

PROTEOMICS

Supporting Information

for Proteomics

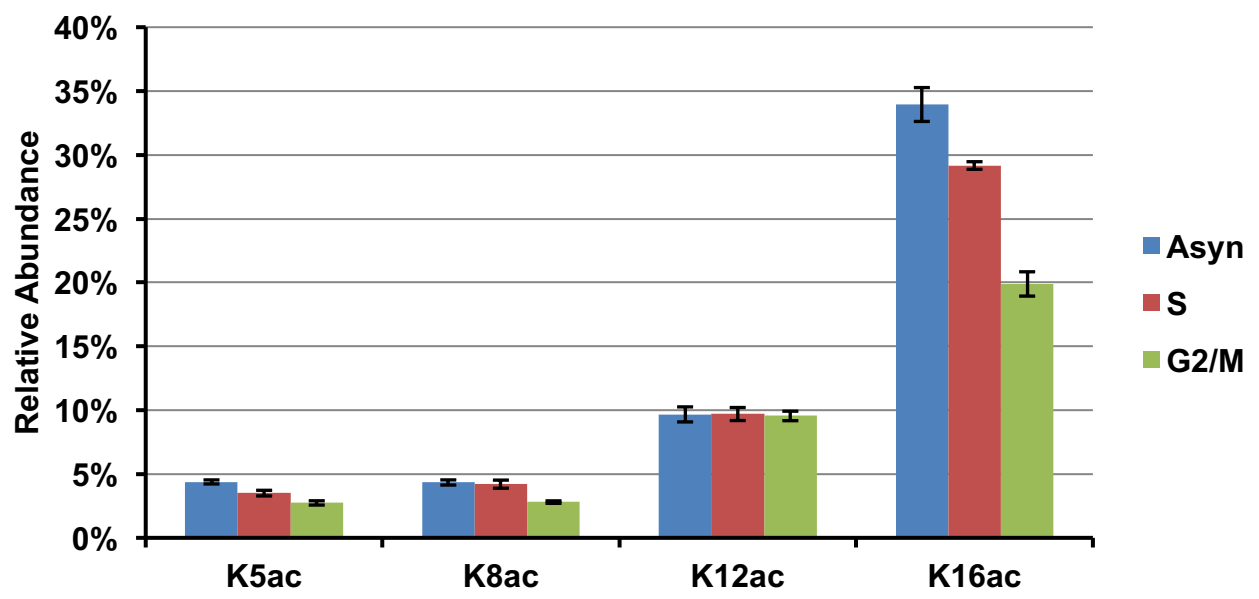
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**Middle-Down Characterization of the Cell Cycle Dependence of Histone H4
Posttranslational Modifications and Proteoforms**

Figure S1

MCF-10A



MDA-MB-231

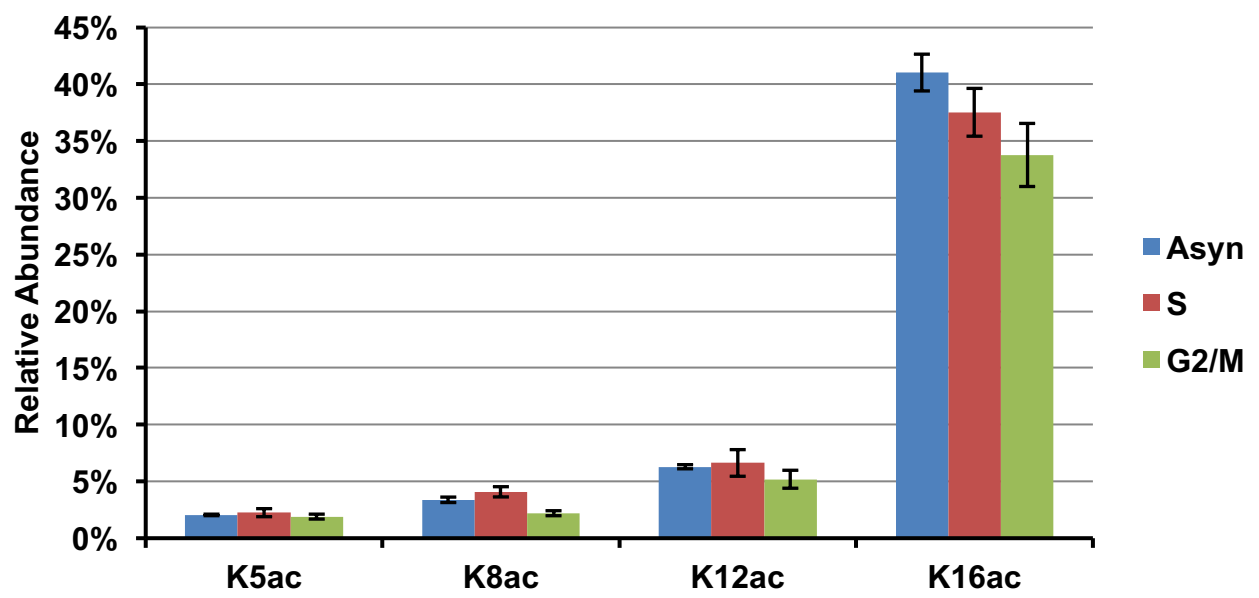
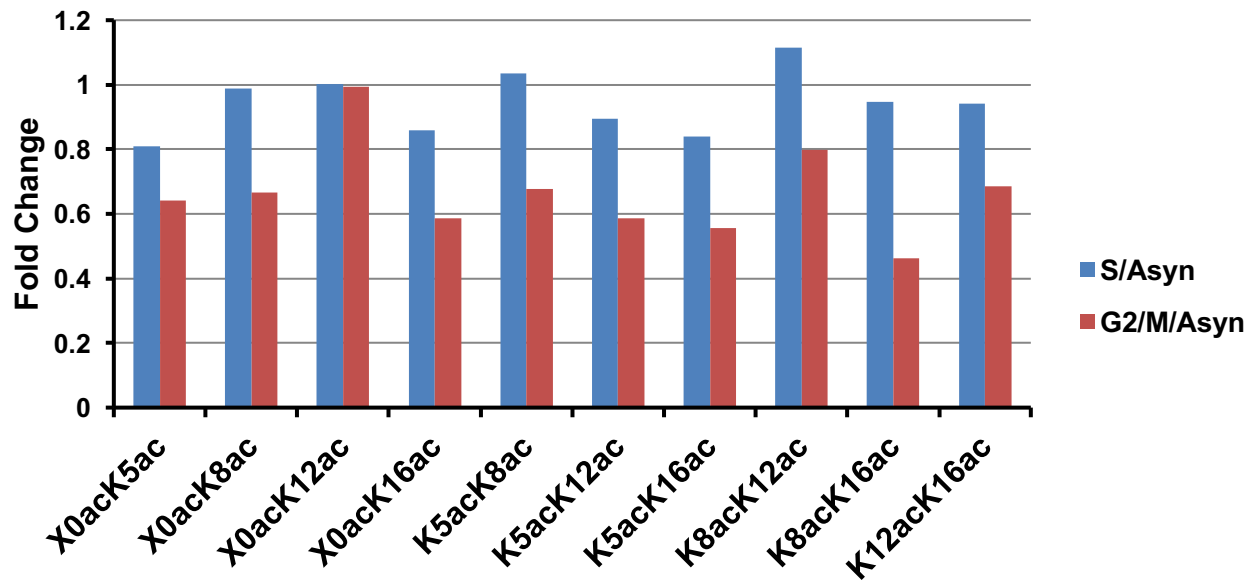


Figure S2

S vs. G2/M in MCF10A Cells



S vs. G2/M in MDA-MB-231 Cells

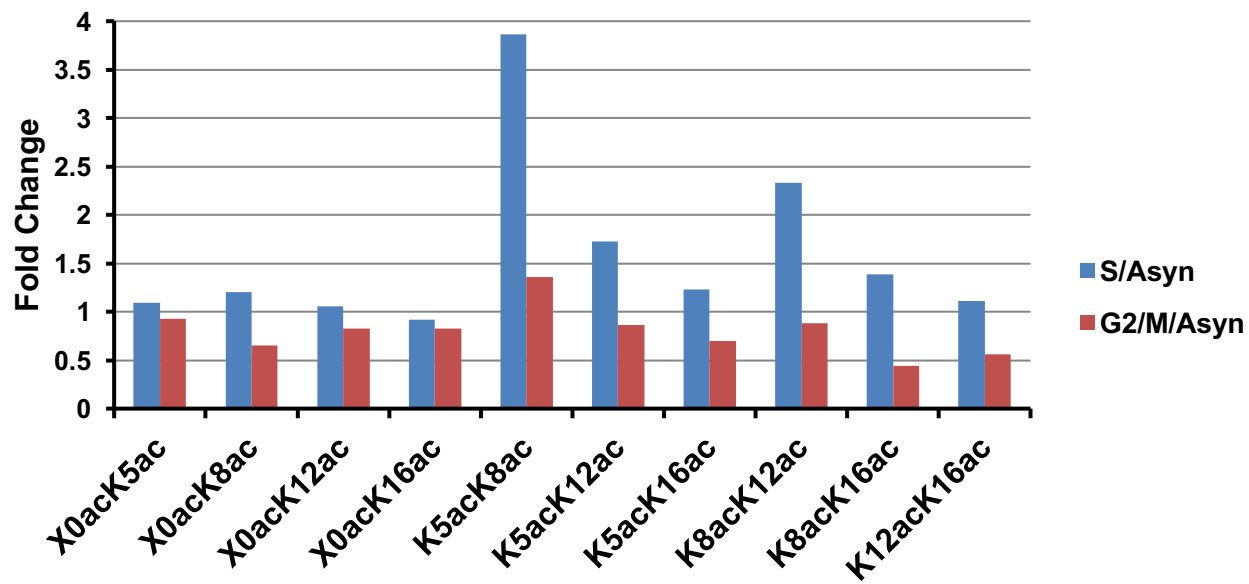
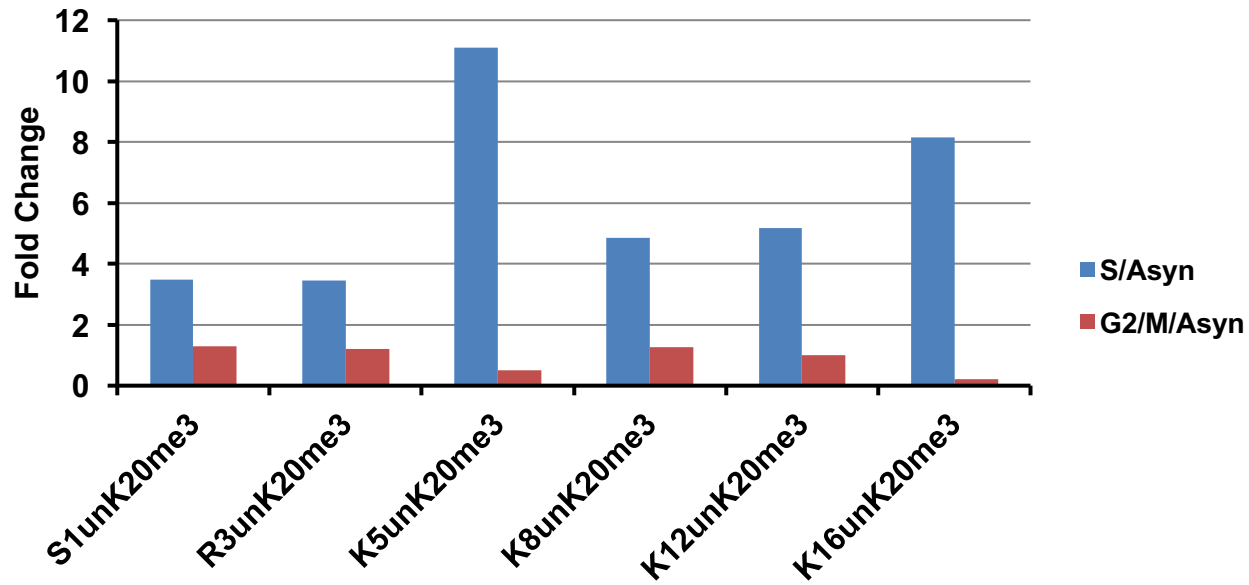
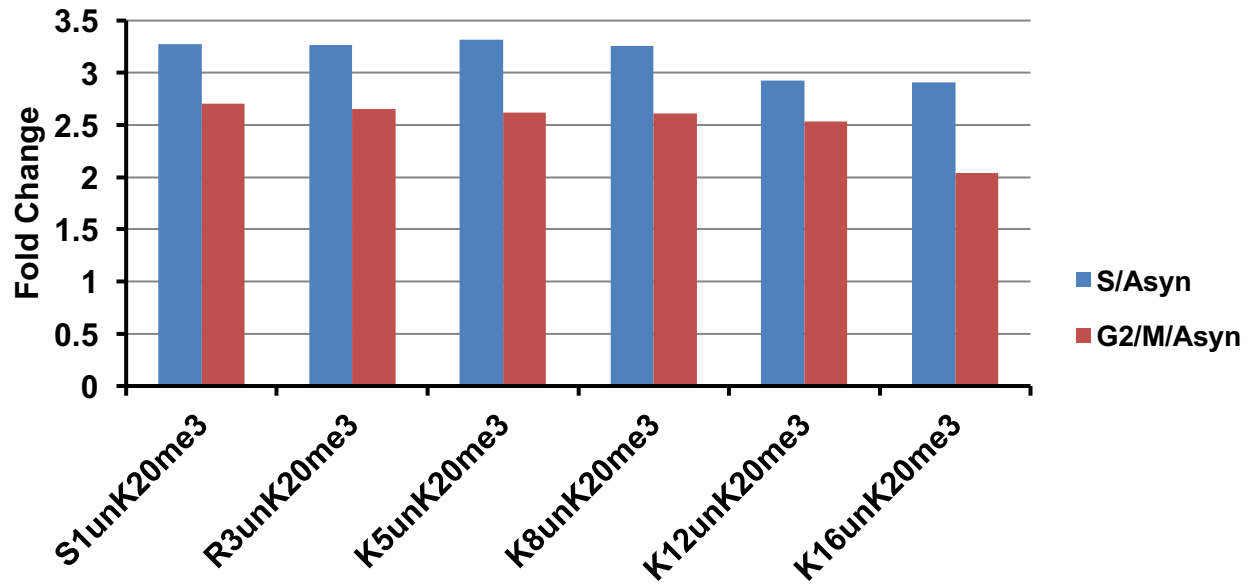


Figure S3

S vs. G2/M in MCF10A Cells



S vs. G2/M in MDA-MB-231 Cells



Supplemental Table 1. Proteoforms Measured

Proteoform	Average						STDEV					
	G1		S		M		G1		S		M	
	MB_asyn	10A_asyn	MB_thy	10A_thy	MB_Noc	10A_Noc	MB_asyn	10A_asyn	MB_thy	10A_thy	MB_Noc	10A_Noc
X0acS1unR3unK5unK8unK12unK16unK20me2	0.402006	0.403347	0.463852	0.53441	0.536996	0.648174	0.006394	0.015293	0.025223	0.007039	0.066955	0.016845
X0acS1unR3unK5unK8unK12unK16ack20me2	0.241286	0.179344	0.230928	0.181132	0.236864	0.139444	0.023938	0.011549	0.027835	0.007189	0.042231	0.016136
X0acS1unR3unK5unK8unK12ack16unK20me2	0.012392	0.021982	0.01403	0.032816	0.019956	0.048362	0.002577	0.002118	0.0058	0.001078	0.003839	0.004897
X0acS1unR3unK5unK8unK12unK16unK20me1	0.062996	0.093599	0.021972	0.02211	0.047036	0.039925	0.008564	0.007147	0.00252	0.004968	0.007829	0.002382
X0acS1unR3unK5unK8unK12ack16ack20me2	0.026055	0.023678	0.028597	0.027594	0.015229	0.023738	0.001499	0.006228	0.010662	0.008688	0.013399	0.001653
X0acS1unR3unK5unK8ack12unK16unK20me2	0.008807	0.01212	0.009207	0.014653	0.009111	0.012296	0.001668	0.001449	0.004646	0.002898	0.001159	0.002308
X0acS1unR3unK5ack8unK12unK16unK20me2	0.003611	0.006501	0.003841	0.008644	0.00742	0.011895	0.001008	0.000678	0.002709	0.004152	0.000416	0.000895
X0acS1unR3unK5unK8unK12unK16ack20me1	0.061013	0.048089	0.035276	0.014238	0.051346	0.0103	0.004371	0.002994	0.005375	0.001325	0.009766	0.001319
X0acS1unR3me1K5unK8unK12unK16unK20me2	0.003618	0.003268	0.003058	0.003478	0.004267	0.007667	0.000806	0.000829	0.001197	0.002782	0.000901	0.001922
X0acS1unR3unK5unK8unK12ack16unK20me1	0.00302	0.005601	0.001353	0.002326	0.004866	0.004435	0.000999	0.000459	0.001564	0.000417	0.001506	0.001557
X0acS1unR3unK5unK8unK12unK16unK20un	0.078625	0.074562	0.055286	0.05677	0.005244	0.004805	0.015322	0.010165	0.013573	0.007881	0.001818	0.000213
X0acS1unR3unK5unK8ack12ack16unK20me2	0.002213	0.003727	0.003452	0.005265	0.002358	0.005648	0.000612	0.000165	0.001913	0.001155	0.000944	0.000593
X0acS1phR3unK5unK8unK12unK16unK20me2	0.00027	0.000577	0.000579	0.001211	0.003244	0.007039	0.000346	4.01E-05	0.000816	0.000435	0.001397	0.003105
X0acS1unR3unK5ack8unK12unK16ack20me2	0.00696	0.008209	0.006692	0.008196	0.005267	0.00418	0.00092	0.000428	0.001451	0.001996	0.00238	0.000569
X0acS1unR3unK5unK8unK12unK16ack20un	0.037489	0.033075	0.031369	0.02219	0.007175	0.001936	0.004934	0.002156	0.005643	0.000856	0.002364	0.001192
X0acS1unR3unK5unK8ack12unK16ack20me2	0.011688	0.007197	0.013228	0.00694	0.005099	0.003394	0.002182	0.001922	0.003303	0.002312	0.003449	0.000658
X0acS1unR3unK5ack8ack12unK16ack20me3	6.67E-06	0.001645	8.63E-06	0.0021	7.35E-05	0.002264	3.08E-06	0.000395	1.61E-06	0.000842	5.6E-05	0.00083
X0acS1unR3unK5ack8unK12ack16ack20me3	7.24E-06	0.001773	6.06E-06	0.002097	1.48E-05	0.002963	4.63E-06	0.000449	2.57E-06	0.000887	1.22E-05	0.000838
X0acS1unR3unK5ack8unK12ack16unK20me2	0.000621	0.00086	0.000882	0.002017	0.000652	0.002249	0.00024	2.56E-05	0.000656	0.000153	0.0003	0.000434
X0acS1unR3unK5unK8unK12ack16ack20me1	0.00531	0.00706	0.000972	0.00263	0.00404	0.001739	0.001209	0.000691	0.000532	0.000533	0.002451	0.000454
X0acS1unR3unK5unK8ack12ack16ack20me2	0.000855	0.002808	0.004511	0.004061	0.000811	0.001891	4.31E-05	0.001086	0.003348	0.000582	0.000764	0.000772
X0acS1unR3unK5ack8unK12ack16ack20me2	0.000198	0.001765	0.001436	0.001999	0.000369	0.00093	5.62E-05	0.000113	0.001105	0.000476	0.000311	0.000142
X0unS1unR3unK5unK8unK12unK16unK20me2	0.000215	0.001287	0.0348	0.00152	0.013421	0.004189	0.0003	0.000381	0.045609	0.000573	0.008882	0.003354
X0acS1unR3unK5ack8unK12unK16unK20me1	0.000543	0.00115	0.000273	0.000512	0.000644	0.00021	0.000119	0.000209	0.000204	0.000396	0.000533	0.000416
X0acS1unR3unK5unK8unK12ack16unK20un	0.002518	0.008748	0.000833	0.004445	6.64E-05	0.000373	0.000355	0.001328	0.000717	0.000899	4.48E-05	0.000239
X0acS1unR3unK5unK8ack12unK16unK20me1	0.001706	0.002331	0.000347	0.000588	0.001223	0.000479	0.000856	0.000175	0.000515	0.000244	0.000859	0.000441
X0acS1unR3unK5unK8ack12unK16ack20me1	0.002171	0.002394	0.001629	0.001305	0.001204	0.000544	0.000443	0.000856	0.000776	0.000645	0.000875	0.000126
X0acS1unR3unK5unK8unK12ack16ack20un	0.006124	0.007131	0.004896	0.004383	0.001072	0.000718	0.000441	0.001184	0.002489	0.000904	0.001257	0.000244
X0acS1unR3me1K5unK8unK12unK16ack20me2	0.001731	0.002082	0.002063	0.00367	0.003328	0.001888	0.000456	0.000427	0.00065	0.000944	0.001685	0.000969
X0acS1unR3unK5unK8unK12ack16unK20me3	1.67E-08	3.73E-05	6.59E-06	0.000319	1.26E-05	9.56E-05	1.53E-08	3.49E-05	5.48E-06	4.48E-05	1.99E-05	0.000189
X0acS1unR3unK5unK8ack12ack16unK20me1	0.000631	0.000491	0.00011	0.000154	0.000283	0.000312	0.000309	0.000228	9.44E-05	0.000165	0.000271	0.000167
X0acS1unR3me1K5ack8unK12unK16unK20me2	2.85E-05	0.000178	3.66E-05	0.000158	8.92E-05	0.000157	3.04E-05	0.000151	4.09E-05	6.42E-05	8.31E-05	0.000182
X0acS1unR3unK5ack8unK12unK16ack20un	0.003382	0.003454	0.002883	0.00101	0.000804	0.000319	0.001378	0.000455	0.000971	0.00043	0.000914	9.39E-05
X0acS1phR3unK5unK8unK12unK16ack20me2	2.07E-05	0.00084	0.000158	0.000104	0.001066	0.000875	2.44E-05	0.000679	0.000163	5.75E-05	0.001678	0.00043
X0acS1unR3me1K5unK8unK12ack16ack20me2	7.34E-05	0.000425	0.000133	0.000461	8.11E-05	0.000243	4.1E-05	4.07E-05	8.78E-05	0.000253	0.000118	3.14E-05
X0unS1unR3me1K5unK8unK12unK16unK20me2	9.26E-06	0.000254	0.000221	0.000278	0.000198	0.000301	8.9E-06	4.28E-06	0.000294	0.000112	0.000213	9E-05
X0acS1unR3me1K5unK8ack12unK16unK20me2	5.52E-05	0.00061	0.000118	0.000335	9.46E-05	6.75E-05	2.15E-05	9.66E-05	0.00011	8.52E-05	5.75E-05	7.16E-05
X0acS1unR3unK5ack8unK12unK16ack20me1	0.000522	0.001298	0.000967	0.000354	0.001165	0.000157	0.000163	0.000353	0.001272	0.000107	0.000932	6.37E-05
X0acS1unR3unK5unK8ack12unK16ack20un	0.003637	0.002416	0.003632	0.001699	0.000707	0.000207	0.000322	0.000378	0.001512	0.00018	0.000497	9.05E-05

X0acS1unR3unK5ack8ack12unK16ack20me2	0.000187	0.000466	0.001081	0.000552	0.000223	0.000122	6.56E-05	0.000102	0.000709	5.56E-05	0.000197	6.83E-06
X0acS1unR3me1K5unK8unK12ack16unK20me2	3.33E-09	4.07E-05	3.28E-06	5.2E-05	2E-05	0.000214	5.77E-09	2.53E-05	7.77E-06	6.47E-05	3.16E-05	0.000121
X0acS1unR3unK5ack8ack12unK16unK20me2	8.52E-05	0.000256	0.000127	0.00047	0.00016	0.000174	0.000115	0.000119	9.88E-05	0.000151	0.00019	8.26E-05
X0acS1unR3unK5unK8ack12ack16ack20me1	0.000324	0.000711	0.000573	0.000444	0.000292	0.000131	0.000111	0.000129	0.000322	0.000172	0.00024	2.56E-05
X0acS1unR3unK5ack8unK12ack16unK20me1	0.000172	0.000368	1.67E-05	0.000257	0.000324	0.000206	0.000298	0.000305	3.45E-05	7.6E-05	0.000378	8.1E-05
X0acS1unR3unK5unK8unK12unK16unK20me3	0.000496	0.000682	0.001443	0.007887	0.001	0.000128	0.00029	0.000997	0.000677	0.003338	0.000754	6.1E-05
X0acS1unR3unK5unK8unK12ack16ack20me3	6.87E-06	2.77E-05	0.00023	0.000299	9.43E-05	0.000133	5.65E-06	2.89E-05	0.000261	0.000338	8.79E-05	9.37E-05
X0acS1phR3unK5unK8unK12ack16unK20me2	0	0	1E-08	3.8E-07	0.000147	0.00013	0	0	2E-08	7.07E-07	0.000243	5.12E-05
X0acS1unR3unK5ack8unK12ack16ack20me1	0.000121	0.000532	0.000377	0.00017	0.000192	9.5E-05	3.38E-05	3.41E-05	0.00031	7.93E-05	0.000164	2.55E-05
X0acS1unR3unK5ack8unK12ack16unK20un	0.001164	0.00523	0.001003	0.002117	0.000641	0.000362	0.000754	0.001556	0.000369	0.000431	0.000734	0.000224
X0acS1unR3unK5unK8ack12ack16unK20un	1.67E-08	0.000962	3.33E-09	0.000267	2.19E-05	1.85E-05	1.53E-08	0.000526	8.16E-09	0.000309	5.34E-05	3.7E-05
X0acS1phR3unK5unK8unK12ack16ack20me3	0	0	0	4.7E-07	4.75E-07	2.99E-05	0	0	0	9.4E-07	5.94E-07	3.57E-05
X0unS1phR3unK5ack8unK12unK16unK20me2	1.86E-06	5.5E-05	3.3E-05	4.12E-05	3.82E-05	6.97E-05	3.21E-06	7.98E-05	2.24E-05	4.42E-05	4.24E-05	3.52E-05
X0acS1unR3unK5ack8unK12ack16ack20un	0.000375	0.000806	0.000786	0.000279	8.36E-05	5.69E-05	2.68E-05	3.29E-05	0.000541	5.93E-05	7.12E-05	1.75E-05
X0acS1unR3unK5unK8ack12unK16unK20un	0.000908	0.002154	0.000566	0.001139	2.72E-05	2.01E-05	0.000651	0.000705	0.000246	0.000233	2.71E-05	2.41E-05
X0acS1phR3unK5ack8ack12unK16unK20me2	0	0	0	5.15E-06	2.4E-07	1.38E-05	0	0	0	1.54E-06	5.88E-07	1.75E-05
X0acS1unR3unK5ack8ack12ack16unK20me2	3.91E-05	5.92E-05	0.000175	0.000102	1.98E-05	4.86E-05	1.93E-05	3.74E-06	0.000113	3.73E-05	2.65E-05	2.19E-05
X0unS1unR3unK5ack8unK12ack16unK20me1	2.3E-07	0	0	0	0	9.68E-06	3.98E-07	0	0	0	0	1.94E-05
X0unS1unR3me1K5unK8unK12unK16ack20me1	3.07E-05	0.000114	7.46E-05	4.36E-05	4.54E-05	3.66E-05	1.57E-05	4.84E-05	5.72E-05	7.71E-06	3.3E-05	1.16E-05
X0acS1unR3unK5unK8ack12ack16ack20un	0.000293	0.00084	0.001423	0.000456	4.27E-05	4.94E-05	0.000104	0.000167	0.001234	0.000202	4.18E-05	2.89E-05
X0unS1unR3unK5unK8unK12unK16ack20me2	4.2E-07	4.54E-05	5.87E-05	9.69E-05	8.83E-06	2.92E-05	7.27E-07	4.57E-05	0.000134	0.000117	1.74E-05	7.57E-06
X0unS1unR3unK5ack8ack12ack16ack20me1	6.05E-06	8.66E-06	9.56E-06	3.08E-05	4.07E-06	2.4E-05	2.75E-06	1.02E-06	7.65E-06	1.38E-05	3.87E-06	1.73E-05
X0unS1unR3unK5unK8unK12ack16ack20me3	0	4.35E-05	2.76E-06	4.02E-05	4.57E-07	4.92E-05	0	3.47E-05	6.73E-06	3.54E-05	7.09E-07	3.68E-05
X0acS1unR3me1K5ack8unK12unK16ack20me2	3.13E-07	9.95E-06	1.33E-07	3.43E-05	3.73E-06	9.02E-06	5.08E-07	8.41E-06	2.37E-07	4.01E-05	6.97E-06	1.1E-05
X0acS1phR3me1K5ack8unK12unK16unK20me2	0	6.25E-05	1.29E-06	0.000959	3.06E-06	5.47E-06	0	0.000108	1.46E-06	0.001031	5.82E-06	1.09E-05
X0unS1phR3me1K5unK8unK12unK16ack20me2	1.32E-06	0	1.33E-06	2.03E-05	6.59E-06	1.58E-05	7.1E-07	0	1.24E-06	1.46E-05	5E-06	1.16E-05
X0unS1unR3unK5unK8ack12unK16ack20me2	1.3E-05	7.52E-05	0.000115	0.000118	1.15E-06	5.01E-05	2.07E-05	9.19E-05	0.000128	0.000135	2.82E-06	8.13E-05
X0unS1phR3unK5unK8ack12unK16unK20me2	1.7E-06	7.09E-05	1.87E-05	2.89E-05	2.22E-05	2.55E-05	2.94E-06	1.91E-05	2.12E-05	3.54E-05	2.86E-05	4.87E-06
X0acS1unR3me1K5unK8ack12unK16ack20me2	2.36E-06	4.96E-05	1.02E-05	1.95E-05	2.23E-07	1.35E-05	2.15E-06	1.55E-05	1.58E-05	3.4E-05	1.77E-07	7.55E-06
X0acS1unR3unK5unK8ack12unK16ack20me3	3.67E-08	0	5.09E-06	9.2E-05	2.07E-07	5.88E-06	3.21E-08	0	5.45E-06	5.83E-05	2.41E-07	8.24E-06
X0unS1unR3unK5unK8unK12unK16unK20me1	6.23E-06	0.000157	0.002323	4.51E-05	0.00148	0.000143	1.02E-05	8.29E-05	0.003383	2.7E-05	0.001219	0.000134
X0acS1phR3unK5unK8unK12ack16ack20me2	5.32E-05	2E-08	6.04E-05	5.08E-06	6.27E-05	4.74E-05	8.69E-06	3.46E-08	2.05E-05	4.02E-06	0.00014	3.24E-05
X0acS1phR3me1K5unK8unK12unK16ack20me2	3.13E-07	0	4.48E-06	5.94E-06	1.77E-06	1.45E-05	7.23E-08	0	1.02E-05	6.86E-06	2.46E-06	1.98E-06
X0unS1unR3unK5ack8unK12ack16ack20me2	1.37E-07	1.61E-05	1.54E-06	1.47E-06	1.02E-06	5.78E-06	1.3E-07	2.37E-05	3.04E-06	7.72E-07	7.18E-07	3.91E-06
X0acS1unR3unK5unK8unK12unK16ack20me3	8.81E-05	0.000119	0.000266	0.002353	0.000415	2.2E-05	5.96E-05	3E-05	0.000106	0.000698	0.0005	1.66E-05
X0acS1unR3unK5ack8ack12ack16ack20un	5.88E-06	3.37E-05	6.85E-06	1.86E-05	8.25E-06	8.77E-06	2.79E-06	2.15E-05	4.92E-06	4.67E-06	1.41E-05	2.09E-06
X0unS1unR3me1K5unK8ack12unK16unK20me2	6.13E-07	0	9.5E-08	1.95E-06	9E-08	5.08E-06	9.85E-07	0	1.58E-07	2.32E-06	1.65E-07	5.66E-06
X0acS1unR3me1K5ack8ack12unK16unK20me1	9.33E-08	2.58E-06	1.1E-07	1.7E-05	1.83E-07	8.59E-06	6.66E-08	1.24E-06	1.26E-07	9.44E-06	1.73E-07	2.61E-06
X0acS1unR3unK5unK8ack12ack16unK20me3	9.67E-08	2.2E-07	7.07E-07	2.8E-05	1.58E-07	5.42E-06	5.86E-08	3.81E-07	1.32E-06	2.93E-05	1.53E-07	4.9E-06
X0acS1phR3unK5unK8unK12unK16unK20me1	2.83E-06	4.28E-06	4.1E-06	3.25E-08	0.000135	0.000136	4.81E-06	5.51E-06	5.77E-06	6.5E-08	9.5E-05	0.00014
X0acS1unR3me1K5unK8ack12ack16ack20me2	6.39E-06	4.16E-05	1.8E-05	1.9E-05	6.13E-06	8.02E-06	1.23E-06	2.66E-05	1.55E-05	1.67E-05	4.4E-06	6.43E-06
X0acS1unR3unK5ack8ack12ack16ack20me2	0	1.5E-05	4.64E-06	1.56E-05	4E-08	2.99E-06	0	1.26E-05	1.08E-05	6.8E-06	8.41E-08	3.21E-06
X0acS1unR3me1K5ack8ack12unK16ack20me2	5.93E-07	1.15E-05	4.04E-06	2.43E-05	4.39E-06	9.09E-06	4.31E-07	6.46E-06	6.71E-06	9.09E-06	4.26E-06	2.45E-06
X0acS1unR3me1K5ack8unK12ack16unK20un	0	5.33E-08	5E-09	9.48E-06	3.33E-09	1.35E-06	0	9.24E-08	1.22E-08	1.9E-05	8.16E-09	2.7E-06

X0unS1unR3unK5ack8unK12unK16unK20me2	2.17E-07	1.23E-05	6.2E-07	1.12E-05	5E-09	1.7E-05	3.75E-07	6.23E-06	1.26E-06	7.63E-06	1.22E-08	1.35E-05
X0unS1unR3unK5ack8ack12ack16ack20me3	1.37E-07	0	4.42E-07	8.75E-08	9.65E-07	3.06E-06	9.61E-08	0	3.34E-07	1.75E-07	1.03E-06	3.75E-06
X0acS1unR3unK5ack8ack12ack16ack20un	4.49E-05	6.02E-05	0.000236	2.63E-05	7.47E-06	5.1E-06	5.94E-06	1.09E-05	0.00016	1.02E-05	9.21E-06	1.16E-06
X0acS1phR3me1K5unK8unK12ack16unK20me2	6.74E-06	0	1.93E-07	2.15E-05	8.09E-06	3.23E-06	5.96E-06	0	3.01E-07	1.47E-05	6.15E-06	2.75E-06
X0acS1phR3me1K5unK8unK12unK16unK20me2	3.13E-07	6.94E-06	2.33E-07	0	7.83E-08	1.46E-06	1.82E-07	6.36E-06	2.22E-07	0	1.13E-07	1.5E-06
X0unS1unR3unK5unK8ack12ack16unK20me2	0	8.26E-06	4.1E-07	0	3.83E-08	5.56E-06	0	1.41E-05	1E-06	0	6.59E-08	5.52E-06
X0unS1unR3me1K5unK8unK12ack16ack20me3	1.83E-06	3.98E-06	2.15E-07	2.97E-06	1.16E-05	7.58E-07	3.07E-06	6.83E-06	2.55E-07	5.94E-06	8.04E-06	1.32E-06
X0unS1phR3unK5unK8unK12unK16unK20me2	2.25E-06	3.32E-06	6.66E-06	6.1E-06	2.01E-06	6.6E-06	1.96E-06	1.43E-06	3.98E-06	1.6E-06	3.34E-06	4.41E-06
X0unS1phR3unK5ack8unK12unK16unK20me1	0	2.23E-05	7.52E-07	6.58E-06	3.35E-06	5.22E-06	0	5.76E-06	1.18E-06	3.52E-06	6.19E-06	3.51E-06
X0unS1unR3unK5unK8ack12ack16ack20me3	1.63E-07	6.8E-07	8.15E-07	5.75E-06	9.43E-07	4.22E-06	1.1E-07	7.28E-07	1.26E-06	6.14E-06	1.41E-06	4.97E-06
X0unS1phR3unK5unK8ack12unK16ack20me2	8.59E-06	1.88E-06	3.33E-06	1.63E-06	1.76E-05	8.38E-07	1.31E-05	2.86E-06	5.75E-06	1.96E-06	4.31E-05	1.04E-06
X0acS1unR3unK5ack8ack12ack16unK20un	1.74E-05	3.13E-05	1.76E-05	1.08E-05	2.44E-06	2.62E-06	2.92E-05	6.36E-07	2.75E-05	1.26E-05	2.47E-06	1.47E-06
X0unS1unR3me1K5unK8unK12ack16unK20me2	0	6.87E-07	1.85E-07	0	8.33E-09	9.98E-07	0	5.95E-07	3.51E-07	0	2.04E-08	1.02E-06
X0acS1phR3unK5ack8ack12unK16unK20me3	0	1.53E-05	1.67E-09	0.000277	5E-09	4.8E-07	0	2.32E-05	4.08E-09	0.000186	1.22E-08	9.6E-07
X0unS1unR3me1K5unK8unK12unK16unK20un	0	5.39E-06	1.33E-07	1.17E-05	1.19E-06	3.78E-06	0	1.15E-06	1.16E-07	1.24E-05	2.76E-06	2.92E-06
X0unS1phR3unK5unK8unK12unK16unK20me1	1.33E-08	0	1.77E-07	0	6.28E-07	4.1E-07	5.77E-09	0	2.54E-07	0	1.51E-06	8.2E-07
X0unS1phR3unK5unK8unK12unK16unK20un	0.000172	5.04E-06	0.00011	2.22E-06	2.33E-08	5.68E-07	0.000297	4.21E-07	0.000172	2.6E-06	3.83E-08	7.74E-07
X0acS1unR3unK5ack8ack12ack16unK20me1	2.61E-06	1.54E-05	5.92E-06	1.12E-05	2.37E-05	6.73E-07	2.26E-06	1.13E-05	1.39E-05	7.1E-06	2.26E-05	5.67E-07
X0acS1unR3unK5ack8ack12ack16ack20me1	3.16E-06	3.19E-05	2.25E-06	7.06E-06	4.52E-06	5.25E-05	4.81E-06	2.53E-05	2.79E-06	7.02E-06	9.12E-06	4.63E-05
X0unS1phR3unK5unK8unK12unK16ack20me2	7.1E-07	0.0003	2.52E-06	3.02E-06	1.74E-06	6.19E-06	1.23E-06	5.08E-05	1.9E-06	1.54E-06	2.11E-06	7.01E-06
X0acS1unR3me1K5ack8ack12ack16ack20un	2.67E-08	1.85E-06	6.75E-07	4.35E-07	1.42E-07	5.13E-07	4.62E-08	1.65E-06	1.21E-06	5.35E-07	3.47E-07	4.12E-07
X0acS1unR3unK5unK8ack12ack16ack20me3	1.08E-06	2.45E-06	1.12E-05	5.08E-05	3.76E-06	6.68E-06	1.13E-06	2.11E-06	4.31E-06	2.03E-05	2.22E-06	5.01E-06
X0unS1phR3me1K5unK8unK12ack16ack20me2	1.26E-06	0	1.16E-06	1.05E-06	1.9E-06	1.2E-06	1.06E-07	0	1.01E-06	1.21E-06	1.7E-06	3.42E-07
X0acS1phR3me1K5unK8unK12ack16ack20un	1.73E-07	0	3E-08	5.58E-07	1.67E-07	2.43E-07	1.42E-07	0	2.97E-08	1.11E-06	1.56E-07	4.39E-07
X0unS1unR3unK5ack8unK12ack16ack20me3	1.83E-07	7.03E-07	7.72E-07	2.53E-05	3.4E-06	6.41E-06	1.88E-07	5.8E-07	1.01E-06	3.62E-05	6.49E-06	1.03E-05
X0unS1unR3me1K5unK8unK12unK16ack20me2	3.33E-09	4.37E-07	2.07E-07	1.88E-06	4.07E-06	1.1E-06	5.77E-09	2.31E-07	4.11E-07	1.16E-06	5.59E-06	6.13E-07
X0acS1unR3me1K5ack8ack12unK16ack20me3	0	4.73E-06	1.72E-07	2.65E-07	1.98E-07	5.2E-07	0	3.59E-06	2.55E-07	4.97E-07	3.82E-07	4.76E-07
X0unS1unR3unK5unK8unK12ack16ack20me2	5.33E-08	2.02E-06	6.86E-05	1.44E-06	5.32E-07	2.41E-06	9.24E-08	1.95E-06	8.57E-05	1.37E-06	8.9E-07	2.78E-06
X0unS1unR3unK5ack8unK12unK16ack20me1	4.2E-07	8.53E-07	1.73E-06	1E-08	1.32E-06	1.34E-06	7.27E-07	1.42E-06	2.74E-06	1.41E-08	3.24E-06	2.22E-06
X0acS1phR3unK5unK8ack12ack16unK20me2	0	0	0	2.5E-08	0	1.7E-07	0	0	0	4.36E-08	0	3.33E-07
X0unS1unR3unK5ack8unK12unK16ack20me3	0	7.73E-07	5E-09	9.52E-06	0	2.02E-05	0	3.4E-07	1.22E-08	1.82E-05	0	3.97E-05
X0unS1unR3unK5ack8ack12ack16unK20me3	2.17E-07	7E-07	3.77E-07	2.68E-07	1.18E-07	1.68E-06	2.45E-07	6.56E-07	4.29E-07	4.53E-07	1.18E-07	7.42E-07
X0unS1unR3me1K5ack8unK12unK16unK20me1	0	4.67E-08	0	3.35E-07	0	5.45E-07	0	4.51E-08	0	2.8E-07	0	4.65E-07
X0unS1unR3unK5ack8ack12unK16ack20me2	2.33E-08	3.4E-05	1.78E-07	4.68E-07	4.13E-07	1.22E-06	2.52E-08	5.36E-05	2.71E-07	5.1E-07	6.55E-07	1.86E-06
X0unS1unR3me1K5ack8unK12ack16ack20me1	3.03E-07	4.93E-07	6.4E-07	0	2.32E-07	1.9E-07	2.22E-07	8.54E-07	3.06E-07	0	1.66E-07	1.74E-07
X0unS1unR3unK5ack8unK12unK16unK20un	1.67E-08	2.47E-07	4.13E-07	2.17E-06	5.17E-08	7.23E-07	2.89E-08	1.58E-07	9.16E-07	3.05E-06	6.34E-08	9.63E-07
X0unS1unR3unK5ack8unK12unK16unK20me1	0	2.57E-06	2.25E-05	8E-07	2.78E-07	2.79E-06	0	1.4E-06	5.12E-05	4.18E-07	6.38E-07	4.43E-06
X0acS1unR3unK5ack8ack12unK16ack20me1	4.32E-05	3.34E-05	0.000144	1.1E-05	5.6E-05	1.26E-06	7.25E-06	1.57E-06	9.93E-05	5.76E-06	4.48E-05	1.19E-06
X0acS1unR3me1K5ack8ack12ack16unK20me2	1.49E-05	9.33E-08	1.5E-05	2.5E-08	1.29E-05	3.33E-07	7.6E-06	1.18E-07	6.83E-06	2.65E-08	5.9E-06	2.76E-07
X0unS1unR3me1K5ack8ack12ack16unK20me3	1.67E-08	0	4.67E-08	0	4.5E-08	1.55E-07	2.89E-08	0	3.14E-08	0	4.32E-08	1.84E-07
X0acS1phR3unK5ack8unK12ack16ack20un	0	2.66E-05	5.2E-07	1.52E-05	1.03E-06	1.09E-06	0	2.1E-05	7.66E-07	1.47E-05	2.53E-06	1.95E-06
X0unS1unR3me1K5ack8ack12unK16ack20me2	1.93E-07	1.5E-07	6.39E-06	2.25E-07	3.77E-07	2.13E-07	1.6E-07	1.8E-07	1.43E-05	2.77E-07	5.24E-07	1.38E-07
X0unS1phR3unK5unK8ack12ack16unK20me1	8.67E-08	1.85E-06	1.02E-07	4E-08	2.35E-07	6.5E-08	5.51E-08	1.61E-06	8.77E-08	6.68E-08	9.63E-08	1.11E-07
X0unS1unR3unK5ack8unK12ack16unK20me2	0	1.47E-06	1E-08	7.03E-07	3.67E-08	1.15E-06	0	2.51E-06	2.45E-08	1.3E-06	6.83E-08	1.87E-06

X0unS1unR3me1K5unK8ack12ack16ack20me1	1.57E-06	4.33E-08	2.48E-06	1.18E-07	1.32E-06	2.05E-07	1.17E-06	6.66E-08	1.45E-06	1.31E-07	1.26E-06	8.7E-08
X0unS1unR3unK5unK8unK12unK16ack20me1	1.95E-06	1.23E-05	5.5E-07	0	1.25E-06	5.5E-08	3.18E-06	1.64E-05	8.73E-07	0	1.96E-06	1.1E-07
X0acS1phR3me1K5ack8unK12unK16unK20me2	7.83E-07	6.67E-09	9E-07	2.5E-09	1.34E-06	4.93E-07	1.46E-07	1.15E-08	6.87E-07	5E-09	8.15E-07	5.4E-07
X0unS1unR3unK5unK8unK12unK16unK20un	0.00014	0.000117	0.002932	7.92E-05	0.00017	1.08E-05	0.000242	1.19E-05	0.004555	3.47E-05	0.00013	1.6E-05
X0unS1phR3unK5ack8unK12ack16ack20me2	0	0	0	6.55E-07	1.67E-09	4.75E-08	0	0	0	1.1E-06	4.08E-09	9.5E-08
X0unS1unR3unK5unK8ack12ack16unK20me1	0	2.4E-07	1.67E-07	9.13E-07	0	2.03E-07	0	4.16E-07	4.08E-07	1.83E-06	0	1.36E-07
X0acS1unR3me1K5ack8ack12unK16unK20me2	2.37E-07	0	1.88E-07	2.28E-07	2.13E-07	2.25E-08	1.53E-07	0	2.01E-07	4.55E-07	1.38E-07	4.5E-08
X0unS1phR3me1K5unK8unK12ack16ack20me3	5.03E-07	6.67E-08	3.02E-07	3.5E-08	2.07E-06	2.33E-07	5.08E-07	1.15E-07	3.25E-07	7E-08	1.62E-06	3.73E-07
X0unS1unR3me1K5ack8unK12ack16ack20me3	3.33E-08	0	3.33E-08	1E-08	6.55E-07	3E-08	2.08E-08	0	3.39E-08	2E-08	1.06E-06	2.58E-08
X0unS1unR3unK5unK8unK12unK16ack20un	0	4.6E-07	1.1E-06	3.9E-06	4.17E-08	1.03E-07	0	5.79E-07	1.71E-06	6.07E-06	7.17E-08	9.81E-08
X0acS1unR3me1K5unK8ack12unK16ack20me1	3.33E-09	2E-07	2.33E-08	5E-09	4.83E-08	5E-08	5.77E-09	3.46E-07	3.01E-08	1E-08	4.58E-08	3.56E-08
X0unS1phR3me1K5unK8unK12unK16ack20me1	0	4.79E-06	1.67E-09	4.75E-08	3.83E-08	3E-08	0	4.21E-06	4.08E-09	9.5E-08	4.49E-08	1.63E-08
X0unS1phR3unK5ack8unK12ack16ack20me3	0	0	0	0	2.5E-08	2.5E-08	0	0	0	0	3.99E-08	1.73E-08
X0acS1unR3me1K5ack8ack12ack16ack20me2	6.33E-08	2.2E-05	1.03E-06	8.62E-06	2.98E-07	2.84E-06	6.03E-08	2.95E-06	2.36E-06	3.84E-06	3.41E-07	2.87E-06
X0unS1unR3me1K5unK8unK12unK16unK20me1	1.74E-05	1.29E-06	1.85E-05	9.25E-08	3.88E-05	7.5E-09	4.96E-06	4.5E-07	6.3E-06	1.85E-07	1.87E-05	1.5E-08
X0unS1unR3me1K5ack8ack12ack16ack20un	6.67E-09	0	1.17E-08	4.5E-08	9.17E-08	1.75E-08	5.77E-09	0	2.4E-08	7.72E-08	1.91E-07	2.36E-08
X0unS1phR3unK5ack8unK12unK16ack20me2	2.9E-07	0	2.78E-07	5E-09	3.68E-07	1E-08	5.02E-07	0	6.29E-07	5.77E-09	9.02E-07	8.16E-09
X0unS1unR3unK5unK8ack12ack16unK20me3	0	7.28E-05	0	0	0	5E-09	0	6.87E-05	0	0	0	1E-08
X0unS1phR3unK5unK8ack12ack16ack20me2	0	1E-08	0	7.5E-09	0	2.5E-08	0	1E-08	0	9.57E-09	0	1.73E-08
X0acS1unR3me1K5ack8unK12ack16ack20un	6.67E-09	0	2.83E-08	7.5E-09	2.33E-08	2.5E-09	5.77E-09	0	4.17E-08	1.5E-08	4.41E-08	5E-09
X0acS1phR3unK5unK8unK12ack16ack20me1	1.58E-06	2.67E-08	4.47E-07	7.5E-09	7.07E-07	1.8E-07	2.06E-06	3.06E-08	3.96E-07	9.57E-09	5.44E-07	3.27E-07
X0unS1phR3unK5unK8ack12ack16ack20me1	7.5E-07	0	5.22E-07	0	8.18E-07	9.4E-07	7.2E-07	0	4.55E-07	0	7.66E-07	1.87E-06
X0acS1phR3unK5unK8ack12ack16unK20me1	3.28E-06	0	8.9E-07	0	3.12E-07	3.6E-07	3.16E-06	0	7.03E-07	0	4.71E-07	7.13E-07
X0acS1phR3unK5ack8unK12unK16ack20me2	0	0	0	4.49E-06	2.08E-07	2.5E-09	0	0	0	8.99E-06	5.1E-07	5E-09
X0unS1unR3unK5unK8unK12ack16unK20me2	0	0	5.17E-08	3.81E-06	2.1E-07	2.34E-06	0	0	1.22E-07	3.08E-06	3.49E-07	4.67E-06
X0acS1phR3me1K5ack8ack12unK16unK20me2	0	1.63E-05	5.05E-07	6.92E-06	5.6E-07	2.03E-05	0	2.58E-05	8.18E-07	8.33E-06	7.65E-07	4.05E-05
X0unS1unR3unK5ack8ack12unK16ack20me1	0	0	0	0	0	2.75E-08	0	0	0	0	0	3.2E-08
X0unS1phR3me1K5ack8ack12ack16unK20un	0	0	5E-09	0	5E-09	1.25E-08	0	0	8.37E-09	0	8.37E-09	1.5E-08
X0unS1phR3unK5unK8unK12ack16ack20me2	0	0	1.67E-08	5E-09	0	0	0	0	4.08E-08	1E-08	0	0
X0unS1unR3unK5ack8ack12unK16unK20un	0	0	2E-08	0	0	0	0	0	4.9E-08	0	0	0
X0acS1unR3me1K5unK8ack12unK16unK20un	0	0	0	0	2E-08	0	0	0	0	0	4.9E-08	0
X0acS1phR3unK5ack8unK12ack16ack20me1	3.33E-09	0	1.83E-08	0	0	0	5.77E-09	0	2.99E-08	0	0	0
X0unS1phR3me1K5unK8unK12ack16unK20me1	0	0	0	0	2.17E-08	0	0	0	0	0	2.56E-08	0
X0unS1phR3me1K5ack8ack12unK16ack20me2	0	0	0	3.25E-08	0	0	0	0	0	6.5E-08	0	0
X0unS1unR3me1K5ack8ack12ack16unK20un	0	4E-08	0	0	1.67E-09	0	0	6.93E-08	0	0	4.08E-09	0
X0unS1unR3me1K5unK8ack12ack16ack20un	0	0	1.67E-09	0	2E-08	0	0	0	4.08E-09	0	4.43E-08	0
X0unS1phR3unK5ack8ack12unK16ack20me1	6.67E-09	0	3.33E-09	0	1.67E-08	0	1.15E-08	0	5.16E-09	0	3.61E-08	0
X0unS1unR3unK5unK8ack12unK16unK20me2	0	0	2E-08	0	8.33E-09	0	0	0	4.43E-08	0	1.6E-08	0
X0unS1unR3me1K5unK8unK12ack16ack20un	0	2.67E-08	0	0	0	2.5E-08	0	4.62E-08	0	0	0	5E-08
X0unS1phR3unK5ack8unK12ack16ack20un	4E-08	0	1E-08	0	1.67E-09	0	6.93E-08	0	1.67E-08	0	4.08E-09	0
X0acS1phR3me1K5unK8unK12ack16ack20me1	0	0	0	4.5E-08	1.67E-09	0	0	0	0	9E-08	4.08E-09	0
X0unS1unR3me1K5ack8ack12unK16unK20me3	6E-08	0	1.67E-09	0	1.67E-09	0	1.04E-07	0	4.08E-09	0	4.08E-09	0
X0unS1unR3me1K5ack8ack12unK16ack20me3	6.67E-09	0	2.17E-08	5E-09	8.33E-09	0	1.15E-08	0	3.87E-08	1E-08	1.6E-08	0
X0acS1unR3me1K5ack8unK12unK16unK20me1	0	0	2.67E-08	0	1E-08	0	0	0	6.53E-08	0	2.45E-08	0

X0unS1phR3me1K5ack8ack12unK16unK20me1	0	0	1.67E-09	2.5E-08	8.33E-09	1.75E-08	0	0	4.08E-09	5E-08	2.04E-08	2.87E-08
X0unS1unR3me1K5ack8ack12ack16unK20me1	1.67E-08	0	8.33E-09	2.5E-08	6.67E-09	0	2.89E-08	0	9.83E-09	5E-08	1.03E-08	0
X0acS1phR3me1K5unK8ack12ack16unK20me1	0	0	4E-08	0	0	0	0	0	9.8E-08	0	0	0
X0acS1unR3me1K5unK8ack12unK16unK20me3	0	6.67E-09	2.5E-08	0	1.17E-08	0	0	1.15E-08	4.46E-08	0	2.86E-08	0
X0unS1phR3unK5unK8ack12unK16ack20me3	2E-08	0	2.17E-08	0	8.33E-09	0	2E-08	0	2.64E-08	0	1.17E-08	0
X0acS1unR3me1K5unK8ack12unK16ack20un	0	0	0	4.25E-08	5E-09	1.25E-08	0	0	0	6.65E-08	1.22E-08	2.5E-08
X0acS1unR3me1K5ack8unK12unK16unK20un	0	8.33E-08	0	0	0	0	0	1.44E-07	0	0	0	0
X0unS1unR3unK5ack8unK12ack16unK20me3	0	0	5E-09	0	3.67E-08	0	0	0	5.48E-09	0	7.61E-08	0
X0unS1unR3unK5unK8unK12ack16unK20me3	0	0	5.33E-08	0	0	0	0	0	1.31E-07	0	0	0
X0unS1phR3me1K5unK8ack12ack16unK20me1	4E-08	3.33E-09	3.33E-08	0	0	0	6.08E-08	5.77E-09	8.16E-08	0	0	0
X0acS1unR3me1K5ack8unK12ack16unK20me1	1.33E-08	0	1.67E-08	0	3.17E-08	0	5.77E-09	0	1.37E-08	0	5.85E-08	0
X0acS1unR3me1K5unK8ack12ack16unK20un	0	1.1E-07	1.67E-09	0	0	0	0	1.91E-07	4.08E-09	0	0	0
X0acS1phR3me1K5unK8unK12unK16ack20me1	0	0	0	9.25E-08	0	0	0	0	0	1.85E-07	0	0
X0unS1phR3unK5unK8ack12ack16unK20me3	2.33E-08	0	1.17E-08	0	4.17E-08	0	2.08E-08	0	1.47E-08	0	6.27E-08	0
X0acS1unR3me1K5ack8unK12ack16unK20me3	1E-08	0	2.83E-08	0	3.33E-08	0	1E-08	0	3.31E-08	0	3.83E-08	0
X0unS1unR3unK5ack8ack12ack16ack20me2	0	0	0	1.05E-07	0	2.5E-09	0	0	0	2.1E-07	0	5E-09
X0unS1unR3me1K5ack8ack12unK16unK20un	0	0	3.33E-09	0	7.5E-08	0	0	0	5.16E-09	0	1.84E-07	0
X0unS1unR3me1K5ack8ack12unK16ack20me1	1E-08	0	1.33E-08	0	4.33E-08	2.75E-08	1.73E-08	0	2.34E-08	0	5.99E-08	5.5E-08
X0unS1phR3unK5unK8ack12ack16ack20un	0	0	4.67E-08	3.5E-08	1.17E-08	0	0	0	6.59E-08	7E-08	1.47E-08	0
X0acS1unR3me1K5ack8ack12unK16ack20un	3.33E-09	0	2.17E-08	1E-08	5.67E-08	0	5.77E-09	0	1.94E-08	2E-08	6.02E-08	0
X0unS1phR3me1K5unK8unK12unK16unK20me3	0	0	3.33E-08	0	5.33E-08	0	0	0	3.78E-08	0	9.24E-08	0
X0unS1phR3me1K5unK8ack12unK16ack20un	0	1.73E-07	0	0	1.67E-09	0	0	3E-07	0	0	4.08E-09	0
X0unS1phR3unK5ack8ack12ack16unK20me2	3.33E-09	0	0	0	1.67E-09	1.38E-07	5.77E-09	0	0	0	4.08E-09	2.75E-07
X0unS1phR3unK5ack8ack12unK16ack20un	4.33E-08	0	4.5E-08	0	2.83E-08	0	2.52E-08	0	2.07E-08	0	5.49E-08	0
X0unS1unR3unK5unK8ack12ack16unK20un	0	0	9.5E-08	0	0	0	0	0	2.28E-07	0	0	0
X0acS1unR3me1K5unK8ack12ack16ack20un	6.67E-09	0	1.67E-08	0	1.33E-08	1E-07	1.15E-08	0	1.97E-08	0	3.27E-08	1.62E-07
X0acS1phR3unK5ack8ack12ack16unK20me1	0	0	9E-08	0	3.33E-09	1.25E-08	0	0	1.56E-07	0	5.16E-09	2.5E-08
X0unS1phR3me1K5ack8unK12ack16unK20un	4E-08	3.33E-09	1E-08	1.25E-08	6.5E-08	0	2E-08	5.77E-09	1.67E-08	2.5E-08	6.35E-08	0
X0unS1unR3unK5ack8ack12ack16unK20me1	0	0	0	1.63E-07	0	0	0	0	0	3.25E-07	0	0
X0unS1unR3unK5ack8unK12ack16ack20un	3.33E-09	2.1E-07	0	0	1.67E-09	0	5.77E-09	3.64E-07	0	0	4.08E-09	0
X0unS1unR3unK5unK8ack12unK16unK20me3	0	0	1.15E-07	0	0	0	0	0	2.82E-07	0	0	0
X0unS1phR3unK5unK8unK12ack16ack20me3	3.33E-08	0	5.83E-08	0	3.83E-08	2.5E-09	2.08E-08	0	6.65E-08	0	4.36E-08	5E-09
X0unS1unR3me1K5ack8unK12ack16unK20un	0	1.47E-07	5E-09	0	4E-08	0	0	1.27E-07	1.22E-08	0	9.8E-08	0
X0unS1phR3me1K5ack8ack12unK16unK20me3	3.67E-08	0	4.67E-08	0	5.33E-08	0	6.35E-08	0	7.69E-08	0	7.69E-08	0
X0acS1phR3me1K5ack8unK12unK16unK20un	8.67E-08	0	3E-08	7.5E-09	4.33E-08	0	4.93E-08	0	2E-08	1.5E-08	5.09E-08	0
X0unS1phR3unK5ack8unK12ack16unK20me3	3.67E-08	0	3.67E-08	0	7.67E-08	0	3.06E-08	0	3.14E-08	0	6.25E-08	0
X0unS1phR3me1K5ack8unK12ack16unK20me3	1.23E-07	0	5E-09	0	6.67E-08	0	1.88E-07	0	1.22E-08	0	1.4E-07	0
X0unS1unR3unK5ack8ack12unK16unK20me3	1.33E-08	1.47E-07	2.33E-08	1.5E-08	8.33E-09	1.75E-08	2.31E-08	1.5E-07	3.83E-08	2.38E-08	1.6E-08	2.06E-08
X0unS1unR3me1K5ack8unK12unK16ack20me2	0	2.43E-07	3.33E-09	0	1.17E-08	0	0	4.21E-07	8.16E-09	0	2.86E-08	0
X0acS1unR3me1K5unK8ack12ack16unK20me3	2E-08	0	2.17E-08	0	8.17E-08	3.5E-08	3.46E-08	0	1.47E-08	0	1.1E-07	7E-08
X0acS1phR3me1K5unK8unK12ack16unK20un	8.67E-08	0	3.33E-08	0	6.5E-08	0	4.51E-08	0	1.21E-08	0	6.35E-08	0
X0acS1phR3me1K5unK8unK12ack16unK20me3	3.33E-08	0	1.5E-08	0	1.13E-07	0	4.16E-08	0	1.52E-08	0	9.58E-08	0
X0unS1phR3me1K5ack8unK12unK16ack20me2	1.67E-08	0	1.35E-07	0	3.33E-09	0	1.53E-08	0	2.24E-07	0	5.16E-09	0
X0acS1phR3unK5ack8ack12unK16ack20un	0	0	7.33E-08	0	7.83E-08	2.5E-09	0	0	1.8E-07	0	1.56E-07	5E-09

X0acS1phR3unK5ack8unK12unK16ack20me1	0	0	1.67E-09	0	1.55E-07	0	0	0	4.08E-09	0	3.75E-07	0
X0acS1unR3me1K5unK8unK12ack16unK20un	0	0	0	0	1.67E-09	2.38E-07	0	0	0	0	4.08E-09	4.75E-07
X0acS1phR3me1K5unK8unK12unK16ack20un	1E-08	0	6.67E-09	2.15E-07	1.5E-08	0	1.73E-08	0	8.16E-09	2.55E-07	1.87E-08	0
X0unS1phR3unK5ack8unK12unK16ack20me3	1.63E-07	0	3.5E-08	0	5.33E-08	0	1.6E-07	0	6.66E-08	0	8.55E-08	0
X0acS1unR3me1K5ack8ack12ack16ack20me1	3.33E-09	1.33E-08	0	5E-09	1.52E-07	2.75E-08	5.77E-09	1.53E-08	0	1E-08	3.19E-07	3.2E-08
X0unS1unR3unK5ack8ack12unK16unK20me2	1.33E-07	1.67E-08	0	8.25E-08	1.33E-08	6E-08	2.31E-07	2.89E-08	0	1.09E-07	2.8E-08	8.04E-08
X0acS1unR3me1K5ack8ack12unK16unK20me3	5.33E-08	0	5.67E-08	0	1.02E-07	5E-09	6.81E-08	0	2.94E-08	0	9.77E-08	1E-08
X0unS1phR3unK5unK8ack12unK16unK20me3	1.53E-07	0	8E-08	0	4.83E-08	0	1.31E-07	0	5.76E-08	0	3.76E-08	0
X0unS1phR3unK5unK8ack12unK16ack20un	5.67E-08	0	1.55E-07	0	2.83E-08	0	5.03E-08	0	1.43E-07	0	2.93E-08	0
X0unS1phR3me1K5ack8ack12unK16unK20un	7E-08	3.67E-08	4.83E-08	1.25E-08	1.03E-07	0	1.04E-07	6.35E-08	3.87E-08	2.5E-08	4.08E-08	0
X0unS1unR3unK5ack8ack12unK16ack20me3	7.33E-08	0	7.83E-08	8.5E-08	4.67E-08	0	6.35E-08	0	1.59E-07	1.7E-07	7.69E-08	0
X0unS1phR3me1K5ack8unK12ack16unK20me2	1.2E-07	0	9.5E-08	0	7.33E-08	0	1.05E-07	0	5.68E-08	0	6.98E-08	0
X0unS1unR3me1K5unK8unK12unK16unK20me3	6.33E-08	0	8.33E-09	7.5E-09	1.3E-07	8.75E-08	1.1E-07	0	2.04E-08	1.5E-08	2E-07	1.36E-07
X0unS1phR3me1K5unK8unK12unK16unK20un	0	4.67E-08	0	0	2.12E-07	2.5E-09	0	5.03E-08	0	0	4.99E-07	5E-09
X0acS1phR3me1K5unK8ack12unK16unK20un	5.33E-08	0	8.83E-08	8.75E-08	7.17E-08	0	2.31E-08	0	1.45E-07	1.75E-07	1E-07	0
X0acS1phR3me1K5ack8unK12unK16ack20un	6.33E-08	0	4.17E-08	0	1.85E-07	0	9.29E-08	0	3.66E-08	0	1.69E-07	0
X0unS1unR3unK5ack8unK12ack16ack20me1	1.33E-08	5.67E-08	5.83E-08	0	1.68E-07	0	2.31E-08	9.81E-08	9.93E-08	0	3.93E-07	0
X0acS1unR3me1K5ack8unK12unK16ack20me3	2.33E-08	0	1.37E-07	0	1.13E-07	0	3.21E-08	0	1.43E-07	0	1.75E-07	0
X0unS1phR3me1K5ack8unK12ack16unK20me1	0	0	0	0	2.73E-07	0	0	0	0	0	5.52E-07	0
X0unS1unR3me1K5unK8ack12ack16unK20me2	0	1.03E-07	1.67E-09	0	3.33E-09	3.3E-07	0	1.79E-07	4.08E-09	0	8.16E-09	4.06E-07
X0unS1unR3unK5unK8ack12ack16ack20me2	2.03E-07	0	1.15E-07	0	1.67E-08	7E-08	1.02E-07	0	1.94E-07	0	2.25E-08	1.27E-07
X0acS1unR3unK5ack8ack12ack16ack20me3	0	8E-08	3.83E-08	2.93E-07	1.67E-09	1.75E-08	0	1.22E-07	4.17E-08	4.06E-07	4.08E-09	2.36E-08
X0unS1unR3me1K5ack8unK12ack16unK20me2	0	0	0	0	0	4.38E-07	0	0	0	0	0	8.75E-07
X0unS1phR3unK5ack8ack12ack16unK20un	7.33E-08	0	8.83E-08	0	1.68E-07	0	2.52E-08	0	7.11E-08	0	3.55E-07	0
X0unS1unR3unK5ack8ack12unK16ack20un	3.33E-09	1.67E-08	2.47E-07	5.25E-08	0	5E-09	5.77E-09	2.89E-08	5.75E-07	7.54E-08	0	1E-08
X0unS1phR3unK5ack8unK12ack16unK20me1	1.67E-08	0	4.33E-08	0	2.48E-07	0	2.89E-08	0	5.99E-08	0	7.08E-08	0
X0unS1phR3me1K5ack8ack12unK16unK20me2	9.67E-08	0	9.33E-08	7.25E-08	1.13E-07	0	8.96E-08	0	4.72E-08	1.45E-07	1.39E-07	0
X0acS1phR3me1K5unK8ack12unK16ack20un	1.97E-07	1.93E-07	2.5E-08	0	8.67E-08	0	2.21E-07	2E-07	3.56E-08	0	9.05E-08	0
X0unS1phR3me1K5ack8unK12unK16unK20me3	2.4E-07	0	7.17E-08	7.75E-08	8.67E-08	0	2.8E-07	0	9.35E-08	1.55E-07	7.87E-08	0
X0acS1phR3unK5unK8ack12ack16unK20me3	0	0	0	4.93E-07	1.33E-08	0	0	0	0	5.63E-07	3.27E-08	0
X0unS1phR3me1K5unK8ack12ack16unK20un	1.57E-07	0	8.17E-08	0	1.93E-07	0	1.95E-07	0	3.66E-08	0	1.09E-07	0
X0acS1unR3me1K5unK8ack12ack16ack20me3	1.33E-08	0	2.25E-07	5E-09	8.17E-08	5.5E-08	2.31E-08	0	3.54E-07	1E-08	1.34E-07	1.1E-07
X0acS1unR3me1K5ack8ack12ack16unK20me3	1.77E-07	6E-08	4.17E-08	0	1.92E-07	5E-09	2.25E-07	5.29E-08	7.33E-08	0	1.28E-07	5.77E-09
X0unS1phR3unK5ack8unK12unK16ack20me1	1.1E-07	0	5.33E-08	0	2.48E-07	0	1.15E-07	0	7.58E-08	0	1.76E-07	0
X0acS1unR3me1K5ack8unK12unK16ack20me1	3.33E-08	0	1.63E-07	0	1.77E-07	3E-08	4.93E-08	0	1.7E-07	0	1.47E-07	4.76E-08
X0unS1phR3me1K5unK8ack12ack16unK20me2	1.87E-07	0	1.25E-07	0	1.6E-07	0	1.62E-07	0	1.26E-07	0	1.51E-07	0
X0acS1phR3unK5unK8unK12unK16ack20me3	1.5E-07	0	5E-08	0	2.58E-07	0	7E-08	0	3.52E-08	0	2.31E-07	0
X0unS1unR3me1K5ack8ack12ack16ack20me3	0	0	2.62E-07	0	1.35E-07	0	0	0	4.65E-07	0	7.61E-08	0
X0unS1unR3unK5unK8ack12ack16ack20me1	2.67E-08	5.33E-08	8.33E-08	0	3.67E-08	3.63E-07	3.06E-08	9.24E-08	1.05E-07	0	7.2E-08	7.25E-07
X0acS1phR3me1K5unK8ack12ack16unK20un	1.27E-07	0	3.83E-08	2.25E-08	2.82E-07	7.5E-09	1.67E-07	0	3.76E-08	3.86E-08	2.2E-07	9.57E-09
X0acS1phR3unK5ack8unK12unK16unK20me1	3.33E-08	0	3.67E-08	0	2.87E-07	1E-07	3.51E-08	0	2.16E-08	0	5.84E-07	2E-07
X0unS1phR3unK5unK8unK12unK16ack20me3	1.7E-07	2.67E-08	2.23E-07	0	8.83E-08	0	1.13E-07	4.62E-08	2.83E-07	0	1.1E-07	0
X0acS1phR3me1K5unK8unK12unK16unK20me1	7E-08	0	2.62E-07	0	1.2E-07	2.5E-09	4.58E-08	0	2.82E-07	0	1.41E-07	5E-09
X0unS1phR3unK5ack8ack12unK16unK20me1	1.07E-07	0	9.5E-08	0	2.78E-07	0	4.04E-08	0	6.12E-08	0	2.87E-07	0

X0acS1unR3me1K5unK8unK12acK16unK20me3	0	0	1.67E-09	0	4.38E-07	0	0	0	4.08E-09	0	6.04E-07	0
X0unS1phR3me1K5unK8acK12unK16acK20me2	3E-08	0	1.85E-07	0	1.33E-08	3.55E-07	2.65E-08	0	4.05E-07	0	2.34E-08	4.73E-07
X0acS1phR3me1K5acK8acK12unK16unK20un	9.33E-08	5.53E-07	2.33E-08	0	1.02E-07	2.5E-09	6.03E-08	8.73E-07	3.61E-08	0	1.55E-07	5E-09
X0acS1phR3me1K5unK8acK12unK16unK20me1	0	6.2E-07	0	2.25E-08	1.4E-07	0	0	1.07E-06	0	4.5E-08	3.43E-07	0
X0unS1unR3me1K5unK8acK12unK16unK20me3	6.67E-09	0	4.63E-07	0	0	0	1.15E-08	0	1.13E-06	0	0	0
X0unS1unR3unK5unK8acK12unK16acK20me3	1E-08	4.17E-07	1.67E-09	0	0	3.85E-07	1.73E-08	7.22E-07	4.08E-09	0	0	6.99E-07
X0acS1unR3me1K5unK8acK12acK16unK20me2	1.2E-07	0	1.88E-07	0	2.57E-07	1.75E-08	1.35E-07	0	1.95E-07	0	3.94E-07	3.5E-08
X0acS1phR3unK5unK8unK12acK16unK20me3	1.8E-07	0	6.83E-08	0	3.73E-07	0	8E-08	0	4.71E-08	0	3.66E-07	0
X0acS1phR3me1K5acK8unK12acK16unK20un	6.67E-08	0	3E-08	0	4.72E-07	0	1.15E-07	0	3.1E-08	0	8.07E-07	0
X0acS1phR3unK5unK8unK12unK16acK20un	2.07E-07	0	1.93E-07	0	2.55E-07	0	2.89E-07	0	1.81E-07	0	3.99E-07	0
X0unS1phR3unK5acK8acK12unK16unK20me3	2.87E-07	0	2.65E-07	0	1.52E-07	0	1.94E-07	0	1.37E-07	0	1.7E-07	0
X0unS1unR3unK5acK8acK12acK16acK20un	3.83E-07	1.53E-07	5.83E-08	7.25E-08	1.68E-07	2.75E-08	3.39E-07	2.66E-07	3.82E-08	1.45E-07	1.49E-07	5.5E-08
X0unS1phR3me1K5unK8acK12unK16unK20me3	6.9E-07	0	9.83E-08	1.5E-08	1.23E-07	0	8.76E-07	0	8.33E-08	3E-08	1.5E-07	0
X0acS1phR3me1K5unK8acK12unK16unK20me3	2.7E-07	0	9.83E-08	0	3.52E-07	0	3.49E-07	0	1.18E-07	0	2.87E-07	0
X0unS1unR3me1K5unK8unK12acK16unK20me1	1.67E-08	6.67E-09	1.83E-08	3.58E-07	5E-09	5.05E-07	1.15E-08	1.15E-08	1.94E-08	7.15E-07	8.37E-09	9.97E-07
X0unS1phR3unK5unK8unK12acK16unK20me3	3.63E-07	0	3.83E-07	0	9.5E-08	0	3.25E-07	0	3.22E-07	0	9.77E-08	0
X0unS1phR3me1K5unK8unK12acK16acK20un	2.37E-07	0	1.18E-07	2.5E-08	3.93E-07	2.5E-08	3.32E-07	0	1.13E-07	5E-08	3.42E-07	3.32E-08
X0unS1unR3me1K5acK8acK12acK16acK20me2	2.67E-08	0	5.83E-08	0	6.33E-07	0	1.15E-08	0	4.17E-08	0	1.19E-06	0
X0unS1phR3unK5acK8unK12acK16unK20un	1.63E-07	0	4.9E-07	3.75E-08	1.32E-07	0	8.14E-08	0	5.29E-07	7.5E-08	1E-07	0
X0unS1unR3unK5unK8unK12acK16unK20me1	0	0	0	0	7.28E-07	2.75E-08	0	0	0	0	1.78E-06	5.5E-08
X0acS1unR3me1K5unK8acK12unK16acK20me3	0	2.97E-07	3.98E-07	1.75E-08	1.17E-07	1.18E-07	0	5.14E-07	9.42E-07	2.87E-08	2.1E-07	1.41E-07
X0acS1phR3me1K5acK8unK12unK16unK20me3	1.97E-07	0	4.25E-07	0	2.42E-07	0	2.89E-07	0	3.26E-07	0	1.87E-07	0
X0unS1unR3unK5acK8unK12acK16unK20un	0	1.51E-06	0	1.5E-08	1.67E-09	2.5E-09	0	2.62E-06	0	1.91E-08	4.08E-09	5E-09
X0unS1phR3unK5unK8acK12unK16acK20me1	9.13E-07	0	8E-08	1.6E-07	1.28E-07	0	1.29E-06	0	6.96E-08	3.2E-07	7.78E-08	0
X0unS1phR3me1K5unK8unK12acK16unK20me3	6.6E-07	0	1.85E-07	0	2.68E-07	0	8.67E-07	0	1.7E-07	0	2.44E-07	0
X0acS1unR3me1K5unK8acK12acK16acK20me1	0	0	1.33E-08	0	7.72E-07	0	0	0	2.16E-08	0	1.88E-06	0
X0acS1phR3unK5unK8acK12unK16unK20un	3.47E-07	0	5.2E-07	0	9.17E-08	0	2.82E-07	0	7.24E-07	0	1.08E-07	0
X0acS1phR3unK5acK8unK12acK16unK20un	1.4E-07	9.6E-07	1.45E-07	0	9.67E-08	0	6.24E-08	1.66E-06	5.09E-08	0	9.5E-08	0
X0acS1phR3me1K5unK8unK12unK16unK20me3	9.03E-07	0	1.43E-07	1.25E-08	1.63E-07	5.25E-08	1.09E-06	0	1.11E-07	1.89E-08	2.19E-07	8.62E-08
X0unS1phR3me1K5acK8unK12unK16acK20un	2.03E-07	9.27E-07	6.33E-08	2.25E-07	5.5E-08	1.75E-08	2.58E-07	4.6E-07	5.43E-08	4.5E-07	2.07E-08	3.5E-08
X0unS1phR3unK5acK8unK12unK16unK20me3	5.47E-07	0	2.55E-07	3.75E-08	3.12E-07	0	2.97E-07	0	2.02E-07	7.5E-08	4.48E-07	0
X0unS1phR3me1K5acK8unK12unK16acK20me1	1.97E-07	1.93E-07	3.83E-07	0	0	4.3E-07	3.41E-07	3.35E-07	6.05E-07	0	0	8.6E-07
X0unS1unR3unK5acK8unK12unK16acK20un	6.47E-07	0	3.8E-07	0	1.48E-07	3.25E-08	1.12E-06	0	9.31E-07	0	3.63E-07	6.5E-08
X0unS1phR3unK5unK8acK12acK16unK20me2	0	1.03E-07	1.63E-07	2.3E-07	0	7.75E-07	0	1.79E-07	3.9E-07	4.6E-07	0	1.55E-06
X0acS1phR3unK5acK8acK12unK16unK20un	5.87E-07	0	3.35E-07	0	2.65E-07	0	3.52E-07	0	5.96E-08	0	2.58E-07	0
X0acS1unR3me1K5acK8unK12unK16acK20un	6.67E-09	1.73E-06	1.5E-08	0	1.83E-08	1.25E-08	1.15E-08	3E-06	2.51E-08	0	4.49E-08	1.5E-08
X0acS1phR3unK5unK8acK12unK16unK20me2	0	1.6E-06	0	1.1E-07	3.33E-09	7E-08	0	1.61E-06	0	1.1E-07	5.16E-09	1.4E-07
X0unS1phR3me1K5unK8acK12unK16acK20me3	1.57E-07	0	7.33E-08	0	7.82E-07	0	2.71E-07	0	1.8E-07	0	6.82E-07	0
X0acS1phR3unK5acK8unK12unK16acK20un	4.73E-07	0	5.22E-07	0	2.08E-07	0	7.09E-08	0	1.92E-07	0	1.25E-07	0
X0unS1unR3unK5unK8acK12unK16unK20un	0	0	9.92E-07	0	0	0	0	0	1.85E-06	0	0	0
X0unS1unR3me1K5unK8acK12acK16acK20me3	3.33E-08	0	8.05E-07	0	1.8E-07	0	3.51E-08	0	8.13E-07	0	3.01E-07	0
X0unS1phR3me1K5unK8unK12unK16acK20me3	4.13E-07	0	5.33E-08	0	1.08E-07	9.53E-07	6.22E-07	0	4.46E-08	0	8.06E-08	1.91E-06
X0unS1unR3unK5acK8acK12acK16unK20me2	6.67E-09	1.76E-06	3.67E-08	0	1.03E-07	0	1.15E-08	3.04E-06	2.58E-08	0	1.38E-07	0
X0acS1phR3me1K5unK8acK12unK16unK20me2	1.87E-07	0	4.27E-07	0	5.15E-07	0	1.76E-07	0	4.15E-07	0	3.03E-07	0

X0acS1unR3me1K5acK8unK12unK16unK20me3	3.33E-09	0	8.28E-07	2.58E-07	6.67E-09	8.25E-08	5.77E-09	0	2.03E-06	4.95E-07	1.63E-08	1.65E-07
X0acS1unR3me1K5unK8unK12acK16unK20me1	0	6.83E-07	4.8E-07	2.75E-07	1.67E-09	1.18E-07	0	1.18E-06	1.18E-06	3.65E-07	4.08E-09	1.86E-07
X0acS1unR3me1K5acK8unK12acK16acK20me3	0	1.56E-06	2.4E-07	0	7E-08	0	0	2.7E-06	3.91E-07	0	7.46E-08	0
X0acS1phR3me1K5unK8unK12acK16unK20me1	3.33E-09	3E-07	1.33E-08	0	9.25E-07	0	5.77E-09	5.2E-07	2.8E-08	0	1.85E-06	0
X0unS1phR3unK5acK8unK12acK16acK20me1	5.77E-07	0	3.18E-07	0	4.83E-07	0	8.96E-07	0	4.54E-07	0	4.97E-07	0
X0acS1phR3unK5unK8acK12unK16unK20me1	6.67E-08	0	6.83E-08	0	9.9E-07	0	5.51E-08	0	4.07E-08	0	2E-06	0
X0unS1phR3me1K5unK8acK12acK16acK20me1	0	1.9E-06	0	0	6.67E-09	2.3E-07	0	2.08E-06	0	0	1.21E-08	2.7E-07
X0unS1unR3me1K5acK8acK12acK16acK20me1	2.47E-07	1.67E-08	1.25E-07	0	8.68E-07	0	3.29E-07	1.53E-08	2.34E-07	0	2.06E-06	0
X0acS1phR3me1K5acK8unK12unK16unK20me1	3.33E-09	3.07E-07	1.67E-09	4.25E-08	9.4E-07	0	5.77E-09	5.31E-07	4.08E-09	4.79E-08	1.59E-06	0
X0unS1unR3me1K5acK8acK12acK16unK20me2	2.57E-07	0	5.15E-07	4.25E-08	3.45E-07	1.83E-07	1.53E-08	0	5.18E-07	5.68E-08	3.07E-07	3.65E-07
X0acS1phR3unK5unK8unK12acK16acK20un	4.07E-07	0	3.85E-07	0	6.2E-07	0	1.43E-07	0	2.25E-07	0	5.23E-07	0
X0unS1phR3unK5acK8acK12unK16acK20me2	1.1E-07	0	0	1.79E-06	0	7E-08	1.91E-07	0	0	2.16E-06	0	1.4E-07
X0acS1unR3me1K5unK8acK12unK16unK20me1	0	0	8.33E-09	9.25E-08	1.25E-06	0	0	0	2.04E-08	1.85E-07	3.05E-06	0
X0unS1phR3me1K5unK8acK12acK16acK20un	1.67E-08	2.06E-06	1.33E-08	0	2.58E-07	2.5E-08	2.08E-08	1.95E-06	2.16E-08	0	6.13E-07	3.79E-08
X0acS1phR3unK5unK8acK12acK16unK20un	7.87E-07	0	6.3E-07	0	3.5E-07	0	1.03E-07	0	2.08E-07	0	3.08E-07	0
X0acS1phR3unK5unK8acK12unK16unK20me3	7.2E-07	0	6.7E-07	0	4.1E-07	0	2.46E-07	0	1.63E-07	0	1.96E-07	0
X0acS1phR3me1K5unK8acK12unK16acK20me2	0	4.67E-08	0	8.5E-07	7.5E-07	2.23E-07	0	8.08E-08	0	9.82E-07	1.83E-06	4.45E-07
X0acS1phR3unK5acK8unK12unK16unK20me3	6.13E-07	0	6.33E-07	0	5.87E-07	2.5E-08	1.54E-07	0	2.5E-07	0	4.08E-07	5E-08
X0unS1unR3me1K5unK8acK12unK16acK20me3	4E-08	0	2.58E-07	0	1.34E-06	0	6.93E-08	0	4.04E-07	0	1.95E-06	0
X0unS1unR3me1K5unK8unK12acK16acK20me1	1.63E-07	5.93E-07	1.15E-06	5E-09	1.73E-07	0	1.48E-07	1.03E-06	8.22E-07	1E-08	1.86E-07	0
X0unS1unR3unK5unK8acK12acK16acK20un	8.67E-08	3.49E-06	0	0	0	0	1.5E-07	6.04E-06	0	0	0	0
X0unS1unR3unK5unK8acK12unK16unK20me1	0	0	1.07E-06	0	0	1.13E-06	0	0	2.63E-06	0	0	1.29E-06
X0acS1phR3me1K5unK8unK12unK16acK20me3	5.4E-07	1E-08	7.87E-07	0	7.67E-07	0	8.42E-07	1.73E-08	7.29E-07	0	7.13E-07	0
X0acS1phR3me1K5acK8unK12unK16acK20me2	0	0	0	0	0	2.76E-06	0	0	0	0	0	5.53E-06
X0unS1unR3unK5acK8acK12unK16unK20me1	3.8E-07	2E-08	0	1.73E-07	1.59E-06	0	6.58E-07	3.46E-08	0	3.45E-07	3.9E-06	0
X0unS1unR3me1K5unK8acK12unK16acK20me2	3.33E-09	2.07E-07	1.67E-09	0	3.33E-09	2.85E-06	5.77E-09	2.05E-07	4.08E-09	0	5.16E-09	5.63E-06
X0acS1phR3unK5unK8unK12acK16unK20un	1.1E-06	8.17E-07	5.23E-07	3E-08	5.82E-07	0	1.19E-06	1.41E-06	4.12E-07	6E-08	9.09E-07	0
X0unS1phR3unK5unK8unK12unK16unK20me3	3E-08	3.04E-06	1.5E-07	1E-08	4.08E-07	1.75E-08	3.61E-08	3.91E-06	2.21E-07	2E-08	4.44E-07	3.5E-08
X0acS1phR3me1K5unK8unK12acK16unK20me2	7.9E-07	0	5.75E-07	2.5E-09	1.35E-06	0	2.69E-07	0	3.6E-07	5E-09	8.31E-07	0
X0acS1phR3unK5unK8unK12unK16unK20me3	3.07E-07	0	7.82E-07	0	1.4E-06	0	6.66E-08	0	8.84E-07	0	2.15E-06	0
X0unS1unR3me1K5acK8unK12acK16acK20me2	1.41E-06	1E-08	9.33E-07	3.25E-07	3.78E-07	3.48E-07	1.57E-06	1.73E-08	1.05E-06	5.49E-07	2.74E-07	5.87E-07
X0unS1phR3unK5unK8acK12unK16unK20me1	0	0	5.08E-07	0	1.61E-06	7.33E-07	0	0	1.25E-06	0	3.94E-06	1.47E-06
X0unS1phR3unK5acK8unK12unK16acK20un	4.07E-07	0	1.05E-06	1.45E-06	4.67E-07	0	1.76E-07	0	1.48E-06	2.9E-06	6.95E-07	0
X0acS1unR3unK5acK8acK12unK16unK20me3	4.53E-07	5.67E-08	2.78E-07	2.5E-06	1.8E-07	6.18E-07	5.29E-07	9.81E-08	3.21E-07	8.12E-07	1.84E-07	7.89E-07
X0unS1phR3unK5acK8acK12acK16unK20me1	7.03E-07	0	1.07E-06	0	1.38E-06	0	9.84E-07	0	1.26E-06	0	1.54E-06	0
X0acS1unR3me1K5unK8unK12unK16unK20un	0	5.46E-06	1.5E-08	0	5E-08	2.25E-08	0	9.46E-06	3.67E-08	0	8.37E-08	1.71E-08
X0unS1phR3me1K5acK8unK12unK16unK20me2	1.3E-06	0	1.01E-06	2E-08	1.11E-06	7.5E-08	2.82E-07	0	9.13E-07	4E-08	3.73E-07	9.98E-08
X0acS1unR3me1K5acK8acK12acK16unK20un	6.67E-09	0	2.67E-08	4.13E-07	6.67E-08	3.71E-06	5.77E-09	0	2.88E-08	4.49E-07	1.16E-07	3.03E-06
X0unS1unR3unK5acK8unK12unK16unK20me3	4.63E-07	0	3.33E-09	0	0	3.98E-06	8.03E-07	0	5.16E-09	0	0	7.96E-06
X0acS1phR3unK5acK8unK12acK16unK20me2	0	5.87E-06	0	0	0	0	0	1.02E-05	0	0	0	0
X0acS1phR3unK5unK8acK12unK16acK20un	6.87E-07	2.53E-06	7.93E-07	0	7.8E-07	0	1.33E-07	4.38E-06	3E-07	0	8.01E-07	0
X0unS1unR3unK5unK8unK12acK16unK20un	4.67E-08	5.97E-07	2.76E-06	8.5E-08	9.33E-08	1.75E-08	8.08E-08	1.35E-07	4.25E-06	1.03E-07	1.61E-07	2.22E-08
X0acS1unR3me1K5acK8acK12unK16unK20un	0	6.66E-06	3.33E-09	0	1.67E-09	0	0	2.29E-07	5.16E-09	0	4.08E-09	0
X0unS1phR3unK5unK8acK12acK16unK20un	5.23E-07	0	7.82E-07	2.07E-06	1.07E-06	1.85E-07	3.52E-07	0	7.98E-07	2.28E-06	1.12E-06	2.14E-07

X0unS1phR3unK5acK8acK12acK16acK20un	0	4.11E-06	5.5E-08	2.19E-06	1.67E-08	4E-08	0	7.08E-06	8.98E-08	3.87E-06	2.58E-08	8E-08
X0acS1unR3me1K5acK8unK12acK16acK20me1	2.43E-07	4.93E-06	8.83E-08	0	1.05E-06	0	4.13E-07	1.54E-06	1.48E-07	0	2.15E-06	0
X0unS1phR3me1K5unK8unK12acK16unK20me2	1.08E-06	0	1.21E-06	0	2.2E-06	2.33E-07	9.38E-07	0	1.14E-06	0	1.95E-06	2.84E-07
X0acS1phR3unK5acK8unK12unK16unK20me2	3.63E-07	5.69E-06	6.1E-07	7E-07	6.5E-08	0	3.59E-07	9.86E-06	3.29E-07	1.4E-06	5.24E-08	0
X0unS1unR3me1K5acK8unK12unK16acK20me3	1.8E-07	4.83E-06	7.92E-07	1.68E-07	7.87E-07	0	3.12E-07	5.33E-06	9.08E-07	3.35E-07	7.88E-07	0
X0unS1phR3me1K5acK8unK12unK16acK20me3	6.3E-07	1.13E-07	1.32E-06	2.5E-09	2.57E-06	2.5E-08	5.31E-07	1.63E-07	1.04E-06	5E-09	1.74E-06	5E-08
X0unS1phR3me1K5unK8unK12acK16acK20me1	6.07E-07	4.37E-07	1.26E-06	0	2.85E-06	0	1.05E-06	7.56E-07	1.71E-06	0	4.46E-06	0
X0acS1unR3me1K5acK8unK12acK16unK20me2	7.67E-08	0	1.55E-07	1.36E-06	7.5E-08	6.06E-06	9.87E-08	0	2.14E-07	2.68E-06	9.5E-08	7.53E-06
X0acS1unR3me1K5unK8unK12acK16acK20me1	2.01E-06	0	2.88E-06	1.5E-08	1.54E-06	0	1.45E-06	0	1.1E-06	3E-08	9.87E-07	0
X0unS1phR3me1K5unK8acK12unK16unK20me2	1.45E-06	0	8.4E-07	0	3.99E-06	0	6.32E-07	0	4.8E-07	0	4.45E-06	0
X0acS1unR3me1K5acK8acK12unK16acK20me1	5.97E-07	8.19E-06	2.27E-07	8.83E-07	3.58E-07	0	1.03E-06	3.46E-06	3.85E-07	1.77E-06	6.93E-07	0
X0unS1unR3unK5unK8acK12unK16acK20me1	0	0	2.63E-07	7.09E-06	9.6E-07	0	0	0	4E-07	1.38E-05	2.35E-06	0
X0acS1phR3unK5acK8unK12unK16unK20me2	0	3.66E-06	2.05E-07	4.06E-06	1.67E-09	1.91E-06	0	4.64E-06	4.92E-07	3.62E-06	4.08E-09	3.55E-06
X0acS1phR3unK5unK8acK12acK16acK20un	0	4.74E-06	1.67E-08	4.02E-06	8.18E-07	2.8E-07	0	5.85E-06	4.08E-08	2.74E-06	2E-06	2.27E-07
X0unS1phR3unK5acK8acK12unK16unK20un	2.02E-06	5.1E-06	1.42E-06	8.28E-07	6.73E-07	0	1.54E-06	3.29E-06	1.53E-06	1.29E-06	9.17E-07	0
X0unS1unR3unK5unK8unK12acK16acK20me1	6.13E-06	2.77E-07	3.03E-06	0	1.4E-07	0	3.78E-06	4.79E-07	2.48E-06	0	3.14E-07	0
X0unS1phR3unK5unK8unK12acK16acK20me1	4.61E-06	0	2.52E-06	0	1.8E-06	0	1.43E-06	0	1.07E-06	0	9.52E-07	0
X0acS1unR3me1K5unK8unK12acK16acK20me3	2.07E-07	0	1.26E-06	3E-08	5.23E-06	2E-08	2.11E-07	0	1.1E-06	6E-08	7.77E-06	4E-08
X0acS1unR3unK5acK8acK12acK16unK20me3	2.55E-06	1.65E-06	1.14E-06	2.27E-06	1.94E-06	0	5.68E-07	4.14E-07	5.11E-07	2.78E-06	3.61E-06	0
X0acS1phR3unK5acK8unK12acK16unK20me1	2.1E-07	6.33E-08	4.1E-06	3.25E-08	2.36E-06	1.63E-07	2.74E-07	1.1E-07	4.38E-06	6.5E-08	2.53E-06	3.25E-07
X0acS1unR3unK5acK8unK12acK16unK20me3	3.37E-07	0	1.2E-07	8.72E-06	4.37E-07	6.93E-07	3.12E-07	0	1.51E-07	5.81E-06	6.11E-07	8.05E-07
X0acS1phR3unK5unK8acK12unK16acK20me2	0	0	1.9E-06	2.52E-06	1.14E-06	3.54E-06	0	0	4.24E-06	3.02E-06	2.8E-06	6.17E-06
X0unS1unR3me1K5unK8acK12acK16acK20me2	0.000001	3.07E-07	4.03E-06	7.63E-07	1.3E-06	1.13E-06	3.87E-07	5.14E-07	4.73E-06	7.27E-07	2.15E-06	1.03E-06
X0acS1phR3me1K5unK8unK12acK16acK20me2	0	6.33E-08	0	7.57E-06	1.31E-06	1.93E-06	0	1.01E-07	0	1.18E-05	3.19E-06	2.69E-06
X0unS1unR3me1K5acK8unK12unK16unK20me2	0	0	1.71E-06	0	6.12E-07	8.23E-06	0	0	4.19E-06	0	1.5E-06	1.65E-05
X0acS1phR3unK5acK8acK12unK16unK20me1	1.57E-06	2.67E-07	1.76E-06	3.55E-07	5.22E-06	3.25E-08	9.93E-07	4.62E-08	1.2E-06	6.71E-07	4.75E-06	6.5E-08
X0acS1unR3me1K5acK8acK12acK16unK20me1	3.79E-06	0	4.34E-06	1.5E-08	1.91E-06	3.45E-07	6.11E-06	0	4.31E-06	3E-08	2.86E-06	6.9E-07
X0unS1unR3me1K5unK8unK12acK16unK20un	0	0	3.1E-06	2E-08	5.38E-06	0	0	0	7.6E-06	4E-08	9.17E-06	0
X0acS1unR3me1K5acK8unK12acK16acK20me2	1.01E-06	0	9.33E-07	7.91E-06	9.6E-07	1.6E-06	9.21E-07	0	1.33E-06	9.46E-06	1.3E-06	2.26E-06
X0unS1unR3me1K5unK8unK12unK16acK20un	9.8E-07	0	8.52E-06	2.5E-09	3.33E-09	1E-08	1.7E-06	0	1.29E-05	5E-09	8.16E-09	1.41E-08
X0unS1phR3unK5unK8unK12acK16acK20un	1.77E-07	0	1.57E-05	0	1.42E-07	0	1E-07	0	3.82E-05	0	1.85E-07	0
X0unS1phR3me1K5acK8acK12acK16unK20me2	1.16E-06	9.67E-08	7.37E-07	0	1.96E-06	1.94E-05	1.86E-06	1.67E-07	1.56E-06	0	2.31E-06	3.87E-05
X0acS1phR3unK5unK8unK12acK16unK20me1	1.33E-08	0	3.02E-07	0	1.63E-05	0	1.53E-08	0	4.99E-07	0	3.92E-05	0
X0unS1phR3unK5unK8unK12acK16unK20me2	0	3.21E-05	6.67E-09	0	3.33E-09	1.26E-06	0	2.09E-05	1.63E-08	0	5.16E-09	1.55E-06
X0unS1phR3me1K5unK8unK12unK16unK20me1	1.97E-07	6.89E-06	1.55E-05	0	2E-07	5.5E-08	3.15E-07	1.58E-06	3.78E-05	0	9.06E-08	1.1E-07
X0acS1unR3me1K5unK8unK12unK16acK20un	0	0	7.93E-06	1.76E-05	3.46E-06	0	0	0	1.23E-05	3.53E-05	8.47E-06	0
X0acS1unR3unK5acK8unK12unK16unK20me3	1.6E-07	0	2E-08	3.46E-05	5E-08	0	2.69E-07	0	2.19E-08	6.7E-05	9.51E-08	0
X0acS1unR3unK5acK8unK12unK16acK20me3	7.67E-08	0	1.02E-07	2.99E-05	7.95E-07	3.91E-06	7.64E-08	0	1.48E-07	2.37E-05	1.71E-06	6.84E-06
X0unS1phR3me1K5acK8unK12acK16acK20me2	0	5E-05	5E-09	7.33E-07	1.67E-09	0	0	8.65E-05	1.22E-08	1.47E-06	4.08E-09	0
X0acS1unR3unK5unK8acK12unK16unK20me3	3.33E-09	2.9E-06	1.67E-08	3.81E-05	1.29E-06	0	5.77E-09	4.34E-06	1.21E-08	6.93E-05	2.98E-06	0
X0acS1unR3me1K5unK8unK12unK16unK20me3	1.88E-06	0	4.16E-06	1.97E-05	1.36E-05	1E-08	3.25E-06	0	5.91E-06	2.37E-05	1.98E-05	1.41E-08
X0unS1unR3unK5unK8unK12unK16unK20me3	2.87E-07	0	1.99E-05	3.25E-06	2.95E-06	1.12E-05	1.8E-07	0	2.87E-05	6.5E-06	3.62E-06	1.46E-05
X0acS1unR3unK5acK8acK12unK16unK20me1	9.37E-06	0	8.61E-06	0	2.1E-05	1E-08	8.55E-06	0	6.67E-06	0	4.36E-05	2E-08
X0unS1unR3me1K5unK8unK12unK16acK20me3	1.27E-05	2.56E-06	4.9E-06	3.17E-06	1.9E-05	3.78E-06	4.74E-06	4.42E-06	7.37E-06	5.39E-06	1.23E-05	7.46E-06

X0unS1phR3me1K5unK8unK12unK16unK20me2	2.33E-08	6.85E-05	7.5E-08	3.04E-05	1.93E-07	1.13E-07	5.77E-09	2.46E-05	1.55E-07	3.47E-05	2.35E-07	2.25E-07
X0acS1phR3unK5ack8unK12acK16unK20me3	6.67E-09	1.52E-05	0	8.14E-05	0	0	1.15E-08	2.64E-05	0	0.000151	0	0
X0unS1phR3me1K5unK8ack12acK16ack20me2	0	0.000136	8.33E-09	2.29E-05	1E-08	0	0	0.000229	2.04E-08	2.02E-05	1.26E-08	0
X0acS1unR3unK5ack8ack12unK16unK20un	1E-08	0.000116	1E-08	3.1E-05	1.38E-05	0	1.73E-08	2.3E-05	1.67E-08	3.58E-05	3.38E-05	0
X0acS1unR3me1K5unK8unK12unK16ack20me3	3.5E-06	7.08E-06	4.82E-05	3E-05	2.88E-05	1.45E-06	5.8E-06	8.7E-06	6.71E-05	2.59E-05	3.44E-05	2.74E-06
X0acS1unR3me1K5unK8unK12unK16unK20me1	6.33E-08	0.000144	1.4E-06	2.83E-05	2.74E-05	5.65E-06	1.01E-07	0.000125	1.26E-06	2E-05	2.57E-05	6.92E-06
X0acS1unR3me1K5unK8unK12unK16ack20me1	9.81E-06	0	4.88E-06	0	0.000123	0	1.7E-05	0	7.73E-06	0	0.000302	0
X0unS1phR3unK5unK8unK12unK16ack20un	0	0	0.000153	0	0	0	0	0	0.000374	0	0	0
X0unS1unR3unK5ack8unK12unK16ack20me2	0.000119	5.27E-07	4.94E-05	3.26E-05	1.38E-05	3.49E-05	5.67E-05	4.8E-07	3.38E-05	4.77E-05	3.37E-05	5.12E-05
X0acS1phR3unK5unK8unK12unK16ack20me1	1.31E-05	0	8.37E-06	3.03E-07	0.00017	0	9.95E-06	0	1.92E-05	6.05E-07	0.00027	0
X0unS1phR3unK5unK8unK12acK16unK20un	0.0003	0	0.000207	2.5E-09	2.31E-05	0	0.000263	0	0.000265	5E-09	3.67E-05	0
X0unS1unR3me1K5ack8ack12unK16unK20me2	0	0.000911	3.35E-07	0	0	0	0	0.000293	8.21E-07	0	0	0
X0unS1phR3unK5ack8ack12acK16unK20me3	0	0.0003	0	0.00053	1.67E-09	0	0	0.000445	0	0.00106	4.08E-09	0
X0acS1unR3unK5ack8unK12unK16unK20un	0.00219	0.007246	0.001288	0.001623	0.000617	0.000556	0.000805	0.000395	0.00125	0.000448	0.000526	0.000383