



# Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 05:51 PM BST

PDB ID : 4B8F  
Title : Crystal Structure of 70S Ribosome with Both Cognate tRNAs in the E and P Sites Representing an Authentic Elongation Complex.  
Authors : Gao, Y.G.; Feng, S.; Chen, Y.  
Deposited on : 2012-08-28  
Resolution : 3.70 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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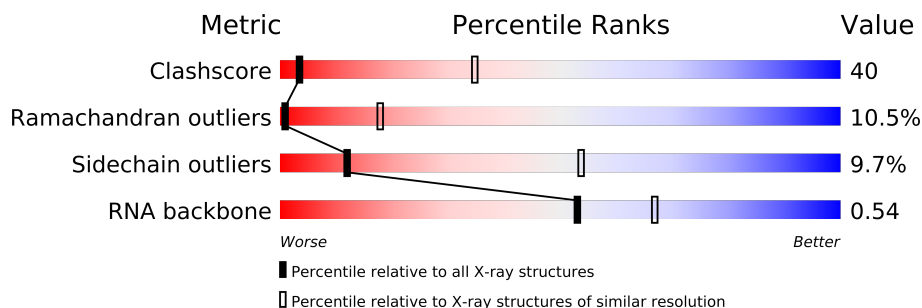
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : dev-1323  
EDS : **NOT EXECUTED**  
Percentile statistics : 21963  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable23004

# 1 Overall quality at a glance

The reported resolution of this entry is 3.70 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))
Clashscore	79885	1009 (3.94-3.46)
Ramachandran outliers	78287	1016 (3.98-3.42)
Sidechain outliers	78261	1014 (3.98-3.42)
RNA backbone	1838	1008 (4.52-2.80)

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.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1522	
2	B	256	
3	C	239	
4	D	209	
5	E	162	
6	F	101	
7	G	156	
8	H	138	
9	I	128	
10	J	105	
11	K	129	
12	L	132	
13	M	126	
14	N	61	
15	O	89	

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Mol	Chain	Length	Quality of chain
16	P	88	
17	Q	105	
18	R	88	
19	S	93	
20	T	106	
21	U	27	
22	V	76	
23	W	77	
24	X	25	
25	Y	691	

## 2 Entry composition

There are 29 unique types of molecules in this entry. The entry contains 60287 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 RNA chain called 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	127	Total	C	N	O	S	0	0	0
			1010	639	197	174				

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	125	Total	C	N	O	S	0	0	1
			988	611	206	169	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14 TYPE Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	R	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 23 is a RNA chain called RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			

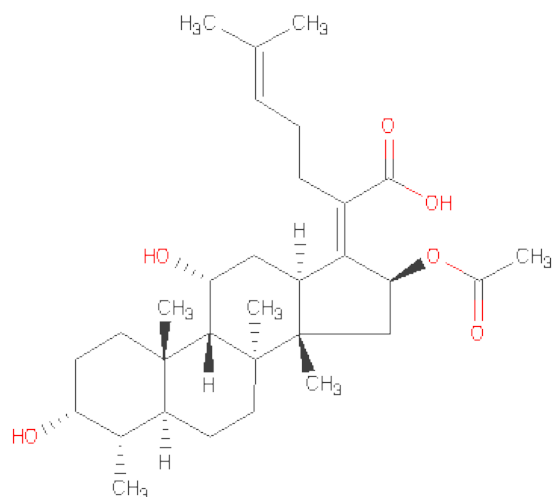
- Molecule 24 is a RNA chain called RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	12	Total	C	N	O	P	0	0	0
			257	116	49	80	12			

- Molecule 25 is a protein called ELONGATION FACTOR G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y	667	Total	C	N	O	S	0	0	1
			5215	3316	893	988	18			

- Molecule 26 is FUSIDIC ACID (three-letter code: FUA) (formula: C<sub>31</sub>H<sub>48</sub>O<sub>6</sub>).

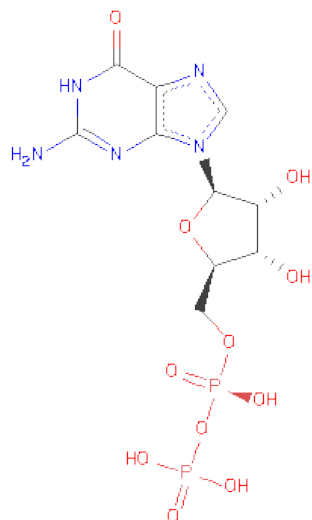


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
26	F	1	Total	C	O	0	0
			37	31	6		

- Molecule 27 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
27	I	4	Total	Zn	0	0
			4	4		

- Molecule 28 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).





Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
28	Y	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 29 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

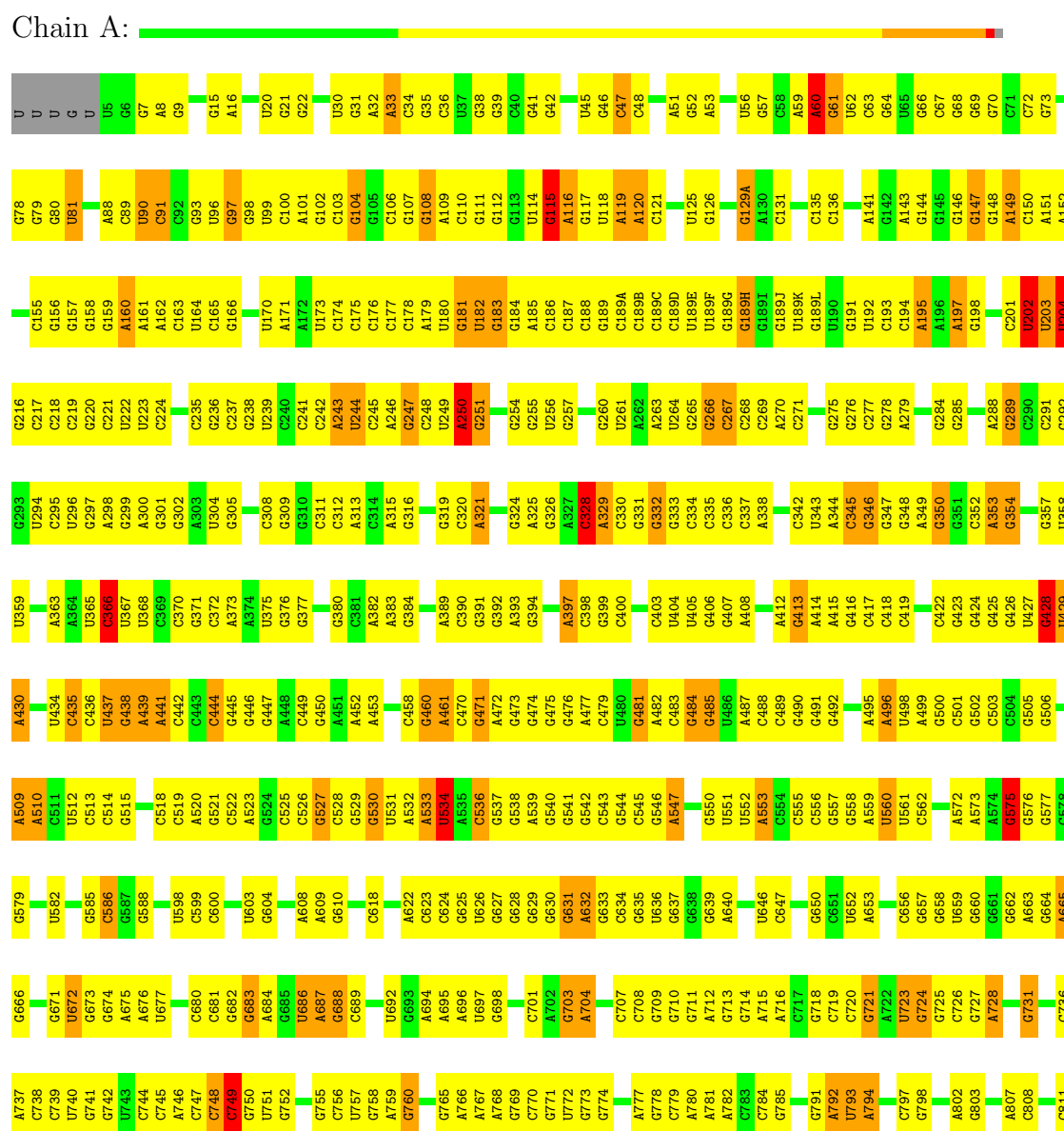
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
29	Y	1	Total	Mg	0	0
			1	1		

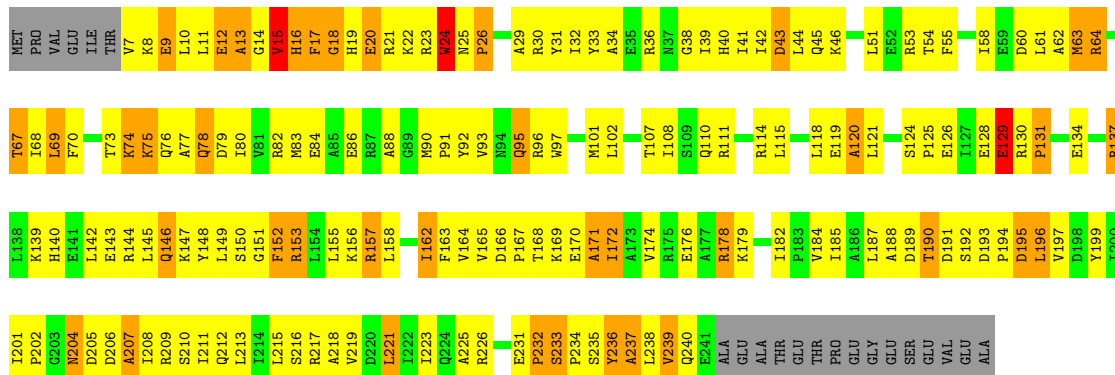
### 3 Residue-property plots

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.

Note EDS was not executed.

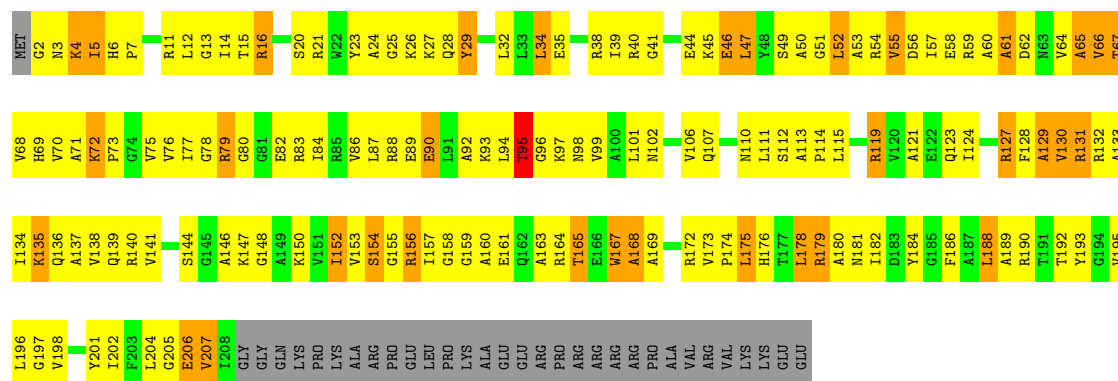
#### • Molecule 1: 16S RIBOSOMAL RNA





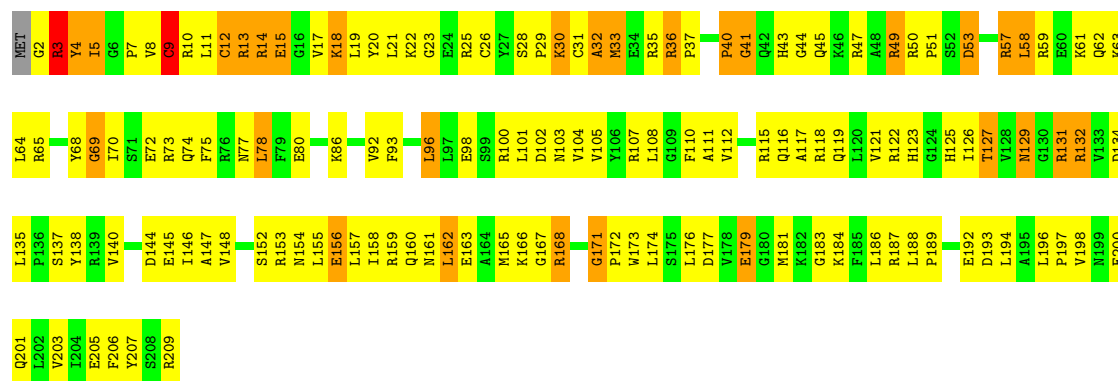
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain C:



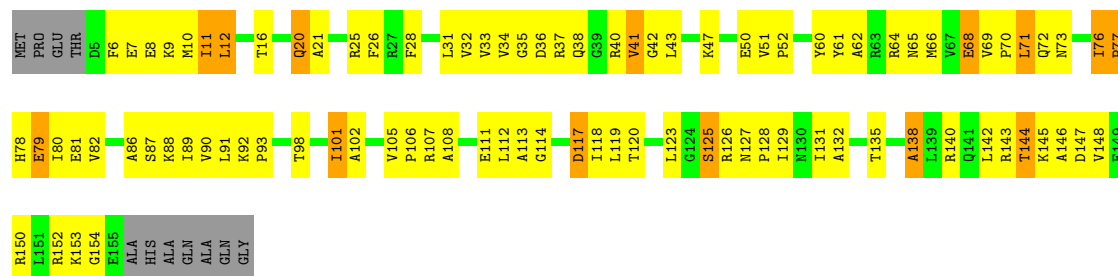
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain D:



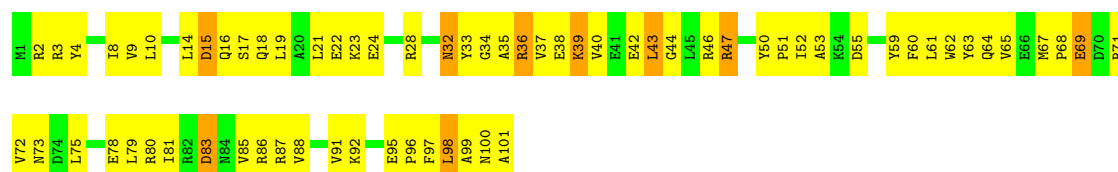
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain E:

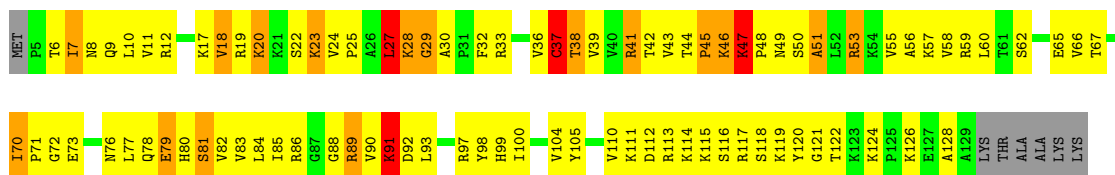


• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain F:

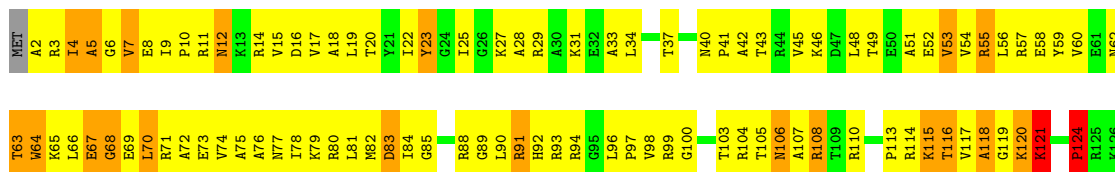






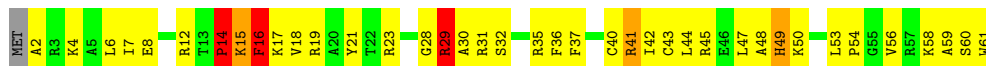
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain M:



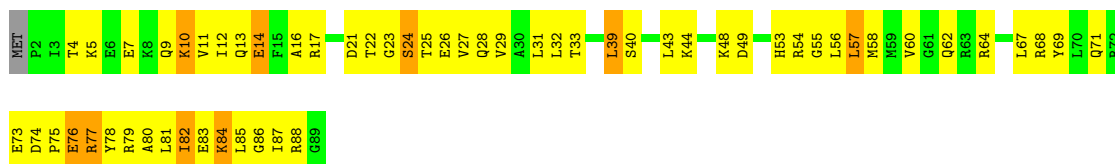
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z

Chain N:



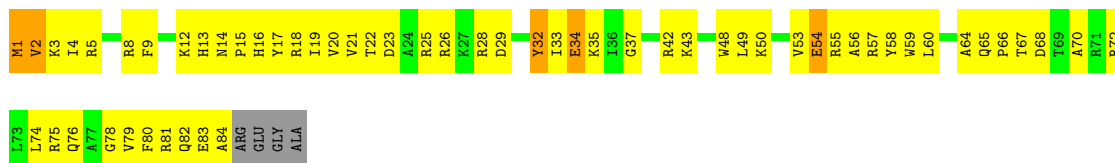
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain O:



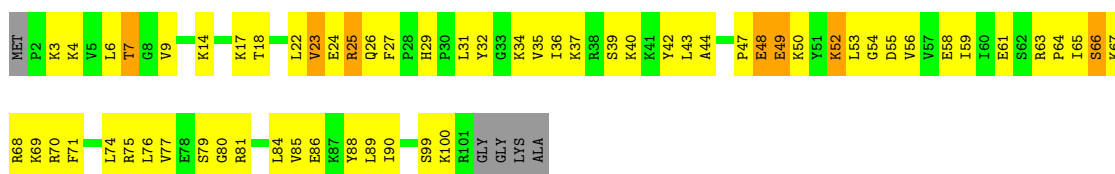
• Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain P:



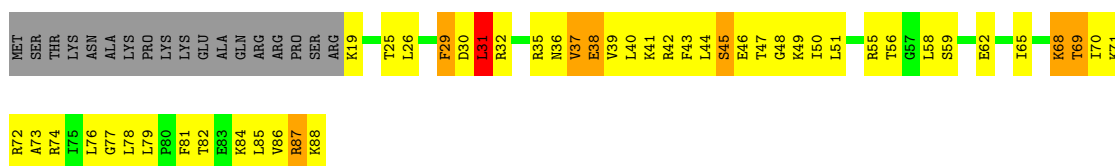
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain Q:



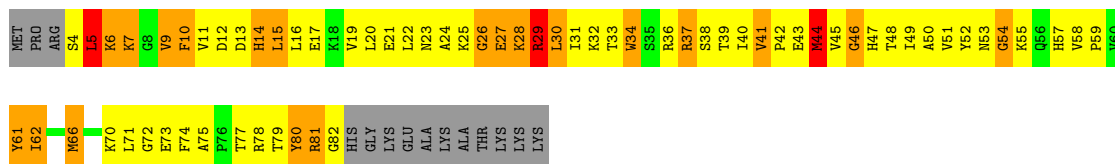
• Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain R:



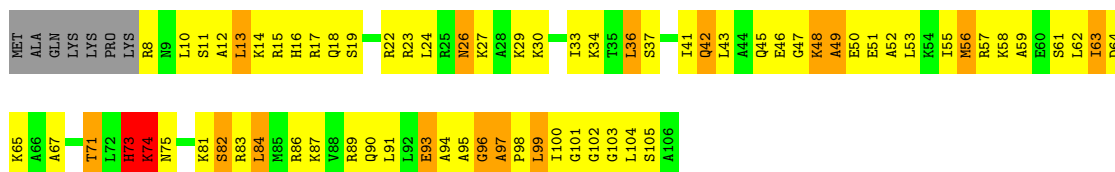
- Molecule 19: 30S RIBOSOMAL PROTEIN S19

Chain S:



- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain T:



- Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain U:



- Molecule 22: MRNA

Chain V:



- Molecule 23: RNA

Chain W:



- Molecule 24: RNA

Chain X:

G	G	C	A	A	G	G	A	G	A	A	A11	A12	A13	U14	G15	U16	U17	C18	A19	A20	A21	A22
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• Molecule 25: ELONGATION FACTOR G

Chain Y:

MET	ALA	VAL	K4	V5	E6	Y7	D8	L9	K10	R11	L12	R13	N14	I15	G16	I17	A18	A19	H20	I21	D22	A23	G24	K25	T26	T27	T28	T29	R31	I32	L33	Y34	Y35	T36	G37	R38	I39	H40	K41	I42	G43	GLU	VAL	HIS	GLU	GLY	ALA	THR	MET	ASP	PHE	T120	Y121	Y122	GLN	GLN	ARG	GLU	ARG	GLU
ARG	GLY	ILE	T64	T65	T66	A67	T70	T71	C72	F73			R78	I79	N80	I81	I82	H83	T84	P85	H86	G87	H88	D89	F90	T91	T92	E93	V94	E95	A159	S97	R98	R99	V100	L101	D102		I105	V106		D109	S110	Q111	Q112	Q113	V114	E115	G116	P117	Q118	S119	E119	T120	Y121	Y122	R123	Q124	K127	
Y128	K129	P130	P131	I133	A134	F135	A136	R137	K138	M139	D140	K141	T142	G143	A144	D145	L146	W147	L148	V149	I150	R151	T152	M153	E154	E155	R156	L157	G158	A159	P161	R162	V163	M164	Q165	L166	P167	I168	G169	R170	E171	D172	T173	F174	S175	G176	I177	L178	D179	V180	L181	R182	A185	Y186	T187	Y188				
D191	L192	G193	T194	D195	T196	R197	E198	F199	P200	T201	P202	E203	E204	Y205	L206	D207	Q208	A209	R210	E211	Y212	H213	E214	K215	L216	Y217	E218	Y219	A220	A221	D222	F223	D224	E225	Y226	K227	K228	L229	K230	Y231	L232	E233	G234	E235	E236	P237	T238	E239	E240	E241	L242	Y243	A244	A245	T246	K247	K248	G249		
T250	L251	D252	L253	K254	T255	T256	V257	V258	F259	L260	G261	S262	A263	L264	K265	N266	K267	G268	V269		L272	L273	D274	A275	V276	D277	D278	Y279	L280	P281	S282	P283	L284	D285	L286	P287	P288	L289		T292	P293	P294	E295	G296	E297	I301	H302	P303	D304	P305	N306	L309	A310	A311	L312	A313	F314			
K315	L316	K317	A318	D319	Y322	L325	T326	F327	L328	R329	V330	Y331	S332	L335	T336	S337	G338	S339	Y340	Y341	Y342	K343	L344	T345	K346	G347	E350	R351	V352	L355	L356	R357	K358	H359	A360	K361	H362	S363	E364	E365	V366	E367	L368	K369	E370	A371	G372	D373	L374	G375	A376	V377	A378	G379						
L380	K381	E382	L383	T384	T385	G386	D387	L388	L389	V390	G391	P395	R396	V397	L398	L399	E400	S401	L402	E403	V404	P405	E406	P407	V408	L409	D410	V411	A412	L413	E414	P415	K416	T417	K418	D419	D420	Q421	K422	K423	L424	S425	Q426	A427	L428	L431	E434	D435	P436	T437	F438	R439	V440	S441	T442	H443				
K444	E445	T446	G447	Q448	T449	L450	L451	S452	G453	N454	L457	H458	L459	E460	L461	L462	V463	D464	R465	L466	K467	R468	E469	F470	K471	V472	D473	A474	V481	A482	Y483	R484	E485	T486	L487	T488	K489	P490	V491	D492	G495	K496	F497	L498	R499	O500	T501	G502	O503	R504	O505	O506	Y507	G508	H509	V510				
K511	I512	K513	S514	E515	P516	L517	P518	R519	G520	S521	V526	N527	A528	I529	V530	G531	G532	V533	I534	P535	K536	E537	Y538	I539	P540	A541	V542	Q543	K544	G545	L546	E547	E548	A549	M550	Q551	S552	G553	P554	L555	L556	G557	F558	P559	V560	V561	D562	L563	K564	V565	T566	L567	Y568	G569	Q570	S571	Y572	H573		
E574	V575	P576	S577	E578	E579	N580	A581	F582	K583	L584	S587	N588	A589	I590	K591	E592	A593	V594	Q595	K596	G597	D598	P599	V600	L601	L602	E603	P604	L605	M606	R607	E608	E609	V610	P613	E614	Y615	Y616	M617	V620	L621	L624	N625	A626	R627	R628	G629	Q630	L631	L632	G633	M634	E635	P636	R637					
Q641	V642	I643	E644	A645	F646	V647	P648	L649	A650	E651	G654	Y655	A656	T657	D658	L659	R660	S661	K662	T663	Q664	G665	R666	F669	V670	M671	F672	F673	D674	H675	Y676	G677	E678	V679	P680	K681	Q682	V683	Q684	L687	I688	K689	G690	GLN																



## 4 Data and refinement statistics

EDS was not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	291.36Å 269.43Å 401.95Å 90.00° 91.78° 90.00°	Depositor
Resolution (Å)	49.75 – 3.70	Depositor
% Data completeness (in resolution range)	99.9 (49.75-3.70)	Depositor
$R_{merge}$	0.20	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.47 (at 3.40Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, $R_{free}$	0.214 , 0.249	Depositor
Wilson B-factor (Å <sup>2</sup> )	84.2	Xtriage
Anisotropy	0.051	Xtriage
Estimated twinning fraction	0.048 for h,-k,-l	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.41$ , $\langle L^2 \rangle = 0.24$	Xtriage
Outliers	0 of 846438 reflections	Xtriage
Total number of atoms	60287	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	91.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.34% 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: GDP, 5MU, ZN, MG, FUA

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	0.54	0/36190	0.74	23/56486 (0.0%)
2	B	0.44	0/1934	0.67	0/2609
3	C	0.48	0/1637	0.64	0/2207
4	D	0.39	0/1733	0.65	0/2318
5	E	0.49	0/1163	0.68	0/1566
6	F	0.40	0/856	0.63	0/1154
7	G	0.40	0/1276	0.60	0/1709
8	H	0.45	0/1136	0.71	0/1527
9	I	0.42	0/1027	0.67	0/1373
10	J	0.45	0/808	0.69	0/1087
11	K	0.45	0/900	0.70	0/1213
12	L	0.47	0/987	0.71	0/1322
13	M	0.39	0/999	0.67	0/1338
14	N	0.47	0/501	0.67	0/664
15	O	0.40	0/745	0.62	0/992
16	P	0.39	0/717	0.63	0/965
17	Q	0.47	0/837	0.66	0/1119
18	R	0.45	0/579	0.67	0/768
19	S	0.43	0/643	0.68	1/867 (0.1%)
20	T	0.38	0/765	0.64	0/1007
21	U	0.47	0/213	0.61	0/279
22	V	0.52	0/1809	0.70	0/2819
23	W	0.36	0/1810	0.70	0/2821
24	X	0.38	0/288	0.72	0/446
25	Y	0.47	0/5313	0.69	0/7195
All	All	0.50	0/64866	0.71	24/95851 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	1	26
22	V	0	1
All	All	1	27

There are no bond length outliers.

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1498	U	C2'-C3'-O3'	9.73	130.91	109.50
1	A	115	G	C2'-C3'-O3'	8.39	127.96	109.50
1	A	1502	A	N9-C1'-C2'	7.98	124.38	114.00
1	A	60	A	C2'-C3'-O3'	7.36	125.69	109.50
1	A	533	A	C2'-C3'-O3'	7.29	125.54	109.50
1	A	328	C	C2'-C3'-O3'	7.23	125.41	109.50
1	A	428	G	C2'-C3'-O3'	6.67	124.37	113.70
1	A	575	G	C2'-C3'-O3'	6.54	124.16	113.70
1	A	366	C	C2'-C3'-O3'	6.25	123.70	113.70
1	A	1190	G	N9-C1'-C2'	6.23	122.09	114.00
1	A	1201	A	C2'-C3'-O3'	6.13	123.50	113.70
19	S	5	LEU	CA-CB-CG	5.96	129.02	115.30
1	A	921	U	C5'-C4'-C3'	-5.91	106.55	116.00
1	A	1109	C	OP2-P-O3'	5.55	117.40	105.20
1	A	1285	A	C2'-C3'-O3'	5.42	122.38	113.70
1	A	553	A	C5'-C4'-C3'	-5.41	107.35	116.00
1	A	481	G	C5'-C4'-C3'	-5.20	107.68	116.00
1	A	204	U	O4'-C1'-N1	5.19	112.35	108.20
1	A	534	U	C5'-C4'-O4'	-5.17	102.89	109.10
1	A	1505	G	N9-C1'-C2'	5.14	120.68	114.00
1	A	250	A	N9-C1'-C2'	5.11	120.65	114.00
1	A	586	C	N1-C1'-C2'	-5.11	106.38	112.00
1	A	1065	U	N1-C1'-C2'	5.10	120.63	114.00
1	A	1049	U	N1-C1'-C2'	5.09	120.62	114.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	1498	U	C3'

All (27) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1065	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1073	U	Sidechain
1	A	1077	G	Sidechain
1	A	108	G	Sidechain
1	A	118	U	Sidechain
1	A	1190	G	Sidechain
1	A	1214	C	Sidechain
1	A	1360	A	Sidechain
1	A	1398	A	Sidechain
1	A	1498	U	Sidechain
1	A	1505	G	Sidechain
1	A	1516	G	Sidechain
1	A	1519	A	Sidechain
1	A	1529	G	Sidechain
1	A	202	U	Sidechain
1	A	250	A	Sidechain
1	A	436	C	Sidechain
1	A	534	U	Sidechain
1	A	586	C	Sidechain
1	A	672	U	Sidechain
1	A	727	G	Sidechain
1	A	749	C	Sidechain
1	A	760	G	Sidechain
1	A	880	C	Sidechain
1	A	898	G	Sidechain
1	A	991	U	Sidechain
22	V	4	C	Sidechain

## 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	32329	0	16318	1155	0
2	B	1901	0	1941	221	0
3	C	1613	0	1677	185	0
4	D	1703	0	1763	171	0
5	E	1147	0	1207	115	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	F	843	0	857	76	0
7	G	1257	0	1296	89	0
8	H	1116	0	1177	89	0
9	I	1010	0	1035	139	0
10	J	795	0	840	154	0
11	K	885	0	904	56	0
12	L	971	0	1057	142	0
13	M	988	0	1059	151	0
14	N	492	0	529	64	0
15	O	734	0	771	69	0
16	P	701	0	720	66	0
17	Q	824	0	891	57	0
18	R	574	0	644	79	0
19	S	630	0	652	101	0
20	T	763	0	861	97	0
21	U	209	0	221	18	0
22	V	1619	0	822	59	0
23	W	1641	0	839	123	0
24	X	257	0	130	45	0
25	Y	5215	0	5288	849	0
26	F	37	0	47	15	0
27	I	4	0	0	0	0
28	Y	28	0	12	13	0
29	Y	1	0	0	0	0
All	All	60287	0	43558	4094	0

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 40.

All (4094) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:34:C:C3'	23:W:35:A:H5''	1.42	1.44
24:X:11:A:H4'	24:X:12:A:C5'	1.69	1.21
23:W:34:C:C2'	23:W:35:A:H5''	1.71	1.20
24:X:11:A:H4'	24:X:12:A:H5'	1.24	1.17
10:J:75:ILE:HG13	10:J:76:ASN:H	1.10	1.17
25:Y:84:THR:H	25:Y:85:PRO:HD2	1.09	1.14
24:X:11:A:H1'	24:X:12:A:N7	1.65	1.12
23:W:34:C:H2'	23:W:35:A:O4'	1.50	1.11
1:A:979:C:H3'	1:A:980:C:H5''	1.20	1.11
25:Y:281:PRO:HB2	25:Y:286:ILE:HD11	1.22	1.11
2:B:185:ILE:HG22	2:B:199:TYR:HB2	1.30	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:18:VAL:HG23	12:L:19:ARG:H	1.12	1.11
1:A:1503:A:N1	24:X:11:A:C2	2.19	1.10
23:W:34:C:H3'	23:W:35:A:C5'	1.81	1.10
9:I:112:LYS:HA	9:I:119:ALA:HB2	1.27	1.10
26:F:1102:FUA:H202	26:F:1102:FUA:H5	1.29	1.09
23:W:3:C:H2'	23:W:4:G:H5''	1.24	1.08
10:J:48:THR:HA	10:J:62:HIS:HB3	1.35	1.07
23:W:34:C:C3'	23:W:35:A:C5'	2.31	1.07
25:Y:468:ARG:HH11	25:Y:468:ARG:HB3	1.12	1.06
3:C:70:VAL:HG12	3:C:72:LYS:H	1.16	1.06
2:B:168:THR:HG23	2:B:192:SER:HB3	1.17	1.06
25:Y:21:ILE:H	25:Y:21:ILE:HD13	1.20	1.05
1:A:793:U:H3'	1:A:794:A:H5''	1.30	1.05
25:Y:485:GLU:HG3	25:Y:553:GLY:HA3	1.40	1.04
15:O:17:ARG:HD3	15:O:26:GLU:HG3	1.40	1.04
2:B:165:VAL:HG23	2:B:166:ASP:H	1.19	1.03
2:B:223:ILE:HG12	2:B:226:ARG:NH2	1.73	1.03
25:Y:293:THR:HA	25:Y:397:VAL:HG12	1.40	1.03
25:Y:490:PRO:HG3	25:Y:516:PRO:HD2	1.40	1.02
1:A:1489:G:H2'	1:A:1490:C:H5''	1.39	1.02
25:Y:85:PRO:HA	25:Y:94:VAL:HG22	1.39	1.01
22:V:36:A:N1	24:X:16:U:O4	1.93	1.01
25:Y:621:ILE:HG23	25:Y:631:ILE:HG12	1.39	1.00
23:W:34:C:C2'	23:W:35:A:C5'	2.40	0.99
23:W:34:C:H3'	23:W:35:A:H5''	1.01	0.99
7:G:27:ILE:HD11	7:G:40:ALA:HA	1.44	0.99
25:Y:84:THR:H	25:Y:85:PRO:CD	1.75	0.99
1:A:1057:G:H5''	3:C:154:SER:HB2	1.40	0.99
13:M:108:ARG:HA	13:M:108:ARG:HH11	1.23	0.99
25:Y:439:ARG:H	25:Y:452:SER:HB3	1.28	0.99
12:L:41:ARG:HB3	12:L:41:ARG:HH11	1.28	0.98
10:J:50:ILE:HD13	10:J:50:ILE:H	1.25	0.98
1:A:979:C:C3'	1:A:980:C:H5''	1.93	0.97
25:Y:250:THR:HA	25:Y:255:ILE:HG23	1.45	0.97
25:Y:624:LEU:HD23	25:Y:631:ILE:HD11	1.45	0.97
25:Y:606:MET:HG3	25:Y:649:LEU:HD21	1.47	0.97
25:Y:423:LYS:HB3	25:Y:472:VAL:HG22	1.47	0.96
11:K:54:ARG:O	11:K:57:THR:HG22	1.66	0.96
25:Y:252:ASP:HB2	25:Y:254:LYS:HG2	1.46	0.96
26:F:1102:FUA:O3	25:Y:84:THR:HG23	1.65	0.96
1:A:656:C:H4'	15:O:62:GLN:HE22	1.31	0.96
1:A:1003:G:H2'	1:A:1004:A:H4'	1.47	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:385:THR:HG21	25:Y:436:PRO:HG3	1.48	0.95
10:J:6:ILE:HD11	10:J:72:VAL:HB	1.48	0.95
1:A:80:G:H3'	1:A:81:U:H5'	1.45	0.95
20:T:57:ARG:NH1	20:T:102:GLY:HA2	1.82	0.95
25:Y:530:VAL:HG13	25:Y:531:GLY:H	1.32	0.95
25:Y:12:LEU:O	25:Y:283:PRO:HD3	1.65	0.95
25:Y:573:HIS:HD2	25:Y:576:ASP:H	1.13	0.94
23:W:3:C:C2'	23:W:4:G:H5''	1.97	0.94
25:Y:512:ILE:HD12	25:Y:589:ALA:HB1	1.48	0.94
1:A:975:A:H4'	1:A:976:G:H5''	1.47	0.94
25:Y:526:VAL:HB	25:Y:566:THR:HA	1.50	0.94
10:J:75:ILE:HG13	10:J:76:ASN:N	1.83	0.93
22:V:4:C:HO2'	22:V:5:G:H8	1.04	0.93
3:C:58:GLU:H	3:C:65:ALA:HB3	1.30	0.93
11:K:111:ASP:HA	18:R:84:LYS:HD2	1.50	0.92
1:A:1004:A:H5'	1:A:1025:U:H3	1.33	0.92
25:Y:238:THR:HG22	25:Y:241:GLU:HG2	1.50	0.92
25:Y:196:ILE:HG13	25:Y:197:ARG:H	1.33	0.92
17:Q:69:LYS:O	17:Q:70:ARG:HD2	1.70	0.92
25:Y:487:ILE:HG23	25:Y:594:VAL:HG13	1.49	0.92
1:A:148:G:H2'	1:A:149:A:H8	1.34	0.92
18:R:29:PHE:H	18:R:29:PHE:HD1	1.10	0.92
12:L:41:ARG:HG2	12:L:42:THR:H	1.35	0.92
1:A:1363(A):A:H4'	1:A:1364:U:H5''	1.52	0.91
6:F:67:MET:HB2	6:F:68:PRO:HD2	1.52	0.91
13:M:23:TYR:HB3	13:M:67:GLU:HB3	1.51	0.91
10:J:49:VAL:HG23	14:N:41:ARG:HB2	1.50	0.91
25:Y:9:LEU:CD2	25:Y:284:LEU:HB2	2.01	0.91
23:W:71:C:H2'	23:W:72:A:H8	1.34	0.91
1:A:1502:A:H2	1:A:1505:G:H1	1.12	0.91
10:J:34:VAL:HG22	10:J:74:ILE:HG22	1.52	0.91
25:Y:546:ILE:HD13	25:Y:565:VAL:HG11	1.52	0.90
13:M:3:ARG:HG2	13:M:9:ILE:HD11	1.54	0.90
14:N:12:ARG:HH12	14:N:14:PRO:HG3	1.36	0.90
1:A:509:A:H5'	1:A:510:A:OP2	1.72	0.90
23:W:14:A:H3'	23:W:15:G:H5''	1.52	0.90
14:N:12:ARG:O	14:N:14:PRO:HD3	1.72	0.90
23:W:2:G:H1	23:W:71:C:H42	1.20	0.90
23:W:7:G:H3'	23:W:8:U:H5'	1.54	0.89
13:M:3:ARG:HH21	13:M:7:VAL:HG13	1.37	0.89
2:B:204:ASN:ND2	2:B:206:ASP:H	1.70	0.89
5:E:80:ILE:HG22	8:H:104:ARG:NH2	1.87	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:83:ILE:HD12	8:H:137:VAL:HG22	1.54	0.89
2:B:17:PHE:HB3	2:B:44:LEU:HD21	1.52	0.89
1:A:1030(D):A:H2'	1:A:1031:G:H5'	1.54	0.89
20:T:23:ARG:O	20:T:27:LYS:HB2	1.72	0.89
24:X:11:A:H4'	24:X:12:A:O5'	1.65	0.89
25:Y:170:ARG:O	25:Y:171:GLU:HG2	1.71	0.89
4:D:49:ARG:HE	4:D:49:ARG:HA	1.35	0.89
25:Y:92:ILE:HG12	25:Y:405:PRO:HG2	1.54	0.89
1:A:686:U:HO2'	1:A:687:A:H8	0.94	0.89
25:Y:281:PRO:HB2	25:Y:286:ILE:CD1	2.02	0.89
3:C:206:GLU:HG2	3:C:207:VAL:H	1.38	0.89
1:A:1489:G:C2'	1:A:1490:C:H5''	2.02	0.88
20:T:13:LEU:H	20:T:13:LEU:HD12	1.38	0.88
4:D:194:LEU:HB3	4:D:196:LEU:HD13	1.55	0.88
3:C:52:LEU:HD23	3:C:52:LEU:H	1.39	0.88
20:T:48:LYS:HB3	20:T:51:GLU:HG2	1.56	0.88
1:A:979:C:H3'	1:A:980:C:C5'	2.03	0.88
1:A:129(A):G:O2'	1:A:189(F):U:H2'	1.71	0.88
10:J:78:ASN:HD22	10:J:81:THR:HG21	1.38	0.88
25:Y:255:ILE:HG12	25:Y:257:PRO:HD3	1.55	0.88
5:E:50:GLU:HG3	5:E:52:PRO:HD2	1.53	0.88
25:Y:546:ILE:HG23	25:Y:590:ILE:HG13	1.55	0.88
1:A:1004:A:H61	1:A:1034:G:H2'	1.37	0.88
3:C:90:GLU:O	3:C:93:LYS:HB3	1.74	0.87
2:B:204:ASN:HD22	2:B:205:ASP:N	1.72	0.87
16:P:20:VAL:HG21	16:P:32:TYR:CG	2.09	0.87
25:Y:453:GLY:HA2	25:Y:458:HIS:HD2	1.36	0.87
1:A:1277:C:H2'	1:A:1278:U:H5'	1.54	0.87
10:J:4:ILE:HD11	10:J:77:PRO:HB3	1.55	0.87
1:A:1227:A:H2'	13:M:117:VAL:HG21	1.57	0.87
25:Y:519:ARG:HH22	25:Y:678:GLU:HB3	1.38	0.87
1:A:1234:C:O2'	1:A:1235:U:H5'	1.73	0.86
4:D:36:ARG:CB	4:D:36:ARG:HH11	1.87	0.86
9:I:17:VAL:HG11	9:I:81:ILE:HD13	1.56	0.86
1:A:1054:C:O2'	1:A:1055:A:H5''	1.76	0.86
24:X:11:A:H1'	24:X:12:A:C8	2.09	0.86
15:O:80:ALA:HB1	15:O:84:LYS:HE2	1.58	0.86
25:Y:406:GLU:HB3	25:Y:407:PRO:HD2	1.57	0.86
25:Y:409:ILE:HG12	25:Y:656:ALA:HB3	1.53	0.86
25:Y:15:ILE:HD11	25:Y:81:ILE:HG12	1.58	0.86
9:I:119:ALA:O	9:I:120:ARG:HG2	1.73	0.86
1:A:1490:C:H5'	1:A:1490:C:H6	1.39	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:53:G:H2'	22:V:54:U:H6	1.39	0.86
9:I:4:TYR:HB2	9:I:19:LEU:HB2	1.56	0.86
2:B:126:GLU:HA	2:B:129:GLU:OE2	1.75	0.86
13:M:97:PRO:HA	13:M:110:ARG:HD3	1.57	0.86
25:Y:35:TYR:OH	25:Y:266:ASN:HB3	1.75	0.86
1:A:973:G:O4'	10:J:55:LYS:HG3	1.76	0.85
2:B:88:ALA:HB2	2:B:219:VAL:HG13	1.58	0.85
12:L:83:VAL:HG11	12:L:100:ILE:HD13	1.59	0.85
1:A:998:G:H2'	1:A:999:C:C2	2.11	0.85
25:Y:71:THR:HG22	25:Y:80:ASN:OD1	1.76	0.85
22:V:15:G:H3'	22:V:16:U:H5''	1.57	0.85
1:A:1026:G:H2'	1:A:1027:C:H5'	1.59	0.85
25:Y:223:PHE:CZ	25:Y:249:GLY:HA3	2.12	0.85
25:Y:468:ARG:NH1	25:Y:468:ARG:HB3	1.91	0.85
10:J:54:PHE:CE2	10:J:55:LYS:HD2	2.11	0.85
1:A:1499:A:H1'	1:A:1520:G:H5'	1.59	0.85
25:Y:607:ARG:HG2	25:Y:646:PHE:CE1	2.11	0.84
1:A:1237:C:H3'	1:A:1238:A:H5'	1.59	0.84
3:C:34:LEU:HD22	3:C:38:ARG:HD2	1.58	0.84
3:C:3:ASN:O	3:C:4:LYS:HB2	1.75	0.84
5:E:102:ALA:HB2	5:E:120:THR:OG1	1.76	0.84
25:Y:19:ALA:HA	25:Y:121:VAL:HG11	1.59	0.84
25:Y:427:ALA:HB1	25:Y:466:LEU:HD11	1.59	0.84
1:A:80:G:H3'	1:A:81:U:C5'	2.07	0.84
18:R:58:LEU:HB3	18:R:62:GLU:HB3	1.60	0.84
2:B:42:ILE:HD11	2:B:202:PRO:HB2	1.57	0.84
25:Y:141:LYS:O	25:Y:144:ALA:HB2	1.77	0.84
23:W:50:U:H3	23:W:64:G:H22	1.25	0.84
10:J:49:VAL:O	10:J:60:ARG:HB3	1.78	0.84
1:A:328:C:H2'	1:A:328:C:O2	1.76	0.84
25:Y:607:ARG:HG2	25:Y:646:PHE:HE1	1.43	0.84
5:E:101:ILE:HD11	5:E:119:LEU:HD23	1.59	0.84
25:Y:157:LEU:H	25:Y:157:LEU:HD23	1.43	0.84
5:E:11:ILE:HD12	5:E:31:LEU:HD12	1.59	0.84
12:L:18:VAL:HG23	12:L:19:ARG:N	1.93	0.83
12:L:41:ARG:HB3	12:L:41:ARG:NH1	1.93	0.83
10:J:6:ILE:O	10:J:6:ILE:HD12	1.79	0.83
25:Y:415:PRO:HA	25:Y:474:ALA:CB	2.08	0.83
12:L:90:VAL:O	12:L:92:ASP:N	2.09	0.83
25:Y:510:VAL:HA	25:Y:570:GLY:HA3	1.60	0.83
1:A:1321:C:H3'	1:A:1322:C:H5''	1.60	0.83
1:A:1152:A:H5''	10:J:13:HIS:CD2	2.13	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:63:PHE:HB3	14:N:58:LYS:HA	1.59	0.83
25:Y:230:LYS:HZ1	25:Y:237:PRO:HA	1.44	0.83
1:A:1004:A:H5'	1:A:1025:U:N3	1.93	0.83
1:A:100:C:H2'	1:A:101:A:C8	2.12	0.83
13:M:10:PRO:CB	13:M:18:ALA:HB1	2.09	0.83
23:W:14:A:C3'	23:W:15:G:H5''	2.07	0.83
13:M:49:THR:HG22	13:M:51:ALA:H	1.42	0.83
3:C:156:ARG:HH21	3:C:161:GLU:HA	1.43	0.83
1:A:1442:G:C6	1:A:1442(B):A:H2	1.97	0.82
1:A:793:U:C3'	1:A:794:A:H5''	2.09	0.82
25:Y:431:LEU:HD22	25:Y:466:LEU:HD13	1.59	0.82
2:B:12:GLU:O	2:B:14:GLY:N	2.10	0.82
25:Y:227:ILE:HD12	25:Y:245:ALA:HB2	1.62	0.82
23:W:24:U:H2'	23:W:25:C:H6	1.45	0.82
4:D:64:LEU:HB2	4:D:198:VAL:HG11	1.61	0.82
4:D:36:ARG:HH11	4:D:36:ARG:HB3	1.43	0.82
1:A:182:U:H5'	1:A:183:G:OP2	1.79	0.82
1:A:148:G:H2'	1:A:149:A:C8	2.15	0.82
5:E:76:ILE:HG13	5:E:142:LEU:HD13	1.60	0.82
25:Y:149:VAL:O	25:Y:152:THR:HG22	1.79	0.82
3:C:79:ARG:HH11	3:C:79:ARG:HB2	1.45	0.82
9:I:5:TYR:CD1	9:I:6:GLY:N	2.47	0.82
25:Y:289:ILE:HG13	25:Y:331:TYR:CD1	2.15	0.82
22:V:36:A:N6	24:X:16:U:O4	2.13	0.81
1:A:973:G:H1'	10:J:55:LYS:CE	2.10	0.81
1:A:656:C:H4'	15:O:62:GLN:NE2	1.95	0.81
13:M:8:GLU:OE1	13:M:22:ILE:HA	1.80	0.81
25:Y:145:ASP:HB3	25:Y:148:LEU:HB2	1.61	0.81
12:L:126:LYS:HG3	12:L:128:ALA:H	1.44	0.81
25:Y:428:LEU:HD13	25:Y:440:VAL:HG11	1.62	0.81
25:Y:427:ALA:HB1	25:Y:466:LEU:CD1	2.11	0.81
25:Y:415:PRO:HG3	25:Y:421:GLN:HG2	1.61	0.81
3:C:50:ALA:HB1	3:C:70:VAL:HG11	1.60	0.81
1:A:438:G:H4'	1:A:439:A:OP1	1.81	0.81
25:Y:33:LEU:HD23	25:Y:360:ALA:HB2	1.61	0.81
2:B:44:LEU:H	2:B:44:LEU:HD12	1.45	0.81
10:J:33:GLN:O	10:J:75:ILE:HG12	1.81	0.81
25:Y:171:GLU:HG3	25:Y:172:ASP:H	1.46	0.80
25:Y:555:LEU:HD11	25:Y:599:PRO:O	1.81	0.80
1:A:1250:A:H4'	9:I:68:GLY:H	1.44	0.80
2:B:107:THR:HA	2:B:110:GLN:HE21	1.44	0.80
18:R:87:ARG:HB3	18:R:87:ARG:NH1	1.97	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:34:C:O2'	23:W:35:A:C5'	2.29	0.80
26:F:1102:FUA:C31	25:Y:84:THR:HG23	2.11	0.80
1:A:792:A:O2'	1:A:794:A:N7	2.13	0.80
24:X:17:U:H2'	24:X:18:C:H6	1.43	0.80
3:C:16:ARG:HH11	3:C:16:ARG:HB2	1.46	0.80
25:Y:201:ILE:HD12	25:Y:201:ILE:H	1.45	0.80
9:I:4:TYR:CD2	9:I:88:TYR:HB2	2.17	0.80
24:X:11:A:C1'	24:X:12:A:C8	2.65	0.80
18:R:59:SER:H	18:R:62:GLU:HB2	1.46	0.80
25:Y:149:VAL:O	25:Y:153:MET:N	2.13	0.80
4:D:108:LEU:HD21	4:D:183:GLY:HA3	1.62	0.80
1:A:625:G:H2'	1:A:626:U:C6	2.17	0.80
1:A:736:C:H2'	1:A:737:A:C8	2.14	0.80
7:G:45:ASP:O	7:G:49:ILE:HG12	1.81	0.80
1:A:579:G:H5'	1:A:728:A:H1'	1.64	0.80
22:V:36:A:C6	24:X:16:U:O4	2.35	0.80
20:T:50:GLU:HB3	20:T:99:LEU:HB2	1.63	0.80
14:N:29:ARG:HG3	14:N:29:ARG:HH11	1.47	0.80
24:X:17:U:H2'	24:X:18:C:C6	2.17	0.80
6:F:33:TYR:HA	6:F:71:ARG:NH2	1.95	0.80
6:F:43:LEU:H	6:F:43:LEU:HD12	1.47	0.80
24:X:11:A:C4'	24:X:12:A:H5'	2.08	0.80
1:A:1226:C:N4	13:M:104:ARG:HD2	1.97	0.80
22:V:51:U:H3	22:V:63:G:H1	1.30	0.80
13:M:82:MET:HA	13:M:93:ARG:HH21	1.43	0.80
11:K:99:GLN:HG2	11:K:105:VAL:HG21	1.64	0.79
1:A:1104:G:O5'	2:B:111:ARG:HD2	1.82	0.79
1:A:1503:A:C2	24:X:11:A:C2	2.70	0.79
1:A:1116:C:H2'	1:A:1117:G:H5'	1.63	0.79
12:L:20:LYS:HD3	12:L:20:LYS:H	1.44	0.79
24:X:18:C:C5'	24:X:19:A:OP1	2.30	0.79
11:K:85:ARG:HG2	11:K:111:ASP:O	1.83	0.79
1:A:1112:C:O2	3:C:179:ARG:HG3	1.82	0.79
25:Y:165:GLN:HB2	25:Y:260:LEU:HD11	1.65	0.79
1:A:1503:A:C2	24:X:11:A:H2	2.01	0.79
3:C:83:ARG:O	3:C:86:VAL:HG22	1.82	0.79
25:Y:439:ARG:N	25:Y:452:SER:HB3	1.96	0.79
20:T:45:GLN:HB2	20:T:91:LEU:HD13	1.65	0.79
9:I:53:VAL:HG23	9:I:55:ALA:HB3	1.62	0.79
10:J:69:ASN:O	10:J:70:ARG:HD2	1.82	0.79
20:T:57:ARG:HH11	20:T:102:GLY:HA2	1.45	0.79
13:M:3:ARG:NH2	13:M:7:VAL:HG13	1.97	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:15:VAL:HG12	13:M:45:VAL:HG22	1.63	0.79
22:V:53:G:H2'	22:V:54:U:C6	2.18	0.79
1:A:1513:A:H2'	1:A:1514:C:C6	2.17	0.79
23:W:34:C:O2'	23:W:35:A:C4'	2.31	0.79
17:Q:52:LYS:HD2	17:Q:52:LYS:H	1.47	0.79
4:D:8:VAL:C	4:D:10:ARG:H	1.85	0.79
25:Y:281:PRO:CB	25:Y:286:ILE:HD11	2.10	0.78
2:B:168:THR:CG2	2:B:192:SER:HB3	2.09	0.78
9:I:53:VAL:C	9:I:55:ALA:H	1.85	0.78
25:Y:415:PRO:HA	25:Y:474:ALA:HB2	1.63	0.78
25:Y:539:ILE:O	25:Y:542:VAL:HG12	1.83	0.78
25:Y:247:ARG:HD2	25:Y:278:ASP:O	1.82	0.78
25:Y:141:LYS:HE3	28:Y:1690:GDP:N2	1.97	0.78
12:L:70:ILE:HG23	12:L:100:ILE:HD12	1.65	0.78
25:Y:82:ILE:HD12	25:Y:101:LEU:HD23	1.63	0.78
8:H:17:THR:HB	8:H:78:GLN:OE1	1.84	0.78
2:B:43:ASP:OD2	2:B:46:LYS:HB2	1.83	0.78
1:A:483:C:H3'	1:A:484:G:H5''	1.63	0.78
1:A:522:C:H41	12:L:53:ARG:HH22	1.29	0.78
20:T:26:ASN:O	20:T:30:LYS:HB2	1.83	0.78
1:A:1490:C:C5'	1:A:1490:C:H6	1.97	0.78
1:A:1225:A:H2'	1:A:1225:A:N3	1.99	0.78
1:A:1100:C:H2'	1:A:1101:A:H5''	1.65	0.78
25:Y:25:LYS:HE3	28:Y:1690:GDP:O2B	1.84	0.77
10:J:7:LYS:HB2	10:J:97:GLU:HB2	1.64	0.77
25:Y:505:GLY:HA3	25:Y:576:ASP:CG	2.03	0.77
1:A:1364:U:O2	1:A:1364:U:H2'	1.84	0.77
10:J:61:GLU:OE1	14:N:45:ARG:HD2	1.83	0.77
22:V:46:G:O2'	22:V:47:U:H5'	1.83	0.77
12:L:25:PRO:C	12:L:27:LEU:H	1.85	0.77
1:A:284:G:H2'	1:A:285:G:H8	1.48	0.77
15:O:78:TYR:O	15:O:82:ILE:HG22	1.85	0.77
25:Y:293:THR:HB	25:Y:294:PRO:HD2	1.66	0.77
25:Y:513:LYS:HB2	25:Y:566:THR:HB	1.65	0.77
1:A:1128:C:H2'	1:A:1129:C:H5''	1.67	0.77
9:I:65:VAL:HG21	9:I:73:GLN:HB3	1.64	0.77
25:Y:510:VAL:HG22	25:Y:534:ILE:CD1	2.14	0.77
23:W:34:C:C2'	23:W:35:A:O4'	2.30	0.77
1:A:625:G:H2'	1:A:626:U:H6	1.49	0.77
25:Y:276:VAL:HA	25:Y:280:LEU:HD23	1.64	0.77
25:Y:616:TYR:HE2	25:Y:664:GLN:HE21	1.32	0.77
25:Y:513:LYS:CB	25:Y:566:THR:HB	2.14	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:973:G:H3'	1:A:974:A:H5''	1.65	0.77
1:A:101:A:O2'	1:A:102:G:H5'	1.83	0.77
15:O:33:THR:HG21	15:O:85:LEU:HD21	1.67	0.77
12:L:47:LYS:NZ	12:L:48:PRO:HD3	2.00	0.77
1:A:522:C:H41	12:L:53:ARG:NH2	1.83	0.77
25:Y:67:ALA:CB	25:Y:358:MET:HG3	2.13	0.77
1:A:1299:A:H2'	1:A:1299:A:N3	1.98	0.77
22:V:36:A:N1	24:X:16:U:C4	2.52	0.77
25:Y:223:PHE:CE1	25:Y:249:GLY:HA3	2.20	0.77
15:O:83:GLU:C	15:O:85:LEU:H	1.87	0.77
2:B:96:ARG:HD2	2:B:96:ARG:N	1.98	0.77
3:C:134:ILE:HD11	3:C:153:VAL:HG23	1.67	0.77
3:C:173:VAL:HG12	3:C:175:LEU:HD12	1.67	0.77
12:L:57:LYS:HG3	12:L:67:THR:HG22	1.66	0.77
16:P:20:VAL:HG21	16:P:32:TYR:HB2	1.67	0.76
13:M:96:LEU:HB3	13:M:97:PRO:HD2	1.65	0.76
9:I:95:LYS:HD3	9:I:96:LEU:N	2.00	0.76
19:S:21:GLU:HG3	19:S:22:LEU:HD23	1.66	0.76
24:X:12:A:H4'	24:X:13:A:OP2	1.85	0.76
1:A:926:G:N2	24:X:16:U:OP2	2.19	0.76
2:B:20:GLU:O	2:B:39:ILE:HG23	1.85	0.76
8:H:10:LEU:HD22	8:H:83:ILE:HD11	1.66	0.76
1:A:1004:A:N6	1:A:1034:G:H2'	2.00	0.76
23:W:6:G:H2'	23:W:7:G:O4'	1.86	0.76
19:S:78:ARG:HB2	19:S:81:ARG:HH11	1.49	0.76
22:V:64:A:H2'	22:V:65:G:H8	1.51	0.76
12:L:18:VAL:CG2	12:L:19:ARG:H	1.96	0.76
19:S:41:VAL:HG21	19:S:44:MET:HB2	1.67	0.76
23:W:22:G:C2'	23:W:23:C:H5''	2.15	0.76
5:E:144:THR:O	5:E:148:VAL:HG23	1.84	0.76
5:E:79:GLU:HB3	5:E:93:PRO:HD2	1.68	0.76
1:A:1479:C:H2'	1:A:1480:G:H8	1.51	0.76
19:S:48:THR:HG22	19:S:61:TYR:HA	1.65	0.76
5:E:51:VAL:HB	5:E:52:PRO:HD3	1.66	0.76
4:D:30:LYS:C	4:D:32:ALA:H	1.86	0.76
5:E:64:ARG:HG3	5:E:64:ARG:HH11	1.51	0.76
12:L:6:THR:H	12:L:9:GLN:NE2	1.83	0.76
25:Y:84:THR:N	25:Y:85:PRO:HD2	1.94	0.76
1:A:1513:A:H2'	1:A:1514:C:H6	1.51	0.76
9:I:104:ARG:O	9:I:104:ARG:HG2	1.85	0.76
7:G:151:TYR:OH	11:K:54:ARG:HD3	1.86	0.76
1:A:1002:G:H22	1:A:1039:C:H2'	1.48	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1152:A:H5''	10:J:13:HIS:HD2	1.50	0.76
2:B:165:VAL:HG23	2:B:166:ASP:N	1.98	0.75
1:A:1490:C:H5'	1:A:1490:C:C6	2.20	0.75
25:Y:573:HIS:CD2	25:Y:576:ASP:H	2.02	0.75
9:I:88:TYR:O	9:I:89:ASN:HB2	1.85	0.75
3:C:157:ILE:HD12	3:C:164:ARG:HB2	1.68	0.75
25:Y:466:LEU:HA	25:Y:470:PHE:CD2	2.21	0.75
1:A:1037:C:H2'	1:A:1038:C:C2	2.20	0.75
25:Y:500:GLN:HG2	25:Y:576:ASP:OD2	1.87	0.75
1:A:697:U:H2'	1:A:698:G:H5'	1.66	0.75
1:A:1342:C:H4'	9:I:125:TYR:HB3	1.67	0.75
15:O:11:VAL:O	15:O:14:GLU:HB3	1.86	0.75
4:D:129:ASN:ND2	4:D:145:GLU:H	1.84	0.75
2:B:124:SER:OG	2:B:125:PRO:HD2	1.85	0.75
12:L:39:VAL:HB	12:L:57:LYS:HB2	1.67	0.75
3:C:112:SER:HB3	3:C:115:LEU:HD12	1.67	0.75
10:J:53:PRO:HA	14:N:42:ILE:HD11	1.68	0.75
4:D:18:LYS:HE2	4:D:20:TYR:HE1	1.50	0.75
8:H:50:ARG:HB3	8:H:50:ARG:HH11	1.50	0.75
1:A:720:C:H3'	1:A:721:G:H5''	1.67	0.75
16:P:25:ARG:HG3	16:P:25:ARG:HH11	1.51	0.75
25:Y:121:VAL:HG23	25:Y:122:TRP:H	1.52	0.75
25:Y:180:VAL:HG23	25:Y:216:LEU:HD12	1.68	0.75
3:C:35:GLU:HG3	3:C:95:THR:HG21	1.69	0.75
4:D:9:CYS:SG	4:D:22:LYS:HD2	2.27	0.75
1:A:939:G:H5''	7:G:102:ARG:NH2	2.02	0.75
23:W:2:G:H1	23:W:71:C:N4	1.84	0.74
10:J:64:GLU:HG2	14:N:59:ALA:HB2	1.68	0.74
10:J:78:ASN:O	10:J:82:ILE:HG12	1.87	0.74
26:F:1102:FUA:C5	26:F:1102:FUA:H202	2.15	0.74
19:S:9:VAL:O	19:S:11:VAL:N	2.19	0.74
25:Y:554:PRO:HG3	25:Y:594:VAL:HG12	1.69	0.74
9:I:47:LEU:N	9:I:47:LEU:HD12	2.01	0.74
1:A:1348:U:H4'	9:I:120:ARG:HG3	1.68	0.74
25:Y:534:ILE:HG13	25:Y:570:GLY:O	1.87	0.74
1:A:1226:C:H5'	13:M:96:LEU:HD13	1.68	0.74
20:T:82:SER:O	20:T:86:ARG:HB2	1.87	0.74
10:J:96:ILE:HD13	10:J:96:ILE:H	1.51	0.74
25:Y:165:GLN:HE21	25:Y:177:ILE:HG21	1.53	0.74
25:Y:178:ILE:HG13	25:Y:185:ALA:HA	1.69	0.74
1:A:797:C:OP1	11:K:124:LYS:HE3	1.88	0.74
1:A:1129:C:H6	1:A:1129:C:H5'	1.52	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:40:LEU:HD11	9:I:70:LYS:HG2	1.69	0.74
8:H:89:PRO:HA	8:H:92:ARG:NH1	2.02	0.74
25:Y:609:GLU:HA	25:Y:643:ILE:O	1.87	0.74
4:D:5:ILE:HA	4:D:115:ARG:HH12	1.52	0.74
1:A:773:G:O2'	1:A:774:G:H5'	1.88	0.74
11:K:84:VAL:HG11	11:K:95:ILE:HD11	1.69	0.74
12:L:41:ARG:CG	12:L:42:THR:H	2.00	0.73
10:J:50:ILE:HD13	10:J:50:ILE:N	2.02	0.73
13:M:15:VAL:O	13:M:19:LEU:HD23	1.88	0.73
3:C:14:ILE:HG13	3:C:15:THR:N	2.03	0.73
1:A:201:C:H2'	1:A:202:U:H5''	1.68	0.73
25:Y:416:LYS:CD	25:Y:417:THR:H	2.01	0.73
1:A:1321:C:H5''	1:A:1322:C:H5''	1.70	0.73
4:D:13:ARG:O	4:D:15:GLU:N	2.21	0.73
1:A:1435:G:H2'	1:A:1436:U:C6	2.23	0.73
1:A:631:G:H2'	1:A:632:A:C8	2.23	0.73
23:W:68:C:H2'	23:W:69:C:C6	2.24	0.73
13:M:66:LEU:N	13:M:66:LEU:HD12	2.03	0.73
23:W:24:U:H2'	23:W:25:C:C6	2.22	0.73
5:E:11:ILE:HD12	5:E:31:LEU:CD1	2.18	0.73
2:B:95:GLN:C	2:B:96:ARG:HD2	2.09	0.73
3:C:16:ARG:HB2	3:C:16:ARG:NH1	2.02	0.73
4:D:96:LEU:H	4:D:96:LEU:HD22	1.53	0.73
23:W:56:C:H2'	23:W:56:C:O2	1.87	0.73
23:W:14:A:H3'	23:W:15:G:C5'	2.19	0.73
4:D:129:ASN:HD22	4:D:129:ASN:N	1.84	0.73
25:Y:335:LEU:HD23	25:Y:355:LEU:HD11	1.69	0.73
25:Y:261:GLY:HA3	25:Y:267:LYS:O	1.89	0.73
17:Q:52:LYS:H	17:Q:52:LYS:CD	2.01	0.73
1:A:376:G:H2'	1:A:377:G:H8	1.52	0.73
1:A:1238:A:H5'	1:A:1336:C:H41	1.53	0.73
1:A:514:C:H2'	1:A:515:G:H8	1.54	0.73
1:A:1452:C:H1'	1:A:1456:G:N2	2.02	0.73
25:Y:584:ILE:O	25:Y:588:MET:HG3	1.88	0.73
25:Y:555:LEU:HG	25:Y:599:PRO:HB2	1.69	0.73
23:W:32:C:O5'	23:W:32:C:H6	1.72	0.73
13:M:49:THR:O	13:M:53:VAL:HG23	1.88	0.73
8:H:89:PRO:HA	8:H:92:ARG:HH11	1.54	0.73
11:K:91:ARG:NH1	18:R:88:LYS:HE3	2.03	0.73
25:Y:555:LEU:HD21	25:Y:599:PRO:HG2	1.71	0.73
25:Y:199:ILE:O	25:Y:199:ILE:HD12	1.89	0.73
12:L:6:THR:H	12:L:9:GLN:HE21	1.35	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:23:GLY:HA3	4:D:112:VAL:HG22	1.71	0.73
1:A:939:G:H5''	7:G:102:ARG:CZ	2.19	0.73
2:B:233:SER:HB2	2:B:234:PRO:CD	2.19	0.73
25:Y:212:TYR:HA	25:Y:215:LYS:HD2	1.71	0.72
16:P:8:ARG:HB3	16:P:28:ARG:HH12	1.54	0.72
1:A:759:A:H2'	1:A:760:G:H5'	1.69	0.72
23:W:7:G:H3'	23:W:8:U:C5'	2.18	0.72
7:G:80:VAL:CG2	7:G:83:ALA:HB3	2.19	0.72
12:L:32:PHE:HE1	12:L:86:ARG:HG3	1.53	0.72
25:Y:14:ASN:ND2	25:Y:80:ASN:HB2	2.02	0.72
23:W:22:G:O2'	23:W:23:C:H5''	1.88	0.72
16:P:33:ILE:O	16:P:34:GLU:HB2	1.89	0.72
19:S:9:VAL:HG12	19:S:9:VAL:O	1.88	0.72
25:Y:613:PRO:HG2	25:Y:666:ARG:HE	1.55	0.72
25:Y:464:ASP:O	25:Y:468:ARG:HB2	1.90	0.72
2:B:204:ASN:C	2:B:204:ASN:HD22	1.88	0.72
2:B:54:THR:HG21	2:B:201:ILE:HD11	1.72	0.72
1:A:349:A:H2'	1:A:350:G:H5''	1.71	0.72
1:A:1279:A:H5'	1:A:1280:A:OP1	1.90	0.72
25:Y:491:VAL:HG12	25:Y:492:ASP:N	2.05	0.72
25:Y:85:PRO:HG3	25:Y:94:VAL:HG13	1.71	0.72
2:B:84:GLU:HB3	2:B:219:VAL:HG21	1.71	0.72
25:Y:210:ARG:O	25:Y:214:GLU:HG2	1.88	0.72
12:L:47:LYS:HB3	12:L:47:LYS:HZ2	1.54	0.72
23:W:35:A:N6	24:X:14:U:O4	2.20	0.72
25:Y:227:ILE:HD13	25:Y:242:LEU:HA	1.70	0.72
13:M:4:ILE:HG22	13:M:5:ALA:H	1.53	0.72
3:C:154:SER:O	3:C:165:THR:HA	1.90	0.72
10:J:6:ILE:HD11	10:J:72:VAL:CB	2.19	0.72
13:M:78:ILE:O	13:M:82:MET:HG2	1.89	0.72
25:Y:135:PHE:CD1	25:Y:272:LEU:HD22	2.24	0.72
3:C:123:GLN:HB3	3:C:128:PHE:HD2	1.54	0.72
4:D:159:ARG:HG3	4:D:159:ARG:HH11	1.55	0.72
1:A:1226:C:C5	13:M:104:ARG:HB2	2.23	0.72
1:A:1227:A:C2'	13:M:117:VAL:HG21	2.20	0.72
18:R:56:THR:HB	18:R:58:LEU:HD13	1.71	0.72
1:A:99:U:H2'	1:A:100:C:C6	2.25	0.72
1:A:625:G:H4'	16:P:16:HIS:CD2	2.25	0.72
1:A:266:G:H8	1:A:266:G:H5''	1.54	0.72
2:B:83:MET:HG3	2:B:234:PRO:HG3	1.72	0.72
25:Y:510:VAL:HG22	25:Y:534:ILE:HD11	1.70	0.72
8:H:42:GLU:HG3	8:H:109:ILE:HD12	1.72	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:89:ARG:HD3	12:L:91:LYS:NZ	2.03	0.72
25:Y:539:ILE:HD12	25:Y:567:LEU:HD21	1.72	0.71
23:W:31:G:H8	23:W:31:G:H5'	1.54	0.71
1:A:1510:U:H2'	1:A:1511:G:C8	2.25	0.71
1:A:707:C:H4'	11:K:20:TYR:CD2	2.24	0.71
9:I:4:TYR:CE2	9:I:88:TYR:HB2	2.25	0.71
16:P:53:VAL:HG23	16:P:54:GLU:H	1.55	0.71
10:J:49:VAL:CG2	14:N:41:ARG:HB2	2.20	0.71
12:L:27:LEU:HB2	12:L:62:SER:HB2	1.72	0.71
12:L:47:LYS:HZ3	12:L:48:PRO:HD3	1.55	0.71
25:Y:192:LEU:O	25:Y:192:LEU:HD13	1.89	0.71
23:W:68:C:H5'	23:W:68:C:H6	1.54	0.71
17:Q:67:LYS:HA	17:Q:70:ARG:HH12	1.56	0.71
2:B:55:PHE:HD1	2:B:221:LEU:HG	1.54	0.71
18:R:37:VAL:HG23	18:R:38:GLU:H	1.55	0.71
6:F:9:VAL:HB	6:F:87:ARG:HB2	1.71	0.71
25:Y:413:ILE:HD11	25:Y:474:ALA:HB3	1.73	0.71
25:Y:196:ILE:HG13	25:Y:197:ARG:N	2.04	0.71
2:B:118:LEU:HB3	2:B:142:LEU:HD12	1.71	0.71
1:A:1016:A:H2'	1:A:1017:G:O4'	1.90	0.71
25:Y:12:LEU:HD12	25:Y:14:ASN:HD21	1.55	0.71
25:Y:601:ILE:HG21	25:Y:687:LEU:CD1	2.20	0.71
25:Y:573:HIS:CD2	25:Y:575:VAL:H	2.08	0.71
25:Y:9:LEU:HD21	25:Y:284:LEU:HB2	1.72	0.71
4:D:4:TYR:O	4:D:5:ILE:HB	1.90	0.71
2:B:77:ALA:HB2	2:B:211:ILE:HD13	1.72	0.71
1:A:108:G:H5'	1:A:109:A:H5''	1.72	0.71
1:A:1294:G:O2'	1:A:1295:G:H5'	1.90	0.71
15:O:64:ARG:HH11	15:O:64:ARG:HG3	1.56	0.71
4:D:131:ARG:H	4:D:131:ARG:HD3	1.56	0.71
1:A:1412:C:H2'	1:A:1413:A:C8	2.25	0.71
2:B:29:ALA:O	2:B:32:ILE:HG22	1.91	0.71
24:X:11:A:H3'	24:X:11:A:N3	2.06	0.71
7:G:23:VAL:HG13	7:G:43:PHE:CE2	2.26	0.71
3:C:113:ALA:HB3	3:C:114:PRO:HD3	1.72	0.71
1:A:275:G:H5''	17:Q:14:LYS:HB2	1.71	0.71
5:E:87:SER:HB3	5:E:131:ILE:HD13	1.71	0.71
25:Y:329:ARG:HD3	25:Y:374:LEU:HD11	1.72	0.71
25:Y:165:GLN:C	25:Y:166:LEU:HD12	2.11	0.71
4:D:61:LYS:HD3	4:D:206:PHE:CE2	2.26	0.71
7:G:4:ARG:HB3	7:G:5:ARG:HH11	1.55	0.71
1:A:1220:G:H2'	1:A:1221:G:H8	1.54	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:400:GLU:O	25:Y:402:ILE:HD12	1.90	0.71
1:A:194:C:H2'	1:A:195:A:H5''	1.71	0.71
3:C:59:ARG:HG3	3:C:64:VAL:HA	1.72	0.71
1:A:509:A:C5'	1:A:510:A:OP2	2.39	0.71
9:I:47:LEU:CD1	9:I:47:LEU:H	2.04	0.71
1:A:1208:C:H2'	1:A:1209:C:H6	1.56	0.71
10:J:55:LYS:H	10:J:55:LYS:HE3	1.56	0.70
1:A:1325:C:H2'	1:A:1326:C:H6	1.54	0.70
25:Y:17:ILE:N	25:Y:17:ILE:HD12	2.06	0.70
10:J:82:ILE:O	10:J:86:MET:HB2	1.91	0.70
25:Y:250:THR:CA	25:Y:255:ILE:HG23	2.20	0.70
23:W:30:G:O2'	23:W:31:G:H5''	1.91	0.70
13:M:91:ARG:HD2	13:M:97:PRO:O	1.91	0.70
25:Y:205:TYR:O	25:Y:207:ASP:N	2.24	0.70
1:A:1502:A:H2	1:A:1505:G:N1	1.85	0.70
24:X:15:G:O2'	24:X:16:U:H5''	1.91	0.70
25:Y:546:ILE:O	25:Y:550:MET:HG3	1.91	0.70
25:Y:411:VAL:HG12	25:Y:412:ALA:N	2.06	0.70
5:E:80:ILE:HG22	8:H:104:ARG:HH22	1.56	0.70
2:B:75:LYS:HA	2:B:78:GLN:HG3	1.72	0.70
1:A:473:G:H2'	1:A:474:G:H8	1.55	0.70
24:X:16:U:C2'	24:X:17:U:H5'	2.20	0.70
1:A:1349:A:OP1	9:I:120:ARG:HB2	1.91	0.70
3:C:156:ARG:NH2	3:C:161:GLU:HA	2.06	0.70
9:I:46:ALA:O	9:I:49:PRO:HD2	1.92	0.70
11:K:21:ILE:HG13	11:K:30:VAL:HG12	1.73	0.70
1:A:477:A:O2'	1:A:479:C:H5'	1.92	0.70
1:A:1047:G:H5''	14:N:4:LYS:HD3	1.73	0.70
9:I:112:LYS:CA	9:I:119:ALA:HB2	2.15	0.70
23:W:27:U:O2'	23:W:28:C:H5'	1.89	0.70
1:A:973:G:H1'	10:J:55:LYS:NZ	2.07	0.70
18:R:45:SER:H	18:R:51:LEU:HG	1.56	0.70
1:A:1161:C:H2'	1:A:1162:C:C6	2.27	0.70
25:Y:122:TRP:CE3	25:Y:132:ARG:HD2	2.26	0.70
10:J:70:ARG:HG2	10:J:70:ARG:HH11	1.56	0.70
13:M:49:THR:HB	13:M:52:GLU:HG3	1.74	0.70
25:Y:330:VAL:HB	25:Y:371:ALA:HA	1.73	0.70
25:Y:625:ASN:C	25:Y:627:ARG:H	1.94	0.70
12:L:117:ARG:NH2	12:L:124:LYS:HB2	2.06	0.70
26:F:1102:FUA:H231	26:F:1102:FUA:H122	1.73	0.70
9:I:114:TYR:HE2	10:J:60:ARG:H	1.36	0.70
10:J:61:GLU:OE2	14:N:49:HIS:HE1	1.74	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:44:MET:SD	19:S:44:MET:N	2.65	0.70
19:S:50:ALA:HB1	19:S:57:HIS:HB3	1.74	0.70
18:R:88:LYS:HD3	18:R:88:LYS:C	2.13	0.70
1:A:1255:G:H2'	1:A:1279:A:H62	1.56	0.70
18:R:37:VAL:HG23	18:R:38:GLU:N	2.06	0.70
1:A:434:U:H2'	1:A:435:C:C6	2.27	0.70
25:Y:442:THR:HG23	25:Y:447:GLY:O	1.92	0.70
1:A:490:G:H2'	1:A:491:G:H8	1.57	0.70
25:Y:404:VAL:N	25:Y:405:PRO:HD3	2.06	0.70
25:Y:453:GLY:HA3	25:Y:459:LEU:HD11	1.74	0.69
1:A:268:C:O2	1:A:268:C:H2'	1.92	0.69
25:Y:519:ARG:HH22	25:Y:678:GLU:CB	2.05	0.69
23:W:51:C:C3'	23:W:52:G:H5''	2.21	0.69
9:I:18:PHE:O	9:I:61:ALA:HA	1.92	0.69
25:Y:446:THR:O	25:Y:448:GLN:HG2	1.92	0.69
1:A:677:U:H3	1:A:713:G:H22	1.37	0.69
25:Y:12:LEU:HB3	25:Y:283:PRO:HG2	1.74	0.69
16:P:20:VAL:HG21	16:P:32:TYR:CB	2.22	0.69
1:A:160:A:H1'	1:A:344:A:C5	2.27	0.69
17:Q:58:GLU:HB2	17:Q:74:LEU:HB3	1.73	0.69
10:J:4:ILE:HB	10:J:74:ILE:HD11	1.74	0.69
1:A:266:G:C8	1:A:266:G:H5''	2.26	0.69
22:V:64:A:H2'	22:V:65:G:C8	2.27	0.69
25:Y:628:ARG:HH12	25:Y:680:PRO:HG2	1.56	0.69
2:B:223:ILE:HG23	2:B:226:ARG:NH1	2.08	0.69
1:A:1489:G:C3'	1:A:1490:C:H5''	2.23	0.69
25:Y:512:ILE:H	25:Y:512:ILE:HD13	1.57	0.69
9:I:53:VAL:HG13	9:I:95:LYS:HE3	1.73	0.69
19:S:58:VAL:HG23	19:S:58:VAL:O	1.91	0.69
25:Y:84:THR:N	25:Y:85:PRO:CD	2.49	0.69
3:C:15:THR:HG21	3:C:181:ASN:HA	1.74	0.69
1:A:1239:A:H2'	1:A:1298:C:H42	1.58	0.69
16:P:21:VAL:O	16:P:33:ILE:HB	1.93	0.69
25:Y:35:TYR:HE2	25:Y:269:VAL:HB	1.56	0.69
25:Y:352:VAL:HG23	25:Y:377:VAL:HG23	1.72	0.69
20:T:42:GLN:HA	20:T:42:GLN:HE21	1.56	0.69
25:Y:466:LEU:HA	25:Y:470:PHE:HD2	1.57	0.69
20:T:48:LYS:HB3	20:T:51:GLU:CG	2.21	0.69
19:S:31:ILE:HG23	19:S:49:ILE:HA	1.74	0.69
1:A:748:C:OP2	1:A:748:C:H6	1.75	0.69
1:A:461:A:O2'	1:A:470:C:H5'	1.93	0.69
2:B:61:LEU:HD23	2:B:68:ILE:HD11	1.75	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:108:ILE:N	11:K:108:ILE:HD12	2.07	0.69
25:Y:605:ILE:HG23	25:Y:646:PHE:HB3	1.74	0.69
25:Y:509:HIS:CE1	25:Y:570:GLY:HA2	2.28	0.69
19:S:78:ARG:HB2	19:S:81:ARG:NH1	2.07	0.69
11:K:124:LYS:HD2	11:K:125:PHE:HE1	1.57	0.69
8:H:103:VAL:CG2	8:H:110:ALA:HB2	2.22	0.69
1:A:491:G:H2'	1:A:492:G:H8	1.57	0.69
1:A:243:A:H4'	1:A:244:U:O5'	1.91	0.69
1:A:740:U:O2'	1:A:741:G:H5'	1.93	0.69
10:J:27:ALA:HB2	10:J:85:LEU:HD11	1.75	0.69
1:A:793:U:O2	1:A:1516:G:H4'	1.93	0.69
25:Y:180:VAL:HG23	25:Y:181:LEU:N	2.08	0.69
10:J:8:LEU:CD2	10:J:96:ILE:HG22	2.22	0.69
23:W:34:C:C2'	23:W:35:A:C4'	2.70	0.69
25:Y:111:SER:O	25:Y:113:GLY:N	2.25	0.69
1:A:301:G:O2'	1:A:302:G:H5'	1.93	0.69
2:B:156:LYS:O	2:B:157:ARG:HB2	1.93	0.69
1:A:270:A:H2'	1:A:271:C:C6	2.28	0.69
1:A:666:G:H5'	1:A:726:C:H1'	1.74	0.69
1:A:1109:C:O2'	1:A:1110:A:H5'	1.91	0.69
25:Y:113:GLY:C	25:Y:115:GLU:H	1.97	0.68
20:T:50:GLU:HA	20:T:53:LEU:HD12	1.74	0.68
1:A:736:C:H2'	1:A:737:A:H8	1.57	0.68
1:A:250:A:H4'	1:A:251:G:O5'	1.93	0.68
1:A:1400:C:H5'	24:X:18:C:N4	2.09	0.68
25:Y:164:MET:O	25:Y:180:VAL:HG22	1.93	0.68
25:Y:260:LEU:O	25:Y:268:GLY:HA3	1.93	0.68
25:Y:196:ILE:CG1	25:Y:197:ARG:H	2.04	0.68
4:D:173:TRP:HB3	4:D:187:ARG:NH1	2.08	0.68
9:I:95:LYS:HZ2	9:I:96:LEU:HD13	1.58	0.68
12:L:6:THR:OG1	12:L:9:GLN:HG3	1.93	0.68
1:A:1009:G:H2'	1:A:1009:G:N3	2.07	0.68
3:C:50:ALA:O	3:C:70:VAL:HG13	1.92	0.68
25:Y:180:VAL:CG2	25:Y:216:LEU:HD12	2.23	0.68
25:Y:409:ILE:CG1	25:Y:656:ALA:HB3	2.23	0.68
1:A:1323:G:H2'	1:A:1324:A:C8	2.28	0.68
10:J:50:ILE:H	10:J:50:ILE:CD1	2.02	0.68
25:Y:149:VAL:HA	25:Y:152:THR:HG22	1.76	0.68
1:A:447:G:H2'	1:A:485:G:N2	2.08	0.68
13:M:27:LYS:HE2	13:M:31:LYS:HE3	1.76	0.68
1:A:1296:C:H5'	1:A:1297:C:OP2	1.93	0.68
6:F:42:GLU:O	6:F:44:GLY:N	2.27	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:17:LYS:HD3	12:L:18:VAL:HG22	1.75	0.68
25:Y:227:ILE:HG23	25:Y:237:PRO:CG	2.24	0.68
1:A:254:G:OP1	17:Q:67:LYS:O	2.09	0.68
8:H:109:ILE:HG12	8:H:110:ALA:N	2.09	0.68
1:A:1161:C:H2'	1:A:1162:C:H6	1.58	0.68
25:Y:628:ARG:HE	25:Y:648:PRO:HG2	1.57	0.68
12:L:7:ILE:O	12:L:11:VAL:HG23	1.92	0.68
25:Y:431:LEU:CD2	25:Y:466:LEU:HD13	2.23	0.68
11:K:124:LYS:HD2	11:K:125:PHE:CE1	2.29	0.68
6:F:2:ARG:HD3	6:F:92:LYS:HE3	1.76	0.68
1:A:267:C:H2'	1:A:268:C:H6	1.59	0.68
16:P:9:PHE:CE2	16:P:18:ARG:CZ	2.77	0.68
9:I:114:TYR:HD2	10:J:60:ARG:HG3	1.59	0.68
13:M:10:PRO:HB2	13:M:18:ALA:HB1	1.75	0.68
20:T:33:ILE:HD13	20:T:63:ILE:HA	1.76	0.68
25:Y:519:ARG:CZ	25:Y:678:GLU:H	2.06	0.68
1:A:241:C:O2'	1:A:242:C:H5'	1.92	0.68
1:A:545:C:O2'	1:A:546:G:H5'	1.94	0.68
25:Y:601:ILE:HG21	25:Y:687:LEU:HD12	1.76	0.68
23:W:38:A:C5	23:W:39:C:C5	2.82	0.68
1:A:368:U:P	25:Y:351:ARG:HH21	2.16	0.68
10:J:27:ALA:HA	10:J:30:SER:OG	1.94	0.67
10:J:75:ILE:CG1	10:J:76:ASN:H	1.98	0.67
14:N:41:ARG:HG2	14:N:41:ARG:HH11	1.59	0.67
20:T:64:ASP:OD1	20:T:81:LYS:HD2	1.94	0.67
25:Y:409:ILE:HG12	25:Y:656:ALA:CB	2.25	0.67
25:Y:157:LEU:N	25:Y:157:LEU:HD23	2.08	0.67
10:J:42:THR:HG23	10:J:67:THR:O	1.95	0.67
1:A:1251:A:H2'	1:A:1252:A:C8	2.29	0.67
24:X:16:U:H2'	24:X:17:U:H5'	1.74	0.67
1:A:1117:G:O2'	9:I:104:ARG:HD3	1.95	0.67
25:Y:578:SER:HB3	25:Y:581:ALA:HB2	1.77	0.67
3:C:46:GLU:O	3:C:47:LEU:HB2	1.94	0.67
22:V:61:C:H2'	22:V:62:C:H6	1.60	0.67
12:L:37:CYS:HB3	12:L:79:GLU:O	1.94	0.67
1:A:176:C:H2'	1:A:177:C:H6	1.58	0.67
15:O:33:THR:HG21	15:O:85:LEU:CD2	2.24	0.67
16:P:8:ARG:NH2	16:P:15:PRO:HG3	2.08	0.67
1:A:1375:A:H5'	1:A:1376:U:OP2	1.95	0.67
10:J:32:ALA:HB2	10:J:76:ASN:HD22	1.59	0.67
25:Y:329:ARG:HA	25:Y:374:LEU:HG	1.76	0.67
4:D:64:LEU:HD23	4:D:75:PHE:HZ	1.60	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:93:GLU:C	20:T:95:ALA:H	1.97	0.67
9:I:95:LYS:HZ2	9:I:96:LEU:CD1	2.08	0.67
1:A:664:G:H22	1:A:741:G:H1	1.43	0.67
12:L:36:VAL:HG11	25:Y:425:SER:HB3	1.77	0.67
1:A:1160:G:O6	1:A:1181:G:O6	2.11	0.67
25:Y:141:LYS:HE3	28:Y:1690:GDP:HN22	1.57	0.67
3:C:47:LEU:HD21	3:C:68:VAL:HG11	1.75	0.67
10:J:55:LYS:H	10:J:55:LYS:CE	2.08	0.67
9:I:47:LEU:CD1	9:I:47:LEU:N	2.57	0.67
1:A:164:U:H2'	1:A:165:C:C6	2.30	0.67
19:S:6:LYS:H	19:S:6:LYS:CE	2.08	0.67
17:Q:66:SER:O	17:Q:70:ARG:NH1	2.27	0.67
8:H:10:LEU:CD2	8:H:83:ILE:HD11	2.24	0.67
2:B:12:GLU:HA	2:B:16:HIS:ND1	2.08	0.67
2:B:238:LEU:HG	2:B:238:LEU:O	1.95	0.67
25:Y:180:VAL:HG23	25:Y:181:LEU:H	1.59	0.67
2:B:187:LEU:HD11	2:B:204:ASN:O	1.95	0.67
1:A:1208:C:H2'	1:A:1209:C:C6	2.30	0.67
22:V:68:C:H2'	22:V:69:G:C8	2.29	0.67
18:R:31:LEU:HD23	18:R:31:LEU:H	1.60	0.67
25:Y:111:SER:OG	25:Y:141:LYS:HB3	1.96	0.67
1:A:980:C:H2'	1:A:981:U:H5'	1.76	0.67
25:Y:9:LEU:O	25:Y:9:LEU:HD23	1.95	0.67
1:A:1072:G:H2'	1:A:1073:U:C6	2.29	0.67
25:Y:530:VAL:HG13	25:Y:531:GLY:N	2.06	0.66
2:B:33:TYR:HB2	2:B:43:ASP:HB2	1.77	0.66
16:P:9:PHE:HE2	16:P:18:ARG:CZ	2.09	0.66
13:M:46:LYS:O	13:M:46:LYS:HD3	1.95	0.66
25:Y:560:VAL:HG11	25:Y:594:VAL:HG11	1.77	0.66
3:C:155:GLY:O	3:C:156:ARG:HB2	1.95	0.66
13:M:6:GLY:C	13:M:8:GLU:H	1.98	0.66
25:Y:519:ARG:NH2	25:Y:678:GLU:HB3	2.09	0.66
1:A:523:A:N1	12:L:92:ASP:HB2	2.11	0.66
19:S:13:ASP:C	19:S:15:LEU:H	1.96	0.66
4:D:144:ASP:O	4:D:184:LYS:HA	1.94	0.66
1:A:408:A:H4'	4:D:112:VAL:HG11	1.76	0.66
26:F:1102:FUA:H201	26:F:1102:FUA:O1	1.95	0.66
25:Y:487:ILE:HD11	25:Y:563:ILE:HG22	1.77	0.66
2:B:223:ILE:HG12	2:B:226:ARG:CZ	2.26	0.66
19:S:41:VAL:C	19:S:43:GLU:H	1.98	0.66
1:A:1371:G:O3'	9:I:69:GLY:HA3	1.96	0.66
5:E:79:GLU:HB3	5:E:92:LYS:HA	1.78	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:363:A:OP2	12:L:33:ARG:HD3	1.96	0.66
1:A:178:C:O2'	1:A:179:A:H5'	1.95	0.66
6:F:50:TYR:CE1	18:R:77:GLY:HA2	2.31	0.66
6:F:75:LEU:O	6:F:79:LEU:HG	1.95	0.66
5:E:143:ARG:HH12	8:H:77:GLU:CD	1.99	0.66
24:X:11:A:O4'	24:X:12:A:C8	2.49	0.66
2:B:233:SER:HB2	2:B:234:PRO:HD2	1.76	0.66
4:D:61:LYS:HE2	4:D:62:GLN:HE21	1.61	0.66
16:P:4:ILE:HG13	16:P:64:ALA:HB1	1.78	0.66
5:E:6:PHE:HB3	5:E:35:GLY:O	1.95	0.66
2:B:137:ARG:C	2:B:137:ARG:HD3	2.16	0.66
1:A:598:U:H2'	1:A:599:C:C6	2.30	0.66
25:Y:21:ILE:CD1	25:Y:21:ILE:H	1.96	0.66
3:C:70:VAL:O	3:C:106:VAL:HG23	1.96	0.66
1:A:953:G:H5'	1:A:965:A:H61	1.61	0.66
25:Y:65:ILE:HG12	25:Y:65:ILE:O	1.94	0.66
1:A:203:U:H5''	1:A:204:U:OP1	1.96	0.66
13:M:34:LEU:HD13	13:M:41:PRO:HG3	1.76	0.66
25:Y:25:LYS:O	25:Y:28:THR:HB	1.95	0.66
1:A:1026:G:C2'	1:A:1027:C:H5'	2.26	0.66
1:A:1258:G:H2'	1:A:1259:C:C6	2.31	0.66
1:A:1082:G:O2'	1:A:1083:U:H5'	1.96	0.66
25:Y:82:ILE:CD1	25:Y:101:LEU:HD23	2.25	0.66
25:Y:621:ILE:HG12	25:Y:643:ILE:HD13	1.77	0.66
5:E:76:ILE:CG2	5:E:118:ILE:HD13	2.26	0.66
19:S:22:LEU:O	19:S:26:GLY:HA2	1.96	0.66
1:A:1006:C:H2'	1:A:1007:C:C6	2.30	0.66
19:S:53:ASN:C	19:S:55:LYS:H	1.98	0.66
25:Y:681:LYS:HD2	25:Y:681:LYS:O	1.96	0.66
25:Y:407:PRO:HB3	25:Y:452:SER:OG	1.96	0.66
25:Y:519:ARG:NH2	25:Y:678:GLU:CB	2.59	0.66
9:I:93:ARG:C	9:I:95:LYS:H	1.99	0.66
19:S:24:ALA:O	19:S:25:LYS:HB2	1.96	0.66
2:B:156:LYS:O	2:B:157:ARG:CB	2.44	0.66
1:A:60:A:H5''	1:A:331:G:H22	1.60	0.66
25:Y:315:LYS:NZ	25:Y:317:MET:HG2	2.11	0.66
1:A:148:G:H1	1:A:174:C:H42	1.42	0.65
17:Q:47:PRO:HG2	17:Q:48:GLU:OE2	1.95	0.65
25:Y:176:GLY:HA3	25:Y:187:THR:HA	1.78	0.65
1:A:56:U:H2'	1:A:57:G:C8	2.31	0.65
3:C:25:GLY:C	3:C:27:LYS:H	1.99	0.65
13:M:37:THR:HG21	13:M:56:LEU:HD22	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:71:G:H2'	22:V:72:C:O4'	1.96	0.65
14:N:12:ARG:C	14:N:14:PRO:HD3	2.16	0.65
1:A:509:A:H3'	1:A:510:A:C8	2.32	0.65
23:W:51:C:H2'	23:W:52:G:H5''	1.78	0.65
25:Y:247:ARG:HH11	25:Y:247:ARG:HG3	1.61	0.65
13:M:54:VAL:O	13:M:58:GLU:HG2	1.95	0.65
25:Y:616:TYR:HB3	25:Y:662:LYS:O	1.95	0.65
2:B:22:LYS:H	2:B:40:HIS:CE1	2.14	0.65
3:C:110:ASN:ND2	3:C:140:ARG:HB3	2.11	0.65
24:X:12:A:N3	24:X:12:A:H2'	2.10	0.65
3:C:68:VAL:HG12	3:C:70:VAL:HG23	1.77	0.65
25:Y:630:GLN:NE2	25:Y:646:PHE:HD2	1.93	0.65
20:T:29:LYS:O	20:T:33:ILE:HG13	1.97	0.65
2:B:120:ALA:O	2:B:121:LEU:HD23	1.96	0.65
1:A:719:C:O2'	18:R:49:LYS:HB3	1.95	0.65
19:S:21:GLU:HG3	19:S:22:LEU:CD2	2.25	0.65
25:Y:335:LEU:HD11	25:Y:352:VAL:HG11	1.78	0.65
25:Y:613:PRO:HG2	25:Y:666:ARG:NE	2.10	0.65
25:Y:503:GLY:C	25:Y:505:GLY:H	2.00	0.65
1:A:973:G:H1'	10:J:55:LYS:HE2	1.77	0.65
9:I:95:LYS:NZ	9:I:96:LEU:CD1	2.59	0.65
1:A:663:A:O2'	1:A:664:G:H5'	1.96	0.65
25:Y:228:MET:O	25:Y:232:LEU:HD23	1.96	0.65
1:A:1356:G:H2'	1:A:1357:A:C8	2.31	0.65
10:J:9:ARG:HG2	10:J:69:ASN:OD1	1.96	0.65
1:A:1250:A:H4'	9:I:68:GLY:N	2.11	0.65
9:I:33:PHE:CZ	9:I:47:LEU:HD11	2.32	0.65
1:A:1493:A:H61	25:Y:579:GLU:HG3	1.62	0.65
25:Y:679:VAL:HB	25:Y:683:VAL:HB	1.77	0.65
25:Y:227:ILE:HD11	25:Y:241:GLU:O	1.96	0.65
22:V:3:C:O2'	22:V:4:C:H5'	1.96	0.65
15:O:39:LEU:HD13	15:O:56:LEU:HB2	1.79	0.65
1:A:1004:A:H61	1:A:1034:G:C2'	2.07	0.65
25:Y:9:LEU:C	25:Y:9:LEU:HD23	2.18	0.65
5:E:148:VAL:HG21	8:H:107:LEU:HD22	1.78	0.65
1:A:1128:C:C2'	1:A:1129:C:H5''	2.26	0.65
1:A:301:G:H2'	1:A:302:G:H8	1.61	0.65
1:A:164:U:H2'	1:A:165:C:H6	1.60	0.65
1:A:1392:G:O2'	1:A:1393:U:H5'	1.96	0.65
3:C:52:LEU:CD2	3:C:52:LEU:H	2.10	0.65
25:Y:180:VAL:HG23	25:Y:216:LEU:CD1	2.27	0.65
25:Y:201:ILE:H	25:Y:201:ILE:CD1	2.09	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:134:ILE:HD11	3:C:153:VAL:CG2	2.27	0.65
1:A:1329:A:O2'	1:A:1330:U:H5'	1.96	0.65
25:Y:115:GLU:HG3	25:Y:118:SER:HB3	1.77	0.65
25:Y:119:GLU:O	25:Y:121:VAL:HG22	1.95	0.65
25:Y:12:LEU:HB3	25:Y:283:PRO:CG	2.27	0.65
10:J:13:HIS:O	10:J:17:ASP:HB2	1.96	0.65
25:Y:152:THR:HA	25:Y:155:GLU:HB3	1.79	0.65
25:Y:272:LEU:O	25:Y:275:ALA:HB3	1.96	0.65
1:A:176:C:H2'	1:A:177:C:C6	2.31	0.65
22:V:27:G:H1	22:V:43:C:H42	1.45	0.65
25:Y:227:ILE:HG23	25:Y:237:PRO:HG2	1.77	0.64
25:Y:67:ALA:HB3	25:Y:358:MET:HG3	1.77	0.64
1:A:741:G:O2'	1:A:742:G:H5'	1.98	0.64
1:A:163:C:O2'	1:A:164:U:H5'	1.97	0.64
1:A:528:C:H41	12:L:49:ASN:HD21	1.45	0.64
13:M:124:PRO:HG2	25:Y:574:GLU:H	1.62	0.64
1:A:52:G:O2'	1:A:53:A:H5'	1.97	0.64
2:B:62:ALA:O	2:B:64:ARG:N	2.30	0.64
10:J:3:LYS:NZ	10:J:77:PRO:HD2	2.12	0.64
10:J:78:ASN:HD22	10:J:81:THR:CG2	2.10	0.64
25:Y:485:GLU:CG	25:Y:553:GLY:HA3	2.23	0.64
1:A:1002:G:N2	1:A:1039:C:H2'	2.12	0.64
10:J:7:LYS:O	10:J:96:ILE:HA	1.98	0.64
1:A:552:U:H4'	12:L:86:ARG:HG2	1.79	0.64
25:Y:25:LYS:NZ	25:Y:86:GLY:HA2	2.12	0.64
25:Y:9:LEU:HD22	25:Y:284:LEU:HB2	1.79	0.64
5:E:82:VAL:HG21	5:E:138:ALA:HA	1.78	0.64
4:D:107:ARG:HH21	4:D:194:LEU:CD1	2.10	0.64
12:L:46:LYS:HB2	12:L:92:ASP:O	1.96	0.64
1:A:1512:U:H2'	1:A:1513:A:H8	1.63	0.64
1:A:630:G:C2'	1:A:631:G:H5'	2.27	0.64
1:A:1329:A:P	13:M:28:ALA:HB3	2.38	0.64
16:P:74:LEU:HD23	16:P:79:VAL:HG21	1.79	0.64
1:A:189:G:H2'	1:A:189(A):C:C6	2.32	0.64
10:J:6:ILE:CD1	10:J:72:VAL:HB	2.25	0.64
3:C:59:ARG:HD3	3:C:64:VAL:HG22	1.79	0.64
1:A:1228:C:OP1	13:M:115:LYS:HG3	1.98	0.64
1:A:1404:C:H1'	1:A:1499:A:N1	2.13	0.64
25:Y:145:ASP:HB3	25:Y:148:LEU:HD22	1.78	0.64
3:C:16:ARG:CB	3:C:16:ARG:HH11	2.11	0.64
19:S:40:ILE:HG12	19:S:71:LEU:HD23	1.80	0.64
18:R:31:LEU:CD2	18:R:31:LEU:H	2.10	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:4:ILE:HD12	10:J:4:ILE:N	2.12	0.64
8:H:104:ARG:O	8:H:106:GLY:N	2.30	0.64
1:A:1190:G:H3'	3:C:3:ASN:HD22	1.62	0.64
1:A:627:G:O2'	1:A:628:G:H5'	1.97	0.64
4:D:9:CYS:SG	4:D:31:CYS:O	2.55	0.64
1:A:1239:A:H2'	1:A:1298:C:N4	2.12	0.64
9:I:125:TYR:HD1	9:I:126:SER:N	1.95	0.64
12:L:23:LYS:O	12:L:24:VAL:HG23	1.96	0.64
25:Y:443:HIS:CE1	25:Y:445:GLU:HB2	2.31	0.64
24:X:11:A:C1'	24:X:12:A:N7	2.52	0.64
13:M:3:ARG:HA	13:M:9:ILE:HG13	1.80	0.64
23:W:51:C:H3'	23:W:52:G:H5''	1.79	0.64
1:A:1298:C:O2	1:A:1298:C:H2'	1.97	0.64
13:M:40:ASN:ND2	13:M:42:ALA:HB3	2.12	0.64
25:Y:211:GLU:HB2	25:Y:215:LYS:NZ	2.13	0.64
23:W:1:C:H2'	23:W:2:G:H8	1.62	0.64
13:M:10:PRO:CG	13:M:18:ALA:HB1	2.28	0.64
23:W:28:C:H2'	23:W:29:G:H8	1.62	0.64
25:Y:92:ILE:HG12	25:Y:405:PRO:CG	2.26	0.64
8:H:123:GLU:O	8:H:127:LEU:HD23	1.97	0.64
1:A:1005:A:OP1	1:A:1006:C:N3	2.31	0.64
13:M:80:ARG:O	13:M:83:ASP:HB3	1.98	0.64
6:F:63:TYR:O	6:F:65:VAL:HG13	1.98	0.64
17:Q:22:LEU:HD11	17:Q:39:SER:HB2	1.79	0.64
3:C:76:VAL:HG23	3:C:77:ILE:HG13	1.80	0.64
2:B:82:ARG:HH11	2:B:82:ARG:HG3	1.63	0.64
25:Y:241:GLU:O	25:Y:244:ALA:HB3	1.96	0.64
1:A:1226:C:H41	13:M:104:ARG:HD2	1.61	0.64
23:W:61:C:H2'	23:W:62:C:C6	2.33	0.64
1:A:1128:C:H1'	1:A:1147:C:H42	1.63	0.64
25:Y:335:LEU:CD2	25:Y:355:LEU:HD11	2.28	0.64
8:H:41:ARG:HH22	8:H:123:GLU:CD	2.00	0.64
26:F:1102:FUA:C20	26:F:1102:FUA:H5	2.12	0.64
9:I:114:TYR:CD2	10:J:60:ARG:HG3	2.32	0.64
25:Y:8:ASP:O	25:Y:9:LEU:HB3	1.97	0.64
9:I:8:GLY:HA2	9:I:79:LEU:HD12	1.79	0.64
25:Y:603:GLU:O	25:Y:676:TYR:HA	1.98	0.64
25:Y:132:ARG:O	25:Y:256:THR:HG23	1.98	0.64
1:A:1516:G:H2'	1:A:1518:A:OP2	1.97	0.64
16:P:20:VAL:CG2	16:P:32:TYR:HB2	2.28	0.64
1:A:972:C:OP2	10:J:57:LYS:HG2	1.97	0.64
25:Y:578:SER:HB3	25:Y:581:ALA:CB	2.28	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:59:A:H2'	1:A:59:A:N3	2.13	0.64
1:A:948:C:O2'	1:A:949:A:H5'	1.97	0.64
22:V:11:C:O2'	22:V:12:U:H5'	1.97	0.64
24:X:11:A:O2'	24:X:12:A:P	2.56	0.63
25:Y:21:ILE:HD12	25:Y:88:VAL:HG13	1.80	0.63
1:A:1352:C:H2'	1:A:1353:G:C8	2.33	0.63
25:Y:311:ALA:HB2	25:Y:330:VAL:HA	1.80	0.63
22:V:23:A:H2'	22:V:24:G:H8	1.63	0.63
5:E:36:ASP:OD1	5:E:38:GLN:HB2	1.97	0.63
1:A:1423:G:H2'	1:A:1424:C:C6	2.33	0.63
1:A:1211:U:H5'	1:A:1212:U:OP1	1.97	0.63
25:Y:496:LYS:HE2	25:Y:498:ILE:HD13	1.80	0.63
14:N:53:LEU:HB3	14:N:56:VAL:HG21	1.79	0.63
25:Y:112:GLN:O	25:Y:115:GLU:HB3	1.98	0.63
25:Y:22:ASP:O	28:Y:1690:GDP:H5'	1.98	0.63
25:Y:555:LEU:HD13	25:Y:601:ILE:HG13	1.81	0.63
23:W:14:A:C2'	23:W:15:G:H5'	2.28	0.63
23:W:22:G:H2'	23:W:23:C:C5'	2.28	0.63
12:L:27:LEU:O	12:L:29:GLY:N	2.31	0.63
13:M:94:ARG:NE	19:S:82:GLY:N	2.46	0.63
8:H:85:ARG:HH12	8:H:134:ILE:HG23	1.63	0.63
3:C:99:VAL:O	3:C:99:VAL:HG23	1.98	0.63
24:X:18:C:H5'	24:X:19:A:OP1	1.98	0.63
3:C:47:LEU:HD11	3:C:76:VAL:HG12	1.79	0.63
25:Y:252:ASP:HB2	25:Y:254:LYS:CG	2.25	0.63
13:M:3:ARG:HG2	13:M:9:ILE:CD1	2.28	0.63
9:I:28:VAL:HG22	9:I:63:ILE:HB	1.81	0.63
5:E:81:GLU:HG3	5:E:90:VAL:HG13	1.81	0.63
1:A:191:G:H1'	20:T:105:SER:HA	1.80	0.63
1:A:1525:G:H2'	1:A:1526:G:H8	1.64	0.63
3:C:175:LEU:HD21	3:C:201:TYR:CE2	2.34	0.63
1:A:1314:C:H2'	1:A:1315:U:H6	1.61	0.63
25:Y:608:VAL:HG12	25:Y:609:GLU:H	1.64	0.63
25:Y:527:ASN:ND2	25:Y:539:ILE:HG21	2.12	0.63
25:Y:388:THR:HG23	25:Y:399:LEU:HD13	1.81	0.63
25:Y:688:ILE:O	25:Y:688:ILE:HG22	1.97	0.63
25:Y:487:ILE:H	25:Y:487:ILE:HD13	1.63	0.63
25:Y:609:GLU:HB2	25:Y:670:VAL:HG22	1.80	0.63
25:Y:537:GLU:O	25:Y:540:PRO:HD2	1.99	0.63
12:L:27:LEU:HD13	12:L:28:LYS:H	1.64	0.63
6:F:46:ARG:HH22	18:R:37:VAL:HG21	1.62	0.63
25:Y:680:PRO:C	25:Y:682:GLN:H	2.02	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:110:ASN:O	3:C:141:VAL:HG22	1.98	0.63
1:A:345:C:H5'	1:A:346:G:OP2	1.98	0.63
21:U:2:GLY:O	21:U:4:GLY:N	2.32	0.63
1:A:1358:U:OP1	14:N:35:ARG:HG3	1.99	0.63
1:A:439:A:H2'	1:A:441:A:H5'	1.80	0.63
1:A:475:G:O2'	1:A:476:G:H5'	1.98	0.63
17:Q:9:VAL:HG11	17:Q:84:LEU:HD12	1.79	0.63
25:Y:528:ALA:O	25:Y:568:TYR:HA	1.99	0.63
3:C:59:ARG:CG	3:C:64:VAL:HA	2.28	0.63
2:B:14:GLY:O	2:B:15:VAL:HG13	1.98	0.63
1:A:1298:C:H1'	1:A:1299:A:C6	2.33	0.63
1:A:1218:C:H2'	1:A:1219:U:C6	2.34	0.63
17:Q:53:LEU:HD21	17:Q:85:VAL:HG11	1.80	0.63
1:A:1010:G:N1	1:A:1020:U:H1'	2.14	0.63
18:R:29:PHE:CD1	18:R:29:PHE:N	2.59	0.63
13:M:19:LEU:HA	13:M:22:ILE:HD13	1.79	0.63
20:T:26:ASN:HA	20:T:29:LYS:HG2	1.80	0.63
25:Y:519:ARG:NH1	25:Y:678:GLU:H	1.96	0.63
25:Y:491:VAL:CG1	25:Y:492:ASP:N	2.62	0.63
1:A:659:U:O2'	1:A:660:G:H5'	1.99	0.63
3:C:82:GLU:O	3:C:86:VAL:HG13	1.98	0.63
15:O:82:ILE:C	15:O:82:ILE:HD13	2.19	0.63
25:Y:609:GLU:HB3	25:Y:642:VAL:HG13	1.81	0.63
13:M:22:ILE:HB	13:M:25:ILE:HD12	1.80	0.63
2:B:31:TYR:O	2:B:42:ILE:HG13	1.99	0.63
2:B:233:SER:CB	2:B:234:PRO:HD2	2.27	0.63
2:B:139:LYS:O	2:B:143:GLU:HG2	1.99	0.63
25:Y:549:ALA:HB2	25:Y:587:SER:OG	1.99	0.63
25:Y:373:ASP:C	25:Y:374:LEU:HD12	2.18	0.62
25:Y:252:ASP:O	25:Y:253:LEU:HB2	1.99	0.62
5:E:145:LYS:HA	8:H:107:LEU:HD21	1.80	0.62
1:A:1321:C:H5''	1:A:1322:C:C5'	2.30	0.62
18:R:32:ARG:HA	18:R:69:THR:HG21	1.80	0.62
25:Y:301:ILE:HG22	25:Y:332:SER:HB2	1.79	0.62
1:A:975:A:H8	1:A:975:A:H5'	1.64	0.62
12:L:53:ARG:NH1	12:L:92:ASP:OD2	2.32	0.62
1:A:714:G:H2'	1:A:715:A:C8	2.33	0.62
20:T:86:ARG:HH11	20:T:86:ARG:HG3	1.64	0.62
7:G:145:ALA:O	7:G:146:GLU:HB2	1.97	0.62
3:C:167:TRP:O	3:C:168:ALA:CB	2.46	0.62
1:A:936:C:O2'	1:A:937:A:H5'	1.99	0.62
17:Q:26:GLN:HG2	17:Q:37:LYS:HG3	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:11:ILE:HG22	5:E:12:LEU:N	2.13	0.62
20:T:90:GLN:HA	20:T:93:GLU:OE2	1.99	0.62
1:A:555:C:H2'	1:A:556:C:C6	2.34	0.62
3:C:130:VAL:HG11	3:C:157:ILE:HG23	1.81	0.62
1:A:275:G:H2'	1:A:276:G:H8	1.64	0.62
1:A:418:C:H2'	1:A:419:C:C6	2.35	0.62
1:A:818:G:O2'	1:A:819:A:H5'	1.99	0.62
11:K:79:SER:OG	11:K:106:LYS:HD2	1.99	0.62
25:Y:153:MET:HA	25:Y:157:LEU:HD21	1.81	0.62
7:G:79:ARG:HD2	7:G:79:ARG:O	2.00	0.62
1:A:415:A:H2'	1:A:416:G:C8	2.34	0.62
25:Y:633:GLY:HA3	25:Y:644:ARG:NH1	2.13	0.62
1:A:1004:A:C5'	1:A:1025:U:H3	2.09	0.62
1:A:1003:G:H1'	1:A:1039:C:O2	1.99	0.62
14:N:12:ARG:NH1	14:N:12:ARG:HB2	2.14	0.62
1:A:1226:C:H5'	13:M:96:LEU:CD1	2.30	0.62
3:C:175:LEU:HD21	3:C:201:TYR:HE2	1.65	0.62
23:W:11:A:H2'	23:W:12:G:H8	1.64	0.62
2:B:67:THR:HG22	2:B:90:MET:SD	2.38	0.62
17:Q:59:ILE:HG23	17:Q:71:PHE:HB3	1.81	0.62
25:Y:102:ASP:O	25:Y:130:VAL:HG22	2.00	0.62
1:A:1151:A:HO2'	1:A:1152:A:H8	1.45	0.62
17:Q:9:VAL:HG12	17:Q:56:VAL:HG22	1.80	0.62
4:D:9:CYS:HA	4:D:12:CYS:HB2	1.82	0.62
1:A:708:C:H2'	1:A:709:G:H8	1.65	0.62
10:J:47:PHE:CZ	14:N:37:PHE:HE1	2.16	0.62
3:C:60:ALA:O	3:C:61:ALA:HB2	2.00	0.62
3:C:41:GLY:O	3:C:45:LYS:HG3	1.99	0.62
10:J:4:ILE:HB	10:J:74:ILE:CD1	2.30	0.62
25:Y:486:THR:HG23	25:Y:600:VAL:CG1	2.29	0.62
25:Y:406:GLU:HB3	25:Y:407:PRO:CD	2.29	0.62
25:Y:530:VAL:HG22	25:Y:531:GLY:N	2.15	0.62
1:A:1199:U:H4'	10:J:54:PHE:CE1	2.35	0.62
12:L:82:VAL:HG12	12:L:105:TYR:CD2	2.35	0.62
1:A:833:U:H2'	1:A:834:C:C6	2.34	0.62
25:Y:624:LEU:CD2	25:Y:631:ILE:HD11	2.25	0.62
25:Y:201:ILE:HD12	25:Y:201:ILE:N	2.15	0.62
1:A:1030(D):A:C2'	1:A:1031:G:H5'	2.28	0.62
12:L:28:LYS:O	12:L:29:GLY:C	2.38	0.62
4:D:112:VAL:HG12	4:D:116:GLN:NE2	2.14	0.62
4:D:92:VAL:O	4:D:96:LEU:HD22	2.00	0.62
25:Y:580:MET:O	25:Y:583:LYS:HB3	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:23:A:H2'	22:V:24:G:C8	2.34	0.62
1:A:1459:C:H2'	1:A:1460:A:C8	2.35	0.62
3:C:206:GLU:HG2	3:C:207:VAL:N	2.12	0.61
9:I:77:ILE:O	9:I:81:ILE:HG12	2.00	0.61
19:S:11:VAL:HG23	19:S:38:SER:HB2	1.82	0.61
1:A:1325:C:H2'	1:A:1326:C:C6	2.34	0.61
1:A:538:G:OP1	12:L:113:ARG:HD2	1.99	0.61
13:M:124:PRO:HG2	25:Y:574:GLU:HB2	1.82	0.61
10:J:12:ASP:OD2	10:J:15:THR:HG23	2.00	0.61
1:A:66:G:H4'	1:A:173:U:C5	2.35	0.61
25:Y:453:GLY:HA3	25:Y:459:LEU:CD1	2.31	0.61
3:C:58:GLU:HB2	3:C:65:ALA:HB2	1.81	0.61
4:D:188:LEU:HD12	4:D:189:PRO:HD2	1.81	0.61
1:A:963:G:H21	10:J:55:LYS:HD3	1.65	0.61
1:A:490:G:H2'	1:A:491:G:C8	2.35	0.61
2:B:60:ASP:HB3	2:B:64:ARG:NH2	2.15	0.61
4:D:43:HIS:O	4:D:45:GLN:N	2.33	0.61
25:Y:546:ILE:HG12	25:Y:590:ILE:HG12	1.82	0.61
5:E:101:ILE:HG12	5:E:101:ILE:O	2.00	0.61
10:J:54:PHE:CG	10:J:55:LYS:HE3	2.35	0.61
9:I:24:GLY:HA2	9:I:59:PHE:O	2.00	0.61
3:C:6:HIS:CD2	3:C:7:PRO:HD2	2.35	0.61
10:J:78:ASN:HB2	10:J:81:THR:HG23	1.83	0.61
25:Y:457:LEU:O	25:Y:461:ILE:HG13	2.00	0.61
25:Y:568:TYR:CE2	25:Y:569:ASP:HB2	2.34	0.61
20:T:26:ASN:HB2	20:T:71:THR:HG23	1.82	0.61
1:A:579:G:C5'	1:A:728:A:H1'	2.31	0.61
1:A:277:C:O2'	1:A:278:G:H5'	2.00	0.61
13:M:40:ASN:HD21	13:M:42:ALA:HB3	1.65	0.61
16:P:1:MET:SD	16:P:3:LYS:HE3	2.40	0.61
5:E:9:LYS:HB3	5:E:112:LEU:HD11	1.82	0.61
4:D:74:GLN:HA	4:D:77:ASN:HD22	1.64	0.61
1:A:1284:C:H3'	1:A:1285:A:H5''	1.81	0.61
1:A:750:G:N3	15:O:23:GLY:HA3	2.14	0.61
10:J:32:ALA:HB3	10:J:76:ASN:O	2.01	0.61
26:F:1102:FUA:H211	26:F:1102:FUA:O2	2.00	0.61
25:Y:529:ILE:HD11	25:Y:567:LEU:CD1	2.31	0.61
5:E:76:ILE:HG22	5:E:118:ILE:HD13	1.82	0.61
1:A:1160:G:N3	1:A:1160:G:H2'	2.15	0.61
1:A:718:G:C8	11:K:116:HIS:HB3	2.34	0.61
1:A:1347:G:O2'	1:A:1348:U:OP2	2.18	0.61
10:J:71:LEU:HD12	10:J:72:VAL:H	1.65	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:47:GLY:O	20:T:49:ALA:N	2.28	0.61
25:Y:510:VAL:HG12	25:Y:511:LYS:N	2.16	0.61
1:A:235:C:H5'	17:Q:70:ARG:HG2	1.82	0.61
20:T:13:LEU:N	20:T:13:LEU:HD12	2.10	0.61
1:A:275:G:H5''	17:Q:14:LYS:CB	2.29	0.61
1:A:460:G:H5'	1:A:461:A:OP2	2.01	0.61
1:A:995:C:O2'	1:A:996:A:H5'	2.01	0.61
10:J:48:THR:HG23	10:J:62:HIS:ND1	2.15	0.61
2:B:83:MET:CG	2:B:234:PRO:HG3	2.30	0.61
1:A:1492:A:N3	24:X:20:A:O2'	2.33	0.61
25:Y:88:VAL:O	25:Y:90:PHE:N	2.33	0.61
1:A:1053:G:C3'	1:A:1054:C:H5'	2.30	0.61
1:A:539:A:H2'	1:A:540:G:C8	2.35	0.61
13:M:106:ASN:O	13:M:107:ALA:HB3	1.99	0.61
25:Y:548:GLU:O	25:Y:551:GLN:HG2	2.00	0.61
1:A:20:U:H2'	1:A:21:G:O4'	2.00	0.61
1:A:824:C:H2'	1:A:825:G:H8	1.66	0.61
15:O:5:LYS:O	15:O:9:GLN:HG2	2.01	0.61
25:Y:99:ARG:NH2	25:Y:128:TYR:HB2	2.15	0.61
25:Y:487:ILE:CG2	25:Y:594:VAL:HG13	2.26	0.61
10:J:37:PRO:HA	10:J:72:VAL:HG22	1.83	0.61
9:I:81:ILE:O	9:I:85:LEU:HG	2.01	0.61
1:A:973:G:C1'	10:J:55:LYS:HE2	2.30	0.61
1:A:624:C:O2'	1:A:625:G:H5'	2.01	0.61
17:Q:53:LEU:HD23	17:Q:54:GLY:N	2.15	0.61
20:T:12:ALA:O	20:T:15:ARG:HB2	1.99	0.61
23:W:34:C:H2'	23:W:35:A:H5''	1.80	0.61
1:A:1321:C:C3'	1:A:1322:C:H5''	2.29	0.61
9:I:104:ARG:C	9:I:105:ASP:N	2.54	0.61
19:S:15:LEU:O	19:S:19:VAL:HG23	2.01	0.61
25:Y:416:LYS:HD2	25:Y:417:THR:H	1.65	0.61
1:A:1292:U:H2'	1:A:1293:G:C8	2.36	0.61
1:A:41:G:H2'	1:A:42:G:H8	1.65	0.61
25:Y:5:VAL:HG13	25:Y:6:GLU:N	2.15	0.61
25:Y:539:ILE:CD1	25:Y:567:LEU:HD21	2.31	0.60
23:W:14:A:H2'	23:W:15:G:H5''	1.83	0.60
25:Y:153:MET:O	25:Y:157:LEU:HG	2.01	0.60
1:A:737:A:H2'	1:A:738:C:C6	2.36	0.60
19:S:41:VAL:O	19:S:41:VAL:HG23	2.01	0.60
26:F:1102:FUA:H12	26:F:1102:FUA:O1	2.00	0.60
25:Y:96:ARG:O	25:Y:100:VAL:HG12	2.00	0.60
1:A:1370:G:C2	1:A:1371:G:C8	2.89	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:26:GLU:HA	15:O:81:LEU:HD22	1.81	0.60
25:Y:252:ASP:O	25:Y:254:LYS:HE3	2.01	0.60
14:N:12:ARG:NH1	14:N:14:PRO:HG3	2.14	0.60
23:W:50:U:H3	23:W:64:G:N2	1.95	0.60
1:A:1305:G:OP1	21:U:2:GLY:N	2.34	0.60
23:W:11:A:H2'	23:W:12:G:C8	2.36	0.60
1:A:309:G:H1'	1:A:608:A:C2	2.36	0.60
3:C:70:VAL:HG12	3:C:71:ALA:N	2.15	0.60
25:Y:249:GLY:HA2	25:Y:252:ASP:OD2	2.02	0.60
12:L:8:ASN:O	12:L:12:ARG:HG3	2.01	0.60
1:A:585:G:H4'	12:L:8:ASN:ND2	2.15	0.60
10:J:44:VAL:HG22	10:J:66:ARG:HG2	1.84	0.60
1:A:116:A:H2'	1:A:117:G:O4'	2.00	0.60
25:Y:19:ALA:CA	25:Y:121:VAL:HG11	2.29	0.60
25:Y:106:VAL:HG23	25:Y:132:ARG:HG3	1.82	0.60
3:C:86:VAL:O	3:C:90:GLU:HG2	2.02	0.60
2:B:12:GLU:HA	2:B:16:HIS:CG	2.37	0.60
9:I:104:ARG:O	9:I:105:ASP:HB3	2.01	0.60
1:A:1148:U:O3'	9:I:14:VAL:HG11	2.01	0.60
9:I:83:ARG:O	9:I:86:VAL:HG12	2.01	0.60
4:D:30:LYS:C	4:D:32:ALA:N	2.55	0.60
1:A:1301:U:H3'	1:A:1302:U:H5''	1.83	0.60
19:S:29:ARG:O	19:S:31:ILE:HG22	2.02	0.60
1:A:1479:C:H2'	1:A:1480:G:C8	2.34	0.60
1:A:390:C:O3'	16:P:28:ARG:NH2	2.34	0.60
2:B:233:SER:CB	2:B:234:PRO:CD	2.79	0.60
1:A:1005:A:H5'	1:A:1006:C:OP2	2.00	0.60
1:A:585:G:H4'	12:L:8:ASN:HD21	1.66	0.60
19:S:53:ASN:O	19:S:55:LYS:N	2.32	0.60
25:Y:229:LEU:O	25:Y:233:GLU:HG3	2.01	0.60
5:E:7:GLU:HG2	5:E:112:LEU:HD22	1.82	0.60
6:F:99:ALA:O	6:F:100:ASN:HB2	2.01	0.60
25:Y:12:LEU:HB3	25:Y:283:PRO:CD	2.30	0.60
3:C:84:ILE:O	3:C:88:ARG:HG3	2.02	0.60
25:Y:488:THR:O	25:Y:516:PRO:HG3	2.02	0.60
25:Y:408:VAL:HG21	25:Y:660:ARG:NH2	2.17	0.60
1:A:542:G:O2'	1:A:543:C:H5'	2.02	0.60
23:W:23:C:H6	23:W:23:C:H5'	1.66	0.60
1:A:424:G:H2'	1:A:425:G:H8	1.67	0.60
13:M:82:MET:CA	13:M:93:ARG:HH21	2.14	0.60
1:A:1147:C:O2	9:I:16:ARG:NH1	2.33	0.60
1:A:513:C:O2'	1:A:514:C:H5'	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:820:U:H4'	1:A:821:G:OP2	2.01	0.60
25:Y:9:LEU:HD22	25:Y:284:LEU:HD22	1.83	0.60
22:V:61:C:O2'	22:V:62:C:H5'	2.00	0.60
3:C:11:ARG:HH21	3:C:180:ALA:HB3	1.66	0.60
9:I:53:VAL:O	9:I:54:ASP:HB2	2.01	0.60
7:G:81:GLY:O	7:G:83:ALA:N	2.34	0.60
1:A:179:A:H2'	1:A:180:U:C6	2.37	0.60
12:L:59:ARG:CZ	25:Y:422:GLU:OE2	2.49	0.60
24:X:14:U:H5'	24:X:15:G:OP2	2.00	0.60
23:W:5:G:H1	23:W:68:C:H42	1.49	0.60
25:Y:630:GLN:O	25:Y:630:GLN:HG2	2.02	0.60
25:Y:276:VAL:CA	25:Y:280:LEU:HD23	2.31	0.60
25:Y:335:LEU:HD21	25:Y:352:VAL:HG21	1.82	0.60
12:L:82:VAL:HG12	12:L:105:TYR:HD2	1.66	0.60
6:F:8:ILE:HG23	6:F:85:VAL:HG13	1.83	0.60
2:B:187:LEU:HD12	2:B:205:ASP:HA	1.84	0.60
3:C:180:ALA:O	3:C:181:ASN:HB3	2.02	0.60
11:K:30:VAL:HG21	11:K:65:ALA:HA	1.84	0.60
2:B:142:LEU:O	2:B:146:GLN:HB2	2.01	0.60
5:E:33:VAL:HG12	5:E:34:VAL:N	2.17	0.60
23:W:36:U:H6	23:W:36:U:O5'	1.85	0.60
25:Y:169:GLY:HA3	25:Y:173:THR:O	2.02	0.60
1:A:683:G:H5'	1:A:684:A:OP2	2.01	0.60
17:Q:80:GLY:O	17:Q:81:ARG:HD2	2.01	0.60
9:I:113:LYS:HD2	9:I:119:ALA:HB1	1.84	0.60
1:A:1053:G:N7	1:A:1200:C:H5''	2.17	0.60
9:I:53:VAL:CG1	9:I:95:LYS:HE3	2.31	0.60
1:A:1509:C:O2'	1:A:1510:U:H5'	2.01	0.60
12:L:38:THR:HG23	12:L:57:LYS:HB3	1.84	0.60
1:A:986:A:H1'	19:S:54:GLY:O	2.00	0.60
4:D:176:LEU:HD12	4:D:177:ASP:H	1.66	0.60
1:A:992:U:H1'	1:A:993:G:C2	2.37	0.60
1:A:865:A:H2	1:A:918:A:H4'	1.67	0.60
1:A:1386:G:O2'	1:A:1387:G:H5'	2.02	0.60
9:I:3:GLN:NE2	9:I:20:ARG:HH21	2.00	0.60
25:Y:141:LYS:CE	28:Y:1690:GDP:HN22	2.13	0.60
25:Y:168:ILE:HD11	25:Y:178:ILE:CD1	2.32	0.60
25:Y:509:HIS:ND1	25:Y:570:GLY:HA2	2.17	0.60
13:M:97:PRO:CA	13:M:110:ARG:HD3	2.28	0.60
25:Y:35:TYR:CE2	25:Y:269:VAL:HB	2.37	0.60
23:W:51:C:H2'	23:W:52:G:O4'	2.01	0.60
1:A:1442:G:C6	1:A:1442(B):A:C2	2.86	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:103:VAL:HG21	8:H:110:ALA:HB2	1.84	0.60
1:A:1008:C:H2'	1:A:1009:G:H8	1.66	0.60
3:C:110:ASN:HD21	3:C:140:ARG:HB3	1.65	0.60
4:D:176:LEU:HD12	4:D:177:ASP:N	2.16	0.60
1:A:781:A:H4'	1:A:1522:U:O2'	2.02	0.60
1:A:35:G:H2'	1:A:36:C:C6	2.37	0.60
1:A:976:G:H5'	1:A:1358:U:O2'	2.01	0.59
3:C:94:LEU:O	3:C:95:THR:HG23	2.02	0.59
5:E:145:LYS:HA	8:H:107:LEU:CD2	2.32	0.59
1:A:1129:C:H2'	1:A:1139:G:N7	2.16	0.59
11:K:126:ARG:O	11:K:128:ALA:N	2.34	0.59
25:Y:379:GLY:O	25:Y:380:LEU:O	2.20	0.59
8:H:118:VAL:O	8:H:119:LEU:HD23	2.01	0.59
14:N:12:ARG:NH1	14:N:12:ARG:CB	2.66	0.59
5:E:80:ILE:HD11	5:E:138:ALA:HB1	1.84	0.59
18:R:46:GLU:OE1	18:R:46:GLU:HA	2.02	0.59
23:W:51:C:C2'	23:W:52:G:H5''	2.32	0.59
4:D:192:GLU:H	4:D:192:GLU:CD	2.06	0.59
25:Y:605:ILE:CG2	25:Y:646:PHE:HB3	2.32	0.59
12:L:41:ARG:HG2	12:L:42:THR:N	2.13	0.59
25:Y:185:ALA:HB2	25:Y:201:ILE:HD12	1.83	0.59
1:A:1116:C:H2'	1:A:1117:G:C5'	2.29	0.59
4:D:30:LYS:HB3	4:D:35:ARG:HD2	1.84	0.59
3:C:173:VAL:HG12	3:C:175:LEU:CD1	2.31	0.59
3:C:152:ILE:HG22	3:C:167:TRP:HA	1.83	0.59
8:H:29:SER:OG	8:H:32:LYS:HG3	2.02	0.59
1:A:337:C:H2'	1:A:338:A:H8	1.67	0.59
14:N:44:LEU:O	14:N:44:LEU:HD12	2.02	0.59
2:B:193:ASP:O	2:B:193:ASP:OD1	2.19	0.59
25:Y:485:GLU:HB2	25:Y:560:VAL:HG22	1.85	0.59
20:T:43:LEU:HB3	20:T:48:LYS:HB2	1.84	0.59
14:N:12:ARG:HH11	14:N:12:ARG:HB3	1.67	0.59
1:A:1030(A):G:H1'	1:A:1031:G:H1	1.67	0.59
9:I:79:LEU:HD11	9:I:83:ARG:HD2	1.84	0.59
2:B:22:LYS:HA	2:B:22:LYS:HE2	1.84	0.59
25:Y:614:GLU:HA	25:Y:617:MET:HB2	1.85	0.59
1:A:357:G:O2'	1:A:358:U:H5'	2.03	0.59
1:A:404:U:H2'	1:A:405:U:H6	1.67	0.59
16:P:22:THR:HA	16:P:33:ILE:HG12	1.83	0.59
12:L:70:ILE:CG2	12:L:100:ILE:HD12	2.33	0.59
1:A:999:C:H2'	1:A:1000:U:C5	2.36	0.59
18:R:43:PHE:HE2	18:R:58:LEU:HD11	1.68	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:617:MET:CE	25:Y:641:GLN:HB3	2.33	0.59
1:A:403:C:O2'	1:A:404:U:H5'	2.01	0.59
22:V:6:G:H1	22:V:67:C:H42	1.50	0.59
20:T:55:ILE:O	20:T:58:LYS:HB3	2.02	0.59
10:J:30:SER:OG	10:J:81:THR:HG22	2.03	0.59
25:Y:313:ALA:HA	25:Y:328:ILE:HG22	1.83	0.59
25:Y:553:GLY:HA2	25:Y:560:VAL:CG2	2.33	0.59
1:A:1226:C:H4'	1:A:1227:A:OP1	2.03	0.59
25:Y:150:ILE:O	25:Y:154:GLN:HG2	2.02	0.59
1:A:284:G:H2'	1:A:285:G:C8	2.35	0.59
7:G:28:ASN:O	7:G:31:MET:HB3	2.02	0.59
1:A:1347:G:O2'	1:A:1348:U:P	2.61	0.59
3:C:47:LEU:HD23	3:C:52:LEU:HD13	1.84	0.59
25:Y:608:VAL:O	25:Y:609:GLU:HG3	2.02	0.59
7:G:27:ILE:CD1	7:G:40:ALA:HA	2.27	0.59
25:Y:216:LEU:CD2	25:Y:246:ILE:HD11	2.33	0.59
1:A:219:C:H2'	1:A:220:G:O4'	2.02	0.59
10:J:34:VAL:HG13	10:J:73:ASP:O	2.03	0.59
25:Y:124:GLN:O	25:Y:127:LYS:HB3	2.02	0.59
13:M:108:ARG:HA	13:M:108:ARG:NH1	2.07	0.59
2:B:15:VAL:H	2:B:16:HIS:CE1	2.21	0.59
1:A:630:G:O2'	1:A:631:G:H5'	2.01	0.59
1:A:41:G:H2'	1:A:42:G:C8	2.37	0.59
18:R:50:ILE:HD12	18:R:70:ILE:HG21	1.84	0.59
1:A:826:C:H2'	1:A:827:U:H6	1.67	0.59
1:A:1486:G:H2'	1:A:1487:G:O4'	2.03	0.59
12:L:18:VAL:O	12:L:19:ARG:HB3	2.03	0.59
3:C:58:GLU:N	3:C:65:ALA:HB3	2.11	0.59
1:A:201:C:C2'	1:A:202:U:H5''	2.32	0.59
25:Y:416:LYS:HD3	25:Y:417:THR:N	2.18	0.59
19:S:6:LYS:N	19:S:6:LYS:HE3	2.18	0.59
1:A:1060:C:H4'	10:J:52:GLY:N	2.18	0.59
5:E:98:THR:HB	5:E:117:ASP:HB3	1.84	0.59
25:Y:539:ILE:N	25:Y:540:PRO:CD	2.65	0.59
4:D:31:CYS:SG	4:D:31:CYS:O	2.61	0.59
1:A:1314:C:H2'	1:A:1315:U:C6	2.38	0.59
25:Y:637:ARG:HH11	25:Y:637:ARG:HG3	1.68	0.59
25:Y:312:LEU:HD11	25:Y:401:SER:OG	2.03	0.58
25:Y:459:LEU:HD12	25:Y:459:LEU:H	1.68	0.58
1:A:192:U:O4'	20:T:103:GLY:HA2	2.02	0.58
9:I:8:GLY:CA	9:I:79:LEU:HD12	2.33	0.58
10:J:20:ALA:C	10:J:22:LYS:H	2.05	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:943:U:C2'	1:A:944:G:H5'	2.33	0.58
10:J:8:LEU:HD21	10:J:96:ILE:HG22	1.84	0.58
25:Y:510:VAL:HA	25:Y:570:GLY:CA	2.31	0.58
23:W:6:G:H1	23:W:67:C:H42	1.49	0.58
13:M:52:GLU:HA	13:M:55:ARG:HD3	1.85	0.58
25:Y:314:PHE:CZ	25:Y:327:PHE:HB3	2.38	0.58
23:W:68:C:H2'	23:W:69:C:H6	1.67	0.58
13:M:15:VAL:HA	13:M:18:ALA:HB3	1.85	0.58
1:A:1238:A:C5'	1:A:1336:C:H41	2.16	0.58
12:L:47:LYS:HD2	12:L:48:PRO:HD3	1.86	0.58
1:A:1435:G:H2'	1:A:1436:U:C5	2.38	0.58
25:Y:132:ARG:HG2	25:Y:132:ARG:O	2.03	0.58
25:Y:621:ILE:CG1	25:Y:643:ILE:HD13	2.33	0.58
25:Y:230:LYS:NZ	25:Y:237:PRO:HA	2.16	0.58
25:Y:92:ILE:HG21	25:Y:437:THR:HG21	1.85	0.58
18:R:44:LEU:O	18:R:45:SER:C	2.41	0.58
2:B:9:GLU:N	2:B:9:GLU:OE1	2.36	0.58
7:G:16:LEU:CD1	9:I:42:ARG:HA	2.33	0.58
1:A:1326:C:O2'	1:A:1327:C:H5'	2.04	0.58
16:P:9:PHE:HE2	16:P:18:ARG:NE	2.02	0.58
1:A:1269:A:H2'	1:A:1270:C:H5'	1.84	0.58
1:A:1459:C:H2'	1:A:1460:A:H8	1.69	0.58
16:P:19:ILE:N	16:P:37:GLY:O	2.35	0.58
1:A:1288:A:H2	1:A:1352:C:O2	1.86	0.58
25:Y:230:LYS:HB2	25:Y:230:LYS:NZ	2.18	0.58
14:N:12:ARG:CB	14:N:12:ARG:HH11	2.16	0.58
1:A:812:C:HO2'	1:A:813:U:P	2.27	0.58
25:Y:171:GLU:CG	25:Y:172:ASP:H	2.16	0.58
4:D:36:ARG:HB3	4:D:36:ARG:NH1	2.14	0.58
12:L:24:VAL:HG13	12:L:98:TYR:CE2	2.39	0.58
11:K:21:ILE:HG13	11:K:30:VAL:CG1	2.32	0.58
1:A:473:G:H2'	1:A:474:G:C8	2.38	0.58
1:A:476:G:H2'	1:A:477:A:H8	1.69	0.58
1:A:833:U:H2'	1:A:834:C:H6	1.69	0.58
25:Y:380:LEU:O	25:Y:381:LYS:HE2	2.02	0.58
9:I:10:ARG:HG3	9:I:75:ASP:HB3	1.85	0.58
7:G:35:LYS:HE3	7:G:38:LEU:HD23	1.86	0.58
10:J:78:ASN:C	10:J:79:ARG:HH11	2.06	0.58
18:R:58:LEU:HB3	18:R:62:GLU:CB	2.30	0.58
1:A:1512:U:H2'	1:A:1513:A:C8	2.38	0.58
19:S:9:VAL:CG1	19:S:9:VAL:O	2.51	0.58
16:P:67:THR:N	16:P:70:ALA:HB3	2.18	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:238:LEU:O	2:B:240:GLN:N	2.37	0.58
25:Y:315:LYS:HZ2	25:Y:317:MET:HG2	1.66	0.58
10:J:22:LYS:HE3	10:J:23:ILE:N	2.18	0.58
1:A:1170:A:H2'	1:A:1171:G:O4'	2.03	0.58
24:X:18:C:H5''	24:X:19:A:OP1	2.02	0.58
25:Y:14:ASN:HB2	25:Y:102:ASP:OD1	2.02	0.58
3:C:52:LEU:HD23	3:C:52:LEU:N	2.14	0.58
15:O:16:ALA:HB1	15:O:21:ASP:HB3	1.85	0.58
25:Y:185:ALA:HB3	25:Y:199:ILE:O	2.04	0.58
2:B:44:LEU:N	2:B:44:LEU:HD12	2.18	0.58
2:B:213:LEU:HD23	2:B:213:LEU:O	2.04	0.58
1:A:376:G:H2'	1:A:377:G:C8	2.37	0.58
2:B:207:ALA:HB3	2:B:210:SER:CB	2.34	0.58
1:A:299:G:H2'	1:A:300:A:C8	2.39	0.58
1:A:269:C:H2'	1:A:270:A:C8	2.39	0.58
1:A:1305:G:H5'	21:U:4:GLY:HA3	1.85	0.58
1:A:943:U:H2'	1:A:944:G:H5'	1.84	0.58
2:B:148:TYR:O	2:B:149:LEU:HD23	2.02	0.58
1:A:15:G:H8	1:A:1396:A:HO2'	1.51	0.58
5:E:42:GLY:HA3	5:E:66:MET:HG2	1.84	0.58
24:X:11:A:C4'	24:X:12:A:O5'	2.41	0.58
25:Y:459:LEU:O	25:Y:463:VAL:HG23	2.03	0.58
10:J:94:VAL:HG12	10:J:95:GLU:N	2.19	0.58
3:C:14:ILE:HG13	3:C:15:THR:H	1.68	0.58
4:D:127:THR:HA	4:D:132:ARG:HA	1.86	0.58
12:L:91:LYS:HA	12:L:91:LYS:HZ2	1.69	0.58
22:V:31:A:O2'	22:V:32:U:H5'	2.03	0.58
12:L:17:LYS:CD	12:L:18:VAL:HG22	2.33	0.58
25:Y:181:LEU:HB2	25:Y:216:LEU:HD11	1.85	0.58
4:D:104:VAL:HG21	4:D:140:VAL:HG21	1.86	0.58
25:Y:135:PHE:CE1	25:Y:272:LEU:HD22	2.39	0.58
14:N:37:PHE:CE2	14:N:53:LEU:HD22	2.39	0.58
14:N:37:PHE:HE2	14:N:53:LEU:HD22	1.68	0.58
2:B:223:ILE:HG12	2:B:226:ARG:HH22	1.66	0.57
25:Y:411:VAL:CG1	25:Y:412:ALA:N	2.66	0.57
20:T:50:GLU:HB2	20:T:100:ILE:HB	1.86	0.57
9:I:53:VAL:CG2	9:I:55:ALA:HB3	2.33	0.57
12:L:89:ARG:HD3	12:L:91:LYS:HZ3	1.68	0.57
17:Q:3:LYS:HB3	17:Q:61:GLU:HB3	1.86	0.57
2:B:101:MET:O	2:B:102:LEU:HD12	2.04	0.57
1:A:559:A:H4'	1:A:560:U:H5'	1.85	0.57
3:C:79:ARG:O	3:C:79:ARG:HG3	2.03	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:37:ASN:HD21	9:I:40:LEU:HA	1.67	0.57
1:A:1255:G:H2'	1:A:1279:A:N6	2.18	0.57
22:V:9:A:C2	22:V:45:U:C4	2.92	0.57
1:A:895:G:H2'	1:A:896:C:C6	2.39	0.57
1:A:449:C:O2	16:P:42:ARG:HD2	2.04	0.57
25:Y:312:LEU:HD23	25:Y:387:ASP:O	2.03	0.57
25:Y:100:VAL:HG23	25:Y:329:ARG:CB	2.33	0.57
25:Y:415:PRO:HA	25:Y:474:ALA:HB1	1.86	0.57
9:I:82:ALA:HB1	9:I:96:LEU:HD11	1.85	0.57
12:L:6:THR:HG23	12:L:9:GLN:HE21	1.69	0.57
4:D:158:ILE:HG23	4:D:162:LEU:HD12	1.85	0.57
25:Y:311:ALA:CB	25:Y:330:VAL:HA	2.34	0.57
17:Q:74:LEU:HD12	17:Q:75:ARG:HG2	1.86	0.57
25:Y:301:ILE:CG2	25:Y:332:SER:HB2	2.34	0.57
1:A:731:G:OP1	1:A:766:A:H1'	2.04	0.57
1:A:1057:G:H5''	3:C:154:SER:CB	2.23	0.57
1:A:1149:C:H2'	1:A:1150:U:C6	2.39	0.57
4:D:8:VAL:C	4:D:10:ARG:N	2.57	0.57
25:Y:628:ARG:NH1	25:Y:680:PRO:HG2	2.18	0.57
4:D:70:ILE:HD11	4:D:74:GLN:HB3	1.86	0.57
10:J:40:LEU:N	10:J:40:LEU:HD23	2.19	0.57
1:A:1402:C:H2'	1:A:1403:C:O4'	2.04	0.57
3:C:86:VAL:O	3:C:89:GLU:HB3	2.05	0.57
25:Y:438:PHE:HB2	25:Y:452:SER:O	2.04	0.57
3:C:58:GLU:O	3:C:59:ARG:HG3	2.05	0.57
2:B:17:PHE:O	2:B:204:ASN:HB2	2.05	0.57
25:Y:191:ASP:HA	25:Y:265:LYS:O	2.04	0.57
4:D:61:LYS:HD3	4:D:206:PHE:CD2	2.40	0.57
25:Y:628:ARG:NE	25:Y:648:PRO:HG2	2.19	0.57
25:Y:314:PHE:CD1	25:Y:315:LYS:N	2.72	0.57
25:Y:327:PHE:HA	25:Y:375:GLY:O	2.05	0.57
1:A:1468:A:H2'	1:A:1469:G:O4'	2.05	0.57
1:A:836:G:C6	1:A:851:G:C6	2.91	0.57
23:W:71:C:H2'	23:W:72:A:C8	2.26	0.57
25:Y:404:VAL:HG12	25:Y:404:VAL:O	2.03	0.57
16:P:8:ARG:HB3	16:P:28:ARG:NH1	2.18	0.57
1:A:759:A:C2'	1:A:760:G:H5'	2.34	0.57
2:B:80:ILE:H	2:B:80:ILE:HD12	1.70	0.57
7:G:29:LYS:HB2	7:G:105:VAL:HG21	1.86	0.57
25:Y:91:THR:O	25:Y:93:GLU:N	2.28	0.57
25:Y:18:ALA:O	25:Y:106:VAL:HA	2.05	0.57
25:Y:21:ILE:O	25:Y:23:ALA:N	2.34	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:25:LYS:HZ3	25:Y:86:GLY:HA2	1.70	0.57
1:A:1288:A:N1	1:A:1371:G:H1'	2.20	0.57
15:O:17:ARG:CD	15:O:26:GLU:HG3	2.27	0.57
18:R:56:THR:CB	18:R:58:LEU:HD13	2.35	0.57
1:A:1266:G:N2	1:A:1270:C:N3	2.52	0.57
1:A:1318:A:H1'	19:S:37:ARG:HH21	1.69	0.57
1:A:1061:G:O2'	1:A:1062:U:H5'	2.04	0.57
8:H:63:LEU:H	8:H:63:LEU:HD22	1.69	0.57
25:Y:82:ILE:CG1	25:Y:101:LEU:HD23	2.35	0.57
25:Y:230:LYS:HB2	25:Y:230:LYS:HZ2	1.70	0.57
5:E:101:ILE:HD13	5:E:101:ILE:N	2.19	0.57
1:A:1404:C:H1'	1:A:1499:A:C2	2.39	0.57
24:X:12:A:C4'	24:X:13:A:OP2	2.53	0.57
3:C:78:GLY:HA3	3:C:83:ARG:HB3	1.85	0.57
25:Y:177:ILE:HG21	25:Y:260:LEU:HD21	1.87	0.57
13:M:8:GLU:C	13:M:9:ILE:HD12	2.25	0.57
12:L:27:LEU:CD1	12:L:28:LYS:H	2.18	0.57
3:C:174:PRO:O	3:C:176:HIS:N	2.38	0.57
19:S:41:VAL:O	19:S:43:GLU:N	2.37	0.57
16:P:67:THR:HB	16:P:70:ALA:HB2	1.87	0.57
25:Y:99:ARG:HA	25:Y:128:TYR:CZ	2.40	0.57
13:M:92:HIS:CE1	13:M:98:VAL:HG21	2.40	0.57
17:Q:4:LYS:HG3	17:Q:6:LEU:HD21	1.86	0.57
9:I:65:VAL:HG21	9:I:73:GLN:CB	2.35	0.57
1:A:192:U:H2'	1:A:193:C:C6	2.40	0.57
1:A:956:U:O2'	1:A:957:U:H5'	2.05	0.57
1:A:1479:C:O2'	1:A:1480:G:H5'	2.04	0.57
19:S:6:LYS:H	19:S:6:LYS:CD	2.17	0.57
21:U:2:GLY:C	21:U:4:GLY:H	2.08	0.57
11:K:15:ALA:HA	11:K:76:GLY:O	2.04	0.57
7:G:22:LEU:HD23	7:G:22:LEU:O	2.04	0.57
1:A:575:G:OP1	1:A:575:G:H4'	2.03	0.57
25:Y:33:LEU:HD23	25:Y:360:ALA:CB	2.33	0.56
25:Y:546:ILE:HG23	25:Y:590:ILE:CG1	2.31	0.56
25:Y:573:HIS:HD2	25:Y:576:ASP:N	1.95	0.56
23:W:15:G:H2'	23:W:16:C:H5'	1.87	0.56
4:D:121:VAL:O	4:D:134:ASP:HA	2.05	0.56
16:P:14:ASN:N	16:P:15:PRO:HD3	2.20	0.56
25:Y:636:PRO:O	25:Y:637:ARG:HD3	2.05	0.56
23:W:54:5MU:O2'	23:W:55:U:H5'	2.05	0.56
25:Y:484:ARG:CD	25:Y:559:PRO:HB2	2.34	0.56
25:Y:282:SER:O	25:Y:286:ILE:HD13	2.04	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:183:G:H2'	1:A:184:G:C8	2.40	0.56
4:D:31:CYS:O	4:D:32:ALA:HB3	2.06	0.56
25:Y:105:ILE:HD12	25:Y:105:ILE:N	2.18	0.56
1:A:450:G:H1	1:A:483:C:H42	1.53	0.56
1:A:1342:C:O2'	1:A:1343:G:H5'	2.06	0.56
2:B:137:ARG:HG2	2:B:137:ARG:HH11	1.70	0.56
1:A:1493:A:H61	25:Y:579:GLU:CG	2.17	0.56
1:A:821:G:O2'	1:A:822:C:H5'	2.05	0.56
1:A:382:A:H2'	1:A:383:A:H8	1.70	0.56
1:A:1206:G:H4'	3:C:192:THR:O	2.04	0.56
5:E:68:GLU:HG3	5:E:68:GLU:O	2.04	0.56
25:Y:15:ILE:O	25:Y:101:LEU:HD22	2.05	0.56
25:Y:85:PRO:CA	25:Y:94:VAL:HG22	2.26	0.56
1:A:1367:C:H4'	10:J:48:THR:HG21	1.86	0.56
25:Y:621:ILE:HG23	25:Y:631:ILE:CG1	2.26	0.56
25:Y:655:TYR:OH	25:Y:659:LEU:HD23	2.04	0.56
10:J:71:LEU:HD12	10:J:72:VAL:N	2.20	0.56
25:Y:526:VAL:HG11	25:Y:566:THR:HG23	1.86	0.56
1:A:1054:C:OP2	1:A:1197:G:OP2	2.22	0.56
1:A:521:G:H4'	12:L:73:GLU:HG3	1.87	0.56
9:I:26:VAL:HG22	9:I:61:ALA:HB3	1.85	0.56
3:C:79:ARG:NH1	3:C:79:ARG:HB2	2.18	0.56
20:T:45:GLN:HB2	20:T:91:LEU:HD22	1.88	0.56
12:L:79:GLU:HB2	25:Y:442:THR:HG21	1.87	0.56
1:A:1270:C:H4'	1:A:1313:U:O2'	2.06	0.56
1:A:165:C:O2'	1:A:166:G:H5'	2.05	0.56
19:S:6:LYS:H	19:S:6:LYS:HE3	1.70	0.56
17:Q:48:GLU:O	17:Q:49:GLU:C	2.43	0.56
1:A:358:U:H2'	1:A:359:U:C6	2.40	0.56
22:V:48:C:H2'	22:V:59:U:H4'	1.87	0.56
6:F:36:ARG:CZ	6:F:36:ARG:HB3	2.35	0.56
1:A:46:G:O2'	1:A:365:U:H1'	2.06	0.56
1:A:296:U:O2'	1:A:297:G:H5'	2.04	0.56
1:A:695:A:H2'	1:A:696:A:C8	2.40	0.56
25:Y:138:LYS:HG2	28:Y:1690:GDP:C5	2.40	0.56
25:Y:28:THR:O	25:Y:32:ILE:HG13	2.04	0.56
15:O:17:ARG:HH11	15:O:17:ARG:HG3	1.69	0.56
25:Y:608:VAL:HG12	25:Y:609:GLU:N	2.20	0.56
25:Y:252:ASP:N	25:Y:252:ASP:OD1	2.38	0.56
25:Y:512:ILE:H	25:Y:512:ILE:CD1	2.17	0.56
20:T:11:SER:HA	20:T:13:LEU:CD1	2.35	0.56
13:M:119:GLY:O	13:M:120:LYS:HB2	2.04	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1300:G:O2'	1:A:1301:U:P	2.63	0.56
25:Y:121:VAL:HA	25:Y:124:GLN:NE2	2.20	0.56
25:Y:554:PRO:HG3	25:Y:594:VAL:CG1	2.36	0.56
25:Y:92:ILE:O	25:Y:92:ILE:HD13	2.04	0.56
18:R:45:SER:OG	18:R:46:GLU:N	2.39	0.56
12:L:53:ARG:HG2	12:L:93:LEU:HD21	1.88	0.56
1:A:1442(A):G:O2'	1:A:1442(B):A:H5''	2.04	0.56
1:A:191:G:N3	20:T:105:SER:HB3	2.21	0.56
11:K:91:ARG:HH11	18:R:88:LYS:HE3	1.69	0.56
7:G:85:TYR:CD2	7:G:154:TYR:HE2	2.23	0.56
23:W:10:G:H2'	23:W:11:A:C8	2.40	0.56
6:F:36:ARG:NH1	6:F:36:ARG:HB3	2.20	0.56
15:O:53:HIS:CE1	15:O:57:LEU:HD21	2.40	0.56
1:A:793:U:H3'	1:A:794:A:C5'	2.20	0.56
19:S:62:ILE:HG23	19:S:62:ILE:O	2.04	0.56
1:A:1308:U:H5''	13:M:98:VAL:HG23	1.86	0.56
25:Y:610:VAL:HG11	25:Y:655:TYR:OH	2.05	0.56
6:F:67:MET:HB2	6:F:68:PRO:CD	2.31	0.56
5:E:101:ILE:H	5:E:101:ILE:HD13	1.70	0.56
12:L:28:LYS:O	12:L:30:ALA:N	2.39	0.56
1:A:109:A:C6	1:A:326:G:C6	2.94	0.56
1:A:487:A:H2'	1:A:488:C:O4'	2.06	0.56
25:Y:165:GLN:NE2	25:Y:177:ILE:HG21	2.21	0.56
2:B:204:ASN:C	2:B:204:ASN:ND2	2.59	0.56
9:I:4:TYR:CE2	9:I:88:TYR:CB	2.89	0.56
1:A:1375:A:OP1	7:G:12:LEU:HD21	2.05	0.56
3:C:49:SER:HB2	3:C:75:VAL:HG11	1.88	0.56
12:L:60:LEU:HD21	12:L:66:VAL:HG22	1.88	0.56
25:Y:485:GLU:CG	25:Y:558:PHE:H	2.19	0.56
25:Y:237:PRO:HB2	25:Y:242:LEU:HG	1.87	0.56
2:B:115:LEU:HD13	2:B:145:LEU:HB3	1.88	0.56
9:I:40:LEU:C	9:I:42:ARG:H	2.09	0.56
1:A:512:U:H2'	1:A:513:C:H6	1.71	0.56
7:G:80:VAL:HG21	7:G:83:ALA:HB3	1.87	0.56
12:L:89:ARG:HA	12:L:97:ARG:HA	1.87	0.56
3:C:167:TRP:O	3:C:168:ALA:HB3	2.04	0.56
1:A:405:U:H3'	1:A:406:G:H5'	1.88	0.56
11:K:33:THR:HA	11:K:40:ILE:HG12	1.87	0.56
10:J:29:ARG:HB3	10:J:29:ARG:CZ	2.35	0.56
10:J:32:ALA:N	10:J:78:ASN:HD21	2.03	0.56
3:C:50:ALA:HB1	3:C:70:VAL:CG1	2.35	0.56
23:W:22:G:H2'	23:W:23:C:H5''	1.84	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:15:VAL:C	2:B:16:HIS:CG	2.79	0.56
1:A:1342:C:H1'	9:I:124:GLN:HG3	1.88	0.56
4:D:129:ASN:H	4:D:129:ASN:HD22	1.54	0.56
1:A:865:A:C2	1:A:918:A:H4'	2.41	0.56
3:C:20:SER:HB3	3:C:40:ARG:NH2	2.21	0.56
3:C:127:ARG:HH11	3:C:127:ARG:HG2	1.71	0.56
7:G:51:GLN:OE1	7:G:51:GLN:HA	2.06	0.56
22:V:35:A:H2'	22:V:36:A:H8	1.70	0.55
25:Y:20:HIS:HA	25:Y:87:HIS:CD2	2.42	0.55
25:Y:21:ILE:HG23	25:Y:88:VAL:HG13	1.88	0.55
2:B:164:VAL:HG12	2:B:165:VAL:N	2.21	0.55
25:Y:463:VAL:O	25:Y:467:LYS:HB3	2.06	0.55
25:Y:9:LEU:CD1	25:Y:284:LEU:HD13	2.36	0.55
1:A:1404:C:H5'	1:A:1405:G:OP2	2.06	0.55
2:B:12:GLU:HB3	2:B:16:HIS:HB2	1.88	0.55
20:T:45:GLN:HA	20:T:91:LEU:HB3	1.88	0.55
9:I:55:ALA:HA	9:I:58:HIS:CD2	2.41	0.55
25:Y:314:PHE:HD1	25:Y:315:LYS:HB2	1.71	0.55
15:O:39:LEU:HD22	15:O:43:LEU:HG	1.88	0.55
8:H:114:THR:HG22	8:H:130:GLY:O	2.05	0.55
6:F:28:ARG:O	6:F:32:ASN:HB2	2.06	0.55
13:M:74:VAL:HA	13:M:77:ASN:HD22	1.71	0.55
1:A:1358:U:P	14:N:35:ARG:HG3	2.45	0.55
25:Y:487:ILE:HG21	25:Y:594:VAL:HA	1.88	0.55
25:Y:423:LYS:O	25:Y:427:ALA:HB2	2.07	0.55
25:Y:513:LYS:HB3	25:Y:566:THR:HB	1.86	0.55
6:F:33:TYR:HA	6:F:71:ARG:HH21	1.66	0.55
25:Y:265:LYS:HB3	25:Y:267:LYS:HE3	1.88	0.55
25:Y:149:VAL:CA	25:Y:152:THR:HG22	2.36	0.55
3:C:6:HIS:HD2	3:C:7:PRO:HD2	1.71	0.55
19:S:19:VAL:HG11	19:S:44:MET:HG2	1.88	0.55
25:Y:5:VAL:HG13	25:Y:6:GLU:H	1.70	0.55
1:A:36:C:H4'	12:L:122:THR:O	2.06	0.55
2:B:235:SER:O	2:B:237:ALA:N	2.35	0.55
2:B:236:TYR:CD2	2:B:239:VAL:HG21	2.41	0.55
1:A:635:G:O2'	1:A:636:U:H5'	2.05	0.55
2:B:166:ASP:HB3	2:B:169:LYS:HB2	1.88	0.55
25:Y:460:GLU:O	25:Y:463:VAL:HB	2.05	0.55
6:F:71:ARG:HG3	6:F:71:ARG:HH11	1.69	0.55
9:I:5:TYR:HD1	9:I:6:GLY:H	1.47	0.55
1:A:738:C:H2'	1:A:739:C:H6	1.71	0.55
19:S:13:ASP:C	19:S:15:LEU:N	2.59	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:697:U:C2'	1:A:698:G:H5'	2.33	0.55
1:A:992:U:H4'	1:A:993:G:O5'	2.05	0.55
1:A:382:A:H2'	1:A:383:A:C8	2.41	0.55
1:A:8:A:N6	4:D:209:ARG:HB2	2.21	0.55
4:D:33:MET:O	4:D:37:PRO:HG3	2.07	0.55
25:Y:15:ILE:HD12	25:Y:15:ILE:O	2.05	0.55
25:Y:213:HIS:O	25:Y:217:VAL:HG23	2.06	0.55
13:M:116:THR:HG22	13:M:117:VAL:N	2.21	0.55
18:R:44:LEU:HD22	18:R:79:LEU:HD22	1.89	0.55
7:G:15:ASP:OD1	7:G:16:LEU:N	2.39	0.55
1:A:902:G:O2'	1:A:903:G:H5'	2.07	0.55
5:E:71:LEU:HD11	5:E:114:GLY:HA3	1.88	0.55
25:Y:124:GLN:C	25:Y:127:LYS:HB3	2.27	0.55
3:C:70:VAL:HG12	3:C:72:LYS:N	2.02	0.55
5:E:12:LEU:O	5:E:12:LEU:HD13	2.06	0.55
1:A:1116:C:C2'	1:A:1117:G:H5'	2.36	0.55
3:C:157:ILE:C	3:C:159:GLY:H	2.10	0.55
9:I:40:LEU:O	9:I:42:ARG:N	2.40	0.55
25:Y:625:ASN:C	25:Y:627:ARG:N	2.60	0.55
1:A:1319:A:OP1	19:S:10:PHE:CE1	2.59	0.55
1:A:1388:C:H2'	1:A:1389:C:C6	2.41	0.55
25:Y:637:ARG:NH1	25:Y:637:ARG:HG3	2.20	0.55
1:A:1346:A:N1	1:A:1374:A:H5''	2.21	0.55
17:Q:7:THR:O	17:Q:23:VAL:HG13	2.07	0.55
10:J:4:ILE:HB	10:J:74:ILE:CG1	2.37	0.55
25:Y:216:LEU:HD23	25:Y:246:ILE:HD11	1.87	0.55
10:J:5:ARG:HG3	10:J:71:LEU:HD11	1.89	0.55
25:Y:511:LYS:HB2	25:Y:569:ASP:HB3	1.88	0.55
23:W:30:G:H2'	23:W:31:G:H5'	1.89	0.55
1:A:424:G:O2'	1:A:425:G:H5'	2.07	0.55
18:R:58:LEU:N	18:R:58:LEU:HD12	2.22	0.55
1:A:407:G:O2'	4:D:116:GLN:HG3	2.07	0.55
16:P:67:THR:H	16:P:70:ALA:HB3	1.71	0.55
10:J:18:ALA:C	10:J:20:ALA:H	2.10	0.55
1:A:1403:C:H2'	1:A:1403:C:O2	2.07	0.55
1:A:807:A:H2'	1:A:808:C:C6	2.42	0.55
16:P:82:GLN:O	16:P:84:ALA:N	2.40	0.55
1:A:542:G:H5'	4:D:41:GLY:CA	2.37	0.55
1:A:426:G:P	4:D:36:ARG:HH22	2.30	0.55
1:A:934:C:H5	1:A:1344:C:H2'	1.72	0.55
11:K:108:ILE:N	11:K:108:ILE:CD1	2.70	0.55
23:W:39:C:H2'	23:W:40:C:C6	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:6:LYS:HG2	19:S:7:LYS:HE3	1.89	0.55
1:A:1090:U:H2'	1:A:1091:U:H6	1.72	0.55
15:O:40:SER:O	15:O:44:LYS:HG3	2.07	0.55
12:L:76:ASN:CG	12:L:76:ASN:O	2.45	0.55
25:Y:487:ILE:N	25:Y:487:ILE:HD13	2.21	0.55
1:A:1490:C:C5'	1:A:1490:C:C6	2.85	0.55
5:E:101:ILE:CD1	5:E:119:LEU:HD23	2.34	0.55
1:A:1303:C:C2'	1:A:1304:G:H5'	2.36	0.55
25:Y:491:VAL:HG11	25:Y:596:LYS:HD3	1.89	0.55
1:A:713:G:H2'	1:A:714:G:C8	2.42	0.55
1:A:1492:A:H2'	1:A:1493:A:C8	2.42	0.55
1:A:658:G:O4'	15:O:22:THR:HB	2.07	0.55
1:A:45:U:H2'	1:A:46:G:C8	2.42	0.55
3:C:20:SER:HB3	3:C:40:ARG:HH22	1.72	0.55
8:H:5:PRO:O	8:H:8:ASP:HB3	2.07	0.55
15:O:82:ILE:HD13	15:O:82:ILE:O	2.07	0.55
25:Y:438:PHE:CD1	25:Y:438:PHE:C	2.79	0.55
25:Y:411:VAL:HG23	25:Y:459:LEU:HD22	1.88	0.55
13:M:9:ILE:N	13:M:9:ILE:HD12	2.22	0.55
2:B:24:TRP:CZ3	2:B:26:PRO:HA	2.42	0.55
2:B:51:LEU:CD2	2:B:55:PHE:HE2	2.20	0.55
20:T:30:LYS:HZ2	20:T:34:LYS:HE3	1.71	0.55
16:P:20:VAL:HG23	16:P:34:GLU:O	2.07	0.55
16:P:28:ARG:HH11	16:P:28:ARG:HG2	1.70	0.55
1:A:1082:G:C2'	1:A:1083:U:H5'	2.37	0.55
25:Y:115:GLU:CG	25:Y:118:SER:HB3	2.38	0.54
1:A:1347:G:C2'	1:A:1348:U:OP2	2.55	0.54
23:W:26:G:H2'	23:W:27:U:C6	2.42	0.54
1:A:275:G:H2'	1:A:276:G:C8	2.42	0.54
20:T:42:GLN:HA	20:T:42:GLN:NE2	2.21	0.54
1:A:291:C:O2'	1:A:292:G:H5'	2.06	0.54
25:Y:121:VAL:HA	25:Y:124:GLN:HE22	1.71	0.54
25:Y:14:ASN:HD22	25:Y:80:ASN:HB2	1.72	0.54
25:Y:17:ILE:N	25:Y:17:ILE:CD1	2.69	0.54
25:Y:613:PRO:C	25:Y:615:GLU:H	2.09	0.54
2:B:185:ILE:HG22	2:B:199:TYR:CB	2.20	0.54
2:B:167:PRO:HG2	2:B:192:SER:OG	2.06	0.54
25:Y:215:LYS:O	25:Y:219:VAL:HG23	2.07	0.54
10:J:16:LEU:HD11	10:J:70:ARG:HB2	1.88	0.54
25:Y:276:VAL:HA	25:Y:280:LEU:CD2	2.33	0.54
1:A:393:A:O2'	1:A:394:G:H5'	2.08	0.54
9:I:11:LYS:O	9:I:12:GLU:HB2	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:29:ARG:HH11	10:J:29:ARG:HG2	1.73	0.54
1:A:802:A:H3'	1:A:803:G:C8	2.42	0.54
1:A:1354:C:H2'	1:A:1355:G:H8	1.71	0.54
7:G:107:ALA:O	7:G:110:GLN:HB2	2.08	0.54
12:L:17:LYS:HD3	12:L:18:VAL:N	2.23	0.54
23:W:22:G:C2'	23:W:23:C:C5'	2.83	0.54
5:E:101:ILE:HD11	5:E:119:LEU:HA	1.88	0.54
1:A:687:A:O2'	1:A:701:C:N4	2.40	0.54
1:A:1190:G:OP1	3:C:5:ILE:HD12	2.07	0.54
9:I:5:TYR:CE1	9:I:18:PHE:HE1	2.26	0.54
15:O:83:GLU:O	15:O:85:LEU:N	2.37	0.54
1:A:547:A:OP2	4:D:2:GLY:N	2.41	0.54
1:A:1292:U:H2'	1:A:1293:G:H8	1.71	0.54
1:A:538:G:H2'	1:A:539:A:H8	1.72	0.54
8:H:63:LEU:N	8:H:63:LEU:HD22	2.22	0.54
1:A:332:G:H2'	1:A:333:G:H8	1.71	0.54
1:A:639:G:O2'	1:A:640:A:H5'	2.07	0.54
7:G:109:ASN:HA	7:G:119:ARG:HE	1.71	0.54
7:G:75:VAL:HG11	7:G:86:GLN:HB3	1.89	0.54
25:Y:119:GLU:OE1	25:Y:666:ARG:HG2	2.07	0.54
25:Y:560:VAL:CG1	25:Y:594:VAL:HG11	2.37	0.54
2:B:82:ARG:NH1	2:B:82:ARG:HG3	2.23	0.54
25:Y:529:ILE:HD11	25:Y:567:LEU:HD11	1.90	0.54
13:M:70:LEU:C	13:M:70:LEU:HD23	2.27	0.54
5:E:135:THR:O	5:E:138:ALA:HB3	2.07	0.54
5:E:91:LEU:HA	5:E:120:THR:HG22	1.90	0.54
10:J:32:ALA:N	10:J:78:ASN:ND2	2.55	0.54
25:Y:634:MET:HA	25:Y:642:VAL:O	2.06	0.54
5:E:101:ILE:HD13	5:E:118:ILE:O	2.07	0.54
1:A:687:A:N6	1:A:703:G:H1'	2.22	0.54
1:A:957:U:O2	1:A:959:A:H8	1.90	0.54
3:C:11:ARG:O	3:C:13:GLY:N	2.40	0.54
4:D:28:SER:O	4:D:30:LYS:N	2.38	0.54
22:V:20:U:H5'	22:V:21:A:OP2	2.07	0.54
19:S:17:GLU:O	19:S:21:GLU:HG2	2.08	0.54
1:A:1109:C:C2'	1:A:1110:A:H5'	2.37	0.54
19:S:4:SER:O	19:S:6:LYS:HE3	2.07	0.54
1:A:812:C:O2'	1:A:813:U:P	2.65	0.54
3:C:54:ARG:HD3	3:C:69:HIS:ND1	2.22	0.54
5:E:41:VAL:HG22	5:E:113:ALA:HA	1.90	0.54
18:R:74:ARG:HB3	18:R:81:PHE:CE1	2.43	0.54
10:J:95:GLU:OE1	10:J:95:GLU:HA	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:W:50:U:H3	23:W:64:G:H1	1.54	0.54
2:B:8:LYS:O	2:B:11:LEU:N	2.41	0.54
1:A:1298:C:C5	7:G:114:ARG:HD3	2.43	0.54
1:A:1202:G:C2	14:N:42:ILE:HG21	2.43	0.54
4:D:61:LYS:CE	4:D:62:GLN:HE21	2.21	0.54
1:A:1221:G:H1'	19:S:54:GLY:HA3	1.89	0.54
1:A:427:U:C4	1:A:428:G:C6	2.96	0.54
1:A:1368:G:O2'	1:A:1369:C:H5'	2.07	0.54
13:M:108:ARG:N	13:M:108:ARG:HD2	2.22	0.54
25:Y:409:ILE:HG22	25:Y:459:LEU:HD13	1.90	0.54
12:L:80:HIS:O	12:L:81:SER:HB2	2.08	0.54
2:B:9:GLU:HG2	2:B:10:LEU:N	2.23	0.54
18:R:87:ARG:HB3	18:R:87:ARG:HH11	1.72	0.54
19:S:45:VAL:O	19:S:47:HIS:N	2.37	0.54
25:Y:417:THR:C	25:Y:419:ALA:H	2.10	0.54
1:A:60:A:H5''	1:A:331:G:N2	2.22	0.54
13:M:105:THR:O	13:M:106:ASN:CG	2.46	0.54
1:A:908:A:H2'	1:A:909:A:C8	2.42	0.54
25:Y:670:VAL:O	25:Y:671:MET:HB2	2.07	0.54
25:Y:510:VAL:HG22	25:Y:534:ILE:HD13	1.90	0.54
1:A:472:A:H2'	1:A:473:G:O4'	2.07	0.54
2:B:178:ARG:HH22	2:B:196:LEU:HA	1.71	0.54
25:Y:634:MET:HG2	25:Y:634:MET:O	2.08	0.54
1:A:1205:U:O2'	3:C:195:VAL:HG23	2.08	0.54
1:A:1026:G:C3'	1:A:1027:C:H5'	2.38	0.54
18:R:73:ALA:HB3	18:R:79:LEU:HD12	1.90	0.54
9:I:125:TYR:HD1	9:I:126:SER:H	1.55	0.54
9:I:126:SER:O	9:I:128:ARG:HD2	2.07	0.54
4:D:146:ILE:HD13	4:D:146:ILE:N	2.23	0.54
4:D:101:LEU:HD23	4:D:121:VAL:HG13	1.90	0.54
25:Y:491:VAL:CG1	25:Y:492:ASP:H	2.21	0.54
23:W:10:G:H2'	23:W:11:A:H8	1.73	0.54
7:G:38:LEU:O	7:G:42:ILE:HG13	2.07	0.54
25:Y:517:LEU:HB3	25:Y:521:SER:OG	2.07	0.54
7:G:152:ALA:O	7:G:155:ARG:HG3	2.08	0.54
4:D:152:SER:O	4:D:155:LEU:HG	2.07	0.54
18:R:55:ARG:HG3	18:R:55:ARG:HH11	1.73	0.54
23:W:34:C:O2'	23:W:35:A:H4'	2.06	0.54
10:J:32:ALA:HB1	10:J:75:ILE:HG13	1.88	0.54
25:Y:608:VAL:HG13	25:Y:670:VAL:O	2.08	0.54
9:I:95:LYS:HZ3	9:I:96:LEU:HD12	1.73	0.54
1:A:1511:G:H2'	1:A:1512:U:O4'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:815:A:H62	1:A:1509:C:H1'	1.73	0.54
1:A:514:C:H2'	1:A:515:G:C8	2.40	0.54
2:B:208:ILE:O	2:B:212:GLN:HB2	2.08	0.54
25:Y:137:ASN:HD21	25:Y:263:ALA:CB	2.21	0.54
6:F:98:LEU:HD13	6:F:101:ALA:HB2	1.90	0.54
1:A:542:G:H5'	4:D:41:GLY:HA2	1.90	0.53
9:I:17:VAL:HG13	9:I:63:ILE:HG12	1.89	0.53
1:A:1190:G:OP1	3:C:4:LYS:HA	2.08	0.53
1:A:769:G:O2'	1:A:770:C:H5'	2.07	0.53
4:D:28:SER:HB3	4:D:29:PRO:HD2	1.88	0.53
1:A:483:C:C3'	1:A:484:G:H5''	2.36	0.53
8:H:87:SER:OG	8:H:92:ARG:HA	2.07	0.53
18:R:31:LEU:N	18:R:31:LEU:HD23	2.23	0.53
1:A:1431:C:C2'	1:A:1432:G:H5'	2.38	0.53
6:F:80:ARG:HH11	6:F:88:VAL:HB	1.73	0.53
13:M:121:LYS:HB2	13:M:121:LYS:HZ3	1.73	0.53
3:C:154:SER:OG	3:C:155:GLY:N	2.41	0.53
13:M:6:GLY:O	13:M:8:GLU:N	2.41	0.53
4:D:100:ARG:HB3	4:D:102:ASP:OD1	2.09	0.53
22:V:17:C:O2'	22:V:18:G:OP2	2.25	0.53
12:L:25:PRO:C	12:L:27:LEU:N	2.58	0.53
1:A:1387:G:C6	1:A:1388:C:N4	2.76	0.53
8:H:114:THR:HG21	8:H:129:VAL:HG23	1.89	0.53
1:A:603:U:H2'	1:A:604:G:C8	2.43	0.53
6:F:14:LEU:HD22	6:F:18:GLN:HE21	1.73	0.53
6:F:22:GLU:C	6:F:24:GLU:H	2.10	0.53
25:Y:421:GLN:O	25:Y:421:GLN:NE2	2.41	0.53
10:J:16:LEU:HD12	10:J:70:ARG:HD3	1.91	0.53
10:J:6:ILE:HD11	10:J:72:VAL:CG2	2.39	0.53
3:C:95:THR:O	3:C:97:LYS:N	2.42	0.53
10:J:61:GLU:OE2	14:N:49:HIS:CE1	2.59	0.53
2:B:7:VAL:O	2:B:11:LEU:HG	2.07	0.53
9:I:54:ASP:O	9:I:56:LEU:N	2.40	0.53
9:I:33:PHE:C	9:I:35:GLU:H	2.11	0.53
7:G:37:ASN:ND2	9:I:40:LEU:HA	2.24	0.53
4:D:158:ILE:O	4:D:162:LEU:HB2	2.08	0.53
6:F:2:ARG:HD3	6:F:92:LYS:CE	2.38	0.53
16:P:74:LEU:CD2	16:P:79:VAL:HG21	2.38	0.53
1:A:1010:G:H1	1:A:1020:U:H1'	1.71	0.53
12:L:45:PRO:HG2	12:L:51:ALA:HB3	1.90	0.53
14:N:32:SER:O	14:N:40:CYS:HA	2.08	0.53
25:Y:71:THR:HA	25:Y:79:ILE:O	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:82:GLU:N	3:C:82:GLU:OE1	2.42	0.53
1:A:192:U:H2'	1:A:193:C:H6	1.74	0.53
1:A:1234:C:H1'	1:A:1364:U:C6	2.43	0.53
13:M:15:VAL:HA	13:M:18:ALA:CB	2.37	0.53
25:Y:261:GLY:CA	25:Y:267:LYS:O	2.56	0.53
1:A:1442:G:H1	1:A:1461:G:H21	1.56	0.53
14:N:29:ARG:HG3	14:N:29:ARG:NH1	2.21	0.53
1:A:1128:C:H4'	1:A:1148:U:O2	2.09	0.53
19:S:29:ARG:O	19:S:31:ILE:N	2.41	0.53
1:A:392:G:H2'	1:A:393:A:H8	1.72	0.53
5:E:36:ASP:OD1	5:E:38:GLN:N	2.36	0.53
1:A:821:G:H2'	1:A:822:C:H6	1.74	0.53
1:A:404:U:H2'	1:A:405:U:C6	2.42	0.53
1:A:636:U:H2'	1:A:637:G:C8	2.44	0.53
8:H:86:ILE:HG12	8:H:135:CYS:HA	1.90	0.53
16:P:49:LEU:HD12	16:P:50:LYS:H	1.73	0.53
25:Y:389:LEU:N	25:Y:389:LEU:HD12	2.23	0.53
6:F:83:ASP:OD1	6:F:83:ASP:N	2.41	0.53
25:Y:86:GLY:O	25:Y:87:HIS:HB3	2.08	0.53
25:Y:294:PRO:HG2	25:Y:295:GLU:OE2	2.08	0.53
2:B:24:TRP:HA	2:B:190:THR:O	2.09	0.53
2:B:54:THR:O	2:B:58:ILE:HG13	2.08	0.53
1:A:1404:C:H1'	1:A:1499:A:C6	2.43	0.53
10:J:63:PHE:CD1	10:J:63:PHE:N	2.72	0.53
19:S:44:MET:HB3	19:S:47:HIS:HD2	1.74	0.53
19:S:43:GLU:HB2	19:S:44:MET:SD	2.48	0.53
25:Y:680:PRO:O	25:Y:682:GLN:N	2.38	0.53
5:E:36:ASP:OD2	5:E:40:ARG:HB2	2.08	0.53
2:B:69:LEU:HD12	2:B:70:PHE:N	2.23	0.53
1:A:1392:G:N2	1:A:1502:A:H8	2.07	0.53
25:Y:117:GLN:HA	25:Y:119:GLU:HG3	1.90	0.53
1:A:1037:C:H2'	1:A:1038:C:N3	2.23	0.53
22:V:72:C:O2	22:V:72:C:H2'	2.09	0.53
4:D:173:TRP:CE2	4:D:189:PRO:HB3	2.44	0.53
25:Y:289:ILE:HG13	25:Y:331:TYR:CG	2.44	0.53
4:D:127:THR:HG22	4:D:147:ALA:O	2.08	0.53
8:H:120:THR:HG23	8:H:123:GLU:OE1	2.08	0.53
1:A:662:G:H2'	1:A:663:A:C8	2.44	0.53
4:D:154:ASN:O	4:D:155:LEU:HD23	2.08	0.53
1:A:236:G:O2'	1:A:237:C:H5'	2.08	0.53
1:A:1119:C:O2'	1:A:1120:G:H5'	2.09	0.53
25:Y:122:TRP:CD1	25:Y:122:TRP:C	2.82	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:70:VAL:CG1	3:C:71:ALA:N	2.72	0.53
25:Y:621:ILE:CG2	25:Y:631:ILE:HG12	2.27	0.53
25:Y:227:ILE:HG23	25:Y:237:PRO:CB	2.38	0.53
1:A:1004:A:H5'	1:A:1025:U:C4	2.43	0.53
4:D:173:TRP:HB2	4:D:187:ARG:O	2.09	0.53
18:R:44:LEU:N	18:R:44:LEU:HD12	2.24	0.53
6:F:86:ARG:O	6:F:87:ARG:HG2	2.09	0.53
1:A:502:G:H2'	1:A:503:C:O4'	2.09	0.53
1:A:1313:U:OP2	19:S:6:LYS:CB	2.57	0.53
1:A:59:A:H5''	1:A:60:A:H5'	1.90	0.53
13:M:83:ASP:CG	13:M:84:ILE:N	2.62	0.53
7:G:108:ALA:C	7:G:110:GLN:H	2.12	0.53
1:A:673:G:H2'	1:A:674:G:C8	2.44	0.53
1:A:399:G:H2'	1:A:400:C:C6	2.44	0.53
25:Y:122:TRP:HH2	25:Y:256:THR:HG1	1.54	0.53
25:Y:329:ARG:HD3	25:Y:374:LEU:CD1	2.38	0.53
15:O:71:GLN:O	15:O:71:GLN:HG2	2.09	0.53
23:W:31:G:H5'	23:W:31:G:C8	2.40	0.53
8:H:104:ARG:O	8:H:105:ARG:C	2.46	0.53
25:Y:147:TRP:HB2	25:Y:151:ARG:NE	2.23	0.53
2:B:11:LEU:HD11	2:B:217:ARG:NH2	2.23	0.53
9:I:8:GLY:O	9:I:9:ARG:HG3	2.09	0.53
25:Y:272:LEU:O	25:Y:276:VAL:HG23	2.09	0.53
9:I:35:GLU:HA	9:I:38:GLN:HB2	1.90	0.53
12:L:32:PHE:CE1	12:L:86:ARG:HG3	2.39	0.53
1:A:1269:A:C2	1:A:1313:U:O4'	2.61	0.53
13:M:34:LEU:HD13	13:M:41:PRO:CG	2.39	0.53
13:M:56:LEU:C	13:M:56:LEU:HD13	2.28	0.53
9:I:11:LYS:O	9:I:11:LYS:HG2	2.09	0.53
1:A:45:U:H2'	1:A:46:G:H8	1.74	0.53
1:A:63:C:O2'	1:A:380:G:H4'	2.09	0.53
10:J:32:ALA:CB	10:J:76:ASN:HB3	2.39	0.53
9:I:112:LYS:HA	9:I:119:ALA:CB	2.19	0.53
23:W:4:G:O2'	23:W:5:G:H8	1.92	0.53
25:Y:485:GLU:O	25:Y:560:VAL:HA	2.08	0.53
2:B:219:VAL:O	2:B:223:ILE:HG13	2.09	0.53
25:Y:230:LYS:HZ1	25:Y:237:PRO:CA	2.19	0.53
25:Y:249:GLY:HA2	25:Y:252:ASP:CG	2.29	0.53
1:A:1152:A:H2'	1:A:1153:C:H6	1.74	0.53
25:Y:193:GLY:N	25:Y:266:ASN:HD22	2.07	0.53
25:Y:150:ILE:CD1	25:Y:163:VAL:HG22	2.38	0.53
1:A:1116:C:C2'	1:A:1117:G:C5'	2.87	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:83:GLU:C	15:O:85:LEU:N	2.57	0.53
8:H:103:VAL:HG23	8:H:110:ALA:HB2	1.90	0.53
1:A:539:A:H2'	1:A:540:G:H8	1.72	0.53
7:G:139:GLU:O	7:G:143:ARG:HG3	2.09	0.53
5:E:34:VAL:HG12	5:E:62:ALA:HB1	1.91	0.53
2:B:236:TYR:HA	2:B:239:VAL:HG23	1.89	0.53
1:A:119:A:O2'	1:A:120:A:OP2	2.20	0.53
1:A:1168:A:H8	1:A:1168:A:OP1	1.92	0.53
1:A:711:G:O2'	1:A:712:A:H5'	2.08	0.53
25:Y:100:VAL:HG23	25:Y:329:ARG:HB2	1.88	0.53
25:Y:486:THR:HG23	25:Y:600:VAL:HG12	1.90	0.53
23:W:14:A:C3'	23:W:15:G:C5'	2.83	0.53
5:E:145:LYS:CA	8:H:107:LEU:HD21	2.38	0.53
5:E:76:ILE:HG13	5:E:77:PRO:HD2	1.91	0.53
1:A:999:C:H2'	1:A:1000:U:C6	2.44	0.53
13:M:81:LEU:N	13:M:81:LEU:HD22	2.24	0.53
12:L:20:LYS:N	12:L:20:LYS:HD3	2.20	0.53
17:Q:52:LYS:CE	17:Q:52:LYS:H	2.22	0.53
20:T:42:GLN:NE2	20:T:42:GLN:CA	2.71	0.53
1:A:1270:C:H2'	1:A:1271:G:C8	2.43	0.53
8:H:6:ILE:HG21	8:H:85:ARG:NH1	2.24	0.53
5:E:20:GLN:O	5:E:21:ALA:C	2.44	0.53
20:T:36:LEU:HD12	20:T:59:ALA:HB2	1.90	0.53
6:F:47:ARG:HG2	6:F:47:ARG:HH11	1.74	0.53
25:Y:113:GLY:C	25:Y:115:GLU:N	2.63	0.52
25:Y:616:TYR:O	25:Y:620:VAL:HG23	2.10	0.52
2:B:82:ARG:O	2:B:86:GLU:HG3	2.10	0.52
25:Y:217:VAL:O	25:Y:217:VAL:HG12	2.09	0.52
25:Y:409:ILE:O	25:Y:459:LEU:HD11	2.09	0.52
1:A:276:G:O2'	1:A:277:C:H5'	2.09	0.52
1:A:932:C:H4'	7:G:4:ARG:NH2	2.23	0.52
1:A:1354:C:O2'	1:A:1355:G:H5'	2.09	0.52
12:L:58:VAL:O	12:L:65:GLU:HA	2.09	0.52
5:E:88:LYS:HB3	5:E:123:LEU:O	2.08	0.52
19:S:72:GLY:O	19:S:74:PHE:N	2.42	0.52
1:A:1504:G:OP1	1:A:1507:A:H4'	2.10	0.52
2:B:223:ILE:HG23	2:B:226:ARG:CZ	2.39	0.52
25:Y:655:TYR:CZ	25:Y:659:LEU:HB2	2.43	0.52
25:Y:505:GLY:O	25:Y:506:GLN:HB2	2.09	0.52
5:E:79:GLU:CB	5:E:93:PRO:HD2	2.37	0.52
5:E:78:HIS:O	5:E:93:PRO:HD3	2.10	0.52
25:Y:272:LEU:HD12	25:Y:275:ALA:CB	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:64:THR:C	25:Y:66:THR:H	2.12	0.52
25:Y:70:THR:HG23	25:Y:358:MET:O	2.09	0.52
7:G:15:ASP:OD1	7:G:44:TYR:OH	2.27	0.52
1:A:878:G:H5'	8:H:89:PRO:HG2	1.90	0.52
25:Y:416:LYS:HD3	25:Y:417:THR:H	1.73	0.52
4:D:163:GLU:OE1	4:D:163:GLU:HA	2.10	0.52
13:M:34:LEU:HD13	13:M:41:PRO:CB	2.40	0.52
1:A:1522:U:H2'	1:A:1523:G:C8	2.44	0.52
1:A:264:U:H4'	17:Q:63:ARG:HD3	1.91	0.52
21:U:10:ARG:O	21:U:13:ILE:N	2.41	0.52
1:A:1106:G:O2'	1:A:1107:C:H5'	2.10	0.52
1:A:841:U:H3'	1:A:848:C:H5'	1.90	0.52
1:A:67:C:H2'	1:A:68:G:C8	2.44	0.52
1:A:324:G:O5'	1:A:324:G:H8	1.91	0.52
10:J:27:ALA:CB	10:J:85:LEU:HD11	2.38	0.52
25:Y:286:ILE:HD12	25:Y:286:ILE:N	2.25	0.52
25:Y:486:THR:O	25:Y:599:PRO:HA	2.09	0.52
25:Y:162:VAL:O	25:Y:164:MET:HG2	2.10	0.52
25:Y:410:ASP:HA	25:Y:459:LEU:HD21	1.92	0.52
18:R:44:LEU:O	18:R:45:SER:O	2.26	0.52
23:W:50:U:H2'	23:W:51:C:C6	2.44	0.52
11:K:99:GLN:CG	11:K:105:VAL:HG21	2.35	0.52
4:D:61:LYS:HG3	4:D:203:VAL:HG13	1.89	0.52
1:A:8:A:C6	4:D:209:ARG:HB2	2.44	0.52
6:F:18:GLN:O	6:F:21:LEU:HB2	2.09	0.52
21:U:9:ARG:O	21:U:13:ILE:HG13	2.09	0.52
1:A:519:C:H2'	1:A:520:A:O4'	2.09	0.52
1:A:646:U:H2'	1:A:647:C:C6	2.44	0.52
8:H:111:ILE:HG22	8:H:112:LEU:N	2.24	0.52
25:Y:487:ILE:CD1	25:Y:563:ILE:HG22	2.39	0.52
6:F:72:VAL:HG13	6:F:73:ASN:N	2.24	0.52
5:E:51:VAL:HB	5:E:52:PRO:CD	2.38	0.52
13:M:117:VAL:O	13:M:118:ALA:O	2.27	0.52
13:M:97:PRO:HA	13:M:110:ARG:CD	2.36	0.52
18:R:87:ARG:HH11	18:R:87:ARG:CB	2.22	0.52
1:A:738:C:H2'	1:A:739:C:C6	2.44	0.52
1:A:1112:C:O2'	3:C:179:ARG:HG2	2.09	0.52
25:Y:277:VAL:HG13	25:Y:278:ASP:OD1	2.09	0.52
22:V:42:C:H2'	22:V:42:C:O2	2.08	0.52
1:A:658:G:H2'	1:A:659:U:C6	2.45	0.52
16:P:1:MET:CE	16:P:65:GLN:HG3	2.39	0.52
8:H:34:GLU:HB3	8:H:118:VAL:HG21	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1098:C:O2'	1:A:1099:G:H5'	2.09	0.52
25:Y:139:MET:O	25:Y:171:GLU:HA	2.10	0.52
25:Y:119:GLU:OE2	25:Y:666:ARG:HD2	2.09	0.52
25:Y:72:CYS:SG	25:Y:79:ILE:HB	2.50	0.52
25:Y:177:ILE:O	25:Y:178:ILE:HD12	2.08	0.52
25:Y:181:LEU:HD23	25:Y:182:ARG:HH12	1.75	0.52
13:M:4:ILE:HG22	13:M:5:ALA:N	2.23	0.52
4:D:152:SER:O	4:D:154:ASN:N	2.43	0.52
1:A:710:G:O2'	1:A:711:G:H5'	2.09	0.52
1:A:1137:C:H4'	1:A:1138:G:C2	2.44	0.52
1:A:633:G:H5'	1:A:634:C:OP2	2.09	0.52
3:C:77:ILE:HA	3:C:84:ILE:HB	1.91	0.52
25:Y:209:ALA:O	25:Y:210:ARG:C	2.47	0.52
25:Y:248:LYS:O	25:Y:252:ASP:OD1	2.27	0.52
10:J:70:ARG:HG2	10:J:70:ARG:NH1	2.22	0.52
4:D:173:TRP:O	4:D:174:LEU:HD23	2.09	0.52
3:C:15:THR:HG22	3:C:16:ARG:N	2.25	0.52
12:L:59:ARG:NE	25:Y:422:GLU:OE2	2.43	0.52
1:A:520:A:N1	1:A:536:C:H1'	2.24	0.52
7:G:91:VAL:HG12	7:G:92:SER:N	2.24	0.52
6:F:16:GLN:HA	6:F:19:LEU:HB3	1.91	0.52
25:Y:138:LYS:HG2	28:Y:1690:GDP:C6	2.44	0.52
25:Y:170:ARG:N	25:Y:170:ARG:HD2	2.24	0.52
25:Y:181:LEU:HD13	25:Y:216:LEU:CD2	2.40	0.52
25:Y:451:ILE:HG23	25:Y:459:LEU:HD23	1.92	0.52
2:B:119:GLU:C	2:B:121:LEU:H	2.13	0.52
1:A:1303:C:OP1	1:A:1304:G:OP2	2.28	0.52
4:D:57:ARG:HH11	4:D:57:ARG:HG2	1.75	0.52
10:J:4:ILE:HB	10:J:74:ILE:HG13	1.91	0.52
25:Y:451:ILE:HD11	25:Y:462:ILE:HG21	1.91	0.52
1:A:265:G:H4'	17:Q:66:SER:HA	1.91	0.52
23:W:22:G:H2'	23:W:23:C:H5'	1.91	0.52
2:B:51:LEU:HD23	2:B:55:PHE:HE2	1.75	0.52
16:P:20:VAL:HG23	16:P:34:GLU:C	2.29	0.52
1:A:1321:C:C5'	1:A:1322:C:H5''	2.40	0.52
15:O:12:ILE:O	15:O:14:GLU:N	2.43	0.52
4:D:2:GLY:O	4:D:4:TYR:N	2.43	0.52
1:A:1307:U:H2'	1:A:1308:U:C6	2.45	0.52
3:C:40:ARG:O	3:C:44:GLU:HG3	2.09	0.52
11:K:24:SER:O	11:K:88:GLY:HA3	2.10	0.52
6:F:15:ASP:C	6:F:17:SER:H	2.13	0.52
5:E:107:ARG:HG2	5:E:108:ALA:N	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:148:GLY:HA3	3:C:172:ARG:O	2.09	0.52
1:A:238:G:P	17:Q:25:ARG:HH22	2.33	0.52
25:Y:20:HIS:CE1	25:Y:21:ILE:HG12	2.45	0.52
1:A:980:C:C5	1:A:981:U:C2	2.98	0.52
15:O:17:ARG:NH1	15:O:77:ARG:CZ	2.73	0.52
25:Y:181:LEU:HD13	25:Y:216:LEU:HD21	1.91	0.52
1:A:1227:A:H2'	13:M:117:VAL:CG2	2.36	0.52
7:G:15:ASP:HA	7:G:24:THR:HG23	1.91	0.52
25:Y:628:ARG:HH12	25:Y:680:PRO:CG	2.22	0.52
17:Q:48:GLU:O	17:Q:50:LYS:N	2.42	0.52
5:E:33:VAL:CG1	5:E:112:LEU:HD12	2.39	0.52
25:Y:146:LEU:HD12	25:Y:167:PRO:HD3	1.92	0.52
11:K:29:ILE:HB	11:K:44:SER:CB	2.40	0.52
1:A:22:G:H4'	1:A:885:G:C8	2.45	0.52
6:F:68:PRO:HG2	6:F:71:ARG:HB2	1.92	0.52
25:Y:8:ASP:OD2	25:Y:10:LYS:HB2	2.09	0.52
25:Y:191:ASP:HB2	25:Y:265:LYS:HA	1.92	0.52
25:Y:105:ILE:HG23	25:Y:133:ILE:HG13	1.91	0.52
25:Y:204:GLU:H	25:Y:204:GLU:CD	2.13	0.52
1:A:444:C:H42	1:A:490:G:H1	1.58	0.52
19:S:6:LYS:C	19:S:7:LYS:HE3	2.30	0.52
1:A:135:C:H2'	1:A:136:C:H5'	1.92	0.52
1:A:526:C:C5	1:A:527:G:H1'	2.44	0.52
2:B:84:GLU:HB3	2:B:219:VAL:CG2	2.40	0.51
25:Y:631:ILE:HA	25:Y:645:ALA:HB2	1.92	0.51
1:A:1033:G:H2'	1:A:1034:G:O4'	2.10	0.51
3:C:6:HIS:ND1	14:N:49:HIS:HB3	2.24	0.51
1:A:555:C:H2'	1:A:556:C:H6	1.75	0.51
3:C:53:ALA:HB2	3:C:115:LEU:HG	1.91	0.51
4:D:126:ILE:CG2	4:D:127:THR:N	2.72	0.51
1:A:658:G:H2'	1:A:659:U:H6	1.76	0.51
1:A:862:C:O2'	1:A:863:U:H5'	2.10	0.51
1:A:1275:A:O2'	1:A:1276:G:H5'	2.10	0.51
15:O:29:VAL:HG11	15:O:67:LEU:HD21	1.91	0.51
5:E:73:ASN:N	5:E:73:ASN:HD22	2.08	0.51
14:N:18:VAL:HG23	14:N:19:ARG:N	2.25	0.51
25:Y:546:ILE:CD1	25:Y:565:VAL:HG11	2.34	0.51
12:L:42:THR:HG23	12:L:42:THR:O	2.09	0.51
25:Y:210:ARG:O	25:Y:212:TYR:N	2.43	0.51
1:A:439:A:H2'	1:A:441:A:C5'	2.41	0.51
1:A:1006:C:H2'	1:A:1007:C:C5	2.45	0.51
19:S:36:ARG:NH1	19:S:52:TYR:O	2.42	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:30:ASP:O	18:R:32:ARG:N	2.36	0.51
21:U:5:ASP:O	21:U:7:ARG:N	2.43	0.51
1:A:757:U:H2'	1:A:758:G:O4'	2.10	0.51
10:J:21:GLN:HG2	10:J:21:GLN:O	2.10	0.51
25:Y:471:LYS:O	25:Y:471:LYS:HG2	2.10	0.51
10:J:3:LYS:O	10:J:100:THR:HG23	2.10	0.51
25:Y:97:SER:O	25:Y:100:VAL:HG13	2.09	0.51
25:Y:25:LYS:HE3	28:Y:1690:GDP:PB	2.50	0.51
10:J:8:LEU:HD23	10:J:96:ILE:HG22	1.90	0.51
20:T:13:LEU:O	20:T:16:HIS:N	2.43	0.51
4:D:98:GLU:CD	4:D:103:ASN:HD21	2.13	0.51
23:W:61:C:O2'	23:W:62:C:H5'	2.10	0.51
12:L:47:LYS:HB3	12:L:48:PRO:HD3	1.92	0.51
12:L:38:THR:CG2	12:L:57:LYS:HB3	2.40	0.51
19:S:13:ASP:O	19:S:15:LEU:N	2.44	0.51
1:A:1269:A:C2'	1:A:1270:C:H5'	2.40	0.51
25:Y:679:VAL:HG23	25:Y:684:GLN:NE2	2.25	0.51
1:A:1387:G:H2'	1:A:1388:C:C6	2.45	0.51
15:O:57:LEU:HD23	15:O:57:LEU:H	1.75	0.51
1:A:1133:G:H22	1:A:1143:G:H1'	1.75	0.51
8:H:35:ILE:HG22	8:H:39:LEU:HD21	1.92	0.51
1:A:940:C:O2'	1:A:941:G:H5'	2.09	0.51
25:Y:610:VAL:HG12	25:Y:669:PHE:HB3	1.91	0.51
20:T:50:GLU:HG3	20:T:51:GLU:N	2.24	0.51
3:C:65:ALA:O	3:C:66:VAL:HB	2.10	0.51
17:Q:67:LYS:CA	17:Q:70:ARG:HH12	2.24	0.51
13:M:65:LYS:C	13:M:66:LEU:HD12	2.30	0.51
23:W:25:C:O2'	23:W:26:G:H5'	2.10	0.51
1:A:425:G:O2'	1:A:426:G:H5'	2.11	0.51
1:A:963:G:H21	10:J:55:LYS:CD	2.23	0.51
22:V:52:G:H2'	22:V:53:G:H8	1.75	0.51
22:V:15:G:H3'	22:V:16:U:C5'	2.36	0.51
18:R:87:ARG:HB3	18:R:87:ARG:CZ	2.40	0.51
1:A:1510:U:H2'	1:A:1511:G:H8	1.72	0.51
7:G:114:ARG:HG2	7:G:114:ARG:HH11	1.75	0.51
9:I:45:ALA:O	9:I:48:GLU:HB2	2.10	0.51
1:A:1058:G:O5'	1:A:1058:G:H8	1.94	0.51
7:G:75:VAL:CG1	7:G:86:GLN:HB3	2.41	0.51
11:K:12:ARG:HG2	11:K:13:GLN:N	2.26	0.51
12:L:111:LYS:O	12:L:112:ASP:HB2	2.11	0.51
3:C:150:LYS:HB2	3:C:169:ALA:HB1	1.93	0.51
25:Y:110:SER:OG	25:Y:136:ALA:HB1	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:96:GLY:O	20:T:97:ALA:O	2.29	0.51
25:Y:519:ARG:NH2	25:Y:678:GLU:HB2	2.25	0.51
9:I:84:ALA:C	9:I:86:VAL:H	2.13	0.51
19:S:61:TYR:O	19:S:62:ILE:HB	2.10	0.51
9:I:125:TYR:CD1	9:I:126:SER:N	2.76	0.51
1:A:939:G:H5'	7:G:102:ARG:NH1	2.25	0.51
1:A:939:G:C5'	7:G:102:ARG:NH2	2.71	0.51
6:F:42:GLU:C	6:F:44:GLY:N	2.64	0.51
1:A:866:C:H2'	1:A:867:G:O4'	2.11	0.51
18:R:50:ILE:CD1	18:R:70:ILE:HG21	2.41	0.51
10:J:90:LEU:N	10:J:91:PRO:CD	2.73	0.51
8:H:40:ALA:HA	8:H:45:ILE:HG13	1.91	0.51
15:O:49:ASP:OD1	15:O:49:ASP:O	2.29	0.51
25:Y:180:VAL:CG2	25:Y:181:LEU:H	2.23	0.51
25:Y:230:LYS:HD2	25:Y:235:GLU:OE1	2.11	0.51
25:Y:382:GLU:O	25:Y:384:ILE:HG23	2.11	0.51
25:Y:66:THR:O	25:Y:67:ALA:HB3	2.11	0.51
4:D:78:LEU:HD21	4:D:96:LEU:CB	2.41	0.51
13:M:40:ASN:HD22	13:M:43:THR:HG23	1.76	0.51
1:A:936:C:H2'	1:A:937:A:O4'	2.10	0.51
3:C:136:GLN:O	3:C:137:ALA:C	2.49	0.51
1:A:828:A:H2'	1:A:829:G:O4'	2.10	0.51
1:A:353:A:H5'	1:A:353:A:H8	1.75	0.51
25:Y:427:ALA:CB	25:Y:466:LEU:HD11	2.36	0.51
8:H:82:HIS:HD2	8:H:138:TRP:NE1	2.08	0.51
16:P:33:ILE:O	16:P:34:GLU:CB	2.59	0.51
9:I:88:TYR:O	9:I:89:ASN:CB	2.57	0.51
25:Y:35:TYR:C	25:Y:37:GLY:H	2.13	0.51
1:A:1499:A:C1'	1:A:1520:G:H5'	2.35	0.51
1:A:182:U:H5'	1:A:183:G:P	2.50	0.51
1:A:191:G:C2	20:T:105:SER:HB3	2.45	0.51
1:A:626:U:H5'	1:A:627:G:OP2	2.11	0.51
1:A:1318:A:H2'	1:A:1319:A:H5'	1.93	0.51
19:S:39:THR:HA	19:S:70:LYS:HD3	1.92	0.51
1:A:59:A:H1'	1:A:354:G:N2	2.26	0.51
25:Y:617:MET:HE3	25:Y:641:GLN:HB3	1.92	0.51
1:A:333:G:O2'	1:A:334:C:H5'	2.10	0.51
6:F:19:LEU:HD23	6:F:19:LEU:C	2.31	0.51
12:L:112:ASP:O	12:L:114:LYS:HG3	2.10	0.51
1:A:977:A:H2'	1:A:978:A:H5'	1.93	0.51
19:S:27:GLU:O	19:S:28:LYS:O	2.28	0.51
1:A:1409:C:O2'	1:A:1410:G:H5'	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1507:A:H2'	1:A:1508:G:C8	2.46	0.51
25:Y:139:MET:O	25:Y:144:ALA:HB1	2.11	0.51
25:Y:227:ILE:HG22	25:Y:227:ILE:O	2.10	0.51
13:M:2:ALA:O	13:M:9:ILE:HG23	2.10	0.51
2:B:20:GLU:HB2	2:B:190:THR:OG1	2.10	0.51
5:E:144:THR:N	5:E:147:ASP:OD1	2.40	0.51
5:E:28:PHE:CD2	5:E:51:VAL:HG22	2.46	0.51
1:A:1510:U:O2	1:A:1526:G:C2	2.64	0.51
4:D:10:ARG:O	4:D:13:ARG:HB2	2.11	0.51
25:Y:65:ILE:O	25:Y:67:ALA:N	2.43	0.51
1:A:243:A:C2	1:A:246:A:C8	2.99	0.51
1:A:1308:U:H5''	13:M:98:VAL:CG2	2.41	0.51
7:G:69:VAL:O	7:G:69:VAL:HG12	2.10	0.51
7:G:134:ALA:O	7:G:137:LYS:HB2	2.11	0.51
25:Y:215:LYS:HA	25:Y:218:GLU:HB3	1.93	0.51
10:J:6:ILE:HG22	10:J:98:ILE:HD12	1.93	0.51
22:V:2:C:H2'	22:V:3:C:H6	1.76	0.51
1:A:543:C:O2'	1:A:544:G:H5'	2.11	0.51
4:D:8:VAL:O	4:D:10:ARG:N	2.40	0.51
8:H:50:ARG:HH11	8:H:50:ARG:CB	2.23	0.51
4:D:101:LEU:HD23	4:D:121:VAL:CG1	2.40	0.51
25:Y:417:THR:O	25:Y:419:ALA:N	2.41	0.51
12:L:79:GLU:HB3	25:Y:442:THR:OG1	2.09	0.51
1:A:159:G:H2'	1:A:160:A:H5''	1.93	0.51
19:S:6:LYS:HD2	19:S:6:LYS:H	1.75	0.51
1:A:1320:C:OP1	19:S:70:LYS:NZ	2.43	0.51
5:E:34:VAL:CG1	5:E:62:ALA:HB1	2.41	0.51
1:A:358:U:H2'	1:A:359:U:H6	1.76	0.51
4:D:201:GLN:O	4:D:205:GLU:HG3	2.10	0.51
1:A:802:A:H3'	1:A:803:G:H8	1.76	0.51
12:L:10:LEU:HB3	17:Q:32:TYR:CE2	2.46	0.51
15:O:71:GLN:HB2	15:O:78:TYR:CD1	2.46	0.51
20:T:33:ILE:HG21	20:T:63:ILE:HG12	1.93	0.51
4:D:159:ARG:HG3	4:D:159:ARG:NH1	2.21	0.51
1:A:1221:G:H4'	19:S:77:THR:HG21	1.93	0.51
1:A:159:G:C2'	1:A:160:A:H5''	2.41	0.51
3:C:54:ARG:HG2	3:C:54:ARG:HH11	1.76	0.51
1:A:603:U:H2'	1:A:604:G:H8	1.75	0.51
7:G:134:ALA:O	7:G:137:LYS:N	2.40	0.51
1:A:1334:G:H5'	1:A:1335:C:OP2	2.11	0.51
3:C:129:ALA:O	3:C:131:ARG:N	2.44	0.51
4:D:110:PHE:N	4:D:110:PHE:CD1	2.79	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:409:ILE:CD1	25:Y:654:GLY:HA2	2.41	0.50
12:L:83:VAL:CG1	12:L:100:ILE:HG23	2.40	0.50
22:V:16:U:H4'	22:V:16:U:OP1	2.11	0.50
4:D:117:ALA:O	4:D:121:VAL:HG23	2.11	0.50
1:A:390:C:H2'	1:A:391:G:C8	2.46	0.50
23:W:38:A:O5'	23:W:38:A:H8	1.94	0.50
1:A:1423:G:H2'	1:A:1424:C:H6	1.76	0.50
1:A:991:U:C4	1:A:1212:U:H1'	2.46	0.50
1:A:1284:C:H3'	1:A:1285:A:C5'	2.41	0.50
25:Y:6:GLU:HG2	25:Y:6:GLU:O	2.10	0.50
1:A:1522:U:H2'	1:A:1523:G:H8	1.76	0.50
1:A:812:C:O2'	1:A:813:U:OP2	2.24	0.50
25:Y:484:ARG:NE	25:Y:559:PRO:HB2	2.25	0.50
6:F:22:GLU:C	6:F:24:GLU:N	2.65	0.50
1:A:342:C:O2'	1:A:343:U:H5'	2.10	0.50
3:C:186:PHE:HA	3:C:198:VAL:O	2.12	0.50
1:A:1084:G:OP1	1:A:1086:U:C4	2.64	0.50
5:E:101:ILE:CD1	5:E:118:ILE:O	2.59	0.50
8:H:104:ARG:NH2	8:H:138:TRP:CZ3	2.79	0.50
1:A:974:A:H8	1:A:974:A:OP1	1.95	0.50
23:W:49:G:H2'	23:W:50:U:O4'	2.10	0.50
23:W:61:C:H2'	23:W:62:C:H6	1.74	0.50
14:N:47:LEU:O	14:N:50:LYS:N	2.44	0.50
1:A:624:C:H2'	1:A:625:G:H8	1.77	0.50
5:E:60:TYR:CE1	5:E:64:ARG:NH2	2.75	0.50
15:O:64:ARG:HH11	15:O:64:ARG:CG	2.21	0.50
1:A:1219:U:H2'	1:A:1220:G:H8	1.76	0.50
1:A:529:G:O6	12:L:49:ASN:HA	2.11	0.50
1:A:781:A:C3'	1:A:782:A:H5'	2.41	0.50
1:A:1332:A:O2'	1:A:1333:A:H5'	2.11	0.50
2:B:63:MET:HB3	2:B:225:ALA:HB1	1.93	0.50
25:Y:124:GLN:HA	25:Y:127:LYS:HD3	1.93	0.50
25:Y:33:LEU:HD12	25:Y:33:LEU:N	2.26	0.50
25:Y:243:VAL:HG13	25:Y:279:TYR:CE1	2.47	0.50
10:J:6:ILE:C	10:J:6:ILE:HD12	2.32	0.50
3:C:181:ASN:ND2	3:C:204:LEU:HB2	2.27	0.50
12:L:47:LYS:HD2	12:L:48:PRO:CD	2.41	0.50
4:D:121:VAL:HA	4:D:126:ILE:HD13	1.93	0.50
1:A:512:U:H2'	1:A:513:C:C6	2.47	0.50
3:C:141:VAL:HG11	3:C:202:ILE:HD12	1.93	0.50
1:A:907:A:C2	1:A:908:A:C4	3.00	0.50
6:F:15:ASP:C	6:F:17:SER:N	2.64	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:44:SER:O	11:K:46:GLY:N	2.45	0.50
18:R:85:LEU:HD12	18:R:86:VAL:H	1.76	0.50
1:A:926:G:C6	1:A:1505:G:C6	3.00	0.50
25:Y:12:LEU:HD12	25:Y:14:ASN:ND2	2.24	0.50
25:Y:546:ILE:HG12	25:Y:590:ILE:CG1	2.41	0.50
1:A:174:C:O2'	1:A:175:C:H5'	2.11	0.50
2:B:121:LEU:HA	2:B:124:SER:HB3	1.93	0.50
1:A:521:G:O2'	1:A:522:C:H5'	2.11	0.50
4:D:162:LEU:CD1	4:D:181:MET:HG2	2.42	0.50
1:A:188:C:H2'	1:A:189:G:H8	1.77	0.50
25:Y:546:ILE:CG2	25:Y:590:ILE:HG13	2.35	0.50
12:L:41:ARG:NH1	12:L:41:ARG:CB	2.72	0.50
10:J:96:ILE:N	10:J:96:ILE:HD13	2.24	0.50
13:M:66:LEU:N	13:M:66:LEU:CD1	2.73	0.50
23:W:23:C:O2'	23:W:24:U:H5'	2.12	0.50
2:B:51:LEU:HD23	2:B:201:ILE:HD12	1.92	0.50
8:H:9:MET:O	8:H:10:LEU:C	2.50	0.50
1:A:1064:G:N2	1:A:1190:G:H2'	2.27	0.50
4:D:18:LYS:HE2	4:D:20:TYR:CE1	2.40	0.50
1:A:1318:A:O3'	19:S:10:PHE:CD2	2.65	0.50
19:S:37:ARG:O	19:S:70:LYS:HD2	2.12	0.50
1:A:59:A:H3'	1:A:331:G:H22	1.75	0.50
25:Y:314:PHE:CD1	25:Y:315:LYS:HB2	2.46	0.50
1:A:114:U:H2'	1:A:115:G:C8	2.46	0.50
1:A:745:C:H2'	1:A:746:A:C8	2.46	0.50
11:K:33:THR:HG22	11:K:39:PRO:HA	1.93	0.50
6:F:15:ASP:OD1	6:F:17:SER:HB2	2.12	0.50
13:M:63:THR:HG22	13:M:64:TRP:N	2.27	0.50
5:E:26:PHE:CD1	5:E:26:PHE:N	2.79	0.50
25:Y:122:TRP:HZ3	25:Y:256:THR:HG21	1.77	0.50
12:L:17:LYS:HD3	12:L:18:VAL:H	1.74	0.50
25:Y:485:GLU:CB	25:Y:560:VAL:HG22	2.42	0.50
25:Y:180:VAL:CG2	25:Y:181:LEU:N	2.75	0.50
16:P:25:ARG:NH1	16:P:25:ARG:HG3	2.23	0.50
25:Y:519:ARG:NH1	25:Y:678:GLU:N	2.60	0.50
1:A:974:A:C8	14:N:31:ARG:HD2	2.47	0.50
9:I:48:GLU:N	9:I:49:PRO:HD2	2.27	0.50
8:H:7:ALA:HB2	8:H:85:ARG:HD3	1.94	0.50
25:Y:357:ARG:HH11	25:Y:357:ARG:HG3	1.76	0.50
24:X:11:A:O2'	24:X:12:A:OP2	2.30	0.50
25:Y:20:HIS:O	25:Y:21:ILE:O	2.29	0.50
25:Y:97:SER:O	25:Y:101:LEU:HG	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:980:C:H5	1:A:981:U:C2	2.30	0.50
1:A:1001(A):G:H8	1:A:1002:G:C8	2.30	0.50
13:M:19:LEU:O	13:M:22:ILE:HD13	2.12	0.50
2:B:189:ASP:OD2	2:B:205:ASP:OD1	2.29	0.50
20:T:30:LYS:NZ	20:T:34:LYS:HE3	2.25	0.50
2:B:8:LYS:HB2	2:B:9:GLU:OE1	2.11	0.50
4:D:25:ARG:HH12	4:D:30:LYS:HD2	1.76	0.50
25:Y:247:ARG:NH1	25:Y:247:ARG:HG3	2.26	0.50
19:S:43:GLU:O	19:S:45:VAL:HG13	2.11	0.50
25:Y:416:LYS:CD	25:Y:417:THR:N	2.71	0.50
4:D:161:ASN:O	4:D:165:MET:HG2	2.12	0.50
1:A:1323:G:H2'	1:A:1324:A:H8	1.75	0.50
25:Y:336:THR:HB	25:Y:339:SER:OG	2.12	0.50
2:B:137:ARG:HG2	2:B:137:ARG:NH1	2.26	0.50
1:A:841:U:H3'	1:A:848:C:C5'	2.41	0.50
8:H:65:TYR:HA	8:H:79:VAL:HG23	1.93	0.50
1:A:1065:U:O2'	1:A:1066:C:P	2.69	0.50
16:P:60:LEU:HD21	16:P:66:PRO:HD3	1.93	0.50
23:W:18:G:C6	23:W:57:A:N6	2.80	0.50
1:A:1465:C:C2'	1:A:1466:C:H5'	2.42	0.50
4:D:58:LEU:C	4:D:58:LEU:HD23	2.32	0.50
3:C:189:ALA:HB3	3:C:196:LEU:HB2	1.94	0.50
17:Q:65:ILE:O	17:Q:66:SER:HB3	2.12	0.50
1:A:1239:A:H62	1:A:1299:A:N6	2.10	0.50
4:D:162:LEU:HD13	4:D:181:MET:HG2	1.94	0.50
2:B:142:LEU:HD23	2:B:142:LEU:O	2.12	0.50
2:B:208:ILE:HA	2:B:211:ILE:HD12	1.94	0.50
5:E:33:VAL:HG12	5:E:112:LEU:HD12	1.94	0.50
3:C:150:LYS:HB2	3:C:169:ALA:CB	2.42	0.50
10:J:56:HIS:O	10:J:58:ASP:O	2.30	0.50
6:F:38:GLU:O	6:F:39:LYS:O	2.30	0.50
25:Y:292:THR:HG23	25:Y:297:GLU:H	1.77	0.50
25:Y:100:VAL:HG22	25:Y:374:LEU:HD21	1.94	0.50
1:A:975:A:C8	1:A:975:A:H5'	2.47	0.50
2:B:204:ASN:HD21	2:B:206:ASP:H	1.56	0.50
5:E:80:ILE:CD1	5:E:138:ALA:HB1	2.41	0.50
8:H:104:ARG:CZ	8:H:138:TRP:CZ3	2.95	0.50
1:A:1064:G:H21	1:A:1190:G:H2'	1.77	0.50
6:F:42:GLU:C	6:F:44:GLY:H	2.15	0.50
18:R:32:ARG:CA	18:R:69:THR:HG21	2.42	0.50
7:G:140:ASP:HA	7:G:143:ARG:NH1	2.26	0.50
1:A:143:A:H2	1:A:220:G:H1	1.59	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:4:LYS:HG3	17:Q:6:LEU:CD2	2.41	0.50
25:Y:402:ILE:O	25:Y:402:ILE:HG22	2.11	0.49
15:O:76:GLU:C	15:O:78:TYR:H	2.15	0.49
3:C:165:THR:HG23	3:C:165:THR:O	2.12	0.49
4:D:107:ARG:HH21	4:D:194:LEU:HD13	1.77	0.49
1:A:1238:A:C8	1:A:1303:C:H1'	2.47	0.49
25:Y:145:ASP:CB	25:Y:148:LEU:HD22	2.40	0.49
19:S:21:GLU:CG	19:S:22:LEU:HD23	2.37	0.49
4:D:126:ILE:HG22	4:D:127:THR:N	2.26	0.49
25:Y:679:VAL:CG2	25:Y:684:GLN:NE2	2.75	0.49
1:A:882:C:O2'	1:A:883:C:H5'	2.12	0.49
13:M:17:VAL:O	13:M:20:THR:HB	2.11	0.49
1:A:723:U:H5'	1:A:724:G:OP2	2.12	0.49
25:Y:21:ILE:HD12	25:Y:88:VAL:CG1	2.41	0.49
3:C:76:VAL:HG23	3:C:77:ILE:N	2.28	0.49
15:O:74:ASP:C	15:O:76:GLU:H	2.15	0.49
1:A:265:G:O2'	1:A:266:G:H5'	2.12	0.49
25:Y:9:LEU:HD21	25:Y:284:LEU:CB	2.41	0.49
2:B:55:PHE:HE1	2:B:218:ALA:HA	1.77	0.49
25:Y:149:VAL:C	25:Y:152:THR:HG22	2.33	0.49
7:G:49:ILE:HG22	7:G:49:ILE:O	2.11	0.49
16:P:8:ARG:CB	16:P:28:ARG:NH1	2.75	0.49
4:D:159:ARG:O	4:D:163:GLU:N	2.45	0.49
2:B:207:ALA:C	2:B:209:ARG:N	2.62	0.49
16:P:9:PHE:CE2	16:P:18:ARG:NE	2.80	0.49
1:A:861:G:O2'	1:A:862:C:H5'	2.12	0.49
25:Y:357:ARG:NH1	25:Y:357:ARG:HG3	2.27	0.49
1:A:1466:C:H2'	1:A:1467:G:O4'	2.12	0.49
11:K:26:ASN:O	11:K:27:ASN:HB2	2.12	0.49
1:A:189(D):C:H1'	1:A:189(H):G:N2	2.27	0.49
1:A:920:U:H1'	1:A:1080:A:C2	2.46	0.49
25:Y:313:ALA:CA	25:Y:328:ILE:HG22	2.42	0.49
3:C:86:VAL:HG23	3:C:87:LEU:HD23	1.94	0.49
23:W:31:G:C5	23:W:32:C:C4	3.00	0.49
16:P:5:ARG:HE	16:P:22:THR:CG2	2.24	0.49
20:T:93:GLU:OE1	20:T:93:GLU:N	2.45	0.49
12:L:57:LYS:HG3	12:L:67:THR:CG2	2.39	0.49
2:B:77:ALA:HA	2:B:80:ILE:HD13	1.93	0.49
16:P:18:ARG:HD3	16:P:35:LYS:HD2	1.94	0.49
1:A:745:C:H2'	1:A:746:A:H8	1.75	0.49
3:C:111:LEU:HD21	3:C:144:SER:HB2	1.95	0.49
25:Y:468:ARG:CB	25:Y:468:ARG:HH11	2.04	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:555:LEU:CD1	25:Y:601:ILE:HG13	2.41	0.49
22:V:3:C:C2'	22:V:4:C:H5'	2.42	0.49
4:D:17:VAL:HG11	4:D:197:PRO:HB2	1.93	0.49
1:A:202:U:H5'	1:A:203:U:H5	1.76	0.49
18:R:72:ARG:O	18:R:76:LEU:HD22	2.12	0.49
17:Q:4:LYS:CG	17:Q:6:LEU:HD21	2.42	0.49
10:J:90:LEU:N	10:J:91:PRO:HD3	2.28	0.49
25:Y:518:PRO:O	25:Y:520:GLY:N	2.46	0.49
21:U:24:ARG:HH11	21:U:24:ARG:HG2	1.77	0.49
25:Y:633:GLY:HA3	25:Y:644:ARG:HH11	1.76	0.49
14:N:15:LYS:O	14:N:16:PHE:C	2.51	0.49
1:A:1226:C:H5''	13:M:103:THR:OG1	2.12	0.49
1:A:328:C:C2'	1:A:328:C:O2	2.51	0.49
1:A:1329:A:C2'	1:A:1330:U:H5'	2.42	0.49
2:B:102:LEU:HG	2:B:158:LEU:CD2	2.41	0.49
1:A:321:A:C2	1:A:333:G:C2	3.00	0.49
8:H:99:GLU:O	8:H:100:ILE:C	2.48	0.49
11:K:67:ASP:OD1	11:K:71:LYS:HE3	2.12	0.49
3:C:23:TYR:CG	3:C:24:ALA:N	2.79	0.49
25:Y:319:ASP:OD2	25:Y:322:VAL:HG22	2.12	0.49
2:B:163:PHE:CD1	2:B:185:ILE:HG13	2.47	0.49
25:Y:411:VAL:CG1	25:Y:412:ALA:H	2.26	0.49
25:Y:510:VAL:HG12	25:Y:511:LYS:H	1.77	0.49
13:M:10:PRO:HG3	13:M:18:ALA:HB1	1.94	0.49
13:M:6:GLY:C	13:M:8:GLU:N	2.66	0.49
1:A:1198:G:H2'	1:A:1199:U:O4'	2.12	0.49
13:M:78:ILE:HA	13:M:81:LEU:HD23	1.95	0.49
25:Y:580:MET:CE	25:Y:584:ILE:HG12	2.43	0.49
16:P:53:VAL:HG23	16:P:54:GLU:N	2.25	0.49
1:A:1294:G:C2'	1:A:1295:G:H5'	2.42	0.49
1:A:1218:C:H2'	1:A:1219:U:C5	2.47	0.49
19:S:6:LYS:HG2	19:S:7:LYS:CE	2.42	0.49
10:J:47:PHE:CE2	14:N:37:PHE:HE1	2.30	0.49
1:A:1061:G:C2'	1:A:1062:U:H5'	2.42	0.49
1:A:860:A:H2'	1:A:861:G:O4'	2.12	0.49
23:W:65:C:H2'	23:W:66:C:C6	2.48	0.49
25:Y:364:GLU:HG2	25:Y:366:VAL:HG13	1.93	0.49
25:Y:367:GLU:O	25:Y:368:GLU:HB3	2.12	0.49
21:U:3:LYS:HB3	21:U:14:TRP:CD1	2.47	0.49
24:X:13:A:H2'	24:X:14:U:O4'	2.12	0.49
25:Y:402:ILE:HD12	25:Y:402:ILE:H	1.78	0.49
25:Y:17:ILE:O	25:Y:85:PRO:HG2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:41:ARG:CG	12:L:42:THR:N	2.71	0.49
25:Y:136:ALA:HB3	25:Y:260:LEU:HB3	1.94	0.49
25:Y:217:VAL:HG22	25:Y:242:LEU:HD21	1.93	0.49
2:B:17:PHE:CG	2:B:18:GLY:N	2.81	0.49
10:J:63:PHE:HB3	14:N:58:LYS:CA	2.39	0.49
1:A:247:G:C6	1:A:278:G:C2	3.01	0.49
25:Y:339:SER:O	25:Y:351:ARG:NH1	2.45	0.49
1:A:1270:C:H2'	1:A:1271:G:H8	1.78	0.49
1:A:1259:C:C4	1:A:1260:C:O2	2.65	0.49
1:A:990:C:H2'	1:A:991:U:C6	2.47	0.49
23:W:44:A:H2'	23:W:45:G:C8	2.47	0.49
25:Y:119:GLU:O	25:Y:120:THR:OG1	2.31	0.49
25:Y:170:ARG:C	25:Y:171:GLU:HG2	2.31	0.49
25:Y:13:ARG:O	25:Y:79:ILE:HA	2.12	0.49
25:Y:181:LEU:HD21	25:Y:243:VAL:HG22	1.95	0.49
10:J:6:ILE:HA	10:J:97:GLU:O	2.13	0.49
3:C:35:GLU:OE2	3:C:59:ARG:NH1	2.46	0.49
13:M:11:ARG:HG2	13:M:12:ASN:N	2.28	0.49
23:W:30:G:C2'	23:W:31:G:H5''	2.42	0.49
2:B:33:TYR:HB2	2:B:43:ASP:CB	2.42	0.49
4:D:129:ASN:HD21	4:D:145:GLU:H	1.57	0.49
9:I:47:LEU:H	9:I:47:LEU:HD12	1.70	0.49
4:D:163:GLU:C	4:D:165:MET:N	2.66	0.49
12:L:91:LYS:HG3	12:L:91:LYS:O	2.13	0.49
2:B:207:ALA:O	2:B:208:ILE:C	2.50	0.49
19:S:53:ASN:C	19:S:55:LYS:N	2.65	0.49
9:I:10:ARG:O	9:I:11:LYS:HB3	2.13	0.49
1:A:559:A:H4'	1:A:560:U:C5'	2.42	0.49
23:W:44:A:C6	23:W:45:G:C2	3.00	0.49
1:A:93:G:O2'	1:A:96:U:H5'	2.13	0.49
1:A:530:G:H1	24:X:21:A:H1'	1.78	0.49
1:A:1216:G:OP1	14:N:2:ALA:HA	2.12	0.49
1:A:1076:C:H5'	1:A:1077:G:OP2	2.12	0.49
3:C:101:LEU:C	3:C:101:LEU:HD23	2.33	0.49
25:Y:139:MET:O	25:Y:144:ALA:CB	2.61	0.49
2:B:165:VAL:CG2	2:B:166:ASP:H	2.05	0.49
25:Y:632:LEU:HG	25:Y:645:ALA:HA	1.95	0.49
25:Y:210:ARG:O	25:Y:213:HIS:N	2.46	0.49
1:A:1004:A:C6	1:A:1034:G:H2'	2.47	0.49
25:Y:526:VAL:CG1	25:Y:566:THR:HG23	2.43	0.49
25:Y:174:PHE:HD2	25:Y:267:LYS:HD2	1.77	0.49
25:Y:147:TRP:O	25:Y:151:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:19:LEU:O	4:D:26:CYS:SG	2.70	0.49
2:B:207:ALA:HB3	2:B:210:SER:HB2	1.94	0.49
2:B:207:ALA:HB3	2:B:210:SER:HB3	1.95	0.49
20:T:42:GLN:HE21	20:T:42:GLN:CA	2.19	0.49
15:O:39:LEU:CD1	15:O:56:LEU:HB2	2.42	0.49
1:A:528:C:H41	12:L:49:ASN:ND2	2.09	0.49
25:Y:322:VAL:HG21	25:Y:325:LEU:HD21	1.94	0.49
2:B:45:GLN:O	2:B:45:GLN:HG2	2.13	0.49
23:W:5:G:H1	23:W:68:C:N4	2.11	0.49
25:Y:489:LYS:HG3	25:Y:597:GLY:HA2	1.93	0.49
1:A:1151:A:O2'	1:A:1152:A:H8	1.95	0.49
3:C:35:GLU:O	3:C:39:ILE:HG13	2.13	0.49
8:H:137:VAL:HG12	8:H:138:TRP:N	2.28	0.49
4:D:189:PRO:HB2	4:D:194:LEU:HD21	1.95	0.49
9:I:50:LEU:HD23	9:I:85:LEU:CD2	2.43	0.49
1:A:973:G:OP1	10:J:57:LYS:HD3	2.13	0.49
25:Y:303:PRO:HA	25:Y:331:TYR:O	2.13	0.49
25:Y:289:ILE:HG21	25:Y:399:LEU:HD23	1.94	0.49
1:A:1509:C:C2'	1:A:1510:U:H5'	2.43	0.49
4:D:129:ASN:ND2	4:D:129:ASN:N	2.56	0.49
11:K:30:VAL:O	11:K:30:VAL:HG23	2.12	0.49
1:A:694:A:O2'	23:W:38:A:O2'	2.30	0.49
2:B:131:PRO:HG2	2:B:134:GLU:HG2	1.94	0.49
1:A:674:G:H4'	18:R:81:PHE:CD2	2.48	0.49
21:U:8:THR:O	21:U:12:LYS:HB2	2.13	0.49
1:A:1134:G:C2'	1:A:1135:U:H5'	2.43	0.49
25:Y:363:ARG:HG3	25:Y:363:ARG:HH11	1.76	0.49
15:O:28:GLN:O	15:O:32:LEU:HG	2.13	0.49
25:Y:604:PRO:CB	25:Y:673:PHE:HE1	2.25	0.49
1:A:1500:A:H5''	1:A:1508:G:H5''	1.95	0.48
25:Y:400:GLU:O	25:Y:401:SER:HB2	2.13	0.48
1:A:1316:G:O2'	14:N:18:VAL:HG11	2.13	0.48
1:A:1037:C:H2'	1:A:1038:C:C4	2.47	0.48
1:A:1152:A:OP1	10:J:68:HIS:CD2	2.66	0.48
12:L:53:ARG:HH11	12:L:53:ARG:HG2	1.77	0.48
9:I:56:LEU:C	9:I:56:LEU:HD23	2.33	0.48
14:N:53:LEU:HB3	14:N:56:VAL:CG2	2.43	0.48
1:A:1388:C:H2'	1:A:1389:C:H6	1.78	0.48
1:A:826:C:H2'	1:A:827:U:C6	2.47	0.48
13:M:63:THR:HG22	13:M:64:TRP:H	1.78	0.48
6:F:37:VAL:HG12	6:F:38:GLU:N	2.28	0.48
1:A:1080:A:H5''	5:E:16:THR:HG21	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:105:VAL:HB	5:E:106:PRO:CD	2.43	0.48
25:Y:15:ILE:CD1	25:Y:81:ILE:HG23	2.43	0.48
25:Y:424:LEU:HA	25:Y:427:ALA:CB	2.42	0.48
2:B:17:PHE:CD1	2:B:18:GLY:N	2.81	0.48
20:T:26:ASN:HD22	20:T:27:LYS:N	2.12	0.48
20:T:56:MET:HG3	20:T:84:LEU:HD12	1.95	0.48
25:Y:304:ASP:C	25:Y:306:ASN:H	2.16	0.48
3:C:119:ARG:O	3:C:123:GLN:HG3	2.13	0.48
4:D:126:ILE:N	4:D:126:ILE:HD12	2.28	0.48
25:Y:580:MET:HE1	25:Y:581:ALA:HA	1.94	0.48
4:D:59:ARG:NH2	4:D:62:GLN:HG3	2.28	0.48
5:E:143:ARG:NH1	8:H:77:GLU:CD	2.67	0.48
6:F:80:ARG:NH1	6:F:88:VAL:O	2.46	0.48
1:A:582:U:OP1	15:O:68:ARG:NH2	2.46	0.48
1:A:106:C:C2'	1:A:107:G:H5'	2.43	0.48
8:H:54:ASP:O	8:H:56:LYS:HG3	2.13	0.48
1:A:312:C:H2'	1:A:313:A:C8	2.48	0.48
24:X:11:A:C3'	24:X:11:A:N3	2.74	0.48
10:J:78:ASN:C	10:J:79:ARG:NH1	2.67	0.48
25:Y:88:VAL:O	25:Y:89:ASP:C	2.50	0.48
2:B:86:GLU:C	2:B:88:ALA:H	2.16	0.48
1:A:1002:G:C8	1:A:1003:G:N7	2.81	0.48
1:A:1152:A:OP1	10:J:68:HIS:HD2	1.97	0.48
25:Y:566:THR:O	25:Y:566:THR:HG22	2.14	0.48
1:A:265:G:N2	1:A:267:C:H5'	2.29	0.48
1:A:149:A:N3	1:A:149:A:H2'	2.28	0.48
20:T:45:GLN:HB2	20:T:91:LEU:CD1	2.41	0.48
4:D:29:PRO:C	4:D:30:LYS:HG2	2.34	0.48
19:S:51:VAL:HG22	19:S:71:LEU:HD13	1.95	0.48
19:S:47:HIS:O	19:S:62:ILE:HG21	2.14	0.48
16:P:8:ARG:HG2	16:P:8:ARG:HH11	1.79	0.48
12:L:110:VAL:CG2	12:L:120:TYR:HB3	2.43	0.48
1:A:1314:C:OP2	19:S:6:LYS:HD3	2.13	0.48
6:F:97:PHE:O	18:R:31:LEU:HD23	2.13	0.48
3:C:146:ALA:O	3:C:148:GLY:N	2.46	0.48
25:Y:286:ILE:HG23	25:Y:287:PRO:HD2	1.96	0.48
25:Y:238:THR:CG2	25:Y:241:GLU:HG2	2.30	0.48
23:W:22:G:HO2'	23:W:23:C:H5''	1.79	0.48
25:Y:191:ASP:O	25:Y:266:ASN:ND2	2.47	0.48
1:A:1148:U:H2'	1:A:1149:C:O4'	2.14	0.48
13:M:4:ILE:O	13:M:5:ALA:C	2.51	0.48
1:A:1060:C:C5	3:C:2:GLY:HA2	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:15:G:H8	1:A:1396:A:O2'	1.96	0.48
1:A:311:C:O2'	1:A:312:C:H5'	2.14	0.48
15:O:69:TYR:CZ	15:O:73:GLU:HG3	2.48	0.48
2:B:151:GLY:O	2:B:153:ARG:N	2.47	0.48
8:H:30:ARG:HB3	8:H:30:ARG:NH1	2.28	0.48
26:F:1102:FUA:C1	26:F:1102:FUA:O1	2.60	0.48
1:A:1369:C:H2'	1:A:1370:G:C8	2.48	0.48
25:Y:408:VAL:HG21	25:Y:660:ARG:HH22	1.77	0.48
20:T:43:LEU:O	20:T:46:GLU:N	2.46	0.48
5:E:12:LEU:C	5:E:12:LEU:HD22	2.33	0.48
2:B:213:LEU:HD23	2:B:213:LEU:C	2.33	0.48
1:A:1301:U:H3'	1:A:1302:U:C5'	2.43	0.48
19:S:41:VAL:C	19:S:43:GLU:N	2.65	0.48
19:S:61:TYR:CG	19:S:62:ILE:N	2.81	0.48
23:W:56:C:OP1	23:W:56:C:C6	2.67	0.48
25:Y:204:GLU:O	25:Y:205:TYR:C	2.51	0.48
1:A:398:C:H6	1:A:398:C:O5'	1.96	0.48
2:B:63:MET:HG3	2:B:63:MET:O	2.12	0.48
1:A:1049:U:H1'	1:A:1201:A:N7	2.28	0.48
25:Y:124:GLN:HB2	25:Y:124:GLN:HE21	1.51	0.48
25:Y:100:VAL:CG2	25:Y:374:LEU:HD21	2.43	0.48
25:Y:73:PHE:HE1	25:Y:78:ARG:HB2	1.77	0.48
2:B:82:ARG:NH1	2:B:92:TYR:OH	2.46	0.48
25:Y:384:ILE:O	25:Y:385:THR:C	2.51	0.48
23:W:49:G:H3'	23:W:50:U:H5''	1.96	0.48
22:V:50:U:O2'	22:V:51:U:H5'	2.13	0.48
9:I:95:LYS:NZ	9:I:96:LEU:HD12	2.28	0.48
7:G:102:ARG:HG2	7:G:106:GLN:NE2	2.29	0.48
1:A:1293:G:O2'	1:A:1294:G:H5'	2.14	0.48
22:V:68:C:H2'	22:V:69:G:H8	1.76	0.48
3:C:129:ALA:HB3	3:C:132:ARG:HB3	1.96	0.48
1:A:1163:C:H2'	1:A:1164:G:H8	1.78	0.48
2:B:97:TRP:HH2	2:B:176:GLU:CD	2.16	0.48
7:G:118:VAL:O	7:G:121:ALA:HB3	2.14	0.48
10:J:81:THR:C	10:J:83:GLU:N	2.66	0.48
25:Y:345:THR:HG21	25:Y:387:ASP:OD1	2.14	0.48
1:A:1038:C:H2'	1:A:1039:C:C5	2.49	0.48
1:A:192:U:O3'	20:T:57:ARG:HD2	2.14	0.48
13:M:66:LEU:O	13:M:67:GLU:O	2.32	0.48
1:A:1030:C:H2'	1:A:1030(A):G:H5'	1.96	0.48
4:D:11:LEU:O	4:D:12:CYS:C	2.51	0.48
4:D:12:CYS:SG	4:D:19:LEU:O	2.71	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:273:LEU:HA	25:Y:276:VAL:HG23	1.96	0.48
5:E:64:ARG:NH1	5:E:64:ARG:HG3	2.23	0.48
1:A:538:G:H2'	1:A:539:A:C8	2.48	0.48
1:A:1110:A:H8	1:A:1110:A:O5'	1.96	0.48
12:L:8:ASN:HB2	17:Q:34:LYS:NZ	2.28	0.48
15:O:56:LEU:O	15:O:60:VAL:HG23	2.14	0.48
2:B:60:ASP:HB3	2:B:64:ARG:HH21	1.78	0.48
7:G:146:GLU:OE2	7:G:149:ARG:HD2	2.13	0.48
1:A:867:G:O2'	1:A:868:C:H5'	2.13	0.48
11:K:29:ILE:HB	11:K:44:SER:HB2	1.96	0.48
1:A:1132:C:N4	1:A:1133:G:C6	2.81	0.48
1:A:294:U:H2'	1:A:295:C:C6	2.47	0.48
25:Y:651:GLU:O	25:Y:651:GLU:HG3	2.14	0.48
25:Y:14:ASN:HA	25:Y:80:ASN:O	2.13	0.48
25:Y:438:PHE:C	25:Y:438:PHE:HD1	2.17	0.48
25:Y:201:ILE:HG21	25:Y:206:LEU:CA	2.43	0.48
1:A:268:C:C2'	1:A:268:C:O2	2.61	0.48
2:B:221:LEU:O	2:B:221:LEU:HD13	2.14	0.48
8:H:82:HIS:CD2	8:H:138:TRP:NE1	2.82	0.48
16:P:33:ILE:O	16:P:33:ILE:HG22	2.14	0.48
1:A:1442:G:C5	1:A:1442(B):A:C2	3.02	0.48
1:A:1148:U:C2'	1:A:1149:C:H5'	2.43	0.48
11:K:21:ILE:HA	11:K:30:VAL:HG12	1.95	0.48
12:L:119:LYS:O	12:L:120:TYR:HB2	2.13	0.48
1:A:545:C:H5''	4:D:72:GLU:HG2	1.96	0.48
25:Y:99:ARG:HA	25:Y:128:TYR:CE1	2.49	0.48
1:A:559:A:P	5:E:126:ARG:HH22	2.36	0.48
1:A:1503:A:N1	24:X:11:A:N3	2.60	0.48
25:Y:15:ILE:HD13	25:Y:17:ILE:HD11	1.95	0.48
25:Y:374:LEU:HD12	25:Y:374:LEU:N	2.29	0.48
25:Y:644:ARG:O	25:Y:645:ALA:HB2	2.14	0.48
25:Y:223:PHE:HZ	25:Y:255:ILE:HG22	1.78	0.48
23:W:72:A:O2'	23:W:73:A:O5'	2.21	0.48
18:R:59:SER:N	18:R:62:GLU:HB2	2.23	0.48
1:A:184:G:O2'	1:A:185:A:H5'	2.13	0.48
12:L:47:LYS:HB3	12:L:48:PRO:CD	2.43	0.48
1:A:1298:C:O2	1:A:1298:C:C2'	2.61	0.48
19:S:58:VAL:O	19:S:59:PRO:C	2.52	0.48
1:A:1456:G:H2'	1:A:1457:G:H5'	1.94	0.48
2:B:22:LYS:H	2:B:40:HIS:HE1	1.61	0.48
1:A:1327:C:H2'	1:A:1328:C:C6	2.49	0.48
12:L:78:GLN:O	12:L:79:GLU:C	2.52	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:218:C:H5'	1:A:470:C:N4	2.28	0.48
13:M:58:GLU:O	13:M:62:ASN:HB2	2.14	0.48
2:B:69:LEU:HD11	2:B:93:VAL:HG23	1.95	0.48
5:E:20:GLN:NE2	5:E:25:ARG:NH2	2.61	0.48
7:G:26:PHE:CE2	7:G:30:ILE:HD11	2.49	0.48
23:W:34:C:O2'	23:W:35:A:O5'	2.30	0.48
25:Y:115:GLU:CD	25:Y:118:SER:HB3	2.35	0.48
25:Y:120:THR:O	25:Y:124:GLN:CD	2.52	0.48
25:Y:495:GLY:O	25:Y:510:VAL:N	2.45	0.48
13:M:22:ILE:N	13:M:22:ILE:HD12	2.29	0.48
1:A:1029:C:O2'	1:A:1032:G:N2	2.46	0.48
13:M:118:ALA:HB3	13:M:120:LYS:HE3	1.94	0.48
22:V:61:C:H2'	22:V:62:C:C6	2.46	0.48
1:A:101:A:HO2'	1:A:102:G:H5'	1.78	0.48
9:I:79:LEU:HD13	9:I:79:LEU:C	2.34	0.48
1:A:1271:G:H2'	1:A:1272:G:H8	1.79	0.48
13:M:14:ARG:CZ	13:M:42:ALA:HA	2.44	0.48
5:E:9:LYS:CB	5:E:112:LEU:HD11	2.44	0.48
1:A:636:U:H2'	1:A:637:G:H8	1.78	0.48
1:A:883:C:O2'	1:A:884:U:H5'	2.14	0.48
9:I:37:PHE:HB3	9:I:43:ALA:HB2	1.95	0.48
14:N:23:ARG:NH1	14:N:30:ALA:HB2	2.29	0.48
8:H:26:VAL:HG23	8:H:27:PRO:HD2	1.96	0.48
1:A:1310:G:O2'	1:A:1311:G:H5'	2.13	0.48
25:Y:486:THR:HG23	25:Y:600:VAL:HG13	1.94	0.47
25:Y:406:GLU:CB	25:Y:407:PRO:CD	2.92	0.47
25:Y:210:ARG:O	25:Y:211:GLU:C	2.52	0.47
25:Y:230:LYS:NZ	25:Y:230:LYS:CB	2.76	0.47
25:Y:253:LEU:N	25:Y:253:LEU:HD12	2.29	0.47
1:A:194:C:C2'	1:A:195:A:H5''	2.42	0.47
16:P:22:THR:OG1	16:P:23:ASP:N	2.47	0.47
10:J:54:PHE:CD1	10:J:55:LYS:HE3	2.49	0.47
25:Y:35:TYR:HH	25:Y:266:ASN:HB3	1.73	0.47
22:V:18:G:C5	22:V:57:G:O6	2.66	0.47
19:S:29:ARG:N	19:S:29:ARG:HD2	2.29	0.47
1:A:1343:G:H2'	1:A:1344:C:C6	2.49	0.47
23:W:56:C:O2	23:W:56:C:C2'	2.59	0.47
1:A:376:G:OP2	16:P:67:THR:HG21	2.14	0.47
12:L:89:ARG:HD3	12:L:91:LYS:HZ1	1.75	0.47
18:R:37:VAL:CG2	18:R:38:GLU:H	2.26	0.47
25:Y:497:PHE:O	25:Y:498:ILE:O	2.32	0.47
3:C:60:ALA:O	3:C:61:ALA:CB	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1431:C:O2'	1:A:1432:G:H5'	2.14	0.47
1:A:1080:A:C5'	5:E:16:THR:HG21	2.44	0.47
4:D:68:TYR:O	4:D:69:GLY:C	2.52	0.47
11:K:59:TYR:CE2	11:K:63:LEU:HD11	2.49	0.47
20:T:73:HIS:O	20:T:74:LYS:C	2.52	0.47
25:Y:14:ASN:O	25:Y:101:LEU:HB2	2.14	0.47
1:A:1316:G:H4'	14:N:18:VAL:HG12	1.96	0.47
1:A:1347:G:H3'	9:I:108:VAL:O	2.14	0.47
25:Y:526:VAL:HB	25:Y:566:THR:CA	2.34	0.47
8:H:10:LEU:HD22	8:H:83:ILE:CD1	2.39	0.47
1:A:1277:C:H2'	1:A:1278:U:C5'	2.36	0.47
1:A:423:G:H2'	1:A:424:G:H5'	1.96	0.47
5:E:12:LEU:CD1	5:E:31:LEU:HB3	2.44	0.47
22:V:19:G:H1	22:V:56:C:H42	1.62	0.47
16:P:28:ARG:HG2	16:P:29:ASP:OD1	2.14	0.47
8:H:31:PHE:O	8:H:34:GLU:HB2	2.15	0.47
6:F:15:ASP:O	6:F:17:SER:N	2.48	0.47
17:Q:18:THR:HG23	17:Q:44:ALA:O	2.14	0.47
1:A:692:U:O4	11:K:53:SER:HA	2.13	0.47
12:L:38:THR:HG22	12:L:57:LYS:O	2.14	0.47
19:S:29:ARG:HB2	19:S:48:THR:H	1.80	0.47
1:A:349:A:C2'	1:A:350:G:H5''	2.41	0.47
1:A:56:U:H2'	1:A:57:G:H8	1.76	0.47
1:A:864:A:H2'	1:A:865:A:C8	2.49	0.47
4:D:3:ARG:HG2	4:D:118:ARG:HE	1.79	0.47
6:F:21:LEU:O	6:F:24:GLU:HB3	2.13	0.47
1:A:1166:G:H5'	1:A:1168:A:OP2	2.15	0.47
4:D:53:ASP:O	4:D:57:ARG:HD2	2.15	0.47
2:B:151:GLY:O	2:B:152:PHE:C	2.52	0.47
1:A:830:G:O2'	1:A:831:U:H5'	2.14	0.47
10:J:3:LYS:HZ3	10:J:77:PRO:HD2	1.79	0.47
26:F:1102:FUA:O3	25:Y:84:THR:CG2	2.51	0.47
25:Y:513:LYS:O	25:Y:515:GLU:OE1	2.32	0.47
11:K:111:ASP:HA	18:R:84:LYS:CD	2.34	0.47
18:R:29:PHE:N	18:R:29:PHE:HD1	1.89	0.47
20:T:27:LYS:HD3	20:T:27:LYS:O	2.14	0.47
4:D:187:ARG:HH11	4:D:187:ARG:HG2	1.78	0.47
3:C:128:PHE:O	3:C:130:VAL:N	2.48	0.47
17:Q:9:VAL:CG1	17:Q:56:VAL:HG22	2.43	0.47
1:A:931:C:H1'	1:A:1387:G:N2	2.30	0.47
7:G:103:TRP:CE2	7:G:137:LYS:HD3	2.50	0.47
6:F:10:LEU:HB2	6:F:59:TYR:HB3	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:30:SER:HA	10:J:80:LYS:HE2	1.96	0.47
25:Y:117:GLN:HE22	25:Y:120:THR:HG23	1.79	0.47
25:Y:100:VAL:HG23	25:Y:329:ARG:HG2	1.97	0.47
20:T:16:HIS:O	20:T:19:SER:HB3	2.15	0.47
1:A:1104:G:P	2:B:111:ARG:HD2	2.55	0.47
9:I:7:THR:O	9:I:83:ARG:HD2	2.14	0.47
12:L:47:LYS:CD	12:L:48:PRO:HD3	2.43	0.47
1:A:390:C:H2'	1:A:391:G:H8	1.80	0.47
8:H:109:ILE:HG13	8:H:120:THR:HB	1.97	0.47
2:B:207:ALA:O	2:B:210:SER:N	2.47	0.47
25:Y:315:LYS:HZ2	25:Y:317:MET:CG	2.27	0.47
1:A:930:C:O2'	1:A:931:C:H5'	2.14	0.47
26:F:1102:FUA:C20	26:F:1102:FUA:O1	2.62	0.47
25:Y:487:ILE:HB	25:Y:597:GLY:O	2.14	0.47
15:O:24:SER:O	15:O:25:THR:C	2.52	0.47
25:Y:210:ARG:HG2	25:Y:210:ARG:HH11	1.80	0.47
25:Y:220:ALA:O	25:Y:245:ALA:HB1	2.15	0.47
25:Y:420:ASP:HB3	25:Y:472:VAL:CG1	2.44	0.47
25:Y:384:ILE:O	25:Y:385:THR:O	2.32	0.47
1:A:80:G:C6	1:A:90:U:H5'	2.48	0.47
13:M:118:ALA:CB	13:M:120:LYS:HE3	2.45	0.47
12:L:83:VAL:HG12	12:L:84:LEU:N	2.30	0.47
1:A:1225:A:N3	1:A:1225:A:C2'	2.74	0.47
1:A:1344:C:O2'	1:A:1345:U:H5'	2.13	0.47
4:D:145:GLU:C	4:D:146:ILE:HD13	2.34	0.47
1:A:407:G:OP1	4:D:115:ARG:CZ	2.63	0.47
3:C:25:GLY:C	3:C:27:LYS:N	2.66	0.47
5:E:36:ASP:O	5:E:37:ARG:HB2	2.15	0.47
21:U:2:GLY:C	21:U:4:GLY:N	2.67	0.47
1:A:342:C:C2'	1:A:343:U:H5'	2.44	0.47
15:O:75:PRO:O	15:O:79:ARG:HG3	2.14	0.47
1:A:665:A:H2'	1:A:725:G:N2	2.30	0.47
2:B:179:LYS:HB2	2:B:179:LYS:NZ	2.30	0.47
1:A:1391:U:H2'	1:A:1392:G:C8	2.49	0.47
25:Y:114:VAL:O	25:Y:116:PRO:HD3	2.15	0.47
1:A:1367:C:N3	1:A:1368:G:C8	2.83	0.47
25:Y:609:GLU:HB3	25:Y:642:VAL:CG1	2.44	0.47
10:J:6:ILE:HG13	10:J:72:VAL:O	2.15	0.47
17:Q:69:LYS:C	17:Q:70:ARG:HD2	2.32	0.47
4:D:98:GLU:HG2	4:D:189:PRO:HG3	1.97	0.47
14:N:28:GLY:O	14:N:29:ARG:O	2.33	0.47
2:B:111:ARG:O	2:B:145:LEU:HD12	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1117:G:O3'	9:I:104:ARG:HD2	2.14	0.47
9:I:93:ARG:C	9:I:95:LYS:N	2.67	0.47
7:G:102:ARG:HG2	7:G:106:GLN:HE21	1.79	0.47
4:D:78:LEU:CD2	4:D:96:LEU:HB2	2.45	0.47
4:D:163:GLU:C	4:D:165:MET:H	2.16	0.47
12:L:97:ARG:C	12:L:98:TYR:CD1	2.88	0.47
18:R:35:ARG:O	18:R:37:VAL:N	2.45	0.47
19:S:32:LYS:HA	19:S:50:ALA:HB3	1.95	0.47
1:A:715:A:H2'	1:A:716:A:C8	2.50	0.47
1:A:458:C:H3'	1:A:460:G:H8	1.79	0.47
1:A:1007:C:H2'	1:A:1008:C:C6	2.49	0.47
19:S:5:LEU:HG	19:S:10:PHE:CD1	2.50	0.47
25:Y:176:GLY:HA2	25:Y:188:TYR:CD2	2.50	0.47
25:Y:225:GLU:H	25:Y:225:GLU:CD	2.18	0.47
13:M:83:ASP:C	13:M:85:GLY:N	2.67	0.47
1:A:308:C:H2'	1:A:309:G:H8	1.80	0.47
1:A:1308:U:C5	13:M:99:ARG:NH1	2.83	0.47
15:O:53:HIS:O	15:O:57:LEU:HD23	2.14	0.47
8:H:116:LYS:HD2	8:H:129:VAL:HG11	1.95	0.47
1:A:413:G:H21	1:A:428:G:H1'	1.79	0.47
17:Q:24:GLU:O	17:Q:25:ARG:HB3	2.14	0.47
11:K:44:SER:O	11:K:45:GLY:C	2.53	0.47
23:W:57:A:O2'	23:W:58:A:H5'	2.14	0.47
8:H:30:ARG:CB	8:H:30:ARG:HH11	2.28	0.47
20:T:74:LYS:HB2	20:T:75:ASN:H	1.43	0.47
9:I:122:ALA:HB1	9:I:123:PRO:HD2	1.97	0.47
1:A:1440:C:H2'	1:A:1441:G:H5'	1.95	0.47
25:Y:689:LYS:HG3	25:Y:690:GLY:N	2.30	0.47
13:M:89:GLY:O	13:M:90:LEU:C	2.52	0.47
25:Y:543:GLN:O	25:Y:547:GLU:HB2	2.15	0.47
25:Y:85:PRO:CG	25:Y:94:VAL:HG13	2.44	0.47
2:B:189:ASP:C	2:B:191:ASP:H	2.18	0.47
2:B:126:GLU:HA	2:B:129:GLU:CD	2.35	0.47
2:B:108:ILE:O	2:B:111:ARG:HB2	2.15	0.47
4:D:26:CYS:O	4:D:31:CYS:HB2	2.15	0.47
19:S:40:ILE:O	19:S:41:VAL:C	2.53	0.47
11:K:21:ILE:HD13	11:K:82:VAL:HG13	1.97	0.47
4:D:148:VAL:HG12	4:D:152:SER:HB2	1.97	0.47
7:G:92:SER:O	7:G:93:PRO:C	2.52	0.47
3:C:133:ALA:O	3:C:137:ALA:HB2	2.14	0.47
1:A:189(D):C:H2'	1:A:189(E):U:O4'	2.15	0.47
1:A:1134:G:N2	1:A:1141:C:C2	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:114:VAL:O	25:Y:114:VAL:HG13	2.13	0.47
1:A:255:G:O6	1:A:266:G:O6	2.33	0.47
2:B:189:ASP:CG	2:B:205:ASP:OD1	2.54	0.47
1:A:1195:C:H2'	1:A:1197:G:O4'	2.15	0.47
12:L:28:LYS:HB2	12:L:33:ARG:NH2	2.30	0.47
19:S:19:VAL:CG1	19:S:44:MET:HG2	2.45	0.47
14:N:42:ILE:HG22	14:N:43:CYS:N	2.30	0.47
16:P:67:THR:HG22	16:P:68:ASP:N	2.29	0.47
4:D:61:LYS:HD2	4:D:207:TYR:OH	2.15	0.47
1:A:1328:C:H2'	1:A:1329:A:C8	2.50	0.47
1:A:337:C:H2'	1:A:338:A:C8	2.47	0.47
2:B:235:SER:C	2:B:237:ALA:H	2.14	0.47
7:G:112:PRO:HG2	7:G:113:GLU:OE2	2.15	0.47
3:C:136:GLN:HG3	3:C:139:GLN:HB3	1.97	0.47
12:L:17:LYS:NZ	12:L:18:VAL:HG22	2.30	0.47
25:Y:177:ILE:CG2	25:Y:260:LEU:HD21	2.45	0.47
1:A:1364:U:C2'	1:A:1364:U:O2	2.54	0.47
13:M:67:GLU:O	13:M:69:GLU:N	2.48	0.47
13:M:15:VAL:HG12	13:M:45:VAL:CG2	2.39	0.47
23:W:30:G:C2'	23:W:31:G:C5'	2.93	0.47
1:A:1237:C:H3'	1:A:1238:A:C5'	2.40	0.47
2:B:188:ALA:O	2:B:202:PRO:HA	2.15	0.47
9:I:9:ARG:CB	9:I:104:ARG:HH12	2.28	0.47
1:A:555:C:OP1	12:L:20:LYS:HE2	2.15	0.47
25:Y:65:ILE:N	25:Y:65:ILE:HD13	2.31	0.47
1:A:115:G:H1'	1:A:116:A:N7	2.30	0.47
23:W:36:U:C6	23:W:36:U:O5'	2.67	0.47
1:A:1308:U:O2'	1:A:1309:G:H5'	2.14	0.47
1:A:1014:A:H4'	19:S:14:HIS:CE1	2.49	0.47
7:G:8:GLU:O	7:G:9:VAL:C	2.53	0.47
3:C:29:TYR:OH	14:N:54:PRO:HD2	2.14	0.47
6:F:3:ARG:HH11	6:F:3:ARG:HG3	1.79	0.47
10:J:16:LEU:CD1	10:J:70:ARG:HD3	2.46	0.46
3:C:32:LEU:HD22	3:C:59:ARG:HH12	1.79	0.46
13:M:3:ARG:HG2	13:M:9:ILE:CG1	2.45	0.46
20:T:11:SER:HA	20:T:13:LEU:HD11	1.97	0.46
1:A:1303:C:H2'	1:A:1304:G:H5'	1.96	0.46
25:Y:352:VAL:HG23	25:Y:377:VAL:CG2	2.42	0.46
25:Y:128:TYR:O	25:Y:129:LYS:CB	2.63	0.46
7:G:29:LYS:CB	7:G:105:VAL:HG21	2.45	0.46
17:Q:43:LEU:HD12	17:Q:68:ARG:HB3	1.97	0.46
14:N:18:VAL:CG2	14:N:19:ARG:N	2.78	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1277:C:H3'	1:A:1277:C:H6	1.81	0.46
2:B:96:ARG:N	2:B:96:ARG:CD	2.72	0.46
25:Y:352:VAL:O	25:Y:352:VAL:HG13	2.15	0.46
18:R:37:VAL:CG2	18:R:38:GLU:N	2.76	0.46
12:L:115:LYS:O	12:L:117:ARG:N	2.48	0.46
10:J:47:PHE:CE2	14:N:37:PHE:CE1	3.03	0.46
1:A:865:A:H2'	1:A:866:C:C6	2.49	0.46
1:A:332:G:O2'	1:A:333:G:H5'	2.15	0.46
1:A:983:A:H5'	1:A:984:C:OP2	2.14	0.46
20:T:73:HIS:HB3	20:T:74:LYS:CE	2.46	0.46
11:K:34:ASP:HB2	11:K:35:PRO:CD	2.45	0.46
17:Q:40:LYS:HD3	17:Q:42:TYR:OH	2.16	0.46
1:A:1281:U:H5''	1:A:1282:C:H5	1.80	0.46
1:A:853:G:O2'	1:A:854:G:H5'	2.14	0.46
4:D:168:ARG:N	4:D:168:ARG:HD2	2.30	0.46
25:Y:230:LYS:HE2	25:Y:241:GLU:OE2	2.16	0.46
3:C:35:GLU:O	3:C:38:ARG:HG2	2.15	0.46
1:A:1226:C:C6	13:M:103:THR:O	2.68	0.46
5:E:91:LEU:HD13	5:E:120:THR:CG2	2.45	0.46
1:A:942:G:H21	9:I:124:GLN:NE2	2.14	0.46
1:A:499:A:H4'	1:A:500:G:OP1	2.15	0.46
17:Q:99:SER:C	17:Q:100:LYS:HG3	2.36	0.46
12:L:7:ILE:HG22	12:L:8:ASN:N	2.31	0.46
22:V:29:G:N2	22:V:42:C:H1'	2.30	0.46
2:B:236:TYR:O	2:B:237:ALA:C	2.53	0.46
1:A:892:A:O2'	1:A:1415:G:H4'	2.15	0.46
4:D:119:GLN:HG3	4:D:123:HIS:CD2	2.50	0.46
1:A:1382:C:H2'	1:A:1383:C:H6	1.80	0.46
1:A:1392:G:N2	1:A:1502:A:C8	2.84	0.46
25:Y:616:TYR:CG	25:Y:663:THR:HA	2.51	0.46
1:A:1286:A:H2'	1:A:1287:A:H4'	1.97	0.46
25:Y:438:PHE:O	25:Y:438:PHE:HD1	1.99	0.46
23:W:29:G:H2'	23:W:30:G:H8	1.80	0.46
2:B:187:LEU:HA	2:B:201:ILE:HB	1.98	0.46
12:L:81:SER:O	12:L:83:VAL:HG23	2.15	0.46
13:M:51:ALA:O	13:M:55:ARG:HB3	2.16	0.46
4:D:4:TYR:O	4:D:5:ILE:CB	2.61	0.46
7:G:5:ARG:HD2	7:G:5:ARG:N	2.31	0.46
1:A:1319:A:OP1	19:S:10:PHE:CZ	2.68	0.46
1:A:1070:U:O2'	1:A:1071:C:H5'	2.15	0.46
1:A:819:A:H4'	1:A:820:U:OP2	2.16	0.46
22:V:66:U:H2'	22:V:67:C:C6	2.51	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:Q:27:PHE:CZ	17:Q:36:ILE:HD11	2.51	0.46
15:O:10:LYS:HD2	15:O:10:LYS:O	2.16	0.46
1:A:926:G:H22	24:X:15:G:H3'	1.80	0.46
25:Y:15:ILE:C	25:Y:15:ILE:HD12	2.35	0.46
25:Y:196:ILE:CG1	25:Y:197:ARG:N	2.74	0.46
1:A:265:G:H5'	17:Q:64:PRO:O	2.16	0.46
23:W:30:G:H2'	23:W:31:G:C5'	2.45	0.46
2:B:24:TRP:CH2	2:B:26:PRO:HA	2.50	0.46
5:E:150:ARG:HA	5:E:153:LYS:HE2	1.96	0.46
13:M:120:LYS:HD2	13:M:120:LYS:N	2.31	0.46
25:Y:147:TRP:HZ3	25:Y:163:VAL:HG11	1.81	0.46
10:J:61:GLU:HG3	14:N:58:LYS:HZ3	1.81	0.46
6:F:43:LEU:H	6:F:43:LEU:CD1	2.23	0.46
3:C:157:ILE:C	3:C:159:GLY:N	2.69	0.46
13:M:106:ASN:HB3	13:M:107:ALA:H	1.58	0.46
1:A:918:A:H2'	1:A:919:A:O4'	2.16	0.46
1:A:907:A:H2'	1:A:908:A:O4'	2.16	0.46
17:Q:76:LEU:HD21	17:Q:79:SER:HB2	1.96	0.46
25:Y:591:LYS:HA	25:Y:591:LYS:HD3	1.73	0.46
2:B:53:ARG:HG2	2:B:53:ARG:O	2.14	0.46
24:X:11:A:C2'	24:X:11:A:N3	2.79	0.46
25:Y:130:VAL:O	25:Y:132:ARG:NH2	2.49	0.46
3:C:47:LEU:CD1	3:C:76:VAL:HG12	2.44	0.46
3:C:52:LEU:HA	3:C:70:VAL:HG22	1.97	0.46
2:B:169:LYS:O	2:B:169:LYS:HD3	2.15	0.46
25:Y:487:ILE:CD1	25:Y:563:ILE:CG2	2.94	0.46
25:Y:465:ARG:O	25:Y:470:PHE:HD2	1.99	0.46
25:Y:503:GLY:C	25:Y:505:GLY:N	2.69	0.46
1:A:265:G:H2'	1:A:267:C:H5	1.80	0.46
1:A:1511:G:O2'	1:A:1512:U:H5'	2.16	0.46
4:D:19:LEU:CD2	4:D:21:LEU:HD21	2.45	0.46
7:G:83:ALA:HB1	7:G:85:TYR:CE1	2.51	0.46
1:A:275:G:O2'	1:A:276:G:H5'	2.15	0.46
15:O:39:LEU:CD2	15:O:43:LEU:HG	2.46	0.46
1:A:1305:G:C5'	21:U:4:GLY:HA3	2.45	0.46
7:G:143:ARG:O	7:G:145:ALA:O	2.33	0.46
1:A:1132:C:O2'	1:A:1133:G:H5'	2.15	0.46
1:A:977:A:C2'	1:A:978:A:H5'	2.46	0.46
20:T:73:HIS:HB3	20:T:74:LYS:HE2	1.96	0.46
19:S:79:THR:O	19:S:80:TYR:HB3	2.16	0.46
1:A:1123:A:O3'	10:J:36:GLY:HA3	2.15	0.46
1:A:445:G:H2'	1:A:446:G:H8	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:162:ILE:HG22	2:B:182:ILE:HG22	1.97	0.46
25:Y:613:PRO:O	25:Y:615:GLU:N	2.48	0.46
1:A:1368:G:C2'	1:A:1369:C:H5'	2.46	0.46
25:Y:555:LEU:HD21	25:Y:599:PRO:CG	2.42	0.46
22:V:2:C:H42	22:V:71:G:H1	1.63	0.46
3:C:32:LEU:HD22	3:C:59:ARG:NH1	2.31	0.46
1:A:255:G:O3'	17:Q:17:LYS:HD2	2.15	0.46
14:N:14:PRO:O	14:N:15:LYS:O	2.34	0.46
4:D:196:LEU:C	4:D:198:VAL:H	2.19	0.46
1:A:1321:C:C5'	1:A:1322:C:C5'	2.93	0.46
1:A:186:C:C2	1:A:187:C:C5	3.03	0.46
20:T:86:ARG:O	20:T:90:GLN:HG3	2.15	0.46
1:A:1511:G:C6	1:A:1512:U:C4	3.04	0.46
19:S:15:LEU:HD21	19:S:33:THR:OG1	2.16	0.46
1:A:392:G:H2'	1:A:393:A:C8	2.49	0.46
1:A:1376:U:H2'	1:A:1377:A:C8	2.51	0.46
4:D:192:GLU:N	4:D:192:GLU:CD	2.69	0.46
1:A:46:G:H2'	1:A:366:C:H5	1.81	0.46
1:A:413:G:N2	1:A:428:G:H1'	2.31	0.46
1:A:1431:C:H2'	1:A:1432:G:H5'	1.97	0.46
8:H:39:LEU:H	8:H:39:LEU:HD22	1.81	0.46
1:A:853:G:H2'	1:A:854:G:H8	1.81	0.46
1:A:1426:C:H2'	1:A:1427:U:C6	2.51	0.46
1:A:429:U:H1'	1:A:430:A:H5''	1.97	0.46
1:A:61:G:OP1	20:T:10:LEU:HD11	2.15	0.46
13:M:88:ARG:HH11	13:M:88:ARG:HG2	1.80	0.46
24:X:13:A:OP1	24:X:14:U:OP1	2.33	0.46
25:Y:395:PRO:O	25:Y:397:VAL:N	2.47	0.46
6:F:69:GLU:O	6:F:72:VAL:HG12	2.16	0.46
13:M:7:VAL:O	13:M:7:VAL:HG12	2.16	0.46
23:W:51:C:H2'	23:W:52:G:C5'	2.46	0.46
20:T:64:ASP:O	20:T:67:ALA:HB3	2.15	0.46
12:L:27:LEU:CB	12:L:62:SER:HB2	2.45	0.46
2:B:32:ILE:CD	2:B:40:HIS:HB3	2.46	0.46
7:G:108:ALA:HB2	7:G:123:GLU:HG2	1.97	0.46
1:A:61:G:H2'	1:A:62:U:O4'	2.16	0.46
25:Y:29:THR:C	25:Y:31:ARG:N	2.68	0.46
1:A:1203:C:O2'	1:A:1204:A:H5'	2.15	0.46
25:Y:260:LEU:HD13	25:Y:260:LEU:N	2.31	0.46
25:Y:411:VAL:HG23	25:Y:459:LEU:CD2	2.45	0.46
20:T:53:LEU:HB3	20:T:102:GLY:HA3	1.98	0.46
25:Y:35:TYR:C	25:Y:37:GLY:N	2.70	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:7:PRO:HG3	3:C:184:TYR:CD1	2.51	0.46
20:T:86:ARG:NH1	20:T:86:ARG:HG3	2.27	0.46
4:D:13:ARG:O	4:D:14:ARG:C	2.54	0.46
25:Y:447:GLY:O	25:Y:448:GLN:O	2.33	0.46
1:A:1296:C:C5'	1:A:1297:C:OP2	2.63	0.46
2:B:134:GLU:O	2:B:137:ARG:HB3	2.15	0.46
25:Y:228:MET:CE	25:Y:229:LEU:HG	2.45	0.46
13:M:106:ASN:O	13:M:107:ALA:CB	2.63	0.46
23:W:33:U:O2	23:W:36:U:OP2	2.33	0.46
1:A:781:A:H2'	1:A:782:A:H5'	1.97	0.46
1:A:880:C:H2'	1:A:881:G:H8	1.81	0.46
1:A:38:G:C2	1:A:397:A:C2	3.03	0.46
6:F:78:GLU:O	6:F:81:ILE:HG13	2.15	0.46
15:O:4:THR:HG23	15:O:7:GLU:OE1	2.16	0.46
1:A:1397:C:H6	1:A:1397:C:H3'	1.81	0.46
20:T:8:ARG:HH11	20:T:8:ARG:HG3	1.80	0.46
25:Y:313:ALA:O	25:Y:386:GLY:N	2.48	0.46
1:A:979:C:C3'	1:A:980:C:C5'	2.78	0.46
25:Y:423:LYS:HB3	25:Y:472:VAL:CG2	2.32	0.46
1:A:147:G:N2	1:A:148:G:H1'	2.31	0.46
14:N:15:LYS:O	14:N:16:PHE:O	2.34	0.46
23:W:23:C:H2'	23:W:24:U:C6	2.51	0.46
2:B:20:GLU:CG	2:B:189:ASP:OD2	2.64	0.46
1:A:1030(A):G:H2'	1:A:1030(B):C:H5'	1.98	0.46
20:T:89:ARG:HD2	20:T:104:LEU:CG	2.46	0.46
12:L:28:LYS:C	12:L:30:ALA:N	2.68	0.46
4:D:179:GLU:O	4:D:181:MET:HG3	2.15	0.46
1:A:1329:A:OP1	13:M:29:ARG:HG3	2.16	0.46
1:A:747:C:H2'	1:A:748:C:C1'	2.45	0.46
1:A:1319:A:OP2	19:S:5:LEU:HD23	2.15	0.46
13:M:83:ASP:CG	13:M:84:ILE:H	2.17	0.46
4:D:65:ARG:NH1	4:D:70:ILE:O	2.47	0.46
3:C:67:THR:HG23	3:C:102:ASN:HB2	1.98	0.46
1:A:1243:C:O2'	1:A:1244:C:H5'	2.15	0.46
10:J:92:THR:HG23	10:J:93:GLY:H	1.80	0.46
1:A:557:G:H2'	1:A:558:G:O4'	2.16	0.46
1:A:652:U:C2	1:A:752:G:N2	2.83	0.46
2:B:172:ILE:HD12	2:B:172:ILE:N	2.31	0.46
25:Y:141:LYS:CE	28:Y:1690:GDP:N2	2.73	0.45
25:Y:485:GLU:OE1	25:Y:555:LEU:HB2	2.16	0.45
15:O:17:ARG:NH1	15:O:17:ARG:HG3	2.30	0.45
10:J:8:LEU:HB2	10:J:70:ARG:O	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:204:ASN:HD22	2:B:206:ASP:H	1.57	0.45
12:L:83:VAL:HG12	12:L:84:LEU:H	1.81	0.45
1:A:1520:G:O2'	1:A:1521:G:H5'	2.17	0.45
2:B:12:GLU:CA	2:B:16:HIS:ND1	2.77	0.45
1:A:183:G:O2'	1:A:224:C:H4'	2.16	0.45
4:D:17:VAL:O	4:D:19:LEU:HD12	2.16	0.45
25:Y:272:LEU:O	25:Y:272:LEU:HG	2.15	0.45
9:I:126:SER:O	9:I:127:LYS:HB3	2.16	0.45
9:I:99:LEU:N	9:I:99:LEU:HD22	2.31	0.45
1:A:748:C:O2'	1:A:749:C:O5'	2.35	0.45
19:S:6:LYS:O	19:S:7:LYS:HE3	2.16	0.45
25:Y:225:GLU:HB2	25:Y:228:MET:HE1	1.98	0.45
25:Y:445:GLU:HA	25:Y:445:GLU:OE1	2.15	0.45
13:M:14:ARG:HB3	13:M:16:ASP:OD1	2.16	0.45
1:A:909:A:H2'	1:A:910:C:O4'	2.16	0.45
21:U:13:ILE:O	21:U:16:GLY:N	2.49	0.45
1:A:1440:C:C2'	1:A:1441:G:H5'	2.46	0.45
17:Q:88:TYR:O	17:Q:89:LEU:C	2.54	0.45
5:E:86:ALA:HB3	5:E:125:SER:HB3	1.98	0.45
14:N:7:ILE:HG13	14:N:8:GLU:N	2.29	0.45
1:A:1126:U:O4	10:J:7:LYS:HE2	2.17	0.45
5:E:150:ARG:HB2	5:E:150:ARG:NH1	2.31	0.45
10:J:61:GLU:HG3	14:N:58:LYS:NZ	2.32	0.45
1:A:770:C:O2'	1:A:771:G:H5'	2.16	0.45
1:A:325:A:N6	1:A:326:G:N1	2.64	0.45
25:Y:175:SER:O	25:Y:188:TYR:N	2.49	0.45
1:A:346:G:H2'	1:A:347:G:O4'	2.16	0.45
25:Y:39:ILE:HG22	25:Y:40:HIS:N	2.30	0.45
10:J:32:ALA:HB2	10:J:76:ASN:ND2	2.28	0.45
10:J:3:LYS:HZ2	10:J:77:PRO:HD2	1.81	0.45
25:Y:100:VAL:O	25:Y:329:ARG:NH1	2.50	0.45
7:G:23:VAL:O	7:G:27:ILE:HB	2.16	0.45
25:Y:214:GLU:O	25:Y:218:GLU:N	2.50	0.45
25:Y:462:ILE:O	25:Y:466:LEU:HB2	2.16	0.45
20:T:48:LYS:HD2	20:T:51:GLU:OE2	2.16	0.45
2:B:21:ARG:NH2	2:B:38:GLY:HA3	2.31	0.45
10:J:54:PHE:CD2	10:J:55:LYS:HD2	2.49	0.45
25:Y:191:ASP:HB3	25:Y:265:LYS:HB3	1.99	0.45
1:A:1026:G:H3'	1:A:1027:C:C5'	2.46	0.45
25:Y:580:MET:HE2	25:Y:584:ILE:HG12	1.97	0.45
7:G:80:VAL:HG23	7:G:83:ALA:HB3	1.95	0.45
2:B:77:ALA:O	2:B:78:GLN:C	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1328:C:H2'	1:A:1329:A:H8	1.81	0.45
1:A:500:G:H5'	12:L:124:LYS:NZ	2.32	0.45
1:A:217:C:O2'	1:A:470:C:N4	2.49	0.45
1:A:1008:C:H6	1:A:1008:C:O5'	1.99	0.45
1:A:826:C:C2	1:A:827:U:C5	3.05	0.45
1:A:765:G:H1	1:A:812:C:H2'	1.82	0.45
4:D:155:LEU:O	4:D:156:GLU:C	2.55	0.45
8:H:38:ILE:O	8:H:39:LEU:C	2.54	0.45
1:A:811:C:H4'	1:A:900:A:N6	2.31	0.45
21:U:6:ARG:NH2	21:U:15:ARG:NH2	2.64	0.45
24:X:12:A:H5''	24:X:13:A:OP2	2.15	0.45
25:Y:490:PRO:CG	25:Y:516:PRO:HD2	2.30	0.45
10:J:49:VAL:HG21	14:N:41:ARG:O	2.15	0.45
9:I:59:PHE:N	9:I:59:PHE:CD1	2.84	0.45
12:L:20:LYS:CD	12:L:20:LYS:H	2.21	0.45
25:Y:133:ILE:HD12	25:Y:272:LEU:HD11	1.97	0.45
25:Y:64:THR:C	25:Y:66:THR:N	2.70	0.45
1:A:797:C:H2'	1:A:798:G:C8	2.52	0.45
2:B:74:LYS:O	2:B:75:LYS:C	2.54	0.45
1:A:269:C:H2'	1:A:270:A:H8	1.80	0.45
1:A:1157:A:H1'	1:A:1181:G:H21	1.82	0.45
19:S:37:ARG:HG3	19:S:37:ARG:H	1.37	0.45
1:A:1264:C:O2'	1:A:1265:G:H5'	2.17	0.45
20:T:37:SER:O	20:T:41:ILE:HG12	2.15	0.45
10:J:62:HIS:CD2	10:J:62:HIS:H	2.35	0.45
25:Y:464:ASP:O	25:Y:468:ARG:CB	2.63	0.45
25:Y:185:ALA:HB3	25:Y:200:PRO:HA	1.98	0.45
14:N:12:ARG:CZ	14:N:12:ARG:HB2	2.46	0.45
2:B:215:LEU:HD22	2:B:215:LEU:N	2.31	0.45
5:E:28:PHE:O	5:E:47:LYS:HA	2.16	0.45
5:E:90:VAL:O	5:E:120:THR:HA	2.17	0.45
18:R:44:LEU:CD2	18:R:79:LEU:HD22	2.46	0.45
9:I:79:LEU:HD13	9:I:83:ARG:HB2	1.98	0.45
5:E:64:ARG:CG	5:E:64:ARG:NH1	2.80	0.45
1:A:797:C:H2'	1:A:798:G:H8	1.80	0.45
4:D:78:LEU:HD21	4:D:96:LEU:HB2	1.98	0.45
4:D:157:LEU:HG	4:D:161:ASN:HD21	1.82	0.45
2:B:73:THR:HG23	2:B:170:GLU:OE2	2.16	0.45
1:A:1325:C:C2	1:A:1326:C:C5	3.05	0.45
12:L:79:GLU:CB	25:Y:442:THR:OG1	2.65	0.45
1:A:1005:A:H3'	1:A:1006:C:O4'	2.17	0.45
6:F:97:PHE:CD2	18:R:65:ILE:CD1	3.00	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:745:C:H5''	1:A:851:G:H1'	1.99	0.45
1:A:22:G:O2'	1:A:913:A:N1	2.43	0.45
1:A:1163:C:H2'	1:A:1164:G:C8	2.51	0.45
4:D:171:GLY:HA2	4:D:172:PRO:HD3	1.85	0.45
1:A:248:C:O2'	1:A:249:U:H5'	2.17	0.45
1:A:622:A:C8	1:A:623:C:C5	3.04	0.45
17:Q:86:GLU:O	17:Q:90:ILE:HG12	2.17	0.45
14:N:36:PHE:CD1	14:N:36:PHE:C	2.90	0.45
25:Y:413:ILE:HG23	25:Y:413:ILE:O	2.16	0.45
25:Y:656:ALA:O	25:Y:660:ARG:HD2	2.17	0.45
25:Y:512:ILE:N	25:Y:512:ILE:HD13	2.28	0.45
11:K:111:ASP:OD1	18:R:84:LYS:HE2	2.16	0.45
1:A:703:G:O2'	1:A:704:A:OP2	2.35	0.45
5:E:81:GLU:HA	5:E:89:ILE:O	2.17	0.45
19:S:12:ASP:H	19:S:38:SER:HB3	1.80	0.45
4:D:160:GLN:O	4:D:163:GLU:HB3	2.17	0.45
1:A:1015:A:H2'	1:A:1016:A:C8	2.52	0.45
15:O:64:ARG:NH1	15:O:64:ARG:CG	2.79	0.45
1:A:1220:G:H2'	1:A:1221:G:C8	2.42	0.45
1:A:491:G:H2'	1:A:492:G:C8	2.45	0.45
6:F:97:PHE:HB2	18:R:32:ARG:HH21	1.82	0.45
19:S:72:GLY:C	19:S:74:PHE:H	2.20	0.45
1:A:1131:G:C6	1:A:1132:C:N4	2.84	0.45
18:R:40:LEU:O	18:R:42:ARG:N	2.48	0.45
1:A:1392:G:H21	1:A:1502:A:H8	1.64	0.45
25:Y:106:VAL:CG2	25:Y:132:ARG:HG3	2.46	0.45
1:A:1368:G:H5'	9:I:112:LYS:O	2.17	0.45
1:A:1003:G:C2	1:A:1004:A:H1'	2.51	0.45
1:A:703:G:C2'	1:A:704:A:OP2	2.65	0.45
1:A:1226:C:C4	13:M:104:ARG:HB2	2.51	0.45
1:A:628:G:O2'	1:A:629:G:H5'	2.17	0.45
1:A:539:A:OP2	12:L:115:LYS:HE3	2.17	0.45
1:A:935:A:H2'	1:A:936:C:C6	2.52	0.45
3:C:127:ARG:HG2	3:C:127:ARG:NH1	2.32	0.45
18:R:55:ARG:HG3	18:R:55:ARG:NH1	2.31	0.45
25:Y:141:LYS:O	25:Y:144:ALA:CB	2.59	0.45
3:C:80:GLY:HA3	3:C:82:GLU:OE2	2.17	0.45
10:J:17:ASP:OD1	10:J:70:ARG:NH1	2.50	0.45
25:Y:499:ARG:HH12	25:Y:506:GLN:HG2	1.82	0.45
13:M:23:TYR:C	13:M:23:TYR:CD1	2.91	0.45
23:W:28:C:H42	23:W:42:G:H1	1.64	0.45
20:T:22:ARG:O	20:T:26:ASN:ND2	2.50	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:116:THR:CG2	13:M:117:VAL:N	2.80	0.45
1:A:1026:G:H3'	1:A:1027:C:H5'	1.97	0.45
1:A:1191:A:P	3:C:3:ASN:HD21	2.40	0.45
20:T:89:ARG:HD2	20:T:104:LEU:HG	1.98	0.45
1:A:437:U:H2'	1:A:438:G:O4'	2.17	0.45
9:I:9:ARG:HG2	9:I:14:VAL:HA	1.98	0.45
3:C:179:ARG:HG3	3:C:179:ARG:H	1.54	0.45
25:Y:272:LEU:HD12	25:Y:275:ALA:HB3	1.98	0.45
22:V:19:G:H4'	22:V:20:U:OP1	2.17	0.45
2:B:233:SER:OG	2:B:234:PRO:HD2	2.17	0.45
1:A:552:U:H2'	1:A:553:A:C8	2.52	0.45
25:Y:340:TYR:CZ	25:Y:351:ARG:HD3	2.52	0.45
1:A:824:C:H1'	8:H:1:MET:HE2	1.98	0.45
8:H:111:ILE:CG2	8:H:112:LEU:N	2.79	0.45
1:A:1097:C:O2'	1:A:1098:C:H5'	2.17	0.45
15:O:76:GLU:O	15:O:78:TYR:N	2.50	0.45
3:C:195:VAL:C	3:C:196:LEU:HD22	2.37	0.45
25:Y:238:THR:HG22	25:Y:241:GLU:CG	2.33	0.45
25:Y:415:PRO:HB2	25:Y:420:ASP:C	2.37	0.45
1:A:1234:C:C2'	1:A:1235:U:H5'	2.47	0.45
2:B:21:ARG:O	2:B:21:ARG:HG3	2.17	0.45
1:A:956:U:C2'	1:A:957:U:H5'	2.47	0.45
9:I:64:THR:O	9:I:64:THR:HG22	2.17	0.45
1:A:1405:G:O2'	1:A:1406:U:H5'	2.17	0.45
1:A:183:G:H2'	1:A:184:G:H8	1.82	0.45
1:A:1101:A:H4'	1:A:1102:A:C4'	2.46	0.45
9:I:99:LEU:HB2	9:I:101:PHE:CD2	2.52	0.45
16:P:28:ARG:NH1	16:P:28:ARG:HG2	2.31	0.45
25:Y:491:VAL:HG21	25:Y:596:LYS:C	2.37	0.45
1:A:1314:C:C2	1:A:1315:U:C5	3.04	0.45
1:A:1258:G:C6	1:A:1259:C:N4	2.85	0.45
15:O:23:GLY:O	15:O:27:VAL:HB	2.17	0.45
2:B:101:MET:C	2:B:102:LEU:HD12	2.37	0.45
6:F:16:GLN:N	6:F:16:GLN:CD	2.70	0.45
1:A:1065:U:O2'	1:A:1066:C:OP2	2.32	0.45
1:A:1338:G:C6	1:A:1339:A:C6	3.05	0.45
25:Y:359:HIS:HB2	25:Y:362:HIS:O	2.17	0.45
5:E:10:MET:HB2	5:E:32:VAL:HG13	1.98	0.45
10:J:32:ALA:HB1	10:J:76:ASN:HB3	1.98	0.45
25:Y:119:GLU:HB2	25:Y:120:THR:H	1.56	0.45
3:C:72:LYS:HA	3:C:72:LYS:HE3	1.99	0.45
25:Y:486:THR:HG21	25:Y:602:LEU:HG	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:71:GLN:HB2	15:O:78:TYR:CE1	2.52	0.45
15:O:74:ASP:C	15:O:76:GLU:N	2.70	0.45
9:I:114:TYR:HE2	10:J:60:ARG:N	2.08	0.45
2:B:215:LEU:O	2:B:218:ALA:HB3	2.17	0.45
25:Y:156:ARG:HB2	25:Y:157:LEU:HD23	1.99	0.45
4:D:26:CYS:HA	4:D:31:CYS:HA	1.98	0.45
19:S:24:ALA:O	19:S:25:LYS:CB	2.65	0.45
1:A:298:A:H2'	1:A:299:G:O4'	2.17	0.45
6:F:14:LEU:HD22	6:F:18:GLN:NE2	2.31	0.45
25:Y:485:GLU:HG3	25:Y:558:PHE:H	1.82	0.44
13:M:117:VAL:O	13:M:118:ALA:C	2.54	0.44
25:Y:251:ILE:HG22	25:Y:251:ILE:O	2.16	0.44
12:L:86:ARG:NH2	12:L:99:HIS:CD2	2.85	0.44
1:A:489:C:H2'	1:A:490:G:H8	1.82	0.44
13:M:56:LEU:HD13	13:M:60:VAL:HG23	1.98	0.44
1:A:930:C:C2'	1:A:931:C:H5'	2.48	0.44
6:F:22:GLU:O	6:F:24:GLU:N	2.50	0.44
1:A:983:A:HO2'	1:A:1049:U:HO2'	1.63	0.44
25:Y:359:HIS:O	25:Y:361:ASN:N	2.50	0.44
1:A:319:G:O2'	1:A:320:C:H5'	2.16	0.44
1:A:256:U:H2'	1:A:257:G:C8	2.51	0.44
1:A:1370:G:C2	1:A:1371:G:N7	2.85	0.44
3:C:78:GLY:CA	3:C:83:ARG:HB3	2.47	0.44
25:Y:223:PHE:HB3	25:Y:248:LYS:HD3	1.99	0.44
2:B:20:GLU:HG3	2:B:189:ASP:OD2	2.17	0.44
9:I:63:ILE:HD11	9:I:81:ILE:HD11	1.99	0.44
9:I:89:ASN:O	9:I:92:TYR:HB2	2.17	0.44
2:B:121:LEU:HD22	2:B:126:GLU:HB2	1.98	0.44
18:R:46:GLU:C	18:R:48:GLY:N	2.68	0.44
1:A:1442:G:C5	1:A:1442(B):A:H2	2.33	0.44
17:Q:52:LYS:N	17:Q:52:LYS:HD2	2.21	0.44
4:D:31:CYS:O	4:D:32:ALA:CB	2.65	0.44
19:S:31:ILE:CG2	19:S:49:ILE:HA	2.45	0.44
9:I:70:LYS:O	9:I:74:ILE:HG13	2.17	0.44
4:D:111:ALA:HA	4:D:116:GLN:OE1	2.17	0.44
1:A:375:U:H4'	16:P:17:TYR:CE2	2.52	0.44
12:L:8:ASN:HB2	17:Q:34:LYS:HZ3	1.81	0.44
1:A:1422:G:C2	1:A:1423:G:C5	3.05	0.44
2:B:140:HIS:O	2:B:143:GLU:HB2	2.17	0.44
1:A:1379:G:O2'	1:A:1380:U:H5'	2.17	0.44
5:E:7:GLU:O	5:E:8:GLU:HB3	2.18	0.44
12:L:50:SER:O	12:L:51:ALA:HB2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:16:GLN:CD	6:F:16:GLN:H	2.21	0.44
7:G:62:PHE:O	7:G:65:ALA:N	2.50	0.44
25:Y:507:TYR:C	25:Y:507:TYR:CD1	2.91	0.44
10:J:3:LYS:HZ2	10:J:76:ASN:HA	1.82	0.44
25:Y:111:SER:O	25:Y:112:GLN:C	2.54	0.44
25:Y:124:GLN:CA	25:Y:127:LYS:HD3	2.46	0.44
25:Y:138:LYS:HE2	28:Y:1690:GDP:N9	2.32	0.44
1:A:1348:U:O3'	9:I:120:ARG:HG3	2.17	0.44
3:C:50:ALA:CB	3:C:70:VAL:HG11	2.39	0.44
25:Y:550:MET:CE	25:Y:563:ILE:HD11	2.48	0.44
25:Y:201:ILE:HG21	25:Y:206:LEU:HA	1.98	0.44
25:Y:216:LEU:HD23	25:Y:216:LEU:O	2.17	0.44
1:A:1004:A:N1	1:A:1034:G:H2'	2.33	0.44
6:F:72:VAL:CG1	6:F:73:ASN:N	2.79	0.44
1:A:1104:G:H4'	2:B:111:ARG:NH1	2.32	0.44
12:L:20:LYS:CD	12:L:20:LYS:N	2.80	0.44
9:I:95:LYS:C	9:I:98:PRO:HD2	2.38	0.44
25:Y:65:ILE:H	25:Y:65:ILE:HD13	1.82	0.44
19:S:58:VAL:HG21	19:S:75:ALA:CB	2.48	0.44
1:A:1343:G:C6	1:A:1344:C:N4	2.86	0.44
7:G:15:ASP:HB3	7:G:20:ASP:H	1.83	0.44
1:A:470:C:C2'	1:A:471:G:OP1	2.65	0.44
1:A:301:G:H2'	1:A:302:G:C8	2.47	0.44
1:A:1315:U:O2	1:A:1360:A:H2	2.00	0.44
18:R:31:LEU:N	18:R:31:LEU:CD2	2.80	0.44
5:E:143:ARG:NH1	8:H:77:GLU:OE1	2.50	0.44
25:Y:544:LYS:O	25:Y:548:GLU:CB	2.66	0.44
1:A:1389:C:H2'	1:A:1390:U:O4'	2.18	0.44
8:H:101:PRO:HG2	8:H:133:LEU:HD11	1.98	0.44
1:A:756:C:H2'	1:A:757:U:O4'	2.17	0.44
7:G:7:ALA:O	7:G:8:GLU:HB2	2.16	0.44
1:A:1339:A:H2'	1:A:1340:A:H5'	1.99	0.44
16:P:43:LYS:HA	16:P:48:TRP:HB3	1.99	0.44
22:V:35:A:O2'	22:V:36:A:H5'	2.18	0.44
25:Y:141:LYS:NZ	28:Y:1690:GDP:HN22	2.14	0.44
15:O:17:ARG:HD3	15:O:26:GLU:CG	2.29	0.44
15:O:17:ARG:NH1	15:O:77:ARG:NH1	2.66	0.44
25:Y:177:ILE:C	25:Y:178:ILE:HD12	2.38	0.44
25:Y:451:ILE:O	25:Y:451:ILE:HG23	2.17	0.44
2:B:17:PHE:O	2:B:18:GLY:C	2.55	0.44
2:B:19:HIS:CD2	2:B:20:GLU:HG2	2.52	0.44
4:D:64:LEU:HD23	4:D:75:PHE:CZ	2.47	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:8:LYS:O	2:B:9:GLU:C	2.55	0.44
20:T:90:GLN:CA	20:T:93:GLU:OE2	2.66	0.44
3:C:15:THR:CG2	3:C:181:ASN:HA	2.45	0.44
9:I:9:ARG:HB3	9:I:104:ARG:HH12	1.83	0.44
9:I:33:PHE:O	9:I:35:GLU:N	2.47	0.44
1:A:1379:G:C6	1:A:1380:U:C4	3.05	0.44
1:A:1458:G:C6	1:A:1459:C:C4	3.05	0.44
1:A:824:C:H2'	1:A:825:G:C8	2.49	0.44
2:B:149:LEU:O	2:B:150:SER:C	2.56	0.44
3:C:20:SER:HA	3:C:57:ILE:O	2.17	0.44
1:A:96:U:O2'	1:A:97:G:H8	2.00	0.44
7:G:65:ALA:HB1	7:G:127:ALA:HB3	2.00	0.44
1:A:967:C:H2'	1:A:968:A:C8	2.53	0.44
2:B:174:VAL:HG13	2:B:184:VAL:HG11	1.98	0.44
5:E:127:ASN:HA	5:E:128:PRO:HD3	1.88	0.44
2:B:21:ARG:HD2	2:B:39:ILE:CG1	2.48	0.44
1:A:963:G:N2	10:J:55:LYS:HD3	2.31	0.44
14:N:47:LEU:O	14:N:48:ALA:C	2.55	0.44
2:B:11:LEU:O	2:B:12:GLU:O	2.35	0.44
1:A:187:C:OP1	20:T:82:SER:HB2	2.18	0.44
25:Y:331:TYR:CD2	25:Y:399:LEU:HD21	2.53	0.44
22:V:17:C:H1'	22:V:18:G:OP2	2.17	0.44
1:A:1493:A:O2'	1:A:1494:G:OP1	2.31	0.44
1:A:1096:C:H2'	1:A:1097:C:C6	2.52	0.44
1:A:751:U:C2'	1:A:752:G:H5'	2.48	0.44
1:A:261:U:O2	1:A:263:A:C8	2.71	0.44
1:A:791:G:N2	1:A:1497:G:O3'	2.45	0.44
10:J:32:ALA:HB1	10:J:75:ILE:CG1	2.47	0.44
25:Y:33:LEU:N	25:Y:33:LEU:CD1	2.80	0.44
25:Y:244:ALA:O	25:Y:248:LYS:HB2	2.18	0.44
25:Y:515:GLU:HG2	25:Y:515:GLU:O	2.18	0.44
13:M:70:LEU:O	13:M:71:ARG:C	2.55	0.44
23:W:1:C:C2	23:W:2:G:C8	3.06	0.44
8:H:104:ARG:O	8:H:107:LEU:N	2.50	0.44
1:A:954:G:H2'	1:A:955:U:C6	2.52	0.44
22:V:21:A:N1	22:V:46:G:C2	2.86	0.44
4:D:126:ILE:O	4:D:132:ARG:HB2	2.18	0.44
16:P:67:THR:HB	16:P:70:ALA:CB	2.47	0.44
23:W:38:A:N7	23:W:39:C:C5	2.85	0.44
25:Y:175:SER:O	25:Y:188:TYR:HB2	2.17	0.44
5:E:61:TYR:O	5:E:62:ALA:C	2.53	0.44
25:Y:95:GLU:HB3	25:Y:99:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:357:G:H2'	1:A:358:U:H6	1.82	0.44
1:A:813:U:O2'	1:A:814:A:H5'	2.18	0.44
25:Y:296:GLY:O	25:Y:297:GLU:HB3	2.18	0.44
25:Y:356:LEU:HD21	25:Y:363:ARG:HB3	1.98	0.44
25:Y:689:LYS:CG	25:Y:690:GLY:N	2.80	0.44
25:Y:342:TYR:CE2	25:Y:396:ARG:HD2	2.52	0.44
2:B:194:PRO:O	2:B:195:ASP:C	2.56	0.44
4:D:200:GLU:CD	4:D:200:GLU:H	2.20	0.44
1:A:69:G:H2'	1:A:70:G:H8	1.82	0.44
25:Y:84:THR:O	25:Y:85:PRO:C	2.56	0.44
25:Y:414:GLU:HA	25:Y:415:PRO:HD2	1.74	0.44
13:M:66:LEU:HA	13:M:70:LEU:HD12	1.98	0.44
13:M:68:GLY:CA	13:M:71:ARG:HB3	2.48	0.44
1:A:1053:G:N7	1:A:1199:U:H2'	2.33	0.44
17:Q:52:LYS:CD	17:Q:55:ASP:OD2	2.66	0.44
25:Y:259:PHE:CE1	25:Y:275:ALA:HB1	2.52	0.44
22:V:19:G:O4'	22:V:57:G:N2	2.51	0.44
1:A:1298:C:O2'	1:A:1299:A:C2	2.71	0.44
19:S:51:VAL:O	19:S:58:VAL:HG22	2.17	0.44
1:A:300:A:H2'	1:A:301:G:O4'	2.18	0.44
13:M:14:ARG:NH2	13:M:42:ALA:HA	2.32	0.44
22:V:22:G:O2'	22:V:23:A:H5'	2.18	0.44
12:L:105:TYR:CD1	12:L:105:TYR:N	2.84	0.44
25:Y:5:VAL:CG1	25:Y:6:GLU:H	2.31	0.44
7:G:108:ALA:O	7:G:110:GLN:N	2.50	0.44
1:A:1408:A:O2'	1:A:1409:C:H5'	2.16	0.44
6:F:38:GLU:O	6:F:39:LYS:C	2.55	0.44
1:A:622:A:C8	1:A:623:C:C6	3.05	0.44
2:B:194:PRO:HG2	2:B:195:ASP:H	1.81	0.44
1:A:877:C:OP1	8:H:88:LYS:NZ	2.47	0.44
25:Y:130:VAL:HA	25:Y:131:PRO:HD3	1.76	0.44
25:Y:487:ILE:O	25:Y:600:VAL:HG12	2.17	0.44
25:Y:411:VAL:HG12	25:Y:412:ALA:H	1.81	0.44
1:A:1152:A:H2'	1:A:1153:C:C6	2.52	0.44
25:Y:526:VAL:HG12	25:Y:528:ALA:HB2	2.00	0.44
3:C:66:VAL:HG12	3:C:66:VAL:O	2.18	0.44
13:M:23:TYR:HE1	13:M:70:LEU:HD22	1.83	0.44
13:M:23:TYR:CE1	13:M:70:LEU:HD22	2.53	0.44
1:A:1256:A:C2	1:A:1277:C:C4	3.05	0.44
25:Y:247:ARG:NH1	25:Y:251:ILE:HD11	2.33	0.44
25:Y:416:LYS:NZ	25:Y:417:THR:HG23	2.32	0.44
12:L:22:SER:C	12:L:24:VAL:H	2.21	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:108:G:OP2	1:A:109:A:C2	2.71	0.44
2:B:29:ALA:HA	2:B:32:ILE:HG22	2.00	0.44
1:A:540:G:H2'	1:A:541:G:O4'	2.17	0.44
13:M:33:ALA:HA	13:M:59:TYR:HE2	1.83	0.44
3:C:92:ALA:HB2	3:C:99:VAL:HG22	1.99	0.44
5:E:7:GLU:HG2	5:E:112:LEU:CD2	2.46	0.44
1:A:383:A:H2'	1:A:384:G:H5'	1.99	0.44
21:U:18:TYR:CD2	21:U:24:ARG:HG3	2.53	0.44
5:E:32:VAL:O	5:E:43:LEU:HD12	2.18	0.44
25:Y:122:TRP:CZ2	25:Y:159:ALA:HB2	2.52	0.44
1:A:1030(A):G:H1'	1:A:1031:G:N1	2.31	0.44
16:P:5:ARG:NH2	16:P:26:ARG:HB2	2.33	0.44
3:C:159:GLY:HA2	3:C:193:TYR:CE1	2.53	0.44
4:D:125:HIS:C	4:D:126:ILE:HD12	2.38	0.44
4:D:78:LEU:HB3	4:D:93:PHE:HE1	1.82	0.44
1:A:500:G:C5'	12:L:124:LYS:NZ	2.81	0.44
7:G:88:PRO:HB3	7:G:145:ALA:HA	1.99	0.44
12:L:104:VAL:HG12	12:L:105:TYR:CD1	2.53	0.44
1:A:66:G:C4'	1:A:173:U:C5	2.99	0.44
1:A:66:G:H4'	1:A:173:U:H5	1.81	0.44
25:Y:614:GLU:HA	25:Y:617:MET:CB	2.47	0.44
1:A:47:C:H6	1:A:365:U:H2'	1.83	0.44
18:R:74:ARG:HD3	18:R:81:PHE:CD1	2.53	0.44
1:A:236:G:C6	1:A:237:C:C4	3.06	0.44
1:A:1465:C:O2'	1:A:1466:C:H5'	2.17	0.44
5:E:129:ILE:O	5:E:132:ALA:HB3	2.18	0.44
23:W:68:C:O2'	23:W:69:C:H5'	2.18	0.43
25:Y:420:ASP:HB3	25:Y:472:VAL:HG13	1.99	0.43
23:W:14:A:C6	23:W:22:G:C2	3.06	0.43
1:A:1030:C:N4	1:A:1032:G:C2	2.86	0.43
1:A:441:A:H2'	1:A:442:C:H5'	1.99	0.43
1:A:1129:C:H5'	1:A:1129:C:C6	2.42	0.43
12:L:39:VAL:O	12:L:56:ALA:HA	2.18	0.43
6:F:46:ARG:HH22	18:R:37:VAL:CG2	2.29	0.43
1:A:1109:C:H2'	1:A:1110:A:O4'	2.17	0.43
15:O:55:GLY:O	15:O:56:LEU:C	2.55	0.43
25:Y:443:HIS:HE1	25:Y:445:GLU:HB2	1.83	0.43
1:A:865:A:H5'	1:A:1078:U:O4	2.18	0.43
25:Y:350:GLU:HB3	25:Y:380:LEU:HG	1.99	0.43
1:A:405:U:OP2	4:D:3:ARG:HD2	2.18	0.43
1:A:1171:G:H2'	1:A:1172:C:C6	2.53	0.43
3:C:146:ALA:C	3:C:148:GLY:H	2.21	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:138:VAL:O	3:C:139:GLN:C	2.56	0.43
1:A:1056:U:C5'	3:C:163:ALA:HB2	2.48	0.43
1:A:157:G:H2'	1:A:158:G:H8	1.83	0.43
13:M:72:ALA:O	13:M:75:ALA:N	2.51	0.43
25:Y:613:PRO:C	25:Y:615:GLU:N	2.71	0.43
25:Y:90:PHE:HB2	25:Y:454:MET:CE	2.48	0.43
10:J:94:VAL:HG12	10:J:95:GLU:H	1.82	0.43
2:B:17:PHE:CD1	2:B:17:PHE:C	2.91	0.43
25:Y:157:LEU:CD2	25:Y:157:LEU:N	2.79	0.43
20:T:93:GLU:C	20:T:95:ALA:N	2.66	0.43
1:A:112:G:H4'	1:A:389:A:H5''	2.00	0.43
1:A:525:C:OP1	12:L:91:LYS:HE2	2.18	0.43
4:D:203:VAL:O	4:D:206:PHE:HB3	2.17	0.43
19:S:5:LEU:HG	19:S:10:PHE:HD1	1.83	0.43
7:G:140:ASP:HA	7:G:143:ARG:HH11	1.82	0.43
15:O:9:GLN:HB3	15:O:13:GLN:NE2	2.33	0.43
1:A:1216:G:H2'	1:A:1217:C:H6	1.82	0.43
1:A:1244:C:H2'	1:A:1245:A:H8	1.82	0.43
1:A:260:G:H2'	1:A:261:U:C6	2.53	0.43
8:H:74:PRO:O	8:H:75:ARG:C	2.56	0.43
1:A:784:C:H2'	1:A:785:G:H8	1.83	0.43
6:F:40:VAL:O	6:F:40:VAL:HG13	2.17	0.43
1:A:1371:G:C6	1:A:1372:U:C4	3.06	0.43
25:Y:485:GLU:HB2	25:Y:558:PHE:O	2.17	0.43
25:Y:181:LEU:HD11	25:Y:242:LEU:HD22	2.00	0.43
25:Y:434:GLU:OE1	25:Y:465:ARG:NH2	2.52	0.43
22:V:4:C:O2'	22:V:5:G:P	2.76	0.43
23:W:23:C:H2'	23:W:24:U:H6	1.83	0.43
1:A:965:A:C2	1:A:969:A:N1	2.86	0.43
1:A:1227:A:O2'	13:M:117:VAL:HG21	2.18	0.43
9:I:95:LYS:HD3	9:I:95:LYS:C	2.38	0.43
15:O:85:LEU:O	15:O:85:LEU:HD23	2.19	0.43
25:Y:64:THR:HG23	25:Y:66:THR:HB	1.99	0.43
25:Y:603:GLU:OE2	25:Y:628:ARG:NH2	2.51	0.43
1:A:1010:G:C2	1:A:1011:G:C8	3.06	0.43
25:Y:517:LEU:HD11	25:Y:564:LYS:HB3	2.00	0.43
1:A:155:C:H2'	1:A:156:G:H8	1.83	0.43
1:A:689:C:H6	1:A:689:C:O5'	2.01	0.43
25:Y:117:GLN:C	25:Y:119:GLU:N	2.70	0.43
25:Y:178:ILE:HD11	25:Y:185:ALA:HB1	2.00	0.43
25:Y:461:ILE:HD12	25:Y:462:ILE:N	2.33	0.43
20:T:97:ALA:O	20:T:99:LEU:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:76:ILE:HD11	5:E:142:LEU:CD2	2.48	0.43
5:E:78:HIS:HD2	8:H:107:LEU:HD12	1.84	0.43
8:H:10:LEU:O	8:H:13:ILE:HB	2.18	0.43
9:I:19:LEU:HB3	9:I:59:PHE:HD2	1.84	0.43
12:L:70:ILE:HG21	12:L:77:LEU:HD12	1.99	0.43
25:Y:150:ILE:C	25:Y:152:THR:H	2.22	0.43
25:Y:64:THR:O	25:Y:66:THR:N	2.39	0.43
4:D:111:ALA:HB3	4:D:117:ALA:HB2	1.99	0.43
25:Y:583:LYS:C	25:Y:583:LYS:HD3	2.39	0.43
1:A:1270:C:O2'	1:A:1271:G:H5'	2.18	0.43
6:F:97:PHE:N	18:R:30:ASP:OD1	2.51	0.43
5:E:34:VAL:O	5:E:34:VAL:HG13	2.18	0.43
1:A:116:A:O5'	1:A:116:A:H8	2.00	0.43
1:A:398:C:H2'	1:A:399:G:H8	1.84	0.43
7:G:93:PRO:HG2	7:G:94:ARG:H	1.83	0.43
1:A:1133:G:N2	1:A:1143:G:H1'	2.34	0.43
17:Q:76:LEU:HD12	17:Q:77:VAL:N	2.33	0.43
2:B:34:ALA:O	2:B:41:ILE:HB	2.18	0.43
1:A:1118:C:H1'	1:A:1179:A:C4	2.54	0.43
25:Y:592:GLU:HG2	25:Y:592:GLU:O	2.18	0.43
25:Y:24:GLY:O	25:Y:25:LYS:C	2.56	0.43
25:Y:13:ARG:O	25:Y:79:ILE:HG23	2.18	0.43
15:O:76:GLU:C	15:O:78:TYR:N	2.71	0.43
1:A:1054:C:H3'	1:A:1054:C:O2	2.18	0.43
18:R:58:LEU:CD1	18:R:58:LEU:N	2.81	0.43
23:W:49:G:C3'	23:W:50:U:H5''	2.48	0.43
1:A:1116:C:O2'	1:A:1117:G:H5''	2.19	0.43
19:S:4:SER:O	19:S:5:LEU:C	2.56	0.43
18:R:32:ARG:HA	18:R:69:THR:CG2	2.48	0.43
18:R:68:LYS:O	18:R:71:LYS:N	2.49	0.43
1:A:937:A:C2	1:A:1379:G:O6	2.71	0.43
1:A:415:A:H2'	1:A:416:G:H8	1.82	0.43
1:A:927:G:O2'	1:A:928:G:H5'	2.19	0.43
1:A:334:C:H2'	1:A:335:C:C6	2.53	0.43
1:A:923:A:OP1	5:E:21:ALA:HB2	2.18	0.43
1:A:1065:U:C2'	1:A:1066:C:OP2	2.66	0.43
8:H:27:PRO:HA	8:H:58:TYR:CD1	2.54	0.43
2:B:23:ARG:HD2	2:B:23:ARG:HA	1.79	0.43
22:V:36:A:N3	25:Y:502:GLY:HA2	2.34	0.43
1:A:980:C:O2	14:N:19:ARG:HA	2.18	0.43
25:Y:550:MET:HE3	25:Y:563:ILE:HD11	2.00	0.43
25:Y:206:LEU:O	25:Y:209:ALA:HB3	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:T:100:ILE:HG13	20:T:101:GLY:H	1.84	0.43
25:Y:512:ILE:HG12	25:Y:514:VAL:HG23	1.99	0.43
5:E:76:ILE:HD11	5:E:142:LEU:HD22	1.99	0.43
25:Y:404:VAL:H	25:Y:405:PRO:HD3	1.81	0.43
9:I:97:LYS:N	9:I:98:PRO:CD	2.82	0.43
2:B:142:LEU:HD23	2:B:142:LEU:C	2.39	0.43
1:A:277:C:C2'	1:A:278:G:H5'	2.49	0.43
1:A:159:G:C3'	1:A:160:A:H5''	2.49	0.43
13:M:124:PRO:HG2	25:Y:574:GLU:N	2.32	0.43
25:Y:498:ILE:O	25:Y:498:ILE:HG13	2.19	0.43
5:E:9:LYS:NZ	5:E:111:GLU:OE1	2.52	0.43
5:E:33:VAL:HG12	5:E:34:VAL:H	1.82	0.43
25:Y:5:VAL:CG1	25:Y:6:GLU:N	2.80	0.43
11:K:126:ARG:O	11:K:127:LYS:C	2.57	0.43
25:Y:635:GLU:HA	25:Y:636:PRO:HD2	1.85	0.43
1:A:64:G:N2	1:A:67:C:C4	2.86	0.43
1:A:1096:C:H2'	1:A:1097:C:H6	1.83	0.43
14:N:2:ALA:O	14:N:6:LEU:HD12	2.18	0.43
25:Y:359:HIS:C	25:Y:361:ASN:H	2.22	0.43
11:K:60:ALA:O	11:K:61:ALA:C	2.55	0.43
1:A:103:C:H3'	1:A:104:G:H8	1.83	0.43
7:G:41:ARG:HG2	7:G:41:ARG:HH11	1.84	0.43
1:A:1287:A:H2'	1:A:1288:A:C8	2.54	0.43
10:J:16:LEU:HD13	10:J:16:LEU:O	2.19	0.43
25:Y:9:LEU:C	25:Y:9:LEU:CD2	2.86	0.43
23:W:6:G:H1	23:W:67:C:N4	2.14	0.43
1:A:954:G:N2	1:A:1228:C:N3	2.66	0.43
18:R:44:LEU:CD1	18:R:44:LEU:N	2.81	0.43
3:C:178:LEU:C	3:C:180:ALA:H	2.21	0.43
1:A:1129:C:H1'	1:A:1130:A:N7	2.34	0.43
3:C:134:ILE:O	3:C:135:LYS:C	2.57	0.43
2:B:210:SER:O	2:B:211:ILE:C	2.56	0.43
2:B:80:ILE:N	2:B:80:ILE:HD12	2.32	0.43
23:W:40:C:O2'	23:W:41:C:H5'	2.18	0.43
13:M:54:VAL:HA	13:M:57:ARG:HE	1.83	0.43
25:Y:380:LEU:O	25:Y:381:LYS:CE	2.67	0.43
6:F:35:ALA:O	6:F:36:ARG:C	2.57	0.43
13:M:72:ALA:O	13:M:73:GLU:C	2.57	0.43
7:G:41:ARG:HG2	7:G:41:ARG:NH1	2.33	0.43
1:A:505:G:H5'	1:A:534:U:H2'	2.00	0.43
1:A:1378:C:O2	7:G:76:ARG:NH2	2.51	0.43
25:Y:223:PHE:CD2	25:Y:245:ALA:O	2.72	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:8:LEU:HA	10:J:95:GLU:O	2.18	0.43
22:V:2:C:H2'	22:V:3:C:C6	2.54	0.43
22:V:16:U:O2'	22:V:60:U:O3'	2.37	0.43
2:B:43:ASP:OD2	2:B:46:LYS:HE3	2.19	0.43
1:A:720:C:H6	1:A:720:C:O5'	2.02	0.43
12:L:86:ARG:NH2	12:L:99:HIS:CG	2.87	0.43
1:A:476:G:H2'	1:A:477:A:C8	2.50	0.43
1:A:1008:C:H2'	1:A:1009:G:C8	2.51	0.43
25:Y:228:MET:HE2	25:Y:229:LEU:HG	1.99	0.43
25:Y:544:LYS:O	25:Y:548:GLU:HB2	2.19	0.43
1:A:35:G:C6	1:A:36:C:N4	2.87	0.43
10:J:20:ALA:C	10:J:22:LYS:N	2.72	0.43
1:A:1074:G:O2'	1:A:1075:C:H5'	2.18	0.43
4:D:137:SER:O	4:D:138:TYR:C	2.57	0.43
1:A:779:C:O2'	1:A:780:A:H5'	2.19	0.43
25:Y:171:GLU:CG	25:Y:172:ASP:N	2.81	0.43
25:Y:616:TYR:CE1	25:Y:666:ARG:HD3	2.54	0.43
25:Y:613:PRO:HD3	25:Y:666:ARG:O	2.19	0.43
13:M:15:VAL:HG11	13:M:48:LEU:HD11	2.01	0.43
5:E:144:THR:C	5:E:146:ALA:N	2.70	0.43
16:P:21:VAL:HG11	16:P:59:TRP:NE1	2.34	0.43
2:B:119:GLU:O	2:B:121:LEU:N	2.50	0.43
1:A:1404:C:H5'	1:A:1405:G:P	2.58	0.43
12:L:90:VAL:C	12:L:92:ASP:N	2.70	0.43
2:B:7:VAL:C	2:B:11:LEU:HG	2.39	0.43
1:A:1457:G:H8	1:A:1457:G:O5'	2.01	0.43
1:A:501:C:OP1	12:L:117:ARG:NH2	2.48	0.43
1:A:663:A:C2'	1:A:664:G:H5'	2.48	0.43
23:W:54:5MU:H2'	23:W:55:U:O4'	2.19	0.43
1:A:8:A:N6	4:D:205:GLU:O	2.52	0.43
7:G:113:GLU:CG	7:G:119:ARG:HG2	2.48	0.43
21:U:6:ARG:NH2	21:U:15:ARG:HH21	2.17	0.43
4:D:86:LYS:HA	4:D:86:LYS:HD3	1.87	0.43
25:Y:17:ILE:HG22	25:Y:25:LYS:HG2	2.01	0.43
3:C:52:LEU:HD12	3:C:55:VAL:CG2	2.49	0.43
25:Y:211:GLU:HG3	25:Y:212:TYR:N	2.34	0.43
25:Y:424:LEU:HA	25:Y:427:ALA:HB3	2.01	0.43
3:C:34:LEU:CD2	3:C:38:ARG:HD2	2.38	0.43
23:W:28:C:N4	23:W:42:G:H1	2.17	0.43
5:E:150:ARG:CZ	5:E:150:ARG:HB2	2.49	0.43
5:E:77:PRO:HG2	5:E:78:HIS:H	1.84	0.43
1:A:423:G:C2'	1:A:424:G:H5'	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:973:G:C1'	10:J:55:LYS:CE	2.86	0.43
22:V:16:U:HO2'	22:V:61:C:P	2.42	0.43
2:B:11:LEU:HB3	2:B:213:LEU:HD11	2.01	0.43
3:C:11:ARG:HH11	3:C:11:ARG:HG2	1.84	0.43
4:D:25:ARG:NH1	4:D:30:LYS:HD2	2.34	0.43
19:S:31:ILE:HG21	19:S:49:ILE:HG12	2.01	0.43
15:O:11:VAL:O	15:O:14:GLU:CB	2.64	0.43
12:L:119:LYS:HB2	12:L:120:TYR:CD1	2.54	0.43
3:C:25:GLY:O	3:C:27:LYS:N	2.52	0.43
16:P:3:LYS:HG2	16:P:65:GLN:HB2	2.00	0.43
1:A:1133:G:C1'	1:A:1142:G:H22	2.32	0.43
1:A:125:U:H2'	1:A:126:G:C8	2.54	0.43
8:H:46:LYS:HE3	8:H:64:LYS:HG3	2.01	0.43
6:F:51:PRO:HA	6:F:55:ASP:O	2.18	0.43
6:F:61:LEU:O	6:F:62:TRP:HB2	2.19	0.43
1:A:1501:C:OP2	1:A:1504:G:H2'	2.19	0.42
25:Y:73:PHE:CE1	25:Y:78:ARG:HB2	2.54	0.42
1:A:1316:G:H4'	14:N:18:VAL:CG1	2.48	0.42
25:Y:610:VAL:HG12	25:Y:659:LEU:HG	2.00	0.42
1:A:192:U:C4'	20:T:103:GLY:HA2	2.49	0.42
13:M:68:GLY:N	13:M:71:ARG:HB3	2.33	0.42
16:P:23:ASP:OD1	16:P:25:ARG:N	2.47	0.42
1:A:954:G:H21	1:A:1227:A:H62	1.67	0.42
9:I:63:ILE:CG2	9:I:64:THR:N	2.81	0.42
18:R:44:LEU:HA	18:R:49:LYS:O	2.19	0.42
1:A:141:A:H1'	1:A:182:U:O2	2.19	0.42
4:D:104:VAL:O	4:D:108:LEU:HB2	2.19	0.42
25:Y:276:VAL:O	25:Y:280:LEU:HB2	2.20	0.42
9:I:40:LEU:C	9:I:42:ARG:N	2.72	0.42
4:D:131:ARG:N	4:D:131:ARG:HD3	2.29	0.42
1:A:1219:U:H2'	1:A:1220:G:C8	2.53	0.42
1:A:1320:C:N4	19:S:36:ARG:HG3	2.34	0.42
18:R:68:LYS:O	18:R:69:THR:C	2.58	0.42
6:F:19:LEU:HD23	6:F:19:LEU:O	2.19	0.42
6:F:37:VAL:HG12	6:F:38:GLU:H	1.84	0.42
1:A:1134:G:O2'	1:A:1135:U:H5'	2.19	0.42
6:F:95:GLU:HA	6:F:96:PRO:HD3	1.86	0.42
1:A:600:C:H4'	8:H:128:GLY:O	2.19	0.42
1:A:1290:G:H2'	1:A:1290:G:N3	2.34	0.42
10:J:79:ARG:HG2	10:J:79:ARG:NH1	2.35	0.42
2:B:185:ILE:HA	2:B:199:TYR:O	2.18	0.42
5:E:147:ASP:HA	5:E:150:ARG:NH1	2.32	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:999:C:H6	1:A:999:C:H3'	1.83	0.42
1:A:769:G:H4'	1:A:1513:A:H4'	2.00	0.42
3:C:174:PRO:O	3:C:175:LEU:C	2.57	0.42
5:E:64:ARG:CG	5:E:64:ARG:HH11	2.22	0.42
1:A:349:A:H2'	1:A:350:G:C5'	2.45	0.42
12:L:98:TYR:N	12:L:98:TYR:CD1	2.87	0.42
1:A:109:A:C6	1:A:326:G:C5	3.07	0.42
13:M:54:VAL:O	13:M:56:LEU:N	2.51	0.42
1:A:781:A:C2'	1:A:782:A:H5'	2.49	0.42
1:A:34:C:O2'	1:A:35:G:H5'	2.19	0.42
1:A:1058:G:C6	1:A:1059:C:C4	3.07	0.42
17:Q:31:LEU:HG	17:Q:32:TYR:CE1	2.54	0.42
1:A:78:G:H22	1:A:91:C:N4	2.17	0.42
10:J:28:ARG:NH1	10:J:28:ARG:HG2	2.34	0.42
25:Y:109:ASP:OD1	25:Y:138:LYS:HG3	2.19	0.42
25:Y:130:VAL:O	25:Y:132:ARG:CZ	2.68	0.42
25:Y:90:PHE:CB	25:Y:454:MET:HB2	2.49	0.42
9:I:119:ALA:O	9:I:120:ARG:CG	2.58	0.42
9:I:4:TYR:HA	9:I:88:TYR:CD1	2.54	0.42
5:E:11:ILE:HG22	5:E:12:LEU:H	1.82	0.42
1:A:1103:C:C4	1:A:1104:G:N7	2.87	0.42
2:B:144:ARG:HG3	2:B:145:LEU:N	2.34	0.42
9:I:93:ARG:O	9:I:95:LYS:N	2.52	0.42
25:Y:276:VAL:O	25:Y:280:LEU:HD23	2.19	0.42
7:G:16:LEU:HD12	9:I:42:ARG:HA	1.99	0.42
1:A:1329:A:OP1	13:M:28:ALA:HB3	2.19	0.42
6:F:91:VAL:HG12	6:F:92:LYS:N	2.34	0.42
5:E:143:ARG:HD3	5:E:143:ARG:HA	1.87	0.42
1:A:930:C:C4	1:A:931:C:C5	3.07	0.42
13:M:63:THR:CG2	13:M:64:TRP:H	2.32	0.42
1:A:1337:G:H5''	1:A:1338:G:OP2	2.18	0.42
6:F:60:PHE:C	6:F:61:LEU:HD12	2.39	0.42
19:S:20:LEU:HA	19:S:23:ASN:HB2	2.01	0.42
1:A:150:C:H6	1:A:150:C:O5'	2.01	0.42
25:Y:115:GLU:HA	25:Y:116:PRO:HD2	1.93	0.42
25:Y:89:ASP:HB2	25:Y:90:PHE:H	1.66	0.42
1:A:1366:C:H2'	1:A:1367:C:H6	1.85	0.42
15:O:21:ASP:OD1	15:O:24:SER:HB3	2.19	0.42
25:Y:431:LEU:HD22	25:Y:466:LEU:CD1	2.40	0.42
25:Y:465:ARG:HD2	25:Y:469:GLU:HG2	2.01	0.42
13:M:68:GLY:H	13:M:71:ARG:CB	2.32	0.42
2:B:17:PHE:HD1	2:B:17:PHE:H	1.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:687:A:H62	1:A:703:G:H1'	1.83	0.42
16:P:5:ARG:HE	16:P:22:THR:HG21	1.84	0.42
5:E:12:LEU:HD13	5:E:31:LEU:HB3	2.02	0.42
2:B:12:GLU:HB2	2:B:13:ALA:H	1.57	0.42
4:D:30:LYS:O	4:D:32:ALA:N	2.53	0.42
16:P:2:VAL:HG22	16:P:64:ALA:HA	2.00	0.42
1:A:1423:G:C5	1:A:1424:C:C4	3.07	0.42
9:I:3:GLN:NE2	9:I:20:ARG:NH2	2.66	0.42
11:K:126:ARG:HG2	11:K:126:ARG:HH11	1.84	0.42
20:T:36:LEU:HD12	20:T:59:ALA:CB	2.49	0.42
14:N:21:TYR:HE2	14:N:23:ARG:NH2	2.17	0.42
20:T:73:HIS:HB3	20:T:74:LYS:HD3	2.01	0.42
1:A:1244:C:H2'	1:A:1245:A:C8	2.55	0.42
1:A:1042:G:C2'	1:A:1043:C:H5'	2.49	0.42
1:A:152:A:N6	1:A:170:U:C2	2.87	0.42
1:A:373:A:C2	1:A:482:A:C6	3.06	0.42
25:Y:138:LYS:HE2	28:Y:1690:GDP:C4	2.55	0.42
25:Y:25:LYS:HB2	28:Y:1690:GDP:O2B	2.19	0.42
25:Y:616:TYR:OH	25:Y:666:ARG:HD3	2.19	0.42
25:Y:14:ASN:ND2	25:Y:80:ASN:HD22	2.16	0.42
25:Y:136:ALA:HB3	25:Y:260:LEU:CB	2.50	0.42
25:Y:427:ALA:O	25:Y:431:LEU:HB2	2.20	0.42
25:Y:414:GLU:O	25:Y:474:ALA:HB1	2.19	0.42
22:V:70:G:O2'	22:V:71:G:H5'	2.19	0.42
20:T:11:SER:HA	20:T:13:LEU:HD12	2.02	0.42
4:D:100:ARG:O	4:D:103:ASN:HB3	2.18	0.42
1:A:965:A:C2	1:A:969:A:C2	3.08	0.42
25:Y:35:TYR:HE2	25:Y:269:VAL:CB	2.28	0.42
1:A:186:C:H1'	20:T:81:LYS:HE2	2.00	0.42
17:Q:52:LYS:HD3	17:Q:55:ASP:OD2	2.19	0.42
4:D:129:ASN:HD21	4:D:145:GLU:N	2.18	0.42
1:A:538:G:O2'	1:A:539:A:H5'	2.19	0.42
1:A:500:G:C5'	12:L:124:LYS:HZ3	2.31	0.42
13:M:57:ARG:CG	13:M:58:GLU:N	2.82	0.42
23:W:33:U:H2'	23:W:33:U:O2	2.19	0.42
1:A:67:C:O2'	1:A:171:A:H1'	2.20	0.42
7:G:91:VAL:HG12	7:G:92:SER:H	1.84	0.42
25:Y:673:PHE:CG	25:Y:674:ASP:N	2.88	0.42
1:A:779:C:H1'	11:K:120:ARG:HD2	2.02	0.42
4:D:50:ARG:HA	4:D:51:PRO:HD3	1.89	0.42
26:F:1102:FUA:C15	26:F:1102:FUA:H323	2.49	0.42
25:Y:555:LEU:HG	25:Y:599:PRO:CB	2.44	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:632:LEU:HD11	25:Y:646:PHE:CE2	2.55	0.42
25:Y:409:ILE:O	25:Y:459:LEU:HD21	2.20	0.42
1:A:193:C:H2'	1:A:194:C:C6	2.55	0.42
20:T:52:ALA:O	20:T:53:LEU:C	2.56	0.42
22:V:49:C:H2'	22:V:50:U:C6	2.55	0.42
1:A:1112:C:H1'	3:C:179:ARG:HD3	2.00	0.42
9:I:95:LYS:NZ	9:I:96:LEU:HD13	2.25	0.42
1:A:1299:A:C2	1:A:1301:U:C2	3.07	0.42
3:C:51:GLY:O	3:C:115:LEU:HD21	2.19	0.42
1:A:773:G:C2'	1:A:774:G:H5'	2.50	0.42
2:B:73:THR:O	2:B:75:LYS:N	2.52	0.42
2:B:77:ALA:O	2:B:78:GLN:O	2.38	0.42
1:A:474:G:H2'	1:A:475:G:H8	1.84	0.42
1:A:1305:G:H5''	21:U:4:GLY:C	2.40	0.42
25:Y:137:ASN:ND2	25:Y:263:ALA:H	2.17	0.42
19:S:72:GLY:C	19:S:74:PHE:N	2.72	0.42
1:A:238:G:O2'	1:A:239:U:H5'	2.19	0.42
10:J:56:HIS:O	10:J:58:ASP:N	2.52	0.42
2:B:97:TRP:CH2	2:B:176:GLU:CD	2.93	0.42
14:N:21:TYR:CE2	14:N:23:ARG:NH2	2.87	0.42
6:F:60:PHE:CE2	18:R:78:LEU:HD21	2.55	0.42
1:A:161:A:O2'	1:A:162:A:H5'	2.19	0.42
25:Y:390:VAL:O	25:Y:391:GLY:C	2.57	0.42
1:A:72:C:H2'	1:A:73:G:H8	1.83	0.42
4:D:173:TRP:CZ3	4:D:193:ASP:HB3	2.55	0.42
4:D:98:GLU:CG	4:D:189:PRO:HG3	2.49	0.42
18:R:43:PHE:C	18:R:44:LEU:HD12	2.40	0.42
5:E:11:ILE:CG2	5:E:12:LEU:H	2.32	0.42
4:D:15:GLU:HG3	4:D:63:LYS:HE2	2.02	0.42
25:Y:259:PHE:CZ	25:Y:275:ALA:HB1	2.54	0.42
4:D:179:GLU:C	4:D:181:MET:H	2.21	0.42
2:B:75:LYS:C	2:B:75:LYS:HD3	2.39	0.42
1:A:1324:A:H2'	1:A:1325:C:C6	2.55	0.42
16:P:74:LEU:O	16:P:79:VAL:HG23	2.19	0.42
1:A:949:A:C2	1:A:1233:G:C4	3.08	0.42
1:A:948:C:OP1	13:M:107:ALA:HA	2.18	0.42
1:A:1107:C:C4	1:A:1108:G:C8	3.08	0.42
1:A:1142:G:H2'	1:A:1143:G:O4'	2.20	0.42
3:C:28:GLN:O	3:C:29:TYR:C	2.58	0.42
19:S:16:LEU:O	19:S:20:LEU:N	2.46	0.42
12:L:43:VAL:HG13	12:L:55:VAL:HG21	2.00	0.42
1:A:1362:C:O2'	1:A:1363:C:H5''	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:54:ARG:HG2	15:O:58:MET:CE	2.50	0.42
10:J:99:LYS:HA	10:J:99:LYS:HD3	1.80	0.42
25:Y:546:ILE:HG21	25:Y:565:VAL:HG21	2.01	0.42
1:A:181:G:N2	1:A:195:A:C4	2.88	0.42
20:T:104:LEU:HD23	20:T:105:SER:O	2.18	0.42
20:T:94:ALA:O	20:T:95:ALA:HB3	2.19	0.42
25:Y:302:HIS:O	25:Y:304:ASP:N	2.40	0.42
13:M:79:LYS:HA	13:M:82:MET:HG3	2.00	0.42
11:K:99:GLN:HG2	11:K:105:VAL:CG2	2.44	0.42
1:A:1300:G:O2'	1:A:1301:U:OP2	2.38	0.42
9:I:125:TYR:CE1	9:I:127:LYS:HB2	2.54	0.42
1:A:878:G:C5'	8:H:89:PRO:HG2	2.50	0.42
4:D:122:ARG:NH1	4:D:134:ASP:O	2.52	0.42
1:A:375:U:O2'	16:P:28:ARG:HD2	2.19	0.42
25:Y:580:MET:O	25:Y:583:LYS:CB	2.67	0.42
12:L:11:VAL:HG13	17:Q:29:HIS:HD2	1.84	0.42
1:A:1095:U:P	1:A:1108:G:H1	2.42	0.42
13:M:73:GLU:O	13:M:76:ALA:HB3	2.20	0.42
8:H:122:ARG:HB3	8:H:122:ARG:HH11	1.85	0.42
1:A:1248:A:C5	1:A:1249:C:C5	3.07	0.42
20:T:14:LYS:N	20:T:17:ARG:HH21	2.18	0.42
1:A:189(B):C:C2	1:A:189(J):G:C2	3.08	0.42
15:O:48:LYS:HA	15:O:48:LYS:HD3	1.63	0.42
10:J:78:ASN:HB2	10:J:81:THR:CG2	2.48	0.42
26:F:1102:FUA:H231	26:F:1102:FUA:C12	2.45	0.42
25:Y:36:THR:HG21	25:Y:72:CYS:SG	2.60	0.42
3:C:87:LEU:O	3:C:88:ARG:C	2.58	0.42
25:Y:413:ILE:HG22	25:Y:449:THR:O	2.19	0.42
13:M:10:PRO:HB2	13:M:18:ALA:CB	2.44	0.42
2:B:21:ARG:HB3	2:B:39:ILE:HA	2.02	0.42
9:I:4:TYR:HA	9:I:88:TYR:CE1	2.55	0.42
1:A:33:A:O2'	1:A:363:A:N3	2.52	0.42
1:A:179:A:O2'	1:A:180:U:H5'	2.19	0.42
5:E:143:ARG:NH1	8:H:77:GLU:OE2	2.52	0.42
1:A:1010:G:H2'	1:A:1011:G:H8	1.85	0.42
1:A:417:C:H2'	1:A:418:C:C6	2.54	0.42
25:Y:641:GLN:HE21	25:Y:641:GLN:HB2	1.67	0.42
3:C:129:ALA:C	3:C:131:ARG:N	2.73	0.42
1:A:342:C:C5	1:A:343:U:C5	3.07	0.42
2:B:153:ARG:C	2:B:155:LEU:N	2.73	0.42
4:D:168:ARG:HH11	4:D:168:ARG:HA	1.83	0.42
1:A:858:G:O2'	1:A:859:A:H5''	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:121:VAL:HG23	25:Y:122:TRP:N	2.29	0.42
2:B:166:ASP:HA	2:B:167:PRO:HD2	1.87	0.42
1:A:793:U:C3'	1:A:794:A:C5'	2.87	0.42
15:O:25:THR:O	15:O:26:GLU:C	2.59	0.42
25:Y:238:THR:HG23	25:Y:241:GLU:H	1.85	0.42
20:T:48:LYS:O	20:T:49:ALA:C	2.58	0.42
23:W:27:U:O5'	23:W:27:U:H6	2.02	0.42
1:A:953:G:O6	1:A:1228:C:N4	2.52	0.42
2:B:30:ARG:NH2	2:B:31:TYR:OH	2.53	0.42
1:A:184:G:H2'	1:A:185:A:H8	1.85	0.42
9:I:84:ALA:O	9:I:86:VAL:N	2.53	0.42
19:S:25:LYS:O	19:S:26:GLY:C	2.58	0.42
1:A:630:G:H2'	1:A:631:G:H5'	2.00	0.42
4:D:159:ARG:O	4:D:162:LEU:N	2.53	0.42
11:K:20:TYR:CD1	11:K:83:ILE:HB	2.54	0.42
3:C:141:VAL:HG11	3:C:202:ILE:CD1	2.50	0.42
3:C:92:ALA:HB2	3:C:99:VAL:CG2	2.50	0.42
2:B:147:LYS:HE2	2:B:148:TYR:CE1	2.55	0.42
1:A:1431:C:H2'	1:A:1432:G:C5'	2.49	0.42
1:A:711:G:H2'	1:A:712:A:C8	2.55	0.42
1:A:238:G:C6	1:A:239:U:C4	3.07	0.42
4:D:110:PHE:N	4:D:110:PHE:HD1	2.17	0.42
2:B:152:PHE:O	2:B:153:ARG:HB2	2.19	0.42
1:A:534:U:H5'	1:A:534:U:H6	1.84	0.42
15:O:54:ARG:HG2	15:O:58:MET:HE2	2.02	0.42
14:N:60:SER:O	14:N:61:TRP:HB3	2.20	0.42
1:A:1473:A:O2'	1:A:1474:G:H5'	2.20	0.42
2:B:114:ARG:O	2:B:114:ARG:CD	2.68	0.42
11:K:22:HIS:CD2	11:K:22:HIS:C	2.93	0.42
25:Y:312:LEU:O	25:Y:328:ILE:HA	2.20	0.41
3:C:87:LEU:C	3:C:89:GLU:N	2.73	0.41
25:Y:607:ARG:HA	25:Y:645:ALA:O	2.20	0.41
1:A:1003:G:C2'	1:A:1004:A:H4'	2.35	0.41
13:M:10:PRO:HG2	13:M:11:ARG:H	1.85	0.41
8:H:104:ARG:HB3	8:H:108:GLY:H	1.84	0.41
8:H:83:ILE:HD12	8:H:137:VAL:CG2	2.38	0.41
9:I:63:ILE:HG22	9:I:64:THR:N	2.35	0.41
25:Y:149:VAL:O	25:Y:152:THR:CG2	2.59	0.41
1:A:1148:U:H2'	1:A:1149:C:H5'	2.01	0.41
20:T:45:GLN:CB	20:T:91:LEU:HD22	2.48	0.41
1:A:1239:A:H62	1:A:1299:A:H62	1.68	0.41
8:H:41:ARG:NH2	8:H:123:GLU:OE1	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:R:37:VAL:O	18:R:39:VAL:N	2.53	0.41
15:O:64:ARG:HB2	15:O:64:ARG:CZ	2.50	0.41
1:A:276:G:C2'	1:A:277:C:H5'	2.49	0.41
1:A:179:A:H2'	1:A:180:U:H6	1.82	0.41
1:A:1313:U:P	19:S:6:LYS:HG3	2.60	0.41
1:A:1493:A:N6	25:Y:579:GLU:HG3	2.32	0.41
3:C:61:ALA:O	3:C:62:ASP:HB2	2.20	0.41
16:P:1:MET:HE3	16:P:65:GLN:HG3	2.01	0.41
1:A:807:A:C5	1:A:808:C:C4	3.08	0.41
13:M:121:LYS:NZ	13:M:121:LYS:HB2	2.35	0.41
1:A:1042:G:O2'	1:A:1043:C:H5'	2.19	0.41
6:F:52:ILE:O	6:F:52:ILE:HG22	2.19	0.41
25:Y:16:GLY:C	25:Y:17:ILE:HD12	2.40	0.41
25:Y:21:ILE:O	25:Y:22:ASP:HB2	2.20	0.41
25:Y:71:THR:HB	25:Y:78:ARG:NH1	2.34	0.41
25:Y:486:THR:CG2	25:Y:602:LEU:HG	2.50	0.41
25:Y:166:LEU:HD12	25:Y:166:LEU:N	2.34	0.41
25:Y:219:VAL:C	25:Y:221:ALA:H	2.23	0.41
25:Y:216:LEU:HD21	25:Y:246:ILE:HD11	2.01	0.41
25:Y:453:GLY:CA	25:Y:458:HIS:HD2	2.21	0.41
20:T:50:GLU:HB2	20:T:100:ILE:CB	2.48	0.41
1:A:509:A:N3	1:A:543:C:O2'	2.51	0.41
23:W:31:G:C6	23:W:32:C:C4	3.08	0.41
2:B:15:VAL:HG23	2:B:16:HIS:CE1	2.55	0.41
19:S:46:GLY:N	19:S:62:ILE:HG23	2.35	0.41
1:A:939:G:C5'	7:G:102:ARG:HH22	2.32	0.41
9:I:49:PRO:HD3	9:I:101:PHE:CE1	2.54	0.41
1:A:1207:G:O2'	1:A:1208:C:H5'	2.19	0.41
1:A:1271:G:H2'	1:A:1272:G:C8	2.54	0.41
22:V:27:G:H2'	22:V:28:G:H8	1.85	0.41
4:D:3:ARG:HG2	4:D:118:ARG:NE	2.35	0.41
23:W:9:G:C2	23:W:45:G:C6	3.08	0.41
25:Y:604:PRO:HB2	25:Y:673:PHE:HE1	1.85	0.41
1:A:452:A:O2'	1:A:453:A:H8	2.02	0.41
2:B:194:PRO:O	2:B:197:VAL:HG23	2.20	0.41
1:A:78:G:H1	1:A:91:C:N4	2.18	0.41
25:Y:329:ARG:CA	25:Y:374:LEU:HG	2.47	0.41
25:Y:21:ILE:CG2	25:Y:88:VAL:HG13	2.49	0.41
3:C:155:GLY:O	3:C:196:LEU:HD13	2.20	0.41
25:Y:406:GLU:CB	25:Y:407:PRO:HD2	2.37	0.41
1:A:254:G:HO2'	1:A:255:G:H5'	1.85	0.41
13:M:68:GLY:O	13:M:70:LEU:N	2.42	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:19:HIS:O	2:B:20:GLU:O	2.39	0.41
9:I:23:ASN:OD1	9:I:24:GLY:N	2.53	0.41
2:B:12:GLU:OE1	2:B:12:GLU:N	2.41	0.41
1:A:185:A:N3	20:T:81:LYS:NZ	2.67	0.41
1:A:187:C:O2'	20:T:89:ARG:HD3	2.20	0.41
19:S:40:ILE:HG21	19:S:66:MET:O	2.20	0.41
25:Y:578:SER:HB3	25:Y:581:ALA:H	1.85	0.41
13:M:56:LEU:O	13:M:59:TYR:N	2.39	0.41
1:A:347:G:C2	1:A:348:G:C8	3.08	0.41
1:A:929:G:O2'	1:A:930:C:H5'	2.20	0.41
4:D:3:ARG:CG	4:D:118:ARG:HE	2.33	0.41
5:E:42:GLY:CA	5:E:66:MET:HG2	2.50	0.41
2:B:69:LEU:HD13	2:B:91:PRO:HB2	2.02	0.41
8:H:35:ILE:HG22	8:H:39:LEU:CD2	2.50	0.41
20:T:8:ARG:HD3	20:T:8:ARG:HA	1.82	0.41
6:F:52:ILE:O	6:F:53:ALA:HB3	2.20	0.41
16:P:57:ARG:O	16:P:58:TYR:C	2.59	0.41
1:A:897:C:O2'	1:A:898:G:H5'	2.19	0.41
1:A:675:A:O2'	1:A:676:A:H5'	2.20	0.41
1:A:1516:G:N1	1:A:1519:A:OP2	2.54	0.41
15:O:74:ASP:O	15:O:76:GLU:N	2.54	0.41
25:Y:609:GLU:HB2	25:Y:670:VAL:CG2	2.49	0.41
25:Y:566:THR:O	25:Y:567:LEU:C	2.58	0.41
1:A:955:U:O2'	1:A:956:U:H5'	2.20	0.41
13:M:91:ARG:CD	13:M:97:PRO:O	2.65	0.41
23:W:53:G:C2	23:W:62:C:N3	2.88	0.41
20:T:89:ARG:HD2	20:T:104:LEU:HD11	2.03	0.41
20:T:81:LYS:O	20:T:83:ARG:N	2.52	0.41
2:B:107:THR:HA	2:B:110:GLN:NE2	2.23	0.41
25:Y:276:VAL:HB	25:Y:277:VAL:H	1.62	0.41
25:Y:65:ILE:CD1	25:Y:65:ILE:H	2.34	0.41
1:A:1299:A:C2	1:A:1301:U:N3	2.88	0.41
4:D:165:MET:O	4:D:167:GLY:N	2.53	0.41
11:K:21:ILE:HD12	11:K:21:ILE:N	2.35	0.41
10:J:42:THR:HG23	10:J:67:THR:C	2.41	0.41
19:S:6:LYS:N	19:S:6:LYS:CD	2.81	0.41
1:A:1259:C:C5	1:A:1260:C:O2	2.73	0.41
6:F:8:ILE:CG2	6:F:85:VAL:HG13	2.48	0.41
1:A:928:G:O2'	1:A:929:G:H5'	2.19	0.41
1:A:1431:C:H2'	1:A:1432:G:O4'	2.21	0.41
6:F:14:LEU:HA	6:F:14:LEU:HD23	1.90	0.41
1:A:1134:G:H2'	1:A:1135:U:H5'	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:151:A:C2'	1:A:152:A:H5'	2.50	0.41
18:R:25:THR:C	18:R:26:LEU:HD23	2.40	0.41
16:P:75:ARG:O	16:P:78:GLY:N	2.50	0.41
1:A:688:G:H5'	11:K:47:VAL:HA	2.03	0.41
1:A:222:U:H2'	1:A:223:U:C6	2.55	0.41
24:X:11:A:C5'	24:X:12:A:H5'	2.51	0.41
1:A:1347:G:H2'	1:A:1373:G:O6	2.21	0.41
3:C:52:LEU:HD12	3:C:55:VAL:HG22	2.03	0.41
1:A:1489:G:H2'	1:A:1490:C:C5'	2.29	0.41
3:C:154:SER:CB	3:C:197:GLY:H	2.34	0.41
3:C:155:GLY:O	3:C:156:ARG:CB	2.66	0.41
25:Y:162:VAL:O	25:Y:164:MET:N	2.54	0.41
25:Y:236:GLU:HG3	25:Y:236:GLU:O	2.18	0.41
20:T:50:GLU:HB2	20:T:100:ILE:CG2	2.51	0.41
25:Y:9:LEU:HD13	25:Y:284:LEU:HD13	2.02	0.41
1:A:129(A):G:H8	1:A:129(A):G:H5''	1.86	0.41
1:A:1256:A:C2	1:A:1277:C:C5	3.08	0.41
1:A:376:G:N3	1:A:389:A:C2	2.89	0.41
1:A:707:C:O2'	1:A:708:C:H5'	2.19	0.41
25:Y:192:LEU:HD12	25:Y:194:THR:HG23	2.02	0.41
1:A:986:A:H2'	1:A:987:G:O4'	2.20	0.41
6:F:4:TYR:CE1	6:F:92:LYS:HD2	2.56	0.41
13:M:34:LEU:HD13	13:M:41:PRO:HB3	2.03	0.41
10:J:29:ARG:C	10:J:31:GLY:H	2.23	0.41
7:G:111:ARG:HD2	7:G:123:GLU:HB2	2.01	0.41
25:Y:368:GLU:C	25:Y:369:LEU:HD12	2.41	0.41
1:A:657:G:H4'	15:O:28:GLN:HG2	2.02	0.41
25:Y:309:LEU:O	25:Y:390:VAL:HA	2.20	0.41
1:A:304:U:O2'	1:A:305:G:H5'	2.20	0.41
2:B:231:GLU:HB2	2:B:232:PRO:CD	2.51	0.41
7:G:23:VAL:CG1	7:G:43:PHE:CE2	3.01	0.41
25:Y:230:LYS:O	25:Y:235:GLU:O	2.39	0.41
25:Y:236:GLU:HA	25:Y:237:PRO:HD3	1.95	0.41
23:W:31:G:H2'	23:W:32:C:C6	2.55	0.41
23:W:49:G:C6	23:W:50:U:C4	3.08	0.41
1:A:1116:C:C2'	1:A:1117:G:H5''	2.51	0.41
19:S:33:THR:OG1	19:S:34:TRP:N	2.54	0.41
9:I:46:ALA:HB3	9:I:47:LEU:HD12	2.03	0.41
12:L:23:LYS:HE3	12:L:89:ARG:HE	1.85	0.41
18:R:69:THR:O	18:R:72:ARG:HB2	2.20	0.41
3:C:182:ILE:HA	3:C:202:ILE:O	2.20	0.41
15:O:57:LEU:HD23	15:O:57:LEU:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:86:ILE:HG21	8:H:133:LEU:HD13	2.02	0.41
7:G:103:TRP:NE1	7:G:137:LYS:HD3	2.36	0.41
1:A:892:A:H2'	1:A:893:C:C6	2.55	0.41
1:A:1351:U:O4'	7:G:33:ASP:HB3	2.20	0.41
1:A:288:A:H2'	1:A:289:G:H4'	2.02	0.41
7:G:136:LYS:HB3	7:G:136:LYS:HE3	1.82	0.41
18:R:36:ASN:O	18:R:36:ASN:OD1	2.39	0.41
25:Y:102:ASP:O	25:Y:130:VAL:CG2	2.66	0.41
25:Y:20:HIS:O	25:Y:23:ALA:HB2	2.20	0.41
25:Y:211:GLU:HB2	25:Y:215:LYS:HZ1	1.82	0.41
25:Y:219:VAL:O	25:Y:222:ASP:OD2	2.38	0.41
25:Y:529:ILE:HD11	25:Y:567:LEU:HG	2.03	0.41
6:F:67:MET:CE	6:F:72:VAL:HA	2.51	0.41
1:A:1303:C:O2'	1:A:1304:G:H5'	2.20	0.41
1:A:186:C:H2'	1:A:187:C:C6	2.55	0.41
18:R:87:ARG:NH1	18:R:87:ARG:CB	2.72	0.41
1:A:939:G:H5''	7:G:102:ARG:HH22	1.83	0.41
9:I:99:LEU:HB2	9:I:101:PHE:HD2	1.85	0.41
25:Y:315:LYS:HD2	25:Y:317:MET:HG3	2.02	0.41
11:K:126:ARG:HG2	11:K:126:ARG:NH1	2.35	0.41
8:H:34:GLU:OE1	8:H:34:GLU:HA	2.20	0.41
1:A:1090:U:H2'	1:A:1091:U:C6	2.53	0.41
1:A:429:U:C1'	1:A:430:A:H5''	2.51	0.41
1:A:618:C:N3	1:A:622:A:N6	2.68	0.41
25:Y:390:VAL:C	25:Y:391:GLY:O	2.57	0.41
1:A:961:U:O2'	1:A:962:C:H5'	2.21	0.41
20:T:62:LEU:O	20:T:65:LYS:HB2	2.21	0.41
16:P:12:LYS:O	16:P:13:HIS:HB2	2.19	0.41
4:D:80:GLU:OE1	4:D:80:GLU:HA	2.21	0.41
25:Y:33:LEU:HD11	25:Y:81:ILE:HD12	2.03	0.41
25:Y:607:ARG:O	25:Y:671:MET:HA	2.21	0.41
25:Y:610:VAL:HG23	25:Y:643:ILE:HD12	2.02	0.41
25:Y:160:ARG:NH2	25:Y:222:ASP:OD2	2.53	0.41
25:Y:241:GLU:HG3	25:Y:242:LEU:N	2.36	0.41
5:E:78:HIS:CE1	5:E:80:ILE:HG23	2.56	0.41
19:S:29:ARG:HD2	19:S:30:LEU:N	2.36	0.41
3:C:157:ILE:O	3:C:159:GLY:N	2.53	0.41
1:A:375:U:H2'	1:A:376:G:H8	1.85	0.41
1:A:246:A:C2	1:A:279:A:N1	2.89	0.41
16:P:4:ILE:CG1	16:P:64:ALA:HB1	2.49	0.41
25:Y:95:GLU:O	25:Y:99:ARG:HD2	2.21	0.41
10:J:18:ALA:C	10:J:20:ALA:N	2.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:29:ARG:HH11	10:J:29:ARG:CG	2.33	0.41
1:A:1216:G:H2'	1:A:1217:C:C6	2.55	0.41
16:P:55:ARG:O	16:P:58:TYR:N	2.54	0.41
1:A:550:G:C6	1:A:551:U:C4	3.09	0.41
1:A:197:A:H4'	1:A:198:G:H5'	2.03	0.41
7:G:52:GLU:O	7:G:53:LYS:C	2.58	0.41
1:A:767:A:H2'	1:A:768:A:O4'	2.20	0.41
25:Y:32:ILE:HG22	25:Y:33:LEU:HD12	2.03	0.41
25:Y:256:THR:O	25:Y:258:VAL:HG23	2.21	0.41
25:Y:329:ARG:CB	25:Y:374:LEU:HG	2.51	0.41
25:Y:328:ILE:O	25:Y:374:LEU:HA	2.21	0.41
25:Y:553:GLY:N	25:Y:557:GLY:HA2	2.36	0.41
25:Y:211:GLU:O	25:Y:215:LYS:HG3	2.21	0.41
25:Y:453:GLY:HA2	25:Y:458:HIS:CD2	2.29	0.41
1:A:1001(A):G:H2'	1:A:1002:G:C8	2.56	0.41
3:C:35:GLU:OE1	3:C:97:LYS:HE3	2.20	0.41
1:A:254:G:O2'	1:A:255:G:H5'	2.20	0.41
23:W:25:C:C2'	23:W:26:G:H5'	2.51	0.41
23:W:27:U:H2'	23:W:28:C:H6	1.86	0.41
20:T:18:GLN:O	20:T:22:ARG:HG3	2.21	0.41
9:I:19:LEU:HB3	9:I:59:PHE:CD2	2.55	0.41
20:T:84:LEU:C	20:T:86:ARG:H	2.24	0.41
25:Y:302:HIS:HA	25:Y:303:PRO:HD2	1.76	0.41
25:Y:145:ASP:HB3	25:Y:148:LEU:CD2	2.50	0.41
14:N:29:ARG:NH1	14:N:29:ARG:CG	2.80	0.41
4:D:8:VAL:HG23	4:D:9:CYS:N	2.35	0.41
7:G:79:ARG:O	7:G:80:VAL:HG13	2.20	0.41
11:K:20:TYR:O	11:K:30:VAL:HA	2.21	0.41
1:A:537:G:H2'	1:A:538:G:H8	1.85	0.41
1:A:747:C:H2'	1:A:748:C:O4'	2.21	0.41
1:A:741:G:C2'	1:A:742:G:H5'	2.50	0.41
1:A:177:C:H2'	1:A:178:C:H6	1.86	0.41
6:F:97:PHE:HB2	18:R:32:ARG:NH2	2.35	0.41
2:B:131:PRO:HG2	2:B:134:GLU:CG	2.51	0.41
13:M:57:ARG:C	13:M:59:TYR:N	2.73	0.41
25:Y:228:MET:O	25:Y:232:LEU:CD2	2.66	0.41
1:A:1010:G:N3	1:A:1011:G:C8	2.89	0.41
7:G:145:ALA:O	7:G:147:ALA:N	2.51	0.41
1:A:832:C:H2'	1:A:833:U:O4'	2.21	0.41
1:A:1060:C:H4'	10:J:52:GLY:H	1.86	0.41
10:J:22:LYS:NZ	10:J:23:ILE:HA	2.36	0.41
1:A:47:C:H5	1:A:365:U:H3'	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:113:GLU:HB2	7:G:119:ARG:HG2	2.02	0.41
8:H:36:LEU:O	8:H:38:ILE:N	2.54	0.41
1:A:294:U:H2'	1:A:295:C:H6	1.85	0.41
8:H:53:VAL:HB	8:H:58:TYR:CD2	2.55	0.41
20:T:73:HIS:HB3	20:T:74:LYS:CD	2.51	0.41
1:A:329:A:H3'	1:A:330:C:H5'	2.03	0.41
1:A:429:U:H4'	1:A:430:A:O5'	2.20	0.41
2:B:194:PRO:O	2:B:197:VAL:N	2.54	0.41
1:A:505:G:H2'	1:A:506:G:H8	1.86	0.41
1:A:778:G:C5	1:A:779:C:C5	3.08	0.41
1:A:676:A:H1'	11:K:115:PRO:HB3	2.02	0.41
7:G:73:MET:HG2	7:G:90:GLU:HA	2.02	0.41
1:A:221:C:O2	1:A:221:C:H2'	2.20	0.41
18:R:47:THR:O	18:R:82:THR:HA	2.20	0.41
1:A:495:A:H4'	1:A:496:A:OP1	2.21	0.41
3:C:188:LEU:HD22	3:C:188:LEU:N	2.35	0.41
23:W:34:C:H2'	23:W:35:A:C4'	2.31	0.41
25:Y:616:TYR:CD2	25:Y:663:THR:HA	2.55	0.41
15:O:74:ASP:OD2	15:O:77:ARG:HG2	2.21	0.41
25:Y:605:ILE:O	25:Y:605:ILE:HG22	2.21	0.41
25:Y:415:PRO:HG3	25:Y:421:GLN:CG	2.41	0.41
25:Y:505:GLY:HA3	25:Y:576:ASP:CB	2.51	0.41
25:Y:510:VAL:CG1	25:Y:511:LYS:N	2.82	0.41
9:I:50:LEU:HG	9:I:81:ILE:HG21	2.03	0.41
22:V:52:G:H2'	22:V:53:G:C8	2.55	0.41
1:A:1190:G:OP1	3:C:5:ILE:HG23	2.20	0.41
9:I:80:GLY:O	9:I:84:ALA:N	2.52	0.41
1:A:284:G:N3	1:A:285:G:C8	2.89	0.41
4:D:129:ASN:HD21	4:D:144:ASP:HB3	1.85	0.41
1:A:707:C:H2'	1:A:708:C:C6	2.56	0.41
8:H:91:ARG:HB2	12:L:7:ILE:HG21	2.02	0.41
1:A:1071:C:O2'	1:A:1072:G:H5'	2.21	0.41
1:A:608:A:O2'	1:A:609:A:H5'	2.21	0.41
8:H:32:LYS:C	8:H:34:GLU:N	2.72	0.41
1:A:894:G:O2'	1:A:895:G:H5'	2.21	0.41
11:K:29:ILE:HB	11:K:44:SER:HB3	2.02	0.41
4:D:105:VAL:HG13	4:D:110:PHE:HB2	2.03	0.41
18:R:42:ARG:HB2	18:R:42:ARG:HE	1.71	0.41
1:A:779:C:O2'	11:K:120:ARG:HD3	2.20	0.41
8:H:121:ASP:O	8:H:122:ARG:C	2.58	0.41
16:P:80:PHE:O	16:P:81:ARG:C	2.59	0.41
7:G:64:GLN:HE21	7:G:68:ASN:HD21	1.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:82:ILE:HG13	25:Y:101:LEU:HD23	2.03	0.40
1:A:1347:G:H2'	1:A:1373:G:C6	2.56	0.40
5:E:76:ILE:CG1	5:E:77:PRO:HD2	2.51	0.40
1:A:1256:A:H2	1:A:1277:C:C4	2.39	0.40
3:C:5:ILE:N	3:C:5:ILE:HD13	2.36	0.40
12:L:53:ARG:HG2	12:L:53:ARG:NH1	2.35	0.40
9:I:55:ALA:HA	9:I:58:HIS:HD2	1.84	0.40
1:A:771:G:H2'	1:A:772:U:C6	2.56	0.40
11:K:122:LYS:O	11:K:124:LYS:N	2.55	0.40
18:R:37:VAL:C	18:R:39:VAL:H	2.23	0.40
12:L:117:ARG:O	12:L:119:LYS:O	2.38	0.40
1:A:489:C:H2'	1:A:490:G:C8	2.56	0.40
17:Q:9:VAL:HG12	17:Q:56:VAL:HA	2.03	0.40
1:A:16:A:N1	1:A:919:A:C2	2.89	0.40
8:H:63:LEU:H	8:H:63:LEU:CD2	2.33	0.40
1:A:335:C:O2'	1:A:336:C:H5'	2.21	0.40
1:A:189(C):C:H2'	1:A:189(D):C:O4'	2.21	0.40
1:A:1056:U:H5'	3:C:163:ALA:CB	2.51	0.40
1:A:72:C:H2'	1:A:73:G:C8	2.56	0.40
1:A:671:G:H2'	1:A:672:U:O4'	2.21	0.40
5:E:152:ARG:HB3	8:H:43:GLY:HA3	2.03	0.40
2:B:25:ASN:OD1	2:B:25:ASN:C	2.58	0.40
25:Y:90:PHE:HB3	25:Y:454:MET:HB2	2.03	0.40
25:Y:96:ARG:CG	25:Y:97:SER:N	2.84	0.40
23:W:70:G:N1	23:W:71:C:N4	2.69	0.40
1:A:1226:C:H5	13:M:104:ARG:HB2	1.82	0.40
19:S:17:GLU:C	19:S:19:VAL:H	2.25	0.40
2:B:83:MET:SD	2:B:234:PRO:HG3	2.61	0.40
2:B:32:ILE:CD	2:B:40:HIS:HD2	2.34	0.40
1:A:1325:C:O2'	1:A:1326:C:H5'	2.22	0.40
1:A:243:A:C2	1:A:245:C:C2	3.10	0.40
1:A:246:A:O2'	17:Q:99:SER:HA	2.21	0.40
1:A:559:A:OP2	5:E:126:ARG:NH2	2.54	0.40
7:G:108:ALA:C	7:G:110:GLN:N	2.74	0.40
1:A:923:A:O2'	1:A:924:C:H5'	2.21	0.40
21:U:8:THR:O	21:U:9:ARG:C	2.59	0.40
25:Y:337:SER:HB3	25:Y:367:GLU:HG2	2.03	0.40
1:A:1056:U:H4'	3:C:163:ALA:HB2	2.02	0.40
5:E:69:VAL:HA	5:E:70:PRO:HD2	1.83	0.40
25:Y:434:GLU:HG2	25:Y:434:GLU:O	2.21	0.40
25:Y:467:LYS:HA	25:Y:472:VAL:O	2.21	0.40
25:Y:568:TYR:CD2	25:Y:569:ASP:HB2	2.55	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:65:ALA:O	3:C:66:VAL:CB	2.69	0.40
14:N:12:ARG:O	14:N:14:PRO:CD	2.57	0.40
22:V:53:G:C4	22:V:54:U:C5	3.08	0.40
13:M:49:THR:C	13:M:51:ALA:N	2.73	0.40
12:L:47:LYS:NZ	12:L:47:LYS:HB3	2.25	0.40
3:C:173:VAL:N	3:C:174:PRO:HD3	2.36	0.40
9:I:49:PRO:HD3	9:I:101:PHE:HE1	1.86	0.40
1:A:513:C:H2'	1:A:514:C:C6	2.56	0.40
2:B:170:GLU:O	2:B:171:ALA:C	2.59	0.40
1:A:501:C:O2'	1:A:502:G:H5'	2.22	0.40
13:M:59:TYR:O	13:M:60:VAL:C	2.60	0.40
13:M:124:PRO:CG	25:Y:574:GLU:HB2	2.49	0.40
6:F:19:LEU:HD21	6:F:23:LYS:HE2	2.04	0.40
1:A:110:C:H2'	1:A:111:G:O4'	2.21	0.40
25:Y:561:VAL:O	25:Y:562:ASP:HB2	2.21	0.40
1:A:610:G:N3	1:A:610:G:H2'	2.37	0.40
1:A:1505:G:H4'	1:A:1506:U:H5''	2.02	0.40
26:F:1102:FUA:H212	26:F:1102:FUA:H72	1.88	0.40
25:Y:616:TYR:CZ	25:Y:666:ARG:HD3	2.57	0.40
25:Y:87:HIS:CE1	25:Y:120:THR:CB	3.04	0.40
4:D:40:PRO:HB2	4:D:41:GLY:H	1.61	0.40
20:T:26:ASN:HA	20:T:29:LYS:CG	2.48	0.40
20:T:13:LEU:H	20:T:13:LEU:CD1	2.11	0.40
14:N:47:LEU:O	14:N:49:HIS:N	2.54	0.40
1:A:182:U:H2'	1:A:182:U:O2	2.21	0.40
1:A:391:G:C6	1:A:392:G:N7	2.89	0.40
12:L:117:ARG:O	12:L:118:SER:C	2.60	0.40
1:A:1059:C:H2'	1:A:1060:C:H6	1.87	0.40
1:A:765:G:H22	1:A:812:C:HO2'	1.69	0.40
12:L:60:LEU:N	12:L:60:LEU:HD22	2.37	0.40
3:C:121:ALA:O	3:C:124:ILE:HB	2.21	0.40
1:A:680:C:O2'	1:A:681:C:H5'	2.22	0.40
11:K:31:THR:O	11:K:31:THR:HG23	2.21	0.40
1:A:1500:A:OP2	1:A:1505:G:OP2	2.39	0.40
10:J:3:LYS:N	10:J:74:ILE:O	2.55	0.40
2:B:163:PHE:HA	2:B:185:ILE:HG13	2.03	0.40
1:A:975:A:N6	1:A:1367:C:O4'	2.55	0.40
9:I:69:GLY:O	9:I:73:GLN:HG3	2.22	0.40
1:A:958:A:C6	1:A:959:A:N1	2.90	0.40
13:M:96:LEU:CB	13:M:97:PRO:HD2	2.44	0.40
2:B:42:ILE:HG23	2:B:42:ILE:O	2.22	0.40
1:A:186:C:H2'	1:A:187:C:H6	1.87	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:Y:428:LEU:CD1	25:Y:440:VAL:HG11	2.42	0.40
18:R:35:ARG:O	18:R:37:VAL:HG13	2.21	0.40
12:L:111:LYS:HG2	12:L:112:ASP:OD1	2.22	0.40
25:Y:29:THR:C	25:Y:31:ARG:H	2.24	0.40
1:A:189(K):U:H2'	1:A:189(L):G:C8	2.56	0.40
1:A:370:C:O2'	1:A:371:G:H5'	2.22	0.40
20:T:87:LYS:HD2	20:T:87:LYS:HA	1.87	0.40
5:E:65:ASN:O	5:E:65:ASN:CG	2.59	0.40
3:C:21:ARG:H	3:C:21:ARG:HG2	1.76	0.40

There are no symmetry-related clashes.

## 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	
2	B	233/256 (91%)	148 (64%)	52 (22%)	33 (14%)	0	10
3	C	205/239 (86%)	146 (71%)	32 (16%)	27 (13%)	0	12
4	D	206/209 (99%)	138 (67%)	47 (23%)	21 (10%)	1	19
5	E	149/162 (92%)	117 (78%)	26 (17%)	6 (4%)	5	50
6	F	99/101 (98%)	69 (70%)	26 (26%)	4 (4%)	5	50
7	G	153/156 (98%)	112 (73%)	27 (18%)	14 (9%)	1	24
8	H	136/138 (99%)	106 (78%)	26 (19%)	4 (3%)	7	60
9	I	121/128 (94%)	85 (70%)	27 (22%)	9 (7%)	2	31
10	J	97/105 (92%)	67 (69%)	19 (20%)	11 (11%)	1	16
11	K	117/129 (91%)	85 (73%)	23 (20%)	9 (8%)	1	29
12	L	123/132 (93%)	84 (68%)	19 (15%)	20 (16%)	0	7
13	M	123/126 (98%)	75 (61%)	30 (24%)	18 (15%)	0	10
14	N	58/61 (95%)	43 (74%)	10 (17%)	5 (9%)	1	25
15	O	86/89 (97%)	55 (64%)	24 (28%)	7 (8%)	1	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	P	82/88 (93%)	62 (76%)	15 (18%)	5 (6%)	2	37
17	Q	98/105 (93%)	80 (82%)	15 (15%)	3 (3%)	7	59
18	R	68/88 (77%)	47 (69%)	13 (19%)	8 (12%)	1	15
19	S	77/93 (83%)	42 (54%)	17 (22%)	18 (23%)	0	2
20	T	97/106 (92%)	57 (59%)	28 (29%)	12 (12%)	1	14
21	U	23/27 (85%)	13 (56%)	7 (30%)	3 (13%)	0	13
25	Y	663/691 (96%)	458 (69%)	126 (19%)	79 (12%)	1	15
All	All	3014/3229 (93%)	2089 (69%)	609 (20%)	316 (10%)	1	18

All (316) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	12	GLU
2	B	13	ALA
2	B	15	VAL
2	B	74	LYS
2	B	75	LYS
2	B	95	GLN
2	B	128	GLU
2	B	129	GLU
2	B	153	ARG
2	B	157	ARG
2	B	195	ASP
2	B	233	SER
2	B	239	VAL
3	C	12	LEU
3	C	47	LEU
3	C	61	ALA
3	C	65	ALA
3	C	95	THR
3	C	96	GLY
3	C	154	SER
3	C	168	ALA
3	C	207	VAL
4	D	3	ARG
4	D	13	ARG
4	D	14	ARG
4	D	18	LYS
4	D	30	LYS
4	D	40	PRO

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Mol	Chain	Res	Type
4	D	44	GLY
4	D	153	ARG
4	D	186	LEU
5	E	11	ILE
6	F	39	LYS
6	F	43	LEU
7	G	8	GLU
7	G	36	LYS
8	H	105	ARG
9	I	41	VAL
9	I	61	ALA
9	I	89	ASN
10	J	36	GLY
10	J	51	ARG
10	J	75	ILE
10	J	83	GLU
11	K	127	LYS
12	L	18	VAL
12	L	28	LYS
12	L	71	PRO
12	L	91	LYS
13	M	5	ALA
13	M	7	VAL
13	M	12	ASN
13	M	63	THR
13	M	67	GLU
13	M	83	ASP
13	M	118	ALA
13	M	124	PRO
14	N	14	PRO
14	N	15	LYS
14	N	16	PHE
14	N	29	ARG
16	P	34	GLU
16	P	83	GLU
17	Q	49	GLU
18	R	45	SER
19	S	10	PHE
19	S	28	LYS
19	S	29	ARG
19	S	61	TYR
19	S	62	ILE

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Mol	Chain	Res	Type
20	T	48	LYS
20	T	49	ALA
20	T	99	LEU
25	Y	21	ILE
25	Y	23	ALA
25	Y	39	ILE
25	Y	66	THR
25	Y	84	THR
25	Y	85	PRO
25	Y	89	ASP
25	Y	92	ILE
25	Y	112	GLN
25	Y	121	VAL
25	Y	129	LYS
25	Y	203	GLU
25	Y	204	GLU
25	Y	205	TYR
25	Y	206	LEU
25	Y	209	ALA
25	Y	210	ARG
25	Y	276	VAL
25	Y	380	LEU
25	Y	385	THR
25	Y	399	LEU
25	Y	402	ILE
25	Y	448	GLN
25	Y	498	ILE
25	Y	505	GLY
25	Y	530	VAL
25	Y	535	PRO
25	Y	628	ARG
2	B	18	GLY
2	B	20	GLU
2	B	78	GLN
2	B	190	THR
2	B	236	TYR
3	C	66	VAL
3	C	107	GLN
3	C	147	LYS
3	C	175	LEU
3	C	205	GLY
4	D	5	ILE

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Mol	Chain	Res	Type
4	D	41	GLY
4	D	69	GLY
4	D	156	GLU
4	D	166	LYS
4	D	171	GLY
6	F	34	GLY
7	G	7	ALA
7	G	9	VAL
7	G	82	GLY
7	G	90	GLU
7	G	109	ASN
8	H	121	ASP
9	I	55	ALA
9	I	85	LEU
9	I	120	ARG
10	J	33	GLN
10	J	57	LYS
10	J	59	SER
11	K	49	GLY
11	K	88	GLY
12	L	37	CYS
12	L	38	THR
12	L	46	LYS
12	L	121	GLY
13	M	55	ARG
13	M	70	LEU
13	M	100	GLY
13	M	114	ARG
15	O	14	GLU
15	O	24	SER
18	R	41	LYS
18	R	68	LYS
19	S	26	GLY
19	S	44	MET
19	S	46	GLY
19	S	54	GLY
19	S	73	GLU
19	S	80	TYR
20	T	63	ILE
20	T	74	LYS
20	T	97	ALA
21	U	3	LYS

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Mol	Chain	Res	Type
21	U	6	ARG
25	Y	25	LYS
25	Y	42	ILE
25	Y	88	VAL
25	Y	111	SER
25	Y	114	VAL
25	Y	119	GLU
25	Y	137	ASN
25	Y	211	GLU
25	Y	347	GLY
25	Y	416	LYS
25	Y	418	LYS
25	Y	447	GLY
25	Y	502	GLY
25	Y	519	ARG
25	Y	614	GLU
25	Y	680	PRO
2	B	24	TRP
2	B	63	MET
2	B	64	ARG
2	B	120	ALA
2	B	131	PRO
2	B	237	ALA
3	C	4	LYS
3	C	26	LYS
3	C	129	ALA
3	C	130	VAL
3	C	135	LYS
3	C	156	ARG
3	C	160	ALA
4	D	4	TYR
4	D	47	ARG
5	E	71	LEU
7	G	80	VAL
7	G	121	ALA
8	H	2	LEU
9	I	34	ASN
9	I	94	ALA
10	J	61	GLU
10	J	85	LEU
11	K	45	GLY
11	K	50	TYR

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Mol	Chain	Res	Type
11	K	57	THR
11	K	62	GLN
12	L	27	LEU
12	L	45	PRO
12	L	51	ALA
12	L	81	SER
12	L	89	ARG
12	L	116	SER
13	M	53	VAL
13	M	116	THR
15	O	77	ARG
15	O	84	LYS
15	O	86	GLY
17	Q	25	ARG
17	Q	66	SER
18	R	38	GLU
18	R	87	ARG
19	S	14	HIS
19	S	27	GLU
19	S	81	ARG
20	T	71	THR
20	T	82	SER
20	T	96	GLY
20	T	98	PRO
21	U	25	LYS
25	Y	6	GLU
25	Y	24	GLY
25	Y	99	ARG
25	Y	142	THR
25	Y	360	ALA
25	Y	471	LYS
25	Y	486	THR
25	Y	497	PHE
25	Y	559	PRO
25	Y	681	LYS
2	B	76	GLN
2	B	130	ARG
2	B	171	ALA
2	B	207	ALA
2	B	216	SER
3	C	165	THR
4	D	9	CYS

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Mol	Chain	Res	Type
5	E	77	PRO
7	G	52	GLU
7	G	117	ALA
9	I	44	VAL
10	J	19	SER
11	K	123	LYS
12	L	23	LYS
12	L	79	GLU
13	M	106	ASN
13	M	121	LYS
18	R	31	LEU
18	R	69	THR
20	T	73	HIS
25	Y	34	TYR
25	Y	65	ILE
25	Y	120	THR
25	Y	371	ALA
25	Y	400	GLU
25	Y	645	ALA
25	Y	666	ARG
25	Y	671	MET
2	B	9	GLU
2	B	152	PHE
4	D	32	ALA
6	F	36	ARG
7	G	113	GLU
7	G	116	ALA
8	H	20	TYR
10	J	84	GLN
11	K	95	ILE
12	L	29	GLY
12	L	47	LYS
13	M	4	ILE
14	N	17	LYS
15	O	76	GLU
16	P	54	GLU
16	P	76	GLN
19	S	30	LEU
20	T	61	SER
25	Y	163	VAL
25	Y	239	GLU
25	Y	257	PRO

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Mol	Chain	Res	Type
25	Y	277	VAL
25	Y	406	GLU
25	Y	415	PRO
25	Y	483	TYR
25	Y	504	ARG
25	Y	598	ASP
3	C	29	TYR
3	C	73	PRO
3	C	206	GLU
4	D	7	PRO
4	D	179	GLU
5	E	138	ALA
5	E	140	ARG
7	G	62	PHE
13	M	68	GLY
16	P	56	ALA
19	S	42	PRO
25	Y	171	GLU
25	Y	303	PRO
5	E	154	GLY
19	S	41	VAL
25	Y	196	ILE
25	Y	408	VAL
25	Y	520	GLY
25	Y	636	PRO
2	B	232	PRO
3	C	158	GLY
12	L	72	GLY
12	L	88	GLY
25	Y	305	PRO
25	Y	560	VAL
2	B	26	PRO
3	C	55	VAL
19	S	9	VAL
15	O	87	ILE
18	R	37	VAL

### 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	
2	B	200/220 (91%)	182 (91%)	18 (9%)	14	58
3	C	160/188 (85%)	139 (87%)	21 (13%)	6	37
4	D	180/181 (99%)	160 (89%)	20 (11%)	9	46
5	E	115/123 (94%)	104 (90%)	11 (10%)	12	54
6	F	90/90 (100%)	83 (92%)	7 (8%)	18	65
7	G	126/127 (99%)	117 (93%)	9 (7%)	21	70
8	H	119/119 (100%)	110 (92%)	9 (8%)	19	67
9	I	98/99 (99%)	91 (93%)	7 (7%)	21	70
10	J	88/92 (96%)	77 (88%)	11 (12%)	7	40
11	K	90/99 (91%)	87 (97%)	3 (3%)	50	89
12	L	104/109 (95%)	93 (89%)	11 (11%)	10	49
13	M	99/101 (98%)	90 (91%)	9 (9%)	14	57
14	N	49/50 (98%)	44 (90%)	5 (10%)	11	51
15	O	79/80 (99%)	73 (92%)	6 (8%)	19	67
16	P	72/74 (97%)	68 (94%)	4 (6%)	30	78
17	Q	94/97 (97%)	89 (95%)	5 (5%)	32	80
18	R	61/77 (79%)	58 (95%)	3 (5%)	35	82
19	S	69/80 (86%)	60 (87%)	9 (13%)	6	37
20	T	76/82 (93%)	66 (87%)	10 (13%)	6	36
21	U	19/22 (86%)	18 (95%)	1 (5%)	32	80
25	Y	563/582 (97%)	495 (88%)	68 (12%)	7	41
All	All	2551/2692 (95%)	2304 (90%)	247 (10%)	12	54

All (247) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	15	VAL
2	B	16	HIS
2	B	17	PHE
2	B	24	TRP
2	B	36	ARG
2	B	43	ASP
2	B	67	THR
2	B	69	LEU
2	B	79	ASP
2	B	129	GLU

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Mol	Chain	Res	Type
2	B	137	ARG
2	B	146	GLN
2	B	162	ILE
2	B	172	ILE
2	B	178	ARG
2	B	196	LEU
2	B	204	ASN
2	B	221	LEU
3	C	5	ILE
3	C	16	ARG
3	C	34	LEU
3	C	46	GLU
3	C	52	LEU
3	C	56	ASP
3	C	67	THR
3	C	72	LYS
3	C	79	ARG
3	C	90	GLU
3	C	95	THR
3	C	98	ASN
3	C	119	ARG
3	C	127	ARG
3	C	131	ARG
3	C	152	ILE
3	C	167	TRP
3	C	178	LEU
3	C	179	ARG
3	C	188	LEU
3	C	190	ARG
4	D	3	ARG
4	D	9	CYS
4	D	12	CYS
4	D	15	GLU
4	D	33	MET
4	D	36	ARG
4	D	49	ARG
4	D	53	ASP
4	D	57	ARG
4	D	58	LEU
4	D	73	ARG
4	D	78	LEU
4	D	96	LEU

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Mol	Chain	Res	Type
4	D	127	THR
4	D	129	ASN
4	D	131	ARG
4	D	132	ARG
4	D	135	LEU
4	D	162	LEU
4	D	168	ARG
5	E	12	LEU
5	E	20	GLN
5	E	41	VAL
5	E	68	GLU
5	E	72	GLN
5	E	76	ILE
5	E	79	GLU
5	E	101	ILE
5	E	117	ASP
5	E	125	SER
5	E	144	THR
6	F	15	ASP
6	F	32	ASN
6	F	47	ARG
6	F	64	GLN
6	F	69	GLU
6	F	83	ASP
6	F	98	LEU
7	G	30	ILE
7	G	57	GLU
7	G	79	ARG
7	G	104	LEU
7	G	111	ARG
7	G	113	GLU
7	G	137	LYS
7	G	151	TYR
7	G	156	TRP
8	H	1	MET
8	H	25	ASP
8	H	26	VAL
8	H	41	ARG
8	H	50	ARG
8	H	91	ARG
8	H	102	ARG
8	H	118	VAL

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Mol	Chain	Res	Type
8	H	133	LEU
9	I	10	ARG
9	I	47	LEU
9	I	87	GLN
9	I	95	LYS
9	I	114	TYR
9	I	121	ARG
9	I	128	ARG
10	J	22	LYS
10	J	40	LEU
10	J	43	ARG
10	J	50	ILE
10	J	55	LYS
10	J	62	HIS
10	J	63	PHE
10	J	70	ARG
10	J	74	ILE
10	J	92	THR
10	J	96	ILE
11	K	29	ILE
11	K	87	THR
11	K	92	GLU
12	L	7	ILE
12	L	20	LYS
12	L	27	LEU
12	L	37	CYS
12	L	41	ARG
12	L	44	THR
12	L	47	LYS
12	L	53	ARG
12	L	70	ILE
12	L	85	ILE
12	L	91	LYS
13	M	23	TYR
13	M	64	TRP
13	M	91	ARG
13	M	108	ARG
13	M	113	PRO
13	M	115	LYS
13	M	120	LYS
13	M	121	LYS
13	M	124	PRO

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Mol	Chain	Res	Type
14	N	14	PRO
14	N	16	PHE
14	N	29	ARG
14	N	41	ARG
14	N	49	HIS
15	O	10	LYS
15	O	31	LEU
15	O	39	LEU
15	O	57	LEU
15	O	82	ILE
15	O	88	ARG
16	P	1	MET
16	P	2	VAL
16	P	32	TYR
16	P	72	ARG
17	Q	7	THR
17	Q	23	VAL
17	Q	35	VAL
17	Q	48	GLU
17	Q	52	LYS
18	R	19	LYS
18	R	29	PHE
18	R	31	LEU
19	S	5	LEU
19	S	6	LYS
19	S	7	LYS
19	S	15	LEU
19	S	29	ARG
19	S	34	TRP
19	S	37	ARG
19	S	44	MET
19	S	66	MET
20	T	13	LEU
20	T	24	LEU
20	T	26	ASN
20	T	36	LEU
20	T	42	GLN
20	T	56	MET
20	T	73	HIS
20	T	74	LYS
20	T	84	LEU
20	T	93	GLU

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Mol	Chain	Res	Type
21	U	10	ARG
25	Y	12	LEU
25	Y	21	ILE
25	Y	27	THR
25	Y	40	HIS
25	Y	65	ILE
25	Y	85	PRO
25	Y	88	VAL
25	Y	92	ILE
25	Y	99	ARG
25	Y	102	ASP
25	Y	109	ASP
25	Y	119	GLU
25	Y	122	TRP
25	Y	124	GLN
25	Y	128	TYR
25	Y	130	VAL
25	Y	132	ARG
25	Y	137	ASN
25	Y	157	LEU
25	Y	165	GLN
25	Y	173	THR
25	Y	204	GLU
25	Y	214	GLU
25	Y	225	GLU
25	Y	240	GLU
25	Y	242	LEU
25	Y	252	ASP
25	Y	255	ILE
25	Y	260	LEU
25	Y	288	PRO
25	Y	326	THR
25	Y	336	THR
25	Y	343	ASN
25	Y	356	LEU
25	Y	377	VAL
25	Y	381	LYS
25	Y	421	GLN
25	Y	426	GLN
25	Y	428	LEU
25	Y	438	PHE
25	Y	440	VAL

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Mol	Chain	Res	Type
25	Y	468	ARG
25	Y	481	VAL
25	Y	484	ARG
25	Y	487	ILE
25	Y	499	ARG
25	Y	501	THR
25	Y	504	ARG
25	Y	507	TYR
25	Y	512	ILE
25	Y	527	ASN
25	Y	533	VAL
25	Y	535	PRO
25	Y	567	LEU
25	Y	572	TYR
25	Y	574	GLU
25	Y	579	GLU
25	Y	580	MET
25	Y	595	GLN
25	Y	605	ILE
25	Y	610	VAL
25	Y	614	GLU
25	Y	624	LEU
25	Y	630	GLN
25	Y	634	MET
25	Y	647	VAL
25	Y	657	THR
25	Y	684	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (82) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	37	ASN
2	B	40	HIS
2	B	78	GLN
2	B	110	GLN
2	B	113	HIS
2	B	146	GLN
2	B	204	ASN
2	B	212	GLN
3	C	28	GLN
3	C	110	ASN
3	C	118	GLN

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Mol	Chain	Res	Type
3	C	170	GLN
3	C	181	ASN
4	D	62	GLN
4	D	74	GLN
4	D	77	ASN
4	D	129	ASN
4	D	160	GLN
4	D	161	ASN
5	E	20	GLN
5	E	72	GLN
5	E	73	ASN
6	F	18	GLN
6	F	27	GLN
6	F	32	ASN
6	F	100	ASN
7	G	13	GLN
7	G	37	ASN
7	G	68	ASN
7	G	84	ASN
7	G	96	GLN
7	G	106	GLN
8	H	82	HIS
9	I	3	GLN
9	I	58	HIS
9	I	73	GLN
9	I	124	GLN
10	J	13	HIS
10	J	56	HIS
10	J	68	HIS
10	J	76	ASN
10	J	78	ASN
10	J	84	GLN
11	K	22	HIS
11	K	117	ASN
12	L	8	ASN
12	L	9	GLN
12	L	49	ASN
13	M	40	ASN
13	M	77	ASN
13	M	101	GLN
14	N	49	HIS
15	O	9	GLN

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Mol	Chain	Res	Type
15	O	13	GLN
15	O	28	GLN
15	O	37	ASN
15	O	53	HIS
15	O	62	GLN
16	P	16	HIS
17	Q	16	GLN
19	S	14	HIS
19	S	47	HIS
20	T	16	HIS
20	T	26	ASN
20	T	42	GLN
20	T	75	ASN
25	Y	14	ASN
25	Y	124	GLN
25	Y	137	ASN
25	Y	165	GLN
25	Y	208	GLN
25	Y	226	ASN
25	Y	266	ASN
25	Y	343	ASN
25	Y	421	GLN
25	Y	458	HIS
25	Y	506	GLN
25	Y	527	ASN
25	Y	573	HIS
25	Y	630	GLN
25	Y	641	GLN
25	Y	664	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1503/1522 (98%)	254 (16%)	36 (2%)
22	V	75/76 (98%)	13 (17%)	1 (1%)
23	W	76/77 (98%)	27 (35%)	1 (1%)
24	X	12/25 (48%)	8 (66%)	2 (16%)
All	All	1666/1700 (98%)	302 (18%)	40 (2%)

All (302) RNA backbone outliers are listed below:



Mol	Chain	Res	Type
1	A	7	G
1	A	9	G
1	A	31	G
1	A	32	A
1	A	33	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	51	A
1	A	60	A
1	A	61	G
1	A	79	G
1	A	81	U
1	A	88	A
1	A	89	C
1	A	90	U
1	A	91	C
1	A	97	G
1	A	98	G
1	A	104	G
1	A	116	A
1	A	120	A
1	A	121	C
1	A	129(A)	G
1	A	131	C
1	A	144	G
1	A	146	G
1	A	147	G
1	A	149	A
1	A	160	A
1	A	181	G
1	A	182	U
1	A	183	G
1	A	189(G)	G
1	A	189(H)	G
1	A	195	A
1	A	197	A
1	A	202	U
1	A	203	U
1	A	204	U
1	A	216	G
1	A	243	A
1	A	244	U

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Mol	Chain	Res	Type
1	A	247	G
1	A	251	G
1	A	266	G
1	A	267	C
1	A	289	G
1	A	316	G
1	A	321	A
1	A	328	C
1	A	329	A
1	A	332	G
1	A	345	C
1	A	346	G
1	A	350	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	372	C
1	A	397	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	428	G
1	A	429	U
1	A	430	A
1	A	435	C
1	A	437	U
1	A	439	A
1	A	441	A
1	A	444	C
1	A	460	G
1	A	461	A
1	A	471	G
1	A	481	G
1	A	484	G
1	A	485	G
1	A	496	A
1	A	498	U
1	A	509	A
1	A	510	A
1	A	518	C

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Mol	Chain	Res	Type
1	A	527	G
1	A	530	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	536	C
1	A	547	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	G
1	A	577	G
1	A	588	G
1	A	631	G
1	A	632	A
1	A	650	G
1	A	653	A
1	A	665	A
1	A	682	G
1	A	683	G
1	A	686	U
1	A	687	A
1	A	688	G
1	A	704	A
1	A	721	G
1	A	723	U
1	A	724	G
1	A	728	A
1	A	731	G
1	A	744	C
1	A	748	C
1	A	749	C
1	A	755	G
1	A	777	A
1	A	792	A
1	A	793	U
1	A	794	A
1	A	813	U

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Mol	Chain	Res	Type
1	A	817	C
1	A	828	A
1	A	839	U
1	A	840	C
1	A	841	U
1	A	848	C
1	A	859	A
1	A	907	A
1	A	914	A
1	A	921	U
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	951	G
1	A	960	U
1	A	961	U
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	978	A
1	A	980	C
1	A	981	U
1	A	991	U
1	A	992	U
1	A	993	G
1	A	997	U
1	A	1003	G
1	A	1004	A
1	A	1010	G
1	A	1025	U
1	A	1027	C
1	A	1030	C
1	A	1030(B)	C
1	A	1050	G
1	A	1054	C
1	A	1065	U
1	A	1066	C

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Mol	Chain	Res	Type
1	A	1068	G
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1102	A
1	A	1117	G
1	A	1124	G
1	A	1125	U
1	A	1130	A
1	A	1136	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1146	A
1	A	1152	A
1	A	1154	G
1	A	1159	U
1	A	1196	U
1	A	1197	G
1	A	1202	G
1	A	1212	U
1	A	1214	C
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1253	G
1	A	1256	A
1	A	1257	U
1	A	1273	G
1	A	1280	A
1	A	1281	U
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1299	A
1	A	1300	G
1	A	1301	U
1	A	1302	U

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Mol	Chain	Res	Type
1	A	1305	G
1	A	1317	C
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1335	C
1	A	1336	C
1	A	1338	G
1	A	1346	A
1	A	1348	U
1	A	1353	G
1	A	1363	C
1	A	1364	U
1	A	1375	A
1	A	1385	G
1	A	1394	A
1	A	1397	C
1	A	1398	A
1	A	1404	C
1	A	1419	G
1	A	1434	A
1	A	1442	G
1	A	1442(A)	G
1	A	1443	G
1	A	1447	A
1	A	1452	C
1	A	1456	G
1	A	1490	C
1	A	1492	A
1	A	1494	G
1	A	1497	G
1	A	1499	A
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1517	G
1	A	1519	A
1	A	1520	G
1	A	1529	G

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Mol	Chain	Res	Type
1	A	1530	G
22	V	5	G
22	V	8	U
22	V	16	U
22	V	17	C
22	V	18	G
22	V	19	G
22	V	20	U
22	V	21	A
22	V	43	C
22	V	46	G
22	V	48	C
22	V	74	C
22	V	76	A
23	W	5	G
23	W	7	G
23	W	8	U
23	W	9	G
23	W	10	G
23	W	15	G
23	W	17(A)	U
23	W	18	G
23	W	19	G
23	W	20	U
23	W	21	A
23	W	23	C
23	W	31	G
23	W	33	U
23	W	34	C
23	W	35	A
23	W	47	U
23	W	48	C
23	W	50	U
23	W	52	G
23	W	56	C
23	W	61	C
23	W	67	C
23	W	68	C
23	W	71	C
23	W	73	A
23	W	74	C
24	X	12	A

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Mol	Chain	Res	Type
24	X	13	A
24	X	14	U
24	X	15	G
24	X	16	U
24	X	18	C
24	X	19	A
24	X	20	A

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	30	U
1	A	60	A
1	A	115	G
1	A	119	A
1	A	203	U
1	A	243	A
1	A	250	A
1	A	315	A
1	A	328	C
1	A	345	C
1	A	366	C
1	A	428	G
1	A	429	U
1	A	438	G
1	A	533	A
1	A	534	U
1	A	575	G
1	A	703	G
1	A	748	C
1	A	812	C
1	A	913	A
1	A	992	U
1	A	1049	U
1	A	1065	U
1	A	1101	A
1	A	1201	A
1	A	1225	A
1	A	1226	C
1	A	1281	U
1	A	1285	A
1	A	1300	G

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Mol	Chain	Res	Type
1	A	1347	G
1	A	1493	A
1	A	1498	U
1	A	1505	G
1	A	1529	G
22	V	17	C
23	W	72	A
24	X	11	A
24	X	12	A

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
23	5MU	W	54	23	20,22,23	0.88	2 (10%)	25,32,35	1.36	3 (12%)

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
23	5MU	W	54	23	-	0/6/25/26	0/2/2/2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	W	54	5MU	P-OP1	2.16	1.49	1.46
23	W	54	5MU	C6-C5	-2.07	1.34	1.40

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	W	54	5MU	C6-N1-C2	-4.94	121.00	122.41
23	W	54	5MU	C5-C6-N1	2.25	123.77	121.59
23	W	54	5MU	C5M-C5-C6	2.02	122.88	118.59

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 7 ligands modelled in this entry, 5 are monoatomic - leaving 2 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	$\# Z  > 2$
26	FUA	F	1102	-	40,40,40	1.80	8 (20%)	64,64,64	1.62	10 (15%)
28	GDP	Y	1690	29	30,30,30	1.35	4 (13%)	44,47,47	2.43	9 (20%)

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
26	FUA	F	1102	-	-	0/18/92/92	0/0/4/4
28	GDP	Y	1690	29	-	0/16/32/32	0/1/3/3

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	F	1102	FUA	C17-C22	4.70	1.39	1.34
26	F	1102	FUA	C29-C22	4.52	1.53	1.47
26	F	1102	FUA	C23-C22	-4.16	1.39	1.51
26	F	1102	FUA	C23-C24	-3.98	1.39	1.53
28	Y	1690	GDP	C4-N9	-3.82	1.32	1.37
26	F	1102	FUA	C24-C25	-3.72	1.39	1.50
28	Y	1690	GDP	C2-N1	2.57	1.40	1.36
26	F	1102	FUA	C14-C8	-2.55	1.53	1.58
28	Y	1690	GDP	C8-N9	-2.41	1.33	1.36
26	F	1102	FUA	C25-C26	2.14	1.39	1.32
28	Y	1690	GDP	C5-N7	-2.10	1.32	1.40
26	F	1102	FUA	C10-C9	-2.08	1.53	1.57

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	Y	1690	GDP	C6-C5-N7	-11.74	132.56	134.14
26	F	1102	FUA	C24-C23-C22	4.94	124.11	111.93
28	Y	1690	GDP	C2-N3-C4	4.53	121.45	115.09
26	F	1102	FUA	C13-C12-C11	-4.37	105.84	112.00
28	Y	1690	GDP	C5-C4-N3	-3.91	120.28	125.94
28	Y	1690	GDP	PA-O3A-PB	-3.79	120.58	131.68
26	F	1102	FUA	C16-O2-C31	-3.77	111.12	117.13
28	Y	1690	GDP	O4'-C1'-N9	3.70	111.88	108.44
26	F	1102	FUA	C8-C9-C10	-3.44	112.82	116.45
28	Y	1690	GDP	N3-C4-N9	3.34	131.80	126.91
26	F	1102	FUA	C23-C22-C17	-3.14	117.04	123.08
28	Y	1690	GDP	C4-C5-N7	-3.06	106.90	109.52
26	F	1102	FUA	C23-C22-C29	2.97	121.75	115.50
26	F	1102	FUA	O2-C31-C32	2.87	116.52	111.12
28	Y	1690	GDP	O4'-C1'-C2'	-2.83	102.43	106.77
26	F	1102	FUA	C12-C13-C14	-2.55	110.43	115.00
28	Y	1690	GDP	C4'-O4'-C1'	-2.45	107.08	109.75
26	F	1102	FUA	C23-C24-C25	2.04	117.46	111.62
26	F	1102	FUA	C28-C26-C27	2.01	119.75	114.62

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 ⓘ

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

### 6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

### 6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

### 6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.