ARG:HD2	2.87	0.66
1:M:323:ARG:NH1	1:M:392:LYS:HZ1	1.89	0.66
1:K:410:ILE:HB	1:K:496:VAL:HG11	1.78	0.66
1:E:94:VAL:CG1	1:E:449:GLU:HB3	2.25	0.66
1:D:233:LEU:O	1:D:237:GLU:HG3	2.17	0.66
1:A:19:GLY:HA3	1:A:67:GLU:O	2.00	0.66
1:J:212:ALA:HB3	1:J:324:ILE:HB	1.77	0.66
1:E:228:ASN:HD22	1:E:231:GLU:HG3	4.48	0.66
1:J:103:GLY:O	1:J:107:VAL:HG23	1.96	0.66
2:Q:17:VAL:HG12	2:Q:45:VAL:HA	4.97	0.66
2:U:45:VAL:HG21	2:U:64:VAL:HG11	1.77	0.66
1:E:50:THR:HG21	1:E:52:ASP:HB3	1.76	0.66
1:C:325:THR:HG22	1:C:326:LYS:N	2.15	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:246:LEU:HB3	1:A:272:VAL:CG1	2.25	0.66
1:D:94:VAL:CG1	1:D:449:GLU:HB3	2.25	0.66
1:G:382:ALA:HB3	1:G:388:LEU:HB2	1.77	0.66
1:L:372:ALA:C	1:L:374:GLY:H	2.00	0.66
1:E:217:ALA:HB2	1:E:245:PRO:HB2	1.78	0.65
1:G:325:THR:HG22	1:G:326:LYS:N	2.28	0.65
1:L:180:LYS:CB	1:M:281:GLY:CA	2.74	0.65
1:L:264:ASN:HB3	1:L:269:THR:HB	1.81	0.65
1:E:94:VAL:HG12	1:E:449:GLU:HB3	1.79	0.65
1:B:120:ILE:O	1:B:124:VAL:HG23	2.00	0.65
1:D:178:GLU:HG3	1:D:388:LEU:HD21	1.83	0.65
1:B:455:ALA:HB1	1:B:465:ILE:HD12	1.76	0.65
1:A:298:THR:HB	1:A:315:MET:HB2	1.85	0.65
1:B:23:VAL:HG22	1:B:60:VAL:HG11	1.78	0.65
1:J:459:GLY:HA3	1:K:114:LEU:HD12	1.76	0.65
2:Q:92:GLU:CA	2:Q:95:LEU:HD12	3.13	0.65
1:D:363:LYS:C	1:D:365:GLN:H	2.23	0.65
1:N:283:ARG:HD3	1:N:363:LYS:HE3	1.78	0.65
2:P:10:PRO:HG3	2:P:47:ALA:O	1.96	0.65
1:B:290:ASP:O	1:B:294:VAL:HG23	1.96	0.65
1:L:50:THR:HG22	1:L:51:LYS:N	2.12	0.65
1:M:383:ALA:O	1:N:280:PHE:CD1	2.50	0.65
1:C:259:ALA:O	1:C:263:VAL:HG23	1.99	0.65
1:F:94:VAL:CG1	1:F:449:GLU:HB3	2.25	0.65
1:F:116:LEU:O	1:F:120:ILE:HG13	2.03	0.65
1:K:264:ASN:HB3	1:K:269:THR:HB	1.82	0.65
1:E:199:ILE:HG13	1:E:274:ALA:O	1.96	0.65
2:O:8:ILE:HD12	2:O:8:ILE:N	2.10	0.65
1:J:50:THR:HG22	1:J:51:LYS:N	2.17	0.65
1:A:522:VAL:HG22	1:B:39:VAL:HB	1.78	0.65
1:K:232:LEU:HD21	1:K:236:LEU:HD13	1.75	0.65
1:F:94:VAL:HG12	1:F:449:GLU:HB3	1.79	0.65
2:P:73:ALA:HB1	2:P:75:TYR:CE2	2.31	0.65
1:N:283:ARG:HG2	1:N:363:LYS:HZ2	1.59	0.65
1:M:283:ARG:NH1	1:M:363:LYS:HG3	2.33	0.65
1:H:325:THR:HG22	1:H:327:ASP:N	2.00	0.65
2:R:53:VAL:HG22	2:R:59:ARG:HG2	1.78	0.65
1:G:94:VAL:CG1	1:G:449:GLU:HB3	2.28	0.65
2:S:52:ARG:NH2	2:T:53:VAL:HB	3.58	0.65
1:I:462:GLY:O	1:I:466:VAL:HG23	1.97	0.65
1:B:320:GLU:HB3	1:B:333:GLY:HA3	1.77	0.65
1:K:157:VAL:HG21	1:K:395:PHE:CE2	2.31	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:259:ALA:O	1:E:263:VAL:HG23	1.97	0.65
1:J:283:ARG:HH12	1:J:364:LEU:HD12	1.61	0.65
1:B:279:GLY:C	1:B:284:ARG:HB3	2.37	0.65
1:A:50:THR:HG21	1:A:52:ASP:HB3	1.81	0.65
1:K:40:LEU:HD23	1:K:59:GLU:CG	2.29	0.65
1:N:157:VAL:HG21	1:N:395:PHE:CE2	2.32	0.65
1:E:373:GLY:O	1:E:375:VAL:N	2.69	0.65
1:J:84:VAL:HG12	1:J:500:LYS:HE2	1.84	0.65
1:J:325:THR:HG22	1:J:327:ASP:N	1.98	0.65
2:Q:58:GLN:HG2	2:Q:59:ARG:H	4.89	0.65
1:L:366:GLU:O	1:L:370:LYS:HG3	1.97	0.65
1:A:94:VAL:CG1	1:A:449:GLU:HB3	2.26	0.65
1:J:340:ASP:O	1:J:343:ALA:HB3	2.05	0.65
1:D:19:GLY:HA3	1:D:67:GLU:O	2.01	0.65
1:K:96:ALA:O	1:K:100:VAL:HG23	1.97	0.65
1:E:256:GLU:OE1	2:S:35:THR:HG22	4.13	0.65
2:R:45:VAL:HG21	2:R:64:VAL:HG11	1.79	0.65
2:O:48:VAL:HG13	2:O:62:LEU:HD12	2.08	0.65
2:Q:52:ARG:HH11	2:Q:52:ARG:HG2	4.30	0.65
1:K:217:ALA:CB	1:K:245:PRO:HG2	2.25	0.65
1:D:50:THR:CG2	1:D:51:LYS:H	2.08	0.65
1:K:74:LEU:HD12	1:K:512:ILE:CD1	2.31	0.65
1:H:290:ASP:O	1:H:294:VAL:HG23	2.11	0.65
2:U:10:PRO:HG3	2:U:47:ALA:O	1.97	0.65
2:O:54:LEU:HD11	2:P:57:GLY:H	3.22	0.65
2:Q:58:GLN:CG	2:Q:59:ARG:H	4.87	0.65
1:G:50:THR:CG2	1:G:52:ASP:H	2.10	0.65
1:C:522:VAL:HG22	1:D:39:VAL:HB	1.94	0.65
1:D:54:VAL:HG22	1:D:89:THR:HG21	1.78	0.65
2:S:62:LEU:H	2:S:62:LEU:HD12	3.53	0.65
2:S:52:ARG:O	2:S:52:ARG:HG3	1.95	0.65
1:E:207:PRO:HG2	1:E:208:GLU:H	1.60	0.65
2:Q:91:SER:CB	2:Q:93:ARG:HH11	4.06	0.65
1:B:363:LYS:C	1:B:365:GLN:H	1.98	0.65
2:Q:33:PRO:C	2:Q:35:THR:H	2.15	0.65
1:M:177:GLU:HB3	1:M:321:ARG:NH1	2.12	0.65
1:J:187:LYS:NZ	1:J:379:ARG:HG3	2.12	0.65
1:A:307:LYS:HB2	1:A:310:ASN:HD22	1.97	0.65
1:C:263:VAL:O	1:C:267:ARG:HB2	1.96	0.65
1:L:290:ASP:N	1:L:344:ARG:HH12	1.95	0.65
1:M:249:ILE:HG22	1:M:249:ILE:O	1.97	0.65
1:L:340:ASP:O	1:L:343:ALA:HB3	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:96:ALA:O	1:G:100:VAL:HG23	1.97	0.65
1:B:224:LYS:HB3	1:B:302:GLU:OE1	1.98	0.65
1:N:232:LEU:HD23	1:N:232:LEU:O	1.97	0.65
1:M:194:PHE:CD1	1:M:278:PRO:HB3	2.32	0.65
1:J:503:ARG:HH11	1:J:507:GLN:HE22	1.46	0.65
1:B:450:PRO:O	1:B:454:ILE:HG13	2.15	0.65
2:T:79:GLU:C	2:T:80:ILE:HD12	2.49	0.65
1:G:136:ILE:HD11	1:G:477:ARG:HH21	1.61	0.65
1:F:218:PHE:HB3	1:F:316:LEU:HD13	1.80	0.65
1:M:217:ALA:CB	1:M:245:PRO:HG2	2.25	0.65
1:F:236:LEU:HB2	2:T:30:ILE:HD11	1.79	0.65
1:H:168:VAL:HG11	1:H:173:ILE:H	1.62	0.65
1:A:515:LEU:HD12	1:B:49:ILE:HG21	1.77	0.65
1:N:222:VAL:HG12	1:N:223:GLU:N	2.13	0.65
1:G:57:ALA:O	1:G:75:LYS:HD3	1.97	0.65
1:D:298:THR:HB	1:D:315:MET:HB2	1.87	0.65
1:L:157:VAL:HG21	1:L:395:PHE:CE2	2.32	0.65
2:T:49:GLY:O	2:T:62:LEU:HD11	1.96	0.64
2:T:77:GLY:HA3	2:T:90:LEU:HD23	1.79	0.64
1:E:265:LYS:NZ	1:E:271:SER:HB2	2.11	0.64
1:M:503:ARG:NH1	1:M:507:GLN:HE22	1.98	0.64
1:F:366:GLU:O	1:F:370:LYS:HG3	2.03	0.64
1:H:524:ALA:HB1	1:N:41:GLU:OE2	1.96	0.64
1:F:450:PRO:O	1:F:454:ILE:HG13	2.22	0.64
1:H:167:LYS:HD2	1:H:188:PHE:CZ	2.32	0.64
2:T:45:VAL:HG21	2:T:64:VAL:HG11	1.79	0.64
1:E:366:GLU:O	1:E:370:LYS:HG3	2.46	0.64
2:S:45:VAL:HG21	2:S:64:VAL:HG11	1.78	0.64
1:H:187:LYS:NZ	1:H:379:ARG:HG3	2.11	0.64
1:K:295:THR:HG22	1:K:317:GLY:C	2.18	0.64
1:A:127:ALA:O	1:A:131:ILE:HG13	2.07	0.64
1:L:74:LEU:HD12	1:L:512:ILE:CD1	2.26	0.64
1:G:455:ALA:HB1	1:G:465:ILE:HD12	1.89	0.64
1:B:175:THR:HB	1:B:377:VAL:HG22	2.02	0.64
1:M:173:ILE:HD11	1:M:370:LYS:HB3	1.78	0.64
1:G:277:ALA:HB1	1:G:284:ARG:HD2	2.65	0.64
1:B:50:THR:CG2	1:B:51:LYS:H	2.16	0.64
1:L:79:SER:C	1:L:81:THR:H	2.01	0.64
2:S:8:ILE:HD12	2:S:8:ILE:N	2.13	0.64
1:E:141:ARG:NH2	1:E:163:ASP:OD1	2.30	0.64
1:C:69:ILE:HD11	1:D:41:GLU:HB2	1.88	0.64
1:B:234:PRO:O	1:B:238:GLN:HG3	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:15:VAL:HG12	2:Q:16:VAL:N	4.35	0.64
1:B:50:THR:HG21	1:B:52:ASP:HB3	1.80	0.64
1:L:39:VAL:C	1:L:40:LEU:HD12	2.17	0.64
1:N:187:LYS:NZ	1:N:379:ARG:HG3	2.18	0.64
1:J:232:LEU:HD21	1:J:236:LEU:HD13	1.80	0.64
1:I:222:VAL:HG12	1:I:224:LYS:H	1.63	0.64
1:N:31:LEU:HD13	1:N:90:THR:HG22	1.80	0.64
1:H:157:VAL:HG21	1:H:395:PHE:CE2	2.33	0.64
1:J:312:THR:C	1:J:314:SER:H	2.05	0.64
1:I:157:VAL:HG21	1:I:395:PHE:CE2	2.34	0.64
1:D:320:GLU:HB3	1:D:333:GLY:HA3	1.87	0.64
1:H:332:VAL:HG22	1:H:375:VAL:HG11	1.80	0.64
2:T:96:LEU:HB3	2:U:89:ILE:HG21	2.26	0.64
1:N:50:THR:HG22	1:N:51:LYS:N	2.10	0.64
1:G:326:LYS:O	1:G:326:LYS:HD3	4.64	0.64
1:N:40:LEU:HD23	1:N:59:GLU:CG	2.27	0.64
1:H:74:LEU:HA	1:H:512:ILE:HD11	1.79	0.64
2:O:56:ASN:HD21	2:P:56:ASN:HB3	1.63	0.64
1:K:103:GLY:O	1:K:107:VAL:HG23	2.02	0.64
1:D:359:TYR:CZ	1:D:363:LYS:HE3	2.52	0.64
2:P:13:ASP:O	2:P:13:ASP:OD1	3.12	0.64
2:O:77:GLY:HA3	2:O:90:LEU:HD23	1.86	0.64
1:M:345:ILE:O	1:M:349:LYS:HG3	1.98	0.64
1:N:234:PRO:CG	1:N:309:GLU:HA	2.28	0.64
1:C:85:ALA:HB1	1:C:501:VAL:HG12	1.86	0.64
1:B:94:VAL:CG1	1:B:449:GLU:HB3	2.27	0.64
1:M:175:THR:HG21	1:M:177:GLU:OE2	2.12	0.64
1:I:503:ARG:NH1	1:I:507:GLN:HE22	1.95	0.64
1:L:222:VAL:HG12	1:L:223:GLU:N	2.13	0.64
2:P:100:GLN:HB2	2:Q:9:LYS:HE2	1.80	0.64
1:I:212:ALA:HB3	1:I:324:ILE:HB	1.79	0.64
1:E:248:ILE:HD12	1:E:261:LEU:HD21	1.79	0.64
1:J:234:PRO:CG	1:J:309:GLU:HA	2.29	0.64
1:C:94:VAL:CG1	1:C:449:GLU:HB3	2.30	0.64
1:C:116:LEU:O	1:C:120:ILE:HG13	1.97	0.64
1:I:222:VAL:HG12	1:I:223:GLU:N	2.11	0.64
1:I:277:ALA:CB	1:I:284:ARG:HD2	2.29	0.64
1:D:40:LEU:HD13	1:D:59:GLU:HG3	1.80	0.64
1:E:233:LEU:O	1:E:237:GLU:HG3	2.33	0.64
2:Q:54:LEU:CD1	2:Q:55:GLU:H	3.79	0.64
1:D:304:LEU:CD1	1:E:262:VAL:HG11	2.27	0.64
1:I:189:VAL:CG1	1:I:333:GLY:HA2	2.26	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:348:ILE:HD11	1:G:367:ARG:HE	2.32	0.64
1:L:65:HIS:O	1:L:69:ILE:HG13	1.98	0.64
1:E:320:GLU:HB3	1:E:333:GLY:HA3	4.01	0.64
2:O:32:LEU:HG	2:O:33:PRO:HD2	4.04	0.64
1:F:23:VAL:HG22	1:F:60:VAL:HG11	1.85	0.64
1:I:247:LEU:HD22	1:I:322:VAL:HG11	1.82	0.64
1:E:298:THR:HB	1:E:315:MET:HB2	4.37	0.64
1:K:168:VAL:HG11	1:K:173:ILE:H	1.63	0.64
1:K:297:GLY:HA3	1:K:317:GLY:H	1.63	0.64
1:N:264:ASN:HB3	1:N:269:THR:HB	1.80	0.64
1:E:416:VAL:HG21	1:E:490:MET:HG3	1.90	0.63
1:G:136:ILE:O	1:G:410:ILE:HG22	2.34	0.63
1:F:150:ILE:HD11	1:F:495:ILE:CA	2.14	0.63
1:A:237:GLU:HB3	2:O:28:GLY:CA	2.97	0.63
1:C:50:THR:HG21	1:C:52:ASP:HB3	1.82	0.63
1:J:345:ILE:O	1:J:349:LYS:HG3	2.06	0.63
2:S:100:GLN:OE1	2:T:9:LYS:CE	2.46	0.63
1:B:319:ALA:HB1	1:B:332:VAL:O	2.43	0.63
1:K:157:VAL:HG21	1:K:395:PHE:CZ	2.33	0.63
1:J:167:LYS:HD2	1:J:188:PHE:CZ	2.36	0.63
1:M:167:LYS:HD2	1:M:188:PHE:CZ	2.32	0.63
1:I:352:LEU:HD11	1:I:365:GLN:HE22	2.79	0.63
2:Q:62:LEU:H	2:Q:62:LEU:HD12	1.63	0.63
2:T:14:ARG:HG2	2:T:14:ARG:HH11	2.75	0.63
1:A:210:MET:HE1	1:G:343:ALA:HA	1.80	0.63
1:D:78:ALA:O	1:D:89:THR:HG22	2.06	0.63
1:J:411:VAL:O	1:J:496:VAL:HG13	2.05	0.63
1:L:222:VAL:HG12	1:L:224:LYS:H	1.62	0.63
1:H:247:LEU:HD22	1:H:322:VAL:HG11	1.80	0.63
1:H:157:VAL:HG21	1:H:395:PHE:CZ	2.34	0.63
1:G:19:GLY:HA3	1:G:67:GLU:O	2.03	0.63
1:L:312:THR:C	1:L:314:SER:H	2.01	0.63
1:K:340:ASP:O	1:K:343:ALA:HB3	2.04	0.63
1:N:340:ASP:O	1:N:343:ALA:HB3	2.10	0.63
1:I:232:LEU:HD21	1:I:236:LEU:HD13	1.79	0.63
1:F:422:ILE:HG23	1:F:444:ARG:HG3	1.82	0.63
2:P:81:GLU:HG3	2:P:85:GLU:H	1.63	0.63
2:P:15:VAL:CG2	2:P:95:LEU:HD11	2.26	0.63
1:L:410:ILE:CD1	1:L:496:VAL:HG11	2.27	0.63
1:D:222:VAL:O	1:D:250:ALA:HA	1.97	0.63
1:A:287:MET:O	1:A:291:ILE:HG13	2.29	0.63
1:K:167:LYS:HD2	1:K:188:PHE:CZ	2.34	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:235:ILE:HD12	1:E:311:ALA:HB1	3.93	0.63
2:T:61:PRO:HG3	2:U:59:ARG:HH21	7.08	0.63
1:J:283:ARG:CG	1:J:363:LYS:NZ	2.89	0.63
1:C:280:PHE:O	1:C:283:ARG:HB3	3.84	0.63
1:E:294:VAL:HA	1:E:341:ILE:HD11	1.79	0.63
1:K:50:THR:HG22	1:K:52:ASP:N	2.15	0.63
1:M:39:VAL:O	1:N:522:VAL:HA	2.13	0.63
1:F:290:ASP:O	1:F:294:VAL:HG23	1.98	0.63
1:B:19:GLY:HA3	1:B:67:GLU:O	1.98	0.63
1:I:167:LYS:HD2	1:I:188:PHE:CZ	2.34	0.63
1:M:173:ILE:HD11	1:M:370:LYS:CB	2.29	0.63
2:P:18:LYS:HG2	2:P:87:TYR:CD2	3.78	0.63
2:O:81:GLU:HA	2:O:86:GLU:HA	1.81	0.63
1:M:219:ILE:HB	1:M:295:THR:HG21	1.81	0.63
1:I:168:VAL:HG11	1:I:173:ILE:H	1.63	0.63
1:J:410:ILE:HB	1:J:496:VAL:HG11	1.79	0.63
1:N:27:VAL:HG12	1:N:90:THR:HG23	1.92	0.63
1:N:337:LYS:HB2	1:N:340:ASP:OD2	1.98	0.63
1:E:19:GLY:HA3	1:E:67:GLU:O	1.97	0.63
1:L:103:GLY:O	1:L:107:VAL:HG23	2.15	0.63
1:I:352:LEU:HD11	1:I:365:GLN:NE2	2.70	0.63
2:Q:45:VAL:HG21	2:Q:64:VAL:HG11	1.80	0.63
2:O:45:VAL:HG21	2:O:64:VAL:CG1	2.32	0.63
2:S:96:LEU:HB3	2:T:89:ILE:HD13	1.81	0.63
2:T:62:LEU:HD12	2:T:62:LEU:H	1.63	0.63
1:N:189:VAL:CG1	1:N:190:GLU:H	2.10	0.63
1:G:294:VAL:HA	1:G:341:ILE:HD11	2.62	0.63
1:E:223:GLU:O	1:E:251:GLU:HB2	1.98	0.63
1:E:289:LYS:CE	1:F:202:TYR:OH	3.43	0.63
1:N:410:ILE:HB	1:N:496:VAL:HG11	1.85	0.63
1:K:219:ILE:HD12	1:K:295:THR:CG2	2.32	0.63
1:J:222:VAL:HG12	1:J:224:LYS:H	1.66	0.63
1:J:290:ASP:N	1:J:344:ARG:HH12	2.09	0.63
1:L:362:GLU:O	1:L:365:GLN:HB2	2.04	0.63
1:J:157:VAL:HG21	1:J:395:PHE:CZ	2.35	0.63
1:B:298:THR:HB	1:B:315:MET:HB2	1.78	0.63
2:Q:17:VAL:HG12	2:Q:44:LYS:O	3.57	0.63
1:D:283:ARG:HH11	1:D:363:LYS:HD3	5.15	0.63
2:T:99:LEU:HD23	2:U:8:ILE:CD1	8.23	0.63
2:T:100:GLN:HE22	2:U:9:LYS:HZ2	7.08	0.63
1:M:168:VAL:HG11	1:M:173:ILE:H	1.64	0.63
1:G:290:ASP:HB3	1:G:371:LEU:HD21	2.25	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:235:ILE:O	1:A:239:VAL:HG23	2.46	0.63
1:M:157:VAL:HG21	1:M:395:PHE:CZ	2.36	0.63
1:N:54:VAL:HG22	1:N:89:THR:HG21	1.87	0.63
1:K:290:ASP:O	1:K:294:VAL:HG23	1.99	0.63
2:Q:45:VAL:HG12	2:Q:46:ILE:N	2.68	0.63
2:Q:77:GLY:HA3	2:Q:90:LEU:HB3	4.17	0.63
2:R:18:LYS:HG2	2:R:87:TYR:CD2	2.34	0.63
1:G:287:MET:O	1:G:290:ASP:HB2	2.18	0.63
1:H:283:ARG:HG2	1:H:363:LYS:NZ	2.44	0.63
1:M:178:GLU:HB3	1:M:388:LEU:HD21	1.81	0.63
1:N:74:LEU:HD12	1:N:512:ILE:CD1	2.29	0.63
1:C:98:ALA:HB2	1:C:449:GLU:CG	2.28	0.63
1:A:94:VAL:HG12	1:A:449:GLU:HB3	1.83	0.63
1:L:157:VAL:HG21	1:L:395:PHE:CZ	2.34	0.63
1:D:345:ILE:HG23	1:D:368:LEU:HD13	1.87	0.63
1:N:178:GLU:HB3	1:N:388:LEU:HD21	1.81	0.63
2:R:48:VAL:HG13	2:R:62:LEU:HD23	1.79	0.63
1:I:50:THR:HG22	1:I:51:LYS:N	2.10	0.63
1:H:40:LEU:HD23	1:H:59:GLU:CG	2.29	0.63
1:G:85:ALA:HB1	1:G:501:VAL:HG12	1.84	0.63
1:L:232:LEU:HD22	1:L:236:LEU:HD22	1.82	0.63
1:K:178:GLU:HB3	1:K:388:LEU:HD21	1.81	0.63
2:U:80:ILE:HG22	2:U:81:GLU:N	2.14	0.62
1:C:168:VAL:HG12	1:C:168:VAL:O	1.99	0.62
1:A:39:VAL:HB	1:G:522:VAL:HG22	1.81	0.62
1:N:307:LYS:HE3	1:N:310:ASN:ND2	2.14	0.62
2:S:81:GLU:HG3	2:S:85:GLU:H	1.64	0.62
1:J:247:LEU:HD22	1:J:322:VAL:HG11	1.80	0.62
1:E:411:VAL:HB	1:E:412:PRO:HD2	1.98	0.62
1:F:298:THR:HB	1:F:315:MET:HB2	1.81	0.62
1:D:450:PRO:O	1:D:454:ILE:HG13	1.98	0.62
1:E:118:ARG:HH22	1:F:34:ARG:HH12	1.52	0.62
1:E:263:VAL:O	1:E:267:ARG:HB2	3.26	0.62
2:Q:41:GLN:HG2	2:Q:74:LYS:HB3	1.81	0.62
1:E:264:ASN:CG	2:S:30:ILE:HG23	2.19	0.62
1:F:246:LEU:HB3	1:F:272:VAL:CG1	2.58	0.62
1:E:283:ARG:NH2	1:E:366:GLU:OE1	2.32	0.62
2:R:54:LEU:CD2	2:S:55:GLU:HA	4.12	0.62
1:C:224:LYS:HB3	1:C:302:GLU:OE1	1.99	0.62
1:K:187:LYS:NZ	1:K:379:ARG:HG3	2.14	0.62
1:K:408:GLU:O	1:K:499:ALA:HB3	2.44	0.62
1:B:72:GLN:HE22	1:B:75:LYS:NZ	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:175:THR:HG21	1:L:177:GLU:OE2	2.03	0.62
1:J:465:ILE:HD13	1:J:480:PHE:CE1	2.34	0.62
2:R:13:ASP:CA	2:R:62:LEU:HD21	3.73	0.62
1:A:352:LEU:HD21	1:A:364:LEU:HB2	1.81	0.62
2:S:41:GLN:HG2	2:S:74:LYS:HB3	1.89	0.62
2:Q:50:THR:O	2:Q:51:GLY:O	4.09	0.62
1:M:206:ASN:HD21	1:M:389:LYS:CD	2.12	0.62
1:H:496:VAL:HG12	1:H:497:ASP:H	1.71	0.62
1:C:124:VAL:O	1:C:128:VAL:HG23	1.99	0.62
1:H:503:ARG:NH1	1:H:507:GLN:HE22	1.97	0.62
1:F:416:VAL:HG21	1:F:490:MET:HG3	1.96	0.62
2:T:60:VAL:HG13	2:T:61:PRO:HD2	3.28	0.62
1:E:265:LYS:HZ2	1:E:271:SER:HB2	1.64	0.62
1:M:50:THR:HG22	1:M:51:LYS:N	2.14	0.62
1:J:297:GLY:HA3	1:J:317:GLY:H	1.75	0.62
1:C:199:ILE:HG13	1:C:274:ALA:O	2.06	0.62
1:E:382:ALA:HB3	1:E:388:LEU:HB2	1.83	0.62
1:L:195:ASP:O	1:L:196:LYS:HD3	2.53	0.62
1:B:366:GLU:O	1:B:370:LYS:HG3	2.01	0.62
1:E:136:ILE:HD11	1:E:477:ARG:NH2	2.28	0.62
1:C:209:THR:HB	1:C:211:GLU:HG2	4.05	0.62
1:G:50:THR:HG21	1:G:52:ASP:HB3	1.83	0.62
1:F:168:VAL:O	1:F:168:VAL:HG12	2.00	0.62
1:I:187:LYS:NZ	1:I:379:ARG:HG3	2.14	0.62
1:G:256:GLU:HB3	2:U:35:THR:HB	1.81	0.62
1:A:416:VAL:HG21	1:A:490:MET:HG3	1.81	0.62
1:E:455:ALA:HB1	1:E:465:ILE:HD12	1.81	0.62
1:C:175:THR:HB	1:C:377:VAL:HG22	1.80	0.62
2:R:48:VAL:HG12	2:R:62:LEU:HD13	4.19	0.62
2:T:99:LEU:HA	2:U:8:ILE:HG12	6.49	0.62
1:E:85:ALA:HB1	1:E:501:VAL:HG12	1.82	0.62
1:L:178:GLU:HB3	1:L:388:LEU:HD21	1.83	0.62
1:D:422:ILE:HG23	1:D:444:ARG:HG3	1.82	0.62
1:I:175:THR:HG21	1:I:177:GLU:OE2	2.00	0.62
2:Q:97:ALA:HA	2:R:9:LYS:O	2.73	0.62
1:N:366:GLU:O	1:N:370:LYS:HG3	2.13	0.62
2:P:45:VAL:HG21	2:P:64:VAL:HG11	1.80	0.62
1:H:360:ALA:HA	1:H:363:LYS:HG3	3.61	0.62
1:A:50:THR:CG2	1:A:51:LYS:H	2.11	0.62
1:J:168:VAL:HG11	1:J:173:ILE:H	1.63	0.62
1:B:94:VAL:HG12	1:B:449:GLU:HB3	1.80	0.62
1:J:222:VAL:HG12	1:J:223:GLU:N	2.17	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:247:LEU:HD22	1:G:322:VAL:HG11	2.16	0.62
1:D:57:ALA:O	1:D:75:LYS:HD3	1.99	0.62
1:I:232:LEU:HD22	1:I:236:LEU:HD22	1.84	0.62
1:G:411:VAL:HB	1:G:412:PRO:HD2	1.81	0.62
2:P:77:GLY:HA3	2:P:90:LEU:HD23	1.82	0.62
1:K:312:THR:C	1:K:314:SER:H	2.07	0.62
2:Q:80:ILE:HG12	2:Q:81:GLU:N	4.61	0.62
2:U:10:PRO:C	2:U:11:LEU:HD22	4.59	0.62
1:E:306:PHE:HA	2:T:34:ASP:OD2	3.50	0.62
1:G:235:ILE:CG1	1:G:311:ALA:HB3	2.36	0.62
1:G:224:LYS:HD2	1:G:224:LYS:H	4.42	0.62
1:G:248:ILE:HD12	1:G:261:LEU:HD21	2.43	0.62
1:L:283:ARG:HH11	1:L:363:LYS:HE3	1.64	0.62
1:J:290:ASP:O	1:J:294:VAL:HG23	1.99	0.62
1:L:526:LYS:CG	1:L:527:PRO:HD2	2.29	0.62
1:I:226:VAL:HG11	1:I:232:LEU:HD12	1.81	0.62
1:F:411:VAL:HB	1:F:412:PRO:HD2	1.87	0.62
1:M:465:ILE:HD13	1:M:480:PHE:CE1	2.44	0.62
1:B:141:ARG:NH2	1:B:163:ASP:OD1	2.42	0.62
2:U:13:ASP:CB	2:U:62:LEU:HD21	2.30	0.62
1:C:229:VAL:HG23	1:C:256:GLU:HG3	2.28	0.62
1:M:187:LYS:NZ	1:M:379:ARG:HG3	2.14	0.62
1:N:503:ARG:NH1	1:N:507:GLN:HE22	1.98	0.62
1:F:368:LEU:O	1:F:368:LEU:HD12	2.01	0.62
1:E:57:ALA:O	1:E:75:LYS:HD3	2.08	0.62
2:R:25:LYS:HG2	2:R:31:VAL:HG22	2.16	0.62
1:L:462:GLY:O	1:L:466:VAL:HG23	2.00	0.62
1:A:450:PRO:O	1:A:454:ILE:HG13	2.10	0.62
1:L:96:ALA:O	1:L:100:VAL:HG23	2.12	0.62
2:U:92:GLU:HA	2:U:95:LEU:HD12	1.79	0.62
1:N:189:VAL:HG11	1:N:333:GLY:CA	2.23	0.62
2:O:84:GLY:CA	2:U:27:LYS:HD3	2.30	0.62
1:E:54:VAL:HG22	1:E:89:THR:HG21	1.82	0.62
1:E:352:LEU:HD21	1:E:364:LEU:HB2	3.79	0.62
1:G:234:PRO:O	1:G:238:GLN:HG3	2.00	0.62
1:B:382:ALA:HB3	1:B:388:LEU:HB2	1.81	0.62
2:S:77:GLY:HA3	2:S:90:LEU:HD23	1.86	0.62
1:K:465:ILE:HD13	1:K:480:PHE:CE1	2.35	0.62
1:I:340:ASP:O	1:I:343:ALA:HB3	1.99	0.62
1:E:348:ILE:HD11	1:E:367:ARG:NE	2.14	0.62
2:T:15:VAL:HG23	2:T:15:VAL:O	2.99	0.61
2:T:15:VAL:O	2:T:17:VAL:HG23	4.36	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:283:ARG:HG2	1:M:363:LYS:HZ2	1.64	0.61
1:B:343:ALA:HB2	1:C:207:PRO:CB	2.26	0.61
1:L:180:LYS:HB3	1:M:281:GLY:N	2.15	0.61
1:H:219:ILE:HD12	1:H:295:THR:CG2	2.30	0.61
1:K:74:LEU:HA	1:K:512:ILE:CD1	2.35	0.61
1:C:352:LEU:CD2	1:C:364:LEU:HB2	2.68	0.61
1:H:195:ASP:O	1:H:196:LYS:HD3	1.99	0.61
1:A:229:VAL:HG23	1:A:256:GLU:OE2	2.00	0.61
1:H:178:GLU:HB3	1:H:388:LEU:HD21	1.82	0.61
1:I:264:ASN:HB3	1:I:269:THR:HB	1.81	0.61
1:I:178:GLU:HB3	1:I:388:LEU:HD21	1.83	0.61
2:S:25:LYS:HG2	2:S:31:VAL:HG22	1.82	0.61
2:S:96:LEU:O	2:T:14:ARG:HD3	2.16	0.61
1:M:283:ARG:HD3	1:M:363:LYS:NZ	2.15	0.61
1:H:283:ARG:HD3	1:H:363:LYS:NZ	2.47	0.61
1:L:7:VAL:HG12	1:L:12:ALA:HB2	1.82	0.61
1:C:94:VAL:HG12	1:C:449:GLU:HB3	1.81	0.61
2:U:8:ILE:HG22	2:U:9:LYS:N	2.76	0.61
1:M:50:THR:HG22	1:M:52:ASP:N	2.09	0.61
2:R:73:ALA:O	2:R:75:TYR:N	2.36	0.61
1:I:157:VAL:HG21	1:I:395:PHE:CZ	2.35	0.61
1:I:249:ILE:O	1:I:249:ILE:HG22	2.00	0.61
1:L:167:LYS:HD2	1:L:188:PHE:CZ	2.37	0.61
1:J:178:GLU:HB3	1:J:388:LEU:HD21	1.82	0.61
1:B:345:ILE:HG23	1:B:368:LEU:HD13	1.87	0.61
1:M:96:ALA:O	1:M:100:VAL:HG23	2.07	0.61
1:D:416:VAL:HG21	1:D:490:MET:HG3	1.85	0.61
2:Q:16:VAL:HG12	2:Q:46:ILE:HD12	5.83	0.61
1:L:189:VAL:HG11	1:L:333:GLY:HA2	1.81	0.61
2:T:8:ILE:CD1	2:T:82:ILE:HD11	4.57	0.61
2:U:13:ASP:OD1	2:U:93:ARG:HG2	7.01	0.61
1:C:416:VAL:HG21	1:C:490:MET:HG3	1.81	0.61
1:C:270:LEU:HG	1:C:272:VAL:HG13	1.80	0.61
1:G:52:ASP:OD1	1:G:54:VAL:HG23	2.01	0.61
1:M:229:VAL:HG23	1:M:256:GLU:CB	2.29	0.61
1:B:189:VAL:HG11	1:B:193:GLN:HG2	3.20	0.61
1:F:178:GLU:HG3	1:F:388:LEU:HD21	1.82	0.61
1:A:30:THR:O	1:A:35:GLY:HA3	2.09	0.61
1:M:195:ASP:O	1:M:196:LYS:HD3	2.00	0.61
1:I:410:ILE:HB	1:I:496:VAL:HG11	1.82	0.61
1:I:290:ASP:N	1:I:344:ARG:HH12	2.00	0.61
1:N:232:LEU:HD22	1:N:236:LEU:HD22	1.87	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:264:ASN:HB3	1:M:269:THR:HB	1.83	0.61
2:T:41:GLN:HG2	2:T:42:LYS:HE3	9.44	0.61
2:Q:78:THR:HG22	2:Q:79:GLU:N	2.36	0.61
1:A:233:LEU:HD23	2:O:30:ILE:HD13	1.82	0.61
1:L:49:ILE:HG21	1:M:515:LEU:HD21	1.82	0.61
2:O:52:ARG:HH21	2:P:53:VAL:HB	1.63	0.61
1:K:37:ASN:OD1	1:L:515:LEU:HD12	2.19	0.61
1:L:187:LYS:NZ	1:L:379:ARG:HG3	2.17	0.61
1:M:222:VAL:HG12	1:M:223:GLU:N	2.16	0.61
1:K:408:GLU:OE1	1:K:500:LYS:HA	2.51	0.61
1:H:157:VAL:O	1:H:161:ILE:HG13	2.03	0.61
1:H:452:ARG:HH11	1:H:452:ARG:HG2	1.65	0.61
1:A:23:VAL:HG22	1:A:60:VAL:HG11	1.83	0.61
1:B:526:LYS:HG3	1:B:527:PRO:HD2	2.31	0.61
1:I:283:ARG:HH12	1:I:364:LEU:HD12	1.64	0.61
2:P:22:GLU:OE2	2:P:38:GLU:O	2.19	0.61
2:Q:91:SER:HB3	2:Q:93:ARG:HH11	3.56	0.61
1:A:136:ILE:HD11	1:A:477:ARG:NH2	2.16	0.61
1:C:235:ILE:CD1	1:C:311:ALA:HB3	2.30	0.61
1:C:382:ALA:HB3	1:C:388:LEU:HB2	1.84	0.61
1:N:290:ASP:N	1:N:344:ARG:HH12	2.01	0.61
1:I:96:ALA:O	1:I:100:VAL:HG23	2.07	0.61
1:H:218:PHE:CE1	1:H:242:THR:HG21	2.35	0.61
1:C:455:ALA:HB1	1:C:465:ILE:HD12	1.83	0.61
1:N:167:LYS:HD2	1:N:188:PHE:CZ	2.35	0.61
2:T:10:PRO:HB3	2:T:16:VAL:HG23	2.49	0.61
1:M:283:ARG:HH12	1:M:364:LEU:HD12	1.69	0.61
1:A:237:GLU:CD	2:O:28:GLY:HA3	2.21	0.61
1:C:348:ILE:CD1	1:C:367:ARG:NE	3.72	0.61
1:M:219:ILE:HD12	1:M:295:THR:CG2	2.32	0.61
1:N:65:HIS:O	1:N:69:ILE:HG13	2.12	0.61
1:L:345:ILE:O	1:L:349:LYS:HG3	2.04	0.61
1:A:85:ALA:HB1	1:A:501:VAL:HG12	1.83	0.61
1:D:175:THR:HB	1:D:377:VAL:HG22	1.83	0.61
1:L:465:ILE:HD13	1:L:480:PHE:CE1	2.39	0.61
1:K:218:PHE:CE1	1:K:242:THR:HG21	2.44	0.61
2:Q:41:GLN:HG3	2:Q:72:PHE:O	4.66	0.61
1:A:228:ASN:HD21	1:A:230:ARG:HB2	1.85	0.61
1:C:368:LEU:O	1:C:368:LEU:HD12	2.00	0.61
1:E:522:VAL:HG22	1:F:39:VAL:HB	1.81	0.61
1:F:50:THR:CG2	1:F:51:LYS:H	2.11	0.61
1:F:78:ALA:O	1:F:89:THR:HG22	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:235:ILE:HD12	1:A:311:ALA:CB	2.31	0.61
1:N:168:VAL:HG11	1:N:173:ILE:H	1.66	0.61
1:M:40:LEU:HD23	1:M:59:GLU:CG	2.32	0.61
1:I:229:VAL:HG23	1:I:256:GLU:CB	2.30	0.61
2:T:66:GLU:HG2	2:T:67:GLY:N	3.89	0.61
1:B:411:VAL:HB	1:B:412:PRO:HD2	1.90	0.61
1:C:411:VAL:HB	1:C:412:PRO:HD2	1.83	0.61
1:N:283:ARG:NH1	1:N:363:LYS:HG3	2.15	0.61
2:O:11:LEU:O	2:O:12:GLY:C	2.39	0.61
2:T:10:PRO:HB2	2:T:14:ARG:HB2	2.63	0.61
1:C:50:THR:CG2	1:C:51:LYS:H	2.10	0.61
1:L:168:VAL:HG11	1:L:173:ILE:H	1.67	0.61
1:I:40:LEU:HD23	1:I:59:GLU:CG	2.30	0.61
1:J:295:THR:HG22	1:J:317:GLY:C	2.24	0.61
1:D:98:ALA:HB2	1:D:449:GLU:CG	2.31	0.61
1:D:18:ARG:HD2	1:D:67:GLU:OE2	2.01	0.61
1:C:251:GLU:HA	1:C:277:ALA:HB2	2.91	0.60
1:C:265:LYS:NZ	1:C:271:SER:HB2	3.31	0.60
1:C:283:ARG:HH12	1:C:363:LYS:HB3	2.21	0.60
1:M:178:GLU:H	1:M:321:ARG:NH1	1.95	0.60
1:H:50:THR:HG22	1:H:51:LYS:N	2.18	0.60
1:G:235:ILE:HG12	1:G:311:ALA:CB	2.96	0.60
1:L:180:LYS:O	1:M:280:PHE:C	2.40	0.60
1:D:85:ALA:HB1	1:D:501:VAL:HG12	1.82	0.60
2:U:24:PRO:HB2	2:U:37:LYS:HZ1	5.54	0.60
2:S:100:GLN:HB2	2:T:9:LYS:HE3	3.60	0.60
1:N:224:LYS:HG2	1:N:225:LYS:H	1.66	0.60
1:G:222:VAL:O	1:G:250:ALA:HA	2.01	0.60
1:E:348:ILE:HD11	1:E:367:ARG:HE	1.65	0.60
1:D:6:LEU:HD22	1:D:523:VAL:HG22	1.82	0.60
2:O:9:LYS:HE2	2:U:100:GLN:HB2	1.82	0.60
1:K:345:ILE:HG22	1:K:349:LYS:HE3	1.83	0.60
1:H:458:ALA:O	1:I:114:LEU:HD12	2.49	0.60
1:H:290:ASP:N	1:H:344:ARG:HH12	1.99	0.60
1:K:503:ARG:NH1	1:K:507:GLN:HE22	2.04	0.60
1:M:232:LEU:HD22	1:M:236:LEU:HD22	1.83	0.60
2:R:45:VAL:O	2:R:46:ILE:HD13	2.01	0.60
1:A:350:LYS:O	1:B:208:GLU:CA	7.70	0.60
1:M:410:ILE:HB	1:M:496:VAL:HG11	1.82	0.60
2:Q:54:LEU:HD12	2:Q:55:GLU:N	4.56	0.60
1:C:300:ILE:O	1:C:300:ILE:HG22	2.01	0.60
2:Q:26:THR:HG22	2:Q:32:LEU:CD2	5.10	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:295:THR:HG22	1:M:317:GLY:C	2.25	0.60
1:G:50:THR:CG2	1:G:51:LYS:H	2.06	0.60
1:F:54:VAL:HG22	1:F:89:THR:HG21	1.83	0.60
1:E:98:ALA:HB2	1:E:449:GLU:CG	2.32	0.60
1:H:280:PHE:CD2	1:N:385:GLU:HB2	2.90	0.60
1:D:287:MET:O	1:D:291:ILE:HG13	2.01	0.60
1:D:455:ALA:HB1	1:D:465:ILE:HD12	1.87	0.60
1:E:23:VAL:HG22	1:E:60:VAL:HG11	1.82	0.60
1:F:184:THR:HG23	1:F:380:VAL:HA	1.82	0.60
1:A:184:THR:HG23	1:A:380:VAL:HA	2.02	0.60
2:Q:96:LEU:HA	2:R:14:ARG:NE	2.16	0.60
2:T:80:ILE:HG22	2:T:81:GLU:N	2.19	0.60
1:I:189:VAL:CG1	1:I:190:GLU:H	2.14	0.60
1:H:283:ARG:HD3	1:H:363:LYS:HZ1	2.10	0.60
1:M:178:GLU:OE1	1:M:323:ARG:NH2	2.33	0.60
1:E:345:ILE:HD11	1:E:368:LEU:HD23	1.82	0.60
2:T:25:LYS:HG2	2:T:31:VAL:HG22	1.83	0.60
1:H:219:ILE:HB	1:H:295:THR:HG21	1.84	0.60
1:I:229:VAL:CG2	1:I:256:GLU:HB3	2.31	0.60
1:K:263:VAL:O	1:K:267:ARG:HB2	2.01	0.60
1:M:268:GLY:O	1:N:227:SER:OG	2.18	0.60
1:M:218:PHE:CE1	1:M:242:THR:HG21	2.39	0.60
2:Q:70:VAL:HG11	2:Q:95:LEU:HD23	2.59	0.60
1:A:233:LEU:HA	2:O:30:ILE:CD1	2.62	0.60
2:O:80:ILE:HG22	2:O:81:GLU:N	2.15	0.60
1:E:360:ALA:O	1:E:364:LEU:HG	2.01	0.60
1:D:235:ILE:CD1	1:D:311:ALA:HB3	2.29	0.60
1:L:180:LYS:HB3	1:M:281:GLY:CA	2.31	0.60
1:K:224:LYS:HG2	1:K:225:LYS:H	1.66	0.60
1:G:222:VAL:HG22	1:G:300:ILE:HD12	1.82	0.60
1:M:290:ASP:N	1:M:344:ARG:HH12	2.02	0.60
1:H:312:THR:C	1:H:314:SER:H	2.05	0.60
1:H:337:LYS:HB2	1:H:340:ASP:OD2	2.02	0.60
2:Q:58:GLN:CG	2:Q:59:ARG:N	4.83	0.60
1:H:50:THR:HG22	1:H:52:ASP:N	2.16	0.60
1:L:526:LYS:HG3	1:L:527:PRO:HD2	1.82	0.60
1:F:382:ALA:HB3	1:F:388:LEU:HB2	1.83	0.60
1:I:465:ILE:HD13	1:I:480:PHE:CE1	2.36	0.60
1:K:28:LYS:NZ	1:K:97:GLN:HE22	2.09	0.60
1:K:366:GLU:O	1:K:370:LYS:HG3	2.08	0.60
2:Q:73:ALA:HB1	2:Q:75:TYR:CE2	2.37	0.60
2:U:13:ASP:C	2:U:13:ASP:OD1	2.40	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:54:VAL:HG22	1:C:89:THR:HG21	1.84	0.60
1:H:189:VAL:CG1	1:H:190:GLU:H	2.11	0.60
1:J:229:VAL:HG23	1:J:256:GLU:CB	2.32	0.60
1:I:74:LEU:HA	1:I:512:ILE:HD11	1.84	0.60
1:C:501:VAL:HG23	1:C:502:THR:N	2.17	0.60
1:D:127:ALA:O	1:D:131:ILE:HG13	2.05	0.60
1:G:263:VAL:HG13	1:G:267:ARG:NH1	3.99	0.60
1:N:79:SER:C	1:N:81:THR:H	2.06	0.60
1:I:31:LEU:HD13	1:I:90:THR:HG22	1.87	0.60
2:U:13:ASP:CG	2:U:92:GLU:HB3	2.98	0.60
2:U:20:ILE:CG1	2:U:44:LYS:HG3	4.68	0.60
1:N:74:LEU:HA	1:N:512:ILE:HD11	1.84	0.60
1:G:98:ALA:HB2	1:G:449:GLU:CG	2.39	0.60
1:G:23:VAL:HG22	1:G:60:VAL:HG11	1.83	0.60
1:C:404:ALA:HB1	1:C:500:LYS:HB3	1.82	0.60
1:I:79:SER:C	1:I:81:THR:H	2.07	0.60
1:H:527:PRO:O	1:H:528:GLU:HG2	2.02	0.60
1:H:175:THR:HG21	1:H:177:GLU:OE2	2.09	0.60
2:Q:62:LEU:O	2:Q:64:VAL:N	2.57	0.60
1:M:182:LEU:HD12	1:N:363:LYS:HE2	1.82	0.60
1:E:234:PRO:O	1:E:238:GLN:HG3	2.09	0.60
2:S:96:LEU:CD2	2:T:14:ARG:NH1	6.06	0.60
1:E:225:LYS:HG3	1:E:252:ASP:HB3	1.84	0.60
1:E:251:GLU:HA	1:E:277:ALA:HB2	1.83	0.60
1:C:298:THR:HG23	1:C:304:LEU:HD12	8.55	0.60
1:F:98:ALA:HB2	1:F:449:GLU:CG	2.33	0.60
1:K:79:SER:C	1:K:81:THR:H	2.05	0.60
1:K:229:VAL:HG23	1:K:256:GLU:CB	2.35	0.60
1:H:316:LEU:CD2	1:H:316:LEU:H	2.15	0.60
1:D:30:THR:O	1:D:35:GLY:HA3	2.12	0.60
1:D:150:ILE:CD1	1:D:496:VAL:H	2.14	0.60
2:S:41:GLN:HE21	2:S:74:LYS:HG2	2.24	0.60
2:T:55:GLU:CD	2:U:55:GLU:HB3	3.99	0.60
2:P:92:GLU:HA	2:P:95:LEU:HD12	2.08	0.60
1:F:233:LEU:HD23	2:T:30:ILE:HD13	1.84	0.60
1:M:74:LEU:HA	1:M:512:ILE:CD1	2.59	0.60
1:K:74:LEU:HA	1:K:512:ILE:HD11	2.00	0.60
1:N:465:ILE:HD13	1:N:480:PHE:CE1	2.36	0.60
1:F:224:LYS:HB3	1:F:302:GLU:OE1	2.14	0.60
2:Q:96:LEU:HD23	2:R:14:ARG:NH2	2.16	0.59
1:E:258:LEU:HA	1:E:261:LEU:HD12	1.83	0.59
1:E:246:LEU:HB3	1:E:272:VAL:CG1	2.54	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:218:PHE:O	1:F:246:LEU:HD12	2.19	0.59
1:F:325:THR:HG22	1:F:326:LYS:H	1.66	0.59
1:A:222:VAL:HG22	1:A:300:ILE:HD12	1.95	0.59
1:M:372:ALA:C	1:M:374:GLY:N	2.48	0.59
1:M:229:VAL:CG2	1:M:256:GLU:HB3	2.32	0.59
1:H:232:LEU:HD21	1:H:236:LEU:HD13	1.84	0.59
1:L:526:LYS:HD2	1:L:527:PRO:HD2	1.84	0.59
1:J:65:HIS:HD2	1:J:527:PRO:HG3	2.71	0.59
1:H:6:LEU:HD23	1:H:523:VAL:HG22	1.90	0.59
1:J:218:PHE:CE1	1:J:242:THR:HG21	2.40	0.59
1:M:410:ILE:CD1	1:M:496:VAL:HG11	2.29	0.59
1:L:410:ILE:HB	1:L:496:VAL:HG11	1.83	0.59
1:C:258:LEU:HA	1:C:261:LEU:HD12	2.54	0.59
1:J:157:VAL:O	1:J:161:ILE:HG13	2.06	0.59
1:L:157:VAL:O	1:L:161:ILE:HG13	2.06	0.59
1:I:157:VAL:O	1:I:161:ILE:HG13	2.01	0.59
1:L:232:LEU:HD21	1:L:236:LEU:HD13	1.84	0.59
1:M:390:GLU:OE1	1:M:394:ARG:NH1	2.35	0.59
2:Q:81:GLU:OE2	2:Q:84:GLY:HA2	2.95	0.59
2:T:8:ILE:HD12	2:T:8:ILE:N	2.17	0.59
1:B:416:VAL:HG21	1:B:490:MET:HG3	1.96	0.59
1:A:231:GLU:O	1:A:234:PRO:HD2	2.99	0.59
1:C:237:GLU:CG	2:Q:28:GLY:HA3	2.31	0.59
2:U:41:GLN:HG2	2:U:74:LYS:HB3	1.83	0.59
1:J:233:LEU:N	1:J:234:PRO:HD2	2.17	0.59
1:C:498:PRO:HG2	1:C:501:VAL:CG2	2.41	0.59
1:G:267:ARG:HG3	1:G:267:ARG:HH11	4.49	0.59
1:J:226:VAL:HG11	1:J:232:LEU:HD12	1.99	0.59
1:N:290:ASP:O	1:N:294:VAL:HG23	2.04	0.59
1:D:290:ASP:O	1:D:294:VAL:HG23	2.02	0.59
1:I:372:ALA:C	1:I:374:GLY:H	2.22	0.59
1:A:175:THR:HB	1:A:377:VAL:HG22	1.86	0.59
2:R:8:ILE:N	2:R:8:ILE:HD12	2.19	0.59
1:N:283:ARG:HH12	1:N:364:LEU:HD12	1.67	0.59
2:S:96:LEU:HB3	2:T:89:ILE:HG21	1.84	0.59
2:T:8:ILE:H	2:T:8:ILE:HD12	1.67	0.59
2:U:78:THR:HG22	2:U:80:ILE:HD11	1.94	0.59
2:U:79:GLU:C	2:U:80:ILE:HD12	2.51	0.59
1:M:136:ILE:HD11	1:M:491:VAL:CG2	2.33	0.59
2:P:18:LYS:HE3	2:P:86:GLU:O	2.58	0.59
1:E:213:VAL:O	1:E:214:LEU:HD23	2.02	0.59
1:K:189:VAL:CG1	1:K:190:GLU:H	2.08	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:177:GLU:HB3	1:M:321:ARG:HH11	1.67	0.59
1:J:74:LEU:HA	1:J:512:ILE:CD1	2.41	0.59
1:N:295:THR:HG22	1:N:317:GLY:C	2.26	0.59
1:L:229:VAL:HG23	1:L:256:GLU:CB	2.35	0.59
1:B:116:LEU:O	1:B:120:ILE:HG13	2.01	0.59
1:G:127:ALA:O	1:G:131:ILE:HG13	2.02	0.59
1:J:458:ALA:O	1:K:114:LEU:HD12	2.02	0.59
1:J:28:LYS:NZ	1:J:97:GLN:HE22	1.99	0.59
1:L:118:ARG:O	1:L:122:LYS:HG3	2.02	0.59
1:L:31:LEU:HD13	1:L:90:THR:HG22	1.86	0.59
1:N:218:PHE:CE1	1:N:242:THR:HG21	2.38	0.59
2:S:96:LEU:HD23	2:T:14:ARG:NH1	5.17	0.59
2:T:96:LEU:O	2:T:97:ALA:HB2	2.41	0.59
2:O:6:THR:HG23	2:U:100:GLN:OXT	5.07	0.59
2:T:97:ALA:HB1	2:U:8:ILE:CG2	3.86	0.59
1:M:410:ILE:HB	1:M:496:VAL:HG12	1.84	0.59
1:I:325:THR:CG2	1:I:327:ASP:H	2.05	0.59
1:C:201:PRO:O	1:C:204:VAL:CG2	2.99	0.59
1:E:224:LYS:HB3	1:E:302:GLU:OE1	8.22	0.59
1:H:295:THR:HG22	1:H:317:GLY:C	2.21	0.59
1:H:79:SER:C	1:H:81:THR:H	2.05	0.59
1:J:337:LYS:HB2	1:J:340:ASP:OD2	2.07	0.59
1:L:232:LEU:O	1:L:232:LEU:HD23	2.03	0.59
1:M:226:VAL:HG11	1:M:232:LEU:HD12	1.88	0.59
1:G:30:THR:O	1:G:35:GLY:HA3	2.02	0.59
1:K:128:VAL:HA	1:K:131:ILE:HD12	1.83	0.59
1:K:283:ARG:HH12	1:K:364:LEU:HD12	1.66	0.59
1:B:136:ILE:HB	1:B:410:ILE:HG22	1.84	0.59
1:G:352:LEU:HD21	1:G:365:GLN:HG2	6.09	0.59
1:H:410:ILE:HB	1:H:496:VAL:HG11	1.83	0.59
1:M:74:LEU:HD12	1:M:512:ILE:CD1	2.32	0.59
1:K:267:ARG:HG2	1:L:256:GLU:CD	2.23	0.59
1:F:301:SER:HB2	1:F:304:LEU:CB	2.33	0.59
1:C:57:ALA:O	1:C:75:LYS:HD3	2.02	0.59
1:K:290:ASP:N	1:K:344:ARG:HH12	2.00	0.59
2:U:81:GLU:HA	2:U:85:GLU:O	2.02	0.59
1:E:281:GLY:O	1:E:284:ARG:HG2	2.02	0.59
1:D:325:THR:HG22	1:D:326:LYS:N	2.18	0.59
2:S:12:GLY:O	2:S:13:ASP:CB	2.45	0.59
1:G:225:LYS:HD3	1:G:254:GLU:CD	3.25	0.59
1:L:295:THR:HG22	1:L:317:GLY:C	2.23	0.59
1:D:501:VAL:HG23	1:D:502:THR:N	2.18	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:124:VAL:O	1:F:128:VAL:HG23	2.16	0.59
1:A:382:ALA:HB3	1:A:388:LEU:HB2	1.85	0.59
1:F:284:ARG:O	1:F:288:LEU:HG	2.03	0.59
1:N:226:VAL:HG11	1:N:232:LEU:HD12	2.29	0.59
1:M:232:LEU:HD21	1:M:236:LEU:HD13	1.88	0.59
1:A:40:LEU:HD13	1:A:59:GLU:HG3	1.96	0.59
1:H:65:HIS:O	1:H:69:ILE:HG13	2.13	0.59
1:G:136:ILE:HD11	1:G:477:ARG:NH2	2.21	0.59
1:C:235:ILE:HD11	1:C:311:ALA:CB	2.33	0.59
1:E:283:ARG:NH1	1:E:363:LYS:HB3	2.17	0.59
2:T:25:LYS:HA	2:T:30:ILE:O	2.75	0.59
1:G:242:THR:HG22	1:G:244:LYS:HG3	2.85	0.59
1:C:498:PRO:HG2	1:C:501:VAL:HG22	1.94	0.59
1:B:57:ALA:O	1:B:75:LYS:HD3	2.12	0.59
1:D:224:LYS:HB3	1:D:302:GLU:OE1	2.03	0.59
2:T:8:ILE:CG2	2:T:16:VAL:HG21	2.60	0.59
1:G:279:GLY:C	1:G:284:ARG:HB3	2.22	0.59
1:I:307:LYS:HE3	1:I:310:ASN:ND2	2.24	0.59
1:G:301:SER:HB2	1:G:304:LEU:CB	2.31	0.59
1:I:74:LEU:HA	1:I:512:ILE:CD1	2.32	0.59
1:B:498:PRO:HG2	1:B:501:VAL:CG2	2.32	0.59
1:N:229:VAL:HG23	1:N:256:GLU:CB	2.34	0.59
1:L:226:VAL:HG11	1:L:232:LEU:HD12	1.84	0.59
1:H:303:GLU:C	1:H:305:GLY:H	2.08	0.59
2:T:54:LEU:HD13	2:U:57:GLY:HA2	5.13	0.59
2:U:84:GLY:O	2:U:85:GLU:HG3	2.03	0.59
1:C:218:PHE:HE1	1:C:244:LYS:HD2	4.36	0.59
1:H:283:ARG:NH1	1:H:363:LYS:HG3	2.17	0.59
1:F:50:THR:HG21	1:F:52:ASP:HB3	1.83	0.59
1:L:180:LYS:C	1:M:281:GLY:CA	2.71	0.59
1:K:345:ILE:O	1:K:349:LYS:HG3	2.07	0.59
1:E:501:VAL:HG23	1:E:502:THR:N	2.22	0.59
1:L:74:LEU:HA	1:L:512:ILE:CD1	2.32	0.59
1:G:207:PRO:HG2	1:G:208:GLU:H	2.62	0.59
1:M:303:GLU:C	1:M:305:GLY:H	2.10	0.59
1:F:157:VAL:HG22	1:F:395:PHE:CZ	2.37	0.59
1:N:175:THR:HG21	1:N:177:GLU:OE2	2.02	0.59
1:L:182:LEU:HD12	1:M:363:LYS:NZ	2.18	0.58
1:C:230:ARG:O	1:C:234:PRO:HD2	2.03	0.58
1:M:297:GLY:HA3	1:M:317:GLY:H	1.73	0.58
1:L:47:PRO:HB3	1:M:69:ILE:HG23	1.86	0.58
1:A:263:VAL:HG22	1:G:304:LEU:O	4.50	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:74:LEU:HA	1:M:512:ILE:HD11	2.31	0.58
1:L:359:TYR:O	1:L:363:LYS:HG2	2.54	0.58
1:A:96:ALA:O	1:A:100:VAL:HG23	2.07	0.58
1:J:79:SER:C	1:J:81:THR:H	2.08	0.58
1:B:40:LEU:HD13	1:B:59:GLU:HG3	1.94	0.58
2:R:81:GLU:HA	2:R:86:GLU:HA	1.85	0.58
2:T:81:GLU:HG3	2:T:85:GLU:H	1.67	0.58
1:C:278:PRO:O	1:C:279:GLY:O	2.21	0.58
1:B:247:LEU:HD13	1:B:324:ILE:HD11	1.85	0.58
1:C:349:LYS:C	1:C:351:GLU:H	2.06	0.58
1:F:237:GLU:CG	2:T:28:GLY:HA3	2.32	0.58
1:K:496:VAL:HG12	1:K:497:ASP:H	1.68	0.58
2:S:56:ASN:N	2:S:56:ASN:OD1	2.35	0.58
1:H:118:ARG:O	1:H:122:LYS:HG3	2.02	0.58
1:L:283:ARG:HH21	1:L:367:ARG:CD	2.42	0.58
1:J:118:ARG:O	1:J:122:LYS:HG3	2.08	0.58
2:S:52:ARG:HH21	2:T:53:VAL:HB	2.98	0.58
1:D:141:ARG:NH2	1:D:163:ASP:OD1	2.29	0.58
1:J:217:ALA:HB2	1:J:245:PRO:CG	2.35	0.58
1:A:236:LEU:HB2	2:O:30:ILE:CD1	2.55	0.58
2:S:49:GLY:O	2:S:62:LEU:HD11	2.46	0.58
1:I:345:ILE:O	1:I:349:LYS:HG3	2.11	0.58
1:D:263:VAL:O	1:D:267:ARG:HB2	2.10	0.58
1:A:501:VAL:HG23	1:A:502:THR:N	2.20	0.58
1:B:124:VAL:O	1:B:128:VAL:HG23	2.03	0.58
1:B:127:ALA:O	1:B:131:ILE:HG13	2.14	0.58
1:B:501:VAL:HG23	1:B:502:THR:N	2.20	0.58
1:C:136:ILE:CD1	1:C:477:ARG:HH21	2.16	0.58
1:L:224:LYS:HG2	1:L:225:LYS:H	1.68	0.58
1:K:175:THR:HG21	1:K:177:GLU:OE2	2.03	0.58
2:Q:34:ASP:OD1	2:Q:34:ASP:N	2.35	0.58
1:H:106:ASN:HD21	5:H:601:DMS:H11	1.68	0.58
2:S:96:LEU:HD23	2:T:14:ARG:HH22	4.48	0.58
2:O:14:ARG:HE	2:U:96:LEU:HD23	1.68	0.58
1:I:297:GLY:HA3	1:I:317:GLY:H	1.70	0.58
1:K:50:THR:HG22	1:K:51:LYS:N	2.14	0.58
1:H:411:VAL:O	1:H:496:VAL:HG13	2.13	0.58
1:N:258:LEU:O	1:N:262:VAL:HG23	2.03	0.58
1:B:498:PRO:HG2	1:B:501:VAL:HG22	1.84	0.58
1:L:290:ASP:O	1:L:294:VAL:HG23	2.17	0.58
1:J:65:HIS:O	1:J:69:ILE:HG13	2.12	0.58
1:N:103:GLY:O	1:N:107:VAL:HG23	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:79:SER:C	1:M:81:THR:H	2.06	0.58
1:A:320:GLU:HB3	1:A:333:GLY:HA3	1.87	0.58
1:E:40:LEU:HD13	1:E:59:GLU:HG3	1.90	0.58
1:M:31:LEU:HD13	1:M:90:THR:HG22	1.84	0.58
2:U:20:ILE:HG13	2:U:43:GLY:HA2	1.86	0.58
1:G:283:ARG:NH2	1:G:366:GLU:OE2	3.05	0.58
1:B:54:VAL:HG22	1:B:89:THR:HG21	1.86	0.58
1:E:301:SER:HB2	1:E:304:LEU:CB	6.29	0.58
1:H:496:VAL:HG12	1:H:497:ASP:N	2.20	0.58
1:N:345:ILE:O	1:N:349:LYS:HG3	2.12	0.58
1:M:345:ILE:HG22	1:M:349:LYS:HE3	1.85	0.58
1:J:503:ARG:NH1	1:J:507:GLN:HE22	2.04	0.58
1:J:81:THR:OG1	1:J:508:ASN:ND2	2.35	0.58
1:J:175:THR:HG21	1:J:177:GLU:OE2	2.07	0.58
1:L:36:ARG:HB3	1:M:518:THR:O	2.04	0.58
1:I:312:THR:C	1:I:314:SER:H	2.07	0.58
1:H:258:LEU:O	1:H:262:VAL:HG23	2.14	0.58
1:K:258:LEU:O	1:K:262:VAL:HG23	2.09	0.58
1:M:283:ARG:CZ	1:M:363:LYS:HG3	2.90	0.58
1:C:298:THR:HB	1:C:315:MET:HB2	1.84	0.58
1:E:18:ARG:HD2	1:E:67:GLU:OE2	2.04	0.58
1:E:175:THR:HB	1:E:377:VAL:HG22	1.95	0.58
2:O:34:ASP:OD1	2:O:34:ASP:N	2.31	0.58
1:K:6:LEU:HD23	1:K:523:VAL:HG22	1.96	0.58
1:J:96:ALA:O	1:J:100:VAL:HG23	2.03	0.58
1:A:372:ALA:C	1:A:374:GLY:N	2.78	0.58
1:B:218:PHE:HE1	1:B:244:LYS:HB2	1.95	0.58
1:B:222:VAL:O	1:B:250:ALA:HA	2.10	0.58
2:U:74:LYS:HZ1	2:U:75:TYR:HB3	6.60	0.58
1:G:283:ARG:HH22	1:G:366:GLU:CD	3.51	0.58
1:E:283:ARG:HH12	1:E:363:LYS:HD2	3.08	0.58
1:E:326:LYS:O	1:E:326:LYS:HD3	2.03	0.58
1:L:234:PRO:HG3	1:L:309:GLU:CA	2.37	0.58
1:I:263:VAL:O	1:I:267:ARG:HB2	2.03	0.58
1:L:219:ILE:HB	1:L:295:THR:HG21	1.87	0.58
1:C:253:VAL:HG21	1:C:274:ALA:HB1	1.85	0.58
1:H:229:VAL:HG23	1:H:256:GLU:CB	2.33	0.58
1:I:103:GLY:O	1:I:107:VAL:HG23	2.06	0.58
1:M:337:LYS:HB2	1:M:340:ASP:OD2	2.04	0.58
1:M:259:ALA:O	1:M:263:VAL:HG23	2.03	0.58
2:T:81:GLU:HA	2:T:86:GLU:HA	1.84	0.58
1:H:325:THR:CG2	1:H:327:ASP:H	2.05	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:295:THR:HG22	1:I:317:GLY:C	2.24	0.58
1:A:236:LEU:CB	2:O:30:ILE:HD11	2.57	0.58
1:G:78:ALA:O	1:G:89:THR:HG22	2.04	0.58
1:J:189:VAL:CG1	1:J:190:GLU:H	2.12	0.58
1:I:234:PRO:HG3	1:I:309:GLU:CA	2.33	0.58
2:Q:11:LEU:O	2:Q:12:GLY:C	2.40	0.58
1:G:501:VAL:HG23	1:G:502:THR:N	2.21	0.58
1:H:27:VAL:HG12	1:H:90:THR:HG23	1.97	0.58
1:G:392:LYS:O	1:G:396:GLU:HG3	2.04	0.58
1:G:88:GLY:HA2	4:G:602:ADP:O2B	2.03	0.58
1:L:249:ILE:O	1:L:249:ILE:HG22	2.02	0.58
1:D:101:ARG:HG3	1:D:102:GLU:N	2.19	0.58
1:B:95:LEU:O	1:B:99:ILE:HG13	2.25	0.58
1:D:411:VAL:HB	1:D:412:PRO:HD2	1.89	0.58
2:R:17:VAL:HG12	2:R:18:LYS:N	2.18	0.58
1:N:283:ARG:CZ	1:N:363:LYS:HG3	2.33	0.58
1:C:237:GLU:HB3	2:Q:28:GLY:CA	2.27	0.58
1:B:168:VAL:O	1:B:168:VAL:HG12	2.11	0.58
1:E:289:LYS:HE3	1:F:202:TYR:CZ	5.03	0.58
1:M:37:ASN:OD1	1:N:515:LEU:HD12	2.03	0.58
1:B:78:ALA:O	1:B:89:THR:HG22	2.04	0.58
1:L:233:LEU:N	1:L:234:PRO:HD2	2.25	0.58
1:A:124:VAL:O	1:A:128:VAL:HG23	2.02	0.58
1:D:229:VAL:HG21	2:R:36:ALA:HB2	1.86	0.58
1:K:157:VAL:O	1:K:161:ILE:HG13	2.03	0.58
1:J:303:GLU:C	1:J:305:GLY:H	2.07	0.58
1:G:450:PRO:O	1:G:454:ILE:HG13	2.04	0.58
1:C:40:LEU:HD13	1:C:59:GLU:HG3	1.89	0.58
2:T:18:LYS:HZ1	2:T:85:GLU:CD	2.06	0.58
1:B:300:ILE:O	1:B:300:ILE:HG22	2.02	0.58
1:C:290:ASP:HB3	1:C:371:LEU:HD21	1.89	0.58
1:F:325:THR:HG22	1:F:326:LYS:N	2.19	0.58
2:T:32:LEU:HB3	2:T:36:ALA:HB3	3.85	0.58
1:C:326:LYS:HD3	1:C:326:LYS:C	4.40	0.58
1:N:410:ILE:HB	1:N:496:VAL:HG12	1.90	0.58
1:K:234:PRO:HG3	1:K:309:GLU:CA	2.32	0.58
1:K:219:ILE:HB	1:K:295:THR:HG21	1.90	0.58
1:J:316:LEU:H	1:J:316:LEU:CD2	2.21	0.58
1:G:6:LEU:HD22	1:G:523:VAL:HG22	1.86	0.58
1:G:199:ILE:HG13	1:G:274:ALA:O	2.15	0.58
1:D:235:ILE:CG1	1:D:311:ALA:HB3	2.33	0.57
1:M:385:GLU:N	1:N:280:PHE:CE2	2.72	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:225:LYS:HD3	1:C:254:GLU:CD	3.31	0.57
1:H:345:ILE:O	1:H:349:LYS:HG3	2.04	0.57
1:M:157:VAL:O	1:M:161:ILE:HG13	2.05	0.57
1:L:27:VAL:HG12	1:L:90:THR:HG23	1.88	0.57
1:L:218:PHE:CE1	1:L:242:THR:HG21	2.43	0.57
1:I:303:GLU:C	1:I:305:GLY:H	2.08	0.57
1:M:462:GLY:O	1:M:466:VAL:HG23	2.03	0.57
2:U:78:THR:HG22	2:U:80:ILE:CD1	2.46	0.57
1:C:150:ILE:HD11	1:C:495:ILE:CA	2.12	0.57
1:I:219:ILE:HB	1:I:295:THR:HG21	1.85	0.57
2:P:79:GLU:C	2:P:80:ILE:HG13	2.74	0.57
1:G:341:ILE:C	1:G:343:ALA:H	3.24	0.57
1:E:343:ALA:HA	1:F:210:MET:HE3	2.34	0.57
1:J:307:LYS:HB3	1:J:309:GLU:OE1	2.15	0.57
1:L:54:VAL:HG22	1:L:89:THR:CG2	2.32	0.57
1:M:332:VAL:CG1	1:M:377:VAL:HG21	2.34	0.57
1:E:127:ALA:O	1:E:131:ILE:HG13	2.11	0.57
1:A:57:ALA:O	1:A:75:LYS:HD3	2.03	0.57
1:N:157:VAL:O	1:N:161:ILE:HG13	2.05	0.57
1:B:366:GLU:O	1:B:369:ALA:HB3	2.03	0.57
1:L:316:LEU:CD2	1:L:316:LEU:H	2.18	0.57
1:N:303:GLU:C	1:N:305:GLY:H	2.09	0.57
1:G:231:GLU:HA	1:G:309:GLU:HB3	2.16	0.57
1:I:130:LYS:HD3	1:I:142:LYS:NZ	29.77	0.57
1:L:303:GLU:C	1:L:305:GLY:H	2.08	0.57
1:H:372:ALA:C	1:H:374:GLY:H	2.19	0.57
2:U:17:VAL:HG21	2:U:70:VAL:HG21	3.98	0.57
1:L:219:ILE:HD12	1:L:295:THR:CG2	2.34	0.57
1:G:263:VAL:O	1:G:267:ARG:HB2	2.04	0.57
1:J:259:ALA:O	1:J:263:VAL:HG23	2.17	0.57
1:J:385:GLU:HB2	1:K:280:PHE:CD2	2.48	0.57
1:F:57:ALA:O	1:F:75:LYS:HD3	2.10	0.57
1:A:101:ARG:HG3	1:A:102:GLU:N	2.26	0.57
2:R:21:GLU:H	2:R:21:GLU:CD	2.07	0.57
2:Q:46:ILE:O	2:Q:66:GLU:HG3	3.29	0.57
1:E:312:THR:HG22	1:E:314:SER:H	1.69	0.57
2:O:54:LEU:HD11	2:P:55:GLU:HA	1.86	0.57
1:C:238:GLN:HB3	1:C:313:LEU:HG	2.09	0.57
1:C:264:ASN:OD1	1:C:269:THR:HG21	2.35	0.57
1:M:178:GLU:CA	1:M:321:ARG:HH12	2.17	0.57
1:G:218:PHE:O	1:G:246:LEU:HD12	2.57	0.57
1:N:74:LEU:HD12	1:N:512:ILE:HD12	1.87	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:337:LYS:HB2	1:L:340:ASP:OD2	2.04	0.57
1:K:316:LEU:CD2	1:K:316:LEU:H	2.22	0.57
1:B:96:ALA:O	1:B:100:VAL:HG23	2.03	0.57
2:P:13:ASP:HB2	2:P:62:LEU:CD2	2.34	0.57
2:P:79:GLU:HG2	2:P:88:VAL:HG22	2.02	0.57
1:C:203:PHE:CD1	1:C:273:ALA:HA	2.74	0.57
1:E:352:LEU:HD21	1:E:365:GLN:HG2	1.87	0.57
1:L:410:ILE:HB	1:L:496:VAL:HG12	1.86	0.57
1:A:218:PHE:O	1:A:246:LEU:HD12	2.38	0.57
1:N:74:LEU:HA	1:N:512:ILE:CD1	2.34	0.57
1:H:74:LEU:HA	1:H:512:ILE:CD1	2.33	0.57
1:N:232:LEU:HD21	1:N:236:LEU:HD13	1.89	0.57
1:M:41:GLU:OE2	1:N:524:ALA:HB1	2.05	0.57
1:G:184:THR:HG23	1:G:380:VAL:HA	1.86	0.57
1:I:352:LEU:HD23	1:I:364:LEU:CD2	6.04	0.57
2:P:71:VAL:CG1	2:Q:80:ILE:HD13	2.35	0.57
2:T:8:ILE:HG21	2:T:16:VAL:HG21	1.86	0.57
1:B:219:ILE:N	1:B:317:GLY:O	2.52	0.57
1:H:360:ALA:O	1:H:364:LEU:HD13	2.23	0.57
1:A:288:LEU:HD23	1:A:291:ILE:HD12	2.53	0.57
1:C:136:ILE:HB	1:C:410:ILE:HG22	1.89	0.57
1:D:230:ARG:HA	1:D:233:LEU:HD12	2.09	0.57
1:A:325:THR:HG22	1:A:326:LYS:N	2.20	0.57
1:B:18:ARG:HD2	1:B:67:GLU:OE2	2.05	0.57
2:T:56:ASN:O	2:T:58:GLN:HG3	2.04	0.57
1:C:30:THR:O	1:C:35:GLY:HA3	2.08	0.57
1:G:175:THR:HB	1:G:377:VAL:HG22	1.86	0.57
2:U:15:VAL:HG11	2:U:95:LEU:CD2	4.72	0.57
1:G:251:GLU:HA	1:G:277:ALA:HB2	2.84	0.57
1:A:235:ILE:HD12	1:A:311:ALA:HB1	1.87	0.57
1:L:360:ALA:HA	1:L:363:LYS:HG3	2.93	0.57
1:H:256:GLU:HG3	1:N:267:ARG:O	2.04	0.57
1:G:130:LYS:O	1:G:133:ALA:HB3	2.59	0.57
1:H:465:ILE:HD13	1:H:480:PHE:CE1	2.40	0.57
2:Q:48:VAL:CG1	2:Q:62:LEU:HD12	4.49	0.57
2:R:81:GLU:HA	2:R:85:GLU:O	2.05	0.57
2:U:46:ILE:HD12	2:U:87:TYR:CE2	5.83	0.57
1:M:283:ARG:CD	1:M:363:LYS:HZ2	2.17	0.57
1:M:496:VAL:HG12	1:M:497:ASP:H	1.69	0.57
1:A:168:VAL:HG12	1:A:168:VAL:O	2.05	0.57
2:Q:54:LEU:HD11	2:R:57:GLY:CA	2.34	0.57
1:G:168:VAL:HG12	1:G:168:VAL:O	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:235:ILE:HD11	1:J:311:ALA:CB	2.26	0.57
1:C:229:VAL:HG23	1:C:256:GLU:OE2	2.03	0.57
1:C:294:VAL:HG23	1:C:295:THR:HG23	5.95	0.57
1:E:225:LYS:HD3	1:E:254:GLU:CD	2.25	0.57
1:F:233:LEU:HD21	2:T:32:LEU:HD21	5.24	0.57
1:N:496:VAL:HG12	1:N:497:ASP:H	1.71	0.57
1:J:307:LYS:HE3	1:J:310:ASN:ND2	2.23	0.57
1:N:233:LEU:N	1:N:234:PRO:HD2	2.20	0.57
1:D:128:VAL:HG13	1:D:503:ARG:HG3	1.85	0.57
1:B:349:LYS:C	1:B:351:GLU:H	2.07	0.57
1:K:459:GLY:HA3	1:L:114:LEU:HD12	2.00	0.57
1:M:263:VAL:O	1:M:267:ARG:HB2	2.04	0.57
1:A:323:ARG:HH11	1:A:323:ARG:HG2	1.91	0.57
2:T:73:ALA:HB1	2:T:75:TYR:CE2	2.39	0.57
1:G:233:LEU:O	1:G:237:GLU:HG3	2.04	0.57
2:R:34:ASP:HA	2:R:37:LYS:HE2	1.85	0.57
1:N:421:ALA:O	1:N:425:VAL:HG23	2.05	0.57
1:G:40:LEU:HD13	1:G:59:GLU:HG3	1.87	0.57
2:Q:17:VAL:O	2:Q:87:TYR:HB3	2.05	0.57
2:R:17:VAL:O	2:R:87:TYR:HB3	2.05	0.57
2:T:10:PRO:HB2	2:T:14:ARG:O	2.04	0.57
2:T:13:ASP:HA	2:T:62:LEU:HD21	1.87	0.57
2:U:20:ILE:HD11	2:U:44:LYS:HG3	3.36	0.57
1:B:235:ILE:HD12	1:B:311:ALA:HB1	2.00	0.57
1:D:247:LEU:HD22	1:D:322:VAL:HG11	2.00	0.57
1:L:40:LEU:N	1:L:40:LEU:HD12	2.19	0.57
1:G:224:LYS:CE	1:G:301:SER:HA	6.89	0.57
1:M:74:LEU:HD12	1:M:512:ILE:HD12	2.03	0.57
1:J:263:VAL:O	1:J:267:ARG:HB2	2.08	0.57
1:G:231:GLU:O	1:G:309:GLU:HA	2.41	0.57
1:M:146:GLU:O	1:M:150:ILE:HG13	2.05	0.57
1:G:452:ARG:NH1	1:G:463:SER:HA	2.19	0.57
1:E:101:ARG:HG3	1:E:102:GLU:N	2.21	0.57
1:D:80:LYS:HE2	1:E:383:ALA:O	2.04	0.57
1:J:127:ALA:O	1:J:131:ILE:HG13	2.04	0.57
1:E:80:LYS:HE2	1:F:383:ALA:O	2.41	0.57
1:B:199:ILE:HG13	1:B:274:ALA:O	2.05	0.57
2:T:48:VAL:HG12	2:T:62:LEU:HD12	4.06	0.57
1:B:136:ILE:CD1	1:B:477:ARG:HH21	2.27	0.57
1:M:360:ALA:O	1:M:363:LYS:HG2	2.22	0.57
1:C:290:ASP:O	1:C:294:VAL:HG23	2.04	0.57
1:E:78:ALA:O	1:E:89:THR:HG22	2.08	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:283:ARG:HD3	1:H:363:LYS:HE3	1.87	0.57
1:F:228:ASN:HD21	1:F:230:ARG:HB2	1.90	0.57
1:I:233:LEU:N	1:I:234:PRO:HD2	2.23	0.57
1:K:410:ILE:HB	1:K:496:VAL:HG12	1.88	0.57
1:H:74:LEU:HD12	1:H:512:ILE:HD12	1.87	0.57
1:H:345:ILE:HG22	1:H:349:LYS:HE3	1.86	0.57
1:A:98:ALA:HB2	1:A:449:GLU:CG	2.38	0.57
1:K:222:VAL:HG12	1:K:223:GLU:H	1.74	0.57
1:C:101:ARG:HG3	1:C:102:GLU:N	2.25	0.57
1:D:452:ARG:NH1	1:D:463:SER:HA	2.23	0.57
1:N:127:ALA:O	1:N:131:ILE:HG13	2.04	0.57
1:C:445:ARG:CZ	1:C:452:ARG:HH21	2.18	0.57
1:F:101:ARG:HG3	1:F:102:GLU:N	2.20	0.57
2:R:77:GLY:HA3	2:R:90:LEU:HD23	2.04	0.57
2:P:27:LYS:HD3	2:Q:84:GLY:HA3	1.86	0.56
1:N:50:THR:CG2	1:N:51:LYS:H	2.18	0.56
1:B:359:TYR:CZ	1:B:363:LYS:HE3	2.40	0.56
1:C:207:PRO:HG2	1:C:208:GLU:H	3.91	0.56
1:C:220:LEU:HG	1:C:222:VAL:HG23	1.87	0.56
1:H:283:ARG:HH22	1:H:364:LEU:HA	1.70	0.56
1:G:201:PRO:O	1:G:204:VAL:HG23	2.05	0.56
1:J:496:VAL:HG12	1:J:497:ASP:H	1.70	0.56
1:E:144:ILE:CD1	1:E:165:MET:HG2	2.34	0.56
1:N:316:LEU:CD2	1:N:316:LEU:H	2.19	0.56
1:K:127:ALA:O	1:K:131:ILE:HG13	2.09	0.56
1:N:452:ARG:HG2	1:N:452:ARG:HH11	1.77	0.56
1:G:95:LEU:O	1:G:99:ILE:HG13	2.05	0.56
1:N:96:ALA:O	1:N:100:VAL:HG23	2.09	0.56
1:D:136:ILE:CD1	1:D:477:ARG:HH21	2.19	0.56
1:M:283:ARG:HD3	1:M:363:LYS:HZ2	1.69	0.56
1:M:65:HIS:O	1:M:69:ILE:HG13	2.05	0.56
1:N:307:LYS:HE3	1:N:310:ASN:HD21	1.71	0.56
1:L:229:VAL:CG2	1:L:256:GLU:HB3	2.41	0.56
2:O:44:LYS:HA	2:O:68:ASP:O	2.12	0.56
1:B:427:GLU:OE2	1:B:430:LYS:HD2	2.05	0.56
1:H:25:ASN:HA	1:H:28:LYS:HE2	1.90	0.56
1:G:416:VAL:HG21	1:G:490:MET:HG3	1.86	0.56
2:Q:26:THR:HG21	2:Q:30:ILE:HB	3.63	0.56
1:G:283:ARG:O	1:G:287:MET:HG3	2.05	0.56
1:E:289:LYS:NZ	1:F:202:TYR:CE2	5.41	0.56
1:L:307:LYS:HE3	1:L:310:ASN:ND2	2.25	0.56
1:L:307:LYS:HB3	1:L:309:GLU:OE1	2.08	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:180:LYS:HB3	1:M:281:GLY:H	1.68	0.56
1:C:298:THR:HG23	1:C:304:LEU:HD13	7.84	0.56
1:M:208:GLU:OE1	1:M:389:LYS:HD3	2.05	0.56
1:N:410:ILE:CD1	1:N:496:VAL:HG11	2.34	0.56
1:J:410:ILE:HB	1:J:496:VAL:HG12	1.92	0.56
1:K:136:ILE:HB	1:K:410:ILE:HG13	2.52	0.56
1:M:234:PRO:HG3	1:M:309:GLU:CA	2.33	0.56
2:S:100:GLN:CG	2:T:9:LYS:HE2	2.35	0.56
1:F:128:VAL:HG13	1:F:503:ARG:HG3	1.92	0.56
1:I:54:VAL:HG22	1:I:89:THR:CG2	2.35	0.56
1:A:301:SER:HB2	1:A:304:LEU:CB	2.35	0.56
1:M:312:THR:C	1:M:314:SER:H	2.12	0.56
2:O:50:THR:O	2:O:50:THR:HG23	2.05	0.56
1:K:372:ALA:C	1:K:374:GLY:H	2.08	0.56
1:J:6:LEU:HD23	1:J:523:VAL:HG22	1.85	0.56
1:D:286:GLU:OE1	1:D:344:ARG:NH2	2.62	0.56
1:M:6:LEU:HD23	1:M:523:VAL:HG22	1.87	0.56
2:Q:80:ILE:HG22	2:Q:81:GLU:N	2.20	0.56
1:A:345:ILE:HG23	1:A:368:LEU:HD13	1.93	0.56
1:F:359:TYR:CE1	1:F:363:LYS:HE2	2.66	0.56
1:C:348:ILE:CG2	1:C:368:LEU:HG	5.90	0.56
2:Q:26:THR:O	2:Q:27:LYS:HB2	4.81	0.56
2:O:52:ARG:HH21	2:P:53:VAL:CG1	2.18	0.56
1:A:235:ILE:HG21	1:A:311:ALA:CB	4.34	0.56
1:K:307:LYS:HB3	1:K:309:GLU:OE1	2.12	0.56
1:L:59:GLU:OE1	1:M:4:LYS:NZ	2.35	0.56
1:M:258:LEU:O	1:M:262:VAL:HG23	2.06	0.56
1:G:298:THR:HB	1:G:315:MET:HB2	1.88	0.56
1:J:496:VAL:HG12	1:J:497:ASP:N	2.20	0.56
1:K:496:VAL:HG12	1:K:497:ASP:N	2.21	0.56
1:M:233:LEU:N	1:M:234:PRO:HD2	2.21	0.56
1:K:7:VAL:HG12	1:K:12:ALA:HB2	1.87	0.56
1:H:106:ASN:HD21	5:H:601:DMS:C1	2.19	0.56
1:M:27:VAL:HG12	1:M:90:THR:HG23	1.87	0.56
1:B:101:ARG:HG3	1:B:102:GLU:N	2.23	0.56
1:B:147:VAL:CG2	1:B:410:ILE:HD11	2.35	0.56
1:E:50:THR:CG2	1:E:51:LYS:H	2.09	0.56
1:C:168:VAL:CG1	1:C:172:GLY:HA3	2.27	0.56
2:O:52:ARG:NH2	2:P:53:VAL:CB	2.65	0.56
1:K:233:LEU:N	1:K:234:PRO:HD2	2.23	0.56
1:M:408:GLU:O	1:M:499:ALA:HB3	2.36	0.56
1:D:229:VAL:HG11	2:R:32:LEU:CD2	2.35	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:228:ASN:ND2	1:E:231:GLU:HG3	3.90	0.56
1:K:452:ARG:HH11	1:K:452:ARG:HG2	1.75	0.56
1:C:520:GLU:HB3	1:D:29:VAL:HG11	1.88	0.56
1:J:27:VAL:HG12	1:J:90:THR:HG23	1.90	0.56
1:J:31:LEU:HD13	1:J:90:THR:HG22	1.87	0.56
1:G:101:ARG:HG3	1:G:102:GLU:N	2.23	0.56
1:B:219:ILE:HG22	1:B:221:ILE:HG13	1.86	0.56
1:C:235:ILE:O	1:C:239:VAL:HG23	2.15	0.56
1:B:215:GLU:OE1	1:B:321:ARG:HG3	2.67	0.56
1:E:341:ILE:C	1:E:343:ALA:H	2.08	0.56
1:E:349:LYS:C	1:E:351:GLU:H	2.85	0.56
1:E:361:ARG:O	1:E:365:GLN:HB2	3.14	0.56
1:J:229:VAL:CG2	1:J:256:GLU:HB3	2.36	0.56
1:N:307:LYS:HB3	1:N:309:GLU:OE1	2.06	0.56
1:L:283:ARG:HH12	1:L:364:LEU:CD1	2.18	0.56
1:K:54:VAL:HG22	1:K:89:THR:CG2	2.45	0.56
1:G:465:ILE:HD13	1:G:480:PHE:CE2	2.41	0.56
1:L:459:GLY:HA3	1:M:114:LEU:HD12	1.91	0.56
1:L:452:ARG:HH11	1:L:452:ARG:HG2	1.72	0.56
1:I:218:PHE:CE1	1:I:242:THR:HG21	2.42	0.56
1:B:452:ARG:NH1	1:B:463:SER:HA	2.21	0.56
2:O:18:LYS:HG2	2:O:87:TYR:CD2	2.40	0.56
1:H:363:LYS:O	1:H:366:GLU:HG2	2.16	0.56
1:G:326:LYS:C	1:G:326:LYS:HD3	4.37	0.56
1:F:237:GLU:OE1	2:T:27:LYS:HG3	2.61	0.56
2:R:100:GLN:CG	2:S:9:LYS:HE2	5.41	0.56
1:D:235:ILE:O	1:D:239:VAL:HG23	2.30	0.56
1:C:178:GLU:CG	1:C:388:LEU:HD21	2.36	0.56
1:H:224:LYS:HG2	1:H:225:LYS:H	1.72	0.56
1:I:224:LYS:HG2	1:I:225:LYS:H	1.73	0.56
1:F:127:ALA:O	1:F:131:ILE:HG13	2.15	0.56
1:K:118:ARG:O	1:K:122:LYS:HG3	2.05	0.56
2:R:41:GLN:HG2	2:R:74:LYS:HB3	1.99	0.56
1:I:283:ARG:HH12	1:I:363:LYS:HG3	2.28	0.56
2:Q:18:LYS:HE3	2:Q:86:GLU:O	2.05	0.56
1:K:307:LYS:HE3	1:K:310:ASN:ND2	2.21	0.56
1:H:218:PHE:HE1	1:H:242:THR:HG21	1.70	0.56
1:I:27:VAL:HG12	1:I:90:THR:HG23	1.88	0.56
1:K:31:LEU:HD13	1:K:90:THR:HG22	1.89	0.56
1:C:23:VAL:HG22	1:C:60:VAL:HG11	1.86	0.56
1:H:421:ALA:O	1:H:425:VAL:HG23	2.11	0.56
2:R:79:GLU:C	2:R:80:ILE:HG13	2.75	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:62:LEU:O	2:T:64:VAL:N	2.68	0.56
2:T:95:LEU:O	2:U:14:ARG:NH1	2.38	0.56
2:T:97:ALA:HB1	2:U:8:ILE:HG22	3.39	0.56
1:M:283:ARG:CG	1:M:363:LYS:HZ2	2.18	0.56
1:E:52:ASP:OD1	1:E:54:VAL:HG23	2.09	0.56
1:K:411:VAL:O	1:K:496:VAL:HG13	2.09	0.56
1:L:283:ARG:HG2	1:L:363:LYS:HZ2	1.70	0.56
1:D:230:ARG:O	1:D:234:PRO:HD2	2.18	0.56
1:A:332:VAL:HG12	1:A:333:GLY:N	2.21	0.56
1:D:189:VAL:HG13	1:D:193:GLN:HG2	1.86	0.56
1:J:197:GLY:HA3	1:J:325:THR:O	2.06	0.56
1:G:345:ILE:HG23	1:G:368:LEU:HD13	1.87	0.56
1:G:345:ILE:HG23	1:G:368:LEU:CD1	2.36	0.56
1:F:51:LYS:NZ	4:F:602:ADP:O1A	2.86	0.56
1:E:306:PHE:CE2	1:E:315:MET:SD	2.99	0.56
1:J:345:ILE:HG22	1:J:349:LYS:HE3	1.95	0.56
1:H:59:GLU:O	1:I:4:LYS:HG3	2.07	0.56
1:A:361:ARG:O	1:A:365:GLN:HB2	2.06	0.56
1:A:72:GLN:HE22	1:A:75:LYS:HZ1	1.76	0.56
1:D:445:ARG:CZ	1:D:452:ARG:HH21	2.24	0.56
1:J:452:ARG:HG2	1:J:452:ARG:HH11	1.73	0.56
1:M:452:ARG:HG2	1:M:452:ARG:HH11	1.73	0.56
1:D:199:ILE:HG13	1:D:274:ALA:O	2.06	0.56
1:E:445:ARG:CZ	1:E:452:ARG:HH21	2.31	0.56
1:I:25:ASN:HA	1:I:28:LYS:HE2	1.87	0.56
1:A:452:ARG:NH1	1:A:463:SER:HA	2.21	0.56
2:O:41:GLN:HG2	2:O:74:LYS:HB3	2.08	0.56
1:C:526:LYS:HG3	1:C:527:PRO:HD2	2.13	0.56
2:Q:8:ILE:HG21	2:Q:16:VAL:HG21	1.87	0.55
1:F:150:ILE:CD1	1:F:496:VAL:H	2.19	0.55
1:N:219:ILE:HB	1:N:295:THR:HG21	1.91	0.55
1:B:301:SER:HB2	1:B:304:LEU:CB	2.34	0.55
1:M:290:ASP:O	1:M:294:VAL:HG23	2.07	0.55
1:M:118:ARG:O	1:M:122:LYS:HG3	2.14	0.55
1:I:316:LEU:CD2	1:I:316:LEU:H	2.21	0.55
1:L:421:ALA:O	1:L:425:VAL:HG23	2.15	0.55
1:F:201:PRO:O	1:F:204:VAL:HG23	2.05	0.55
2:R:78:THR:HG22	2:R:79:GLU:N	2.21	0.55
1:E:235:ILE:HD12	1:E:311:ALA:HB3	3.82	0.55
1:N:50:THR:CG2	1:N:52:ASP:H	2.14	0.55
1:D:52:ASP:OD1	1:D:54:VAL:HG23	2.15	0.55
1:B:98:ALA:HB2	1:B:449:GLU:CG	2.34	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:307:LYS:HE3	1:C:309:GLU:OE1	2.05	0.55
1:C:465:ILE:HD13	1:C:480:PHE:CD2	2.42	0.55
1:B:520:GLU:HB3	1:C:29:VAL:HG11	2.01	0.55
1:H:128:VAL:HA	1:H:131:ILE:HD12	1.94	0.55
1:M:103:GLY:O	1:M:107:VAL:HG23	2.06	0.55
1:E:267:ARG:HG3	1:E:267:ARG:HH11	1.71	0.55
1:N:283:ARG:HD3	1:N:363:LYS:NZ	2.45	0.55
1:F:237:GLU:HB3	2:T:28:GLY:HA3	1.87	0.55
1:N:229:VAL:CG2	1:N:256:GLU:HB3	2.40	0.55
1:B:178:GLU:CG	1:B:388:LEU:HD21	2.36	0.55
1:C:127:ALA:O	1:C:131:ILE:HG13	2.06	0.55
1:H:222:VAL:HG12	1:H:223:GLU:H	1.73	0.55
1:C:72:GLN:HE22	1:C:75:LYS:HZ1	1.52	0.55
1:M:232:LEU:O	1:M:232:LEU:HD23	2.11	0.55
1:D:199:ILE:O	1:D:199:ILE:HG22	2.06	0.55
1:B:230:ARG:HA	1:B:233:LEU:HD12	2.07	0.55
1:K:325:THR:HG22	1:K:327:ASP:N	2.02	0.55
2:P:45:VAL:HG21	2:P:64:VAL:CG1	2.43	0.55
1:B:283:ARG:O	1:B:287:MET:HG3	2.06	0.55
1:G:349:LYS:C	1:G:351:GLU:H	2.10	0.55
1:H:366:GLU:O	1:H:370:LYS:HG3	2.06	0.55
2:S:11:LEU:O	2:S:13:ASP:N	2.39	0.55
1:A:222:VAL:O	1:A:250:ALA:HA	2.08	0.55
1:I:290:ASP:O	1:I:294:VAL:HG23	2.07	0.55
1:F:501:VAL:HG23	1:F:502:THR:N	2.22	0.55
1:E:425:VAL:O	1:E:429:ILE:HG13	2.23	0.55
1:F:14:ARG:NH1	1:M:109:ALA:HA	2.22	0.55
1:K:283:ARG:HG2	1:K:363:LYS:HZ2	1.77	0.55
2:Q:65:LYS:HG3	2:Q:68:ASP:OD1	4.31	0.55
2:O:9:LYS:O	2:U:97:ALA:HA	2.07	0.55
2:T:96:LEU:HD23	2:U:14:ARG:HH11	1.71	0.55
2:Q:33:PRO:O	2:Q:35:THR:N	2.48	0.55
1:B:212:ALA:CB	1:B:324:ILE:HB	2.56	0.55
2:O:52:ARG:HG3	2:O:52:ARG:O	2.12	0.55
1:H:426:GLU:OE1	1:H:444:ARG:NH1	2.56	0.55
1:J:54:VAL:HG22	1:J:89:THR:CG2	2.41	0.55
2:P:56:ASN:N	2:P:56:ASN:OD1	2.39	0.55
1:D:465:ILE:HD13	1:D:480:PHE:CE2	2.50	0.55
1:L:25:ASN:HA	1:L:28:LYS:HE2	1.92	0.55
1:I:283:ARG:NH1	1:I:363:LYS:HG3	2.53	0.55
2:R:10:PRO:C	2:R:11:LEU:HD12	5.14	0.55
1:D:168:VAL:O	1:D:168:VAL:HG12	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:220:LEU:HD13	1:B:235:ILE:CD1	2.36	0.55
1:B:235:ILE:O	1:B:239:VAL:HG23	2.10	0.55
1:E:247:LEU:HD13	1:E:324:ILE:HD11	1.98	0.55
1:E:294:VAL:HA	1:E:341:ILE:CD1	2.35	0.55
1:N:496:VAL:HG12	1:N:497:ASP:N	2.21	0.55
1:I:496:VAL:HG12	1:I:497:ASP:N	2.23	0.55
1:C:142:LYS:HE2	1:C:146:GLU:OE2	2.11	0.55
1:I:232:LEU:HD23	1:I:232:LEU:O	2.07	0.55
1:G:472:GLU:HB3	1:G:478:TYR:CD2	2.52	0.55
1:L:6:LEU:HD23	1:L:523:VAL:HG22	1.94	0.55
1:D:161:ILE:HD12	1:D:399:LEU:CD2	2.44	0.55
2:Q:72:PHE:CD2	2:Q:72:PHE:N	3.02	0.55
2:R:8:ILE:HD12	2:R:8:ILE:H	2.23	0.55
1:M:182:LEU:CD1	1:N:363:LYS:HZ3	2.17	0.55
1:M:496:VAL:HG12	1:M:497:ASP:N	2.22	0.55
1:E:354:THR:HG22	1:E:354:THR:O	2.07	0.55
1:A:78:ALA:O	1:A:89:THR:HG22	2.10	0.55
1:C:50:THR:CG2	1:C:52:ASP:H	2.15	0.55
1:L:41:GLU:HB3	1:M:69:ILE:HD11	1.88	0.55
1:H:307:LYS:HB3	1:H:309:GLU:OE1	2.08	0.55
1:C:526:LYS:CG	1:C:527:PRO:HD2	2.74	0.55
1:D:144:ILE:CD1	1:D:165:MET:HG2	2.37	0.55
1:C:354:THR:HG22	1:C:354:THR:O	2.25	0.55
1:K:518:THR:O	1:K:518:THR:HG22	2.07	0.55
1:E:30:THR:O	1:E:35:GLY:HA3	2.06	0.55
1:E:520:GLU:HB3	1:F:29:VAL:HG11	1.91	0.55
1:F:320:GLU:HB3	1:F:333:GLY:HA3	1.88	0.55
1:D:95:LEU:O	1:D:99:ILE:HG13	2.07	0.55
1:I:360:ALA:O	1:I:364:LEU:HD13	2.29	0.55
2:R:80:ILE:CG2	2:R:81:GLU:N	2.76	0.55
1:E:218:PHE:HB3	1:E:316:LEU:HD13	2.55	0.55
1:F:136:ILE:CD1	1:F:477:ARG:HH21	2.20	0.55
2:P:85:GLU:HA	2:P:85:GLU:OE1	2.05	0.55
1:A:234:PRO:HG2	1:A:309:GLU:HA	2.37	0.55
1:E:277:ALA:HB1	1:E:284:ARG:HD2	1.88	0.55
1:N:345:ILE:HG22	1:N:349:LYS:HE3	1.99	0.55
1:C:267:ARG:HH11	1:C:267:ARG:HG3	4.48	0.55
1:M:224:LYS:HG2	1:M:225:LYS:H	1.70	0.55
1:A:411:VAL:HB	1:A:412:PRO:HD2	1.94	0.55
1:A:369:ALA:HB1	1:A:375:VAL:CG2	2.96	0.55
2:P:100:GLN:OXT	2:Q:7:VAL:N	2.92	0.55
1:D:173:ILE:HD12	1:D:366:GLU:CA	3.11	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:P:11:LEU:O	2:P:12:GLY:C	2.45	0.55
1:G:168:VAL:HG21	1:G:376:ALA:HB2	1.92	0.55
1:A:228:ASN:HD22	1:A:231:GLU:HG3	1.72	0.55
1:A:207:PRO:HB3	1:G:343:ALA:HB2	1.88	0.55
1:G:354:THR:O	1:G:354:THR:HG22	2.22	0.55
1:E:222:VAL:HA	1:E:300:ILE:HB	1.88	0.55
1:N:518:THR:O	1:N:518:THR:HG22	2.05	0.55
1:C:52:ASP:OD1	1:C:54:VAL:HG23	2.07	0.55
1:D:217:ALA:HB2	1:D:245:PRO:HB2	1.89	0.55
1:F:307:LYS:HB2	1:F:310:ASN:HD22	1.87	0.55
1:H:307:LYS:HE3	1:H:310:ASN:ND2	2.21	0.55
1:C:199:ILE:HG23	1:C:276:LYS:HZ2	5.44	0.55
1:I:118:ARG:O	1:I:122:LYS:HG3	2.07	0.55
1:D:307:LYS:HB2	1:D:310:ASN:HD22	1.71	0.55
1:G:189:VAL:HG13	1:G:190:GLU:N	2.21	0.55
1:C:18:ARG:HD2	1:C:67:GLU:OE2	2.07	0.55
1:K:218:PHE:HE1	1:K:242:THR:HG21	1.81	0.55
1:D:6:LEU:CD2	1:D:523:VAL:HG22	2.37	0.55
1:M:316:LEU:H	1:M:316:LEU:CD2	2.20	0.55
1:F:225:LYS:O	1:F:226:VAL:HG23	2.30	0.55
1:E:157:VAL:HG22	1:E:395:PHE:CZ	2.41	0.55
1:F:452:ARG:NH1	1:F:463:SER:HA	2.23	0.55
1:B:230:ARG:O	1:B:234:PRO:HD2	2.08	0.55
2:T:11:LEU:C	2:T:14:ARG:HD2	3.01	0.55
1:F:235:ILE:CG1	1:F:311:ALA:HB3	2.37	0.55
1:A:233:LEU:CD2	2:O:30:ILE:HG21	2.66	0.55
1:M:178:GLU:N	1:M:321:ARG:HH11	2.02	0.55
1:G:325:THR:CG2	1:G:326:LYS:H	2.48	0.55
1:I:410:ILE:HB	1:I:496:VAL:HG12	1.89	0.55
1:G:246:LEU:HB3	1:G:272:VAL:CG1	2.35	0.55
1:D:124:VAL:O	1:D:128:VAL:HG23	2.10	0.55
1:G:178:GLU:CG	1:G:388:LEU:HD21	2.36	0.55
1:L:226:VAL:CG1	1:L:232:LEU:HD12	2.40	0.55
1:D:465:ILE:HD13	1:D:480:PHE:CD2	2.52	0.55
1:K:24:ALA:O	1:K:28:LYS:HG2	2.07	0.55
1:N:312:THR:C	1:N:314:SER:H	2.10	0.55
1:M:117:LYS:O	1:M:121:GLU:HG3	2.16	0.55
2:Q:73:ALA:O	2:Q:75:TYR:N	2.40	0.54
1:M:136:ILE:HD11	1:M:491:VAL:HG21	1.97	0.54
2:P:70:VAL:HG11	2:P:95:LEU:CD2	2.30	0.54
1:D:301:SER:HB2	1:D:304:LEU:HB2	1.89	0.54
1:C:366:GLU:O	1:C:370:LYS:HG3	2.06	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:360:ALA:O	1:H:363:LYS:HG2	2.07	0.54
1:F:230:ARG:HA	1:F:233:LEU:HD12	1.88	0.54
1:I:496:VAL:HG12	1:I:497:ASP:H	1.74	0.54
1:J:226:VAL:CG1	1:J:232:LEU:HD12	2.48	0.54
1:J:232:LEU:HD23	1:J:236:LEU:HB2	1.88	0.54
1:F:284:ARG:HG3	1:F:284:ARG:HH11	1.71	0.54
1:L:372:ALA:C	1:L:374:GLY:N	2.60	0.54
1:L:518:THR:O	1:L:518:THR:HG22	2.07	0.54
1:J:490:MET:CE	1:J:490:MET:HA	2.37	0.54
1:D:417:THR:HG23	1:D:418:LEU:HD12	2.00	0.54
1:C:144:ILE:HD12	1:C:165:MET:HG2	2.22	0.54
2:T:48:VAL:CG1	2:T:62:LEU:CD1	3.99	0.54
1:D:168:VAL:HG21	1:D:376:ALA:HB2	1.88	0.54
1:C:222:VAL:O	1:C:250:ALA:HA	2.07	0.54
1:G:366:GLU:O	1:G:370:LYS:HG3	2.07	0.54
1:F:230:ARG:O	1:F:234:PRO:HD2	2.08	0.54
2:O:60:VAL:HG21	2:P:53:VAL:HG11	1.89	0.54
1:H:410:ILE:HB	1:H:496:VAL:HG12	1.88	0.54
1:A:284:ARG:O	1:A:288:LEU:HG	2.07	0.54
1:N:297:GLY:HA3	1:N:317:GLY:H	1.75	0.54
2:R:20:ILE:CG1	2:R:43:GLY:HA2	2.40	0.54
1:J:218:PHE:HE1	1:J:242:THR:HG21	1.74	0.54
1:K:175:THR:HG22	1:K:176:VAL:N	2.22	0.54
1:K:6:LEU:CD2	1:K:523:VAL:HG22	2.47	0.54
1:K:27:VAL:HG12	1:K:90:THR:HG23	1.88	0.54
1:L:258:LEU:O	1:L:262:VAL:HG23	2.11	0.54
1:G:526:LYS:HG3	1:G:527:PRO:HD2	1.88	0.54
1:N:332:VAL:HG22	1:N:375:VAL:HG11	1.92	0.54
1:F:520:GLU:HB3	1:G:29:VAL:HG11	1.89	0.54
1:C:204:VAL:HG11	1:C:210:MET:HA	2.79	0.54
1:D:218:PHE:HE1	1:D:244:LYS:HB2	1.73	0.54
1:D:270:LEU:HG	1:D:272:VAL:HG13	1.94	0.54
1:I:345:ILE:HG22	1:I:349:LYS:HE3	1.97	0.54
1:G:238:GLN:HB3	1:G:313:LEU:HG	2.14	0.54
1:L:297:GLY:HA3	1:L:317:GLY:N	2.20	0.54
1:E:124:VAL:O	1:E:128:VAL:HG23	2.18	0.54
1:K:229:VAL:CG2	1:K:256:GLU:HB3	2.40	0.54
1:D:229:VAL:HG12	1:D:233:LEU:HD11	2.07	0.54
1:A:141:ARG:NH2	1:A:163:ASP:OD1	2.47	0.54
1:G:350:LYS:O	1:G:353:GLU:HG2	3.35	0.54
1:J:123:ALA:HB2	1:J:440:ALA:HA	1.92	0.54
2:R:85:GLU:OE1	2:R:85:GLU:HA	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:11:LEU:HD11	2:U:98:VAL:HG23	3.18	0.54
1:J:283:ARG:HD3	1:J:363:LYS:NZ	2.22	0.54
1:C:229:VAL:HG12	1:C:233:LEU:HG	2.23	0.54
1:A:220:LEU:HG	1:A:222:VAL:HG23	2.08	0.54
1:L:41:GLU:HB3	1:M:69:ILE:CD1	2.38	0.54
1:L:63:GLU:OE2	1:M:526:LYS:HE2	2.08	0.54
1:M:459:GLY:CA	1:N:114:LEU:HD12	2.37	0.54
1:A:72:GLN:NE2	1:A:75:LYS:NZ	2.68	0.54
1:H:459:GLY:CA	1:I:114:LEU:HD12	2.64	0.54
1:C:147:VAL:CG2	1:C:410:ILE:HD11	2.37	0.54
2:O:22:GLU:N	2:O:22:GLU:OE1	2.35	0.54
1:N:360:ALA:O	1:N:364:LEU:HD12	2.29	0.54
1:N:360:ALA:O	1:N:363:LYS:HG2	2.06	0.54
2:U:12:GLY:HA2	2:U:51:GLY:N	5.09	0.54
1:L:240:ALA:O	1:M:228:ASN:OD1	2.25	0.54
1:J:366:GLU:O	1:J:370:LYS:HG3	2.17	0.54
1:J:128:VAL:HA	1:J:131:ILE:HD12	1.92	0.54
1:F:6:LEU:HD22	1:F:523:VAL:HG22	1.96	0.54
2:Q:15:VAL:CG1	2:Q:45:VAL:HG13	3.78	0.54
1:E:219:ILE:N	1:E:317:GLY:O	2.41	0.54
2:U:71:VAL:O	2:U:95:LEU:HD12	7.76	0.54
1:B:150:ILE:HG22	1:B:151:SER:N	2.53	0.54
1:G:341:ILE:O	1:G:345:ILE:HG22	5.26	0.54
1:K:410:ILE:CD1	1:K:496:VAL:HG11	2.38	0.54
1:J:219:ILE:O	1:J:221:ILE:HG13	2.24	0.54
1:B:173:ILE:HD12	1:B:366:GLU:HA	6.58	0.54
1:G:445:ARG:CZ	1:G:452:ARG:HH21	2.25	0.54
1:B:468:GLN:O	1:B:471:ALA:HB3	2.22	0.54
1:I:204:VAL:HG13	1:I:211:GLU:O	2.15	0.54
1:I:258:LEU:O	1:I:262:VAL:HG23	2.10	0.54
2:T:41:GLN:HG2	2:T:74:LYS:HB3	1.90	0.54
1:C:361:ARG:O	1:C:365:GLN:HB2	2.08	0.54
1:H:37:ASN:OD1	1:I:515:LEU:HD12	2.35	0.54
1:C:50:THR:HA	1:C:390:GLU:OE1	2.17	0.54
1:D:240:ALA:HA	1:D:270:LEU:HD13	1.90	0.54
1:H:410:ILE:CD1	1:H:496:VAL:HG11	2.35	0.54
1:A:365:GLN:OE1	1:A:365:GLN:HA	2.08	0.54
1:L:69:ILE:O	1:L:73:LEU:HB2	2.15	0.54
2:U:24:PRO:HB2	2:U:37:LYS:NZ	5.60	0.54
1:N:263:VAL:O	1:N:267:ARG:HB2	2.08	0.54
1:K:81:THR:OG1	1:K:508:ASN:ND2	2.59	0.54
1:M:41:GLU:HG2	1:N:524:ALA:HA	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:283:ARG:HG2	1:I:363:LYS:NZ	2.33	0.54
2:T:78:THR:HG22	2:T:80:ILE:HD11	2.00	0.54
2:U:18:LYS:HG2	2:U:87:TYR:CD2	2.43	0.54
1:B:416:VAL:HG21	1:B:479:GLY:HA3	1.88	0.54
1:C:416:VAL:HG21	1:C:479:GLY:HA3	2.01	0.54
1:J:283:ARG:HH21	1:J:367:ARG:CD	2.34	0.54
1:J:360:ALA:O	1:J:363:LYS:HG3	2.53	0.54
1:B:218:PHE:CE1	1:B:244:LYS:HB2	2.68	0.54
2:Q:33:PRO:C	2:Q:35:THR:N	2.73	0.54
1:E:31:LEU:HB2	1:E:90:THR:HG21	1.89	0.54
1:E:325:THR:CG2	1:E:326:LYS:H	2.14	0.54
1:D:246:LEU:HB3	1:D:272:VAL:CG1	2.34	0.54
1:I:410:ILE:CD1	1:I:496:VAL:HG11	2.35	0.54
1:C:263:VAL:HG13	1:C:267:ARG:NH1	3.85	0.54
1:H:226:VAL:HG11	1:H:232:LEU:HD12	1.89	0.54
1:G:124:VAL:O	1:G:128:VAL:HG23	2.08	0.54
1:J:222:VAL:HG12	1:J:223:GLU:H	1.84	0.54
1:C:360:ALA:O	1:C:364:LEU:HG	2.07	0.54
1:M:218:PHE:HB3	1:M:316:LEU:HG	1.89	0.54
1:D:472:GLU:HB3	1:D:478:TYR:CD2	2.43	0.54
1:M:141:ARG:NH1	1:M:166:GLU:HG3	2.23	0.54
2:T:20:ILE:HD12	2:T:42:LYS:CG	4.09	0.54
2:P:100:GLN:OE1	2:Q:9:LYS:CE	2.56	0.54
1:N:325:THR:HG22	1:N:327:ASP:N	2.04	0.54
1:E:247:LEU:HD22	1:E:322:VAL:CG1	2.36	0.54
1:F:168:VAL:HG21	1:F:376:ALA:HB2	1.94	0.54
1:L:50:THR:CG2	1:L:51:LYS:H	2.19	0.54
1:A:37:ASN:ND2	1:G:518:THR:OG1	2.46	0.54
1:F:232:LEU:HB3	1:F:236:LEU:CD1	2.38	0.54
2:T:25:LYS:HD3	2:T:29:GLY:O	2.54	0.54
2:O:63:GLU:OE2	2:P:50:THR:HG21	2.85	0.54
2:R:100:GLN:OE1	2:S:9:LYS:HE2	4.76	0.54
1:M:208:GLU:OE1	1:M:389:LYS:CD	2.55	0.54
1:A:251:GLU:O	1:A:252:ASP:HB2	2.29	0.54
1:N:411:VAL:O	1:N:496:VAL:HG13	2.13	0.54
1:G:261:LEU:O	1:G:265:LYS:HB2	2.08	0.54
1:M:307:LYS:HB3	1:M:309:GLU:OE1	2.08	0.54
1:M:54:VAL:HG22	1:M:89:THR:CG2	2.37	0.54
1:J:316:LEU:O	1:J:316:LEU:HD23	2.08	0.54
1:K:303:GLU:C	1:K:305:GLY:H	2.11	0.54
2:P:52:ARG:O	2:P:52:ARG:HG3	2.22	0.54
1:J:283:ARG:CG	1:J:363:LYS:HZ1	2.48	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:345:ILE:HG22	1:L:349:LYS:HE3	1.89	0.54
1:J:232:LEU:HD23	1:J:232:LEU:O	2.08	0.54
2:S:80:ILE:CG2	2:S:81:GLU:N	2.71	0.54
1:I:226:VAL:CG1	1:I:232:LEU:HD12	2.38	0.54
1:L:218:PHE:HB3	1:L:316:LEU:HG	1.92	0.54
1:J:6:LEU:CD2	1:J:523:VAL:HG22	2.38	0.54
1:C:173:ILE:HD12	1:C:369:ALA:HB2	1.89	0.54
1:I:518:THR:HG22	1:I:518:THR:O	2.09	0.54
1:H:151:SER:HB2	1:H:398:ALA:HA	1.92	0.54
1:L:204:VAL:HG13	1:L:211:GLU:O	2.07	0.54
1:I:352:LEU:HD21	1:I:365:GLN:HE22	1.73	0.53
2:Q:79:GLU:HB2	2:Q:87:TYR:O	4.49	0.53
1:N:360:ALA:O	1:N:364:LEU:CD1	2.62	0.53
2:O:13:ASP:CB	2:O:62:LEU:HD21	2.40	0.53
2:O:55:GLU:HG3	2:P:55:GLU:OE1	3.85	0.53
1:F:235:ILE:HG12	1:F:311:ALA:HB3	1.90	0.53
1:M:247:LEU:HD22	1:M:322:VAL:CG1	2.36	0.53
1:G:54:VAL:HG22	1:G:89:THR:HG21	1.94	0.53
1:D:261:LEU:O	1:D:265:LYS:HB2	2.77	0.53
1:K:40:LEU:HD12	1:K:40:LEU:N	2.28	0.53
1:J:74:LEU:HA	1:J:512:ILE:HD11	2.00	0.53
1:C:515:LEU:HD12	1:D:49:ILE:HG21	2.05	0.53
2:O:8:ILE:HG21	2:O:16:VAL:HG21	1.90	0.53
1:L:455:ALA:HB1	1:L:465:ILE:HD12	1.89	0.53
1:M:226:VAL:CG1	1:M:232:LEU:HD12	2.39	0.53
1:I:452:ARG:HH11	1:I:452:ARG:HG2	1.73	0.53
1:M:135:ALA:O	1:M:137:PRO:HD3	2.08	0.53
1:A:6:LEU:HD22	1:A:523:VAL:HG22	1.95	0.53
1:L:142:LYS:O	1:L:146:GLU:HG3	2.09	0.53
2:S:44:LYS:HA	2:S:68:ASP:O	2.08	0.53
1:A:219:ILE:HG22	1:A:221:ILE:HG13	1.90	0.53
2:R:11:LEU:O	2:R:12:GLY:C	2.46	0.53
2:R:13:ASP:OD1	2:R:13:ASP:C	2.68	0.53
2:O:62:LEU:C	2:O:64:VAL:H	2.14	0.53
2:S:96:LEU:HD23	2:T:14:ARG:NH2	3.78	0.53
1:A:230:ARG:O	1:A:234:PRO:HD2	2.09	0.53
1:B:284:ARG:HG3	1:B:284:ARG:HH11	4.04	0.53
1:B:287:MET:O	1:B:290:ASP:HB2	2.09	0.53
2:T:34:ASP:N	2:T:34:ASP:OD1	2.36	0.53
1:K:168:VAL:HG12	1:K:172:GLY:CA	2.33	0.53
1:B:515:LEU:HD12	1:C:49:ILE:HG21	1.90	0.53
1:N:234:PRO:HG3	1:N:309:GLU:CA	2.36	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:128:VAL:HG13	1:C:503:ARG:HG3	1.93	0.53
1:L:74:LEU:HA	1:L:512:ILE:HD11	1.93	0.53
1:C:466:VAL:HG12	1:C:470:LEU:HD12	1.99	0.53
2:O:8:ILE:H	2:O:8:ILE:HD12	1.74	0.53
1:H:526:LYS:HG3	1:H:527:PRO:HD2	1.90	0.53
1:J:175:THR:HG22	1:J:176:VAL:N	2.25	0.53
1:C:173:ILE:HD12	1:C:369:ALA:CB	2.38	0.53
1:I:95:LEU:O	1:I:99:ILE:HG13	2.08	0.53
1:H:95:LEU:HD21	1:H:450:PRO:HG2	2.05	0.53
1:B:30:THR:O	1:B:35:GLY:HA3	2.15	0.53
2:Q:48:VAL:HG12	2:Q:62:LEU:HD12	4.03	0.53
2:Q:78:THR:CG2	2:Q:79:GLU:N	2.93	0.53
2:O:18:LYS:HE3	2:O:86:GLU:O	2.09	0.53
1:G:293:ALA:O	1:G:336:GLY:HA3	2.52	0.53
1:L:496:VAL:HG12	1:L:497:ASP:N	2.26	0.53
1:M:372:ALA:O	1:M:374:GLY:N	2.38	0.53
1:K:39:VAL:C	1:K:40:LEU:HD12	2.39	0.53
1:H:233:LEU:N	1:H:234:PRO:HD2	2.22	0.53
1:H:229:VAL:CG2	1:H:256:GLU:HB3	2.38	0.53
1:G:144:ILE:HD12	1:G:165:MET:HG2	1.91	0.53
1:H:142:LYS:O	1:H:146:GLU:HG3	2.13	0.53
2:U:44:LYS:HA	2:U:68:ASP:O	2.08	0.53
1:C:341:ILE:C	1:C:343:ALA:H	3.13	0.53
1:F:351:GLU:OE2	1:G:326:LYS:NZ	2.23	0.53
1:I:411:VAL:O	1:I:496:VAL:HG13	2.09	0.53
1:H:458:ALA:O	1:I:114:LEU:CD1	3.02	0.53
1:J:224:LYS:HG2	1:J:225:LYS:H	1.73	0.53
2:R:33:PRO:C	2:R:35:THR:H	2.20	0.53
1:C:465:ILE:HD13	1:C:480:PHE:CE2	2.42	0.53
1:F:445:ARG:CZ	1:F:452:ARG:HH21	2.22	0.53
1:D:258:LEU:O	1:D:262:VAL:HG23	2.28	0.53
2:R:52:ARG:HG3	2:R:52:ARG:O	2.09	0.53
1:F:141:ARG:NH2	1:F:163:ASP:OD1	2.45	0.53
1:E:189:VAL:CG1	1:E:190:GLU:N	2.70	0.53
1:N:6:LEU:HD23	1:N:523:VAL:HG22	1.91	0.53
1:I:151:SER:HB2	1:I:398:ALA:HA	1.90	0.53
1:C:340:ASP:O	1:C:344:ARG:HB2	2.09	0.53
1:F:222:VAL:HG22	1:F:300:ILE:HD12	1.91	0.53
2:U:18:LYS:O	2:U:19:ARG:C	2.72	0.53
2:O:54:LEU:CD1	2:P:57:GLY:H	3.53	0.53
1:B:220:LEU:HD23	1:B:248:ILE:HG23	2.37	0.53
1:E:278:PRO:HG3	1:E:291:ILE:HD11	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:349:LYS:C	1:F:351:GLU:H	2.11	0.53
1:D:198:TYR:O	1:D:198:TYR:HD1	1.92	0.53
1:L:411:VAL:O	1:L:496:VAL:HG13	2.20	0.53
1:E:304:LEU:O	1:F:259:ALA:HB1	5.12	0.53
2:P:53:VAL:HG22	2:P:59:ARG:HE	1.74	0.53
1:K:226:VAL:HG11	1:K:232:LEU:HD12	1.95	0.53
1:H:263:VAL:O	1:H:267:ARG:HB2	2.09	0.53
2:S:8:ILE:CG2	2:S:16:VAL:HG21	2.49	0.53
1:A:202:TYR:CE1	1:G:289:LYS:NZ	2.71	0.53
1:E:465:ILE:HD13	1:E:480:PHE:CE2	2.51	0.53
1:N:316:LEU:HD23	1:N:316:LEU:O	2.09	0.53
1:K:421:ALA:O	1:K:425:VAL:HG23	2.08	0.53
1:B:184:THR:HG23	1:B:380:VAL:HA	1.96	0.53
1:A:258:LEU:O	1:A:262:VAL:HG23	2.23	0.53
1:E:392:LYS:O	1:E:396:GLU:HG3	2.11	0.53
1:B:392:LYS:O	1:B:396:GLU:HG3	2.21	0.53
1:D:477:ARG:HH11	1:D:477:ARG:HG3	1.74	0.53
1:D:150:ILE:CD1	1:D:496:VAL:N	2.72	0.53
1:B:233:LEU:O	1:B:237:GLU:HG3	2.10	0.53
1:G:235:ILE:O	1:G:239:VAL:HG23	2.44	0.53
1:J:219:ILE:HB	1:J:295:THR:HG21	1.91	0.53
1:H:458:ALA:C	1:I:114:LEU:CD1	3.24	0.53
1:L:222:VAL:HG12	1:L:223:GLU:H	1.77	0.53
1:N:218:PHE:HE1	1:N:242:THR:HG21	1.72	0.53
1:H:201:PRO:O	1:H:204:VAL:HG23	2.08	0.53
1:B:144:ILE:HD12	1:B:165:MET:HG2	1.89	0.53
1:C:418:LEU:HD12	1:C:418:LEU:H	1.79	0.53
1:E:201:PRO:O	1:E:204:VAL:HG22	2.09	0.53
1:G:150:ILE:CD1	1:G:496:VAL:H	2.39	0.53
1:F:410:ILE:HD11	1:F:496:VAL:HG21	1.96	0.53
1:A:136:ILE:O	1:A:410:ILE:HG22	2.27	0.53
1:F:240:ALA:HA	1:F:270:LEU:HD13	1.90	0.53
1:B:287:MET:O	1:B:291:ILE:HG13	2.36	0.53
1:N:40:LEU:HD12	1:N:40:LEU:N	2.31	0.53
1:A:149:THR:HG23	1:A:155:PRO:CA	2.43	0.53
1:B:189:VAL:HG13	1:B:190:GLU:N	2.24	0.53
1:K:218:PHE:HB3	1:K:316:LEU:HG	1.90	0.53
1:K:25:ASN:HA	1:K:28:LYS:HE2	1.90	0.53
1:L:28:LYS:NZ	1:L:97:GLN:HE22	2.07	0.53
1:K:142:LYS:O	1:K:146:GLU:HG3	2.09	0.53
1:C:192:TYR:CD2	1:C:192:TYR:C	3.40	0.53
2:P:21:GLU:CD	2:P:21:GLU:H	2.46	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:238:GLN:HB3	1:E:313:LEU:HG	1.90	0.53
2:T:92:GLU:HA	2:T:95:LEU:HD12	1.99	0.53
1:D:301:SER:HB2	1:D:304:LEU:CB	2.38	0.53
1:E:168:VAL:HG12	1:E:168:VAL:O	2.09	0.53
1:M:323:ARG:HH12	1:M:392:LYS:HE2	1.69	0.53
1:E:368:LEU:O	1:E:368:LEU:HD12	5.50	0.53
1:E:224:LYS:HD2	1:E:224:LYS:H	1.74	0.53
1:A:270:LEU:HG	1:A:272:VAL:HG13	2.04	0.53
1:K:259:ALA:O	1:K:263:VAL:HG23	2.28	0.53
1:J:194:PHE:CG	1:J:278:PRO:HB3	2.44	0.53
1:G:72:GLN:HE22	1:G:75:LYS:HZ3	1.57	0.53
1:K:337:LYS:HB2	1:K:340:ASP:OD2	2.12	0.53
1:I:6:LEU:HD23	1:I:523:VAL:HG22	1.90	0.53
1:D:289:LYS:O	1:D:292:ALA:HB3	2.37	0.53
1:L:259:ALA:O	1:L:263:VAL:HG23	2.08	0.53
1:L:263:VAL:O	1:L:267:ARG:HB2	2.14	0.53
1:N:28:LYS:NZ	1:N:97:GLN:HE22	2.07	0.53
1:A:520:GLU:HB3	1:B:29:VAL:HG11	1.92	0.53
1:I:363:LYS:O	1:I:366:GLU:HG2	2.15	0.53
1:B:228:ASN:HD21	1:B:230:ARG:HB2	1.74	0.53
1:E:321:ARG:O	1:E:322:VAL:HG23	2.09	0.53
1:C:206:ASN:HB3	1:C:209:THR:OG1	2.08	0.53
1:C:234:PRO:O	1:C:238:GLN:HG3	2.28	0.53
2:O:81:GLU:HA	2:O:85:GLU:O	2.09	0.53
1:C:168:VAL:HG21	1:C:376:ALA:HB2	1.95	0.53
1:E:287:MET:O	1:E:290:ASP:HB2	2.08	0.53
1:E:294:VAL:HG23	1:E:295:THR:N	2.24	0.53
1:M:383:ALA:HB1	1:N:359:TYR:OH	2.08	0.53
1:N:118:ARG:O	1:N:122:LYS:HG3	2.13	0.53
1:G:229:VAL:HG23	1:G:256:GLU:HG3	2.04	0.53
1:E:466:VAL:HG12	1:E:470:LEU:HD12	1.91	0.53
1:N:226:VAL:CG1	1:N:232:LEU:HD12	2.75	0.53
1:A:445:ARG:CZ	1:A:452:ARG:HH21	2.33	0.53
2:P:44:LYS:HA	2:P:68:ASP:O	2.09	0.53
1:E:372:ALA:O	1:E:374:GLY:N	4.33	0.53
1:N:141:ARG:NH1	1:N:166:GLU:HG3	2.24	0.53
1:K:283:ARG:NH2	1:K:367:ARG:CD	2.80	0.53
1:N:283:ARG:HG2	1:N:363:LYS:NZ	2.24	0.53
1:A:168:VAL:HG21	1:A:376:ALA:HB2	1.94	0.53
2:P:13:ASP:CB	2:P:62:LEU:HD21	2.37	0.53
2:Q:53:VAL:HG22	2:Q:59:ARG:HG2	1.91	0.53
1:D:7:VAL:HG21	1:D:66:LEU:CD1	2.29	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:7:VAL:HG12	1:B:12:ALA:HB2	1.91	0.53
1:B:360:ALA:O	1:B:364:LEU:HG	2.09	0.53
1:J:117:LYS:O	1:J:121:GLU:HG3	2.09	0.53
1:F:416:VAL:HG21	1:F:479:GLY:HA3	1.93	0.53
1:A:229:VAL:HG23	1:A:256:GLU:CD	2.29	0.53
1:D:184:THR:HG23	1:D:380:VAL:HA	1.90	0.53
1:L:239:VAL:HG22	1:L:313:LEU:CD1	2.44	0.53
1:C:320:GLU:HB3	1:C:333:GLY:HA3	1.91	0.53
2:Q:81:GLU:CD	2:Q:84:GLY:HA2	3.42	0.52
2:T:52:ARG:NH2	2:U:53:VAL:HB	2.21	0.52
1:E:147:VAL:CG2	1:E:410:ILE:HD11	2.38	0.52
1:J:283:ARG:HG2	1:J:363:LYS:HZ2	1.74	0.52
1:B:235:ILE:HD12	1:B:311:ALA:HB3	2.25	0.52
1:C:347:GLY:O	1:C:351:GLU:HB2	2.08	0.52
1:C:128:VAL:HA	1:C:131:ILE:HD12	1.91	0.52
1:D:368:LEU:HD12	1:D:368:LEU:O	2.09	0.52
1:B:368:LEU:HD12	1:B:368:LEU:O	2.20	0.52
1:M:142:LYS:O	1:M:146:GLU:HG3	2.08	0.52
2:O:53:VAL:HG22	2:O:59:ARG:HG2	1.90	0.52
1:M:421:ALA:O	1:M:425:VAL:HG23	2.22	0.52
1:F:175:THR:HB	1:F:377:VAL:HG22	1.91	0.52
1:I:283:ARG:HD3	1:I:363:LYS:NZ	2.25	0.52
1:B:263:VAL:HG21	2:P:33:PRO:HB3	3.12	0.52
1:D:363:LYS:C	1:D:365:GLN:N	2.86	0.52
2:T:63:GLU:HB3	2:U:11:LEU:CD1	5.11	0.52
1:M:228:ASN:HB3	1:M:231:GLU:HG2	1.96	0.52
1:F:235:ILE:HD11	1:F:311:ALA:HB1	2.49	0.52
1:F:52:ASP:OD1	1:F:54:VAL:HG23	2.09	0.52
2:S:10:PRO:C	2:S:11:LEU:HD12	2.30	0.52
1:L:39:VAL:O	1:M:522:VAL:HA	2.35	0.52
1:A:363:LYS:HA	1:A:366:GLU:HG2	2.70	0.52
1:L:283:ARG:HD3	1:L:363:LYS:NZ	2.24	0.52
1:H:458:ALA:C	1:I:114:LEU:HD12	2.81	0.52
1:I:7:VAL:HG12	1:I:12:ALA:HB2	1.96	0.52
1:J:458:ALA:O	1:K:114:LEU:CD1	2.56	0.52
1:B:345:ILE:HG23	1:B:368:LEU:CD1	2.39	0.52
1:B:307:LYS:HD3	1:B:309:GLU:OE2	2.09	0.52
1:F:340:ASP:O	1:F:344:ARG:HB2	2.10	0.52
1:F:40:LEU:HD13	1:F:59:GLU:HG3	1.96	0.52
2:R:14:ARG:HH11	2:R:14:ARG:CG	2.37	0.52
2:Q:52:ARG:NH2	2:R:53:VAL:HB	2.24	0.52
1:F:518:THR:OG1	1:G:37:ASN:ND2	2.41	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:50:THR:CG2	1:I:51:LYS:H	2.16	0.52
1:E:278:PRO:CG	1:E:291:ILE:HD11	2.39	0.52
1:H:40:LEU:HD12	1:H:40:LEU:N	2.30	0.52
1:G:253:VAL:HG12	1:G:258:LEU:HB2	1.91	0.52
1:G:258:LEU:O	1:G:262:VAL:HG23	2.09	0.52
1:A:128:VAL:HG13	1:A:503:ARG:HG3	1.90	0.52
2:S:17:VAL:O	2:S:87:TYR:HB3	2.29	0.52
1:H:175:THR:HG22	1:H:176:VAL:N	2.25	0.52
1:N:131:ILE:HD13	1:N:502:THR:HG22	1.92	0.52
1:I:218:PHE:HB3	1:I:316:LEU:HG	1.93	0.52
1:F:222:VAL:O	1:F:250:ALA:HA	2.10	0.52
1:G:425:VAL:O	1:G:429:ILE:HG13	2.17	0.52
1:N:151:SER:HB2	1:N:398:ALA:HA	1.91	0.52
1:J:142:LYS:O	1:J:146:GLU:HG3	2.10	0.52
2:T:38:GLU:OE1	2:T:74:LYS:NZ	2.34	0.52
2:Q:16:VAL:CG1	2:Q:46:ILE:HB	3.35	0.52
1:A:347:GLY:O	1:A:351:GLU:HB2	2.27	0.52
1:M:283:ARG:HH22	1:M:364:LEU:HA	1.87	0.52
1:A:150:ILE:HG22	1:A:151:SER:N	2.24	0.52
1:F:242:THR:HG22	1:F:244:LYS:HG2	2.32	0.52
1:K:168:VAL:HG11	1:K:173:ILE:N	2.24	0.52
1:L:41:GLU:OE2	1:M:65:HIS:ND1	2.42	0.52
1:G:348:ILE:CD1	1:G:367:ARG:NE	3.45	0.52
1:H:297:GLY:HA3	1:H:317:GLY:H	1.74	0.52
1:D:498:PRO:HG2	1:D:501:VAL:HG22	2.06	0.52
1:A:466:VAL:HG12	1:A:470:LEU:HD12	1.91	0.52
1:J:526:LYS:CD	1:J:527:PRO:HD2	2.40	0.52
1:L:458:ALA:O	1:M:114:LEU:HD12	2.09	0.52
1:N:141:ARG:HH11	1:N:166:GLU:HG3	1.74	0.52
1:A:396:GLU:O	1:A:400:ASN:ND2	2.63	0.52
1:N:123:ALA:HB2	1:N:440:ALA:HA	1.94	0.52
1:K:283:ARG:HG2	1:K:363:LYS:NZ	2.34	0.52
1:I:283:ARG:HH11	1:I:363:LYS:CE	2.60	0.52
2:U:45:VAL:HG22	2:U:70:VAL:HG13	5.25	0.52
1:F:7:VAL:HG12	1:F:12:ALA:HB2	1.90	0.52
1:L:168:VAL:HG12	1:L:172:GLY:CA	2.36	0.52
1:G:214:LEU:HB3	1:G:245:PRO:CB	2.99	0.52
1:H:234:PRO:HG3	1:H:309:GLU:CA	2.41	0.52
1:K:352:LEU:HD21	1:K:365:GLN:HE22	1.87	0.52
1:L:363:LYS:O	1:L:366:GLU:HG2	2.16	0.52
1:A:118:ARG:O	1:A:122:LYS:HG3	2.10	0.52
1:D:348:ILE:HG21	1:D:364:LEU:O	2.17	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:P:8:ILE:HG21	2:P:16:VAL:HG21	1.91	0.52
1:E:448:GLU:OE1	1:E:452:ARG:NH2	2.43	0.52
1:F:144:ILE:CD1	1:F:165:MET:HG2	2.40	0.52
1:F:25:ASN:HA	1:F:28:LYS:HG2	1.94	0.52
1:L:151:SER:HB2	1:L:398:ALA:HA	1.91	0.52
1:N:283:ARG:HD3	1:N:363:LYS:HZ1	2.23	0.52
1:E:416:VAL:HG21	1:E:479:GLY:HA3	1.94	0.52
1:A:207:PRO:CB	1:G:343:ALA:HB2	2.41	0.52
1:N:168:VAL:HG12	1:N:172:GLY:CA	2.37	0.52
1:F:305:GLY:HA2	2:U:33:PRO:HB2	3.08	0.52
1:L:175:THR:HG22	1:L:176:VAL:N	2.25	0.52
1:H:218:PHE:HB3	1:H:316:LEU:HG	1.91	0.52
1:C:452:ARG:NH1	1:C:463:SER:HA	2.25	0.52
1:D:293:ALA:HB1	1:D:340:ASP:HB3	1.92	0.52
1:D:157:VAL:HG22	1:D:395:PHE:CZ	2.45	0.52
1:M:141:ARG:HH11	1:M:166:GLU:HG3	1.74	0.52
1:D:349:LYS:C	1:D:351:GLU:H	2.19	0.52
1:L:141:ARG:NH1	1:L:166:GLU:HG3	2.27	0.52
2:Q:99:LEU:HD21	2:R:8:ILE:HG13	6.42	0.52
2:O:48:VAL:CG1	2:O:62:LEU:CD1	2.83	0.52
2:T:69:ILE:HB	2:T:99:LEU:HD12	5.07	0.52
1:M:168:VAL:HG11	1:M:173:ILE:N	2.25	0.52
2:R:50:THR:CG2	2:R:59:ARG:HD3	2.40	0.52
1:D:304:LEU:HD11	1:E:262:VAL:HG11	1.90	0.52
1:B:232:LEU:O	1:B:235:ILE:HG22	2.09	0.52
1:G:361:ARG:O	1:G:365:GLN:HB2	2.08	0.52
2:S:45:VAL:HG21	2:S:64:VAL:CG1	2.39	0.52
1:E:209:THR:CG2	1:E:211:GLU:HG3	2.32	0.52
1:A:363:LYS:C	1:A:365:GLN:N	2.84	0.52
1:E:131:ILE:HD13	1:E:502:THR:HG22	1.92	0.52
1:H:54:VAL:HG22	1:H:89:THR:CG2	2.39	0.52
1:D:466:VAL:HG12	1:D:470:LEU:HD12	1.92	0.52
1:K:458:ALA:O	1:L:114:LEU:HD12	2.15	0.52
1:K:131:ILE:HD13	1:K:502:THR:HG22	2.06	0.52
1:N:175:THR:HG22	1:N:176:VAL:N	2.25	0.52
1:L:141:ARG:HH11	1:L:166:GLU:HG3	1.77	0.52
1:J:258:LEU:O	1:J:262:VAL:HG23	2.14	0.52
1:A:277:ALA:HB1	1:A:278:PRO:HD2	1.91	0.52
1:G:468:GLN:O	1:G:471:ALA:HB3	2.17	0.52
2:U:15:VAL:HG23	2:U:47:ALA:O	5.83	0.52
1:C:201:PRO:O	1:C:203:PHE:N	3.29	0.52
1:H:283:ARG:NH2	1:H:367:ARG:CD	2.73	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:7:VAL:HG12	1:C:12:ALA:HB2	1.92	0.52
1:I:168:VAL:HG12	1:I:172:GLY:CA	2.35	0.52
1:H:7:VAL:HG12	1:H:12:ALA:HB2	1.92	0.52
2:Q:39:LYS:HB3	2:Q:40:PRO:HD2	2.79	0.52
1:G:289:LYS:HB2	1:G:344:ARG:NH2	2.88	0.52
1:B:345:ILE:HG22	1:B:346:ASN:N	2.25	0.52
2:T:56:ASN:O	2:T:58:GLN:N	2.43	0.52
1:G:237:GLU:CD	2:U:28:GLY:HA3	3.90	0.52
1:C:144:ILE:CD1	1:C:165:MET:HG2	2.55	0.52
1:H:518:THR:O	1:H:518:THR:HG22	2.10	0.52
1:J:462:GLY:O	1:J:466:VAL:HG23	2.09	0.52
1:B:157:VAL:HG22	1:B:395:PHE:CZ	2.48	0.52
1:C:141:ARG:NH2	1:C:163:ASP:OD1	2.43	0.52
1:C:10:GLU:N	1:C:13:ARG:HH12	2.28	0.52
1:N:372:ALA:C	1:N:374:GLY:H	2.16	0.52
2:T:21:GLU:H	2:T:21:GLU:CD	2.13	0.52
1:N:283:ARG:NH2	1:N:367:ARG:CD	2.72	0.52
2:T:8:ILE:HG22	2:T:16:VAL:HG21	2.60	0.52
2:T:90:LEU:HD12	2:T:90:LEU:N	4.13	0.52
2:O:96:LEU:O	2:P:14:ARG:HD3	2.09	0.52
1:C:220:LEU:HD13	1:C:235:ILE:CD1	3.01	0.52
1:C:283:ARG:NH1	1:C:363:LYS:HD2	3.24	0.52
1:C:290:ASP:OD2	1:C:371:LEU:HD11	2.10	0.52
1:L:180:LYS:O	1:M:281:GLY:N	2.43	0.52
1:A:235:ILE:HD11	1:A:316:LEU:HD21	1.91	0.52
1:A:39:VAL:HG23	1:G:519:THR:HG23	2.08	0.52
1:M:39:VAL:C	1:M:40:LEU:HD12	2.30	0.52
1:H:292:ALA:HB1	1:H:297:GLY:O	2.09	0.52
1:G:118:ARG:O	1:G:122:LYS:HG3	2.13	0.52
1:J:114:LEU:O	1:J:118:ARG:HG3	2.27	0.52
1:J:177:GLU:HB3	1:J:321:ARG:NH1	2.31	0.52
1:B:445:ARG:CZ	1:B:452:ARG:HH21	2.28	0.52
1:E:452:ARG:NH1	1:E:463:SER:HA	2.24	0.52
1:F:30:THR:O	1:F:35:GLY:HA3	2.10	0.52
1:D:416:VAL:HG21	1:D:479:GLY:HA3	1.92	0.52
2:T:13:ASP:OD1	2:T:13:ASP:C	2.48	0.52
1:C:265:LYS:HD3	1:C:272:VAL:H	2.26	0.52
1:C:235:ILE:HD12	1:C:311:ALA:HB1	3.95	0.52
1:E:284:ARG:O	1:E:288:LEU:HG	2.13	0.52
1:E:294:VAL:HG23	1:E:295:THR:HG23	1.92	0.52
2:T:32:LEU:HD13	2:T:36:ALA:HB1	4.90	0.52
1:L:168:VAL:CG1	1:L:173:ILE:H	2.26	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:40:LEU:N	1:J:40:LEU:HD12	2.25	0.52
1:I:307:LYS:HB3	1:I:309:GLU:OE1	2.10	0.52
1:L:79:SER:O	1:L:81:THR:N	2.43	0.52
1:I:142:LYS:O	1:I:146:GLU:HG3	2.08	0.52
1:I:6:LEU:CD2	1:I:523:VAL:HG22	2.40	0.52
1:A:392:LYS:O	1:A:396:GLU:HG3	2.09	0.52
1:F:144:ILE:HD12	1:F:165:MET:HG2	1.92	0.52
1:E:418:LEU:HD12	1:E:418:LEU:H	1.75	0.52
1:N:142:LYS:O	1:N:146:GLU:HG3	2.10	0.52
1:A:356:ASP:O	1:A:357:SER:C	2.50	0.52
1:K:141:ARG:HH11	1:K:166:GLU:HG3	1.75	0.52
1:K:141:ARG:NH1	1:K:166:GLU:HG3	2.25	0.52
1:K:283:ARG:HH22	1:K:364:LEU:HA	1.84	0.51
1:E:256:GLU:OE1	2:S:35:THR:O	3.36	0.51
2:U:46:ILE:O	2:U:46:ILE:HG22	2.28	0.51
2:U:62:LEU:C	2:U:64:VAL:H	2.14	0.51
1:A:136:ILE:CD1	1:A:477:ARG:HH21	2.23	0.51
1:A:150:ILE:CD1	1:A:496:VAL:H	2.27	0.51
1:C:283:ARG:O	1:C:287:MET:HG3	2.10	0.51
1:K:189:VAL:HG12	1:K:333:GLY:HA2	2.35	0.51
1:H:168:VAL:CG1	1:H:173:ILE:H	2.24	0.51
1:B:304:LEU:O	1:C:263:VAL:HG22	4.24	0.51
1:B:465:ILE:HD13	1:B:480:PHE:CE2	2.44	0.51
1:J:84:VAL:O	1:J:84:VAL:HG12	2.11	0.51
1:H:452:ARG:NH1	1:H:452:ARG:HG2	2.24	0.51
1:H:316:LEU:O	1:H:316:LEU:HD23	2.12	0.51
1:D:101:ARG:CG	1:D:102:GLU:N	2.73	0.51
1:L:6:LEU:CD2	1:L:523:VAL:HG22	2.49	0.51
1:D:144:ILE:HD12	1:D:165:MET:HG2	1.91	0.51
1:I:65:HIS:O	1:I:69:ILE:HG13	2.11	0.51
1:H:481:ASN:HD21	1:H:484:THR:HG23	1.75	0.51
1:E:184:THR:HG23	1:E:380:VAL:HA	1.91	0.51
1:I:131:ILE:HD13	1:I:502:THR:HG22	1.92	0.51
1:N:437:ALA:O	1:N:441:LYS:HG3	2.09	0.51
1:E:235:ILE:HD11	1:E:316:LEU:HD21	7.03	0.51
2:T:99:LEU:HD23	2:U:8:ILE:HD11	8.00	0.51
1:M:411:VAL:O	1:M:496:VAL:HG13	2.11	0.51
2:O:93:ARG:O	2:P:14:ARG:NH2	2.50	0.51
1:M:175:THR:HG22	1:M:176:VAL:N	2.26	0.51
1:K:168:VAL:HG21	1:K:376:ALA:HB2	1.93	0.51
1:E:326:LYS:HD3	1:E:326:LYS:C	2.30	0.51
1:G:248:ILE:CD1	1:G:261:LEU:HD21	2.65	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:295:THR:HG22	1:K:317:GLY:HA3	1.92	0.51
1:J:295:THR:HG22	1:J:317:GLY:HA3	2.02	0.51
1:K:194:PHE:CG	1:K:278:PRO:HB3	2.50	0.51
1:D:498:PRO:HG2	1:D:501:VAL:CG2	2.52	0.51
2:R:33:PRO:HG2	2:R:36:ALA:HB2	2.29	0.51
1:F:361:ARG:O	1:F:365:GLN:HB2	2.16	0.51
1:G:25:ASN:HA	1:G:28:LYS:HG2	1.92	0.51
1:A:224:LYS:HB3	1:A:302:GLU:OE1	2.13	0.51
1:I:141:ARG:NH1	1:I:166:GLU:HG3	2.27	0.51
2:O:78:THR:HG22	2:O:80:ILE:HD11	1.92	0.51
1:H:283:ARG:CG	1:H:363:LYS:NZ	3.05	0.51
1:M:178:GLU:C	1:M:321:ARG:NH1	2.61	0.51
1:E:209:THR:HG22	1:E:211:GLU:CG	2.36	0.51
1:G:213:VAL:O	1:G:214:LEU:HD23	2.64	0.51
1:N:222:VAL:HG12	1:N:223:GLU:H	1.76	0.51
1:L:408:GLU:HB2	1:L:500:LYS:HB2	2.04	0.51
1:A:202:TYR:CZ	1:G:289:LYS:NZ	2.72	0.51
1:H:6:LEU:CD2	1:H:523:VAL:HG22	2.41	0.51
1:D:289:LYS:NZ	1:E:202:TYR:CE1	2.77	0.51
1:C:10:GLU:N	1:C:13:ARG:NH1	2.69	0.51
1:L:128:VAL:HA	1:L:131:ILE:HD12	1.95	0.51
1:J:518:THR:HG22	1:J:518:THR:O	2.12	0.51
1:H:141:ARG:NH1	1:H:166:GLU:HG3	2.25	0.51
1:B:10:GLU:N	1:B:13:ARG:NH1	2.58	0.51
1:C:6:LEU:HD22	1:C:523:VAL:HG22	1.91	0.51
2:R:71:VAL:HG23	2:R:99:LEU:HD13	2.08	0.51
1:J:421:ALA:O	1:J:425:VAL:HG23	2.11	0.51
1:M:481:ASN:HD21	1:M:484:THR:HG23	1.74	0.51
2:T:14:ARG:HG2	2:T:14:ARG:NH1	3.13	0.51
1:A:234:PRO:O	1:A:238:GLN:HG3	2.13	0.51
1:B:246:LEU:CB	1:B:272:VAL:HG12	2.49	0.51
1:A:52:ASP:OD1	1:A:54:VAL:HG23	2.10	0.51
2:R:100:GLN:OE1	2:S:9:LYS:CE	3.95	0.51
1:L:179:SER:CB	1:L:379:ARG:HB3	2.37	0.51
1:J:410:ILE:CD1	1:J:496:VAL:HG11	2.39	0.51
1:E:498:PRO:HG2	1:E:501:VAL:CG2	2.40	0.51
1:F:18:ARG:HD2	1:F:67:GLU:OE2	2.10	0.51
1:D:229:VAL:HG21	2:R:36:ALA:CB	2.39	0.51
1:H:525:GLU:N	1:N:41:GLU:OE2	2.37	0.51
1:E:465:ILE:HD13	1:E:480:PHE:CD2	2.50	0.51
1:H:127:ALA:O	1:H:131:ILE:HG13	2.14	0.51
1:N:25:ASN:HA	1:N:28:LYS:HE2	1.91	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:128:VAL:HA	1:I:131:ILE:HD12	1.94	0.51
1:K:151:SER:HB2	1:K:398:ALA:HA	1.94	0.51
1:C:457:ASN:N	1:C:457:ASN:HD22	2.08	0.51
1:I:416:VAL:HG21	1:I:479:GLY:HA3	1.98	0.51
2:T:48:VAL:HG13	2:T:62:LEU:HD13	4.02	0.51
2:P:17:VAL:HG12	2:P:18:LYS:N	2.24	0.51
1:C:235:ILE:HD12	1:C:311:ALA:CB	3.88	0.51
1:C:251:GLU:HG3	1:C:284:ARG:NH1	2.13	0.51
1:I:168:VAL:CG1	1:I:173:ILE:H	2.24	0.51
1:K:297:GLY:HA3	1:K:317:GLY:N	2.26	0.51
1:A:131:ILE:HD13	1:A:502:THR:HG22	1.91	0.51
1:E:128:VAL:HG13	1:E:503:ARG:HG3	1.96	0.51
1:H:232:LEU:HD23	1:H:232:LEU:O	2.10	0.51
2:S:73:ALA:O	2:S:75:TYR:N	2.42	0.51
1:A:202:TYR:OH	1:G:289:LYS:CE	2.58	0.51
1:I:175:THR:HG22	1:I:176:VAL:N	2.27	0.51
1:H:340:ASP:O	1:H:343:ALA:HB3	2.09	0.51
1:I:455:ALA:HB1	1:I:465:ILE:HD12	2.01	0.51
1:G:231:GLU:HB3	1:G:308:LEU:HB3	2.32	0.51
1:F:101:ARG:CG	1:F:102:GLU:N	2.73	0.51
1:M:6:LEU:CD2	1:M:523:VAL:HG22	2.41	0.51
1:I:421:ALA:O	1:I:425:VAL:HG23	2.20	0.51
1:J:151:SER:HB2	1:J:398:ALA:HA	1.92	0.51
1:E:256:GLU:O	2:S:33:PRO:HG2	4.15	0.51
1:E:267:ARG:CD	2:S:31:VAL:HG21	2.36	0.51
2:P:41:GLN:HE21	2:P:74:LYS:HG2	1.76	0.51
2:O:46:ILE:O	2:O:46:ILE:HG22	2.25	0.51
2:T:54:LEU:HD21	2:T:60:VAL:HG21	4.02	0.51
1:G:416:VAL:HG21	1:G:479:GLY:HA3	1.94	0.51
1:J:168:VAL:HG11	1:J:173:ILE:N	2.26	0.51
1:D:220:LEU:HG	1:D:222:VAL:HG23	1.97	0.51
1:D:242:THR:HG22	1:D:244:LYS:HG2	1.94	0.51
1:C:224:LYS:CE	1:C:301:SER:HA	6.88	0.51
2:Q:20:ILE:HG13	2:Q:43:GLY:CA	2.58	0.51
1:G:348:ILE:HD11	1:G:367:ARG:CZ	3.08	0.51
1:B:128:VAL:HG13	1:B:503:ARG:HG3	1.94	0.51
1:B:466:VAL:HG12	1:B:470:LEU:HD12	1.96	0.51
1:N:54:VAL:HG22	1:N:89:THR:CG2	2.47	0.51
1:G:144:ILE:CD1	1:G:165:MET:HG2	2.40	0.51
1:I:127:ALA:O	1:I:131:ILE:HG13	2.10	0.51
1:M:127:ALA:O	1:M:131:ILE:HG13	2.10	0.51
1:M:151:SER:HB2	1:M:398:ALA:HA	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:286:GLU:OE1	1:B:344:ARG:NH2	2.42	0.51
1:D:136:ILE:O	1:D:410:ILE:HG22	2.34	0.51
2:Q:96:LEU:O	2:R:14:ARG:HD3	2.11	0.51
1:D:359:TYR:CE1	1:D:363:LYS:HE2	2.45	0.51
1:N:283:ARG:HH21	1:N:367:ARG:CD	2.24	0.51
2:T:45:VAL:HG21	2:T:64:VAL:CG1	2.40	0.51
2:P:80:ILE:HG22	2:P:81:GLU:H	1.76	0.51
1:C:292:ALA:O	1:C:293:ALA:C	2.78	0.51
1:F:202:TYR:CD2	1:F:266:LEU:HD11	2.54	0.51
1:L:496:VAL:HG12	1:L:497:ASP:H	1.80	0.51
2:S:53:VAL:HG22	2:S:59:ARG:CG	2.73	0.51
1:I:222:VAL:HG12	1:I:223:GLU:H	1.75	0.51
1:K:177:GLU:HB3	1:K:321:ARG:NH1	2.52	0.51
2:R:44:LYS:HA	2:R:68:ASP:O	2.11	0.51
1:A:468:GLN:O	1:A:471:ALA:HB3	2.11	0.51
2:U:17:VAL:HG13	2:U:44:LYS:N	2.89	0.51
1:M:136:ILE:HD11	1:M:491:VAL:HG22	1.91	0.51
2:O:100:GLN:CG	2:P:9:LYS:HE2	2.77	0.51
1:C:232:LEU:O	1:C:235:ILE:HG22	5.35	0.51
1:I:141:ARG:HH11	1:I:166:GLU:HG3	1.77	0.51
1:E:10:GLU:N	1:E:13:ARG:NH1	2.59	0.51
1:F:80:LYS:HE2	1:G:383:ALA:O	2.22	0.51
1:G:14:ARG:NH1	1:G:17:GLU:OE1	2.44	0.51
1:B:258:LEU:O	1:B:262:VAL:HG23	2.45	0.51
2:P:98:VAL:O	2:Q:9:LYS:HB2	2.11	0.51
2:T:79:GLU:O	2:T:80:ILE:HG13	2.10	0.51
1:M:168:VAL:CG1	1:M:173:ILE:H	2.24	0.51
2:Q:52:ARG:NH1	2:Q:52:ARG:HG2	4.58	0.51
1:D:519:THR:HG23	1:E:39:VAL:HG23	1.92	0.51
1:C:348:ILE:CD1	1:C:367:ARG:HB3	3.03	0.51
1:J:39:VAL:C	1:J:40:LEU:HD12	2.37	0.51
1:N:342:GLU:HA	1:N:345:ILE:HD12	1.93	0.51
1:G:219:ILE:HG22	1:G:221:ILE:HG13	1.93	0.51
1:L:219:ILE:O	1:L:221:ILE:HG13	2.19	0.51
1:L:295:THR:HG22	1:L:317:GLY:HA3	1.93	0.51
1:E:149:THR:HG23	1:E:155:PRO:CA	2.37	0.51
1:N:84:VAL:HG12	1:N:84:VAL:O	2.10	0.51
1:J:194:PHE:CB	1:J:278:PRO:HB3	2.41	0.51
1:H:222:VAL:CG1	1:H:223:GLU:N	2.77	0.51
1:A:101:ARG:CG	1:A:102:GLU:N	2.76	0.51
1:C:74:LEU:HD21	1:C:93:THR:CG2	2.41	0.51
1:H:449:GLU:HB2	1:H:450:PRO:HD3	2.00	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:128:VAL:HA	1:M:131:ILE:HD12	1.97	0.51
1:E:249:ILE:HD11	1:E:331:ILE:HD11	1.93	0.51
2:S:21:GLU:H	2:S:21:GLU:CD	2.15	0.51
1:J:141:ARG:NH1	1:J:166:GLU:HG3	2.26	0.51
1:J:95:LEU:O	1:J:99:ILE:HG13	2.13	0.51
2:Q:41:GLN:HA	2:Q:74:LYS:HB3	2.52	0.51
1:C:209:THR:CG2	1:C:211:GLU:HG2	5.92	0.51
1:C:229:VAL:HG23	1:C:256:GLU:CD	2.31	0.51
1:C:281:GLY:O	1:C:284:ARG:HG2	2.51	0.51
1:F:352:LEU:C	1:F:354:THR:H	2.14	0.51
1:L:283:ARG:NH2	1:L:367:ARG:CD	2.89	0.51
2:S:79:GLU:O	2:S:80:ILE:HG13	2.11	0.51
1:G:18:ARG:HD2	1:G:67:GLU:OE2	2.12	0.51
1:M:340:ASP:O	1:M:343:ALA:HB3	2.19	0.51
1:H:24:ALA:O	1:H:28:LYS:HG2	2.10	0.51
1:F:300:ILE:O	1:F:300:ILE:HG22	2.15	0.51
1:M:123:ALA:HB2	1:M:440:ALA:HA	1.91	0.51
1:F:177:GLU:O	1:F:379:ARG:HA	2.11	0.51
1:C:289:LYS:CE	1:D:202:TYR:OH	2.59	0.51
2:R:62:LEU:C	2:R:64:VAL:H	2.15	0.50
2:T:54:LEU:HD21	2:U:57:GLY:H	1.76	0.50
1:F:477:ARG:HH11	1:F:477:ARG:HG3	1.75	0.50
1:J:359:TYR:O	1:J:363:LYS:HG2	2.58	0.50
1:C:219:ILE:HG22	1:C:221:ILE:HG13	1.93	0.50
1:G:294:VAL:HA	1:G:341:ILE:CD1	3.22	0.50
1:D:54:VAL:HG11	1:D:79:SER:HA	1.92	0.50
1:F:237:GLU:CB	2:T:28:GLY:HA3	2.41	0.50
1:H:168:VAL:HG11	1:H:173:ILE:N	2.25	0.50
1:J:352:LEU:HD21	1:J:365:GLN:HE22	1.78	0.50
1:H:344:ARG:HH11	1:H:344:ARG:HG3	1.90	0.50
2:O:33:PRO:C	2:O:35:THR:H	2.14	0.50
2:O:50:THR:CG2	2:O:59:ARG:HD3	3.09	0.50
1:H:141:ARG:HH11	1:H:166:GLU:HG3	1.75	0.50
1:D:356:ASP:O	1:D:357:SER:C	2.49	0.50
1:M:437:ALA:O	1:M:441:LYS:HG3	2.10	0.50
1:D:147:VAL:CG2	1:D:410:ILE:HD11	2.40	0.50
1:D:147:VAL:HG23	1:D:410:ILE:HD11	1.92	0.50
1:I:283:ARG:HD3	1:I:363:LYS:HZ1	1.77	0.50
2:Q:84:GLY:O	2:Q:85:GLU:HB2	2.11	0.50
2:U:42:LYS:HA	2:U:70:VAL:O	2.11	0.50
1:E:214:LEU:HB3	1:E:245:PRO:CB	2.41	0.50
1:C:343:ALA:HB2	1:D:207:PRO:CB	7.37	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:168:VAL:HG21	1:J:376:ALA:HB2	1.93	0.50
2:R:100:GLN:HG2	2:S:9:LYS:HE2	5.80	0.50
1:D:218:PHE:CE1	1:D:242:THR:HG21	2.45	0.50
1:K:232:LEU:O	1:K:232:LEU:HD23	2.15	0.50
1:N:114:LEU:O	1:N:118:ARG:HG3	2.12	0.50
1:C:147:VAL:HG23	1:C:410:ILE:HD11	1.94	0.50
1:B:189:VAL:CG1	1:B:193:GLN:HG2	3.66	0.50
1:M:455:ALA:HB1	1:M:465:ILE:HD12	1.98	0.50
1:H:102:GLU:HB3	5:H:601:DMS:H13	1.92	0.50
1:H:28:LYS:NZ	1:H:97:GLN:HE22	2.20	0.50
1:L:253:VAL:O	1:L:258:LEU:HD22	2.11	0.50
1:C:6:LEU:HD13	1:D:26:ALA:HB2	2.21	0.50
1:K:65:HIS:O	1:K:69:ILE:HG13	2.14	0.50
2:Q:6:THR:HG21	2:Q:82:ILE:HG21	4.29	0.50
2:T:82:ILE:O	2:T:82:ILE:HG22	3.16	0.50
1:G:150:ILE:HD11	1:G:495:ILE:CA	2.23	0.50
1:I:217:ALA:HB2	1:I:245:PRO:CG	2.31	0.50
1:J:283:ARG:CG	1:J:363:LYS:HZ2	2.49	0.50
1:C:283:ARG:NH2	1:C:366:GLU:OE2	3.00	0.50
1:E:168:VAL:HG21	1:E:376:ALA:HB2	1.98	0.50
1:M:178:GLU:OE2	1:M:392:LYS:HE3	2.16	0.50
1:J:50:THR:CG2	1:J:51:LYS:H	2.24	0.50
1:I:337:LYS:HB2	1:I:340:ASP:OD2	2.15	0.50
1:M:518:THR:HG22	1:M:518:THR:O	2.12	0.50
1:B:10:GLU:N	1:B:13:ARG:HH12	2.10	0.50
1:K:449:GLU:HB2	1:K:450:PRO:HD3	1.94	0.50
1:A:161:ILE:HD12	1:A:399:LEU:CD2	2.51	0.50
1:C:425:VAL:O	1:C:429:ILE:HG13	2.11	0.50
2:P:21:GLU:O	2:P:22:GLU:C	2.50	0.50
2:Q:13:ASP:OD2	2:Q:92:GLU:HB3	2.47	0.50
2:U:19:ARG:HE	2:U:40:PRO:HG2	5.24	0.50
1:G:136:ILE:CD1	1:G:477:ARG:HH21	2.23	0.50
1:E:198:TYR:O	1:E:198:TYR:HD1	2.37	0.50
1:C:345:ILE:HG13	1:C:368:LEU:HD23	7.75	0.50
1:A:54:VAL:HG22	1:A:89:THR:HG21	1.94	0.50
1:J:168:VAL:CG1	1:J:173:ILE:H	2.24	0.50
2:R:97:ALA:HA	2:S:11:LEU:HD12	2.01	0.50
1:M:40:LEU:N	1:M:40:LEU:HD12	2.27	0.50
1:L:228:ASN:HB3	1:L:231:GLU:HG2	1.92	0.50
1:G:199:ILE:O	1:G:199:ILE:HG22	2.15	0.50
1:A:448:GLU:OE1	1:A:452:ARG:NH2	2.45	0.50
1:N:481:ASN:HD21	1:N:484:THR:HG23	1.77	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:50:THR:HG23	2:T:59:ARG:HD3	1.94	0.50
1:G:157:VAL:O	1:G:161:ILE:HG12	2.16	0.50
1:B:425:VAL:O	1:B:429:ILE:HG13	2.11	0.50
1:B:217:ALA:HB2	1:B:245:PRO:HB2	1.93	0.50
1:K:283:ARG:HH21	1:K:367:ARG:HD2	2.30	0.50
1:I:283:ARG:HG2	1:I:363:LYS:HZ2	1.76	0.50
1:B:264:ASN:OD1	2:P:30:ILE:HA	2.12	0.50
1:L:298:THR:N	1:L:315:MET:O	2.43	0.50
1:G:477:ARG:NH1	1:G:477:ARG:HG3	2.42	0.50
1:C:236:LEU:CB	2:Q:30:ILE:CD1	2.86	0.50
1:C:265:LYS:HA	1:C:270:LEU:O	2.19	0.50
1:F:515:LEU:HD12	1:G:49:ILE:HG21	1.92	0.50
1:E:351:GLU:CG	1:F:326:LYS:HZ1	2.24	0.50
2:O:52:ARG:HH21	2:P:53:VAL:CB	2.23	0.50
2:Q:43:GLY:O	2:Q:69:ILE:HA	2.77	0.50
1:K:219:ILE:O	1:K:221:ILE:HG13	2.16	0.50
2:S:50:THR:CG2	2:S:59:ARG:HD3	2.47	0.50
1:C:149:THR:HG23	1:C:155:PRO:CA	2.44	0.50
1:I:114:LEU:O	1:I:118:ARG:HG3	2.12	0.50
1:I:84:VAL:O	1:I:84:VAL:HG12	2.11	0.50
1:G:466:VAL:HG12	1:G:470:LEU:HD12	1.93	0.50
1:L:312:THR:O	1:L:314:SER:N	2.43	0.50
1:J:218:PHE:HB3	1:J:316:LEU:HG	1.93	0.50
1:M:131:ILE:HD13	1:M:502:THR:HG22	1.92	0.50
1:M:204:VAL:HG13	1:M:211:GLU:O	2.11	0.50
1:A:199:ILE:HG22	1:A:199:ILE:O	2.10	0.50
1:H:19:GLY:HA3	1:H:67:GLU:O	2.12	0.50
2:Q:90:LEU:N	2:Q:90:LEU:HD23	3.35	0.50
1:E:218:PHE:HA	1:E:317:GLY:O	2.54	0.50
2:T:85:GLU:OE1	2:T:85:GLU:HA	2.11	0.50
2:U:80:ILE:CG2	2:U:81:GLU:N	2.74	0.50
1:G:410:ILE:HD11	1:G:496:VAL:CG2	2.49	0.50
1:F:410:ILE:HG12	1:F:496:VAL:HB	2.07	0.50
2:T:33:PRO:C	2:T:35:THR:H	2.15	0.50
1:I:259:ALA:O	1:I:263:VAL:HG23	2.11	0.50
1:G:238:GLN:C	1:G:313:LEU:HD21	2.83	0.50
1:G:205:THR:HB	1:G:213:VAL:H	1.84	0.50
1:N:352:LEU:HD21	1:N:365:GLN:HE22	1.77	0.50
1:A:49:ILE:HG21	1:G:515:LEU:HD12	2.08	0.50
1:K:66:LEU:HD22	1:K:522:VAL:HG21	1.93	0.50
1:C:477:ARG:HH11	1:C:477:ARG:HG3	1.75	0.50
1:C:25:ASN:HA	1:C:28:LYS:HG2	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:520:GLU:HB3	1:E:29:VAL:HG11	2.01	0.50
2:S:71:VAL:HG23	2:S:99:LEU:HD13	1.93	0.50
1:H:416:VAL:HG21	1:H:479:GLY:HA3	1.98	0.50
1:M:25:ASN:HA	1:M:28:LYS:HE2	1.93	0.50
1:E:6:LEU:HD22	1:E:523:VAL:HG22	1.96	0.50
1:B:263:VAL:O	1:B:267:ARG:HB2	2.32	0.50
2:S:38:GLU:HG3	2:S:74:LYS:NZ	2.26	0.50
2:T:17:VAL:CG2	2:T:45:VAL:HA	3.81	0.50
2:U:18:LYS:HE3	2:U:86:GLU:O	2.11	0.50
1:M:283:ARG:NH2	1:M:367:ARG:CD	2.75	0.50
1:J:325:THR:CG2	1:J:326:LYS:N	2.74	0.50
1:D:168:VAL:CG1	1:D:172:GLY:HA3	2.29	0.50
2:O:79:GLU:O	2:O:80:ILE:HG13	2.11	0.50
1:M:197:GLY:HA3	1:M:325:THR:O	2.22	0.50
1:F:236:LEU:HB2	2:T:30:ILE:CD1	2.41	0.50
1:D:250:ALA:O	1:D:252:ASP:N	2.75	0.50
1:L:168:VAL:HG21	1:L:376:ALA:HB2	1.97	0.50
1:A:220:LEU:HD23	1:A:248:ILE:HG23	2.01	0.50
1:A:261:LEU:O	1:A:265:LYS:HB2	2.10	0.50
1:L:61:GLU:O	1:M:4:LYS:N	2.36	0.50
1:M:526:LYS:CD	1:M:527:PRO:HD2	2.42	0.50
1:K:300:ILE:O	1:K:300:ILE:HG22	2.11	0.50
1:F:498:PRO:HG2	1:F:501:VAL:CG2	2.42	0.50
1:L:408:GLU:OE1	1:L:500:LYS:HA	2.11	0.50
1:M:194:PHE:CB	1:M:278:PRO:HB3	2.42	0.50
1:J:455:ALA:HB1	1:J:465:ILE:HD12	1.98	0.50
1:E:23:VAL:CG1	1:E:74:LEU:HD23	2.40	0.50
1:I:146:GLU:O	1:I:150:ILE:HG13	2.12	0.50
1:H:204:VAL:HG13	1:H:211:GLU:O	2.12	0.50
1:G:194:PHE:CD1	1:G:196:LYS:HB2	2.72	0.50
1:C:356:ASP:O	1:C:357:SER:C	2.50	0.50
2:Q:17:VAL:CG2	2:Q:88:VAL:HB	4.88	0.50
2:U:48:VAL:CG1	2:U:62:LEU:CD1	2.85	0.50
1:E:136:ILE:CD1	1:E:477:ARG:HH21	2.31	0.50
1:B:279:GLY:O	1:B:284:ARG:HD3	2.85	0.50
1:F:347:GLY:O	1:F:351:GLU:HB2	2.29	0.50
1:G:198:TYR:O	1:G:198:TYR:HD1	1.95	0.50
1:M:385:GLU:HB2	1:N:280:PHE:CD2	2.46	0.50
1:I:168:VAL:HG11	1:I:173:ILE:N	2.25	0.50
2:U:32:LEU:O	2:U:37:LYS:NZ	4.44	0.50
1:F:498:PRO:HG2	1:F:501:VAL:HG22	1.94	0.50
1:I:194:PHE:CG	1:I:278:PRO:HB3	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:465:ILE:HD13	1:G:480:PHE:CD2	2.46	0.50
1:B:101:ARG:CG	1:B:102:GLU:N	2.80	0.50
1:M:114:LEU:O	1:M:118:ARG:HG3	2.12	0.50
1:J:141:ARG:HH11	1:J:166:GLU:HG3	1.77	0.50
1:E:95:LEU:O	1:E:99:ILE:HG13	2.24	0.50
1:K:462:GLY:O	1:K:466:VAL:HG23	2.14	0.50
2:T:48:VAL:HG13	2:T:62:LEU:CD1	4.90	0.50
1:A:168:VAL:CG1	1:A:172:GLY:HA3	2.25	0.50
1:A:54:VAL:HG11	1:A:79:SER:HA	1.94	0.50
1:K:194:PHE:CB	1:K:278:PRO:HB3	2.49	0.50
1:A:526:LYS:HB3	1:A:529:LYS:HE3	1.93	0.50
1:K:455:ALA:HB1	1:K:465:ILE:HD12	1.96	0.50
1:M:43:LYS:HG2	1:N:525:GLU:HG3	1.94	0.50
1:I:239:VAL:HG22	1:I:313:LEU:CD1	2.46	0.50
1:E:73:LEU:CD2	1:F:47:PRO:HD2	2.42	0.50
2:Q:45:VAL:HG21	2:Q:64:VAL:CG1	2.41	0.49
2:O:10:PRO:HA	2:U:97:ALA:HB2	1.94	0.49
2:P:80:ILE:CG2	2:P:81:GLU:N	2.73	0.49
2:Q:54:LEU:HD11	2:R:57:GLY:HA2	1.94	0.49
2:O:84:GLY:HA3	2:U:27:LYS:HD3	1.93	0.49
1:M:175:THR:CG2	1:M:177:GLU:OE2	2.74	0.49
1:N:65:HIS:HD2	1:N:527:PRO:HG3	6.04	0.49
1:I:168:VAL:HG21	1:I:376:ALA:HB2	1.93	0.49
1:G:66:LEU:CD2	1:G:522:VAL:HG11	2.37	0.49
1:H:7:VAL:HG21	1:H:66:LEU:CD1	2.50	0.49
1:D:118:ARG:O	1:D:122:LYS:HG3	2.13	0.49
2:R:33:PRO:HG2	2:R:36:ALA:CB	2.81	0.49
1:F:466:VAL:HG12	1:F:470:LEU:HD12	1.94	0.49
1:E:348:ILE:HD13	1:E:367:ARG:HB3	1.93	0.49
1:M:218:PHE:HE1	1:M:242:THR:HG21	1.78	0.49
1:F:157:VAL:O	1:F:161:ILE:HG12	2.19	0.49
1:J:490:MET:HA	1:J:490:MET:HE2	1.92	0.49
1:E:194:PHE:CE1	1:E:329:THR:HB	3.08	0.49
1:L:481:ASN:HD21	1:L:484:THR:HG23	1.76	0.49
1:N:283:ARG:HD3	1:N:363:LYS:CE	2.41	0.49
2:T:14:ARG:HH11	2:T:14:ARG:HG3	1.77	0.49
1:I:322:VAL:HG22	1:I:331:ILE:HG12	2.10	0.49
1:B:168:VAL:HG21	1:B:376:ALA:HB2	1.93	0.49
1:M:526:LYS:HG3	1:M:527:PRO:HD2	1.94	0.49
1:I:39:VAL:C	1:I:40:LEU:HD12	2.35	0.49
1:K:222:VAL:CG1	1:K:223:GLU:N	2.78	0.49
1:L:290:ASP:N	1:L:344:ARG:NH1	2.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:127:ALA:O	1:L:131:ILE:HG13	2.21	0.49
1:H:18:ARG:HD2	1:H:67:GLU:OE1	2.12	0.49
2:S:89:ILE:O	2:S:89:ILE:HG22	2.33	0.49
1:B:418:LEU:H	1:B:418:LEU:HD12	1.77	0.49
1:G:10:GLU:N	1:G:13:ARG:NH1	2.68	0.49
1:E:229:VAL:HG23	1:E:256:GLU:CG	2.64	0.49
2:U:17:VAL:HG12	2:U:18:LYS:N	2.27	0.49
1:B:477:ARG:HG3	1:B:477:ARG:HH11	1.80	0.49
1:C:150:ILE:CD1	1:C:496:VAL:H	2.26	0.49
1:A:477:ARG:HH11	1:A:477:ARG:HG3	1.77	0.49
1:J:283:ARG:HD3	1:J:363:LYS:HZ1	1.76	0.49
1:B:270:LEU:HG	1:B:272:VAL:HG13	1.92	0.49
1:G:364:LEU:O	1:G:368:LEU:HB2	3.32	0.49
1:C:51:LYS:HG2	1:C:51:LYS:O	2.19	0.49
1:B:54:VAL:HG11	1:B:79:SER:HA	1.98	0.49
1:F:233:LEU:HD23	2:T:30:ILE:CD1	2.42	0.49
1:K:168:VAL:CG1	1:K:173:ILE:H	2.24	0.49
1:I:307:LYS:HE3	1:I:310:ASN:HD21	1.80	0.49
1:H:228:ASN:HB3	1:H:231:GLU:HG2	1.96	0.49
2:Q:11:LEU:HB2	2:Q:14:ARG:NH1	5.40	0.49
1:A:4:LYS:HG3	1:B:59:GLU:O	2.12	0.49
1:D:193:GLN:HB3	1:D:330:THR:HG23	1.95	0.49
1:L:146:GLU:O	1:L:150:ILE:HG13	2.22	0.49
2:S:21:GLU:O	2:S:21:GLU:HG2	2.46	0.49
1:A:157:VAL:HG22	1:A:395:PHE:CZ	2.47	0.49
1:K:481:ASN:HD21	1:K:484:THR:HG23	1.81	0.49
1:B:225:LYS:HD3	1:B:254:GLU:OE1	2.64	0.49
1:G:179:SER:HB2	1:G:379:ARG:HB3	1.94	0.49
1:K:95:LEU:O	1:K:99:ILE:HG13	2.31	0.49
1:L:123:ALA:HB2	1:L:440:ALA:HA	1.94	0.49
1:K:283:ARG:NH1	1:K:363:LYS:HG3	2.49	0.49
2:P:100:GLN:CB	2:Q:9:LYS:HE2	2.42	0.49
2:Q:91:SER:OG	2:Q:93:ARG:NH1	4.81	0.49
1:M:283:ARG:HH21	1:M:367:ARG:CD	2.25	0.49
2:O:100:GLN:OE1	2:P:9:LYS:HE2	2.45	0.49
2:Q:52:ARG:HH21	2:R:53:VAL:CG1	2.25	0.49
1:C:284:ARG:O	1:C:288:LEU:HG	2.12	0.49
1:E:51:LYS:NZ	4:E:602:ADP:O1A	2.70	0.49
1:L:307:LYS:HE3	1:L:310:ASN:HD21	1.80	0.49
1:M:239:VAL:HG22	1:M:313:LEU:CD1	2.43	0.49
1:M:342:GLU:HA	1:M:345:ILE:HD12	2.01	0.49
1:J:292:ALA:HB1	1:J:297:GLY:O	2.23	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:194:PHE:CG	1:H:278:PRO:HB3	2.47	0.49
1:L:114:LEU:O	1:L:118:ARG:HG3	2.13	0.49
1:K:372:ALA:O	1:K:374:GLY:N	2.42	0.49
1:J:449:GLU:HB2	1:J:450:PRO:HD3	1.93	0.49
1:J:450:PRO:O	1:J:454:ILE:HG13	2.13	0.49
1:B:142:LYS:HE2	1:B:146:GLU:OE2	2.13	0.49
1:B:356:ASP:O	1:B:357:SER:C	2.53	0.49
1:I:283:ARG:HH22	1:I:364:LEU:HA	1.88	0.49
2:P:30:ILE:O	2:P:30:ILE:HG22	2.12	0.49
2:U:45:VAL:CG2	2:U:70:VAL:HG13	5.57	0.49
1:C:222:VAL:HA	1:C:300:ILE:HB	2.19	0.49
1:M:178:GLU:O	1:M:321:ARG:CZ	2.60	0.49
1:F:54:VAL:HG11	1:F:79:SER:HA	1.94	0.49
2:P:50:THR:CG2	2:P:59:ARG:HD3	4.32	0.49
2:S:14:ARG:HH11	2:S:14:ARG:CG	2.23	0.49
1:N:7:VAL:HG21	1:N:66:LEU:CD1	2.42	0.49
1:G:230:ARG:O	1:G:234:PRO:HD2	2.13	0.49
1:L:269:THR:HA	1:M:256:GLU:HG3	1.92	0.49
1:E:498:PRO:HG2	1:E:501:VAL:HG22	1.94	0.49
1:M:84:VAL:HG12	1:M:84:VAL:O	2.13	0.49
1:F:179:SER:HB2	1:F:379:ARG:HB3	1.95	0.49
1:M:28:LYS:NZ	1:M:97:GLN:HE22	2.12	0.49
1:E:194:PHE:CD1	1:E:196:LYS:HB2	2.48	0.49
1:B:417:THR:HG23	1:B:418:LEU:HD12	1.94	0.49
1:A:417:THR:HG23	1:A:418:LEU:HD12	1.95	0.49
1:A:29:VAL:HG13	1:G:520:GLU:HG2	1.96	0.49
1:D:25:ASN:HA	1:D:28:LYS:HG2	1.93	0.49
1:B:6:LEU:HD22	1:B:523:VAL:HG22	1.94	0.49
1:D:150:ILE:HD12	1:D:496:VAL:H	1.76	0.49
2:P:100:GLN:OE1	2:Q:9:LYS:HE2	2.13	0.49
2:U:45:VAL:HG21	2:U:64:VAL:CG1	2.40	0.49
1:J:325:THR:CG2	1:J:327:ASP:H	2.04	0.49
1:A:142:LYS:O	1:A:146:GLU:HG3	2.33	0.49
1:F:218:PHE:CE1	1:F:242:THR:HG21	3.01	0.49
2:O:78:THR:HG22	2:O:79:GLU:N	2.26	0.49
1:M:297:GLY:HA3	1:M:317:GLY:N	2.34	0.49
1:E:224:LYS:CE	1:E:301:SER:HA	2.35	0.49
1:C:312:THR:HB	1:C:314:SER:OG	2.12	0.49
1:L:168:VAL:HG11	1:L:173:ILE:N	2.27	0.49
1:G:245:PRO:HA	1:G:271:SER:OG	2.50	0.49
1:B:304:LEU:HD11	1:C:262:VAL:HG11	1.94	0.49
2:S:81:GLU:HA	2:S:86:GLU:HA	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:72:GLN:NE2	1:G:75:LYS:NZ	2.60	0.49
1:C:72:GLN:NE2	1:C:75:LYS:NZ	2.59	0.49
1:F:460:TYR:HB3	1:F:465:ILE:HD11	2.01	0.49
1:I:232:LEU:HD23	1:I:236:LEU:HB2	1.98	0.49
1:N:218:PHE:HB3	1:N:316:LEU:HG	1.93	0.49
1:A:29:VAL:HG11	1:G:520:GLU:HB3	1.93	0.49
2:S:22:GLU:OE1	2:S:22:GLU:N	2.39	0.49
1:F:425:VAL:O	1:F:429:ILE:HG13	2.13	0.49
1:N:210:MET:HE2	1:N:210:MET:HA	1.95	0.49
1:E:468:GLN:O	1:E:471:ALA:HB3	2.12	0.49
1:A:14:ARG:NH1	1:A:17:GLU:OE1	2.46	0.49
1:F:417:THR:HG23	1:F:418:LEU:HD12	2.01	0.49
1:C:157:VAL:HG22	1:C:395:PHE:CZ	2.60	0.49
2:T:22:GLU:OE2	2:T:40:PRO:HD3	4.14	0.49
2:U:82:ILE:N	2:U:85:GLU:O	2.58	0.49
1:E:477:ARG:HH11	1:E:477:ARG:HG3	1.79	0.49
1:M:283:ARG:HD3	1:M:363:LYS:HE3	2.17	0.49
1:B:363:LYS:C	1:B:365:GLN:N	2.64	0.49
1:C:294:VAL:O	1:C:336:GLY:N	2.84	0.49
1:D:218:PHE:O	1:D:246:LEU:HD12	2.19	0.49
1:K:77:VAL:O	1:K:80:LYS:HG2	2.13	0.49
1:I:7:VAL:HG21	1:I:66:LEU:CD1	2.41	0.49
1:F:465:ILE:HD13	1:F:480:PHE:CE2	2.49	0.49
1:E:369:ALA:O	1:E:375:VAL:HG21	3.21	0.49
1:N:455:ALA:HB1	1:N:465:ILE:HD12	1.99	0.49
1:N:6:LEU:CD2	1:N:523:VAL:HG22	2.44	0.49
1:D:14:ARG:NH1	1:D:17:GLU:OE1	2.47	0.49
1:F:472:GLU:HB3	1:F:478:TYR:CD2	2.54	0.49
1:A:383:ALA:O	1:G:80:LYS:HE2	2.13	0.49
2:Q:93:ARG:O	2:R:14:ARG:NH2	2.80	0.49
1:B:220:LEU:HG	1:B:222:VAL:HG23	1.94	0.49
1:C:294:VAL:HG23	1:C:295:THR:N	4.63	0.49
1:C:345:ILE:HD12	1:C:371:LEU:O	4.48	0.49
1:E:287:MET:O	1:E:291:ILE:HG13	2.46	0.49
1:N:179:SER:CB	1:N:379:ARG:HB3	2.40	0.49
1:H:194:PHE:CB	1:H:278:PRO:HB3	2.45	0.49
1:D:287:MET:O	1:D:290:ASP:HB2	2.17	0.49
1:K:161:ILE:O	1:K:165:MET:HG3	2.13	0.49
1:L:232:LEU:HD23	1:L:236:LEU:HB2	1.96	0.49
1:F:31:LEU:HB2	1:F:90:THR:HG21	1.95	0.49
1:A:77:VAL:HG23	1:A:512:ILE:HG13	2.01	0.49
1:I:123:ALA:HB2	1:I:440:ALA:HA	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:P:100:GLN:CG	2:Q:9:LYS:HE2	2.42	0.49
2:R:48:VAL:HG12	2:R:62:LEU:HD12	5.16	0.49
1:M:168:VAL:HG21	1:M:376:ALA:HB2	1.95	0.49
1:D:198:TYR:CE1	1:D:326:LYS:HA	2.77	0.49
1:M:385:GLU:O	1:M:389:LYS:HG3	2.13	0.49
1:A:242:THR:HG22	1:A:244:LYS:HG2	2.13	0.49
1:H:39:VAL:C	1:H:40:LEU:HD12	2.36	0.49
1:J:234:PRO:HG3	1:J:309:GLU:CA	2.38	0.49
1:A:359:TYR:CE2	1:A:363:LYS:CE	3.96	0.49
1:J:385:GLU:HB2	1:K:280:PHE:CE2	2.65	0.49
1:F:149:THR:HG23	1:F:155:PRO:CA	2.49	0.49
2:S:81:GLU:HA	2:S:85:GLU:O	2.13	0.49
1:L:161:ILE:O	1:L:165:MET:HG3	2.18	0.49
1:D:161:ILE:HD12	1:D:399:LEU:HD21	1.96	0.49
1:G:526:LYS:CG	1:G:527:PRO:HD2	2.43	0.49
1:E:10:GLU:N	1:E:13:ARG:HH12	2.11	0.49
1:C:468:GLN:O	1:C:471:ALA:HB3	2.20	0.49
2:O:71:VAL:HG23	2:O:99:LEU:HD13	1.94	0.49
1:A:425:VAL:O	1:A:429:ILE:HG13	2.13	0.49
1:D:225:LYS:O	1:D:226:VAL:HG23	2.13	0.49
1:K:363:LYS:O	1:K:366:GLU:HG2	2.20	0.49
2:Q:17:VAL:HG23	2:Q:88:VAL:HB	4.64	0.49
1:N:283:ARG:HH22	1:N:364:LEU:HA	1.77	0.49
2:P:81:GLU:HA	2:P:85:GLU:O	2.19	0.49
2:O:84:GLY:CA	2:U:27:LYS:HD2	3.56	0.49
1:H:4:LYS:HG3	1:N:59:GLU:O	2.13	0.49
1:G:227:SER:HB3	1:G:254:GLU:CG	2.98	0.49
1:N:259:ALA:O	1:N:263:VAL:HG23	2.14	0.49
1:L:526:LYS:HG3	1:L:527:PRO:CD	2.43	0.49
1:J:161:ILE:O	1:J:165:MET:HG3	2.13	0.49
1:B:465:ILE:HD13	1:B:480:PHE:CD2	2.48	0.49
1:E:74:LEU:HD21	1:E:93:THR:CG2	2.47	0.49
1:J:25:ASN:HA	1:J:28:LYS:HE2	1.95	0.49
1:G:6:LEU:CD2	1:G:523:VAL:HG22	2.43	0.49
1:A:205:THR:HB	1:A:213:VAL:H	1.82	0.49
1:A:144:ILE:CD1	1:A:165:MET:HG2	2.43	0.49
1:H:123:ALA:HB2	1:H:440:ALA:HA	1.97	0.49
1:D:361:ARG:O	1:D:365:GLN:HB2	2.13	0.48
1:I:219:ILE:O	1:I:221:ILE:HG13	2.12	0.48
1:M:295:THR:HG22	1:M:317:GLY:HA3	1.94	0.48
1:B:247:LEU:HD22	1:B:322:VAL:HG11	1.94	0.48
1:B:50:THR:HA	1:B:390:GLU:OE1	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:232:LEU:HD23	1:K:236:LEU:HB2	1.97	0.48
1:M:253:VAL:HG11	1:M:261:LEU:HD12	1.95	0.48
1:H:522:VAL:HA	1:N:39:VAL:O	2.13	0.48
1:E:149:THR:CG2	1:E:155:PRO:HA	2.40	0.48
1:I:228:ASN:HB3	1:I:231:GLU:HG2	1.95	0.48
1:L:84:VAL:HG12	1:L:84:VAL:O	2.15	0.48
1:M:408:GLU:OE1	1:M:500:LYS:HA	2.87	0.48
1:A:465:ILE:HD13	1:A:480:PHE:CE2	2.51	0.48
1:M:232:LEU:HD23	1:M:236:LEU:HB2	1.99	0.48
1:D:448:GLU:OE1	1:D:452:ARG:NH2	2.46	0.48
1:I:416:VAL:HG21	1:I:490:MET:HG3	1.94	0.48
1:E:194:PHE:HD1	1:E:196:LYS:HB2	1.78	0.48
1:L:375:VAL:HG12	1:L:375:VAL:O	2.13	0.48
1:D:425:VAL:O	1:D:429:ILE:HG13	2.18	0.48
1:B:264:ASN:HB3	1:B:269:THR:HB	1.95	0.48
2:Q:17:VAL:HG12	2:Q:18:LYS:N	2.29	0.48
2:Q:96:LEU:HD23	2:R:14:ARG:HE	1.78	0.48
1:F:359:TYR:CZ	1:F:363:LYS:HE2	2.49	0.48
1:B:239:VAL:HG11	1:B:246:LEU:HB2	2.04	0.48
1:K:217:ALA:HB2	1:K:245:PRO:CG	2.33	0.48
1:L:50:THR:CG2	1:L:52:ASP:H	2.13	0.48
1:E:227:SER:CB	1:E:254:GLU:HG3	2.31	0.48
1:E:352:LEU:HD21	1:E:365:GLN:CG	2.42	0.48
2:Q:56:ASN:N	2:Q:56:ASN:HD22	4.50	0.48
1:F:232:LEU:HD23	1:F:308:LEU:HD21	1.94	0.48
1:D:222:VAL:HB	1:D:250:ALA:HB2	1.94	0.48
1:N:168:VAL:HG11	1:N:173:ILE:N	2.29	0.48
1:K:295:THR:HG22	1:K:317:GLY:CA	2.44	0.48
1:C:408:GLU:OE1	1:C:503:ARG:NH2	2.46	0.48
1:L:194:PHE:CG	1:L:278:PRO:HB3	2.48	0.48
1:M:222:VAL:HG12	1:M:223:GLU:H	1.77	0.48
1:D:72:GLN:NE2	1:D:75:LYS:NZ	2.68	0.48
1:A:18:ARG:HD2	1:A:67:GLU:OE2	2.17	0.48
1:I:161:ILE:O	1:I:165:MET:HG3	2.14	0.48
1:N:452:ARG:HG2	1:N:452:ARG:NH1	2.37	0.48
1:I:218:PHE:HE1	1:I:242:THR:HG21	1.78	0.48
1:B:144:ILE:CD1	1:B:165:MET:HG2	2.44	0.48
1:A:431:LYS:HG3	1:A:431:LYS:O	2.12	0.48
1:F:356:ASP:O	1:F:357:SER:C	2.52	0.48
1:B:25:ASN:HA	1:B:28:LYS:HG2	1.94	0.48
1:D:490:MET:HE1	1:D:495:ILE:HG21	1.96	0.48
2:P:99:LEU:HD21	2:Q:82:ILE:HD13	3.08	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:49:GLY:O	2:Q:62:LEU:HD11	2.14	0.48
2:T:79:GLU:HA	2:T:87:TYR:O	2.56	0.48
1:G:490:MET:HE1	1:G:495:ILE:HG21	2.07	0.48
1:A:142:LYS:HE2	1:A:146:GLU:OE2	2.13	0.48
1:K:325:THR:CG2	1:K:326:LYS:N	2.76	0.48
1:K:233:LEU:O	1:K:237:GLU:HB2	2.14	0.48
1:K:136:ILE:HB	1:K:410:ILE:CG1	3.03	0.48
2:S:18:LYS:HE3	2:S:86:GLU:O	2.54	0.48
1:N:81:THR:OG1	1:N:508:ASN:ND2	2.46	0.48
1:C:417:THR:HG23	1:C:418:LEU:HD12	1.95	0.48
1:D:10:GLU:N	1:D:13:ARG:NH1	2.61	0.48
1:A:95:LEU:O	1:A:99:ILE:HG13	2.15	0.48
1:J:390:GLU:OE1	1:J:394:ARG:NH1	2.46	0.48
1:N:462:GLY:O	1:N:466:VAL:HG23	2.14	0.48
1:D:359:TYR:OH	1:D:363:LYS:HE3	2.14	0.48
2:U:13:ASP:CA	2:U:62:LEU:HD21	2.43	0.48
2:U:79:GLU:HG2	2:U:88:VAL:HG12	3.82	0.48
1:E:147:VAL:HG23	1:E:410:ILE:HD11	1.95	0.48
2:R:53:VAL:HG22	2:R:59:ARG:CG	2.42	0.48
1:M:47:PRO:HB3	1:N:69:ILE:HG23	2.02	0.48
1:N:7:VAL:HG12	1:N:12:ALA:HB2	1.95	0.48
1:G:224:LYS:HD2	1:G:224:LYS:N	4.80	0.48
1:N:120:ILE:HG23	1:N:443:VAL:CG2	2.43	0.48
1:H:385:GLU:HB2	1:I:280:PHE:CD2	2.66	0.48
1:A:198:TYR:HD1	1:A:198:TYR:O	1.96	0.48
1:F:72:GLN:NE2	1:F:75:LYS:NZ	2.59	0.48
1:N:232:LEU:HD23	1:N:236:LEU:HB2	2.17	0.48
1:J:312:THR:C	1:J:314:SER:N	2.71	0.48
1:E:14:ARG:NH1	1:E:17:GLU:OE1	2.55	0.48
1:F:10:GLU:N	1:F:13:ARG:NH1	2.67	0.48
1:L:449:GLU:HB2	1:L:450:PRO:HD3	2.04	0.48
1:L:416:VAL:HG21	1:L:479:GLY:HA3	1.95	0.48
1:E:229:VAL:HG23	1:E:256:GLU:HG3	1.95	0.48
2:Q:15:VAL:HG22	2:Q:62:LEU:HD13	7.19	0.48
2:R:46:ILE:O	2:R:46:ILE:HG22	2.12	0.48
1:E:237:GLU:HG2	2:S:30:ILE:HD12	1.96	0.48
2:T:16:VAL:HB	2:T:47:ALA:HB3	2.27	0.48
2:P:11:LEU:O	2:P:13:ASP:N	2.94	0.48
1:C:235:ILE:CG1	1:C:311:ALA:HB3	2.43	0.48
2:O:17:VAL:HG12	2:O:18:LYS:N	2.29	0.48
1:G:363:LYS:HA	1:G:366:GLU:OE2	3.21	0.48
1:D:300:ILE:O	1:D:300:ILE:HG22	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:168:VAL:CG1	1:N:173:ILE:H	2.28	0.48
1:N:39:VAL:C	1:N:40:LEU:HD12	2.38	0.48
1:B:204:VAL:HG13	1:B:211:GLU:O	2.40	0.48
1:H:259:ALA:O	1:H:263:VAL:HG23	2.24	0.48
1:N:84:VAL:HG12	1:N:500:LYS:CE	2.42	0.48
1:D:284:ARG:HG3	1:D:284:ARG:HH11	1.79	0.48
1:F:288:LEU:HD23	1:F:291:ILE:HD12	1.95	0.48
1:H:69:ILE:O	1:H:73:LEU:HB2	2.16	0.48
1:G:417:THR:HG23	1:G:418:LEU:HD12	2.00	0.48
1:K:71:ALA:O	1:K:75:LYS:HG3	2.13	0.48
2:U:8:ILE:CG2	2:U:9:LYS:N	3.29	0.48
1:G:410:ILE:HD11	1:G:496:VAL:HG21	1.94	0.48
2:P:17:VAL:CG1	2:P:43:GLY:HA3	2.44	0.48
1:G:287:MET:O	1:G:291:ILE:HG13	2.13	0.48
1:E:50:THR:HA	1:E:390:GLU:OE1	2.26	0.48
1:F:519:THR:HG23	1:G:39:VAL:HG23	1.96	0.48
1:H:283:ARG:CZ	1:H:363:LYS:HG3	2.44	0.48
2:S:13:ASP:OD1	2:S:92:GLU:HB2	2.14	0.48
1:L:269:THR:HA	1:M:256:GLU:CD	2.34	0.48
1:J:295:THR:HG22	1:J:317:GLY:CA	2.53	0.48
1:K:123:ALA:HB2	1:K:440:ALA:HA	1.96	0.48
1:H:120:ILE:HG23	1:H:443:VAL:CG2	2.44	0.48
1:L:194:PHE:CB	1:L:278:PRO:HB3	2.44	0.48
1:I:300:ILE:O	1:I:300:ILE:HG22	2.22	0.48
1:G:498:PRO:HG2	1:G:501:VAL:CG2	2.46	0.48
1:F:503:ARG:O	1:F:507:GLN:HG3	2.19	0.48
1:F:69:ILE:HG23	1:G:47:PRO:HG3	2.04	0.48
1:A:465:ILE:HD13	1:A:480:PHE:CD2	2.53	0.48
1:G:460:TYR:HB3	1:G:465:ILE:HD11	2.02	0.48
1:D:345:ILE:HG23	1:D:368:LEU:CD1	2.56	0.48
1:A:23:VAL:CG1	1:A:74:LEU:HD23	2.43	0.48
1:G:101:ARG:CG	1:G:102:GLU:N	2.76	0.48
1:B:323:ARG:HG2	1:B:323:ARG:HH11	2.00	0.48
1:B:331:ILE:HG22	1:B:331:ILE:O	2.66	0.48
1:A:457:ASN:N	1:A:457:ASN:HD22	2.26	0.48
1:A:80:LYS:HE2	1:B:383:ALA:O	2.14	0.48
1:I:390:GLU:OE1	1:I:394:ARG:NH1	2.51	0.48
1:K:171:GLU:OE1	1:K:366:GLU:HB3	2.64	0.48
1:N:360:ALA:O	1:N:364:LEU:HD13	2.13	0.48
2:S:96:LEU:HA	2:T:14:ARG:NH1	4.96	0.48
1:B:150:ILE:O	1:B:153:ASN:N	2.71	0.48
1:H:197:GLY:HA3	1:H:325:THR:O	2.22	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:283:ARG:HH12	1:J:363:LYS:HB2	3.79	0.48
2:O:80:ILE:CG2	2:O:81:GLU:N	2.77	0.48
1:A:247:LEU:HD13	1:A:324:ILE:HD11	1.95	0.48
1:A:173:ILE:HD11	1:A:365:GLN:HG3	2.35	0.48
1:H:295:THR:HG22	1:H:317:GLY:HA3	1.95	0.48
1:G:503:ARG:O	1:G:507:GLN:HG3	2.14	0.48
1:N:194:PHE:CB	1:N:278:PRO:HB3	2.47	0.48
1:N:194:PHE:CG	1:N:278:PRO:HB3	2.52	0.48
1:E:118:ARG:O	1:E:122:LYS:HG3	2.14	0.48
1:I:175:THR:CG2	1:I:177:GLU:OE2	2.61	0.48
1:A:323:ARG:NH1	1:A:323:ARG:HG2	2.50	0.48
1:I:28:LYS:NZ	1:I:97:GLN:HE22	2.11	0.48
1:E:6:LEU:CD2	1:E:523:VAL:HG22	2.52	0.48
1:C:157:VAL:O	1:C:161:ILE:HG12	2.18	0.48
2:R:22:GLU:OE1	2:R:22:GLU:N	2.38	0.48
1:J:481:ASN:HD21	1:J:484:THR:HG23	1.79	0.48
1:J:71:ALA:O	1:J:75:LYS:HG3	2.14	0.48
1:K:117:LYS:O	1:K:121:GLU:HG3	2.16	0.48
1:F:392:LYS:O	1:F:396:GLU:HG3	2.18	0.48
1:I:437:ALA:O	1:I:441:LYS:HG3	2.14	0.48
1:K:239:VAL:HG22	1:K:313:LEU:CD1	2.44	0.48
1:B:229:VAL:HG23	1:B:256:GLU:OE2	2.13	0.48
2:Q:16:VAL:CG1	2:Q:46:ILE:HD12	6.74	0.48
2:U:19:ARG:NH2	2:U:39:LYS:HB3	4.02	0.48
2:U:81:GLU:CG	2:U:85:GLU:H	2.27	0.48
2:Q:56:ASN:N	2:Q:56:ASN:ND2	4.04	0.48
1:A:220:LEU:HD13	1:A:235:ILE:HD12	2.97	0.48
1:M:307:LYS:HB2	1:M:310:ASN:ND2	2.34	0.48
1:I:40:LEU:HD12	1:I:40:LEU:N	2.28	0.48
1:C:202:TYR:HD2	1:C:266:LEU:HD21	2.19	0.48
1:C:248:ILE:CD1	1:C:261:LEU:HD21	2.75	0.48
1:K:194:PHE:N	1:K:194:PHE:CD2	2.86	0.48
1:H:84:VAL:O	1:H:84:VAL:HG12	2.13	0.48
1:G:498:PRO:HG2	1:G:501:VAL:HG22	1.96	0.48
1:F:287:MET:O	1:F:290:ASP:HB2	2.13	0.48
1:E:307:LYS:HB2	1:E:310:ASN:HD22	2.90	0.48
1:H:161:ILE:O	1:H:165:MET:HG3	2.17	0.48
1:E:157:VAL:O	1:E:161:ILE:HG12	2.13	0.48
1:F:95:LEU:O	1:F:99:ILE:HG13	2.16	0.48
2:T:10:PRO:HB2	2:T:14:ARG:CB	3.28	0.48
1:E:490:MET:HE1	1:E:495:ILE:HG21	1.95	0.48
1:C:277:ALA:O	1:C:278:PRO:O	2.32	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:18:LYS:NZ	2:O:85:GLU:OE1	2.95	0.48
1:G:360:ALA:O	1:G:364:LEU:HG	2.29	0.48
1:G:54:VAL:HG11	1:G:79:SER:HA	1.96	0.48
1:F:198:TYR:CE1	1:F:326:LYS:HA	2.49	0.48
1:D:247:LEU:HD13	1:D:324:ILE:HD11	1.95	0.48
1:F:232:LEU:HB3	1:F:236:LEU:HD11	1.95	0.48
1:A:246:LEU:CB	1:A:272:VAL:HG12	2.37	0.48
1:M:69:ILE:O	1:M:73:LEU:HB2	2.17	0.48
1:K:84:VAL:O	1:K:84:VAL:HG12	2.14	0.48
1:G:344:ARG:HD2	1:G:344:ARG:HA	1.60	0.48
1:E:199:ILE:HD12	1:E:274:ALA:HB1	2.38	0.48
1:L:175:THR:CG2	1:L:177:GLU:OE2	2.65	0.48
1:C:101:ARG:CG	1:C:102:GLU:N	2.78	0.48
1:A:25:ASN:HA	1:A:28:LYS:HG2	1.97	0.48
2:Q:62:LEU:C	2:Q:64:VAL:H	2.18	0.48
2:Q:90:LEU:H	2:Q:90:LEU:CD2	3.92	0.48
2:R:11:LEU:O	2:R:13:ASP:N	3.00	0.48
2:O:13:ASP:OD1	2:O:13:ASP:C	2.81	0.48
2:U:17:VAL:CG2	2:U:70:VAL:HG21	4.21	0.48
1:F:410:ILE:HD11	1:F:496:VAL:CG2	2.49	0.48
2:R:50:THR:HG22	2:R:51:GLY:O	2.63	0.48
1:F:218:PHE:HE1	1:F:244:LYS:HB2	2.12	0.48
1:C:265:LYS:HZ2	1:C:271:SER:HB2	2.85	0.48
1:C:265:LYS:HD2	1:C:271:SER:HA	2.76	0.48
1:G:281:GLY:O	1:G:284:ARG:HG2	2.60	0.48
1:C:54:VAL:HG11	1:C:79:SER:HA	1.95	0.48
1:K:30:THR:HB	1:K:51:LYS:O	2.30	0.48
1:A:250:ALA:O	1:A:252:ASP:N	2.55	0.48
1:N:168:VAL:HG21	1:N:376:ALA:HB2	1.94	0.48
1:B:303:GLU:O	1:C:259:ALA:HA	5.57	0.48
1:N:222:VAL:CG1	1:N:223:GLU:N	2.76	0.48
1:N:178:GLU:OE2	1:N:392:LYS:HE3	2.25	0.48
1:F:6:LEU:CD2	1:F:523:VAL:HG22	2.49	0.48
1:C:14:ARG:NH1	1:C:17:GLU:OE1	2.49	0.48
1:L:131:ILE:HD13	1:L:502:THR:HG22	1.95	0.48
2:T:80:ILE:HD12	2:T:80:ILE:N	2.66	0.47
1:M:168:VAL:HG12	1:M:172:GLY:CA	2.33	0.47
1:E:245:PRO:HA	1:E:271:SER:OG	2.14	0.47
1:B:218:PHE:O	1:B:246:LEU:HD12	2.49	0.47
2:O:80:ILE:CG1	2:U:41:GLN:OE1	2.62	0.47
1:I:50:THR:CG2	1:I:52:ASP:H	2.10	0.47
1:A:217:ALA:HB2	1:A:245:PRO:HB2	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:261:LEU:HD22	1:A:272:VAL:HG21	1.96	0.47
1:J:297:GLY:HA3	1:J:317:GLY:N	2.35	0.47
1:L:7:VAL:HG21	1:L:66:LEU:CD1	2.51	0.47
1:K:79:SER:O	1:K:81:THR:N	2.47	0.47
1:G:190:GLU:OE2	1:G:190:GLU:HA	4.77	0.47
1:F:178:GLU:CG	1:F:388:LEU:HD21	2.45	0.47
1:D:344:ARG:HA	1:D:344:ARG:HD2	1.66	0.47
1:L:458:ALA:O	1:M:114:LEU:CD1	2.62	0.47
1:L:24:ALA:O	1:L:28:LYS:HG2	2.13	0.47
1:J:146:GLU:O	1:J:150:ILE:HG13	2.14	0.47
1:D:528:GLU:H	1:D:528:GLU:CD	2.17	0.47
1:K:283:ARG:HA	1:K:283:ARG:HD2	1.69	0.47
1:K:283:ARG:HD3	1:K:363:LYS:NZ	2.32	0.47
1:B:229:VAL:HG12	1:B:233:LEU:CD1	2.49	0.47
1:B:490:MET:HE1	1:B:495:ILE:HG21	2.09	0.47
1:I:297:GLY:HA3	1:I:317:GLY:N	2.28	0.47
1:I:295:THR:HG22	1:I:317:GLY:HA3	2.05	0.47
2:O:85:GLU:OE1	2:O:85:GLU:HA	2.15	0.47
1:N:526:LYS:HD2	1:N:527:PRO:HD2	1.93	0.47
2:S:46:ILE:O	2:S:46:ILE:HG22	2.14	0.47
1:A:173:ILE:HG13	1:A:365:GLN:HG3	2.49	0.47
1:L:81:THR:OG1	1:L:508:ASN:ND2	2.59	0.47
1:E:503:ARG:O	1:E:507:GLN:HG3	2.30	0.47
1:A:149:THR:CG2	1:A:155:PRO:HA	2.47	0.47
1:A:460:TYR:HB3	1:A:465:ILE:HD11	1.95	0.47
1:N:161:ILE:O	1:N:165:MET:HG3	2.17	0.47
1:C:23:VAL:CG1	1:C:74:LEU:HD23	2.51	0.47
1:J:416:VAL:HG21	1:J:479:GLY:HA3	2.02	0.47
1:A:349:LYS:C	1:A:351:GLU:H	2.16	0.47
2:T:80:ILE:O	2:T:86:GLU:HA	2.36	0.47
2:U:12:GLY:O	2:U:13:ASP:HB3	2.71	0.47
1:K:298:THR:N	1:K:315:MET:O	2.47	0.47
2:P:81:GLU:HA	2:P:86:GLU:HA	1.96	0.47
1:M:247:LEU:HD13	1:M:324:ILE:HD11	2.00	0.47
1:F:7:VAL:CG2	1:F:66:LEU:HD11	2.41	0.47
1:H:283:ARG:HD3	1:H:363:LYS:CE	2.51	0.47
1:E:251:GLU:O	1:E:252:ASP:HB2	2.14	0.47
1:K:50:THR:HG21	1:K:55:THR:HB	2.02	0.47
1:D:265:LYS:HA	1:D:270:LEU:O	2.13	0.47
1:M:206:ASN:HD21	1:M:389:LYS:HE2	1.80	0.47
1:B:289:LYS:HE2	1:C:202:TYR:HH	1.79	0.47
2:Q:10:PRO:HB2	2:Q:14:ARG:O	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:S:18:LYS:HZ1	2:S:85:GLU:CD	2.17	0.47
1:B:422:ILE:HD12	1:B:470:LEU:HD21	2.06	0.47
1:M:194:PHE:CG	1:M:278:PRO:HB3	2.50	0.47
2:O:56:ASN:HB2	2:O:58:GLN:HG3	1.96	0.47
1:J:28:LYS:HZ2	1:J:97:GLN:HE22	1.63	0.47
1:D:159:LYS:HE2	1:D:163:ASP:OD2	2.14	0.47
1:E:201:PRO:O	1:E:204:VAL:HG23	3.64	0.47
1:K:146:GLU:O	1:K:150:ILE:HG13	2.14	0.47
1:C:6:LEU:CD2	1:C:523:VAL:HG22	2.44	0.47
1:K:450:PRO:O	1:K:454:ILE:HG13	2.31	0.47
1:B:6:LEU:CD2	1:B:523:VAL:HG22	2.45	0.47
1:M:49:ILE:HG13	1:M:49:ILE:O	2.25	0.47
2:T:69:ILE:HB	2:T:99:LEU:CB	3.23	0.47
2:U:48:VAL:HG13	2:U:62:LEU:HD12	2.16	0.47
1:G:37:ASN:HB3	1:G:50:THR:O	2.14	0.47
1:E:345:ILE:HG23	1:E:368:LEU:HD13	6.94	0.47
1:N:69:ILE:O	1:N:73:LEU:HB2	2.14	0.47
1:K:168:VAL:CG2	1:K:376:ALA:HB2	2.44	0.47
1:K:226:VAL:CG1	1:K:232:LEU:HD12	2.48	0.47
1:G:248:ILE:HD12	1:G:261:LEU:CD2	2.82	0.47
1:I:228:ASN:ND2	1:I:230:ARG:HB3	2.24	0.47
1:E:210:MET:HE3	1:E:210:MET:HA	1.96	0.47
1:A:161:ILE:HD12	1:A:399:LEU:HD21	2.07	0.47
1:A:344:ARG:HA	1:A:344:ARG:HD2	1.67	0.47
2:Q:80:ILE:CG1	2:Q:81:GLU:H	4.24	0.47
2:Q:8:ILE:H	2:Q:8:ILE:HD12	1.78	0.47
2:O:13:ASP:HB2	2:O:62:LEU:CD2	2.44	0.47
1:J:363:LYS:O	1:J:366:GLU:HG2	2.14	0.47
1:J:375:VAL:HG12	1:J:375:VAL:O	2.20	0.47
1:H:81:THR:OG1	1:H:508:ASN:ND2	2.60	0.47
1:K:300:ILE:HG21	1:K:308:LEU:CD2	2.42	0.47
1:K:7:VAL:HG21	1:K:66:LEU:CD1	2.47	0.47
1:G:267:ARG:NH1	1:G:267:ARG:HG3	4.72	0.47
1:B:149:THR:HG23	1:B:155:PRO:CA	2.41	0.47
1:F:118:ARG:O	1:F:122:LYS:HG3	2.15	0.47
1:G:307:LYS:HB3	1:G:310:ASN:HD22	2.92	0.47
1:J:131:ILE:HD13	1:J:502:THR:HG22	2.01	0.47
2:T:50:THR:CG2	2:T:59:ARG:HD3	2.45	0.47
1:A:144:ILE:HD12	1:A:165:MET:HG2	1.96	0.47
1:F:526:LYS:O	1:F:527:PRO:C	2.52	0.47
1:D:518:THR:OG1	1:E:37:ASN:ND2	2.57	0.47
1:A:10:GLU:N	1:A:13:ARG:NH1	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:19:GLY:HA3	1:N:67:GLU:O	2.14	0.47
1:F:468:GLN:O	1:F:471:ALA:HB3	2.16	0.47
1:M:416:VAL:HG21	1:M:479:GLY:HA3	1.98	0.47
2:T:44:LYS:HA	2:T:68:ASP:O	2.13	0.47
1:D:150:ILE:HG22	1:D:151:SER:N	2.28	0.47
2:R:8:ILE:CG2	2:R:16:VAL:HG21	2.42	0.47
2:T:51:GLY:HA2	2:T:62:LEU:HD21	4.10	0.47
1:E:265:LYS:HD3	1:E:272:VAL:H	1.80	0.47
1:E:265:LYS:HA	1:E:270:LEU:O	2.14	0.47
2:R:54:LEU:HD21	2:S:55:GLU:CA	3.86	0.47
1:J:168:VAL:CG2	1:J:376:ALA:HB2	2.44	0.47
1:H:168:VAL:HG12	1:H:172:GLY:CA	2.34	0.47
1:G:7:VAL:HG12	1:G:12:ALA:HB2	2.08	0.47
1:L:120:ILE:HG23	1:L:443:VAL:CG2	2.53	0.47
1:I:290:ASP:N	1:I:344:ARG:NH1	2.66	0.47
2:S:100:GLN:CD	2:T:9:LYS:HE2	2.35	0.47
1:M:161:ILE:O	1:M:165:MET:HG3	2.16	0.47
1:H:178:GLU:OE2	1:H:392:LYS:HE3	2.15	0.47
1:M:316:LEU:H	1:M:316:LEU:HD23	1.81	0.47
1:H:372:ALA:O	1:H:374:GLY:N	2.59	0.47
1:F:520:GLU:HG2	1:G:29:VAL:HG13	1.96	0.47
1:M:425:VAL:O	1:M:429:ILE:HG13	2.29	0.47
1:F:289:LYS:O	1:F:292:ALA:HB3	2.15	0.47
1:A:201:PRO:O	1:A:204:VAL:HG23	2.48	0.47
2:R:45:VAL:HG21	2:R:64:VAL:CG1	2.48	0.47
1:A:360:ALA:O	1:A:364:LEU:HG	2.15	0.47
2:O:10:PRO:HG2	2:O:49:GLY:HA2	1.97	0.47
1:M:228:ASN:ND2	1:M:230:ARG:HB3	2.25	0.47
2:P:84:GLY:O	2:P:85:GLU:HB2	2.14	0.47
1:E:240:ALA:HB2	1:E:270:LEU:HD22	1.96	0.47
1:B:290:ASP:HB3	1:B:371:LEU:HD21	1.97	0.47
1:K:375:VAL:O	1:K:375:VAL:HG12	2.15	0.47
1:E:54:VAL:CG2	1:E:89:THR:HG21	2.44	0.47
1:E:293:ALA:HB1	1:E:340:ASP:HB3	3.39	0.47
1:B:52:ASP:OD1	1:B:54:VAL:HG23	2.14	0.47
1:B:54:VAL:HG13	1:B:89:THR:HG21	1.95	0.47
1:F:236:LEU:CB	2:T:30:ILE:HD11	2.44	0.47
2:S:13:ASP:OD1	2:S:13:ASP:C	2.56	0.47
1:D:250:ALA:C	1:D:252:ASP:N	2.85	0.47
1:C:224:LYS:N	1:C:224:LYS:HD2	4.81	0.47
1:A:203:PHE:HA	1:A:265:LYS:HE3	1.97	0.47
1:A:288:LEU:HA	1:A:291:ILE:HD12	2.75	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:359:TYR:OH	1:A:363:LYS:HE3	2.15	0.47
1:B:289:LYS:O	1:B:292:ALA:HB3	2.15	0.47
1:C:149:THR:CG2	1:C:155:PRO:HA	2.48	0.47
1:C:199:ILE:HG12	1:C:276:LYS:HZ2	6.03	0.47
1:D:503:ARG:O	1:D:507:GLN:HG3	2.19	0.47
1:E:128:VAL:HA	1:E:131:ILE:HD12	2.07	0.47
1:H:226:VAL:CG1	1:H:232:LEU:HD12	2.43	0.47
1:L:194:PHE:N	1:L:194:PHE:CD2	2.82	0.47
1:M:408:GLU:OE2	1:M:500:LYS:HG3	2.89	0.47
1:N:300:ILE:HG22	1:N:300:ILE:O	2.14	0.47
1:K:114:LEU:O	1:K:118:ARG:HG3	2.14	0.47
1:E:199:ILE:O	1:E:199:ILE:HG22	2.24	0.47
1:I:79:SER:O	1:I:81:THR:N	2.55	0.47
1:N:239:VAL:HG22	1:N:313:LEU:CD1	2.59	0.47
1:I:253:VAL:HG11	1:I:261:LEU:HD12	2.03	0.47
1:H:146:GLU:O	1:H:150:ILE:HG13	2.18	0.47
1:K:425:VAL:O	1:K:429:ILE:HG13	2.15	0.47
1:B:340:ASP:O	1:B:344:ARG:HB2	2.22	0.47
1:C:161:ILE:HD12	1:C:399:LEU:CD2	2.45	0.47
1:F:10:GLU:N	1:F:13:ARG:HH12	2.19	0.47
1:G:418:LEU:H	1:G:418:LEU:HD12	1.89	0.47
1:I:481:ASN:HD21	1:I:484:THR:HG23	1.84	0.47
1:A:253:VAL:HG21	1:A:274:ALA:HB1	2.19	0.47
1:B:179:SER:OG	1:B:180:LYS:N	2.51	0.47
1:H:49:ILE:HG13	1:H:49:ILE:O	2.16	0.47
1:H:390:GLU:OE1	1:H:394:ARG:NH1	2.48	0.47
2:T:80:ILE:CG2	2:T:81:GLU:N	2.78	0.47
1:M:168:VAL:CG2	1:M:376:ALA:HB2	2.45	0.47
1:C:260:THR:HG22	1:C:264:ASN:ND2	2.63	0.47
1:G:294:VAL:O	1:G:336:GLY:N	2.82	0.47
1:E:54:VAL:HG11	1:E:79:SER:HA	1.99	0.47
1:C:168:VAL:O	1:C:172:GLY:HA3	2.22	0.47
1:H:286:GLU:HG3	1:H:367:ARG:NH2	2.29	0.47
1:E:289:LYS:O	1:E:292:ALA:HB3	2.40	0.47
1:C:301:SER:HB2	1:C:304:LEU:CB	2.45	0.47
2:S:5:LYS:CG	2:S:6:THR:N	4.34	0.47
1:A:173:ILE:CD1	1:A:365:GLN:HG3	3.02	0.47
1:N:219:ILE:O	1:N:221:ILE:HG13	2.15	0.47
1:C:199:ILE:HG23	1:C:276:LYS:NZ	4.93	0.47
1:K:74:LEU:HA	1:K:512:ILE:HD13	1.96	0.47
1:K:224:LYS:CG	1:K:225:LYS:N	2.77	0.47
1:K:253:VAL:O	1:K:258:LEU:HD22	2.16	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:452:ARG:HG2	1:J:452:ARG:NH1	2.33	0.47
1:H:450:PRO:O	1:H:454:ILE:HG13	2.33	0.47
1:N:146:GLU:O	1:N:150:ILE:HG13	2.14	0.47
1:G:10:GLU:N	1:G:13:ARG:HH12	2.19	0.47
1:J:181:SER:HA	1:K:282:ASP:OD2	2.37	0.47
1:M:5:ILE:HG23	1:M:5:ILE:O	2.15	0.47
1:E:25:ASN:HA	1:E:28:LYS:HG2	1.96	0.47
1:G:77:VAL:HG23	1:G:512:ILE:HG13	1.96	0.47
1:N:449:GLU:HB2	1:N:450:PRO:HD3	1.97	0.47
1:D:232:LEU:HB3	1:D:236:LEU:CD1	2.45	0.47
1:A:351:GLU:OE2	1:B:326:LYS:NZ	2.38	0.47
2:P:91:SER:O	2:P:95:LEU:HG	2.25	0.47
1:G:352:LEU:HD21	1:G:365:GLN:CG	5.69	0.47
1:B:66:LEU:CD2	1:B:522:VAL:HG11	2.51	0.47
1:H:79:SER:O	1:H:81:THR:N	2.48	0.47
1:H:114:LEU:O	1:H:118:ARG:HG3	2.15	0.47
1:J:194:PHE:N	1:J:194:PHE:CD2	2.84	0.47
2:R:32:LEU:CD2	2:R:33:PRO:HD2	2.84	0.47
1:D:360:ALA:O	1:D:364:LEU:HG	2.15	0.47
1:F:465:ILE:HD13	1:F:480:PHE:CD2	2.53	0.47
1:L:312:THR:C	1:L:314:SER:N	2.67	0.47
2:O:38:GLU:OE1	2:O:74:LYS:NZ	4.18	0.47
1:D:167:LYS:HB2	1:D:188:PHE:CE2	2.49	0.47
1:C:194:PHE:CD1	1:C:196:LYS:HB2	2.74	0.47
1:H:282:ASP:OD2	1:N:181:SER:HA	2.51	0.47
1:B:152:ALA:HB2	1:B:398:ALA:HB2	1.97	0.47
2:Q:81:GLU:HA	2:Q:86:GLU:HA	1.96	0.47
1:A:350:LYS:C	1:B:208:GLU:HA	7.92	0.47
2:O:54:LEU:HG	2:O:55:GLU:H	1.80	0.47
1:M:173:ILE:HG13	1:M:370:LYS:HA	1.97	0.47
1:M:173:ILE:HD11	1:M:370:LYS:CG	2.45	0.47
1:N:325:THR:CG2	1:N:326:LYS:N	2.78	0.47
1:L:219:ILE:HD13	1:L:331:ILE:HD13	1.97	0.47
2:U:25:LYS:HG2	2:U:31:VAL:HG22	1.97	0.47
1:I:222:VAL:CG1	1:I:223:GLU:N	2.76	0.47
1:L:224:LYS:CG	1:L:225:LYS:N	2.76	0.47
1:K:316:LEU:HD23	1:K:316:LEU:O	2.14	0.47
1:E:417:THR:HG23	1:E:418:LEU:HD12	1.97	0.47
1:C:177:GLU:O	1:C:379:ARG:HA	2.15	0.47
1:B:478:TYR:CE1	1:B:487:PHE:HB3	2.56	0.47
1:E:179:SER:HB2	1:E:379:ARG:HB3	2.05	0.47
1:G:142:LYS:O	1:G:146:GLU:HG3	2.18	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:475:ASN:OD1	1:L:477:ARG:N	2.43	0.47
1:A:472:GLU:HB3	1:A:478:TYR:CD2	2.49	0.47
1:B:229:VAL:HG23	1:B:256:GLU:CG	2.52	0.46
2:U:79:GLU:O	2:U:80:ILE:HG13	2.15	0.46
1:B:410:ILE:HD11	1:B:496:VAL:HG21	2.22	0.46
1:C:264:ASN:HB3	1:C:269:THR:HB	1.95	0.46
1:C:348:ILE:HG23	1:C:368:LEU:HG	6.78	0.46
1:E:293:ALA:O	1:E:336:GLY:HA3	2.15	0.46
1:M:383:ALA:CB	1:N:359:TYR:OH	2.63	0.46
1:J:46:SER:HB2	1:J:47:PRO:CD	2.37	0.46
1:K:179:SER:CB	1:K:379:ARG:HB3	2.39	0.46
1:M:66:LEU:HD22	1:M:522:VAL:HG21	2.00	0.46
1:L:149:THR:HG23	1:L:155:PRO:CA	2.40	0.46
1:N:66:LEU:HD22	1:N:522:VAL:HG21	1.97	0.46
1:A:283:ARG:CZ	1:A:363:LYS:HB2	4.58	0.46
1:H:194:PHE:HB2	1:H:278:PRO:HB3	2.03	0.46
2:S:19:ARG:HB3	2:S:40:PRO:HG2	2.07	0.46
1:B:189:VAL:HG12	1:B:190:GLU:N	2.30	0.46
1:N:79:SER:O	1:N:81:THR:N	2.47	0.46
1:G:108:ALA:CB	1:N:109:ALA:CB	2.93	0.46
1:M:202:TYR:CD2	1:M:266:LEU:HD11	2.54	0.46
1:M:202:TYR:HD2	1:M:266:LEU:HD11	1.84	0.46
1:D:410:ILE:HG12	1:D:496:VAL:HB	2.06	0.46
2:R:48:VAL:CG1	2:R:62:LEU:HD23	2.46	0.46
2:R:84:GLY:O	2:R:85:GLU:HB2	2.16	0.46
2:T:72:PHE:CD2	2:T:90:LEU:CD2	5.28	0.46
2:T:91:SER:O	2:T:95:LEU:HG	2.14	0.46
1:C:296:GLY:CA	1:C:336:GLY:HA2	2.44	0.46
1:D:239:VAL:HG11	1:D:246:LEU:HB2	1.96	0.46
1:H:46:SER:HB2	1:H:47:PRO:CD	2.43	0.46
1:H:168:VAL:HG21	1:H:376:ALA:HB2	1.96	0.46
1:H:66:LEU:HD22	1:H:522:VAL:HG21	1.99	0.46
1:I:120:ILE:HG23	1:I:443:VAL:CG2	2.57	0.46
1:G:128:VAL:HG13	1:G:503:ARG:HG3	2.04	0.46
1:N:224:LYS:CG	1:N:225:LYS:N	2.78	0.46
1:I:224:LYS:CG	1:I:225:LYS:N	2.78	0.46
1:F:128:VAL:HA	1:F:131:ILE:HD12	1.97	0.46
1:F:72:GLN:HE22	1:F:75:LYS:HZ3	1.60	0.46
1:G:422:ILE:HD12	1:G:470:LEU:HD21	1.98	0.46
1:C:4:LYS:HG3	1:D:59:GLU:O	2.39	0.46
1:G:231:GLU:HB2	1:G:308:LEU:HD23	2.62	0.46
1:D:418:LEU:H	1:D:418:LEU:HD12	1.81	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:179:SER:OG	1:D:180:LYS:N	2.54	0.46
1:D:303:GLU:HA	1:E:259:ALA:HB2	3.46	0.46
2:Q:97:ALA:HA	2:R:11:LEU:HG	1.98	0.46
1:D:359:TYR:CZ	1:D:363:LYS:CE	2.98	0.46
1:E:218:PHE:HE1	1:E:244:LYS:HB2	1.95	0.46
1:E:235:ILE:HG12	1:E:311:ALA:CB	2.37	0.46
1:E:232:LEU:O	1:E:235:ILE:HG22	5.79	0.46
1:E:410:ILE:HD11	1:E:496:VAL:HG21	2.01	0.46
1:M:363:LYS:O	1:M:366:GLU:HG2	2.16	0.46
1:I:217:ALA:HB1	1:I:245:PRO:O	2.26	0.46
2:Q:54:LEU:CD1	2:R:57:GLY:N	2.79	0.46
1:D:301:SER:HB2	1:D:304:LEU:HB3	2.07	0.46
1:J:283:ARG:HD2	1:J:283:ARG:HA	1.70	0.46
1:J:311:ALA:HA	1:J:315:MET:SD	2.64	0.46
1:C:345:ILE:HG12	1:C:368:LEU:CD2	5.42	0.46
1:B:321:ARG:O	1:B:322:VAL:HG23	2.42	0.46
1:E:363:LYS:C	1:E:365:GLN:H	2.88	0.46
1:F:229:VAL:HG23	1:F:256:GLU:OE2	2.18	0.46
1:M:179:SER:CB	1:M:379:ARG:HB3	2.38	0.46
1:J:77:VAL:O	1:J:80:LYS:HG2	2.27	0.46
1:L:360:ALA:HA	1:L:363:LYS:CG	2.74	0.46
2:U:33:PRO:C	2:U:35:THR:H	2.19	0.46
2:S:17:VAL:HG12	2:S:18:LYS:N	2.31	0.46
1:J:465:ILE:HD13	1:J:480:PHE:CD1	2.51	0.46
1:K:253:VAL:HG11	1:K:261:LEU:HD12	2.03	0.46
1:B:199:ILE:O	1:B:199:ILE:HG22	2.19	0.46
1:C:286:GLU:OE1	1:C:344:ARG:NH2	2.48	0.46
1:C:289:LYS:NZ	1:D:202:TYR:CZ	2.66	0.46
1:F:396:GLU:O	1:F:400:ASN:ND2	2.48	0.46
1:C:179:SER:OG	1:C:180:LYS:N	2.49	0.46
2:Q:24:PRO:HG2	2:Q:25:LYS:H	2.07	0.46
1:G:103:GLY:O	1:G:107:VAL:HG23	2.15	0.46
2:O:13:ASP:OD1	2:O:13:ASP:O	3.33	0.46
2:P:62:LEU:C	2:P:64:VAL:H	2.23	0.46
2:P:52:ARG:NH2	2:Q:53:VAL:O	3.60	0.46
1:A:230:ARG:HA	1:A:233:LEU:HD12	1.98	0.46
1:C:238:GLN:C	1:C:313:LEU:HD21	2.79	0.46
1:C:279:GLY:C	1:C:284:ARG:HB3	2.36	0.46
2:O:84:GLY:O	2:O:85:GLU:HB2	2.15	0.46
1:N:526:LYS:O	1:N:527:PRO:C	2.54	0.46
1:D:54:VAL:CG2	1:D:89:THR:HG21	2.44	0.46
1:L:168:VAL:CG2	1:L:376:ALA:HB2	2.47	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:66:LEU:CD2	1:A:522:VAL:HG11	2.38	0.46
1:G:298:THR:HG23	1:G:304:LEU:CD1	7.64	0.46
1:I:375:VAL:HG12	1:I:375:VAL:O	2.17	0.46
1:A:498:PRO:HG2	1:A:501:VAL:HG22	1.96	0.46
1:K:408:GLU:HB2	1:K:500:LYS:HB2	2.60	0.46
1:J:290:ASP:N	1:J:344:ARG:NH1	2.72	0.46
1:D:149:THR:HG23	1:D:155:PRO:CA	2.43	0.46
1:E:231:GLU:O	1:E:309:GLU:HA	2.15	0.46
1:H:372:ALA:C	1:H:374:GLY:N	2.80	0.46
1:L:452:ARG:HG2	1:L:452:ARG:NH1	2.32	0.46
1:M:452:ARG:HG2	1:M:452:ARG:NH1	2.32	0.46
1:D:468:GLN:O	1:D:471:ALA:HB3	2.17	0.46
1:I:69:ILE:O	1:I:73:LEU:HB2	2.15	0.46
1:B:17:GLU:HB2	1:B:104:LEU:CD1	2.64	0.46
1:E:192:TYR:C	1:E:192:TYR:CD2	2.88	0.46
1:A:216:ASP:HA	1:A:319:ALA:O	2.28	0.46
1:G:141:ARG:NH2	1:G:163:ASP:OD1	2.38	0.46
1:K:19:GLY:HA3	1:K:67:GLU:O	2.15	0.46
1:C:231:GLU:HB3	1:C:308:LEU:HB3	2.44	0.46
2:R:79:GLU:C	2:R:80:ILE:HD12	2.36	0.46
2:O:100:GLN:OE1	2:P:9:LYS:CE	2.84	0.46
1:C:345:ILE:HG12	1:C:368:LEU:HD23	6.25	0.46
1:F:228:ASN:HD22	1:F:231:GLU:HG3	2.16	0.46
1:J:168:VAL:HG12	1:J:172:GLY:CA	2.35	0.46
1:I:168:VAL:CG2	1:I:376:ALA:HB2	2.44	0.46
1:I:385:GLU:O	1:I:389:LYS:HG3	2.15	0.46
1:J:307:LYS:HE3	1:J:310:ASN:HD21	1.83	0.46
1:H:297:GLY:HA3	1:H:317:GLY:N	2.30	0.46
1:N:117:LYS:O	1:N:120:ILE:N	2.48	0.46
1:G:229:VAL:HG11	2:U:32:LEU:CD2	2.45	0.46
1:J:222:VAL:CG1	1:J:223:GLU:N	2.81	0.46
2:P:73:ALA:O	2:P:75:TYR:N	2.48	0.46
1:J:178:GLU:OE2	1:J:392:LYS:HE3	2.20	0.46
1:L:218:PHE:HE1	1:L:242:THR:HG21	1.82	0.46
1:J:425:VAL:O	1:J:429:ILE:HG13	2.16	0.46
1:D:232:LEU:HD23	1:D:308:LEU:HD21	2.06	0.46
1:C:528:GLU:OE1	1:C:528:GLU:N	2.48	0.46
1:E:123:ALA:HB3	1:E:443:VAL:HG21	1.98	0.46
1:F:227:SER:C	1:F:257:ALA:HB2	2.36	0.46
1:H:462:GLY:O	1:H:466:VAL:HG23	2.19	0.46
2:T:20:ILE:CD1	2:T:42:LYS:HG3	5.83	0.46
2:U:15:VAL:CG2	2:U:45:VAL:HG13	4.11	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:U:20:ILE:CD1	2:U:44:LYS:HG3	4.13	0.46
1:C:283:ARG:HH22	1:C:366:GLU:CG	3.07	0.46
1:G:363:LYS:C	1:G:365:GLN:H	2.18	0.46
1:G:345:ILE:HD11	1:G:368:LEU:HD23	7.90	0.46
1:E:31:LEU:HD12	4:E:602:ADP:H5'1	2.40	0.46
1:E:343:ALA:HB2	1:F:207:PRO:HB2	1.97	0.46
1:E:518:THR:OG1	1:F:37:ASN:ND2	2.48	0.46
1:F:54:VAL:CG2	1:F:89:THR:HG21	2.45	0.46
1:C:7:VAL:CG2	1:C:66:LEU:HD11	2.30	0.46
1:M:385:GLU:HB2	1:N:280:PHE:HE2	1.80	0.46
1:K:232:LEU:CD2	1:K:236:LEU:HD13	2.43	0.46
1:L:222:VAL:CG1	1:L:223:GLU:N	2.78	0.46
1:G:320:GLU:HB3	1:G:333:GLY:HA3	1.97	0.46
1:N:27:VAL:CG1	1:N:90:THR:HG23	2.59	0.46
1:D:157:VAL:O	1:D:161:ILE:HG12	2.19	0.46
1:A:369:ALA:HB1	1:A:375:VAL:HG22	2.62	0.46
1:G:157:VAL:HG22	1:G:395:PHE:CZ	2.58	0.46
1:H:86:GLY:O	1:H:87:ASP:HB2	2.17	0.46
1:K:416:VAL:HG21	1:K:479:GLY:HA3	1.98	0.46
1:A:167:LYS:HB2	1:A:188:PHE:CE2	2.58	0.46
1:A:31:LEU:HB2	1:A:90:THR:HG21	1.97	0.46
2:U:56:ASN:ND2	2:U:58:GLN:CD	4.35	0.46
1:K:311:ALA:HA	1:K:315:MET:SD	2.55	0.46
1:B:361:ARG:O	1:B:365:GLN:HB2	2.33	0.46
1:D:7:VAL:HG12	1:D:12:ALA:HB2	1.98	0.46
1:E:292:ALA:O	1:E:293:ALA:C	2.54	0.46
2:R:70:VAL:HG11	2:R:95:LEU:CD2	2.34	0.46
1:N:46:SER:HB2	1:N:47:PRO:CD	2.36	0.46
1:C:299:VAL:O	1:C:304:LEU:HD12	7.62	0.46
1:C:299:VAL:N	1:C:304:LEU:HD12	9.72	0.46
1:N:168:VAL:CG2	1:N:376:ALA:HB2	2.46	0.46
1:G:312:THR:HG22	1:G:313:LEU:H	1.80	0.46
1:K:120:ILE:HG23	1:K:443:VAL:CG2	2.45	0.46
1:C:257:ALA:O	1:C:261:LEU:HD12	3.39	0.46
1:A:498:PRO:HG2	1:A:501:VAL:CG2	2.45	0.46
1:I:194:PHE:CB	1:I:278:PRO:HB3	2.46	0.46
1:K:316:LEU:HD23	1:K:316:LEU:H	1.91	0.46
1:G:310:ASN:HB3	2:O:34:ASP:OD2	2.15	0.46
1:L:316:LEU:O	1:L:316:LEU:HD23	2.16	0.46
1:D:10:GLU:N	1:D:13:ARG:HH12	2.19	0.46
1:D:421:ALA:O	1:D:425:VAL:HG23	2.30	0.46
1:D:457:ASN:N	1:D:457:ASN:HD22	2.14	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:433:GLU:HG2	1:M:434:GLY:N	2.35	0.46
1:F:372:ALA:C	1:F:374:GLY:N	2.76	0.46
1:H:437:ALA:O	1:H:441:LYS:HG3	2.27	0.46
1:E:289:LYS:HB3	1:E:344:ARG:NH2	3.62	0.46
1:F:236:LEU:HB3	2:T:30:ILE:HD13	2.74	0.46
1:M:206:ASN:HD21	1:M:389:LYS:CE	2.29	0.46
2:Q:22:GLU:OE2	2:Q:40:PRO:HD3	4.12	0.46
1:L:283:ARG:HA	1:L:283:ARG:HD2	1.70	0.46
1:C:503:ARG:O	1:C:507:GLN:HG3	2.23	0.46
1:N:228:ASN:HB3	1:N:231:GLU:HG2	1.97	0.46
1:D:178:GLU:CG	1:D:388:LEU:HD21	2.48	0.46
1:G:321:ARG:HG2	1:G:322:VAL:N	2.31	0.46
1:E:231:GLU:HB3	1:E:308:LEU:HB3	1.97	0.46
1:L:316:LEU:H	1:L:316:LEU:HD23	1.80	0.46
1:N:71:ALA:O	1:N:75:LYS:HG3	2.28	0.46
1:J:372:ALA:O	1:J:374:GLY:N	2.45	0.46
1:B:123:ALA:HB3	1:B:443:VAL:HG21	2.04	0.46
1:K:204:VAL:HG13	1:K:211:GLU:O	2.16	0.46
2:P:22:GLU:N	2:P:22:GLU:OE1	3.18	0.46
1:A:147:VAL:HG23	1:A:410:ILE:HD11	1.97	0.46
1:I:311:ALA:HA	1:I:315:MET:SD	2.56	0.46
1:L:325:THR:CG2	1:L:326:LYS:N	2.79	0.46
1:E:270:LEU:HG	1:E:272:VAL:HG13	2.51	0.46
1:F:246:LEU:CB	1:F:272:VAL:HG12	2.63	0.46
1:C:222:VAL:HG22	1:C:300:ILE:HD12	1.97	0.46
1:C:363:LYS:C	1:C:365:GLN:H	2.19	0.46
1:G:284:ARG:HH11	1:G:284:ARG:HG3	1.80	0.46
1:H:283:ARG:CD	1:H:363:LYS:NZ	3.14	0.46
2:S:13:ASP:CA	2:S:62:LEU:HD21	2.47	0.46
1:M:208:GLU:OE1	1:M:389:LYS:NZ	3.00	0.46
1:H:168:VAL:CG2	1:H:376:ALA:HB2	2.46	0.46
1:K:246:LEU:HB3	1:K:272:VAL:CG1	2.44	0.46
1:F:354:THR:O	1:F:354:THR:HG22	2.16	0.46
1:I:117:LYS:O	1:I:121:GLU:HG3	2.16	0.46
1:H:385:GLU:HB2	1:I:280:PHE:CE2	2.71	0.46
1:B:118:ARG:O	1:B:122:LYS:HG3	2.16	0.46
1:E:72:GLN:NE2	1:E:75:LYS:NZ	2.69	0.46
1:A:416:VAL:HG21	1:A:479:GLY:HA3	2.03	0.46
1:H:131:ILE:HD13	1:H:502:THR:HG22	1.97	0.46
2:Q:24:PRO:HG2	2:Q:25:LYS:HG3	2.54	0.46
1:N:363:LYS:O	1:N:366:GLU:HG2	2.22	0.46
2:T:17:VAL:O	2:T:87:TYR:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:82:ILE:HD12	2:T:87:TYR:CE1	4.10	0.46
2:U:42:LYS:HG3	2:U:43:GLY:N	4.84	0.46
2:U:13:ASP:HA	2:U:62:LEU:HD21	1.98	0.46
2:Q:58:GLN:OE1	2:R:57:GLY:HA3	5.26	0.46
1:J:283:ARG:NH2	1:J:367:ARG:CD	2.78	0.46
1:M:50:THR:CG2	1:M:51:LYS:H	2.20	0.46
2:S:62:LEU:C	2:S:64:VAL:H	2.21	0.46
1:H:490:MET:HA	1:H:490:MET:CE	2.51	0.46
1:I:342:GLU:HA	1:I:345:ILE:HD12	2.01	0.46
1:I:307:LYS:HB2	1:I:310:ASN:ND2	2.31	0.46
1:N:297:GLY:HA3	1:N:317:GLY:N	2.33	0.46
1:E:69:ILE:CD1	1:F:41:GLU:HB2	2.42	0.46
1:E:178:GLU:CG	1:E:388:LEU:HD21	2.43	0.46
1:A:529:LYS:HE2	1:B:63:GLU:OE2	2.16	0.46
1:G:189:VAL:HG13	1:G:190:GLU:H	1.79	0.46
1:E:422:ILE:HD12	1:E:470:LEU:HD21	2.08	0.46
1:B:332:VAL:HG12	1:B:333:GLY:N	2.33	0.46
1:M:81:THR:OG1	1:M:508:ASN:ND2	2.49	0.46
1:D:478:TYR:CE1	1:D:487:PHE:HB3	2.51	0.46
1:N:416:VAL:HG21	1:N:479:GLY:HA3	1.98	0.46
1:E:167:LYS:HB2	1:E:188:PHE:CE2	2.51	0.46
2:R:38:GLU:HG2	2:R:38:GLU:H	1.54	0.46
1:N:204:VAL:HG13	1:N:211:GLU:O	2.15	0.46
1:A:179:SER:OG	1:A:180:LYS:N	2.49	0.46
1:E:263:VAL:HG13	1:E:267:ARG:NH1	2.31	0.45
1:D:305:GLY:HA3	2:S:33:PRO:HB2	1.96	0.45
2:Q:73:ALA:O	2:Q:75:TYR:CD1	3.87	0.45
2:Q:77:GLY:O	2:Q:78:THR:O	2.92	0.45
1:N:283:ARG:HD2	1:N:283:ARG:HA	1.72	0.45
2:U:17:VAL:O	2:U:87:TYR:HB3	2.16	0.45
1:B:410:ILE:HG12	1:B:496:VAL:HB	2.42	0.45
1:I:219:ILE:HD13	1:I:331:ILE:HD13	2.02	0.45
1:N:197:GLY:HA3	1:N:325:THR:O	2.19	0.45
1:C:287:MET:O	1:C:290:ASP:HB2	2.34	0.45
1:G:295:THR:C	1:G:336:GLY:H	3.18	0.45
1:I:37:ASN:HD21	1:I:51:LYS:CE	2.39	0.45
1:E:283:ARG:O	1:E:287:MET:HG3	2.15	0.45
1:D:235:ILE:HG21	1:D:311:ALA:CB	4.80	0.45
1:A:250:ALA:O	1:A:251:GLU:C	2.53	0.45
1:K:309:GLU:OE1	1:K:309:GLU:N	2.40	0.45
1:G:262:VAL:O	1:G:265:LYS:HB3	2.75	0.45
1:N:253:VAL:HG11	1:N:261:LEU:HD12	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:179:SER:CB	1:J:379:ARG:HB3	2.41	0.45
1:H:307:LYS:HE3	1:H:310:ASN:HD21	1.80	0.45
1:L:84:VAL:HG12	1:L:500:LYS:CE	2.45	0.45
1:H:224:LYS:CG	1:H:225:LYS:N	2.79	0.45
1:M:120:ILE:HG23	1:M:443:VAL:CG2	2.46	0.45
1:L:352:LEU:HD21	1:L:365:GLN:HE22	1.84	0.45
1:D:74:LEU:HD21	1:D:93:THR:CG2	2.45	0.45
1:B:452:ARG:HH11	1:B:463:SER:HA	1.83	0.45
1:I:452:ARG:NH1	1:I:452:ARG:HG2	2.31	0.45
1:A:337:LYS:O	1:A:340:ASP:HB2	2.15	0.45
1:K:63:GLU:HG2	1:L:3:ALA:HB1	1.97	0.45
1:L:390:GLU:OE1	1:L:394:ARG:NH1	2.49	0.45
1:I:526:LYS:HG3	1:I:527:PRO:HD2	1.98	0.45
2:Q:85:GLU:HA	2:Q:85:GLU:OE1	2.15	0.45
1:A:345:ILE:C	1:A:347:GLY:H	2.19	0.45
1:A:351:GLU:HB2	1:B:207:PRO:O	8.57	0.45
2:T:71:VAL:HG23	2:T:99:LEU:HD13	1.98	0.45
2:Q:50:THR:HB	2:Q:59:ARG:CZ	5.31	0.45
2:U:73:ALA:O	2:U:75:TYR:N	2.49	0.45
1:G:292:ALA:O	1:G:293:ALA:C	2.78	0.45
1:E:31:LEU:HD13	1:E:90:THR:HG22	1.98	0.45
1:M:175:THR:OG1	1:M:330:THR:HG21	2.16	0.45
1:E:227:SER:HB3	1:E:254:GLU:CG	2.33	0.45
1:C:54:VAL:CG2	1:C:89:THR:HG21	2.47	0.45
1:D:219:ILE:N	1:D:317:GLY:O	2.40	0.45
1:J:309:GLU:OE1	1:J:309:GLU:N	2.42	0.45
1:L:79:SER:C	1:L:81:THR:N	2.68	0.45
1:A:503:ARG:O	1:A:507:GLN:HG3	2.20	0.45
1:N:117:LYS:O	1:N:118:ARG:C	2.55	0.45
1:M:268:GLY:HA3	1:N:227:SER:CB	2.43	0.45
1:B:189:VAL:HG13	1:B:190:GLU:H	1.81	0.45
1:E:460:TYR:HB3	1:E:465:ILE:HD11	2.07	0.45
1:D:422:ILE:HD12	1:D:470:LEU:HD21	2.01	0.45
1:G:207:PRO:O	1:G:210:MET:HE3	2.16	0.45
1:N:312:THR:HG22	1:N:313:LEU:N	2.31	0.45
1:A:418:LEU:HD12	1:A:418:LEU:H	1.82	0.45
1:C:472:GLU:HB3	1:C:478:TYR:CD2	2.51	0.45
1:E:113:PRO:HG3	1:F:36:ARG:NH1	2.47	0.45
1:D:173:ILE:HG22	1:D:173:ILE:O	2.16	0.45
1:E:242:THR:HG22	1:E:244:LYS:HG2	3.48	0.45
2:U:91:SER:O	2:U:95:LEU:HG	2.17	0.45
1:B:220:LEU:HD13	1:B:235:ILE:HD13	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:204:VAL:HG12	1:C:206:ASN:O	2.88	0.45
1:C:232:LEU:HB3	1:C:236:LEU:CD1	2.56	0.45
1:L:50:THR:HG21	1:L:55:THR:HB	1.97	0.45
2:Q:56:ASN:OD1	2:R:56:ASN:HA	3.71	0.45
1:D:51:LYS:O	1:D:51:LYS:HG2	2.20	0.45
1:K:46:SER:CB	1:K:47:PRO:HD2	2.38	0.45
1:M:59:GLU:OE1	1:N:4:LYS:NZ	2.74	0.45
1:G:265:LYS:HD3	1:G:272:VAL:H	4.36	0.45
1:H:295:THR:HG22	1:H:317:GLY:CA	2.47	0.45
1:B:506:LEU:HD12	1:B:506:LEU:O	2.16	0.45
1:J:194:PHE:CE1	1:J:278:PRO:HD3	2.52	0.45
2:S:100:GLN:CB	2:T:9:LYS:HE3	4.13	0.45
1:N:385:GLU:O	1:N:389:LYS:HG3	2.20	0.45
1:B:74:LEU:HD21	1:B:93:THR:CG2	2.50	0.45
1:D:455:ALA:O	1:D:458:ALA:HB3	2.17	0.45
1:I:372:ALA:C	1:I:374:GLY:N	2.83	0.45
1:E:101:ARG:CG	1:E:102:GLU:N	2.79	0.45
1:L:253:VAL:HG11	1:L:261:LEU:HD12	1.98	0.45
1:A:350:LYS:CG	1:B:208:GLU:CD	9.15	0.45
2:Q:60:VAL:HG21	2:R:53:VAL:HG11	2.38	0.45
1:J:283:ARG:HG2	1:J:363:LYS:NZ	2.31	0.45
2:O:79:GLU:C	2:O:80:ILE:HD12	2.36	0.45
1:M:178:GLU:H	1:M:321:ARG:HH11	1.64	0.45
1:L:47:PRO:CB	1:M:69:ILE:HG23	2.53	0.45
1:G:236:LEU:O	1:G:240:ALA:HB2	2.38	0.45
1:N:295:THR:HG22	1:N:317:GLY:HA3	1.99	0.45
1:H:84:VAL:HG12	1:H:500:LYS:CE	2.44	0.45
1:A:178:GLU:CG	1:A:388:LEU:HD21	2.55	0.45
1:I:232:LEU:CD2	1:I:236:LEU:HD13	2.47	0.45
1:N:425:VAL:O	1:N:429:ILE:HG13	2.27	0.45
1:H:71:ALA:O	1:H:75:LYS:HG3	2.42	0.45
1:D:396:GLU:O	1:D:400:ASN:ND2	2.49	0.45
1:D:205:THR:HB	1:D:213:VAL:H	1.87	0.45
1:K:286:GLU:HG3	1:K:367:ARG:NH2	2.36	0.45
2:P:41:GLN:HG2	2:P:74:LYS:CB	2.40	0.45
2:Q:16:VAL:O	2:Q:46:ILE:N	2.66	0.45
1:F:283:ARG:HB2	1:F:283:ARG:HH11	1.82	0.45
1:I:197:GLY:HA3	1:I:325:THR:O	2.16	0.45
1:J:283:ARG:HD3	1:J:363:LYS:HE3	1.99	0.45
1:E:66:LEU:HD22	1:E:522:VAL:CG1	2.42	0.45
1:G:198:TYR:CE1	1:G:326:LYS:HA	2.52	0.45
1:M:253:VAL:O	1:M:258:LEU:HD22	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:77:VAL:O	1:N:80:LYS:HG2	2.25	0.45
1:A:287:MET:O	1:A:290:ASP:HB2	2.17	0.45
1:A:359:TYR:CE1	1:A:363:LYS:HE2	2.52	0.45
1:B:304:LEU:O	1:C:263:VAL:CG2	4.34	0.45
1:L:66:LEU:HD22	1:L:522:VAL:HG21	2.01	0.45
1:D:124:VAL:HG13	1:D:506:LEU:HG	1.98	0.45
1:K:80:LYS:HE3	1:K:508:ASN:OD1	2.16	0.45
2:S:98:VAL:O	2:T:9:LYS:N	2.46	0.45
1:C:247:LEU:HD13	1:C:324:ILE:HD11	2.01	0.45
1:E:29:VAL:HG12	1:E:29:VAL:O	2.29	0.45
1:B:280:PHE:O	1:B:281:GLY:C	2.55	0.45
1:I:49:ILE:HG13	1:I:49:ILE:O	2.18	0.45
1:C:103:GLY:O	1:C:107:VAL:HG23	2.17	0.45
1:D:206:ASN:HB3	1:D:209:THR:OG1	2.29	0.45
1:E:230:ARG:O	1:E:234:PRO:HD2	2.35	0.45
1:E:264:ASN:ND2	2:S:30:ILE:HG23	2.31	0.45
2:U:64:VAL:HG22	2:U:98:VAL:HG21	2.64	0.45
1:F:235:ILE:CD1	1:F:311:ALA:CB	2.92	0.45
1:F:51:LYS:HG2	1:F:51:LYS:O	2.16	0.45
1:M:37:ASN:H	1:N:518:THR:HG22	1.81	0.45
1:L:86:GLY:O	1:L:87:ASP:HB2	2.20	0.45
1:I:187:LYS:HZ1	1:I:379:ARG:HG3	1.81	0.45
1:I:179:SER:CB	1:I:379:ARG:HB3	2.40	0.45
2:Q:19:ARG:HD3	2:Q:40:PRO:CG	3.43	0.45
1:E:72:GLN:HE22	1:E:75:LYS:HZ3	1.74	0.45
1:M:290:ASP:N	1:M:344:ARG:NH1	2.68	0.45
1:M:267:ARG:O	1:N:255:GLY:HA3	2.16	0.45
1:K:69:ILE:O	1:K:73:LEU:HB2	2.19	0.45
2:O:21:GLU:CD	2:O:21:GLU:H	2.20	0.45
1:A:321:ARG:O	1:A:322:VAL:HG23	2.50	0.45
1:J:18:ARG:HD2	1:J:67:GLU:OE1	2.16	0.45
1:M:19:GLY:HA3	1:M:67:GLU:O	2.16	0.45
1:K:8:PHE:N	1:K:8:PHE:CD1	2.90	0.45
2:Q:88:VAL:HG12	2:Q:90:LEU:HD22	3.86	0.45
1:A:348:ILE:HG21	1:A:364:LEU:O	2.16	0.45
1:D:283:ARG:HH12	1:D:363:LYS:HD3	4.74	0.45
1:E:238:GLN:O	1:E:313:LEU:HD11	2.16	0.45
2:U:65:LYS:O	2:U:68:ASP:OD2	3.27	0.45
1:E:150:ILE:HG22	1:E:151:SER:N	2.32	0.45
1:I:298:THR:N	1:I:315:MET:O	2.50	0.45
1:F:218:PHE:HA	1:F:317:GLY:O	2.19	0.45
1:G:368:LEU:O	1:G:368:LEU:HD23	4.90	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:50:THR:HG21	1:I:55:THR:HB	2.01	0.45
1:M:323:ARG:HH12	1:M:392:LYS:CE	2.28	0.45
1:E:277:ALA:HB1	1:E:278:PRO:HD2	2.73	0.45
1:E:220:LEU:HD11	1:E:300:ILE:HD11	2.28	0.45
2:S:45:VAL:O	2:S:46:ILE:HD13	2.45	0.45
1:A:263:VAL:O	1:A:267:ARG:HG2	2.17	0.45
1:L:283:ARG:HH22	1:L:364:LEU:HA	1.82	0.45
1:L:286:GLU:HG3	1:L:367:ARG:NH2	2.39	0.45
2:U:24:PRO:CB	2:U:37:LYS:NZ	5.29	0.45
1:G:247:LEU:HD13	1:G:324:ILE:HD11	2.03	0.45
1:F:69:ILE:CG2	1:G:47:PRO:HG3	2.53	0.45
1:E:231:GLU:HA	1:E:309:GLU:HB3	2.73	0.45
1:H:178:GLU:CD	1:H:392:LYS:HE3	2.36	0.45
1:I:178:GLU:OE2	1:I:392:LYS:HE3	2.17	0.45
1:F:14:ARG:NH1	1:F:17:GLU:OE1	2.50	0.45
1:B:14:ARG:NH1	1:B:17:GLU:OE1	2.49	0.45
1:J:95:LEU:HD21	1:J:450:PRO:HG2	1.99	0.45
1:K:8:PHE:O	1:K:11:ALA:HB3	2.20	0.45
2:O:89:ILE:O	2:O:89:ILE:HG22	2.16	0.45
2:U:22:GLU:N	2:U:22:GLU:OE1	2.39	0.45
1:G:215:GLU:O	1:G:216:ASP:C	2.53	0.45
1:E:103:GLY:HA2	1:E:442:ILE:HD13	1.99	0.45
1:J:92:ALA:HB2	1:J:505:ALA:HA	1.99	0.45
2:T:15:VAL:HG21	2:T:95:LEU:HD21	2.23	0.45
1:A:237:GLU:OE2	2:O:28:GLY:N	2.63	0.45
2:O:20:ILE:CG1	2:O:43:GLY:HA2	2.45	0.45
2:U:41:GLN:CD	2:U:41:GLN:H	4.18	0.45
1:G:294:VAL:HG23	1:G:295:THR:HG23	5.66	0.45
1:J:37:ASN:ND2	1:J:51:LYS:HE2	2.28	0.45
1:M:383:ALA:O	1:N:280:PHE:HD1	1.98	0.45
1:H:46:SER:CB	1:H:47:PRO:HD2	2.42	0.45
1:A:252:ASP:OD1	1:A:276:LYS:HE2	2.28	0.45
1:N:253:VAL:O	1:N:258:LEU:HD22	2.18	0.45
1:J:120:ILE:HG23	1:J:443:VAL:CG2	2.47	0.45
1:B:131:ILE:HD13	1:B:502:THR:HG22	1.99	0.45
1:N:194:PHE:N	1:N:194:PHE:CD2	2.84	0.45
1:E:231:GLU:HB2	1:E:308:LEU:HD23	1.97	0.45
1:E:348:ILE:HD11	1:E:367:ARG:CZ	2.46	0.45
2:Q:34:ASP:HA	2:Q:37:LYS:HE2	1.99	0.45
1:A:103:GLY:O	1:A:107:VAL:HG23	2.27	0.45
1:J:438:THR:O	1:J:441:LYS:HB2	2.16	0.45
1:H:117:LYS:O	1:H:121:GLU:HG3	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:80:ILE:CG2	2:Q:81:GLU:N	2.79	0.45
2:T:84:GLY:O	2:T:85:GLU:HB2	2.17	0.45
2:U:81:GLU:HG3	2:U:85:GLU:O	2.29	0.45
1:H:325:THR:CG2	1:H:326:LYS:N	2.81	0.45
1:I:247:LEU:HD13	1:I:324:ILE:HD11	1.99	0.45
1:N:37:ASN:ND2	1:N:51:LYS:HE2	2.31	0.45
1:C:209:THR:CB	1:C:211:GLU:HG2	4.63	0.45
1:C:237:GLU:CG	2:Q:30:ILE:HD12	2.47	0.45
1:C:280:PHE:O	1:C:281:GLY:C	2.55	0.45
1:E:54:VAL:HG13	1:E:89:THR:HG21	1.98	0.45
1:D:220:LEU:HD11	1:D:300:ILE:CD1	2.72	0.45
1:M:522:VAL:CG2	1:M:522:VAL:O	2.64	0.45
1:H:194:PHE:CD2	1:H:194:PHE:N	2.90	0.45
1:C:253:VAL:HG11	1:C:261:LEU:CD1	2.96	0.45
1:H:114:LEU:HD12	1:N:459:GLY:CA	2.54	0.45
1:L:247:LEU:HD13	1:L:324:ILE:HD11	2.00	0.45
1:M:84:VAL:HG12	1:M:500:LYS:CE	2.49	0.45
1:E:348:ILE:HD11	1:E:367:ARG:NH2	2.32	0.45
1:H:239:VAL:HG22	1:H:313:LEU:CD1	2.47	0.45
1:N:128:VAL:HA	1:N:131:ILE:HD12	1.98	0.45
1:J:412:PRO:HB3	1:J:490:MET:HB2	2.00	0.45
1:F:478:TYR:CE1	1:F:487:PHE:HB3	2.59	0.45
1:J:437:ALA:O	1:J:441:LYS:HG3	2.21	0.45
1:F:199:ILE:HG22	1:F:199:ILE:O	2.26	0.45
1:B:431:LYS:O	1:B:431:LYS:HG3	2.16	0.45
1:C:518:THR:OG1	1:D:37:ASN:ND2	2.50	0.45
1:L:19:GLY:HA3	1:L:67:GLU:O	2.20	0.45
1:I:283:ARG:HD2	1:I:283:ARG:HA	1.67	0.45
1:E:267:ARG:HG3	1:E:267:ARG:NH1	2.31	0.45
2:R:13:ASP:O	2:R:62:LEU:HD21	2.16	0.45
1:N:286:GLU:HG3	1:N:367:ARG:NH2	2.31	0.45
1:B:150:ILE:CD1	1:B:496:VAL:H	2.30	0.45
1:E:136:ILE:HB	1:E:410:ILE:HG22	2.22	0.45
1:M:283:ARG:HA	1:M:283:ARG:HD2	1.70	0.45
1:B:288:LEU:HD23	1:B:291:ILE:HD12	2.46	0.45
2:O:78:THR:HG22	2:O:80:ILE:CD1	2.46	0.45
1:G:352:LEU:HD13	1:G:364:LEU:CB	5.66	0.45
1:E:340:ASP:O	1:E:344:ARG:HB2	2.30	0.45
1:M:50:THR:HG21	1:M:55:THR:HB	1.99	0.45
1:F:229:VAL:HG23	1:F:256:GLU:CD	2.49	0.45
2:S:10:PRO:CB	2:S:14:ARG:O	2.62	0.45
1:K:187:LYS:HZ2	1:K:379:ARG:HG3	1.93	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:149:THR:HG23	1:J:155:PRO:CA	2.39	0.45
1:H:149:THR:HG23	1:H:155:PRO:CA	2.43	0.45
1:L:295:THR:HG22	1:L:317:GLY:CA	2.47	0.45
1:H:309:GLU:OE1	1:H:309:GLU:N	2.40	0.45
1:A:501:VAL:HG23	1:A:502:THR:H	1.92	0.45
1:J:300:ILE:HG21	1:J:308:LEU:CD2	2.48	0.45
1:J:66:LEU:HD22	1:J:522:VAL:HG21	2.01	0.45
1:B:23:VAL:CG1	1:B:74:LEU:HD23	2.51	0.45
1:F:23:VAL:CG1	1:F:74:LEU:HD23	2.48	0.45
1:B:72:GLN:NE2	1:B:75:LYS:NZ	2.69	0.45
1:B:159:LYS:HE2	1:B:163:ASP:OD2	2.16	0.45
1:B:526:LYS:CG	1:B:527:PRO:HD2	2.90	0.45
1:D:189:VAL:CG1	1:D:193:GLN:HG2	2.47	0.45
1:E:161:ILE:HD12	1:E:399:LEU:CD2	2.66	0.45
1:E:13:ARG:HB3	1:E:104:LEU:HD22	2.06	0.45
1:F:418:LEU:H	1:F:418:LEU:HD12	1.81	0.45
1:C:194:PHE:HD1	1:C:196:LYS:HB2	2.19	0.45
1:K:201:PRO:O	1:K:204:VAL:HG23	2.16	0.45
1:L:18:ARG:HD2	1:L:67:GLU:OE1	2.25	0.45
1:H:41:GLU:OE2	1:I:525:GLU:N	2.49	0.45
1:H:202:TYR:HD2	1:H:266:LEU:HD11	1.82	0.45
1:I:449:GLU:HB2	1:I:450:PRO:HD3	1.99	0.45
1:N:86:GLY:O	1:N:87:ASP:HB2	2.19	0.45
1:F:264:ASN:HB3	1:F:269:THR:HB	2.15	0.45
2:R:18:LYS:HZ1	2:R:85:GLU:CD	2.48	0.44
1:E:150:ILE:O	1:E:153:ASN:N	2.58	0.44
1:E:248:ILE:CD1	1:E:261:LEU:HD21	2.44	0.44
1:F:235:ILE:O	1:F:239:VAL:HG23	2.17	0.44
1:M:325:THR:HG22	1:M:327:ASP:N	2.09	0.44
1:H:283:ARG:O	1:H:287:MET:HG3	2.34	0.44
1:E:286:GLU:OE2	1:E:344:ARG:NH2	2.43	0.44
1:E:343:ALA:HB2	1:F:207:PRO:CB	2.47	0.44
1:A:518:THR:OG1	1:B:37:ASN:ND2	2.68	0.44
1:C:7:VAL:HG21	1:C:66:LEU:CD1	2.33	0.44
1:M:47:PRO:CG	1:N:73:LEU:HD13	2.47	0.44
1:C:349:LYS:C	1:C:351:GLU:N	2.69	0.44
1:F:229:VAL:HG23	1:F:256:GLU:CG	2.47	0.44
2:T:31:VAL:HG12	2:T:32:LEU:N	3.14	0.44
1:D:246:LEU:O	1:D:272:VAL:HA	2.16	0.44
1:H:412:PRO:HB3	1:H:490:MET:HB2	2.07	0.44
1:L:41:GLU:HG2	1:M:524:ALA:HA	2.55	0.44
1:K:46:SER:HB2	1:K:47:PRO:CD	2.38	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:149:THR:HG23	1:N:155:PRO:CA	2.41	0.44
2:S:8:ILE:HD12	2:S:8:ILE:H	1.82	0.44
1:H:232:LEU:HD23	1:H:236:LEU:HB2	2.00	0.44
1:H:280:PHE:CE2	1:N:385:GLU:HB2	3.10	0.44
1:J:224:LYS:CG	1:J:225:LYS:N	2.80	0.44
1:K:228:ASN:HB3	1:K:231:GLU:HG2	1.99	0.44
1:G:220:LEU:HG	1:G:222:VAL:HG23	1.97	0.44
1:G:207:PRO:O	1:G:210:MET:CE	2.66	0.44
1:K:372:ALA:C	1:K:374:GLY:N	2.69	0.44
1:A:6:LEU:CD2	1:A:523:VAL:HG22	2.51	0.44
1:A:520:GLU:HG2	1:B:29:VAL:HG13	2.04	0.44
1:B:10:GLU:HA	1:B:13:ARG:HH11	1.83	0.44
1:E:457:ASN:HD22	1:E:457:ASN:N	2.18	0.44
1:J:204:VAL:HG13	1:J:211:GLU:O	2.18	0.44
2:T:22:GLU:HG2	2:T:40:PRO:HB3	4.77	0.44
2:Q:45:VAL:HG12	2:Q:46:ILE:H	2.67	0.44
2:Q:84:GLY:O	2:Q:85:GLU:HG2	4.07	0.44
1:C:277:ALA:CB	1:C:284:ARG:HD2	3.09	0.44
1:C:168:VAL:CG1	1:C:168:VAL:O	2.65	0.44
1:E:222:VAL:O	1:E:250:ALA:HA	2.17	0.44
1:E:291:ILE:O	1:E:294:VAL:HG22	2.18	0.44
2:R:91:SER:O	2:R:95:LEU:HG	2.40	0.44
1:C:227:SER:HA	1:C:254:GLU:O	2.41	0.44
1:A:515:LEU:HD12	1:B:49:ILE:CG2	2.46	0.44
1:L:47:PRO:HG2	1:M:73:LEU:HD13	2.13	0.44
1:N:307:LYS:HB2	1:N:310:ASN:ND2	2.33	0.44
1:K:385:GLU:O	1:K:389:LYS:HG3	2.18	0.44
1:G:229:VAL:HG23	1:G:256:GLU:CG	2.47	0.44
1:H:300:ILE:HG21	1:H:308:LEU:CD2	2.45	0.44
1:B:349:LYS:O	1:B:351:GLU:N	2.51	0.44
1:C:422:ILE:HD12	1:C:470:LEU:HD21	2.01	0.44
1:F:287:MET:O	1:F:291:ILE:HG13	2.31	0.44
1:J:458:ALA:C	1:K:114:LEU:CD1	2.85	0.44
1:D:321:ARG:HB3	1:D:332:VAL:HB	2.00	0.44
1:H:375:VAL:O	1:H:375:VAL:HG12	2.18	0.44
1:J:65:HIS:CD2	1:J:527:PRO:HG3	3.60	0.44
1:H:253:VAL:HG11	1:H:261:LEU:HD12	1.99	0.44
1:A:369:ALA:HB1	1:A:375:VAL:HG23	2.46	0.44
1:C:421:ALA:O	1:C:425:VAL:HG23	2.18	0.44
1:A:478:TYR:CE1	1:A:487:PHE:HB3	2.52	0.44
1:D:392:LYS:O	1:D:396:GLU:HG3	2.17	0.44
1:I:19:GLY:HA3	1:I:67:GLU:O	2.23	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:77:VAL:HG23	1:B:512:ILE:HG13	2.15	0.44
1:K:202:TYR:HD2	1:K:266:LEU:HD11	1.82	0.44
1:A:33:PRO:HD3	4:A:602:ADP:C5	2.58	0.44
2:O:15:VAL:CG2	2:O:95:LEU:HD11	2.30	0.44
2:U:69:ILE:O	2:U:98:VAL:HG13	2.17	0.44
1:J:360:ALA:O	1:J:364:LEU:HD13	2.33	0.44
1:B:218:PHE:HA	1:B:317:GLY:O	2.17	0.44
2:O:78:THR:CG2	2:O:80:ILE:HD11	2.46	0.44
1:H:283:ARG:HH12	1:H:364:LEU:HD11	2.36	0.44
1:I:309:GLU:N	1:I:309:GLU:OE1	2.42	0.44
1:K:292:ALA:HB1	1:K:297:GLY:O	2.18	0.44
1:M:362:GLU:HA	1:M:365:GLN:CG	2.63	0.44
1:K:123:ALA:HB3	1:K:443:VAL:HG21	2.16	0.44
1:K:278:PRO:O	1:K:284:ARG:HD3	2.17	0.44
1:A:47:PRO:HD2	1:G:73:LEU:CD2	2.89	0.44
2:Q:89:ILE:O	2:Q:89:ILE:CG2	2.87	0.44
1:M:222:VAL:CG1	1:M:223:GLU:N	2.80	0.44
1:L:74:LEU:HA	1:L:512:ILE:HD13	1.98	0.44
1:M:408:GLU:HB2	1:M:500:LYS:HB2	2.23	0.44
1:M:268:GLY:C	1:N:227:SER:HG	2.14	0.44
1:D:101:ARG:CG	1:D:102:GLU:H	2.31	0.44
1:G:31:LEU:HB2	1:G:90:THR:HG21	2.01	0.44
2:R:78:THR:HG22	2:R:80:ILE:CD1	2.47	0.44
2:Q:100:GLN:OE1	2:R:9:LYS:HE2	2.35	0.44
2:T:51:GLY:HA3	2:T:60:VAL:O	2.17	0.44
2:T:72:PHE:CD2	2:T:90:LEU:HD22	5.06	0.44
1:C:283:ARG:HH12	1:C:363:LYS:CB	3.14	0.44
1:J:30:THR:HB	1:J:51:LYS:O	2.17	0.44
1:C:301:SER:HB2	1:C:304:LEU:HB3	1.99	0.44
1:J:307:LYS:HB2	1:J:310:ASN:ND2	2.32	0.44
1:H:80:LYS:HE3	1:H:508:ASN:OD1	2.18	0.44
1:L:283:ARG:HH21	1:L:367:ARG:HD3	1.92	0.44
1:I:66:LEU:HD22	1:I:522:VAL:HG21	1.98	0.44
2:S:75:TYR:CD1	2:S:76:GLY:N	2.93	0.44
1:J:84:VAL:HG12	1:J:500:LYS:CE	2.52	0.44
1:H:313:LEU:O	1:H:313:LEU:HG	2.24	0.44
1:H:455:ALA:HB1	1:H:465:ILE:HD12	2.00	0.44
1:F:179:SER:OG	1:F:180:LYS:N	2.51	0.44
1:M:24:ALA:O	1:M:28:LYS:HG2	2.26	0.44
1:D:13:ARG:HB3	1:D:104:LEU:HD22	2.05	0.44
2:T:65:LYS:O	2:T:68:ASP:HB2	3.78	0.44
1:J:433:GLU:HG2	1:J:434:GLY:N	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:31:LEU:HD23	1:D:453:GLN:HB3	1.98	0.44
1:D:103:GLY:O	1:D:107:VAL:HG23	2.24	0.44
1:I:352:LEU:HD21	1:I:365:GLN:NE2	2.33	0.44
2:Q:41:GLN:HE21	2:Q:73:ALA:HA	3.39	0.44
2:Q:79:GLU:HG2	2:Q:88:VAL:HG13	1.99	0.44
2:R:18:LYS:HG2	2:R:87:TYR:CE2	2.64	0.44
2:R:79:GLU:HG2	2:R:88:VAL:HG22	2.08	0.44
2:R:81:GLU:HG3	2:R:85:GLU:O	2.24	0.44
1:C:232:LEU:HB3	1:C:236:LEU:HD11	2.12	0.44
1:C:294:VAL:HA	1:C:341:ILE:HD11	2.73	0.44
2:O:18:LYS:NZ	2:O:85:GLU:CD	2.87	0.44
1:H:37:ASN:ND2	1:H:51:LYS:HE2	2.26	0.44
1:C:224:LYS:H	1:C:224:LYS:CD	3.81	0.44
1:M:352:LEU:HD21	1:M:365:GLN:HE22	1.83	0.44
1:L:228:ASN:ND2	1:L:230:ARG:HB3	2.29	0.44
2:S:20:ILE:O	2:S:40:PRO:HB3	2.45	0.44
1:D:23:VAL:CG1	1:D:74:LEU:HD23	2.47	0.44
1:E:526:LYS:HA	1:E:527:PRO:HD3	1.82	0.44
2:O:73:ALA:O	2:O:75:TYR:N	2.51	0.44
1:B:460:TYR:HB3	1:B:465:ILE:HD11	2.00	0.44
1:I:81:THR:OG1	1:I:508:ASN:ND2	2.50	0.44
1:G:237:GLU:OE2	2:U:28:GLY:N	3.70	0.44
1:G:463:SER:O	1:G:467:GLN:HG2	2.29	0.44
1:J:253:VAL:HG11	1:J:261:LEU:HD12	1.99	0.44
1:D:31:LEU:HB2	1:D:90:THR:HG21	2.10	0.44
1:I:181:SER:HA	1:J:282:ASP:OD2	2.42	0.44
1:E:256:GLU:OE1	2:S:35:THR:C	3.84	0.44
2:R:78:THR:CG2	2:R:80:ILE:HD11	2.48	0.44
2:T:84:GLY:O	2:T:85:GLU:HG2	4.06	0.44
2:U:53:VAL:HG22	2:U:59:ARG:CG	2.48	0.44
2:P:52:ARG:HD3	2:P:92:GLU:OE2	3.35	0.44
2:Q:54:LEU:HD11	2:R:57:GLY:N	2.31	0.44
1:E:227:SER:HA	1:E:254:GLU:O	2.17	0.44
1:D:250:ALA:O	1:D:251:GLU:C	2.65	0.44
1:B:39:VAL:HG22	1:B:49:ILE:HG12	1.99	0.44
1:J:187:LYS:HZ1	1:J:379:ARG:HG3	1.83	0.44
1:H:342:GLU:HA	1:H:345:ILE:HD12	2.00	0.44
1:D:501:VAL:HG23	1:D:502:THR:H	1.84	0.44
1:K:222:VAL:CG1	1:K:223:GLU:H	2.32	0.44
2:S:19:ARG:HA	2:S:42:LYS:O	2.17	0.44
2:S:78:THR:HG22	2:S:79:GLU:N	2.32	0.44
1:H:247:LEU:HD13	1:H:324:ILE:HD11	2.02	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:74:LEU:HD21	1:F:93:THR:CG2	2.47	0.44
1:L:178:GLU:OE2	1:L:392:LYS:HE3	2.18	0.44
1:N:175:THR:CG2	1:N:177:GLU:OE2	2.65	0.44
1:B:307:LYS:HG3	2:Q:34:ASP:O	4.46	0.44
1:J:175:THR:CG2	1:J:177:GLU:OE2	2.69	0.44
1:L:22:ALA:HB1	1:M:6:LEU:HD12	1.99	0.44
1:J:412:PRO:HD2	1:J:417:THR:OG1	2.17	0.44
1:A:27:VAL:O	1:A:29:VAL:N	2.77	0.44
1:B:88:GLY:HA2	4:B:602:ADP:O2B	2.34	0.44
1:D:410:ILE:HD11	1:D:496:VAL:HG21	2.05	0.44
2:Q:45:VAL:CG1	2:Q:46:ILE:N	3.25	0.44
1:E:233:LEU:N	1:E:234:PRO:HD2	2.49	0.44
2:U:81:GLU:HG3	2:U:85:GLU:C	2.38	0.44
1:B:490:MET:CE	1:B:495:ILE:HG21	2.62	0.44
1:A:519:THR:HG23	1:B:39:VAL:HG23	2.16	0.44
1:L:46:SER:HB2	1:L:47:PRO:CD	2.43	0.44
1:L:283:ARG:HD3	1:L:363:LYS:HE3	2.00	0.44
1:B:128:VAL:HA	1:B:131:ILE:HD12	2.04	0.44
2:S:34:ASP:HA	2:S:37:LYS:HE2	2.20	0.44
1:N:222:VAL:CG1	1:N:223:GLU:H	2.31	0.44
1:B:352:LEU:C	1:B:354:THR:H	2.30	0.44
2:O:33:PRO:O	2:O:35:THR:N	2.51	0.44
1:A:229:VAL:HG23	1:A:256:GLU:CG	2.47	0.44
1:A:101:ARG:CG	1:A:102:GLU:H	2.37	0.44
1:C:520:GLU:HB3	1:D:29:VAL:CG1	2.47	0.44
1:A:10:GLU:N	1:A:13:ARG:HH12	2.15	0.44
1:B:180:LYS:HD3	1:B:180:LYS:HA	1.81	0.44
1:K:49:ILE:HG13	1:K:49:ILE:O	2.18	0.44
1:C:323:ARG:HG2	1:C:323:ARG:HH11	1.82	0.44
1:G:457:ASN:N	1:G:457:ASN:HD22	2.25	0.44
1:I:478:TYR:CZ	1:I:487:PHE:HB3	2.53	0.44
1:N:160:LEU:HD22	1:N:186:LEU:HB2	2.00	0.44
1:M:285:LYS:HG2	1:M:289:LYS:HE3	2.00	0.44
1:E:410:ILE:HG12	1:E:496:VAL:HB	2.06	0.44
1:F:150:ILE:CD1	1:F:496:VAL:N	2.80	0.44
1:A:147:VAL:CG2	1:A:410:ILE:HD11	2.48	0.44
2:P:17:VAL:O	2:P:87:TYR:HB3	2.17	0.44
2:P:13:ASP:CA	2:P:62:LEU:HD21	2.48	0.44
1:K:37:ASN:ND2	1:K:51:LYS:HE2	2.29	0.44
1:G:238:GLN:HB3	1:G:313:LEU:CG	2.84	0.44
1:G:238:GLN:O	1:G:313:LEU:HD11	2.39	0.44
1:G:214:LEU:HB3	1:G:245:PRO:HB3	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:270:LEU:HG	1:G:272:VAL:HG13	1.98	0.44
1:N:253:VAL:HG21	1:N:274:ALA:HB1	2.00	0.44
1:E:501:VAL:CG2	1:E:502:THR:N	2.87	0.44
1:H:385:GLU:O	1:H:389:LYS:HG3	2.18	0.44
1:L:526:LYS:O	1:L:527:PRO:C	2.56	0.44
2:P:8:ILE:CD1	2:P:8:ILE:N	2.80	0.44
1:J:460:TYR:CE2	1:J:480:PHE:HZ	2.50	0.44
1:H:312:THR:C	1:H:314:SER:N	2.71	0.44
1:N:316:LEU:HD23	1:N:316:LEU:H	1.87	0.44
1:G:233:LEU:CD2	2:U:30:ILE:HG21	2.48	0.44
2:O:53:VAL:HG22	2:O:59:ARG:HE	1.82	0.44
1:D:337:LYS:O	1:D:340:ASP:HB2	2.39	0.44
1:F:250:ALA:O	1:F:252:ASP:N	2.55	0.44
1:B:398:ALA:O	1:B:401:ALA:HB3	2.37	0.44
1:M:18:ARG:HD2	1:M:67:GLU:OE1	2.20	0.44
1:N:298:THR:N	1:N:315:MET:O	2.51	0.44
1:E:152:ALA:HB2	1:E:398:ALA:HB2	2.00	0.44
1:D:264:ASN:HB3	1:D:269:THR:HB	2.00	0.44
1:C:113:PRO:HG3	1:D:36:ARG:NH1	2.32	0.44
1:E:478:TYR:CE1	1:E:487:PHE:HB3	2.53	0.44
2:O:54:LEU:HD13	2:P:55:GLU:C	4.09	0.44
1:A:410:ILE:HG12	1:A:496:VAL:HB	2.01	0.44
2:P:48:VAL:CG1	2:P:62:LEU:CD1	2.93	0.44
2:P:48:VAL:HG12	2:P:62:LEU:CD1	2.29	0.44
1:C:218:PHE:HE1	1:C:244:LYS:HB2	1.95	0.44
1:C:235:ILE:CD1	1:C:311:ALA:HB1	3.07	0.44
1:C:217:ALA:CB	1:C:245:PRO:HB2	2.44	0.44
1:C:348:ILE:HD12	1:C:367:ARG:HE	4.12	0.44
1:G:277:ALA:CB	1:G:284:ARG:HD2	2.78	0.44
1:M:295:THR:HG22	1:M:317:GLY:CA	2.48	0.44
1:J:37:ASN:OD1	1:K:515:LEU:HD12	2.18	0.44
2:R:97:ALA:CA	2:S:11:LEU:HD13	2.65	0.44
1:D:218:PHE:CE1	1:D:244:LYS:HB2	2.52	0.44
1:D:218:PHE:HA	1:D:317:GLY:O	2.18	0.44
1:J:46:SER:CB	1:J:47:PRO:HD2	2.37	0.44
1:L:39:VAL:HG11	1:M:69:ILE:HG21	1.98	0.44
1:M:526:LYS:CG	1:M:527:PRO:HD2	2.48	0.44
1:E:515:LEU:HD12	1:F:49:ILE:CG2	2.44	0.44
1:F:348:ILE:HG21	1:F:364:LEU:O	2.18	0.44
1:K:384:THR:HG22	1:K:385:GLU:N	2.33	0.44
1:J:194:PHE:HB2	1:J:278:PRO:HB3	1.99	0.44
1:A:34:ARG:NH1	1:G:112:ASN:HD21	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:422:ILE:HD12	1:A:470:LEU:HD21	2.00	0.44
1:J:232:LEU:CD2	1:J:236:LEU:HD13	2.51	0.44
1:D:229:VAL:HG23	1:D:256:GLU:OE2	2.24	0.44
1:G:247:LEU:HD22	1:G:322:VAL:CG1	2.99	0.44
1:B:455:ALA:O	1:B:458:ALA:HB3	2.31	0.44
1:J:312:THR:O	1:J:314:SER:N	2.48	0.44
1:K:178:GLU:CD	1:K:392:LYS:HE3	2.38	0.44
1:J:69:ILE:O	1:J:73:LEU:HB2	2.24	0.44
2:O:59:ARG:O	2:O:61:PRO:HD3	2.42	0.44
1:C:289:LYS:HE2	1:D:202:TYR:OH	2.18	0.44
1:F:123:ALA:HA	1:F:428:LEU:HD23	2.05	0.44
1:K:478:TYR:CZ	1:K:487:PHE:HB3	2.57	0.44
1:K:290:ASP:N	1:K:344:ARG:NH1	2.66	0.43
2:P:21:GLU:C	2:P:22:GLU:O	2.54	0.43
2:Q:48:VAL:HG13	2:Q:62:LEU:HD12	5.42	0.43
2:Q:81:GLU:HA	2:Q:85:GLU:O	2.18	0.43
2:R:18:LYS:HE3	2:R:86:GLU:O	2.32	0.43
2:R:17:VAL:CG1	2:R:18:LYS:N	2.81	0.43
2:U:50:THR:CG2	2:U:59:ARG:HD3	2.48	0.43
2:U:45:VAL:HG22	2:U:70:VAL:CG1	4.93	0.43
1:G:150:ILE:HD12	1:G:496:VAL:H	1.98	0.43
1:N:30:THR:HB	1:N:51:LYS:O	2.22	0.43
1:B:265:LYS:HA	1:B:270:LEU:O	2.17	0.43
1:B:284:ARG:HG3	1:B:284:ARG:NH1	4.35	0.43
1:C:345:ILE:HG22	1:C:346:ASN:N	2.33	0.43
1:C:348:ILE:HD11	1:C:367:ARG:HB3	2.73	0.43
1:G:349:LYS:C	1:G:351:GLU:N	2.71	0.43
1:E:31:LEU:CD1	4:E:602:ADP:H5'1	2.78	0.43
1:H:283:ARG:HD2	1:H:283:ARG:HA	1.74	0.43
1:E:355:THR:CG2	1:E:360:ALA:HB3	2.48	0.43
1:M:46:SER:CB	1:M:47:PRO:HD2	2.41	0.43
1:F:229:VAL:HG12	1:F:233:LEU:CD1	2.44	0.43
2:R:98:VAL:O	2:S:9:LYS:HB2	2.18	0.43
1:L:307:LYS:HB2	1:L:310:ASN:ND2	2.35	0.43
1:N:292:ALA:HB1	1:N:297:GLY:O	2.28	0.43
1:L:194:PHE:CE2	1:L:329:THR:HB	2.53	0.43
1:L:247:LEU:HD22	1:L:322:VAL:CG1	2.53	0.43
1:J:286:GLU:OE2	1:J:344:ARG:NH2	2.50	0.43
1:E:455:ALA:O	1:E:458:ALA:HB3	2.30	0.43
1:L:465:ILE:HD13	1:L:480:PHE:CD1	2.59	0.43
1:M:316:LEU:HD23	1:M:316:LEU:O	2.18	0.43
1:J:526:LYS:HG3	1:J:527:PRO:HD2	1.99	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:316:LEU:H	1:J:316:LEU:HD23	1.85	0.43
1:I:130:LYS:O	1:I:134:LEU:HB2	2.25	0.43
1:K:452:ARG:NH1	1:K:452:ARG:HG2	2.33	0.43
1:B:344:ARG:HA	1:B:344:ARG:HD2	1.80	0.43
1:M:285:LYS:O	1:M:289:LYS:HG3	2.19	0.43
1:C:80:LYS:HE2	1:D:383:ALA:O	2.18	0.43
1:K:412:PRO:HB3	1:K:490:MET:HB2	2.07	0.43
2:T:22:GLU:N	2:T:22:GLU:OE1	2.46	0.43
1:B:256:GLU:HB3	2:P:35:THR:HB	2.00	0.43
2:T:17:VAL:HG12	2:T:18:LYS:N	2.33	0.43
1:G:410:ILE:HG12	1:G:496:VAL:HB	2.00	0.43
1:A:150:ILE:CD1	1:A:496:VAL:N	2.82	0.43
1:K:197:GLY:HA3	1:K:325:THR:O	2.20	0.43
2:P:20:ILE:O	2:P:40:PRO:HB3	2.18	0.43
1:F:235:ILE:HD13	1:F:235:ILE:HG21	1.82	0.43
1:F:265:LYS:HA	1:F:270:LEU:O	2.26	0.43
1:G:359:TYR:CE1	1:G:363:LYS:HE2	2.52	0.43
1:M:342:GLU:O	1:M:346:ASN:ND2	2.57	0.43
1:A:283:ARG:O	1:A:287:MET:HG3	2.53	0.43
1:L:117:LYS:O	1:L:121:GLU:HG3	2.18	0.43
1:I:300:ILE:HG21	1:I:308:LEU:CD2	2.46	0.43
1:L:385:GLU:O	1:L:389:LYS:HG3	2.16	0.43
1:J:7:VAL:HG21	1:J:66:LEU:CD1	2.47	0.43
2:S:17:VAL:CG1	2:S:43:GLY:HA3	2.52	0.43
1:E:231:GLU:CB	1:E:308:LEU:HD23	2.49	0.43
1:M:194:PHE:HB2	1:M:278:PRO:HB3	1.99	0.43
1:K:465:ILE:HD13	1:K:480:PHE:CD1	2.56	0.43
1:G:452:ARG:HH11	1:G:463:SER:HA	1.81	0.43
1:I:316:LEU:HD23	1:I:316:LEU:O	2.18	0.43
1:I:253:VAL:O	1:I:258:LEU:HD22	2.18	0.43
1:I:425:VAL:O	1:I:429:ILE:HG13	2.19	0.43
1:A:157:VAL:O	1:A:161:ILE:HG12	2.17	0.43
1:M:412:PRO:HB3	1:M:490:MET:HB2	2.00	0.43
1:F:221:ILE:HG22	1:F:299:VAL:HG13	2.00	0.43
2:Q:38:GLU:HG2	2:Q:38:GLU:H	1.58	0.43
1:L:342:GLU:O	1:L:346:ASN:ND2	2.51	0.43
2:T:38:GLU:O	2:T:39:LYS:C	2.89	0.43
1:A:354:THR:HG22	1:A:354:THR:O	2.20	0.43
2:T:60:VAL:HG13	2:T:61:PRO:CD	3.78	0.43
2:U:17:VAL:CG1	2:U:43:GLY:HA3	2.48	0.43
1:B:147:VAL:HG23	1:B:410:ILE:HD11	2.00	0.43
1:C:297:GLY:H	1:C:317:GLY:HA2	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:341:ILE:C	1:G:343:ALA:N	3.34	0.43
1:E:33:PRO:HG3	4:E:602:ADP:C6	2.53	0.43
1:H:50:THR:HG21	1:H:55:THR:HB	2.02	0.43
1:M:46:SER:HB2	1:M:47:PRO:CD	2.42	0.43
1:D:220:LEU:HD13	1:D:235:ILE:HD12	2.98	0.43
1:C:312:THR:HG22	1:C:314:SER:N	3.19	0.43
1:L:39:VAL:HG11	1:M:69:ILE:CG2	2.48	0.43
1:J:342:GLU:HA	1:J:345:ILE:HD12	1.99	0.43
1:A:307:LYS:HG3	2:P:34:ASP:HB3	2.51	0.43
1:C:501:VAL:HG23	1:C:502:THR:H	1.81	0.43
1:B:503:ARG:O	1:B:507:GLN:HG3	2.18	0.43
1:A:72:GLN:HE22	1:A:75:LYS:HZ3	1.69	0.43
1:N:277:ALA:HB1	1:N:284:ARG:HD2	2.06	0.43
1:C:321:ARG:O	1:C:322:VAL:HG23	2.50	0.43
1:D:23:VAL:HB	1:D:74:LEU:HD23	2.13	0.43
1:E:207:PRO:O	1:E:210:MET:HE3	2.18	0.43
1:B:307:LYS:HB2	1:B:310:ASN:HD22	1.83	0.43
1:D:452:ARG:HH11	1:D:463:SER:HA	1.84	0.43
1:L:425:VAL:O	1:L:429:ILE:HG13	2.17	0.43
1:A:421:ALA:O	1:A:425:VAL:HG23	2.28	0.43
1:L:332:VAL:HG22	1:L:375:VAL:HG11	2.02	0.43
1:L:132:LYS:C	1:L:134:LEU:H	2.24	0.43
1:M:132:LYS:C	1:M:134:LEU:H	2.22	0.43
1:B:80:LYS:HG2	1:C:383:ALA:O	2.51	0.43
1:N:433:GLU:HG2	1:N:434:GLY:N	2.33	0.43
1:K:433:GLU:HG2	1:K:434:GLY:N	2.36	0.43
1:L:478:TYR:CZ	1:L:487:PHE:HB3	2.54	0.43
1:B:267:ARG:HB3	1:B:269:THR:OG1	2.60	0.43
2:P:41:GLN:HB3	2:P:72:PHE:O	2.18	0.43
2:Q:98:VAL:HB	2:R:9:LYS:HB2	2.53	0.43
2:Q:96:LEU:O	2:R:10:PRO:HA	3.00	0.43
1:L:311:ALA:HA	1:L:315:MET:SD	2.58	0.43
2:O:9:LYS:HE3	2:U:100:GLN:HB2	3.32	0.43
2:U:70:VAL:O	2:U:71:VAL:HG23	3.49	0.43
1:G:150:ILE:CD1	1:G:496:VAL:N	2.95	0.43
2:P:80:ILE:CG2	2:P:81:GLU:H	2.31	0.43
1:C:341:ILE:O	1:C:345:ILE:HG22	5.27	0.43
1:E:7:VAL:CG2	1:E:66:LEU:HD11	2.47	0.43
1:M:178:GLU:CA	1:M:321:ARG:NH1	2.79	0.43
1:B:289:LYS:CE	1:C:202:TYR:OH	2.60	0.43
1:N:444:ARG:HG2	1:N:444:ARG:O	2.18	0.43
2:S:78:THR:HG22	2:S:80:ILE:HD11	2.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:72:GLN:HE22	1:F:75:LYS:HZ1	1.66	0.43
1:G:340:ASP:O	1:G:344:ARG:HB2	2.19	0.43
1:F:422:ILE:HD12	1:F:470:LEU:HD21	2.04	0.43
1:K:312:THR:C	1:K:314:SER:N	2.72	0.43
2:T:66:GLU:HG2	2:T:67:GLY:H	4.42	0.43
1:I:316:LEU:HD23	1:I:316:LEU:H	1.82	0.43
1:F:448:GLU:OE1	1:F:452:ARG:NH2	2.51	0.43
1:F:520:GLU:HB3	1:G:29:VAL:CG1	2.48	0.43
1:D:179:SER:HB2	1:D:379:ARG:HB3	2.00	0.43
1:M:71:ALA:O	1:M:75:LYS:HG3	2.18	0.43
1:A:209:THR:O	1:A:211:GLU:HG3	2.18	0.43
1:A:506:LEU:O	1:A:506:LEU:HD12	2.35	0.43
1:B:296:GLY:CA	1:B:336:GLY:HA2	2.48	0.43
1:D:77:VAL:HG23	1:D:512:ILE:HG13	1.99	0.43
2:T:20:ILE:O	2:T:20:ILE:HG22	3.30	0.43
1:B:325:THR:CG2	1:B:326:LYS:H	2.25	0.43
1:E:242:THR:HG22	1:E:242:THR:O	2.18	0.43
2:P:19:ARG:HA	2:P:42:LYS:O	2.28	0.43
2:P:15:VAL:CG1	2:P:45:VAL:HG13	2.42	0.43
2:P:13:ASP:HB2	2:P:52:ARG:HB3	3.76	0.43
1:J:360:ALA:O	1:J:364:LEU:CD1	2.78	0.43
1:K:332:VAL:HG22	1:K:375:VAL:CG1	2.74	0.43
2:Q:31:VAL:O	2:Q:32:LEU:O	3.73	0.43
1:K:217:ALA:HB1	1:K:245:PRO:O	2.19	0.43
1:F:168:VAL:CG1	1:F:168:VAL:O	2.66	0.43
1:E:341:ILE:O	1:E:345:ILE:HG22	2.19	0.43
1:A:51:LYS:O	1:A:51:LYS:HG2	2.18	0.43
1:L:39:VAL:HB	1:M:522:VAL:HG12	2.32	0.43
1:L:179:SER:HB2	1:L:379:ARG:CB	2.41	0.43
1:I:270:LEU:CD2	1:I:272:VAL:HG13	2.38	0.43
1:H:79:SER:C	1:H:81:THR:N	2.72	0.43
1:C:199:ILE:O	1:C:199:ILE:HG22	2.19	0.43
1:K:267:ARG:O	1:L:256:GLU:HG3	2.27	0.43
2:U:33:PRO:O	2:U:36:ALA:N	2.80	0.43
1:K:84:VAL:HG12	1:K:500:LYS:CE	2.44	0.43
1:D:288:LEU:HD23	1:D:291:ILE:HD12	2.01	0.43
1:F:345:ILE:HG23	1:F:368:LEU:CD1	2.53	0.43
1:G:320:GLU:O	1:G:321:ARG:HB2	2.19	0.43
1:F:73:LEU:CD2	1:G:47:PRO:HD2	2.49	0.43
1:L:300:ILE:O	1:L:300:ILE:HG22	2.29	0.43
1:J:313:LEU:HG	1:J:313:LEU:O	2.19	0.43
1:D:332:VAL:HG12	1:D:333:GLY:N	2.35	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:28:LYS:HZ2	1:K:97:GLN:HE22	1.79	0.43
1:G:23:VAL:CG1	1:G:74:LEU:HD23	2.49	0.43
1:H:253:VAL:O	1:H:258:LEU:HD22	2.17	0.43
1:C:101:ARG:CG	1:C:102:GLU:H	2.35	0.43
1:B:396:GLU:O	1:B:400:ASN:ND2	2.66	0.43
1:L:313:LEU:O	1:L:313:LEU:HG	2.17	0.43
1:A:478:TYR:CZ	1:A:487:PHE:HB3	2.54	0.43
1:J:49:ILE:O	1:J:49:ILE:HG13	2.19	0.43
1:B:198:TYR:O	1:B:198:TYR:HD1	2.01	0.43
1:N:132:LYS:C	1:N:134:LEU:H	2.21	0.43
1:L:71:ALA:O	1:L:75:LYS:HG3	2.43	0.43
1:K:360:ALA:O	1:K:364:LEU:CD1	2.70	0.43
2:P:71:VAL:HG13	2:Q:80:ILE:HD13	1.99	0.43
2:R:78:THR:CG2	2:R:79:GLU:N	2.81	0.43
2:O:13:ASP:CA	2:O:62:LEU:HD21	2.49	0.43
2:T:11:LEU:O	2:T:13:ASP:N	2.52	0.43
1:M:190:GLU:HG3	1:M:341:ILE:HD13	1.99	0.43
1:E:262:VAL:O	1:E:265:LYS:HB3	2.19	0.43
1:F:218:PHE:CZ	1:F:242:THR:HG21	3.00	0.43
1:F:218:PHE:CE1	1:F:244:LYS:HB2	2.80	0.43
1:J:360:ALA:O	1:J:363:LYS:HG2	2.17	0.43
1:A:228:ASN:ND2	1:A:230:ARG:HB2	2.52	0.43
1:E:198:TYR:CD1	1:E:198:TYR:O	3.08	0.43
1:E:31:LEU:HB2	1:E:90:THR:CG2	2.47	0.43
1:E:345:ILE:HG22	1:E:346:ASN:N	2.90	0.43
1:D:54:VAL:HG13	1:D:89:THR:HG21	2.00	0.43
1:A:218:PHE:CE1	1:A:242:THR:HG21	2.63	0.43
1:A:218:PHE:HA	1:A:317:GLY:O	2.18	0.43
1:K:307:LYS:HB2	1:K:310:ASN:ND2	2.38	0.43
1:L:40:LEU:CD1	1:L:40:LEU:N	2.81	0.43
1:K:342:GLU:O	1:K:346:ASN:ND2	2.51	0.43
1:C:267:ARG:NH1	1:C:267:ARG:HG3	4.70	0.43
1:N:117:LYS:O	1:N:121:GLU:HG3	2.24	0.43
1:M:277:ALA:HB1	1:M:284:ARG:HD2	2.07	0.43
1:B:193:GLN:HB2	1:B:329:THR:O	2.40	0.43
1:D:253:VAL:HG21	1:D:274:ALA:HB1	2.01	0.43
1:A:452:ARG:HH11	1:A:463:SER:HA	1.83	0.43
1:C:144:ILE:HD13	1:C:402:THR:CG2	2.66	0.43
1:L:95:LEU:O	1:L:99:ILE:HG13	2.18	0.43
1:E:103:GLY:O	1:E:107:VAL:HG23	2.31	0.43
1:H:193:GLN:HE21	1:H:330:THR:CG2	2.31	0.43
1:A:84:VAL:HG12	1:A:84:VAL:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:49:ILE:HG13	1:N:49:ILE:O	2.21	0.43
1:M:8:PHE:CD1	1:M:8:PHE:N	2.87	0.43
1:I:86:GLY:O	1:I:87:ASP:HB2	2.23	0.43
1:E:475:ASN:HA	1:E:476:PRO:HD2	1.92	0.43
1:G:264:ASN:OD1	1:G:269:THR:HG21	2.62	0.43
1:H:433:GLU:HG2	1:H:434:GLY:N	2.34	0.43
1:F:152:ALA:HB2	1:F:398:ALA:HB2	2.00	0.43
1:K:86:GLY:O	1:K:87:ASP:HB2	2.19	0.43
1:G:297:GLY:N	1:G:317:GLY:HA2	2.34	0.43
2:Q:71:VAL:HG23	2:Q:99:LEU:HD13	2.01	0.43
1:D:359:TYR:CE1	1:D:363:LYS:HE3	3.18	0.43
1:E:237:GLU:O	1:E:238:GLN:C	2.57	0.43
2:U:13:ASP:O	2:U:13:ASP:OD1	2.44	0.43
2:P:78:THR:HG22	2:P:79:GLU:N	2.36	0.43
1:B:242:THR:HG22	1:B:244:LYS:HG2	2.35	0.43
1:C:229:VAL:O	1:C:233:LEU:HG	2.18	0.43
1:C:219:ILE:N	1:C:317:GLY:O	2.47	0.43
1:C:237:GLU:HG2	2:Q:30:ILE:HD12	2.00	0.43
2:Q:33:PRO:HG2	2:Q:33:PRO:O	2.42	0.43
1:G:51:LYS:HG2	1:G:51:LYS:O	2.19	0.43
1:C:54:VAL:HG13	1:C:89:THR:HG21	2.07	0.43
1:B:51:LYS:O	1:B:51:LYS:HG2	2.18	0.43
1:H:412:PRO:HD2	1:H:417:THR:OG1	2.32	0.43
1:A:66:LEU:HD22	1:A:522:VAL:CG1	2.42	0.43
1:A:261:LEU:CD2	1:A:272:VAL:HG21	2.48	0.43
1:N:261:LEU:HD22	1:N:272:VAL:HG21	1.99	0.43
1:J:411:VAL:O	1:J:496:VAL:CG1	2.68	0.43
1:C:506:LEU:HD12	1:C:506:LEU:O	2.18	0.43
1:H:352:LEU:HD21	1:H:365:GLN:HE22	1.84	0.43
1:J:385:GLU:O	1:J:389:LYS:HG3	2.19	0.43
1:H:222:VAL:CG1	1:H:223:GLU:H	2.32	0.43
1:F:288:LEU:HD23	1:F:288:LEU:HA	1.88	0.43
1:E:210:MET:CE	1:E:210:MET:HA	2.49	0.43
1:B:72:GLN:HE22	1:B:75:LYS:HZ1	1.74	0.43
1:G:74:LEU:HD21	1:G:93:THR:CG2	2.50	0.43
1:E:421:ALA:O	1:E:425:VAL:HG23	2.28	0.43
1:F:452:ARG:HH11	1:F:463:SER:HA	1.85	0.43
1:F:344:ARG:HA	1:F:344:ARG:HD2	1.63	0.43
1:B:323:ARG:HG2	1:B:323:ARG:NH1	2.53	0.43
1:K:18:ARG:HD2	1:K:67:GLU:OE1	2.25	0.43
1:J:372:ALA:C	1:J:374:GLY:H	2.20	0.43
1:H:5:ILE:O	1:H:5:ILE:HG23	2.23	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:433:GLU:HG2	1:L:434:GLY:N	2.36	0.43
1:B:518:THR:OG1	1:C:37:ASN:ND2	2.64	0.43
2:Q:15:VAL:CG2	2:Q:62:LEU:HD13	7.35	0.43
1:E:232:LEU:HB3	1:E:236:LEU:CD1	2.48	0.43
2:U:71:VAL:CG2	2:U:99:LEU:HG	5.26	0.43
1:L:37:ASN:ND2	1:L:51:LYS:HE2	2.26	0.43
1:H:286:GLU:HG3	1:H:367:ARG:HH22	1.84	0.43
1:H:283:ARG:CG	1:H:363:LYS:HZ1	2.64	0.43
1:A:297:GLY:H	1:A:317:GLY:HA2	1.84	0.43
1:L:41:GLU:OE2	1:M:524:ALA:HB1	2.54	0.43
1:B:303:GLU:HA	1:C:259:ALA:HB2	6.16	0.43
1:C:501:VAL:CG2	1:C:502:THR:N	2.82	0.43
1:L:283:ARG:HD3	1:L:363:LYS:HZ1	1.83	0.43
1:M:224:LYS:CG	1:M:225:LYS:N	2.78	0.43
1:D:72:GLN:HE22	1:D:75:LYS:HZ1	1.67	0.43
1:M:194:PHE:CD2	1:M:194:PHE:N	2.87	0.43
1:N:438:THR:O	1:N:441:LYS:HB2	2.19	0.43
1:B:472:GLU:HB3	1:B:478:TYR:CD2	2.61	0.43
1:H:285:LYS:O	1:H:289:LYS:HG3	2.22	0.43
1:F:457:ASN:N	1:F:457:ASN:HD22	2.17	0.43
1:G:475:ASN:HA	1:G:476:PRO:HD2	1.95	0.43
1:E:260:THR:OG1	2:S:33:PRO:CG	3.22	0.43
1:A:350:LYS:O	1:B:208:GLU:O	5.99	0.43
2:T:10:PRO:O	2:T:49:GLY:HA2	3.47	0.43
1:C:335:LYS:O	1:C:336:GLY:O	2.52	0.43
1:E:519:THR:HG23	1:F:39:VAL:HG23	2.00	0.43
1:E:345:ILE:HG23	1:E:368:LEU:CD1	6.22	0.43
1:B:37:ASN:HB3	1:B:50:THR:O	2.30	0.43
2:S:11:LEU:HB3	2:S:12:GLY:H	1.74	0.43
1:A:250:ALA:C	1:A:252:ASP:N	2.73	0.43
1:A:235:ILE:HD12	1:A:311:ALA:HB3	1.99	0.43
1:N:412:PRO:HB3	1:N:490:MET:HB2	2.03	0.43
1:K:307:LYS:HE3	1:K:310:ASN:HD21	1.82	0.43
1:H:179:SER:CB	1:H:379:ARG:HB3	2.38	0.43
1:G:209:THR:CG2	1:G:211:GLU:HG3	4.46	0.43
1:N:77:VAL:HG11	1:N:512:ILE:HG13	2.00	0.43
1:C:124:VAL:HG13	1:C:506:LEU:HG	2.00	0.43
2:S:80:ILE:HG22	2:S:81:GLU:H	1.83	0.43
1:A:198:TYR:CZ	1:A:326:LYS:HA	2.82	0.43
1:C:118:ARG:O	1:C:122:LYS:HG3	2.28	0.43
1:E:396:GLU:O	1:E:400:ASN:ND2	2.58	0.43
2:Q:21:GLU:CD	2:Q:21:GLU:H	2.22	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:84:VAL:HG12	1:D:84:VAL:O	2.28	0.43
1:C:392:LYS:O	1:C:396:GLU:HG3	2.19	0.43
1:B:103:GLY:HA2	1:B:442:ILE:HD13	2.00	0.43
1:I:92:ALA:HB2	1:I:505:ALA:HA	2.00	0.43
1:K:390:GLU:OE1	1:K:394:ARG:NH1	2.51	0.43
1:A:264:ASN:HB3	1:A:269:THR:HB	2.01	0.43
1:B:437:ALA:O	1:B:441:LYS:HG3	2.26	0.43
2:T:20:ILE:O	2:T:21:GLU:C	3.03	0.43
2:Q:98:VAL:HG12	2:Q:99:LEU:N	2.61	0.43
1:A:352:LEU:C	1:A:354:THR:H	2.24	0.43
1:N:286:GLU:HG3	1:N:367:ARG:HH22	1.84	0.43
2:T:78:THR:HG22	2:T:80:ILE:CD1	2.52	0.43
2:P:20:ILE:CG1	2:P:43:GLY:HA2	2.46	0.43
1:E:214:LEU:HB3	1:E:245:PRO:HB3	2.01	0.43
1:J:298:THR:N	1:J:315:MET:O	2.52	0.43
2:O:80:ILE:HG12	2:U:41:GLN:OE1	2.18	0.43
1:E:349:LYS:C	1:E:351:GLU:N	3.23	0.43
1:H:50:THR:CG2	1:H:51:LYS:H	2.28	0.43
1:E:224:LYS:N	1:E:224:LYS:HD2	2.33	0.43
1:L:47:PRO:HD2	1:M:72:GLN:HB3	2.01	0.43
1:L:47:PRO:CD	1:M:72:GLN:HB2	2.49	0.43
2:P:93:ARG:O	2:Q:14:ARG:NH2	2.87	0.43
1:J:384:THR:HG22	1:J:385:GLU:N	2.33	0.43
2:S:85:GLU:HA	2:S:85:GLU:OE1	2.19	0.43
2:S:18:LYS:HG2	2:S:87:TYR:CD2	3.89	0.43
1:F:288:LEU:HA	1:F:291:ILE:HD12	2.00	0.43
1:E:15:ALA:HA	1:E:18:ARG:CZ	2.53	0.43
1:A:74:LEU:HD21	1:A:93:THR:CG2	2.50	0.43
1:H:175:THR:CG2	1:H:177:GLU:OE2	2.71	0.43
1:K:175:THR:CG2	1:K:177:GLU:OE2	2.66	0.43
1:G:192:TYR:CD2	1:G:192:TYR:C	3.42	0.43
1:D:215:GLU:O	1:D:216:ASP:C	2.57	0.43
1:B:229:VAL:HG23	1:B:256:GLU:CD	2.51	0.42
2:R:62:LEU:HA	2:R:62:LEU:HD12	1.78	0.42
2:S:96:LEU:HD23	2:T:14:ARG:CZ	3.97	0.42
2:T:17:VAL:HG22	2:T:45:VAL:CA	3.79	0.42
2:T:49:GLY:O	2:T:62:LEU:CD1	2.65	0.42
2:T:62:LEU:HA	2:T:62:LEU:HD23	3.75	0.42
2:T:62:LEU:C	2:T:64:VAL:H	2.21	0.42
2:P:10:PRO:CB	2:P:14:ARG:O	2.96	0.42
1:C:245:PRO:HA	1:C:271:SER:OG	2.65	0.42
1:E:284:ARG:HH11	1:E:284:ARG:HG3	4.44	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:267:ARG:HG2	2:T:31:VAL:HG21	2.36	0.42
1:G:205:THR:N	1:G:211:GLU:O	2.65	0.42
1:L:297:GLY:CA	1:L:317:GLY:N	2.81	0.42
1:H:290:ASP:N	1:H:344:ARG:NH1	2.65	0.42
1:I:84:VAL:HG12	1:I:500:LYS:CE	2.47	0.42
1:C:426:GLU:OE2	1:C:444:ARG:NH1	2.66	0.42
1:F:279:GLY:O	1:F:284:ARG:HD3	2.19	0.42
1:D:441:LYS:O	1:D:444:ARG:HB3	2.25	0.42
1:K:458:ALA:O	1:L:114:LEU:CD1	2.77	0.42
1:F:161:ILE:HD12	1:F:399:LEU:CD2	2.49	0.42
2:O:41:GLN:HB3	2:O:72:PHE:O	2.36	0.42
1:A:10:GLU:HA	1:A:13:ARG:HH11	1.84	0.42
1:A:179:SER:HB2	1:A:379:ARG:HB3	2.06	0.42
2:P:89:ILE:HG22	2:P:89:ILE:O	2.18	0.42
1:G:435:ASP:O	1:G:438:THR:HB	2.19	0.42
1:M:449:GLU:HB2	1:M:450:PRO:HD3	2.03	0.42
1:B:31:LEU:HD13	1:B:90:THR:HG22	2.14	0.42
2:Q:15:VAL:CG1	2:Q:16:VAL:N	4.32	0.42
2:T:78:THR:HG22	2:T:79:GLU:N	2.33	0.42
2:U:20:ILE:HD11	2:U:44:LYS:CG	4.26	0.42
1:M:411:VAL:HB	1:M:417:THR:OG1	2.19	0.42
2:O:97:ALA:HB2	2:P:10:PRO:HA	2.00	0.42
2:O:100:GLN:HG2	2:P:9:LYS:HE2	2.30	0.42
1:E:33:PRO:HD3	4:E:602:ADP:C5	2.54	0.42
1:C:167:LYS:O	1:C:168:VAL:HG23	2.26	0.42
1:E:294:VAL:O	1:E:336:GLY:N	2.52	0.42
1:D:219:ILE:HG22	1:D:221:ILE:HG13	2.00	0.42
1:A:246:LEU:O	1:A:272:VAL:HA	2.19	0.42
1:H:246:LEU:HB3	1:H:272:VAL:CG1	2.46	0.42
1:M:313:LEU:O	1:M:313:LEU:HG	2.19	0.42
1:N:40:LEU:HD21	1:N:56:VAL:HA	2.05	0.42
1:G:298:THR:HG23	1:G:304:LEU:HD13	7.77	0.42
2:Q:22:GLU:OE1	2:Q:22:GLU:N	2.42	0.42
1:A:128:VAL:HA	1:A:131:ILE:HD12	2.09	0.42
1:H:344:ARG:HG3	1:H:344:ARG:NH1	2.48	0.42
1:L:384:THR:HG22	1:L:385:GLU:N	2.34	0.42
1:F:217:ALA:CB	1:F:245:PRO:HB2	2.46	0.42
1:L:408:GLU:O	1:L:499:ALA:HB3	2.19	0.42
1:D:23:VAL:HG22	1:D:60:VAL:CG1	2.44	0.42
1:J:247:LEU:HD21	1:J:249:ILE:HD11	2.18	0.42
1:H:53:GLY:HA3	1:H:90:THR:OG1	2.20	0.42
1:K:460:TYR:CE2	1:K:480:PHE:HZ	2.37	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:316:LEU:H	1:H:316:LEU:HD23	1.83	0.42
1:G:23:VAL:HB	1:G:74:LEU:HD23	2.03	0.42
1:A:372:ALA:C	1:A:374:GLY:H	2.47	0.42
1:L:475:ASN:OD1	1:L:475:ASN:C	2.57	0.42
1:H:478:TYR:CZ	1:H:487:PHE:HB3	2.54	0.42
1:B:475:ASN:HA	1:B:476:PRO:HD2	1.93	0.42
1:H:8:PHE:O	1:H:11:ALA:HB3	2.25	0.42
1:K:285:LYS:HG2	1:K:289:LYS:HE3	2.05	0.42
1:A:123:ALA:HB3	1:A:443:VAL:HG21	2.03	0.42
2:P:33:PRO:C	2:P:35:THR:H	2.42	0.42
1:E:239:VAL:HG22	1:E:313:LEU:CD2	2.49	0.42
1:C:292:ALA:O	1:C:294:VAL:N	2.75	0.42
1:B:168:VAL:O	1:B:172:GLY:HA3	2.26	0.42
1:M:325:THR:CG2	1:M:326:LYS:N	2.82	0.42
1:E:352:LEU:C	1:E:354:THR:H	2.44	0.42
1:M:37:ASN:ND2	1:M:51:LYS:HE2	2.26	0.42
1:C:519:THR:HG23	1:D:39:VAL:HG23	2.01	0.42
1:G:235:ILE:HD11	1:G:311:ALA:HB2	2.26	0.42
2:S:49:GLY:O	2:S:62:LEU:CD1	3.00	0.42
1:D:218:PHE:CZ	1:D:242:THR:HG21	2.55	0.42
1:D:220:LEU:HD22	1:D:235:ILE:HD11	4.27	0.42
1:G:219:ILE:O	1:G:316:LEU:HB2	4.88	0.42
2:Q:19:ARG:HA	2:Q:42:LYS:O	2.19	0.42
1:J:222:VAL:CG1	1:J:223:GLU:H	2.39	0.42
1:I:194:PHE:HB2	1:I:278:PRO:HB3	2.02	0.42
1:J:249:ILE:O	1:J:249:ILE:CG2	2.70	0.42
1:E:159:LYS:HE2	1:E:163:ASP:OD2	2.19	0.42
1:A:23:VAL:HB	1:A:74:LEU:HD23	2.03	0.42
1:I:24:ALA:O	1:I:28:LYS:HG2	2.32	0.42
1:N:375:VAL:O	1:N:375:VAL:HG12	2.19	0.42
1:H:95:LEU:O	1:H:99:ILE:HG13	2.18	0.42
1:F:251:GLU:O	1:F:252:ASP:HB2	2.19	0.42
1:C:10:GLU:HA	1:C:13:ARG:HH11	1.89	0.42
1:L:95:LEU:HD21	1:L:450:PRO:HG2	2.10	0.42
1:F:206:ASN:HB3	1:F:209:THR:OG1	2.19	0.42
1:D:490:MET:CE	1:D:495:ILE:HG21	2.49	0.42
1:I:283:ARG:NH2	1:I:367:ARG:CD	2.82	0.42
2:T:10:PRO:CD	2:T:47:ALA:HB1	3.02	0.42
2:T:48:VAL:HG11	2:T:64:VAL:O	2.19	0.42
2:T:88:VAL:O	2:T:90:LEU:HD12	4.08	0.42
2:U:6:THR:HB	2:U:82:ILE:CG2	2.49	0.42
1:E:246:LEU:CB	1:E:272:VAL:HG12	2.56	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:236:LEU:CB	2:O:30:ILE:CD1	3.23	0.42
1:G:294:VAL:HG23	1:G:295:THR:N	4.68	0.42
1:M:178:GLU:O	1:M:321:ARG:NH1	2.53	0.42
2:R:42:LYS:HA	2:R:70:VAL:O	2.20	0.42
2:S:91:SER:O	2:S:95:LEU:HG	2.24	0.42
1:A:297:GLY:N	1:A:317:GLY:HA2	2.34	0.42
1:M:7:VAL:HG21	1:M:66:LEU:CD1	2.47	0.42
1:C:258:LEU:O	1:C:262:VAL:HG23	2.29	0.42
1:D:131:ILE:HD13	1:D:502:THR:HG22	2.01	0.42
1:I:294:VAL:HA	1:I:341:ILE:HD11	2.22	0.42
1:G:149:THR:HG23	1:G:155:PRO:CA	2.44	0.42
1:N:194:PHE:HB2	1:N:278:PRO:HB3	2.06	0.42
1:J:458:ALA:C	1:K:114:LEU:HD12	2.39	0.42
1:L:178:GLU:CD	1:L:392:LYS:HE3	2.40	0.42
1:J:488:VAL:HG23	1:J:490:MET:CE	2.50	0.42
1:F:341:ILE:O	1:F:344:ARG:N	2.51	0.42
1:E:123:ALA:HB2	1:E:440:ALA:HA	2.03	0.42
1:B:80:LYS:HE2	1:C:383:ALA:O	2.18	0.42
1:N:102:GLU:HB2	1:N:442:ILE:HG23	2.10	0.42
1:G:404:ALA:HB1	1:G:500:LYS:HB3	2.01	0.42
1:F:404:ALA:HB1	1:F:500:LYS:HB3	2.02	0.42
1:I:286:GLU:HG3	1:I:367:ARG:NH2	2.34	0.42
2:R:16:VAL:HG12	2:R:16:VAL:O	2.18	0.42
2:O:11:LEU:O	2:O:13:ASP:N	3.07	0.42
2:U:20:ILE:HG13	2:U:43:GLY:CA	2.65	0.42
2:P:17:VAL:HG12	2:P:43:GLY:HA3	2.11	0.42
1:A:233:LEU:HA	2:O:30:ILE:HD13	2.32	0.42
1:C:237:GLU:OE2	2:Q:28:GLY:HA3	3.05	0.42
2:Q:32:LEU:HG	2:Q:36:ALA:HB3	2.00	0.42
1:B:167:LYS:O	1:B:168:VAL:HG23	2.19	0.42
1:E:345:ILE:HD12	1:E:371:LEU:O	2.20	0.42
1:F:207:PRO:HA	1:F:210:MET:HE1	2.17	0.42
1:M:36:ARG:HD2	1:N:518:THR:HG23	2.02	0.42
1:A:7:VAL:HG12	1:A:12:ALA:HB2	2.02	0.42
1:I:40:LEU:HD21	1:I:56:VAL:HA	2.05	0.42
1:J:228:ASN:ND2	1:J:230:ARG:HB3	2.25	0.42
1:E:124:VAL:HG13	1:E:506:LEU:HG	2.01	0.42
2:U:32:LEU:HD12	2:U:36:ALA:CB	5.49	0.42
1:N:384:THR:HG22	1:N:385:GLU:N	2.35	0.42
1:H:177:GLU:HB3	1:H:321:ARG:NH1	2.34	0.42
1:B:307:LYS:HE3	2:Q:34:ASP:O	5.05	0.42
1:I:312:THR:C	1:I:314:SER:N	2.73	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:32:GLY:HA3	1:J:454:ILE:HG23	2.01	0.42
1:H:202:TYR:CD2	1:H:266:LEU:HD11	2.55	0.42
1:C:33:PRO:HD3	4:C:602:ADP:C5	2.85	0.42
1:A:76:GLU:CD	1:B:386:THR:HG1	2.45	0.42
1:H:477:ARG:HD3	1:H:491:VAL:HG21	2.01	0.42
1:L:8:PHE:O	1:L:11:ALA:HB3	2.22	0.42
1:E:216:ASP:HA	1:E:319:ALA:O	2.67	0.42
2:Q:81:GLU:C	2:Q:82:ILE:HG13	2.39	0.42
2:Q:77:GLY:HA3	2:Q:90:LEU:HD23	1.99	0.42
1:A:351:GLU:HG3	1:B:210:MET:CE	7.65	0.42
1:E:242:THR:HG22	1:E:244:LYS:HG3	2.01	0.42
1:F:150:ILE:HD12	1:F:496:VAL:H	1.83	0.42
1:I:295:THR:HG22	1:I:317:GLY:CA	2.55	0.42
2:P:10:PRO:HG2	2:P:49:GLY:CA	2.71	0.42
2:Q:50:THR:CG2	2:Q:59:ARG:HD3	2.49	0.42
1:J:283:ARG:HD3	1:J:363:LYS:CE	2.49	0.42
1:C:237:GLU:O	1:C:238:GLN:C	2.69	0.42
1:C:221:ILE:HG23	1:C:288:LEU:HD22	2.01	0.42
1:E:50:THR:CG2	1:E:52:ASP:HB3	2.48	0.42
1:L:49:ILE:HG13	1:L:49:ILE:O	2.19	0.42
1:D:235:ILE:HD13	1:D:235:ILE:HG21	1.77	0.42
1:F:247:LEU:HD13	1:F:324:ILE:HD11	2.01	0.42
1:M:65:HIS:HD2	1:M:527:PRO:HG3	2.68	0.42
1:G:224:LYS:H	1:G:224:LYS:CD	3.76	0.42
1:G:227:SER:CB	1:G:254:GLU:HG3	3.04	0.42
1:E:506:LEU:O	1:E:506:LEU:HD12	2.28	0.42
1:D:233:LEU:HD23	2:R:30:ILE:HD13	2.01	0.42
1:B:373:GLY:O	1:B:375:VAL:HG23	2.20	0.42
1:A:463:SER:O	1:A:467:GLN:HG2	2.21	0.42
1:L:449:GLU:O	1:L:450:PRO:C	2.58	0.42
1:E:188:PHE:N	1:E:188:PHE:CD1	2.88	0.42
1:E:472:GLU:HB3	1:E:478:TYR:CD2	2.54	0.42
1:B:31:LEU:HB2	1:B:90:THR:HG21	2.00	0.42
2:U:21:GLU:H	2:U:21:GLU:CD	2.22	0.42
1:B:312:THR:HB	1:B:314:SER:OG	2.31	0.42
2:S:51:GLY:HA3	2:S:60:VAL:O	2.49	0.42
1:D:150:ILE:O	1:D:153:ASN:N	2.51	0.42
2:T:20:ILE:N	2:T:42:LYS:O	3.25	0.42
2:Q:17:VAL:HG22	2:Q:90:LEU:HD21	6.90	0.42
2:O:11:LEU:O	2:O:12:GLY:O	2.38	0.42
1:A:150:ILE:O	1:A:153:ASN:N	2.54	0.42
2:P:42:LYS:HA	2:P:70:VAL:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:217:ALA:HB1	1:C:245:PRO:O	2.20	0.42
1:A:50:THR:HA	1:A:390:GLU:OE1	2.34	0.42
1:D:79:SER:O	1:D:82:ASN:N	2.61	0.42
2:O:52:ARG:NH2	2:P:53:VAL:O	2.53	0.42
1:K:149:THR:HG23	1:K:155:PRO:CA	2.41	0.42
1:M:40:LEU:HD21	1:M:56:VAL:HA	2.06	0.42
1:K:411:VAL:O	1:K:496:VAL:CG1	2.72	0.42
1:K:277:ALA:HB1	1:K:284:ARG:HD2	2.05	0.42
1:L:360:ALA:CA	1:L:363:LYS:HG3	3.61	0.42
1:K:79:SER:C	1:K:81:THR:N	2.72	0.42
1:B:149:THR:CG2	1:B:155:PRO:HA	2.44	0.42
1:C:146:GLU:O	1:C:147:VAL:C	2.60	0.42
1:N:290:ASP:N	1:N:344:ARG:NH1	2.66	0.42
1:G:189:VAL:HG12	1:G:190:GLU:N	2.33	0.42
1:N:130:LYS:O	1:N:134:LEU:HB2	2.20	0.42
1:M:8:PHE:O	1:M:11:ALA:HB3	2.21	0.42
1:E:180:LYS:HA	1:E:180:LYS:HD3	1.85	0.42
1:I:358:GLU:HG2	1:I:473:THR:HG21	42.14	0.42
1:C:95:LEU:O	1:C:99:ILE:HG13	2.20	0.42
1:I:433:GLU:HG2	1:I:434:GLY:N	2.36	0.42
1:L:202:TYR:HD2	1:L:266:LEU:HD11	1.84	0.42
1:F:205:THR:HB	1:F:213:VAL:H	1.87	0.42
1:K:286:GLU:OE2	1:K:344:ARG:NH2	2.63	0.42
1:I:283:ARG:NH1	1:I:364:LEU:HD12	2.49	0.42
2:T:42:LYS:HE2	2:T:42:LYS:HB3	2.36	0.42
2:P:27:LYS:HD3	2:Q:84:GLY:CA	2.49	0.42
2:P:71:VAL:HG23	2:P:99:LEU:HD13	2.01	0.42
2:Q:71:VAL:C	2:Q:72:PHE:HD2	3.25	0.42
2:U:81:GLU:HG3	2:U:85:GLU:N	2.28	0.42
1:C:150:ILE:O	1:C:153:ASN:N	2.58	0.42
1:F:239:VAL:HG11	1:F:246:LEU:HB2	2.01	0.42
1:L:217:ALA:HB1	1:L:245:PRO:O	2.20	0.42
1:A:233:LEU:HD23	2:O:30:ILE:CD1	2.48	0.42
1:E:198:TYR:HB3	1:E:324:ILE:HG21	2.90	0.42
1:C:206:ASN:HA	1:C:207:PRO:HD3	1.81	0.42
1:C:348:ILE:HD11	1:C:367:ARG:CD	4.27	0.42
1:C:345:ILE:HG23	1:C:368:LEU:HD13	2.02	0.42
1:C:343:ALA:HB2	1:D:207:PRO:HB2	6.61	0.42
1:E:31:LEU:HD23	1:E:453:GLN:HB3	2.18	0.42
1:E:225:LYS:HD3	1:E:254:GLU:OE1	2.19	0.42
1:C:79:SER:O	1:C:82:ASN:N	2.53	0.42
2:R:100:GLN:HB2	2:S:7:VAL:HB	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:40:LEU:HD21	1:L:56:VAL:HA	2.03	0.42
1:L:187:LYS:HZ2	1:L:379:ARG:HG3	1.82	0.42
1:G:253:VAL:HG11	1:G:261:LEU:CD1	2.86	0.42
1:M:149:THR:HG23	1:M:155:PRO:CA	2.42	0.42
1:D:307:LYS:CE	2:S:34:ASP:HB3	4.65	0.42
1:B:65:HIS:O	1:B:69:ILE:HG13	2.34	0.42
1:I:222:VAL:CG1	1:I:223:GLU:H	2.32	0.42
2:S:19:ARG:HB3	2:S:40:PRO:CG	2.59	0.42
1:G:332:VAL:HG12	1:G:333:GLY:N	2.34	0.42
1:I:178:GLU:CD	1:I:392:LYS:HE3	2.45	0.42
1:N:465:ILE:HD13	1:N:480:PHE:CD1	2.55	0.42
1:D:468:GLN:HB3	1:D:487:PHE:CE2	2.55	0.42
1:K:202:TYR:CD2	1:K:266:LEU:HD11	2.54	0.42
1:M:475:ASN:HA	1:M:476:PRO:HD2	1.98	0.42
1:K:283:ARG:HH12	1:K:364:LEU:CD1	2.31	0.42
2:Q:8:ILE:CD1	2:Q:8:ILE:N	2.77	0.42
1:A:345:ILE:HG23	1:A:368:LEU:CD1	2.62	0.42
2:T:82:ILE:C	2:T:84:GLY:N	3.14	0.42
1:G:147:VAL:CG2	1:G:410:ILE:HD11	2.63	0.42
2:R:53:VAL:HG22	2:R:59:ARG:HE	1.83	0.42
1:C:209:THR:HG21	1:C:211:GLU:CD	4.45	0.42
1:N:217:ALA:HB2	1:N:245:PRO:CG	2.31	0.42
1:M:178:GLU:CD	1:M:392:LYS:HE3	2.48	0.42
1:E:359:TYR:O	1:E:363:LYS:HG2	2.19	0.42
1:C:50:THR:HG23	1:C:390:GLU:OE1	2.22	0.42
1:C:349:LYS:O	1:C:351:GLU:N	2.53	0.42
1:D:244:LYS:HA	1:D:245:PRO:HD3	1.93	0.42
1:H:411:VAL:HB	1:H:417:THR:OG1	2.19	0.42
1:N:342:GLU:O	1:N:346:ASN:ND2	2.59	0.42
1:A:284:ARG:HG3	1:A:284:ARG:HH11	1.85	0.42
1:D:233:LEU:CD2	2:R:30:ILE:HG21	2.49	0.42
1:F:124:VAL:HG13	1:F:506:LEU:HG	2.02	0.42
1:B:373:GLY:O	1:B:374:GLY:C	2.57	0.42
1:D:345:ILE:HG22	1:D:346:ASN:N	2.49	0.42
1:J:303:GLU:C	1:J:305:GLY:N	2.73	0.42
1:D:463:SER:O	1:D:467:GLN:HG2	2.19	0.42
1:B:520:GLU:HG2	1:C:29:VAL:HG13	2.07	0.42
1:F:332:VAL:HG12	1:F:333:GLY:N	2.34	0.42
1:I:253:VAL:HG12	1:I:258:LEU:HB2	2.01	0.42
1:E:190:GLU:HA	1:E:190:GLU:OE2	2.20	0.42
1:J:253:VAL:O	1:J:258:LEU:HD22	2.19	0.42
1:B:9:ASP:C	1:B:13:ARG:NH1	2.73	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:207:PRO:O	1:N:210:MET:HE2	2.19	0.42
1:D:177:GLU:O	1:D:379:ARG:HA	2.38	0.42
1:C:478:TYR:CE1	1:C:487:PHE:HB3	2.59	0.42
1:L:528:GLU:H	1:L:528:GLU:HG3	1.63	0.42
1:E:84:VAL:O	1:E:84:VAL:HG12	2.19	0.42
1:H:130:LYS:O	1:H:134:LEU:HB2	2.20	0.42
1:G:282:ASP:O	1:G:286:GLU:HG2	2.85	0.42
2:Q:18:LYS:HG2	2:Q:87:TYR:HD2	1.80	0.42
2:Q:70:VAL:O	2:Q:71:VAL:HG23	3.70	0.42
2:R:7:VAL:HG12	2:R:8:ILE:N	2.35	0.42
2:T:77:GLY:HA3	2:T:89:ILE:O	3.44	0.42
2:U:46:ILE:O	2:U:46:ILE:CG2	2.94	0.42
1:E:136:ILE:HD12	1:E:477:ARG:HH21	1.85	0.42
1:E:150:ILE:CD1	1:E:496:VAL:H	2.33	0.42
1:A:410:ILE:HD11	1:A:496:VAL:HG21	2.06	0.42
1:B:250:ALA:O	1:B:251:GLU:C	2.57	0.42
1:C:238:GLN:HB3	1:C:313:LEU:CG	2.80	0.42
1:C:291:ILE:O	1:C:294:VAL:HG22	4.89	0.42
1:G:278:PRO:HD2	1:G:288:LEU:HD21	2.53	0.42
1:G:368:LEU:HD12	1:G:368:LEU:O	2.19	0.42
1:G:235:ILE:CD1	1:G:311:ALA:CB	2.88	0.42
1:M:206:ASN:ND2	1:M:389:LYS:CE	2.79	0.42
1:B:66:LEU:HD22	1:B:522:VAL:CG1	2.46	0.42
1:G:225:LYS:HD3	1:G:254:GLU:OE1	2.45	0.42
1:J:74:LEU:HA	1:J:512:ILE:HD13	2.05	0.42
1:A:501:VAL:CG2	1:A:502:THR:N	2.83	0.42
1:L:360:ALA:C	1:L:363:LYS:HG3	3.42	0.42
1:H:300:ILE:HG22	1:H:300:ILE:O	2.20	0.42
2:S:80:ILE:CG2	2:S:81:GLU:H	2.32	0.42
2:O:8:ILE:CD1	2:O:8:ILE:N	2.79	0.42
1:J:178:GLU:CD	1:J:392:LYS:HE3	2.40	0.42
1:N:303:GLU:C	1:N:305:GLY:N	2.76	0.42
1:D:157:VAL:HG13	1:D:395:PHE:CD2	2.64	0.42
1:F:6:LEU:HD13	1:G:26:ALA:HB2	2.07	0.42
1:C:286:GLU:OE2	1:C:344:ARG:NH2	3.65	0.42
1:F:250:ALA:C	1:F:252:ASP:N	2.73	0.42
1:B:144:ILE:HD13	1:B:402:THR:CG2	2.50	0.42
1:C:13:ARG:HB3	1:C:104:LEU:HD22	2.01	0.42
1:G:9:ASP:HB3	1:G:10:GLU:H	1.61	0.42
1:C:179:SER:HB2	1:C:379:ARG:HB3	2.05	0.42
1:D:146:GLU:O	1:D:147:VAL:C	2.59	0.41
2:P:100:GLN:OXT	2:Q:7:VAL:HG23	3.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:6:THR:HG22	2:Q:7:VAL:N	4.53	0.41
1:A:350:LYS:HB3	1:B:208:GLU:CB	7.42	0.41
2:U:78:THR:CG2	2:U:80:ILE:HD11	2.50	0.41
2:U:7:VAL:HG12	2:U:8:ILE:N	2.34	0.41
2:P:13:ASP:C	2:P:13:ASP:OD1	2.71	0.41
2:P:46:ILE:HG22	2:P:46:ILE:O	2.22	0.41
1:C:229:VAL:HG12	1:C:233:LEU:CG	2.81	0.41
2:O:78:THR:CG2	2:O:79:GLU:N	2.83	0.41
1:G:278:PRO:HG3	1:G:291:ILE:HD11	2.92	0.41
1:G:345:ILE:HD12	1:G:371:LEU:O	4.95	0.41
1:E:50:THR:CG2	1:E:51:LYS:N	2.71	0.41
1:K:50:THR:CG2	1:K:52:ASP:H	2.22	0.41
1:H:40:LEU:HD21	1:H:56:VAL:HA	2.05	0.41
1:H:194:PHE:CE1	1:H:278:PRO:HD3	2.67	0.41
1:H:277:ALA:HB1	1:H:284:ARG:HD2	2.05	0.41
1:N:464:VAL:HG12	1:N:468:GLN:NE2	2.26	0.41
1:G:256:GLU:HA	1:G:259:ALA:HB3	2.35	0.41
1:C:136:ILE:CD1	1:C:477:ARG:NH2	2.76	0.41
1:I:194:PHE:N	1:I:194:PHE:CD2	2.91	0.41
1:M:218:PHE:CZ	1:M:242:THR:HG21	2.57	0.41
1:M:53:GLY:HA3	1:M:90:THR:OG1	2.19	0.41
1:C:463:SER:O	1:C:467:GLN:HG2	2.20	0.41
1:E:463:SER:O	1:E:467:GLN:HG2	2.20	0.41
1:I:438:THR:O	1:I:441:LYS:HB2	2.27	0.41
1:B:478:TYR:CZ	1:B:487:PHE:HB3	2.58	0.41
1:N:201:PRO:O	1:N:204:VAL:HG23	2.20	0.41
1:K:412:PRO:HD2	1:K:417:THR:OG1	2.21	0.41
1:K:5:ILE:HG23	1:K:5:ILE:O	2.26	0.41
1:C:475:ASN:HA	1:C:476:PRO:HD2	1.94	0.41
1:I:283:ARG:HH12	1:I:364:LEU:CD1	2.30	0.41
1:A:346:ASN:O	1:A:350:LYS:HB2	2.54	0.41
2:T:62:LEU:HD23	2:T:92:GLU:OE1	4.92	0.41
2:T:71:VAL:HB	2:T:97:ALA:HB3	2.67	0.41
1:C:150:ILE:CD1	1:C:496:VAL:N	2.83	0.41
1:L:325:THR:HG22	1:L:327:ASP:N	2.08	0.41
1:J:360:ALA:HA	1:J:363:LYS:CG	2.74	0.41
1:A:232:LEU:C	1:A:234:PRO:HD2	2.66	0.41
1:G:349:LYS:HB2	1:G:368:LEU:HD11	5.93	0.41
1:C:167:LYS:HB2	1:C:188:PHE:CE2	2.68	0.41
1:H:30:THR:HB	1:H:51:LYS:O	2.30	0.41
1:N:412:PRO:HD2	1:N:417:THR:OG1	2.20	0.41
1:N:411:VAL:HB	1:N:417:THR:OG1	2.24	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:284:ARG:HA	1:A:287:MET:HB2	2.23	0.41
1:G:367:ARG:C	1:G:369:ALA:H	2.23	0.41
1:H:307:LYS:HB2	1:H:310:ASN:ND2	2.35	0.41
1:B:124:VAL:HG13	1:B:506:LEU:HG	2.01	0.41
1:D:307:LYS:HE3	2:S:34:ASP:CB	4.77	0.41
1:G:128:VAL:HA	1:G:131:ILE:HD12	2.04	0.41
1:A:426:GLU:OE2	1:A:444:ARG:NH1	2.69	0.41
1:N:236:LEU:HD12	1:N:236:LEU:HA	1.92	0.41
1:F:23:VAL:HB	1:F:74:LEU:HD23	2.07	0.41
1:M:79:SER:C	1:M:81:THR:N	2.73	0.41
1:I:132:LYS:C	1:I:134:LEU:H	2.23	0.41
1:G:161:ILE:HD12	1:G:399:LEU:CD2	2.50	0.41
1:E:77:VAL:HG23	1:E:512:ILE:HG13	2.05	0.41
1:E:173:ILE:O	1:E:173:ILE:HG22	2.18	0.41
1:G:180:LYS:HD3	1:G:180:LYS:HA	1.86	0.41
1:L:285:LYS:O	1:L:289:LYS:HG3	2.37	0.41
1:K:132:LYS:C	1:K:134:LEU:H	2.29	0.41
1:E:256:GLU:HA	1:E:259:ALA:HB3	2.02	0.41
2:S:33:PRO:C	2:S:35:THR:H	2.24	0.41
2:Q:80:ILE:CG1	2:Q:81:GLU:N	4.43	0.41
1:F:150:ILE:HG22	1:F:151:SER:N	2.38	0.41
1:C:250:ALA:O	1:C:251:GLU:C	2.57	0.41
1:C:269:THR:HG21	2:Q:31:VAL:H	1.85	0.41
1:M:47:PRO:HG2	1:N:73:LEU:CD1	2.51	0.41
1:J:270:LEU:CD2	1:J:272:VAL:HG13	2.51	0.41
1:A:239:VAL:HG11	1:A:246:LEU:HB2	2.02	0.41
1:K:40:LEU:HD21	1:K:56:VAL:HA	2.04	0.41
1:G:214:LEU:HB3	1:G:245:PRO:HB2	2.44	0.41
1:L:77:VAL:O	1:L:80:LYS:HG2	2.24	0.41
1:J:228:ASN:HB3	1:J:231:GLU:HG2	2.03	0.41
1:H:384:THR:HG22	1:H:385:GLU:N	2.36	0.41
2:S:79:GLU:HG2	2:S:88:VAL:HG22	2.20	0.41
1:D:348:ILE:CG2	1:D:364:LEU:O	2.71	0.41
1:D:352:LEU:C	1:D:354:THR:H	2.24	0.41
1:J:526:LYS:CG	1:J:527:PRO:HD2	2.50	0.41
1:H:303:GLU:C	1:H:305:GLY:N	2.75	0.41
1:F:101:ARG:CG	1:F:102:GLU:H	2.32	0.41
1:D:340:ASP:O	1:D:344:ARG:HB2	2.19	0.41
1:B:463:SER:O	1:B:467:GLN:HG2	2.23	0.41
1:C:159:LYS:HE2	1:C:163:ASP:OD2	2.21	0.41
1:B:13:ARG:HB3	1:B:104:LEU:HD22	2.01	0.41
1:G:10:GLU:HA	1:G:13:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:180:LYS:HD3	1:D:180:LYS:HA	1.82	0.41
1:L:202:TYR:CD2	1:L:266:LEU:HD11	2.55	0.41
1:J:275:VAL:HG12	1:J:276:LYS:O	2.20	0.41
1:L:92:ALA:HB2	1:L:505:ALA:HA	2.02	0.41
1:F:193:GLN:HB2	1:F:329:THR:O	2.21	0.41
1:M:86:GLY:O	1:M:87:ASP:HB2	2.20	0.41
1:A:113:PRO:HG3	1:B:36:ARG:NH1	2.36	0.41
2:T:19:ARG:HA	2:T:42:LYS:O	2.21	0.41
1:E:264:ASN:OD1	1:E:269:THR:HG21	2.20	0.41
2:S:38:GLU:HG3	2:S:74:LYS:HZ3	1.84	0.41
1:E:136:ILE:CD1	1:E:477:ARG:NH2	2.84	0.41
1:M:173:ILE:HD11	1:M:370:LYS:HG2	2.01	0.41
2:P:45:VAL:O	2:P:46:ILE:HD13	2.21	0.41
1:A:228:ASN:ND2	1:A:231:GLU:HG3	2.34	0.41
1:C:235:ILE:HG12	1:C:311:ALA:HB3	2.02	0.41
1:B:54:VAL:HG13	1:B:89:THR:CG2	2.50	0.41
1:M:384:THR:HA	1:N:280:PHE:CD1	2.54	0.41
1:L:187:LYS:HZ1	1:L:379:ARG:HG3	2.00	0.41
1:L:283:ARG:HG2	1:L:363:LYS:NZ	2.34	0.41
1:L:225:LYS:HD3	1:L:254:GLU:OE2	2.25	0.41
1:H:384:THR:HB	1:H:387:GLU:H	1.86	0.41
1:A:198:TYR:CE1	1:A:326:LYS:HA	2.84	0.41
1:J:526:LYS:HD2	1:J:527:PRO:HD2	2.00	0.41
1:J:79:SER:O	1:J:81:THR:N	2.53	0.41
1:A:29:VAL:CG1	1:G:520:GLU:HB3	2.49	0.41
1:L:475:ASN:HA	1:L:476:PRO:HD2	1.94	0.41
1:I:487:PHE:C	1:I:488:VAL:HG13	2.41	0.41
1:L:285:LYS:HG2	1:L:289:LYS:HE3	2.06	0.41
1:A:489:ASP:HB3	1:A:492:GLU:HB3	2.07	0.41
1:J:8:PHE:O	1:J:11:ALA:HB3	2.20	0.41
1:I:210:MET:HE2	1:I:210:MET:HA	2.02	0.41
1:L:412:PRO:HB3	1:L:490:MET:HB2	2.09	0.41
1:F:142:LYS:O	1:F:146:GLU:HG3	2.20	0.41
1:K:360:ALA:HA	1:K:363:LYS:HG2	2.03	0.41
2:Q:82:ILE:O	2:Q:83:ASP:HB2	2.58	0.41
1:D:359:TYR:OH	1:D:363:LYS:NZ	3.08	0.41
2:U:20:ILE:HG13	2:U:43:GLY:C	3.81	0.41
1:E:490:MET:CE	1:E:495:ILE:HG21	2.50	0.41
1:G:150:ILE:O	1:G:153:ASN:N	2.54	0.41
1:I:217:ALA:O	1:I:318:ARG:HB2	2.23	0.41
1:F:239:VAL:O	1:F:242:THR:N	2.41	0.41
1:J:283:ARG:O	1:J:287:MET:HG3	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:203:PHE:CG	1:C:273:ALA:HA	2.75	0.41
1:C:287:MET:O	1:C:291:ILE:HG13	2.22	0.41
1:M:322:VAL:HG22	1:M:331:ILE:HG12	2.03	0.41
1:G:54:VAL:HG13	1:G:89:THR:HG21	2.07	0.41
1:H:283:ARG:CD	1:H:363:LYS:HZ1	2.76	0.41
1:F:33:PRO:HD3	4:F:602:ADP:C5	2.68	0.41
1:F:37:ASN:HB3	1:F:50:THR:O	2.20	0.41
1:H:37:ASN:HD21	1:H:51:LYS:CE	2.27	0.41
1:C:66:LEU:HD22	1:C:522:VAL:CG1	2.55	0.41
1:D:246:LEU:CB	1:D:272:VAL:HG12	2.42	0.41
1:L:309:GLU:N	1:L:309:GLU:OE1	2.41	0.41
1:I:46:SER:CB	1:I:47:PRO:HD2	2.39	0.41
1:L:117:LYS:O	1:L:120:ILE:N	2.63	0.41
1:G:267:ARG:HD2	2:U:31:VAL:HG21	3.83	0.41
1:D:228:ASN:HD21	1:D:230:ARG:HB2	1.85	0.41
1:D:20:VAL:HG13	1:D:74:LEU:HD13	2.02	0.41
1:I:278:PRO:O	1:I:284:ARG:HD3	2.20	0.41
1:F:345:ILE:HG22	1:F:346:ASN:N	2.36	0.41
1:J:117:LYS:O	1:J:118:ARG:C	2.61	0.41
1:D:101:ARG:HG3	1:D:102:GLU:H	1.89	0.41
1:G:478:TYR:CE1	1:G:487:PHE:HB3	2.59	0.41
1:C:319:ALA:HB1	1:C:332:VAL:O	2.31	0.41
1:B:157:VAL:O	1:B:161:ILE:HG12	2.20	0.41
2:Q:24:PRO:HG2	2:Q:25:LYS:N	2.63	0.41
1:F:260:THR:HG22	1:F:264:ASN:ND2	2.36	0.41
1:J:132:LYS:C	1:J:134:LEU:H	2.26	0.41
2:T:91:SER:O	2:T:92:GLU:C	3.16	0.41
2:U:12:GLY:HA2	2:U:51:GLY:H	5.74	0.41
1:G:168:VAL:HG12	1:G:172:GLY:CA	2.30	0.41
1:C:218:PHE:CE1	1:C:244:LYS:HB2	2.65	0.41
2:O:81:GLU:CG	2:O:85:GLU:H	2.31	0.41
2:O:80:ILE:HG13	2:U:41:GLN:OE1	2.21	0.41
1:B:167:LYS:HB2	1:B:188:PHE:CE2	2.54	0.41
1:M:219:ILE:HD13	1:M:331:ILE:HD13	2.03	0.41
1:B:212:ALA:HB3	1:B:324:ILE:CB	2.58	0.41
1:B:79:SER:O	1:B:82:ASN:N	2.53	0.41
1:D:235:ILE:HG12	1:D:311:ALA:HB3	2.01	0.41
1:L:87:ASP:O	1:L:501:VAL:HG13	2.21	0.41
1:I:411:VAL:HB	1:I:417:THR:OG1	2.24	0.41
1:M:239:VAL:HG11	1:M:246:LEU:HB2	2.06	0.41
1:M:261:LEU:HD22	1:M:272:VAL:HG21	2.02	0.41
1:G:312:THR:HG22	1:G:313:LEU:N	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:367:ARG:C	1:G:369:ALA:N	2.73	0.41
1:J:295:THR:CG2	1:J:318:ARG:N	2.84	0.41
1:H:219:ILE:O	1:H:221:ILE:HG13	2.21	0.41
2:P:97:ALA:HA	2:Q:11:LEU:HG	2.25	0.41
1:D:501:VAL:CG2	1:D:502:THR:N	2.84	0.41
1:E:408:GLU:OE1	1:E:503:ARG:NH2	2.76	0.41
1:L:384:THR:HB	1:L:387:GLU:H	1.89	0.41
1:A:529:LYS:HZ1	1:B:63:GLU:HB2	1.85	0.41
1:D:149:THR:CG2	1:D:155:PRO:HA	2.46	0.41
1:I:79:SER:C	1:I:81:THR:N	2.74	0.41
1:I:372:ALA:O	1:I:374:GLY:N	2.60	0.41
1:M:79:SER:O	1:M:81:THR:N	2.53	0.41
2:O:34:ASP:HA	2:O:37:LYS:HE2	2.02	0.41
1:E:157:VAL:HG13	1:E:395:PHE:CD2	2.55	0.41
1:N:313:LEU:HG	1:N:313:LEU:O	2.21	0.41
1:D:17:GLU:HB2	1:D:104:LEU:CD1	2.51	0.41
1:F:31:LEU:HD23	1:F:453:GLN:HB3	2.02	0.41
1:A:286:GLU:OE1	1:A:344:ARG:NH2	2.53	0.41
1:J:19:GLY:HA3	1:J:67:GLU:O	2.23	0.41
1:I:18:ARG:HD2	1:I:67:GLU:OE1	2.26	0.41
1:B:103:GLY:O	1:B:107:VAL:HG23	2.31	0.41
1:L:8:PHE:N	1:L:8:PHE:CD1	2.95	0.41
1:A:481:ASN:O	1:A:483:ALA:N	2.54	0.41
1:G:428:LEU:HD12	1:G:428:LEU:O	2.41	0.41
1:K:112:ASN:HA	1:K:113:PRO:HD3	1.96	0.41
1:C:428:LEU:O	1:C:428:LEU:HD12	2.19	0.41
1:A:280:PHE:O	1:A:281:GLY:C	2.59	0.41
1:M:298:THR:N	1:M:315:MET:O	2.55	0.41
1:K:283:ARG:HD3	1:K:363:LYS:HE3	2.03	0.41
1:A:345:ILE:HG22	1:A:346:ASN:N	2.36	0.41
2:T:63:GLU:HB3	2:U:11:LEU:HD11	5.14	0.41
2:U:10:PRO:O	2:U:11:LEU:HD22	4.23	0.41
2:O:97:ALA:HB1	2:P:9:LYS:O	2.21	0.41
1:E:214:LEU:HB3	1:E:245:PRO:HB2	2.02	0.41
1:C:241:GLN:HE21	2:Q:28:GLY:HA2	1.85	0.41
1:G:359:TYR:O	1:G:363:LYS:HG2	2.57	0.41
1:E:220:LEU:HD11	1:E:300:ILE:CD1	2.67	0.41
1:E:250:ALA:C	1:E:252:ASP:N	2.75	0.41
1:E:277:ALA:HA	1:E:278:PRO:HD3	1.96	0.41
1:E:344:ARG:HD2	1:E:344:ARG:HA	1.98	0.41
1:D:50:THR:CG2	1:D:52:ASP:HB3	2.48	0.41
2:P:53:VAL:HG22	2:P:59:ARG:HG2	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:411:VAL:O	1:H:496:VAL:CG1	2.76	0.41
1:I:46:SER:HB2	1:I:47:PRO:CD	2.39	0.41
1:G:232:LEU:HB3	1:G:236:LEU:CD1	2.51	0.41
1:K:342:GLU:HA	1:K:345:ILE:HD12	2.02	0.41
1:H:408:GLU:OE2	1:H:500:LYS:HG3	2.20	0.41
1:J:232:LEU:CD2	1:J:236:LEU:HB2	2.50	0.41
1:D:72:GLN:HE22	1:D:75:LYS:HZ3	1.80	0.41
1:M:465:ILE:HD13	1:M:480:PHE:CD1	2.64	0.41
1:E:348:ILE:CD1	1:E:367:ARG:NE	2.84	0.41
1:E:23:VAL:HB	1:E:74:LEU:HD23	2.06	0.41
1:M:303:GLU:C	1:M:305:GLY:N	2.77	0.41
1:J:53:GLY:HA3	1:J:90:THR:OG1	2.27	0.41
1:J:27:VAL:CG1	1:J:90:THR:HG23	2.55	0.41
1:F:220:LEU:HG	1:F:222:VAL:HG23	2.12	0.41
1:D:14:ARG:HD3	1:D:14:ARG:HA	2.00	0.41
1:F:402:THR:O	1:F:405:ALA:HB3	2.53	0.41
1:F:216:ASP:HA	1:F:319:ALA:O	2.28	0.41
1:J:473:THR:O	1:J:473:THR:HG22	2.21	0.41
1:I:475:ASN:HA	1:I:476:PRO:HD2	1.95	0.41
1:N:8:PHE:O	1:N:11:ALA:HB3	2.21	0.41
1:D:123:ALA:HA	1:D:428:LEU:HD23	2.02	0.41
2:T:69:ILE:HB	2:T:99:LEU:CD1	4.84	0.41
1:H:217:ALA:HB1	1:H:245:PRO:O	2.20	0.41
1:I:325:THR:CG2	1:I:326:LYS:N	2.87	0.41
1:C:204:VAL:HG13	1:C:210:MET:C	3.40	0.41
1:C:235:ILE:HD13	1:C:235:ILE:HG21	1.80	0.41
1:C:239:VAL:HG11	1:C:246:LEU:HB2	2.03	0.41
1:C:283:ARG:HH11	1:C:363:LYS:HB3	2.80	0.41
2:O:17:VAL:CG1	2:O:43:GLY:HA3	2.54	0.41
2:O:20:ILE:O	2:O:40:PRO:HB3	2.27	0.41
1:G:352:LEU:C	1:G:354:THR:H	2.24	0.41
1:L:30:THR:HB	1:L:51:LYS:O	2.33	0.41
1:F:198:TYR:HD1	1:F:198:TYR:O	2.03	0.41
1:C:351:GLU:HG2	1:D:326:LYS:NZ	5.13	0.41
1:G:265:LYS:NZ	1:G:271:SER:HB2	5.26	0.41
1:L:283:ARG:HD3	1:L:363:LYS:CE	2.51	0.41
1:I:117:LYS:O	1:I:118:ARG:C	2.58	0.41
2:S:69:ILE:O	2:S:98:VAL:HG13	2.21	0.41
1:H:27:VAL:CG1	1:H:90:THR:HG23	2.67	0.41
1:J:312:THR:HG22	1:J:313:LEU:N	2.39	0.41
1:H:312:THR:HG22	1:H:313:LEU:N	2.39	0.41
1:G:40:LEU:HD13	1:G:59:GLU:CG	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:101:ARG:CG	1:B:102:GLU:H	2.42	0.41
1:G:144:ILE:HD13	1:G:402:THR:CG2	2.55	0.41
1:E:123:ALA:HA	1:E:428:LEU:HD23	2.02	0.41
1:A:31:LEU:HD23	1:A:453:GLN:HB3	2.15	0.41
1:E:113:PRO:HD3	1:F:36:ARG:NH2	2.49	0.41
1:N:478:TYR:CZ	1:N:487:PHE:HB3	2.55	0.41
1:I:285:LYS:O	1:I:289:LYS:HG3	2.25	0.41
1:F:188:PHE:CD1	1:F:188:PHE:N	2.89	0.41
1:G:356:ASP:O	1:G:357:SER:C	2.59	0.41
1:D:194:PHE:CE1	1:D:329:THR:HB	2.56	0.41
1:D:136:ILE:CD1	1:D:477:ARG:NH2	2.79	0.41
2:S:33:PRO:HD2	2:S:36:ALA:CB	3.03	0.41
1:B:238:GLN:HB3	1:B:313:LEU:HG	2.26	0.41
2:R:9:LYS:HA	2:R:10:PRO:HD2	1.94	0.41
2:R:10:PRO:HB2	2:R:14:ARG:O	2.28	0.41
2:R:62:LEU:O	2:R:64:VAL:N	2.54	0.41
1:A:345:ILE:C	1:A:347:GLY:N	2.74	0.41
1:A:351:GLU:OE1	1:A:364:LEU:HD13	2.43	0.41
2:T:52:ARG:HG3	2:T:52:ARG:O	2.20	0.41
2:O:6:THR:HG22	2:O:7:VAL:N	4.46	0.41
2:O:9:LYS:HE2	2:U:100:GLN:OE1	2.21	0.41
2:U:13:ASP:HB2	2:U:62:LEU:CD2	2.39	0.41
2:U:62:LEU:O	2:U:64:VAL:N	2.55	0.41
2:O:54:LEU:CG	2:P:55:GLU:O	2.66	0.41
1:B:150:ILE:HD11	1:B:494:GLY:O	2.21	0.41
1:E:136:ILE:O	1:E:410:ILE:HG22	2.30	0.41
1:E:258:LEU:O	1:E:262:VAL:HG23	2.45	0.41
1:C:203:PHE:CE2	1:C:272:VAL:HG23	4.12	0.41
1:C:363:LYS:HD3	1:C:366:GLU:OE2	3.00	0.41
1:C:239:VAL:HG22	1:C:313:LEU:CD2	2.87	0.41
1:M:219:ILE:O	1:M:221:ILE:HG13	2.22	0.41
1:F:168:VAL:O	1:F:172:GLY:HA3	2.21	0.41
1:F:66:LEU:CD2	1:F:522:VAL:HG11	2.43	0.41
1:B:50:THR:CG2	1:B:52:ASP:HB3	2.50	0.41
1:B:54:VAL:CG2	1:B:89:THR:HG21	2.50	0.41
1:D:198:TYR:HB3	1:D:324:ILE:HG21	2.02	0.41
1:D:198:TYR:O	1:D:198:TYR:CD1	2.72	0.41
1:E:304:LEU:O	1:F:263:VAL:HG22	2.21	0.41
2:S:48:VAL:HG11	2:S:64:VAL:O	2.19	0.41
2:S:14:ARG:CG	2:S:14:ARG:NH1	2.83	0.41
1:L:246:LEU:HB3	1:L:272:VAL:CG1	2.47	0.41
1:H:490:MET:HA	1:H:490:MET:HE2	2.14	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:20:ILE:CG1	2:Q:43:GLY:HA2	2.46	0.41
1:N:179:SER:HB2	1:N:379:ARG:CB	2.43	0.41
1:I:246:LEU:HB3	1:I:272:VAL:CG1	2.49	0.41
1:I:149:THR:HG23	1:I:155:PRO:CA	2.40	0.41
1:A:173:ILE:HD12	1:A:366:GLU:CA	2.45	0.41
1:I:74:LEU:HA	1:I:512:ILE:HD13	2.06	0.41
1:H:278:PRO:O	1:H:284:ARG:HD3	2.21	0.41
1:K:194:PHE:HB2	1:K:278:PRO:HB3	2.07	0.41
1:L:360:ALA:O	1:L:363:LYS:HG2	2.21	0.41
1:D:128:VAL:HA	1:D:131:ILE:HD12	2.01	0.41
1:A:68:ASN:O	1:A:72:GLN:HG2	2.20	0.41
1:G:229:VAL:HG11	2:U:32:LEU:HD11	4.52	0.41
1:N:228:ASN:ND2	1:N:230:ARG:HB3	2.32	0.41
1:L:277:ALA:HB1	1:L:284:ARG:HD2	2.08	0.41
1:K:228:ASN:ND2	1:K:230:ARG:HB3	2.29	0.41
1:J:344:ARG:HH11	1:J:344:ARG:HG3	1.84	0.41
1:N:247:LEU:HD22	1:N:322:VAL:CG1	2.49	0.41
1:C:72:GLN:O	1:C:75:LYS:N	2.54	0.41
1:F:455:ALA:O	1:F:458:ALA:HB3	2.41	0.41
1:E:231:GLU:HA	1:E:309:GLU:HG2	2.03	0.41
1:J:239:VAL:HG22	1:J:313:LEU:CD1	2.56	0.41
1:E:332:VAL:HG12	1:E:333:GLY:N	2.53	0.41
1:K:178:GLU:OE2	1:K:392:LYS:HE3	2.20	0.41
1:D:437:ALA:O	1:D:441:LYS:HG3	2.21	0.41
1:B:199:ILE:HD12	1:B:274:ALA:HB1	2.03	0.41
1:D:144:ILE:HD13	1:D:402:THR:CG2	2.70	0.41
1:F:250:ALA:O	1:F:251:GLU:C	2.60	0.41
1:C:332:VAL:HG12	1:C:333:GLY:N	2.36	0.41
1:F:289:LYS:HB3	1:F:344:ARG:NH2	3.43	0.41
1:F:24:ALA:O	1:F:28:LYS:HG2	2.20	0.41
1:A:29:VAL:CG1	1:G:520:GLU:CG	3.01	0.41
1:A:215:GLU:O	1:A:216:ASP:C	2.67	0.41
1:A:123:ALA:HB2	1:A:440:ALA:HA	2.03	0.41
1:C:123:ALA:HA	1:C:428:LEU:HD23	2.07	0.41
1:C:205:THR:HB	1:C:213:VAL:H	1.92	0.41
1:A:296:GLY:CA	1:A:336:GLY:HA2	2.67	0.41
1:N:202:TYR:HD2	1:N:266:LEU:HD11	1.85	0.41
1:D:296:GLY:CA	1:D:336:GLY:HA2	2.59	0.41
1:A:475:ASN:HA	1:A:476:PRO:HD2	1.93	0.41
2:R:62:LEU:C	2:R:64:VAL:N	2.75	0.41
1:D:355:THR:CG2	1:D:361:ARG:HG2	2.50	0.41
1:E:238:GLN:C	1:E:313:LEU:HD21	2.41	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:45:VAL:O	2:O:46:ILE:HD13	2.24	0.41
2:T:54:LEU:HD13	2:U:57:GLY:CA	5.78	0.41
1:M:413:GLY:HA2	1:M:497:ASP:OD2	2.26	0.41
1:N:50:THR:HG21	1:N:55:THR:HB	2.02	0.41
1:B:222:VAL:HG22	1:B:300:ILE:HD12	2.25	0.41
1:E:79:SER:O	1:E:82:ASN:N	2.54	0.41
1:K:297:GLY:CA	1:K:317:GLY:N	2.84	0.41
1:N:362:GLU:HA	1:N:365:GLN:CG	2.51	0.41
1:M:77:VAL:HB	1:M:512:ILE:HD11	2.03	0.41
1:D:503:ARG:HG2	1:D:507:GLN:OE1	2.40	0.41
1:D:74:LEU:HD21	1:D:93:THR:HG23	2.03	0.41
1:F:220:LEU:HD23	1:F:248:ILE:HG23	2.13	0.41
1:F:421:ALA:O	1:F:425:VAL:HG23	2.20	0.41
1:G:152:ALA:HB2	1:G:398:ALA:HB2	2.08	0.41
2:T:46:ILE:O	2:T:46:ILE:HG22	2.24	0.41
1:M:478:TYR:CZ	1:M:487:PHE:HB3	2.56	0.41
1:K:283:ARG:HH12	1:K:363:LYS:HG3	2.25	0.40
1:D:359:TYR:CZ	1:D:363:LYS:HE2	2.56	0.40
2:S:97:ALA:HB2	2:T:10:PRO:HA	2.19	0.40
2:U:50:THR:HG22	2:U:51:GLY:O	2.21	0.40
2:P:81:GLU:HG3	2:P:85:GLU:O	2.21	0.40
2:R:50:THR:HG23	2:R:59:ARG:HD3	2.26	0.40
1:N:217:ALA:HB1	1:N:245:PRO:O	2.21	0.40
1:F:515:LEU:O	1:F:518:THR:OG1	2.45	0.40
1:E:278:PRO:HG3	1:E:291:ILE:CD1	2.50	0.40
1:E:296:GLY:CA	1:E:336:GLY:HA2	2.58	0.40
2:R:19:ARG:HA	2:R:42:LYS:O	2.20	0.40
1:F:237:GLU:OE2	2:T:28:GLY:N	2.54	0.40
2:S:9:LYS:HA	2:S:10:PRO:HD2	1.94	0.40
1:N:187:LYS:HZ2	1:N:379:ARG:HG3	1.98	0.40
1:L:221:ILE:HD11	1:L:291:ILE:HG22	2.04	0.40
2:S:53:VAL:HG22	2:S:59:ARG:HE	2.18	0.40
1:N:295:THR:HG22	1:N:317:GLY:CA	2.51	0.40
2:P:25:LYS:HG2	2:P:31:VAL:CG2	2.77	0.40
1:C:247:LEU:HD22	1:C:322:VAL:CG1	3.11	0.40
1:M:222:VAL:CG1	1:M:223:GLU:H	2.35	0.40
2:U:72:PHE:CZ	2:U:90:LEU:HD21	4.24	0.40
1:L:303:GLU:C	1:L:305:GLY:N	2.75	0.40
1:A:159:LYS:HE2	1:A:163:ASP:OD2	2.21	0.40
1:B:29:VAL:O	1:B:29:VAL:HG12	2.28	0.40
1:F:13:ARG:HB3	1:F:104:LEU:HD22	2.04	0.40
1:E:478:TYR:CZ	1:E:487:PHE:HB3	2.57	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:167:LYS:HB2	1:F:188:PHE:CE2	2.57	0.40
1:E:404:ALA:HB1	1:E:500:LYS:HB3	2.02	0.40
1:M:375:VAL:O	1:M:375:VAL:HG12	2.20	0.40
1:J:478:TYR:CZ	1:J:487:PHE:HB3	2.56	0.40
1:C:435:ASP:O	1:C:438:THR:HB	2.26	0.40
2:Q:13:ASP:O	2:Q:62:LEU:CD2	2.69	0.40
2:Q:41:GLN:OE1	2:R:80:ILE:HG12	3.93	0.40
1:A:351:GLU:HG3	1:B:210:MET:HE1	8.32	0.40
1:L:189:VAL:CG1	1:L:190:GLU:N	2.61	0.40
2:O:14:ARG:NE	2:U:96:LEU:HD23	2.33	0.40
2:O:92:GLU:HA	2:O:95:LEU:HD12	2.38	0.40
2:T:18:LYS:NZ	2:T:85:GLU:CD	2.80	0.40
2:U:45:VAL:O	2:U:46:ILE:HD13	2.20	0.40
1:C:150:ILE:HD12	1:C:496:VAL:H	1.86	0.40
2:P:19:ARG:HB3	2:P:40:PRO:HG2	2.05	0.40
1:B:251:GLU:CG	1:B:284:ARG:HH12	2.10	0.40
1:C:238:GLN:O	1:C:313:LEU:HD11	2.61	0.40
1:E:54:VAL:HG13	1:E:89:THR:CG2	2.52	0.40
1:I:37:ASN:ND2	1:I:51:LYS:HE2	2.34	0.40
2:S:12:GLY:O	2:S:13:ASP:CG	3.60	0.40
1:L:80:LYS:HE3	1:L:508:ASN:OD1	2.21	0.40
1:A:47:PRO:HG3	1:G:69:ILE:HG23	2.03	0.40
2:S:98:VAL:HB	2:T:9:LYS:HB2	2.03	0.40
1:K:268:GLY:O	1:L:228:ASN:HB2	2.21	0.40
1:D:229:VAL:HG11	2:R:32:LEU:HD21	2.02	0.40
1:G:206:ASN:OD1	1:G:207:PRO:HD2	2.51	0.40
1:C:17:GLU:HB2	1:C:104:LEU:CD1	2.62	0.40
1:F:180:LYS:HA	1:F:180:LYS:HD3	1.81	0.40
1:C:161:ILE:HD12	1:C:399:LEU:HD21	2.03	0.40
1:C:180:LYS:HA	1:C:180:LYS:HD3	1.87	0.40
1:C:478:TYR:CZ	1:C:487:PHE:HB3	2.61	0.40
1:C:123:ALA:HB2	1:C:440:ALA:HA	2.07	0.40
1:E:218:PHE:CE1	1:E:244:LYS:HB2	2.64	0.40
2:O:14:ARG:HG3	2:O:14:ARG:NH1	2.30	0.40
2:O:62:LEU:C	2:O:64:VAL:N	2.76	0.40
2:O:9:LYS:O	2:U:97:ALA:CA	2.68	0.40
2:T:69:ILE:CB	2:T:99:LEU:HD12	5.79	0.40
1:C:490:MET:HE1	1:C:495:ILE:HG21	2.10	0.40
1:A:146:GLU:O	1:A:147:VAL:C	2.59	0.40
1:L:197:GLY:HA3	1:L:325:THR:O	2.21	0.40
1:C:218:PHE:O	1:C:246:LEU:HD12	2.20	0.40
1:C:281:GLY:C	1:C:283:ARG:N	3.13	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:281:GLY:C	1:G:283:ARG:N	3.18	0.40
1:E:341:ILE:C	1:E:343:ALA:N	2.73	0.40
1:J:50:THR:HG21	1:J:55:THR:HB	2.03	0.40
1:L:270:LEU:CD2	1:L:272:VAL:HG13	2.45	0.40
1:C:304:LEU:HD23	1:C:304:LEU:HA	4.50	0.40
1:F:360:ALA:O	1:F:364:LEU:HG	2.22	0.40
1:K:194:PHE:CE1	1:K:278:PRO:HD3	2.73	0.40
1:G:503:ARG:HG2	1:G:507:GLN:OE1	2.21	0.40
1:K:337:LYS:C	1:K:339:GLU:N	2.74	0.40
1:A:40:LEU:HD13	1:A:59:GLU:CG	2.62	0.40
1:H:465:ILE:HD13	1:H:480:PHE:CD1	2.63	0.40
1:L:26:ALA:HB2	1:M:6:LEU:HD22	2.03	0.40
1:E:10:GLU:HA	1:E:13:ARG:HH11	1.86	0.40
1:G:506:LEU:HD12	1:G:506:LEU:O	2.22	0.40
1:N:390:GLU:OE1	1:N:394:ARG:NH1	2.62	0.40
1:D:88:GLY:HA2	4:D:602:ADP:O2B	2.22	0.40
1:C:249:ILE:HD11	1:C:331:ILE:HD11	2.68	0.40
2:Q:18:LYS:HZ1	2:Q:85:GLU:CD	2.24	0.40
2:R:78:THR:HG22	2:R:80:ILE:HD11	2.02	0.40
1:E:312:THR:HG22	1:E:313:LEU:N	2.37	0.40
1:C:218:PHE:CE1	1:C:242:THR:HG21	2.57	0.40
2:Q:30:ILE:HG22	2:Q:31:VAL:N	2.93	0.40
2:S:11:LEU:HD12	2:S:11:LEU:N	2.36	0.40
1:M:206:ASN:HD21	1:M:389:LYS:CG	2.35	0.40
1:A:244:LYS:HA	1:A:245:PRO:HD3	1.95	0.40
1:A:265:LYS:HA	1:A:270:LEU:O	2.21	0.40
1:K:232:LEU:C	1:K:234:PRO:HD2	2.44	0.40
1:I:342:GLU:O	1:I:346:ASN:ND2	2.56	0.40
1:I:267:ARG:HG2	1:J:256:GLU:CD	2.42	0.40
1:M:179:SER:HB2	1:M:379:ARG:CB	2.41	0.40
1:G:218:PHE:HE1	1:G:244:LYS:HD2	4.23	0.40
1:I:225:LYS:HD3	1:I:254:GLU:OE2	2.21	0.40
1:B:349:LYS:C	1:B:351:GLU:N	2.71	0.40
1:B:351:GLU:CD	1:B:364:LEU:HD13	2.66	0.40
1:N:178:GLU:CD	1:N:392:LYS:HE3	2.42	0.40
1:B:367:ARG:C	1:B:369:ALA:N	2.75	0.40
1:A:101:ARG:HG3	1:A:102:GLU:H	2.02	0.40
1:E:520:GLU:HG2	1:F:29:VAL:HG13	2.02	0.40
1:F:10:GLU:HA	1:F:13:ARG:HH11	1.90	0.40
1:D:123:ALA:HB3	1:D:443:VAL:HG21	2.03	0.40
1:I:285:LYS:HG2	1:I:289:LYS:HE3	2.07	0.40
1:B:403:ARG:HD3	1:B:403:ARG:HA	2.02	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:89:ILE:HG22	2:R:89:ILE:O	2.20	0.40
1:M:160:LEU:HD22	1:M:186:LEU:HB2	2.05	0.40
1:G:167:LYS:HB2	1:G:188:PHE:CE2	2.56	0.40
1:K:360:ALA:HA	1:K:363:LYS:CG	2.70	0.40
2:O:48:VAL:HG13	2:O:62:LEU:CD1	2.61	0.40
2:O:96:LEU:HD23	2:P:14:ARG:HE	1.85	0.40
2:O:17:VAL:HG21	2:O:90:LEU:HD12	2.19	0.40
1:G:283:ARG:HH12	1:G:363:LYS:CD	4.44	0.40
1:M:217:ALA:O	1:M:318:ARG:HB2	2.31	0.40
1:M:197:GLY:CA	1:M:325:THR:O	2.82	0.40
1:M:178:GLU:CD	1:M:323:ARG:NH2	2.74	0.40
1:E:343:ALA:HB2	1:F:207:PRO:HB3	2.40	0.40
1:A:37:ASN:HB3	1:A:50:THR:O	2.33	0.40
2:S:92:GLU:HA	2:S:95:LEU:HD12	2.04	0.40
1:C:306:PHE:CE2	1:C:315:MET:SD	4.01	0.40
1:L:66:LEU:O	1:L:69:ILE:HB	2.33	0.40
1:D:506:LEU:HD12	1:D:506:LEU:O	2.23	0.40
1:F:284:ARG:HG3	1:F:284:ARG:NH1	2.37	0.40
1:C:4:LYS:HE3	1:D:59:GLU:O	2.30	0.40
1:C:460:TYR:HB3	1:C:465:ILE:HD11	2.10	0.40
1:I:53:GLY:HA3	1:I:90:THR:OG1	2.22	0.40
1:F:222:VAL:HA	1:F:300:ILE:HB	2.03	0.40
1:C:192:TYR:HD2	1:C:192:TYR:C	3.06	0.40
1:C:9:ASP:HB3	1:C:10:GLU:H	1.55	0.40
1:C:457:ASN:N	1:C:457:ASN:ND2	2.70	0.40
1:C:157:VAL:HG13	1:C:395:PHE:CD2	2.57	0.40
1:D:232:LEU:HB3	1:D:236:LEU:HD11	2.03	0.40
1:I:338:LYS:HG2	1:I:338:LYS:O	2.29	0.40
1:L:437:ALA:O	1:L:441:LYS:HG3	2.27	0.40
2:P:54:LEU:HB3	2:P:58:GLN:HB3	2.04	0.40
1:A:194:PHE:CE1	1:A:329:THR:HB	2.56	0.40

All (9) 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	Distance(Å)	Clash(Å)
1:E:474:LYS:CE	1:N:472:GLU:OE1[1_455]	1.85	0.35
1:K:474:LYS:NZ	1:N:493:ALA:O[1_455]	1.93	0.27
1:d:474:LYS:CE	1:g:133:ALA:CB[1_455]	1.93	0.27
1:d:474:LYS:NZ	1:g:133:ALA:CB[1_455]	1.95	0.25
1:C:141:ARG:NH2	1:L:353:GLU:OE1[1_565]	2.11	0.09
1:E:473:THR:OG1	1:N:474:LYS:CE[1_455]	2.17	0.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:474:LYS:NZ	1:N:472:GLU:OE1[1_455]	2.18	0.02
1:d:474:LYS:CD	1:g:133:ALA:CB[1_455]	2.19	0.01
1:d:474:LYS:NZ	1:g:129:GLU:O[1_455]	2.19	0.01

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	525/543 (97%)	456 (87%)	56 (11%)	13 (2%)	9	28
1	B	525/543 (97%)	458 (87%)	55 (10%)	12 (2%)	10	31
1	C	524/543 (96%)	451 (86%)	58 (11%)	15 (3%)	7	23
1	D	524/543 (96%)	441 (84%)	67 (13%)	16 (3%)	7	21
1	E	524/543 (96%)	440 (84%)	65 (12%)	19 (4%)	5	17
1	F	527/543 (97%)	453 (86%)	60 (11%)	14 (3%)	8	25
1	G	523/543 (96%)	447 (86%)	65 (12%)	11 (2%)	11	33
1	H	524/543 (96%)	457 (87%)	60 (12%)	7 (1%)	18	51
1	I	523/543 (96%)	457 (87%)	61 (12%)	5 (1%)	22	60
1	J	523/543 (96%)	456 (87%)	58 (11%)	9 (2%)	14	42
1	K	523/543 (96%)	458 (88%)	57 (11%)	8 (2%)	15	46
1	L	524/543 (96%)	454 (87%)	63 (12%)	7 (1%)	18	51
1	M	523/543 (96%)	455 (87%)	61 (12%)	7 (1%)	18	51
1	N	524/543 (96%)	457 (87%)	61 (12%)	6 (1%)	21	57
1	a	525/543 (97%)	453 (86%)	57 (11%)	15 (3%)	7	23
1	b	524/543 (96%)	452 (86%)	61 (12%)	11 (2%)	11	33
1	c	525/543 (97%)	446 (85%)	61 (12%)	18 (3%)	6	19
1	d	525/543 (97%)	451 (86%)	56 (11%)	18 (3%)	6	19
1	e	524/543 (96%)	455 (87%)	57 (11%)	12 (2%)	10	31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	f	525/543 (97%)	458 (87%)	55 (10%)	12 (2%)	10	31
1	g	524/543 (96%)	450 (86%)	60 (12%)	14 (3%)	8	25
1	h	523/543 (96%)	459 (88%)	57 (11%)	7 (1%)	18	51
1	i	523/543 (96%)	456 (87%)	58 (11%)	9 (2%)	14	42
1	j	523/543 (96%)	454 (87%)	60 (12%)	9 (2%)	14	42
1	k	523/543 (96%)	456 (87%)	61 (12%)	6 (1%)	21	57
1	l	523/543 (96%)	457 (87%)	59 (11%)	7 (1%)	18	51
1	m	523/543 (96%)	465 (89%)	51 (10%)	7 (1%)	18	51
1	n	523/543 (96%)	459 (88%)	58 (11%)	6 (1%)	21	57
2	O	94/100 (94%)	74 (79%)	13 (14%)	7 (7%)	2	3
2	P	92/100 (92%)	72 (78%)	13 (14%)	7 (8%)	2	3
2	Q	94/100 (94%)	75 (80%)	12 (13%)	7 (7%)	2	3
2	R	94/100 (94%)	75 (80%)	11 (12%)	8 (8%)	1	2
2	S	94/100 (94%)	72 (77%)	17 (18%)	5 (5%)	3	9
2	T	94/100 (94%)	72 (77%)	15 (16%)	7 (7%)	2	3
2	U	94/100 (94%)	77 (82%)	10 (11%)	7 (7%)	2	3
2	o	94/100 (94%)	75 (80%)	13 (14%)	6 (6%)	2	5
2	p	94/100 (94%)	72 (77%)	15 (16%)	7 (7%)	2	3
2	q	94/100 (94%)	58 (62%)	21 (22%)	15 (16%)	0	1
2	r	94/100 (94%)	71 (76%)	17 (18%)	6 (6%)	2	5
2	s	94/100 (94%)	76 (81%)	13 (14%)	5 (5%)	3	9
2	t	94/100 (94%)	69 (73%)	17 (18%)	8 (8%)	1	2
2	u	94/100 (94%)	66 (70%)	18 (19%)	10 (11%)	1	1
All	All	15983/16604 (96%)	13715 (86%)	1863 (12%)	405 (2%)	9	28

All (405) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	9	ASP
1	A	278	PRO
1	B	9	ASP
1	B	278	PRO
1	C	9	ASP
1	C	278	PRO

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Mol	Chain	Res	Type
1	C	279	GLY
1	D	9	ASP
1	D	190	GLU
1	D	278	PRO
1	E	9	ASP
1	E	292	ALA
1	E	293	ALA
1	F	9	ASP
1	F	278	PRO
1	G	9	ASP
1	G	278	PRO
1	H	9	ASP
1	I	9	ASP
1	J	9	ASP
1	K	9	ASP
1	L	9	ASP
1	M	9	ASP
1	N	9	ASP
2	O	74	LYS
2	P	22	GLU
2	P	74	LYS
2	Q	19	ARG
2	Q	54	LEU
2	Q	74	LYS
2	R	74	LYS
2	S	12	GLY
2	S	74	LYS
2	T	12	GLY
2	T	19	ARG
2	T	74	LYS
2	U	74	LYS
1	a	9	ASP
1	a	278	PRO
1	b	9	ASP
1	b	278	PRO
1	c	9	ASP
1	c	202	TYR
1	c	292	ALA
1	c	293	ALA
1	c	338	LYS
1	d	9	ASP
1	d	278	PRO

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Mol	Chain	Res	Type
1	e	9	ASP
1	e	278	PRO
1	e	373	GLY
1	f	9	ASP
1	f	278	PRO
1	f	279	GLY
1	g	9	ASP
1	h	9	ASP
1	i	9	ASP
1	j	9	ASP
1	k	9	ASP
1	l	9	ASP
1	m	9	ASP
1	n	9	ASP
2	o	12	GLY
2	o	19	ARG
2	o	74	LYS
2	p	12	GLY
2	p	74	LYS
2	q	22	GLU
2	q	51	GLY
2	q	54	LEU
2	q	63	GLU
2	r	12	GLY
2	r	19	ARG
2	r	54	LEU
2	r	74	LYS
2	s	12	GLY
2	s	74	LYS
2	t	63	GLU
2	u	50	THR
2	u	66	GLU
2	u	96	LEU
1	A	168	VAL
1	A	279	GLY
1	A	336	GLY
1	A	528	GLU
1	B	168	VAL
1	B	216	ASP
1	B	279	GLY
1	B	350	LYS
1	B	374	GLY

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Mol	Chain	Res	Type
1	B	434	GLY
1	C	168	VAL
1	C	169	GLY
1	C	281	GLY
1	C	336	GLY
1	C	434	GLY
1	D	168	VAL
1	D	336	GLY
1	E	28	LYS
1	E	179	SER
1	E	336	GLY
1	G	373	GLY
1	G	374	GLY
1	H	305	GLY
1	I	305	GLY
1	J	305	GLY
1	K	305	GLY
1	L	305	GLY
1	M	305	GLY
1	N	305	GLY
2	O	54	LEU
2	Q	12	GLY
2	Q	34	ASP
2	R	19	ARG
2	S	19	ARG
2	S	54	LEU
2	T	57	GLY
2	U	12	GLY
2	U	34	ASP
2	U	63	GLU
1	a	28	LYS
1	a	168	VAL
1	a	434	GLY
1	b	168	VAL
1	b	179	SER
1	c	168	VAL
1	c	276	LYS
1	c	336	GLY
1	c	527	PRO
1	d	279	GLY
1	d	434	GLY
1	e	168	VAL

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Mol	Chain	Res	Type
1	e	374	GLY
1	f	168	VAL
1	g	168	VAL
1	h	305	GLY
1	i	305	GLY
1	j	305	GLY
1	k	305	GLY
1	l	305	GLY
1	m	305	GLY
1	n	305	GLY
2	o	54	LEU
2	o	66	GLU
2	q	12	GLY
2	q	34	ASP
2	q	78	THR
2	s	54	LEU
2	u	19	ARG
2	u	63	GLU
1	A	482	ALA
1	C	216	ASP
1	C	350	LYS
1	D	199	ILE
1	D	216	ASP
1	E	168	VAL
1	E	276	LYS
1	E	342	GLU
1	F	169	GLY
1	F	190	GLU
1	F	216	ASP
1	F	350	LYS
1	G	168	VAL
1	G	216	ASP
1	G	434	GLY
1	H	80	LYS
1	J	313	LEU
1	K	80	LYS
1	L	80	LYS
1	L	313	LEU
1	L	447	LEU
1	N	80	LYS
1	N	527	PRO
2	O	12	GLY

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Mol	Chain	Res	Type
2	O	19	ARG
2	O	34	ASP
2	P	12	GLY
2	P	19	ARG
2	P	21	GLU
2	R	34	ASP
2	R	54	LEU
2	S	66	GLU
2	T	34	ASP
2	U	19	ARG
1	a	53	GLY
1	a	179	SER
1	b	53	GLY
1	b	434	GLY
1	c	53	GLY
1	c	169	GLY
1	c	434	GLY
1	d	168	VAL
1	d	251	GLU
1	d	281	GLY
1	e	350	LYS
1	f	216	ASP
1	f	336	GLY
1	f	434	GLY
1	g	292	ALA
1	g	434	GLY
1	h	80	LYS
1	h	447	LEU
1	i	80	LYS
1	j	80	LYS
1	j	313	LEU
1	l	474	LYS
1	m	474	LYS
1	n	80	LYS
2	q	32	LEU
2	q	33	PRO
2	q	73	ALA
2	r	34	ASP
2	s	63	GLU
2	t	12	GLY
2	t	59	ARG
2	u	75	TYR

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Mol	Chain	Res	Type
2	u	99	LEU
1	A	216	ASP
1	A	297	GLY
1	A	434	GLY
1	B	281	GLY
1	B	357	SER
1	B	373	GLY
1	C	357	SER
1	C	482	ALA
1	D	53	GLY
1	D	179	SER
1	D	224	LYS
1	E	207	PRO
1	E	482	ALA
1	E	527	PRO
1	F	230	ARG
1	F	279	GLY
1	G	224	LYS
1	H	313	LEU
1	H	474	LYS
1	I	313	LEU
1	J	80	LYS
1	J	447	LEU
1	J	474	LYS
1	K	313	LEU
1	K	447	LEU
1	K	474	LYS
1	M	80	LYS
1	M	189	VAL
1	N	313	LEU
1	N	474	LYS
2	P	85	GLU
2	Q	85	GLU
2	R	12	GLY
2	R	63	GLU
1	a	216	ASP
1	a	251	GLU
1	a	357	SER
1	b	169	GLY
1	b	357	SER
1	c	482	ALA
1	d	179	SER

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Mol	Chain	Res	Type
1	d	216	ASP
1	e	293	ALA
1	e	336	GLY
1	e	434	GLY
1	f	225	LYS
1	f	226	VAL
1	g	28	LYS
1	g	207	PRO
1	g	336	GLY
1	g	371	LEU
1	h	474	LYS
1	i	76	GLU
1	i	447	LEU
1	i	474	LYS
1	j	474	LYS
1	k	80	LYS
1	k	313	LEU
1	k	474	LYS
1	l	80	LYS
1	m	80	LYS
1	n	313	LEU
1	n	447	LEU
1	n	474	LYS
2	o	85	GLU
2	p	19	ARG
2	p	54	LEU
2	q	19	ARG
2	q	28	GLY
2	s	19	ARG
2	u	24	PRO
1	A	179	SER
1	C	224	LYS
1	D	28	LYS
1	D	279	GLY
1	D	354	THR
1	D	434	GLY
1	E	195	ASP
1	E	202	TYR
1	E	371	LEU
1	E	374	GLY
1	F	168	VAL
1	F	353	GLU

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Mol	Chain	Res	Type
1	G	292	ALA
1	G	350	LYS
1	H	300	ILE
1	I	80	LYS
1	I	474	LYS
1	J	101	ARG
1	L	474	LYS
1	M	474	LYS
2	O	50	THR
2	O	85	GLU
2	Q	63	GLU
2	R	85	GLU
2	T	85	GLU
1	a	230	ARG
1	a	482	ALA
1	b	28	LYS
1	c	179	SER
1	c	207	PRO
1	c	308	LEU
1	c	342	GLU
1	c	371	LEU
1	d	354	THR
1	d	357	SER
1	d	364	LEU
1	d	482	ALA
1	f	251	GLU
1	f	357	SER
1	g	179	SER
1	g	267	ARG
1	g	293	ALA
1	i	313	LEU
1	j	76	GLU
1	k	76	GLU
1	l	313	LEU
1	m	313	LEU
2	p	34	ASP
2	q	76	GLY
2	r	85	GLU
2	t	22	GLU
1	B	482	ALA
1	D	169	GLY
1	E	53	GLY

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Mol	Chain	Res	Type
1	F	346	ASN
1	F	357	SER
1	F	434	GLY
1	J	304	LEU
1	M	447	LEU
2	U	85	GLU
1	a	354	THR
1	b	281	GLY
1	d	169	GLY
1	d	292	ALA
1	d	336	GLY
1	e	357	SER
1	f	53	GLY
1	g	53	GLY
1	g	190	GLU
1	j	220	LEU
2	q	24	PRO
2	t	39	LYS
2	t	68	ASP
2	t	84	GLY
1	a	279	GLY
1	b	336	GLY
1	e	279	GLY
2	u	46	ILE
2	u	70	VAL
1	A	281	GLY
1	C	53	GLY
1	E	322	VAL
1	F	527	PRO
1	K	300	ILE
1	M	5	ILE
2	P	30	ILE
1	d	297	GLY
1	e	53	GLY
1	m	189	VAL
2	p	57	GLY
2	t	16	VAL
1	A	53	GLY
1	E	434	GLY
1	G	53	GLY
2	T	53	VAL
1	d	53	GLY

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Mol	Chain	Res	Type
1	g	169	GLY
1	h	300	ILE
1	i	189	VAL
1	C	297	GLY
1	D	226	VAL
1	J	488	VAL
1	L	189	VAL
2	R	67	GLY
1	h	488	VAL
1	i	488	VAL
1	l	189	VAL
1	l	300	ILE
1	m	300	ILE
2	q	70	VAL
1	H	488	VAL
1	K	189	VAL
2	U	67	GLY
1	a	281	GLY
1	j	300	ILE
1	j	488	VAL
2	p	30	ILE

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	412/423 (97%)	402 (98%)	10 (2%)	61	91
1	B	412/423 (97%)	399 (97%)	13 (3%)	51	85
1	C	411/423 (97%)	399 (97%)	12 (3%)	55	88
1	D	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	E	411/423 (97%)	395 (96%)	16 (4%)	43	80
1	F	414/423 (98%)	405 (98%)	9 (2%)	64	92
1	G	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	H	411/423 (97%)	403 (98%)	8 (2%)	69	94
1	I	410/423 (97%)	400 (98%)	10 (2%)	61	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	J	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	K	410/423 (97%)	401 (98%)	9 (2%)	64	92
1	L	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	M	410/423 (97%)	399 (97%)	11 (3%)	57	89
1	N	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	a	412/423 (97%)	404 (98%)	8 (2%)	69	94
1	b	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	c	412/423 (97%)	400 (97%)	12 (3%)	55	88
1	d	412/423 (97%)	401 (97%)	11 (3%)	57	89
1	e	411/423 (97%)	403 (98%)	8 (2%)	69	94
1	f	412/423 (97%)	404 (98%)	8 (2%)	69	94
1	g	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	h	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	i	410/423 (97%)	399 (97%)	11 (3%)	57	89
1	j	410/423 (97%)	398 (97%)	12 (3%)	55	88
1	k	410/423 (97%)	399 (97%)	11 (3%)	57	89
1	l	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	m	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	n	410/423 (97%)	401 (98%)	9 (2%)	64	92
2	O	81/83 (98%)	76 (94%)	5 (6%)	26	60
2	P	79/83 (95%)	76 (96%)	3 (4%)	44	80
2	Q	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	R	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	S	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	T	81/83 (98%)	77 (95%)	4 (5%)	35	71
2	U	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	o	81/83 (98%)	79 (98%)	2 (2%)	60	90
2	p	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	q	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	r	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	s	81/83 (98%)	78 (96%)	3 (4%)	45	81

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	t	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	u	81/83 (98%)	78 (96%)	3 (4%)	45	81
All	All	12637/13006 (97%)	12305 (97%)	332 (3%)	59	90

All (332) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	ILE
1	A	9	ASP
1	A	36	ARG
1	A	54	VAL
1	A	173	ILE
1	A	283	ARG
1	A	303	GLU
1	A	312	THR
1	A	340	ASP
1	A	351	GLU
1	B	5	ILE
1	B	9	ASP
1	B	36	ARG
1	B	54	VAL
1	B	173	ILE
1	B	234	PRO
1	B	280	PHE
1	B	283	ARG
1	B	290	ASP
1	B	303	GLU
1	B	340	ASP
1	B	351	GLU
1	B	410	ILE
1	C	5	ILE
1	C	9	ASP
1	C	36	ARG
1	C	54	VAL
1	C	89	THR
1	C	173	ILE
1	C	283	ARG
1	C	303	GLU
1	C	312	THR
1	C	340	ASP
1	C	351	GLU

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Mol	Chain	Res	Type
1	C	410	ILE
1	D	5	ILE
1	D	9	ASP
1	D	36	ARG
1	D	54	VAL
1	D	173	ILE
1	D	283	ARG
1	D	303	GLU
1	D	309	GLU
1	D	340	ASP
1	D	351	GLU
1	E	5	ILE
1	E	9	ASP
1	E	36	ARG
1	E	54	VAL
1	E	136	ILE
1	E	144	ILE
1	E	173	ILE
1	E	210	MET
1	E	235	ILE
1	E	251	GLU
1	E	298	THR
1	E	309	GLU
1	E	316	LEU
1	E	342	GLU
1	E	349	LYS
1	E	368	LEU
1	F	5	ILE
1	F	9	ASP
1	F	36	ARG
1	F	54	VAL
1	F	173	ILE
1	F	198	TYR
1	F	283	ARG
1	F	340	ASP
1	F	351	GLU
1	G	5	ILE
1	G	9	ASP
1	G	36	ARG
1	G	54	VAL
1	G	198	TYR
1	G	283	ARG

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Mol	Chain	Res	Type
1	G	303	GLU
1	G	312	THR
1	G	340	ASP
1	G	351	GLU
1	H	151	SER
1	H	153	ASN
1	H	190	GLU
1	H	270	LEU
1	H	316	LEU
1	H	325	THR
1	H	423	SER
1	H	456	GLU
1	I	151	SER
1	I	153	ASN
1	I	190	GLU
1	I	216	ASP
1	I	270	LEU
1	I	316	LEU
1	I	325	THR
1	I	363	LYS
1	I	423	SER
1	I	456	GLU
1	J	151	SER
1	J	153	ASN
1	J	194	PHE
1	J	216	ASP
1	J	270	LEU
1	J	316	LEU
1	J	325	THR
1	J	423	SER
1	J	456	GLU
1	J	527	PRO
1	K	151	SER
1	K	153	ASN
1	K	194	PHE
1	K	237	GLU
1	K	270	LEU
1	K	316	LEU
1	K	363	LYS
1	K	423	SER
1	K	456	GLU
1	L	151	SER

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Mol	Chain	Res	Type
1	L	153	ASN
1	L	194	PHE
1	L	270	LEU
1	L	316	LEU
1	L	325	THR
1	L	363	LYS
1	L	423	SER
1	L	456	GLU
1	L	522	VAL
1	M	151	SER
1	M	153	ASN
1	M	190	GLU
1	M	194	PHE
1	M	196	LYS
1	M	270	LEU
1	M	316	LEU
1	M	363	LYS
1	M	423	SER
1	M	456	GLU
1	M	522	VAL
1	N	151	SER
1	N	153	ASN
1	N	194	PHE
1	N	270	LEU
1	N	316	LEU
1	N	325	THR
1	N	363	LYS
1	N	423	SER
1	N	456	GLU
1	N	522	VAL
2	O	15	VAL
2	O	21	GLU
2	O	34	ASP
2	O	50	THR
2	O	55	GLU
2	P	15	VAL
2	P	21	GLU
2	P	56	ASN
2	Q	21	GLU
2	Q	34	ASP
2	Q	48	VAL
2	R	21	GLU

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Mol	Chain	Res	Type
2	R	55	GLU
2	R	62	LEU
2	S	21	GLU
2	S	48	VAL
2	S	56	ASN
2	T	13	ASP
2	T	21	GLU
2	T	34	ASP
2	T	48	VAL
2	U	13	ASP
2	U	21	GLU
2	U	92	GLU
1	a	5	ILE
1	a	9	ASP
1	a	36	ARG
1	a	54	VAL
1	a	173	ILE
1	a	303	GLU
1	a	340	ASP
1	a	351	GLU
1	b	5	ILE
1	b	9	ASP
1	b	36	ARG
1	b	54	VAL
1	b	173	ILE
1	b	216	ASP
1	b	303	GLU
1	b	312	THR
1	b	340	ASP
1	b	351	GLU
1	c	5	ILE
1	c	9	ASP
1	c	54	VAL
1	c	173	ILE
1	c	192	TYR
1	c	224	LYS
1	c	251	GLU
1	c	298	THR
1	c	316	LEU
1	c	342	GLU
1	c	368	LEU
1	c	410	ILE

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Mol	Chain	Res	Type
1	d	5	ILE
1	d	9	ASP
1	d	36	ARG
1	d	54	VAL
1	d	89	THR
1	d	173	ILE
1	d	198	TYR
1	d	303	GLU
1	d	340	ASP
1	d	351	GLU
1	d	365	GLN
1	e	5	ILE
1	e	9	ASP
1	e	36	ARG
1	e	54	VAL
1	e	173	ILE
1	e	303	GLU
1	e	340	ASP
1	e	351	GLU
1	f	5	ILE
1	f	9	ASP
1	f	36	ARG
1	f	54	VAL
1	f	173	ILE
1	f	303	GLU
1	f	340	ASP
1	f	351	GLU
1	g	5	ILE
1	g	9	ASP
1	g	36	ARG
1	g	54	VAL
1	g	173	ILE
1	g	204	VAL
1	g	251	GLU
1	g	298	THR
1	g	316	LEU
1	g	342	GLU
1	h	151	SER
1	h	153	ASN
1	h	194	PHE
1	h	216	ASP
1	h	270	LEU

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Mol	Chain	Res	Type
1	h	316	LEU
1	h	325	THR
1	h	363	LYS
1	h	423	SER
1	h	456	GLU
1	i	151	SER
1	i	153	ASN
1	i	194	PHE
1	i	270	LEU
1	i	283	ARG
1	i	316	LEU
1	i	325	THR
1	i	352	LEU
1	i	363	LYS
1	i	423	SER
1	i	456	GLU
1	j	151	SER
1	j	153	ASN
1	j	190	GLU
1	j	194	PHE
1	j	216	ASP
1	j	270	LEU
1	j	283	ARG
1	j	316	LEU
1	j	325	THR
1	j	363	LYS
1	j	423	SER
1	j	456	GLU
1	k	151	SER
1	k	190	GLU
1	k	194	PHE
1	k	216	ASP
1	k	270	LEU
1	k	283	ARG
1	k	316	LEU
1	k	325	THR
1	k	363	LYS
1	k	423	SER
1	k	456	GLU
1	l	151	SER
1	l	153	ASN
1	l	190	GLU

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Mol	Chain	Res	Type
1	l	194	PHE
1	l	196	LYS
1	l	270	LEU
1	l	316	LEU
1	l	363	LYS
1	l	423	SER
1	l	456	GLU
1	m	151	SER
1	m	153	ASN
1	m	194	PHE
1	m	270	LEU
1	m	302	GLU
1	m	316	LEU
1	m	325	THR
1	m	363	LYS
1	m	423	SER
1	m	456	GLU
1	n	151	SER
1	n	194	PHE
1	n	216	ASP
1	n	270	LEU
1	n	316	LEU
1	n	325	THR
1	n	363	LYS
1	n	423	SER
1	n	456	GLU
2	o	13	ASP
2	o	21	GLU
2	p	21	GLU
2	p	48	VAL
2	p	56	ASN
2	q	33	PRO
2	q	72	PHE
2	q	93	ARG
2	r	13	ASP
2	r	21	GLU
2	r	48	VAL
2	s	13	ASP
2	s	21	GLU
2	s	22	GLU
2	t	14	ARG
2	t	69	ILE

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Mol	Chain	Res	Type
2	t	72	PHE
2	u	31	VAL
2	u	70	VAL
2	u	74	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (271) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	72	GLN
1	A	106	ASN
1	A	228	ASN
1	A	310	ASN
1	A	400	ASN
1	A	457	ASN
1	B	72	GLN
1	B	228	ASN
1	B	310	ASN
1	B	400	ASN
1	B	457	ASN
1	C	72	GLN
1	C	106	ASN
1	C	241	GLN
1	C	310	ASN
1	C	400	ASN
1	C	457	ASN
1	D	72	GLN
1	D	106	ASN
1	D	310	ASN
1	D	400	ASN
1	D	457	ASN
1	E	72	GLN
1	E	193	GLN
1	E	310	ASN
1	E	346	ASN
1	E	400	ASN
1	E	457	ASN
1	F	72	GLN
1	F	310	ASN
1	F	400	ASN
1	F	457	ASN
1	G	72	GLN
1	G	310	ASN

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Mol	Chain	Res	Type
1	G	400	ASN
1	G	457	ASN
1	H	37	ASN
1	H	97	GLN
1	H	106	ASN
1	H	153	ASN
1	H	193	GLN
1	H	228	ASN
1	H	310	ASN
1	H	346	ASN
1	H	365	GLN
1	H	400	ASN
1	H	468	GLN
1	H	481	ASN
1	H	507	GLN
1	H	508	ASN
1	I	37	ASN
1	I	97	GLN
1	I	153	ASN
1	I	193	GLN
1	I	228	ASN
1	I	264	ASN
1	I	310	ASN
1	I	346	ASN
1	I	365	GLN
1	I	400	ASN
1	I	468	GLN
1	I	481	ASN
1	I	507	GLN
1	I	508	ASN
1	J	37	ASN
1	J	97	GLN
1	J	153	ASN
1	J	193	GLN
1	J	228	ASN
1	J	310	ASN
1	J	346	ASN
1	J	365	GLN
1	J	400	ASN
1	J	468	GLN
1	J	481	ASN
1	J	507	GLN

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Mol	Chain	Res	Type
1	J	508	ASN
1	K	37	ASN
1	K	97	GLN
1	K	106	ASN
1	K	112	ASN
1	K	153	ASN
1	K	193	GLN
1	K	228	ASN
1	K	264	ASN
1	K	310	ASN
1	K	346	ASN
1	K	365	GLN
1	K	400	ASN
1	K	468	GLN
1	K	481	ASN
1	K	507	GLN
1	K	508	ASN
1	L	37	ASN
1	L	97	GLN
1	L	153	ASN
1	L	193	GLN
1	L	228	ASN
1	L	310	ASN
1	L	365	GLN
1	L	400	ASN
1	L	468	GLN
1	L	481	ASN
1	L	507	GLN
1	L	508	ASN
1	M	37	ASN
1	M	97	GLN
1	M	153	ASN
1	M	193	GLN
1	M	228	ASN
1	M	310	ASN
1	M	346	ASN
1	M	365	GLN
1	M	400	ASN
1	M	468	GLN
1	M	481	ASN
1	M	507	GLN
1	M	508	ASN

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Mol	Chain	Res	Type
1	N	37	ASN
1	N	97	GLN
1	N	153	ASN
1	N	228	ASN
1	N	310	ASN
1	N	346	ASN
1	N	365	GLN
1	N	400	ASN
1	N	468	GLN
1	N	481	ASN
1	N	507	GLN
1	N	508	ASN
2	O	56	ASN
2	Q	41	GLN
1	a	72	GLN
1	a	106	ASN
1	a	228	ASN
1	a	310	ASN
1	a	400	ASN
1	a	457	ASN
1	b	72	GLN
1	b	106	ASN
1	b	228	ASN
1	b	310	ASN
1	b	400	ASN
1	b	457	ASN
1	c	72	GLN
1	c	106	ASN
1	c	310	ASN
1	c	346	ASN
1	c	400	ASN
1	c	457	ASN
1	d	72	GLN
1	d	310	ASN
1	d	400	ASN
1	d	457	ASN
1	e	72	GLN
1	e	106	ASN
1	e	228	ASN
1	e	310	ASN
1	e	400	ASN
1	e	457	ASN

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Mol	Chain	Res	Type
1	f	72	GLN
1	f	106	ASN
1	f	228	ASN
1	f	310	ASN
1	f	400	ASN
1	f	457	ASN
1	g	72	GLN
1	g	106	ASN
1	g	310	ASN
1	g	346	ASN
1	g	365	GLN
1	g	400	ASN
1	g	457	ASN
1	h	37	ASN
1	h	65	HIS
1	h	97	GLN
1	h	153	ASN
1	h	193	GLN
1	h	228	ASN
1	h	310	ASN
1	h	346	ASN
1	h	365	GLN
1	h	400	ASN
1	h	468	GLN
1	h	481	ASN
1	h	507	GLN
1	h	508	ASN
1	i	37	ASN
1	i	97	GLN
1	i	153	ASN
1	i	228	ASN
1	i	310	ASN
1	i	346	ASN
1	i	365	GLN
1	i	400	ASN
1	i	468	GLN
1	i	481	ASN
1	i	507	GLN
1	i	508	ASN
1	j	37	ASN
1	j	65	HIS
1	j	97	GLN

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Mol	Chain	Res	Type
1	j	153	ASN
1	j	193	GLN
1	j	228	ASN
1	j	264	ASN
1	j	310	ASN
1	j	365	GLN
1	j	400	ASN
1	j	468	GLN
1	j	481	ASN
1	j	507	GLN
1	j	508	ASN
1	k	37	ASN
1	k	97	GLN
1	k	153	ASN
1	k	193	GLN
1	k	228	ASN
1	k	310	ASN
1	k	346	ASN
1	k	365	GLN
1	k	400	ASN
1	k	468	GLN
1	k	481	ASN
1	k	507	GLN
1	k	508	ASN
1	l	37	ASN
1	l	97	GLN
1	l	153	ASN
1	l	193	GLN
1	l	228	ASN
1	l	310	ASN
1	l	346	ASN
1	l	365	GLN
1	l	400	ASN
1	l	468	GLN
1	l	481	ASN
1	l	507	GLN
1	l	508	ASN
1	m	37	ASN
1	m	97	GLN
1	m	153	ASN
1	m	193	GLN
1	m	228	ASN

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Mol	Chain	Res	Type
1	m	310	ASN
1	m	346	ASN
1	m	365	GLN
1	m	400	ASN
1	m	468	GLN
1	m	481	ASN
1	m	507	GLN
1	m	508	ASN
1	n	37	ASN
1	n	97	GLN
1	n	153	ASN
1	n	193	GLN
1	n	228	ASN
1	n	310	ASN
1	n	346	ASN
1	n	365	GLN
1	n	400	ASN
1	n	468	GLN
1	n	481	ASN
1	n	507	GLN
1	n	508	ASN
2	q	41	GLN
2	r	41	GLN
2	t	41	GLN
2	t	100	GLN
2	u	41	GLN
2	u	56	ASN

### 5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

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

### 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 42 ligands modelled in this entry, 14 are monoatomic - leaving 28 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
4	ADP	A	602	3	29,29,29	1.40	4 (13%)	45,45,45	2.35	7 (15%)
4	ADP	B	602	3	29,29,29	1.49	6 (20%)	45,45,45	2.48	9 (20%)
4	ADP	C	602	3	29,29,29	1.60	6 (20%)	45,45,45	2.45	6 (13%)
4	ADP	D	602	3	29,29,29	1.63	7 (24%)	45,45,45	2.37	7 (15%)
4	ADP	E	602	3	29,29,29	1.45	5 (17%)	45,45,45	2.55	9 (20%)
4	ADP	F	602	3	29,29,29	1.66	5 (17%)	45,45,45	2.47	9 (20%)
4	ADP	G	602	3	29,29,29	1.55	7 (24%)	45,45,45	2.49	7 (15%)
5	DMS	H	601	-	3,3,3	0.22	0	3,3,3	0.62	0
5	DMS	I	601	-	3,3,3	0.26	0	3,3,3	0.62	0
5	DMS	J	601	-	3,3,3	0.36	0	3,3,3	0.70	0
5	DMS	K	601	-	3,3,3	0.28	0	3,3,3	0.64	0
5	DMS	L	601	-	3,3,3	0.30	0	3,3,3	0.64	0
5	DMS	M	601	-	3,3,3	0.27	0	3,3,3	0.60	0
5	DMS	N	701	-	3,3,3	0.25	0	3,3,3	0.61	0
4	ADP	a	602	3	29,29,29	1.60	5 (17%)	45,45,45	2.42	7 (15%)
4	ADP	b	602	3	29,29,29	1.68	6 (20%)	45,45,45	2.47	6 (13%)
4	ADP	c	602	3	29,29,29	1.91	7 (24%)	45,45,45	2.69	8 (17%)
4	ADP	d	602	3	29,29,29	1.69	6 (20%)	45,45,45	2.49	9 (20%)
4	ADP	e	602	3	29,29,29	1.70	8 (27%)	45,45,45	2.48	7 (15%)
4	ADP	f	602	3	29,29,29	1.57	6 (20%)	45,45,45	2.50	7 (15%)
4	ADP	g	602	3	29,29,29	1.59	7 (24%)	45,45,45	2.46	8 (17%)
5	DMS	h	601	-	3,3,3	0.34	0	3,3,3	0.66	0
5	DMS	i	601	-	3,3,3	0.33	0	3,3,3	0.65	0
5	DMS	j	601	-	3,3,3	0.29	0	3,3,3	0.61	0
5	DMS	k	601	-	3,3,3	0.30	0	3,3,3	0.63	0
5	DMS	l	601	-	3,3,3	0.32	0	3,3,3	0.63	0
5	DMS	m	601	-	3,3,3	0.25	0	3,3,3	0.57	0
5	DMS	n	701	-	3,3,3	0.25	0	3,3,3	0.58	0



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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	ADP	A	602	3	-	0/16/32/32	0/3/3/3
4	ADP	B	602	3	-	0/16/32/32	0/3/3/3
4	ADP	C	602	3	-	0/16/32/32	0/3/3/3
4	ADP	D	602	3	-	0/16/32/32	0/3/3/3
4	ADP	E	602	3	-	0/16/32/32	0/3/3/3
4	ADP	F	602	3	-	0/16/32/32	0/3/3/3
4	ADP	G	602	3	-	0/16/32/32	0/3/3/3
5	DMS	H	601	-	-	0/0/0/0	0/0/0/0
5	DMS	I	601	-	-	0/0/0/0	0/0/0/0
5	DMS	J	601	-	-	0/0/0/0	0/0/0/0
5	DMS	K	601	-	-	0/0/0/0	0/0/0/0
5	DMS	L	601	-	-	0/0/0/0	0/0/0/0
5	DMS	M	601	-	-	0/0/0/0	0/0/0/0
5	DMS	N	701	-	-	0/0/0/0	0/0/0/0
4	ADP	a	602	3	-	0/16/32/32	0/3/3/3
4	ADP	b	602	3	-	0/16/32/32	0/3/3/3
4	ADP	c	602	3	-	0/16/32/32	0/3/3/3
4	ADP	d	602	3	-	0/16/32/32	0/3/3/3
4	ADP	e	602	3	-	0/16/32/32	0/3/3/3
4	ADP	f	602	3	-	0/16/32/32	0/3/3/3
4	ADP	g	602	3	-	0/16/32/32	0/3/3/3
5	DMS	h	601	-	-	0/0/0/0	0/0/0/0
5	DMS	i	601	-	-	0/0/0/0	0/0/0/0
5	DMS	j	601	-	-	0/0/0/0	0/0/0/0
5	DMS	k	601	-	-	0/0/0/0	0/0/0/0
5	DMS	l	601	-	-	0/0/0/0	0/0/0/0
5	DMS	m	601	-	-	0/0/0/0	0/0/0/0
5	DMS	n	701	-	-	0/0/0/0	0/0/0/0

All (85) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	c	602	ADP	C4-N9	-6.02	1.29	1.37
4	b	602	ADP	C2'-C1'	-4.61	1.46	1.53
4	F	602	ADP	C4-N9	-4.40	1.31	1.37
4	g	602	ADP	C4-N9	-4.34	1.31	1.37
4	C	602	ADP	C2'-C1'	-4.33	1.47	1.53
4	F	602	ADP	C2'-C1'	-4.27	1.47	1.53
4	a	602	ADP	C2'-C1'	-4.22	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	602	ADP	C4-N9	-4.09	1.31	1.37
4	e	602	ADP	C4-N9	-4.02	1.31	1.37
4	d	602	ADP	C4-N9	-3.93	1.32	1.37
4	E	602	ADP	C4-N9	-3.83	1.32	1.37
4	D	602	ADP	C2-N3	3.81	1.38	1.32
4	d	602	ADP	C2'-C1'	-3.73	1.48	1.53
4	e	602	ADP	C2'-C1'	-3.67	1.48	1.53
4	C	602	ADP	C4-N9	-3.61	1.32	1.37
4	f	602	ADP	C4-N9	-3.55	1.32	1.37
4	B	602	ADP	C2-N3	3.54	1.38	1.32
4	a	602	ADP	C4-N9	-3.54	1.32	1.37
4	D	602	ADP	C4-N9	-3.50	1.32	1.37
4	B	602	ADP	C4-N9	-3.46	1.32	1.37
4	a	602	ADP	C2-N3	3.45	1.38	1.32
4	c	602	ADP	C2-N3	3.40	1.38	1.32
4	f	602	ADP	O4'-C1'	3.25	1.45	1.41
4	b	602	ADP	C4-N9	-3.24	1.33	1.37
4	B	602	ADP	C2'-C1'	-3.19	1.48	1.53
4	G	602	ADP	C2'-C1'	-3.14	1.48	1.53
4	A	602	ADP	O4'-C1'	3.14	1.45	1.41
4	G	602	ADP	O4'-C1'	3.14	1.45	1.41
4	e	602	ADP	C2-N3	3.10	1.37	1.32
4	D	602	ADP	C2'-C1'	-3.08	1.49	1.53
4	A	602	ADP	C2'-C1'	-3.05	1.49	1.53
4	F	602	ADP	C2-N3	3.05	1.37	1.32
4	d	602	ADP	C4-N3	3.03	1.40	1.35
4	b	602	ADP	O4'-C1'	3.00	1.45	1.41
4	g	602	ADP	C2-N3	2.99	1.37	1.32
4	f	602	ADP	C2-N3	2.97	1.37	1.32
4	c	602	ADP	O4'-C1'	2.82	1.44	1.41
4	D	602	ADP	O4'-C1'	2.80	1.44	1.41
4	e	602	ADP	O4'-C1'	2.78	1.44	1.41
4	g	602	ADP	O4'-C1'	2.77	1.44	1.41
4	c	602	ADP	C2'-C1'	-2.76	1.49	1.53
4	D	602	ADP	PB-O2B	2.75	1.64	1.54
4	C	602	ADP	C2-N3	2.75	1.37	1.32
4	b	602	ADP	C2-N3	2.75	1.37	1.32
4	A	602	ADP	C2-N3	2.73	1.36	1.32
4	b	602	ADP	C4-N3	2.71	1.39	1.35
4	d	602	ADP	O4'-C1'	2.68	1.44	1.41
4	d	602	ADP	C2-N3	2.67	1.36	1.32
4	A	602	ADP	C4-N9	-2.64	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	g	602	ADP	C2'-C1'	-2.60	1.49	1.53
4	G	602	ADP	C4-N3	2.43	1.39	1.35
4	F	602	ADP	C5-N7	-2.43	1.31	1.39
4	E	602	ADP	C2-N3	2.42	1.36	1.32
4	e	602	ADP	C4-N3	2.42	1.39	1.35
4	f	602	ADP	C4-N3	2.42	1.39	1.35
4	c	602	ADP	C2-N1	2.40	1.38	1.33
4	c	602	ADP	PB-O3A	-2.37	1.56	1.60
4	E	602	ADP	C2'-C1'	-2.32	1.50	1.53
4	E	602	ADP	C4-N3	2.31	1.39	1.35
4	g	602	ADP	C5-N7	-2.29	1.31	1.39
4	C	602	ADP	C4-N3	2.24	1.39	1.35
4	G	602	ADP	PA-O2A	-2.23	1.45	1.55
4	E	602	ADP	PA-O2A	-2.19	1.45	1.55
4	e	602	ADP	C2-N1	2.18	1.38	1.33
4	D	602	ADP	PA-O2A	-2.16	1.45	1.55
4	b	602	ADP	C2-N1	2.14	1.38	1.33
4	f	602	ADP	C2'-C1'	-2.14	1.50	1.53
4	d	602	ADP	C5-N7	-2.11	1.32	1.39
4	G	602	ADP	C2-N1	2.10	1.38	1.33
4	g	602	ADP	C4-N3	2.10	1.38	1.35
4	B	602	ADP	PA-O2A	-2.10	1.45	1.55
4	a	602	ADP	PA-O2A	-2.10	1.45	1.55
4	g	602	ADP	PB-O2B	2.09	1.62	1.54
4	F	602	ADP	PB-O3A	-2.09	1.56	1.60
4	a	602	ADP	C4-N3	2.09	1.38	1.35
4	C	602	ADP	O4'-C1'	2.09	1.43	1.41
4	B	602	ADP	C5-N7	-2.07	1.32	1.39
4	e	602	ADP	PA-O2A	-2.06	1.46	1.55
4	B	602	ADP	O4'-C1'	2.06	1.43	1.41
4	e	602	ADP	PB-O2B	2.05	1.62	1.54
4	c	602	ADP	PA-O2A	-2.04	1.46	1.55
4	C	602	ADP	PA-O2A	-2.03	1.46	1.55
4	f	602	ADP	C2-N1	2.03	1.37	1.33
4	D	602	ADP	C4-N3	2.01	1.38	1.35
4	G	602	ADP	C5'-C4'	2.00	1.58	1.51

All (106) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	c	602	ADP	N3-C2-N1	-12.95	117.50	128.89
4	f	602	ADP	N3-C2-N1	-12.69	117.72	128.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	b	602	ADP	N3-C2-N1	-12.64	117.77	128.89
4	d	602	ADP	N3-C2-N1	-12.63	117.78	128.89
4	C	602	ADP	N3-C2-N1	-12.53	117.86	128.89
4	G	602	ADP	N3-C2-N1	-12.48	117.91	128.89
4	E	602	ADP	N3-C2-N1	-12.31	118.06	128.89
4	g	602	ADP	N3-C2-N1	-12.28	118.08	128.89
4	e	602	ADP	N3-C2-N1	-12.16	118.19	128.89
4	D	602	ADP	N3-C2-N1	-12.10	118.25	128.89
4	a	602	ADP	N3-C2-N1	-12.07	118.27	128.89
4	A	602	ADP	N3-C2-N1	-12.02	118.32	128.89
4	F	602	ADP	N3-C2-N1	-11.98	118.35	128.89
4	B	602	ADP	N3-C2-N1	-11.90	118.42	128.89
4	c	602	ADP	C5-C4-N3	-7.77	118.40	125.98
4	E	602	ADP	C5-C4-N3	-7.03	119.13	125.98
4	G	602	ADP	C5-C4-N3	-6.93	119.22	125.98
4	B	602	ADP	C5-C4-N3	-6.78	119.37	125.98
4	f	602	ADP	C5-C4-N3	-6.69	119.45	125.98
4	e	602	ADP	C5-C4-N3	-6.42	119.72	125.98
4	F	602	ADP	C5-C4-N3	-6.38	119.75	125.98
4	a	602	ADP	C5-C4-N3	-6.33	119.81	125.98
4	g	602	ADP	C5-C4-N3	-6.26	119.88	125.98
4	b	602	ADP	C5-C4-N3	-6.07	120.06	125.98
4	d	602	ADP	C5-C4-N3	-6.06	120.07	125.98
4	C	602	ADP	C5-C4-N3	-6.03	120.10	125.98
4	D	602	ADP	C5-C4-N3	-5.98	120.15	125.98
4	A	602	ADP	C5-C4-N3	-5.23	120.88	125.98
4	F	602	ADP	N3-C4-N9	4.62	133.32	125.39
4	f	602	ADP	N3-C4-N9	4.57	133.22	125.39
4	g	602	ADP	N3-C4-N9	4.49	133.09	125.39
4	C	602	ADP	N3-C4-N9	4.48	133.08	125.39
4	A	602	ADP	N3-C4-N9	4.47	133.06	125.39
4	G	602	ADP	N3-C4-N9	4.45	133.03	125.39
4	d	602	ADP	N3-C4-N9	4.45	133.03	125.39
4	c	602	ADP	C4-C5-N7	-4.43	105.13	109.41
4	c	602	ADP	N3-C4-N9	4.43	133.00	125.39
4	B	602	ADP	N3-C4-N9	4.43	132.99	125.39
4	e	602	ADP	N3-C4-N9	4.40	132.93	125.39
4	E	602	ADP	N3-C4-N9	4.37	132.89	125.39
4	b	602	ADP	N3-C4-N9	4.34	132.83	125.39
4	a	602	ADP	N3-C4-N9	4.30	132.77	125.39
4	D	602	ADP	N3-C4-N9	4.25	132.68	125.39
4	e	602	ADP	C4-C5-N7	-3.81	105.73	109.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	c	602	ADP	C2-N3-C4	3.75	124.06	113.27
4	G	602	ADP	C2-N3-C4	3.61	123.66	113.27
4	A	602	ADP	C4'-O4'-C1'	-3.46	105.92	109.72
4	E	602	ADP	C2-N3-C4	3.39	123.03	113.27
4	B	602	ADP	C2-N3-C4	3.36	122.94	113.27
4	b	602	ADP	C2-N3-C4	3.34	122.88	113.27
4	f	602	ADP	C2-N3-C4	3.34	122.88	113.27
4	d	602	ADP	C2-N3-C4	3.31	122.80	113.27
4	g	602	ADP	C2-N3-C4	3.29	122.75	113.27
4	F	602	ADP	C2-N3-C4	3.24	122.60	113.27
4	C	602	ADP	C2-N3-C4	3.24	122.59	113.27
4	e	602	ADP	C2-N3-C4	3.21	122.52	113.27
4	D	602	ADP	C2-N3-C4	3.20	122.48	113.27
4	a	602	ADP	C2-N3-C4	3.20	122.49	113.27
4	E	602	ADP	C4'-O4'-C1'	-3.15	106.25	109.72
4	B	602	ADP	C4'-O4'-C1'	-3.08	106.34	109.72
4	C	602	ADP	C4'-O4'-C1'	-3.07	106.35	109.72
4	A	602	ADP	C2-N3-C4	3.06	122.09	113.27
4	b	602	ADP	C4'-O4'-C1'	-2.87	106.56	109.72
4	B	602	ADP	C4-C5-N7	-2.83	106.67	109.41
4	F	602	ADP	C4'-O4'-C1'	-2.76	106.68	109.72
4	E	602	ADP	C4-C5-N7	-2.74	106.76	109.41
4	F	602	ADP	C4-C5-N7	-2.74	106.76	109.41
4	a	602	ADP	C4-C5-N7	-2.67	106.83	109.41
4	F	602	ADP	O4'-C4'-C5'	2.63	118.70	109.37
4	g	602	ADP	C4-C5-N7	-2.57	106.93	109.41
4	d	602	ADP	C4-C5-N7	-2.56	106.93	109.41
4	G	602	ADP	C4-C5-N7	-2.52	106.98	109.41
4	g	602	ADP	O3A-PA-O5'	2.48	109.47	102.91
4	f	602	ADP	C4-C5-N7	-2.47	107.03	109.41
4	c	602	ADP	O4'-C4'-C5'	2.43	118.01	109.37
4	a	602	ADP	C4'-O4'-C1'	-2.43	107.05	109.72
4	c	602	ADP	O3A-PA-O5'	2.42	109.33	102.91
4	B	602	ADP	O4'-C4'-C5'	2.40	117.88	109.37
4	F	602	ADP	O3A-PA-O5'	2.37	109.19	102.91
4	E	602	ADP	O3A-PA-O5'	2.36	109.15	102.91
4	D	602	ADP	O4'-C4'-C5'	2.33	117.66	109.37
4	G	602	ADP	C4'-O4'-C1'	-2.32	107.17	109.72
4	E	602	ADP	C3'-C2'-C1'	-2.30	97.31	100.92
4	d	602	ADP	C4'-O4'-C1'	-2.30	107.19	109.72
4	B	602	ADP	O4'-C1'-N9	2.29	113.09	108.10
4	a	602	ADP	O4'-C4'-C5'	2.27	117.44	109.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	G	602	ADP	O4'-C4'-C5'	2.27	117.41	109.37
4	b	602	ADP	O4'-C4'-C5'	2.25	117.34	109.37
4	F	602	ADP	O4'-C1'-N9	2.24	112.98	108.10
4	C	602	ADP	O4'-C4'-C5'	2.21	117.23	109.37
4	B	602	ADP	O3A-PA-O5'	2.20	108.74	102.91
4	g	602	ADP	C4'-O4'-C1'	-2.17	107.34	109.72
4	g	602	ADP	O4'-C4'-C5'	2.16	117.04	109.37
4	e	602	ADP	C8-N7-C5	2.15	110.25	103.58
4	f	602	ADP	C4'-O4'-C1'	-2.15	107.36	109.72
4	D	602	ADP	C4'-O4'-C1'	-2.14	107.37	109.72
4	A	602	ADP	C2-N1-C6	2.13	122.55	118.76
4	e	602	ADP	O4'-C4'-C5'	2.12	116.89	109.37
4	f	602	ADP	O4'-C4'-C5'	2.11	116.86	109.37
4	E	602	ADP	O4'-C4'-C5'	2.10	116.83	109.37
4	d	602	ADP	O4'-C4'-C5'	2.10	116.83	109.37
4	A	602	ADP	O4'-C4'-C5'	2.09	116.79	109.37
4	c	602	ADP	C8-N7-C5	2.05	109.93	103.58
4	d	602	ADP	O4'-C1'-N9	2.04	112.55	108.10
4	D	602	ADP	PA-O3A-PB	2.03	137.56	131.93
4	d	602	ADP	C2-N1-C6	2.03	122.37	118.76

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<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	A	527/543 (97%)	-0.21	6 (1%) 77 78	16, 51, 95, 147	0
1	B	527/543 (97%)	-0.16	5 (0%) 81 81	15, 52, 101, 146	0
1	C	526/543 (96%)	-0.23	3 (0%) 86 88	14, 50, 101, 140	0
1	D	526/543 (96%)	-0.07	12 (2%) 57 58	14, 55, 120, 154	0
1	E	526/543 (96%)	-0.01	13 (2%) 54 55	9, 51, 127, 164	0
1	F	529/543 (97%)	-0.07	9 (1%) 67 68	17, 58, 108, 159	0
1	G	525/543 (96%)	-0.12	4 (0%) 83 83	19, 57, 106, 140	0
1	H	526/543 (96%)	-0.01	15 (2%) 49 50	26, 70, 120, 163	0
1	I	525/543 (96%)	-0.08	9 (1%) 67 68	24, 67, 121, 151	0
1	J	525/543 (96%)	-0.11	8 (1%) 70 71	14, 55, 110, 163	0
1	K	525/543 (96%)	-0.05	13 (2%) 54 55	16, 63, 120, 157	0
1	L	526/543 (96%)	-0.05	14 (2%) 52 52	23, 62, 115, 154	0
1	M	525/543 (96%)	2.03	182 (34%) 1 1	25, 95, 150, 167	0
1	N	526/543 (96%)	0.11	24 (4%) 31 31	25, 70, 124, 167	0
1	a	527/543 (97%)	0.31	43 (8%) 12 10	18, 71, 128, 157	0
1	b	526/543 (96%)	0.24	47 (8%) 10 8	18, 66, 121, 163	0
1	c	527/543 (97%)	0.18	28 (5%) 25 26	23, 72, 134, 166	0
1	d	527/543 (97%)	0.08	14 (2%) 52 52	29, 77, 118, 146	0
1	e	526/543 (96%)	0.20	19 (3%) 41 41	42, 81, 116, 155	0
1	f	527/543 (97%)	0.32	26 (4%) 28 29	45, 88, 123, 149	0
1	g	526/543 (96%)	0.25	36 (6%) 17 15	27, 88, 136, 163	0
1	h	525/543 (96%)	-0.06	8 (1%) 70 71	24, 61, 112, 150	0
1	i	525/543 (96%)	0.10	24 (4%) 31 31	28, 76, 125, 160	0
1	j	525/543 (96%)	0.27	33 (6%) 19 18	32, 79, 125, 153	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	k	525/543 (96%)	0.54	59 (11%) 6 5	37, 94, 135, 158	0
1	l	525/543 (96%)	1.05	118 (22%) 1 1	48, 106, 143, 162	0
1	m	525/543 (96%)	1.57	167 (31%) 1 1	56, 104, 146, 174	0
1	n	525/543 (96%)	0.15	32 (6%) 21 20	37, 79, 130, 158	0
2	O	96/100 (96%)	0.63	14 (14%) 3 3	59, 109, 142, 146	0
2	P	94/100 (94%)	0.59	8 (8%) 11 9	69, 108, 142, 146	0
2	Q	96/100 (96%)	0.69	12 (12%) 5 4	60, 108, 142, 149	0
2	R	96/100 (96%)	0.48	9 (9%) 9 7	60, 99, 134, 151	0
2	S	96/100 (96%)	0.73	12 (12%) 5 4	61, 107, 140, 150	0
2	T	96/100 (96%)	0.82	14 (14%) 3 3	65, 106, 141, 154	0
2	U	96/100 (96%)	0.70	7 (7%) 15 13	55, 107, 142, 148	0
2	o	96/100 (96%)	1.35	27 (28%) 1 1	86, 116, 152, 164	0
2	p	96/100 (96%)	0.98	17 (17%) 2 2	80, 112, 146, 150	0
2	q	96/100 (96%)	0.51	6 (6%) 19 18	45, 101, 141, 157	0
2	r	96/100 (96%)	0.71	9 (9%) 9 7	60, 109, 141, 150	0
2	s	96/100 (96%)	0.97	20 (20%) 1 1	73, 114, 143, 150	0
2	t	96/100 (96%)	0.69	14 (14%) 3 3	82, 118, 147, 159	0
2	u	96/100 (96%)	0.92	18 (18%) 2 2	83, 122, 153, 167	0
All	All	16067/16604 (96%)	0.27	1158 (7%) 15 14	9, 76, 133, 174	0

All (1158) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	M	273	ALA	20.1
1	M	294	VAL	19.6
1	M	291	ILE	17.8
1	M	247	LEU	17.3
1	M	246	LEU	14.8
1	m	356	ASP	14.8
1	M	199	ILE	12.9
1	m	271	SER	12.7
1	m	355	THR	12.3
1	M	219	ILE	12.2
1	M	295	THR	11.6
1	M	290	ASP	11.4
1	M	217	ALA	11.1

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Mol	Chain	Res	Type	RSRZ
1	M	332	VAL	11.1
1	M	229	VAL	10.9
1	M	375	VAL	10.6
1	M	371	LEU	10.3
1	M	245	PRO	10.2
1	M	315	MET	10.2
1	m	261	LEU	10.1
1	M	306	PHE	9.9
1	m	298	THR	9.7
1	M	260	THR	9.6
1	M	200	SER	9.6
1	m	273	ALA	9.5
1	M	279	GLY	9.5
1	M	222	VAL	9.5
1	M	368	LEU	9.4
1	m	315	MET	9.4
1	M	262	VAL	9.1
1	M	192	TYR	9.1
1	m	236	LEU	9.0
1	M	266	LEU	8.9
1	M	283	ARG	8.8
1	M	356	ASP	8.8
1	M	264	ASN	8.7
1	M	280	PHE	8.6
1	M	259	ALA	8.6
1	M	343	ALA	8.5
1	M	330	THR	8.5
1	M	299	VAL	8.5
1	M	189	VAL	8.5
1	M	354	THR	8.4
1	l	304	LEU	8.3
1	M	263	VAL	8.1
1	m	257	ALA	8.1
1	m	234	PRO	8.1
1	M	270	LEU	7.9
1	M	327	ASP	7.8
1	m	214	LEU	7.8
1	m	217	ALA	7.8
1	M	268	GLY	7.8
1	M	274	ALA	7.8
1	m	210	MET	7.7
1	m	319	ALA	7.7

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Mol	Chain	Res	Type	RSRZ
1	M	218	PHE	7.6
1	M	213	VAL	7.6
1	H	527	PRO	7.6
1	m	316	LEU	7.6
1	M	255	GLY	7.5
1	M	193	GLN	7.5
1	M	209	THR	7.4
1	M	357	SER	7.4
1	m	280	PHE	7.4
1	k	527	PRO	7.3
1	M	208	GLU	7.3
1	m	279	GLY	7.3
1	m	266	LEU	7.2
1	m	245	PRO	7.2
1	M	382	ALA	7.1
1	m	262	VAL	7.1
1	M	298	THR	7.1
1	M	215	GLU	7.0
1	M	253	VAL	7.0
1	m	265	LYS	7.0
1	L	527	PRO	7.0
1	M	267	ARG	7.0
1	M	171	GLU	6.9
1	m	291	ILE	6.9
1	m	233	LEU	6.9
1	m	267	ARG	6.9
1	L	528	GLU	6.9
1	m	371	LEU	6.9
1	M	271	SER	6.8
1	a	332	VAL	6.8
1	m	270	LEU	6.8
1	m	348	ILE	6.8
1	M	251	GLU	6.8
1	a	529	LYS	6.7
1	M	257	ALA	6.7
1	M	244	LYS	6.7
1	M	252	ASP	6.6
1	l	359	TYR	6.6
1	m	264	ASN	6.6
1	M	367	ARG	6.6
1	N	266	LEU	6.5
1	m	209	THR	6.5

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Mol	Chain	Res	Type	RSRZ
1	l	168	VAL	6.5
1	m	263	VAL	6.5
1	m	235	ILE	6.5
2	u	6	THR	6.5
1	m	237	GLU	6.5
1	M	202	TYR	6.5
1	m	360	ALA	6.4
1	M	265	LYS	6.4
1	m	260	THR	6.4
1	m	382	ALA	6.4
1	M	350	LYS	6.4
1	m	253	VAL	6.4
1	M	234	PRO	6.4
1	M	258	LEU	6.4
1	l	357	SER	6.4
1	A	529	LYS	6.3
1	M	227	SER	6.3
1	M	233	LEU	6.3
2	s	100	GLN	6.3
1	m	192	TYR	6.3
1	l	375	VAL	6.3
1	m	288	LEU	6.3
1	m	299	VAL	6.3
2	o	24	PRO	6.2
1	M	201	PRO	6.2
1	M	214	LEU	6.2
1	M	300	ILE	6.2
1	M	230	ARG	6.2
1	M	173	ILE	6.2
1	k	214	LEU	6.1
1	N	527	PRO	6.1
1	m	294	VAL	6.1
1	M	318	ARG	6.0
1	m	313	LEU	6.0
1	j	368	LEU	6.0
1	M	239	VAL	6.0
1	M	254	GLU	6.0
1	c	529	LYS	5.9
1	m	357	SER	5.9
1	l	395	PHE	5.9
2	T	24	PRO	5.9
1	n	527	PRO	5.8

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Mol	Chain	Res	Type	RSRZ
1	M	341	ILE	5.8
1	M	314	SER	5.8
2	o	44	LYS	5.8
1	k	304	LEU	5.7
1	M	282	ASP	5.7
1	i	356	ASP	5.7
1	M	292	ALA	5.7
1	k	358	GLU	5.7
1	b	362	GLU	5.7
1	M	322	VAL	5.7
1	M	226	VAL	5.6
1	m	232	LEU	5.6
1	k	355	THR	5.6
1	l	173	ILE	5.6
1	m	201	PRO	5.6
1	l	370	LYS	5.6
1	M	242	THR	5.6
1	L	304	LEU	5.6
1	M	359	TYR	5.6
1	m	215	GLU	5.5
1	M	311	ALA	5.5
1	m	325	THR	5.5
1	l	191	GLY	5.5
1	N	359	TYR	5.5
1	a	277	ALA	5.5
1	m	247	LEU	5.5
1	h	527	PRO	5.4
1	l	226	VAL	5.4
1	f	529	LYS	5.4
1	m	306	PHE	5.4
1	m	203	PHE	5.3
1	b	303	GLU	5.3
1	m	292	ALA	5.3
1	b	226	VAL	5.3
1	M	269	THR	5.3
1	c	528	GLU	5.3
1	a	279	GLY	5.3
2	p	90	LEU	5.2
1	M	331	ILE	5.2
1	k	357	SER	5.2
1	M	225	LYS	5.2
1	g	339	GLU	5.2

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Mol	Chain	Res	Type	RSRZ
1	m	258	LEU	5.2
1	l	366	GLU	5.2
1	N	528	GLU	5.1
1	m	350	LYS	5.1
1	N	368	LEU	5.1
1	m	283	ARG	5.1
1	m	241	GLN	5.1
1	k	371	LEU	5.1
2	p	88	VAL	5.1
1	M	232	LEU	5.0
2	t	73	ALA	5.0
1	F	530	LYS	5.0
1	m	278	PRO	5.0
1	m	375	VAL	5.0
1	m	255	GLY	5.0
2	u	5	LYS	4.9
1	c	280	PHE	4.9
1	M	236	LEU	4.9
1	m	246	LEU	4.9
2	T	39	LYS	4.9
1	m	354	THR	4.9
1	m	208	GLU	4.9
1	m	200	SER	4.9
1	m	295	THR	4.8
1	M	297	GLY	4.8
1	l	348	ILE	4.8
1	e	374	GLY	4.8
1	M	240	ALA	4.8
1	m	305	GLY	4.8
1	M	272	VAL	4.8
1	m	222	VAL	4.8
1	B	374	GLY	4.8
1	c	270	LEU	4.8
1	m	243	GLY	4.7
1	D	528	GLU	4.7
1	m	297	GLY	4.7
1	m	347	GLY	4.7
1	l	345	ILE	4.7
2	U	100	GLN	4.7
1	M	307	LYS	4.7
1	M	355	THR	4.7
1	E	270	LEU	4.7

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Mol	Chain	Res	Type	RSRZ
1	M	293	ALA	4.7
1	n	3	ALA	4.7
1	c	208	GLU	4.7
1	m	219	ILE	4.7
1	a	337	LYS	4.7
1	k	167	LYS	4.7
1	k	368	LEU	4.7
2	Q	28	GLY	4.7
1	a	278	PRO	4.6
1	M	346	ASN	4.6
1	a	300	ILE	4.6
1	M	328	GLU	4.6
1	g	280	PHE	4.6
1	l	257	ALA	4.6
1	j	186	LEU	4.6
1	m	268	GLY	4.6
2	U	24	PRO	4.6
1	f	527	PRO	4.6
1	l	267	ARG	4.6
1	M	384	THR	4.6
1	M	216	ASP	4.6
1	m	303	GLU	4.6
1	l	248	ILE	4.6
1	N	526	LYS	4.6
1	l	350	LYS	4.6
1	M	256	GLU	4.6
1	L	182	LEU	4.5
1	c	359	TYR	4.5
2	p	94	ASP	4.5
1	N	373	GLY	4.5
1	N	44	PHE	4.5
2	o	39	LYS	4.5
1	m	212	ALA	4.5
1	M	281	GLY	4.5
1	M	381	GLY	4.5
1	l	227	SER	4.5
1	K	527	PRO	4.5
1	b	275	VAL	4.5
1	b	528	GLU	4.5
1	D	278	PRO	4.4
1	h	270	LEU	4.4
1	m	202	TYR	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	m	368	LEU	4.4
1	M	347	GLY	4.4
1	m	311	ALA	4.4
1	n	354	THR	4.4
1	m	314	SER	4.4
1	h	3	ALA	4.4
2	R	5	LYS	4.4
1	l	223	GLU	4.4
1	M	228	ASN	4.4
1	m	239	VAL	4.4
1	k	178	GLU	4.4
1	m	274	ALA	4.4
1	i	355	THR	4.4
1	m	364	LEU	4.4
1	M	261	LEU	4.3
2	o	99	LEU	4.3
1	m	346	ASN	4.3
1	k	270	LEU	4.3
1	m	374	GLY	4.3
1	F	529	LYS	4.3
1	L	526	LYS	4.3
1	l	527	PRO	4.3
1	M	339	GLU	4.3
1	M	365	GLN	4.3
1	M	326	LYS	4.3
1	M	363	LYS	4.3
1	m	345	ILE	4.3
1	a	361	ARG	4.3
1	b	204	VAL	4.2
1	m	312	THR	4.2
1	m	3	ALA	4.2
1	l	230	ARG	4.2
1	m	216	ASP	4.2
1	M	342	GLU	4.2
1	G	374	GLY	4.2
1	l	169	GLY	4.2
1	c	351	GLU	4.2
1	M	361	ARG	4.2
1	M	172	GLY	4.2
1	m	361	ARG	4.2
1	m	249	ILE	4.2
2	u	9	LYS	4.2

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Mol	Chain	Res	Type	RSRZ
1	M	305	GLY	4.2
1	m	256	GLU	4.2
1	l	299	VAL	4.2
1	f	364	LEU	4.2
1	M	206	ASN	4.2
1	M	289	LYS	4.2
1	E	244	LYS	4.2
1	k	356	ASP	4.2
2	o	69	ILE	4.1
1	l	272	VAL	4.1
1	k	187	LYS	4.1
2	o	31	VAL	4.1
1	M	304	LEU	4.1
1	m	334	GLY	4.1
1	m	373	GLY	4.1
1	l	221	ILE	4.1
1	M	360	ALA	4.1
1	M	376	ALA	4.1
1	m	213	VAL	4.1
1	b	227	SER	4.1
1	n	257	ALA	4.1
1	b	329	THR	4.1
1	J	527	PRO	4.1
1	m	300	ILE	4.1
1	m	186	LEU	4.1
1	m	340	ASP	4.1
2	T	38	GLU	4.0
1	b	352	LEU	4.0
1	M	387	GLU	4.0
1	M	374	GLY	4.0
2	t	36	ALA	4.0
1	l	280	PHE	4.0
1	m	250	ALA	4.0
1	I	280	PHE	4.0
1	b	368	LEU	4.0
1	c	358	GLU	4.0
1	F	531	GLU	3.9
1	m	171	GLU	3.9
1	m	252	ASP	3.9
1	l	367	ARG	3.9
1	M	210	MET	3.9
1	l	266	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
1	M	275	VAL	3.9
1	b	277	ALA	3.9
2	O	76	GLY	3.9
1	n	266	LEU	3.9
1	m	290	ASP	3.9
1	l	182	LEU	3.8
1	n	371	LEU	3.8
1	l	192	TYR	3.8
1	I	3	ALA	3.8
2	p	20	ILE	3.8
1	c	365	GLN	3.8
1	N	363	LYS	3.8
1	M	352	LEU	3.8
1	l	371	LEU	3.8
1	M	395	PHE	3.8
2	s	57	GLY	3.8
1	M	340	ASP	3.8
1	H	44	PHE	3.8
1	M	243	GLY	3.8
1	k	381	GLY	3.8
1	j	350	LYS	3.8
1	l	222	VAL	3.8
1	M	248	ILE	3.8
1	m	199	ILE	3.8
1	n	357	SER	3.8
1	D	358	GLU	3.8
1	e	171	GLU	3.8
1	l	167	LYS	3.8
1	N	3	ALA	3.7
1	j	182	LEU	3.7
1	l	189	VAL	3.7
1	M	320	GLU	3.7
1	c	360	ALA	3.7
1	M	351	GLU	3.7
1	f	322	VAL	3.7
1	k	352	LEU	3.7
1	l	362	GLU	3.7
2	R	83	ASP	3.7
1	b	205	THR	3.7
1	l	256	GLU	3.7
1	l	285	LYS	3.7
1	e	303	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
1	i	354	THR	3.7
1	M	526	LYS	3.7
1	l	264	ASN	3.7
1	l	352	LEU	3.7
1	m	287	MET	3.7
2	S	44	LYS	3.7
1	k	383	ALA	3.6
1	m	188	PHE	3.7
1	M	353	GLU	3.6
1	M	366	GLU	3.6
1	k	185	GLU	3.6
1	M	221	ILE	3.6
1	f	354	THR	3.6
1	j	379	ARG	3.6
1	j	332	VAL	3.6
1	M	312	THR	3.6
2	u	75	TYR	3.6
2	u	15	VAL	3.6
2	o	83	ASP	3.6
1	M	178	GLU	3.6
1	l	188	PHE	3.6
1	l	213	VAL	3.6
1	l	229	VAL	3.6
2	S	31	VAL	3.6
1	d	305	GLY	3.6
1	b	282	ASP	3.6
1	g	187	LYS	3.6
1	M	310	ASN	3.5
1	E	349	LYS	3.5
1	g	305	GLY	3.5
1	M	278	PRO	3.5
1	m	304	LEU	3.5
1	g	188	PHE	3.5
1	H	270	LEU	3.5
1	M	224	LYS	3.5
1	N	371	LEU	3.5
1	m	341	ILE	3.5
1	m	395	PHE	3.5
1	m	242	THR	3.5
1	a	192	TYR	3.5
1	j	371	LEU	3.5
1	k	213	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
1	l	181	SER	3.5
1	m	160	LEU	3.5
1	l	3	ALA	3.5
1	k	380	VAL	3.5
1	n	368	LEU	3.5
1	j	187	LYS	3.5
2	T	44	LYS	3.5
1	M	329	THR	3.4
2	r	56	ASN	3.4
1	l	360	ALA	3.4
1	l	373	GLY	3.4
1	m	178	GLU	3.4
1	F	356	ASP	3.4
1	b	253	VAL	3.4
1	G	372	ALA	3.4
1	m	254	GLU	3.4
2	u	55	GLU	3.4
1	n	287	MET	3.4
1	k	272	VAL	3.4
2	r	75	TYR	3.4
1	l	142	LYS	3.4
1	l	526	LYS	3.4
1	E	358	GLU	3.4
1	f	353	GLU	3.4
1	a	314	SER	3.4
1	k	267	ARG	3.4
1	k	261	LEU	3.4
1	c	345	ILE	3.4
1	j	348	ILE	3.4
2	o	43	GLY	3.4
1	M	383	ALA	3.4
1	l	474	LYS	3.4
1	g	190	GLU	3.4
1	E	356	ASP	3.4
1	n	356	ASP	3.4
2	S	20	ILE	3.4
1	D	360	ALA	3.4
1	N	354	THR	3.4
2	O	28	GLY	3.4
1	k	5	ILE	3.4
1	l	214	LEU	3.3
1	m	269	THR	3.3

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Mol	Chain	Res	Type	RSRZ
2	o	82	ILE	3.3
1	M	156	GLU	3.3
1	a	362	GLU	3.3
2	u	96	LEU	3.3
2	T	23	GLU	3.3
1	l	245	PRO	3.3
1	B	171	GLU	3.3
1	l	244	LYS	3.3
1	H	280	PHE	3.3
1	k	375	VAL	3.3
1	m	44	PHE	3.3
1	f	371	LEU	3.3
1	g	364	LEU	3.3
1	m	324	ILE	3.3
1	F	364	LEU	3.3
2	o	87	TYR	3.3
2	t	5	LYS	3.3
2	U	83	ASP	3.3
1	I	230	ARG	3.3
1	M	345	ILE	3.3
1	n	283	ARG	3.3
2	t	100	GLN	3.3
2	u	7	VAL	3.3
1	N	352	LEU	3.3
2	r	37	LYS	3.2
1	a	236	LEU	3.2
1	a	358	GLU	3.2
1	k	382	ALA	3.2
1	l	361	ARG	3.2
1	M	203	PHE	3.2
1	b	324	ILE	3.2
1	a	226	VAL	3.2
1	l	183	GLU	3.2
2	s	7	VAL	3.2
1	g	374	GLY	3.2
2	R	6	THR	3.2
1	l	363	LYS	3.2
1	H	382	ALA	3.2
1	m	251	GLU	3.2
2	S	54	LEU	3.2
1	E	205	THR	3.2
1	b	337	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
2	s	6	THR	3.2
1	N	356	ASP	3.2
1	a	356	ASP	3.2
1	D	304	LEU	3.2
1	J	526	LYS	3.2
1	l	283	ARG	3.2
2	s	8	ILE	3.2
1	k	332	VAL	3.2
1	H	528	GLU	3.2
1	m	302	GLU	3.2
1	m	362	GLU	3.2
1	l	289	LYS	3.2
1	M	323	ARG	3.2
1	i	283	ARG	3.2
1	b	371	LEU	3.2
1	l	138	VAL	3.2
1	k	526	LYS	3.2
1	l	224	LYS	3.1
1	m	136	ILE	3.1
1	m	248	ILE	3.1
1	m	308	LEU	3.1
2	p	8	ILE	3.1
1	n	282	ASP	3.1
1	g	341	ILE	3.1
1	I	350	LYS	3.1
1	j	355	THR	3.1
2	o	73	ALA	3.1
1	m	185	GLU	3.1
2	o	5	LYS	3.1
1	g	44	PHE	3.1
2	q	40	PRO	3.1
1	j	226	VAL	3.1
1	K	183	GLU	3.1
2	S	74	LYS	3.1
1	j	334	GLY	3.1
1	m	272	VAL	3.1
1	i	280	PHE	3.1
1	b	201	PRO	3.1
1	m	259	ALA	3.1
1	k	305	GLY	3.1
1	f	352	LEU	3.1
1	m	182	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
1	b	339	GLU	3.1
1	H	3	ALA	3.1
1	k	321	ARG	3.0
1	k	182	LEU	3.0
1	m	187	LYS	3.0
1	M	152	ALA	3.0
1	m	275	VAL	3.0
1	d	472	GLU	3.0
1	a	298	THR	3.0
1	c	188	PHE	3.0
1	k	280	PHE	3.0
1	m	526	LYS	3.0
1	a	528	GLU	3.0
1	b	208	GLU	3.0
1	l	139	GLU	3.0
1	a	308	LEU	3.0
1	i	260	THR	3.0
2	p	6	THR	3.0
1	M	358	GLU	3.0
1	j	262	VAL	3.0
1	K	368	LEU	3.0
1	l	355	THR	3.0
2	o	100	GLN	3.0
2	p	38	GLU	3.0
1	M	370	LYS	3.0
1	b	209	THR	3.0
1	D	279	GLY	3.0
1	F	474	LYS	3.0
1	M	198	TYR	3.0
1	f	361	ARG	3.0
1	m	184	THR	3.0
1	m	417	THR	3.0
1	L	381	GLY	3.0
1	M	191	GLY	3.0
1	n	526	LYS	3.0
2	o	21	GLU	3.0
2	s	33	PRO	2.9
1	E	280	PHE	2.9
1	M	220	LEU	2.9
1	b	194	PHE	2.9
1	b	240	ALA	2.9
1	b	313	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
1	e	306	PHE	2.9
1	l	356	ASP	2.9
2	Q	99	LEU	2.9
2	s	53	VAL	2.9
2	o	8	ILE	2.9
2	O	84	GLY	2.9
1	l	382	ALA	2.9
1	j	474	LYS	2.9
1	M	185	GLU	2.9
1	h	306	PHE	2.9
2	r	94	ASP	2.9
1	b	300	ILE	2.9
1	l	228	ASN	2.9
1	m	142	LYS	2.9
1	N	353	GLU	2.9
1	m	223	GLU	2.9
2	p	33	PRO	2.9
2	t	83	ASP	2.9
1	l	482	ALA	2.9
1	g	165	MET	2.9
1	k	361	ARG	2.9
1	d	337	LYS	2.9
1	C	303	GLU	2.9
1	J	303	GLU	2.9
1	i	241	GLN	2.9
1	l	364	LEU	2.9
1	A	527	PRO	2.9
1	d	527	PRO	2.9
1	K	3	ALA	2.9
1	k	359	TYR	2.9
1	j	280	PHE	2.9
1	m	66	LEU	2.9
1	M	344	ARG	2.9
1	M	348	ILE	2.9
1	k	474	LYS	2.9
1	m	176	VAL	2.9
2	o	6	THR	2.9
1	g	359	TYR	2.9
2	s	48	VAL	2.9
1	j	250	ALA	2.9
1	j	347	GLY	2.9
1	l	136	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
1	b	241	GLN	2.9
1	M	364	LEU	2.9
1	a	371	LEU	2.9
1	k	269	THR	2.8
1	l	155	PRO	2.8
1	H	348	ILE	2.8
1	l	233	LEU	2.8
1	a	306	PHE	2.8
1	a	342	GLU	2.8
1	m	204	VAL	2.8
1	N	355	THR	2.8
1	j	260	THR	2.8
1	c	348	ILE	2.8
1	k	348	ILE	2.8
2	T	30	ILE	2.8
1	m	220	LEU	2.8
2	q	68	ASP	2.8
2	u	22	GLU	2.8
1	M	196	LYS	2.8
1	m	207	PRO	2.8
2	t	70	VAL	2.8
1	l	193	GLN	2.8
1	n	355	THR	2.8
2	o	89	ILE	2.8
2	O	99	LEU	2.8
1	m	478	TYR	2.8
2	o	20	ILE	2.8
1	b	251	GLU	2.8
1	h	44	PHE	2.8
1	j	351	GLU	2.8
2	P	46	ILE	2.8
1	a	247	LEU	2.8
2	O	34	ASP	2.8
2	o	17	VAL	2.8
1	B	302	GLU	2.8
1	e	360	ALA	2.8
1	n	376	ALA	2.8
2	O	27	LYS	2.8
1	j	428	LEU	2.8
1	k	6	LEU	2.8
1	j	373	GLY	2.8
1	k	34	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
1	d	302	GLU	2.8
1	c	198	TYR	2.8
1	N	267	ARG	2.8
1	i	230	ARG	2.8
1	M	237	GLU	2.8
1	c	362	GLU	2.8
2	T	70	VAL	2.8
1	M	319	ALA	2.8
1	f	368	LEU	2.8
1	i	304	LEU	2.8
1	l	308	LEU	2.8
1	c	243	GLY	2.7
2	S	29	GLY	2.7
1	M	190	GLU	2.7
1	M	241	GLN	2.7
1	e	528	GLU	2.7
1	g	138	VAL	2.7
1	l	253	VAL	2.7
1	L	3	ALA	2.7
1	k	331	ILE	2.7
1	g	313	LEU	2.7
1	K	250	ALA	2.7
1	e	188	PHE	2.7
1	g	527	PRO	2.7
2	S	24	PRO	2.7
1	g	347	GLY	2.7
2	U	36	ALA	2.7
1	a	241	GLN	2.7
1	M	184	THR	2.7
1	k	379	ARG	2.7
1	K	262	VAL	2.7
1	j	358	GLU	2.7
1	K	44	PHE	2.7
1	m	343	ALA	2.7
1	n	350	LYS	2.7
2	O	8	ILE	2.7
2	S	99	LEU	2.7
1	M	212	ALA	2.7
1	c	356	ASP	2.7
1	f	528	GLU	2.7
1	K	355	THR	2.7
2	R	7	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
1	d	44	PHE	2.7
1	e	244	LYS	2.7
1	M	175	THR	2.7
1	l	161	ILE	2.7
1	e	280	PHE	2.7
1	n	44	PHE	2.7
2	S	94	ASP	2.7
1	b	221	ILE	2.6
1	f	332	VAL	2.6
2	p	89	ILE	2.6
1	l	274	ALA	2.6
2	u	56	ASN	2.6
1	M	316	LEU	2.6
1	L	261	LEU	2.6
1	d	323	ARG	2.6
1	d	331	ILE	2.6
2	r	31	VAL	2.6
1	c	357	SER	2.6
1	l	330	THR	2.6
2	q	75	TYR	2.6
1	l	268	GLY	2.6
1	b	358	GLU	2.6
2	R	74	LYS	2.6
1	j	357	SER	2.6
1	k	330	THR	2.6
1	k	354	THR	2.6
1	J	3	ALA	2.6
1	A	302	GLU	2.6
2	P	99	LEU	2.6
1	D	44	PHE	2.6
1	i	395	PHE	2.6
1	l	263	VAL	2.6
2	s	20	ILE	2.6
1	k	260	THR	2.6
1	H	371	LEU	2.6
1	c	171	GLU	2.6
1	j	333	GLY	2.6
1	j	527	PRO	2.6
1	m	383	ALA	2.6
2	s	47	ALA	2.6
2	u	87	TYR	2.6
1	b	191	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	f	280	PHE	2.6
1	I	356	ASP	2.6
1	g	230	ARG	2.6
1	k	322	VAL	2.6
2	t	64	VAL	2.6
1	A	528	GLU	2.6
1	l	260	THR	2.6
2	s	29	GLY	2.6
1	l	298	THR	2.5
1	i	350	LYS	2.5
1	a	341	ILE	2.5
1	g	228	ASN	2.5
1	k	120	ILE	2.5
2	t	46	ILE	2.5
1	N	364	LEU	2.5
1	d	270	LEU	2.5
2	o	42	LYS	2.5
2	q	5	LYS	2.5
2	t	37	LYS	2.5
1	M	231	GLU	2.5
1	J	368	LEU	2.5
1	c	247	LEU	2.5
2	S	59	ARG	2.5
1	H	303	GLU	2.5
1	a	221	ILE	2.5
1	e	60	VAL	2.5
2	t	71	VAL	2.5
1	D	371	LEU	2.5
1	e	270	LEU	2.5
1	m	527	PRO	2.5
1	a	303	GLU	2.5
1	a	242	THR	2.5
1	n	173	ILE	2.5
2	Q	56	ASN	2.5
2	R	82	ILE	2.5
1	d	303	GLU	2.5
1	e	351	GLU	2.5
2	t	97	ALA	2.5
1	b	44	PHE	2.5
1	c	244	LYS	2.5
1	m	380	VAL	2.5
2	O	100	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
1	l	296	GLY	2.5
1	l	353	GLU	2.5
1	m	62	LEU	2.5
1	b	265	LYS	2.5
2	O	88	VAL	2.5
2	P	29	GLY	2.5
2	Q	48	VAL	2.5
2	u	88	VAL	2.5
1	l	261	LEU	2.5
2	t	99	LEU	2.5
1	l	5	ILE	2.5
2	r	20	ILE	2.5
1	e	185	GLU	2.5
1	l	380	VAL	2.5
1	g	315	MET	2.4
1	m	141	ARG	2.4
1	n	348	ILE	2.4
2	O	89	ILE	2.4
2	P	75	TYR	2.4
1	g	185	GLU	2.4
1	m	159	LYS	2.4
1	H	236	LEU	2.4
1	h	267	ARG	2.4
1	m	321	ARG	2.4
1	K	187	LYS	2.4
1	M	170	LYS	2.4
1	a	251	GLU	2.4
1	e	208	GLU	2.4
1	m	198	TYR	2.4
1	b	232	LEU	2.4
1	g	371	LEU	2.4
1	m	352	LEU	2.4
1	l	179	SER	2.4
1	E	306	PHE	2.4
1	M	362	GLU	2.4
1	M	527	PRO	2.4
1	n	280	PHE	2.4
1	b	359	TYR	2.4
1	g	161	ILE	2.4
1	l	85	ALA	2.4
1	n	199	ILE	2.4
1	n	261	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
1	k	175	THR	2.4
2	u	19	ARG	2.4
1	m	276	LYS	2.4
2	T	42	LYS	2.4
1	C	528	GLU	2.4
1	m	227	SER	2.4
1	M	296	GLY	2.4
1	m	173	ILE	2.4
1	m	277	ALA	2.4
2	P	69	ILE	2.4
2	o	75	TYR	2.4
2	r	89	ILE	2.4
1	l	236	LEU	2.4
1	D	302	GLU	2.4
1	M	325	THR	2.4
1	a	218	PHE	2.4
1	j	218	PHE	2.4
1	k	334	GLY	2.4
1	b	338	LYS	2.4
1	N	270	LEU	2.4
1	b	215	GLU	2.4
1	m	301	SER	2.4
1	M	187	LYS	2.4
1	i	250	ALA	2.4
1	j	376	ALA	2.4
1	l	250	ALA	2.4
2	s	73	ALA	2.4
2	u	8	ILE	2.4
1	k	189	VAL	2.4
1	C	170	LYS	2.4
1	G	373	GLY	2.4
1	m	289	LYS	2.4
2	o	37	LYS	2.4
1	g	331	ILE	2.4
1	M	223	GLU	2.4
2	P	36	ALA	2.4
2	p	71	VAL	2.4
1	F	350	LYS	2.4
1	E	44	PHE	2.4
1	L	44	PHE	2.4
1	a	203	PHE	2.4
1	M	211	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
1	a	348	ILE	2.4
1	M	288	LEU	2.3
1	k	3	ALA	2.4
1	k	186	LEU	2.3
2	s	32	LEU	2.3
1	l	44	PHE	2.3
2	p	93	ARG	2.3
1	b	249	ILE	2.3
1	l	249	ILE	2.3
1	a	474	LYS	2.3
1	b	316	LEU	2.3
1	m	240	ALA	2.3
1	i	263	VAL	2.3
1	k	377	VAL	2.3
1	l	491	VAL	2.3
1	l	379	ARG	2.3
1	L	306	PHE	2.3
1	k	44	PHE	2.3
1	l	145	GLU	2.3
1	a	340	ASP	2.3
1	b	340	ASP	2.3
1	f	412	PRO	2.3
2	Q	94	ASP	2.3
2	U	82	ILE	2.3
1	g	308	LEU	2.3
1	l	148	ALA	2.3
1	h	226	VAL	2.3
1	m	7	VAL	2.3
1	J	280	PHE	2.3
1	H	526	LYS	2.3
1	J	356	ASP	2.3
1	j	5	ILE	2.3
2	t	8	ILE	2.3
2	Q	90	LEU	2.3
2	s	54	LEU	2.3
1	f	143	ALA	2.3
2	T	100	GLN	2.3
1	d	213	VAL	2.3
1	D	43	LYS	2.3
1	a	373	GLY	2.3
1	g	337	LYS	2.3
2	u	57	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	M	179	SER	2.3
1	F	352	LEU	2.3
1	m	221	ILE	2.3
2	o	30	ILE	2.3
2	r	59	ARG	2.3
1	a	339	GLU	2.3
1	e	354	THR	2.3
1	m	358	GLU	2.3
2	Q	73	ALA	2.3
1	c	202	TYR	2.3
1	L	302	GLU	2.3
1	N	43	LYS	2.3
1	N	358	GLU	2.3
1	f	241	GLN	2.3
1	l	225	LYS	2.3
1	m	326	LYS	2.3
2	r	100	GLN	2.3
1	l	354	THR	2.3
1	D	332	VAL	2.3
1	d	374	GLY	2.3
1	J	288	LEU	2.3
1	L	183	GLU	2.3
1	h	348	ILE	2.3
1	j	179	SER	2.3
1	m	225	LYS	2.3
1	c	3	ALA	2.3
1	c	242	THR	2.3
1	g	332	VAL	2.3
1	m	194	PHE	2.3
1	a	338	LYS	2.3
1	K	356	ASP	2.3
1	M	195	ASP	2.3
1	m	339	GLU	2.3
1	n	270	LEU	2.3
2	T	20	ILE	2.3
2	t	98	VAL	2.3
2	s	44	LYS	2.2
1	g	356	ASP	2.2
1	n	258	LEU	2.2
2	Q	54	LEU	2.2
2	o	58	GLN	2.2
1	l	334	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
1	M	391	LYS	2.2
1	a	326	LYS	2.2
1	b	276	LYS	2.2
1	l	483	ALA	2.2
2	Q	72	PHE	2.2
2	T	18	LYS	2.2
1	i	351	GLU	2.2
1	k	418	LEU	2.2
1	l	66	LEU	2.2
2	p	32	LEU	2.2
1	i	285	LYS	2.2
2	R	57	GLY	2.2
2	T	31	VAL	2.2
1	l	232	LEU	2.2
1	n	364	LEU	2.2
1	I	283	ARG	2.2
1	i	357	SER	2.2
1	l	381	GLY	2.2
1	c	207	PRO	2.2
1	e	358	GLU	2.2
1	l	476	PRO	2.2
1	b	203	PHE	2.2
1	m	189	VAL	2.2
2	O	60	VAL	2.2
1	a	327	ASP	2.2
1	i	186	LEU	2.2
1	E	374	GLY	2.2
1	g	279	GLY	2.2
1	g	485	GLY	2.2
1	k	191	GLY	2.2
1	n	45	GLY	2.2
1	l	358	GLU	2.2
1	E	527	PRO	2.2
1	B	372	ALA	2.2
1	l	262	VAL	2.2
1	m	226	VAL	2.2
1	n	250	ALA	2.2
1	d	529	LYS	2.2
1	f	474	LYS	2.2
1	g	326	LYS	2.2
1	M	313	LEU	2.2
2	s	99	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
2	O	69	ILE	2.2
1	a	305	GLY	2.2
1	f	171	GLU	2.2
1	l	336	GLY	2.2
2	p	84	GLY	2.2
1	i	44	PHE	2.2
2	o	16	VAL	2.2
1	m	6	LEU	2.2
1	i	282	ASP	2.2
1	j	354	THR	2.2
2	q	46	ILE	2.2
1	N	357	SER	2.2
1	g	360	ALA	2.2
1	n	375	VAL	2.2
2	u	70	VAL	2.2
1	i	258	LEU	2.2
1	l	270	LEU	2.2
1	l	316	LEU	2.2
2	p	87	TYR	2.2
1	m	195	ASP	2.2
1	l	144	ILE	2.2
2	O	44	LYS	2.2
1	a	267	ARG	2.2
2	R	100	GLN	2.2
2	o	19	ARG	2.2
1	H	261	LEU	2.2
1	D	216	ASP	2.2
1	f	374	GLY	2.2
1	m	211	GLU	2.1
1	K	261	LEU	2.1
1	j	372	ALA	2.1
1	n	66	LEU	2.1
1	l	242	THR	2.1
1	F	358	GLU	2.1
1	b	353	GLU	2.1
1	k	395	PHE	2.1
1	l	203	PHE	2.1
1	j	62	LEU	2.1
1	k	236	LEU	2.1
1	k	364	LEU	2.1
1	f	373	GLY	2.1
1	l	305	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	e	144	ILE	2.1
1	M	238	GLN	2.1
2	U	81	GLU	2.1
1	b	266	LEU	2.1
2	p	24	PRO	2.1
1	M	148	ALA	2.1
1	f	475	ASN	2.1
1	G	280	PHE	2.1
1	m	175	THR	2.1
1	e	527	PRO	2.1
1	L	382	ALA	2.1
1	a	282	ASP	2.1
2	R	59	ARG	2.1
2	p	36	ALA	2.1
1	E	326	LYS	2.1
1	E	350	LYS	2.1
1	b	285	LYS	2.1
1	f	187	LYS	2.1
1	g	348	ILE	2.1
2	u	85	GLU	2.1
1	K	182	LEU	2.1
1	d	247	LEU	2.1
1	f	473	THR	2.1
1	i	232	LEU	2.1
2	s	95	LEU	2.1
1	a	204	VAL	2.1
1	b	283	ARG	2.1
2	T	17	VAL	2.1
2	U	57	GLY	2.1
1	f	358	GLU	2.1
1	n	183	GLU	2.1
2	S	5	LYS	2.1
2	q	25	LYS	2.1
2	T	46	ILE	2.1
1	l	490	MET	2.1
1	n	187	LYS	2.1
1	i	185	GLU	2.1
1	i	239	VAL	2.1
2	S	71	VAL	2.1
1	M	249	ILE	2.1
2	Q	100	GLN	2.1
1	A	474	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	j	270	LEU	2.1
1	m	244	LYS	2.1
1	b	355	THR	2.1
1	k	168	VAL	2.1
2	o	70	VAL	2.1
1	m	359	TYR	2.1
1	H	350	LYS	2.1
1	m	284	ARG	2.1
1	n	361	ARG	2.1
1	B	368	LEU	2.1
1	g	358	GLU	2.1
1	l	368	LEU	2.1
1	c	314	SER	2.1
1	i	179	SER	2.1
1	c	205	THR	2.0
1	M	369	ALA	2.0
1	f	331	ILE	2.0
1	f	360	ALA	2.0
1	l	391	LYS	2.0
2	P	82	ILE	2.0
2	Q	75	TYR	2.0
2	s	65	LYS	2.0
1	H	306	PHE	2.0
1	m	218	PHE	2.0
1	M	303	GLU	2.0
1	g	366	GLU	2.0
1	A	373	GLY	2.0
1	l	165	MET	2.0
1	l	282	ASP	2.0
1	I	43	LYS	2.0
2	u	64	VAL	2.0
1	g	325	THR	2.0
1	I	5	ILE	2.0
1	N	280	PHE	2.0
1	I	232	LEU	2.0
1	L	356	ASP	2.0
2	s	27	LYS	2.0
1	a	201	PRO	2.0
1	g	189	VAL	2.0
2	P	100	GLN	2.0
1	l	131	ILE	2.0
2	O	23	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	c	306	PHE	2.0
1	e	214	LEU	2.0
1	b	363	LYS	2.0
1	N	263	VAL	2.0
1	M	136	ILE	2.0
1	k	378	ILE	2.0
2	s	36	ALA	2.0
1	l	478	TYR	2.0
2	p	72	PHE	2.0
1	K	363	LYS	2.0
2	Q	5	LYS	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
3	MG	g	601	1/1	0.54	14.41	66,66,66,66	0
3	MG	F	601	1/1	0.27	10.85	25,25,25,25	0
3	MG	d	601	1/1	0.38	10.22	68,68,68,68	0
3	MG	D	601	1/1	0.22	8.61	29,29,29,29	0
3	MG	f	601	1/1	0.46	7.13	70,70,70,70	0
3	MG	c	601	1/1	0.31	5.95	51,51,51,51	0
3	MG	A	601	1/1	0.23	5.36	27,27,27,27	0
5	DMS	k	601	4/4	0.28	4.50	89,96,103,115	0
5	DMS	n	701	4/4	0.27	4.45	69,85,87,99	0
3	MG	e	601	1/1	0.32	4.44	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
3	MG	B	601	1/1	0.29	3.49	44,44,44,44	0
3	MG	a	601	1/1	0.32	3.44	54,54,54,54	0
5	DMS	j	601	4/4	0.27	3.07	82,83,101,117	0
5	DMS	h	601	4/4	0.22	3.01	52,58,85,96	0
5	DMS	H	601	4/4	0.26	2.78	24,28,74,96	0
5	DMS	m	601	4/4	0.23	2.67	82,92,95,105	0
5	DMS	l	601	4/4	0.27	2.66	63,95,106,125	0
5	DMS	J	601	4/4	0.23	2.63	39,53,65,90	0
3	MG	b	601	1/1	0.25	2.16	53,53,53,53	0
4	ADP	f	602	27/27	0.28	2.01	47,93,109,116	0
3	MG	E	601	1/1	0.22	1.84	20,20,20,20	0
5	DMS	I	601	4/4	0.19	1.67	37,58,66,93	0
5	DMS	L	601	4/4	0.22	1.53	39,58,61,94	0
4	ADP	B	602	27/27	0.22	1.53	18,54,75,80	0
4	ADP	d	602	27/27	0.23	1.52	45,72,87,93	0
4	ADP	g	602	27/27	0.25	1.46	56,84,98,103	0
4	ADP	a	602	27/27	0.24	1.36	21,70,81,90	0
3	MG	G	601	1/1	0.20	1.25	29,29,29,29	0
4	ADP	D	602	27/27	0.20	1.21	1,38,64,69	0
4	ADP	G	602	27/27	0.21	1.19	1,61,76,85	0
4	ADP	e	602	27/27	0.24	1.16	48,78,103,108	0
4	ADP	c	602	27/27	0.22	1.10	24,67,80,102	0
5	DMS	M	601	4/4	0.18	1.05	26,29,60,79	0
3	MG	C	601	1/1	0.20	0.97	28,28,28,28	0
4	ADP	F	602	27/27	0.21	0.91	23,51,75,88	0
5	DMS	i	601	4/4	0.19	0.80	27,32,40,87	0
4	ADP	E	602	27/27	0.20	0.71	12,44,74,80	0
4	ADP	b	602	27/27	0.19	0.61	13,58,79,85	0
4	ADP	A	602	27/27	0.20	0.49	1,47,68,77	0
5	DMS	K	601	4/4	0.17	0.47	43,44,76,91	0
4	ADP	C	602	27/27	0.19	0.40	1,34,70,78	0
5	DMS	N	701	4/4	0.15	-0.45	53,57,64,90	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.