



Full wwPDB/EMDataBank EM Map/Model Validation Report ⓘ

Nov 30, 2017 – 01:55 PM EST

PDB ID : 6AWB
EMDB ID: : EMD-7014
Title : Structure of 30S ribosomal subunit and RNA polymerase complex in non-rotated state
Authors : Demo, G.; Rasouly, A.; Vasilyev, N.; Loveland, A.B.; Diaz-Avalos, R.; Grigorieff, N.; Nudler, E.; Korostelev, A.A.
Deposited on : unknown
Resolution : 6.70 Å(reported)

This is a Full wwPDB/EMDataBank EM Map/Model Validation Report
for a publicly released PDB/EMDB entry.

We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

MolProbity : 4.02b-467
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20030345

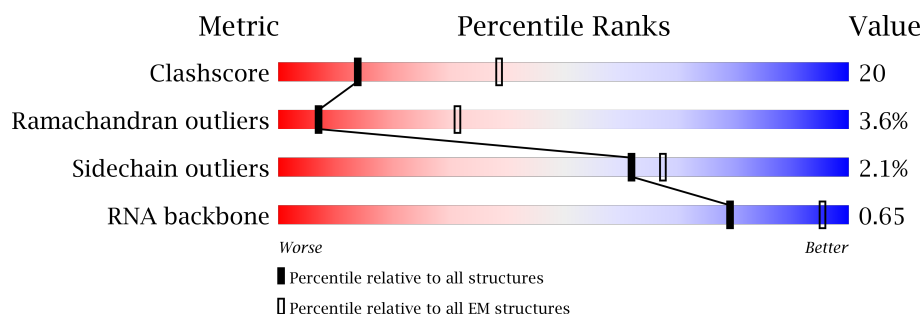
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 6.70 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.





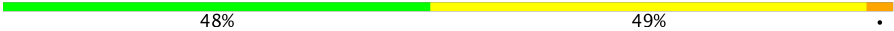








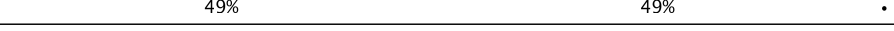







Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	1539	55% 35% 6%
2	01	229	47% 50% ..
2	02	229	46% 48% . ..
3	03	1340	53% 44% ..
4	04	1369	50% 46% ..
5	05	76	43% 57%
6	B	153	93% 7%
7	E	218	48% 43% 8%

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Mol	Chain	Length	Quality of chain
8	F	206	 64% 34% .
9	G	205	 43% 53% .
10	H	157	 48% 49% .
11	I	100	 51% 46% .
12	J	151	 56% 43% .
13	K	129	 64% 34% .
14	L	127	 54% 42% .
15	M	98	 63% 33% .
16	N	116	 43% 53% .
17	O	123	 59% 38% .
18	P	114	 62% 33% .
19	Q	100	 49% 49% .
20	R	88	 65% 34% .
21	S	82	 59% 38% .
22	T	80	 59% 39% .
23	U	65	 65% 32% .
24	V	79	 48% 49% .
25	W	85	 52% 44% 5%
26	X	65	 46% 45% 9%

2 Entry composition

There are 26 unique types of molecules in this entry. The entry contains 75316 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1443	Total	C	N	O	P	0	0
			30955	13808	5681	10024	1442		

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	01	227	Total	C	N	O	S	0	0
			1753	1091	311	345	6		
2	02	227	Total	C	N	O	S	0	0
			1757	1094	311	346	6		

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	03	1327	Total	C	N	O	S	0	0
			10272	6441	1787	2001	43		

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	04	1345	Total	C	N	O	S	0	0
			10372	6508	1853	1962	49		

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	05	76	Total	C	N	O	S	0	0
			605	368	115	121	1		

- Molecule 6 is a protein called 30S ribosomal protein S1.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	B	153	Total	C	N	O	0	0
			774	463	154	157		

- Molecule 7 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	E	218	Total	C	N	O	S	0	0
			1705	1081	305	312	7		

- Molecule 8 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	F	206	Total	C	N	O	S	0	0
			1625	1028	305	289	3		

- Molecule 9 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	G	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 10 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	H	157	Total	C	N	O	S	0	0
			1157	719	218	214	6		

- Molecule 11 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	I	100	Total	C	N	O	S	0	0
			818	515	148	149	6		

- Molecule 12 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	J	151	Total	C	N	O	S	0	0
			1182	735	227	216	4		

- Molecule 13 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	K	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 14 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	L	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 15 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	M	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 16 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	N	116	Total	C	N	O	S	0	0
			870	535	173	159	3		

- Molecule 17 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	O	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 18 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	P	114	Total	C	N	O	S	0	0
			884	546	178	157	3		

- Molecule 19 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	Q	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 20 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	R	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 21 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	S	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 22 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	T	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 23 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	U	65	Total	C	N	O	S	0	0
			536	339	100	96	1		

- Molecule 24 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	V	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 25 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	W	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

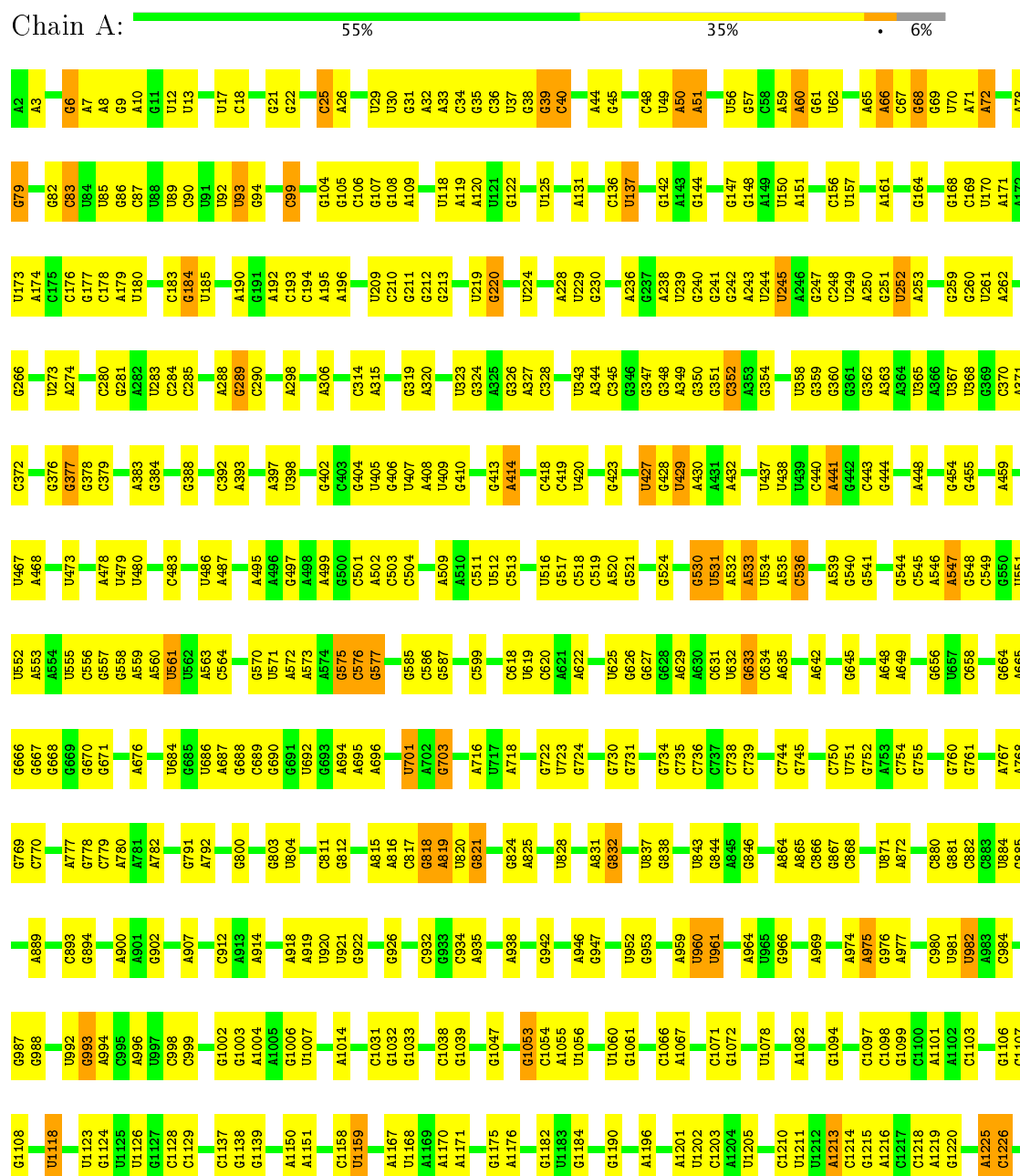
- Molecule 26 is a protein called 30S ribosomal protein S21.

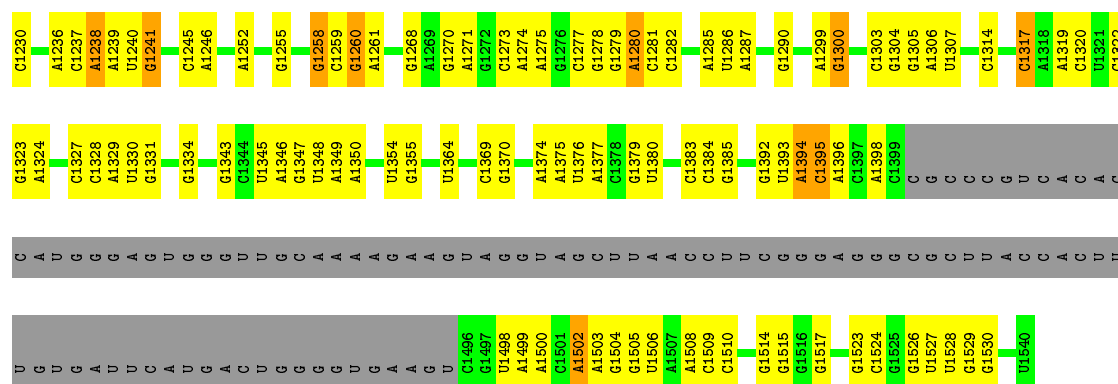
Mol	Chain	Residues	Atoms					AltConf	Trace
26	X	65	Total	C	N	O	S	0	0
			545	335	117	92	1		

3 Residue-property plots

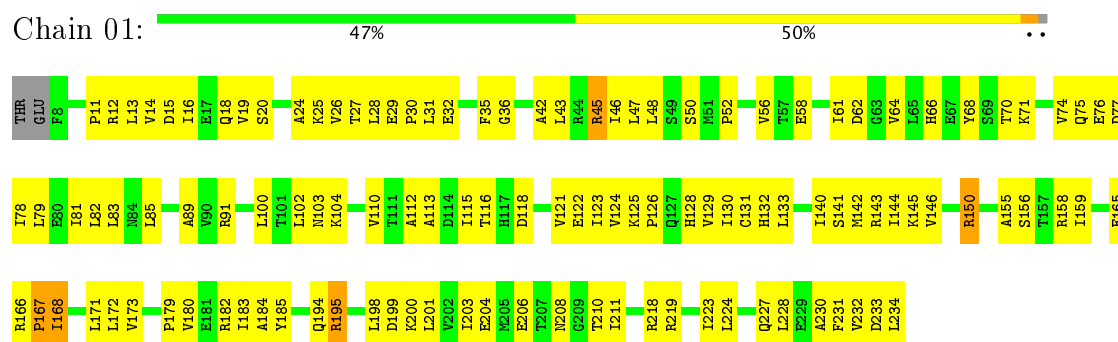
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according 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. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 16S rRNA

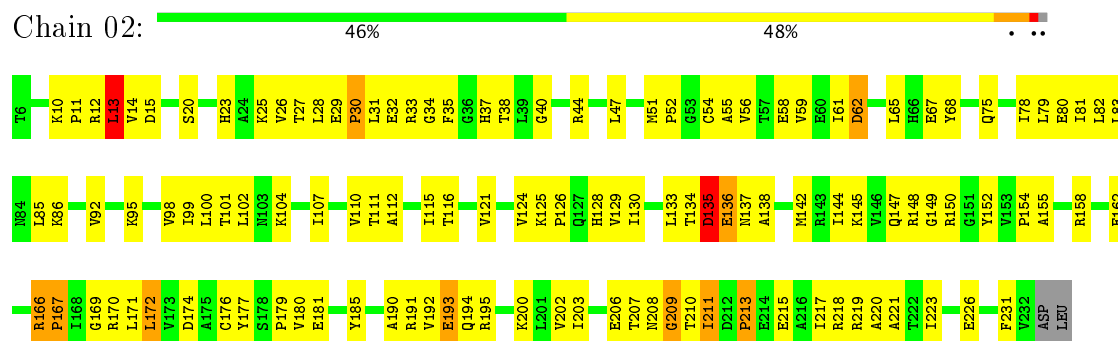




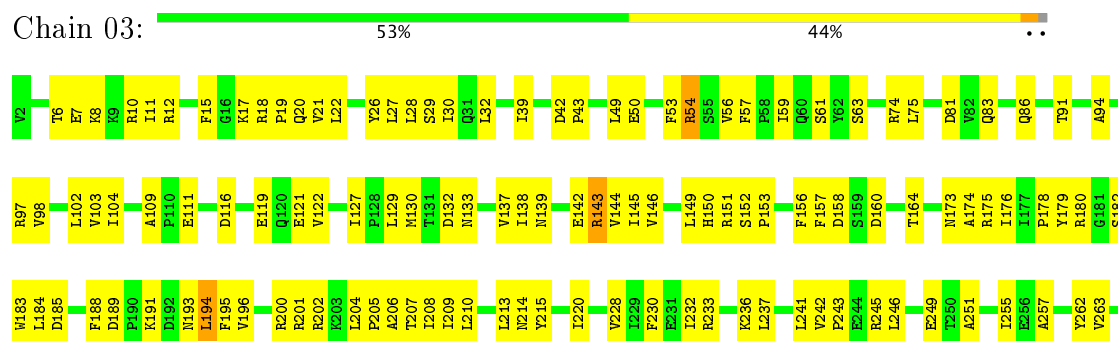
• Molecule 2: DNA-directed RNA polymerase subunit alpha



• Molecule 2: DNA-directed RNA polymerase subunit alpha



• Molecule 3: DNA-directed RNA polymerase subunit beta

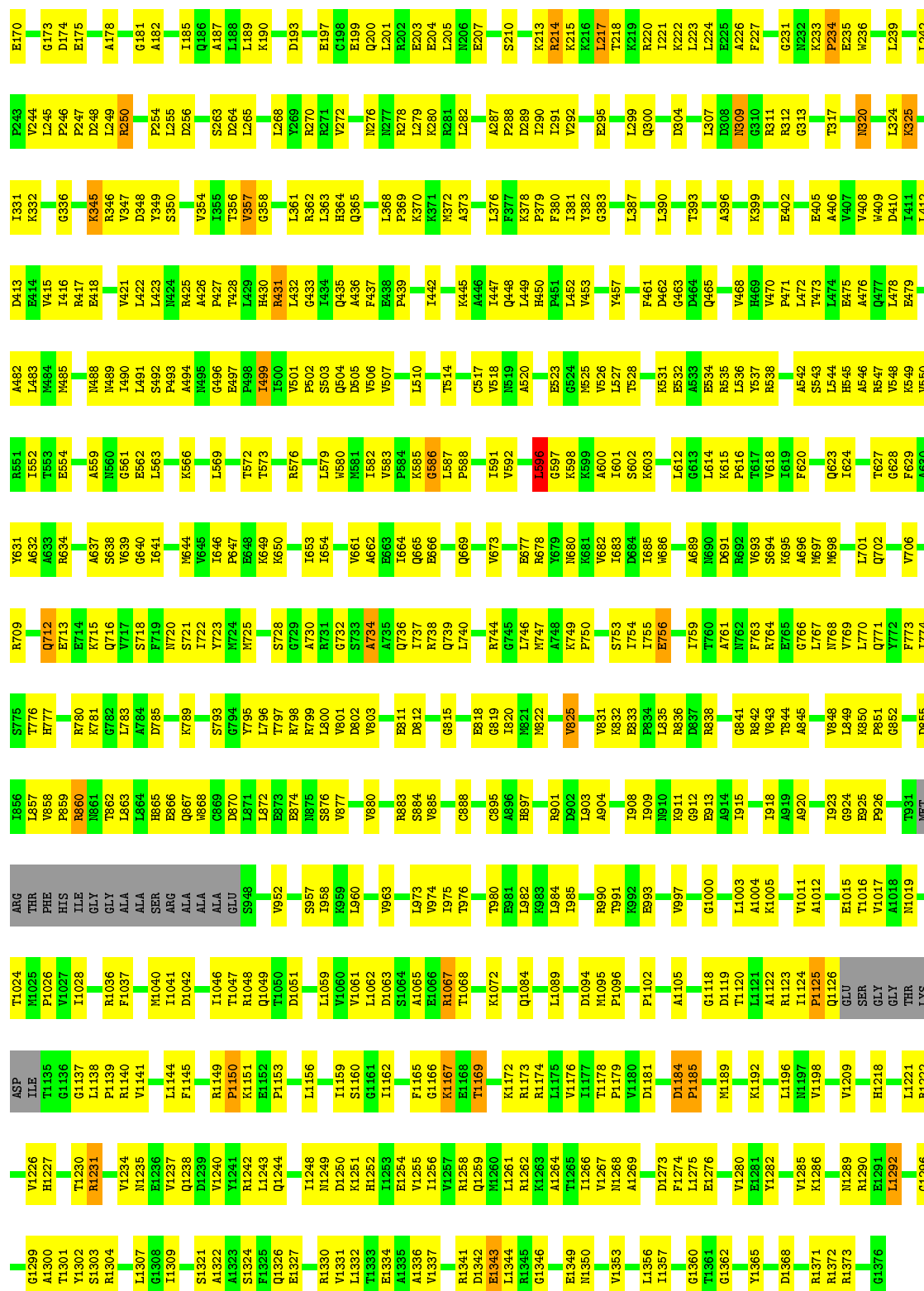


R268	R368	E458	A532	V710	G869	E962	V1046	G1123	K1200	M1290	L8
1269	M369	M459	R540	D711	I870	E963	L1047	G1123	K1200	K1294	Q11
T270	P376	N462	F545	S712	Y871	L964	K1048	M1129	L1204	L1294	T12
R273	A351	Q463	F545	A718	G874	Q965	V1052	A1130	Q1209	M1304	K13
1274	E382	F464	V550	K719	G874	L966	Y1053	A1131	I1210	Y1305	R31
L277	S363	R465	V550	R720	A875	L967	Y1053	L1132	R1211	R1211	V92
V282	L384	V467	Y555	G721	T878	L971	A1054	K1133	D1214	I1308	T93
K283	N387	L468	G556	G722	G879	R974	V1056	Q1136	G1215	V1309	R21
L284	L388	V469	R557	V723	I882	Y975	K1057	A1137	L1216	H1313	I22
1285	F389	R470	V558	K725	L883	R976	R1058	V1138	T1217	M1319	L24
P288	F390	V471	I561	W726	V884	A977	I1060	A1139	Q1220	P1320	A25
	S391	E472		V727	G885	V978	Q1061	V1140	F1221	E1321	M29
		V475	P564	D728	G886	L979	P1062	A1141	L1222	S1322	A23
		K476	P567	R730	G887	V980	G1063	R1142	M1230	F1323	L24
		E477	N568	R731	T888	G883	K1064	I1145	P1224	M1324	W33
		R478	I569	I732	P889	V984	K1065	Q1146	V1225	V1325	W33
		L479	G570	V733	K890	V985	A1066	Q1146	T1226	L1326	V38
		K480	L571	I734	G891	E984	H1067	Y1149	Y1229	K1328	P41
		D483	I572	K735	E892	L989	G1068	D1150	M1230	M1331	E42
			N573	V736	T893		R1069	L1151	G1152	L1332	T43
			S574	E737	T896		K1073	G1152		R1331	I44
			L575	E738	E899		I1076	V1155	Y1241	L1333	N45
			S576	M741	K900		I1076	R1156	K1242	G1334	Y46
			A579	G747	R903		I1079	D1160	D1240	I1335	R47
			F586	I748	L903		N1080	L1161	D1240	M1336	K50
			L587	K750	A904		P1081	L1161	D1241	P51	P51
			S499	T751	I905		I1082	F1164	K1242	E52	E52
			E588	K752	LEU		M1085	S1165	R1246	R53	R53
			T589	T754	THR		P1086	E1168	S1247	D54	D54
			P590	T757	GLU		Y1087	V1169	K1253	L56	L56
			Y591	Q686	GLY		D1088	M1170	L1253	F57	F57
			F505	R687	LYS		E1089	R1171	V1254	C58	C58
			K593	Q688	ASN		N1090	L1172	Q1256	A59	A59
			S512	Q689	GLN		A1173	E1174	Q1257	R60	R60
			R515	V690	L1011		T1092	M1175	P1258	I61	I61
			D506	P691	E1012		I1096	L1176	G1261	P64	P64
			E602	T692	Q1013		V1097	R1177	K1262	V65	V65
			I603	L693	L1014		L1098	M1180	F1265	K66	K66
			H604	A695	A1015		P1100	P1181		D67	D67
			Y619	D696	L1021		L1101	I1182		Y68	Y68
			P520	P697	E1024		R1106	A1183		E69	E69
			L521	P698	F1025		M1107	V1186		C70	C70
			S522	T702	K1028		N1108	K1191		L71	L71
			E523	G703	L1029		I1109	E1192		C72	C72
			V615	R704	K1032		Q1111	I1195		K74	K74
			I616	E705	K1032		L1112	L1195		L78	L78
			A617	R706	I1036		L1113	K1196		R81	R81
			N620	V707	I1036		G1118	L1197		G82	G82
			G627	A709	D1040		M1119	L1198		V83	V83
										I84	I84

• Molecule 4: DNA-directed RNA polymerase subunit beta'

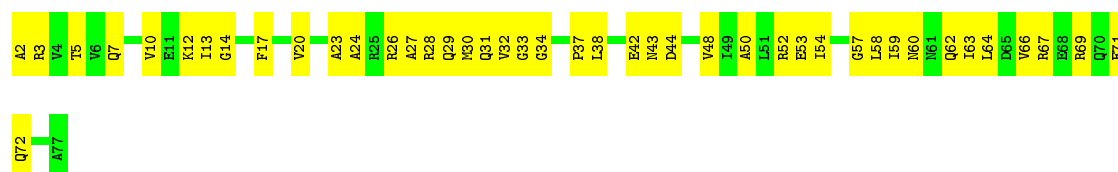
Chain 04:  50% 46%

L8	C95	L18	C95	L18	C95	L18	C95	L18	C95	L18	C95
Q11	C98	Q11	C98	Q11	C98	Q11	C98	Q11	C98	Q11	C98
T12	G89	T12	G89	T12	G89	T12	G89	T12	G89	T12	G89
K13	V90	K13	V90	K13	V90	K13	V90	K13	V90	K13	V90
A19	E91	A19	E91	A19	E91	A19	E91	A19	E91	A19	E91
R20	V92	R20	V92	R20	V92	R20	V92	R20	V92	R20	V92
K21	T93	K21	T93	K21	T93	K21	T93	K21	T93	K21	T93
I120	Q94	I120	Q94	I120	Q94	I120	Q94	I120	Q94	I120	Q94
V130	V97	V130	V97	V130	V97	V130	V97	V130	V97	V130	V97
H131	R98	H131	R98	H131	R98	H131	R98	H131	R98	H131	R98
M1319	R99	M1319	R99	M1319	R99	M1319	R99	M1319	R99	M1319	R99
P1320	E100	P1320	E100	P1320	E100	P1320	E100	P1320	E100	P1320	E100
E1321	I101	E1321	I101	E1321	I101	E1321	I101	E1321	I101	E1321	I101
S1322	M102	S1322	M102	S1322	M102	S1322	M102	S1322	M102	S1322	M102
F1323	I105	F1323	I105	F1323	I105	F1323	I105	F1323	I105	F1323	I105
M1324	A108	M1324	A108	M1324	A108	M1324	A108	M1324	A108	M1324	A108
V1325	S109	V1325	S109	V1325	S109	V1325	S109	V1325	S109	V1325	S109
L1326	P110	L1326	P110	L1326	P110	L1326	P110	L1326	P110	L1326	P110
L1327	T111	L1327	T111	L1327	T111	L1327	T111	L1327	T111	L1327	T111
K1328	A112	K1328	A112	K1328	A112	K1328	A112	K1328	A112	K1328	A112
R1331	H113	R1331	H113	R1331	H113	R1331	H113	R1331	H113	R1331	H113
S1332	I114	S1332	I114	S1332	I114	S1332	I114	S1332	I114	S1332	I114
L1333	S119	L1333	S119	L1333	S119	L1333	S119	L1333	S119	L1333	S119
G1334	L120	G1334	L120	G1334	L120	G1334	L120	G1334	L120	G1334	L120
I1335	P121	I1335	P121	I1335	P121	I1335	P121	I1335	P121	I1335	P121
M1336	S122	M1336	S122	M1336	S122	M1336	S122	M1336	S122	M1336	S122
	R123		R123		R123		R123		R123		R123
	T124		T124		T124		T124		T124		T124
	G125		G125		G125		G125		G125		G125
	M129		M129		M129		M129		M129		M129
	N130		N130		N130		N130		N130		N130
	P131		P131		P131		P131		P131		P131
	L132		L132		L132		L132		L132		L132
	R133		R133		R133		R133		R133		R133
	D134		D134		D134		D134		D134		D134
	I135		I135		I135		I135		I135		I135
	E136		E136		E136		E136		E136		E136
	R137		R137		R137		R137		R137		R137
	F141		F141		F141		F141		F141		F141
	V146		V146		V146		V146		V146		V146
	L154		L154		L154		L154		L154		L154
	E155		E155		E155		E155		E155		E155
	R156		R156		R156		R156		R156		R156
	L160		L160		L160		L160		L160		L160
	T161		T161		T161		T161		T161		T161
	Q164		Q164		Q164		Q164		Q164		Q164
	I165		I165		I165		I165		I165		I165
	V166		V166		V166		V166		V166		V166



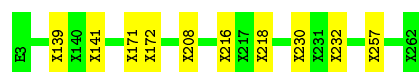
- Molecule 5: DNA-directed RNA polymerase subunit omega





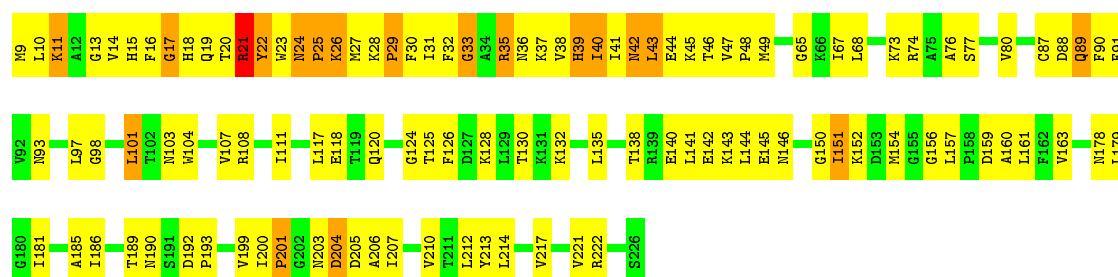
- Molecule 6: 30S ribosomal protein S1

Chain B: 93% 7%



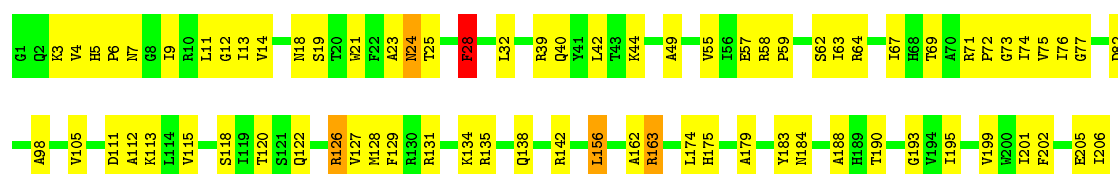
- Molecule 7: 30S ribosomal protein S2

Chain E: 48% 43% 8%



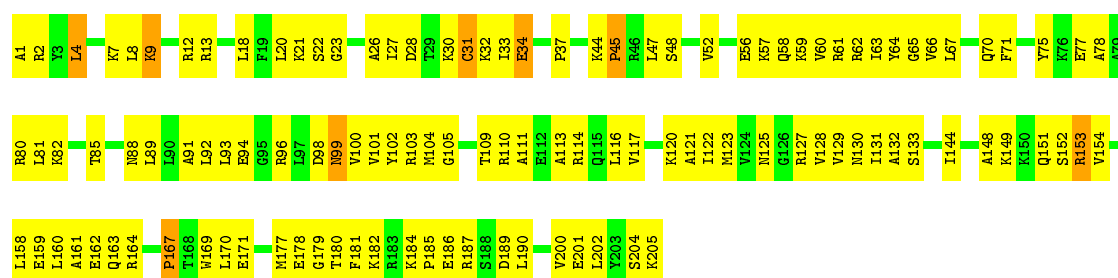
- Molecule 8: 30S ribosomal protein S3

Chain F: 64% 34% 2%

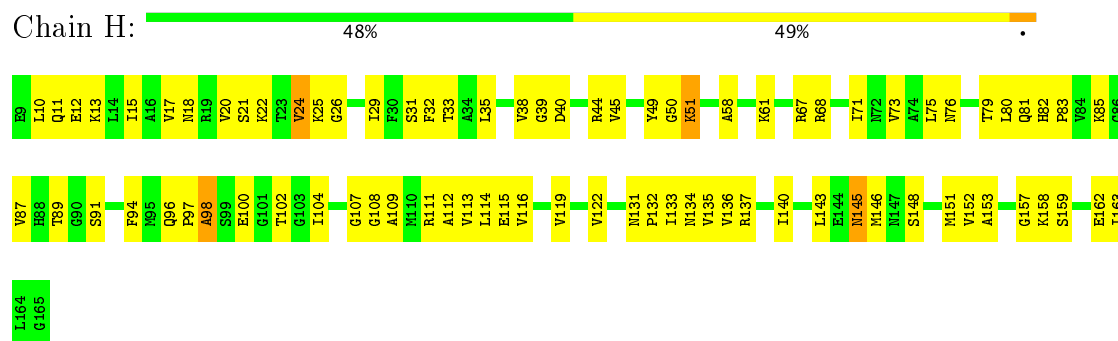


- Molecule 9: 30S ribosomal protein S4

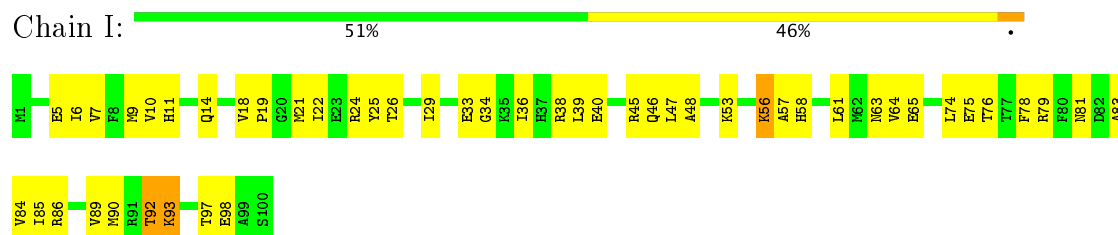
Chain G: 43% 53% 4%



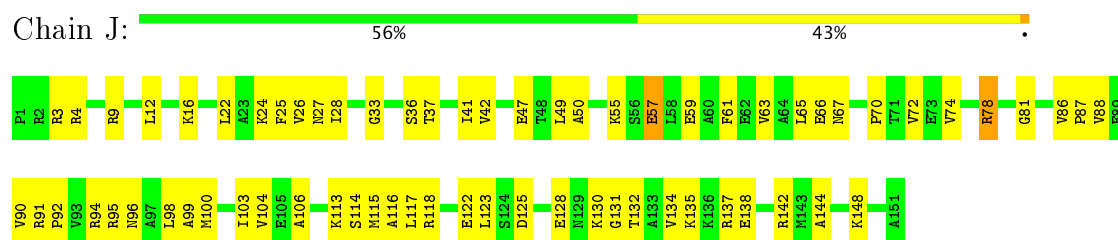
- Molecule 10: 30S ribosomal protein S5



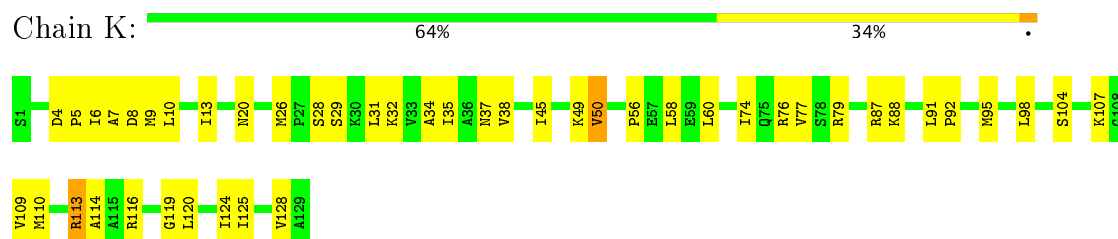
- Molecule 11: 30S ribosomal protein S6



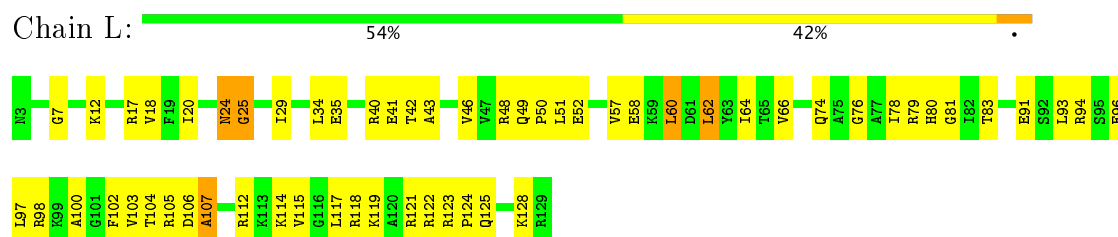
- Molecule 12: 30S ribosomal protein S7



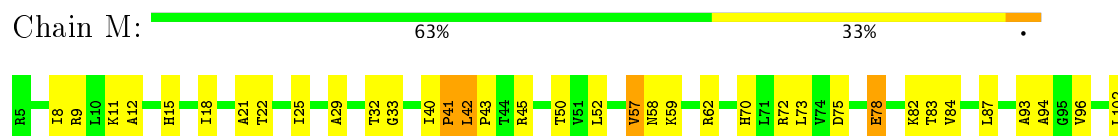
- Molecule 13: 30S ribosomal protein S8



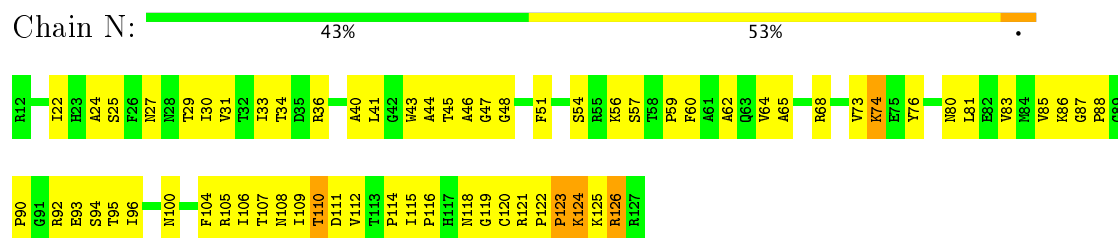
- Molecule 14: 30S ribosomal protein S9



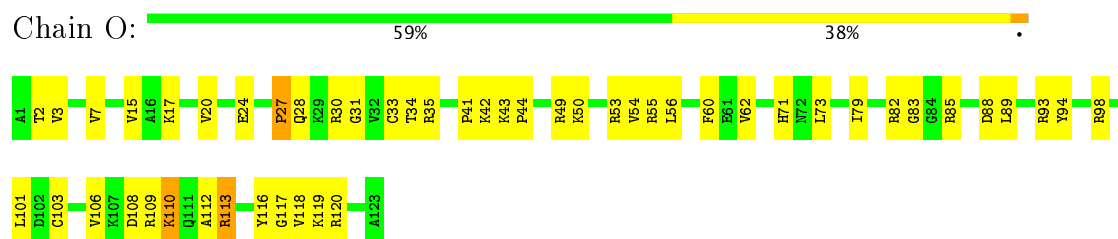
- Molecule 15: 30S ribosomal protein S10



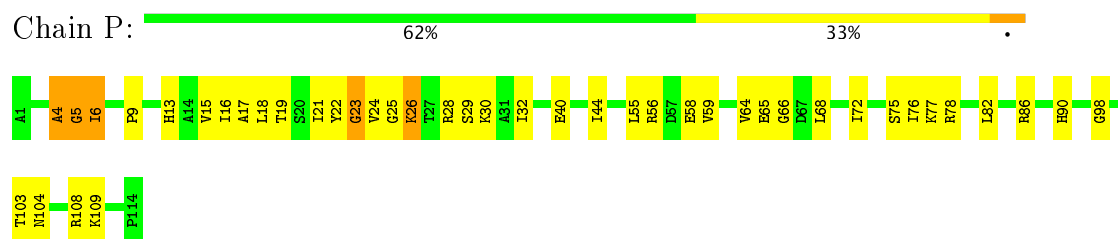
- Molecule 16: 30S ribosomal protein S11



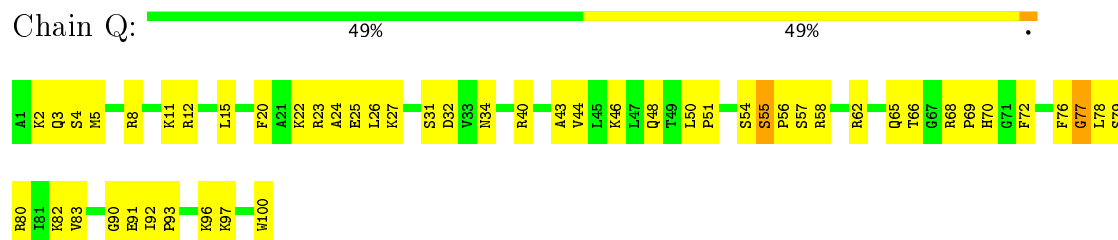
- Molecule 17: 30S ribosomal protein S12



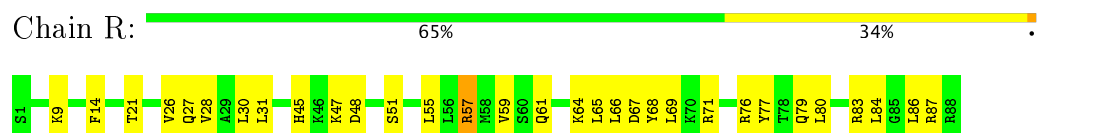
- Molecule 18: 30S ribosomal protein S13



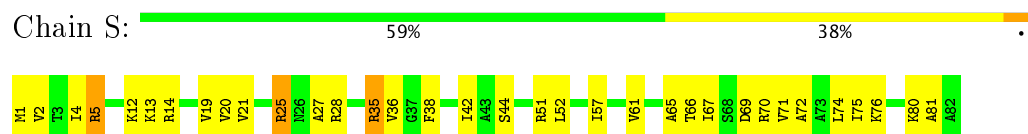
- Molecule 19: 30S ribosomal protein S14



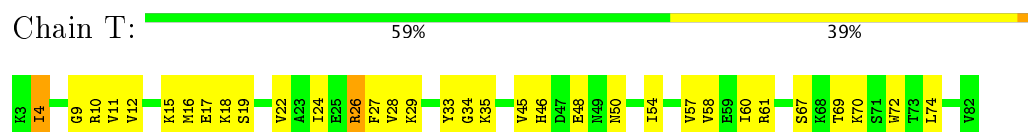
- Molecule 20: 30S ribosomal protein S15



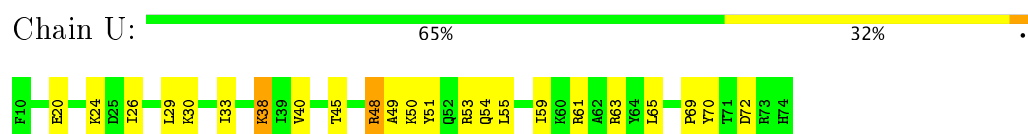
- Molecule 21: 30S ribosomal protein S16



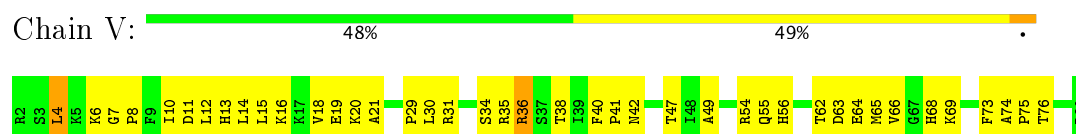
- Molecule 22: 30S ribosomal protein S17



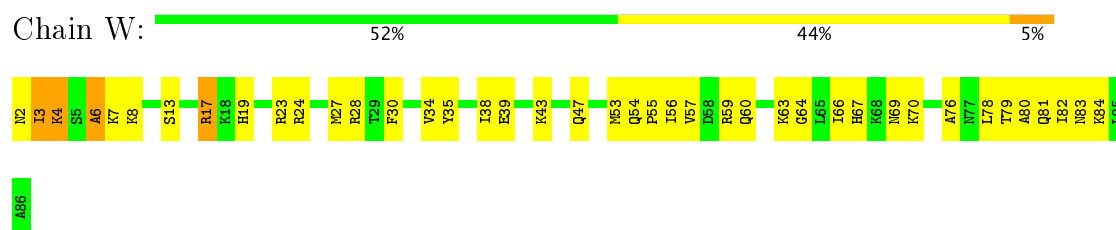
- Molecule 23: 30S ribosomal protein S18



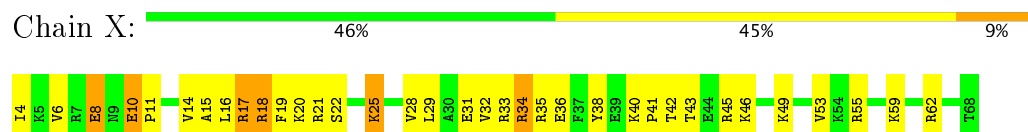
- Molecule 24: 30S ribosomal protein S19



- Molecule 25: 30S ribosomal protein S20



- Molecule 26: 30S ribosomal protein S21



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	15012	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40.0	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	25000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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 >2	RMSZ	# Z >2
1	A	0.32	0/34660	0.67	0/54067
10	H	0.30	0/1170	0.63	0/1573
11	I	0.30	0/836	0.56	0/1128
12	J	0.28	0/1196	0.63	0/1602
13	K	0.31	0/989	0.65	0/1326
14	L	0.30	0/1034	0.60	0/1375
15	M	0.32	0/797	0.60	0/1077
16	N	0.33	0/886	0.64	0/1195
17	O	0.30	0/969	0.65	0/1300
18	P	0.28	0/893	0.60	0/1193
19	Q	0.33	0/817	0.63	1/1088 (0.1%)
2	01	0.25	0/1774	0.61	0/2405
2	02	0.28	0/1779	0.66	2/2411 (0.1%)
20	R	0.30	0/722	0.62	0/964
21	S	0.31	0/659	0.55	0/884
22	T	0.31	0/658	0.60	0/881
23	U	0.35	0/545	0.72	0/731
24	V	0.34	0/653	0.60	0/877
25	W	0.31	0/671	0.59	0/888
26	X	0.39	0/551	0.70	0/728
3	03	0.30	0/10433	0.66	3/14101 (0.0%)
4	04	0.29	0/10528	0.67	4/14224 (0.0%)
5	05	0.28	0/607	0.60	0/817
6	B	0.64	0/65	0.56	0/86
7	E	0.36	0/1736	0.73	2/2338 (0.1%)
8	F	0.30	0/1652	0.59	1/2225 (0.0%)
9	G	0.30	0/1665	0.61	1/2227 (0.0%)
All	All	0.31	0/78945	0.66	14/113711 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2

There are no bond length outliers.

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	04	1296	GLY	N-CA-C	-6.35	97.22	113.10
2	02	135	ASP	N-CA-C	6.33	128.10	111.00
3	03	843	THR	N-CA-C	-6.31	93.96	111.00
3	03	891	GLY	N-CA-C	6.30	128.84	113.10
4	04	1184	ASP	N-CA-C	6.16	127.63	111.00
7	E	26	LYS	N-CA-C	-5.89	95.10	111.00
4	04	173	GLY	N-CA-C	-5.73	98.77	113.10
19	Q	77	GLY	N-CA-C	-5.58	99.15	113.10
7	E	24	ASN	C-N-CD	-5.54	108.42	120.60
3	03	516	ASP	CB-CG-OD2	5.17	122.95	118.30
8	F	105	VAL	N-CA-C	-5.16	97.07	111.00
9	G	23	GLY	N-CA-C	-5.08	100.41	113.10
4	04	324	LEU	N-CA-C	5.05	124.63	111.00
2	02	136	GLU	N-CA-C	5.04	124.61	111.00

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	25	C	Sidechain
1	A	872	A	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	30955	0	15586	433	0
2	01	1753	0	1780	113	0
2	02	1757	0	1778	110	0
3	03	10272	0	10138	556	0
4	04	10372	0	10512	598	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	05	605	0	612	41	0
6	B	774	0	200	5	0
7	E	1705	0	1732	157	0
8	F	1625	0	1699	60	0
9	G	1643	0	1710	100	0
10	H	1157	0	1199	66	0
11	I	818	0	808	43	0
12	J	1182	0	1240	59	0
13	K	979	0	1034	36	0
14	L	1022	0	1070	64	0
15	M	787	0	828	43	0
16	N	870	0	878	60	0
17	O	955	0	1019	38	0
18	P	884	0	944	41	0
19	Q	805	0	847	47	0
20	R	714	0	737	30	0
21	S	649	0	666	25	0
22	T	649	0	691	30	0
23	U	536	0	552	21	0
24	V	638	0	665	50	0
25	W	665	0	714	54	0
26	X	545	0	579	37	0
All	All	75316	0	60218	2681	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 20.

All (2681) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:26:LYS:O	7:E:29:PRO:HD2	1.44	1.14
1:A:664:G:H5''	23:U:53:ARG:HH12	1.05	1.10
7:E:47:VAL:HB	7:E:48:PRO:HD3	1.37	1.05
7:E:19:GLN:H	7:E:40:ILE:HA	1.14	1.04
4:04:246:PRO:HD2	4:04:249:LEU:HD12	1.38	1.03
3:03:1082:ILE:HD12	3:03:1082:ILE:H	1.22	1.03
25:W:54:GLN:HA	25:W:57:VAL:HG12	1.36	1.02
4:04:744:ARG:HB3	4:04:759:ILE:HB	1.40	1.02
7:E:31:ILE:HG21	7:E:189:THR:HG21	1.36	1.02
9:G:121:ALA:HB1	9:G:148:ALA:HB2	1.43	1.01
3:03:194:LEU:HB2	3:03:346:TYR:HB3	1.43	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:120:LEU:HB3	4:04:121:PRO:HD3	1.45	0.98
4:04:661:VAL:HG11	4:04:686:TRP:HE1	1.29	0.96
3:03:241:LEU:HD21	3:03:277:LEU:HD13	1.42	0.96
3:03:886:LYS:HB3	3:03:917:SER:HA	1.47	0.96
4:04:290:ILE:H	4:04:290:ILE:HD12	1.32	0.94
7:E:120:GLN:HA	7:E:124:GLY:HA3	1.49	0.93
4:04:214:ARG:HA	4:04:217:LEU:HB2	1.49	0.92
18:P:22:TYR:HB3	18:P:65:GLU:HG2	1.51	0.92
15:M:57:VAL:HG22	15:M:58:ASN:H	1.35	0.91
14:L:105:ARG:HH11	14:L:107:ALA:HA	1.33	0.90
14:L:98:ARG:HH11	14:L:103:VAL:HB	1.37	0.90
4:04:1046:ILE:HD12	4:04:1059:LEU:HB3	1.53	0.90
21:S:4:ILE:HD12	21:S:67:ILE:HG12	1.52	0.89
10:H:35:LEU:HD22	10:H:133:ILE:HG12	1.54	0.89
3:03:241:LEU:HD11	3:03:246:LEU:HD11	1.53	0.88
3:03:817:LEU:HD21	3:03:1080:ASN:HD22	1.38	0.88
2:02:100:LEU:HD21	2:02:121:VAL:HG11	1.54	0.87
4:04:363:LEU:HD21	4:04:618:VAL:HG12	1.56	0.86
1:A:1500:A:H4'	1:A:1508:A:H5''	1.55	0.86
7:E:87:CYS:HB2	7:E:89:GLN:HE22	1.38	0.86
15:M:12:ALA:HB2	15:M:96:VAL:HG22	1.57	0.86
15:M:32:THR:HG23	15:M:33:GLY:H	1.40	0.86
9:G:13:ARG:HD2	9:G:37:PRO:HB2	1.58	0.86
1:A:1014:A:H4'	24:V:13:HIS:HB2	1.56	0.86
15:M:70:HIS:HB3	15:M:72:ARG:HH12	1.38	0.85
3:03:690:VAL:HG11	3:03:1234:LYS:HB3	1.59	0.85
1:A:1279:G:H5''	15:M:9:ARG:HH12	1.40	0.85
4:04:614:LEU:HD23	5:05:7:GLN:HB2	1.59	0.85
4:04:909:ILE:HD11	4:04:913:GLU:HG2	1.58	0.85
1:A:831:A:H3'	1:A:832:G:H5''	1.58	0.85
7:E:21:ARG:H	7:E:38:VAL:HG12	1.42	0.85
4:04:1231:ARG:HA	4:04:1234:VAL:HG22	1.59	0.85
4:04:1138:LEU:HB3	4:04:1139:PRO:HD3	1.59	0.84
4:04:520:ALA:HB1	4:04:543:SER:HB3	1.60	0.84
3:03:409:LEU:HD21	3:03:428:VAL:HG22	1.60	0.84
4:04:19:ALA:HB3	4:04:1373:ARG:HG2	1.59	0.84
12:J:78:ARG:HD2	12:J:78:ARG:H	1.42	0.84
4:04:958:ILE:HG23	4:04:982:LEU:HD11	1.59	0.84
3:03:521:LEU:HG	3:03:686:GLN:HE21	1.41	0.83
14:L:24:ASN:ND2	14:L:25:GLY:H	1.75	0.83
3:03:588:GLU:HB3	3:03:605:TYR:HB3	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:24:ASN:HD22	14:L:25:GLY:H	1.24	0.83
3:03:459:MET:HA	3:03:462:ASN:HD22	1.41	0.83
1:A:131:A:H4'	25:W:69:ASN:HD21	1.43	0.83
4:04:747:MET:HB2	4:04:774:ILE:HG22	1.61	0.83
3:03:8:LYS:HG3	3:03:1168:GLU:HG3	1.59	0.83
13:K:28:SER:HB2	13:K:58:LEU:HB2	1.60	0.83
11:I:46:GLN:HA	11:I:56:LYS:HG2	1.60	0.83
2:01:45:ARG:HH21	3:03:1216:ARG:HA	1.42	0.82
3:03:808:ASN:HA	4:04:629:PHE:HB3	1.59	0.82
19:Q:40:ARG:HH11	24:V:6:LYS:HD2	1.43	0.82
2:01:13:LEU:H	2:01:13:LEU:HD23	1.45	0.82
7:E:31:ILE:HG21	7:E:189:THR:CG2	2.08	0.82
19:Q:72:PHE:HE1	19:Q:77:GLY:HA2	1.45	0.82
1:A:618:C:H42	1:A:622:A:H62	1.24	0.82
23:U:26:ILE:HA	23:U:29:LEU:HD23	1.60	0.82
3:03:1112:ILE:CG2	4:04:640:GLY:HA2	2.09	0.81
1:A:179:A:H61	1:A:196:A:H62	1.29	0.81
1:A:664:G:H5''	23:U:53:ARG:NH1	1.91	0.81
7:E:41:ILE:HG22	7:E:43:LEU:H	1.45	0.81
7:E:23:TRP:CE2	7:E:25:PRO:HG3	2.16	0.81
26:X:43:THR:O	26:X:46:LYS:HB2	1.81	0.81
16:N:93:GLU:HA	26:X:17:ARG:HH12	1.46	0.80
4:04:1290:ARG:HH11	4:04:1299:GLY:HA2	1.45	0.80
25:W:23:ARG:HB3	25:W:60:GLN:HE22	1.46	0.80
3:03:1258:PRO:HG2	4:04:346:ARG:HB2	1.62	0.80
3:03:802:VAL:HA	3:03:1096:ILE:HB	1.61	0.80
3:03:1211:ARG:HB2	3:03:1220:GLN:HG3	1.63	0.80
12:J:70:PRO:HG3	12:J:137:ARG:HG2	1.62	0.80
4:04:1286:LYS:O	4:04:1290:ARG:HG2	1.82	0.80
2:02:59:VAL:HG21	2:02:85:LEU:HD13	1.64	0.80
3:03:1012:GLU:HG2	3:03:1013:GLN:H	1.45	0.80
4:04:485:MET:HB3	4:04:488:ASN:HD22	1.47	0.80
4:04:425:ARG:HG2	4:04:427:PRO:HD2	1.64	0.80
9:G:123:MET:HG2	9:G:128:VAL:HA	1.63	0.80
3:03:796:LEU:HD12	3:03:796:LEU:H	1.47	0.80
1:A:1236:A:H4'	1:A:1304:G:H4'	1.64	0.80
22:T:16:MET:HG2	22:T:19:SER:HB2	1.62	0.79
3:03:463:GLN:HE21	3:03:505:PHE:HB2	1.46	0.79
3:03:1242:LYS:HD3	4:04:354:VAL:HG11	1.63	0.79
22:T:58:VAL:HG21	22:T:74:LEU:HD22	1.64	0.79
3:03:569:ILE:HG21	4:04:783:LEU:HD13	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:1164:PHE:O	3:03:1168:GLU:HB3	1.82	0.79
4:04:1172:LYS:HD3	4:04:1189:MET:HB3	1.64	0.79
19:Q:46:LYS:O	19:Q:50:LEU:HD13	1.83	0.79
1:A:981:U:H3'	1:A:982:U:H5''	1.65	0.78
1:A:1220:G:H4'	24:V:35:ARG:HB2	1.63	0.78
4:04:974:VAL:HG21	4:04:1118:GLY:HA3	1.66	0.78
3:03:557:ARG:HB2	3:03:587:LEU:HD13	1.66	0.78
4:04:288:PRO:HG2	4:04:291:ILE:HD12	1.65	0.78
7:E:38:VAL:O	7:E:39:HIS:HB2	1.82	0.78
4:04:587:LEU:HD12	4:04:588:PRO:HD2	1.66	0.78
4:04:502:PRO:HB2	4:04:507:VAL:HG22	1.66	0.78
1:A:427:U:H1'	1:A:541:G:H5''	1.64	0.78
7:E:30:PHE:HB3	7:E:45:LYS:HG3	1.66	0.78
9:G:103:ARG:HB3	9:G:167:PRO:HG2	1.65	0.78
2:02:35:PHE:HA	2:02:38:THR:HG22	1.64	0.77
3:03:519:ASN:ND2	3:03:521:LEU:HB3	1.99	0.77
1:A:92:U:H2'	1:A:93:U:H4'	1.66	0.77
16:N:109:ILE:HG22	26:X:20:LYS:NZ	2.00	0.77
9:G:101:VAL:O	9:G:104:MET:HB2	1.85	0.77
7:E:23:TRP:O	7:E:190:ASN:HB3	1.84	0.77
2:01:14:VAL:HG22	2:01:15:ASP:H	1.50	0.77
2:01:31:LEU:HB2	2:01:199:ASP:O	1.85	0.77
1:A:151:A:H62	1:A:170:U:H3	1.32	0.77
10:H:13:LYS:HG2	10:H:112:ALA:HB1	1.65	0.77
2:01:29:GLU:HB3	2:01:30:PRO:HD3	1.67	0.76
3:03:152:SER:HA	3:03:452:ARG:HB2	1.67	0.76
4:04:504:GLN:HA	4:04:730:ALA:HB1	1.67	0.76
1:A:922:G:H4'	10:H:25:LYS:HB3	1.66	0.76
14:L:98:ARG:NH1	14:L:103:VAL:HB	2.01	0.76
18:P:4:ALA:HB3	18:P:21:ILE:HD13	1.67	0.76
3:03:1211:ARG:H	3:03:1211:ARG:HD2	1.51	0.76
3:03:478:ARG:HG2	3:03:492:MET:HG2	1.68	0.75
3:03:723:VAL:HG22	3:03:776:PRO:HG3	1.67	0.75
1:A:961:U:H3	1:A:1201:A:H61	1.34	0.75
1:A:1259:C:H3'	1:A:1260:G:H5''	1.66	0.75
3:03:1333:LEU:HD21	4:04:307:LEU:HD21	1.66	0.75
1:A:25:C:H41	1:A:558:G:N2	1.83	0.75
3:03:204:LEU:HD13	3:03:208:ILE:HD13	1.68	0.75
4:04:845:ALA:HA	4:04:883:ARG:HG3	1.68	0.75
24:V:21:ALA:HB2	24:V:30:LEU:HD21	1.68	0.75
3:03:11:ILE:H	3:03:1172:LEU:HD11	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:39:HIS:O	7:E:40:ILE:HB	1.84	0.75
9:G:117:VAL:HG22	9:G:122:ILE:HD12	1.68	0.75
1:A:1252:A:H61	1:A:1285:A:H61	1.35	0.75
1:A:244:U:H4'	1:A:245:U:H5'	1.68	0.75
8:F:69:THR:HG21	8:F:75:VAL:HG21	1.67	0.74
3:03:807:TRP:H	3:03:811:ASN:HD21	1.35	0.74
3:03:557:ARG:HG3	3:03:558:VAL:HG23	1.70	0.74
5:05:63:ILE:H	5:05:63:ILE:HD12	1.51	0.74
4:04:279:LEU:HD13	4:04:299:LEU:HD22	1.70	0.74
1:A:782:A:H62	1:A:800:G:H21	1.35	0.74
24:V:62:THR:H	24:V:65:MET:HE3	1.53	0.74
2:01:46:ILE:HG13	2:01:224:LEU:HD21	1.68	0.74
9:G:94:GLU:HG2	9:G:185:PRO:HG3	1.69	0.74
12:J:72:VAL:HG21	12:J:144:ALA:HB2	1.70	0.74
2:01:211:ILE:HG21	2:01:219:ARG:HH22	1.52	0.74
3:03:295:LYS:O	3:03:316:GLU:HA	1.88	0.73
4:04:736:GLN:HA	4:04:739:GLN:NE2	2.02	0.73
7:E:31:ILE:HG22	7:E:42:ASN:ND2	2.03	0.73
16:N:30:ILE:HA	16:N:45:THR:HG22	1.70	0.73
3:03:671:LEU:HD12	3:03:674:ASP:HB2	1.71	0.73
4:04:204:GLU:HA	4:04:207:GLU:HB2	1.70	0.73
4:04:526:VAL:HG12	4:04:549:LYS:HB2	1.69	0.73
7:E:11:LYS:O	7:E:14:VAL:HG22	1.89	0.73
3:03:1320:PRO:HB2	3:03:1323:PHE:HB2	1.71	0.73
4:04:11:GLN:HG3	4:04:13:LYS:H	1.54	0.72
2:02:12:ARG:HG2	2:02:13:LEU:H	1.52	0.72
3:03:1024:GLU:O	3:03:1028:LYS:HG2	1.88	0.72
4:04:483:LEU:HD13	5:05:17:PHE:HE1	1.55	0.72
4:04:849:LEU:HD23	4:04:849:LEU:H	1.54	0.72
24:V:14:LEU:O	24:V:18:VAL:HG23	1.88	0.72
7:E:186:ILE:HG13	7:E:200:ILE:O	1.90	0.72
26:X:14:VAL:HG13	26:X:16:LEU:HG	1.71	0.72
3:03:1285:TYR:HB2	4:04:1356:LEU:HD21	1.71	0.72
16:N:109:ILE:HG22	26:X:20:LYS:HZ1	1.53	0.72
21:S:61:VAL:HA	21:S:65:ALA:HB3	1.70	0.72
4:04:763:PHE:HA	4:04:767:LEU:HD11	1.70	0.72
18:P:32:ILE:HG23	18:P:58:GLU:HB3	1.70	0.72
3:03:213:LEU:HD13	3:03:422:LYS:HE3	1.70	0.72
4:04:220:ARG:NH1	4:04:224:LEU:HD11	2.05	0.72
7:E:47:VAL:HB	7:E:48:PRO:CD	2.18	0.72
4:04:268:LEU:O	4:04:272:VAL:HG23	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:57:GLU:HB2	8:F:64:ARG:HB3	1.70	0.71
2:02:194:GLN:HG3	4:04:406:ALA:HB2	1.71	0.71
3:03:667:LEU:HD23	3:03:702:THR:HG22	1.72	0.71
9:G:57:LYS:HD3	9:G:202:LEU:HD21	1.71	0.71
4:04:1249:ASN:ND2	4:04:1251:LYS:HB2	2.04	0.71
1:A:701:U:H5"	1:A:703:G:H1'	1.72	0.71
3:03:971:LEU:HD12	3:03:1021:LEU:HD11	1.71	0.71
4:04:418:GLU:HG3	5:05:44:ASP:HA	1.73	0.71
10:H:148:SER:H	10:H:151:MET:HB3	1.55	0.71
2:02:192:VAL:HB	2:02:195:ARG:HB2	1.70	0.71
3:03:1062:PRO:HG3	3:03:1079:ILE:HG22	1.71	0.71
3:03:591:TYR:HD2	3:03:606:LEU:HD13	1.54	0.71
9:G:190:LEU:H	9:G:190:LEU:HD23	1.53	0.71
3:03:30:ILE:H	3:03:30:ILE:HD12	1.56	0.71
21:S:4:ILE:HG12	21:S:21:VAL:HG22	1.73	0.71
3:03:26:TYR:HB3	3:03:29:SER:OG	1.90	0.71
3:03:91:THR:HG21	3:03:503:LYS:NZ	2.06	0.71
10:H:131:ASN:HB3	10:H:134:ASN:HB2	1.73	0.71
19:Q:92:ILE:H	19:Q:92:ILE:HD12	1.53	0.71
4:04:1024:THR:HG22	4:04:1026:PRO:HD3	1.73	0.70
4:04:356:THR:HG23	4:04:448:GLN:HG2	1.73	0.70
12:J:28:ILE:HG22	12:J:104:VAL:HG21	1.73	0.70
2:01:211:ILE:HG21	2:01:219:ARG:NH2	2.06	0.70
4:04:84:ILE:HG12	7:E:74:ARG:HG2	1.73	0.70
3:03:255:ILE:HB	3:03:263:VAL:HB	1.71	0.70
3:03:359:ARG:O	3:03:363:LEU:HG	1.89	0.70
3:03:1151:LEU:HB2	3:03:1198:LEU:HD21	1.73	0.70
3:03:842:ASP:HA	3:03:847:PRO:HA	1.72	0.70
7:E:47:VAL:CB	7:E:48:PRO:HD3	2.20	0.70
9:G:113:ALA:O	9:G:117:VAL:HG23	1.91	0.70
4:04:1046:ILE:HG22	4:04:1061:VAL:HA	1.73	0.70
4:04:60:ARG:HG3	4:04:88:CYS:HB3	1.72	0.70
1:A:1502:A:H8	1:A:1505:G:H22	1.40	0.70
3:03:561:ILE:HG22	3:03:683:ALA:HB2	1.73	0.70
4:04:712:GLN:HG3	4:04:713:GLU:H	1.56	0.70
1:A:770:C:H1'	1:A:900:A:H2	1.55	0.70
2:01:195:ARG:HG2	2:01:198:LEU:HG	1.73	0.70
2:02:133:LEU:HD11	2:02:138:ALA:HB1	1.73	0.70
3:03:176:ILE:HD12	3:03:184:LEU:HD23	1.73	0.70
10:H:85:LYS:HG2	10:H:94:PHE:HD1	1.57	0.70
21:S:20:VAL:HG12	21:S:35:ARG:HB3	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:185:TYR:HB2	2:01:201:LEU:HD11	1.74	0.70
15:M:70:HIS:HB3	15:M:72:ARG:NH1	2.07	0.69
8:F:113:LYS:HD3	8:F:184:ASN:HD22	1.58	0.69
1:A:668:G:H4'	20:R:47:LYS:HB2	1.73	0.69
3:03:402:ARG:HH11	3:03:406:ASN:HD21	1.41	0.69
3:03:402:ARG:NH1	3:03:406:ASN:HD21	1.90	0.69
1:A:78:A:H2'	1:A:79:G:H4'	1.73	0.69
1:A:889:A:H61	1:A:907:A:H3'	1.56	0.69
4:04:646:ILE:HG12	4:04:764:ARG:HH11	1.57	0.69
11:I:5:GLU:HA	11:I:63:ASN:HA	1.74	0.69
3:03:1101:LEU:HD12	3:03:1101:LEU:H	1.56	0.69
4:04:552:ILE:HD12	4:04:552:ILE:O	1.93	0.69
1:A:1108:G:H5'	8:F:175:HIS:HD2	1.56	0.69
2:02:172:LEU:H	2:02:172:LEU:HD23	1.57	0.69
1:A:1280:A:O2'	1:A:1281:C:H5'	1.92	0.69
8:F:18:ASN:HA	8:F:55:VAL:HG12	1.74	0.69
9:G:7:LYS:HE3	9:G:20:LEU:HD22	1.73	0.69
4:04:510:LEU:HD21	4:04:624:ILE:HG23	1.74	0.69
7:E:40:ILE:HG23	7:E:41:ILE:HG13	1.73	0.69
11:I:47:LEU:HG	11:I:57:ALA:H	1.56	0.69
2:02:23:HIS:HB3	2:02:206:GLU:HG2	1.73	0.69
18:P:16:ILE:H	18:P:16:ILE:HD12	1.57	0.69
1:A:410:G:H21	1:A:432:A:H62	1.40	0.69
16:N:51:PHE:O	16:N:56:LYS:HG3	1.93	0.69
26:X:40:LYS:HB3	26:X:41:PRO:HD3	1.74	0.69
1:A:414:A:H62	1:A:430:A:H61	1.41	0.69
13:K:35:ILE:HG12	13:K:109:VAL:HG11	1.74	0.69
3:03:10:ARG:HD3	3:03:1181:PRO:HG2	1.74	0.69
4:04:21:LYS:HB3	4:04:1373:ARG:HH21	1.58	0.69
4:04:381:ILE:HD11	4:04:412:LEU:HD13	1.75	0.69
4:04:798:ARG:O	4:04:801:VAL:HG22	1.93	0.69
5:05:58:LEU:H	5:05:58:LEU:HD23	1.57	0.69
4:04:1252:HIS:O	4:04:1255:VAL:HG22	1.92	0.68
4:04:1282:TYR:O	4:04:1285:VAL:HG12	1.93	0.68
11:I:47:LEU:HD21	11:I:57:ALA:HB3	1.75	0.68
1:A:688:G:H5'	16:N:48:GLY:HA2	1.76	0.68
18:P:5:GLY:O	18:P:6:ILE:HG23	1.93	0.68
22:T:16:MET:HG3	22:T:17:GLU:H	1.58	0.68
1:A:664:G:C5'	23:U:53:ARG:HH12	1.94	0.68
4:04:615:LYS:HB2	4:04:616:PRO:HD3	1.75	0.68
18:P:4:ALA:HB3	18:P:21:ILE:HG21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:50:SER:HB3	2:01:223:ILE:HD13	1.75	0.68
4:04:1344:LEU:HD11	4:04:1353:VAL:HG11	1.75	0.68
2:02:52:PRO:HG3	2:02:150:ARG:HG2	1.75	0.68
1:A:884:U:H4'	1:A:885:G:H5''	1.74	0.68
19:Q:40:ARG:NH1	24:V:6:LYS:HD2	2.09	0.68
3:03:1063:GLY:H	3:03:1076:ILE:HG23	1.57	0.68
2:02:208:ASN:HD21	2:02:210:THR:HG23	1.59	0.68
2:02:12:ARG:HB3	2:02:13:LEU:HD23	1.75	0.68
3:03:846:GLY:HA3	3:03:889:PRO:HG2	1.76	0.68
4:04:598:LYS:O	4:04:601:ILE:HG22	1.94	0.68
1:A:1205:U:O2'	8:F:193:GLY:HA2	1.93	0.68
16:N:85:VAL:HG21	16:N:96:ILE:HD11	1.76	0.68
3:03:296:VAL:HG12	3:03:316:GLU:HG3	1.75	0.68
3:03:1326:LEU:HB2	4:04:331:ILE:HG21	1.76	0.68
4:04:799:ARG:HD2	4:04:1309:ILE:HD12	1.75	0.67
4:04:426:ALA:HB3	4:04:427:PRO:HD3	1.76	0.67
7:E:161:LEU:HD13	7:E:181:ILE:HD12	1.74	0.67
7:E:23:TRP:CH2	7:E:25:PRO:HB3	2.29	0.67
3:03:1320:PRO:O	3:03:1322:SER:N	2.26	0.67
1:A:920:U:H2'	1:A:921:U:C6	2.29	0.67
22:T:45:VAL:HG21	22:T:60:ILE:HD13	1.77	0.67
4:04:501:VAL:HG23	4:04:602:SER:HB2	1.76	0.67
10:H:76:ASN:HD22	10:H:79:THR:CG2	2.08	0.67
2:02:166:ARG:HB2	2:02:167:PRO:HD3	1.77	0.67
4:04:1290:ARG:NH1	4:04:1299:GLY:HA2	2.09	0.67
4:04:736:GLN:O	4:04:739:GLN:HG2	1.95	0.67
1:A:577:G:H1'	1:A:816:A:H2'	1.75	0.67
1:A:8:A:N3	10:H:107:GLY:HA2	2.08	0.67
1:A:9:G:N2	1:A:10:A:C4	2.62	0.67
7:E:19:GLN:N	7:E:40:ILE:HA	1.99	0.67
4:04:349:TYR:HB3	4:04:470:VAL:HB	1.77	0.67
15:M:32:THR:HG23	15:M:33:GLY:N	2.08	0.67
2:01:66:HIS:HA	2:01:171:LEU:HD11	1.76	0.67
2:02:107:ILE:HG12	2:02:135:ASP:HA	1.75	0.67
2:02:14:VAL:HG23	2:02:26:VAL:HG13	1.77	0.67
3:03:431:LYS:O	3:03:435:ILE:HG13	1.95	0.67
3:03:564:PRO:HD2	3:03:572:ILE:HG21	1.75	0.67
1:A:245:U:H3	1:A:283:U:H3	1.41	0.67
1:A:632:U:H3'	1:A:633:G:H5'	1.76	0.67
4:04:502:PRO:HB3	4:04:506:VAL:HG13	1.77	0.67
8:F:163:ARG:H	8:F:163:ARG:HD3	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:79:THR:HA	25:W:82:ILE:HG12	1.77	0.67
2:02:80:GLU:HG2	4:04:569:LEU:HD21	1.77	0.67
7:E:157:LEU:H	7:E:157:LEU:HD23	1.60	0.67
4:04:20:ILE:O	4:04:1343:GLU:HA	1.95	0.66
1:A:626:G:H2'	1:A:627:G:H8	1.60	0.66
22:T:67:SER:H	22:T:70:LYS:HB3	1.59	0.66
3:03:1138:VAL:O	3:03:1142:ARG:HG3	1.95	0.66
4:04:189:LEU:HD22	4:04:234:PRO:HB3	1.77	0.66
3:03:103:VAL:HG12	3:03:116:ASP:HA	1.77	0.66
4:04:1249:ASN:HD21	4:04:1251:LYS:HE2	1.59	0.66
4:04:749:LYS:HD3	4:04:753:SER:HB2	1.76	0.66
1:A:778:G:H21	16:N:121:ARG:HD3	1.59	0.66
19:Q:48:GLN:HB3	24:V:12:LEU:HD22	1.76	0.66
3:03:193:ASN:HB3	3:03:195:PHE:CE2	2.30	0.66
4:04:811:GLU:HA	4:04:911:LYS:HE2	1.76	0.66
10:H:82:HIS:CD2	13:K:98:LEU:HD22	2.30	0.66
4:04:436:ALA:O	4:04:485:MET:HE3	1.96	0.66
4:04:64:PRO:HG2	4:04:93:THR:H	1.61	0.66
1:A:107:G:H2'	1:A:108:G:H5'	1.77	0.66
9:G:100:VAL:O	9:G:104:MET:HG2	1.96	0.66
9:G:116:LEU:O	9:G:121:ALA:HB3	1.94	0.66
3:03:296:VAL:CG1	3:03:316:GLU:HG3	2.26	0.66
3:03:557:ARG:NH1	3:03:608:ALA:HB2	2.09	0.66
4:04:800:LEU:O	4:04:803:VAL:HG12	1.96	0.66
1:A:767:A:H4'	1:A:1524:C:O2'	1.95	0.66
25:W:56:ILE:N	25:W:56:ILE:HD12	2.10	0.66
3:03:817:LEU:HD21	3:03:1080:ASN:ND2	2.09	0.66
4:04:1028:ILE:HB	4:04:1118:GLY:HA2	1.77	0.66
4:04:347:VAL:HG23	4:04:350:SER:HB2	1.77	0.66
4:04:773:PHE:HA	4:04:776:THR:OG1	1.94	0.66
4:04:363:LEU:HD21	4:04:618:VAL:CG1	2.24	0.66
14:L:91:GLU:HA	14:L:94:ARG:HB2	1.76	0.66
26:X:10:GLU:H	26:X:11:PRO:HD2	1.60	0.66
1:A:1299:A:H2'	1:A:1300:G:H4'	1.77	0.66
1:A:516:U:H5	1:A:533:A:H62	1.42	0.66
3:03:1090:ASN:HD22	3:03:1092:THR:HG23	1.61	0.65
4:04:698:MET:O	4:04:702:GLN:HB2	1.96	0.65
17:O:118:VAL:HG12	17:O:119:LYS:H	1.61	0.65
22:T:15:LYS:HB2	22:T:15:LYS:NZ	2.11	0.65
4:04:706:VAL:HG12	4:04:715:LYS:HB3	1.77	0.65
1:A:65:A:H4'	1:A:66:A:H5'	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:24:ASN:ND2	14:L:25:GLY:N	2.43	0.65
19:Q:26:LEU:HD22	19:Q:43:ALA:HA	1.76	0.65
3:03:139:ASN:H	3:03:143:ARG:NH1	1.93	0.65
4:04:1037:PHE:HB3	4:04:1040:MET:HB2	1.78	0.65
4:04:1368:ASP:HB3	4:04:1372:ARG:HH12	1.61	0.65
4:04:187:ALA:HA	4:04:190:LYS:HZ2	1.59	0.65
1:A:194:C:H4'	25:W:59:ARG:HD2	1.78	0.65
1:A:552:U:H2'	1:A:553:A:H8	1.61	0.65
19:Q:23:ARG:HB3	19:Q:50:LEU:HD21	1.77	0.65
3:03:149:LEU:HD11	3:03:451:ARG:HB3	1.78	0.65
4:04:361:LEU:HD11	4:04:448:GLN:HB3	1.79	0.65
7:E:33:GLY:HA3	7:E:41:ILE:O	1.96	0.65
20:R:69:LEU:HD11	20:R:76:ARG:HD2	1.79	0.65
3:03:1271:GLY:O	3:03:1275:VAL:HG23	1.96	0.65
4:04:926:PRO:HG2	4:04:1248:ILE:HD11	1.77	0.65
7:E:130:THR:HG22	7:E:132:LYS:H	1.61	0.65
14:L:24:ASN:HD22	14:L:25:GLY:N	1.94	0.65
3:03:246:LEU:HD23	3:03:249:GLU:OE1	1.97	0.65
5:05:23:ALA:HB1	5:05:50:ALA:HB1	1.78	0.65
1:A:1158:C:H5''	7:E:132:LYS:HD3	1.79	0.65
4:04:749:LYS:HB3	4:04:755:ILE:HG13	1.79	0.65
1:A:502:A:OP1	17:O:112:ALA:HA	1.97	0.65
10:H:96:GLN:NE2	10:H:97:PRO:HD2	2.12	0.65
19:Q:68:ARG:HH22	19:Q:80:ARG:NH2	1.95	0.65
9:G:77:GLU:O	9:G:81:LEU:HG	1.97	0.64
1:A:363:A:H5'	17:O:30:ARG:HB2	1.77	0.64
2:01:102:LEU:O	2:01:141:SER:HA	1.97	0.64
3:03:420:LEU:HB3	3:03:425:ILE:HD11	1.79	0.64
3:03:471:VAL:HG21	3:03:493:ILE:HD12	1.77	0.64
7:E:26:LYS:O	7:E:29:PRO:CD	2.36	0.64
22:T:24:ILE:H	22:T:24:ILE:HD12	1.62	0.64
3:03:1313:HIS:HD2	5:05:31:GLN:HE22	1.45	0.64
3:03:471:VAL:O	3:03:475:VAL:HG23	1.98	0.64
8:F:13:ILE:HG22	8:F:14:VAL:HG23	1.78	0.64
14:L:105:ARG:HD3	14:L:105:ARG:O	1.97	0.64
4:04:98:ARG:HA	4:04:101:ARG:HG2	1.80	0.64
1:A:1158:C:H2'	1:A:1159:U:H4'	1.79	0.64
24:V:15:LEU:O	24:V:19:GLU:HG2	1.97	0.64
2:01:100:LEU:HD21	2:01:121:VAL:HG11	1.80	0.64
3:03:1123:GLY:HA3	3:03:1204:LEU:HD11	1.80	0.64
3:03:232:ILE:HG12	3:03:237:LEU:HD23	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:704:MET:O	3:03:708:VAL:HG23	1.98	0.64
7:E:80:VAL:HG12	7:E:91:PHE:HB2	1.79	0.64
3:03:1305:TYR:O	3:03:1309:VAL:HG13	1.98	0.64
1:A:105:G:H22	1:A:379:C:H4'	1.63	0.64
7:E:76:ALA:O	7:E:80:VAL:HG23	1.96	0.64
17:O:83:GLY:HA2	17:O:94:TYR:HD1	1.63	0.64
3:03:890:LYS:HG2	3:03:891:GLY:N	2.13	0.63
22:T:35:LYS:HB3	22:T:35:LYS:NZ	2.12	0.63
2:02:95:LYS:HD3	2:02:98:VAL:HB	1.80	0.63
3:03:137:VAL:HG22	3:03:142:GLU:HG2	1.78	0.63
4:04:800:LEU:HD23	4:04:920:ALA:HA	1.80	0.63
21:S:35:ARG:O	21:S:35:ARG:HD3	1.98	0.63
2:01:91:ARG:HB2	2:01:122:GLU:HB3	1.79	0.63
3:03:1132:LEU:HD11	3:03:1174:GLU:HG2	1.80	0.63
18:P:18:LEU:HD12	18:P:29:SER:OG	1.98	0.63
3:03:488:MET:O	3:03:491:ASP:HB2	1.99	0.63
4:04:120:LEU:HB3	4:04:121:PRO:CD	2.26	0.63
3:03:1112:ILE:O	4:04:641:ILE:HG12	1.99	0.63
4:04:97:VAL:HB	4:04:101:ARG:HH12	1.64	0.63
2:01:113:ALA:HB2	2:01:126:PRO:HB3	1.80	0.63
2:01:11:PRO:HA	2:01:30:PRO:HB2	1.81	0.63
2:02:33:ARG:H	2:02:33:ARG:HD3	1.63	0.63
4:04:1159:ILE:HG21	4:04:1179:PRO:HG3	1.79	0.63
1:A:244:U:C4'	1:A:245:U:H5'	2.29	0.63
13:K:50:VAL:HG22	13:K:50:VAL:O	1.99	0.63
4:04:797:THR:HG22	4:04:924:GLY:HA3	1.79	0.63
1:A:1128:C:O2'	1:A:1129:C:H5'	1.99	0.63
1:A:553:A:H1'	17:O:27:PRO:HA	1.79	0.63
4:04:1159:ILE:HG13	4:04:1160:SER:N	2.14	0.63
4:04:1264:ALA:HB2	4:04:1280:VAL:HG22	1.81	0.63
5:05:44:ASP:HB3	5:05:48:VAL:HB	1.81	0.63
8:F:127:VAL:HG22	8:F:128:MET:H	1.64	0.63
3:03:1246:ARG:HD3	3:03:1246:ARG:C	2.19	0.62
4:04:405:GLU:O	4:04:408:VAL:HG22	1.97	0.62
10:H:82:HIS:HD2	13:K:98:LEU:HD22	1.64	0.62
13:K:113:ARG:HA	13:K:116:ARG:NH1	2.14	0.62
2:01:31:LEU:HD13	2:01:36:GLY:HA3	1.81	0.62
3:03:1247:SER:HB2	4:04:349:TYR:H	1.64	0.62
4:04:1140:ARG:O	4:04:1144:LEU:HG	1.99	0.62
4:04:1231:ARG:HH11	4:04:1231:ARG:HG2	1.64	0.62
4:04:865:HIS:HE1	4:04:867:GLN:HB2	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:21:ARG:C	7:E:23:TRP:H	2.01	0.62
10:H:80:LEU:HG	10:H:81:GLN:H	1.64	0.62
20:R:48:ASP:HB3	20:R:51:SER:HB2	1.81	0.62
24:V:14:LEU:HD13	24:V:34:SER:HB3	1.81	0.62
10:H:131:ASN:HB3	10:H:134:ASN:HD22	1.65	0.62
10:H:51:LYS:HE2	10:H:61:LYS:NZ	2.14	0.62
21:S:14:ARG:HE	21:S:42:ILE:HD12	1.65	0.62
2:01:26:VAL:HG22	2:01:203:ILE:HB	1.80	0.62
4:04:1302:TYR:HE2	4:04:1304:ARG:HE	1.47	0.62
4:04:736:GLN:HA	4:04:739:GLN:HE21	1.65	0.62
7:E:125:THR:HB	7:E:128:LYS:HB2	1.80	0.62
23:U:30:LYS:HB3	23:U:30:LYS:NZ	2.13	0.62
2:02:31:LEU:HD12	2:02:35:PHE:HB3	1.81	0.62
3:03:719:LYS:HZ3	3:03:751:TYR:HE1	1.45	0.62
3:03:81:ASP:OD2	3:03:83:GLN:HB2	2.00	0.62
4:04:744:ARG:HD3	4:04:759:ILE:HG13	1.82	0.62
4:04:923:ILE:HG12	4:04:1248:ILE:HG21	1.81	0.62
26:X:10:GLU:HG3	26:X:11:PRO:HD3	1.81	0.62
3:03:463:GLN:NE2	3:03:505:PHE:HB2	2.14	0.62
3:03:452:ARG:HG3	3:03:585:GLY:HA3	1.80	0.62
3:03:97:ARG:HB3	3:03:121:GLU:HA	1.81	0.62
4:04:472:LEU:HD23	4:04:472:LEU:H	1.65	0.62
1:A:625:U:H2'	1:A:626:G:H8	1.64	0.62
7:E:104:TRP:O	7:E:108:ARG:HG3	2.00	0.62
11:I:47:LEU:HD11	11:I:57:ALA:HB2	1.81	0.62
1:A:656:G:N2	20:R:27:GLN:HE22	1.98	0.62
22:T:16:MET:HG3	22:T:17:GLU:N	2.14	0.62
2:01:16:ILE:HG12	2:01:26:VAL:HG12	1.82	0.62
3:03:1108:ASN:O	3:03:1111:GLN:HG2	2.00	0.62
3:03:230:PHE:HB2	3:03:333:ILE:HB	1.81	0.62
4:04:1240:VAL:O	4:04:1244:GLN:HG2	2.00	0.62
4:04:187:ALA:HA	4:04:190:LYS:NZ	2.14	0.62
4:04:485:MET:CB	4:04:488:ASN:HD22	2.12	0.62
14:L:18:VAL:HG12	14:L:20:ILE:HG13	1.82	0.62
14:L:20:ILE:HG21	14:L:60:LEU:HD22	1.82	0.62
18:P:16:ILE:N	18:P:16:ILE:HD12	2.15	0.62
3:03:798:GLN:HB3	3:03:827:ARG:HH21	1.65	0.62
3:03:842:ASP:H	3:03:848:GLU:H	1.46	0.62
4:04:430:HIS:CD2	4:04:432:LEU:HB2	2.34	0.62
4:04:473:THR:HG23	4:04:476:ALA:H	1.64	0.62
4:04:600:ALA:HA	4:04:603:LYS:HE2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:925:GLU:HB3	4:04:926:PRO:HD3	1.80	0.62
17:O:73:LEU:HD21	17:O:79:ILE:HG21	1.81	0.62
2:02:190:ALA:HB2	2:02:200:LYS:HB2	1.82	0.61
3:03:102:LEU:HD22	3:03:489:PRO:HD3	1.82	0.61
3:03:668:ILE:HD13	3:03:1069:ARG:HB3	1.81	0.61
2:01:168:ILE:HD12	3:03:875:ALA:HA	1.80	0.61
7:E:11:LYS:HG2	7:E:212:LEU:CD2	2.29	0.61
3:03:767:GLN:HB3	3:03:784:ALA:HB1	1.80	0.61
26:X:19:PHE:HA	26:X:22:SER:HB2	1.82	0.61
4:04:114:ILE:HG12	4:04:300:GLN:HG2	1.82	0.61
13:K:91:LEU:HD12	13:K:92:PRO:HD2	1.81	0.61
3:03:810:TYR:HB3	3:03:817:LEU:HD23	1.83	0.61
4:04:536:LEU:HD11	4:04:542:ALA:HB3	1.81	0.61
4:04:588:PRO:O	4:04:591:ILE:HG22	2.00	0.61
1:A:1379:G:O2'	1:A:1380:U:H5'	2.00	0.61
1:A:39:G:H2'	1:A:40:C:H5''	1.83	0.61
7:E:87:CYS:HB2	7:E:89:GLN:NE2	2.12	0.61
9:G:12:ARG:HG2	9:G:33:ILE:HD12	1.81	0.61
9:G:98:ASP:HB3	9:G:132:ALA:HB1	1.80	0.61
11:I:29:ILE:HG22	11:I:34:GLY:HA3	1.82	0.61
4:04:799:ARG:HD2	4:04:1309:ILE:CD1	2.30	0.61
4:04:694:SER:C	4:04:696:ALA:H	2.04	0.61
4:04:850:LYS:HB3	4:04:851:PRO:HD2	1.82	0.61
9:G:201:GLU:HA	9:G:204:SER:HB3	1.82	0.61
3:03:402:ARG:HG3	3:03:406:ASN:HD22	1.64	0.61
10:H:22:LYS:HD3	10:H:24:VAL:HG12	1.83	0.61
25:W:23:ARG:HB3	25:W:60:GLN:NE2	2.16	0.61
2:02:102:LEU:HB3	2:02:142:MET:HG2	1.82	0.61
1:A:454:G:H2'	1:A:455:G:C8	2.36	0.61
20:R:27:GLN:O	20:R:31:LEU:HG	2.01	0.61
3:03:525:THR:HG21	3:03:687:ARG:HG2	1.81	0.61
3:03:724:VAL:HG12	3:03:734:ILE:CD1	2.31	0.61
14:L:114:LYS:HB2	14:L:117:LEU:HD12	1.83	0.61
2:01:102:LEU:HD23	2:01:115:ILE:HG12	1.83	0.60
2:02:78:ILE:HA	2:02:81:ILE:HD12	1.83	0.60
3:03:1028:LYS:O	3:03:1032:LYS:HD3	2.00	0.60
3:03:530:ILE:HB	3:03:574:SER:HA	1.82	0.60
4:04:1249:ASN:HB3	4:04:1252:HIS:CD2	2.36	0.60
4:04:393:THR:HG23	4:04:396:ALA:H	1.66	0.60
1:A:1175:G:H2'	1:A:1176:A:H8	1.66	0.60
8:F:112:ALA:HB1	8:F:199:VAL:HG13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:61:GLN:O	20:R:65:LEU:HD13	2.01	0.60
3:03:1141:LEU:O	3:03:1145:ILE:HG12	2.01	0.60
3:03:1261:GLY:HA2	4:04:346:ARG:HH22	1.65	0.60
14:L:18:VAL:HG21	14:L:81:GLY:HA3	1.83	0.60
3:03:1112:ILE:HG22	4:04:640:GLY:HA2	1.83	0.60
4:04:356:THR:CG2	4:04:448:GLN:HG2	2.31	0.60
11:I:75:GLU:HA	11:I:78:PHE:HD2	1.66	0.60
3:03:709:ALA:HB2	3:03:792:GLY:O	2.02	0.60
3:03:74:ARG:HD2	3:03:75:LEU:N	2.17	0.60
1:A:627:G:H5'	21:S:51:ARG:HH22	1.66	0.60
2:02:56:VAL:CG2	2:02:144:ILE:HD11	2.30	0.60
1:A:626:G:H2'	1:A:627:G:C8	2.37	0.60
2:01:61:ILE:HB	2:01:64:VAL:HB	1.83	0.60
4:04:416:ILE:HG23	4:04:439:PRO:HB2	1.82	0.60
1:A:59:A:H3'	1:A:60:A:H5'	1.82	0.60
12:J:94:ARG:O	12:J:98:LEU:HD23	2.01	0.60
18:P:72:ILE:O	18:P:76:ILE:HG13	2.02	0.60
26:X:18:ARG:N	26:X:18:ARG:HD2	2.15	0.60
2:01:83:LEU:HD23	3:03:694:ARG:NH2	2.16	0.60
4:04:1149:ARG:NH1	4:04:1153:PRO:HG2	2.16	0.60
4:04:1273:ASP:HB3	4:04:1276:GLU:HB2	1.83	0.60
1:A:1285:A:H4'	1:A:1286:U:H5''	1.83	0.60
1:A:1103:C:H5''	7:E:97:LEU:HD23	1.83	0.60
2:01:166:ARG:N	2:01:167:PRO:HD2	2.17	0.60
3:03:91:THR:HA	3:03:138:ILE:HA	1.83	0.60
3:03:349:GLU:O	3:03:353:VAL:HG23	2.02	0.60
7:E:213:TYR:O	7:E:217:VAL:HG23	2.00	0.60
25:W:59:ARG:HG3	25:W:63:LYS:HE2	1.84	0.60
3:03:1082:ILE:CD1	3:03:1082:ILE:H	2.00	0.60
4:04:1221:LEU:HD22	4:04:1226:VAL:HA	1.84	0.60
4:04:1341:ARG:NH2	4:04:1343:GLU:HG3	2.17	0.60
11:I:7:VAL:HG13	11:I:61:LEU:HG	1.83	0.60
2:02:27:THR:CG2	2:02:200:LYS:HD3	2.32	0.60
3:03:660:VAL:HG13	3:03:661:VAL:HG13	1.83	0.60
4:04:1269:ALA:HB2	4:04:1274:PHE:HD1	1.67	0.60
4:04:678:ARG:O	4:04:682:VAL:HG23	2.02	0.60
1:A:1129:C:H5''	14:L:17:ARG:HH22	1.66	0.60
10:H:80:LEU:HB3	10:H:97:PRO:HB3	1.84	0.60
1:A:8:A:HO2'	1:A:9:G:H8	1.48	0.59
7:E:21:ARG:NH1	7:E:38:VAL:HA	2.17	0.59
11:I:5:GLU:HB2	11:I:90:MET:HG3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:28:VAL:O	26:X:32:VAL:HG22	2.02	0.59
3:03:233:ARG:O	3:03:236:LYS:HG2	2.02	0.59
4:04:661:VAL:CG1	4:04:686:TRP:HE1	2.10	0.59
1:A:119:A:H4'	1:A:120:A:O4'	2.02	0.59
1:A:150:U:H3	1:A:171:A:H62	1.50	0.59
1:A:410:G:H2'	1:A:429:U:C5	2.37	0.59
1:A:35:G:H4'	17:O:117:GLY:HA2	1.84	0.59
3:03:767:GLN:HA	3:03:785:ASP:O	2.02	0.59
4:04:923:ILE:HA	4:04:1248:ILE:HD13	1.83	0.59
1:A:21:G:H21	1:A:914:A:H62	1.50	0.59
11:I:38:ARG:HG3	11:I:40:GLU:HG3	1.84	0.59
3:03:1079:ILE:O	3:03:1079:ILE:HG23	2.02	0.59
1:A:376:G:H2'	1:A:377:G:H5'	1.85	0.59
15:M:57:VAL:HG22	15:M:58:ASN:N	2.14	0.59
25:W:34:VAL:O	25:W:38:ILE:HG13	2.01	0.59
14:L:48:ARG:O	14:L:52:GLU:HG3	2.02	0.59
3:03:1112:ILE:HG21	4:04:640:GLY:HA2	1.85	0.59
3:03:582:ASN:HA	3:03:588:GLU:OE2	2.02	0.59
1:A:108:G:N2	25:W:6:ALA:HB1	2.17	0.59
7:E:33:GLY:CA	7:E:41:ILE:HB	2.33	0.59
12:J:106:ALA:HB1	12:J:122:GLU:HG3	1.84	0.59
3:03:1129:ASN:O	3:03:1133:LYS:HG2	2.03	0.59
3:03:195:PHE:HD1	3:03:205:PRO:HA	1.66	0.59
3:03:862:LEU:HA	3:03:865:LEU:HB2	1.83	0.59
4:04:838:ARG:NH2	4:04:1235:ASN:HD21	1.99	0.59
7:E:23:TRP:CE3	7:E:189:THR:HB	2.38	0.59
16:N:118:ASN:HD22	26:X:32:VAL:HG12	1.68	0.59
3:03:974:ARG:O	3:03:978:VAL:HG23	2.03	0.59
4:04:203:GLU:O	4:04:207:GLU:HG2	2.03	0.59
1:A:570:G:H2'	1:A:571:U:C6	2.38	0.59
9:G:78:ALA:O	9:G:85:THR:HB	2.03	0.59
17:O:17:LYS:NZ	17:O:17:LYS:HB2	2.17	0.59
3:03:1294:LYS:HG2	4:04:348:ASP:H	1.67	0.59
4:04:689:ALA:O	4:04:693:VAL:HG23	2.03	0.59
1:A:252:U:H2'	1:A:252:U:O2	2.01	0.59
16:N:73:VAL:HA	16:N:76:TYR:HD2	1.67	0.59
18:P:28:ARG:O	18:P:32:ILE:HG12	2.02	0.59
3:03:1142:ARG:HD3	3:03:1165:SER:O	2.03	0.58
3:03:389:PHE:HB3	3:03:420:LEU:HD12	1.85	0.58
3:03:98:VAL:O	3:03:122:VAL:HG12	2.02	0.58
4:04:1252:HIS:O	4:04:1256:ILE:HG12	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:440:C:H2'	1:A:441:A:H5''	1.83	0.58
7:E:125:THR:HG22	7:E:128:LYS:HD2	1.84	0.58
17:O:98:ARG:NH1	17:O:106:VAL:HG12	2.18	0.58
2:O2:30:PRO:C	2:O2:31:LEU:HD22	2.23	0.58
2:O1:75:GLN:HE21	3:O3:772:SER:HA	1.68	0.58
3:O3:812:PHE:H	3:O3:815:SER:HB3	1.68	0.58
1:A:1047:G:H5''	19:Q:3:GLN:HG3	1.83	0.58
1:A:1238:A:C2'	1:A:1239:A:H5'	2.33	0.58
10:H:132:PRO:HA	10:H:135:VAL:HG22	1.86	0.58
3:O3:104:ILE:N	3:O3:104:ILE:HD12	2.19	0.58
4:O4:1227:HIS:HA	4:O4:1230:THR:HG22	1.85	0.58
1:A:1060:U:H2'	1:A:1061:G:C8	2.38	0.58
3:O3:1082:ILE:N	3:O3:1082:ILE:HD12	2.07	0.58
3:O3:807:TRP:N	3:O3:811:ASN:HD21	2.01	0.58
4:O4:583:VAL:HG13	4:O4:587:LEU:HD23	1.84	0.58
4:O4:903:LEU:HG	4:O4:904:ALA:H	1.68	0.58
10:H:73:VAL:HG21	10:H:143:LEU:HD22	1.84	0.58
16:N:115:ILE:HD13	26:X:28:VAL:HG21	1.86	0.58
26:X:55:ARG:O	26:X:59:LYS:HG2	2.04	0.58
2:O2:56:VAL:HG21	2:O2:144:ILE:HD11	1.83	0.58
2:O2:61:ILE:O	2:O2:62:ASP:HB2	2.02	0.58
4:O4:431:ARG:HD2	4:O4:493:PRO:HG3	1.86	0.58
4:O4:523:GLU:HA	4:O4:546:ALA:HB1	1.86	0.58
10:H:76:ASN:HB3	10:H:79:THR:HG23	1.85	0.58
3:O3:179:TYR:H	3:O3:397:LEU:HD23	1.68	0.58
3:O3:778:GLU:HB3	3:O3:781:ASP:OD2	2.03	0.58
4:O4:304:ASP:HB3	4:O4:309:ASN:C	2.24	0.58
1:A:59:A:H1'	1:A:354:G:C2	2.39	0.58
11:I:18:VAL:N	11:I:19:PRO:CD	2.67	0.58
1:A:105:G:OP2	25:W:8:LYS:HG2	2.04	0.58
2:O2:12:ARG:C	2:O2:13:LEU:HD23	2.23	0.58
3:O3:1272:GLU:O	3:O3:1275:VAL:HB	2.04	0.58
3:O3:426:ILE:O	3:O3:430:LYS:HG3	2.03	0.58
9:G:8:LEU:O	9:G:12:ARG:HG3	2.03	0.58
11:I:93:LYS:HB3	11:I:93:LYS:NZ	2.19	0.58
1:A:1060:U:H2'	1:A:1061:G:H8	1.69	0.58
1:A:516:U:H5	1:A:533:A:N6	2.00	0.58
7:E:89:GLN:H	7:E:89:GLN:NE2	2.02	0.58
3:O3:12:ARG:NH2	3:O3:705:GLU:HG3	2.18	0.58
4:O4:161:THR:HG23	4:O4:164:GLN:H	1.68	0.58
4:O4:799:ARG:O	4:O4:802:ASP:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:05:3:ARG:HH21	5:05:52:ARG:HD2	1.66	0.58
10:H:44:ARG:HA	10:H:71:ILE:O	2.04	0.58
20:R:87:ARG:HA	20:R:87:ARG:HE	1.67	0.58
3:03:402:ARG:HG3	3:03:406:ASN:ND2	2.18	0.58
4:04:661:VAL:HG13	4:04:685:ILE:HD11	1.85	0.57
1:A:39:G:C3'	1:A:40:C:H5''	2.33	0.57
7:E:97:LEU:H	7:E:97:LEU:HD12	1.69	0.57
2:02:133:LEU:CD1	2:02:138:ALA:HB1	2.33	0.57
2:02:58:GLU:CB	2:02:170:ARG:HH21	2.17	0.57
3:03:28:LEU:HD13	3:03:133:ASN:O	2.04	0.57
4:04:123:ARG:NH2	4:04:1334:GLU:HA	2.20	0.57
4:04:215:LYS:O	4:04:218:THR:HG22	2.04	0.57
5:05:63:ILE:N	5:05:63:ILE:HD12	2.17	0.57
15:M:52:LEU:HD22	19:Q:80:ARG:HD2	1.86	0.57
21:S:71:VAL:O	21:S:75:ILE:HG12	2.03	0.57
3:03:1032:LYS:O	3:03:1036:ILE:HG13	2.04	0.57
1:A:1259:C:H3'	1:A:1260:G:C5'	2.35	0.57
1:A:244:U:H3	1:A:893:C:H42	1.50	0.57
7:E:186:ILE:HG12	7:E:204:ASP:HB3	1.87	0.57
7:E:21:ARG:CA	7:E:23:TRP:HD1	2.18	0.57
13:K:7:ALA:HB2	13:K:76:ARG:HD2	1.87	0.57
15:M:21:ALA:O	15:M:25:ILE:HG12	2.05	0.57
7:E:154:MET:HG3	7:E:156:GLY:O	2.04	0.57
3:03:384:LEU:O	3:03:388:LEU:HG	2.05	0.57
3:03:670:PHE:HB3	3:03:673:HIS:HD2	1.69	0.57
4:04:430:HIS:HD2	4:04:432:LEU:HB2	1.70	0.57
1:A:1108:G:H5'	8:F:175:HIS:CD2	2.38	0.57
9:G:18:LEU:HD21	9:G:63:ILE:HG12	1.85	0.57
14:L:115:VAL:CG1	15:M:62:ARG:HB3	2.34	0.57
3:03:708:VAL:HG11	3:03:794:LEU:HD13	1.85	0.57
4:04:1151:LYS:O	4:04:1153:PRO:HD3	2.04	0.57
19:Q:40:ARG:O	19:Q:44:VAL:HG22	2.05	0.57
3:03:1214:ASP:HB3	3:03:1217:THR:HB	1.87	0.57
3:03:7:GLU:OE1	3:03:11:ILE:HD12	2.04	0.57
4:04:579:LEU:O	4:04:583:VAL:HG23	2.03	0.57
4:04:478:LEU:HD12	5:05:24:ALA:HB2	1.86	0.57
24:V:35:ARG:NH2	24:V:76:THR:HG21	2.20	0.57
3:03:1109:ILE:HD12	3:03:1112:ILE:HG13	1.87	0.57
4:04:1105:ALA:HB1	4:04:1122:ALA:HB1	1.86	0.57
4:04:154:LEU:HD22	4:04:160:LEU:CD2	2.34	0.57
1:A:1393:U:H2'	1:A:1395:C:C5	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:824:G:H2'	1:A:825:A:H8	1.69	0.57
9:G:109:THR:HG22	9:G:111:ALA:H	1.69	0.57
10:H:132:PRO:O	10:H:136:VAL:HG23	2.05	0.57
14:L:94:ARG:HH11	14:L:94:ARG:HA	1.70	0.57
18:P:77:LYS:HB3	18:P:77:LYS:NZ	2.20	0.57
2:01:18:GLN:NE2	2:01:24:ALA:HB2	2.20	0.57
2:02:158:ARG:HA	2:02:158:ARG:HE	1.68	0.57
3:03:1086:PRO:HB3	3:03:1221:PHE:HE2	1.69	0.57
3:03:1313:HIS:HB3	4:04:473:THR:HA	1.85	0.57
3:03:179:TYR:HB3	3:03:397:LEU:HA	1.86	0.57
3:03:144:VAL:HG21	3:03:527:LYS:HG2	1.85	0.57
3:03:634:VAL:HG13	3:03:636:CYS:SG	2.45	0.57
4:04:1227:HIS:O	4:04:1230:THR:HG22	2.05	0.57
4:04:518:VAL:HG12	4:04:716:GLN:HB3	1.86	0.57
4:04:332:LYS:HG2	4:04:336:GLY:O	2.04	0.57
4:04:378:LYS:HB3	4:04:382:TYR:CE2	2.40	0.57
14:L:20:ILE:HG12	14:L:62:LEU:HD23	1.87	0.57
4:04:859:PRO:HG2	4:04:862:THR:OG1	2.05	0.56
4:04:980:THR:HG21	4:04:997:VAL:HB	1.87	0.56
7:E:217:VAL:O	7:E:221:VAL:HG23	2.05	0.56
12:J:55:LYS:HD2	12:J:59:GLU:OE2	2.04	0.56
3:03:765:ILE:HG13	3:03:787:PRO:HD3	1.87	0.56
4:04:1000:GLY:HA3	4:04:1026:PRO:HG2	1.86	0.56
4:04:181:GLY:O	4:04:185:ILE:HG12	2.06	0.56
4:04:41:PRO:HA	4:04:56:LEU:HD13	1.87	0.56
14:L:115:VAL:HG11	15:M:62:ARG:HB3	1.86	0.56
20:R:55:LEU:O	20:R:59:VAL:HG23	2.04	0.56
3:03:616:ILE:HG13	3:03:652:TYR:HB2	1.87	0.56
3:03:720:ARG:HD2	3:03:736:VAL:HG11	1.87	0.56
3:03:724:VAL:HG12	3:03:734:ILE:HD12	1.88	0.56
4:04:1141:VAL:HA	4:04:1144:LEU:HD12	1.86	0.56
1:A:454:G:H2'	1:A:455:G:H8	1.68	0.56
1:A:751:U:H2'	1:A:752:G:H5'	1.86	0.56
7:E:20:THR:O	7:E:23:TRP:N	2.37	0.56
1:A:544:G:OP1	9:G:58:GLN:HG3	2.04	0.56
2:02:34:GLY:HA2	2:02:37:HIS:HD2	1.70	0.56
3:03:979:LEU:HD21	3:03:989:LEU:HD22	1.87	0.56
4:04:870:ASP:O	4:04:874:GLU:HG2	2.05	0.56
3:03:590:PRO:HB2	3:03:655:VAL:HG21	1.88	0.56
3:03:796:LEU:HD12	3:03:796:LEU:N	2.20	0.56
3:03:890:LYS:HG2	3:03:891:GLY:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:1041:ILE:HD12	4:04:1041:ILE:N	2.20	0.56
2:02:86:LYS:HE3	4:04:526:VAL:O	2.06	0.56
9:G:61:ARG:HG2	9:G:66:VAL:O	2.06	0.56
15:M:29:ALA:HB1	15:M:83:THR:HG23	1.87	0.56
16:N:44:ALA:HB1	16:N:68:ARG:HB3	1.86	0.56
3:03:1319:MET:C	3:03:1321:GLU:H	2.08	0.56
3:03:727:VAL:HG13	3:03:732:ILE:HG12	1.87	0.56
4:04:21:LYS:HD2	4:04:21:LYS:C	2.26	0.56
1:A:288:A:H2'	1:A:289:G:H5'	1.88	0.56
7:E:42:ASN:ND2	7:E:42:ASN:O	2.39	0.56
12:J:99:ALA:O	12:J:103:ILE:HG13	2.06	0.56
15:M:52:LEU:HD21	15:M:59:LYS:HZ3	1.69	0.56
12:J:96:ASN:HB3	12:J:100:MET:HE3	1.87	0.56
2:01:118:ASP:HB3	2:01:121:VAL:HG23	1.88	0.56
3:03:556:GLY:HA2	3:03:660:VAL:HA	1.87	0.56
3:03:616:ILE:N	3:03:616:ILE:HD12	2.21	0.56
4:04:413:ASP:O	4:04:417:ARG:HG3	2.05	0.56
1:A:109:A:H62	1:A:324:G:H21	1.53	0.56
1:A:750:C:H2'	1:A:751:U:C6	2.41	0.56
15:M:32:THR:HG21	15:M:82:LYS:HB3	1.88	0.56
21:S:20:VAL:HA	21:S:35:ARG:HA	1.88	0.56
3:03:1012:GLU:HG2	3:03:1013:GLN:N	2.16	0.56
4:04:210:SER:HB2	4:04:213:LYS:HD2	1.87	0.56
1:A:1175:G:H2'	1:A:1176:A:C8	2.40	0.56
9:G:116:LEU:HD21	9:G:153:ARG:HB2	1.87	0.56
3:03:1141:LEU:HD12	3:03:1142:ARG:N	2.21	0.56
3:03:1145:ILE:O	3:03:1149:TYR:HB2	2.06	0.56
3:03:54:ARG:HB2	3:03:54:ARG:HH11	1.71	0.56
4:04:1266:ILE:HG21	4:04:1300:ALA:HB1	1.88	0.56
1:A:599:C:OP1	13:K:87:ARG:HG2	2.05	0.56
13:K:29:SER:HB3	13:K:32:LYS:NZ	2.21	0.56
3:03:1058:ARG:CZ	3:03:1240:ASP:HB3	2.36	0.56
3:03:983:GLY:O	3:03:985:GLU:HG3	2.04	0.56
1:A:1384:C:H2'	1:A:1385:G:C8	2.41	0.56
8:F:58:ARG:H	15:M:94:ALA:HB1	1.70	0.56
18:P:64:VAL:HG23	18:P:66:GLY:H	1.71	0.56
2:01:150:ARG:O	2:01:150:ARG:HD2	2.07	0.55
3:03:17:LYS:HB2	3:03:1155:VAL:HG12	1.88	0.55
3:03:732:ILE:HG21	3:03:783:LEU:HD12	1.88	0.55
1:A:818:G:H3'	1:A:819:A:H5'	1.88	0.55
7:E:186:ILE:HA	7:E:200:ILE:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:676:A:H2	16:N:120:CYS:HB3	1.71	0.55
16:N:88:PRO:HG2	26:X:29:LEU:HD22	1.88	0.55
2:01:166:ARG:O	2:01:168:ILE:N	2.39	0.55
2:01:82:LEU:HD23	2:01:85:LEU:HD12	1.88	0.55
3:03:1191:LYS:O	3:03:1195:ILE:HG13	2.05	0.55
3:03:150:HIS:HD2	3:03:454:ARG:HH11	1.54	0.55
3:03:812:PHE:N	3:03:815:SER:HB3	2.22	0.55
4:04:119:SER:O	4:04:120:LEU:C	2.43	0.55
4:04:746:LEU:N	4:04:746:LEU:HD12	2.22	0.55
5:05:12:LYS:HE2	5:05:57:GLY:HA3	1.88	0.55
1:A:1354:U:H2'	1:A:1355:G:C8	2.42	0.55
1:A:414:A:H2'	1:A:414:A:N3	2.21	0.55
16:N:74:LYS:HD3	16:N:74:LYS:H	1.71	0.55
24:V:16:LYS:O	24:V:16:LYS:HD3	2.05	0.55
2:01:28:LEU:O	2:01:200:LYS:HA	2.06	0.55
2:01:227:GLN:NE2	2:02:11:PRO:HD3	2.21	0.55
3:03:839:VAL:HG23	3:03:1046:VAL:HG13	1.89	0.55
4:04:205:LEU:HD13	4:04:205:LEU:O	2.06	0.55
4:04:842:ARG:HG2	4:04:1251:LYS:HD3	1.87	0.55
1:A:8:A:O2'	1:A:9:G:H8	1.90	0.55
7:E:19:GLN:HG2	7:E:189:THR:HG1	1.70	0.55
3:03:242:VAL:HB	3:03:245:ARG:HD2	1.88	0.55
3:03:693:LEU:HG	3:03:829:THR:O	2.06	0.55
4:04:1342:ASP:O	4:04:1344:LEU:N	2.38	0.55
4:04:628:GLY:O	4:04:632:ALA:HB2	2.06	0.55
3:03:1113:LEU:HA	4:04:641:ILE:HG13	1.87	0.55
16:N:29:THR:OG1	16:N:46:ALA:HB2	2.07	0.55
22:T:22:VAL:HG11	22:T:60:ILE:CD1	2.37	0.55
25:W:24:ARG:HB3	25:W:28:ARG:NH1	2.22	0.55
2:02:125:LYS:HE2	2:02:128:HIS:HB2	1.89	0.55
3:03:1335:ILE:HG22	3:03:1336:ASN:H	1.71	0.55
3:03:633:LEU:HD12	3:03:633:LEU:O	2.07	0.55
1:A:545:C:H5''	9:G:61:ARG:HH12	1.72	0.55
1:A:932:C:H5''	12:J:3:ARG:NH2	2.21	0.55
14:L:118:ARG:HE	14:L:122:ARG:HD3	1.71	0.55
16:N:109:ILE:N	16:N:109:ILE:HD12	2.21	0.55
24:V:4:LEU:N	24:V:4:LEU:HD23	2.22	0.55
24:V:8:PRO:C	24:V:38:THR:HG21	2.27	0.55
2:02:10:LYS:N	2:02:10:LYS:HD2	2.21	0.55
3:03:1328:LYS:HD2	3:03:1331:ARG:NH1	2.22	0.55
3:03:189:ASP:C	3:03:191:LYS:H	2.09	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:1047:THR:HB	4:04:1062:LEU:HD21	1.88	0.55
1:A:242:G:H2'	1:A:243:A:H5'	1.89	0.55
1:A:501:C:H2'	1:A:502:A:C8	2.41	0.55
25:W:4:LYS:NZ	25:W:4:LYS:HB3	2.21	0.55
2:01:32:GLU:HB2	2:01:35:PHE:HD2	1.71	0.55
3:03:854:ILE:HG23	3:03:854:ILE:O	2.07	0.55
3:03:870:ILE:HG23	3:03:884:VAL:HG12	1.89	0.55
4:04:1042:ASP:HA	4:04:1046:ILE:O	2.07	0.55
1:A:82:G:H5''	1:A:83:C:H4'	1.88	0.55
8:F:63:ILE:O	8:F:98:ALA:HA	2.06	0.55
3:03:800:MET:HB2	3:03:1096:ILE:HD11	1.87	0.55
3:03:28:LEU:O	3:03:32:LEU:HD13	2.07	0.55
4:04:1231:ARG:HA	4:04:1234:VAL:CG2	2.35	0.55
1:A:50:A:H4'	1:A:51:A:H5'	1.88	0.55
7:E:33:GLY:HA3	7:E:41:ILE:HB	1.89	0.55
8:F:32:LEU:O	8:F:32:LEU:HD23	2.07	0.55
18:P:55:LEU:HD12	18:P:56:ARG:N	2.22	0.55
24:V:29:PRO:HA	24:V:47:THR:O	2.07	0.55
2:01:155:ALA:HA	2:01:158:ARG:HE	1.72	0.55
2:02:54:CYS:SG	2:02:92:VAL:HG22	2.47	0.55
3:03:1151:LEU:HG	3:03:1152:GLY:H	1.71	0.55
3:03:1211:ARG:HG2	3:03:1211:ARG:O	2.07	0.55
3:03:18:ARG:HE	3:03:18:ARG:HA	1.70	0.55
3:03:424:ASP:O	3:03:428:VAL:HG23	2.07	0.55
1:A:768:A:H4'	1:A:1523:G:N2	2.21	0.55
7:E:11:LYS:HG2	7:E:212:LEU:HD22	1.87	0.55
11:I:76:THR:HG23	11:I:79:ARG:NH2	2.22	0.55
2:02:145:LYS:HE2	2:02:147:GLN:HB2	1.88	0.55
3:03:405:PHE:O	3:03:409:LEU:HG	2.07	0.55
4:04:442:ILE:HG21	4:04:448:GLN:HE21	1.71	0.55
4:04:514:THR:HG23	4:04:514:THR:O	2.07	0.55
1:A:779:C:H2'	1:A:780:A:O4'	2.07	0.55
7:E:140:GLU:O	7:E:144:LEU:HD23	2.06	0.55
16:N:34:THR:HA	16:N:40:ALA:HA	1.89	0.55
25:W:24:ARG:HD2	25:W:66:ILE:HD11	1.88	0.55
2:02:208:ASN:ND2	2:02:210:THR:HG23	2.21	0.54
3:03:1137:GLU:OE2	3:03:1139:ALA:HB3	2.07	0.54
3:03:241:LEU:O	3:03:283:LYS:HG2	2.07	0.54
4:04:1227:HIS:O	4:04:1231:ARG:HD3	2.06	0.54
4:04:768:ASN:OD1	4:04:770:LEU:HB3	2.07	0.54
1:A:730:G:H2'	1:A:731:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:71:PHE:HE1	9:G:93:LEU:HD11	1.71	0.54
23:U:30:LYS:HZ3	23:U:30:LYS:HB3	1.71	0.54
25:W:30:PHE:HB3	25:W:53:MET:HA	1.89	0.54
2:02:33:ARG:N	2:02:33:ARG:HD3	2.22	0.54
3:03:1113:LEU:HG	4:04:641:ILE:HG13	1.89	0.54
3:03:1308:ILE:HG22	3:03:1308:ILE:O	2.07	0.54
4:04:833:GLU:HB2	4:04:1242:ARG:NH2	2.22	0.54
4:04:378:LYS:HB2	4:04:379:PRO:HD3	1.88	0.54
4:04:761:ALA:HB1	4:04:766:GLY:O	2.08	0.54
7:E:186:ILE:HD11	7:E:203:ASN:O	2.06	0.54
24:V:36:ARG:HG3	24:V:36:ARG:HH11	1.72	0.54
2:01:194:GLN:O	2:01:195:ARG:HB2	2.07	0.54
3:03:493:ILE:HD11	3:03:498:ILE:HD11	1.89	0.54
3:03:706:ARG:NH1	3:03:706:ARG:HB3	2.21	0.54
4:04:1169:THR:OG1	4:04:1192:LYS:HD3	2.06	0.54
4:04:649:LYS:O	4:04:653:ILE:HG13	2.07	0.54
4:04:818:GLU:HG3	4:04:819:GLY:N	2.22	0.54
1:A:1509:C:H2'	1:A:1510:C:H6	1.71	0.54
1:A:40:C:H41	1:A:547:A:H3'	1.72	0.54
12:J:90:VAL:HG21	12:J:94:ARG:HD3	1.90	0.54
3:03:1146:GLN:HA	3:03:1146:GLN:OE1	2.06	0.54
3:03:149:LEU:HD12	3:03:452:ARG:O	2.08	0.54
1:A:1374:A:H4'	12:J:27:ASN:HB3	1.90	0.54
7:E:90:PHE:HB3	7:E:150:GLY:O	2.08	0.54
7:E:21:ARG:HA	7:E:23:TRP:CD1	2.42	0.54
8:F:115:VAL:HG21	8:F:201:ILE:HD11	1.87	0.54
13:K:77:VAL:O	13:K:79:ARG:HD2	2.06	0.54
15:M:8:ILE:HD11	15:M:87:LEU:HD23	1.88	0.54
2:02:58:GLU:HB2	2:02:170:ARG:HH21	1.71	0.54
3:03:1101:LEU:CD1	3:03:1101:LEU:H	2.19	0.54
4:04:1362:GLY:HA2	4:04:1365:TYR:HB3	1.89	0.54
1:A:219:U:H2'	1:A:220:G:C4'	2.38	0.54
1:A:437:U:O2'	1:A:438:U:H5'	2.08	0.54
7:E:39:HIS:O	7:E:40:ILE:CB	2.53	0.54
1:A:1103:C:H4'	7:E:97:LEU:HB3	1.90	0.54
8:F:138:GLN:O	8:F:142:ARG:HG2	2.06	0.54
9:G:178:GLU:HG2	9:G:179:GLY:N	2.23	0.54
20:R:9:LYS:HB3	20:R:9:LYS:NZ	2.22	0.54
3:03:617:ALA:HB2	3:03:650:VAL:HG11	1.90	0.54
4:04:1249:ASN:HD21	4:04:1251:LYS:HB2	1.71	0.54
4:04:56:LEU:HD12	4:04:56:LEU:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:586:GLY:HA3	4:04:612:LEU:HD13	1.88	0.54
1:A:935:A:H2	1:A:1383:C:H42	1.55	0.54
23:U:50:LYS:O	23:U:54:GLN:HG3	2.07	0.54
24:V:62:THR:H	24:V:65:MET:CE	2.19	0.54
2:01:219:ARG:O	2:01:223:ILE:HG13	2.08	0.54
3:03:690:VAL:CG1	3:03:1234:LYS:HB3	2.33	0.54
4:04:746:LEU:H	4:04:746:LEU:HD12	1.73	0.54
1:A:770:C:H1'	1:A:900:A:C2	2.40	0.54
8:F:127:VAL:HG22	8:F:128:MET:N	2.23	0.54
2:01:130:ILE:HD12	2:01:130:ILE:N	2.22	0.54
3:03:178:PRO:HG3	3:03:182:SER:C	2.29	0.54
3:03:56:VAL:HB	3:03:465:ARG:HH12	1.73	0.54
3:03:591:TYR:CD2	3:03:606:LEU:HD13	2.41	0.54
5:05:13:ILE:HD11	5:05:60:ASN:HB2	1.90	0.54
14:L:50:PRO:HA	14:L:97:LEU:HD11	1.89	0.54
26:X:17:ARG:N	26:X:17:ARG:HD3	2.23	0.54
4:04:1046:ILE:CD1	4:04:1059:LEU:HB3	2.33	0.54
4:04:857:LEU:H	4:04:857:LEU:HD23	1.72	0.54
4:04:865:HIS:HA	4:04:901:ARG:HH21	1.73	0.54
1:A:1527:U:O2'	1:A:1528:U:H5'	2.07	0.54
1:A:530:G:H3'	1:A:531:U:H5''	1.88	0.54
9:G:121:ALA:O	9:G:144:ILE:HG23	2.08	0.54
23:U:40:VAL:CG1	23:U:45:THR:HG23	2.38	0.54
3:03:979:LEU:HD12	3:03:980:VAL:N	2.24	0.54
4:04:362:ARG:HB3	4:04:365:GLN:HG2	1.89	0.54
4:04:795:TYR:HD1	4:04:798:ARG:HE	1.56	0.54
4:04:863:LEU:HD22	4:04:908:ILE:HD11	1.88	0.54
1:A:1053:G:H4'	1:A:1054:C:H3'	1.90	0.54
11:I:11:HIS:NE2	11:I:85:ILE:HG21	2.23	0.54
2:01:48:LEU:HA	2:01:180:VAL:HG21	1.90	0.53
3:03:243:PRO:HA	3:03:246:LEU:HD12	1.90	0.53
4:04:1342:ASP:C	4:04:1344:LEU:H	2.11	0.53
4:04:517:CYS:SG	4:04:545:HIS:HB2	2.49	0.53
1:A:1305:G:H22	1:A:1331:G:H2'	1.73	0.53
1:A:1509:C:H2'	1:A:1510:C:C6	2.43	0.53
1:A:26:A:N3	9:G:205:LYS:HE2	2.23	0.53
1:A:932:C:H5''	12:J:3:ARG:HH21	1.73	0.53
1:A:92:U:H3'	1:A:93:U:H5''	1.88	0.53
4:04:1063:ASP:O	4:04:1067:ARG:HG3	2.08	0.53
4:04:255:LEU:HD13	4:04:256:ASP:N	2.23	0.53
4:04:737:ILE:O	4:04:740:LEU:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:103:ASN:O	7:E:107:VAL:HG23	2.09	0.53
9:G:144:ILE:HD12	9:G:177:MET:HB2	1.90	0.53
9:G:58:GLN:OE1	9:G:61:ARG:HD3	2.08	0.53
11:I:29:ILE:CG2	11:I:34:GLY:HA3	2.37	0.53
21:S:35:ARG:C	21:S:35:ARG:HD3	2.29	0.53
3:03:838:CYS:HB2	3:03:918:LEU:HD22	1.91	0.53
4:04:865:HIS:CE1	4:04:867:GLN:HB2	2.43	0.53
1:A:105:G:N2	1:A:379:C:H4'	2.21	0.53
1:A:362:G:H21	1:A:365:U:H5	1.56	0.53
11:I:47:LEU:HG	11:I:57:ALA:N	2.21	0.53
8:F:18:ASN:HB2	19:Q:90:GLY:O	2.07	0.53
22:T:60:ILE:HG22	22:T:72:TRP:HE3	1.74	0.53
24:V:16:LYS:O	24:V:20:LYS:HG3	2.07	0.53
2:01:14:VAL:HG22	2:01:15:ASP:N	2.21	0.53
2:02:101:THR:H	2:02:116:THR:HG22	1.73	0.53
3:03:401:GLY:O	3:03:405:PHE:HB2	2.08	0.53
3:03:429:MET:O	3:03:433:ILE:HG13	2.09	0.53
3:03:882:ILE:HD12	3:03:882:ILE:N	2.23	0.53
4:04:193:ASP:O	4:04:197:GLU:HG2	2.08	0.53
1:A:66:A:H1'	1:A:173:U:H2'	1.91	0.53
2:02:67:GLU:HB2	2:02:79:LEU:HD23	1.89	0.53
5:05:42:GLU:O	5:05:43:ASN:HB2	2.07	0.53
1:A:125:U:H3	1:A:236:A:H61	1.57	0.53
1:A:1348:U:H4'	14:L:121:ARG:HG3	1.91	0.53
1:A:501:C:H2'	1:A:502:A:H8	1.73	0.53
1:A:552:U:H2'	1:A:553:A:C8	2.41	0.53
1:A:692:U:H2'	1:A:694:A:OP2	2.08	0.53
8:F:118:SER:O	8:F:122:GLN:HG2	2.07	0.53
10:H:119:VAL:CG1	10:H:122:VAL:HG13	2.38	0.53
14:L:49:GLN:C	14:L:51:LEU:H	2.12	0.53
20:R:28:VAL:HA	20:R:31:LEU:HD12	1.89	0.53
23:U:38:LYS:HB3	23:U:38:LYS:NZ	2.23	0.53
2:02:12:ARG:HB3	2:02:12:ARG:HH11	1.74	0.53
2:02:172:LEU:HD23	2:02:172:LEU:N	2.23	0.53
3:03:564:PRO:CD	3:03:572:ILE:HG21	2.39	0.53
3:03:697:LYS:H	3:03:697:LYS:HD3	1.73	0.53
4:04:1165:PHE:CZ	4:04:1198:VAL:HG11	2.44	0.53
4:04:383:GLY:O	4:04:387:LEU:HB2	2.08	0.53
4:04:740:LEU:HD12	4:04:763:PHE:HB2	1.90	0.53
5:05:63:ILE:H	5:05:63:ILE:CD1	2.21	0.53
1:A:1245:C:H2'	1:A:1246:A:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:645:G:H1'	22:T:27:PHE:CZ	2.43	0.53
1:A:837:U:H2'	1:A:838:G:C8	2.43	0.53
7:E:25:PRO:O	7:E:28:LYS:HB2	2.09	0.53
8:F:21:TRP:CZ3	8:F:23:ALA:HB2	2.44	0.53
9:G:64:TYR:HA	9:G:110:ARG:HD2	1.91	0.53
12:J:90:VAL:CG2	12:J:94:ARG:HD3	2.38	0.53
13:K:28:SER:HB2	13:K:58:LEU:CB	2.38	0.53
2:01:56:VAL:HG13	2:01:173:VAL:HG21	1.88	0.53
3:03:75:LEU:HD11	3:03:127:ILE:HD11	1.89	0.53
3:03:971:LEU:O	3:03:975:ILE:HG13	2.07	0.53
4:04:1227:HIS:HA	4:04:1230:THR:CG2	2.39	0.53
1:A:511:C:O2'	1:A:512:U:H5'	2.09	0.53
1:A:831:A:C3'	1:A:832:G:H5''	2.35	0.53
9:G:159:GLU:HA	9:G:159:GLU:OE1	2.08	0.53
25:W:78:LEU:HD23	25:W:79:THR:N	2.24	0.53
2:02:47:LEU:HD23	2:02:51:MET:HE2	1.91	0.53
1:A:701:U:H5''	1:A:703:G:C1'	2.38	0.53
7:E:25:PRO:CB	7:E:28:LYS:HB2	2.39	0.53
8:F:69:THR:CG2	8:F:75:VAL:HG21	2.39	0.53
14:L:104:THR:HG22	14:L:106:ASP:H	1.74	0.53
25:W:30:PHE:CD2	25:W:56:ILE:HG12	2.43	0.53
2:01:228:LEU:O	2:01:232:VAL:HG23	2.09	0.53
2:01:28:LEU:HD12	2:01:28:LEU:N	2.24	0.53
2:02:111:THR:HA	2:02:129:VAL:HA	1.91	0.53
1:A:8:A:O2'	1:A:9:G:C8	2.61	0.53
7:E:143:LYS:HA	7:E:146:ASN:HD21	1.73	0.53
7:E:142:GLU:HA	7:E:145:GLU:HG3	1.91	0.53
7:E:13:GLY:O	7:E:16:PHE:HE1	1.92	0.53
7:E:31:ILE:HB	7:E:42:ASN:HA	1.91	0.53
9:G:22:SER:HA	9:G:26:ALA:HA	1.90	0.53
12:J:91:ARG:O	12:J:95:ARG:HG3	2.09	0.53
14:L:7:GLY:HA3	14:L:18:VAL:HB	1.91	0.53
20:R:14:PHE:HB3	20:R:26:VAL:HG22	1.91	0.53
1:A:1150:A:H2'	1:A:1151:A:C8	2.44	0.53
1:A:1354:U:H2'	1:A:1355:G:H8	1.73	0.53
1:A:273:U:H2'	1:A:274:A:H5'	1.90	0.53
14:L:29:ILE:HA	14:L:64:ILE:O	2.09	0.53
18:P:4:ALA:CB	18:P:21:ILE:HG21	2.39	0.53
19:Q:20:PHE:HD1	19:Q:24:ALA:HB2	1.73	0.53
3:03:10:ARG:HH11	3:03:10:ARG:HG3	1.74	0.52
3:03:929:ILE:HG13	3:03:930:ASP:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:317:THR:HG23	4:04:320:ASN:HB3	1.90	0.52
4:04:66:LYS:HG2	4:04:67:ASP:H	1.74	0.52
4:04:720:ASN:HB3	4:04:722:ILE:HG22	1.92	0.52
12:J:115:MET:HA	12:J:118:ARG:HG2	1.91	0.52
21:S:20:VAL:HG12	21:S:35:ARG:CB	2.39	0.52
3:03:1067:ALA:HB2	3:03:1073:LYS:HA	1.92	0.52
2:01:45:ARG:NH2	3:03:1216:ARG:HA	2.18	0.52
3:03:1246:ARG:HG3	3:03:1265:PHE:HB3	1.91	0.52
3:03:748:ILE:HD12	3:03:748:ILE:N	2.24	0.52
1:A:545:C:O2'	1:A:549:C:H5''	2.09	0.52
12:J:49:LEU:HD12	12:J:50:ALA:N	2.24	0.52
13:K:49:LYS:O	13:K:58:LEU:HD12	2.08	0.52
14:L:46:VAL:HA	14:L:49:GLN:HE21	1.73	0.52
17:O:73:LEU:HD12	17:O:73:LEU:N	2.25	0.52
20:R:26:VAL:O	20:R:30:LEU:HD13	2.09	0.52
23:U:61:ARG:O	23:U:65:LEU:HD13	2.08	0.52
3:03:151:ARG:HE	3:03:450:ASN:HB3	1.75	0.52
4:04:527:LEU:HD23	4:04:532:GLU:HG3	1.92	0.52
1:A:440:C:C3'	1:A:441:A:H5''	2.39	0.52
1:A:625:U:H2'	1:A:626:G:C8	2.43	0.52
10:H:39:GLY:HA3	10:H:45:VAL:HG12	1.92	0.52
16:N:122:PRO:HB2	16:N:123:PRO:HD2	1.90	0.52
18:P:13:HIS:HB2	18:P:16:ILE:HD13	1.90	0.52
1:A:668:G:H21	20:R:45:HIS:CE1	2.27	0.52
20:R:79:GLN:O	20:R:83:ARG:HB2	2.10	0.52
3:03:145:ILE:HD12	3:03:456:VAL:HG13	1.91	0.52
3:03:174:ALA:HB2	3:03:432:LEU:HD13	1.91	0.52
3:03:6:THR:HG21	3:03:706:ARG:HH21	1.74	0.52
4:04:631:TYR:HA	4:04:634:ARG:HG2	1.91	0.52
2:01:91:ARG:HD2	2:01:210:THR:HA	1.91	0.52
2:01:43:LEU:HD23	2:01:224:LEU:HD11	1.92	0.52
1:A:107:G:C2'	1:A:108:G:H5'	2.38	0.52
1:A:142:G:H1'	1:A:195:A:H61	1.74	0.52
1:A:39:G:H3'	1:A:40:C:H5''	1.90	0.52
6:B:208:UNK:HA	6:B:216:UNK:O	2.09	0.52
10:H:50:GLY:HA3	10:H:58:ALA:O	2.09	0.52
1:A:716:A:N3	16:N:119:GLY:HA2	2.24	0.52
19:Q:40:ARG:O	19:Q:40:ARG:HD2	2.10	0.52
2:02:115:ILE:HD11	2:02:130:ILE:HD11	1.91	0.52
2:02:12:ARG:CB	2:02:12:ARG:NH1	2.72	0.52
3:03:1132:LEU:O	3:03:1132:LEU:HD23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:496:LYS:HB3	3:03:497:PRO:HD3	1.91	0.52
3:03:519:ASN:HD21	3:03:521:LEU:HB3	1.73	0.52
3:03:516:ASP:H	3:03:526:HIS:CD2	2.27	0.52
4:04:591:ILE:HG23	4:04:592:VAL:HG13	1.90	0.52
3:03:1226:THR:H	4:04:638:SER:HB3	1.74	0.52
4:04:858:VAL:HG13	4:04:858:VAL:O	2.09	0.52
1:A:106:C:H2'	1:A:107:G:C8	2.45	0.52
1:A:1393:U:H2'	1:A:1395:C:H5	1.72	0.52
7:E:21:ARG:N	7:E:38:VAL:HG12	2.17	0.52
9:G:61:ARG:O	9:G:65:GLY:HA2	2.10	0.52
23:U:29:LEU:O	23:U:33:ILE:HG12	2.10	0.52
26:X:34:ARG:H	26:X:34:ARG:HD3	1.73	0.52
3:03:195:PHE:HE1	3:03:353:VAL:HG11	1.75	0.52
3:03:502:VAL:HG13	3:03:503:LYS:N	2.24	0.52
3:03:725:GLN:CD	3:03:735:LYS:HB2	2.30	0.52
4:04:101:ARG:HG2	4:04:101:ARG:HH11	1.74	0.52
3:03:1336:ASN:HB3	4:04:25:ALA:HB3	1.92	0.52
4:04:831:VAL:O	4:04:831:VAL:HG13	2.09	0.52
1:A:404:G:H1	1:A:499:A:H62	1.56	0.52
1:A:865:A:H2'	1:A:866:C:C6	2.45	0.52
7:E:206:ALA:O	7:E:210:VAL:HG23	2.09	0.52
12:J:36:SER:HA	14:L:42:THR:HB	1.92	0.52
16:N:36:ARG:NH1	16:N:36:ARG:HB2	2.25	0.52
8:F:12:GLY:HA3	19:Q:96:LYS:HE2	1.91	0.52
3:03:1258:PRO:HD2	4:04:346:ARG:HD3	1.91	0.52
3:03:1321:GLU:HG2	4:04:99:ARG:NE	2.25	0.52
3:03:833:ILE:HG23	3:03:1054:LEU:O	2.10	0.52
4:04:650:LYS:O	4:04:654:ILE:HG13	2.10	0.52
1:A:1369:C:H2'	1:A:1370:G:H8	1.74	0.52
7:E:23:TRP:HE3	7:E:189:THR:CB	2.23	0.52
14:L:105:ARG:NH1	14:L:107:ALA:HA	2.14	0.52
15:M:32:THR:CG2	15:M:33:GLY:H	2.19	0.52
23:U:59:ILE:O	23:U:63:ARG:HG3	2.09	0.52
2:01:224:LEU:O	2:01:228:LEU:HG	2.09	0.52
3:03:663:VAL:HG23	3:03:664:GLY:N	2.25	0.52
3:03:931:VAL:HG12	3:03:933:VAL:HG13	1.92	0.52
4:04:154:LEU:HD22	4:04:160:LEU:HD21	1.90	0.52
1:A:131:A:H4'	25:W:69:ASN:ND2	2.20	0.52
1:A:974:A:H4'	1:A:976:G:H4'	1.91	0.52
7:E:19:GLN:HG2	7:E:189:THR:OG1	2.10	0.52
7:E:11:LYS:NZ	7:E:212:LEU:HD11	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:87:CYS:SG	7:E:222:ARG:HD2	2.49	0.52
1:A:1129:C:H5'	14:L:17:ARG:HH12	1.75	0.52
15:M:15:HIS:HA	15:M:18:ILE:HG22	1.92	0.52
22:T:15:LYS:HB2	22:T:15:LYS:HZ2	1.74	0.52
22:T:35:LYS:HZ2	22:T:35:LYS:HB3	1.75	0.52
23:U:38:LYS:HZ2	23:U:38:LYS:HB3	1.75	0.52
3:03:1062:PRO:CG	3:03:1079:ILE:HG22	2.40	0.52
3:03:1214:ASP:OD2	3:03:1216:ARG:HB2	2.10	0.52
7:E:44:GLU:O	7:E:48:PRO:HD2	2.10	0.52
9:G:27:ILE:O	9:G:28:ASP:HB2	2.09	0.52
16:N:95:THR:HG23	16:N:96:ILE:N	2.25	0.52
17:O:3:VAL:O	17:O:7:VAL:HG23	2.09	0.52
18:P:68:LEU:O	18:P:72:ILE:HG12	2.10	0.52
3:03:1058:ARG:NH1	3:03:1240:ASP:HB3	2.24	0.51
4:04:217:LEU:O	4:04:221:ILE:HG22	2.10	0.51
4:04:514:THR:HG21	4:04:596:LEU:HD23	1.92	0.51
1:A:1190:G:H5''	8:F:175:HIS:CE1	2.44	0.51
7:E:11:LYS:N	7:E:11:LYS:HD2	2.25	0.51
13:K:116:ARG:NH1	13:K:116:ARG:HB2	2.25	0.51
13:K:29:SER:HB3	13:K:32:LYS:HZ3	1.75	0.51
4:04:1262:ARG:O	4:04:1280:VAL:HG23	2.10	0.51
4:04:1356:LEU:HB3	4:04:1362:GLY:HA3	1.92	0.51
5:05:58:LEU:HG	5:05:59:ILE:HG12	1.92	0.51
1:A:1238:A:H2'	1:A:1239:A:H5'	1.91	0.51
1:A:1384:C:H2'	1:A:1385:G:H8	1.75	0.51
8:F:113:LYS:HD3	8:F:184:ASN:ND2	2.23	0.51
3:03:1286:THR:O	3:03:1290:MET:HB2	2.10	0.51
3:03:138:ILE:HG22	3:03:139:ASN:OD1	2.09	0.51
3:03:251:ALA:HB2	3:03:263:VAL:HG11	1.92	0.51
3:03:646:SER:HB3	3:03:649:GLN:HE21	1.74	0.51
3:03:835:GLU:HA	3:03:1052:VAL:O	2.10	0.51
3:03:1065:LYS:HD2	4:04:462:ASP:O	2.11	0.51
5:05:32:VAL:C	5:05:34:GLY:H	2.13	0.51
1:A:35:G:H4'	17:O:117:GLY:CA	2.40	0.51
3:03:1246:ARG:NH1	3:03:1258:PRO:HB3	2.25	0.51
3:03:30:ILE:HG23	3:03:581:THR:H	1.76	0.51
4:04:1249:ASN:HB3	4:04:1252:HIS:HD2	1.73	0.51
4:04:615:LYS:HG2	5:05:5:THR:OG1	2.11	0.51
13:K:104:SER:HB2	13:K:125:ILE:HD11	1.92	0.51
25:W:23:ARG:CZ	25:W:59:ARG:HH22	2.23	0.51
25:W:79:THR:HG23	25:W:82:ILE:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:569:ILE:HD13	4:04:780:ARG:HE	1.76	0.51
4:04:292:VAL:O	4:04:295:GLU:HB3	2.10	0.51
1:A:1271:A:H5'	1:A:1314:C:H5"	1.92	0.51
1:A:348:G:H2'	1:A:349:A:H8	1.75	0.51
7:E:23:TRP:HE3	7:E:189:THR:HB	1.74	0.51
9:G:129:VAL:HG12	9:G:131:ILE:H	1.76	0.51
1:A:1350:A:H2	12:J:33:GLY:HA3	1.75	0.51
17:O:49:ARG:HH11	17:O:49:ARG:HG3	1.74	0.51
19:Q:40:ARG:HH11	19:Q:40:ARG:HG3	1.73	0.51
19:Q:92:ILE:N	19:Q:92:ILE:HD12	2.23	0.51
22:T:28:VAL:HG22	22:T:29:LYS:O	2.11	0.51
3:03:905:ILE:HG21	23:U:45:THR:HG22	1.93	0.51
26:X:18:ARG:HD2	26:X:18:ARG:H	1.75	0.51
3:03:367:TYR:CD2	3:03:376:PRO:HB3	2.45	0.51
3:03:119:GLU:HB2	3:03:489:PRO:HG2	1.93	0.51
4:04:21:LYS:HD2	4:04:22:ILE:N	2.26	0.51
3:03:1257:GLN:HE21	4:04:346:ARG:CD	2.24	0.51
4:04:596:LEU:HD13	4:04:597:GLY:N	2.25	0.51
4:04:507:VAL:HB	4:04:730:ALA:HB2	1.92	0.51
4:04:923:ILE:HD11	4:04:1252:HIS:HB3	1.93	0.51
5:05:62:GLN:O	5:05:66:VAL:HG23	2.10	0.51
1:A:1066:C:C2'	1:A:1067:A:H5'	2.41	0.51
1:A:39:G:C2'	1:A:40:C:H5"	2.40	0.51
7:E:18:HIS:HA	7:E:40:ILE:O	2.10	0.51
8:F:120:THR:HG23	8:F:188:ALA:HA	1.92	0.51
10:H:40:ASP:OD1	10:H:44:ARG:HB3	2.11	0.51
1:A:980:C:H4'	19:Q:58:ARG:HH21	1.75	0.51
19:Q:72:PHE:CE1	19:Q:77:GLY:HA2	2.36	0.51
24:V:38:THR:HA	24:V:69:LYS:HA	1.92	0.51
3:03:691:PRO:HG2	3:03:763:THR:HG21	1.91	0.51
1:A:314:C:H2'	1:A:315:A:C8	2.46	0.51
7:E:23:TRP:CE3	7:E:189:THR:CB	2.94	0.51
15:M:11:LYS:NZ	15:M:11:LYS:HB2	2.24	0.51
21:S:5:ARG:HG2	21:S:5:ARG:HH11	1.76	0.51
2:01:100:LEU:O	2:01:143:ARG:HA	2.10	0.51
3:03:1242:LYS:HD3	4:04:354:VAL:CG1	2.39	0.51
1:A:751:U:C2'	1:A:752:G:H5'	2.41	0.51
7:E:20:THR:HB	7:E:22:TYR:CE1	2.46	0.51
8:F:206:ILE:HG12	8:F:206:ILE:OXT	2.10	0.51
14:L:97:LEU:O	14:L:102:PHE:HB2	2.11	0.51
15:M:40:ILE:HG22	15:M:42:LEU:HG	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:12:LEU:HD23	24:V:13:HIS:H	1.76	0.51
3:03:196:VAL:O	3:03:196:VAL:HG13	2.11	0.51
3:03:209:ILE:HG23	3:03:210:LEU:N	2.26	0.51
3:03:725:GLN:O	3:03:773:LEU:HD11	2.11	0.51
4:04:1004:ALA:HB3	4:04:1017:VAL:HG12	1.93	0.51
4:04:768:ASN:OD1	4:04:771:GLN:HG3	2.11	0.51
1:A:1290:G:O2'	14:L:41:GLU:HG3	2.11	0.51
1:A:273:U:C2'	1:A:274:A:H5'	2.41	0.51
1:A:323:U:H4'	25:W:13:SER:HA	1.93	0.51
1:A:161:A:N6	1:A:347:G:H21	2.09	0.51
2:01:115:ILE:HG22	2:01:116:THR:N	2.26	0.51
3:03:1151:LEU:HD12	3:03:1198:LEU:HD21	1.93	0.51
3:03:540:ARG:HD3	3:03:568:ASN:HB3	1.92	0.51
3:03:812:PHE:HZ	4:04:503:SER:HB2	1.76	0.51
1:A:1071:C:H2'	1:A:1072:G:H8	1.75	0.51
1:A:1502:A:H5'	1:A:1504:G:N7	2.26	0.51
1:A:358:U:H2'	1:A:359:G:C8	2.45	0.51
6:B:171:UNK:O	6:B:172:UNK:C	2.57	0.51
7:E:18:HIS:HA	7:E:40:ILE:HG13	1.91	0.51
7:E:21:ARG:O	7:E:23:TRP:CD1	2.64	0.51
10:H:24:VAL:HG13	10:H:29:ILE:HG22	1.93	0.51
16:N:110:THR:HG22	16:N:112:VAL:HG13	1.92	0.51
1:A:912:C:H5''	17:O:42:LYS:NZ	2.26	0.51
20:R:87:ARG:HA	20:R:87:ARG:NE	2.26	0.51
24:V:68:HIS:HB2	24:V:73:PHE:HE2	1.74	0.51
3:03:20:GLN:HE21	3:03:1156:ARG:HH22	1.59	0.50
3:03:468:LEU:O	3:03:472:GLU:HB2	2.10	0.50
4:04:108:ALA:HB3	4:04:280:LYS:HG2	1.93	0.50
1:A:1345:U:H4'	1:A:1346:A:C8	2.46	0.50
7:E:28:LYS:O	7:E:31:ILE:HG13	2.10	0.50
9:G:117:VAL:CG2	9:G:122:ILE:HD12	2.38	0.50
14:L:64:ILE:HD13	14:L:78:ILE:HG23	1.92	0.50
3:03:241:LEU:HD13	3:03:285:ILE:HD13	1.92	0.50
1:A:184:G:H2'	1:A:184:G:N3	2.26	0.50
1:A:409:U:H2'	1:A:410:G:C8	2.46	0.50
1:A:44:A:H2'	1:A:45:G:H5'	1.92	0.50
1:A:837:U:H2'	1:A:838:G:H8	1.74	0.50
7:E:16:PHE:HE2	7:E:40:ILE:HD11	1.75	0.50
7:E:45:LYS:O	7:E:45:LYS:HD3	2.11	0.50
9:G:56:GLU:O	9:G:60:VAL:HG23	2.11	0.50
1:A:754:C:H5'	20:R:71:ARG:HH22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:02:102:LEU:C	2:02:102:LEU:HD13	2.32	0.50
4:04:497:GLU:O	4:04:499:ILE:N	2.44	0.50
1:A:156:C:O2'	1:A:157:U:H5'	2.12	0.50
7:E:17:GLY:CA	7:E:203:ASN:HB3	2.41	0.50
13:K:10:LEU:HA	13:K:13:ILE:HD12	1.94	0.50
3:03:698:PRO:HG3	3:03:1231:TYR:CE2	2.46	0.50
4:04:1145:PHE:HB3	4:04:1309:ILE:HD13	1.94	0.50
3:03:1331:ARG:HH22	4:04:245:LEU:HA	1.76	0.50
1:A:1273:C:H2'	1:A:1274:A:H5'	1.92	0.50
1:A:1375:A:H2'	1:A:1376:U:C6	2.46	0.50
1:A:61:G:N7	25:W:4:LYS:HA	2.27	0.50
12:J:67:ASN:O	12:J:134:VAL:HG23	2.11	0.50
20:R:57:ARG:C	20:R:57:ARG:HD3	2.32	0.50
2:02:208:ASN:HD21	2:02:210:THR:CG2	2.23	0.50
3:03:1101:LEU:HD23	4:04:504:GLN:HB2	1.93	0.50
3:03:515:MET:HA	3:03:526:HIS:CE1	2.47	0.50
10:H:35:LEU:HD13	10:H:49:TYR:HD1	1.77	0.50
11:I:22:ILE:O	11:I:26:THR:HG22	2.11	0.50
12:J:125:ASP:HB3	12:J:130:LYS:O	2.11	0.50
13:K:120:LEU:HD12	13:K:120:LEU:O	2.11	0.50
15:M:84:VAL:HA	15:M:87:LEU:HG	1.93	0.50
3:03:150:HIS:CD2	3:03:454:ARG:HH11	2.30	0.50
4:04:1026:PRO:HB3	4:04:1120:THR:HG22	1.92	0.50
3:03:1261:GLY:HA2	4:04:346:ARG:NH2	2.27	0.50
4:04:93:THR:HG22	4:04:94:GLN:H	1.77	0.50
1:A:319:G:O2'	1:A:320:A:H5'	2.11	0.50
16:N:125:LYS:NZ	26:X:33:ARG:HD2	2.27	0.50
2:02:180:VAL:HA	2:02:207:THR:HA	1.92	0.50
3:03:1152:GLY:HA3	3:03:1197:GLU:HG2	1.93	0.50
3:03:839:VAL:HG13	3:03:886:LYS:NZ	2.27	0.50
3:03:940:GLU:HB3	3:03:946:LEU:HD21	1.93	0.50
4:04:527:LEU:HB2	4:04:550:VAL:HG12	1.93	0.50
1:A:1500:A:H4'	1:A:1508:A:C5'	2.35	0.50
1:A:975:A:N6	15:M:50:THR:HG21	2.27	0.50
9:G:94:GLU:HA	9:G:99:ASN:OD1	2.11	0.50
11:I:21:MET:O	11:I:24:ARG:HB3	2.12	0.50
16:N:33:ILE:HG13	16:N:41:LEU:HB2	1.94	0.50
20:R:28:VAL:HG11	20:R:66:LEU:HD21	1.94	0.50
25:W:78:LEU:HD23	25:W:78:LEU:C	2.31	0.50
3:03:1214:ASP:HB2	3:03:1221:PHE:CZ	2.47	0.50
1:A:618:C:H5'	1:A:619:U:H5''	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:104:ILE:HD11	10:H:114:LEU:HB2	1.93	0.50
19:Q:8:ARG:O	19:Q:12:ARG:NH1	2.45	0.50
3:03:130:MET:CE	3:03:456:VAL:HG11	2.41	0.50
3:03:582:ASN:HB3	3:03:586:PHE:HB2	1.94	0.50
3:03:964:LEU:HD22	3:03:1025:PHE:CG	2.47	0.50
4:04:1362:GLY:HA2	4:04:1365:TYR:CB	2.42	0.50
4:04:759:ILE:HD12	4:04:771:GLN:HB3	1.94	0.50
4:04:812:ASP:O	4:04:895:CYS:HB2	2.11	0.50
1:A:867:G:H2'	1:A:868:C:C6	2.47	0.50
7:E:135:LEU:HD12	7:E:138:THR:HB	1.93	0.50
9:G:149:LYS:HB3	9:G:149:LYS:NZ	2.27	0.50
14:L:29:ILE:HD12	14:L:64:ILE:O	2.12	0.50
14:L:43:ALA:HB1	14:L:46:VAL:HG11	1.93	0.50
24:V:54:ARG:HG3	24:V:55:GLN:H	1.77	0.50
7:E:44:GLU:OE2	7:E:48:PRO:HG2	2.12	0.49
1:A:1056:U:H4'	8:F:162:ALA:CB	2.42	0.49
1:A:1240:U:H5'	12:J:41:ILE:HD11	1.93	0.49
2:02:35:PHE:HA	2:02:38:THR:CG2	2.37	0.49
3:03:1321:GLU:O	3:03:1324:ASN:HB3	2.12	0.49
3:03:475:VAL:O	3:03:479:LEU:HG	2.11	0.49
3:03:528:ARG:HD3	3:03:575:LEU:HD23	1.94	0.49
3:03:698:PRO:HD2	3:03:705:GLU:OE1	2.12	0.49
4:04:952:VAL:HG12	4:04:1015:GLU:O	2.13	0.49
4:04:485:MET:HB3	4:04:488:ASN:ND2	2.23	0.49
4:04:799:ARG:HA	4:04:802:ASP:OD2	2.11	0.49
1:A:376:G:H2'	1:A:377:G:C5'	2.42	0.49
1:A:418:C:H2'	1:A:419:C:C6	2.48	0.49
1:A:631:C:H3'	1:A:632:U:H5'	1.93	0.49
1:A:880:C:H2'	1:A:881:G:H8	1.77	0.49
17:O:79:ILE:HG22	17:O:103:CYS:HB2	1.94	0.49
2:01:124:VAL:HG13	2:01:125:LYS:HG2	1.92	0.49
3:03:176:ILE:HB	3:03:184:LEU:HB3	1.93	0.49
3:03:205:PRO:O	3:03:208:ILE:HG22	2.11	0.49
3:03:488:MET:HB2	3:03:491:ASP:OD2	2.13	0.49
4:04:1173:ARG:NH2	4:04:1196:LEU:HG	2.27	0.49
4:04:22:ILE:H	4:04:1341:ARG:HG2	1.77	0.49
4:04:38:VAL:HG21	4:04:244:VAL:HG11	1.94	0.49
4:04:41:PRO:HA	4:04:56:LEU:CD1	2.42	0.49
4:04:422:LEU:HD13	4:04:471:PRO:HG3	1.95	0.49
1:A:1218:C:H2'	1:A:1219:A:C8	2.47	0.49
1:A:137:U:H6	1:A:137:U:H5'	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:92:THR:O	11:I:93:LYS:HB2	2.12	0.49
12:J:144:ALA:O	12:J:148:LYS:HG3	2.12	0.49
16:N:22:ILE:HG12	16:N:31:VAL:HG13	1.94	0.49
1:A:1202:U:O2'	19:Q:68:ARG:HB2	2.12	0.49
24:V:20:LYS:HB3	24:V:20:LYS:NZ	2.27	0.49
2:01:232:VAL:HG22	2:02:221:ALA:HB1	1.93	0.49
2:01:184:ALA:HB2	3:03:1091:GLY:CA	2.42	0.49
4:04:22:ILE:O	4:04:22:ILE:HG23	2.12	0.49
4:04:357:VAL:HG12	4:04:358:GLY:N	2.28	0.49
4:04:885:VAL:HA	4:04:888:CYS:HB2	1.93	0.49
4:04:53:ARG:HH22	4:04:88:CYS:CB	2.24	0.49
1:A:1279:G:H5''	15:M:9:ARG:NH1	2.18	0.49
1:A:828:U:O2	7:E:26:LYS:HG2	2.13	0.49
9:G:33:ILE:HG13	9:G:34:GLU:HG3	1.95	0.49
2:01:31:LEU:HD11	2:01:201:LEU:HB2	1.95	0.49
3:03:731:ARG:HH22	3:03:958:LYS:HB2	1.77	0.49
4:04:1151:LYS:C	4:04:1153:PRO:HD3	2.33	0.49
4:04:478:LEU:O	4:04:482:ALA:HB2	2.12	0.49
5:05:32:VAL:O	5:05:34:GLY:N	2.43	0.49
7:E:31:ILE:HD12	7:E:32:PHE:O	2.12	0.49
8:F:179:ALA:HB1	8:F:202:PHE:HE1	1.78	0.49
1:A:405:U:C5	9:G:4:LEU:HG	2.48	0.49
10:H:119:VAL:HG12	10:H:122:VAL:HG13	1.93	0.49
1:A:864:A:H5''	10:H:89:THR:HG22	1.94	0.49
1:A:1377:A:N6	12:J:9:ARG:HH22	2.11	0.49
18:P:22:TYR:CB	18:P:65:GLU:HG2	2.32	0.49
2:02:100:LEU:HD12	2:02:100:LEU:N	2.27	0.49
3:03:1082:ILE:HA	3:03:1085:MET:HG2	1.95	0.49
2:01:184:ALA:HB2	3:03:1091:GLY:HA3	1.93	0.49
3:03:139:ASN:H	3:03:143:ARG:HH11	1.61	0.49
3:03:207:THR:HG21	3:03:351:LEU:HD23	1.95	0.49
3:03:61:SER:OG	3:03:476:LYS:HB3	2.13	0.49
4:04:620:PHE:CE2	4:04:624:ILE:HD11	2.48	0.49
5:05:26:ARG:HD3	5:05:64:LEU:HD13	1.93	0.49
1:A:348:G:H2'	1:A:349:A:C8	2.48	0.49
7:E:23:TRP:CZ2	7:E:25:PRO:HG3	2.46	0.49
23:U:40:VAL:HG11	23:U:45:THR:HG23	1.94	0.49
2:01:26:VAL:CG2	2:01:203:ILE:HB	2.42	0.49
2:02:28:LEU:HD23	2:02:29:GLU:N	2.27	0.49
3:03:1285:TYR:O	3:03:1288:GLN:HB3	2.12	0.49
3:03:723:VAL:HA	3:03:776:PRO:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:81:ARG:HB2	7:E:206:ALA:HA	1.95	0.49
1:A:865:A:H5'	1:A:1078:U:O4	2.12	0.49
1:A:392:C:H2'	1:A:393:A:C8	2.48	0.49
9:G:2:ARG:N	9:G:2:ARG:HD3	2.26	0.49
11:I:36:ILE:HA	11:I:64:VAL:HG23	1.94	0.49
13:K:95:MET:HB3	13:K:98:LEU:HB2	1.95	0.49
14:L:49:GLN:N	14:L:50:PRO:HD2	2.28	0.49
18:P:55:LEU:O	18:P:59:VAL:HG22	2.12	0.49
3:03:363:LEU:HD11	3:03:382:GLU:HG2	1.95	0.49
4:04:554:GLU:HG3	4:04:566:LYS:HG3	1.94	0.49
1:A:1245:C:H2'	1:A:1246:A:C8	2.48	0.49
1:A:993:G:H21	1:A:996:A:H61	1.60	0.49
7:E:24:ASN:N	7:E:25:PRO:HD3	2.24	0.49
15:M:59:LYS:HE3	15:M:62:ARG:HH12	1.77	0.49
1:A:1014:A:C4'	24:V:13:HIS:HB2	2.36	0.49
2:02:40:GLY:HA3	2:02:185:TYR:CD2	2.48	0.49
3:03:1107:MET:HG2	4:04:740:LEU:HD13	1.94	0.49
3:03:149:LEU:HD21	3:03:451:ARG:HD2	1.94	0.49
3:03:616:ILE:HG22	3:03:617:ALA:O	2.12	0.49
3:03:753:LEU:HB3	3:03:767:GLN:HB2	1.94	0.49
4:04:233:LYS:O	4:04:235:GLU:N	2.46	0.49
4:04:53:ARG:HE	4:04:54:ASP:CG	2.16	0.49
4:04:582:ILE:HD13	4:04:627:THR:HG21	1.94	0.49
4:04:722:ILE:HG23	4:04:723:TYR:N	2.27	0.49
3:03:550:VAL:HG11	4:04:776:THR:HB	1.94	0.49
1:A:440:C:C2'	1:A:441:A:H5''	2.42	0.49
1:A:952:U:H4'	1:A:964:A:H61	1.78	0.49
7:E:41:ILE:HG22	7:E:43:LEU:N	2.23	0.49
18:P:19:THR:HG22	18:P:25:GLY:C	2.33	0.49
22:T:24:ILE:N	22:T:24:ILE:HD12	2.27	0.49
2:01:27:THR:C	2:01:28:LEU:HD12	2.33	0.49
2:02:111:THR:HG22	2:02:129:VAL:HG22	1.94	0.49
3:03:15:PHE:HB3	3:03:1183:ALA:O	2.13	0.49
3:03:1331:ARG:HH22	4:04:245:LEU:CA	2.26	0.49
3:03:796:LEU:CD1	3:03:796:LEU:H	2.23	0.49
4:04:1282:TYR:O	4:04:1286:LYS:HG2	2.12	0.49
4:04:110:PRO:O	4:04:182:ALA:HB3	2.13	0.49
4:04:526:VAL:C	4:04:527:LEU:HD12	2.34	0.49
4:04:850:LYS:C	4:04:852:GLY:N	2.66	0.49
1:A:815:A:H2'	1:A:1510:C:H1'	1.95	0.49
1:A:686:U:O2'	1:A:687:A:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:139:UNK:O	6:B:141:UNK:N	2.46	0.49
11:I:10:VAL:HA	11:I:83:ALA:O	2.13	0.49
14:L:80:HIS:O	14:L:83:THR:HB	2.13	0.49
17:O:98:ARG:HB2	17:O:116:TYR:HA	1.95	0.49
2:02:112:ALA:HB3	2:02:126:PRO:HA	1.95	0.48
3:03:387:ASN:HA	3:03:391:SER:HB2	1.93	0.48
3:03:448:LEU:HD11	3:03:557:ARG:HH11	1.78	0.48
4:04:265:LEU:HD23	4:04:325:LYS:HG2	1.94	0.48
4:04:64:PRO:HG2	4:04:92:VAL:HA	1.95	0.48
4:04:825:VAL:HG22	4:04:833:GLU:HB3	1.94	0.48
1:A:938:A:H4'	12:J:94:ARG:HH22	1.77	0.48
10:H:131:ASN:HD21	10:H:133:ILE:HB	1.78	0.48
13:K:113:ARG:HA	13:K:116:ARG:HH12	1.78	0.48
19:Q:54:SER:HB2	19:Q:57:SER:OG	2.13	0.48
26:X:42:THR:O	26:X:46:LYS:HG2	2.13	0.48
2:01:194:GLN:OE1	2:01:194:GLN:HA	2.13	0.48
2:02:95:LYS:CD	2:02:98:VAL:HB	2.43	0.48
3:03:1168:GLU:O	3:03:1172:LEU:HD23	2.13	0.48
4:04:372:MET:O	4:04:376:LEU:HD13	2.13	0.48
4:04:646:ILE:HG12	4:04:764:ARG:NH1	2.27	0.48
1:A:29:U:O2'	1:A:30:U:H5'	2.13	0.48
1:A:959:A:H2'	1:A:960:U:H4'	1.94	0.48
4:04:83:VAL:HG23	7:E:73:LYS:O	2.13	0.48
9:G:131:ILE:HG22	9:G:133:SER:H	1.77	0.48
10:H:15:ILE:HG23	10:H:109:ALA:HB1	1.95	0.48
16:N:27:ASN:O	16:N:56:LYS:HE2	2.12	0.48
16:N:59:PRO:HA	16:N:62:ALA:HB3	1.95	0.48
16:N:80:ASN:HA	16:N:105:ARG:O	2.13	0.48
17:O:88:ASP:HB2	17:O:89:LEU:HD12	1.95	0.48
19:Q:23:ARG:CB	19:Q:50:LEU:HD21	2.43	0.48
2:02:52:PRO:HA	2:02:149:GLY:O	2.13	0.48
2:02:209:GLY:C	2:02:211:ILE:H	2.16	0.48
3:03:204:LEU:HD13	3:03:208:ILE:CD1	2.42	0.48
4:04:680:ASN:HA	4:04:683:ILE:HD12	1.94	0.48
1:A:1170:A:H2'	1:A:1171:A:O4'	2.13	0.48
7:E:26:LYS:C	7:E:28:LYS:H	2.16	0.48
19:Q:65:GLN:NE2	19:Q:82:LYS:HD2	2.28	0.48
23:U:55:LEU:O	23:U:59:ILE:HG13	2.12	0.48
2:01:25:LYS:HG2	2:01:204:GLU:HA	1.93	0.48
3:03:1164:PHE:HB2	3:03:1168:GLU:HB2	1.94	0.48
3:03:189:ASP:C	3:03:191:LYS:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:496:LYS:HA	3:03:499:SER:HB2	1.95	0.48
3:03:948:ILE:O	3:03:952:GLN:HG3	2.13	0.48
4:04:350:SER:HA	4:04:468:VAL:O	2.14	0.48
4:04:579:LEU:HD23	4:04:592:VAL:HB	1.95	0.48
4:04:960:LEU:HB3	4:04:963:VAL:CG1	2.43	0.48
4:04:479:GLU:HG3	5:05:20:VAL:HG11	1.96	0.48
5:05:50:ALA:O	5:05:54:ILE:HG12	2.13	0.48
7:E:118:GLU:OE1	7:E:152:LYS:HD3	2.13	0.48
11:I:85:ILE:HG13	11:I:86:ARG:N	2.29	0.48
14:L:83:THR:HG23	14:L:97:LEU:HD23	1.95	0.48
16:N:29:THR:HG21	16:N:62:ALA:HB2	1.95	0.48
18:P:86:ARG:O	18:P:90:HIS:HB2	2.14	0.48
3:03:193:ASN:HB3	3:03:195:PHE:CD2	2.48	0.48
3:03:453:ILE:HD12	3:03:586:PHE:O	2.12	0.48
4:04:435:GLN:OE1	4:04:453:VAL:HG11	2.13	0.48
1:A:1258:G:H2'	1:A:1259:C:C6	2.48	0.48
1:A:404:G:H1	1:A:499:A:N6	2.12	0.48
1:A:539:A:H2'	1:A:540:G:C8	2.49	0.48
7:E:117:LEU:HD23	7:E:141:LEU:HD13	1.96	0.48
7:E:21:ARG:O	7:E:23:TRP:N	2.46	0.48
13:K:107:LYS:HB3	13:K:107:LYS:NZ	2.28	0.48
16:N:29:THR:HG22	16:N:90:PRO:HG2	1.95	0.48
1:A:684:U:O2	16:N:40:ALA:HB3	2.13	0.48
2:01:123:ILE:HG22	2:01:125:LYS:H	1.78	0.48
4:04:1227:HIS:C	4:04:1230:THR:HG22	2.34	0.48
4:04:1289:ASN:HA	4:04:1292:LEU:HB2	1.95	0.48
4:04:1368:ASP:HA	4:04:1371:ARG:NH2	2.29	0.48
4:04:60:ARG:HA	4:04:89:GLY:O	2.13	0.48
4:04:612:LEU:HD23	4:04:616:PRO:HB3	1.96	0.48
1:A:1329:A:H5"	18:P:25:GLY:N	2.29	0.48
1:A:35:G:H2'	1:A:36:C:C6	2.49	0.48
7:E:21:ARG:C	7:E:23:TRP:N	2.66	0.48
2:01:52:PRO:HD2	2:01:219:ARG:CZ	2.44	0.48
3:03:431:LYS:HA	3:03:434:ASP:OD2	2.13	0.48
3:03:448:LEU:HD11	3:03:557:ARG:NH1	2.28	0.48
3:03:579:ALA:HB1	3:03:587:LEU:HD21	1.94	0.48
3:03:603:ILE:HG13	3:03:603:ILE:O	2.13	0.48
4:04:1307:LEU:N	4:04:1307:LEU:HD12	2.28	0.48
4:04:450:HIS:HE1	4:04:452:LEU:HB2	1.79	0.48
4:04:537:TYR:CZ	4:04:544:LEU:HB2	2.48	0.48
4:04:818:GLU:HG3	4:04:819:GLY:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:848:VAL:HB	4:04:858:VAL:CG1	2.44	0.48
1:A:244:U:H5'	1:A:894:G:N2	2.28	0.48
1:A:987:G:H2'	1:A:988:G:C8	2.48	0.48
7:E:10:LEU:C	7:E:11:LYS:HD2	2.33	0.48
11:I:18:VAL:HG12	11:I:19:PRO:HD3	1.96	0.48
12:J:28:ILE:CG2	12:J:104:VAL:HG21	2.43	0.48
25:W:80:ALA:O	25:W:84:LYS:HG3	2.14	0.48
2:01:71:LYS:O	2:01:74:VAL:HG12	2.14	0.48
3:03:1101:LEU:HD12	3:03:1101:LEU:N	2.27	0.48
3:03:462:ASN:O	3:03:466:VAL:HG23	2.13	0.48
4:04:200:GLN:HA	4:04:203:GLU:OE1	2.14	0.48
4:04:221:ILE:HG23	4:04:222:LYS:N	2.29	0.48
4:04:693:VAL:O	4:04:696:ALA:HB3	2.14	0.48
1:A:358:U:H2'	1:A:359:G:H8	1.78	0.48
7:E:21:ARG:C	7:E:23:TRP:HD1	2.17	0.48
10:H:10:LEU:HD12	10:H:11:GLN:N	2.29	0.48
10:H:133:ILE:O	10:H:137:ARG:HG3	2.13	0.48
13:K:10:LEU:HD23	13:K:13:ILE:HD12	1.96	0.48
16:N:81:LEU:HD23	16:N:81:LEU:H	1.79	0.48
2:01:47:LEU:O	2:01:180:VAL:HG11	2.14	0.48
3:03:42:ASP:N	3:03:43:PRO:HD3	2.28	0.48
3:03:798:GLN:OE1	3:03:827:ARG:HB2	2.12	0.48
4:04:1166:GLY:O	4:04:1174:ARG:HB2	2.14	0.48
4:04:1227:HIS:CA	4:04:1230:THR:HG22	2.43	0.48
4:04:278:ARG:O	4:04:282:LEU:HG	2.14	0.48
4:04:547:ARG:HG3	4:04:547:ARG:HH11	1.78	0.48
1:A:1238:A:H2	1:A:1241:G:H1'	1.78	0.48
1:A:443:C:H2'	1:A:444:G:C8	2.48	0.48
7:E:67:ILE:CD1	7:E:160:ALA:HB3	2.43	0.48
9:G:120:LYS:HG2	9:G:130:ASN:HD22	1.79	0.48
1:A:402:G:H5"	9:G:70:GLN:NE2	2.29	0.48
2:01:56:VAL:O	2:01:173:VAL:HG23	2.14	0.48
2:01:78:ILE:HD13	2:01:81:ILE:HD12	1.96	0.48
3:03:1253:LEU:HD13	3:03:1253:LEU:O	2.14	0.48
3:03:431:LYS:O	3:03:434:ASP:HB2	2.13	0.48
1:A:1317:C:OP2	19:Q:27:LYS:HD3	2.14	0.48
1:A:1369:C:H2'	1:A:1370:G:C8	2.48	0.48
9:G:170:LEU:HD23	9:G:181:PHE:HA	1.96	0.48
18:P:9:PRO:HG2	18:P:44:ILE:HG21	1.96	0.48
21:S:70:ARG:O	21:S:74:LEU:HG	2.14	0.48
2:02:12:ARG:HB2	2:02:12:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:689:ALA:HA	3:03:1233:LEU:HD11	1.96	0.47
4:04:399:LYS:O	4:04:402:GLU:HB3	2.14	0.47
4:04:442:ILE:CG2	4:04:448:GLN:HE21	2.27	0.47
1:A:359:G:C5	1:A:360:G:H1'	2.48	0.47
9:G:48:SER:O	9:G:52:VAL:HG23	2.14	0.47
10:H:12:GLU:HA	10:H:38:VAL:HG12	1.96	0.47
10:H:131:ASN:CB	10:H:134:ASN:HD22	2.25	0.47
13:K:110:MET:HB2	13:K:114:ALA:HB3	1.95	0.47
1:A:676:A:C2	16:N:120:CYS:HB3	2.49	0.47
2:01:102:LEU:HD13	2:01:102:LEU:C	2.34	0.47
3:03:1328:LYS:HE2	4:04:102:MET:HE2	1.96	0.47
3:03:575:LEU:HD11	3:03:579:ALA:HB3	1.95	0.47
3:03:97:ARG:HB3	3:03:121:GLU:CA	2.43	0.47
4:04:1011:VAL:HG12	4:04:1012:ALA:N	2.29	0.47
4:04:41:PRO:HB2	4:04:270:ARG:HG3	1.95	0.47
4:04:845:ALA:O	4:04:860:ARG:HG3	2.14	0.47
1:A:1306:A:H61	1:A:1331:G:H1'	1.78	0.47
18:P:19:THR:HG21	18:P:26:LYS:HD2	1.96	0.47
26:X:49:LYS:O	26:X:53:VAL:HG23	2.14	0.47
2:01:32:GLU:HB2	2:01:35:PHE:CD2	2.49	0.47
3:03:1025:PHE:O	3:03:1028:LYS:HB2	2.14	0.47
3:03:1156:ARG:HG3	3:03:1156:ARG:HH11	1.79	0.47
3:03:56:VAL:HG22	3:03:59:ILE:HG12	1.96	0.47
4:04:1341:ARG:HH21	4:04:1343:GLU:HG3	1.79	0.47
4:04:662:ALA:O	4:04:666:GLU:HG3	2.14	0.47
1:A:454:G:H22	1:A:478:A:H2	1.62	0.47
1:A:620:C:H5'	9:G:127:ARG:HD3	1.97	0.47
15:M:102:LEU:N	15:M:102:LEU:HD23	2.29	0.47
24:V:10:ILE:HD12	24:V:10:ILE:O	2.13	0.47
24:V:54:ARG:HG3	24:V:55:GLN:N	2.28	0.47
2:02:28:LEU:C	2:02:28:LEU:HD23	2.34	0.47
3:03:1160:ASP:CG	3:03:1161:LEU:H	2.18	0.47
3:03:237:LEU:HD13	3:03:292:ILE:HD12	1.95	0.47
3:03:757:THR:OG1	3:03:765:ILE:HG23	2.14	0.47
4:04:506:VAL:O	4:04:510:LEU:HD13	2.14	0.47
4:04:646:ILE:CG1	4:04:764:ARG:HD3	2.44	0.47
4:04:984:LEU:HB3	4:04:993:GLU:H	1.80	0.47
1:A:17:U:O2'	1:A:18:C:H5'	2.14	0.47
1:A:370:C:H2'	1:A:371:A:C8	2.49	0.47
1:A:517:G:H4'	1:A:519:C:C2	2.49	0.47
1:A:735:C:O2'	1:A:736:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:158:LEU:HD23	9:G:158:LEU:O	2.13	0.47
9:G:158:LEU:O	9:G:162:GLU:HG2	2.14	0.47
15:M:40:ILE:HB	15:M:73:LEU:HB2	1.96	0.47
16:N:60:PHE:O	16:N:64:VAL:HG23	2.14	0.47
2:02:181:GLU:HB3	4:04:531:LYS:HE3	1.96	0.47
2:02:14:VAL:CG2	2:02:26:VAL:HG13	2.42	0.47
3:03:228:VAL:HG23	3:03:337:PHE:HB2	1.96	0.47
4:04:247:PRO:HA	4:04:250:ARG:HE	1.79	0.47
4:04:449:LEU:HD21	4:04:457:TYR:CE2	2.49	0.47
4:04:490:ILE:HG13	4:04:491:LEU:N	2.30	0.47
4:04:691:ASP:O	4:04:694:SER:HB3	2.13	0.47
1:A:229:U:H2'	1:A:230:G:C8	2.50	0.47
12:J:138:GLU:HB3	12:J:142:ARG:HH12	1.79	0.47
12:J:86:VAL:O	12:J:88:VAL:HG23	2.13	0.47
1:A:1129:C:C5'	14:L:17:ARG:HH22	2.26	0.47
18:P:82:LEU:HD13	24:V:64:GLU:HB2	1.97	0.47
25:W:35:TYR:CE2	25:W:78:LEU:HD12	2.50	0.47
2:01:159:ILE:HG12	2:01:159:ILE:O	2.15	0.47
2:01:182:ARG:H	2:01:206:GLU:HB3	1.80	0.47
4:04:697:MET:O	4:04:701:LEU:HD23	2.14	0.47
7:E:30:PHE:HB3	7:E:45:LYS:CG	2.42	0.47
10:H:21:SER:HA	10:H:31:SER:H	1.80	0.47
16:N:126:ARG:HA	16:N:126:ARG:HE	1.78	0.47
19:Q:91:GLU:HB3	19:Q:92:ILE:HD12	1.96	0.47
21:S:72:ALA:O	21:S:76:LYS:HG2	2.15	0.47
1:A:645:G:H1'	22:T:27:PHE:HZ	1.79	0.47
25:W:23:ARG:NH1	25:W:59:ARG:HH22	2.12	0.47
2:01:70:THR:HG22	2:01:77:ASP:HA	1.96	0.47
3:03:455:SER:OG	3:03:458:GLU:HG3	2.14	0.47
4:04:141:PHE:CE1	4:04:181:GLY:HA3	2.50	0.47
1:A:107:G:H2'	1:A:108:G:C5'	2.45	0.47
1:A:33:A:H61	1:A:551:U:H3	1.61	0.47
8:F:135:ARG:HG3	8:F:135:ARG:HH11	1.80	0.47
15:M:9:ARG:HG2	15:M:11:LYS:HG3	1.96	0.47
2:02:15:ASP:HB3	2:02:27:THR:HB	1.96	0.47
3:03:893:THR:HG21	4:04:254:PRO:HB3	1.97	0.47
4:04:598:LYS:HB2	4:04:728:SER:O	2.14	0.47
4:04:957:SER:HB3	4:04:985:ILE:O	2.15	0.47
1:A:136:C:H2'	1:A:137:U:H5'	1.97	0.47
1:A:6:G:O2'	1:A:298:A:H1'	2.15	0.47
1:A:521:G:H21	1:A:536:C:H5'	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:27:MET:HG3	7:E:189:THR:HA	1.96	0.47
8:F:71:ARG:HA	8:F:72:PRO:HD2	1.75	0.47
9:G:20:LEU:HD12	9:G:21:LYS:N	2.30	0.47
9:G:30:LYS:O	9:G:32:LYS:N	2.48	0.47
14:L:94:ARG:HH12	14:L:103:VAL:CG2	2.27	0.47
2:01:81:ILE:HG23	2:01:130:ILE:HG22	1.97	0.47
2:02:193:GLU:HB3	4:04:406:ALA:HB1	1.96	0.47
3:03:964:LEU:HD22	3:03:1025:PHE:CD1	2.49	0.47
3:03:119:GLU:HG3	3:03:489:PRO:CD	2.45	0.47
3:03:39:ILE:HA	3:03:49:LEU:HD12	1.96	0.47
4:04:19:ALA:HB1	4:04:1343:GLU:O	2.15	0.47
1:A:211:G:C2'	1:A:212:G:H5'	2.45	0.47
1:A:722:G:N3	1:A:722:G:H3'	2.30	0.47
7:E:9:MET:O	7:E:10:LEU:HB2	2.15	0.47
7:E:21:ARG:HA	7:E:23:TRP:HD1	1.78	0.47
8:F:42:LEU:HD21	8:F:67:ILE:HD11	1.97	0.47
14:L:128:LYS:NZ	14:L:128:LYS:HB2	2.30	0.47
16:N:81:LEU:CD2	16:N:104:PHE:HB3	2.45	0.47
19:Q:48:GLN:CB	24:V:12:LEU:HD22	2.42	0.47
3:03:119:GLU:HG3	3:03:489:PRO:HD2	1.97	0.47
3:03:521:LEU:O	3:03:525:THR:HG22	2.15	0.47
3:03:591:TYR:O	3:03:603:ILE:HA	2.12	0.47
4:04:1250:ASP:O	4:04:1254:GLU:HG3	2.15	0.47
3:03:1331:ARG:HH22	4:04:245:LEU:N	2.13	0.47
4:04:347:VAL:HG23	4:04:350:SER:CB	2.44	0.47
4:04:744:ARG:HB3	4:04:759:ILE:CB	2.29	0.47
10:H:131:ASN:ND2	10:H:133:ILE:HB	2.30	0.47
10:H:87:VAL:O	10:H:87:VAL:HG13	2.15	0.47
11:I:75:GLU:HA	11:I:78:PHE:CD2	2.48	0.47
16:N:24:ALA:HB3	16:N:87:GLY:O	2.14	0.47
21:S:36:VAL:O	21:S:36:VAL:HG13	2.15	0.47
25:W:34:VAL:HG21	25:W:53:MET:SD	2.55	0.47
25:W:43:LYS:O	25:W:47:GLN:HG3	2.15	0.47
3:03:1029:LEU:HA	3:03:1032:LYS:HB2	1.97	0.47
3:03:934:PHE:HA	3:03:1040:ASP:HB3	1.96	0.47
3:03:97:ARG:HD2	3:03:121:GLU:HB2	1.97	0.47
3:03:498:ILE:HD12	3:03:498:ILE:N	2.29	0.47
3:03:667:LEU:HD21	3:03:704:MET:HB2	1.97	0.47
3:03:724:VAL:HG11	3:03:771:VAL:HG11	1.97	0.47
3:03:862:LEU:HD23	3:03:865:LEU:HB2	1.97	0.47
4:04:263:SER:O	4:04:265:LEU:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:811:GLU:O	4:04:895:CYS:HA	2.15	0.47
7:E:126:PHE:H	7:E:126:PHE:HD1	1.63	0.47
8:F:59:PRO:HG2	8:F:62:SER:OG	2.15	0.47
12:J:78:ARG:H	12:J:78:ARG:CD	2.21	0.47
16:N:81:LEU:HD21	16:N:104:PHE:HB3	1.97	0.47
25:W:13:SER:O	25:W:17:ARG:HB2	2.15	0.47
25:W:54:GLN:HA	25:W:57:VAL:CG1	2.26	0.47
3:03:1335:ILE:HD11	4:04:1336:ALA:HB2	1.98	0.46
3:03:605:TYR:C	3:03:606:LEU:HD12	2.35	0.46
3:03:753:LEU:HD23	3:03:767:GLN:O	2.14	0.46
4:04:1344:LEU:HD11	4:04:1353:VAL:CG1	2.44	0.46
4:04:197:GLU:O	4:04:201:LEU:HG	2.14	0.46
1:A:1237:C:OP1	1:A:1238:A:H1'	2.14	0.46
1:A:219:U:H2'	1:A:220:G:C5'	2.45	0.46
1:A:59:A:H1'	1:A:354:G:N2	2.30	0.46
1:A:383:A:H5''	1:A:454:G:H4'	1.97	0.46
1:A:987:G:H2'	1:A:988:G:H8	1.80	0.46
7:E:40:ILE:HG23	7:E:41:ILE:N	2.31	0.46
1:A:545:C:H5''	9:G:61:ARG:NH1	2.30	0.46
10:H:119:VAL:HG11	10:H:122:VAL:CG1	2.45	0.46
10:H:18:ASN:O	10:H:32:PHE:HD1	1.98	0.46
12:J:138:GLU:O	12:J:142:ARG:HG3	2.14	0.46
12:J:74:VAL:HG12	12:J:87:PRO:HA	1.97	0.46
21:S:12:LYS:O	21:S:13:LYS:HB2	2.15	0.46
2:01:48:LEU:HG	2:01:183:ILE:HD12	1.98	0.46
2:02:155:ALA:HB1	2:02:172:LEU:HD12	1.97	0.46
3:03:153:PRO:CD	3:03:452:ARG:HD2	2.45	0.46
4:04:598:LYS:HA	4:04:601:ILE:HG22	1.98	0.46
4:04:81:ARG:HB2	7:E:207:ILE:H	1.81	0.46
5:05:3:ARG:NH2	5:05:52:ARG:HD2	2.29	0.46
1:A:1014:A:H4'	24:V:13:HIS:CB	2.38	0.46
1:A:1392:G:H2'	1:A:1393:U:C6	2.51	0.46
1:A:219:U:H2'	1:A:220:G:H5''	1.96	0.46
1:A:350:G:H2'	1:A:351:G:C8	2.50	0.46
7:E:80:VAL:HA	7:E:214:LEU:HD21	1.97	0.46
10:H:113:VAL:O	10:H:116:VAL:HG22	2.16	0.46
12:J:90:VAL:HG22	12:J:91:ARG:N	2.29	0.46
1:A:1343:G:H4'	14:L:123:ARG:HB3	1.97	0.46
1:A:1329:A:H4'	18:P:23:GLY:O	2.16	0.46
1:A:228:A:H2	21:S:1:MET:HA	1.80	0.46
2:01:58:GLU:HG2	2:01:172:LEU:HG	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:1131:MET:HG2	3:03:1136:GLN:HB2	1.98	0.46
3:03:1235:LEU:HD12	3:03:1235:LEU:N	2.29	0.46
3:03:835:GLU:C	3:03:836:LEU:HD12	2.35	0.46
3:03:934:PHE:O	3:03:1048:LYS:HA	2.15	0.46
4:04:973:LEU:HB3	4:04:1003:LEU:HB2	1.96	0.46
4:04:1150:PRO:HG2	4:04:1153:PRO:HG3	1.97	0.46
4:04:1286:LYS:HD2	4:04:1290:ARG:NH2	2.29	0.46
4:04:214:ARG:CA	4:04:217:LEU:HB2	2.34	0.46
4:04:29:MET:O	4:04:32:SER:HB2	2.15	0.46
4:04:309:ASN:ND2	4:04:312:ARG:HB2	2.30	0.46
3:03:1280:ALA:HB3	4:04:431:ARG:HB3	1.97	0.46
4:04:55:GLY:H	4:04:58:CYS:HB2	1.79	0.46
7:E:27:MET:CB	7:E:189:THR:HG22	2.46	0.46
16:N:110:THR:CG2	16:N:112:VAL:HG13	2.45	0.46
17:O:20:VAL:HG23	17:O:20:VAL:O	2.15	0.46
2:02:26:VAL:O	2:02:202:VAL:HA	2.16	0.46
3:03:980:VAL:HA	3:03:984:VAL:HA	1.97	0.46
4:04:426:ALA:C	4:04:428:THR:H	2.17	0.46
4:04:796:LEU:O	4:04:800:LEU:HD13	2.15	0.46
3:03:1313:HIS:CD2	5:05:31:GLN:HE22	2.30	0.46
5:05:53:GLU:O	5:05:58:LEU:HD23	2.15	0.46
1:A:18:C:H4'	1:A:1078:U:O2	2.16	0.46
1:A:1123:U:O2'	1:A:1124:G:H5'	2.16	0.46
1:A:1210:C:H2'	1:A:1211:U:H5'	1.98	0.46
1:A:1225:A:H5'	1:A:1226:C:OP2	2.15	0.46
1:A:440:C:H3'	1:A:441:A:H5''	1.96	0.46
7:E:20:THR:HA	7:E:38:VAL:HG12	1.97	0.46
7:E:20:THR:HA	7:E:38:VAL:CG1	2.45	0.46
1:A:942:G:H21	14:L:125:GLN:CD	2.19	0.46
17:O:43:LYS:HG3	17:O:44:PRO:HD3	1.97	0.46
20:R:64:LYS:HA	20:R:67:ASP:HB3	1.98	0.46
2:01:112:ALA:HB2	2:01:130:ILE:HD11	1.97	0.46
2:01:233:ASP:C	2:01:234:LEU:HD22	2.35	0.46
2:02:136:GLU:HB3	2:02:137:ASN:H	1.55	0.46
3:03:557:ARG:HH12	3:03:608:ALA:HB2	1.76	0.46
3:03:842:ASP:N	3:03:848:GLU:H	2.12	0.46
4:04:1156:LEU:HD13	4:04:1209:VAL:HA	1.98	0.46
4:04:380:PHE:HB3	4:04:415:VAL:HG11	1.97	0.46
4:04:586:GLY:HA3	4:04:612:LEU:CD1	2.45	0.46
12:J:41:ILE:HG23	12:J:116:ALA:HB2	1.97	0.46
14:L:57:VAL:HB	14:L:58:GLU:OE1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:53:MET:HG3	25:W:54:GLN:N	2.31	0.46
25:W:54:GLN:N	25:W:55:PRO:CD	2.78	0.46
2:02:75:GLN:N	2:02:134:THR:HG22	2.31	0.46
3:03:178:PRO:HD3	3:03:183:TRP:HA	1.98	0.46
3:03:436:ARG:HA	3:03:436:ARG:NE	2.31	0.46
3:03:753:LEU:HA	3:03:767:GLN:OE1	2.16	0.46
3:03:899:GLU:O	3:03:903:ARG:HB2	2.15	0.46
4:04:364:HIS:NE2	5:05:2:ALA:HB3	2.31	0.46
1:A:193:C:O2'	1:A:194:C:H5'	2.15	0.46
9:G:164:ARG:HG2	9:G:164:ARG:HH11	1.80	0.46
12:J:47:GLU:OE2	12:J:57:GLU:HG2	2.16	0.46
1:A:778:G:N2	16:N:121:ARG:HD3	2.27	0.46
24:V:49:ALA:HB1	24:V:56:HIS:HB3	1.98	0.46
3:03:593:LYS:HB3	3:03:602:GLU:HB2	1.98	0.46
4:04:108:ALA:CB	4:04:280:LYS:HG2	2.46	0.46
4:04:1322:ALA:O	4:04:1326:GLN:HB2	2.16	0.46
4:04:423:LEU:HD22	4:04:437:PHE:CD2	2.51	0.46
4:04:68:TYR:CE1	4:04:81:ARG:HG2	2.51	0.46
1:A:1123:U:H2'	1:A:1124:G:C8	2.50	0.46
1:A:1319:A:H4'	1:A:1320:C:C5	2.51	0.46
1:A:22:G:OP2	1:A:561:U:H1'	2.16	0.46
7:E:25:PRO:O	7:E:28:LYS:CB	2.64	0.46
11:I:9:MET:O	11:I:84:VAL:HA	2.15	0.46
15:M:93:ALA:HB3	15:M:96:VAL:HB	1.96	0.46
16:N:86:LYS:HE3	16:N:114:PRO:HD2	1.98	0.46
18:P:18:LEU:O	18:P:24:VAL:HG13	2.15	0.46
22:T:67:SER:N	22:T:70:LYS:HB3	2.30	0.46
23:U:49:ALA:O	23:U:50:LYS:C	2.53	0.46
25:W:4:LYS:C	25:W:6:ALA:N	2.68	0.46
2:02:12:ARG:HB3	2:02:12:ARG:NH1	2.31	0.46
3:03:698:PRO:HG3	3:03:1231:TYR:CZ	2.51	0.46
3:03:929:ILE:HG13	3:03:930:ASP:H	1.81	0.46
4:04:121:PRO:O	4:04:123:ARG:N	2.49	0.46
4:04:1266:ILE:O	4:04:1275:LEU:HA	2.16	0.46
4:04:1321:SER:O	4:04:1324:SER:HB2	2.16	0.46
4:04:421:VAL:HG11	4:04:439:PRO:HG3	1.97	0.46
1:A:557:G:H2'	1:A:558:G:O4'	2.15	0.46
1:A:981:U:H5''	19:Q:5:MET:SD	2.56	0.46
1:A:993:G:N3	1:A:993:G:H2'	2.31	0.46
7:E:163:VAL:HB	7:E:185:ALA:HB2	1.98	0.46
4:04:81:ARG:NE	7:E:206:ALA:HB1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:25:PRO:HB2	7:E:28:LYS:HB2	1.97	0.46
13:K:6:ILE:O	13:K:10:LEU:HG	2.15	0.46
2:01:218:ARG:HA	2:02:231:PHE:HB3	1.97	0.46
3:03:1141:LEU:HD12	3:03:1141:LEU:C	2.36	0.46
3:03:157:PHE:HA	3:03:174:ALA:HA	1.97	0.46
3:03:175:ARG:HA	3:03:185:ASP:HA	1.97	0.46
3:03:6:THR:HG21	3:03:706:ARG:NH2	2.31	0.46
3:03:86:GLN:HE22	3:03:754:THR:HG21	1.81	0.46
4:04:527:LEU:HD13	4:04:548:VAL:HG11	1.97	0.46
1:A:1056:U:H4'	8:F:162:ALA:HB2	1.97	0.46
12:J:24:LYS:HZ3	12:J:24:LYS:HB3	1.81	0.46
25:W:59:ARG:O	25:W:63:LYS:HG3	2.16	0.46
2:01:71:LYS:HG2	2:01:140:ILE:HG22	1.98	0.46
2:02:65:LEU:HG	2:02:169:GLY:HA2	1.98	0.46
3:03:829:THR:HG23	3:03:1059:ARG:HA	1.97	0.46
3:03:1132:LEU:CD1	3:03:1174:GLU:HG2	2.45	0.46
3:03:257:ALA:HB1	3:03:282:VAL:HG11	1.97	0.46
4:04:1089:LEU:N	4:04:1089:LEU:HD12	2.31	0.46
4:04:64:PRO:CG	4:04:92:VAL:HA	2.46	0.46
9:G:105:GLY:O	9:G:158:LEU:HA	2.15	0.46
11:I:5:GLU:HB2	11:I:90:MET:CG	2.45	0.46
11:I:76:THR:HG23	11:I:79:ARG:HH21	1.81	0.46
14:L:62:LEU:HD12	14:L:62:LEU:N	2.31	0.46
17:O:85:ARG:HH12	17:O:93:ARG:HG2	1.81	0.46
24:V:19:GLU:C	24:V:21:ALA:H	2.20	0.46
26:X:35:ARG:HB2	26:X:35:ARG:HH11	1.80	0.46
2:01:77:ASP:O	2:01:81:ILE:HG13	2.16	0.45
3:03:215:TYR:HD2	3:03:220:ILE:HG12	1.81	0.45
3:03:39:ILE:O	3:03:39:ILE:HG23	2.15	0.45
3:03:962:GLU:O	3:03:966:ILE:HG13	2.15	0.45
4:04:1137:GLY:O	4:04:1141:VAL:HG23	2.15	0.45
4:04:664:ILE:HG22	4:04:678:ARG:HG2	1.97	0.45
4:04:747:MET:O	4:04:754:ILE:HD12	2.16	0.45
4:04:863:LEU:HD21	4:04:901:ARG:HD3	1.98	0.45
1:A:1167:A:N3	1:A:1167:A:H2'	2.31	0.45
1:A:1323:G:H2'	1:A:1324:A:C8	2.51	0.45
1:A:352:C:H4'	1:A:354:G:OP1	2.14	0.45
8:F:129:PHE:CE2	8:F:156:LEU:HD13	2.51	0.45
11:I:10:VAL:O	11:I:57:ALA:HB1	2.16	0.45
17:O:89:LEU:HD12	17:O:89:LEU:N	2.31	0.45
25:W:66:ILE:HG23	25:W:70:LYS:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:150:ARG:C	2:01:150:ARG:HD2	2.36	0.45
3:03:532:ALA:HB3	3:03:571:LEU:HA	1.97	0.45
3:03:575:LEU:HG	3:03:576:SER:N	2.32	0.45
3:03:615:VAL:CG2	3:03:636:CYS:HB3	2.46	0.45
3:03:738:GLU:HA	3:03:741:MET:HB3	1.98	0.45
4:04:43:THR:HA	4:04:52:GLU:HB3	1.98	0.45
4:04:569:LEU:HD12	4:04:569:LEU:N	2.31	0.45
4:04:694:SER:C	4:04:696:ALA:N	2.69	0.45
4:04:843:VAL:HG11	4:04:897:HIS:C	2.37	0.45
1:A:104:G:C8	25:W:8:LYS:HE3	2.51	0.45
10:H:20:VAL:HG23	10:H:31:SER:HB3	1.97	0.45
12:J:113:LYS:HB2	12:J:117:LEU:HD23	1.98	0.45
3:03:139:ASN:HB2	3:03:143:ARG:HH12	1.81	0.45
3:03:833:ILE:HA	3:03:1054:LEU:O	2.16	0.45
3:03:926:GLY:HA3	3:03:1056:VAL:HG22	1.98	0.45
4:04:1235:ASN:HA	4:04:1238:GLN:CB	2.46	0.45
4:04:336:GLY:HA2	4:04:1324:SER:HB3	1.98	0.45
4:04:536:LEU:C	4:04:536:LEU:HD13	2.36	0.45
1:A:1237:C:H4'	1:A:1334:G:N2	2.32	0.45
1:A:367:U:O2'	1:A:368:U:H4'	2.17	0.45
1:A:666:G:H2'	1:A:667:G:H8	1.81	0.45
7:E:16:PHE:O	7:E:17:GLY:C	2.54	0.45
8:F:129:PHE:CD2	8:F:156:LEU:HD13	2.52	0.45
9:G:170:LEU:HD21	9:G:181:PHE:HD1	1.81	0.45
9:G:186:GLU:HB3	9:G:189:ASP:OD2	2.16	0.45
17:O:73:LEU:CD2	17:O:79:ILE:HG21	2.45	0.45
2:02:115:ILE:HG22	2:02:116:THR:N	2.30	0.45
2:02:215:GLU:O	2:02:218:ARG:HG2	2.16	0.45
2:01:68:TYR:OH	3:03:1057:LYS:HG3	2.17	0.45
3:03:1131:MET:CE	3:03:1141:LEU:HB3	2.46	0.45
3:03:1246:ARG:O	3:03:1246:ARG:HD3	2.16	0.45
4:04:976:THR:HG22	4:04:1028:ILE:HG13	1.99	0.45
1:A:1230:C:H41	18:P:103:THR:HG21	1.81	0.45
7:E:23:TRP:CE3	7:E:189:THR:OG1	2.61	0.45
8:F:126:ARG:HH11	8:F:126:ARG:HG2	1.82	0.45
10:H:82:HIS:HB2	10:H:83:PRO:HD2	1.99	0.45
17:O:31:GLY:HA3	17:O:54:VAL:HG13	1.98	0.45
22:T:11:VAL:HA	22:T:22:VAL:HA	1.97	0.45
2:02:158:ARG:NE	2:02:158:ARG:HA	2.30	0.45
3:03:841:ARG:CB	3:03:1047:LEU:HB2	2.47	0.45
3:03:842:ASP:H	3:03:848:GLU:N	2.12	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:26:LYS:C	7:E:28:LYS:N	2.69	0.45
9:G:171:GLU:HB2	9:G:180:THR:HB	1.97	0.45
10:H:111:ARG:O	10:H:115:GLU:HG3	2.17	0.45
12:J:36:SER:HB3	14:L:42:THR:HG22	1.98	0.45
2:01:102:LEU:HD13	2:01:103:ASN:N	2.31	0.45
2:02:98:VAL:HG11	2:02:121:VAL:HG22	1.99	0.45
3:03:97:ARG:HB3	3:03:121:GLU:CB	2.46	0.45
3:03:29:SER:HA	3:03:32:LEU:HB2	1.97	0.45
3:03:520:PRO:O	3:03:524:ILE:HG13	2.16	0.45
4:04:1230:THR:HG23	4:04:1231:ARG:N	2.32	0.45
5:05:24:ALA:O	5:05:28:ARG:HG3	2.17	0.45
7:E:163:VAL:HB	7:E:185:ALA:CB	2.47	0.45
8:F:7:ASN:O	8:F:11:LEU:HG	2.17	0.45
8:F:163:ARG:HD3	8:F:163:ARG:N	2.30	0.45
10:H:29:ILE:O	10:H:29:ILE:HG23	2.17	0.45
17:O:85:ARG:NH1	17:O:93:ARG:HG2	2.32	0.45
2:01:144:ILE:HG22	2:01:146:VAL:HG23	1.98	0.45
2:01:76:GLU:OE2	2:01:131:CYS:HA	2.16	0.45
3:03:1170:MET:O	3:03:1173:ALA:HB3	2.16	0.45
3:03:300:ASP:OD1	3:03:313:ALA:HB2	2.17	0.45
4:04:1005:LYS:HG3	4:04:1011:VAL:CG2	2.46	0.45
4:04:1047:THR:HG23	4:04:1049:GLN:HG3	1.99	0.45
4:04:1238:GLN:O	4:04:1242:ARG:HB2	2.17	0.45
4:04:190:LYS:HB3	4:04:190:LYS:HZ3	1.81	0.45
1:A:44:A:C2'	1:A:45:G:H5'	2.46	0.45
8:F:134:LYS:HD3	8:F:134:LYS:O	2.17	0.45
9:G:104:MET:SD	9:G:179:GLY:HA3	2.56	0.45
11:I:93:LYS:HB3	11:I:93:LYS:HZ3	1.81	0.45
15:M:78:GLU:HG3	15:M:78:GLU:O	2.17	0.45
11:I:48:ALA:HB1	23:U:69:PRO:HB3	1.97	0.45
2:01:156:SER:O	2:01:159:ILE:HG22	2.17	0.45
3:03:1011:LEU:O	3:03:1015:ALA:HB3	2.17	0.45
3:03:1176:LEU:HD22	3:03:1180:MET:HG3	1.99	0.45
3:03:1119:MET:HG3	3:03:1204:LEU:HD13	1.99	0.45
3:03:1319:MET:SD	3:03:1324:ASN:HB2	2.57	0.45
4:04:1048:ARG:HH11	4:04:1059:LEU:HD21	1.82	0.45
4:04:129:ASP:HB2	4:04:220:ARG:NE	2.31	0.45
4:04:639:VAL:O	4:04:639:VAL:HG13	2.17	0.45
4:04:734:ALA:HB1	4:04:738:ARG:HH21	1.82	0.45
4:04:844:THR:HB	4:04:860:ARG:O	2.17	0.45
4:04:97:VAL:O	4:04:97:VAL:HG12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:05:29:GLN:O	5:05:32:VAL:O	2.34	0.45
1:A:1526:G:H2'	1:A:1527:U:C6	2.52	0.45
13:K:88:LYS:HD2	13:K:119:GLY:HA2	1.99	0.45
14:L:35:GLU:O	14:L:40:ARG:HD3	2.17	0.45
24:V:4:LEU:H	24:V:4:LEU:HD23	1.81	0.45
3:03:1061:GLN:HE22	4:04:445:LYS:NZ	2.14	0.45
3:03:1246:ARG:HG3	3:03:1246:ARG:HH11	1.82	0.45
3:03:974:ARG:HB3	3:03:1014:LEU:HD22	1.98	0.45
4:04:1068:THR:O	4:04:1072:LYS:HG3	2.16	0.45
4:04:81:ARG:HB3	7:E:207:ILE:HG22	1.98	0.45
4:04:81:ARG:HE	7:E:206:ALA:HB1	1.82	0.45
7:E:36:ASN:C	7:E:38:VAL:H	2.20	0.45
9:G:96:ARG:HB3	9:G:98:ASP:OD1	2.17	0.45
12:J:61:PHE:O	12:J:65:LEU:HB2	2.17	0.45
17:O:110:LYS:HD2	17:O:110:LYS:N	2.31	0.45
18:P:9:PRO:HG3	18:P:17:ALA:HB1	1.99	0.45
25:W:35:TYR:O	25:W:39:GLU:HG3	2.16	0.45
25:W:84:LYS:HZ2	25:W:84:LYS:HB2	1.81	0.45
2:01:110:VAL:O	2:01:129:VAL:HA	2.16	0.45
2:01:31:LEU:CB	2:01:199:ASP:HB2	2.47	0.45
1:A:1255:G:H2'	1:A:1279:G:N2	2.32	0.45
1:A:419:C:H2'	1:A:420:U:O4'	2.16	0.45
1:A:548:G:H2'	1:A:549:C:C6	2.52	0.45
1:A:791:G:H2'	1:A:792:A:H8	1.82	0.45
9:G:169:TRP:CD1	9:G:170:LEU:HG	2.52	0.45
19:Q:22:LYS:HD3	19:Q:22:LYS:C	2.38	0.45
2:02:51:MET:HE1	2:02:220:ALA:HB2	1.98	0.44
3:03:91:THR:HG21	3:03:503:LYS:HZ2	1.79	0.44
3:03:505:PHE:O	3:03:512:SER:HB3	2.17	0.44
3:03:706:ARG:HB3	3:03:706:ARG:CZ	2.46	0.44
4:04:559:ALA:HB3	4:04:562:GLU:HB2	1.99	0.44
1:A:921:U:H5'	1:A:1082:A:H5'	2.00	0.44
1:A:754:C:H5'	20:R:71:ARG:NH2	2.31	0.44
7:E:68:LEU:HB3	7:E:161:LEU:HG	1.98	0.44
8:F:49:ALA:HB2	8:F:74:ILE:CG2	2.47	0.44
9:G:62:ARG:HH11	9:G:62:ARG:HG2	1.82	0.44
17:O:50:LYS:HD3	17:O:71:HIS:CD2	2.52	0.44
22:T:22:VAL:HG11	22:T:60:ILE:HD11	1.98	0.44
3:03:459:MET:HA	3:03:462:ASN:ND2	2.20	0.44
3:03:522:SER:HA	3:03:525:THR:HG22	1.98	0.44
4:04:1048:ARG:HH11	4:04:1059:LEU:CD2	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:1024:THR:HG21	4:04:1123:ARG:NH1	2.32	0.44
4:04:131:PRO:O	4:04:135:ILE:HG13	2.17	0.44
4:04:368:LEU:HA	4:04:369:PRO:HD3	1.87	0.44
4:04:485:MET:HB3	4:04:488:ASN:HB2	1.99	0.44
4:04:523:GLU:CA	4:04:546:ALA:HB1	2.47	0.44
4:04:572:THR:OG1	4:04:576:ARG:HD2	2.17	0.44
1:A:1071:C:H2'	1:A:1072:G:C8	2.52	0.44
1:A:1330:U:H2'	1:A:1331:G:O4'	2.17	0.44
1:A:754:C:H6	20:R:68:TYR:CD2	2.35	0.44
1:A:820:U:H4'	1:A:821:G:OP2	2.17	0.44
1:A:952:U:H2'	1:A:953:G:C8	2.52	0.44
14:L:34:LEU:C	14:L:34:LEU:HD23	2.38	0.44
21:S:25:ARG:HD3	21:S:25:ARG:N	2.33	0.44
24:V:21:ALA:CB	24:V:30:LEU:HD21	2.43	0.44
2:01:91:ARG:NH2	2:01:122:GLU:HG2	2.32	0.44
2:02:147:GLN:O	2:02:177:TYR:HE1	2.00	0.44
3:03:317:LEU:CD2	3:03:325:LEU:HD13	2.48	0.44
4:04:311:ARG:HG3	4:04:311:ARG:HH11	1.82	0.44
4:04:33:TRP:HB3	4:04:102:MET:HB3	1.99	0.44
4:04:535:ARG:HB2	4:04:535:ARG:NH1	2.32	0.44
4:04:740:LEU:HA	4:04:763:PHE:HD2	1.82	0.44
5:05:27:ALA:HA	5:05:30:MET:CE	2.47	0.44
1:A:407:U:H2'	1:A:408:A:H8	1.81	0.44
8:F:24:ASN:ND2	8:F:25:THR:H	2.15	0.44
9:G:22:SER:O	9:G:160:LEU:HD11	2.17	0.44
12:J:49:LEU:HD22	12:J:123:LEU:HD23	1.98	0.44
18:P:108:ARG:NE	18:P:108:ARG:HA	2.32	0.44
25:W:27:MET:HG3	25:W:57:VAL:HA	1.97	0.44
2:02:44:ARG:HG2	2:02:44:ARG:HH11	1.83	0.44
3:03:463:GLN:HE21	3:03:505:PHE:CB	2.25	0.44
3:03:472:GLU:HG2	3:03:476:LYS:HG3	1.99	0.44
4:04:1234:VAL:HA	4:04:1237:VAL:HG12	1.99	0.44
4:04:885:VAL:O	4:04:1258:ARG:HD2	2.18	0.44
1:A:248:C:O2'	1:A:249:U:H5'	2.17	0.44
1:A:760:G:H2'	1:A:761:G:H5'	1.99	0.44
9:G:75:TYR:CE1	9:G:200:VAL:HG23	2.53	0.44
10:H:136:VAL:O	10:H:140:ILE:HG12	2.17	0.44
1:A:1240:U:H4'	12:J:37:THR:HG22	1.99	0.44
15:M:72:ARG:HG2	15:M:72:ARG:HH11	1.80	0.44
16:N:22:ILE:HG23	16:N:31:VAL:HG22	2.00	0.44
16:N:62:ALA:O	16:N:65:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:119:GLU:CB	3:03:489:PRO:HG2	2.47	0.44
3:03:823:VAL:HB	3:03:1060:ILE:HG23	1.99	0.44
4:04:1028:ILE:HG22	4:04:1119:ASP:C	2.38	0.44
4:04:331:ILE:HD12	4:04:331:ILE:N	2.33	0.44
3:03:814:ASP:HB2	4:04:461:PHE:HB2	1.99	0.44
4:04:475:GLU:O	4:04:479:GLU:HG3	2.17	0.44
4:04:554:GLU:HA	4:04:580:TRP:CZ2	2.52	0.44
4:04:83:VAL:HG13	4:04:83:VAL:O	2.18	0.44
4:04:863:LEU:HD22	4:04:908:ILE:CD1	2.47	0.44
1:A:288:A:C2'	1:A:289:G:H5'	2.47	0.44
1:A:459:A:H61	1:A:473:U:H3	1.66	0.44
1:A:575:G:H21	1:A:576:C:H5	1.64	0.44
1:A:563:A:H61	1:A:884:U:H3	1.66	0.44
6:B:218:UNK:HA	6:B:257:UNK:O	2.18	0.44
8:F:3:LYS:HD3	8:F:174:LEU:HD22	1.99	0.44
13:K:10:LEU:HD22	13:K:74:ILE:CD1	2.48	0.44
13:K:9:MET:SD	13:K:32:LYS:HD2	2.57	0.44
16:N:43:TRP:CE3	16:N:45:THR:HG23	2.52	0.44
16:N:83:VAL:HG12	16:N:85:VAL:HG23	2.00	0.44
19:Q:11:LYS:O	19:Q:15:LEU:HD13	2.17	0.44
20:R:57:ARG:HH11	20:R:57:ARG:HG3	1.81	0.44
22:T:4:ILE:O	22:T:61:ARG:HG3	2.17	0.44
25:W:81:GLN:HA	25:W:84:LYS:HZ2	1.82	0.44
16:N:125:LYS:HG2	26:X:34:ARG:HB3	1.99	0.44
2:01:89:ALA:HB3	2:01:124:VAL:CG1	2.47	0.44
3:03:1174:GLU:HA	3:03:1177:ARG:HD2	2.00	0.44
3:03:1304:MET:O	3:03:1308:ILE:HG12	2.17	0.44
4:04:838:ARG:HH12	4:04:1238:GLN:HE21	1.66	0.44
4:04:1242:ARG:HG2	4:04:1242:ARG:HH11	1.82	0.44
4:04:442:ILE:HD12	4:04:448:GLN:NE2	2.32	0.44
1:A:1106:G:O2'	1:A:1107:C:H5'	2.18	0.44
1:A:670:G:H2'	1:A:671:G:H8	1.83	0.44
1:A:769:G:OP2	1:A:803:G:H4'	2.17	0.44
7:E:31:ILE:HD12	7:E:32:PHE:N	2.33	0.44
7:E:45:LYS:O	7:E:49:MET:HB2	2.18	0.44
9:G:154:VAL:O	9:G:158:LEU:HB2	2.18	0.44
10:H:10:LEU:HD22	10:H:67:ARG:HH21	1.83	0.44
10:H:148:SER:O	10:H:152:VAL:HG23	2.17	0.44
11:I:36:ILE:HD13	11:I:39:LEU:HB2	2.00	0.44
12:J:22:LEU:O	12:J:26:VAL:HG23	2.18	0.44
18:P:16:ILE:H	18:P:16:ILE:CD1	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1216:A:H5''	19:Q:4:SER:HB3	1.99	0.44
22:T:9:GLY:O	22:T:57:VAL:HA	2.18	0.44
2:01:129:VAL:HG13	2:01:129:VAL:O	2.17	0.44
2:02:12:ARG:HG2	2:02:13:LEU:N	2.28	0.44
2:01:231:PHE:CE1	2:02:217:ILE:HG23	2.52	0.44
3:03:1192:GLU:O	3:03:1196:LYS:HD3	2.16	0.44
3:03:421:SER:OG	3:03:424:ASP:HB2	2.17	0.44
3:03:524:ILE:HA	3:03:527:LYS:HE3	1.99	0.44
3:03:811:ASN:HA	3:03:815:SER:O	2.17	0.44
4:04:1268:ASN:HB3	4:04:1301:THR:H	1.83	0.44
4:04:102:MET:HE3	4:04:246:PRO:HG3	1.99	0.44
4:04:279:LEU:HD12	4:04:295:GLU:HG3	2.00	0.44
4:04:354:VAL:HA	4:04:465:GLN:HA	1.99	0.44
1:A:1349:A:OP1	14:L:119:LYS:HB2	2.17	0.44
1:A:427:U:H1'	1:A:541:G:C5'	2.41	0.44
1:A:585:G:H2'	1:A:586:C:C6	2.52	0.44
7:E:77:SER:O	7:E:93:ASN:HB2	2.17	0.44
9:G:101:VAL:HG21	9:G:122:ILE:HD13	2.00	0.44
9:G:44:LYS:HA	9:G:45:PRO:HD3	1.69	0.44
11:I:25:TYR:HD1	11:I:74:LEU:HD11	1.83	0.44
12:J:26:VAL:HG22	12:J:42:VAL:HG21	2.00	0.44
18:P:18:LEU:HD21	18:P:55:LEU:HD13	1.99	0.44
24:V:18:VAL:O	24:V:21:ALA:HB3	2.17	0.44
24:V:30:LEU:HD12	24:V:30:LEU:N	2.33	0.44
3:03:1059:ARG:HG3	3:03:1059:ARG:HH11	1.83	0.44
3:03:180:ARG:C	3:03:180:ARG:HD2	2.38	0.44
3:03:18:ARG:HA	3:03:18:ARG:NE	2.33	0.44
3:03:297:VAL:HG22	3:03:298:ALA:N	2.32	0.44
3:03:530:ILE:HG12	3:03:575:LEU:H	1.83	0.44
3:03:57:PHE:CD1	3:03:59:ILE:HG13	2.53	0.44
3:03:727:VAL:HG22	3:03:732:ILE:HG23	2.00	0.44
4:04:1040:MET:CE	4:04:1061:VAL:HG22	2.48	0.44
7:E:16:PHE:HD1	7:E:16:PHE:H	1.66	0.44
7:E:27:MET:HB3	7:E:189:THR:HG22	1.99	0.44
10:H:104:ILE:O	10:H:104:ILE:HG23	2.17	0.44
10:H:148:SER:O	10:H:151:MET:N	2.50	0.44
12:J:96:ASN:C	12:J:98:LEU:H	2.20	0.44
25:W:23:ARG:HG3	25:W:63:LYS:HZ2	1.82	0.44
16:N:124:LYS:HB3	26:X:35:ARG:HB3	1.99	0.44
2:01:179:PRO:HB3	2:01:210:THR:OG1	2.18	0.44
2:02:99:ILE:HG13	2:02:144:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:1131:MET:HE1	3:03:1141:LEU:HB3	2.00	0.44
3:03:732:ILE:HG22	3:03:734:ILE:HD11	1.99	0.44
3:03:764:CYS:HB3	3:03:831:ILE:HB	2.00	0.44
4:04:1259:GLN:OE1	4:04:1259:GLN:HA	2.18	0.44
4:04:725:MET:C	4:04:732:GLY:HA3	2.38	0.44
1:A:1002:G:H2'	1:A:1003:G:C8	2.53	0.44
1:A:545:C:H2'	1:A:546:A:O4'	2.17	0.44
1:A:56:U:H2'	1:A:57:G:H8	1.82	0.44
7:E:10:LEU:HB3	7:E:15:HIS:CD2	2.53	0.44
8:F:21:TRP:HZ3	8:F:23:ALA:HB2	1.82	0.44
12:J:25:PHE:HB2	12:J:100:MET:SD	2.58	0.44
14:L:76:GLY:HA2	14:L:79:ARG:HG2	2.00	0.44
21:S:57:ILE:O	21:S:61:VAL:HG23	2.17	0.44
2:02:152:TYR:O	2:02:154:PRO:HD3	2.17	0.43
3:03:1180:MET:O	3:03:1182:ILE:HG13	2.18	0.43
3:03:360:LEU:O	3:03:364:VAL:HG23	2.18	0.43
3:03:775:GLU:HA	3:03:776:PRO:HD3	1.84	0.43
4:04:1165:PHE:HZ	4:04:1198:VAL:HG11	1.80	0.43
4:04:436:ALA:HB3	4:04:485:MET:HA	2.00	0.43
4:04:58:CYS:HB3	4:04:61:ILE:HB	2.00	0.43
5:05:62:GLN:HB3	5:05:63:ILE:HD12	2.00	0.43
9:G:187:ARG:HH11	9:G:187:ARG:HG3	1.82	0.43
12:J:92:PRO:HA	12:J:95:ARG:HD2	2.00	0.43
17:O:28:GLN:OE1	17:O:82:ARG:HA	2.18	0.43
1:A:668:G:O2'	20:R:45:HIS:HB3	2.18	0.43
21:S:80:LYS:HG2	21:S:80:LYS:O	2.18	0.43
17:O:3:VAL:CG1	22:T:35:LYS:HD2	2.47	0.43
24:V:40:PHE:CG	24:V:41:PRO:HD2	2.53	0.43
25:W:3:ILE:HG22	25:W:4:LYS:N	2.33	0.43
2:01:19:VAL:HG13	2:01:20:SER:N	2.33	0.43
2:02:181:GLU:HA	4:04:535:ARG:HE	1.81	0.43
2:02:25:LYS:HA	2:02:203:ILE:O	2.18	0.43
3:03:1113:LEU:CD2	3:03:1195:ILE:HD13	2.49	0.43
3:03:210:LEU:O	3:03:215:TYR:HB2	2.18	0.43
3:03:204:LEU:HD11	3:03:369:MET:HB2	2.00	0.43
3:03:589:THR:HG22	3:03:606:LEU:C	2.38	0.43
4:04:582:ILE:HG23	4:04:623:GLN:HB3	1.99	0.43
4:04:877:VAL:O	4:04:877:VAL:HG13	2.19	0.43
1:A:1328:C:H2'	1:A:1329:A:C8	2.53	0.43
1:A:252:U:O2	1:A:253:A:C8	2.71	0.43
6:B:230:UNK:O	6:B:232:UNK:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:100:GLU:C	10:H:102:THR:H	2.20	0.43
10:H:108:GLY:O	10:H:109:ALA:HB3	2.18	0.43
11:I:81:ASN:ND2	11:I:83:ALA:HB3	2.33	0.43
13:K:98:LEU:N	13:K:98:LEU:HD12	2.33	0.43
2:01:208:ASN:HD21	2:01:210:THR:HG23	1.83	0.43
2:02:179:PRO:HG2	2:02:219:ARG:HH12	1.83	0.43
2:02:86:LYS:HD3	2:02:174:ASP:H	1.83	0.43
3:03:317:LEU:HD22	3:03:325:LEU:HD13	2.00	0.43
3:03:974:ARG:HG3	3:03:1014:LEU:HD13	2.00	0.43
3:03:976:ARG:HG2	3:03:976:ARG:HH11	1.84	0.43
4:04:975:ILE:O	4:04:1028:ILE:HD11	2.18	0.43
4:04:838:ARG:HH22	4:04:1235:ASN:HD21	1.64	0.43
4:04:218:THR:HA	4:04:221:ILE:CG2	2.48	0.43
5:05:37:PRO:C	5:05:38:LEU:HD12	2.38	0.43
1:A:666:G:H2'	1:A:667:G:C8	2.53	0.43
9:G:71:PHE:CZ	9:G:89:LEU:HD21	2.52	0.43
16:N:107:THR:HG23	16:N:108:ASN:N	2.33	0.43
19:Q:62:ARG:CZ	19:Q:69:PRO:HB3	2.48	0.43
24:V:63:ASP:O	24:V:66:VAL:HG13	2.18	0.43
2:02:13:LEU:N	2:02:13:LEU:HD23	2.33	0.43
3:03:580:GLN:O	3:03:588:GLU:N	2.51	0.43
4:04:349:TYR:CE2	4:04:472:LEU:HD13	2.53	0.43
4:04:47:ARG:HA	4:04:47:ARG:NE	2.33	0.43
4:04:990:ARG:HG3	4:04:990:ARG:O	2.17	0.43
1:A:1285:A:H4'	1:A:1286:U:C5'	2.46	0.43
1:A:503:C:O2'	1:A:504:C:H5'	2.18	0.43
9:G:91:ALA:HB1	9:G:184:LYS:HG3	1.99	0.43
10:H:81:GLN:HB2	10:H:146:MET:SD	2.59	0.43
10:H:17:VAL:HA	10:H:33:THR:O	2.18	0.43
22:T:26:ARG:HG2	22:T:26:ARG:HH11	1.83	0.43
25:W:80:ALA:HA	25:W:83:ASN:HD22	1.83	0.43
2:01:12:ARG:HB3	2:01:30:PRO:HG2	2.01	0.43
2:01:75:GLN:HB3	2:01:132:HIS:HB2	1.99	0.43
3:03:1113:LEU:HA	4:04:641:ILE:CG1	2.48	0.43
3:03:11:ILE:N	3:03:1172:LEU:HD11	2.28	0.43
3:03:1223:ARG:NH2	4:04:721:SER:OG	2.52	0.43
4:04:1231:ARG:NH1	4:04:1231:ARG:HG2	2.31	0.43
4:04:132:LEU:O	4:04:132:LEU:HD13	2.19	0.43
4:04:673:VAL:HG12	4:04:677:GLU:OE2	2.17	0.43
1:A:1319:A:H4'	1:A:1320:C:H5	1.84	0.43
1:A:1322:C:H5"	18:P:98:GLY:HA3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:176:C:H5''	25:W:19:HIS:NE2	2.34	0.43
1:A:212:G:O2'	1:A:213:G:H5'	2.18	0.43
1:A:122:G:N2	1:A:290:C:H4'	2.34	0.43
1:A:980:C:O2	19:Q:58:ARG:HA	2.18	0.43
7:E:192:ASP:HA	7:E:193:PRO:HD3	1.91	0.43
7:E:35:ARG:HA	7:E:39:HIS:HA	2.01	0.43
10:H:153:ALA:O	10:H:158:LYS:HA	2.19	0.43
18:P:5:GLY:O	18:P:6:ILE:CG2	2.63	0.43
19:Q:62:ARG:HB2	19:Q:68:ARG:O	2.18	0.43
24:V:7:GLY:HA3	24:V:8:PRO:HD2	1.83	0.43
25:W:27:MET:SD	25:W:66:ILE:HG13	2.58	0.43
26:X:45:ARG:HA	26:X:45:ARG:HD2	1.85	0.43
2:02:124:VAL:HG21	2:02:209:GLY:O	2.19	0.43
2:02:223:ILE:O	2:02:226:GLU:HB3	2.19	0.43
3:03:10:ARG:NH1	3:03:10:ARG:HG3	2.34	0.43
3:03:158:ASP:HB2	3:03:173:ASN:OD1	2.18	0.43
3:03:839:VAL:HG13	3:03:886:LYS:HZ1	1.83	0.43
4:04:435:GLN:HE21	4:04:489:ASN:HB2	1.83	0.43
4:04:531:LYS:O	4:04:534:GLU:HB3	2.18	0.43
3:03:555:TYR:CE1	4:04:769:VAL:HG21	2.54	0.43
4:04:812:ASP:OD2	4:04:911:LYS:HE3	2.18	0.43
4:04:819:GLY:HA2	4:04:884:SER:H	1.83	0.43
1:A:689:C:H2'	1:A:690:G:O4'	2.19	0.43
1:A:885:G:H1'	1:A:914:A:C2	2.54	0.43
8:F:190:THR:HG21	8:F:195:ILE:HD12	2.00	0.43
8:F:23:ALA:HB3	8:F:28:PHE:HD1	1.84	0.43
12:J:103:ILE:HD13	12:J:123:LEU:HD13	2.01	0.43
18:P:30:LYS:HA	18:P:40:GLU:OE2	2.19	0.43
19:Q:68:ARG:HE	19:Q:70:HIS:HB2	1.83	0.43
15:M:52:LEU:HD13	19:Q:80:ARG:HD2	2.00	0.43
2:01:81:ILE:O	2:01:85:LEU:HG	2.19	0.43
4:04:137:ARG:HG2	4:04:137:ARG:HH11	1.83	0.43
4:04:361:LEU:HD11	4:04:448:GLN:CB	2.48	0.43
4:04:868:TRP:O	4:04:872:LEU:HG	2.19	0.43
1:A:1210:C:C2'	1:A:1211:U:H5'	2.48	0.43
9:G:109:THR:HG22	9:G:110:ARG:N	2.34	0.43
9:G:58:GLN:O	9:G:62:ARG:HG2	2.19	0.43
20:R:84:LEU:HD23	20:R:86:LEU:HB3	1.99	0.43
22:T:69:THR:HG22	22:T:69:THR:O	2.19	0.43
24:V:38:THR:HB	24:V:69:LYS:HD3	2.00	0.43
25:W:55:PRO:C	25:W:56:ILE:HD12	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:02:116:THR:O	2:02:116:THR:HG23	2.19	0.43
3:03:1321:GLU:O	3:03:1325:VAL:HG23	2.19	0.43
3:03:615:VAL:C	3:03:616:ILE:HD12	2.39	0.43
4:04:1141:VAL:HA	4:04:1144:LEU:CD1	2.49	0.43
4:04:1267:VAL:CG2	4:04:1303:SER:HB2	2.49	0.43
4:04:514:THR:HG23	4:04:596:LEU:HB2	2.01	0.43
4:04:841:GLY:HA2	4:04:901:ARG:CZ	2.49	0.43
1:A:1277:C:O2'	1:A:1278:G:H4'	2.19	0.43
1:A:998:C:O2'	1:A:999:C:H5'	2.19	0.43
9:G:161:ALA:C	9:G:163:GLN:H	2.22	0.43
16:N:125:LYS:HZ2	26:X:33:ARG:HD2	1.83	0.43
19:Q:25:GLU:C	19:Q:27:LYS:H	2.21	0.43
24:V:40:PHE:HB3	24:V:42:ASN:OD1	2.18	0.43
18:P:82:LEU:HD11	24:V:65:MET:HG3	2.01	0.43
25:W:56:ILE:N	25:W:56:ILE:CD1	2.80	0.43
26:X:59:LYS:HD3	26:X:62:ARG:HE	1.84	0.43
2:01:182:ARG:HH11	2:01:182:ARG:HG3	1.84	0.43
4:04:1040:MET:HB3	4:04:1046:ILE:HD13	1.99	0.43
4:04:190:LYS:NZ	4:04:190:LYS:HB3	2.33	0.43
3:03:1258:PRO:HD3	4:04:345:LYS:CB	2.49	0.43
4:04:425:ARG:CG	4:04:427:PRO:HD2	2.40	0.43
4:04:835:LEU:HD21	4:04:880:VAL:HG23	2.00	0.43
1:A:1066:C:H2'	1:A:1067:A:H5'	2.00	0.43
1:A:250:A:H4'	1:A:252:U:C5	2.54	0.43
1:A:564:C:H5'	22:T:33:TYR:HE1	1.84	0.43
8:F:40:GLN:O	8:F:44:LYS:HG2	2.19	0.43
8:F:42:LEU:HD21	8:F:67:ILE:CD1	2.48	0.43
14:L:100:ALA:HB3	14:L:102:PHE:CE2	2.54	0.43
15:M:8:ILE:HD11	15:M:87:LEU:CD2	2.48	0.43
19:Q:65:GLN:HG3	19:Q:66:THR:N	2.34	0.43
21:S:19:VAL:H	21:S:38:PHE:HA	1.84	0.43
3:03:524:ILE:HD11	3:03:712:SER:HB2	2.01	0.43
3:03:647:ARG:HD3	3:03:648:ASP:N	2.34	0.43
4:04:174:ASP:O	4:04:175:GLU:C	2.57	0.43
4:04:201:LEU:HD22	4:04:217:LEU:HD13	2.01	0.43
4:04:41:PRO:CB	4:04:270:ARG:HG3	2.49	0.43
4:04:33:TRP:O	4:04:102:MET:O	2.37	0.43
1:A:238:A:O2'	1:A:239:U:H5'	2.18	0.43
1:A:427:U:H5''	1:A:428:G:H2'	1.99	0.43
1:A:687:A:H62	1:A:703:G:H21	1.66	0.43
1:A:824:G:H2'	1:A:825:A:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:946:A:H2'	1:A:947:G:H8	1.84	0.43
1:A:959:A:H2'	1:A:960:U:C4'	2.49	0.43
10:H:159:SER:HB3	10:H:162:GLU:CB	2.49	0.43
10:H:97:PRO:HG2	10:H:98:ALA:H	1.84	0.43
14:L:43:ALA:HB1	14:L:46:VAL:CG1	2.48	0.43
24:V:14:LEU:HD13	24:V:34:SER:CB	2.47	0.43
2:02:83:LEU:HA	2:02:86:LYS:NZ	2.34	0.42
3:03:1085:MET:HA	3:03:1086:PRO:HD3	1.85	0.42
4:04:1005:LYS:HG3	4:04:1011:VAL:HG22	2.01	0.42
4:04:1016:THR:HG22	4:04:1019:ASN:HB2	2.01	0.42
4:04:820:ILE:HD12	4:04:1231:ARG:HB3	2.01	0.42
4:04:123:ARG:HD2	4:04:1337:VAL:HG11	2.00	0.42
4:04:45:ASN:HB2	4:04:50:LYS:HB2	2.01	0.42
5:05:69:ARG:HA	5:05:72:GLN:OE1	2.18	0.42
1:A:192:A:O2'	25:W:55:PRO:HB3	2.19	0.42
7:E:65:GLY:HA2	7:E:159:ASP:OD2	2.19	0.42
8:F:69:THR:CB	8:F:75:VAL:HG21	2.49	0.42
13:K:28:SER:CB	13:K:58:LEU:HB2	2.40	0.42
16:N:111:ASP:HB2	26:X:20:LYS:HD3	1.99	0.42
25:W:23:ARG:HG3	25:W:63:LYS:NZ	2.33	0.42
25:W:4:LYS:HB3	25:W:4:LYS:HZ3	1.82	0.42
2:02:32:GLU:H	2:02:35:PHE:HB2	1.84	0.42
3:03:150:HIS:HD2	3:03:454:ARG:NH1	2.17	0.42
3:03:325:LEU:HA	3:03:325:LEU:HD23	1.73	0.42
3:03:690:VAL:HA	3:03:691:PRO:HD3	1.84	0.42
3:03:963:GLU:O	3:03:967:LEU:HD13	2.20	0.42
4:04:582:ILE:HG22	4:04:620:PHE:CE1	2.54	0.42
5:05:53:GLU:HA	5:05:58:LEU:HD21	2.00	0.42
1:A:1126:U:H1'	1:A:1281:C:H1'	2.02	0.42
1:A:1394:A:H3'	1:A:1395:C:H5'	2.01	0.42
1:A:393:A:H5'	1:A:483:C:O2'	2.19	0.42
7:E:35:ARG:HB3	7:E:39:HIS:CE1	2.54	0.42
11:I:64:VAL:HG22	11:I:65:GLU:N	2.34	0.42
8:F:9:ILE:HG13	19:Q:97:LYS:NZ	2.34	0.42
24:V:13:HIS:CD2	24:V:36:ARG:HH21	2.37	0.42
2:01:165:GLU:O	2:01:165:GLU:HG3	2.19	0.42
3:03:522:SER:HA	3:03:525:THR:CG2	2.49	0.42
4:04:199:GLU:O	4:04:203:GLU:HG3	2.19	0.42
1:A:392:C:H2'	1:A:393:A:H8	1.82	0.42
1:A:744:C:H2'	1:A:745:G:H8	1.84	0.42
7:E:67:ILE:HD13	7:E:160:ALA:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:26:LYS:O	7:E:28:LYS:N	2.52	0.42
8:F:32:LEU:HD11	19:Q:76:PHE:HD1	1.83	0.42
9:G:18:LEU:HD11	9:G:63:ILE:HA	2.00	0.42
17:O:34:THR:O	17:O:53:ARG:HB3	2.17	0.42
17:O:34:THR:O	17:O:35:ARG:HB3	2.20	0.42
18:P:75:SER:O	18:P:78:ARG:HB3	2.19	0.42
20:R:84:LEU:HD23	20:R:86:LEU:HD23	2.01	0.42
1:A:224:U:OP1	25:W:64:GLY:HA2	2.19	0.42
2:02:67:GLU:HG3	2:02:68:TYR:HD1	1.85	0.42
3:03:18:ARG:HE	3:03:19:PRO:CD	2.32	0.42
4:04:1167:LYS:HE3	4:04:1174:ARG:HG3	2.01	0.42
4:04:132:LEU:HA	4:04:135:ILE:HD12	2.00	0.42
4:04:155:GLU:HG3	4:04:156:ARG:N	2.34	0.42
4:04:665:GLN:O	4:04:669:GLN:HG3	2.20	0.42
1:A:168:G:O2'	1:A:169:C:H5'	2.19	0.42
1:A:72:A:N1	1:A:99:C:H1'	2.35	0.42
9:G:178:GLU:HG2	9:G:179:GLY:H	1.84	0.42
9:G:8:LEU:HD22	9:G:27:ILE:HA	2.01	0.42
12:J:113:LYS:HB3	12:J:114:SER:H	1.54	0.42
12:J:24:LYS:NZ	12:J:24:LYS:HB3	2.33	0.42
21:S:5:ARG:HG2	21:S:5:ARG:NH1	2.34	0.42
2:02:194:GLN:HG3	4:04:406:ALA:CB	2.47	0.42
4:04:175:GLU:O	4:04:175:GLU:HG3	2.20	0.42
4:04:739:GLN:HA	4:04:744:ARG:HA	2.01	0.42
4:04:885:VAL:HG21	4:04:1255:VAL:HG12	2.01	0.42
1:A:1514:G:H2'	1:A:1515:G:C8	2.55	0.42
1:A:634:C:H2'	1:A:635:A:C8	2.55	0.42
1:A:782:A:H62	1:A:800:G:N2	2.10	0.42
7:E:141:LEU:O	7:E:145:GLU:HG3	2.20	0.42
7:E:15:HIS:CG	7:E:16:PHE:N	2.88	0.42
7:E:179:LEU:HD12	7:E:179:LEU:N	2.35	0.42
7:E:36:ASN:O	7:E:38:VAL:N	2.52	0.42
8:F:77:GLY:HA3	8:F:82:ASP:HB3	2.02	0.42
9:G:88:ASN:O	9:G:92:LEU:HD13	2.20	0.42
10:H:10:LEU:CD2	10:H:67:ARG:HH21	2.32	0.42
10:H:51:LYS:H	10:H:61:LYS:HD3	1.85	0.42
11:I:10:VAL:CG2	11:I:58:HIS:HB3	2.49	0.42
11:I:40:GLU:OE1	11:I:61:LEU:HD22	2.19	0.42
15:M:45:ARG:HG2	15:M:45:ARG:HH11	1.85	0.42
1:A:718:A:H4'	26:X:31:GLU:OE1	2.19	0.42
2:02:99:ILE:C	2:02:100:LEU:HD12	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:1169:VAL:HG12	3:03:1169:VAL:O	2.20	0.42
3:03:1319:MET:HA	3:03:1320:PRO:HD3	1.91	0.42
3:03:851:THR:CB	3:03:869:GLY:HA3	2.49	0.42
4:04:1230:THR:O	4:04:1234:VAL:HG13	2.19	0.42
4:04:270:ARG:HH11	4:04:270:ARG:HG2	1.83	0.42
4:04:527:LEU:O	4:04:550:VAL:HA	2.19	0.42
4:04:848:VAL:O	4:04:857:LEU:HD23	2.20	0.42
5:05:27:ALA:O	5:05:30:MET:HB2	2.19	0.42
1:A:1006:G:O2'	1:A:1007:U:H5'	2.19	0.42
1:A:1268:G:H1'	1:A:1327:C:H5'	2.01	0.42
1:A:738:C:O2'	1:A:739:C:H5'	2.20	0.42
8:F:19:SER:HB3	8:F:39:ARG:HH22	1.84	0.42
8:F:4:VAL:HG22	8:F:5:HIS:N	2.34	0.42
9:G:82:LYS:N	9:G:82:LYS:HD2	2.35	0.42
12:J:128:GLU:HB2	12:J:130:LYS:NZ	2.34	0.42
13:K:124:ILE:O	13:K:124:ILE:HG13	2.20	0.42
21:S:52:LEU:HD13	21:S:75:ILE:HD13	2.00	0.42
22:T:12:VAL:O	22:T:54:ILE:HD13	2.20	0.42
2:01:195:ARG:HA	2:01:195:ARG:HE	1.85	0.42
2:01:208:ASN:HD21	2:01:210:THR:CG2	2.32	0.42
3:03:302:ILE:O	3:03:330:HIS:HE1	2.03	0.42
3:03:725:GLN:HG3	3:03:735:LYS:HB2	2.01	0.42
4:04:1125:PRO:HB2	4:04:1126:GLN:H	1.62	0.42
4:04:1221:LEU:HD13	4:04:1221:LEU:C	2.40	0.42
4:04:24:LEU:N	4:04:24:LEU:HD22	2.35	0.42
4:04:287:ALA:HB3	4:04:292:VAL:HG13	2.02	0.42
4:04:504:GLN:HG3	4:04:505:ASP:N	2.34	0.42
4:04:912:GLY:O	4:04:1360:GLY:N	2.53	0.42
4:04:418:GLU:CG	5:05:44:ASP:HA	2.46	0.42
5:05:63:ILE:O	5:05:67:ARG:HG2	2.20	0.42
1:A:1201:A:H4'	1:A:1203:C:OP2	2.20	0.42
1:A:326:G:H2'	1:A:327:A:H5'	2.01	0.42
1:A:34:C:H2'	1:A:35:G:C8	2.54	0.42
1:A:62:U:H4'	1:A:378:G:N2	2.34	0.42
1:A:648:A:H2'	1:A:649:A:C8	2.54	0.42
1:A:803:G:O2'	1:A:804:U:H5'	2.19	0.42
7:E:20:THR:O	7:E:21:ARG:C	2.58	0.42
8:F:131:ARG:HH21	8:F:135:ARG:NH1	2.16	0.42
9:G:103:ARG:O	9:G:167:PRO:HG2	2.19	0.42
15:M:41:PRO:HG2	15:M:42:LEU:H	1.83	0.42
16:N:24:ALA:HB1	16:N:90:PRO:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:32:ILE:HD12	18:P:58:GLU:HG3	2.01	0.42
23:U:30:LYS:CB	23:U:30:LYS:NZ	2.82	0.42
24:V:74:ALA:O	24:V:76:THR:HG23	2.20	0.42
3:03:206:ALA:O	3:03:209:ILE:HG22	2.18	0.42
3:03:243:PRO:CB	3:03:274:ILE:HG23	2.48	0.42
3:03:50:GLU:O	3:03:54:ARG:HB2	2.19	0.42
3:03:896:THR:O	3:03:900:LYS:HG3	2.20	0.42
4:04:1036:ARG:O	4:04:1036:ARG:HG3	2.19	0.42
4:04:166:LEU:O	4:04:170:GLU:HG3	2.20	0.42
4:04:984:LEU:H	4:04:991:THR:HG23	1.85	0.42
1:A:250:A:H4'	1:A:252:U:C6	2.54	0.42
7:E:107:VAL:O	7:E:111:ILE:HG12	2.20	0.42
8:F:183:TYR:HD1	8:F:199:VAL:O	2.03	0.42
19:Q:32:ASP:HB2	19:Q:34:ASN:ND2	2.35	0.42
19:Q:55:SER:HA	19:Q:56:PRO:HA	1.63	0.42
20:R:80:LEU:HG	20:R:86:LEU:HD21	2.02	0.42
24:V:11:ASP:OD2	24:V:36:ARG:HG2	2.19	0.42
25:W:24:ARG:HB3	25:W:28:ARG:HH12	1.84	0.42
2:02:58:GLU:HB3	2:02:170:ARG:HH21	1.84	0.42
3:03:1171:ARG:O	3:03:1175:ASN:ND2	2.52	0.42
3:03:1196:LYS:O	3:03:1200:LYS:HG3	2.20	0.42
3:03:257:ALA:HB3	3:03:262:TYR:CE2	2.54	0.42
3:03:521:LEU:HB2	3:03:794:LEU:HD21	2.00	0.42
4:04:105:ILE:HD12	4:04:242:LEU:HD23	2.00	0.42
4:04:1198:VAL:O	4:04:1198:VAL:HG13	2.20	0.42
4:04:504:GLN:HG3	4:04:505:ASP:H	1.85	0.42
4:04:518:VAL:HG22	4:04:709:ARG:HG2	2.02	0.42
4:04:68:TYR:HB2	4:04:78:LEU:HA	2.02	0.42
4:04:91:GLU:O	4:04:91:GLU:HG3	2.20	0.42
1:A:1306:A:O2'	1:A:1307:U:H5'	2.20	0.42
1:A:570:G:H5'	1:A:820:U:O4'	2.20	0.42
1:A:918:A:H2'	1:A:919:A:O4'	2.19	0.42
9:G:160:LEU:O	9:G:160:LEU:HG	2.20	0.42
9:G:200:VAL:HG13	9:G:201:GLU:HG3	2.02	0.42
12:J:130:LYS:N	12:J:134:VAL:HG11	2.34	0.42
24:V:36:ARG:NH1	24:V:36:ARG:HG3	2.35	0.42
3:03:146:VAL:HG13	3:03:529:ARG:HB3	2.02	0.42
3:03:53:PHE:O	3:03:56:VAL:HG12	2.20	0.42
3:03:671:LEU:H	3:03:1186:VAL:CG1	2.33	0.42
3:03:725:GLN:CG	3:03:735:LYS:HB2	2.49	0.42
4:04:1095:MET:HA	4:04:1096:PRO:HD3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:876:SER:HA	4:04:990:ARG:HH21	1.85	0.42
4:04:975:ILE:HD13	4:04:980:THR:HG21	2.02	0.42
1:A:1150:A:H1'	15:M:41:PRO:HB2	2.02	0.42
1:A:3:A:N1	1:A:629:A:H4'	2.35	0.42
1:A:670:G:H2'	1:A:671:G:C8	2.55	0.42
1:A:881:G:O2'	1:A:882:C:H5'	2.20	0.42
7:E:178:ASN:HD22	10:H:68:ARG:HH21	1.67	0.42
10:H:51:LYS:HD2	10:H:51:LYS:O	2.20	0.42
1:A:1377:A:C2	12:J:4:ARG:HG3	2.55	0.42
14:L:58:GLU:OE1	14:L:58:GLU:N	2.53	0.42
14:L:66:VAL:HG11	14:L:74:GLN:HB3	2.02	0.42
16:N:116:PRO:C	16:N:118:ASN:H	2.23	0.42
2:01:102:LEU:HB3	2:01:142:MET:HG2	2.02	0.41
2:01:227:GLN:HA	2:02:11:PRO:HG3	2.02	0.41
2:01:89:ALA:HB3	2:01:124:VAL:HG11	2.02	0.41
3:03:246:LEU:HA	3:03:249:GLU:OE1	2.20	0.41
1:A:1038:C:H2'	1:A:1039:G:C8	2.55	0.41
1:A:1395:C:H2'	1:A:1396:A:C8	2.55	0.41
1:A:8:A:H1'	10:H:107:GLY:CA	2.50	0.41
7:E:45:LYS:HD2	7:E:201:PRO:HG2	2.02	0.41
8:F:111:ASP:O	8:F:115:VAL:HG23	2.20	0.41
11:I:61:LEU:HD12	11:I:61:LEU:N	2.35	0.41
14:L:112:ARG:HD2	19:Q:100:TRP:OXT	2.20	0.41
15:M:57:VAL:HG13	15:M:58:ASN:N	2.35	0.41
16:N:81:LEU:HD23	16:N:106:ILE:HA	2.01	0.41
17:O:17:LYS:HZ2	17:O:17:LYS:HB2	1.84	0.41
20:R:67:ASP:O	20:R:71:ARG:HG3	2.20	0.41
21:S:69:ASP:HA	21:S:72:ALA:HB3	2.01	0.41
24:V:31:ARG:HG2	24:V:31:ARG:HH11	1.85	0.41
3:03:1011:LEU:O	3:03:1012:GLU:C	2.58	0.41
3:03:1067:ALA:HB3	3:03:1235:LEU:HD11	2.02	0.41
3:03:521:LEU:HD13	3:03:521:LEU:O	2.20	0.41
4:04:223:LEU:O	4:04:226:ALA:HB3	2.20	0.41
4:04:718:SER:HB3	4:04:720:ASN:OD1	2.20	0.41
4:04:793:SER:O	4:04:796:LEU:HB3	2.20	0.41
5:05:42:GLU:C	5:05:44:ASP:H	2.23	0.41
1:A:1252:A:H61	1:A:1285:A:N6	2.09	0.41
8:F:72:PRO:O	8:F:76:ILE:HG12	2.19	0.41
9:G:117:VAL:O	9:G:130:ASN:HA	2.20	0.41
10:H:87:VAL:HA	10:H:91:SER:O	2.20	0.41
12:J:122:GLU:OE1	12:J:132:THR:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:74:ILE:HD12	13:K:128:VAL:HG13	2.02	0.41
18:P:32:ILE:HG23	18:P:58:GLU:CB	2.45	0.41
24:V:29:PRO:HB2	24:V:49:ALA:HB2	2.02	0.41
2:02:152:TYR:CE2	2:02:154:PRO:HG3	2.54	0.41
2:02:55:ALA:HB2	2:02:176:CYS:O	2.20	0.41
3:03:1099:ASN:HA	3:03:1100:PRO:HD3	1.81	0.41
3:03:153:PRO:HD2	3:03:452:ARG:HD2	2.02	0.41
3:03:178:PRO:HD2	3:03:183:TRP:HD1	1.84	0.41
3:03:487:LEU:HD23	3:03:487:LEU:H	1.85	0.41
3:03:888:THR:HA	3:03:889:PRO:HD3	1.92	0.41
3:03:928:VAL:O	3:03:928:VAL:HG23	2.20	0.41
4:04:132:LEU:C	4:04:132:LEU:HD13	2.41	0.41
4:04:1331:VAL:HA	4:04:1334:GLU:HB3	2.01	0.41
4:04:510:LEU:HD12	4:04:510:LEU:N	2.34	0.41
4:04:56:LEU:CD1	4:04:56:LEU:H	2.33	0.41
4:04:722:ILE:HD11	4:04:737:ILE:HG21	2.02	0.41
4:04:72:CYS:SG	4:04:74:LYS:HB2	2.60	0.41
1:A:552:U:H4'	17:O:82:ARG:NH1	2.34	0.41
1:A:586:C:H2'	1:A:587:G:O4'	2.20	0.41
1:A:880:C:H2'	1:A:881:G:C8	2.55	0.41
7:E:10:LEU:HD23	7:E:10:LEU:HA	1.84	0.41
11:I:36:ILE:CD1	11:I:39:LEU:HB2	2.50	0.41
15:M:52:LEU:HD12	15:M:52:LEU:N	2.35	0.41
15:M:93:ALA:HB3	15:M:96:VAL:CG2	2.50	0.41
16:N:124:LYS:HA	26:X:35:ARG:H	1.85	0.41
3:03:1076:ILE:O	3:03:1076:ILE:HG23	2.21	0.41
3:03:817:LEU:HB3	3:03:1097:VAL:HB	2.01	0.41
3:03:269:ILE:HG23	3:03:273:HIS:HB2	2.02	0.41
3:03:798:GLN:HB3	3:03:827:ARG:NH2	2.35	0.41
4:04:1218:HIS:O	4:04:1221:LEU:HB3	2.19	0.41
2:02:83:LEU:O	4:04:528:THR:HB	2.20	0.41
4:04:850:LYS:HG3	4:04:855:ASP:O	2.21	0.41
4:04:915:ILE:O	4:04:918:ILE:HG12	2.21	0.41
1:A:147:G:H2'	1:A:148:G:C8	2.56	0.41
1:A:241:G:H2'	1:A:242:G:C8	2.56	0.41
1:A:383:A:H2'	1:A:384:G:O4'	2.20	0.41
1:A:555:U:H2'	1:A:556:C:C6	2.56	0.41
7:E:101:LEU:HD21	7:E:181:ILE:HD11	2.02	0.41
7:E:11:LYS:HG2	7:E:212:LEU:HD21	2.01	0.41
7:E:28:LYS:N	7:E:29:PRO:HD2	2.36	0.41
8:F:72:PRO:HG2	8:F:73:GLY:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:91:ALA:O	9:G:94:GLU:HB3	2.21	0.41
10:H:145:ASN:O	10:H:145:ASN:ND2	2.53	0.41
11:I:6:ILE:HG12	11:I:89:VAL:HG12	2.02	0.41
12:J:138:GLU:HB3	12:J:142:ARG:NH1	2.36	0.41
14:L:124:PRO:O	14:L:125:GLN:C	2.59	0.41
18:P:24:VAL:HG22	18:P:25:GLY:N	2.35	0.41
3:03:21:VAL:HG13	3:03:22:LEU:N	2.35	0.41
3:03:489:PRO:O	3:03:490:GLN:HB3	2.19	0.41
3:03:708:VAL:HG21	3:03:794:LEU:HD22	2.02	0.41
3:03:718:ALA:HB2	3:03:783:LEU:HD21	2.02	0.41
4:04:101:ARG:O	4:04:246:PRO:HA	2.21	0.41
4:04:1089:LEU:HD23	4:04:1094:ASP:HA	2.01	0.41
4:04:1262:ARG:HH11	4:04:1262:ARG:HG3	1.86	0.41
3:03:1109:ILE:HG12	4:04:644:MET:HE1	2.03	0.41
4:04:722:ILE:HG23	4:04:723:TYR:H	1.85	0.41
5:05:10:VAL:HA	5:05:14:GLY:HA2	2.03	0.41
1:A:1270:G:H2'	1:A:1271:A:C8	2.55	0.41
1:A:12:U:H2'	1:A:13:U:H5''	2.01	0.41
1:A:178:C:H2'	1:A:179:A:H4'	2.03	0.41
9:G:59:LYS:O	9:G:63:ILE:HG13	2.20	0.41
1:A:546:A:OP2	9:G:67:LEU:HB3	2.21	0.41
12:J:72:VAL:HG21	12:J:144:ALA:CB	2.46	0.41
14:L:62:LEU:H	14:L:62:LEU:HD12	1.86	0.41
16:N:47:GLY:HA3	16:N:56:LYS:HE3	2.02	0.41
26:X:8:GLU:OE2	26:X:16:LEU:HD13	2.20	0.41
2:01:42:ALA:O	2:01:46:ILE:HG12	2.20	0.41
3:03:1151:LEU:CG	3:03:1152:GLY:H	2.32	0.41
3:03:32:LEU:HD12	3:03:130:MET:SD	2.60	0.41
3:03:352:ARG:HG2	3:03:352:ARG:HH11	1.85	0.41
3:03:179:TYR:CB	3:03:397:LEU:HA	2.51	0.41
4:04:750:PRO:HA	4:04:777:HIS:CE1	2.56	0.41
4:04:848:VAL:HB	4:04:858:VAL:HG12	2.01	0.41
4:04:822:MET:HB2	4:04:880:VAL:O	2.19	0.41
4:04:417:ARG:HE	5:05:43:ASN:HB3	1.84	0.41
1:A:284:C:H2'	1:A:285:C:C6	2.55	0.41
1:A:620:C:O2	9:G:131:ILE:HG13	2.19	0.41
1:A:695:A:H2'	1:A:696:A:O4'	2.20	0.41
8:F:4:VAL:O	8:F:6:PRO:HD3	2.21	0.41
9:G:1:ALA:HB1	9:G:114:ARG:HH22	1.85	0.41
15:M:50:THR:CG2	15:M:62:ARG:HD3	2.51	0.41
17:O:109:ARG:HB3	17:O:118:VAL:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:9:LYS:HB3	20:R:9:LYS:HZ3	1.85	0.41
26:X:14:VAL:HG22	26:X:15:ALA:N	2.36	0.41
2:01:82:LEU:HA	2:01:85:LEU:HD12	2.01	0.41
2:02:82:LEU:HD21	2:02:171:LEU:HD13	2.03	0.41
3:03:1054:LEU:HD12	3:03:1054:LEU:N	2.35	0.41
3:03:1132:LEU:HD11	3:03:1174:GLU:CG	2.47	0.41
3:03:346:TYR:HE2	3:03:437:ASN:HD21	1.68	0.41
3:03:363:LEU:HB3	3:03:381:ALA:HB1	2.01	0.41
3:03:532:ALA:HB3	3:03:571:LEU:CA	2.50	0.41
3:03:842:ASP:CA	3:03:847:PRO:HA	2.48	0.41
3:03:945:ALA:O	3:03:949:GLU:HG3	2.21	0.41
3:03:94:ALA:HB2	3:03:129:LEU:HD11	2.02	0.41
4:04:125:GLY:HA2	4:04:135:ILE:HD11	2.02	0.41
4:04:239:LEU:HD23	4:04:239:LEU:HA	1.89	0.41
4:04:105:ILE:HG21	4:04:276:ASN:ND2	2.36	0.41
4:04:370:LYS:O	4:04:373:ALA:HB3	2.19	0.41
4:04:767:LEU:HA	4:04:771:GLN:OE1	2.20	0.41
3:03:1321:GLU:HG2	4:04:99:ARG:CZ	2.51	0.41
7:E:199:VAL:HG22	7:E:201:PRO:HG3	2.02	0.41
9:G:30:LYS:O	9:G:31:CYS:SG	2.77	0.41
12:J:59:GLU:C	12:J:61:PHE:H	2.24	0.41
12:J:78:ARG:HD2	12:J:78:ARG:N	2.23	0.41
22:T:18:LYS:HG2	22:T:46:HIS:HE1	1.85	0.41
3:03:1223:ARG:O	3:03:1224:PRO:C	2.59	0.41
3:03:1255:THR:HG22	3:03:1256:GLN:N	2.35	0.41
3:03:160:ASP:HB3	3:03:164:THR:CB	2.51	0.41
3:03:395:TYR:OH	3:03:397:LEU:HD21	2.20	0.41
3:03:521:LEU:HG	3:03:686:GLN:NE2	2.23	0.41
3:03:798:GLN:HB2	3:03:828:PHE:CZ	2.55	0.41
4:04:534:GLU:O	4:04:538:ARG:HG3	2.21	0.41
4:04:563:LEU:N	4:04:563:LEU:HD12	2.35	0.41
4:04:84:ILE:HA	4:04:90:VAL:O	2.21	0.41
1:A:1098:C:H2'	1:A:1099:G:O4'	2.20	0.41
1:A:259:G:O2'	1:A:260:G:H5'	2.21	0.41
1:A:261:U:H2'	1:A:262:A:C8	2.56	0.41
1:A:520:A:H61	1:A:533:A:H61	1.69	0.41
7:E:46:THR:HA	7:E:201:PRO:HD2	2.01	0.41
9:G:1:ALA:HB3	9:G:2:ARG:HD3	2.03	0.41
10:H:157:GLY:HA3	10:H:163:ILE:CG2	2.50	0.41
12:J:12:LEU:HD12	12:J:12:LEU:N	2.36	0.41
14:L:93:LEU:HA	14:L:96:GLU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:50:THR:HG23	15:M:62:ARG:HD3	2.03	0.41
3:03:109:ALA:O	3:03:111:GLU:N	2.46	0.41
3:03:1136:GLN:OE1	3:03:1136:GLN:HA	2.21	0.41
3:03:722:GLY:HA3	3:03:735:LYS:O	2.21	0.41
3:03:6:THR:HG23	3:03:781:ASP:OD1	2.21	0.41
4:04:1222:ARG:HD2	4:04:1222:ARG:O	2.20	0.41
4:04:133:ARG:O	4:04:137:ARG:HG3	2.21	0.41
4:04:912:GLY:CA	4:04:1360:GLY:H	2.34	0.41
4:04:409:TRP:O	4:04:412:LEU:HB3	2.20	0.41
4:04:433:GLY:HA2	4:04:457:TYR:CD1	2.56	0.41
4:04:525:MET:O	4:04:548:VAL:HG13	2.21	0.41
1:A:1528:U:O4	26:X:43:THR:HG21	2.20	0.41
7:E:27:MET:O	7:E:28:LYS:C	2.59	0.41
9:G:94:GLU:CG	9:G:185:PRO:HG3	2.43	0.41
12:J:131:GLY:O	12:J:135:LYS:HB2	2.21	0.41
13:K:45:ILE:HD11	13:K:60:LEU:HB3	2.02	0.41
19:Q:79:SER:O	19:Q:83:VAL:HG23	2.21	0.41
20:R:69:LEU:HD23	20:R:77:TYR:HD1	1.86	0.41
26:X:6:VAL:HG11	26:X:16:LEU:O	2.21	0.41
2:02:68:TYR:CD1	2:02:68:TYR:N	2.89	0.41
3:03:1111:GLN:HB2	3:03:1230:MET:SD	2.61	0.41
3:03:791:LEU:CD2	3:03:791:LEU:O	2.69	0.41
4:04:1003:LEU:HA	4:04:1017:VAL:O	2.21	0.41
4:04:1102:PRO:CG	4:04:1124:ILE:HD11	2.51	0.41
4:04:227:PHE:O	4:04:231:GLY:N	2.48	0.41
4:04:490:ILE:HD13	4:04:614:LEU:CD1	2.51	0.41
4:04:492:SER:C	4:04:494:ALA:H	2.24	0.41
4:04:583:VAL:CG1	4:04:587:LEU:HD23	2.51	0.41
4:04:582:ILE:CD1	4:04:627:THR:HG21	2.51	0.41
4:04:53:ARG:NH2	4:04:88:CYS:SG	2.94	0.41
1:A:1213:A:O2'	1:A:1214:C:H2'	2.20	0.41
1:A:67:C:H2'	1:A:68:G:C8	2.56	0.41
7:E:151:ILE:HG12	7:E:151:ILE:O	2.21	0.41
11:I:76:THR:O	11:I:79:ARG:HB3	2.21	0.41
13:K:31:LEU:O	13:K:35:ILE:HG13	2.21	0.41
16:N:111:ASP:O	26:X:4:ILE:HG23	2.21	0.41
16:N:125:LYS:HG3	16:N:126:ARG:N	2.35	0.41
1:A:658:C:H1'	20:R:21:THR:HG21	2.01	0.41
2:01:166:ARG:N	2:01:167:PRO:CD	2.83	0.41
2:02:82:LEU:HA	2:02:85:LEU:HD12	2.02	0.41
3:03:156:PHE:O	3:03:175:ARG:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:04:1327:GLU:OE1	4:04:1330:ARG:HB2	2.21	0.41
4:04:836:ARG:NH2	4:04:866:GLU:OE2	2.53	0.41
1:A:1323:G:H2'	1:A:1324:A:H8	1.86	0.41
1:A:240:G:H2'	1:A:241:G:C8	2.56	0.41
1:A:37:U:O2'	1:A:38:G:H5'	2.20	0.41
9:G:102:TYR:C	9:G:104:MET:H	2.24	0.41
11:I:29:ILE:HD13	11:I:64:VAL:HG11	2.03	0.41
11:I:97:THR:HG23	11:I:98:GLU:HG3	2.02	0.41
13:K:79:ARG:HD2	13:K:79:ARG:H	1.86	0.41
14:L:114:LYS:HD2	14:L:117:LEU:HD12	2.02	0.41
16:N:88:PRO:CB	16:N:92:ARG:HD2	2.50	0.41
17:O:118:VAL:HG12	17:O:119:LYS:N	2.33	0.41
18:P:15:VAL:O	18:P:19:THR:HG23	2.20	0.41
1:A:1220:G:H5''	24:V:36:ARG:HD2	2.03	0.41
2:01:128:HIS:O	2:01:130:ILE:HD12	2.21	0.40
2:02:145:LYS:HD3	2:02:145:LYS:C	2.42	0.40
3:03:816:ILE:O	3:03:1076:ILE:HD12	2.20	0.40
3:03:1088:ASP:HB2	3:03:1210:ILE:HG21	2.03	0.40
3:03:1118:GLY:HA3	3:03:1229:TYR:O	2.21	0.40
3:03:1156:ARG:HG3	3:03:1156:ARG:NH1	2.35	0.40
3:03:257:ALA:HB3	3:03:262:TYR:CD2	2.56	0.40
3:03:27:LEU:HB2	3:03:711:ASP:HB3	2.03	0.40
3:03:545:PHE:HZ	4:04:781:LYS:HA	1.85	0.40
3:03:878:THR:OG1	3:03:879:GLY:N	2.54	0.40
4:04:1138:LEU:CB	4:04:1139:PRO:HD3	2.41	0.40
4:04:1261:LEU:O	4:04:1280:VAL:HG21	2.21	0.40
4:04:125:GLY:HA2	4:04:135:ILE:CD1	2.51	0.40
4:04:1356:LEU:HD12	4:04:1365:TYR:CD2	2.56	0.40
4:04:510:LEU:O	4:04:514:THR:HG22	2.21	0.40
4:04:647:PRO:C	4:04:649:LYS:H	2.23	0.40
7:E:143:LYS:HA	7:E:146:ASN:ND2	2.35	0.40
9:G:101:VAL:HA	9:G:104:MET:HG3	2.04	0.40
11:I:45:ARG:HH11	11:I:45:ARG:HG2	1.85	0.40
12:J:63:VAL:O	12:J:66:GLU:HG2	2.21	0.40
13:K:34:ALA:O	13:K:38:VAL:HG23	2.22	0.40
1:A:1118:U:OP1	14:L:105:ARG:HG3	2.21	0.40
17:O:43:LYS:CG	17:O:44:PRO:HD3	2.51	0.40
22:T:10:ARG:HH11	22:T:10:ARG:HG3	1.86	0.40
23:U:48:ARG:HD3	23:U:51:TYR:HD2	1.85	0.40
23:U:51:TYR:O	23:U:55:LEU:HG	2.20	0.40
26:X:21:ARG:HA	26:X:25:LYS:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:100:LEU:N	2:01:100:LEU:HD12	2.36	0.40
2:01:145:LYS:HD3	2:01:145:LYS:C	2.41	0.40
3:03:297:VAL:CG2	3:03:298:ALA:N	2.84	0.40
3:03:694:ARG:HD3	3:03:694:ARG:HA	1.80	0.40
3:03:719:LYS:NZ	3:03:751:TYR:HE1	2.18	0.40
4:04:1350:ASN:ND2	4:04:1357:ILE:HA	2.37	0.40
4:04:785:ASP:O	4:04:789:LYS:HG2	2.21	0.40
1:A:170:U:O2'	1:A:171:A:H5'	2.21	0.40
1:A:190:A:N1	25:W:47:GLN:HB3	2.37	0.40
1:A:39:G:H2'	1:A:40:C:C5'	2.48	0.40
1:A:576:C:H3'	1:A:577:G:H5''	2.02	0.40
9:G:158:LEU:HD23	9:G:158:LEU:C	2.41	0.40
9:G:9:LYS:HD2	9:G:9:LYS:O	2.20	0.40
13:K:4:ASP:HA	13:K:5:PRO:HD2	1.85	0.40
21:S:2:VAL:O	21:S:66:THR:HG22	2.21	0.40
26:X:17:ARG:HG3	26:X:17:ARG:HH11	1.87	0.40
2:02:104:LYS:HG2	2:02:110:VAL:HG22	2.03	0.40
2:02:29:GLU:HA	2:02:30:PRO:HA	1.90	0.40
3:03:1222:GLU:O	3:03:1223:ARG:HB3	2.21	0.40
3:03:150:HIS:HB3	3:03:454:ARG:HH12	1.85	0.40
3:03:482:GLY:HA3	3:03:487:LEU:HD22	2.03	0.40
3:03:976:ARG:CD	3:03:989:LEU:HD23	2.51	0.40
4:04:1184:ASP:N	4:04:1185:PRO:HD2	2.36	0.40
4:04:1243:LEU:HD12	4:04:1243:LEU:N	2.37	0.40
4:04:1346:GLY:HA3	4:04:1349:GLU:OE1	2.21	0.40
4:04:425:ARG:HG2	4:04:426:ALA:H	1.85	0.40
4:04:53:ARG:HH11	4:04:53:ARG:HG2	1.86	0.40
4:04:573:THR:OG1	4:04:576:ARG:HG2	2.20	0.40
4:04:749:LYS:HB3	4:04:755:ILE:CG1	2.49	0.40
4:04:81:ARG:HA	4:04:92:VAL:HG23	2.04	0.40
4:04:848:VAL:HG21	4:04:880:VAL:HG13	2.03	0.40
5:05:67:ARG:O	5:05:71:GLU:HG3	2.21	0.40
1:A:118:U:H2'	1:A:119:A:H5'	2.04	0.40
9:G:151:GLN:O	9:G:152:SER:HB3	2.21	0.40
14:L:118:ARG:HH11	14:L:118:ARG:HG3	1.87	0.40
15:M:18:ILE:O	15:M:22:THR:HG23	2.21	0.40
15:M:45:ARG:HG2	15:M:45:ARG:NH1	2.36	0.40
16:N:54:SER:O	16:N:57:SER:HB3	2.21	0.40
2:01:100:LEU:HD21	2:01:121:VAL:HG21	2.02	0.40
2:01:172:LEU:N	2:01:172:LEU:HD12	2.36	0.40
2:01:79:LEU:C	2:01:79:LEU:HD13	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:03:1209:GLN:O	3:03:1224:PRO:HB3	2.22	0.40
3:03:150:HIS:CE1	3:03:452:ARG:HB3	2.56	0.40
3:03:695:ALA:HB1	3:03:795:ALA:O	2.21	0.40
3:03:724:VAL:HG22	3:03:775:GLU:H	1.85	0.40
4:04:272:VAL:O	4:04:276:ASN:HB2	2.21	0.40
4:04:390:LEU:N	4:04:390:LEU:HD12	2.37	0.40
3:03:812:PHE:CZ	4:04:503:SER:HB2	2.55	0.40
3:03:672:GLU:O	4:04:767:LEU:HD13	2.21	0.40
4:04:70:CYS:SG	4:04:85:CYS:HB2	2.61	0.40
1:A:36:C:H4'	17:O:113:ARG:HG3	2.04	0.40
7:E:108:ARG:HA	7:E:111:ILE:CG1	2.51	0.40
7:E:25:PRO:C	7:E:28:LYS:H	2.24	0.40
9:G:110:ARG:O	9:G:114:ARG:HG3	2.20	0.40
1:A:402:G:H5''	9:G:70:GLN:HE21	1.86	0.40
1:A:1346:A:H4'	14:L:121:ARG:HH22	1.84	0.40
14:L:74:GLN:O	14:L:78:ILE:HG13	2.21	0.40
17:O:30:ARG:HG2	17:O:31:GLY:N	2.37	0.40
19:Q:65:GLN:HE21	19:Q:78:LEU:HD22	1.86	0.40
19:Q:92:ILE:HA	19:Q:93:PRO:HD3	1.82	0.40
2:01:104:LYS:HG2	2:01:110:VAL:HG22	2.04	0.40
2:01:230:ALA:HA	2:01:233:ASP:HB3	2.03	0.40
3:03:1262:LYS:HA	3:03:1262:LYS:HD3	1.89	0.40
3:03:735:LYS:HA	3:03:735:LYS:HD2	1.90	0.40
3:03:865:LEU:HA	3:03:870:ILE:O	2.21	0.40
3:03:944:ARG:O	3:03:948:ILE:HG13	2.22	0.40
4:04:1162:ILE:HG22	4:04:1178:THR:O	2.21	0.40
4:04:146:VAL:HA	4:04:178:ALA:CB	2.51	0.40
4:04:410:ASP:O	4:04:413:ASP:HB2	2.22	0.40
4:04:447:ILE:HD13	4:04:468:VAL:HG13	2.03	0.40
4:04:45:ASN:HD22	4:04:50:LYS:HD2	1.87	0.40
4:04:50:LYS:HA	4:04:51:PRO:HD2	1.78	0.40
4:04:66:LYS:HG2	4:04:67:ASP:N	2.37	0.40
4:04:801:VAL:HG23	4:04:802:ASP:N	2.37	0.40
4:04:98:ARG:HA	4:04:101:ARG:CG	2.49	0.40
1:A:1097:C:H2'	1:A:1098:C:C6	2.57	0.40
1:A:219:U:C3'	1:A:220:G:H5''	2.52	0.40
1:A:811:C:H2'	1:A:812:G:H5'	2.03	0.40
7:E:23:TRP:CD2	7:E:25:PRO:HG3	2.54	0.40
8:F:156:LEU:HD12	8:F:156:LEU:O	2.22	0.40
1:A:509:A:H5''	9:G:48:SER:OG	2.21	0.40
1:A:1343:G:O2'	14:L:122:ARG:HA	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:56:LEU:HD12	17:O:60:PHE:HB2	2.02	0.40
18:P:77:LYS:HZ2	18:P:77:LYS:HB3	1.86	0.40
22:T:26:ARG:HD3	22:T:26:ARG:O	2.22	0.40
24:V:68:HIS:HB2	24:V:73:PHE:CE2	2.55	0.40
1:A:108:G:C2	25:W:6:ALA:HB1	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	01	225/229 (98%)	183 (81%)	38 (17%)	4 (2%)	10	49
2	02	225/229 (98%)	177 (79%)	37 (16%)	11 (5%)	2	27
3	03	1323/1340 (99%)	1053 (80%)	221 (17%)	49 (4%)	4	33
4	04	1339/1369 (98%)	1091 (82%)	205 (15%)	43 (3%)	5	36
5	05	74/76 (97%)	60 (81%)	13 (18%)	1 (1%)	13	54
6	B	6/153 (4%)	6 (100%)	0	0	100	100
7	E	216/218 (99%)	161 (74%)	40 (18%)	15 (7%)	1	20
8	F	204/206 (99%)	178 (87%)	24 (12%)	2 (1%)	18	61
9	G	203/205 (99%)	158 (78%)	38 (19%)	7 (3%)	4	35
10	H	155/157 (99%)	119 (77%)	33 (21%)	3 (2%)	9	47
11	I	98/100 (98%)	78 (80%)	15 (15%)	5 (5%)	2	26
12	J	149/151 (99%)	126 (85%)	20 (13%)	3 (2%)	9	46
13	K	127/129 (98%)	110 (87%)	14 (11%)	3 (2%)	7	42
14	L	125/127 (98%)	94 (75%)	28 (22%)	3 (2%)	7	42
15	M	96/98 (98%)	79 (82%)	11 (12%)	6 (6%)	1	22
16	N	114/116 (98%)	96 (84%)	14 (12%)	4 (4%)	4	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	O	121/123 (98%)	87 (72%)	25 (21%)	9 (7%)	1	18
18	P	112/114 (98%)	93 (83%)	12 (11%)	7 (6%)	1	22
19	Q	98/100 (98%)	66 (67%)	28 (29%)	4 (4%)	3	30
20	R	86/88 (98%)	74 (86%)	12 (14%)	0	100	100
21	S	80/82 (98%)	61 (76%)	15 (19%)	4 (5%)	2	27
22	T	78/80 (98%)	61 (78%)	13 (17%)	4 (5%)	2	26
23	U	63/65 (97%)	48 (76%)	11 (18%)	4 (6%)	1	22
24	V	77/79 (98%)	59 (77%)	17 (22%)	1 (1%)	14	56
25	W	83/85 (98%)	68 (82%)	10 (12%)	5 (6%)	2	23
26	X	63/65 (97%)	49 (78%)	9 (14%)	5 (8%)	1	17
All	All	5540/5784 (96%)	4435 (80%)	903 (16%)	202 (4%)	7	33

All (202) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	02	13	LEU
2	02	62	ASP
2	02	135	ASP
2	02	193	GLU
3	03	288	PRO
3	03	638	SER
3	03	866	ASP
3	03	1013	GLN
3	03	1321	GLU
4	04	47	ARG
4	04	234	PRO
4	04	264	ASP
4	04	325	LYS
4	04	345	LYS
4	04	357	VAL
4	04	585	LYS
4	04	712	GLN
4	04	860	ARG
4	04	1051	ASP
4	04	1065	ALA
4	04	1067	ARG
4	04	1343	GLU
7	E	39	HIS

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Mol	Chain	Res	Type
7	E	40	ILE
7	E	43	LEU
9	G	31	CYS
17	O	24	GLU
18	P	4	ALA
18	P	6	ILE
18	P	26	LYS
21	S	27	ALA
23	U	20	GLU
25	W	6	ALA
26	X	10	GLU
26	X	38	TYR
2	02	20	SER
3	03	63	SER
3	03	200	ARG
3	03	201	ARG
3	03	268	ARG
3	03	270	THR
3	03	483	ASP
3	03	655	VAL
3	03	660	VAL
3	03	842	ASP
3	03	852	ALA
3	03	872	TYR
3	03	879	GLY
3	03	937	ASP
3	03	1101	LEU
4	04	89	GLY
4	04	122	SER
4	04	289	ASP
4	04	586	GLY
4	04	596	LEU
4	04	637	ALA
4	04	1125	PRO
4	04	1292	LEU
7	E	17	GLY
7	E	22	TYR
7	E	25	PRO
7	E	33	GLY
7	E	37	LYS
7	E	151	ILE
8	F	205	GLU

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Mol	Chain	Res	Type
9	G	4	LEU
11	I	92	THR
13	K	56	PRO
15	M	57	VAL
15	M	75	ASP
17	O	27	PRO
17	O	33	CYS
17	O	108	ASP
18	P	5	GLY
21	S	28	ARG
21	S	44	SER
22	T	50	ASN
23	U	72	ASP
25	W	7	LYS
2	01	195	ARG
3	03	132	ASP
3	03	188	PHE
3	03	343	HIS
3	03	440	GLY
3	03	596	ASP
3	03	659	GLN
3	03	984	VAL
3	03	1151	LEU
3	03	1161	LEU
3	03	1224	PRO
4	04	309	ASN
4	04	463	GLY
4	04	756	GLU
4	04	815	GLY
4	04	1084	GLN
4	04	1167	LYS
7	E	88	ASP
8	F	28	PHE
9	G	182	LYS
10	H	26	GLY
10	H	98	ALA
11	I	53	LYS
11	I	93	LYS
12	J	16	LYS
12	J	57	GLU
16	N	25	SER
16	N	123	PRO

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Mol	Chain	Res	Type
16	N	126	ARG
17	O	41	PRO
17	O	101	LEU
18	P	109	LYS
19	Q	2	LYS
19	Q	51	PRO
21	S	81	ALA
22	T	34	GLY
23	U	70	TYR
26	X	8	GLU
26	X	36	GLU
2	01	62	ASP
2	02	162	GLU
2	02	213	PRO
3	03	202	ARG
3	03	357	ASN
3	03	627	GLY
3	03	729	ALA
3	03	1186	VAL
4	04	112	ALA
4	04	248	ASP
4	04	499	ILE
4	04	695	LYS
4	04	734	ALA
4	04	832	LYS
4	04	1169	THR
4	04	1185	PRO
5	05	33	GLY
7	E	21	ARG
7	E	29	PRO
7	E	101	LEU
9	G	34	GLU
10	H	24	VAL
11	I	56	LYS
15	M	41	PRO
15	M	42	LEU
17	O	2	THR
17	O	15	VAL
18	P	23	GLY
18	P	104	ASN
19	Q	31	SER
23	U	24	LYS

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Mol	Chain	Res	Type
25	W	17	ARG
25	W	76	ALA
26	X	25	LYS
2	02	166	ARG
2	02	211	ILE
3	03	575	LEU
3	03	841	ARG
3	03	994	ARG
3	03	1334	GLY
4	04	51	PRO
4	04	236	TRP
7	E	201	PRO
9	G	45	PRO
11	I	33	GLU
13	K	20	ASN
14	L	12	LYS
19	Q	55	SER
22	T	48	GLU
25	W	3	ILE
2	01	168	ILE
3	03	438	GLY
3	03	567	PRO
3	03	630	VAL
3	03	1223	ARG
3	03	1265	PHE
4	04	313	GLY
4	04	496	GLY
9	G	47	LEU
9	G	167	PRO
14	L	25	GLY
14	L	107	ALA
16	N	94	SER
2	01	167	PRO
3	03	1100	PRO
4	04	825	VAL
4	04	1176	VAL
15	M	78	GLU
3	03	747	GLY
3	03	1320	PRO
4	04	1150	PRO
7	E	98	GLY
17	O	62	VAL

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Mol	Chain	Res	Type
24	V	75	PRO
2	02	167	PRO
2	02	209	GLY
3	03	809	GLY
3	03	874	GLY
22	T	4	ILE
3	03	294	GLY
4	04	561	GLY
12	J	81	GLY
13	K	50	VAL
15	M	43	PRO

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 PDB entries followed by that with respect to all EM entries.

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	01	194/197 (98%)	191 (98%)	3 (2%)	70	86
2	02	194/197 (98%)	188 (97%)	6 (3%)	45	71
3	03	1098/1155 (95%)	1079 (98%)	19 (2%)	66	84
4	04	1103/1141 (97%)	1087 (98%)	16 (2%)	70	86
5	05	65/65 (100%)	65 (100%)	0	100	100
6	B	6/7 (86%)	6 (100%)	0	100	100
7	E	180/180 (100%)	173 (96%)	7 (4%)	37	66
8	F	170/170 (100%)	165 (97%)	5 (3%)	48	73
9	G	172/172 (100%)	167 (97%)	5 (3%)	48	73
10	H	119/119 (100%)	116 (98%)	3 (2%)	53	77
11	I	87/87 (100%)	86 (99%)	1 (1%)	78	89
12	J	124/124 (100%)	123 (99%)	1 (1%)	85	92
13	K	104/104 (100%)	100 (96%)	4 (4%)	38	67
14	L	105/105 (100%)	102 (97%)	3 (3%)	48	73
15	M	86/86 (100%)	86 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	N	89/89 (100%)	85 (96%)	4 (4%)	32	63
17	O	103/103 (100%)	99 (96%)	4 (4%)	37	66
18	P	92/92 (100%)	92 (100%)	0	100	100
19	Q	83/83 (100%)	83 (100%)	0	100	100
20	R	76/76 (100%)	75 (99%)	1 (1%)	73	87
21	S	65/65 (100%)	62 (95%)	3 (5%)	31	62
22	T	74/74 (100%)	73 (99%)	1 (1%)	71	86
23	U	56/56 (100%)	54 (96%)	2 (4%)	40	68
24	V	70/70 (100%)	68 (97%)	2 (3%)	48	73
25	W	65/65 (100%)	62 (95%)	3 (5%)	31	62
26	X	55/55 (100%)	52 (94%)	3 (6%)	25	58
All	All	4635/4737 (98%)	4539 (98%)	96 (2%)	62	80

All (96) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	01	45	ARG
2	01	133	LEU
2	01	150	ARG
2	02	13	LEU
2	02	30	PRO
2	02	148	ARG
2	02	172	LEU
2	02	191	ARG
2	02	213	PRO
3	03	54	ARG
3	03	143	ARG
3	03	194	LEU
3	03	214	ASN
3	03	470	ARG
3	03	620	ASN
3	03	647	ARG
3	03	697	LYS
3	03	974	ARG
3	03	1014	LEU
3	03	1082	ILE
3	03	1106	ARG
3	03	1113	LEU

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Mol	Chain	Res	Type
3	03	1149	TYR
3	03	1151	LEU
3	03	1211	ARG
3	03	1224	PRO
3	03	1246	ARG
3	03	1253	LEU
4	04	21	LYS
4	04	46	TYR
4	04	53	ARG
4	04	60	ARG
4	04	102	MET
4	04	113	HIS
4	04	214	ARG
4	04	217	LEU
4	04	250	ARG
4	04	320	ASN
4	04	431	ARG
4	04	596	LEU
4	04	756	GLU
4	04	1181	ASP
4	04	1231	ARG
4	04	1332	LEU
7	E	11	LYS
7	E	21	ARG
7	E	35	ARG
7	E	42	ASN
7	E	89	GLN
7	E	204	ASP
7	E	205	ASP
8	F	24	ASN
8	F	28	PHE
8	F	126	ARG
8	F	156	LEU
8	F	163	ARG
9	G	9	LYS
9	G	80	ARG
9	G	99	ASN
9	G	125	ASN
9	G	153	ARG
10	H	51	LYS
10	H	75	LEU
10	H	145	ASN

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Mol	Chain	Res	Type
11	I	14	GLN
12	J	78	ARG
13	K	8	ASP
13	K	26	MET
13	K	37	ASN
13	K	113	ARG
14	L	24	ASN
14	L	60	LEU
14	L	62	LEU
16	N	74	LYS
16	N	100	ASN
16	N	110	THR
16	N	124	LYS
17	O	55	ARG
17	O	110	LYS
17	O	113	ARG
17	O	120	ARG
20	R	57	ARG
21	S	5	ARG
21	S	25	ARG
21	S	35	ARG
22	T	26	ARG
23	U	38	LYS
23	U	48	ARG
24	V	4	LEU
24	V	36	ARG
25	W	2	ASN
25	W	4	LYS
25	W	67	HIS
26	X	17	ARG
26	X	18	ARG
26	X	34	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (104) such sidechains are listed below:

Mol	Chain	Res	Type
2	01	41	ASN
2	01	227	GLN
2	02	37	HIS
2	02	75	GLN
2	02	194	GLN
2	02	208	ASN

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Mol	Chain	Res	Type
3	03	20	GLN
3	03	86	GLN
3	03	214	ASN
3	03	258	ASN
3	03	330	HIS
3	03	406	ASN
3	03	437	ASN
3	03	450	ASN
3	03	462	ASN
3	03	463	GLN
3	03	494	ASN
3	03	526	HIS
3	03	620	ASN
3	03	649	GLN
3	03	686	GLN
3	03	688	GLN
3	03	811	ASN
3	03	922	ASN
3	03	955	GLN
3	03	1061	GLN
3	03	1070	HIS
3	03	1080	ASN
3	03	1090	ASN
3	03	1116	HIS
3	03	1175	ASN
3	03	1257	GLN
4	04	45	ASN
4	04	104	HIS
4	04	266	ASN
4	04	300	GLN
4	04	309	ASN
4	04	320	ASN
4	04	448	GLN
4	04	458	ASN
4	04	488	ASN
4	04	545	HIS
4	04	593	ASN
4	04	708	ASN
4	04	736	GLN
4	04	739	GLN
4	04	861	ASN
4	04	1235	ASN

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Mol	Chain	Res	Type
4	04	1279	GLN
4	04	1289	ASN
4	04	1350	ASN
5	05	31	GLN
5	05	43	ASN
7	E	15	HIS
7	E	51	ASN
7	E	89	GLN
7	E	103	ASN
7	E	177	ASN
7	E	178	ASN
8	F	24	ASN
8	F	31	ASN
8	F	139	ASN
8	F	175	HIS
8	F	184	ASN
9	G	70	GLN
9	G	73	ASN
9	G	88	ASN
9	G	125	ASN
9	G	130	ASN
9	G	163	GLN
10	H	76	ASN
10	H	82	HIS
10	H	96	GLN
10	H	131	ASN
10	H	134	ASN
10	H	145	ASN
11	I	52	ASN
11	I	81	ASN
12	J	96	ASN
12	J	121	ASN
13	K	15	ASN
13	K	37	ASN
14	L	24	ASN
14	L	30	ASN
14	L	49	GLN
14	L	74	GLN
15	M	58	ASN
16	N	100	ASN
16	N	118	ASN
17	O	71	HIS

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Mol	Chain	Res	Type
17	O	72	ASN
19	Q	34	ASN
19	Q	48	GLN
19	Q	61	ASN
19	Q	65	GLN
20	R	36	ASN
20	R	39	GLN
22	T	46	HIS
23	U	31	ASN
23	U	52	GLN
25	W	2	ASN
25	W	12	GLN
25	W	69	ASN
25	W	74	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1441/1539 (93%)	170 (11%)	2 (0%)

All (170) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	7	A
1	A	31	G
1	A	32	A
1	A	39	G
1	A	40	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	60	A
1	A	66	A
1	A	68	G
1	A	70	U
1	A	71	A
1	A	72	A
1	A	79	G
1	A	83	C

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Mol	Chain	Res	Type
1	A	85	U
1	A	86	G
1	A	87	C
1	A	89	U
1	A	90	C
1	A	93	U
1	A	94	G
1	A	99	C
1	A	137	U
1	A	144	G
1	A	164	G
1	A	174	A
1	A	177	G
1	A	180	U
1	A	183	C
1	A	184	G
1	A	185	U
1	A	209	U
1	A	210	C
1	A	220	G
1	A	245	U
1	A	247	G
1	A	251	G
1	A	252	U
1	A	266	G
1	A	280	C
1	A	281	G
1	A	289	G
1	A	306	A
1	A	328	C
1	A	344	A
1	A	345	C
1	A	352	C
1	A	372	C
1	A	377	G
1	A	388	G
1	A	397	A
1	A	398	U
1	A	406	G
1	A	413	G
1	A	414	A
1	A	423	G

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Mol	Chain	Res	Type
1	A	427	U
1	A	429	U
1	A	441	A
1	A	448	A
1	A	467	U
1	A	468	A
1	A	479	U
1	A	480	U
1	A	486	U
1	A	487	A
1	A	495	A
1	A	497	G
1	A	513	C
1	A	518	C
1	A	524	G
1	A	530	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C
1	A	547	A
1	A	559	A
1	A	560	A
1	A	561	U
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	C
1	A	577	G
1	A	633	G
1	A	642	A
1	A	665	A
1	A	701	U
1	A	703	G
1	A	723	U
1	A	724	G
1	A	734	G
1	A	755	G
1	A	777	A
1	A	817	C

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Mol	Chain	Res	Type
1	A	818	G
1	A	819	A
1	A	821	G
1	A	832	G
1	A	843	U
1	A	844	G
1	A	846	G
1	A	871	U
1	A	902	G
1	A	926	G
1	A	934	C
1	A	960	U
1	A	961	U
1	A	966	G
1	A	969	A
1	A	975	A
1	A	977	A
1	A	982	U
1	A	984	C
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1004	A
1	A	1031	C
1	A	1032	G
1	A	1033	G
1	A	1053	G
1	A	1055	A
1	A	1094	G
1	A	1101	A
1	A	1118	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1159	U
1	A	1168	U
1	A	1182	G
1	A	1184	G
1	A	1196	A
1	A	1213	A
1	A	1215	G
1	A	1225	A

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Mol	Chain	Res	Type
1	A	1226	C
1	A	1238	A
1	A	1241	G
1	A	1258	G
1	A	1260	G
1	A	1261	A
1	A	1275	A
1	A	1280	A
1	A	1282	C
1	A	1287	A
1	A	1300	G
1	A	1303	C
1	A	1317	C
1	A	1347	G
1	A	1364	U
1	A	1394	A
1	A	1395	C
1	A	1398	A
1	A	1498	U
1	A	1499	A
1	A	1502	A
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1529	G
1	A	1530	G

All (2) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	69	G
1	A	343	U

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
6	B	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	10:GLU	C	107:UNK	N	56.44
1	B	179:UNK	C	191:UNK	N	18.18