



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 3, 2024 – 02:55 PM JST

PDB ID : 8KAK
Title : Crystal structure of SpyCas9 in complex with sgRNA and 18nt target DNA
Authors : Chen, Y.; Chen, J.; Liu, L.
Deposited on : 2023-08-03
Resolution : 3.60 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : 2.36.2
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

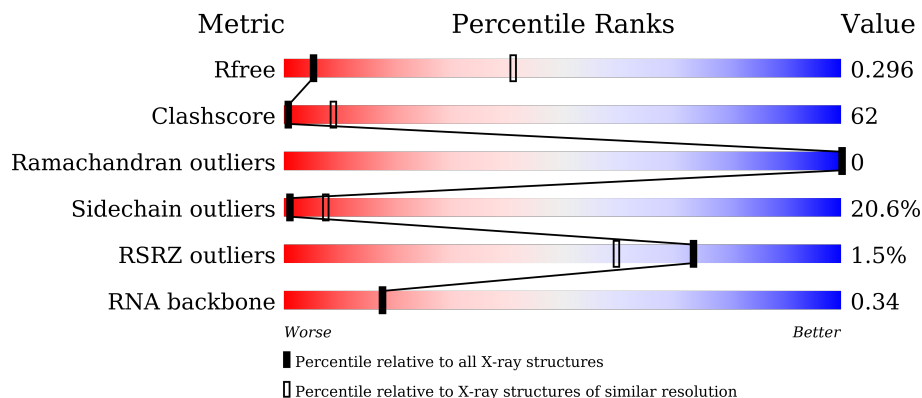
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.60 Å.

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



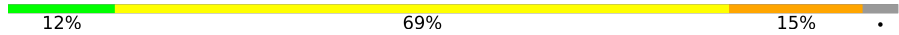
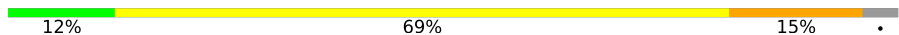

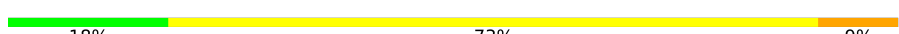
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1257 (3.70-3.50)
Clashscore	141614	1353 (3.70-3.50)
Ramachandran outliers	138981	1307 (3.70-3.50)
Sidechain outliers	138945	1307 (3.70-3.50)
RSRZ outliers	127900	1161 (3.70-3.50)
RNA backbone	3102	1017 (4.20-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	98	
1	E	98	
2	B	1368	
2	F	1368	

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Mol	Chain	Length	Quality of chain
3	C	26	 12% 69% 15%
3	G	26	 12% 69% 15%
4	D	11	 18% 73% 9%
4	H	11	 18% 73% 9%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	SO4	B	1401	-	-	X	-

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 27148 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called RNA (98-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	A	94	2009	899	362	654	94	0	0	0
1	E	94	2009	899	362	654	94	0	0	0

- Molecule 2 is a protein called CRISPR-associated endonuclease Cas9/Csn1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	1326	10827	6897	1879	2029	22	0	0	0
2	F	1326	10827	6897	1879	2029	22	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	10	ALA	ASP	engineered mutation	UNP Q99ZW2
B	840	ALA	HIS	engineered mutation	UNP Q99ZW2
F	10	ALA	ASP	engineered mutation	UNP Q99ZW2
F	840	ALA	HIS	engineered mutation	UNP Q99ZW2

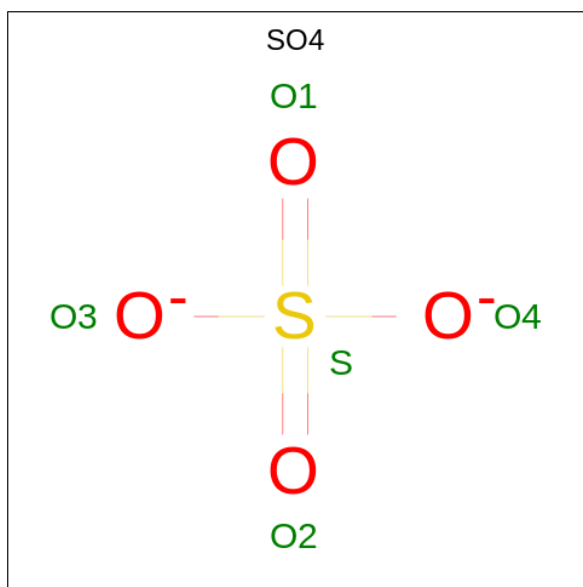
- Molecule 3 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
3	C	25	505	243	93	145	24	0	0	0
3	G	25	505	243	93	145	24	0	0	0

- Molecule 4 is a DNA chain called DNA (5'-D(*TP*TP*TP*AP*GP*GP*TP*AP*TP*TP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	11	Total	C	N	O	P	0	0	0
			225	110	37	68	10			
4	H	11	Total	C	N	O	P	0	0	0
			225	110	37	68	10			

- Molecule 5 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	B	1	Total	O	S	0	0
			5	4	1		
5	F	1	Total	O	S	0	0
			5	4	1		

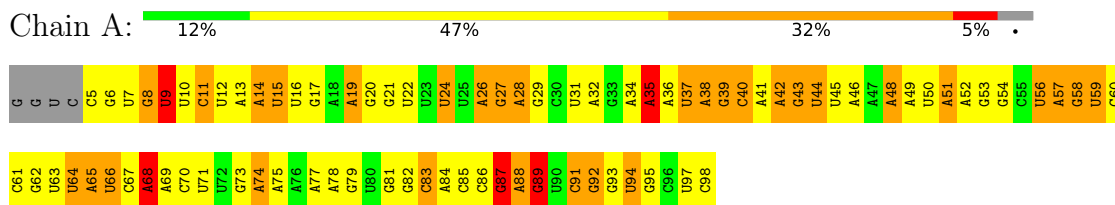
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	1	Total	O	0	0
			1	1		
6	B	1	Total	O	0	0
			1	1		
6	F	4	Total	O	0	0
			4	4		

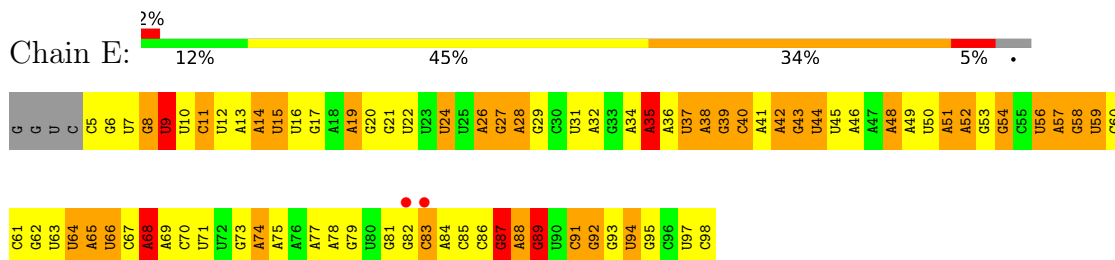
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

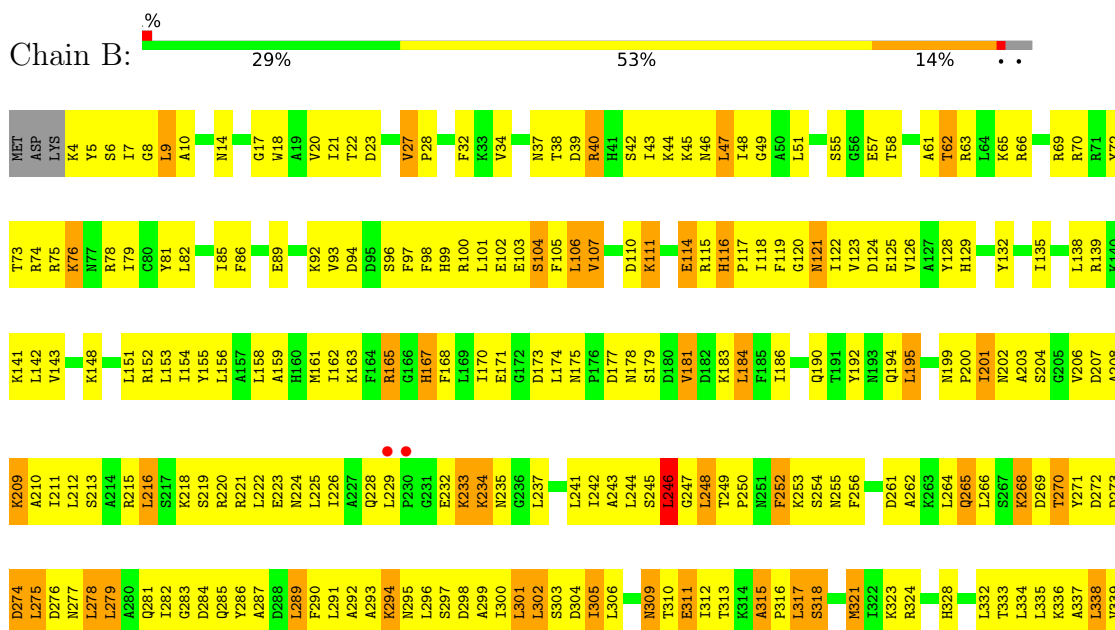
- Molecule 1: RNA (98-MER)



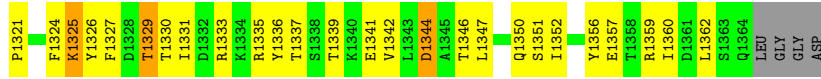
- Molecule 1: RNA (98-MER)



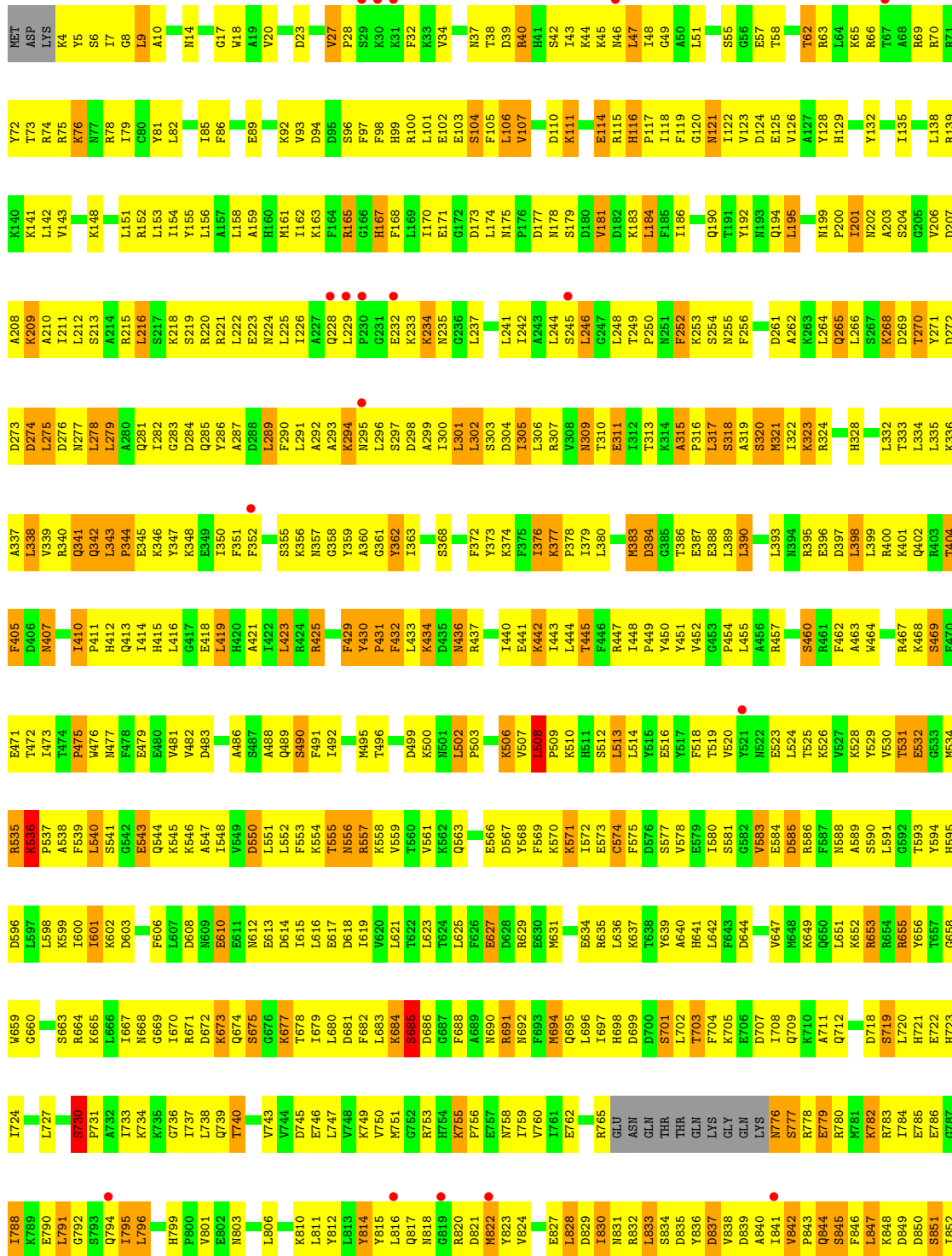
- Molecule 2: CRISPR-associated endonuclease Cas9/Csn1

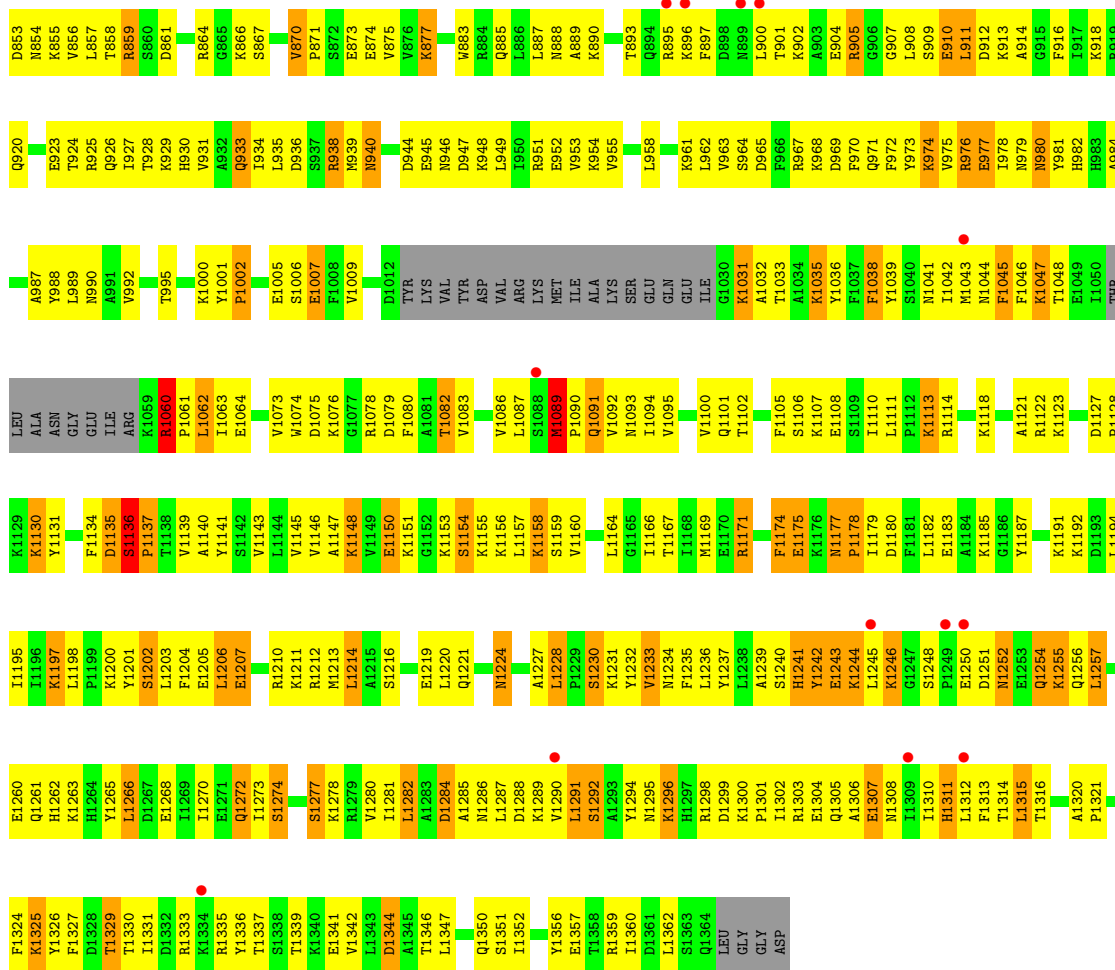


L1257	L1194	P1128	THR	A984	R919	S881	E786	E722	T857	H595	M534	E470	T404	R340
E1260	I1195	K1129	LEU	A987	Q920	I882	G787	H723	G658	D896	R535	E471	F405	Q341
Q1261	I1196	K1130	ALA	A988	E923	N854	K788	I724	L597	L597	P537	T472	D406	Q342
H1262	K1197	Y988	ASN	Y988	T924	R855	K789	I724	G660	L598	A538	L473	M407	L343
K1263	P1199	L989	GLY	L989	R925	R856	E790	L727	S663	I600	F539	T474	I410	P344
H1264	K1200	D1185	ILE	A991	Q926	L857	G792	S730	R664	I601	L540	H476	P411	E345
Y1265	S1187	S1186	ARG	Y992	I927	T858	S793	F731	K665	K602	S541	H477	H412	K346
L1266	S1202	P1136	R1059	T995	T928	R859	G794	A732	L666	D603	G542	F478	Q413	K347
L1267	L1203	T1138	R1060	R995	K929	S860	I795	I733	L667	E543	E479	E479	Q414	E349
E1268	F1204	P1061	R1061	H930	H930	D861	L796	K734	N668	G605	Q544	E480	H415	I350
L1269	E1205	A1140	L1062	V951	V951	R864	K735	K735	G669	F606	V481	V481	L416	F351
L1270	L1206	Y1141	L1063	Y1001	Y1001	G865	G736	G736	I670	K546	K546	V482	L417	F352
E1271	E1207	P1002	E1064	P1002	Q833	G866	I737	I737	R671	D603	A947	D483	E418	F352
Q1272	R1210	L1143	G1070	L1005	I934	K866	R672	R672	N609	N609	L419	A486	H419	S385
L1273	K1211	L1144	L1078	E1005	L935	R867	K673	Q739	K673	E610	V549	A486	H420	K356
S1274	R1212	V1145	S1006	S1006	D936	S867	Q674	T740	Q674	E611	D550	S487	H421	K357
S1277	M1213	V1146	V1073	E1007	S937	V870	S675	T740	S675	N612	D551	A488	I422	G358
K1278	L1214	A1147	K1074	F1008	R938	P871	G676	V744	G676	E613	L552	O489	L423	Y359
R1279	L1215	K1148	D1075	V1009	M939	S872	K677	V744	K677	D614	F553	S490	R424	A360
V1280	S1216	V1149	K1076	V1009	N940	S873	T878	V744	T878	L615	F491	F491	R425	G361
I1281	E1219	E1150	R1078	D1012	D944	E873	L810	V744	L810	L616	T555	T555	F429	Y362
L1282	L1220	G1152	D1079	LYS	E945	E874	L811	L747	L616	E617	N556	N556	Y430	I363
K1283	E1221	K1153	F1080	VAL	N946	V875	L812	L747	L616	D618	R557	R557	P431	Y363
D1284	Q1221	S1154	A1081	TTR	D947	K877	Y814	V748	D681	I619	K558	T496	F432	D364
A1285	M1224	K1155	V1082	ASP	K948	W883	Y815	V750	L833	Y620	V559	T496	F432	S388
L1286	E1225	K1156	V1083	VAL	K949	R884	L816	V751	K684	L621	T960	D499	L433	Q369
L1287	L1226	L1157	R1083	ARG	L949	R884	Q817	G752	S685	T622	V561	K500	L434	Q369
L1288	E1226	K1158	V1086	LYS	I950	Q885	N818	R753	D686	L623	K562	N501	K434	F372
K1289	A1227	S1159	L1087	LYS	R951	R886	G819	H754	G687	E630	Q563	L502	M436	Y373
L1290	P1228	V1160	ILE	ILE	E952	R887	R820	K755	F688	L625	F503	P503	R437	K374
L1291	S1229	L1161	R1089	ALA	K953	R888	D821	V756	A689	F628	E566	K506	I440	F375
A1292	K1231	I1165	P1090	LYS	K954	R889	M822	E757	E627	E627	D567	K506	I441	I376
Y1294	L1232	I1166	Q1091	SER	K955	R890	Y823	I758	R691	D628	V568	V507	E441	K377
N1295	V1233	T1167	M1093	GLN	K956	K890	V824	R760	N692	R629	F569	F509	E442	P378
K1296	N1234	I1168	I1094	GLU	L958	T893	V824	I761	F693	E630	K570	K510	I443	I379
H1297	F1235	M1169	V1095	ILE	K861	Q894	E827	E762	Q895	M631	L572	H511	L444	L380
D1298	L1236	E1170	V1100	GLU	L962	R895	L828	E762	L696	E634	E573	H511	T445	E381
K1300	Y1237	R1171	L963	ILE	V963	F897	D829	R765	L696	R635	CS74	S512	F446	K382
P1301	L1238	F1174	Q1101	K1030	S964	R898	I830	GLU	I697	R635	CS74	S512	R447	M383
I1302	S1240	E1175	T1102	T1033	D965	L900	R832	ASN	H698	L636	F575	L514	I448	D384
R1303	H1241	K1176	F1105	A1034	F966	T901	L833	GLN	D699	K637	D576	Y514	P449	G385
E1304	Y1242	N1177	S1106	K1035	K968	K902	S834	THR	S701	Y639	V578	E516	Y450	T386
Q1305	E1243	P1178	K1107	Y1036	D969	A903	D835	THR	D702	A640	E579	F518	V452	E387
A1306	L1244	I1179	E1108	F1037	R970	E904	Y836	GLN	L703	L642	I880	T519	G453	E388
E1307	L1245	D1180	S1109	F1038	Q971	R905	D837	LYS	F704	H641	S581	V520	P454	L389
N1308	K1246	F1181	I1110	S1040	F972	G907	V839	GLN	K705	L642	G582	V521	L455	V391
L1309	G1247	L1182	L1110	M1041	Y973	L908	A840	LYS	E706	D644	E584	E523	A456	K392
I1310	S1248	E1183	L1111	M1041	K974	S909	I841	LYS	D707	E584	E523	E523	R457	L393
H1311	P1249	K1113	P1112	I1042	V975	E910	V842	THR	I708	V647	D886	L524	S460	K394
L1312	K1185	A1184	R1114	M1044	R976	L911	P843	R778	K710	M648	R886	T525	R461	R395
F1313	D1251	G1186	R1114	M1044	E977	D912	Q844	E779	A711	Q650	F587	K526	F462	E396
L1314	M1252	Y1187	F1046	F1045	I978	D912	Q844	R780	Q712	L651	A589	V529	A463	D397
L1315	Q1253	Y1187	R1122	F1046	N979	A914	S845	R780	Q712	L651	A589	V529	A464	L398
T1316	Q1254	K1191	R1123	K1047	M980	G915	L847	K782	D718	R653	L591	V530	W464	L399
A1320	K1255	K1192	T1048	T1048	Y951	F916	R848	I784	S719	R654	G592	T531	R467	R400
	Q1256	D1193	I1050	I1050	H953	K918	D850	E785	H721	R655	L594	E532	K468	Q401
														R402
														R403

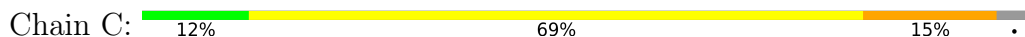


• Molecule 2: CRISPR-associated endonuclease Cas9/Csn1





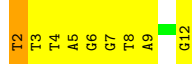
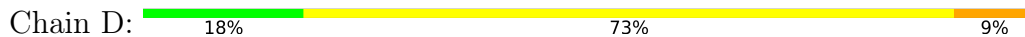
• Molecule 3: DNA (26-MER)



• Molecule 3: DNA (26-MER)

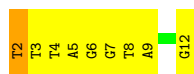


• Molecule 4: DNA (5'-D(*TP*TP*TP*AP*GP*GP*TP*AP*TP*TP*G)-3')



- Molecule 4: DNA (5'-D(*TP*TP*TP*AP*GP*GP*TP*AP*TP*TP*G)-3')

Chain H:  18% 73% 9%



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	70.74Å 104.97Å 184.31Å 75.82° 78.67° 72.63°	Depositor
Resolution (Å)	24.97 – 3.60 49.55 – 3.60	Depositor EDS
% Data completeness (in resolution range)	73.7 (24.97-3.60) 73.8 (49.55-3.60)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.46 (at 3.57Å)	Xtrriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.265 , 0.297 0.265 , 0.296	Depositor DCC
R_{free} test set	2067 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å ²)	30.0	Xtrriage
Anisotropy	0.942	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , -19.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	0.107 for h,h-k,h-l	Xtrriage
F_o, F_c correlation	0.74	EDS
Total number of atoms	27148	wwPDB-VP
Average B, all atoms (Å ²)	37.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.28% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: SO4

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.87	1/2249 (0.0%)	1.58	39/3503 (1.1%)
1	E	0.87	1/2249 (0.0%)	1.58	41/3503 (1.2%)
2	B	0.61	11/11019 (0.1%)	0.74	31/14807 (0.2%)
2	F	0.61	10/11019 (0.1%)	0.74	32/14807 (0.2%)
3	C	1.25	2/566 (0.4%)	1.24	6/870 (0.7%)
3	G	1.25	2/566 (0.4%)	1.24	6/870 (0.7%)
4	D	1.40	2/251 (0.8%)	1.28	0/387
4	H	1.40	2/251 (0.8%)	1.27	0/387
All	All	0.72	31/28170 (0.1%)	0.98	155/39134 (0.4%)

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	3	DT	N1-C2	5.79	1.42	1.38
4	H	3	DT	N1-C2	5.78	1.42	1.38
2	F	27	VAL	CA-C	5.60	1.67	1.52
2	B	27	VAL	CA-C	5.57	1.67	1.52
3	G	8	DT	C3'-O3'	5.53	1.51	1.44
3	C	8	DT	C3'-O3'	5.50	1.51	1.44
3	C	15	DT	C1'-N1	-5.38	1.39	1.47
3	G	15	DT	C1'-N1	-5.34	1.39	1.47
2	F	1002	PRO	N-CD	5.33	1.55	1.47
2	B	431	PRO	N-CD	5.32	1.55	1.47
2	F	344	PRO	N-CD	5.30	1.55	1.47
2	F	431	PRO	N-CD	5.29	1.55	1.47
2	B	1002	PRO	N-CD	5.28	1.55	1.47
1	E	46	A	N9-C4	5.24	1.41	1.37
2	B	344	PRO	N-CD	5.20	1.55	1.47
2	B	1301	PRO	N-CD	5.18	1.55	1.47
1	A	46	A	N9-C4	5.18	1.41	1.37
2	F	475	PRO	N-CD	5.18	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	475	PRO	N-CD	5.12	1.55	1.47
2	F	1301	PRO	N-CD	5.11	1.55	1.47
2	B	316	PRO	N-CD	5.10	1.54	1.47
2	F	1137	PRO	N-CD	5.10	1.54	1.47
2	F	1061	PRO	N-CD	5.10	1.54	1.47
2	B	1061	PRO	N-CD	5.08	1.54	1.47
2	F	316	PRO	N-CD	5.07	1.54	1.47
2	B	1137	PRO	N-CD	5.04	1.54	1.47
2	F	1178	PRO	N-CD	5.04	1.54	1.47
2	B	871	PRO	N-CD	5.04	1.54	1.47
2	B	1178	PRO	N-CD	5.02	1.54	1.47
4	D	2	DT	N1-C2	5.02	1.42	1.38
4	H	2	DT	N1-C2	5.00	1.42	1.38

All (155) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	685	SER	N-CA-C	12.54	144.85	111.00
2	F	684	LYS	N-CA-C	-9.21	86.15	111.00
2	B	684	LYS	N-CA-C	-9.20	86.15	111.00
1	E	15	U	N3-C4-C5	8.90	119.94	114.60
1	A	15	U	N3-C4-C5	8.88	119.93	114.60
1	A	60	C	C6-N1-C2	-8.88	116.75	120.30
1	E	52	A	N1-C6-N6	-8.77	113.34	118.60
1	A	52	A	N1-C6-N6	-8.76	113.34	118.60
1	E	60	C	C6-N1-C2	-8.75	116.80	120.30
1	A	15	U	C6-N1-C2	8.23	125.94	121.00
1	E	15	U	C6-N1-C2	8.12	125.87	121.00
1	A	50	U	C2-N1-C1'	-8.10	107.98	117.70
1	E	50	U	C2-N1-C1'	-8.09	108.00	117.70
1	E	60	C	C2-N1-C1'	8.01	127.61	118.80
1	A	60	C	C2-N1-C1'	7.99	127.58	118.80
1	A	46	A	C8-N9-C4	-7.83	102.67	105.80
1	E	46	A	C8-N9-C4	-7.76	102.70	105.80
3	G	3	DA	O5'-P-OP2	-7.45	98.99	105.70
3	C	3	DA	O5'-P-OP2	-7.41	99.03	105.70
1	A	66	U	N3-C4-O4	7.27	124.49	119.40
1	E	66	U	N3-C4-O4	7.24	124.47	119.40
1	E	52	A	N9-C4-C5	7.11	108.64	105.80
1	E	52	A	C5-C6-N6	7.11	129.38	123.70
1	A	52	A	C5-C6-N6	7.08	129.37	123.70
1	A	52	A	N9-C4-C5	7.05	108.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	64	U	N3-C2-O2	-6.79	117.44	122.20
1	A	15	U	C5-C4-O4	-6.78	121.83	125.90
1	E	64	U	N3-C2-O2	-6.76	117.47	122.20
1	E	15	U	C5-C4-O4	-6.70	121.88	125.90
1	E	38	A	C8-N9-C4	6.57	108.43	105.80
2	F	200	PRO	CB-CA-C	6.57	128.42	112.00
1	E	52	A	C4-C5-N7	-6.51	107.44	110.70
1	A	52	A	C4-C5-N7	-6.50	107.45	110.70
1	A	60	C	C5-C6-N1	6.47	124.24	121.00
2	B	199	ASN	C-N-CD	6.40	141.84	128.40
2	F	199	ASN	C-N-CD	6.38	141.81	128.40
1	A	38	A	C8-N9-C4	6.38	108.35	105.80
1	E	60	C	C5-C6-N1	6.27	124.13	121.00
2	B	175	ASN	C-N-CD	6.24	141.51	128.40
2	F	799	HIS	C-N-CD	6.23	141.49	128.40
2	F	175	ASN	C-N-CD	6.23	141.49	128.40
2	B	799	HIS	C-N-CD	6.22	141.47	128.40
1	E	83	C	C6-N1-C2	-6.20	117.82	120.30
1	A	83	C	C6-N1-C2	-6.18	117.83	120.30
2	B	200	PRO	CB-CA-C	6.17	127.41	112.00
1	A	21	G	N3-C4-C5	6.14	131.67	128.60
1	E	21	G	N3-C4-C5	6.12	131.66	128.60
1	E	35	A	N1-C6-N6	6.09	122.25	118.60
2	B	116	HIS	C-N-CD	6.07	141.15	128.40
2	F	116	HIS	C-N-CD	6.07	141.15	128.40
2	F	1198	LEU	C-N-CD	6.05	141.11	128.40
2	B	1198	LEU	C-N-CD	6.05	141.11	128.40
1	A	35	A	N1-C6-N6	6.05	122.23	118.60
1	E	19	A	N1-C6-N6	6.03	122.22	118.60
2	F	201	ILE	N-CA-C	-6.00	94.80	111.00
2	F	536	LYS	C-N-CD	6.00	141.00	128.40
1	A	19	A	N1-C6-N6	5.99	122.20	118.60
2	B	755	LYS	C-N-CD	5.99	140.98	128.40
1	E	48	A	C8-N9-C4	-5.99	103.41	105.80
2	F	755	LYS	C-N-CD	5.98	140.97	128.40
2	B	536	LYS	C-N-CD	5.98	140.96	128.40
1	A	26	A	N1-C6-N6	5.96	122.17	118.60
1	A	48	A	C8-N9-C4	-5.94	103.42	105.80
1	E	26	A	N1-C6-N6	5.92	122.15	118.60
1	E	58	G	C8-N9-C4	-5.92	104.03	106.40
2	F	410	ILE	C-N-CD	5.88	140.74	128.40
2	F	377	LYS	C-N-CD	5.88	140.74	128.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	377	LYS	C-N-CD	5.86	140.71	128.40
1	E	68	A	C8-N9-C4	-5.86	103.46	105.80
2	B	410	ILE	C-N-CD	5.86	140.69	128.40
1	A	68	A	C8-N9-C4	-5.84	103.46	105.80
2	F	1089	MET	C-N-CD	5.84	140.66	128.40
2	F	1228	LEU	C-N-CD	5.83	140.64	128.40
2	B	1177	ASN	C-N-CD	5.82	140.63	128.40
2	B	1228	LEU	C-N-CD	5.82	140.62	128.40
2	F	842	VAL	C-N-CD	5.82	140.62	128.40
2	B	1089	MET	C-N-CD	5.82	140.61	128.40
2	B	842	VAL	C-N-CD	5.81	140.60	128.40
2	F	1177	ASN	C-N-CD	5.81	140.60	128.40
1	A	58	G	C8-N9-C4	-5.80	104.08	106.40
1	A	50	U	C6-N1-C1'	5.80	129.31	121.20
1	E	50	U	C6-N1-C1'	5.79	129.31	121.20
2	F	870	VAL	C-N-CD	5.79	140.55	128.40
2	F	508	LEU	C-N-CD	5.78	140.54	128.40
2	F	730	SER	C-N-CD	5.78	140.54	128.40
1	E	15	U	C2-N3-C4	-5.77	123.54	127.00
2	B	730	SER	C-N-CD	5.77	140.51	128.40
2	B	870	VAL	C-N-CD	5.76	140.50	128.40
1	A	15	U	C2-N3-C4	-5.75	123.55	127.00
1	A	65	A	N3-C4-C5	-5.75	122.78	126.80
2	B	315	ALA	C-N-CD	5.74	140.45	128.40
2	B	684	LYS	CB-CA-C	-5.73	98.93	110.40
2	B	508	LEU	C-N-CD	5.73	140.44	128.40
1	E	65	A	N3-C4-C5	-5.73	122.79	126.80
2	F	315	ALA	C-N-CD	5.72	140.41	128.40
2	F	684	LYS	CB-CA-C	-5.72	98.96	110.40
1	E	64	U	N1-C2-N3	5.72	118.33	114.90
1	A	64	U	N1-C2-N3	5.71	118.33	114.90
2	B	1136	SER	C-N-CD	5.70	140.38	128.40
2	F	1300	LYS	C-N-CD	5.69	140.35	128.40
2	B	343	LEU	C-N-CD	5.69	140.35	128.40
2	B	201	ILE	N-CA-C	-5.69	95.65	111.00
2	F	343	LEU	C-N-CD	5.68	140.33	128.40
2	B	1300	LYS	C-N-CD	5.68	140.33	128.40
2	F	1136	SER	C-N-CD	5.67	140.31	128.40
2	F	430	TYR	C-N-CD	5.67	140.30	128.40
1	E	60	C	N3-C4-C5	-5.65	119.64	121.90
2	B	430	TYR	C-N-CD	5.64	140.24	128.40
2	F	1060	ARG	C-N-CD	5.64	140.24	128.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	66	U	C5-C4-O4	-5.63	122.52	125.90
1	E	66	U	C5-C4-O4	-5.63	122.52	125.90
2	B	1060	ARG	C-N-CD	5.62	140.21	128.40
2	F	685	SER	N-CA-CB	-5.62	102.07	110.50
1	A	64	U	C6-N1-C2	-5.55	117.67	121.00
1	A	65	A	C2-N3-C4	5.55	113.37	110.60
2	B	1001	TYR	C-N-CD	5.55	140.06	128.40
1	E	64	U	C6-N1-C2	-5.54	117.68	121.00
1	E	65	A	C2-N3-C4	5.54	113.37	110.60
2	F	1001	TYR	C-N-CD	5.53	140.02	128.40
1	A	60	C	N3-C4-C5	-5.50	119.70	121.90
1	E	87	G	C8-N9-C4	-5.45	104.22	106.40
1	A	89	G	C8-N9-C4	5.42	108.57	106.40
1	A	87	G	C8-N9-C4	-5.41	104.24	106.40
1	E	60	C	N3-C4-N4	5.39	121.77	118.00
1	A	60	C	N3-C4-N4	5.38	121.77	118.00
1	E	89	G	C8-N9-C4	5.38	108.55	106.40
3	G	10	DT	N3-C4-O4	5.33	123.10	119.90
2	B	246	LEU	N-CA-C	-5.33	96.61	111.00
3	G	21	DC	C1'-O4'-C4'	-5.32	104.78	110.10
3	C	21	DC	C1'-O4'-C4'	-5.29	104.81	110.10
3	C	10	DT	N3-C4-O4	5.28	123.07	119.90
1	A	14	A	N1-C6-N6	5.24	121.74	118.60
1	E	94	U	C6-N1-C2	-5.20	117.88	121.00
2	B	200	PRO	CA-N-CD	-5.19	104.24	111.50
2	B	947	ASP	CB-CG-OD2	5.18	122.96	118.30
2	F	947	ASP	CB-CG-OD2	5.17	122.95	118.30
3	G	10	DT	C5-C4-O4	-5.16	121.29	124.90
3	C	10	DT	C5-C4-O4	-5.15	121.30	124.90
1	A	94	U	C6-N1-C2	-5.15	117.91	121.00
2	F	200	PRO	CA-N-CD	-5.14	104.30	111.50
3	C	22	DA	O4'-C1'-N9	5.14	111.60	108.00
1	A	9	U	N3-C2-O2	-5.13	118.61	122.20
2	F	1111	LEU	CA-CB-CG	5.09	127.01	115.30
2	B	1111	LEU	CA-CB-CG	5.09	127.01	115.30
3	G	22	DA	O4'-C1'-N9	5.08	111.56	108.00
1	E	48	A	N7-C8-N9	5.08	116.34	113.80
1	E	9	U	N3-C2-O2	-5.07	118.65	122.20
1	E	14	A	N1-C6-N6	5.07	121.64	118.60
1	A	48	A	N7-C8-N9	5.06	116.33	113.80
3	C	11	DT	O4'-C4'-C3'	-5.05	102.48	104.50
1	E	89	G	O4'-C1'-N9	-5.04	104.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	65	A	C4-C5-C6	5.03	119.52	117.00
1	E	38	A	N7-C8-N9	-5.02	111.29	113.80
1	A	89	G	O4'-C1'-N9	-5.02	104.18	108.20
3	G	11	DT	O4'-C4'-C3'	-5.02	102.49	104.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2009	0	1009	109	0
1	E	2009	0	1009	111	0
2	B	10827	0	10973	1508	0
2	F	10827	0	10972	1554	0
3	C	505	0	283	31	0
3	G	505	0	283	31	0
4	D	225	0	129	18	0
4	H	225	0	129	19	0
5	B	5	0	0	3	0
5	F	5	0	0	1	0
6	A	1	0	0	0	0
6	B	1	0	0	0	0
6	F	4	0	0	0	0
All	All	27148	0	24787	3189	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 62.

All (3189) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:181:VAL:HG11	2:F:300:ILE:CD1	1.14	1.57
2:B:181:VAL:HG11	2:B:300:ILE:CD1	1.14	1.57
2:F:342:GLN:HG3	2:F:383:MET:CE	1.09	1.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1270:ILE:HD12	2:F:1294:TYR:CE2	1.37	1.54
2:B:181:VAL:CG1	2:B:300:ILE:CD1	1.83	1.53
2:F:181:VAL:CG1	2:F:300:ILE:CD1	1.83	1.53
2:B:1270:ILE:HD12	2:B:1294:TYR:CE2	1.37	1.53
2:B:1270:ILE:CD1	2:B:1294:TYR:CE2	1.91	1.52
2:F:1270:ILE:CD1	2:F:1294:TYR:CE2	1.91	1.51
2:F:1294:TYR:HE1	2:F:1305:GLN:NE2	1.14	1.44
2:B:1294:TYR:HE1	2:B:1305:GLN:NE2	1.14	1.43
2:F:179:SER:CB	2:F:310:THR:CB	1.93	1.43
2:B:179:SER:CB	2:B:310:THR:CB	1.93	1.42
2:F:181:VAL:CG1	2:F:300:ILE:HD11	1.40	1.42
2:B:181:VAL:CG1	2:B:300:ILE:HD11	1.40	1.42
2:B:981:TYR:CZ	2:B:1092:VAL:HG12	1.54	1.41
2:F:981:TYR:CZ	2:F:1092:VAL:HG12	1.54	1.41
2:B:1000:LYS:NZ	2:B:1045:PHE:HD2	1.18	1.41
2:F:1000:LYS:NZ	2:F:1045:PHE:HD2	1.19	1.40
2:F:297:SER:OG	2:F:301:LEU:CD1	1.68	1.39
2:B:297:SER:OG	2:B:301:LEU:CD1	1.68	1.39
2:B:1270:ILE:CD1	2:B:1294:TYR:CD2	2.04	1.39
2:F:1270:ILE:CD1	2:F:1294:TYR:CD2	2.04	1.38
2:B:665:LYS:CA	2:B:669:GLY:HA3	1.53	1.37
2:F:665:LYS:CA	2:F:669:GLY:HA3	1.52	1.37
2:B:1000:LYS:HE3	2:B:1073:VAL:CG2	1.53	1.36
2:F:342:GLN:CG	2:F:383:MET:CE	2.01	1.36
2:F:1000:LYS:HE3	2:F:1073:VAL:CG2	1.53	1.36
2:F:324:ARG:HD3	2:F:400:ARG:CG	1.55	1.34
2:F:1000:LYS:CE	2:F:1073:VAL:CG2	2.07	1.33
2:B:1000:LYS:CE	2:B:1073:VAL:CG2	2.07	1.33
2:F:1000:LYS:CE	2:F:1073:VAL:HG21	1.56	1.33
2:F:324:ARG:NH2	2:F:400:ARG:NH1	1.77	1.32
2:F:530:VAL:CG2	2:F:537:PRO:HB3	1.57	1.32
2:B:1000:LYS:CE	2:B:1073:VAL:HG21	1.56	1.32
2:F:179:SER:HB2	2:F:310:THR:CB	1.51	1.32
2:B:179:SER:HB2	2:B:310:THR:CB	1.51	1.32
2:B:530:VAL:CG2	2:B:537:PRO:HB3	1.57	1.31
2:F:1000:LYS:NZ	2:F:1045:PHE:CD2	1.96	1.31
2:B:1000:LYS:NZ	2:B:1045:PHE:CD2	1.95	1.30
2:B:178:ASN:O	2:B:299:ALA:CB	1.80	1.28
2:F:178:ASN:O	2:F:299:ALA:CB	1.80	1.28
2:F:1294:TYR:CE1	2:F:1305:GLN:NE2	2.00	1.28
2:B:557:ARG:HH22	2:B:599:LYS:NZ	1.28	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:324:ARG:CZ	2:F:400:ARG:HH11	1.45	1.28
2:B:1060:ARG:NH1	2:B:1064:GLU:OE2	1.66	1.27
2:B:1294:TYR:CE1	2:B:1305:GLN:NE2	2.00	1.27
2:F:324:ARG:CD	2:F:400:ARG:HG2	1.64	1.27
2:F:557:ARG:HH22	2:F:599:LYS:NZ	1.28	1.27
2:F:1060:ARG:NH1	2:F:1064:GLU:OE2	1.66	1.26
2:F:178:ASN:O	2:F:299:ALA:HB1	1.14	1.26
2:B:178:ASN:O	2:B:299:ALA:HB1	1.14	1.26
2:B:178:ASN:HB3	2:B:299:ALA:CB	1.65	1.26
2:F:181:VAL:CG2	2:F:209:LYS:CG	2.12	1.25
2:B:181:VAL:CG2	2:B:209:LYS:CG	2.12	1.25
2:F:178:ASN:HB3	2:F:299:ALA:CB	1.65	1.25
2:F:195:LEU:HD21	2:F:286:TYR:CD2	1.72	1.24
2:B:195:LEU:HD21	2:B:286:TYR:CD2	1.71	1.24
2:B:178:ASN:CB	2:B:299:ALA:HB2	1.69	1.22
2:F:178:ASN:CB	2:F:299:ALA:HB2	1.69	1.22
2:F:207:ASP:HB3	2:F:210:ALA:CB	1.69	1.22
2:B:780:ARG:NH1	2:B:812:TYR:CD2	2.08	1.22
2:B:207:ASP:HB3	2:B:210:ALA:CB	1.69	1.22
2:F:780:ARG:NH1	2:F:812:TYR:CD2	2.08	1.22
2:F:324:ARG:NH2	2:F:400:ARG:HH11	1.30	1.21
2:F:665:LYS:HA	2:F:669:GLY:CA	1.70	1.21
2:B:665:LYS:HA	2:B:669:GLY:CA	1.70	1.21
2:F:979:ASN:ND2	2:F:981:TYR:CD1	2.09	1.20
2:F:672:ASP:OD1	2:F:703:THR:HG22	1.02	1.19
2:F:1251:ASP:HA	2:F:1254:GLN:NE2	1.57	1.19
2:B:672:ASP:OD1	2:B:703:THR:HG22	1.02	1.18
2:B:1251:ASP:HA	2:B:1254:GLN:NE2	1.57	1.18
2:B:1146:VAL:HG11	2:B:1194:LEU:CD1	1.73	1.18
2:B:870:VAL:HG23	2:B:908:LEU:HG	1.26	1.18
2:F:297:SER:OG	2:F:301:LEU:HD11	1.43	1.18
2:F:870:VAL:HG23	2:F:908:LEU:HG	1.26	1.18
2:F:1146:VAL:HG11	2:F:1194:LEU:CD1	1.73	1.18
2:B:297:SER:OG	2:B:301:LEU:HD11	1.43	1.17
2:F:926:GLN:HA	2:F:929:LYS:HG3	1.22	1.16
2:F:755:LYS:NZ	2:F:939:MET:O	1.78	1.16
2:B:755:LYS:NZ	2:B:939:MET:O	1.78	1.16
2:B:926:GLN:HA	2:B:929:LYS:HG3	1.21	1.16
2:B:195:LEU:CD2	2:B:286:TYR:CD2	2.27	1.16
2:F:195:LEU:CD2	2:F:286:TYR:CD2	2.27	1.16
2:F:905:ARG:NH1	3:G:24:DG:OP1	1.78	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:905:ARG:NH1	3:C:24:DG:OP1	1.78	1.15
2:F:207:ASP:CB	2:F:210:ALA:HB3	1.74	1.15
2:B:207:ASP:CB	2:B:210:ALA:HB3	1.74	1.14
2:B:981:TYR:CE2	2:B:1092:VAL:CG1	2.30	1.14
2:F:362:TYR:HD1	2:F:372:PHE:CD2	1.65	1.14
2:F:981:TYR:CE2	2:F:1092:VAL:CG1	2.30	1.14
2:F:178:ASN:ND2	2:F:298:ASP:HB2	1.62	1.14
2:F:297:SER:OG	2:F:301:LEU:HD12	1.42	1.13
2:B:178:ASN:ND2	2:B:298:ASP:HB2	1.62	1.13
2:F:342:GLN:HG3	2:F:383:MET:HE2	1.28	1.12
2:B:297:SER:OG	2:B:301:LEU:HD12	1.42	1.12
2:B:1251:ASP:HA	2:B:1254:GLN:CD	1.69	1.12
2:F:362:TYR:CD1	2:F:372:PHE:CD2	2.38	1.12
2:F:1251:ASP:HA	2:F:1254:GLN:CD	1.69	1.12
2:F:178:ASN:ND2	2:F:298:ASP:CB	2.12	1.12
2:F:1270:ILE:HD12	2:F:1294:TYR:CD2	1.78	1.12
2:B:178:ASN:ND2	2:B:298:ASP:CB	2.12	1.12
2:B:278:LEU:HD11	2:B:282:ILE:HD11	1.28	1.12
2:F:1062:LEU:O	2:F:1076:LYS:HG3	1.45	1.12
2:B:1270:ILE:HD12	2:B:1294:TYR:CD2	1.78	1.11
2:B:672:ASP:OD1	2:B:703:THR:CG2	1.97	1.11
2:F:181:VAL:CG2	2:F:209:LYS:HG3	1.79	1.11
2:B:181:VAL:CG2	2:B:209:LYS:HG3	1.79	1.11
2:F:278:LEU:HD11	2:F:282:ILE:HD11	1.28	1.11
2:F:672:ASP:OD1	2:F:703:THR:CG2	1.97	1.11
2:B:1062:LEU:O	2:B:1076:LYS:HG3	1.46	1.11
2:F:181:VAL:CG1	2:F:300:ILE:HD13	1.60	1.11
2:F:179:SER:HB3	2:F:310:THR:CB	1.71	1.10
2:F:1205:GLU:O	2:F:1346:THR:OG1	1.69	1.10
2:B:1205:GLU:O	2:B:1346:THR:OG1	1.69	1.10
2:F:324:ARG:CD	2:F:400:ARG:CG	2.24	1.10
2:B:974:LYS:NZ	2:B:976:ARG:HH12	1.49	1.10
2:F:810:LYS:O	2:F:833:LEU:CD1	1.99	1.10
2:B:58:THR:HG22	2:B:731:PRO:HG3	1.30	1.10
2:B:181:VAL:CG1	2:B:300:ILE:HD13	1.60	1.10
2:F:58:THR:HG22	2:F:731:PRO:HG3	1.30	1.10
2:B:378:PRO:HG2	2:B:379:ILE:HD12	1.15	1.09
2:B:121:ASN:HD21	2:B:124:ASP:HB2	1.15	1.09
2:B:179:SER:HB3	2:B:310:THR:CB	1.71	1.09
2:B:810:LYS:O	2:B:833:LEU:CD1	1.99	1.09
2:F:107:VAL:HG22	2:F:1131:TYR:OH	1.51	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:195:LEU:CD2	2:F:286:TYR:CE2	2.36	1.09
2:F:324:ARG:HD3	2:F:400:ARG:HG3	1.11	1.09
2:F:378:PRO:HG2	2:F:379:ILE:HD12	1.15	1.09
2:B:195:LEU:CD2	2:B:286:TYR:CE2	2.36	1.09
2:B:107:VAL:HG22	2:B:1131:TYR:OH	1.51	1.08
2:B:530:VAL:HG22	2:B:537:PRO:HB3	1.23	1.08
2:F:121:ASN:HD21	2:F:124:ASP:HB2	1.15	1.08
2:B:557:ARG:NH2	2:B:599:LYS:NZ	2.00	1.08
2:F:704:PHE:O	2:F:708:ILE:HG12	1.51	1.08
2:F:914:ALA:HB1	2:F:1035:LYS:HD3	1.29	1.08
2:F:1146:VAL:CG1	2:F:1194:LEU:HD12	1.84	1.08
1:A:63:U:O2'	2:B:62:THR:HG23	1.54	1.08
2:B:704:PHE:O	2:B:708:ILE:HG12	1.51	1.08
2:B:981:TYR:CZ	2:B:1092:VAL:CG1	2.36	1.08
2:B:1146:VAL:CG1	2:B:1194:LEU:HD12	1.84	1.08
2:F:557:ARG:NH2	2:F:599:LYS:NZ	2.00	1.08
2:F:981:TYR:CZ	2:F:1092:VAL:CG1	2.36	1.08
1:E:63:U:O2'	2:F:62:THR:HG23	1.54	1.08
2:F:335:LEU:O	2:F:339:VAL:HG23	1.53	1.08
2:F:530:VAL:HG22	2:F:537:PRO:HB3	1.23	1.08
2:F:1062:LEU:HA	2:F:1076:LYS:HD2	1.36	1.08
2:B:914:ALA:HB1	2:B:1035:LYS:HD3	1.29	1.07
2:B:1062:LEU:HA	2:B:1076:LYS:HD2	1.36	1.07
2:B:1326:TYR:CE2	2:B:1327:PHE:CE2	2.41	1.07
2:F:1270:ILE:HD13	2:F:1294:TYR:CD2	1.80	1.07
2:F:1326:TYR:CE2	2:F:1327:PHE:CE2	2.41	1.07
2:B:335:LEU:O	2:B:339:VAL:HG23	1.53	1.07
2:B:551:LEU:O	2:B:555:THR:OG1	1.71	1.07
2:B:832:ARG:NH1	2:B:835:ASP:OD2	1.88	1.07
2:F:832:ARG:NH1	2:F:835:ASP:OD2	1.88	1.07
2:F:551:LEU:O	2:F:555:THR:OG1	1.71	1.07
2:B:1270:ILE:HD13	2:B:1294:TYR:CD2	1.80	1.06
2:B:14:ASN:OD1	2:B:55:SER:OG	1.71	1.06
2:B:1270:ILE:HD11	2:B:1294:TYR:CE2	1.87	1.06
2:F:668:ASN:OD1	2:F:678:THR:OG1	1.74	1.06
2:B:278:LEU:CD1	2:B:282:ILE:HD11	1.86	1.06
2:B:668:ASN:OD1	2:B:678:THR:OG1	1.74	1.06
2:F:1000:LYS:HE3	2:F:1073:VAL:HG23	1.38	1.06
2:B:215:ARG:NE	2:B:215:ARG:O	1.88	1.05
2:F:278:LEU:CD1	2:F:282:ILE:HD11	1.86	1.05
2:F:14:ASN:OD1	2:F:55:SER:OG	1.71	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:215:ARG:O	2:F:215:ARG:NE	1.88	1.05
2:F:665:LYS:O	2:F:669:GLY:CA	2.04	1.05
1:A:19:A:H4'	2:B:407:ASN:O	1.57	1.05
2:B:665:LYS:O	2:B:669:GLY:CA	2.04	1.05
2:F:273:ASP:O	2:F:277:ASN:N	1.88	1.05
2:F:324:ARG:NE	2:F:400:ARG:HG2	1.70	1.05
2:F:806:LEU:HD22	2:F:811:LEU:HD12	1.32	1.05
2:B:273:ASP:O	2:B:277:ASN:N	1.88	1.05
2:B:1292:SER:OG	2:B:1296:LYS:NZ	1.88	1.05
1:E:19:A:H4'	2:F:407:ASN:O	1.57	1.05
2:B:1000:LYS:HE3	2:B:1073:VAL:HG23	1.38	1.05
2:F:1270:ILE:HD11	2:F:1294:TYR:CE2	1.87	1.05
2:B:530:VAL:HG22	2:B:537:PRO:CB	1.86	1.04
2:B:596:ASP:OD2	2:B:656:TYR:OH	1.75	1.04
2:B:806:LEU:HD22	2:B:811:LEU:HD12	1.32	1.04
2:F:596:ASP:OD2	2:F:656:TYR:OH	1.75	1.04
2:B:981:TYR:CE2	2:B:1092:VAL:HG12	1.92	1.04
2:F:342:GLN:HG3	2:F:383:MET:HE1	1.36	1.04
2:F:530:VAL:HG22	2:F:537:PRO:CB	1.86	1.04
2:F:1292:SER:OG	2:F:1296:LYS:NZ	1.88	1.04
2:B:665:LYS:HA	2:B:669:GLY:HA3	1.09	1.04
2:F:393:LEU:HD12	2:F:398:LEU:HD12	1.08	1.04
2:B:704:PHE:O	2:B:708:ILE:CG1	2.05	1.04
2:F:704:PHE:O	2:F:708:ILE:CG1	2.05	1.04
2:B:275:LEU:HD12	2:B:279:LEU:HB2	1.40	1.03
2:F:665:LYS:HA	2:F:669:GLY:HA3	1.08	1.03
2:B:393:LEU:HD12	2:B:398:LEU:HD12	1.08	1.03
2:B:846:PHE:O	2:B:916:PHE:HB3	1.57	1.03
2:F:275:LEU:HD12	2:F:279:LEU:HB2	1.40	1.03
2:F:665:LYS:C	2:F:669:GLY:HA3	1.77	1.03
2:B:181:VAL:HG11	2:B:300:ILE:HD13	1.20	1.02
2:B:665:LYS:C	2:B:669:GLY:HA3	1.77	1.02
2:B:672:ASP:HA	2:B:703:THR:CG2	1.89	1.02
2:F:846:PHE:O	2:F:916:PHE:HB3	1.57	1.02
2:B:1326:TYR:CE2	2:B:1327:PHE:HE2	1.76	1.02
2:F:672:ASP:HA	2:F:703:THR:CG2	1.89	1.02
2:F:978:ILE:HG12	2:F:1313:PHE:CE2	1.93	1.02
2:F:70:ARG:NH2	2:F:462:PHE:HD2	1.56	1.02
2:F:1326:TYR:CE2	2:F:1327:PHE:HE2	1.76	1.02
2:B:1143:VAL:CG1	2:B:1195:ILE:CG2	2.38	1.02
2:F:1143:VAL:CG1	2:F:1195:ILE:CG2	2.38	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:70:ARG:NH2	2:B:462:PHE:HD2	1.56	1.01
2:F:342:GLN:CG	2:F:383:MET:HE2	1.83	1.01
2:F:1000:LYS:HE2	2:F:1073:VAL:CG2	1.87	1.01
2:B:1000:LYS:HE2	2:B:1073:VAL:CG2	1.87	1.01
2:F:641:HIS:CD2	2:F:642:LEU:HG	1.95	1.01
1:A:59:U:OP1	2:B:467:ARG:NH2	1.93	1.01
2:B:525:THR:HG23	2:B:690:ASN:HD22	1.22	1.01
2:B:641:HIS:CD2	2:B:642:LEU:HG	1.95	1.01
1:E:59:U:OP1	2:F:467:ARG:NH2	1.93	1.01
2:F:181:VAL:HG11	2:F:300:ILE:HD13	1.20	1.01
2:F:378:PRO:HG2	2:F:379:ILE:CD1	1.91	1.01
2:B:378:PRO:HG2	2:B:379:ILE:CD1	1.91	1.00
2:B:1239:ALA:HB1	2:B:1306:ALA:HB1	1.40	1.00
2:F:1239:ALA:HB1	2:F:1306:ALA:HB1	1.40	1.00
2:B:376:ILE:HD12	2:B:376:ILE:H	1.27	1.00
2:F:195:LEU:HD23	2:F:286:TYR:CE2	1.97	1.00
2:F:376:ILE:H	2:F:376:ILE:HD12	1.27	1.00
2:B:114:GLU:OE2	2:B:120:GLY:O	1.77	1.00
2:B:195:LEU:HD23	2:B:286:TYR:CE2	1.97	1.00
2:B:979:ASN:ND2	2:B:981:TYR:CD1	2.26	1.00
2:F:114:GLU:OE2	2:F:120:GLY:O	1.77	1.00
2:F:780:ARG:NH1	2:F:812:TYR:HD2	1.53	1.00
2:F:530:VAL:HG21	2:F:537:PRO:HB3	1.42	0.99
2:B:178:ASN:HB3	2:B:299:ALA:HB2	1.03	0.99
2:B:1305:GLN:HA	2:B:1327:PHE:CZ	1.97	0.99
2:F:178:ASN:HB3	2:F:299:ALA:HB2	1.03	0.99
2:F:528:LYS:HB2	2:F:581:SER:OG	1.63	0.99
2:F:1305:GLN:HA	2:F:1327:PHE:CZ	1.97	0.99
2:B:530:VAL:HG21	2:B:537:PRO:HB3	1.42	0.99
2:B:393:LEU:CD1	2:B:398:LEU:HD12	1.91	0.99
2:F:393:LEU:CD1	2:F:398:LEU:HD12	1.91	0.99
2:F:696:LEU:CD1	2:F:702:LEU:CD1	2.40	0.99
2:B:393:LEU:HD12	2:B:398:LEU:CD1	1.93	0.99
2:B:528:LYS:HB2	2:B:581:SER:OG	1.63	0.99
2:B:696:LEU:CD1	2:B:702:LEU:CD1	2.40	0.99
2:F:340:ARG:O	2:F:344:PRO:HG3	1.61	0.99
2:F:1305:GLN:HA	2:F:1327:PHE:HZ	1.26	0.99
2:B:340:ARG:O	2:B:344:PRO:HG3	1.61	0.99
2:F:1230:SER:HA	2:F:1233:VAL:HG23	1.45	0.99
2:B:249:THR:HG22	2:B:265:GLN:NE2	1.78	0.99
2:F:359:TYR:HE1	2:F:399:LEU:HD23	1.26	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:393:LEU:HD12	2:F:398:LEU:CD1	1.93	0.99
2:F:70:ARG:NH2	2:F:462:PHE:CD2	2.31	0.98
2:B:1230:SER:HA	2:B:1233:VAL:HG23	1.45	0.98
2:B:1305:GLN:HA	2:B:1327:PHE:HZ	1.26	0.98
2:B:70:ARG:NH2	2:B:462:PHE:CD2	2.31	0.98
2:F:945:GLU:OE1	2:F:945:GLU:N	1.94	0.98
2:B:945:GLU:N	2:B:945:GLU:OE1	1.94	0.98
2:B:849:ASP:HB3	2:B:854:ASN:HD22	1.29	0.98
2:F:981:TYR:CE2	2:F:1092:VAL:HG12	1.92	0.98
2:F:849:ASP:HB3	2:F:854:ASN:HD22	1.29	0.98
2:B:277:ASN:HD22	2:B:653:ARG:HD3	1.27	0.98
2:B:780:ARG:NH1	2:B:812:TYR:HD2	1.53	0.98
2:F:704:PHE:O	2:F:708:ILE:CD1	2.12	0.98
2:B:704:PHE:O	2:B:708:ILE:CD1	2.12	0.98
2:F:181:VAL:HG21	2:F:209:LYS:CG	1.93	0.97
2:F:525:THR:HG22	2:F:690:ASN:HB3	1.43	0.97
2:F:1062:LEU:CD2	2:F:1063:ILE:HG13	1.93	0.97
2:B:1146:VAL:HG11	2:B:1194:LEU:HD12	0.98	0.97
2:F:195:LEU:HD21	2:F:286:TYR:CE2	1.99	0.97
2:B:311:GLU:OE1	2:B:311:GLU:N	1.97	0.97
2:F:311:GLU:OE1	2:F:311:GLU:N	1.97	0.97
2:F:1146:VAL:HG11	2:F:1194:LEU:HD12	0.98	0.97
2:B:195:LEU:HD21	2:B:286:TYR:CE2	1.99	0.97
2:B:207:ASP:HB3	2:B:210:ALA:HB3	0.98	0.97
2:B:1210:ARG:HH22	2:B:1341:GLU:CD	1.66	0.97
2:F:207:ASP:HB3	2:F:210:ALA:HB3	0.98	0.97
2:F:277:ASN:HD22	2:F:653:ARG:HD3	1.26	0.97
2:F:1270:ILE:HD12	2:F:1294:TYR:HE2	1.25	0.97
2:B:181:VAL:HG21	2:B:209:LYS:CG	1.93	0.97
2:B:1000:LYS:HE3	2:B:1073:VAL:HG21	1.19	0.97
2:B:1062:LEU:CD2	2:B:1063:ILE:HG13	1.93	0.97
2:B:181:VAL:HG21	2:B:209:LYS:HG2	1.44	0.97
2:B:372:PHE:O	2:B:376:ILE:HD11	1.65	0.97
2:F:372:PHE:O	2:F:376:ILE:HD11	1.65	0.97
2:F:343:LEU:HD21	2:F:346:LYS:HB2	1.44	0.97
2:B:343:LEU:HD21	2:B:346:LYS:HB2	1.44	0.97
2:B:1143:VAL:HG11	2:B:1195:ILE:CG2	1.95	0.97
2:B:1270:ILE:HD12	2:B:1294:TYR:HE2	1.25	0.97
2:F:1143:VAL:HG11	2:F:1195:ILE:CG2	1.95	0.97
2:F:1224:ASN:CG	2:F:1280:VAL:HG11	1.85	0.97
2:B:178:ASN:HB3	2:B:299:ALA:CA	1.95	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1224:ASN:CG	2:B:1280:VAL:HG11	1.85	0.96
2:F:1210:ARG:HH22	2:F:1341:GLU:CD	1.66	0.96
2:B:279:LEU:HD11	2:B:287:ALA:HA	1.47	0.96
2:F:279:LEU:HD11	2:F:287:ALA:HA	1.47	0.96
2:B:686:ASP:OD2	2:B:691:ARG:N	1.96	0.96
2:F:178:ASN:HB3	2:F:299:ALA:CA	1.95	0.96
2:F:181:VAL:CG2	2:F:209:LYS:HG2	1.95	0.96
2:F:279:LEU:HD11	2:F:287:ALA:CA	1.95	0.96
2:F:181:VAL:HG21	2:F:209:LYS:HG2	1.43	0.96
2:F:181:VAL:HG12	2:F:300:ILE:CD1	1.94	0.96
2:F:279:LEU:HD11	2:F:287:ALA:CB	1.95	0.96
2:F:979:ASN:HD21	2:F:981:TYR:HD1	1.10	0.96
3:C:24:DG:H2''	3:C:25:DG:H5'	1.47	0.96
2:F:1326:TYR:HE2	2:F:1327:PHE:CE2	1.80	0.96
2:B:279:LEU:HD11	2:B:287:ALA:CA	1.95	0.96
2:F:340:ARG:O	2:F:344:PRO:CG	2.14	0.96
2:B:279:LEU:HD11	2:B:287:ALA:CB	1.95	0.96
2:B:340:ARG:O	2:B:344:PRO:CG	2.14	0.96
2:B:432:PHE:O	2:B:436:ASN:ND2	1.99	0.96
2:B:181:VAL:CG2	2:B:209:LYS:HG2	1.95	0.95
2:B:1326:TYR:HE2	2:B:1327:PHE:CE2	1.80	0.95
2:F:432:PHE:O	2:F:436:ASN:ND2	1.99	0.95
3:G:24:DG:H2''	3:G:25:DG:H5'	1.46	0.95
2:B:681:ASP:O	2:B:684:LYS:O	1.83	0.95
2:F:184:LEU:HD12	2:F:296:LEU:HA	1.47	0.95
2:F:359:TYR:CE1	2:F:399:LEU:HD23	2.01	0.95
2:F:681:ASP:O	2:F:684:LYS:O	1.83	0.95
2:F:1000:LYS:HE3	2:F:1073:VAL:HG21	1.18	0.95
2:B:181:VAL:HG12	2:B:300:ILE:CD1	1.93	0.95
2:B:278:LEU:HD11	2:B:282:ILE:CD1	1.96	0.95
2:F:318:SER:OG	2:F:418:GLU:OE2	1.82	0.95
2:B:184:LEU:HD12	2:B:296:LEU:HA	1.47	0.95
2:F:278:LEU:HD11	2:F:282:ILE:CD1	1.96	0.95
2:B:70:ARG:HH22	2:B:462:PHE:HB2	1.32	0.95
2:B:244:LEU:HG	2:B:266:LEU:CD1	1.96	0.95
2:B:870:VAL:CG2	2:B:908:LEU:HG	1.96	0.95
2:F:70:ARG:HH22	2:F:462:PHE:HB2	1.32	0.95
2:F:244:LEU:HG	2:F:266:LEU:CD1	1.96	0.95
3:G:23:DC:H2''	3:G:24:DG:H5'	1.44	0.95
2:F:870:VAL:CG2	2:F:908:LEU:HG	1.96	0.95
2:B:1148:LYS:HB3	2:B:1158:LYS:O	1.65	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1148:LYS:HB3	2:F:1158:LYS:O	1.65	0.94
2:F:1313:PHE:O	2:F:1316:THR:OG1	1.85	0.94
2:B:1313:PHE:O	2:B:1316:THR:OG1	1.85	0.94
3:C:23:DC:H2''	3:C:24:DG:H5'	1.44	0.94
2:B:342:GLN:OE1	2:B:384:ASP:O	1.86	0.94
2:F:844:GLN:HE21	2:F:848:LYS:HG2	1.32	0.94
2:F:248:LEU:HD13	2:F:249:THR:H	1.29	0.94
2:F:784:ILE:HG22	2:F:788:ILE:HD11	1.50	0.94
2:B:1204:PHE:CE2	2:B:1214:LEU:HD12	2.03	0.94
2:F:696:LEU:HD13	2:F:702:LEU:CD1	1.97	0.94
2:F:1135:ASP:OD1	2:F:1136:SER:OG	1.85	0.94
1:A:89:G:N1	2:B:1272:GLN:OE1	2.01	0.94
2:B:784:ILE:HG22	2:B:788:ILE:HD11	1.50	0.94
2:B:844:GLN:HE21	2:B:848:LYS:HG2	1.32	0.94
2:B:1171:ARG:HG2	2:B:1171:ARG:HH11	1.33	0.94
1:E:89:G:N1	2:F:1272:GLN:OE1	2.01	0.94
2:F:1204:PHE:CE2	2:F:1214:LEU:HD12	2.03	0.94
2:B:181:VAL:HG22	2:B:209:LYS:HG3	1.47	0.94
2:B:696:LEU:HD13	2:B:702:LEU:CD1	1.97	0.94
2:B:1135:ASP:OD1	2:B:1136:SER:OG	1.85	0.94
2:B:525:THR:HG22	2:B:690:ASN:HB3	1.49	0.94
2:F:275:LEU:O	2:F:279:LEU:N	2.01	0.94
2:F:1171:ARG:HG2	2:F:1171:ARG:HH11	1.33	0.94
2:B:275:LEU:O	2:B:279:LEU:N	2.01	0.93
2:F:703:THR:OG1	2:F:707:ASP:OD2	1.85	0.93
2:B:359:TYR:HE1	2:B:399:LEU:HD23	1.30	0.93
2:F:181:VAL:HG22	2:F:209:LYS:HG3	1.47	0.93
1:A:32:A:N6	1:A:37:U:O4	2.01	0.93
2:B:703:THR:OG1	2:B:707:ASP:OD2	1.85	0.93
2:F:1314:THR:HG21	2:F:1324:PHE:CB	1.98	0.93
2:B:1273:ILE:O	2:B:1277:SER:OG	1.85	0.93
1:E:32:A:N6	1:E:37:U:O4	2.01	0.93
2:B:1224:ASN:OD1	2:B:1280:VAL:HG11	1.68	0.93
2:B:1314:THR:HG21	2:B:1324:PHE:CB	1.98	0.93
2:F:342:GLN:HG3	2:F:383:MET:HE3	0.95	0.93
2:F:806:LEU:CD2	2:F:811:LEU:HD12	1.97	0.93
1:A:57:A:H5'	2:B:457:ARG:NH2	1.83	0.93
2:B:806:LEU:CD2	2:B:811:LEU:HD12	1.97	0.93
2:F:1273:ILE:O	2:F:1277:SER:OG	1.85	0.93
1:E:57:A:H5'	2:F:457:ARG:NH2	1.83	0.93
2:F:1224:ASN:OD1	2:F:1280:VAL:HG11	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1105:PHE:CD2	2:B:1169:MET:HG3	2.04	0.93
2:F:1105:PHE:CD2	2:F:1169:MET:HG3	2.04	0.93
2:F:1326:TYR:HE2	2:F:1327:PHE:HE2	0.98	0.92
1:A:63:U:H2'	2:B:62:THR:CG2	1.99	0.92
1:E:63:U:H2'	2:F:62:THR:CG2	1.99	0.92
1:A:24:U:O2	2:B:105:PHE:CD1	2.23	0.92
2:F:248:LEU:HD13	2:F:249:THR:N	1.84	0.92
2:B:1045:PHE:CZ	2:B:1046:PHE:CE2	2.57	0.92
2:F:1045:PHE:CZ	2:F:1046:PHE:CE2	2.57	0.92
2:B:299:ALA:O	2:B:302:LEU:CD2	2.18	0.92
2:B:181:VAL:HG21	2:B:209:LYS:HA	1.52	0.92
2:B:691:ARG:NH1	2:B:699:ASP:OD2	2.03	0.92
2:F:691:ARG:NH1	2:F:699:ASP:OD2	2.03	0.92
1:E:24:U:O2	2:F:105:PHE:CD1	2.23	0.91
2:F:181:VAL:HG21	2:F:209:LYS:HA	1.52	0.91
2:F:299:ALA:O	2:F:302:LEU:CD2	2.18	0.91
2:F:305:ILE:HD13	2:F:306:LEU:N	1.84	0.91
2:B:285:GLN:OE1	2:B:285:GLN:N	2.03	0.91
2:F:181:VAL:HG12	2:F:300:ILE:HD11	1.52	0.91
2:F:297:SER:HG	2:F:301:LEU:HD11	1.33	0.91
2:F:1260:GLU:HA	2:F:1263:LYS:HB2	1.51	0.91
2:F:195:LEU:HD23	2:F:286:TYR:HE2	1.29	0.91
2:F:285:GLN:OE1	2:F:285:GLN:N	2.03	0.91
2:B:195:LEU:CD2	2:B:286:TYR:HD2	1.81	0.91
2:B:195:LEU:HD23	2:B:286:TYR:HE2	1.29	0.91
2:B:305:ILE:HD13	2:B:306:LEU:N	1.84	0.91
2:F:209:LYS:O	2:F:213:SER:CB	2.19	0.91
2:F:970:PHE:HE1	2:F:1080:PHE:HZ	1.18	0.91
2:B:178:ASN:CA	2:B:299:ALA:HB2	2.01	0.91
2:B:1000:LYS:NZ	2:B:1064:GLU:HG3	1.85	0.91
2:B:1260:GLU:HA	2:B:1263:LYS:HB2	1.51	0.91
2:F:178:ASN:CA	2:F:299:ALA:HB2	2.01	0.91
2:B:209:LYS:O	2:B:213:SER:CB	2.19	0.91
2:B:1210:ARG:NH2	2:B:1341:GLU:CD	2.24	0.91
2:B:1294:TYR:HE1	2:B:1305:GLN:HE22	1.14	0.91
2:B:181:VAL:HG12	2:B:300:ILE:HD11	1.52	0.91
2:B:569:PHE:O	2:B:574:CYS:N	2.04	0.91
2:B:665:LYS:O	2:B:669:GLY:HA3	1.68	0.91
2:B:1270:ILE:HD11	2:B:1294:TYR:CZ	2.06	0.91
2:F:1210:ARG:NH2	2:F:1341:GLU:CD	2.24	0.91
3:G:23:DC:C2'	3:G:24:DG:H5'	2.01	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:849:ASP:OD1	2:B:851:SER:OG	1.88	0.90
1:E:63:U:C2'	2:F:62:THR:CG2	2.49	0.90
2:F:665:LYS:O	2:F:669:GLY:HA3	1.68	0.90
2:F:849:ASP:OD1	2:F:851:SER:OG	1.88	0.90
2:F:1000:LYS:NZ	2:F:1064:GLU:HG3	1.85	0.90
2:F:1230:SER:HA	2:F:1233:VAL:CG2	2.01	0.90
2:B:926:GLN:CA	2:B:929:LYS:HG3	2.02	0.90
2:B:970:PHE:HE1	2:B:1080:PHE:HZ	1.18	0.90
3:C:23:DC:C2'	3:C:24:DG:H5'	2.01	0.90
2:F:569:PHE:O	2:F:574:CYS:N	2.04	0.90
2:F:1270:ILE:HD11	2:F:1294:TYR:CZ	2.06	0.90
1:A:63:U:C2'	2:B:62:THR:CG2	2.49	0.90
2:F:305:ILE:HD13	2:F:306:LEU:H	1.36	0.90
2:B:557:ARG:HH11	2:B:557:ARG:HG3	1.34	0.90
2:F:342:GLN:HE22	2:F:384:ASP:HB2	1.37	0.90
2:B:1230:SER:HA	2:B:1233:VAL:CG2	2.01	0.90
2:F:926:GLN:CA	2:F:929:LYS:HG3	2.02	0.90
2:B:1000:LYS:CG	2:B:1073:VAL:HG21	2.02	0.90
2:F:1294:TYR:HE1	2:F:1305:GLN:HE22	1.13	0.90
2:B:755:LYS:HD3	2:B:939:MET:CE	2.02	0.90
2:F:1000:LYS:CG	2:F:1073:VAL:HG21	2.02	0.90
2:F:1091:GLN:O	2:F:1091:GLN:NE2	2.05	0.90
2:B:305:ILE:HD13	2:B:306:LEU:H	1.35	0.89
2:B:1091:GLN:NE2	2:B:1091:GLN:O	2.05	0.89
2:B:1243:GLU:O	2:B:1244:LYS:NZ	2.05	0.89
1:E:63:U:C2'	2:F:62:THR:HG23	2.02	0.89
2:F:178:ASN:HD22	2:F:298:ASP:CB	1.86	0.89
2:F:195:LEU:CD2	2:F:286:TYR:HD2	1.81	0.89
2:F:755:LYS:HD3	2:F:939:MET:CE	2.02	0.89
2:F:1243:GLU:O	2:F:1244:LYS:NZ	2.05	0.89
2:B:1114:ARG:NH1	4:D:9:DA:OP1	2.04	0.89
2:B:1221:GLN:NE2	4:D:6:DG:OP2	2.05	0.89
2:B:1326:TYR:HE2	2:B:1327:PHE:HE2	0.98	0.89
2:F:318:SER:OG	2:F:418:GLU:CD	2.09	0.89
2:B:178:ASN:HD22	2:B:298:ASP:CB	1.86	0.89
2:F:178:ASN:ND2	2:F:298:ASP:HB3	1.87	0.89
1:A:63:U:C2'	2:B:62:THR:HG23	2.02	0.89
2:B:143:VAL:HG11	2:B:315:ALA:HB2	1.55	0.89
2:F:557:ARG:HH11	2:F:557:ARG:HG3	1.34	0.89
2:F:914:ALA:HB1	2:F:1035:LYS:CD	2.02	0.89
2:F:1114:ARG:NH1	4:H:9:DA:OP1	2.04	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:143:VAL:HG11	2:F:315:ALA:HB2	1.55	0.89
2:F:249:THR:CG2	2:F:265:GLN:NE2	2.34	0.89
2:F:1221:GLN:NE2	4:H:6:DG:OP2	2.05	0.89
2:B:634:GLU:HA	2:B:637:LYS:HE2	1.55	0.89
2:B:914:ALA:HB1	2:B:1035:LYS:CD	2.03	0.89
2:F:634:GLU:HA	2:F:637:LYS:HE2	1.55	0.89
2:B:178:ASN:ND2	2:B:298:ASP:HB3	1.87	0.88
2:B:531:THR:HG22	2:B:534:MET:SD	2.13	0.88
2:F:531:THR:HG22	2:F:534:MET:SD	2.13	0.88
2:B:905:ARG:HG2	2:B:905:ARG:HH11	1.39	0.88
2:F:905:ARG:HG2	2:F:905:ARG:HH11	1.39	0.88
2:B:600:ILE:O	2:B:647:VAL:HG13	1.74	0.88
2:B:981:TYR:CE2	2:B:1092:VAL:HB	2.08	0.88
2:F:981:TYR:CE2	2:F:1092:VAL:HB	2.08	0.88
2:F:600:ILE:O	2:F:647:VAL:HG13	1.74	0.88
2:F:107:VAL:HG22	2:F:1131:TYR:CZ	2.08	0.88
2:F:342:GLN:CG	2:F:383:MET:HE3	1.83	0.88
2:B:244:LEU:HD12	2:B:250:PRO:CD	2.04	0.88
2:B:369:GLN:OE1	2:B:400:ARG:NH1	2.07	0.88
2:F:244:LEU:HD12	2:F:250:PRO:CD	2.04	0.88
2:B:78:ARG:NH1	2:B:162:ILE:O	2.06	0.87
2:B:107:VAL:HG22	2:B:1131:TYR:CZ	2.08	0.87
2:B:641:HIS:HD2	2:B:642:LEU:HG	1.30	0.87
1:E:24:U:O2	2:F:105:PHE:HD1	1.57	0.87
2:F:78:ARG:NH1	2:F:162:ILE:O	2.06	0.87
2:B:1326:TYR:CD2	2:B:1327:PHE:CD2	2.63	0.87
2:F:1326:TYR:CD2	2:F:1327:PHE:CD2	2.63	0.87
2:B:665:LYS:CA	2:B:669:GLY:CA	2.41	0.87
2:B:974:LYS:NZ	2:B:976:ARG:NH1	2.23	0.87
2:F:324:ARG:CZ	2:F:400:ARG:NH1	2.27	0.87
2:B:1062:LEU:HD23	2:B:1063:ILE:H	1.36	0.87
1:A:24:U:C2	2:B:105:PHE:CE1	2.63	0.87
2:B:226:ILE:HD11	2:F:574:CYS:SG	2.15	0.87
2:B:557:ARG:NH2	2:B:599:LYS:HZ2	1.67	0.87
1:E:24:U:C2	2:F:105:PHE:CE1	2.63	0.87
2:F:641:HIS:HD2	2:F:642:LEU:HG	1.30	0.87
1:A:24:U:O2	2:B:105:PHE:HD1	1.56	0.87
2:B:544:GLN:O	2:B:548:ILE:HG13	1.74	0.87
2:F:665:LYS:CA	2:F:669:GLY:CA	2.40	0.87
2:B:372:PHE:O	2:B:376:ILE:CD1	2.22	0.86
2:F:220:ARG:HG3	2:F:220:ARG:HH11	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:220:ARG:HH11	2:B:220:ARG:HG3	1.40	0.86
2:F:372:PHE:O	2:F:376:ILE:CD1	2.22	0.86
2:F:699:ASP:OD1	2:F:701:SER:OG	1.93	0.86
2:B:699:ASP:OD1	2:B:701:SER:OG	1.93	0.86
2:B:974:LYS:HZ2	2:B:976:ARG:HH12	0.92	0.86
2:F:544:GLN:O	2:F:548:ILE:HG13	1.74	0.86
2:F:1062:LEU:HD23	2:F:1063:ILE:H	1.36	0.86
2:B:195:LEU:HD22	2:B:289:LEU:CD1	2.05	0.86
2:B:1357:GLU:OE1	2:B:1359:ARG:NH1	2.09	0.86
2:B:181:VAL:CG2	2:B:209:LYS:CB	2.53	0.86
2:B:1204:PHE:HE2	2:B:1214:LEU:HD12	1.37	0.86
2:F:1357:GLU:OE1	2:F:1359:ARG:NH1	2.09	0.86
2:B:525:THR:CG2	2:B:690:ASN:HD22	1.87	0.86
2:F:181:VAL:CG2	2:F:209:LYS:CB	2.53	0.86
2:F:195:LEU:HD22	2:F:289:LEU:CD1	2.05	0.86
2:F:679:ILE:HD11	2:F:704:PHE:CD1	2.11	0.86
2:F:1204:PHE:HE2	2:F:1214:LEU:HD12	1.37	0.86
2:B:70:ARG:O	2:B:74:ARG:HD2	1.75	0.86
2:B:679:ILE:HD11	2:B:704:PHE:CD1	2.11	0.86
2:B:909:SER:N	2:B:912:ASP:OD2	2.08	0.86
2:B:1314:THR:HG21	2:B:1324:PHE:HB3	1.58	0.86
2:F:1314:THR:HG21	2:F:1324:PHE:HB3	1.58	0.86
2:F:931:VAL:O	2:F:935:LEU:HD13	1.75	0.85
2:F:70:ARG:O	2:F:74:ARG:HD2	1.75	0.85
2:F:557:ARG:NH2	2:F:599:LYS:HZ2	1.67	0.85
2:F:909:SER:N	2:F:912:ASP:OD2	2.08	0.85
2:B:557:ARG:NH2	2:B:599:LYS:HZ3	1.64	0.85
2:B:981:TYR:CE2	2:B:1092:VAL:CB	2.59	0.85
2:F:981:TYR:CE2	2:F:1092:VAL:CB	2.59	0.85
2:B:1062:LEU:HD23	2:B:1063:ILE:N	1.90	0.85
2:F:121:ASN:HD21	2:F:124:ASP:CB	1.89	0.85
2:F:178:ASN:CB	2:F:299:ALA:CA	2.54	0.85
2:B:931:VAL:O	2:B:935:LEU:HD13	1.75	0.85
2:F:1062:LEU:HD23	2:F:1063:ILE:N	1.90	0.85
2:B:279:LEU:CD1	2:B:287:ALA:HB2	2.06	0.85
2:F:1290:VAL:HG22	2:F:1331:ILE:HD13	1.57	0.85
2:F:557:ARG:NH2	2:F:599:LYS:HZ3	1.64	0.85
2:B:121:ASN:HD21	2:B:124:ASP:CB	1.89	0.85
2:B:178:ASN:CB	2:B:299:ALA:CA	2.54	0.85
2:B:317:LEU:HD12	2:B:317:LEU:O	1.76	0.85
2:F:279:LEU:CD1	2:F:287:ALA:HB2	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:977:GLU:HG3	2:F:1310:ILE:CG2	2.06	0.85
2:B:671:ARG:HG3	2:B:678:THR:HG22	1.58	0.85
2:F:27:VAL:CG1	2:F:1086:VAL:HG13	2.06	0.85
2:F:671:ARG:HG3	2:F:678:THR:HG22	1.58	0.85
2:F:806:LEU:HD22	2:F:811:LEU:CD1	2.07	0.85
2:B:1105:PHE:CG	2:B:1169:MET:HG3	2.11	0.84
2:B:1290:VAL:HG22	2:B:1331:ILE:HD13	1.57	0.84
2:F:317:LEU:HD12	2:F:317:LEU:O	1.76	0.84
2:F:1105:PHE:CG	2:F:1169:MET:HG3	2.11	0.84
2:B:181:VAL:HG23	2:B:209:LYS:CB	2.06	0.84
2:F:563:GLN:O	2:F:567:ASP:HB2	1.77	0.84
2:B:27:VAL:CG1	2:B:1086:VAL:HG13	2.06	0.84
2:B:806:LEU:HD22	2:B:811:LEU:CD1	2.07	0.84
1:E:17:G:OP2	2:F:74:ARG:NH1	2.10	0.84
2:F:362:TYR:CE2	2:F:401:LYS:HE3	2.12	0.84
2:B:563:GLN:O	2:B:567:ASP:HB2	1.77	0.84
2:B:672:ASP:HA	2:B:703:THR:HG21	1.59	0.84
2:F:1305:GLN:CA	2:F:1327:PHE:HZ	1.89	0.84
1:A:17:G:OP2	2:B:74:ARG:NH1	2.10	0.84
2:F:181:VAL:HG23	2:F:209:LYS:CB	2.06	0.84
2:F:181:VAL:HG23	2:F:209:LYS:CG	2.07	0.84
2:B:530:VAL:CG2	2:B:537:PRO:CB	2.46	0.84
2:B:1305:GLN:CA	2:B:1327:PHE:HZ	1.89	0.84
2:F:691:ARG:HB3	2:F:696:LEU:HD22	1.60	0.84
2:B:961:LYS:NZ	2:B:965:ASP:OD2	2.10	0.84
2:F:961:LYS:NZ	2:F:965:ASP:OD2	2.10	0.84
2:B:569:PHE:HD1	2:B:575:PHE:CD2	1.96	0.84
2:B:691:ARG:HB3	2:B:696:LEU:HD22	1.60	0.84
2:F:569:PHE:HD1	2:F:575:PHE:CD2	1.96	0.84
2:F:672:ASP:HA	2:F:703:THR:HG21	1.59	0.84
2:B:557:ARG:HH22	2:B:599:LYS:HZ3	0.86	0.83
2:B:810:LYS:O	2:B:833:LEU:HD13	1.76	0.83
2:B:181:VAL:HG23	2:B:209:LYS:CG	2.07	0.83
2:B:229:LEU:HD13	2:B:232:GLU:H	1.42	0.83
2:B:696:LEU:HD12	2:B:702:LEU:HD13	1.60	0.83
2:F:436:ASN:O	2:F:440:ILE:HD12	1.78	0.83
2:B:436:ASN:O	2:B:440:ILE:HD12	1.78	0.83
3:C:19:DA:H8	3:C:19:DA:H5''	1.42	0.83
2:F:1000:LYS:CD	2:F:1073:VAL:HG21	2.08	0.83
2:B:1302:ILE:O	2:B:1306:ALA:CB	2.27	0.83
2:F:557:ARG:HH22	2:F:599:LYS:HZ3	0.86	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:696:LEU:HD12	2:F:702:LEU:HD13	1.60	0.83
2:B:704:PHE:O	2:B:708:ILE:HD11	1.77	0.83
2:F:530:VAL:CG2	2:F:537:PRO:CB	2.46	0.83
2:F:810:LYS:O	2:F:833:LEU:HD13	1.76	0.83
2:B:1232:TYR:OH	2:B:1268:GLU:HG2	1.77	0.83
2:F:229:LEU:HD13	2:F:232:GLU:H	1.42	0.83
2:F:1302:ILE:O	2:F:1306:ALA:CB	2.27	0.83
2:B:359:TYR:CE1	2:B:399:LEU:HD23	2.12	0.83
2:B:1244:LYS:N	2:B:1244:LYS:HD3	1.94	0.83
2:F:979:ASN:ND2	2:F:981:TYR:HD1	1.69	0.83
2:F:1000:LYS:HE2	2:F:1073:VAL:HG22	1.59	0.83
2:B:870:VAL:HG12	2:B:871:PRO:CD	2.08	0.83
2:B:1000:LYS:CD	2:B:1073:VAL:HG21	2.09	0.83
2:F:1203:LEU:CD1	2:F:1213:MET:HG3	2.08	0.83
2:F:1244:LYS:HD3	2:F:1244:LYS:N	1.94	0.83
3:G:19:DA:H5''	3:G:19:DA:H8	1.42	0.83
2:B:1000:LYS:HE2	2:B:1073:VAL:HG22	1.59	0.83
2:B:1203:LEU:CD1	2:B:1213:MET:HG3	2.08	0.83
2:F:704:PHE:O	2:F:708:ILE:HD11	1.77	0.83
2:F:870:VAL:HG12	2:F:871:PRO:CD	2.08	0.82
2:B:395:ARG:O	2:B:396:GLU:HB2	1.79	0.82
2:F:209:LYS:O	2:F:213:SER:HB2	1.78	0.82
2:F:1230:SER:CA	2:F:1233:VAL:HG23	2.09	0.82
2:B:209:LYS:O	2:B:213:SER:HB2	1.78	0.82
2:B:1143:VAL:CG1	2:B:1195:ILE:HG23	2.09	0.82
2:F:121:ASN:ND2	2:F:124:ASP:HB2	1.93	0.82
2:F:1143:VAL:CG1	2:F:1195:ILE:HG23	2.09	0.82
2:B:1230:SER:CA	2:B:1233:VAL:HG23	2.09	0.82
2:F:324:ARG:HH21	2:F:400:ARG:NH1	1.72	0.82
2:F:395:ARG:O	2:F:396:GLU:HB2	1.79	0.82
2:B:121:ASN:ND2	2:B:124:ASP:HB2	1.93	0.82
2:B:569:PHE:HD1	2:B:575:PHE:HD2	1.26	0.82
2:F:70:ARG:HH21	2:F:462:PHE:HD2	1.26	0.82
2:B:733:ILE:O	2:B:737:ILE:HG13	1.80	0.82
2:B:1062:LEU:HD21	2:B:1063:ILE:HG13	1.61	0.82
2:F:569:PHE:HD1	2:F:575:PHE:HD2	1.26	0.82
2:F:733:ILE:O	2:F:737:ILE:HG13	1.80	0.82
2:B:181:VAL:HG13	2:B:300:ILE:HD13	1.61	0.82
2:F:1062:LEU:HD21	2:F:1063:ILE:HG13	1.61	0.82
2:B:181:VAL:HG11	2:B:300:ILE:HD11	0.83	0.82
2:B:279:LEU:HD11	2:B:287:ALA:HB2	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:279:LEU:HD11	2:F:287:ALA:HB2	1.62	0.82
2:B:679:ILE:HG12	2:B:704:PHE:CE1	2.14	0.81
2:F:181:VAL:HG11	2:F:300:ILE:HD11	0.83	0.81
2:F:679:ILE:HG12	2:F:704:PHE:CE1	2.14	0.81
2:B:70:ARG:HH21	2:B:462:PHE:HD2	1.26	0.81
2:B:241:LEU:HD21	2:B:290:PHE:HE2	1.45	0.81
2:B:244:LEU:HG	2:B:266:LEU:HD12	1.62	0.81
2:B:398:LEU:O	2:B:399:LEU:HD12	1.80	0.81
2:B:1107:LYS:NZ	3:C:7:DC:O2	2.13	0.81
2:B:1314:THR:CG2	2:B:1324:PHE:CG	2.62	0.81
2:F:241:LEU:HD21	2:F:290:PHE:HE2	1.45	0.81
2:F:1314:THR:CG2	2:F:1324:PHE:CG	2.62	0.81
2:F:181:VAL:HG13	2:F:300:ILE:HD13	1.61	0.81
2:F:244:LEU:HG	2:F:266:LEU:HD12	1.62	0.81
2:B:101:LEU:O	2:B:104:SER:OG	1.97	0.81
2:B:926:GLN:HA	2:B:929:LYS:CG	2.06	0.81
2:B:1127:ASP:HB3	2:B:1130:LYS:HB2	1.62	0.81
2:F:398:LEU:O	2:F:399:LEU:HD12	1.80	0.81
2:F:1107:LYS:NZ	3:G:7:DC:O2	2.13	0.81
2:F:101:LEU:O	2:F:104:SER:OG	1.97	0.81
1:A:62:G:C8	2:B:69:ARG:NH1	2.49	0.81
2:B:277:ASN:ND2	2:B:653:ARG:HD3	1.94	0.81
2:F:99:HIS:O	2:F:103:GLU:HG2	1.80	0.81
2:F:277:ASN:ND2	2:F:653:ARG:HD3	1.94	0.81
4:H:6:DG:H2''	4:H:7:DG:H5'	1.61	0.81
2:B:955:VAL:O	2:B:1009:VAL:HG13	1.81	0.81
2:F:926:GLN:HA	2:F:929:LYS:CG	2.06	0.81
2:B:513:LEU:HD11	2:B:616:LEU:CB	2.10	0.81
2:B:852:ILE:HG13	5:B:1401:SO4:O1	1.81	0.81
4:D:6:DG:H2''	4:D:7:DG:H5'	1.61	0.81
1:E:62:G:C8	2:F:69:ARG:NH1	2.49	0.81
2:F:324:ARG:NH2	2:F:400:ARG:HH12	1.77	0.81
2:F:955:VAL:O	2:F:1009:VAL:HG13	1.81	0.81
2:B:99:HIS:O	2:B:103:GLU:HG2	1.80	0.80
2:B:745:ASP:OD2	2:B:938:ARG:NH2	2.14	0.80
2:F:107:VAL:CG2	2:F:1131:TYR:OH	2.28	0.80
2:F:745:ASP:OD2	2:F:938:ARG:NH2	2.14	0.80
2:B:1251:ASP:HA	2:B:1254:GLN:OE1	1.81	0.80
2:F:513:LEU:HD11	2:F:616:LEU:CB	2.10	0.80
2:B:249:THR:CG2	2:B:265:GLN:NE2	2.44	0.80
2:B:974:LYS:HZ2	2:B:976:ARG:NH1	1.77	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:107:VAL:CG2	2:B:1131:TYR:OH	2.28	0.80
2:F:1045:PHE:CZ	2:F:1046:PHE:HE2	1.95	0.80
2:B:207:ASP:O	2:B:211:ILE:N	2.14	0.80
2:B:665:LYS:O	2:B:669:GLY:N	2.13	0.80
2:B:842:VAL:HG12	2:B:854:ASN:OD1	1.82	0.80
2:B:1312:LEU:HD11	2:B:1326:TYR:CD1	2.16	0.80
2:B:970:PHE:HE1	2:B:1080:PHE:CZ	2.00	0.80
2:B:1302:ILE:O	2:B:1306:ALA:N	2.15	0.80
2:F:318:SER:HG	2:F:418:GLU:CD	1.82	0.80
2:F:528:LYS:HB2	2:F:581:SER:HG	1.47	0.80
2:F:665:LYS:O	2:F:669:GLY:N	2.13	0.80
2:F:842:VAL:HG12	2:F:854:ASN:OD1	1.82	0.80
2:F:1251:ASP:HA	2:F:1254:GLN:OE1	1.81	0.80
2:B:1045:PHE:CZ	2:B:1046:PHE:HE2	1.95	0.80
2:B:1207:GLU:OE2	2:B:1210:ARG:HD3	1.82	0.80
2:F:637:LYS:HA	2:F:640:ALA:HB2	1.63	0.80
2:F:970:PHE:HE1	2:F:1080:PHE:CZ	2.00	0.80
2:F:1207:GLU:OE2	2:F:1210:ARG:HD3	1.82	0.80
2:F:979:ASN:OD1	2:F:980:ASN:N	2.15	0.80
2:F:1302:ILE:O	2:F:1306:ALA:N	2.15	0.80
2:F:207:ASP:O	2:F:211:ILE:N	2.14	0.80
2:F:518:PHE:CD1	2:F:667:ILE:HG23	2.17	0.80
2:F:1312:LEU:HD11	2:F:1326:TYR:CD1	2.16	0.80
2:B:637:LYS:HA	2:B:640:ALA:HB2	1.63	0.80
2:F:297:SER:C	2:F:301:LEU:HD12	2.01	0.80
2:F:1236:LEU:HD22	2:F:1310:ILE:HG13	1.64	0.80
1:A:59:U:OP2	2:B:472:THR:HG23	1.81	0.79
2:B:297:SER:C	2:B:301:LEU:HD12	2.01	0.79
2:B:518:PHE:CD1	2:B:667:ILE:HG23	2.17	0.79
2:B:788:ILE:O	2:B:792:GLY:N	2.15	0.79
2:B:1179:ILE:O	2:B:1183:GLU:HG3	1.82	0.79
2:B:1236:LEU:HD22	2:B:1310:ILE:HG13	1.64	0.79
2:F:1179:ILE:O	2:F:1183:GLU:HG3	1.82	0.79
2:B:1062:LEU:O	2:B:1076:LYS:CG	2.27	0.79
2:F:89:GLU:O	2:F:93:VAL:HG23	1.81	0.79
2:F:343:LEU:CD2	2:F:346:LYS:HB2	2.12	0.79
2:F:788:ILE:O	2:F:792:GLY:N	2.15	0.79
2:B:343:LEU:CD2	2:B:346:LYS:HB2	2.12	0.79
1:E:59:U:OP2	2:F:472:THR:HG23	1.81	0.79
1:A:56:U:O2	1:A:58:G:N2	2.15	0.79
2:B:89:GLU:O	2:B:93:VAL:HG23	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:ARG:NE	2:B:117:PRO:O	2.16	0.79
2:F:539:PHE:CE1	2:F:690:ASN:HB2	2.17	0.79
2:F:874:GLU:O	2:F:877:LYS:HG3	1.82	0.79
2:F:1062:LEU:O	2:F:1076:LYS:CG	2.27	0.79
1:E:56:U:O2	1:E:58:G:N2	2.15	0.79
1:E:19:A:O2'	2:F:405:PHE:O	2.00	0.79
2:F:100:ARG:NE	2:F:117:PRO:O	2.16	0.79
1:A:19:A:O2'	2:B:405:PHE:O	2.00	0.79
2:B:874:GLU:O	2:B:877:LYS:HG3	1.82	0.79
2:B:1303:ARG:O	2:B:1307:GLU:HG3	1.82	0.79
2:B:1242:TYR:HD1	2:B:1242:TYR:H	1.32	0.78
2:F:1251:ASP:CA	2:F:1254:GLN:NE2	2.39	0.78
2:B:1045:PHE:CE1	2:B:1046:PHE:CE2	2.71	0.78
2:B:512:SER:OG	2:B:617:GLU:OE1	2.02	0.78
2:B:1000:LYS:HZ1	2:B:1064:GLU:HG3	1.49	0.78
2:F:1045:PHE:CE1	2:F:1046:PHE:CE2	2.71	0.78
2:F:1242:TYR:HD1	2:F:1242:TYR:H	1.32	0.78
2:F:1303:ARG:O	2:F:1307:GLU:HG3	1.82	0.78
1:A:41:A:H2'	1:A:42:A:H5''	1.65	0.78
2:B:45:LYS:HE3	2:B:1093:ASN:OD1	1.83	0.78
2:B:755:LYS:HD3	2:B:939:MET:HE1	1.64	0.78
2:B:1326:TYR:HD2	2:B:1327:PHE:HD2	1.31	0.78
2:F:512:SER:OG	2:F:617:GLU:OE1	2.02	0.78
1:E:41:A:H2'	1:E:42:A:H5''	1.65	0.78
2:F:8:GLY:O	2:F:987:ALA:HB1	1.83	0.78
2:F:114:GLU:HG2	2:F:120:GLY:HA2	1.63	0.78
2:F:249:THR:HG22	2:F:265:GLN:HB2	1.66	0.78
2:F:1143:VAL:HG13	2:F:1195:ILE:HG22	1.65	0.78
2:B:870:VAL:HG12	2:B:871:PRO:HD2	1.66	0.78
2:F:1326:TYR:HD2	2:F:1327:PHE:HD2	1.31	0.78
1:A:24:U:H1'	2:B:105:PHE:CE1	2.18	0.78
2:B:219:SER:O	2:B:222:LEU:HG	1.84	0.78
2:B:1041:ASN:HB3	2:B:1044:ASN:OD1	1.82	0.78
2:B:1143:VAL:HG13	2:B:1195:ILE:HG22	1.65	0.78
1:E:24:U:H1'	2:F:105:PHE:CE1	2.18	0.78
2:F:219:SER:O	2:F:222:LEU:HG	1.84	0.78
2:B:8:GLY:O	2:B:987:ALA:HB1	1.83	0.78
2:B:212:LEU:HD21	2:B:225:LEU:HD12	1.65	0.78
2:F:45:LYS:HE3	2:F:1093:ASN:OD1	1.83	0.78
2:F:342:GLN:CD	2:F:383:MET:HE2	2.03	0.78
2:F:362:TYR:CE1	2:F:372:PHE:CD2	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1000:LYS:HZ1	2:F:1064:GLU:HG3	1.49	0.78
2:B:278:LEU:CD1	2:B:282:ILE:CD1	2.59	0.78
2:F:870:VAL:HG12	2:F:871:PRO:HD2	1.66	0.78
2:F:1041:ASN:HB3	2:F:1044:ASN:OD1	1.82	0.78
2:F:777:SER:HG	4:H:2:DT:HO5'	1.25	0.77
2:B:114:GLU:HG2	2:B:120:GLY:HA2	1.63	0.77
2:B:1256:GLN:NE2	2:B:1260:GLU:OE2	2.17	0.77
2:F:672:ASP:CG	2:F:703:THR:HG22	2.02	0.77
2:B:914:ALA:CB	2:B:1035:LYS:HD3	2.13	0.77
2:B:1000:LYS:HE2	2:B:1064:GLU:HB3	1.64	0.77
2:F:212:LEU:HD21	2:F:225:LEU:HD12	1.65	0.77
2:F:1000:LYS:HE2	2:F:1064:GLU:HB3	1.65	0.77
2:B:672:ASP:CG	2:B:703:THR:HG22	2.02	0.77
2:F:278:LEU:CD1	2:F:282:ILE:CD1	2.59	0.77
2:F:755:LYS:HD3	2:F:939:MET:HE3	1.64	0.77
2:F:939:MET:HE2	2:F:953:VAL:HG21	1.67	0.77
2:F:1256:GLN:NE2	2:F:1260:GLU:OE2	2.17	0.77
2:F:362:TYR:HD1	2:F:372:PHE:CG	2.03	0.77
2:F:914:ALA:CB	2:F:1035:LYS:HD3	2.13	0.77
2:B:847:LEU:HD21	2:B:849:ASP:HB2	1.66	0.77
2:F:78:ARG:NE	2:F:165:ARG:HH11	1.83	0.77
2:F:321:MET:HA	2:F:321:MET:CE	2.15	0.77
2:F:847:LEU:HD21	2:F:849:ASP:HB2	1.66	0.77
2:F:1143:VAL:CG1	2:F:1195:ILE:HG22	2.13	0.77
2:B:279:LEU:CD1	2:B:287:ALA:CB	2.61	0.77
2:B:1243:GLU:C	2:B:1244:LYS:HD3	2.04	0.77
2:B:1287:LEU:HD12	2:B:1287:LEU:O	1.84	0.77
2:F:165:ARG:HH21	2:F:168:PHE:HZ	1.29	0.77
2:F:178:ASN:CB	2:F:299:ALA:CB	2.41	0.77
2:F:812:TYR:CE1	2:F:816:LEU:HD21	2.19	0.77
2:B:78:ARG:NE	2:B:165:ARG:HH11	1.83	0.77
2:B:977:GLU:HG3	2:B:1310:ILE:CG2	2.14	0.77
2:B:114:GLU:HG2	2:B:120:GLY:CA	2.15	0.77
2:F:1243:GLU:C	2:F:1244:LYS:HD3	2.04	0.77
2:F:1287:LEU:HD12	2:F:1287:LEU:O	1.84	0.77
2:B:45:LYS:CE	2:B:1093:ASN:OD1	2.33	0.77
2:B:508:LEU:HD12	2:B:663:SER:C	2.04	0.77
2:F:114:GLU:HG2	2:F:120:GLY:CA	2.15	0.77
2:B:812:TYR:CE1	2:B:816:LEU:HD21	2.19	0.76
2:B:1086:VAL:O	2:B:1089:MET:HE1	1.85	0.76
2:F:279:LEU:CD1	2:F:287:ALA:CB	2.61	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:45:LYS:CE	2:F:1093:ASN:OD1	2.33	0.76
2:F:98:PHE:O	2:F:102:GLU:HG3	1.85	0.76
2:F:508:LEU:HD12	2:F:663:SER:C	2.04	0.76
2:F:1303:ARG:O	2:F:1307:GLU:CG	2.34	0.76
2:B:1206:LEU:O	2:B:1207:GLU:HG3	1.84	0.76
2:B:1303:ARG:O	2:B:1307:GLU:CG	2.34	0.76
2:F:621:LEU:O	2:F:625:LEU:HB2	1.85	0.76
2:F:1206:LEU:O	2:F:1207:GLU:HG3	1.84	0.76
2:F:1290:VAL:HG22	2:F:1331:ILE:CD1	2.15	0.76
2:B:178:ASN:CB	2:B:299:ALA:CB	2.41	0.76
2:B:483:ASP:OD1	2:B:486:ALA:HB3	1.86	0.76
2:B:842:VAL:CG1	2:B:854:ASN:HD21	1.99	0.76
2:B:1143:VAL:CG1	2:B:1195:ILE:HG22	2.13	0.76
2:B:1290:VAL:HG22	2:B:1331:ILE:CD1	2.15	0.76
2:F:483:ASP:OD1	2:F:486:ALA:HB3	1.86	0.76
2:F:842:VAL:CG1	2:F:854:ASN:HD21	1.99	0.76
2:B:106:LEU:O	2:B:111:LYS:HE3	1.84	0.76
2:F:106:LEU:O	2:F:111:LYS:HE3	1.84	0.76
2:B:98:PHE:O	2:B:102:GLU:HG3	1.85	0.76
2:B:275:LEU:CD1	2:B:279:LEU:HB2	2.16	0.76
2:B:621:LEU:O	2:B:625:LEU:HB2	1.85	0.76
2:F:275:LEU:CD1	2:F:279:LEU:HB2	2.16	0.76
2:B:165:ARG:HH21	2:B:168:PHE:HZ	1.29	0.76
2:F:386:THR:O	2:F:389:LEU:HB2	1.86	0.76
2:B:545:LYS:HZ1	2:B:690:ASN:ND2	1.84	0.76
2:B:839:ASP:OD1	2:B:864:ARG:NH1	2.18	0.76
2:B:970:PHE:CE1	2:B:1080:PHE:CZ	2.73	0.76
2:F:970:PHE:CE1	2:F:1080:PHE:CZ	2.73	0.76
2:B:181:VAL:HG23	2:B:209:LYS:HB2	1.68	0.76
1:E:15:U:H2'	1:E:16:U:H6	1.50	0.76
2:F:839:ASP:OD1	2:F:864:ARG:NH1	2.18	0.76
2:F:181:VAL:HG23	2:F:209:LYS:HB2	1.67	0.75
2:F:784:ILE:CG2	2:F:788:ILE:HD11	2.16	0.75
2:F:818:ASN:O	2:F:818:ASN:ND2	2.19	0.75
2:F:1082:THR:O	2:F:1086:VAL:HG23	1.85	0.75
2:B:818:ASN:ND2	2:B:818:ASN:O	2.19	0.75
2:B:970:PHE:CE1	2:B:1080:PHE:HZ	2.04	0.75
2:B:1274:SER:O	2:B:1278:LYS:HG3	1.84	0.75
1:E:24:U:C2	2:F:105:PHE:HE1	2.01	0.75
2:F:307:ARG:NH1	2:F:323:LYS:NZ	2.34	0.75
2:F:518:PHE:HD1	2:F:667:ILE:HG23	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1274:SER:O	2:F:1278:LYS:HG3	1.84	0.75
2:F:321:MET:HA	2:F:321:MET:HE3	1.68	0.75
1:A:15:U:H2'	1:A:16:U:H6	1.50	0.75
2:F:1206:LEU:C	2:F:1207:GLU:HG3	2.07	0.75
1:A:24:U:C2	2:B:105:PHE:CD1	2.75	0.75
2:B:518:PHE:HD1	2:B:667:ILE:HG23	1.51	0.75
2:B:784:ILE:CG2	2:B:788:ILE:HD11	2.16	0.75
2:B:1082:THR:O	2:B:1086:VAL:HG23	1.85	0.75
2:B:1206:LEU:C	2:B:1207:GLU:HG3	2.06	0.75
1:E:24:U:C2	2:F:105:PHE:CD1	2.75	0.75
2:F:234:LYS:HD3	2:F:235:ASN:ND2	2.02	0.75
2:F:341:GLN:HG3	2:F:342:GLN:HG2	1.69	0.75
2:F:970:PHE:CE1	2:F:1080:PHE:HZ	2.04	0.75
2:F:1246:LYS:HZ2	2:F:1246:LYS:HB2	1.52	0.75
2:B:178:ASN:HD22	2:B:298:ASP:HB3	1.46	0.75
2:B:234:LYS:HD3	2:B:235:ASN:ND2	2.02	0.75
2:B:341:GLN:HG3	2:B:342:GLN:HG2	1.69	0.75
2:B:1224:ASN:CG	2:B:1280:VAL:CG1	2.55	0.75
2:F:398:LEU:HD22	2:F:399:LEU:HD13	1.67	0.75
2:B:1314:THR:HG21	2:B:1324:PHE:CG	2.22	0.74
2:F:1105:PHE:CD2	2:F:1169:MET:CG	2.70	0.74
2:F:1314:THR:HG21	2:F:1324:PHE:CG	2.22	0.74
1:A:24:U:C2	2:B:105:PHE:HE1	2.01	0.74
2:B:299:ALA:O	2:B:302:LEU:HD22	1.84	0.74
2:B:398:LEU:HD22	2:B:399:LEU:HD13	1.67	0.74
2:B:679:ILE:HD11	2:B:704:PHE:CE1	2.22	0.74
2:F:178:ASN:HD22	2:F:298:ASP:HB3	1.46	0.74
2:F:299:ALA:O	2:F:302:LEU:HD22	1.84	0.74
2:F:981:TYR:CD2	2:F:1092:VAL:HG11	2.22	0.74
2:F:1224:ASN:CG	2:F:1280:VAL:CG1	2.55	0.74
2:B:114:GLU:CG	2:B:120:GLY:HA2	2.17	0.74
2:B:981:TYR:CD2	2:B:1092:VAL:HG11	2.22	0.74
2:F:100:ARG:NH2	2:F:117:PRO:O	2.19	0.74
2:B:1105:PHE:CD2	2:B:1169:MET:CG	2.70	0.74
2:F:679:ILE:HD11	2:F:704:PHE:CE1	2.22	0.74
2:F:1086:VAL:O	2:F:1089:MET:HE1	1.88	0.74
2:B:100:ARG:NH2	2:B:117:PRO:O	2.19	0.74
2:F:78:ARG:NE	2:F:165:ARG:NH1	2.35	0.74
2:B:234:LYS:HB2	2:F:572:ILE:O	1.87	0.74
2:F:297:SER:O	2:F:301:LEU:HD12	1.88	0.74
2:B:297:SER:HG	2:B:301:LEU:CD1	1.97	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:967:ARG:NH1	2:B:974:LYS:HB2	2.01	0.74
2:F:963:VAL:HG21	2:F:990:ASN:ND2	2.02	0.74
2:B:78:ARG:NE	2:B:165:ARG:NH1	2.35	0.74
2:B:297:SER:O	2:B:301:LEU:HD12	1.88	0.74
2:B:940:ASN:OD1	2:B:951:ARG:HA	1.88	0.74
2:F:114:GLU:CG	2:F:120:GLY:HA2	2.17	0.74
2:F:940:ASN:OD1	2:F:951:ARG:HA	1.88	0.74
2:F:967:ARG:NH1	2:F:974:LYS:HB2	2.01	0.74
2:B:244:LEU:CD1	2:B:250:PRO:CD	2.66	0.74
3:C:19:DA:H5''	3:C:19:DA:C8	2.22	0.74
2:F:340:ARG:C	2:F:344:PRO:HG3	2.08	0.74
2:F:696:LEU:HD12	2:F:702:LEU:CD1	2.15	0.74
2:F:874:GLU:HA	2:F:877:LYS:HD2	1.68	0.74
2:B:963:VAL:HG21	2:B:990:ASN:ND2	2.02	0.73
2:F:244:LEU:CD1	2:F:250:PRO:CD	2.66	0.73
2:B:340:ARG:C	2:B:344:PRO:HG3	2.08	0.73
2:B:618:ASP:OD2	2:B:639:TYR:OH	2.03	0.73
2:B:979:ASN:OD1	2:B:981:TYR:HD1	1.72	0.73
2:F:842:VAL:HG12	2:F:854:ASN:ND2	2.03	0.73
2:B:830:ILE:N	2:B:830:ILE:HD12	2.04	0.73
2:B:842:VAL:HG12	2:B:854:ASN:ND2	2.03	0.73
2:F:278:LEU:HD12	2:F:278:LEU:O	1.88	0.73
2:F:830:ILE:HD12	2:F:830:ILE:N	2.03	0.73
3:G:19:DA:H5''	3:G:19:DA:C8	2.22	0.73
2:B:340:ARG:NH2	2:B:347:TYR:CE1	2.57	0.73
2:F:618:ASP:OD2	2:F:639:TYR:OH	2.03	0.73
2:F:1304:GLU:HB3	2:F:1327:PHE:HE1	1.52	0.73
2:B:278:LEU:HD12	2:B:278:LEU:O	1.88	0.73
2:B:545:LYS:NZ	2:B:690:ASN:HD21	1.86	0.73
2:B:961:LYS:HG2	2:B:965:ASP:OD2	1.88	0.73
2:B:1221:GLN:NE2	2:B:1320:ALA:HB2	2.03	0.73
2:F:340:ARG:NH2	2:F:347:TYR:CE1	2.57	0.73
2:F:1221:GLN:NE2	2:F:1320:ALA:HB2	2.03	0.73
2:B:27:VAL:HG12	2:B:1086:VAL:HG13	1.70	0.73
2:B:696:LEU:HD12	2:B:702:LEU:CD1	2.15	0.73
2:B:780:ARG:HD2	2:B:812:TYR:CE2	2.23	0.73
2:B:874:GLU:HA	2:B:877:LYS:HD2	1.68	0.73
1:E:45:U:H5'	2:F:402:GLN:HG2	1.68	0.73
2:F:27:VAL:HG12	2:F:1086:VAL:HG13	1.70	0.73
2:F:244:LEU:HG	2:F:266:LEU:HD11	1.70	0.73
2:B:244:LEU:HG	2:B:266:LEU:HD11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:545:LYS:NZ	2:B:690:ASN:ND2	2.36	0.73
2:B:686:ASP:OD2	2:B:691:ARG:HB2	1.88	0.73
2:F:178:ASN:HB3	2:F:299:ALA:N	2.04	0.73
2:F:362:TYR:CE1	2:F:372:PHE:HD2	2.07	0.73
2:F:780:ARG:HD2	2:F:812:TYR:CE2	2.23	0.73
2:B:178:ASN:HB3	2:B:299:ALA:N	2.04	0.73
2:B:870:VAL:CG2	2:B:908:LEU:CG	2.67	0.73
2:F:979:ASN:OD1	2:F:981:TYR:N	2.20	0.73
1:A:45:U:H5'	2:B:402:GLN:HG2	1.68	0.73
2:F:870:VAL:CG2	2:F:908:LEU:CG	2.67	0.73
2:B:34:VAL:HG21	2:B:43:ILE:HG13	1.71	0.73
2:B:27:VAL:HG11	2:B:1086:VAL:HG13	1.70	0.72
2:B:1304:GLU:HB3	2:B:1327:PHE:HE1	1.52	0.72
1:E:63:U:H2'	2:F:62:THR:HG22	1.69	0.72
2:F:284:ASP:N	2:F:285:GLN:OE1	2.22	0.72
2:F:302:LEU:HD23	2:F:303:SER:N	2.03	0.72
2:F:961:LYS:HG2	2:F:965:ASP:OD2	1.88	0.72
2:B:284:ASP:N	2:B:285:GLN:OE1	2.22	0.72
2:F:34:VAL:HG21	2:F:43:ILE:HG13	1.71	0.72
2:F:1246:LYS:HB2	2:F:1246:LYS:NZ	2.04	0.72
2:B:22:THR:HG22	2:B:23:ASP:H	1.54	0.72
2:B:241:LEU:HD21	2:B:290:PHE:CE2	2.24	0.72
2:B:1246:LYS:HB2	2:B:1246:LYS:NZ	2.04	0.72
2:F:841:ILE:HD13	2:F:900:LEU:HD23	1.71	0.72
1:A:63:U:H2'	2:B:62:THR:HG22	1.69	0.72
2:B:302:LEU:HD23	2:B:303:SER:N	2.03	0.72
2:F:842:VAL:HG12	2:F:854:ASN:CG	2.10	0.72
2:B:841:ILE:HD13	2:B:900:LEU:HD23	1.71	0.72
2:B:1135:ASP:OD1	2:B:1136:SER:N	2.22	0.72
2:B:1171:ARG:HG2	2:B:1171:ARG:NH1	2.01	0.72
2:B:1203:LEU:HD12	2:B:1213:MET:HG3	1.71	0.72
2:F:241:LEU:HD21	2:F:290:PHE:CE2	2.24	0.72
2:F:273:ASP:OD1	2:F:274:ASP:N	2.22	0.72
2:F:635:ARG:HG3	2:F:635:ARG:NH1	2.04	0.72
2:B:273:ASP:OD1	2:B:274:ASP:N	2.22	0.72
2:B:449:PRO:HD2	2:B:452:VAL:HG21	1.71	0.72
2:B:842:VAL:HG12	2:B:854:ASN:CG	2.10	0.72
2:B:1272:GLN:C	2:B:1272:GLN:HE21	1.93	0.72
2:F:1135:ASP:OD1	2:F:1136:SER:N	2.22	0.72
2:F:1272:GLN:HE21	2:F:1272:GLN:C	1.93	0.72
2:B:244:LEU:HD12	2:B:250:PRO:HD3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:324:ARG:HD3	2:B:400:ARG:HB3	1.70	0.72
2:F:70:ARG:NH1	2:F:454:PRO:HG3	2.04	0.72
2:F:249:THR:HG23	2:F:265:GLN:NE2	2.04	0.72
2:F:1203:LEU:HD12	2:F:1213:MET:HG3	1.71	0.72
2:B:70:ARG:NH1	2:B:454:PRO:HG3	2.04	0.72
2:B:178:ASN:HD21	2:B:298:ASP:HB2	1.51	0.72
2:B:216:LEU:HD23	2:B:216:LEU:N	2.03	0.72
2:B:635:ARG:HG3	2:B:635:ARG:NH1	2.04	0.72
2:B:1224:ASN:OD1	2:B:1280:VAL:CG1	2.37	0.72
2:F:27:VAL:HG11	2:F:1086:VAL:HG13	1.70	0.72
2:F:449:PRO:HD2	2:F:452:VAL:HG21	1.71	0.72
2:F:1171:ARG:HG2	2:F:1171:ARG:NH1	2.01	0.72
2:F:216:LEU:N	2:F:216:LEU:HD23	2.03	0.72
2:F:844:GLN:NE2	2:F:848:LYS:HG2	2.04	0.72
2:B:746:GLU:O	2:B:750:VAL:HG23	1.90	0.72
2:B:1000:LYS:HZ3	2:B:1045:PHE:HD2	0.74	0.72
2:F:178:ASN:HB2	2:F:299:ALA:HA	1.72	0.72
2:F:178:ASN:HD21	2:F:298:ASP:HB2	1.51	0.72
2:F:746:GLU:O	2:F:750:VAL:HG23	1.90	0.72
2:B:178:ASN:HD21	2:B:298:ASP:CB	2.00	0.71
2:B:178:ASN:HB2	2:B:299:ALA:HA	1.72	0.71
2:B:379:ILE:HD12	2:B:379:ILE:H	1.55	0.71
2:B:844:GLN:NE2	2:B:848:LYS:HG2	2.04	0.71
2:F:1224:ASN:OD1	2:F:1280:VAL:CG1	2.37	0.71
2:B:181:VAL:HG21	2:B:209:LYS:CA	2.20	0.71
2:B:1127:ASP:O	2:B:1131:TYR:N	2.22	0.71
2:F:181:VAL:HG21	2:F:209:LYS:CA	2.20	0.71
2:F:373:TYR:HA	2:F:376:ILE:HD11	1.71	0.71
2:F:244:LEU:HD12	2:F:250:PRO:HD3	1.71	0.71
2:F:513:LEU:HD11	2:F:616:LEU:HB3	1.71	0.71
2:F:557:ARG:HH12	2:F:599:LYS:NZ	1.88	0.71
2:B:373:TYR:HA	2:B:376:ILE:HD11	1.71	0.71
2:B:981:TYR:CE1	2:B:1092:VAL:HG12	2.24	0.71
2:B:70:ARG:HH22	2:B:462:PHE:CB	2.04	0.71
2:B:557:ARG:HH12	2:B:599:LYS:NZ	1.89	0.71
2:B:974:LYS:HD3	2:B:976:ARG:NH1	2.05	0.71
2:F:70:ARG:HH22	2:F:462:PHE:CB	2.04	0.71
2:F:379:ILE:HD12	2:F:379:ILE:H	1.54	0.71
2:F:407:ASN:H	2:F:407:ASN:ND2	1.86	0.71
2:B:513:LEU:HD11	2:B:616:LEU:HB3	1.71	0.71
1:E:45:U:H5''	2:F:402:GLN:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1000:LYS:HZ3	2:F:1045:PHE:HD2	0.74	0.71
2:B:841:ILE:HD13	2:B:900:LEU:CD2	2.20	0.71
2:B:1308:ASN:O	2:B:1311:HIS:HB2	1.89	0.71
2:F:340:ARG:O	2:F:344:PRO:HG2	1.91	0.71
2:F:981:TYR:CE1	2:F:1092:VAL:HG12	2.24	0.71
1:A:24:U:N1	2:B:105:PHE:HE1	1.88	0.71
1:A:45:U:H5''	2:B:402:GLN:HB2	1.72	0.71
2:B:407:ASN:ND2	2:B:407:ASN:H	1.86	0.71
2:B:780:ARG:HD3	5:B:1401:SO4:O3	1.90	0.71
1:E:24:U:N1	2:F:105:PHE:HE1	1.88	0.71
2:F:178:ASN:HD21	2:F:298:ASP:CB	2.00	0.71
2:F:1031:LYS:H	2:F:1031:LYS:HD2	1.56	0.71
2:F:1127:ASP:O	2:F:1131:TYR:N	2.22	0.71
2:F:1308:ASN:O	2:F:1311:HIS:HB2	1.89	0.71
2:F:1326:TYR:CD2	2:F:1327:PHE:HD2	2.06	0.71
2:B:209:LYS:O	2:B:213:SER:HB3	1.89	0.71
2:B:340:ARG:O	2:B:344:PRO:HG2	1.91	0.71
2:B:967:ARG:HA	2:B:972:PHE:HB2	1.73	0.71
2:B:978:ILE:HG12	2:B:1313:PHE:CE2	2.25	0.71
2:B:1246:LYS:HB2	2:B:1246:LYS:HZ2	1.56	0.71
2:F:981:TYR:CE2	2:F:1092:VAL:HG11	2.24	0.71
2:B:379:ILE:HD12	2:B:379:ILE:N	2.05	0.71
2:B:489:GLN:HG3	2:B:625:LEU:HD21	1.73	0.71
2:F:870:VAL:HG21	2:F:908:LEU:CD2	2.21	0.70
2:F:967:ARG:HA	2:F:972:PHE:HB2	1.73	0.70
2:B:870:VAL:HG21	2:B:908:LEU:CD2	2.21	0.70
2:F:209:LYS:O	2:F:213:SER:HB3	1.89	0.70
2:F:1252:ASN:N	2:F:1252:ASN:HD22	1.89	0.70
2:B:1000:LYS:HZ1	2:B:1064:GLU:CB	2.05	0.70
2:B:1252:ASN:HD22	2:B:1252:ASN:N	1.89	0.70
1:E:61:C:OP1	2:F:70:ARG:NH2	2.24	0.70
2:F:181:VAL:HG23	2:F:209:LYS:HG3	1.67	0.70
2:F:379:ILE:HD12	2:F:379:ILE:N	2.05	0.70
2:F:489:GLN:HG3	2:F:625:LEU:HD21	1.73	0.70
2:F:841:ILE:HD13	2:F:900:LEU:CD2	2.20	0.70
2:F:1000:LYS:HZ1	2:F:1064:GLU:CB	2.05	0.70
2:B:195:LEU:HD22	2:B:289:LEU:HD13	1.73	0.70
2:F:178:ASN:O	2:F:299:ALA:HB2	1.87	0.70
2:F:350:ILE:HG22	2:F:351:PHE:CD2	2.26	0.70
2:F:1000:LYS:HZ3	2:F:1064:GLU:HG3	1.56	0.70
1:A:61:C:OP1	2:B:70:ARG:NH2	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:181:VAL:HG23	2:B:209:LYS:HG3	1.67	0.70
2:B:350:ILE:HG22	2:B:351:PHE:CD2	2.26	0.70
2:B:1000:LYS:HZ3	2:B:1064:GLU:HG3	1.56	0.70
2:F:249:THR:CG2	2:F:265:GLN:HE21	2.04	0.70
2:F:265:GLN:HB3	2:F:268:LYS:HB2	1.73	0.70
2:F:1143:VAL:HG13	2:F:1195:ILE:CG2	2.17	0.70
2:F:195:LEU:HD22	2:F:289:LEU:HD13	1.73	0.70
2:F:1344:ASP:OD2	2:F:1344:ASP:N	2.24	0.70
2:B:265:GLN:HB3	2:B:268:LYS:HB2	1.73	0.70
2:B:842:VAL:CG1	2:B:854:ASN:ND2	2.54	0.70
2:B:1000:LYS:HZ1	2:B:1064:GLU:CG	2.05	0.70
2:F:780:ARG:HH12	2:F:812:TYR:HD2	1.37	0.70
2:F:842:VAL:CG1	2:F:854:ASN:ND2	2.54	0.70
2:B:178:ASN:O	2:B:299:ALA:HB2	1.87	0.70
2:B:1243:GLU:HA	2:B:1243:GLU:OE1	1.92	0.70
2:B:1326:TYR:CD2	2:B:1327:PHE:HD2	2.06	0.70
2:B:1344:ASP:OD2	2:B:1344:ASP:N	2.25	0.70
2:F:1243:GLU:OE1	2:F:1243:GLU:HA	1.92	0.70
2:B:679:ILE:CG1	2:B:704:PHE:CE1	2.75	0.70
2:B:810:LYS:C	2:B:833:LEU:HD12	2.11	0.70
2:B:1315:LEU:HD12	2:B:1315:LEU:O	1.92	0.70
2:B:679:ILE:CD1	2:B:704:PHE:CE1	2.75	0.69
2:B:1232:TYR:OH	2:B:1268:GLU:CG	2.40	0.69
2:F:317:LEU:HB2	2:F:414:ILE:HD12	1.73	0.69
2:F:679:ILE:CD1	2:F:704:PHE:CE1	2.75	0.69
2:F:810:LYS:C	2:F:833:LEU:HD12	2.11	0.69
2:F:1000:LYS:HZ1	2:F:1064:GLU:CG	2.05	0.69
2:F:1302:ILE:O	2:F:1306:ALA:HB3	1.91	0.69
2:F:1315:LEU:HD12	2:F:1315:LEU:O	1.92	0.69
2:B:317:LEU:HB2	2:B:414:ILE:HD12	1.73	0.69
2:B:780:ARG:HH12	2:B:812:TYR:HD2	1.37	0.69
2:F:167:HIS:ND1	2:F:411:PRO:HA	2.07	0.69
2:B:148:LYS:HE3	2:B:429:PHE:HB3	1.72	0.69
2:B:181:VAL:HG22	2:B:209:LYS:CG	2.05	0.69
2:B:275:LEU:HD12	2:B:275:LEU:O	1.92	0.69
2:B:1302:ILE:O	2:B:1306:ALA:HB3	1.91	0.69
2:F:557:ARG:CZ	2:F:599:LYS:NZ	2.55	0.69
2:F:679:ILE:CG1	2:F:704:PHE:CE1	2.75	0.69
2:F:979:ASN:ND2	2:F:981:TYR:CG	2.60	0.69
2:B:167:HIS:ND1	2:B:411:PRO:HA	2.07	0.69
2:B:444:LEU:O	2:B:444:LEU:HD23	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:557:ARG:CZ	2:B:599:LYS:NZ	2.55	0.69
2:B:1219:GLU:HG3	2:B:1336:TYR:O	1.91	0.69
2:B:539:PHE:CD1	2:B:690:ASN:HB2	2.28	0.69
2:B:696:LEU:HD13	2:B:702:LEU:HD12	1.74	0.69
2:F:275:LEU:HD12	2:F:275:LEU:O	1.92	0.69
2:F:784:ILE:O	2:F:788:ILE:HG12	1.93	0.69
2:B:343:LEU:O	2:B:343:LEU:HD23	1.93	0.69
2:B:696:LEU:HD13	2:B:702:LEU:HD11	1.75	0.69
2:B:1143:VAL:HG13	2:B:1195:ILE:CG2	2.17	0.69
2:F:343:LEU:HD23	2:F:343:LEU:O	1.93	0.69
1:A:35:A:H2'	1:A:36:A:C8	2.28	0.69
2:B:208:ALA:O	2:B:212:LEU:HB2	1.92	0.69
2:B:784:ILE:O	2:B:788:ILE:HG12	1.93	0.69
2:B:940:ASN:HD22	2:B:940:ASN:N	1.90	0.69
2:B:1204:PHE:CE1	2:B:1347:LEU:HG	2.28	0.69
1:E:35:A:H2'	1:E:36:A:C8	2.28	0.69
2:F:148:LYS:HE3	2:F:429:PHE:HB3	1.72	0.69
2:F:208:ALA:O	2:F:212:LEU:HB2	1.92	0.69
2:F:359:TYR:CE1	2:F:399:LEU:CD2	2.75	0.69
2:F:444:LEU:HD23	2:F:444:LEU:O	1.92	0.69
2:F:696:LEU:HD13	2:F:702:LEU:HD11	1.75	0.69
2:F:696:LEU:HD13	2:F:702:LEU:HD12	1.74	0.69
2:F:730:SER:O	2:F:733:ILE:HG22	1.93	0.69
2:F:1219:GLU:HG3	2:F:1336:TYR:O	1.91	0.69
2:B:285:GLN:H	2:B:285:GLN:CD	1.97	0.69
2:B:507:VAL:HG11	2:B:660:GLY:O	1.93	0.69
2:F:285:GLN:H	2:F:285:GLN:CD	1.97	0.69
2:B:117:PRO:HD2	2:B:125:GLU:OE2	1.93	0.69
2:B:373:TYR:CE1	2:B:398:LEU:HB3	2.28	0.69
2:B:730:SER:O	2:B:733:ILE:HG22	1.93	0.69
2:F:117:PRO:HD2	2:F:125:GLU:OE2	1.93	0.69
2:B:223:GLU:OE1	2:F:574:CYS:HB3	1.92	0.68
2:F:373:TYR:CE1	2:F:398:LEU:HB3	2.28	0.68
2:F:507:VAL:HG11	2:F:660:GLY:O	1.93	0.68
2:F:940:ASN:N	2:F:940:ASN:HD22	1.91	0.68
2:F:1204:PHE:CE1	2:F:1347:LEU:HG	2.28	0.68
2:F:755:LYS:HD3	2:F:939:MET:HE1	1.76	0.68
2:B:500:LYS:O	2:B:712:GLN:NE2	2.27	0.68
2:F:324:ARG:NH1	2:F:400:ARG:HD2	2.08	0.68
2:F:806:LEU:CD2	2:F:811:LEU:CD1	2.69	0.68
2:B:51:LEU:HD13	2:B:1352:ILE:HG13	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:178:ASN:C	2:B:299:ALA:CB	2.61	0.68
2:B:806:LEU:CD2	2:B:811:LEU:CD1	2.69	0.68
2:F:51:LEU:HD13	2:F:1352:ILE:HG13	1.75	0.68
2:F:500:LYS:O	2:F:712:GLN:NE2	2.27	0.68
2:F:106:LEU:HD23	2:F:110:ASP:HB3	1.75	0.68
2:F:107:VAL:HG23	2:F:110:ASP:HB2	1.75	0.68
2:B:1257:LEU:H	2:B:1257:LEU:HD12	1.58	0.68
2:F:699:ASP:HB3	2:F:702:LEU:HB2	1.75	0.68
2:B:376:ILE:HD12	2:B:376:ILE:N	2.03	0.68
2:B:1272:GLN:O	2:B:1272:GLN:NE2	2.26	0.68
2:F:178:ASN:C	2:F:299:ALA:CB	2.61	0.68
2:F:1257:LEU:H	2:F:1257:LEU:HD12	1.59	0.68
2:B:699:ASP:HB3	2:B:702:LEU:HB2	1.75	0.68
2:F:433:LEU:O	2:F:437:ARG:N	2.27	0.68
2:F:1272:GLN:NE2	2:F:1272:GLN:O	2.26	0.68
2:B:106:LEU:HD23	2:B:110:ASP:CG	2.14	0.68
2:B:433:LEU:O	2:B:437:ARG:N	2.27	0.68
2:B:483:ASP:OD1	2:B:486:ALA:CB	2.42	0.68
2:B:1326:TYR:CE2	2:B:1327:PHE:CD2	2.81	0.68
2:F:1236:LEU:HD22	2:F:1310:ILE:CG1	2.23	0.68
2:F:1326:TYR:CE2	2:F:1327:PHE:CD2	2.81	0.68
2:B:963:VAL:HG21	2:B:990:ASN:CG	2.15	0.68
2:F:181:VAL:HG22	2:F:209:LYS:CG	2.05	0.68
2:B:513:LEU:HD11	2:B:616:LEU:HB2	1.75	0.67
2:B:1260:GLU:HA	2:B:1263:LYS:CB	2.24	0.67
2:F:376:ILE:HD12	2:F:376:ILE:N	2.03	0.67
2:F:483:ASP:OD1	2:F:486:ALA:CB	2.41	0.67
2:F:817:GLN:OE1	2:F:856:VAL:HG13	1.94	0.67
2:F:963:VAL:HG21	2:F:990:ASN:CG	2.15	0.67
2:F:1260:GLU:HA	2:F:1263:LYS:CB	2.24	0.67
2:B:845:SER:O	2:B:920:GLN:NE2	2.27	0.67
2:B:1236:LEU:HD22	2:B:1310:ILE:CG1	2.23	0.67
2:F:569:PHE:CD1	2:F:575:PHE:CD2	2.81	0.67
2:B:1045:PHE:H	2:B:1045:PHE:HD1	1.41	0.67
2:F:1062:LEU:CG	2:F:1063:ILE:HG13	2.23	0.67
2:B:275:LEU:HD12	2:B:275:LEU:C	2.15	0.67
2:B:817:GLN:OE1	2:B:856:VAL:HG13	1.94	0.67
2:B:901:THR:O	2:B:904:GLU:HG2	1.95	0.67
2:B:1062:LEU:CG	2:B:1063:ILE:HG13	2.24	0.67
2:F:275:LEU:HD12	2:F:275:LEU:C	2.15	0.67
2:F:362:TYR:HE2	2:F:401:LYS:HE3	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:901:THR:O	2:F:904:GLU:HG2	1.95	0.67
2:F:1045:PHE:HD1	2:F:1045:PHE:H	1.41	0.67
2:B:143:VAL:HG22	2:B:421:ALA:HB3	1.77	0.67
2:B:569:PHE:CD1	2:B:575:PHE:CD2	2.81	0.67
2:B:939:MET:HE2	2:B:953:VAL:HG21	1.76	0.67
2:F:513:LEU:HD11	2:F:616:LEU:HB2	1.75	0.67
2:F:845:SER:O	2:F:920:GLN:NE2	2.27	0.67
2:B:212:LEU:HD12	2:B:246:LEU:HD11	1.75	0.67
2:B:530:VAL:HG22	2:B:537:PRO:CA	2.25	0.67
2:B:755:LYS:HD3	2:B:939:MET:HE3	1.76	0.67
2:F:442:LYS:HE2	2:F:476:TRP:HA	1.75	0.67
2:B:1000:LYS:NZ	2:B:1045:PHE:CE2	2.51	0.67
2:B:1060:ARG:HH12	2:B:1064:GLU:CD	1.98	0.67
2:F:143:VAL:HG22	2:F:421:ALA:HB3	1.77	0.67
2:F:530:VAL:HG22	2:F:537:PRO:CA	2.25	0.67
2:F:1060:ARG:HH12	2:F:1064:GLU:CD	1.98	0.67
2:B:247:GLY:O	2:B:248:LEU:HD22	1.95	0.67
2:B:350:ILE:HG22	2:B:351:PHE:CE2	2.30	0.67
2:B:393:LEU:HD23	2:B:393:LEU:C	2.14	0.67
2:B:442:LYS:HE2	2:B:476:TRP:HA	1.75	0.67
2:F:279:LEU:HD13	2:F:287:ALA:HB2	1.76	0.67
2:F:283:GLY:C	2:F:285:GLN:OE1	2.33	0.67
2:F:350:ILE:HG22	2:F:351:PHE:CE2	2.30	0.67
2:B:278:LEU:HD12	2:B:278:LEU:C	2.16	0.67
2:B:283:GLY:C	2:B:285:GLN:OE1	2.33	0.67
2:B:317:LEU:HD12	2:B:317:LEU:C	2.16	0.67
2:F:393:LEU:C	2:F:393:LEU:HD23	2.14	0.67
2:B:93:VAL:HG21	2:B:151:LEU:HD23	1.76	0.67
2:B:918:LYS:HG3	2:B:1039:TYR:CE2	2.30	0.67
2:F:317:LEU:HD12	2:F:317:LEU:C	2.16	0.67
2:B:279:LEU:HD13	2:B:287:ALA:HB2	1.76	0.66
2:F:495:MET:O	3:G:17:DA:H2''	1.94	0.66
2:F:552:LEU:O	2:F:556:ASN:ND2	2.28	0.66
2:F:1063:ILE:HG23	2:F:1074:TRP:O	1.94	0.66
2:B:141:LYS:HG2	2:B:142:LEU:HD23	1.77	0.66
2:B:539:PHE:CE1	2:B:690:ASN:HB2	2.31	0.66
2:B:552:LEU:O	2:B:556:ASN:ND2	2.28	0.66
2:F:141:LYS:HG2	2:F:142:LEU:HD23	1.77	0.66
2:F:278:LEU:HD12	2:F:278:LEU:C	2.16	0.66
2:F:635:ARG:HG3	2:F:635:ARG:HH11	1.60	0.66
2:F:918:LYS:HG3	2:F:1039:TYR:CE2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:58:THR:HG22	2:B:731:PRO:CG	2.17	0.66
2:B:256:PHE:CD2	2:B:282:ILE:HD13	2.30	0.66
2:B:495:MET:O	3:C:17:DA:H2"	1.94	0.66
2:B:557:ARG:NH1	2:B:599:LYS:NZ	2.43	0.66
2:B:1045:PHE:CE1	2:B:1046:PHE:HE2	2.12	0.66
2:B:1063:ILE:HG23	2:B:1074:TRP:O	1.94	0.66
2:B:1312:LEU:HD11	2:B:1326:TYR:CE1	2.31	0.66
2:F:256:PHE:CD2	2:F:282:ILE:HD13	2.31	0.66
2:F:1000:LYS:HG3	2:F:1073:VAL:HG21	1.77	0.66
2:F:1325:LYS:HB2	2:F:1329:THR:O	1.95	0.66
2:B:1062:LEU:CA	2:B:1076:LYS:HD2	2.22	0.66
2:B:1281:ILE:HG21	2:B:1315:LEU:HD11	1.77	0.66
2:F:317:LEU:HD23	2:F:414:ILE:HG13	1.77	0.66
2:F:318:SER:OG	2:F:418:GLU:OE1	2.14	0.66
2:F:362:TYR:CD2	2:F:401:LYS:HE3	2.31	0.66
2:F:407:ASN:H	2:F:407:ASN:HD22	1.44	0.66
2:F:557:ARG:NH1	2:F:599:LYS:NZ	2.43	0.66
2:F:1062:LEU:CA	2:F:1076:LYS:HD2	2.22	0.66
2:F:1281:ILE:HG21	2:F:1315:LEU:HD11	1.77	0.66
2:B:635:ARG:HG3	2:B:635:ARG:HH11	1.61	0.66
2:B:1325:LYS:HB2	2:B:1329:THR:O	1.95	0.66
2:F:93:VAL:HG21	2:F:151:LEU:HD23	1.76	0.66
2:F:307:ARG:HH11	2:F:323:LYS:NZ	1.93	0.66
2:F:692:ASN:HB3	2:F:695:GLN:HG3	1.76	0.66
2:F:1045:PHE:CE1	2:F:1046:PHE:HE2	2.12	0.66
2:B:407:ASN:H	2:B:407:ASN:HD22	1.44	0.66
2:B:1044:ASN:O	2:B:1047:LYS:HG3	1.95	0.66
2:F:830:ILE:CD1	2:F:831:ASN:H	2.09	0.66
2:F:1000:LYS:NZ	2:F:1045:PHE:CE2	2.51	0.66
2:B:229:LEU:CD1	2:B:232:GLU:H	2.09	0.66
2:B:296:LEU:HD23	2:B:296:LEU:C	2.15	0.66
2:B:317:LEU:HD23	2:B:414:ILE:HG13	1.77	0.66
2:B:386:THR:O	2:B:389:LEU:HB2	1.95	0.66
2:B:1256:GLN:NE2	2:B:1260:GLU:CD	2.49	0.66
2:F:229:LEU:CD1	2:F:232:GLU:H	2.09	0.66
2:F:844:GLN:HE21	2:F:848:LYS:CG	2.08	0.66
2:F:873:GLU:HG2	2:F:874:GLU:N	2.09	0.66
2:F:1122:ARG:HD3	2:F:1134:PHE:CE2	2.31	0.66
2:F:1239:ALA:HB1	2:F:1306:ALA:CB	2.21	0.66
2:F:1248:SER:O	2:F:1252:ASN:ND2	2.29	0.66
2:F:1256:GLN:NE2	2:F:1260:GLU:CD	2.49	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1307:GLU:O	2:F:1310:ILE:HB	1.95	0.66
2:B:830:ILE:CD1	2:B:831:ASN:H	2.09	0.66
2:B:1000:LYS:NZ	2:B:1064:GLU:CG	2.58	0.66
2:B:1122:ARG:HD3	2:B:1134:PHE:CE2	2.31	0.66
2:B:1248:SER:O	2:B:1252:ASN:ND2	2.29	0.66
2:B:1307:GLU:O	2:B:1310:ILE:HB	1.95	0.66
2:F:1000:LYS:NZ	2:F:1064:GLU:CG	2.58	0.66
2:F:1312:LEU:HD11	2:F:1326:TYR:CE1	2.31	0.66
2:B:902:LYS:O	2:B:905:ARG:N	2.27	0.66
2:F:58:THR:HG22	2:F:731:PRO:CG	2.17	0.66
2:F:944:ASP:OD1	2:F:946:ASN:O	2.13	0.66
2:F:981:TYR:CD2	2:F:1092:VAL:CG1	2.78	0.66
2:F:1044:ASN:O	2:F:1047:LYS:HG3	1.95	0.66
1:A:78:A:H2'	1:A:79:G:H8	1.60	0.66
2:B:692:ASN:HB3	2:B:695:GLN:HG3	1.76	0.66
2:B:873:GLU:HG2	2:B:874:GLU:N	2.09	0.66
2:B:981:TYR:CD2	2:B:1092:VAL:CG1	2.78	0.66
2:F:296:LEU:HD23	2:F:296:LEU:C	2.15	0.66
2:F:302:LEU:HD23	2:F:302:LEU:C	2.16	0.66
2:F:810:LYS:C	2:F:833:LEU:CD1	2.63	0.66
2:B:107:VAL:HG22	2:B:1131:TYR:CE1	2.31	0.65
2:B:844:GLN:HE21	2:B:848:LYS:CG	2.08	0.65
2:B:944:ASP:OD1	2:B:946:ASN:O	2.13	0.65
2:F:107:VAL:HG22	2:F:1131:TYR:CE1	2.31	0.65
2:F:821:ASP:OD1	2:F:858:THR:OG1	2.13	0.65
2:F:1060:ARG:NH1	2:F:1064:GLU:CD	2.48	0.65
2:B:302:LEU:HD23	2:B:302:LEU:C	2.16	0.65
2:F:252:PHE:CZ	2:F:264:LEU:HD13	2.31	0.65
2:F:275:LEU:HD11	2:F:279:LEU:CG	2.26	0.65
2:F:307:ARG:HH11	2:F:323:LYS:HZ3	1.43	0.65
2:F:1230:SER:O	2:F:1233:VAL:HG23	1.96	0.65
1:A:59:U:OP1	2:B:473:ILE:HG13	1.96	0.65
2:B:1230:SER:O	2:B:1233:VAL:HG23	1.96	0.65
2:B:1239:ALA:HB1	2:B:1306:ALA:CB	2.21	0.65
2:F:665:LYS:HA	2:F:669:GLY:HA2	1.76	0.65
2:F:902:LYS:O	2:F:905:ARG:N	2.27	0.65
1:A:57:A:H5'	2:B:457:ARG:HH21	1.60	0.65
2:B:275:LEU:HD11	2:B:279:LEU:CG	2.26	0.65
2:B:870:VAL:HG21	2:B:908:LEU:HD21	1.78	0.65
2:B:958:LEU:HD22	2:B:962:LEU:HD12	1.78	0.65
2:B:1257:LEU:HD12	2:B:1257:LEU:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:78:A:H2'	1:E:79:G:H8	1.60	0.65
2:F:275:LEU:O	2:F:279:LEU:HB2	1.96	0.65
2:B:794:GLN:H	2:B:794:GLN:CD	2.00	0.65
2:B:821:ASP:OD1	2:B:858:THR:OG1	2.13	0.65
1:E:15:U:H2'	1:E:16:U:C6	2.31	0.65
2:F:958:LEU:HD22	2:F:962:LEU:HD12	1.78	0.65
2:F:1230:SER:C	2:F:1233:VAL:HG23	2.17	0.65
2:F:1257:LEU:H	2:F:1257:LEU:CD1	2.10	0.65
1:A:15:U:H2'	1:A:16:U:C6	2.31	0.65
2:B:100:ARG:CZ	2:B:117:PRO:O	2.45	0.65
2:B:252:PHE:CZ	2:B:264:LEU:HD13	2.32	0.65
2:B:810:LYS:C	2:B:833:LEU:CD1	2.64	0.65
2:B:1060:ARG:NH1	2:B:1064:GLU:CD	2.48	0.65
2:B:1230:SER:C	2:B:1233:VAL:HG23	2.17	0.65
2:B:1257:LEU:H	2:B:1257:LEU:CD1	2.10	0.65
1:E:59:U:OP1	2:F:473:ILE:HG13	1.97	0.65
2:F:794:GLN:CD	2:F:794:GLN:H	2.00	0.65
2:F:870:VAL:HG21	2:F:908:LEU:HD21	1.78	0.65
2:B:970:PHE:HD1	2:B:1080:PHE:CE1	2.15	0.65
3:C:24:DG:H2''	3:C:25:DG:C5'	2.26	0.65
1:E:57:A:H5'	2:F:457:ARG:HH21	1.60	0.65
2:B:665:LYS:HA	2:B:669:GLY:HA2	1.76	0.65
2:F:100:ARG:CZ	2:F:117:PRO:O	2.45	0.65
2:F:569:PHE:CD1	2:F:575:PHE:HD2	2.13	0.65
2:F:970:PHE:CD1	2:F:1080:PHE:CE1	2.84	0.65
2:F:970:PHE:HD1	2:F:1080:PHE:CE1	2.15	0.65
2:F:1062:LEU:HA	2:F:1076:LYS:CD	2.21	0.65
2:B:275:LEU:O	2:B:279:LEU:HB2	1.96	0.65
2:B:569:PHE:CD1	2:B:575:PHE:HD2	2.13	0.65
2:B:1220:LEU:HD11	2:B:1339:THR:HA	1.79	0.65
2:B:1251:ASP:CA	2:B:1254:GLN:NE2	2.39	0.65
2:F:1257:LEU:HD12	2:F:1257:LEU:N	2.11	0.65
3:G:19:DA:H2''	3:G:20:DA:O4'	1.97	0.65
3:G:24:DG:H2''	3:G:25:DG:C5'	2.26	0.65
2:B:970:PHE:CD1	2:B:1080:PHE:CE1	2.84	0.65
2:F:615:ILE:O	2:F:619:ILE:N	2.28	0.65
2:F:1220:LEU:HD11	2:F:1339:THR:HA	1.79	0.65
2:B:615:ILE:O	2:B:619:ILE:N	2.28	0.64
2:B:672:ASP:OD2	2:B:675:SER:OG	2.13	0.64
2:B:1062:LEU:HA	2:B:1076:LYS:CD	2.21	0.64
2:B:1143:VAL:HG11	2:B:1195:ILE:HG21	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:19:DA:H2''	3:C:20:DA:O4'	1.97	0.64
2:F:121:ASN:OD1	2:F:124:ASP:N	2.25	0.64
2:F:696:LEU:CD1	2:F:702:LEU:HD11	2.24	0.64
2:F:737:ILE:HG23	2:F:931:VAL:HG13	1.79	0.64
2:F:1143:VAL:HG11	2:F:1195:ILE:HG21	1.79	0.64
2:B:264:LEU:HD11	2:B:278:LEU:HD23	1.79	0.64
2:B:627:GLU:OE1	2:B:627:GLU:N	2.30	0.64
2:B:737:ILE:HG23	2:B:931:VAL:HG13	1.79	0.64
2:B:1045:PHE:CE1	2:B:1046:PHE:CD2	2.85	0.64
2:F:398:LEU:HD22	2:F:399:LEU:CD1	2.27	0.64
2:F:539:PHE:CD1	2:F:690:ASN:HB2	2.32	0.64
2:F:672:ASP:OD2	2:F:675:SER:OG	2.13	0.64
2:F:1045:PHE:CE1	2:F:1046:PHE:CD2	2.84	0.64
2:B:696:LEU:CD1	2:B:702:LEU:HD11	2.24	0.64
2:B:972:PHE:CE1	2:B:1083:VAL:HG12	2.33	0.64
2:F:46:ASN:ND2	2:F:1089:MET:SD	2.71	0.64
2:F:192:TYR:HE1	2:F:237:LEU:HD23	1.62	0.64
2:F:264:LEU:HD11	2:F:278:LEU:HD23	1.80	0.64
2:B:398:LEU:HD22	2:B:399:LEU:CD1	2.27	0.64
2:F:627:GLU:N	2:F:627:GLU:OE1	2.30	0.64
2:F:930:HIS:O	2:F:934:ILE:HG13	1.98	0.64
2:F:972:PHE:CE1	2:F:1083:VAL:HG12	2.33	0.64
2:F:1108:GLU:N	3:G:9:DC:OP1	2.30	0.64
2:B:46:ASN:ND2	2:B:1089:MET:SD	2.71	0.64
2:B:192:TYR:HE1	2:B:237:LEU:HD23	1.62	0.64
2:B:930:HIS:O	2:B:934:ILE:HG13	1.97	0.64
2:B:1108:GLU:N	3:C:9:DC:OP1	2.30	0.64
2:B:1326:TYR:HD2	2:B:1327:PHE:CD2	2.08	0.64
2:F:317:LEU:HD22	2:F:414:ILE:HD11	1.80	0.64
2:F:1305:GLN:CA	2:F:1327:PHE:CZ	2.73	0.64
2:B:317:LEU:HD22	2:B:414:ILE:HD11	1.80	0.64
2:B:557:ARG:HH12	2:B:599:LYS:HZ1	1.46	0.64
2:B:873:GLU:O	2:B:877:LYS:HG2	1.98	0.64
2:F:841:ILE:CD1	2:F:900:LEU:CD2	2.76	0.64
2:F:1210:ARG:NH2	2:F:1341:GLU:OE1	2.17	0.64
1:A:28:A:OP2	2:B:126:VAL:HG13	1.97	0.64
2:B:121:ASN:OD1	2:B:124:ASP:N	2.25	0.64
2:B:841:ILE:CD1	2:B:900:LEU:CD2	2.76	0.64
2:B:1243:GLU:C	2:B:1244:LYS:HZ2	2.00	0.64
2:F:557:ARG:HH12	2:F:599:LYS:HZ1	1.45	0.64
2:B:1210:ARG:NH2	2:B:1341:GLU:OE1	2.17	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:554:LYS:HD3	2:F:594:TYR:CZ	2.33	0.64
2:F:873:GLU:O	2:F:877:LYS:HG2	1.98	0.64
2:B:252:PHE:CE1	2:B:264:LEU:HD13	2.34	0.63
2:B:554:LYS:HD3	2:B:594:TYR:CZ	2.33	0.63
2:F:559:VAL:HA	2:F:563:GLN:OE1	1.98	0.63
2:F:1216:SER:HB2	4:H:6:DG:H3'	1.80	0.63
1:A:26:A:OP1	2:B:115:ARG:NH1	2.31	0.63
2:B:341:GLN:HE21	2:B:342:GLN:HG2	1.63	0.63
2:B:356:LYS:O	2:B:357:ASN:HB2	1.98	0.63
2:B:1216:SER:HB2	4:D:6:DG:H3'	1.80	0.63
2:B:1305:GLN:CA	2:B:1327:PHE:CZ	2.73	0.63
2:F:342:GLN:OE1	2:F:384:ASP:O	2.15	0.63
2:F:379:ILE:O	2:F:383:MET:HB2	1.98	0.63
2:B:97:PHE:CE1	2:B:152:ARG:HB3	2.33	0.63
2:B:184:LEU:CD1	2:B:296:LEU:HA	2.26	0.63
2:B:244:LEU:CG	2:B:266:LEU:HD11	2.28	0.63
2:B:559:VAL:HA	2:B:563:GLN:OE1	1.99	0.63
1:E:28:A:OP2	2:F:126:VAL:HG13	1.97	0.63
2:F:252:PHE:CE1	2:F:264:LEU:HD13	2.34	0.63
2:F:341:GLN:HE21	2:F:342:GLN:HG2	1.63	0.63
2:F:1326:TYR:HD2	2:F:1327:PHE:CD2	2.08	0.63
2:B:429:PHE:HB2	2:B:430:TYR:CD1	2.34	0.63
2:B:441:GLU:O	2:B:445:THR:OG1	2.16	0.63
2:B:614:ASP:OD1	2:B:664:ARG:NH2	2.31	0.63
2:F:429:PHE:HB2	2:F:430:TYR:CD1	2.34	0.63
2:F:441:GLU:O	2:F:445:THR:OG1	2.16	0.63
2:F:1243:GLU:C	2:F:1244:LYS:HZ2	2.00	0.63
2:B:234:LYS:HE2	2:B:234:LYS:O	1.97	0.63
2:B:525:THR:HG23	2:B:690:ASN:ND2	2.05	0.63
1:E:26:A:OP1	2:F:115:ARG:NH1	2.31	0.63
2:F:97:PHE:CE1	2:F:152:ARG:HB3	2.33	0.63
2:F:184:LEU:CD1	2:F:296:LEU:HA	2.26	0.63
2:F:244:LEU:CG	2:F:266:LEU:HD11	2.28	0.63
2:F:614:ASP:OD1	2:F:664:ARG:NH2	2.31	0.63
2:F:1039:TYR:O	2:F:1042:ILE:HG22	1.98	0.63
2:B:545:LYS:HZ2	2:B:690:ASN:HD21	1.46	0.63
2:B:1079:ASP:HA	2:B:1082:THR:OG1	1.99	0.63
2:F:830:ILE:HD12	2:F:830:ILE:H	1.63	0.63
2:F:1079:ASP:HA	2:F:1082:THR:OG1	1.99	0.63
2:B:687:GLY:HA3	2:B:688:PHE:C	2.17	0.63
2:B:1039:TYR:O	2:B:1042:ILE:HG22	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1200:LYS:NZ	4:H:6:DG:OP1	2.31	0.63
3:G:10:DT:H2'	3:G:11:DT:C6	2.34	0.63
2:B:557:ARG:CZ	2:B:599:LYS:HZ2	2.12	0.63
2:B:680:LEU:O	2:B:684:LYS:HG3	1.97	0.63
2:B:1007:GLU:N	2:B:1007:GLU:OE2	2.31	0.63
2:B:1200:LYS:NZ	4:D:6:DG:OP1	2.31	0.63
3:C:24:DG:C2'	3:C:25:DG:H5'	2.25	0.63
3:C:10:DT:H2'	3:C:11:DT:C6	2.34	0.63
2:F:234:LYS:HE2	2:F:234:LYS:O	1.97	0.63
2:F:342:GLN:CG	2:F:383:MET:HE1	2.09	0.63
2:F:1000:LYS:HD2	2:F:1045:PHE:CE2	2.34	0.63
2:F:1127:ASP:HB3	2:F:1130:LYS:HB2	1.81	0.63
2:B:334:LEU:O	2:B:338:LEU:HB2	1.98	0.62
2:B:830:ILE:HD12	2:B:830:ILE:H	1.64	0.62
2:B:1000:LYS:HD2	2:B:1045:PHE:CE2	2.34	0.62
2:F:680:LEU:O	2:F:684:LYS:HG3	1.97	0.62
2:F:1145:VAL:HG11	2:F:1182:LEU:HD13	1.81	0.62
3:G:24:DG:C2'	3:G:25:DG:H5'	2.25	0.62
2:B:341:GLN:NE2	2:B:342:GLN:HG2	2.13	0.62
2:F:334:LEU:O	2:F:338:LEU:HB2	1.98	0.62
2:B:171:GLU:OE1	2:B:269:ASP:HB3	1.98	0.62
2:B:1145:VAL:HG11	2:B:1182:LEU:HD13	1.81	0.62
2:B:1150:GLU:HG2	2:B:1157:LEU:HD21	1.81	0.62
2:F:195:LEU:HD22	2:F:286:TYR:HD2	1.63	0.62
2:F:979:ASN:CG	2:F:981:TYR:H	2.01	0.62
2:F:1007:GLU:N	2:F:1007:GLU:OE2	2.31	0.62
2:B:889:ALA:O	2:B:890:LYS:HB2	1.98	0.62
2:B:1000:LYS:HG3	2:B:1073:VAL:HG21	1.77	0.62
2:F:275:LEU:HD11	2:F:279:LEU:HG	1.80	0.62
2:F:828:LEU:HD13	2:F:836:TYR:CE2	2.34	0.62
2:F:1062:LEU:HG	2:F:1063:ILE:HG13	1.80	0.62
2:F:1150:GLU:HG2	2:F:1157:LEU:HD21	1.81	0.62
1:A:17:G:O2'	2:B:168:PHE:CD1	2.53	0.62
2:B:275:LEU:HD11	2:B:279:LEU:HG	1.80	0.62
2:B:828:LEU:HD13	2:B:836:TYR:CE2	2.34	0.62
2:F:171:GLU:OE1	2:F:269:ASP:HB3	1.98	0.62
2:F:1315:LEU:HB2	2:F:1324:PHE:CZ	2.34	0.62
2:B:158:LEU:O	2:B:162:ILE:HG13	1.99	0.62
2:B:1325:LYS:CB	2:B:1330:THR:HA	2.29	0.62
1:E:17:G:O2'	2:F:168:PHE:CD1	2.53	0.62
2:F:341:GLN:NE2	2:F:342:GLN:HG2	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:378:PRO:O	2:B:382:LYS:HG2	2.00	0.62
2:B:1270:ILE:HD13	2:B:1294:TYR:CG	2.35	0.62
2:B:1315:LEU:HB2	2:B:1324:PHE:CZ	2.34	0.62
2:F:70:ARG:NH1	2:F:454:PRO:CG	2.63	0.62
2:F:423:LEU:N	2:F:423:LEU:HD23	2.13	0.62
2:F:889:ALA:O	2:F:890:LYS:HB2	1.98	0.62
2:F:977:GLU:HG3	2:F:1310:ILE:HG21	1.79	0.62
2:F:1325:LYS:CB	2:F:1330:THR:HA	2.29	0.62
2:B:61:ALA:O	2:B:65:LYS:HG2	1.99	0.62
2:B:244:LEU:CD2	2:B:266:LEU:HD11	2.30	0.62
2:F:158:LEU:O	2:F:162:ILE:HG13	1.99	0.62
2:F:1292:SER:O	2:F:1296:LYS:HE3	2.00	0.62
2:B:195:LEU:HD22	2:B:286:TYR:HD2	1.63	0.62
2:B:665:LYS:O	2:B:670:ILE:N	2.33	0.62
2:B:1062:LEU:HG	2:B:1063:ILE:HG13	1.80	0.62
2:F:244:LEU:CD2	2:F:266:LEU:HD11	2.30	0.62
2:F:244:LEU:O	2:F:266:LEU:HD13	1.99	0.62
2:F:842:VAL:HG13	2:F:854:ASN:HD21	1.64	0.62
2:B:70:ARG:NH1	2:B:454:PRO:CG	2.63	0.62
2:B:1292:SER:O	2:B:1296:LYS:HE3	2.00	0.62
2:B:842:VAL:HG13	2:B:854:ASN:HD21	1.64	0.61
2:B:945:GLU:CD	2:B:946:ASN:H	2.04	0.61
2:F:324:ARG:CG	2:F:400:ARG:HG2	2.29	0.61
2:F:665:LYS:O	2:F:670:ILE:N	2.33	0.61
2:F:1270:ILE:HD13	2:F:1294:TYR:CG	2.35	0.61
2:B:178:ASN:C	2:B:299:ALA:HB2	2.20	0.61
2:B:318:SER:OG	2:B:418:GLU:OE2	2.16	0.61
2:B:423:LEU:N	2:B:423:LEU:HD23	2.13	0.61
2:F:945:GLU:CD	2:F:946:ASN:H	2.04	0.61
2:B:1164:LEU:HD22	2:B:1187:TYR:HE2	1.65	0.61
2:F:972:PHE:CE1	2:F:1083:VAL:CG1	2.83	0.61
2:B:665:LYS:C	2:B:669:GLY:CA	2.52	0.61
2:F:178:ASN:C	2:F:299:ALA:HB2	2.20	0.61
2:F:1164:LEU:HD22	2:F:1187:TYR:HE2	1.65	0.61
2:B:229:LEU:HD22	2:B:232:GLU:HB2	1.82	0.61
2:B:244:LEU:O	2:B:266:LEU:HD13	1.99	0.61
2:B:981:TYR:OH	2:B:1092:VAL:HG12	2.00	0.61
2:B:1302:ILE:CG2	2:B:1306:ALA:HB2	2.30	0.61
2:F:1079:ASP:O	2:F:1082:THR:OG1	2.15	0.61
2:F:1292:SER:O	2:F:1296:LYS:HD2	2.00	0.61
2:B:972:PHE:CE1	2:B:1083:VAL:CG1	2.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1079:ASP:O	2:B:1082:THR:OG1	2.16	0.61
2:F:167:HIS:CE1	2:F:411:PRO:HA	2.35	0.61
2:F:229:LEU:HD22	2:F:232:GLU:HB2	1.82	0.61
2:F:291:LEU:HD23	2:F:291:LEU:C	2.21	0.61
2:F:1302:ILE:CG2	2:F:1306:ALA:HB2	2.30	0.61
1:A:8:G:H2'	1:A:9:U:C6	2.36	0.61
2:B:167:HIS:CE1	2:B:411:PRO:HA	2.35	0.61
2:B:870:VAL:CG2	2:B:908:LEU:CD2	2.78	0.61
2:B:1292:SER:O	2:B:1296:LYS:HD2	2.00	0.61
1:E:8:G:H2'	1:E:9:U:C6	2.36	0.61
2:F:342:GLN:NE2	2:F:384:ASP:HB2	2.13	0.61
2:B:655:ARG:HH11	2:B:655:ARG:CG	2.13	0.61
2:B:979:ASN:CG	2:B:981:TYR:HD1	2.04	0.61
2:F:460:SER:OG	2:F:463:ALA:N	2.32	0.61
2:F:870:VAL:CG2	2:F:908:LEU:CD2	2.78	0.61
2:F:935:LEU:O	2:F:939:MET:HG2	2.00	0.61
2:F:1239:ALA:CB	2:F:1306:ALA:HB1	2.25	0.61
2:F:1282:LEU:O	2:F:1282:LEU:HD22	2.00	0.61
2:B:269:ASP:N	2:B:269:ASP:OD1	2.33	0.61
2:B:979:ASN:OD1	2:B:980:ASN:N	2.34	0.61
2:B:1042:ILE:O	2:B:1042:ILE:HD12	2.01	0.61
2:B:1245:LEU:HD12	2:B:1245:LEU:O	2.01	0.61
2:F:269:ASP:OD1	2:F:269:ASP:N	2.33	0.61
2:B:106:LEU:O	2:B:111:LYS:CE	2.49	0.60
2:B:244:LEU:CD1	2:B:250:PRO:HD2	2.29	0.60
2:B:291:LEU:HD23	2:B:291:LEU:C	2.21	0.60
2:F:244:LEU:CD1	2:F:250:PRO:HD2	2.29	0.60
2:F:1042:ILE:HD12	2:F:1042:ILE:O	2.01	0.60
2:F:324:ARG:HH21	2:F:400:ARG:HH12	1.39	0.60
2:F:655:ARG:CG	2:F:655:ARG:HH11	2.13	0.60
2:F:791:LEU:HD13	2:F:889:ALA:HB2	1.83	0.60
2:B:460:SER:OG	2:B:463:ALA:N	2.32	0.60
2:B:721:HIS:ND1	2:B:738:LEU:HD11	2.16	0.60
2:B:935:LEU:O	2:B:939:MET:HG2	2.00	0.60
2:B:1147:ALA:O	2:B:1160:VAL:HG22	2.01	0.60
2:B:1239:ALA:CB	2:B:1306:ALA:HB1	2.25	0.60
2:B:1282:LEU:O	2:B:1282:LEU:HD22	2.00	0.60
2:B:1304:GLU:HB3	2:B:1327:PHE:CE1	2.35	0.60
2:F:10:ALA:N	2:F:17:GLY:O	2.28	0.60
2:F:324:ARG:HG2	2:F:400:ARG:HB3	1.83	0.60
1:E:70:C:H2'	1:E:71:U:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:106:LEU:O	2:F:111:LYS:CE	2.49	0.60
2:F:307:ARG:NH1	2:F:323:LYS:HZ1	1.97	0.60
2:F:340:ARG:NH2	2:F:347:TYR:CZ	2.63	0.60
2:F:379:ILE:CD1	2:F:379:ILE:H	2.15	0.60
2:F:720:LEU:O	2:F:724:ILE:HG13	2.01	0.60
2:F:1147:ALA:O	2:F:1160:VAL:HG22	2.01	0.60
2:B:340:ARG:NH2	2:B:347:TYR:CZ	2.63	0.60
2:B:526:LYS:NZ	2:B:695:GLN:OE1	2.28	0.60
2:B:791:LEU:HD13	2:B:889:ALA:HB2	1.83	0.60
2:F:663:SER:OG	2:F:664:ARG:N	2.35	0.60
2:F:721:HIS:ND1	2:F:738:LEU:HD11	2.16	0.60
2:F:1245:LEU:O	2:F:1245:LEU:HD12	2.01	0.60
2:F:1304:GLU:HB3	2:F:1327:PHE:CE1	2.34	0.60
2:B:720:LEU:O	2:B:724:ILE:HG13	2.01	0.60
2:B:1075:ASP:OD1	2:B:1078:ARG:N	2.27	0.60
2:B:1166:ILE:HG13	2:B:1174:PHE:CE2	2.37	0.60
2:F:526:LYS:NZ	2:F:695:GLN:OE1	2.28	0.60
2:F:1166:ILE:HG13	2:F:1174:PHE:CE2	2.37	0.60
1:A:70:C:H2'	1:A:71:U:C6	2.36	0.60
2:B:10:ALA:N	2:B:17:GLY:O	2.28	0.60
2:B:379:ILE:CD1	2:B:379:ILE:H	2.15	0.60
2:B:1256:GLN:HE22	2:B:1260:GLU:CD	2.05	0.60
2:B:275:LEU:CD1	2:B:279:LEU:HG	2.32	0.60
2:B:379:ILE:O	2:B:383:MET:CG	2.49	0.60
2:B:557:ARG:O	2:B:590:SER:HB2	2.01	0.60
2:B:663:SER:OG	2:B:664:ARG:N	2.35	0.60
2:F:170:ILE:O	2:F:413:GLN:NE2	2.35	0.60
2:F:812:TYR:HE1	2:F:816:LEU:HD21	1.64	0.60
2:F:923:GLU:OE2	2:F:925:ARG:NE	2.32	0.60
2:F:1150:GLU:HG2	2:F:1157:LEU:CD2	2.32	0.60
2:F:1256:GLN:HE22	2:F:1260:GLU:CD	2.05	0.60
2:B:170:ILE:O	2:B:413:GLN:NE2	2.35	0.60
2:B:491:PHE:CZ	3:C:16:DT:H1'	2.37	0.60
2:B:830:ILE:HD12	2:B:831:ASN:H	1.67	0.60
2:B:830:ILE:HD13	2:B:831:ASN:OD1	2.01	0.60
2:B:1150:GLU:HG2	2:B:1157:LEU:CD2	2.32	0.60
2:B:1312:LEU:HD11	2:B:1326:TYR:HD1	1.65	0.60
2:F:275:LEU:CD1	2:F:279:LEU:HG	2.32	0.60
2:F:557:ARG:O	2:F:590:SER:HB2	2.01	0.60
2:F:830:ILE:HD13	2:F:831:ASN:OD1	2.01	0.60
2:F:557:ARG:CZ	2:F:599:LYS:HZ2	2.12	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:665:LYS:C	2:F:669:GLY:CA	2.52	0.60
2:F:1075:ASP:OD1	2:F:1078:ARG:N	2.27	0.60
2:B:508:LEU:HD11	2:B:664:ARG:HB2	1.84	0.59
2:B:727:LEU:O	2:B:734:LYS:HE2	2.01	0.59
2:B:812:TYR:HE1	2:B:816:LEU:HD21	1.64	0.59
2:B:1254:GLN:HB2	2:B:1255:LYS:HE3	1.84	0.59
2:F:491:PHE:CZ	3:G:16:DT:H1'	2.37	0.59
2:F:830:ILE:HD12	2:F:831:ASN:H	1.67	0.59
2:B:118:ILE:CG2	2:B:119:PHE:CE2	2.86	0.59
2:B:1266:LEU:O	2:B:1270:ILE:HG13	2.01	0.59
2:F:516:GLU:HA	2:F:519:THR:HG22	1.85	0.59
2:F:665:LYS:CB	2:F:669:GLY:HA3	2.30	0.59
2:F:727:LEU:O	2:F:734:LYS:HE2	2.01	0.59
2:B:115:ARG:HG3	2:B:116:HIS:ND1	2.16	0.59
1:E:5:C:H42	3:G:24:DG:H1	1.49	0.59
1:E:24:U:C1'	2:F:105:PHE:CE1	2.85	0.59
2:F:115:ARG:HG3	2:F:116:HIS:ND1	2.16	0.59
2:F:118:ILE:CG2	2:F:119:PHE:CE2	2.86	0.59
2:F:252:PHE:HZ	2:F:264:LEU:HD22	1.66	0.59
2:F:297:SER:CB	2:F:301:LEU:HD12	2.30	0.59
2:F:508:LEU:HD11	2:F:664:ARG:HB2	1.84	0.59
2:F:1203:LEU:CD1	2:F:1213:MET:CG	2.80	0.59
2:B:252:PHE:HZ	2:B:264:LEU:HD22	1.66	0.59
2:B:516:GLU:HA	2:B:519:THR:HG22	1.85	0.59
2:B:923:GLU:OE2	2:B:925:ARG:NE	2.32	0.59
2:F:1254:GLN:HB2	2:F:1255:LYS:HE3	1.84	0.59
2:F:1266:LEU:O	2:F:1270:ILE:HG13	2.02	0.59
1:A:5:C:H42	3:C:24:DG:H1	1.49	0.59
2:B:665:LYS:CB	2:B:669:GLY:HA3	2.30	0.59
2:B:675:SER:O	2:B:677:LYS:HG3	2.03	0.59
2:B:981:TYR:CE2	2:B:1092:VAL:HG11	2.24	0.59
2:B:256:PHE:HD2	2:B:282:ILE:HD13	1.66	0.59
2:B:524:LEU:CD2	2:B:540:LEU:HD23	2.32	0.59
2:B:672:ASP:CA	2:B:703:THR:CG2	2.74	0.59
1:E:83:C:H2'	1:E:84:A:H8	1.68	0.59
2:F:524:LEU:CD2	2:F:540:LEU:HD23	2.32	0.59
2:F:675:SER:O	2:F:677:LYS:HG3	2.03	0.59
2:F:1177:ASN:ND2	2:F:1180:ASP:OD2	2.33	0.59
2:F:1312:LEU:HD11	2:F:1326:TYR:HD1	1.65	0.59
2:B:143:VAL:CG1	2:B:315:ALA:HB2	2.31	0.59
2:B:297:SER:CB	2:B:301:LEU:HD12	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:936:ASP:OD2	2:B:951:ARG:NE	2.36	0.59
2:B:1177:ASN:ND2	2:B:1180:ASP:OD2	2.33	0.59
2:B:1241:HIS:CD2	2:B:1303:ARG:NH1	2.71	0.59
2:F:454:PRO:HB2	2:F:463:ALA:HB2	1.84	0.59
2:F:936:ASP:OD2	2:F:951:ARG:NE	2.36	0.59
1:A:83:C:H2'	1:A:84:A:H8	1.68	0.59
2:B:841:ILE:O	2:B:864:ARG:NH2	2.34	0.59
2:F:270:THR:OG1	2:F:274:ASP:OD1	2.21	0.59
2:F:297:SER:O	2:F:301:LEU:HB2	2.03	0.59
2:F:1241:HIS:CD2	2:F:1303:ARG:NH1	2.71	0.59
2:B:106:LEU:CD2	2:B:110:ASP:CG	2.71	0.59
2:B:297:SER:O	2:B:301:LEU:HB2	2.03	0.59
2:B:454:PRO:HB2	2:B:463:ALA:HB2	1.84	0.59
2:B:979:ASN:CG	2:B:981:TYR:CD1	2.76	0.59
2:F:143:VAL:CG1	2:F:315:ALA:HB2	2.31	0.59
2:F:841:ILE:O	2:F:864:ARG:NH2	2.34	0.59
2:F:324:ARG:NE	2:F:400:ARG:CG	2.55	0.59
2:F:981:TYR:HE2	2:F:1092:VAL:HB	1.64	0.59
2:B:93:VAL:HG21	2:B:151:LEU:CD2	2.33	0.58
2:B:114:GLU:OE1	2:B:115:ARG:N	2.35	0.58
2:B:270:THR:OG1	2:B:274:ASP:OD1	2.21	0.58
2:B:810:LYS:O	2:B:833:LEU:HD11	1.97	0.58
2:F:359:TYR:CZ	2:F:363:ILE:HD11	2.38	0.58
2:F:1064:GLU:HB2	2:F:1074:TRP:HB3	1.85	0.58
2:F:93:VAL:HG21	2:F:151:LEU:CD2	2.33	0.58
1:A:89:G:C6	2:B:1272:GLN:OE1	2.55	0.58
2:B:178:ASN:CB	2:B:299:ALA:N	2.64	0.58
2:B:328:HIS:CD2	2:B:399:LEU:HG	2.38	0.58
2:B:1064:GLU:HB2	2:B:1074:TRP:HB3	1.85	0.58
1:E:85:C:H2'	1:E:86:C:H6	1.68	0.58
2:F:114:GLU:OE1	2:F:115:ARG:N	2.35	0.58
2:F:342:GLN:CD	2:F:383:MET:CE	2.63	0.58
2:F:978:ILE:HG21	2:F:1228:LEU:HD23	1.85	0.58
2:F:1000:LYS:NZ	2:F:1064:GLU:CB	2.66	0.58
1:A:24:U:C1'	2:B:105:PHE:CE1	2.85	0.58
1:A:85:C:H2'	1:A:86:C:H6	1.68	0.58
2:B:1000:LYS:NZ	2:B:1064:GLU:CB	2.66	0.58
2:B:1095:VAL:HG22	2:B:1350:GLN:OE1	2.03	0.58
2:B:1255:LYS:HE2	2:B:1255:LYS:CA	2.33	0.58
1:E:89:G:C6	2:F:1272:GLN:OE1	2.55	0.58
2:F:319:ALA:HA	2:F:322:ILE:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1095:VAL:HG22	2:F:1350:GLN:OE1	2.03	0.58
2:B:167:HIS:HD1	2:B:411:PRO:HA	1.69	0.58
2:B:1344:ASP:HA	2:B:1362:LEU:O	2.04	0.58
1:E:5:C:N4	3:G:24:DG:H1	2.01	0.58
2:F:499:ASP:O	2:F:502:LEU:O	2.22	0.58
2:F:672:ASP:CA	2:F:703:THR:CG2	2.74	0.58
2:F:1255:LYS:HE2	2:F:1255:LYS:CA	2.33	0.58
1:A:88:A:C2	2:B:1090:PRO:HD2	2.38	0.58
2:B:78:ARG:CD	2:B:165:ARG:NH1	2.67	0.58
2:B:457:ARG:HB2	2:B:467:ARG:HH12	1.68	0.58
2:B:846:PHE:HB3	2:B:916:PHE:CD2	2.39	0.58
1:E:88:A:C2	2:F:1090:PRO:HD2	2.38	0.58
2:F:167:HIS:HD1	2:F:411:PRO:HA	1.69	0.58
2:F:256:PHE:HD2	2:F:282:ILE:HD13	1.66	0.58
2:F:328:HIS:CD2	2:F:399:LEU:HG	2.39	0.58
2:F:674:GLN:OE1	2:F:674:GLN:HA	2.02	0.58
2:F:1344:ASP:HA	2:F:1362:LEU:O	2.04	0.58
1:A:5:C:N4	3:C:24:DG:H1	2.01	0.58
2:B:499:ASP:O	2:B:502:LEU:O	2.22	0.58
2:B:674:GLN:OE1	2:B:674:GLN:HA	2.02	0.58
2:F:78:ARG:CD	2:F:165:ARG:NH1	2.67	0.58
2:F:846:PHE:HB3	2:F:916:PHE:CD2	2.39	0.58
2:B:359:TYR:CE1	2:B:399:LEU:CD2	2.85	0.58
2:F:178:ASN:CB	2:F:299:ALA:N	2.64	0.58
2:F:356:LYS:O	2:F:357:ASN:HB2	2.02	0.58
2:F:1216:SER:HB2	4:H:6:DG:C3'	2.34	0.58
2:B:48:ILE:HG12	2:B:49:GLY:N	2.17	0.58
2:B:286:TYR:O	2:B:289:LEU:N	2.37	0.58
2:B:1135:ASP:OD2	4:D:8:DT:C5'	2.52	0.58
2:B:1232:TYR:CZ	2:B:1268:GLU:HB3	2.39	0.58
2:F:457:ARG:HB2	2:F:467:ARG:HH12	1.68	0.58
2:F:1135:ASP:OD2	4:H:8:DT:C5'	2.52	0.58
2:B:277:ASN:HB3	2:B:653:ARG:CZ	2.34	0.58
2:B:672:ASP:HA	2:B:703:THR:HG23	1.82	0.58
2:B:1203:LEU:HD12	2:B:1213:MET:CG	2.33	0.58
1:E:14:A:H5''	2:F:66:ARG:HH12	1.68	0.58
1:E:22:U:O2	2:F:1110:ILE:HD12	2.04	0.58
2:F:277:ASN:HB3	2:F:653:ARG:CZ	2.34	0.58
2:F:810:LYS:O	2:F:833:LEU:HD11	1.97	0.58
2:F:1000:LYS:CE	2:F:1064:GLU:HB3	2.34	0.58
1:A:14:A:H5''	2:B:66:ARG:HH12	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:981:TYR:HE2	2:B:1092:VAL:HB	1.64	0.57
2:B:1000:LYS:CE	2:B:1064:GLU:HB3	2.34	0.57
2:B:1216:SER:HB2	4:D:6:DG:C3'	2.34	0.57
2:F:48:ILE:HG12	2:F:49:GLY:N	2.17	0.57
2:F:181:VAL:HG21	2:F:209:LYS:CB	2.26	0.57
2:F:286:TYR:O	2:F:289:LEU:N	2.37	0.57
1:A:22:U:O2	2:B:1110:ILE:HD12	2.04	0.57
2:B:66:ARG:NH2	2:B:462:PHE:CE2	2.61	0.57
2:B:336:LYS:HD3	2:B:347:TYR:OH	2.03	0.57
2:B:350:ILE:CG2	2:B:351:PHE:CE2	2.88	0.57
2:B:843:PRO:HD2	2:B:846:PHE:HD2	1.69	0.57
2:F:673:LYS:H	2:F:703:THR:HG21	1.69	0.57
2:F:843:PRO:HD2	2:F:846:PHE:HD2	1.69	0.57
2:F:1148:LYS:HE2	2:F:1159:SER:OG	2.03	0.57
1:A:85:C:H2'	1:A:86:C:C6	2.38	0.57
2:B:503:PRO:HD3	2:B:711:ALA:HB1	1.86	0.57
2:B:524:LEU:HD23	2:B:540:LEU:HD23	1.85	0.57
1:E:85:C:H2'	1:E:86:C:C6	2.38	0.57
2:F:503:PRO:HD3	2:F:711:ALA:HB1	1.86	0.57
2:F:777:SER:OG	4:H:2:DT:O5'	2.01	0.57
2:F:1203:LEU:HD12	2:F:1213:MET:CG	2.33	0.57
2:B:244:LEU:HD13	2:B:250:PRO:HG2	1.87	0.57
2:B:601:ILE:CD1	2:B:603:ASP:HB3	2.33	0.57
2:B:673:LYS:H	2:B:703:THR:HG21	1.69	0.57
2:B:1148:LYS:HE2	2:B:1159:SER:OG	2.03	0.57
2:F:341:GLN:HE21	2:F:342:GLN:CG	2.16	0.57
2:F:350:ILE:CG2	2:F:351:PHE:CE2	2.88	0.57
2:F:601:ILE:CD1	2:F:603:ASP:HB3	2.33	0.57
2:F:244:LEU:HD13	2:F:250:PRO:HG2	1.87	0.57
2:F:273:ASP:HA	2:F:276:ASP:HB3	1.86	0.57
2:F:430:TYR:CD1	2:F:430:TYR:N	2.73	0.57
2:F:601:ILE:HD11	2:F:603:ASP:HB3	1.87	0.57
2:F:694:MET:O	2:F:697:ILE:HG22	2.04	0.57
2:F:852:ILE:HG13	5:F:1401:SO4:O4	2.05	0.57
2:F:978:ILE:HG12	2:F:1313:PHE:CZ	2.38	0.57
2:B:339:VAL:O	2:B:342:GLN:O	2.22	0.57
2:B:430:TYR:CD1	2:B:430:TYR:N	2.73	0.57
2:B:694:MET:O	2:B:697:ILE:HG22	2.04	0.57
2:B:905:ARG:NH1	2:B:905:ARG:HG2	2.13	0.57
2:F:38:THR:HG22	2:F:39:ASP:N	2.20	0.57
2:F:336:LYS:HD3	2:F:347:TYR:OH	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:339:VAL:O	2:F:342:GLN:O	2.22	0.57
2:F:524:LEU:HD23	2:F:540:LEU:HD23	1.85	0.57
2:F:790:GLU:OE2	2:F:888:ASN:O	2.23	0.57
2:F:829:ASP:OD1	2:F:832:ARG:N	2.32	0.57
2:F:905:ARG:NH1	2:F:905:ARG:HG2	2.13	0.57
2:F:973:TYR:HD2	2:F:1234:ASN:OD1	1.88	0.57
2:B:273:ASP:HA	2:B:276:ASP:HB3	1.86	0.57
2:B:341:GLN:HE21	2:B:342:GLN:CG	2.16	0.57
2:B:601:ILE:HD11	2:B:603:ASP:HB3	1.87	0.57
2:F:672:ASP:HA	2:F:703:THR:HG23	1.82	0.57
2:F:755:LYS:CD	2:F:939:MET:HE3	2.35	0.57
2:F:979:ASN:CG	2:F:981:TYR:HD1	2.07	0.57
2:B:790:GLU:OE2	2:B:888:ASN:O	2.23	0.57
2:B:1212:ARG:CZ	2:B:1336:TYR:HE2	2.18	0.57
2:F:979:ASN:ND2	2:F:981:TYR:HB2	2.19	0.57
2:B:38:THR:HG22	2:B:39:ASP:N	2.20	0.57
2:B:973:TYR:HD2	2:B:1234:ASN:OD1	1.88	0.57
1:E:6:G:H2'	1:E:7:U:O4'	2.05	0.57
2:F:1045:PHE:N	2:F:1045:PHE:CD1	2.73	0.57
1:A:6:G:H2'	1:A:7:U:O4'	2.05	0.57
2:B:181:VAL:HG21	2:B:209:LYS:CB	2.26	0.57
2:F:249:THR:HG22	2:F:265:GLN:NE2	2.18	0.57
2:F:1212:ARG:CZ	2:F:1336:TYR:HE2	2.18	0.57
2:F:1230:SER:HA	2:F:1233:VAL:HG21	1.86	0.56
1:A:89:G:N2	2:B:1227:ALA:O	2.39	0.56
2:B:275:LEU:HD11	2:B:279:LEU:HD12	1.88	0.56
2:B:822:MET:HG3	2:B:883:TRP:HE1	1.69	0.56
2:B:824:VAL:O	2:B:824:VAL:HG12	2.05	0.56
2:B:829:ASP:OD1	2:B:832:ARG:N	2.32	0.56
2:B:1230:SER:HA	2:B:1233:VAL:HG21	1.86	0.56
1:E:89:G:N2	2:F:1227:ALA:O	2.39	0.56
2:F:128:TYR:HD1	2:F:132:TYR:HD2	1.53	0.56
2:F:275:LEU:HD11	2:F:279:LEU:HD12	1.88	0.56
2:B:1202:SER:O	2:B:1213:MET:HA	2.05	0.56
2:F:1204:PHE:CZ	2:F:1214:LEU:HD12	2.40	0.56
2:F:1202:SER:O	2:F:1213:MET:HA	2.05	0.56
2:B:128:TYR:HD1	2:B:132:TYR:HD2	1.53	0.56
2:B:350:ILE:O	2:B:359:TYR:N	2.39	0.56
2:B:557:ARG:HG3	2:B:557:ARG:NH1	2.09	0.56
2:B:1204:PHE:CZ	2:B:1214:LEU:HD12	2.40	0.56
2:F:207:ASP:HB3	2:F:210:ALA:HB2	1.79	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:824:VAL:O	2:F:824:VAL:HG12	2.05	0.56
2:F:972:PHE:CZ	2:F:1083:VAL:HG11	2.41	0.56
1:A:27:G:H5'	1:A:28:A:H5''	1.87	0.56
2:B:186:ILE:HD11	2:B:203:ALA:HB1	1.88	0.56
2:B:341:GLN:HE21	2:B:342:GLN:CB	2.18	0.56
2:B:566:GLU:O	2:B:571:LYS:HD2	2.06	0.56
2:B:837:ASP:OD2	2:B:859:ARG:O	2.23	0.56
2:B:972:PHE:CZ	2:B:1083:VAL:HG11	2.41	0.56
2:B:1303:ARG:O	2:B:1307:GLU:HG2	2.06	0.56
1:E:8:G:H2'	1:E:9:U:H6	1.70	0.56
1:E:17:G:O2'	2:F:168:PHE:HD1	1.89	0.56
1:E:27:G:H5'	1:E:28:A:H5''	1.88	0.56
2:F:822:MET:HG3	2:F:883:TRP:HE1	1.69	0.56
2:F:1237:TYR:O	2:F:1242:TYR:HE1	1.88	0.56
2:B:297:SER:HG	2:B:301:LEU:HD11	1.61	0.56
2:F:362:TYR:CD1	2:F:372:PHE:CG	2.87	0.56
2:F:691:ARG:HB3	2:F:696:LEU:CD2	2.35	0.56
1:A:17:G:O2'	2:B:168:PHE:HD1	1.89	0.56
2:B:9:LEU:HA	2:B:17:GLY:O	2.06	0.56
2:B:18:TRP:CZ3	2:B:747:LEU:HD21	2.41	0.56
2:B:691:ARG:HB3	2:B:696:LEU:CD2	2.35	0.56
2:B:1101:GLN:HB2	2:B:1140:ALA:HA	1.88	0.56
2:B:1203:LEU:CD1	2:B:1213:MET:CG	2.80	0.56
2:F:186:ILE:HD11	2:F:203:ALA:HB1	1.88	0.56
2:F:837:ASP:OD2	2:F:859:ARG:O	2.23	0.56
2:F:1101:GLN:HB2	2:F:1140:ALA:HA	1.88	0.56
2:F:1303:ARG:O	2:F:1307:GLU:HG2	2.06	0.56
1:A:8:G:H2'	1:A:9:U:H6	1.70	0.56
2:B:207:ASP:HB3	2:B:210:ALA:HB2	1.80	0.56
2:B:244:LEU:HD23	2:B:266:LEU:HD11	1.86	0.56
2:B:393:LEU:HB2	2:B:398:LEU:HD12	1.88	0.56
2:B:1241:HIS:CD2	2:B:1303:ARG:HH11	2.22	0.56
2:F:9:LEU:HA	2:F:17:GLY:O	2.06	0.56
2:F:18:TRP:CZ3	2:F:747:LEU:HD21	2.41	0.56
2:F:244:LEU:HD23	2:F:266:LEU:HD11	1.86	0.56
2:F:324:ARG:CZ	2:F:400:ARG:HD2	2.35	0.56
2:F:341:GLN:HE21	2:F:342:GLN:CB	2.18	0.56
2:F:393:LEU:HB2	2:F:398:LEU:HD12	1.88	0.56
2:F:566:GLU:O	2:F:571:LYS:HD2	2.06	0.56
2:F:655:ARG:HG3	2:F:655:ARG:NH1	2.21	0.56
2:F:679:ILE:O	2:F:683:LEU:N	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:79:ILE:HD12	2:B:159:ALA:HB1	1.87	0.55
2:B:489:GLN:HG3	2:B:625:LEU:CD2	2.36	0.55
2:B:1210:ARG:NH2	2:B:1341:GLU:OE2	2.39	0.55
2:B:1237:TYR:O	2:B:1242:TYR:HE1	1.88	0.55
2:B:1302:ILE:HG23	2:B:1306:ALA:HB2	1.88	0.55
2:F:489:GLN:HG3	2:F:625:LEU:CD2	2.36	0.55
2:F:686:ASP:OD2	2:F:691:ARG:HB2	2.05	0.55
2:F:1241:HIS:CD2	2:F:1303:ARG:HH11	2.22	0.55
2:F:1284:ASP:O	2:F:1285:ALA:C	2.43	0.55
2:F:1302:ILE:HG23	2:F:1306:ALA:HB2	1.88	0.55
2:B:148:LYS:CD	2:B:429:PHE:CD1	2.72	0.55
2:B:309:ASN:N	2:B:309:ASN:OD1	2.36	0.55
2:B:679:ILE:O	2:B:683:LEU:N	2.34	0.55
2:B:1284:ASP:O	2:B:1285:ALA:C	2.43	0.55
2:F:758:ASN:HD22	2:F:995:THR:HG22	1.71	0.55
2:F:1294:TYR:CD1	2:F:1305:GLN:NE2	2.68	0.55
2:B:655:ARG:HG3	2:B:655:ARG:NH1	2.21	0.55
2:B:758:ASN:HD22	2:B:995:THR:HG22	1.71	0.55
2:F:79:ILE:HD12	2:F:159:ALA:HB1	1.87	0.55
2:F:229:LEU:HD13	2:F:232:GLU:N	2.18	0.55
2:F:694:MET:SD	2:F:698:HIS:CD2	2.99	0.55
2:B:694:MET:SD	2:B:698:HIS:CD2	3.00	0.55
2:B:810:LYS:O	2:B:833:LEU:HD12	1.96	0.55
2:B:823:TYR:CD1	2:B:875:VAL:HG11	2.42	0.55
2:B:940:ASN:OD1	2:B:952:GLU:N	2.40	0.55
2:B:1325:LYS:HB2	2:B:1330:THR:HA	1.87	0.55
3:C:23:DC:C2'	3:C:24:DG:C5'	2.82	0.55
2:F:161:MET:SD	2:F:419:LEU:HD12	2.46	0.55
2:F:557:ARG:HG3	2:F:557:ARG:NH1	2.09	0.55
2:F:1210:ARG:NH2	2:F:1341:GLU:OE2	2.39	0.55
2:B:161:MET:SD	2:B:419:LEU:HD12	2.46	0.55
2:B:229:LEU:HD13	2:B:232:GLU:N	2.18	0.55
2:B:1272:GLN:HE21	2:B:1272:GLN:CA	2.18	0.55
2:F:457:ARG:O	2:F:457:ARG:HG2	2.07	0.55
2:F:823:TYR:CD1	2:F:875:VAL:HG11	2.42	0.55
2:F:940:ASN:OD1	2:F:952:GLU:N	2.40	0.55
1:A:19:A:C4'	2:B:407:ASN:O	2.45	0.55
2:B:376:ILE:HA	2:B:379:ILE:HD13	1.87	0.55
2:B:457:ARG:HG2	2:B:457:ARG:O	2.07	0.55
2:F:842:VAL:HG12	2:F:854:ASN:HD21	1.66	0.55
3:G:23:DC:C2'	3:G:24:DG:C5'	2.82	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:51:LEU:CD1	2:B:1352:ILE:HG13	2.35	0.55
2:B:207:ASP:O	2:B:210:ALA:N	2.40	0.55
2:B:380:LEU:O	2:B:386:THR:HG21	2.07	0.55
2:F:309:ASN:N	2:F:309:ASN:OD1	2.36	0.55
2:F:681:ASP:HA	2:F:684:LYS:HE2	1.89	0.55
2:F:1272:GLN:HE21	2:F:1272:GLN:CA	2.18	0.55
2:B:681:ASP:HA	2:B:684:LYS:HE2	1.89	0.55
2:B:1294:TYR:CD1	2:B:1305:GLN:NE2	2.68	0.55
2:F:988:TYR:CZ	2:F:1086:VAL:HG21	2.42	0.55
2:F:1325:LYS:HB2	2:F:1330:THR:HA	1.88	0.55
2:B:567:ASP:O	2:B:571:LYS:HB2	2.06	0.55
2:F:207:ASP:O	2:F:210:ALA:N	2.40	0.55
2:F:376:ILE:HA	2:F:379:ILE:HD13	1.88	0.55
2:F:523:GLU:OE2	2:F:588:ASN:N	2.35	0.55
2:F:843:PRO:HD2	2:F:846:PHE:CD2	2.42	0.55
2:F:1230:SER:O	2:F:1233:VAL:N	2.40	0.55
2:F:1304:GLU:CB	2:F:1327:PHE:HE1	2.17	0.55
2:B:842:VAL:HG12	2:B:854:ASN:HD21	1.66	0.55
2:B:843:PRO:HD2	2:B:846:PHE:CD2	2.42	0.55
2:B:1230:SER:O	2:B:1233:VAL:N	2.40	0.55
2:B:988:TYR:CZ	2:B:1086:VAL:HG21	2.42	0.54
2:B:1270:ILE:CD1	2:B:1294:TYR:CG	2.84	0.54
2:F:51:LEU:CD1	2:F:1352:ILE:HG13	2.35	0.54
2:B:233:LYS:CG	2:F:543:GLU:OE1	2.56	0.54
2:B:1277:SER:HB2	2:B:1287:LEU:HD22	1.88	0.54
2:F:212:LEU:HD12	2:F:246:LEU:HD11	1.87	0.54
2:F:567:ASP:O	2:F:571:LYS:HB2	2.06	0.54
2:F:905:ARG:HH11	2:F:905:ARG:CG	2.14	0.54
2:B:167:HIS:HE1	2:B:411:PRO:HG3	1.72	0.54
2:B:244:LEU:CD1	2:B:250:PRO:CG	2.85	0.54
2:F:148:LYS:CD	2:F:429:PHE:CD1	2.72	0.54
2:F:1277:SER:HB2	2:F:1287:LEU:HD22	1.88	0.54
2:B:195:LEU:HD22	2:B:289:LEU:HD12	1.87	0.54
2:B:261:ASP:OD1	2:B:261:ASP:N	2.38	0.54
2:B:1146:VAL:O	2:B:1146:VAL:HG13	2.07	0.54
2:B:1304:GLU:CB	2:B:1327:PHE:HE1	2.17	0.54
2:F:114:GLU:HG2	2:F:120:GLY:O	2.08	0.54
2:F:307:ARG:NH1	2:F:323:LYS:HZ3	2.02	0.54
2:F:495:MET:HB3	3:G:17:DA:H1'	1.89	0.54
2:B:114:GLU:HG2	2:B:120:GLY:O	2.08	0.54
2:B:495:MET:HB3	3:C:17:DA:H1'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:91:C:H2'	2:F:44:LYS:O	2.07	0.54
2:F:167:HIS:HE1	2:F:411:PRO:HG3	1.71	0.54
2:F:1314:THR:HG23	2:F:1324:PHE:CG	2.43	0.54
1:A:91:C:H2'	2:B:44:LYS:O	2.07	0.54
2:B:233:LYS:HD2	2:F:543:GLU:CD	2.28	0.54
2:B:606:PHE:HE2	2:B:612:ASN:CG	2.10	0.54
2:B:1220:LEU:HD21	2:B:1342:VAL:HG21	1.89	0.54
1:E:19:A:C4'	2:F:407:ASN:O	2.45	0.54
1:E:81:G:N1	2:F:1356:TYR:HB3	2.23	0.54
2:F:1146:VAL:HG13	2:F:1146:VAL:O	2.07	0.54
2:B:181:VAL:CG2	2:B:209:LYS:CA	2.84	0.54
2:B:317:LEU:HD22	2:B:414:ILE:CD1	2.38	0.54
2:B:864:ARG:HA	2:B:875:VAL:HG21	1.88	0.54
2:B:905:ARG:HH11	2:B:905:ARG:CG	2.14	0.54
2:B:1314:THR:HG23	2:B:1324:PHE:CG	2.43	0.54
2:F:195:LEU:HD22	2:F:289:LEU:HD12	1.87	0.54
2:F:606:PHE:HE2	2:F:612:ASN:CG	2.10	0.54
2:F:1220:LEU:HD21	2:F:1342:VAL:HG21	1.89	0.54
1:A:81:G:N1	2:B:1356:TYR:HB3	2.23	0.54
2:F:244:LEU:CD1	2:F:250:PRO:CG	2.85	0.54
2:F:277:ASN:HB3	2:F:653:ARG:NE	2.23	0.54
2:F:317:LEU:HD22	2:F:414:ILE:CD1	2.38	0.54
2:F:596:ASP:CG	2:F:656:TYR:HH	1.98	0.54
2:F:979:ASN:CG	2:F:981:TYR:HB2	2.27	0.54
2:B:1200:LYS:O	2:B:1201:TYR:HB2	2.08	0.54
2:F:220:ARG:HG3	2:F:220:ARG:NH1	2.14	0.54
2:F:1270:ILE:CD1	2:F:1294:TYR:CG	2.84	0.54
2:B:823:TYR:OH	2:B:839:ASP:OD2	2.19	0.54
2:F:261:ASP:N	2:F:261:ASP:OD1	2.38	0.54
1:A:24:U:N1	2:B:105:PHE:CE1	2.74	0.53
2:F:696:LEU:CD1	2:F:702:LEU:HD13	2.20	0.53
2:F:864:ARG:HA	2:F:875:VAL:HG21	1.88	0.53
2:F:1048:THR:HA	2:F:1076:LYS:HZ2	1.73	0.53
2:F:1200:LYS:O	2:F:1201:TYR:HB2	2.08	0.53
3:G:17:DA:H2'	3:G:18:DG:C8	2.43	0.53
2:B:69:ARG:O	2:B:73:THR:HG23	2.09	0.53
2:B:277:ASN:HB3	2:B:653:ARG:NE	2.23	0.53
2:B:360:ALA:O	2:B:364:ASP:HB2	2.08	0.53
2:B:432:PHE:CD1	2:B:433:LEU:N	2.77	0.53
2:B:437:ARG:O	2:B:441:GLU:HG3	2.08	0.53
2:B:927:ILE:O	2:B:931:VAL:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1000:LYS:HE2	2:B:1073:VAL:HG21	1.62	0.53
3:C:17:DA:H2'	3:C:18:DG:C8	2.43	0.53
2:F:69:ARG:O	2:F:73:THR:HG23	2.09	0.53
2:F:181:VAL:CG2	2:F:209:LYS:CA	2.84	0.53
2:F:437:ARG:O	2:F:441:GLU:HG3	2.08	0.53
2:B:275:LEU:HD11	2:B:279:LEU:CD1	2.38	0.53
2:B:870:VAL:CG1	2:B:871:PRO:CD	2.85	0.53
2:B:963:VAL:HG21	2:B:990:ASN:OD1	2.08	0.53
2:B:1325:LYS:HG3	2:B:1326:TYR:O	2.08	0.53
1:A:19:A:H4'	2:B:407:ASN:C	2.27	0.53
2:B:736:GLY:O	2:B:740:THR:HG22	2.09	0.53
2:F:432:PHE:CD1	2:F:433:LEU:N	2.77	0.53
2:F:530:VAL:HG22	2:F:537:PRO:HA	1.90	0.53
2:F:736:GLY:O	2:F:740:THR:HG22	2.09	0.53
2:F:927:ILE:O	2:F:931:VAL:HG23	2.08	0.53
1:E:24:U:N1	2:F:105:PHE:CE1	2.74	0.53
2:F:762:GLU:OE1	2:F:990:ASN:ND2	2.41	0.53
2:B:1038:PHE:HD1	2:B:1038:PHE:O	1.92	0.53
1:E:42:A:O2'	1:E:43:G:OP1	2.23	0.53
2:F:207:ASP:HB2	2:F:210:ALA:HB3	1.84	0.53
2:F:270:THR:OG1	2:F:629:ARG:NH1	2.41	0.53
2:F:1038:PHE:O	2:F:1038:PHE:HD1	1.92	0.53
2:F:1135:ASP:OD2	4:H:8:DT:H5''	2.09	0.53
2:F:1325:LYS:HG3	2:F:1326:TYR:O	2.08	0.53
2:B:7:ILE:O	2:B:759:ILE:HA	2.08	0.53
2:B:212:LEU:CD1	2:B:246:LEU:HD11	2.38	0.53
2:B:270:THR:OG1	2:B:629:ARG:NH1	2.41	0.53
2:B:508:LEU:CD1	2:B:663:SER:C	2.75	0.53
2:B:530:VAL:HG22	2:B:537:PRO:HA	1.90	0.53
2:B:1284:ASP:OD1	2:B:1284:ASP:N	2.35	0.53
2:F:508:LEU:CD1	2:F:663:SER:C	2.75	0.53
2:B:275:LEU:CD1	2:B:279:LEU:CG	2.86	0.53
1:E:19:A:H4'	2:F:407:ASN:C	2.27	0.53
2:F:128:TYR:CD1	2:F:132:TYR:HD2	2.27	0.53
2:F:275:LEU:HD11	2:F:279:LEU:CD1	2.38	0.53
2:F:569:PHE:CD1	2:F:575:PHE:CE2	2.97	0.53
2:F:570:LYS:HA	2:F:574:CYS:HA	1.91	0.53
2:F:870:VAL:CG1	2:F:871:PRO:CD	2.85	0.53
2:F:963:VAL:HG21	2:F:990:ASN:OD1	2.08	0.53
2:F:1284:ASP:OD1	2:F:1284:ASP:N	2.35	0.53
2:B:128:TYR:CD1	2:B:132:TYR:HD2	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:220:ARG:HG3	2:B:220:ARG:NH1	2.14	0.53
2:B:569:PHE:CD1	2:B:575:PHE:CE2	2.97	0.53
2:B:1135:ASP:OD2	4:D:8:DT:H5''	2.09	0.53
2:F:66:ARG:CZ	2:F:462:PHE:CZ	2.78	0.53
2:F:275:LEU:CD1	2:F:279:LEU:CG	2.86	0.53
2:B:570:LYS:HA	2:B:574:CYS:HA	1.91	0.53
2:B:762:GLU:OE1	2:B:990:ASN:ND2	2.41	0.53
2:B:911:LEU:HA	2:B:1032:ALA:CB	2.39	0.53
2:F:7:ILE:O	2:F:759:ILE:HA	2.08	0.53
2:F:386:THR:OG1	2:F:389:LEU:HD12	2.09	0.53
2:F:911:LEU:HA	2:F:1032:ALA:CB	2.39	0.53
1:A:42:A:O2'	1:A:43:G:OP1	2.23	0.52
2:B:249:THR:HG22	2:B:265:GLN:HE21	1.70	0.52
2:B:553:PHE:CD1	2:B:559:VAL:HG21	2.44	0.52
2:F:277:ASN:O	2:F:281:GLN:NE2	2.42	0.52
2:F:553:PHE:CD1	2:F:559:VAL:HG21	2.44	0.52
2:F:1210:ARG:HA	2:F:1280:VAL:HG13	1.90	0.52
2:F:1315:LEU:HD12	2:F:1315:LEU:C	2.29	0.52
2:B:594:TYR:OH	2:B:608:ASP:OD1	2.20	0.52
2:B:1045:PHE:HD1	2:B:1045:PHE:N	2.06	0.52
2:F:37:ASN:OD1	2:F:37:ASN:N	2.39	0.52
2:B:561:VAL:CG2	2:B:584:GLU:O	2.57	0.52
2:B:1210:ARG:HA	2:B:1280:VAL:HG13	1.90	0.52
2:B:1262:HIS:O	2:B:1265:TYR:HB2	2.10	0.52
2:F:1262:HIS:O	2:F:1265:TYR:HB2	2.10	0.52
2:B:81:TYR:O	2:B:85:ILE:HG13	2.09	0.52
2:B:277:ASN:O	2:B:281:GLN:NE2	2.42	0.52
2:B:830:ILE:CD1	2:B:831:ASN:N	2.73	0.52
2:F:40:ARG:NE	2:F:43:ILE:CD1	2.73	0.52
2:F:244:LEU:HD13	2:F:250:PRO:CG	2.40	0.52
2:F:561:VAL:CG2	2:F:584:GLU:O	2.57	0.52
2:F:830:ILE:CD1	2:F:831:ASN:N	2.73	0.52
2:F:1284:ASP:O	2:F:1287:LEU:N	2.43	0.52
3:G:24:DG:C2'	3:G:25:DG:C5'	2.85	0.52
2:B:696:LEU:CD1	2:B:702:LEU:HD13	2.19	0.52
2:B:1284:ASP:O	2:B:1287:LEU:N	2.43	0.52
2:F:167:HIS:ND1	2:F:167:HIS:O	2.41	0.52
2:F:635:ARG:HH11	2:F:635:ARG:CG	2.20	0.52
2:F:694:MET:SD	2:F:698:HIS:NE2	2.82	0.52
2:F:1045:PHE:HD1	2:F:1045:PHE:N	2.06	0.52
2:B:37:ASN:OD1	2:B:37:ASN:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:40:ARG:NE	2:B:43:ILE:CD1	2.73	0.52
2:B:244:LEU:HD13	2:B:250:PRO:CG	2.40	0.52
2:B:647:VAL:O	2:B:651:LEU:N	2.43	0.52
2:B:1216:SER:CB	4:D:6:DG:H3'	2.38	0.52
2:F:58:THR:CG2	2:F:731:PRO:HG3	2.21	0.52
2:B:207:ASP:HB2	2:B:210:ALA:HB3	1.84	0.52
2:B:738:LEU:HD23	2:B:738:LEU:C	2.30	0.52
2:B:963:VAL:CG2	2:B:990:ASN:OD1	2.57	0.52
2:B:1315:LEU:HD12	2:B:1315:LEU:C	2.29	0.52
2:F:165:ARG:O	2:F:415:HIS:ND1	2.42	0.52
2:F:212:LEU:O	2:F:221:ARG:NH1	2.40	0.52
2:F:393:LEU:HD23	2:F:393:LEU:O	2.10	0.52
2:F:594:TYR:OH	2:F:608:ASP:OD1	2.20	0.52
2:F:811:LEU:C	2:F:811:LEU:HD13	2.29	0.52
2:F:1203:LEU:HD21	2:F:1211:LYS:CD	2.40	0.52
2:F:1216:SER:CB	4:H:6:DG:H3'	2.38	0.52
2:B:393:LEU:HD23	2:B:393:LEU:O	2.10	0.52
2:B:523:GLU:OE1	2:B:588:ASN:HB2	2.09	0.52
2:B:694:MET:SD	2:B:698:HIS:NE2	2.82	0.52
2:B:811:LEU:HD13	2:B:811:LEU:C	2.29	0.52
2:F:81:TYR:O	2:F:85:ILE:HG13	2.09	0.52
2:F:400:ARG:HD3	2:F:401:LYS:H	1.74	0.52
2:F:492:ILE:CD1	2:F:625:LEU:O	2.58	0.52
2:F:1272:GLN:NE2	2:F:1272:GLN:CA	2.73	0.52
2:B:58:THR:CG2	2:B:731:PRO:HG3	2.22	0.52
2:B:212:LEU:O	2:B:221:ARG:NH1	2.39	0.52
2:B:340:ARG:CA	2:B:344:PRO:HG3	2.40	0.52
2:B:523:GLU:OE2	2:B:588:ASN:N	2.35	0.52
2:B:635:ARG:HH11	2:B:635:ARG:CG	2.20	0.52
2:B:1045:PHE:N	2:B:1045:PHE:CD1	2.73	0.52
2:F:531:THR:CG2	2:F:534:MET:SD	2.94	0.52
2:F:963:VAL:CG2	2:F:990:ASN:OD1	2.57	0.52
2:B:27:VAL:HG11	2:B:1089:MET:HE3	1.91	0.52
2:B:165:ARG:O	2:B:415:HIS:ND1	2.42	0.52
2:B:167:HIS:ND1	2:B:167:HIS:O	2.41	0.52
2:B:226:ILE:HA	2:B:229:LEU:HG	1.92	0.52
2:B:275:LEU:CD1	2:B:279:LEU:CB	2.87	0.52
2:B:429:PHE:N	2:B:429:PHE:HD2	2.08	0.52
2:B:981:TYR:CE1	2:B:1092:VAL:CG1	2.88	0.52
2:B:1203:LEU:HD21	2:B:1211:LYS:CD	2.40	0.52
3:C:24:DG:C2'	3:C:25:DG:C5'	2.86	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:275:LEU:CD1	2:F:279:LEU:CB	2.87	0.52
2:F:429:PHE:HD2	2:F:429:PHE:N	2.08	0.52
2:F:647:VAL:O	2:F:651:LEU:N	2.43	0.52
2:B:66:ARG:CZ	2:B:462:PHE:CZ	2.78	0.51
2:B:123:VAL:HG13	2:B:124:ASP:N	2.25	0.51
2:B:274:ASP:O	2:B:278:LEU:HB3	2.10	0.51
2:B:318:SER:OG	2:B:418:GLU:CD	2.48	0.51
2:B:492:ILE:CD1	2:B:625:LEU:O	2.58	0.51
2:B:1272:GLN:NE2	2:B:1272:GLN:CA	2.73	0.51
2:F:246:LEU:CD1	2:F:246:LEU:N	2.73	0.51
2:F:738:LEU:C	2:F:738:LEU:HD23	2.30	0.51
2:B:1250:GLU:O	2:B:1254:GLN:OE1	2.28	0.51
2:F:123:VAL:HG13	2:F:124:ASP:N	2.25	0.51
2:F:245:SER:HB3	2:F:296:LEU:HD22	1.91	0.51
2:F:340:ARG:CA	2:F:344:PRO:HG3	2.40	0.51
2:F:523:GLU:OE1	2:F:588:ASN:HB2	2.09	0.51
2:F:979:ASN:CG	2:F:981:TYR:CD1	2.81	0.51
2:F:981:TYR:OH	2:F:1092:VAL:HG12	2.00	0.51
2:F:1216:SER:HB2	4:H:6:DG:H5''	1.90	0.51
2:F:40:ARG:NE	2:F:43:ILE:HD11	2.25	0.51
2:F:226:ILE:HA	2:F:229:LEU:HG	1.92	0.51
2:F:275:LEU:HD12	2:F:279:LEU:CB	2.26	0.51
2:F:341:GLN:NE2	2:F:342:GLN:CG	2.73	0.51
2:F:759:ILE:HG21	2:F:935:LEU:HD23	1.92	0.51
2:B:520:VAL:HG21	2:B:591:LEU:CD2	2.40	0.51
2:B:759:ILE:HG21	2:B:935:LEU:HD23	1.92	0.51
2:B:788:ILE:HG13	2:B:796:LEU:HG	1.93	0.51
2:B:1048:THR:HA	2:B:1076:LYS:HZ2	1.75	0.51
2:B:1351:SER:OG	2:B:1356:TYR:HB2	2.10	0.51
2:F:274:ASP:O	2:F:278:LEU:HB3	2.11	0.51
2:F:801:VAL:HG11	2:F:815:TYR:CE2	2.46	0.51
2:F:1250:GLU:O	2:F:1254:GLN:OE1	2.28	0.51
2:B:341:GLN:NE2	2:B:342:GLN:CG	2.73	0.51
2:B:531:THR:CG2	2:B:534:MET:SD	2.94	0.51
2:B:655:ARG:HH11	2:B:655:ARG:HG3	1.76	0.51
2:B:801:VAL:HG11	2:B:815:TYR:CE2	2.46	0.51
2:B:1216:SER:HB2	4:D:6:DG:H5''	1.90	0.51
2:F:788:ILE:HG13	2:F:796:LEU:HG	1.93	0.51
2:F:1351:SER:OG	2:F:1356:TYR:HB2	2.10	0.51
2:B:40:ARG:NE	2:B:43:ILE:HD11	2.25	0.51
2:B:302:LEU:O	2:B:305:ILE:HD12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:827:GLU:O	2:B:828:LEU:HD23	2.10	0.51
2:B:1048:THR:HA	2:B:1076:LYS:NZ	2.25	0.51
2:B:1145:VAL:CG1	2:B:1182:LEU:CD1	2.89	0.51
2:B:1204:PHE:CD1	2:B:1347:LEU:HG	2.45	0.51
2:F:296:LEU:HD23	2:F:296:LEU:O	2.11	0.51
2:F:373:TYR:HA	2:F:376:ILE:CD1	2.40	0.51
2:F:520:VAL:HG21	2:F:591:LEU:CD2	2.40	0.51
2:F:1145:VAL:CG1	2:F:1182:LEU:CD1	2.89	0.51
1:A:14:A:H5''	2:B:66:ARG:NH1	2.26	0.51
2:B:1314:THR:HG23	2:B:1324:PHE:CD1	2.46	0.51
2:F:655:ARG:HH11	2:F:655:ARG:HG3	1.76	0.51
2:F:708:ILE:HD13	2:F:708:ILE:N	2.25	0.51
2:F:870:VAL:CG2	2:F:908:LEU:HD21	2.40	0.51
2:F:1314:THR:HG23	2:F:1324:PHE:CD1	2.46	0.51
1:A:97:U:H2'	1:A:98:C:O4'	2.11	0.51
2:B:558:LYS:HD2	2:B:586:ARG:HD2	1.93	0.51
2:B:708:ILE:HD13	2:B:708:ILE:N	2.25	0.51
2:F:429:PHE:HB2	2:F:430:TYR:CE1	2.46	0.51
2:F:827:GLU:O	2:F:828:LEU:HD23	2.10	0.51
2:F:974:LYS:HZ3	2:F:976:ARG:HH11	1.59	0.51
1:A:91:C:H6	2:B:44:LYS:O	1.94	0.51
2:B:296:LEU:HD23	2:B:296:LEU:O	2.11	0.51
2:B:429:PHE:HB2	2:B:430:TYR:CE1	2.46	0.51
2:B:975:VAL:HG23	2:B:1233:VAL:HG12	1.92	0.51
1:E:97:U:H2'	1:E:98:C:O4'	2.11	0.51
2:F:905:ARG:NH1	2:F:905:ARG:CG	2.73	0.51
2:F:981:TYR:CE1	2:F:1092:VAL:CG1	2.88	0.51
2:F:1255:LYS:N	2:F:1255:LYS:CE	2.73	0.51
2:B:78:ARG:CZ	2:B:165:ARG:HH11	2.24	0.51
2:B:110:ASP:O	2:B:110:ASP:OD1	2.29	0.51
2:B:244:LEU:CG	2:B:266:LEU:CD1	2.78	0.51
1:E:14:A:H5''	2:F:66:ARG:NH1	2.26	0.51
2:F:78:ARG:CZ	2:F:165:ARG:HH11	2.24	0.51
2:F:302:LEU:O	2:F:305:ILE:HD12	2.11	0.51
2:F:359:TYR:CD1	2:F:399:LEU:CD2	2.94	0.51
2:F:558:LYS:HD2	2:F:586:ARG:HD2	1.93	0.51
2:F:910:GLU:HG2	2:F:1033:THR:HG22	1.91	0.51
2:F:1204:PHE:CD1	2:F:1347:LEU:HG	2.45	0.51
3:G:1:DC:H42	4:H:12:DG:H1	1.57	0.51
2:B:186:ILE:CD1	2:B:203:ALA:HB1	2.42	0.50
2:B:275:LEU:HD12	2:B:279:LEU:CB	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:321:MET:HE3	2:B:321:MET:HA	1.93	0.50
2:B:429:PHE:N	2:B:429:PHE:CD2	2.78	0.50
2:B:553:PHE:CD1	2:B:559:VAL:CG2	2.94	0.50
2:B:625:LEU:HD13	2:B:659:TRP:CZ2	2.46	0.50
2:B:830:ILE:HD13	2:B:831:ASN:CG	2.32	0.50
2:B:1203:LEU:HD21	2:B:1211:LYS:HD2	1.92	0.50
1:E:91:C:H6	2:F:44:LYS:O	1.94	0.50
2:F:1203:LEU:HD21	2:F:1211:LYS:HD2	1.93	0.50
2:B:153:LEU:HD23	2:B:156:LEU:HD12	1.93	0.50
2:B:398:LEU:O	2:B:398:LEU:HD23	2.11	0.50
2:B:905:ARG:NH1	2:B:905:ARG:CG	2.73	0.50
3:C:1:DC:H42	4:D:12:DG:H1	1.57	0.50
2:F:244:LEU:CG	2:F:266:LEU:CD1	2.78	0.50
2:F:398:LEU:O	2:F:398:LEU:HD23	2.11	0.50
2:F:625:LEU:HD13	2:F:659:TRP:CZ2	2.46	0.50
2:F:830:ILE:HD13	2:F:831:ASN:CG	2.32	0.50
2:F:844:GLN:HA	2:F:847:LEU:O	2.11	0.50
2:F:1048:THR:HA	2:F:1076:LYS:NZ	2.25	0.50
1:A:83:C:H2'	1:A:84:A:C8	2.46	0.50
2:B:981:TYR:CG	2:B:1092:VAL:HG11	2.46	0.50
2:B:1255:LYS:N	2:B:1255:LYS:CE	2.73	0.50
2:F:153:LEU:HD23	2:F:156:LEU:HD12	1.93	0.50
2:F:186:ILE:CD1	2:F:203:ALA:HB1	2.42	0.50
2:F:359:TYR:O	2:F:362:TYR:HB3	2.11	0.50
2:F:429:PHE:N	2:F:429:PHE:CD2	2.78	0.50
2:F:492:ILE:HD12	2:F:625:LEU:O	2.11	0.50
2:F:553:PHE:CD1	2:F:559:VAL:CG2	2.94	0.50
2:B:114:GLU:CG	2:B:120:GLY:O	2.60	0.50
2:B:844:GLN:HA	2:B:847:LEU:O	2.11	0.50
1:E:59:U:O4	2:F:475:PRO:HG3	2.12	0.50
2:F:114:GLU:CG	2:F:120:GLY:O	2.60	0.50
2:F:313:THR:HG23	2:F:313:THR:O	2.10	0.50
2:F:969:ASP:C	2:F:970:PHE:CD2	2.85	0.50
1:A:59:U:O4	2:B:475:PRO:HG3	2.12	0.50
2:B:97:PHE:HD2	2:B:98:PHE:CD1	2.30	0.50
2:B:220:ARG:NH1	2:B:220:ARG:CG	2.73	0.50
2:B:492:ILE:HD12	2:B:625:LEU:O	2.11	0.50
1:E:83:C:H2'	1:E:84:A:C8	2.46	0.50
2:F:27:VAL:HG11	2:F:1089:MET:HE3	1.93	0.50
2:F:723:HIS:CD2	2:F:727:LEU:HD21	2.47	0.50
2:F:1033:THR:O	2:F:1036:TYR:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:606:PHE:CE2	2:B:612:ASN:CG	2.85	0.50
2:B:723:HIS:CD2	2:B:727:LEU:HD21	2.46	0.50
2:B:910:GLU:HG2	2:B:1033:THR:HG22	1.91	0.50
2:B:969:ASP:C	2:B:970:PHE:CD2	2.85	0.50
2:F:97:PHE:HD2	2:F:98:PHE:CD1	2.30	0.50
2:F:738:LEU:HD23	2:F:738:LEU:O	2.12	0.50
2:B:870:VAL:CG2	2:B:908:LEU:HD21	2.40	0.50
2:B:1033:THR:O	2:B:1036:TYR:HB3	2.12	0.50
2:B:1038:PHE:CD1	2:B:1038:PHE:C	2.85	0.50
2:B:1145:VAL:CG1	2:B:1182:LEU:HD13	2.42	0.50
2:F:1038:PHE:CD1	2:F:1038:PHE:C	2.85	0.50
2:B:114:GLU:HG3	2:B:120:GLY:HA2	1.92	0.50
2:B:313:THR:O	2:B:313:THR:HG23	2.10	0.50
2:B:738:LEU:HD23	2:B:738:LEU:O	2.12	0.50
2:B:926:GLN:HA	2:B:929:LYS:HE3	1.93	0.50
1:E:39:G:H5'	1:E:40:C:OP2	2.12	0.50
2:F:606:PHE:CE2	2:F:612:ASN:CG	2.85	0.50
2:F:926:GLN:HA	2:F:929:LYS:HE3	1.93	0.50
2:F:981:TYR:CG	2:F:1092:VAL:HG11	2.46	0.50
2:F:1145:VAL:CG1	2:F:1182:LEU:HD13	2.42	0.50
1:A:74:A:H3'	1:A:75:A:C8	2.47	0.50
2:B:568:TYR:O	2:B:572:ILE:HB	2.12	0.50
1:E:44:U:N3	2:F:328:HIS:HB3	2.27	0.50
1:E:74:A:H3'	1:E:75:A:C8	2.47	0.50
2:F:568:TYR:O	2:F:572:ILE:HB	2.12	0.50
2:F:644:ASP:HB3	2:F:647:VAL:HG23	1.94	0.50
1:A:44:U:N3	2:B:328:HIS:HB3	2.27	0.49
2:B:644:ASP:HB3	2:B:647:VAL:HG23	1.94	0.49
2:B:790:GLU:OE2	2:B:888:ASN:C	2.50	0.49
2:F:220:ARG:NH1	2:F:220:ARG:CG	2.73	0.49
2:F:362:TYR:HE1	2:F:372:PHE:HD2	1.54	0.49
2:F:655:ARG:CG	2:F:655:ARG:NH1	2.73	0.49
2:F:814:TYR:CD1	2:F:814:TYR:C	2.85	0.49
2:F:897:PHE:CZ	2:F:901:THR:HG21	2.46	0.49
1:A:39:G:H5'	1:A:40:C:OP2	2.12	0.49
2:B:338:LEU:HD22	2:B:341:GLN:HG2	1.95	0.49
2:B:841:ILE:HD11	2:B:900:LEU:HD21	1.95	0.49
2:F:338:LEU:HD22	2:F:341:GLN:HG2	1.95	0.49
2:B:379:ILE:O	2:B:383:MET:HG2	2.12	0.49
2:B:897:PHE:CZ	2:B:901:THR:HG21	2.46	0.49
2:F:62:THR:O	2:F:65:LYS:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:841:ILE:HD11	2:F:900:LEU:HD21	1.95	0.49
2:B:178:ASN:CB	2:B:299:ALA:HA	2.30	0.49
2:B:708:ILE:O	2:B:711:ALA:N	2.44	0.49
2:B:814:TYR:C	2:B:814:TYR:CD1	2.85	0.49
2:B:1241:HIS:CE1	2:B:1244:LYS:C	2.85	0.49
2:F:790:GLU:OE2	2:F:888:ASN:C	2.50	0.49
2:B:379:ILE:O	2:B:383:MET:HG3	2.13	0.49
2:B:1031:LYS:O	2:B:1031:LYS:HD3	2.13	0.49
2:F:114:GLU:HG3	2:F:120:GLY:HA2	1.92	0.49
2:F:508:LEU:CD1	2:F:663:SER:O	2.61	0.49
2:F:849:ASP:CB	2:F:854:ASN:HD22	2.13	0.49
2:F:1141:TYR:OH	2:F:1175:GLU:OE2	2.21	0.49
2:B:373:TYR:CA	2:B:376:ILE:HD11	2.40	0.49
2:B:410:ILE:HD12	2:B:410:ILE:N	2.27	0.49
2:B:508:LEU:CD1	2:B:663:SER:O	2.61	0.49
2:B:655:ARG:CG	2:B:655:ARG:NH1	2.73	0.49
2:B:844:GLN:NE2	2:B:848:LYS:CD	2.76	0.49
2:B:974:LYS:HZ3	2:B:976:ARG:NH1	2.06	0.49
2:F:201:ILE:HG22	2:F:202:ASN:N	2.28	0.49
2:F:974:LYS:NZ	2:F:976:ARG:HH11	2.09	0.49
2:F:1235:PHE:C	2:F:1235:PHE:CD2	2.86	0.49
1:A:16:U:O2	2:B:447:ARG:NH2	2.45	0.49
2:B:910:GLU:CG	2:B:1033:THR:HG22	2.43	0.49
2:B:1121:ALA:HB2	2:B:1128:PRO:HD3	1.95	0.49
2:F:321:MET:CE	2:F:324:ARG:HD2	2.43	0.49
2:F:410:ILE:N	2:F:410:ILE:HD12	2.27	0.49
2:F:414:ILE:O	2:F:418:GLU:N	2.40	0.49
2:F:583:VAL:HG13	2:F:584:GLU:O	2.13	0.49
2:F:708:ILE:O	2:F:711:ALA:N	2.44	0.49
2:F:844:GLN:NE2	2:F:848:LYS:CD	2.76	0.49
2:F:1121:ALA:HB2	2:F:1128:PRO:HD3	1.95	0.49
2:B:201:ILE:HG22	2:B:202:ASN:N	2.28	0.49
2:B:414:ILE:O	2:B:418:GLU:N	2.40	0.49
2:B:746:GLU:O	2:B:750:VAL:N	2.33	0.49
2:B:840:ALA:O	2:B:864:ARG:NH1	2.45	0.49
2:B:933:GLN:OE1	2:B:934:ILE:N	2.46	0.49
2:B:971:GLN:HA	2:B:973:TYR:CE2	2.47	0.49
2:B:1286:ASN:O	2:B:1289:LYS:HB3	2.12	0.49
2:F:432:PHE:CE1	2:F:433:LEU:HG	2.48	0.49
2:F:910:GLU:CG	2:F:1033:THR:HG22	2.43	0.49
2:F:933:GLN:OE1	2:F:934:ILE:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:971:GLN:HA	2:F:973:TYR:CE2	2.47	0.49
2:F:1241:HIS:CE1	2:F:1244:LYS:C	2.86	0.49
2:F:1286:ASN:O	2:F:1289:LYS:HB3	2.12	0.49
2:B:106:LEU:HD23	2:B:110:ASP:CB	2.41	0.49
2:B:583:VAL:HG13	2:B:584:GLU:O	2.13	0.49
2:B:1235:PHE:C	2:B:1235:PHE:CD2	2.86	0.49
2:B:1237:TYR:C	2:B:1237:TYR:CD1	2.85	0.49
1:E:16:U:O2	2:F:447:ARG:NH2	2.45	0.49
2:F:373:TYR:CA	2:F:376:ILE:HD11	2.40	0.49
2:F:358:GLY:O	2:F:361:GLY:N	2.45	0.49
2:F:1224:ASN:N	2:F:1224:ASN:ND2	2.60	0.49
2:B:432:PHE:CE1	2:B:433:LEU:HG	2.48	0.48
2:B:440:ILE:HA	2:B:443:ILE:HD12	1.94	0.48
2:B:665:LYS:O	2:B:669:GLY:C	2.51	0.48
2:F:341:GLN:CG	2:F:342:GLN:HG2	2.41	0.48
2:F:840:ALA:O	2:F:864:ARG:NH1	2.45	0.48
2:F:1237:TYR:CD1	2:F:1237:TYR:C	2.86	0.48
2:B:340:ARG:HA	2:B:344:PRO:HG3	1.95	0.48
2:B:583:VAL:HG22	2:B:584:GLU:H	1.77	0.48
2:B:776:ASN:N	2:B:776:ASN:ND2	2.60	0.48
2:B:1224:ASN:N	2:B:1224:ASN:ND2	2.60	0.48
2:F:106:LEU:HD23	2:F:110:ASP:CB	2.41	0.48
2:F:299:ALA:O	2:F:302:LEU:HD21	2.12	0.48
2:F:340:ARG:HA	2:F:344:PRO:HG3	1.95	0.48
2:F:440:ILE:HA	2:F:443:ILE:HD12	1.94	0.48
2:F:776:ASN:N	2:F:776:ASN:ND2	2.60	0.48
1:A:26:A:H2'	1:A:27:G:H8	1.78	0.48
2:B:94:ASP:HB2	2:B:152:ARG:HD3	1.95	0.48
2:B:226:ILE:CD1	2:F:574:CYS:SG	2.95	0.48
1:E:26:A:H2'	1:E:27:G:H8	1.78	0.48
2:F:181:VAL:HG12	2:F:300:ILE:CG1	2.43	0.48
2:B:299:ALA:O	2:B:302:LEU:HD21	2.12	0.48
2:B:341:GLN:CG	2:B:342:GLN:HG2	2.41	0.48
2:B:419:LEU:HD21	2:B:440:ILE:HG22	1.94	0.48
2:B:758:ASN:ND2	2:B:995:THR:HG22	2.29	0.48
2:B:975:VAL:HB	2:B:978:ILE:HD12	1.95	0.48
2:F:94:ASP:HB2	2:F:152:ARG:HD3	1.94	0.48
2:F:143:VAL:HG13	2:F:421:ALA:CB	2.44	0.48
2:B:114:GLU:HG2	2:B:120:GLY:C	2.34	0.48
2:B:419:LEU:HD13	2:B:444:LEU:HD12	1.95	0.48
2:B:779:GLU:O	2:B:783:ARG:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:849:ASP:CB	2:B:854:ASN:HD22	2.13	0.48
2:F:5:TYR:HD2	2:F:20:VAL:HG13	1.77	0.48
2:F:324:ARG:CG	2:F:400:ARG:CG	2.89	0.48
2:F:419:LEU:HD13	2:F:444:LEU:HD12	1.95	0.48
2:F:665:LYS:O	2:F:669:GLY:C	2.51	0.48
2:F:665:LYS:C	2:F:669:GLY:H	2.17	0.48
2:F:758:ASN:ND2	2:F:995:THR:HG22	2.29	0.48
2:F:977:GLU:HG3	2:F:1310:ILE:HG23	1.94	0.48
2:F:978:ILE:HG12	2:F:1313:PHE:CD2	2.44	0.48
2:B:78:ARG:HD3	2:B:165:ARG:NH1	2.27	0.48
2:B:143:VAL:HG13	2:B:421:ALA:CB	2.44	0.48
2:B:181:VAL:HG12	2:B:300:ILE:CG1	2.43	0.48
2:B:243:ALA:O	2:B:248:LEU:HB2	2.13	0.48
2:B:410:ILE:N	2:B:410:ILE:CD1	2.77	0.48
2:B:448:ILE:HG22	2:B:452:VAL:HB	1.96	0.48
2:F:28:PRO:HB2	2:F:47:LEU:HG	1.96	0.48
2:F:118:ILE:HB	2:F:119:PHE:CD2	2.48	0.48
2:F:178:ASN:CB	2:F:299:ALA:HA	2.30	0.48
2:F:321:MET:CE	2:F:321:MET:CA	2.86	0.48
2:F:404:THR:O	2:F:407:ASN:ND2	2.43	0.48
2:F:448:ILE:HG22	2:F:452:VAL:HB	1.96	0.48
2:F:705:LYS:HE2	2:F:705:LYS:HB3	1.60	0.48
2:F:779:GLU:O	2:F:783:ARG:HG3	2.13	0.48
2:F:821:ASP:CB	2:F:824:VAL:HB	2.43	0.48
2:B:5:TYR:HD2	2:B:20:VAL:HG13	1.77	0.48
2:B:28:PRO:HB2	2:B:47:LEU:HG	1.96	0.48
2:B:665:LYS:C	2:B:669:GLY:H	2.17	0.48
2:B:692:ASN:H	2:B:695:GLN:HB2	1.78	0.48
2:B:699:ASP:HB3	2:B:702:LEU:CB	2.44	0.48
2:B:1302:ILE:HG22	2:B:1306:ALA:HB2	1.96	0.48
2:B:1304:GLU:C	2:B:1327:PHE:CE1	2.87	0.48
2:F:114:GLU:HG2	2:F:120:GLY:C	2.34	0.48
2:F:410:ILE:N	2:F:410:ILE:CD1	2.77	0.48
2:F:419:LEU:HD21	2:F:440:ILE:HG22	1.94	0.48
2:F:699:ASP:HB3	2:F:702:LEU:CB	2.44	0.48
2:F:1302:ILE:HG22	2:F:1306:ALA:HB2	1.96	0.48
1:A:68:A:C4	2:B:1350:GLN:O	2.67	0.48
2:B:225:LEU:HD13	2:B:242:ILE:HG21	1.95	0.48
3:C:1:DC:N4	3:C:2:DA:N1	2.60	0.48
2:F:78:ARG:HD3	2:F:165:ARG:NH1	2.27	0.48
2:F:225:LEU:HD13	2:F:242:ILE:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:432:PHE:HD1	2:F:433:LEU:N	2.12	0.48
2:F:583:VAL:HG22	2:F:584:GLU:H	1.77	0.48
2:F:1304:GLU:C	2:F:1327:PHE:CE1	2.87	0.48
3:G:1:DC:N4	3:G:2:DA:N1	2.61	0.48
1:A:13:A:H2'	1:A:14:A:H8	1.78	0.48
2:B:432:PHE:HD1	2:B:433:LEU:N	2.11	0.48
2:B:821:ASP:CB	2:B:824:VAL:HB	2.43	0.48
2:B:988:TYR:OH	2:B:1086:VAL:HG21	2.14	0.48
2:F:351:PHE:CD2	2:F:351:PHE:N	2.82	0.48
2:F:842:VAL:CG1	2:F:847:LEU:HD22	2.44	0.48
2:F:1242:TYR:CD1	2:F:1242:TYR:N	2.72	0.48
2:F:1287:LEU:HD12	2:F:1287:LEU:C	2.32	0.48
2:B:27:VAL:HG11	2:B:1086:VAL:CG1	2.43	0.48
2:B:38:THR:HG22	2:B:39:ASP:H	1.79	0.48
2:B:1242:TYR:CD1	2:B:1242:TYR:N	2.72	0.48
2:F:321:MET:HE1	2:F:324:ARG:HD2	1.95	0.48
2:F:972:PHE:CE1	2:F:1083:VAL:HG11	2.48	0.48
2:B:118:ILE:HB	2:B:119:PHE:CD2	2.48	0.47
2:B:151:LEU:O	2:B:154:ILE:N	2.47	0.47
2:B:358:GLY:O	2:B:361:GLY:N	2.47	0.47
2:B:705:LYS:HB3	2:B:705:LYS:HE2	1.60	0.47
2:B:821:ASP:HB3	2:B:824:VAL:HB	1.95	0.47
1:E:13:A:H2'	1:E:14:A:H8	1.78	0.47
1:E:68:A:C4	2:F:1350:GLN:O	2.67	0.47
2:F:838:VAL:HG11	2:F:855:LYS:HE3	1.95	0.47
2:F:1219:GLU:CG	2:F:1220:LEU:N	2.77	0.47
2:B:336:LYS:HG2	2:B:347:TYR:HE2	1.79	0.47
2:B:351:PHE:CD2	2:B:351:PHE:N	2.82	0.47
2:B:972:PHE:CE1	2:B:1083:VAL:HG11	2.48	0.47
2:B:1251:ASP:O	2:B:1254:GLN:HB2	2.14	0.47
2:B:1287:LEU:HD12	2:B:1287:LEU:C	2.32	0.47
2:F:151:LEU:O	2:F:154:ILE:N	2.47	0.47
2:F:336:LYS:HG2	2:F:347:TYR:HE2	1.79	0.47
2:F:386:THR:OG1	2:F:389:LEU:CD1	2.62	0.47
2:F:821:ASP:HB3	2:F:824:VAL:HB	1.95	0.47
2:F:988:TYR:OH	2:F:1086:VAL:HG21	2.14	0.47
1:A:58:G:H5''	1:A:59:U:OP2	2.14	0.47
1:A:77:A:OP1	2:B:721:HIS:NE2	2.47	0.47
2:B:75:ARG:HA	2:B:78:ARG:NH2	2.29	0.47
2:B:404:THR:O	2:B:407:ASN:ND2	2.43	0.47
2:B:842:VAL:CG1	2:B:847:LEU:HD22	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1219:GLU:CG	2:B:1220:LEU:N	2.77	0.47
2:F:297:SER:CA	2:F:301:LEU:HD12	2.44	0.47
2:F:692:ASN:H	2:F:695:GLN:HB2	1.78	0.47
2:F:978:ILE:CG1	2:F:1313:PHE:CE2	2.83	0.47
2:F:1000:LYS:HZ1	2:F:1064:GLU:HB2	1.79	0.47
2:B:79:ILE:HG13	2:B:163:LYS:HG3	1.96	0.47
2:B:297:SER:CA	2:B:301:LEU:HD12	2.44	0.47
2:B:830:ILE:HD13	2:B:831:ASN:H	1.79	0.47
2:B:849:ASP:OD2	2:B:854:ASN:HB2	2.15	0.47
2:F:181:VAL:CG2	2:F:209:LYS:HA	2.33	0.47
2:F:1251:ASP:O	2:F:1254:GLN:HB2	2.14	0.47
2:B:250:PRO:HD2	2:B:264:LEU:O	2.15	0.47
2:B:529:TYR:CD1	2:B:538:ALA:O	2.68	0.47
2:B:838:VAL:HG11	2:B:855:LYS:HE3	1.95	0.47
2:B:844:GLN:NE2	2:B:848:LYS:CG	2.73	0.47
2:B:979:ASN:ND2	2:B:981:TYR:CG	2.81	0.47
2:B:1076:LYS:O	2:B:1080:PHE:HD2	1.97	0.47
2:F:27:VAL:HG11	2:F:1086:VAL:CG1	2.43	0.47
2:F:45:LYS:HE2	2:F:1093:ASN:OD1	2.13	0.47
2:F:75:ARG:HA	2:F:78:ARG:NH2	2.29	0.47
2:F:178:ASN:HB2	2:F:299:ALA:CA	2.29	0.47
2:B:412:HIS:CD2	2:B:413:GLN:HE21	2.33	0.47
2:B:516:GLU:OE1	2:B:593:THR:N	2.33	0.47
1:E:58:G:H5''	1:E:59:U:OP2	2.14	0.47
1:E:77:A:OP1	2:F:721:HIS:NE2	2.47	0.47
2:F:362:TYR:HE2	2:F:401:LYS:CE	2.27	0.47
2:F:529:TYR:CD1	2:F:538:ALA:O	2.68	0.47
2:F:765:ARG:HH22	2:F:848:LYS:HE3	1.79	0.47
2:F:849:ASP:OD2	2:F:854:ASN:HB2	2.14	0.47
2:F:1347:LEU:HB3	2:F:1360:ILE:HB	1.96	0.47
1:A:49:A:OP2	2:B:76:LYS:HE2	2.15	0.47
2:B:6:SER:HB3	2:B:758:ASN:HB2	1.96	0.47
2:B:45:LYS:HE2	2:B:1093:ASN:OD1	2.13	0.47
2:B:167:HIS:CE1	2:B:411:PRO:CA	2.98	0.47
2:B:212:LEU:HD21	2:B:225:LEU:CD1	2.41	0.47
2:B:509:PRO:HG2	2:B:621:LEU:HA	1.97	0.47
2:B:746:GLU:HA	2:B:749:LYS:HB3	1.96	0.47
2:B:796:LEU:HD23	2:B:796:LEU:HA	1.80	0.47
2:B:840:ALA:HA	2:B:854:ASN:O	2.15	0.47
2:B:1000:LYS:HZ1	2:B:1064:GLU:HB2	1.79	0.47
2:B:1206:LEU:HD11	2:B:1210:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1232:TYR:CE1	2:B:1268:GLU:HB3	2.49	0.47
1:E:51:A:C6	2:F:1105:PHE:CZ	3.02	0.47
2:F:6:SER:HB3	2:F:758:ASN:HB2	1.96	0.47
2:F:79:ILE:HG13	2:F:163:LYS:HG3	1.96	0.47
2:F:212:LEU:HD21	2:F:225:LEU:CD1	2.41	0.47
2:F:250:PRO:HD2	2:F:264:LEU:O	2.15	0.47
2:F:297:SER:O	2:F:301:LEU:CB	2.63	0.47
2:F:324:ARG:HG2	2:F:400:ARG:CB	2.44	0.47
2:F:412:HIS:CD2	2:F:413:GLN:HE21	2.33	0.47
2:F:516:GLU:OE1	2:F:593:THR:N	2.33	0.47
2:F:557:ARG:NH1	2:F:557:ARG:CG	2.73	0.47
2:F:830:ILE:HD13	2:F:831:ASN:H	1.79	0.47
2:F:1076:LYS:O	2:F:1080:PHE:HD2	1.97	0.47
2:B:297:SER:O	2:B:301:LEU:CB	2.63	0.47
2:B:963:VAL:HG13	2:B:989:LEU:HB2	1.97	0.47
2:B:1206:LEU:HD11	2:B:1210:ARG:NE	2.30	0.47
1:E:49:A:OP2	2:F:76:LYS:HE2	2.15	0.47
2:F:746:GLU:HA	2:F:749:LYS:HB3	1.96	0.47
2:F:795:ILE:HG23	2:F:796:LEU:N	2.30	0.47
2:F:838:VAL:CG2	2:F:857:LEU:HD12	2.45	0.47
2:F:840:ALA:HA	2:F:854:ASN:O	2.15	0.47
2:F:963:VAL:HG13	2:F:989:LEU:HB2	1.97	0.47
1:A:51:A:C6	2:B:1105:PHE:CZ	3.02	0.47
2:B:491:PHE:CE2	3:C:16:DT:H1'	2.50	0.47
2:B:765:ARG:HH22	2:B:848:LYS:HE3	1.79	0.47
2:B:838:VAL:CG2	2:B:857:LEU:HD12	2.45	0.47
2:B:1302:ILE:O	2:B:1306:ALA:HB2	2.12	0.47
2:F:167:HIS:CE1	2:F:411:PRO:CA	2.98	0.47
2:F:350:ILE:O	2:F:359:TYR:N	2.48	0.47
2:F:416:LEU:HD13	2:F:444:LEU:HD13	1.97	0.47
2:F:509:PRO:HG2	2:F:621:LEU:HA	1.97	0.47
2:F:655:ARG:HH11	2:F:655:ARG:CB	2.27	0.47
2:B:143:VAL:HG13	2:B:421:ALA:HB1	1.97	0.47
2:B:207:ASP:O	2:B:211:ILE:HG13	2.15	0.47
2:B:373:TYR:HA	2:B:376:ILE:CD1	2.40	0.47
2:B:795:ILE:HG23	2:B:796:LEU:N	2.30	0.47
2:B:1108:GLU:HB2	3:C:9:DC:H5''	1.96	0.47
2:B:1347:LEU:HB3	2:B:1360:ILE:HB	1.96	0.47
2:F:38:THR:HG22	2:F:39:ASP:H	1.79	0.47
2:F:143:VAL:HG13	2:F:421:ALA:HB1	1.97	0.47
2:F:207:ASP:O	2:F:211:ILE:HG13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:270:THR:O	2:F:274:ASP:HB2	2.15	0.47
2:F:1108:GLU:HB2	3:G:9:DC:H5''	1.96	0.47
2:F:1179:ILE:HD11	2:F:1192:LYS:HD3	1.97	0.47
2:F:1204:PHE:CG	2:F:1342:VAL:HG13	2.50	0.47
2:F:1206:LEU:HD11	2:F:1210:ARG:CZ	2.44	0.47
1:A:63:U:H3'	2:B:62:THR:HG21	1.97	0.46
2:B:165:ARG:NH2	2:B:168:PHE:HZ	2.06	0.46
2:B:181:VAL:CG2	2:B:209:LYS:HA	2.33	0.46
2:B:416:LEU:HD13	2:B:444:LEU:HD13	1.97	0.46
2:B:557:ARG:NH1	2:B:557:ARG:CG	2.73	0.46
2:B:655:ARG:HH11	2:B:655:ARG:CB	2.27	0.46
2:B:897:PHE:CE2	2:B:901:THR:HG21	2.50	0.46
2:B:980:ASN:HB2	2:B:1225:GLU:OE2	2.15	0.46
2:B:1204:PHE:CG	2:B:1342:VAL:HG13	2.50	0.46
2:F:190:GLN:O	2:F:194:GLN:HG2	2.16	0.46
2:F:491:PHE:CE2	3:G:16:DT:H1'	2.50	0.46
2:F:897:PHE:CE2	2:F:901:THR:HG21	2.50	0.46
2:F:940:ASN:N	2:F:940:ASN:ND2	2.60	0.46
2:F:1206:LEU:HD11	2:F:1210:ARG:NE	2.30	0.46
2:B:270:THR:O	2:B:274:ASP:HB2	2.15	0.46
2:B:665:LYS:C	2:B:669:GLY:N	2.66	0.46
2:B:1042:ILE:HG23	2:B:1043:MET:SD	2.55	0.46
2:B:1145:VAL:HG23	2:B:1145:VAL:O	2.15	0.46
2:B:1179:ILE:HD11	2:B:1192:LYS:HD3	1.97	0.46
2:B:1312:LEU:HD21	2:B:1326:TYR:HD1	1.80	0.46
1:E:63:U:H3'	2:F:62:THR:HG21	1.97	0.46
1:A:59:U:P	2:B:467:ARG:HH22	2.37	0.46
2:B:190:GLN:O	2:B:194:GLN:HG2	2.16	0.46
2:B:253:LYS:HD2	2:B:261:ASP:HA	1.98	0.46
2:B:737:ILE:O	2:B:740:THR:HG23	2.15	0.46
2:B:755:LYS:CD	2:B:939:MET:HE3	2.44	0.46
2:B:1236:LEU:HD13	2:B:1310:ILE:HG12	1.97	0.46
1:E:43:G:H22	2:F:360:ALA:CB	2.28	0.46
1:E:59:U:P	2:F:467:ARG:HH22	2.37	0.46
1:E:87:G:H1	1:E:91:C:H42	1.63	0.46
2:F:148:LYS:HD2	2:F:429:PHE:CD1	2.48	0.46
2:F:229:LEU:CD2	2:F:232:GLU:HB2	2.43	0.46
2:F:253:LYS:HD2	2:F:261:ASP:HA	1.98	0.46
2:F:342:GLN:OE1	2:F:384:ASP:N	2.47	0.46
2:F:970:PHE:CD1	2:F:1080:PHE:CZ	3.02	0.46
2:F:1031:LYS:H	2:F:1031:LYS:CD	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1042:ILE:HG23	2:F:1043:MET:SD	2.55	0.46
2:F:1312:LEU:HD21	2:F:1326:TYR:HD1	1.80	0.46
2:B:719:SER:O	2:B:722:GLU:HB2	2.15	0.46
2:F:114:GLU:CD	2:F:120:GLY:O	2.50	0.46
2:F:719:SER:O	2:F:722:GLU:HB2	2.15	0.46
2:F:1236:LEU:HD13	2:F:1310:ILE:HG12	1.97	0.46
1:A:27:G:H5'	1:A:28:A:C5'	2.45	0.46
2:B:27:VAL:CG1	2:B:1086:VAL:CG1	2.88	0.46
2:B:62:THR:O	2:B:66:ARG:HG3	2.15	0.46
2:B:148:LYS:HD2	2:B:429:PHE:CD1	2.48	0.46
2:B:178:ASN:HB2	2:B:299:ALA:CA	2.29	0.46
2:B:970:PHE:CD1	2:B:1080:PHE:CZ	3.02	0.46
2:B:1204:PHE:CZ	2:B:1214:LEU:CD1	2.99	0.46
2:B:1336:TYR:N	2:B:1336:TYR:CD1	2.83	0.46
1:E:27:G:H5'	1:E:28:A:C5'	2.45	0.46
1:E:78:A:H2'	1:E:79:G:C8	2.47	0.46
2:F:62:THR:O	2:F:66:ARG:HG3	2.15	0.46
2:F:665:LYS:C	2:F:669:GLY:N	2.67	0.46
2:F:737:ILE:O	2:F:740:THR:HG23	2.15	0.46
2:F:963:VAL:HG21	2:F:990:ASN:HD21	1.76	0.46
2:F:1145:VAL:O	2:F:1145:VAL:HG23	2.15	0.46
2:F:1204:PHE:CZ	2:F:1214:LEU:CD1	2.99	0.46
1:A:87:G:H1	1:A:91:C:H42	1.63	0.46
2:B:121:ASN:HD21	2:B:124:ASP:CG	2.19	0.46
2:B:637:LYS:O	2:B:640:ALA:HB3	2.15	0.46
2:F:121:ASN:HD21	2:F:124:ASP:CG	2.19	0.46
2:F:321:MET:HA	2:F:321:MET:HE2	1.94	0.46
2:F:362:TYR:CD2	2:F:362:TYR:C	2.89	0.46
2:F:1302:ILE:O	2:F:1306:ALA:HB2	2.12	0.46
2:B:107:VAL:HG23	2:B:110:ASP:HB3	1.98	0.46
2:B:244:LEU:HD12	2:B:250:PRO:CG	2.45	0.46
2:B:573:GLU:C	2:B:574:CYS:SG	2.94	0.46
2:B:940:ASN:N	2:B:940:ASN:ND2	2.60	0.46
2:B:1092:VAL:HG13	2:B:1094:ILE:HG12	1.96	0.46
2:F:359:TYR:C	2:F:359:TYR:CD2	2.88	0.46
2:F:469:SER:HB3	2:F:471:GLU:HG2	1.96	0.46
2:F:573:GLU:C	2:F:574:CYS:SG	2.94	0.46
2:F:1298:ARG:HH11	2:F:1298:ARG:HG3	1.81	0.46
1:A:78:A:H2'	1:A:79:G:C8	2.47	0.46
2:B:229:LEU:CD2	2:B:232:GLU:HB2	2.43	0.46
2:B:992:VAL:HA	2:B:995:THR:OG1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1252:ASN:HD22	2:B:1252:ASN:H	1.61	0.46
2:B:1298:ARG:HG3	2:B:1298:ARG:HH11	1.81	0.46
1:E:27:G:N2	1:E:44:U:OP2	2.49	0.46
2:F:32:PHE:O	2:F:42:SER:HB2	2.15	0.46
2:F:324:ARG:CZ	2:F:400:ARG:HG2	2.40	0.46
2:F:477:ASN:ND2	2:F:481:VAL:HG21	2.30	0.46
2:F:679:ILE:HG12	2:F:704:PHE:HE1	1.71	0.46
2:F:844:GLN:NE2	2:F:848:LYS:CG	2.73	0.46
2:F:1092:VAL:HG13	2:F:1094:ILE:HG12	1.96	0.46
2:F:1252:ASN:HD22	2:F:1252:ASN:H	1.61	0.46
1:A:65:A:C5	1:A:66:U:C4	3.04	0.46
2:B:477:ASN:ND2	2:B:481:VAL:HG21	2.30	0.46
2:B:687:GLY:HA3	2:B:689:ALA:O	2.16	0.46
2:F:165:ARG:NH2	2:F:168:PHE:HZ	2.06	0.46
2:F:1122:ARG:HD3	2:F:1134:PHE:CZ	2.50	0.46
2:F:1336:TYR:N	2:F:1336:TYR:CD1	2.83	0.46
1:A:27:G:N2	1:A:44:U:OP2	2.49	0.46
2:B:32:PHE:O	2:B:42:SER:HB2	2.15	0.46
2:B:114:GLU:CD	2:B:120:GLY:O	2.50	0.46
2:B:272:ASP:O	2:B:276:ASP:HB2	2.16	0.46
2:B:469:SER:HB3	2:B:471:GLU:HG2	1.96	0.46
2:B:923:GLU:OE2	2:B:925:ARG:NH2	2.46	0.46
2:B:1122:ARG:HD3	2:B:1134:PHE:CZ	2.50	0.46
2:B:1257:LEU:N	2:B:1257:LEU:CD1	2.73	0.46
2:F:338:LEU:CD1	2:F:384:ASP:O	2.64	0.46
2:F:637:LYS:O	2:F:640:ALA:HB3	2.15	0.46
2:F:992:VAL:HA	2:F:995:THR:OG1	2.16	0.46
2:B:393:LEU:HB2	2:B:398:LEU:CD1	2.46	0.45
2:B:531:THR:OG1	2:B:532:GLU:N	2.49	0.45
2:B:655:ARG:H	2:B:655:ARG:HG2	1.46	0.45
2:B:864:ARG:O	2:B:875:VAL:HG21	2.16	0.45
2:B:1100:VAL:HG13	2:B:1140:ALA:O	2.16	0.45
2:F:393:LEU:HB2	2:F:398:LEU:CD1	2.46	0.45
2:F:393:LEU:HA	2:F:398:LEU:HB2	1.98	0.45
2:F:531:THR:OG1	2:F:532:GLU:N	2.49	0.45
2:F:864:ARG:O	2:F:875:VAL:HG21	2.16	0.45
2:F:1257:LEU:CD1	2:F:1257:LEU:N	2.73	0.45
2:B:963:VAL:HG21	2:B:990:ASN:HD21	1.76	0.45
1:E:65:A:C5	1:E:66:U:C4	3.04	0.45
2:F:223:GLU:HA	2:F:226:ILE:HG12	1.98	0.45
2:F:272:ASP:O	2:F:276:ASP:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:350:ILE:CG2	2:F:351:PHE:CD2	2.99	0.45
2:F:1206:LEU:CD1	2:F:1210:ARG:CZ	2.94	0.45
3:G:6:DC:H2''	3:G:7:DC:O5'	2.15	0.45
2:B:350:ILE:CG2	2:B:351:PHE:CD2	2.99	0.45
2:B:691:ARG:HB2	2:B:691:ARG:HE	1.62	0.45
2:B:1038:PHE:HD1	2:B:1038:PHE:C	2.20	0.45
2:F:78:ARG:CD	2:F:165:ARG:HH11	2.26	0.45
2:F:320:SER:O	2:F:323:LYS:HB3	2.17	0.45
2:F:457:ARG:HB2	2:F:467:ARG:NH1	2.32	0.45
2:F:603:ASP:OD1	2:F:606:PHE:HB2	2.16	0.45
2:F:680:LEU:HD12	2:F:680:LEU:HA	1.76	0.45
2:F:923:GLU:OE2	2:F:925:ARG:NH2	2.46	0.45
2:F:1038:PHE:HD1	2:F:1038:PHE:C	2.20	0.45
2:F:1100:VAL:HG13	2:F:1140:ALA:O	2.16	0.45
1:A:64:U:OP1	2:B:1102:THR:OG1	2.26	0.45
2:B:393:LEU:HA	2:B:398:LEU:HB2	1.98	0.45
2:B:452:VAL:HG13	2:B:482:VAL:HG11	1.98	0.45
2:B:457:ARG:HB2	2:B:467:ARG:NH1	2.32	0.45
2:B:568:TYR:HD2	2:B:569:PHE:CD2	2.35	0.45
2:B:603:ASP:OD1	2:B:606:PHE:HB2	2.15	0.45
2:B:679:ILE:HA	2:B:682:PHE:HB2	1.99	0.45
2:B:839:ASP:O	2:B:856:VAL:N	2.47	0.45
2:B:1206:LEU:CD1	2:B:1210:ARG:CZ	2.94	0.45
3:C:6:DC:H2''	3:C:7:DC:O5'	2.15	0.45
4:D:7:DG:C2	4:D:8:DT:C2	3.04	0.45
2:F:27:VAL:CG1	2:F:1086:VAL:CG1	2.88	0.45
2:F:184:LEU:HD12	2:F:296:LEU:CA	2.34	0.45
2:F:452:VAL:HG13	2:F:482:VAL:HG11	1.98	0.45
2:F:679:ILE:HA	2:F:682:PHE:HB2	1.99	0.45
1:A:53:G:C4	1:A:62:G:N2	2.84	0.45
2:B:223:GLU:HA	2:B:226:ILE:HG12	1.98	0.45
2:B:277:ASN:ND2	2:B:653:ARG:CD	2.75	0.45
2:F:94:ASP:CB	2:F:152:ARG:HD3	2.47	0.45
2:F:492:ILE:O	2:F:496:THR:HG23	2.16	0.45
2:F:568:TYR:HD2	2:F:569:PHE:CD2	2.35	0.45
2:F:849:ASP:CG	2:F:854:ASN:HB3	2.37	0.45
4:H:7:DG:C2	4:H:8:DT:C2	3.04	0.45
2:B:94:ASP:CB	2:B:152:ARG:HD3	2.47	0.45
2:B:520:VAL:HG21	2:B:591:LEU:HD23	1.98	0.45
2:B:949:LEU:HD23	2:B:951:ARG:NH2	2.32	0.45
2:F:655:ARG:H	2:F:655:ARG:HG2	1.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:740:THR:O	2:F:743:VAL:HB	2.17	0.45
2:F:838:VAL:HG23	2:F:857:LEU:CD1	2.46	0.45
2:B:78:ARG:CD	2:B:165:ARG:HH11	2.26	0.45
2:B:740:THR:O	2:B:743:VAL:HB	2.17	0.45
2:B:838:VAL:HG23	2:B:857:LEU:CD1	2.46	0.45
2:B:1113:LYS:O	2:B:1113:LYS:HG3	2.16	0.45
2:B:1257:LEU:O	2:B:1261:GLN:N	2.43	0.45
2:F:244:LEU:O	2:F:246:LEU:O	2.35	0.45
2:F:520:VAL:HG21	2:F:591:LEU:HD23	1.97	0.45
2:F:949:LEU:HD23	2:F:951:ARG:NH2	2.32	0.45
2:B:118:ILE:HG22	2:B:119:PHE:CE2	2.52	0.45
2:B:492:ILE:O	2:B:496:THR:HG23	2.16	0.45
2:B:756:PRO:HD2	2:B:953:VAL:CG2	2.47	0.45
2:B:849:ASP:CG	2:B:854:ASN:HB3	2.37	0.45
2:B:1062:LEU:HD21	2:B:1063:ILE:CG1	2.39	0.45
1:E:53:G:C4	1:E:62:G:N2	2.84	0.45
2:F:93:VAL:CG2	2:F:151:LEU:HD23	2.47	0.45
2:F:841:ILE:CD1	2:F:900:LEU:HD21	2.47	0.45
2:F:1113:LYS:HG3	2:F:1113:LYS:O	2.16	0.45
2:B:184:LEU:HD12	2:B:296:LEU:CA	2.34	0.45
2:B:473:ILE:HG12	2:B:481:VAL:HG11	1.98	0.45
2:B:658:GLY:C	2:B:659:TRP:CD1	2.90	0.45
2:B:830:ILE:HD13	2:B:831:ASN:N	2.31	0.45
2:B:841:ILE:CD1	2:B:900:LEU:HD21	2.46	0.45
2:B:847:LEU:O	2:B:847:LEU:HD23	2.17	0.45
2:F:207:ASP:CB	2:F:210:ALA:CB	2.56	0.45
2:F:277:ASN:ND2	2:F:653:ARG:CD	2.75	0.45
2:F:610:GLU:O	2:F:613:GLU:HB3	2.17	0.45
2:F:658:GLY:C	2:F:659:TRP:CD1	2.90	0.45
2:F:756:PRO:HD2	2:F:953:VAL:CG2	2.47	0.45
2:F:784:ILE:O	2:F:788:ILE:CG1	2.64	0.45
2:F:839:ASP:O	2:F:856:VAL:N	2.47	0.45
2:B:234:LYS:C	2:B:234:LYS:CD	2.85	0.45
2:B:977:GLU:HG3	2:B:1310:ILE:HG21	1.95	0.45
2:B:1108:GLU:HG3	3:C:9:DC:H5"	1.99	0.45
2:F:118:ILE:HG22	2:F:119:PHE:CE2	2.52	0.45
2:B:186:ILE:HD13	2:B:186:ILE:HA	1.86	0.44
2:B:450:TYR:OH	2:B:627:GLU:HG3	2.17	0.44
2:B:610:GLU:O	2:B:613:GLU:HB3	2.17	0.44
2:B:782:LYS:O	2:B:786:GLU:HG3	2.17	0.44
2:F:49:GLY:HA2	2:F:1092:VAL:CG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:519:THR:OG1	2:F:589:ALA:HB2	2.16	0.44
2:F:553:PHE:CE1	2:F:559:VAL:CG2	3.00	0.44
2:F:812:TYR:CD1	2:F:812:TYR:O	2.71	0.44
2:F:979:ASN:OD1	2:F:981:TYR:HD1	1.98	0.44
2:F:1108:GLU:HG3	3:G:9:DC:H5''	1.99	0.44
2:B:812:TYR:O	2:B:812:TYR:CD1	2.71	0.44
2:B:1108:GLU:CG	3:C:9:DC:H5''	2.47	0.44
2:F:206:VAL:HG23	2:F:206:VAL:O	2.17	0.44
2:F:473:ILE:HG12	2:F:481:VAL:HG11	1.98	0.44
2:F:606:PHE:CE2	2:F:612:ASN:OD1	2.70	0.44
2:F:830:ILE:HD13	2:F:831:ASN:N	2.31	0.44
2:F:838:VAL:HG23	2:F:857:LEU:HD12	1.99	0.44
2:F:847:LEU:O	2:F:847:LEU:HD23	2.17	0.44
2:F:1143:VAL:HG22	2:F:1197:LYS:HA	1.98	0.44
2:B:49:GLY:HA2	2:B:1092:VAL:CG2	2.47	0.44
2:B:207:ASP:CB	2:B:210:ALA:CB	2.56	0.44
2:B:553:PHE:CE1	2:B:559:VAL:CG2	3.00	0.44
2:B:784:ILE:O	2:B:788:ILE:CG1	2.64	0.44
2:B:838:VAL:HG23	2:B:857:LEU:HD12	2.00	0.44
2:B:902:LYS:HE3	2:B:907:GLY:O	2.17	0.44
2:B:926:GLN:C	2:B:929:LYS:HG3	2.38	0.44
2:F:45:LYS:HE3	2:F:45:LYS:HB3	1.78	0.44
2:F:234:LYS:CD	2:F:234:LYS:C	2.85	0.44
2:F:746:GLU:O	2:F:750:VAL:N	2.33	0.44
2:F:782:LYS:O	2:F:786:GLU:HG3	2.17	0.44
2:F:926:GLN:C	2:F:929:LYS:HG3	2.38	0.44
2:F:1062:LEU:HD21	2:F:1063:ILE:CG1	2.39	0.44
2:F:1076:LYS:O	2:F:1080:PHE:CD2	2.70	0.44
2:F:1257:LEU:O	2:F:1261:GLN:N	2.43	0.44
2:B:20:VAL:O	2:B:27:VAL:HG23	2.18	0.44
2:B:206:VAL:HG23	2:B:206:VAL:O	2.18	0.44
2:B:256:PHE:CE2	2:B:282:ILE:HD13	2.53	0.44
2:B:519:THR:OG1	2:B:589:ALA:HB2	2.16	0.44
2:B:606:PHE:CE2	2:B:612:ASN:OD1	2.70	0.44
2:B:923:GLU:HG2	2:B:928:THR:OG1	2.17	0.44
2:B:1076:LYS:O	2:B:1080:PHE:CD2	2.70	0.44
2:B:1143:VAL:HG22	2:B:1197:LYS:HA	1.98	0.44
2:F:20:VAL:O	2:F:27:VAL:HG23	2.18	0.44
2:F:249:THR:HG23	2:F:265:GLN:HE22	1.81	0.44
2:F:265:GLN:O	2:F:271:TYR:HD1	2.00	0.44
2:F:450:TYR:OH	2:F:627:GLU:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:507:VAL:HG11	2:F:660:GLY:C	2.37	0.44
2:F:623:LEU:HD12	2:F:623:LEU:HA	1.51	0.44
2:F:974:LYS:HE2	2:F:982:HIS:CD2	2.53	0.44
2:F:979:ASN:ND2	2:F:981:TYR:CB	2.80	0.44
2:B:666:LEU:HA	2:B:666:LEU:HD23	1.63	0.44
2:B:678:THR:O	2:B:682:PHE:N	2.42	0.44
2:B:974:LYS:HE2	2:B:982:HIS:CD2	2.53	0.44
2:B:1122:ARG:CG	2:B:1134:PHE:HE2	2.31	0.44
3:C:2:DA:H1'	3:C:3:DA:OP1	2.18	0.44
1:E:78:A:C5	1:E:79:G:N7	2.85	0.44
2:F:89:GLU:OE1	2:F:92:LYS:HD2	2.16	0.44
2:F:550:ASP:HA	2:F:554:LYS:HG3	1.98	0.44
2:F:691:ARG:HB2	2:F:691:ARG:HE	1.62	0.44
2:F:692:ASN:CB	2:F:695:GLN:HG3	2.45	0.44
2:F:832:ARG:HH11	2:F:835:ASP:CG	2.10	0.44
2:F:902:LYS:HE3	2:F:907:GLY:O	2.17	0.44
3:G:2:DA:H1'	3:G:3:DA:OP1	2.18	0.44
2:B:692:ASN:CB	2:B:695:GLN:HG3	2.45	0.44
2:B:979:ASN:OD1	2:B:981:TYR:CD1	2.62	0.44
2:F:256:PHE:CE2	2:F:282:ILE:HD13	2.53	0.44
2:F:923:GLU:HG2	2:F:928:THR:OG1	2.17	0.44
2:F:1108:GLU:CG	3:G:9:DC:H5''	2.47	0.44
2:F:1122:ARG:CG	2:F:1134:PHE:HE2	2.31	0.44
1:A:24:U:O2	2:B:105:PHE:CE1	2.63	0.44
2:B:106:LEU:HD23	2:B:110:ASP:HB3	1.99	0.44
2:B:156:LEU:HD23	2:B:156:LEU:HA	1.80	0.44
2:B:265:GLN:O	2:B:271:TYR:HD1	1.99	0.44
2:B:780:ARG:NH1	2:B:812:TYR:CE2	2.66	0.44
2:B:1291:LEU:HD23	2:B:1291:LEU:HA	1.82	0.44
2:F:186:ILE:HD13	2:F:186:ILE:HA	1.86	0.44
2:F:234:LYS:HD3	2:F:234:LYS:C	2.38	0.44
2:F:386:THR:OG1	2:F:389:LEU:HB2	2.18	0.44
2:F:431:PRO:O	2:F:434:LYS:HG2	2.17	0.44
2:F:513:LEU:O	2:F:516:GLU:HB2	2.18	0.44
2:F:568:TYR:CZ	2:F:573:GLU:OE2	2.70	0.44
2:F:969:ASP:C	2:F:970:PHE:HD2	2.21	0.44
2:F:1185:LYS:HA	2:F:1185:LYS:HD2	1.77	0.44
2:F:1292:SER:CA	2:F:1296:LYS:HE3	2.48	0.44
1:A:45:U:C5'	2:B:402:GLN:HG2	2.43	0.44
1:A:61:C:OP1	2:B:70:ARG:CZ	2.66	0.44
1:A:94:U:H2'	1:A:95:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:507:VAL:HG11	2:B:660:GLY:C	2.37	0.44
2:B:530:VAL:O	2:B:578:VAL:HG23	2.18	0.44
2:B:550:ASP:HA	2:B:554:LYS:HG3	1.99	0.44
2:B:568:TYR:CZ	2:B:573:GLU:OE2	2.70	0.44
2:B:1203:LEU:HD13	2:B:1213:MET:HG3	1.97	0.44
1:E:61:C:OP1	2:F:70:ARG:CZ	2.66	0.44
2:F:351:PHE:N	2:F:351:PHE:HD2	2.16	0.44
2:F:678:THR:O	2:F:682:PHE:N	2.42	0.44
2:F:975:VAL:HG23	2:F:1233:VAL:HG12	2.00	0.44
2:F:1203:LEU:HD13	2:F:1213:MET:HG3	1.97	0.44
2:F:1291:LEU:HD23	2:F:1291:LEU:HA	1.82	0.44
1:A:53:G:OP1	2:B:1123:LYS:HG3	2.18	0.44
1:A:78:A:C5	1:A:79:G:N7	2.85	0.44
2:B:89:GLU:OE1	2:B:92:LYS:HD2	2.16	0.44
2:B:234:LYS:HD3	2:B:234:LYS:C	2.38	0.44
2:B:248:LEU:HD13	2:B:248:LEU:HA	1.77	0.44
2:B:513:LEU:O	2:B:516:GLU:HB2	2.18	0.44
1:E:45:U:C5'	2:F:402:GLN:HG2	2.43	0.44
1:E:94:U:H2'	1:E:95:G:C8	2.53	0.44
2:F:10:ALA:O	2:F:17:GLY:N	2.45	0.44
2:F:342:GLN:OE1	2:F:384:ASP:CA	2.66	0.44
2:F:530:VAL:O	2:F:578:VAL:HG23	2.18	0.44
2:F:1360:ILE:HG22	2:F:1362:LEU:HD23	2.00	0.44
1:A:64:U:O5'	1:A:64:U:H6	2.01	0.43
2:B:70:ARG:HH11	2:B:454:PRO:HG3	1.78	0.43
2:B:317:LEU:CD2	2:B:414:ILE:CD1	2.95	0.43
2:B:431:PRO:O	2:B:434:LYS:HG2	2.17	0.43
2:B:679:ILE:HG12	2:B:704:PHE:HE1	1.71	0.43
2:B:969:ASP:C	2:B:970:PHE:HD2	2.21	0.43
2:B:1235:PHE:CE2	2:B:1266:LEU:CD1	3.01	0.43
2:B:1292:SER:CA	2:B:1296:LYS:HE3	2.48	0.43
2:B:1360:ILE:HG22	2:B:1362:LEU:HD23	2.00	0.43
2:F:184:LEU:CD1	2:F:295:ASN:O	2.67	0.43
2:F:317:LEU:CD2	2:F:414:ILE:CD1	2.95	0.43
2:F:1219:GLU:HG3	2:F:1220:LEU:H	1.83	0.43
2:B:184:LEU:CD1	2:B:295:ASN:O	2.67	0.43
2:B:568:TYR:CD2	2:B:569:PHE:CD2	3.06	0.43
2:B:649:LYS:HA	2:B:652:LYS:HD3	2.00	0.43
2:B:874:GLU:HA	2:B:877:LYS:CD	2.42	0.43
2:B:1219:GLU:HG3	2:B:1220:LEU:H	1.84	0.43
1:E:64:U:H6	1:E:64:U:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:341:GLN:HE21	2:F:342:GLN:N	2.16	0.43
2:F:345:GLU:HG2	2:F:346:LYS:H	1.83	0.43
2:F:568:TYR:CD2	2:F:569:PHE:CD2	3.06	0.43
2:F:1235:PHE:CE2	2:F:1266:LEU:CD1	3.01	0.43
1:A:24:U:C1'	2:B:105:PHE:HE1	2.27	0.43
2:B:94:ASP:HB2	2:B:152:ARG:HH11	1.83	0.43
2:B:345:GLU:HG2	2:B:346:LYS:H	1.83	0.43
2:B:851:SER:H	2:B:851:SER:HG	1.43	0.43
2:B:944:ASP:OD1	2:B:948:LYS:O	2.36	0.43
2:B:1031:LYS:NZ	2:B:1031:LYS:HB2	2.32	0.43
2:F:248:LEU:HD22	2:F:248:LEU:HA	1.83	0.43
2:F:291:LEU:HD23	2:F:292:ALA:N	2.33	0.43
2:F:374:LYS:O	2:F:374:LYS:HG2	2.18	0.43
2:F:641:HIS:CD2	2:F:642:LEU:N	2.87	0.43
2:F:944:ASP:OD1	2:F:948:LYS:O	2.36	0.43
2:F:1216:SER:CB	4:H:6:DG:C3'	2.96	0.43
1:A:15:U:H5''	2:B:70:ARG:NH1	2.33	0.43
2:B:45:LYS:HE3	2:B:45:LYS:HB3	1.77	0.43
2:B:291:LEU:HD23	2:B:292:ALA:N	2.33	0.43
2:B:328:HIS:O	2:B:332:LEU:N	2.51	0.43
2:B:374:LYS:HG2	2:B:374:LYS:O	2.18	0.43
2:B:451:TYR:HA	2:B:491:PHE:CD1	2.53	0.43
2:B:623:LEU:HD12	2:B:623:LEU:HA	1.52	0.43
2:B:641:HIS:CD2	2:B:642:LEU:N	2.87	0.43
2:B:1232:TYR:HH	2:B:1268:GLU:HG2	1.79	0.43
1:E:53:G:OP1	2:F:1123:LYS:HG3	2.18	0.43
2:F:1251:ASP:CA	2:F:1254:GLN:OE1	2.60	0.43
2:B:687:GLY:CA	2:B:688:PHE:C	2.85	0.43
2:B:1216:SER:CB	4:D:6:DG:C3'	2.96	0.43
2:F:94:ASP:HB2	2:F:152:ARG:HH11	1.83	0.43
2:F:212:LEU:HD13	2:F:212:LEU:HA	1.79	0.43
2:F:649:LYS:HA	2:F:652:LYS:HD3	2.00	0.43
1:A:49:A:P	2:B:76:LYS:HE2	2.58	0.43
1:A:70:C:H2'	1:A:71:U:H6	1.82	0.43
2:B:341:GLN:HE21	2:B:342:GLN:N	2.16	0.43
2:B:686:ASP:OD2	2:B:691:ARG:CB	2.63	0.43
2:B:737:ILE:HD13	2:B:931:VAL:HG22	2.00	0.43
2:B:832:ARG:HH11	2:B:835:ASP:CG	2.10	0.43
2:B:1185:LYS:HA	2:B:1185:LYS:HD2	1.77	0.43
2:B:1325:LYS:HB3	2:B:1330:THR:HA	1.99	0.43
1:E:49:A:P	2:F:76:LYS:HE2	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:328:HIS:O	2:F:332:LEU:N	2.51	0.43
2:F:541:SER:O	2:F:545:LYS:HG3	2.18	0.43
2:F:780:ARG:NH1	2:F:812:TYR:CE2	2.66	0.43
2:F:1325:LYS:HB3	2:F:1330:THR:HA	1.99	0.43
2:B:212:LEU:HD13	2:B:212:LEU:HA	1.79	0.43
2:B:233:LYS:HG3	2:F:543:GLU:OE1	2.19	0.43
2:B:556:ASN:O	2:B:595:HIS:NE2	2.51	0.43
2:B:1135:ASP:CG	2:B:1136:SER:N	2.72	0.43
1:E:15:U:H5''	2:F:70:ARG:NH1	2.33	0.43
2:F:451:TYR:HA	2:F:491:PHE:CD1	2.53	0.43
2:F:464:TRP:HD1	2:F:490:SER:HB3	1.84	0.43
2:F:780:ARG:H	2:F:780:ARG:HG2	1.66	0.43
2:B:541:SER:O	2:B:545:LYS:HG3	2.18	0.43
2:F:138:LEU:HD21	2:F:153:LEU:HD22	2.00	0.43
2:F:216:LEU:HD23	2:F:216:LEU:H	1.82	0.43
2:F:395:ARG:O	2:F:396:GLU:CB	2.54	0.43
2:F:1135:ASP:CG	2:F:1136:SER:N	2.72	0.43
2:B:138:LEU:HD21	2:B:153:LEU:HD22	2.00	0.43
2:B:464:TRP:HD1	2:B:490:SER:HB3	1.84	0.43
2:B:516:GLU:O	2:B:520:VAL:HG23	2.18	0.43
2:F:362:TYR:C	2:F:362:TYR:HD2	2.22	0.43
2:F:488:ALA:O	2:F:491:PHE:HB3	2.19	0.43
2:F:556:ASN:O	2:F:595:HIS:NE2	2.51	0.43
2:F:737:ILE:HD13	2:F:931:VAL:HG22	2.00	0.43
2:B:10:ALA:O	2:B:17:GLY:N	2.45	0.43
2:B:380:LEU:HD11	2:B:398:LEU:HD11	2.00	0.43
2:B:402:GLN:OE1	2:B:402:GLN:HA	2.19	0.43
2:F:156:LEU:HD23	2:F:156:LEU:HA	1.80	0.43
2:F:874:GLU:HA	2:F:877:LYS:CD	2.42	0.43
1:A:36:A:C5	1:A:37:U:H1'	2.54	0.42
2:B:216:LEU:HD23	2:B:216:LEU:H	1.82	0.42
2:B:233:LYS:HE3	2:F:547:ALA:HB2	2.01	0.42
2:B:488:ALA:O	2:B:491:PHE:HB3	2.19	0.42
2:B:625:LEU:HD13	2:B:659:TRP:CH2	2.53	0.42
2:B:1292:SER:CB	2:B:1296:LYS:NZ	2.80	0.42
2:B:1324:PHE:O	2:B:1331:ILE:N	2.41	0.42
2:F:256:PHE:CE2	2:F:282:ILE:HG21	2.54	0.42
2:F:1062:LEU:CD2	2:F:1063:ILE:N	2.73	0.42
2:F:1292:SER:CB	2:F:1296:LYS:NZ	2.80	0.42
2:F:1295:ASN:O	2:F:1298:ARG:HG3	2.19	0.42
2:B:256:PHE:CE2	2:B:282:ILE:HG21	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:341:GLN:NE2	2:B:341:GLN:C	2.73	0.42
2:B:432:PHE:CD1	2:B:432:PHE:C	2.91	0.42
2:B:627:GLU:N	2:B:627:GLU:CD	2.73	0.42
2:B:765:ARG:HH22	2:B:848:LYS:CE	2.32	0.42
2:B:846:PHE:CZ	2:B:913:LYS:HD3	2.55	0.42
2:B:1177:ASN:ND2	2:B:1180:ASP:CG	2.73	0.42
2:B:1235:PHE:CZ	2:B:1266:LEU:HD13	2.53	0.42
2:B:1251:ASP:CA	2:B:1254:GLN:OE1	2.60	0.42
2:B:1295:ASN:O	2:B:1298:ARG:HG3	2.19	0.42
1:E:12:U:H2'	1:E:13:A:H8	1.84	0.42
1:E:36:A:C5	1:E:37:U:H1'	2.54	0.42
1:E:70:C:H2'	1:E:71:U:H6	1.82	0.42
2:F:70:ARG:HH11	2:F:454:PRO:HG3	1.78	0.42
2:F:234:LYS:CD	2:F:235:ASN:ND2	2.79	0.42
2:F:324:ARG:CZ	2:F:400:ARG:CD	2.97	0.42
2:F:525:THR:HG23	2:F:545:LYS:HZ1	1.84	0.42
2:F:627:GLU:N	2:F:627:GLU:CD	2.73	0.42
2:F:846:PHE:CZ	2:F:913:LYS:HD3	2.55	0.42
2:F:856:VAL:HG12	2:F:857:LEU:N	2.34	0.42
2:F:1265:TYR:O	2:F:1268:GLU:HB2	2.18	0.42
1:A:17:G:O2'	2:B:168:PHE:CE1	2.72	0.42
1:A:27:G:H1'	2:B:129:HIS:ND1	2.33	0.42
1:A:31:U:H2'	1:A:32:A:O4'	2.20	0.42
1:A:48:A:H2'	1:A:49:A:C8	2.55	0.42
2:B:312:ILE:H	2:B:312:ILE:HG13	1.68	0.42
2:B:359:TYR:CZ	2:B:363:ILE:HD11	2.54	0.42
2:B:388:GLU:O	2:B:391:VAL:N	2.52	0.42
2:B:849:ASP:OD2	2:B:854:ASN:CB	2.67	0.42
2:B:856:VAL:HG12	2:B:857:LEU:N	2.34	0.42
2:B:1002:PRO:O	2:B:1005:GLU:HB2	2.19	0.42
2:F:341:GLN:NE2	2:F:341:GLN:C	2.73	0.42
2:F:380:LEU:HD11	2:F:398:LEU:HD11	2.00	0.42
2:F:402:GLN:OE1	2:F:402:GLN:HA	2.20	0.42
2:F:516:GLU:O	2:F:520:VAL:HG23	2.18	0.42
2:F:625:LEU:HD13	2:F:659:TRP:CH2	2.53	0.42
2:F:849:ASP:OD2	2:F:854:ASN:CB	2.67	0.42
2:F:1002:PRO:O	2:F:1005:GLU:HB2	2.19	0.42
2:F:1235:PHE:CZ	2:F:1266:LEU:HD13	2.53	0.42
1:A:12:U:H2'	1:A:13:A:H8	1.84	0.42
2:B:234:LYS:CD	2:B:235:ASN:ND2	2.79	0.42
2:B:311:GLU:H	2:B:311:GLU:CD	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:318:SER:HG	2:B:418:GLU:CD	2.16	0.42
2:B:423:LEU:HD12	2:B:437:ARG:HG3	2.00	0.42
2:B:1062:LEU:CD2	2:B:1063:ILE:N	2.73	0.42
2:B:1105:PHE:O	2:B:1137:PRO:HA	2.20	0.42
2:B:1114:ARG:HH12	4:D:9:DA:P	2.41	0.42
1:E:27:G:H1'	2:F:129:HIS:ND1	2.34	0.42
1:E:31:U:H2'	1:E:32:A:O4'	2.20	0.42
2:F:63:ARG:HA	2:F:66:ARG:HD3	2.01	0.42
2:F:148:LYS:N	2:F:429:PHE:CZ	2.81	0.42
2:F:380:LEU:O	2:F:386:THR:HG21	2.20	0.42
2:F:423:LEU:HD12	2:F:437:ARG:HG3	2.00	0.42
2:F:765:ARG:HH22	2:F:848:LYS:CE	2.32	0.42
2:F:1105:PHE:O	2:F:1137:PRO:HA	2.20	0.42
2:F:1177:ASN:ND2	2:F:1180:ASP:CG	2.73	0.42
2:B:333:THR:O	2:B:337:ALA:CB	2.67	0.42
2:B:451:TYR:O	2:B:464:TRP:NE1	2.51	0.42
2:B:499:ASP:HB3	2:B:502:LEU:O	2.19	0.42
1:E:48:A:H2'	1:E:49:A:C8	2.55	0.42
2:F:224:ASN:O	2:F:228:GLN:NE2	2.52	0.42
2:F:253:LYS:HB2	2:F:262:ALA:H	1.84	0.42
2:B:63:ARG:HA	2:B:66:ARG:HD3	2.01	0.42
2:B:386:THR:O	2:B:386:THR:OG1	2.37	0.42
2:B:448:ILE:H	2:B:448:ILE:HG13	1.69	0.42
1:E:24:U:C1'	2:F:105:PHE:HE1	2.27	0.42
1:E:45:U:HO2'	2:F:135:ILE:H	1.68	0.42
2:F:173:ASP:O	2:F:174:LEU:HD12	2.19	0.42
2:F:311:GLU:H	2:F:311:GLU:CD	2.21	0.42
2:F:451:TYR:O	2:F:464:TRP:NE1	2.51	0.42
2:F:756:PRO:O	2:F:953:VAL:HG22	2.20	0.42
2:F:796:LEU:HD23	2:F:796:LEU:HA	1.80	0.42
2:F:1221:GLN:HE21	2:F:1320:ALA:HB2	1.79	0.42
2:F:1324:PHE:O	2:F:1331:ILE:N	2.41	0.42
2:B:224:ASN:O	2:B:228:GLN:NE2	2.52	0.42
2:F:78:ARG:HG2	2:F:443:ILE:HG23	2.01	0.42
2:F:499:ASP:HB3	2:F:502:LEU:O	2.19	0.42
2:F:883:TRP:CZ3	2:F:900:LEU:HB3	2.54	0.42
2:F:974:LYS:NZ	2:F:976:ARG:NH1	2.68	0.42
2:F:1232:TYR:OH	2:F:1268:GLU:HB3	2.20	0.42
2:F:1245:LEU:HD13	2:F:1252:ASN:OD1	2.20	0.42
1:A:45:U:HO2'	2:B:135:ILE:H	1.68	0.42
2:B:249:THR:CG2	2:B:265:GLN:HE21	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:253:LYS:HB2	2:B:262:ALA:H	1.84	0.42
2:B:756:PRO:O	2:B:953:VAL:HG22	2.20	0.42
2:F:139:ARG:HH22	2:F:415:HIS:CD2	2.37	0.42
2:F:324:ARG:CZ	2:F:400:ARG:CG	2.98	0.42
2:F:333:THR:O	2:F:337:ALA:CB	2.67	0.42
2:F:432:PHE:CD1	2:F:432:PHE:C	2.91	0.42
2:F:448:ILE:H	2:F:448:ILE:HG13	1.69	0.42
2:F:1000:LYS:CE	2:F:1045:PHE:CD2	2.96	0.42
2:F:1114:ARG:HH12	4:H:9:DA:P	2.41	0.42
1:A:42:A:HO2'	1:A:43:G:P	2.42	0.42
1:A:43:G:O2'	2:B:363:ILE:HG13	2.19	0.42
2:B:48:ILE:HD11	2:B:984:ALA:O	2.19	0.42
2:B:119:PHE:CD2	2:B:119:PHE:N	2.87	0.42
2:B:351:PHE:N	2:B:351:PHE:HD2	2.16	0.42
2:F:48:ILE:HD11	2:F:984:ALA:O	2.19	0.42
2:F:66:ARG:NH2	2:F:462:PHE:CE2	2.61	0.42
2:F:255:ASN:HD22	2:F:256:PHE:HE1	1.65	0.42
2:F:829:ASP:OD1	2:F:831:ASN:N	2.53	0.42
2:F:1295:ASN:OD1	2:F:1298:ARG:NH2	2.53	0.42
2:B:78:ARG:HG2	2:B:443:ILE:HG23	2.02	0.42
2:B:139:ARG:HH22	2:B:415:HIS:CD2	2.37	0.42
2:B:173:ASP:O	2:B:174:LEU:HD12	2.19	0.42
2:B:395:ARG:O	2:B:396:GLU:CB	2.53	0.42
2:B:429:PHE:HD2	2:B:429:PHE:H	1.68	0.42
2:B:739:GLN:OE1	2:B:1352:ILE:HD11	2.19	0.42
2:B:883:TRP:CZ3	2:B:900:LEU:HB3	2.54	0.42
2:B:1205:GLU:HB2	2:B:1211:LYS:HG3	2.02	0.42
2:B:1220:LEU:CD2	2:B:1342:VAL:HG21	2.50	0.42
2:B:1245:LEU:HD13	2:B:1252:ASN:OD1	2.20	0.42
2:B:1295:ASN:OD1	2:B:1298:ARG:NH2	2.53	0.42
3:C:3:DA:H2''	3:C:4:DT:O5'	2.20	0.42
2:F:421:ALA:O	2:F:425:ARG:HB2	2.19	0.42
2:F:423:LEU:N	2:F:423:LEU:CD2	2.82	0.42
2:F:503:PRO:CD	2:F:711:ALA:HB1	2.50	0.42
2:F:506:LYS:H	2:F:506:LYS:HG2	1.65	0.42
2:F:683:LEU:HA	2:F:683:LEU:HD23	1.70	0.42
2:F:1240:SER:OG	2:F:1310:ILE:HD12	2.20	0.42
2:B:86:PHE:CE2	2:B:155:TYR:HB2	2.55	0.41
2:B:271:TYR:CD2	2:B:271:TYR:C	2.93	0.41
2:B:421:ALA:O	2:B:425:ARG:HB2	2.19	0.41
2:B:760:VAL:HG11	2:B:990:ASN:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:829:ASP:OD1	2:B:831:ASN:N	2.53	0.41
2:B:1000:LYS:CE	2:B:1045:PHE:CD2	2.96	0.41
2:B:1154:SER:O	2:B:1155:LYS:HB2	2.20	0.41
2:B:1212:ARG:CZ	2:B:1336:TYR:CE2	3.01	0.41
2:B:1213:MET:O	2:B:1221:GLN:N	2.52	0.41
1:E:10:U:H2'	1:E:11:C:C6	2.55	0.41
1:E:43:G:O2'	2:F:363:ILE:HG13	2.19	0.41
2:F:1212:ARG:NH2	2:F:1280:VAL:O	2.53	0.41
3:G:3:DA:H2''	3:G:4:DT:O5'	2.20	0.41
1:A:10:U:H2'	1:A:11:C:C6	2.55	0.41
1:A:92:G:C2	1:A:93:G:C4	3.08	0.41
2:B:244:LEU:HD11	2:B:264:LEU:O	2.19	0.41
2:B:256:PHE:CD2	2:B:282:ILE:HG21	2.54	0.41
2:B:780:ARG:H	2:B:780:ARG:HG2	1.67	0.41
2:B:1091:GLN:NE2	2:B:1091:GLN:C	2.73	0.41
2:B:1204:PHE:CE2	2:B:1342:VAL:HG11	2.55	0.41
2:F:119:PHE:CD2	2:F:119:PHE:N	2.87	0.41
2:F:336:LYS:CG	2:F:347:TYR:HE2	2.32	0.41
2:F:429:PHE:HD2	2:F:429:PHE:H	1.68	0.41
2:F:739:GLN:OE1	2:F:1352:ILE:HD11	2.19	0.41
2:B:423:LEU:N	2:B:423:LEU:CD2	2.82	0.41
2:B:447:ARG:HG2	2:B:448:ILE:O	2.20	0.41
2:B:535:ARG:HG2	2:B:536:LYS:H	1.86	0.41
2:B:1000:LYS:CG	2:B:1073:VAL:HG11	2.50	0.41
1:E:92:G:C2	1:E:93:G:C4	3.08	0.41
2:F:86:PHE:CE2	2:F:155:TYR:HB2	2.55	0.41
2:F:271:TYR:CD2	2:F:271:TYR:C	2.93	0.41
2:F:286:TYR:O	2:F:289:LEU:HB2	2.21	0.41
2:F:760:VAL:HG11	2:F:990:ASN:O	2.20	0.41
2:F:1000:LYS:HE2	2:F:1064:GLU:CB	2.44	0.41
2:F:1091:GLN:NE2	2:F:1091:GLN:C	2.73	0.41
2:F:1118:LYS:HA	2:F:1118:LYS:HD3	1.79	0.41
2:F:1154:SER:O	2:F:1155:LYS:HB2	2.20	0.41
2:F:1220:LEU:CD2	2:F:1342:VAL:HG21	2.50	0.41
2:B:286:TYR:O	2:B:289:LEU:HB2	2.20	0.41
2:B:1000:LYS:HE2	2:B:1064:GLU:CB	2.44	0.41
2:B:1141:TYR:OH	2:B:1175:GLU:OE2	2.21	0.41
2:B:1153:LYS:O	2:B:1155:LYS:HG3	2.20	0.41
2:B:1178:PRO:O	2:B:1182:LEU:N	2.42	0.41
2:B:1212:ARG:NH2	2:B:1280:VAL:O	2.53	0.41
2:B:1240:SER:OG	2:B:1310:ILE:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:5:DA:C2	4:D:9:DA:C2	3.08	0.41
4:D:4:DT:C4	4:D:5:DA:N1	2.88	0.41
4:D:8:DT:H2''	4:D:9:DA:H5'	2.02	0.41
1:E:8:G:C2	3:G:22:DA:C2	3.09	0.41
2:F:256:PHE:CD2	2:F:282:ILE:HG21	2.54	0.41
2:F:290:PHE:O	2:F:293:ALA:HB3	2.20	0.41
2:F:535:ARG:HG2	2:F:536:LYS:H	1.86	0.41
2:F:1205:GLU:HB2	2:F:1211:LYS:HG3	2.02	0.41
4:H:8:DT:H2''	4:H:9:DA:H5'	2.02	0.41
1:A:8:G:C2	3:C:22:DA:C2	3.09	0.41
2:B:252:PHE:CE1	2:B:278:LEU:HD21	2.55	0.41
2:B:290:PHE:O	2:B:293:ALA:HB3	2.20	0.41
2:B:336:LYS:CG	2:B:347:TYR:HE2	2.32	0.41
2:B:1302:ILE:O	2:B:1306:ALA:CA	2.69	0.41
2:F:82:LEU:HB3	2:F:155:TYR:HE1	1.85	0.41
2:F:122:ILE:O	2:F:126:VAL:HG23	2.21	0.41
2:F:244:LEU:CD2	2:F:266:LEU:CD1	2.97	0.41
2:F:244:LEU:HD11	2:F:264:LEU:O	2.19	0.41
2:F:525:THR:CG2	2:F:690:ASN:HB3	2.31	0.41
2:F:641:HIS:CD2	2:F:642:LEU:H	2.38	0.41
2:F:1178:PRO:O	2:F:1182:LEU:N	2.43	0.41
2:F:1204:PHE:CE2	2:F:1342:VAL:HG11	2.55	0.41
2:F:1213:MET:O	2:F:1221:GLN:N	2.52	0.41
2:F:1302:ILE:O	2:F:1306:ALA:CA	2.69	0.41
4:H:4:DT:C4	4:H:5:DA:N1	2.88	0.41
2:B:82:LEU:HB3	2:B:155:TYR:HE1	1.85	0.41
2:B:186:ILE:CD1	2:B:203:ALA:CB	2.99	0.41
2:B:255:ASN:HD22	2:B:256:PHE:HE1	1.65	0.41
2:B:536:LYS:HB2	2:B:536:LYS:HE2	1.83	0.41
2:B:852:ILE:CG1	5:B:1401:SO4:O1	2.60	0.41
2:B:1000:LYS:CD	2:B:1045:PHE:CE2	3.04	0.41
2:B:1221:GLN:HE21	2:B:1320:ALA:HB2	1.79	0.41
2:F:252:PHE:CE1	2:F:278:LEU:HD21	2.55	0.41
2:F:447:ARG:HG2	2:F:448:ILE:O	2.20	0.41
2:F:1000:LYS:CG	2:F:1073:VAL:HG11	2.50	0.41
2:F:1244:LYS:NZ	2:F:1244:LYS:HB2	2.36	0.41
2:F:1314:THR:CG2	2:F:1324:PHE:CD2	3.03	0.41
2:B:122:ILE:O	2:B:126:VAL:HG23	2.21	0.41
2:B:600:ILE:O	2:B:647:VAL:CG1	2.58	0.41
2:B:758:ASN:OD1	2:B:954:LYS:NZ	2.44	0.41
1:E:74:A:H3'	1:E:75:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:40:ARG:CZ	2:F:43:ILE:HD13	2.50	0.41
2:F:186:ILE:CD1	2:F:203:ALA:CB	2.99	0.41
2:F:390:LEU:HA	2:F:390:LEU:HD23	1.81	0.41
2:F:896:LYS:O	2:F:900:LEU:HG	2.19	0.41
2:F:1000:LYS:CD	2:F:1045:PHE:CE2	3.04	0.41
3:G:5:DA:C2	4:H:9:DA:C2	3.08	0.41
1:A:74:A:H3'	1:A:75:A:H8	1.86	0.41
2:B:641:HIS:HD2	2:B:642:LEU:CG	2.16	0.41
2:B:683:LEU:HA	2:B:683:LEU:HD23	1.70	0.41
2:B:896:LYS:O	2:B:900:LEU:HG	2.20	0.41
2:B:1244:LYS:NZ	2:B:1244:LYS:HB2	2.36	0.41
1:E:64:U:OP1	2:F:1102:THR:OG1	2.26	0.41
2:F:165:ARG:C	2:F:415:HIS:ND1	2.74	0.41
2:F:1153:LYS:O	2:F:1155:LYS:HG3	2.20	0.41
2:B:40:ARG:CZ	2:B:43:ILE:HD13	2.50	0.41
2:B:107:VAL:O	2:B:111:LYS:N	2.54	0.41
2:B:244:LEU:CD2	2:B:266:LEU:CD1	2.97	0.41
2:B:256:PHE:N	2:B:256:PHE:CD1	2.89	0.41
2:B:393:LEU:O	2:B:396:GLU:N	2.44	0.41
2:B:451:TYR:HB2	2:B:488:ALA:HA	2.03	0.41
2:B:641:HIS:CD2	2:B:642:LEU:H	2.38	0.41
2:B:777:SER:OG	4:D:2:DT:O5'	2.01	0.41
2:B:1314:THR:CG2	2:B:1324:PHE:CD2	3.03	0.41
2:B:1321:PRO:HB2	2:B:1333:ARG:HD2	2.02	0.41
2:F:256:PHE:N	2:F:256:PHE:CD1	2.89	0.41
2:F:393:LEU:O	2:F:396:GLU:N	2.44	0.41
2:F:536:LYS:HB2	2:F:536:LYS:HE2	1.83	0.41
2:F:685:SER:O	2:F:685:SER:OG	2.26	0.41
2:F:758:ASN:OD1	2:F:954:LYS:NZ	2.44	0.41
2:F:1321:PRO:HB2	2:F:1333:ARG:HD2	2.02	0.41
2:B:154:ILE:O	2:B:155:TYR:C	2.58	0.41
2:B:165:ARG:C	2:B:415:HIS:ND1	2.74	0.41
2:B:294:LYS:O	2:B:297:SER:HB3	2.21	0.41
2:B:436:ASN:ND2	2:B:436:ASN:N	2.69	0.41
2:B:1122:ARG:HG3	2:B:1134:PHE:HE2	1.86	0.41
2:B:1335:ARG:C	2:B:1336:TYR:HD1	2.24	0.41
1:E:43:G:N2	2:F:360:ALA:HA	2.35	0.41
2:F:107:VAL:O	2:F:111:LYS:N	2.54	0.41
2:F:246:LEU:N	2:F:246:LEU:HD12	2.36	0.41
2:F:841:ILE:CD1	2:F:900:LEU:HG	2.51	0.41
2:F:925:ARG:C	2:F:929:LYS:HE3	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1122:ARG:HG3	2:F:1134:PHE:HE2	1.86	0.41
1:A:26:A:H2'	1:A:27:G:C8	2.56	0.40
2:B:355:SER:OG	2:B:356:LYS:HG2	2.21	0.40
2:B:945:GLU:CD	2:B:946:ASN:N	2.73	0.40
2:B:1203:LEU:HD13	2:B:1213:MET:CG	2.51	0.40
2:B:1304:GLU:C	2:B:1327:PHE:HE1	2.24	0.40
2:F:436:ASN:ND2	2:F:436:ASN:N	2.69	0.40
2:F:616:LEU:O	2:F:619:ILE:HG22	2.21	0.40
2:F:1304:GLU:C	2:F:1327:PHE:HE1	2.24	0.40
2:B:249:THR:CG2	2:B:265:GLN:HE22	2.29	0.40
2:B:534:MET:H	2:B:534:MET:HG2	1.58	0.40
2:B:596:ASP:CG	2:B:656:TYR:OH	2.53	0.40
2:B:841:ILE:CD1	2:B:900:LEU:HG	2.51	0.40
2:B:925:ARG:C	2:B:929:LYS:HE3	2.41	0.40
2:F:350:ILE:CG2	2:F:351:PHE:HE2	2.34	0.40
2:F:1139:VAL:HA	2:F:1167:THR:HA	2.03	0.40
2:F:1246:LYS:HZ2	2:F:1246:LYS:CB	2.29	0.40
2:B:454:PRO:HD2	2:B:463:ALA:HA	2.02	0.40
2:B:616:LEU:O	2:B:619:ILE:HG22	2.21	0.40
2:B:784:ILE:O	2:B:788:ILE:CD1	2.69	0.40
2:B:924:THR:O	2:B:929:LYS:CE	2.69	0.40
2:B:1246:LYS:NZ	2:B:1246:LYS:CB	2.73	0.40
1:E:42:A:HO2'	1:E:43:G:P	2.43	0.40
1:E:54:G:H22	1:E:61:C:H1'	1.87	0.40
2:F:294:LYS:O	2:F:297:SER:HB3	2.21	0.40
2:F:311:GLU:N	2:F:311:GLU:CD	2.73	0.40
2:F:341:GLN:HE21	2:F:341:GLN:C	2.25	0.40
2:F:355:SER:OG	2:F:356:LYS:HG2	2.21	0.40
2:F:451:TYR:HB2	2:F:488:ALA:HA	2.03	0.40
2:F:561:VAL:HG23	2:F:585:ASP:O	2.21	0.40
2:F:1335:ARG:C	2:F:1336:TYR:HD1	2.25	0.40
2:B:6:SER:O	2:B:21:ILE:HG12	2.22	0.40
2:B:38:THR:CG2	2:B:39:ASP:N	2.84	0.40
2:B:51:LEU:HD13	2:B:1352:ILE:O	2.22	0.40
2:B:70:ARG:NH1	2:B:454:PRO:HG2	2.35	0.40
2:B:184:LEU:CD1	2:B:295:ASN:C	2.90	0.40
2:B:311:GLU:N	2:B:311:GLU:CD	2.73	0.40
2:B:341:GLN:HE21	2:B:341:GLN:C	2.25	0.40
2:B:594:TYR:OH	2:B:604:LYS:NZ	2.48	0.40
2:B:842:VAL:HG13	2:B:847:LEU:HD22	2.03	0.40
2:B:1139:VAL:HA	2:B:1167:THR:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1286:ASN:O	2:B:1289:LYS:CB	2.69	0.40
1:E:26:A:H2'	1:E:27:G:C8	2.56	0.40
1:E:67:C:P	2:F:739:GLN:HE22	2.43	0.40
2:F:38:THR:CG2	2:F:39:ASP:N	2.84	0.40
2:F:51:LEU:HD13	2:F:1352:ILE:O	2.22	0.40
2:F:184:LEU:CD1	2:F:295:ASN:C	2.90	0.40
2:F:245:SER:CB	2:F:296:LEU:HD22	2.51	0.40
2:F:842:VAL:HG13	2:F:847:LEU:HD22	2.02	0.40
2:F:1203:LEU:HD13	2:F:1213:MET:CG	2.51	0.40
1:A:67:C:P	2:B:739:GLN:HE22	2.43	0.40
2:B:81:TYR:CE2	2:B:475:PRO:HD3	2.56	0.40
2:B:350:ILE:CG2	2:B:351:PHE:HE2	2.33	0.40
2:B:406:ASP:OD1	2:B:407:ASN:ND2	2.54	0.40
2:B:514:LEU:O	2:B:515:TYR:C	2.58	0.40
2:B:561:VAL:HG23	2:B:585:ASP:O	2.21	0.40
2:B:568:TYR:HD2	2:B:569:PHE:CE2	2.40	0.40
2:B:678:THR:O	2:B:681:ASP:HB2	2.21	0.40
2:B:710:LYS:HE2	2:B:710:LYS:HB2	1.81	0.40
2:B:979:ASN:OD1	2:B:981:TYR:N	2.55	0.40
1:E:52:A:H1'	2:F:1169:MET:CE	2.52	0.40
2:F:154:ILE:O	2:F:155:TYR:C	2.58	0.40
2:F:244:LEU:HD12	2:F:250:PRO:CG	2.45	0.40
2:F:454:PRO:HD2	2:F:463:ALA:HA	2.02	0.40
2:F:534:MET:H	2:F:534:MET:HG2	1.58	0.40
2:F:600:ILE:O	2:F:647:VAL:CG1	2.58	0.40
2:F:641:HIS:HD2	2:F:642:LEU:CG	2.16	0.40
2:F:811:LEU:O	2:F:814:TYR:HB3	2.22	0.40
2:F:924:THR:O	2:F:929:LYS:CE	2.69	0.40
2:F:945:GLU:CD	2:F:946:ASN:N	2.73	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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	1318/1368 (96%)	1279 (97%)	39 (3%)	0	100	100
2	F	1318/1368 (96%)	1281 (97%)	37 (3%)	0	100	100
All	All	2636/2736 (96%)	2560 (97%)	76 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B	1186/1225 (97%)	942 (79%)	244 (21%)	1	7
2	F	1186/1225 (97%)	942 (79%)	244 (21%)	1	7
All	All	2372/2450 (97%)	1884 (79%)	488 (21%)	1	7

All (488) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	4	LYS
2	B	9	LEU
2	B	40	ARG
2	B	47	LEU
2	B	57	GLU
2	B	62	THR
2	B	72	TYR
2	B	76	LYS
2	B	96	SER
2	B	104	SER
2	B	106	LEU
2	B	107	VAL
2	B	111	LYS
2	B	114	GLU
2	B	121	ASN
2	B	165	ARG
2	B	167	HIS
2	B	177	ASP

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Mol	Chain	Res	Type
2	B	181	VAL
2	B	183	LYS
2	B	184	LEU
2	B	195	LEU
2	B	204	SER
2	B	209	LYS
2	B	216	LEU
2	B	218	LYS
2	B	233	LYS
2	B	234	LYS
2	B	245	SER
2	B	246	LEU
2	B	248	LEU
2	B	252	PHE
2	B	254	SER
2	B	265	GLN
2	B	268	LYS
2	B	270	THR
2	B	274	ASP
2	B	275	LEU
2	B	278	LEU
2	B	279	LEU
2	B	289	LEU
2	B	294	LYS
2	B	301	LEU
2	B	302	LEU
2	B	304	ASP
2	B	305	ILE
2	B	309	ASN
2	B	311	GLU
2	B	317	LEU
2	B	318	SER
2	B	321	MET
2	B	323	LYS
2	B	338	LEU
2	B	341	GLN
2	B	342	GLN
2	B	348	LYS
2	B	352	PHE
2	B	368	SER
2	B	376	ILE
2	B	377	LYS

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Mol	Chain	Res	Type
2	B	382	LYS
2	B	383	MET
2	B	384	ASP
2	B	387	GLU
2	B	388	GLU
2	B	390	LEU
2	B	397	ASP
2	B	398	LEU
2	B	404	THR
2	B	405	PHE
2	B	407	ASN
2	B	419	LEU
2	B	423	LEU
2	B	425	ARG
2	B	429	PHE
2	B	432	PHE
2	B	434	LYS
2	B	436	ASN
2	B	442	LYS
2	B	445	THR
2	B	455	LEU
2	B	460	SER
2	B	468	LYS
2	B	469	SER
2	B	479	GLU
2	B	490	SER
2	B	502	LEU
2	B	506	LYS
2	B	508	LEU
2	B	510	LYS
2	B	513	LEU
2	B	514	LEU
2	B	531	THR
2	B	532	GLU
2	B	535	ARG
2	B	536	LYS
2	B	540	LEU
2	B	543	GLU
2	B	546	LYS
2	B	550	ASP
2	B	555	THR
2	B	556	ASN

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Mol	Chain	Res	Type
2	B	557	ARG
2	B	571	LYS
2	B	574	CYS
2	B	577	SER
2	B	580	ILE
2	B	583	VAL
2	B	585	ASP
2	B	598	LEU
2	B	601	ILE
2	B	602	LYS
2	B	610	GLU
2	B	627	GLU
2	B	631	MET
2	B	636	LEU
2	B	653	ARG
2	B	655	ARG
2	B	673	LYS
2	B	675	SER
2	B	677	LYS
2	B	685	SER
2	B	688	PHE
2	B	691	ARG
2	B	694	MET
2	B	701	SER
2	B	703	THR
2	B	709	GLN
2	B	710	LYS
2	B	718	ASP
2	B	719	SER
2	B	730	SER
2	B	740	THR
2	B	751	MET
2	B	753	ARG
2	B	776	ASN
2	B	777	SER
2	B	778	ARG
2	B	779	GLU
2	B	782	LYS
2	B	785	GLU
2	B	788	ILE
2	B	791	LEU
2	B	795	ILE

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Mol	Chain	Res	Type
2	B	796	LEU
2	B	803	ASN
2	B	814	TYR
2	B	820	ARG
2	B	822	MET
2	B	828	LEU
2	B	830	ILE
2	B	833	LEU
2	B	834	SER
2	B	837	ASP
2	B	844	GLN
2	B	845	SER
2	B	847	LEU
2	B	850	ASP
2	B	851	SER
2	B	853	ASP
2	B	859	ARG
2	B	861	ASP
2	B	866	LYS
2	B	867	SER
2	B	877	LYS
2	B	885	GLN
2	B	887	LEU
2	B	893	THR
2	B	895	ARG
2	B	905	ARG
2	B	910	GLU
2	B	911	LEU
2	B	933	GLN
2	B	938	ARG
2	B	940	ASN
2	B	964	SER
2	B	968	LYS
2	B	974	LYS
2	B	977	GLU
2	B	980	ASN
2	B	1006	SER
2	B	1007	GLU
2	B	1031	LYS
2	B	1035	LYS
2	B	1038	PHE
2	B	1045	PHE

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Mol	Chain	Res	Type
2	B	1047	LYS
2	B	1060	ARG
2	B	1062	LEU
2	B	1082	THR
2	B	1087	LEU
2	B	1089	MET
2	B	1091	GLN
2	B	1106	SER
2	B	1113	LYS
2	B	1135	ASP
2	B	1136	SER
2	B	1148	LYS
2	B	1150	GLU
2	B	1151	LYS
2	B	1154	SER
2	B	1156	LYS
2	B	1158	LYS
2	B	1171	ARG
2	B	1174	PHE
2	B	1175	GLU
2	B	1191	LYS
2	B	1197	LYS
2	B	1202	SER
2	B	1206	LEU
2	B	1207	GLU
2	B	1214	LEU
2	B	1224	ASN
2	B	1230	SER
2	B	1231	LYS
2	B	1233	VAL
2	B	1241	HIS
2	B	1242	TYR
2	B	1243	GLU
2	B	1244	LYS
2	B	1246	LYS
2	B	1252	ASN
2	B	1254	GLN
2	B	1255	LYS
2	B	1257	LEU
2	B	1266	LEU
2	B	1268	GLU
2	B	1272	GLN

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Mol	Chain	Res	Type
2	B	1274	SER
2	B	1277	SER
2	B	1282	LEU
2	B	1284	ASP
2	B	1288	ASP
2	B	1291	LEU
2	B	1292	SER
2	B	1296	LYS
2	B	1299	ASP
2	B	1307	GLU
2	B	1311	HIS
2	B	1315	LEU
2	B	1325	LYS
2	B	1329	THR
2	B	1337	THR
2	B	1344	ASP
2	F	4	LYS
2	F	9	LEU
2	F	23	ASP
2	F	40	ARG
2	F	47	LEU
2	F	57	GLU
2	F	62	THR
2	F	72	TYR
2	F	76	LYS
2	F	96	SER
2	F	104	SER
2	F	106	LEU
2	F	107	VAL
2	F	111	LYS
2	F	114	GLU
2	F	121	ASN
2	F	165	ARG
2	F	167	HIS
2	F	177	ASP
2	F	181	VAL
2	F	183	LYS
2	F	184	LEU
2	F	195	LEU
2	F	204	SER
2	F	209	LYS
2	F	216	LEU

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Mol	Chain	Res	Type
2	F	218	LYS
2	F	233	LYS
2	F	234	LYS
2	F	246	LEU
2	F	252	PHE
2	F	254	SER
2	F	265	GLN
2	F	268	LYS
2	F	270	THR
2	F	274	ASP
2	F	275	LEU
2	F	278	LEU
2	F	279	LEU
2	F	289	LEU
2	F	294	LYS
2	F	301	LEU
2	F	302	LEU
2	F	304	ASP
2	F	305	ILE
2	F	309	ASN
2	F	311	GLU
2	F	317	LEU
2	F	318	SER
2	F	320	SER
2	F	321	MET
2	F	323	LYS
2	F	338	LEU
2	F	341	GLN
2	F	342	GLN
2	F	348	LYS
2	F	352	PHE
2	F	362	TYR
2	F	368	SER
2	F	376	ILE
2	F	377	LYS
2	F	383	MET
2	F	384	ASP
2	F	387	GLU
2	F	388	GLU
2	F	390	LEU
2	F	397	ASP
2	F	398	LEU

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Mol	Chain	Res	Type
2	F	404	THR
2	F	405	PHE
2	F	407	ASN
2	F	419	LEU
2	F	423	LEU
2	F	425	ARG
2	F	429	PHE
2	F	432	PHE
2	F	434	LYS
2	F	436	ASN
2	F	442	LYS
2	F	445	THR
2	F	455	LEU
2	F	460	SER
2	F	468	LYS
2	F	469	SER
2	F	479	GLU
2	F	490	SER
2	F	502	LEU
2	F	506	LYS
2	F	508	LEU
2	F	510	LYS
2	F	513	LEU
2	F	514	LEU
2	F	531	THR
2	F	532	GLU
2	F	535	ARG
2	F	536	LYS
2	F	540	LEU
2	F	543	GLU
2	F	546	LYS
2	F	550	ASP
2	F	555	THR
2	F	556	ASN
2	F	557	ARG
2	F	571	LYS
2	F	574	CYS
2	F	577	SER
2	F	580	ILE
2	F	583	VAL
2	F	585	ASP
2	F	598	LEU

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Mol	Chain	Res	Type
2	F	601	ILE
2	F	602	LYS
2	F	610	GLU
2	F	627	GLU
2	F	631	MET
2	F	636	LEU
2	F	653	ARG
2	F	655	ARG
2	F	673	LYS
2	F	675	SER
2	F	677	LYS
2	F	685	SER
2	F	688	PHE
2	F	691	ARG
2	F	694	MET
2	F	701	SER
2	F	703	THR
2	F	709	GLN
2	F	718	ASP
2	F	719	SER
2	F	730	SER
2	F	740	THR
2	F	751	MET
2	F	753	ARG
2	F	776	ASN
2	F	777	SER
2	F	778	ARG
2	F	779	GLU
2	F	782	LYS
2	F	785	GLU
2	F	788	ILE
2	F	791	LEU
2	F	795	ILE
2	F	796	LEU
2	F	803	ASN
2	F	814	TYR
2	F	820	ARG
2	F	822	MET
2	F	828	LEU
2	F	830	ILE
2	F	833	LEU
2	F	834	SER

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Mol	Chain	Res	Type
2	F	837	ASP
2	F	844	GLN
2	F	845	SER
2	F	847	LEU
2	F	850	ASP
2	F	851	SER
2	F	853	ASP
2	F	859	ARG
2	F	861	ASP
2	F	866	LYS
2	F	867	SER
2	F	877	LYS
2	F	885	GLN
2	F	887	LEU
2	F	893	THR
2	F	895	ARG
2	F	905	ARG
2	F	910	GLU
2	F	911	LEU
2	F	933	GLN
2	F	938	ARG
2	F	940	ASN
2	F	964	SER
2	F	968	LYS
2	F	974	LYS
2	F	976	ARG
2	F	977	GLU
2	F	980	ASN
2	F	1006	SER
2	F	1007	GLU
2	F	1031	LYS
2	F	1035	LYS
2	F	1038	PHE
2	F	1045	PHE
2	F	1047	LYS
2	F	1060	ARG
2	F	1062	LEU
2	F	1082	THR
2	F	1087	LEU
2	F	1089	MET
2	F	1091	GLN
2	F	1106	SER

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Mol	Chain	Res	Type
2	F	1113	LYS
2	F	1130	LYS
2	F	1135	ASP
2	F	1136	SER
2	F	1148	LYS
2	F	1150	GLU
2	F	1151	LYS
2	F	1154	SER
2	F	1156	LYS
2	F	1158	LYS
2	F	1171	ARG
2	F	1174	PHE
2	F	1175	GLU
2	F	1191	LYS
2	F	1197	LYS
2	F	1202	SER
2	F	1206	LEU
2	F	1207	GLU
2	F	1214	LEU
2	F	1224	ASN
2	F	1230	SER
2	F	1231	LYS
2	F	1233	VAL
2	F	1241	HIS
2	F	1242	TYR
2	F	1243	GLU
2	F	1244	LYS
2	F	1246	LYS
2	F	1252	ASN
2	F	1254	GLN
2	F	1255	LYS
2	F	1257	LEU
2	F	1266	LEU
2	F	1272	GLN
2	F	1274	SER
2	F	1277	SER
2	F	1282	LEU
2	F	1284	ASP
2	F	1288	ASP
2	F	1291	LEU
2	F	1292	SER
2	F	1296	LYS

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Mol	Chain	Res	Type
2	F	1299	ASP
2	F	1307	GLU
2	F	1311	HIS
2	F	1315	LEU
2	F	1325	LYS
2	F	1329	THR
2	F	1337	THR
2	F	1344	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (47) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	178	ASN
2	B	235	ASN
2	B	265	GLN
2	B	277	ASN
2	B	281	GLN
2	B	295	ASN
2	B	341	GLN
2	B	407	ASN
2	B	412	HIS
2	B	413	GLN
2	B	641	HIS
2	B	650	GLN
2	B	690	ASN
2	B	776	ASN
2	B	844	GLN
2	B	854	ASN
2	B	1041	ASN
2	B	1221	GLN
2	B	1241	HIS
2	B	1252	ASN
2	B	1256	GLN
2	B	1272	GLN
2	B	1317	ASN
2	F	178	ASN
2	F	235	ASN
2	F	265	GLN
2	F	277	ASN
2	F	281	GLN
2	F	295	ASN
2	F	341	GLN

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Mol	Chain	Res	Type
2	F	369	GLN
2	F	407	ASN
2	F	412	HIS
2	F	413	GLN
2	F	641	HIS
2	F	650	GLN
2	F	690	ASN
2	F	776	ASN
2	F	844	GLN
2	F	854	ASN
2	F	1041	ASN
2	F	1221	GLN
2	F	1241	HIS
2	F	1252	ASN
2	F	1256	GLN
2	F	1272	GLN
2	F	1317	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	93/98 (94%)	31 (33%)	4 (4%)
1	E	93/98 (94%)	31 (33%)	4 (4%)
All	All	186/196 (94%)	62 (33%)	8 (4%)

All (62) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	9	U
1	A	11	C
1	A	20	G
1	A	24	U
1	A	27	G
1	A	28	A
1	A	29	G
1	A	34	A
1	A	35	A
1	A	37	U
1	A	38	A
1	A	39	G
1	A	40	C

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Mol	Chain	Res	Type
1	A	42	A
1	A	43	G
1	A	44	U
1	A	51	A
1	A	54	G
1	A	56	U
1	A	57	A
1	A	59	U
1	A	68	A
1	A	69	A
1	A	73	G
1	A	74	A
1	A	82	G
1	A	87	G
1	A	88	A
1	A	89	G
1	A	91	C
1	A	92	G
1	E	9	U
1	E	11	C
1	E	20	G
1	E	24	U
1	E	27	G
1	E	28	A
1	E	29	G
1	E	34	A
1	E	35	A
1	E	37	U
1	E	38	A
1	E	39	G
1	E	40	C
1	E	42	A
1	E	43	G
1	E	44	U
1	E	51	A
1	E	54	G
1	E	56	U
1	E	57	A
1	E	59	U
1	E	68	A
1	E	69	A
1	E	73	G

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Mol	Chain	Res	Type
1	E	74	A
1	E	82	G
1	E	87	G
1	E	88	A
1	E	89	G
1	E	91	C
1	E	92	G

All (8) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	8	G
1	A	27	G
1	A	42	A
1	A	68	A
1	E	8	G
1	E	27	G
1	E	42	A
1	E	68	A

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	SO4	F	1401	-	4,4,4	0.98	0	6,6,6	1.66	1 (16%)
5	SO4	B	1401	-	4,4,4	0.98	0	6,6,6	1.66	1 (16%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	B	1401	SO4	O4-S-O3	3.83	125.39	109.06
5	F	1401	SO4	O4-S-O3	3.83	125.39	109.06

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	F	1401	SO4	1	0
5	B	1401	SO4	3	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	94/98 (95%)	-0.17	0 100 100	7, 25, 69, 93	0
1	E	94/98 (95%)	-0.07	2 (2%) 63 48	11, 39, 87, 112	0
2	B	1326/1368 (96%)	-0.39	10 (0%) 86 75	5, 26, 65, 117	0
2	F	1326/1368 (96%)	-0.25	31 (2%) 60 44	11, 40, 74, 131	0
3	C	25/26 (96%)	-0.48	0 100 100	9, 17, 64, 79	0
3	G	25/26 (96%)	-0.24	0 100 100	19, 29, 78, 84	0
4	D	11/11 (100%)	-0.12	0 100 100	18, 32, 95, 99	0
4	H	11/11 (100%)	-0.22	0 100 100	27, 56, 102, 112	0
All	All	2912/3006 (96%)	-0.31	43 (1%) 73 60	5, 33, 74, 131	0

All (43) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	543	GLU	6.0
2	F	46	ASN	5.0
2	F	29	SER	4.4
2	F	1249	PRO	4.0
2	F	1043	MET	3.8
2	F	1245	LEU	3.6
2	B	230	PRO	3.4
2	F	229	LEU	3.4
2	F	896	LYS	3.1
2	F	899	ASN	3.1
2	F	1088	SER	3.0
2	B	398	LEU	3.0
2	F	230	PRO	3.0
2	F	31	LYS	3.0
2	F	822	MET	2.9
2	B	524	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
2	F	295	ASN	2.8
2	F	30	LYS	2.7
2	B	544	GLN	2.7
2	B	229	LEU	2.6
2	B	1070	GLY	2.6
2	F	1290	VAL	2.6
2	F	1334	LYS	2.5
2	F	352	PHE	2.5
2	F	245	SER	2.5
2	F	794	GLN	2.5
2	B	859	ARG	2.5
2	F	232	GLU	2.4
2	F	1309	ILE	2.3
2	F	1312	LEU	2.3
2	B	521	TYR	2.3
2	F	900	LEU	2.3
2	B	540	LEU	2.3
2	F	228	GLN	2.3
2	F	816	LEU	2.2
1	E	82	G	2.2
2	F	67	THR	2.2
2	F	841	ILE	2.2
2	F	895	ARG	2.2
2	F	521	TYR	2.1
1	E	83	C	2.1
2	F	819	GLY	2.0
2	F	1250	GLU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
5	SO4	B	1401	5/5	0.93	0.15	30,30,30,30	0
5	SO4	F	1401	5/5	0.94	0.20	30,30,30,30	0

6.5 Other polymers [i](#)

There are no such residues in this entry.