

Figure S15. MASCOT report for MS/MS analysis of gel excised fluorescent SrfAB bands from the *B. subtilis* ATCC 21332 proteome.

Database : NCBIr 20151028 (73478315 sequences; 2674620744 residues)
 Taxonomy : *Bacillus subtilis* (127736 sequences)
 Enzyme : Trypsin
 Variable modifications : Deamidated (NQ),Gln->pyro-Glu (N-term Q),Oxidation (M),Acetyl (Protein N-term),Propionamide (C)
 Mass values : Monoisotopic
 Protein Mass : Unrestricted
 Peptide Mass Tolerance : ± 15 ppm
 Fragment Mass Tolerance : ± 20 mmu
 Max Missed Cleavages : 3
 Instrument type : ESI-TRAP
 Number of queries : 10418

Protein hits [g|740641903](#) non-ribosomal peptide synthetase [Bacillus subtilis]
 1. [g|740641903](#) [Mass: 409579](#) [Score: 26597](#) [Matches: 675\(675\)](#) [Sequences: 257\(257\)](#) [emPAL_34.23](#)
 non-ribosomal peptide synthetase [Bacillus subtilis]

Query	Observed	Mr(exp)	Mr(calc)	ppm	Miss	Score	Expect	Rank	Unique	Peptide
47	314.7051	627.3657	627.3656	0.18	0	30	0.014	1		R.TGFLIKA
328	381.7002	761.3658	761.3654	0.50	0	34	0.044	1		K.GGQMASRL
337	383.7082	766.4018	766.4021	-0.41	0	37	0.018	1		R.SYDILRT
362	389.2186	776.4186	776.4181	0.61	0	38	0.036	1		R.QGFINLAKD
378	395.2214	786.4263	786.4280	0.39	0	41	0.018	1		K.IETLLDAKQ
412	401.2449	800.4763	800.4756	-0.35	0	36	0.044	1		K.QTGAQKS
415	401.7386	801.4697	801.4696	-1.14	0	37	0.022	1		R.VLLTGQDKL
536	414.7832	827.5116	827.5116	0.20	0	45	0.0021	1		R.LVLGGEKLI
562	416.7400	829.4656	829.4657	-0.31	0	40	0.018	1		K.SVNELIRLS
572	417.7289	833.4393	833.4395	-0.28	0	38	0.034	1		K.FAVNLERLN
576	417.7482	833.4769	833.4759	-0.08	0	34	0.046	1		K.GVGYGLIRY
579	418.2282	834.4369	834.4388	-3.52	0	43	0.005	1		K.QFAAFRLRE
582	419.7302	837.4458	837.4457	0.18	0	(40)	0.0071	1		K.GVQIEHRN 581
585	420.2224	838.4302	838.4297	0.60	0	43	0.0042	1		K.GVQIEHRLN
588	420.7449	839.4752	839.4753	-0.09	0	33	0.024	1		K.KALPVPDKT
637	424.7197	847.4189	847.4186	0.07	1	35	0.042	1		K.KGFDPRLV
651	426.7401	851.4657	851.4654	0.43	0	(39)	0.0087	1		K.QFAARLRE
667	429.7263	857.4369	857.4365	0.54	0	38	0.0087	1		R.ELNAAANRL 655 666
692	436.7456	871.4798	871.4793	0.51	0	50	0.001	1	U	R.EVAVGELRK
724	442.2416	882.4697	882.4671	1.74	0	35	0.016	1		K.AAAAANPVRLL
846	459.2887	916.5229	916.5229	-0.12	1	58	0.00019	1		K.IKETLLDAKQ
865	461.7407	921.4698	921.4696	-0.05	1	40	0.011	1		R.QKEHERLY
902	468.2843	930.5140	930.5134	0.62	0	57	0.00037	1		K.LQSSDLRLT
919	312.8349	935.4828	935.4825	0.34	1	41	0.011	1		R.YKQDQVRLQ
965	472.7819	943.8092	943.8097	0.60	1	71	1.2e-005	1		R.ADDQVGRG
982	478.2303	950.4490	950.4487	0.24	0	41	0.008	1		K.DANFESRLI
990	478.7481	951.4816	951.4814	0.22	0	40	0.0089	1		K.WSEYVRLI
1006	479.2799	956.5453	956.5443	1.05	0	41	0.0043	1		K.QALLQWKQ
1038	482.7843	963.5141	963.5136	0.38	0	68	2e-005	1		K.AGQNLTYRLE
1049	484.2377	966.4609	966.4593	1.68	0	(47)	0.0018	1		K.DAGMFGTLRLH
1052	485.2296	968.4445	968.4451	-0.54	0	30	0.046	1		R.YLSDSGAKF
1068	486.2856	970.5666	970.5680	0.80	1	37	0.018	1		R.IDNQVQVRLG
1111	492.2344	982.4642	982.4642	-0.02	0	48	0.0011	1		K.DAGMFGTLRLH 1112
1201	801.2942	1000.6739	1000.6739	0.05	0	(38)	0.017	1		K.ENLLMLRLH
1254	338.8697	1013.6872	1013.6898	0.32	1	(35)	0.087	1		K.LVQLEKRLH
1255	807.8006	1013.6873	1013.6898	0.39	1	45	0.0035	1		K.LVQLEKRLH
1263	806.2919	1016.6993	1016.6988	0.48	0	38	0.017	1		K.ENLLMLRLH
1315	516.2849	1030.5553	1030.5546	0.64	0	45	0.0055	1		R.IELGIEIYKL
1343	821.2374	1040.4803	1040.4897	0.80	0	42	0.0044	1		R.FMAEDSSVRLM
1353	821.8186	1041.8186	1041.8182	0.39	1	53	0.00036	1		R.KLVQGLQKGG
1360	822.3273	1042.6400	1042.6398	1.29	1	34	0.03	1		R.VLLTGQDKLKR
1409	829.2349	1066.4653	1066.4646	0.65	0	(34)	0.018	1		R.FMAEDSSVRLM
1416	829.7835	1057.5523	1057.5516	0.70	0	52	0.00073	1		R.DSLNQLVNRH
1432	830.7934	1059.5722	1059.5713	0.91	0	41	0.011	1		K.ALFEQPTVRLQ
1450	355.8690	1084.5732	1084.5727	0.52	0	37	0.018	1		K.IGINLEHGRL
1473	837.3136	1072.6124	1072.6126	-0.38	1	50	0.0013	1		R.SKLVLEKRLH
1478	838.2810	1074.6074	1074.6080	-0.57	0	62	6.3e-006	1		R.EEDAEIYK
1480	359.1877	1074.5411	1074.5416	-0.60	0	(41)	0.011	1		K.EPSSISGSLRN
1481	838.2796	1074.5427	1074.5416	0.88	0	44	0.008	1		K.EPSSISGSLRN
1492	839.2536	1076.4925	1076.4920	0.46	0	71	6.9e-008	1		K.GETAAMNDRLS
1528	544.3095	1086.8045	1086.8033	1.04	0	56	0.00034	1		R.DVMSYTAGRT
1534	545.2599	1088.5033	1088.5026	0.62	0	44	0.0022	1		R.YFTEIATKQ
1545	546.7835	1091.4925	1091.4917	0.78	0	70	5.8e-008	1		R.ATVTEQMERF
1547	547.2510	1092.4875	1092.4870	0.63	0	(44)	0.0022	1		K.GETAAMNDRLS
1608	854.7509	1107.4871	1107.4896	0.48	0	(48)	0.001	1		R.ATVTEQMERF 1609 1610
1659	560.8036	1119.8927	1119.8924	0.32	0	39	0.018	1		K.NISFLEAKQ
1746	572.8402	1143.8659	1143.8652	0.69	0	47	0.002	1		K.IFDIYAFERK 1748
1762	574.7831	1147.8517	1147.8509	0.69	0	51	0.00089	1		K.EEOTFERRQ
1768	575.3174	1148.8203	1148.8190	1.18	0	78	3.8e-008	1		R.LSDGTLAFGR 1768
1775	576.2976	1150.5905	1150.5905	0.08	0	55	0.00032	1		R.MYLNQLDRQ
1827	582.6169	1163.6162	1163.6166	0.61	0	67	3e-005	1		R.QVYFVNSTKA
1863	586.8063	1177.5960	1177.5979	0.09	0	57	0.00028	1		K.FDLSLEAVLE
1926	400.5876	1198.7409	1198.7397	1.00	2	49	0.00088	1		R.VLLTGQDKLKR
1975	804.8072	1207.5999	1207.5998	1.14	0	78	3.4e-008	1		K.WTGGIEYGRLI
2023	810.8251	1219.6396	1219.6348	0.82	0	47	0.0028	1		K.AFPVPELNR
2071	308.1866	1228.7136	1228.7136	-0.38	2	(33)	0.047	1		R.SKLVLEKRLH
2072	410.6785	1228.7136	1228.7136	-0.21	2	(52)	0.0008	1		R.SKLVLEKRLH
2073	815.3643	1228.7141	1228.7139	0.15	2	65	3.3e-005	1		R.SKLVLEKRLH
2088	817.3177	1232.6206	1232.6190	1.49	0	61	0.00011	1		R.FVADFPVGERLM
2103	818.3117	1234.6089	1234.6082	0.68	0	59	0.00018	1		R.VDLSDDPTVVKR
2109	818.8273	1235.6401	1235.6397	0.30	0	62	0.00012	1		R.IEVLQDSGAKL
2119	413.5506	1237.6301	1237.6302	-0.14	1	(42)	0.008	1		R.IRYLSDSGAKF
2120	819.8231	1237.6316	1237.6302	1.08	1	53	0.00065	1		R.IRYLSDSGAKF
2132	820.8200	1239.6255	1239.6246	0.57	0	49	0.0016	1		K.SLFQYEAURL
2238	829.3271	1266.6397	1266.6401	-0.27	0	45	0.0038	1		K.AEVDLHFEAKE
2265	831.8343	1281.6541	1281.6554	-0.99	0	56	0.00049	1		R.GYVNLPELTKQ
2328	836.8889	1271.7692	1271.7601	-0.71	1	37	0.0086	1		K.IIFDVLAFRKM
2349	838.3676	1274.7004	1274.6983	1.69	1	58	0.00021	1		R.TGPLLKAQYRLT
2359	428.2530	1275.7371	1275.7373	-0.17	1	(34)	0.027	1		R.FKFNLLMLRH
2360	838.8782	1275.7378	1275.7373	0.59	1	(49)	0.00095	1		R.FKFNLLMLRH
2382	842.2998	1282.5850	1282.5893	-1.00	0	35	0.028	1		K.QDMYPLSBAQKR
2418	429.9181	1286.7324	1286.7347	-1.80	1	53	0.0008	1		R.IPDKGVGYGLIRY 2419
2422	944.3781	1286.7378	1286.7347	2.32	1	(45)	0.0035	1		R.IPDKGVGYGLIRY
2425	944.8226	1287.6311	1287.6306	0.35	1	50	0.0014	1		K.GREEDAEIYK
2446	846.8739	1291.7332	1291.7322	0.82	1	(43)	0.003	1		R.FKFNLLMLRH
2449	431.5853	1291.7340	1291.7322	1.38	1	51	0.00048	1		R.FKFNLLMLRH
2462	847.7969	1293.6940	1293.6937	0.21	0	80	7.8e-007	1		R.EYVLVQDSGRQ 2463 2464
2467	848.5182	1294.6237	1294.6153	6.82	1	59	0.00017	1		R.GYVNLREDETRK
2531	435.9141	1304.7204	1304.7201	0.21	1	(37)	0.025	1		R.RLSDGTLAFGR
2533	853.8683	1304.7220	1304.7201	1.49	1	58	0.00018	1		R.RLSDGTLAFGR
2557	855.8300	1306.6454	1306.6449	0.39	1	(50)	0.0015	1		R.LRFMAEDSSVRLM
2568	856.3736	1310.7324	1310.7306	1.36	0	45	0.0019	1		R.LENAQQLNRLH
2654	442.8873	1325.6400	1325.6398	1.16	1	(41)	0.0088	1		R.LRFMAEDSSVRLM
2655	863.8273	1325.6401	1325.6398	0.25	1	68	2.9e-005	1		R.LRFMAEDSSVRLM
2659	864.3752	1326.7359	1326.7368	-0.64	1	49	0.0011	1		R.LRDSLNLQVNRH
2660	443.2833	1326.7362	1326.7368	1.05	1	(35)	0.03	1		R.LRDSLNLQVNRH
2682	444.9224	1331.7454	1331.7449	0.42	2	40	0.011	1		R.LPQWQDEYVYK
2750	873.3820	1344.7894	1344.7887	0.53	0	80	9.4e-007	1		R.SVYVYVGMIAVLA 2748
2770	876.3205	1348.8264	1348.8259	0.41	0	80	1.1e-008	1		K.NAGYVYVTEEDRM 2773
2782	876.8124	1349.8103	1349.8099	0.31	0	(65)	3.1e-005	1		K.NAGYVYVTEEDRM
2797	451.5809	1351.7209	1351.7208	0.07	0	(49)	0.0018	1		R.NALPKPNAQSGGKA
2799	876.8679	1351.7212	1351.7208	0.29	0					

2806	451.0088	1382.7047	1382.7046	-0.07	0	(49)	0.0017	1	R.NALPKPNAAGSQGK A 2805
2812	452.5844	1354.7613	1354.7609	0.35	0	(47)	0.0017	1	K.LAEWEGLGVRA
2813	678.3890	1354.7614	1354.7606	0.43	0	75	3e-008	1	K.LAEWEGLGVRA 2811 2814
2837	454.5949	1380.7827	1380.7836	-0.64	0	(45)	0.0039	1	R.SVETVYGLMLAVJKA
2838	861.3895	1380.7645	1380.7836	0.67	0	(54)	4.3e-005	1	R.SVETVYGLMLAVJKA
2851	882.3711	1382.7277	1382.7251	1.88	0	(88)	3.7e-005	1	R.SAEVMVSLGVMLKA
2881	885.8795	1389.7364	1389.7354	0.75	0	88	1.8e-005	1	R.LAGFOPSVLPGRLL
2889	458.2396	1371.8989	1371.8999	0.04	0	(41)	0.01	1	K.ISSYMLHVVAKF
2900	888.8590	1371.8975	1371.8989	0.44	0	(48)	0.0022	1	K.ISSYMLHVVAKF
2936	480.5806	1378.7199	1378.7200	-0.09	0	(37)	0.034	1	R.SAEVMVSLGVMLKA
2937	890.3690	1378.7214	1378.7200	1.02	0	87	3e-005	1	R.SAEVMVSLGVMLKA
2938	890.3682	1378.7218	1378.7200	1.28	0	(83)	7.7e-005	1	R.SAEVMVSLGVMLKA
2984	483.5713	1387.8920	1387.8918	0.17	0	(48)	0.0037	1	K.ISSYMLHVVAKF
2985	894.8536	1387.8928	1387.8918	0.88	0	84	6.1e-007	1	K.ISSYMLHVVAKF
2990	885.3670	1388.7213	1388.7201	0.88	1	48	0.0029	1	K.RFVADFPVGRML
3002	464.5892	1390.7459	1390.7458	0.18	1	43	0.0072	1	R.GFRIELGEITKL
3019	897.3896	1382.7786	1382.7786	0.05	1	59	8.1e-005	1	R.QGFNLAKDILFKV
3020	465.2862	1382.7789	1382.7786	0.27	1	(37)	0.014	1	R.QGFNLAKDILFKV
3032	465.9125	1394.7157	1394.7149	0.88	0	(43)	0.0082	1	R.SAEVMVSLGVMLKA
3034	898.3862	1394.7158	1394.7149	0.86	0	(89)	0.00019	1	R.SAEVMVSLGVMLKA
3049	700.3816	1386.7057	1386.7078	0.68	1	40	0.014	1	R.LNQH9WLEJMKD
3152	708.8875	1415.7204	1415.7197	0.48	0	55	0.00061	1	R.WLPDGNIEGLRLJ 3151 3153
3167	708.8825	1417.7505	1417.7313	13.5	0	37	0.084	1	R.GYLNRPQLTAERFL
3185	711.8355	1421.8893	1421.8609	-3.20	0	(39)	0.011	1	K.QDMLPLSAGKRLM
3224	716.8838	1429.7131	1429.7129	0.14	0	38	0.042	1	R.YDYVPLYEIQRL
3280	720.3510	1438.8873	1438.8874	-0.06	1	(48)	0.0019	1	K.QDMLPLSAGKRLM
3281	480.5899	1438.8878	1438.8874	0.28	1	50	0.0013	1	K.QDMLPLSAGKRLM
3306	722.4241	1442.8337	1442.8358	-1.43	2	(34)	0.038	1	R.RIPDKGVGYGILRY
3307	361.7180	1442.8349	1442.8358	-0.81	2	(35)	0.025	1	R.RIPDKGVGYGILRY
3308	481.9528	1442.8385	1442.8358	0.54	2	80	7.8e-005	1	R.RIPDKGVGYGILRY
3338	728.3895	1450.7194	1450.7184	1.35	2	63	9.2e-005	1	R.GYLNREDETAQRFL
3374	486.9181	1457.7288	1457.7283	0.21	0	85	4.9e-005	1	K.TVHQLFEETAQRH
3375	729.8714	1457.7282	1457.7283	1.34	0	(38)	0.022	1	K.TVHQLFEETAQRH
3386	730.8442	1459.8739	1459.8732	0.52	0	85	3.2e-007	1	K.VYNGAADFARFERT
3410	733.3411	1464.8977	1464.8987	0.68	0	(89)	1.9e-005	1	R.TSFMANGEPVQRI
3411	733.8322	1465.8499	1465.8507	-0.59	0	(54)	0.00021	1	R.TSFMANGEPVQRI
3438	490.9596	1489.8589	1489.8585	0.28	1	(55)	0.00019	1	K.ILANKLGSSLDLRL
3437	735.9399	1489.8573	1489.8585	0.50	1	80	6.2e-007	1	K.ILANKLGSSLDLRL
3475	494.2844	1479.8313	1479.8310	0.20	0	(37)	0.015	1	R.TVYVHQLOKPRQ
3476	740.8232	1479.8319	1479.8310	0.57	0	51	0.00048	1	R.TVYVHQLOKPRQ
3477	494.5808	1480.8608	1480.8618	-0.68	0	(47)	0.0018	1	R.TSFMANGEPVQRI
3478	741.3383	1480.8621	1480.8618	0.31	0	73	4.2e-006	1	R.TSFMANGEPVQRI
3483	741.8351	1481.8658	1481.8648	6.72	0	(48)	0.0009	1	R.TSFMANGEPVQRI
3497	485.2926	1482.8580	1482.8588	0.10	1	59	7.5e-005	1	K.KLAEWEGLGVRA 3493 3500
3498	742.4353	1482.8580	1482.8588	0.15	1	(82)	0.00043	1	K.KLAEWEGLGVRA
3543	504.2582	1508.7488	1508.7483	0.30	1	(82)	0.00011	1	K.ETAEKWSEYVRLI
3544	755.8812	1508.7478	1508.7483	0.96	1	84	9e-007	1	K.ETAEKWSEYVRLI
3567	806.2790	1515.8151	1515.8158	-0.40	0	(58)	0.0003	1	K.TLQALIEHDALRLM 3672 3673
3568	768.9152	1515.8159	1515.8158	0.09	0	79	2.4e-008	1	K.TLQALIEHDALRLM
3670	379.9813	1515.8162	1515.8158	0.31	0	(50)	0.0015	1	K.TLQALIEHDALRLM
3692	780.3300	1518.8465	1518.8448	0.38	0	87	7.4e-008	1	K.TDFFPSAFDMGRQ
3778	767.8910	1533.7875	1533.7875	0.06	0	58	0.00087	1	K.EQOITFAELLEQAQK
3779	612.2836	1533.7888	1533.7875	0.89	0	(51)	0.0018	1	K.EQOITFAELLEQAQK
3782	768.3276	1534.8406	1534.8396	1.16	0	(58)	7.4e-005	1	K.TDFFPSAFDMGRQ
3784	768.3718	1534.7290	1534.7272	0.49	0	(75)	4.3e-008	1	R.MJEAADVQPAFVRL
3785	768.3838	1534.7830	1534.7815	1.02	0	(44)	0.008	1	K.EQOITFAELLEQAQK
3846	517.9180	1550.7231	1550.7221	0.64	0	(43)	0.0057	3	R.MJEAADVQPAFVRL
3847	776.3891	1550.7238	1550.7221	0.98	0	(81)	1e-008	1	R.MJEAADVQPAFVRL
3848	776.3893	1550.7241	1550.7221	1.27	0	87	2.3e-007	1	R.MJEAADVQPAFVRL
3878	780.9101	1559.8058	1559.8051	0.38	0	(70)	2.1e-005	1	K.GMMLJANQAELEKS
3906	784.3890	1588.7175	1588.7170	0.30	0	(71)	7.1e-008	1	R.MJEAADVQPAFVRL 3905 3908
3907	623.2486	1588.7177	1588.7170	0.44	0	(48)	0.0018	1	R.MJEAADVQPAFVRL
3932	625.9232	1574.7478	1574.7484	0.82	0	(48)	0.0027	1	K.ALPEPDIAGSGEYKA
3933	788.3817	1574.7487	1574.7484	1.50	0	74	7e-008	1	K.ALPEPDIAGSGEYKA 3931
3937	628.2737	1575.7994	1575.8000	-0.39	0	(45)	0.0059	1	K.GMMLJANQAELEKS
3938	788.9080	1575.8015	1575.8000	0.94	0	(87)	3.9e-005	1	K.GMMLJANQAELEKS
3939	788.9081	1575.8016	1575.8000	1.02	0	75	5.4e-008	1	K.GMMLJANQAELEKS
3951	791.8153	1581.8181	1581.8181	0.65	0	89	1.9e-005	1	K.AGAAVYFLDPLPGRLL
3956	628.2836	1581.8591	1581.8587	0.27	1	39	0.015	1	K.DRLNIAQILNRLH
4004	631.3007	1590.8903	1590.8903	-0.01	1	(81)	7.9e-005	1	R.VMFLDKQITQAKS
4006	631.6098	1591.7959	1591.7949	0.60	0	(85)	6.2e-005	1	K.GMMLJANQAELEKS
4009	798.9057	1591.7988	1591.7949	1.21	0	(89)	2.5e-005	1	K.GMMLJANQAELEKS 4007
4037	801.8782	1601.7379	1601.7382	1.08	0	51	0.00061	1	U KEYSFTWDELTVQRI
4062	838.8334	1608.8783	1608.8783	1.88	1	(55)	0.00029	1	R.VMFLDKQITQAKS
4065	804.4470	1608.8812	1608.8783	3.70	1	86	2.4e-007	1	R.VMFLDKQITQAKS
4126	541.8353	1621.8539	1621.8528	0.71	1	51	0.001	1	K.ETLLDAKQFAFVRL
4132	613.3232	1624.8519	1624.8277	2.58	0	(49)	0.00011	1	K.QDNEAESYWSERLL
4154	616.3828	1630.7713	1630.7701	0.75	0	85	4.8e-005	1	R.FVENYSPGSLMYKT
4174	619.9099	1637.8051	1637.8048	0.14	0	(88)	2.8e-006	1	R.TPANGGQKPYSDYIKW
4175	548.9425	1637.8057	1637.8048	0.48	0	72	1.2e-005	1	R.TPANGGQKPYSDYIKW
4182	547.2703	1638.7891	1638.7888	0.13	0	(38)	0.025	1	R.TPANGGQKPYSDYIKW
4183	820.4020	1638.7895	1638.7888	0.37	0	(84)	6.2e-005	1	R.TPANGGQKPYSDYIKW
4193	821.8340	1641.8834	1641.8843	-0.52	0	102	6.2e-010	1	K.QDNEAESYWSERLL
4208	824.3802	1648.7858	1648.7850	0.50	0	(53)	0.00089	1	R.FVENYSPGSLMYKT 4206
4217	550.8091	1648.8054	1648.8057	-0.17	0	(75)	6.1e-008	1	K.YASQDDIVSPTAGR.T
4219	825.4117	1648.8088	1648.8057	1.91	0	95	5.8e-008	1	K.YASQDDIVSPTAGR.T
4224	825.9042	1649.7938	1649.7937	0.07	0	(43)	0.0082	1	K.ETYTPDEIAHYKE
4226	550.8388	1649.7949	1649.7937	0.73	0	44	0.0078	1	K.ETYTPDEIAHYKE
4252	553.6104	1657.8094	1657.8094	0.03	0	(80)	1.4e-008	1	R.AGAGNEDIVAMDR.S
4253	829.9125	1657.8105	1657.8094	0.71	0	115	5.4e-010	1	R.AGAGNEDIVAMDR.S
4276	833.9496	1685.8846	1685.8872	-1.55	0	(78)	8.4e-008	1	K.LNMAEHTAAVIRK
4288	558.9883	1687.8732	1687.8723	0.57	0	54	0.0002	1	R.HLIIGDALVPHVSKVJ 4281 4282 4283 4284 4286 4289
4291	834.9844	1687.8742	1687.8723	1.18	0	(37)	0.0082	1	R.HLIIGDALVPHVSKVJ
4316	836.9333	1671.8820	1671.8801	1.14	0	80	0.00019	1	U KALAVPETAEESLRL
4317	419.2143	1672.8282	1672.8281	0.05	0	(53)	0.001	1	R.LEDEGANQLAHHLRA
4318	837.4214	1672.8282	1672.8281	0.08	0	90	2e-007	1	R.LEDEGANQLAHHLRA
4320	558.6188	1672.8285	1672.8281	0.21	0	(83)	8.9e-005	1	R.LEDEGANQLAHHLRA
4323	558.9422	1673.8048	1673.8043	0.30	0	(59)	0.00019	1	R.AGAGNEDIVAMDR.S
4325	837.9108	1673.8088	1673.8043	1.39	0	(89)	1.9e-007	1	R.AGAGNEDIVAMDR.S 4324
4351	840.9430	1679.8714	1679.8703	0.67	1	40	0.022	1	R.D8NQLVNRHESLRT
4359	661.6338	1681.8795	1681.8821	-1.53	0	100	1.8e-008	1	K.LNMAEHTAAVIRK 4380
4362	841.9485	1681.8825	1681.8821	0.28	0	(82)	9.9e-007	1	K.LNMAEHTAAVIRK
4432	867.9883	1700.8629	1700.8622	0.43	1	88	2.7e-005	1	K.KYNGAADFARFERT
4447	852.4284	1702.8423	1702.8413	0.65	1	88	4.4e-007	1	R.KALPEPDIAGSGEYKA
4448	868.8214	1702.8424	1702.8413	0.61	1	(87)	4e-005	1	R.KALPEPDIAGSGEYKA
4477	868.8292	1711.8438	1711.8417	1.28	0	88	4.5e-005	1	K.AGAAFLPIDPTEERJ 4478
4480	571.8449	1711.9129	1711.9145	-0.94	0	(82)	8.3e-005	1	R.NLAYVYTSGLTGKPK.G 4487
4485	868.9842	1711.9139	1711.9145	-0.33	0	81	1.1e-008	1	R.NLAYVYTSGLTGKPK.G 4482
4496	857.9210	1713.8274	1713.8283	-0.57	0	83	7.3e-007	1	R.LILEDFA8GYMQAEKE
4505	573.2787	1716.8084	1716.8108	-1.40	0	48	0.0022	1	K.AGAAFLPIDPDPGRJ
4518	859.8250	1717.8354	1717.8345	0.53	0	(75)	4.7e-008	1	R.NPLFNVMVTTENPKKE
4544	865.9196	1729.8247	1729.8233	0.83	0	(87)	2.9e-005	1	R.LILEDFA8GYMQAEKE
4561	867.9227	1733.8306	1733.8294	0.78	0				

4743	449.5028	1793.9820	1793.9821	-0.07	1	(50)	0.0011	1	KLNMAEHTEAAVIRKN
4770	802.8300	1804.8682	1804.8686	0.88	0	82	1.1e-008	1	R.TSFDMIDGVEVQTVHK.N
4774	802.8346	1804.8616	1804.8816	-0.12	0	46	0.0008	1	K.IYGGADMELPQHLYKD
4779	904.8221	1807.0296	1807.0386	-3.30	1	82	2.8e-005	1	R.LIAGFEQPSVLPGRLPVKK
4780	803.3828	1807.0386	1807.0386	0.51	1	(38)	0.0008	1	R.LIAGFEQPSVLPGRLPVKK
4790	453.5016	1809.9773	1809.9771	0.10	1	(68)	0.00028	1	KLNMAEHTEAAVIRKN
4791	804.3332	1809.9777	1809.9771	0.37	1	(69)	1.3e-005	1	KLNMAEHTEAAVIRKN
4792	905.9873	1809.9801	1809.9771	1.86	1	(63)	0.00061	1	KLNMAEHTEAAVIRKN
4807	454.2171	1812.8382	1812.8391	0.06	1	(89)	1.7e-005	1	K.TKVYVYEDSHADENR.Q
4808	805.2872	1812.8399	1812.8391	0.44	1	74	4.8e-008	1	K.TKVYVYEDSHADENR.Q
4810	807.4290	1812.8414	1812.8391	1.29	1	(88)	2.2e-005	1	K.TKVYVYEDSHADENR.Q 4811
4817	805.9689	1814.9690	1814.9670	0.82	0	(45)	0.0089	1	K.EFRFPDLNDAPLURA
4819	808.4690	1814.9716	1814.9670	2.00	0	46	0.0048	1	K.EFRFPDLNDAPLURA
4825	809.9439	1817.8733	1817.8723	0.82	0	80	1.7e-008	1	R.EEDIGLSFDYATALKFD
4839	807.9810	1820.8612	1820.8615	-0.18	0	(69)	0.00023	1	R.TSFDMIDGVEVQTVHK.N 4838
4840	911.4385	1820.8625	1820.8615	0.87	0	(75)	4.8e-008	1	R.TSFDMIDGVEVQTVHK.N
4844	807.9890	1820.9421	1820.9421	0.00	1	39	0.0027	1	R.TGDLVKWVGGGIEYGR.I
4883	914.4778	1828.9411	1828.9414	-0.17	0	100	2e-008	1	U R.TPASTAVYEGVLTLYRE 4858 4859 4860
4886	806.9879	1828.9419	1828.9414	0.27	0	(83)	0.0001	1	U R.TPASTAVYEGVLTLYRE
4908	819.4681	1838.9018	1838.9080	-3.49	0	(87)	4.1e-007	1	R.HMTQTEATFAALFEK.Q 4909 4913
4912	813.3102	1838.9067	1838.9080	0.38	0	(77)	3.9e-008	1	R.HMTQTEATFAALFEK.Q 4910 4911 4914
4924	813.6421	1837.9044	1837.9820	8.78	0	(38)	0.0048	1	R.HMTQTEATFAALFEK.Q
4976	826.4778	1850.9410	1850.9414	-0.22	1	72	1.2e-005	1	R.TAPAGDKTFAQLEEVKT
4977	817.9883	1850.9432	1850.9414	0.96	1	(51)	0.0017	1	R.TAPAGDKTFAQLEEVKT
4989	827.4686	1852.9028	1852.9028	-0.19	0	104	7.5e-009	1	R.HMTQTEATFAALFEK.Q
4990	818.6428	1852.9069	1852.9028	1.81	0	(90)	1.7e-007	1	R.HMTQTEATFAALFEK.Q 4987
5028	932.0080	1861.9874	1861.9838	1.94	0	108	3.8e-009	1	K.LTSPHFHTVNTSSFAK.D 5027
5029	821.6731	1861.9875	1861.9838	1.87	0	(70)	1.5e-005	1	K.LTSPHFHTVNTSSFAK.D
5078	838.9877	1875.8209	1875.8214	-0.28	0	70	2.2e-005	1	R.EEENGDIVQYKPGESKV
5079	828.3148	1875.8228	1875.8214	0.88	0	(49)	0.0028	1	R.EEENGDIVQYKPGESKV
5146	833.3546	1897.0420	1897.0421	-0.08	0	82	7.2e-008	1	K.LVPPGASGGLYTTQGLAR.Q 5150
5152	949.8287	1897.0428	1897.0421	0.38	0	(91)	9.2e-008	1	K.LVPPGASGGLYTTQGLAR.Q 5139 5140 5141 5143 5144 5145 5147 5148 5149 5154 5155 5158 5159
5289	961.0145	1920.0144	1920.0179	-1.82	0	(48)	0.0089	1	R.ISTMWLTSPFLNQLAK.D
5270	841.0132	1920.0179	1920.0179	0.00	0	(53)	0.00091	1	R.ISTMWLTSPFLNQLAK.D
5312	967.0046	1931.9946	1931.9983	-0.34	0	(73)	1.2e-005	1	R.QADQGVPEVILTPIQR.W
5313	845.0057	1931.9954	1931.9983	0.06	0	(65)	0.00089	1	R.QADQGVPEVILTPIQR.W
5330	948.3498	1938.0094	1938.0128	-1.75	0	70	2.1e-005	1	R.ISTMWLTSPFLNQLAK.D
5331	989.0122	1938.0089	1938.0128	-1.82	0	(43)	0.01	1	R.ISTMWLTSPFLNQLAK.D
5347	485.7892	1939.0478	1939.0482	0.72	0	(48)	0.0022	1	K.HLLLDMMHHIADGVS.R.Q 5342 5344
5382	850.6813	1949.0222	1949.0218	0.20	0	(57)	0.00041	2	K.QADQGVPEVILTPIQR.W
5384	875.5198	1949.0230	1949.0218	0.64	0	85	6.5e-007	1	K.QADQGVPEVILTPIQR.W 5383 5385
5386	488.2708	1949.0541	1949.0555	-0.68	2	45	0.0052	1	R.LRSDLNQVNRHESLR.T
5389	880.8925	1949.0557	1949.0555	0.11	2	(41)	0.011	1	R.LRSDLNQVNRHESLR.T
5418	882.6886	1955.0379	1955.0411	-1.63	0	(69)	0.00021	1	K.HLLLDMMHHIADGVS.R.Q
5421	489.7875	1955.0407	1955.0411	-0.18	0	82	0.00011	1	K.HLLLDMMHHIADGVS.R.Q 5422 5423 5424 5425
5484	887.0096	1972.0044	1972.0047	-0.19	1	99	3.1e-008	1	K.LVEGGLQKGETAAMNDR.S
5485	858.3424	1972.0054	1972.0047	0.33	1	(74)	8.9e-008	1	K.LVEGGLQKGETAAMNDR.S
5525	862.0214	1983.0424	1983.0425	-0.06	1	53	0.00094	1	U K.RTPASTAVYEGVLTLYRE 5530 5531
5555	853.6739	1987.9998	1987.9997	0.09	1	(88)	0.00037	1	K.LVEGGLQKGETAAMNDR.S
5556	895.0075	1988.0005	1987.9997	0.40	1	(84)	8.7e-005	1	K.LVEGGLQKGETAAMNDR.S
5582	897.4991	1992.9837	1992.9828	0.88	1	(83)	1.3e-008	1	R.MEAKEQQTFAELLEQAK.Q
5583	865.3386	1992.9851	1992.9828	1.24	1	(82)	0.00015	1	R.MEAKEQQTFAELLEQAK.Q
5611	867.9880	2000.9421	2000.9401	1.01	0	(82)	0.00012	1	K.VSFEVLDYGSDEEMLR.S
5612	1001.4791	2000.9438	2000.9401	1.74	0	102	1.1e-008	1	K.VSFEVLDYGSDEEMLR.S 5610
5635	870.8689	2008.8790	2008.8775	0.72	1	89	3.2e-007	1	R.MEAKEQQTFAELLEQAK.Q
5651	871.8830	2011.9872	2011.9873	-0.03	0	(48)	0.0036	1	K.AELPEGMVAVHQVFEQAKR.T
5677	873.3190	2016.8383	2016.8380	0.12	0	(87)	3.1e-005	1	K.VSFEVLDYGSDEEMLR.S
5678	1009.4782	2016.8388	2016.8380	0.37	0	(90)	0.00014	1	K.VSFEVLDYGSDEEMLR.S 5678 5679 5680
5707	1014.4844	2028.9542	2028.9517	1.22	0	103	9e-009	1	R.NMFTAQGYEGTVLDDGKW
5708	878.6894	2028.9583	2028.9517	2.23	0	(49)	0.0022	1	R.NMFTAQGYEGTVLDDGKW
5709	1014.4917	2028.9688	2028.9870	0.92	0	82	1.2e-008	1	R.QVSESEALYALSFSGMIR.N
5711	1014.9843	2027.9839	2027.9857	8.88	0	(52)	0.0012	1	R.NMFTAQGYEGTVLDDGKW
5714	878.9961	2027.9834	2027.9822	0.68	0	(37)	0.038	1	K.AELPEGMVAVHQVFEQAKR.T
5715	1014.9910	2027.9875	2027.9822	2.61	0	87	3.8e-005	1	K.AELPEGMVAVHQVFEQAKR.T
5726	878.0196	2031.0371	2031.0371	-0.01	0	129	2.9e-011	1	R.LSDVLLSSAETAALLEER.H
5727	1016.5327	2031.0507	2031.0371	6.70	0	(82)	1.3e-007	1	R.LSDVLLSSAETAALLEER.H
5770	1021.8005	2041.1884	2041.1857	0.34	0	(65)	9.9e-005	1	R.VGVLTSPSLESAVLSVJKA
5771	811.2042	2041.1878	2041.1857	1.04	0	(38)	0.0073	1	R.VGVLTSPSLESAVLSVJKA
5773	881.4037	2041.1892	2041.1857	1.74	0	86	6.5e-008	1	R.VGVLTSPSLESAVLSVJKA 5772 5774
5779	1022.4893	2042.9840	2042.9819	1.01	0	(53)	0.00091	1	R.QVSESEALYALSFSGMIR.N
5784	882.3391	2043.9853	2043.9835	0.88	0	(77)	3.9e-008	1	R.QVSESEALYALSFSGMIR.N
5785	1023.0128	2044.0111	2043.9835	8.80	0	(49)	0.0031	1	R.QVSESEALYALSFSGMIR.N
5807	1028.5408	2051.0870	2051.0823	2.31	0	(68)	0.00033	1	R.THFQDQVPMGFVNTALR.M
5843	888.7343	2057.1811	2057.1806	0.24	0	(70)	4.8e-008	1	R.VGVLTSPSLESAVLSVJKA
5844	1029.5989	2057.1832	2057.1806	1.27	0	(69)	0.0001	1	R.VGVLTSPSLESAVLSVJKA
5851	887.8707	2059.9803	2059.9884	0.92	0	(90)	0.00022	1	R.QVSESEALYALSFSGMIR.N
5852	1031.0029	2059.9913	2059.9884	1.40	0	(73)	1e-005	1	R.QVSESEALYALSFSGMIR.N
5884	860.0299	2067.0589	2067.0572	0.85	0	83	0.00012	1	R.THFQDQVPMGFVNTALR.M
5885	1034.8391	2067.0616	2067.0572	2.15	0	(91)	0.00018	1	R.THFQDQVPMGFVNTALR.M
5896	891.8840	2071.8702	2071.8988	0.18	1	(54)	0.00085	1	K.AEVDLHFPEAKEDEADK.I
5897	819.0001	2071.8714	2071.8988	0.78	1	(48)	0.0041	1	K.AEVDLHFPEAKEDEADK.I
5898	1036.9969	2071.8771	2071.8988	3.54	1	83	8.2e-005	1	K.AEVDLHFPEAKEDEADK.I
5942	821.7911	2083.1362	2083.1380	-0.40	1	45	0.0047	1	K.HLLLDMMHHIADGVS.R.Q 5944 5947
5973	897.8919	2090.0538	2090.0531	0.34	0	(91)	0.00023	1	K.GGNTAAAYTPESADIALK.S
5974	1046.0375	2090.0804	2090.0531	3.48	0	87	4.9e-005	1	K.GGNTAAAYTPESADIALK.S
5978	898.3449	2082.0129	2082.0081	2.27	0	(83)	1.3e-008	1	R.TNADVQDMGMPFVNTALR.M
5979	1047.0143	2082.0140	2082.0081	2.80	0	(95)	7.5e-008	1	R.TNADVQDMGMPFVNTALR.M
6007	701.0408	2100.1007	2100.0987	0.48	1	115	6.7e-010	1	R.KLVEGGLQKGETAAMNDR.S
6008	828.0328	2100.1016	2100.0987	0.85	2	(68)	0.00033	1	R.KLVEGGLQKGETAAMNDR.S
6032	703.6739	2107.9998	2108.0031	-1.53	0	(82)	1.2e-008	1	R.TNADVQDMGMPFVNTALR.M
6033	1055.0090	2108.0036	2108.0031	0.21	0	(101)	1.8e-008	1	R.TNADVQDMGMPFVNTALR.M
6034	703.6752	2108.0037	2108.0031	0.29	0	(82)	1.2e-007	1	R.TNADVQDMGMPFVNTALR.M
6035	1055.0116	2108.0084	2108.0031	2.82	0	102	1.1e-008	1	R.TNADVQDMGMPFVNTALR.M
6064	830.0313	2116.0969	2116.0946	0.60	2	(69)	0.00036	1	R.KLVEGGLQKGETAAMNDR.S
6065	708.3726	2116.0980	2116.0946	0.67	2	(74)	1e-005	1	R.KLVEGGLQKGETAAMNDR.S
6067	1059.0595	2116.1024	2116.0946	3.87	2	(88)	5.8e-007	1	R.KLVEGGLQKGETAAMNDR.S
6089	708.8876	2117.0410	2117.0429	-0.89	0	83	0.00013	1	K.DLFQHTTEELTOYVERA 6070
6073	1059.5322	2117.0499	2117.0429	3.30	0	(90)	0.00022	1	K.DLFQHTTEELTOYVERA
6078	707.0209	2118.0410	2118.0289	6.64	0	(45)	0.0084	1	K.DLFQHTTEELTOYVERA
6087	707.8629	2119.9899	2119.9833	1.70	1	89	1.7e-005	1	R.NQGVLSGSYNEKFEPLA
6093	708.0087	2123.9893	2123.9980	0.15	0	(84)	7.7e-007	1	R.TNADVQDMGMPFVNTALR.M
6095	1083.0112	2124.0079	2123.9980	4.67	0	(100)	1.9e-008	1	R.TNADVQDMGMPFVNTALR.M
6101	709.8522	2125.8947	2126.8941	0.28	1	(72)	4.8e-008	1	K.WLQGDNEAESYWSER.L
6102	1083.0782	2125.8959	2126.8941	0.88	1	103	3.8e-009	1	K.WLQGDNEAESYWSER.L
6304	728.8983	2188.0670	2188.0684	-0.63	1	54	0.00088	1	K.AELPEGMVAVHQVFEQAKR.T
6306	1085.0441	2188.0738	2188.0684	2.39	1	(45)	0.00089	1	K.AELPEGMVAVHQVFEQAKR.T
6322	844.3251	2173.2714	2173.2896	0.90	0	(30)	0.025	1	K.RPTGRPIANAGALVLEAKL 6328
6324	725.4311	2173.2714	2173.2896	0.91	0	41	0		

6483	738.3827	2212.1282	2212.1223	1.79	0	(76)	9e-008	1	KAVADNPNQPLSSLSLVTEK.Q
6484	1107.0732	2212.1919	2212.1223	4.38	0	83	1.3e-008	1	KAVADNPNQPLSSLSLVTEK.Q
6502	1111.0837	2220.0929	2220.0810	0.83	0	103	1.3e-008	1	K.QEGISVPSDVTGDVLLDGSRT
6503	741.0383	2220.0932	2220.0810	0.97	0	(87)	4.4e-007	1	K.QEGISVPSDVTGDVLLDGSRT
6524	742.7029	2225.0868	2225.0885	0.14	0	(58)	0.00074	1	KARPVTVYNGQSWTYGELNKA 6525 6527
6529	1113.5564	2225.0963	2225.0885	4.40	0	80	0.00023	1	KARPVTVYNGQSWTYGELNKA
6535	743.0343	2226.0611	2226.0705	4.74	0	(47)	0.0049	1	KARPVTVYNGQSWTYGELNKA
6541	745.8801	2234.0183	2234.0188	0.70	1	82	8.7e-005	1	KEQTVYKQDEEYVLDVFK.G
6542	1118.0207	2234.0289	2234.0188	4.88	1	(43)	0.0082	1	KEQTVYKQDEEYVLDVFK.G
6562	1121.0503	2240.0680	2240.0792	3.06	0	115	7.3e-010	1	R.SPLFSVMFNMQNMIEPSRL.L
6566	748.0398	2241.0879	2241.0832	11.0	0	(54)	0.001	1	R.SPLFSVMFNMQNMIEPSRL.L
6606	753.0319	2258.0738	2258.0741	-0.15	0	(78)	2.4e-005	1	R.SPLFSVMFNMQNMIEPSRL.L
6609	1129.0477	2258.0809	2258.0741	3.02	0	(72)	1.3e-005	1	R.SPLFSVMFNMQNMIEPSRL.L
6622	758.3821	2272.0845	2272.0890	-1.97	0	(88)	2.5e-005	1	R.SPLFSVMFNMQNMIEPSRL.L
6633	758.3843	2272.0711	2272.0890	0.88	0	(82)	0.00012	1	R.SPLFSVMFNMQNMIEPSRL.L
6654	1137.0432	2272.0719	2272.0890	1.28	0	(38)	0.029	1	R.SPLFSVMFNMQNMIEPSRL.L
6655	1137.0440	2272.0735	2272.0890	1.91	0	(83)	1e-008	1	R.SPLFSVMFNMQNMIEPSRL.L
6701	780.7367	2276.1862	2276.1910	-1.21	1	(57)	0.00061	1	KALPVPDTKVHQLFEETAQR.H
6702	570.8054	2276.1923	2276.1910	0.59	1	73	1.1e-005	1	KALPVPDTKVHQLFEETAQR.H
6728	765.6976	2288.0707	2288.0838	2.98	0	(77)	3e-008	1	R.SPLFSVMFNMQNMIEPSRL.L
6748	1145.6337	2288.0828	2288.0478	2.13	0	(44)	0.0085	1	R.SPLFSVMFNMQNMIEPSRL.L
6757	764.3796	2290.1171	2290.1158	0.68	0	(81)	0.0002	1	K.VESAFQTSFDPLVYPGKT
6758	1146.0874	2290.1202	2290.1158	1.94	0	81	0.0002	1	K.VESAFQTSFDPLVYPGKT
6841	772.0885	2313.1477	2313.1488	-0.47	2	71	2.2e-005	1	K.AEVDLHFEAKEDEADQKICE
6855	772.7628	2315.2380	2315.2346	0.84	1	54	0.00079	1	K.IGNLEGHGREDIPVNSR.T.6859
6824	776.7322	2333.1747	2333.1750	-0.14	1	(89)	3.9e-005	1	KDKGGNTAAAYVTPESADIEALKS
6825	1167.5699	2333.1851	2333.1750	4.33	1	70	2.7e-005	1	KDKGGNTAAAYVTPESADIEALKS
6829	779.0817	2334.2232	2334.2178	2.25	1	84	8.9e-005	1	RAEGKQADQGPVEGVLTPQR.W
6855	782.3880	2344.1722	2344.1546	7.49	0	81	0.0002	1	KEQLTLQLSISPYEAGHGTSK.F
6858	783.0291	2346.0855	2346.0852	0.15	0	(87)	2.2e-007	1	R.NLNTYVSWFSEASLTENDKT
6859	1174.0426	2346.0798	2346.0852	2.34	0	97	2.6e-008	1	R.NLNTYVSWFSEASLTENDKT
6864	784.3876	2360.0808	2360.0753	2.25	1	(80)	1.4e-008	1	U K.DEYVWKEYSFTWDELVGR.I
6865	1178.0492	2360.0838	2360.0753	3.81	1	94	5.4e-008	1	U K.DEYVWKEYSFTWDELVGR.I
6878	785.3879	2363.1418	2363.1372	1.94	1	(70)	2.4e-005	1	R.NMTAIGQYEGTVSLDDGKWR.N
6879	1177.5807	2363.1488	2363.1372	4.08	1	101	2e-008	1	R.NMTAIGQYEGTVSLDDGKWR.N
6891	786.0500	2365.1291	2365.1063	9.72	1	(88)	5.7e-005	1	R.NMTAIGQYEGTVSLDDGKWR.N
7025	790.7201	2389.1384	2389.1322	2.65	1	(87)	5.1e-007	1	R.NMTAIGQYEGTVSLDDGKWR.N.7029
7026	1185.6776	2389.1405	2389.1322	3.51	1	(85)	8.4e-007	1	R.NMTAIGQYEGTVSLDDGKWR.N.7029
7027	790.7316	2389.1729	2389.1686	1.84	0	(58)	0.00042	1	R.QLAAYMEASVSGGHQVLKPADK.Q
7035	791.4074	2371.2004	2371.1842	6.85	0	(42)	0.018	1	R.QLAAYMEASVSGGHQVLKPADK.Q
7073	867.5582	2386.1955	2386.1951	0.18	0	(42)	0.017	1	R.QLAAYMEASVSGGHQVLKPADK.Q
7074	796.4082	2386.1987	2386.1951	0.70	0	82	0.0002	1	R.QLAAYMEASVSGGHQVLKPADK.Q
7100	1198.5979	2385.1812	2385.1783	2.07	0	(97)	5e-008	1	R.QTISYVWMPVLLMEGELDISRL.L
7101	798.4012	2385.1817	2385.1783	2.28	0	(81)	2.2e-008	1	R.QTISYVWMPVLLMEGELDISRL.L
7102	1198.1038	2386.1830	2386.1803	18.8	0	(59)	0.0012	1	R.QTISYVWMPVLLMEGELDISRL.L
7141	804.7308	2411.1705	2411.1712	-0.31	0	(82)	0.00014	1	R.QTISYVWMPVLLMEGELDISRL.L
7142	1206.5945	2411.1744	2411.1712	1.32	0	(101)	2e-008	1	R.QTISYVWMPVLLMEGELDISRL.L.7144
7143	804.7325	2411.1768	2411.1712	1.90	0	104	1e-008	1	R.QTISYVWMPVLLMEGELDISRL.L
7175	806.7693	2423.2681	2423.2710	-1.19	0	(54)	0.00092	1	R.ETAGDHLIAVHLVDDGVSWR.L
7186	806.8282	2423.2788	2423.2710	1.98	0	57	0.00039	1	R.ETAGDHLIAVHLVDDGVSWR.L
7189	806.4062	2425.1938	2425.1947	-0.45	1	51	0.00024	1	R.MVYREENGQVQYKPIGESK.V
7197	1213.6078	2425.2013	2425.1947	2.70	1	(38)	0.041	1	R.MVYREENGQVQYKPIGESK.V
7208	810.0838	2427.1890	2427.1881	1.17	0	(97)	4.5e-008	1	R.QTISYVWMPVLLMEGELDISRL.L
7209	1214.5680	2427.1754	2427.1881	3.81	0	(91)	2.3e-007	1	R.QTISYVWMPVLLMEGELDISRL.L
7210	810.0898	2427.1871	2427.1827	10.0	1	(43)	0.013	1	R.MVYREENGQVQYKPIGESK.V
7219	811.7325	2432.1768	2432.1747	0.44	1	(81)	2.1e-008	1	R.EEDIGLSPDYATLFDKDIR.R
7220	1217.0888	2432.1829	2432.1747	3.38	1	103	1.1e-008	1	R.EEDIGLSPDYATLFDKDIR.R
7241	814.7388	2441.1888	2441.1886	-0.41	1	(43)	0.014	1	R.MVYREENGQVQYKPIGESK.V
7247	815.0884	2442.1774	2442.1738	1.54	1	(44)	0.0088	1	R.MVYREENGQVQYKPIGESK.V
7280	820.0783	2457.2129	2457.2097	1.30	1	57	0.00046	1	K.VSFEVDLYGSEEMLRBQK.I
7323	1237.6152	2473.2169	2473.2046	4.58	1	(47)	0.005	1	K.VSFEVDLYGSEEMLRBQK.I
7332	827.0833	2478.1680	2478.1703	-0.91	2	103	1.1e-008	1	U K.DEYVWKEYSFTWDELVGR.I 7333 7335
7334	820.5498	2478.1701	2478.1703	-0.08	2	(48)	0.0007	1	U K.DEYVWKEYSFTWDELVGR.I 7336 7337
7341	827.3832	2479.1577	2479.1543	1.38	2	(60)	0.00022	1	U K.DEYVWKEYSFTWDELVGR.I
7385	830.7816	2489.2828	2489.2850	3.04	2	80	0.0003	1	K.GREEDAEIIFVQPFELNRA
7386	830.7780	2489.3082	2489.3013	1.98	1	57	0.00048	1	K.GGNTAAAYVTPESADIEALSKALKE
7370	831.7826	2482.3680	2482.3540	0.80	0	74	5.5e-008	1	K.TANLHQVTGPNLFAVWGNLSKY
7371	1247.1855	2482.3685	2482.3540	1.03	0	(88)	3.4e-005	1	K.TANLHQVTGPNLFAVWGNLSKY
7380	834.0824	2489.1655	2489.1652	0.10	0	(50)	0.0019	1	K.ELPAPQSEAVQPEYAAPETESBKK
7381	1250.5914	2489.1683	2489.1652	1.23	0	86	4.5e-005	1	K.ELPAPQSEAVQPEYAAPETESBKK
7391	828.5873	2602.2389	2602.2390	0.38	1	83	0.00014	1	K.DLFQHTBEELTOYVERAEGK.Q.7390
7392	835.0873	2602.2400	2602.2390	0.39	1	(80)	0.00031	1	K.DLFQHTBEELTOYVERAEGK.Q.7390
7416	837.7820	2610.2841	2610.2814	1.08	0	(50)	0.00031	1	U K.VLFEQTOIEMALYLEENESKE
7449	843.0942	2628.2807	2628.2883	1.75	0	87	5.3e-005	1	U K.VLFEQTOIEMALYLEENESKE
7459	843.7804	2628.2693	2628.2693	-3.08	0	44	0.011	1	R.VYLQEGNKVQPEVAGELCYAQR.G
7528	844.0744	2672.2885	2672.2870	0.58	1	43	0.015	1	K.VBRDAAFADIFTAQGHVWAEYR.Y
7601	852.3205	2605.2529	2605.2383	5.59	0	(42)	0.017	1	K.MYGHTEFINHYGTEATGAIAGR.V
7631	873.7751	2618.3034	2618.3050	-0.80	1	84	0.00013	1	K.LEMKQLGQHTBEELTOYVERA
7632	855.5839	2618.3063	2618.3050	0.51	1	(41)	0.024	1	K.LEMKQLGQHTBEELTOYVERA
7645	856.3153	2621.2321	2621.2333	-0.43	0	(42)	0.015	1	K.MYGHTEFINHYGTEATGAIAGR.V
7646	874.7916	2621.2329	2621.2333	-0.12	0	53	0.0001	1	K.MYGHTEFINHYGTEATGAIAGR.V
7647	1811.6283	2621.2381	2621.2333	1.88	0	(45)	0.0074	1	K.MYGHTEFINHYGTEATGAIAGR.V
7667	876.7803	2627.2591	2627.2602	-0.42	1	48	0.0043	1	K.ELPAPQSEAVQPEYAAPETESBKK.L
7669	876.7813	2627.2620	2627.2602	0.70	1	46	0.0088	1	K.ELPAPQSEAVQPEYAAPETESBKK.L
7686	876.1081	2634.3024	2634.2898	0.95	1	(82)	0.00021	1	K.LEMKQLGQHTBEELTOYVERA
7746	889.4619	2685.3837	2685.3640	-0.09	0	78	4.7e-008	1	R.TVQWFTAQYVPLDISDASAVIKT 7745 7747
7749	1333.6832	2685.3719	2685.3640	2.90	0	(74)	1.1e-005	1	R.TVQWFTAQYVPLDISDASAVIKT
7786	871.6184	2682.4385	2682.4327	1.40	0	(89)	2.6e-007	1	R.IELSEIEVQLQLSEVQDAAVTAVK.D
7797	895.1839	2682.4388	2682.4327	2.84	0	(111)	1.4e-009	1	R.IELSEIEVQLQLSEVQDAAVTAVK.D
7798	1342.2290	2682.4434	2682.4327	4.00	0	113	8.5e-010	1	R.IELSEIEVQLQLSEVQDAAVTAVK.D
7812	898.8202	2687.4389	2687.4382	0.29	1	107	4.1e-009	1	K.LLLKQEGISVPSDVTGDVLLDGSRT.7813
7815	1945.2283	2688.4420	2688.4222	7.37	1	(89)	2.3e-005	1	K.LLLKQEGISVPSDVTGDVLLDGSRT
7910	909.4829	2725.3368	2725.3417	-1.78	0	(72)	2e-005	1	K.SLMAETDTTMYMFLAARVLLSKY
7919	911.4301	2731.2863	2731.2788	-3.10	1	82	0.0013	1	R.DTSSRPLFSVMFNMQNMIEPSRL.L
7920	911.4386	2731.2881	2731.2788	4.15	1	(41)	0.019	1	R.DTSSRPLFSVMFNMQNMIEPSRL.L
7921	884.1136	2732.4250	2732.4232	0.67	2	(68)	0.00088	1	KDKGGNTAAAYVTPESADIEALGALK.E
7922	911.8186	2732.4278	2732.4232	1.87	2	72	1.7e-005	1	KDKGGNTAAAYVTPESADIEALGALK.E
7923	1987.2290	2732.4354	2732.4232	4.47	2	(40)	0.025	1	KDKGGNTAAAYVTPESADIEALGALK.E
7937	914.7876	2741.3408	2741.3398	1.54	0	(80)	3.2e-008	1	K.SLMAETDTTMYMFLAARVLLSKY
7938	1971.6794	2741.3443	2741.3398	2.83	0	91	2.8e-007	1	K.SLMAETDTTMYMFLAARVLLSKY
7946	917.1008	2748.2799	2748.2867	8.82	1	(47)	0.0043	1	R.DTSSRPLFSVMFNMQNMIEPSRL.L
7952	888.3401	2749.3315	2749.3282	1.19	1	38	0.049	1	R.KYGHTEFINHYGTEATGAIAGR.V
7964	889.8448	2755.3603	2755.3651	-1.78	2	45	0.01	1	K.ELPAPQSEAVQPEYAAPETESBKK.L
7987	1979.6788	2757.3370	2757.3315	2.00	0	(82)	0.00019	1	K.SLMAETDTTMYMFLAARVLLSKY
7988	920.1205	2757.3388	2757.3315	2.94	0	(97)	5.5e-005	1	K.SLMAETDTTMYMFLAARVLLSKY
7992	1988.6790	2771.3434	2771.3727	-10.80	1	(45)	0.005	1	RILLEDFA8GYMKAKEESLVFPQKT
7995	893.8909	2771.3745	2771.3727	0.82	1	(82)	0.0021	1	RILLEDFA8GYMKAKEESLVFPQKT
8012	896.8327	2782.5019	2782.50						

8343	876.1987	2825.5883	2825.5546	4.89	1	80	1.5e-008	1	R.IE.LS.EI.EV.QL.AQ.LS.EV.QD.AA.VT.AV.KD.G
8356	1468.2330	2834.4515	2834.4399	3.94	1	39	0.042	1	K.A.G.A.F.V.P.I.P.D.P.Y.D.P.O.R.I.E.V.L.Q.D.S.G.A.K.L
8380	983.4919	2847.4540	2847.4491	1.85	0	65	0.00011	1	K.F.D.L.T.L.G.G.F.T.D.E.N.G.I.Q.L.E.Y.A.T.L.F.A.K.E
8381	1474.7383	2847.4561	2847.4491	2.38	0	(60)	0.00034	1	K.F.D.L.T.L.G.G.F.T.D.E.N.G.I.Q.L.E.Y.A.T.L.F.A.K.E
8393	1476.7279	2851.4413	2851.4301	3.78	0	(58)	0.0011	1	K.Q.T.N.L.S.A.L.E.H.Q.E.Y.P.F.E.D.L.V.N.G.L.D.L.P.R.D
8399	985.1497	2852.4273	2852.4141	4.48	0	(58)	0.00085	1	K.Q.T.N.L.S.A.L.E.H.Q.E.Y.P.F.E.D.L.V.N.G.L.D.L.P.R.D 8400
8428	990.4901	2868.4483	2868.4586	-2.80	0	104	1.3e-008	1	K.Q.T.N.L.S.A.L.E.H.Q.E.Y.P.F.E.D.L.V.N.G.L.D.L.P.R.D 8429 8430
8441	1485.7396	2899.4647	2899.4406	6.10	0	(42)	0.021	1	K.Q.T.N.L.S.A.L.E.H.Q.E.Y.P.F.E.D.L.V.N.G.L.D.L.P.R.D
8453	993.4947	2977.4624	2977.4597	0.93	1	42	0.025	1	K.F.D.L.S.E.A.V.E.E.E.D.I.G.L.S.F.Y.A.T.A.L.F.K.D
8514	1003.5490	3007.8252	3007.8206	1.58	0	47	0.0027	1	K.Q.L.S.L.T.L.P.S.H.M.I.P.F.F.V.Q.D.A.I.P.L.T.A.N.G.K.T
8535	1008.8798	3023.8171	3023.8154	0.65	0	(42)	0.01	1	K.Q.L.S.L.T.L.P.S.H.M.I.P.F.F.V.Q.D.A.I.P.L.T.A.N.G.K.T
8584	785.6608	3058.8135	3058.8198	-1.68	1	(77)	4.7e-008	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D 8586
8597	1020.5485	3058.8238	3058.8198	1.82	1	88	5.7e-007	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D 8588
8591	1630.8185	3059.8185	3059.8028	5.19	1	(72)	1.3e-005	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D
8592	1631.2720	3060.8294	3060.8287	0.89	0	(85)	0.0012	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8593	1021.1850	3060.8332	3060.8287	2.12	0	114	1.3e-009	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8594	1531.8201	3060.8298	3060.8286	12.7	1	(40)	0.021	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D
8615	1024.8294	3071.4574	3071.4513	2.01	0	(73)	1.3e-005	1	K.Q.A.S.P.S.L.W.N.G.Y.G.P.T.E.N.T.T.F.S.F.S.F.L.D.R.E
8642	1045.2473	3088.4801	3088.4778	0.73	0	(98)	8.6e-008	1	K.Q.A.S.P.S.L.W.N.G.Y.G.P.T.E.N.T.T.F.S.F.S.F.L.D.R.E
8644	1030.6028	3088.4869	3088.4778	2.81	0	107	5.8e-009	1	K.Q.A.S.P.S.L.W.N.G.Y.G.P.T.E.N.T.T.F.S.F.S.F.L.D.R.E
8683	1037.1984	3108.8733	3108.8624	3.50	0	38	0.048	1	U K.T.L.S.Q.S.L.P.D.Y.M.F.A.H.L.G.M.D.N.L.P.T.N.G.K.I
8690	778.8745	3111.4689	3111.4688	0.11	1	63	0.00015	1	U K.G.E.Q.L.P.E.P.A.L.H.Y.D.F.A.V.W.G.N.E.A.E.Q.Q.E.R.M
8691	1038.1848	3111.4718	3111.4688	1.04	1	(52)	0.0017	1	U K.G.E.Q.L.P.E.P.A.L.H.Y.D.F.A.V.W.G.N.E.A.E.Q.Q.E.R.M
8725	784.9388	3135.7190	3135.7195	0.80	1	(33)	0.048	1	R.Q.L.S.L.T.L.P.S.H.M.I.P.F.F.V.Q.D.A.I.P.L.T.A.N.G.K.T
8755	1051.5803	3151.7191	3151.7104	2.78	1	49	0.0014	1	R.Q.L.S.L.T.L.P.S.H.M.I.P.F.F.V.Q.D.A.I.P.L.T.A.N.G.K.T
8797	1068.8679	3173.5819	3173.5703	3.87	1	45	0.01	1	R.Q.I.V.E.V.F.N.S.T.K.A.E.L.P.E.G.M.A.V.H.Q.V.F.E.E.Q.A.K.R
8843	1896.3157	3188.8188	3188.8218	-1.52	1	(52)	0.0023	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8845	1063.8840	3188.8303	3188.8216	2.71	1	92	1.9e-007	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8847	1064.2085	3189.5978	3189.6056	-2.48	1	(79)	3.9e-008	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8850	838.8950	3189.8388	3189.8058	10.3	1	(54)	0.0012	1	R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
8875	1809.8441	3217.8737	3217.8733	0.12	1	(55)	0.00083	1	K.S.A.L.K.E.T.L.P.D.Y.M.F.A.F.W.V.T.N.E.L.P.V.T.A.N.G.K.V
9017	806.4241	3233.8674	3233.8682	-0.25	1	(44)	0.012	1	K.S.A.L.K.E.T.L.P.D.Y.M.F.A.F.W.V.T.N.E.L.P.V.T.A.N.G.K.V
9022	1079.2324	3234.8754	3234.8822	7.18	1	57	0.00051	1	K.S.A.L.K.E.T.L.P.D.Y.M.F.A.F.W.V.T.N.E.L.P.V.T.A.N.G.K.V
9101	826.4412	3301.7355	3301.7405	-1.51	2	(81)	2e-008	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D.G
9104	828.6917	3302.7377	3302.7245	4.00	2	87	4.2e-007	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D.G
9105	828.9483	3303.7921	3303.7085	13.2	2	(40)	0.021	1	R.G.Y.R.I.E.S.E.I.V.Q.L.A.Q.L.S.E.V.Q.D.A.A.V.T.A.V.K.D.G
9145	1108.2249	3315.8827	3315.8412	3.48	1	114	1.3e-009	1	K.V.Q.A.S.P.S.L.W.N.G.Y.G.P.T.E.N.T.T.F.S.F.L.D.R.E
9255	1121.5829	3381.8888	3381.8506	4.80	1	40	0.039	1	K.D.E.E.Y.L.D.V.F.K.G.P.L.D.P.A.D.F.E.R.P.A.E.R.S
9261	1124.5823	3370.7650	3370.7823	0.81	0	44	0.011	1	K.T.V.L.S.Y.A.F.D.L.G.V.T.S.M.F.F.V.L.L.G.G.E.L.H.V.K.E
9295	949.8528	3395.7815	3395.7912	-2.88	1	39	0.028	1	K.Q.L.S.L.T.L.P.S.H.M.I.P.F.F.V.Q.D.A.I.P.L.T.A.N.G.K.T.D.R.N
9328	1715.2101	3428.4058	3428.4148	-2.81	0	83	5.9e-008	1	K.E.F.T.S.D.F.S.A.E.D.L.E.M.D.E.M.G.D.F.D.M.L.E.E.N.L.K.
9329	1143.8120	3428.4142	3428.4148	-0.11	0	(48)	0.00023	1	K.E.F.T.S.D.F.S.A.E.D.L.E.M.D.E.M.G.D.F.D.M.L.E.E.N.L.K.
9330	1143.8217	3428.4432	3428.4148	6.34	0	(43)	0.0013	1	K.E.F.T.S.D.F.S.A.E.D.L.E.M.D.E.M.G.D.F.D.M.L.E.E.N.L.K.
9345	1148.1478	3444.4209	3444.4095	3.32	0	(38)	0.0021	1	K.E.F.T.S.D.F.S.A.E.D.L.E.M.D.E.M.G.D.F.D.M.L.E.E.N.L.K.
9385	878.8859	3502.8347	3502.8310	1.05	0	(46)	0.008	1	R.S.A.L.D.G.N.L.L.H.V.A.F.E.N.Y.P.L.D.Q.E.L.E.N.G.S.M.E.D.R.L
9396	1168.5546	3502.8419	3502.8310	5.10	0	(43)	0.014	1	R.S.A.L.D.G.N.L.L.H.V.A.F.E.N.Y.P.L.D.Q.E.L.E.N.G.S.M.E.D.R.L
9398	1173.8870	3518.8391	3518.8259	3.72	0	54	0.00098	1	R.S.A.L.D.G.N.L.L.H.V.A.F.E.N.Y.P.L.D.Q.E.L.E.N.G.S.M.E.D.R.L
9402	880.9137	3519.8257	3519.8100	4.47	0	(38)	0.033	1	R.S.A.L.D.G.N.L.L.H.V.A.F.E.N.Y.P.L.D.Q.E.L.E.N.G.S.M.E.D.R.L
9404	1780.8239	3519.8331	3519.8100	8.59	0	(47)	0.0044	1	R.S.A.L.D.G.N.L.L.H.V.A.F.E.N.Y.P.L.D.Q.E.L.E.N.G.S.M.E.D.R.L
9563	727.9820	3834.7738	3834.7759	-0.88	1	(39)	0.048	1	R.Q.L.A.A.Y.M.E.A.S.A.V.S.G.G.H.V.L.K.P.A.D.K.D.M.Y.P.L.S.S.A.Q.K.R
9572	810.9588	3838.8061	3838.8018	1.19	1	(84)	1.2e-008	1	U K.V.L.F.E.P.T.Q.I.E.M.A.L.Y.L.E.E.N.S.K.E.E.Q.T.F.E.P.I.R.Q
9576	1214.8110	3840.8111	3840.7858	0.94	1	(49)	0.0042	1	U K.V.L.F.E.P.T.Q.I.E.M.A.L.Y.L.E.E.N.S.K.E.E.Q.T.F.E.P.I.R.Q
9581	811.7124	3842.8205	3842.8185	1.08	0	(71)	3.2e-005	1	K.K.P.Y.T.L.V.N.N.Y.G.P.T.E.N.T.V.A.T.S.A.E.H.P.E.E.G.S.L.S.I.G.R.A
9582	729.5720	3842.8237	3842.8185	1.97	0	(45)	0.011	1	K.K.P.Y.T.L.V.N.N.Y.G.P.T.E.N.T.V.A.T.S.A.E.H.P.E.E.G.S.L.S.I.G.R.A
9583	1215.2849	3842.8329	3842.8185	4.49	0	78	5.5e-008	1	K.K.P.Y.T.L.V.N.N.Y.G.P.T.E.N.T.V.A.T.S.A.E.H.P.E.E.G.S.L.S.I.G.R.A
9587	811.9830	3843.8229	3843.8008	6.14	0	(84)	0.00014	1	K.K.P.Y.T.L.V.N.N.Y.G.P.T.E.N.T.V.A.T.S.A.E.H.P.E.E.G.S.L.S.I.G.R.A
9601	813.7011	3850.7781	3850.7708	1.18	1	48	0.0081	1	R.Q.L.A.A.Y.M.E.A.S.A.V.S.G.G.H.V.L.K.P.A.D.K.D.M.Y.P.L.S.S.A.Q.K.R
9607	814.9589	3855.7946	3855.7987	-0.88	1	105	1.1e-008	1	U K.V.L.F.E.P.T.Q.I.E.M.A.L.Y.L.E.E.N.S.K.E.E.Q.T.F.E.P.I.R.Q
9610	1219.9457	3858.8152	3858.7807	9.44	1	(75)	1.1e-005	1	U K.V.L.F.E.P.T.Q.I.E.M.A.L.Y.L.E.E.N.S.K.E.E.Q.T.F.E.P.I.R.Q
9668	1232.2299	3893.8878	3893.8810	1.83	1	41	0.013	1	K.G.F.T.F.E.I.S.F.N.Y.L.G.O.F.D.S.E.V.K.T.D.F.F.E.P.S.A.F.D.M.G.R.Q
9800	1250.9479	3749.8218	3749.8134	2.23	0	55	0.0014	1	R.L.N.D.Y.F.E.T.N.G.V.I.T.T.P.L.Q.A.E.Q.F.M.E.L.E.N.T.S.R.V
9806	1273.1895	3816.8798	3816.8740	0.88	1	44	0.00047	1	K.E.D.K.E.F.T.S.D.F.S.A.E.D.L.E.M.D.E.M.G.D.F.D.M.L.E.E.N.L.K.
9972	1289.9888	3888.9388	3888.9135	6.80	1	41	0.028	1	R.L.S.O.D.L.L.S.Q.S.A.H.L.L.E.E.R.H.M.T.Q.I.E.A.T.F.A.L.F.E.K.Q
10018	1914.8512	3840.9919	3840.8271	1.22	0	46	0.0089	1	K.D.W.A.E.L.A.F.S.Q.S.A.H.L.L.Q.G.A.E.Y.W.S.Q.A.A.E.Q.V.S.P.L.K.D
10023	988.5003	3841.8721	3841.8687	3.40	2	48	0.0087	1	U K.E.L.A.L.L.Y.G.E.Q.L.P.E.P.A.L.H.Y.D.F.A.V.W.G.N.E.A.E.Q.Q.E.R.M
10089	1008.0206	4028.0839	4028.0354	4.60	0	70	3.5e-005	1	K.Y.N.F.T.D.V.F.G.T.V.G.S.R.P.S.E.I.N.G.I.E.T.M.A.G.L.F.I.N.T.P.V.R.V
10107	1012.2824	4045.0205	4044.9826	14.3	1	(58)	0.00058	1	R.N.F.L.F.N.V.M.Y.T.T.E.N.P.D.K.E.Q.L.T.Q.N.L.S.I.S.P.Y.E.A.H.Q.G.T.S.K.F
10113	1012.5146	4046.0290	4045.9893	7.59	0	(45)	0.013	1	K.Y.N.F.T.D.V.F.G.T.V.G.S.R.P.S.E.I.N.G.I.E.T.M.A.G.L.F.I.N.T.P.V.R.V
10132	1015.7899	4058.9948	4058.9896	1.25	1	(74)	1.5e-005	1	R.N.F.L.F.N.V.M.Y.T.T.E.N.P.D.K.E.Q.L.T.Q.N.L.S.I.S.P.Y.E.A.H.Q.G.T.S.K.F
10133	1854.3429	4080.0089	4080.9735	8.22	1	78	6.5e-008	1	R.N.F.L.F.N.V.M.Y.T.T.E.N.P.D.K.E.Q.L.T.Q.N.L.S.I.S.P.Y.E.A.H.Q.G.T.S.K.F
10172	1032.2487	4124.9877	4124.9823	-1.12	0	81	0.00024	1	R.T.L.S.P.L.D.E.N.E.N.P.E.T.A.Y.E.N.L.A.Y.M.Y.T.S.O.T.T.G.O.P.K.G
10176	1378.8648	4128.9725	4128.9303	10.2	0	(65)	0.0011	1	R.T.L.S.P.L.D.E.N.E.N.P.E.T.A.Y.E.N.L.A.Y.M.Y.T.S.O.T.T.G.O.P.K.G
10182	1098.2488	4140.9880	4140.9872	2.12	0	(47)	0.007	1	R.T.L.S.P.L.D.E.N.E.N.P.E.T.A.Y.E.N.L.A.Y.M.Y.T.S.O.T.T.G.O.P.K.G
10183	1381.3294	4140.9882	4140.9872	2.17	0	(68)	0.00078	1	R.T.L.S.P.L.D.E.N.E.N.P.E.T.A.Y.E.N.L.A.Y.M.Y.T.S.O.T.T.G.O.P.K.G
10188	829.3882	4141.9540	4141.9419	3.29	0	(41)	0.028	1	R.T.L.S.P.L.D.E.N.E.N.P.E.T.A.Y.E.N.L.A.Y.M.Y.T.S.O.T.T.G.O.P.K.G
10273	1448.0833	4341.1882	4341.1259	9.78	1	(55)	0.0012	1	K.S.L.M.A.E.T.D.T.T.M.Y.F.L.L.A.A.F.N.L.L.S.K.Y.A.S.Q.D.D.I.V.G.S.P.T.A.G.R.T
10281	1483.7222	4368.1447	4368.1048	9.16	1	72	2.4e-005	1	K.S.L.M.A.E.T.D.T.T.M.Y.F.L.L.A.A.F.N.L.L.S.K.Y.A.S.Q.D.D.I.V.G.S.P.T.A.G.R.T
10285	1094.0453	4372.1821	4372.1317	4.88	1	(70)	3.8e-005	1	K.S.L.M.A.E.T.D.T.T.M.Y.F.L.L.A.A.F.N.L.L.S.K.Y.A.S.Q.D.D.I.V.G.S.P.T.A.G.R.T
10286	1488.3916	4372.1830	4372.1317	4.87	1	(85)	0.00012	1	K.S.L.M.A.E.T.D.T.T.M.Y.F.L.L.A.A.F.N.L.L.S.K.Y.A.S.Q.D.D.I.V.G.S.P.T.A.G.R.T
10291	1484.7202	4381.1388	4381.1420	-0.73	1	55	0.0013	1	K.N.A.G.Y.V.P.T.E.E.D.R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
10292	1098.7977	4381.1818	4381.1420	4.51	1	(47)	0.0088	1	K.N.A.G.Y.V.P.T.E.E.D.R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
10322	1190.6689	4618.2346	4618.2131	4.75	1	(47)	0.0088	1	K.N.T.S.F.K.W.A.E.L.A.F.S.Q.S.A.H.L.L.Q.G.A.E.Y.W.S.Q.A.A.E.Q.V.S.P.L.K.D 10324
10326	1190.8200	4619.2506	4619.2370	3.06	2	(42)	0.025	1	K.N.A.G.Y.V.P.T.E.E.D.R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K
10328	1807.7483	4620.2172	4620.1812	7.97	1	80	0.00042	1	K.N.T.S.F.K.W.A.E.L.A.F.S.Q.S.A.H.L.L.Q.G.A.E.Y.W.S.Q.A.A.E.Q.V.S.P.L.K.D
10332	1131.3188	4621.2483	4621.2050	9.14	2	48	0.0054	1	K.N.A.G.Y.V.P.T.E.E.D.R.M.A.G.T.G.A.V.S.F.D.A.G.T.F.E.V.F.G.A.L.L.N.G.A.L.Y.P.V.K.K

2. [gi|674707898](#) non-ribosomal peptide synthetase [Bacillus subtilis]
3. [gi|727788222](#) non-ribosomal peptide synthetase [Bacillus subtilis]
4. [gi|827042897](#) non-ribosomal peptide synthetase [Bacillus subtilis]
5. [gi|895816705](#) non-ribosomal peptide synthetase [Bacillus subtilis]
6. [gi|18542182](#) ATP-dependent isoleucine adenylation [Bacillus subtilis]
7. [gi|874380654](#) non-ribosomal peptide synthetase [Bacillus subtilis]
8. [gi|499188883](#) MULTISPECIES: Surfactin synthase subunit 2 [Bacillus]
9. [gi|740842895](#) non-ribosomal peptide synthetase [Bacillus subtilis]
10. [gi|16292826](#) ATP-dependent isoleucine adenylation [Bacillus subtilis]
11. [gi|760325309](#) non-ribosomal peptide synthetase [Bacillus subtilis]
12. [gi|810425190](#) non-ribosomal peptide synthetase [Bacillus subtilis]
13. [gi|752706030](#) non-ribosomal peptide synthetase [Bacillus subtilis]
14. [gi|752704565](#) non-ribosomal peptide synthetase [Bacillus subtilis]
15. [gi|504288673](#) non-ribosomal peptide synthetase [Bacillus subtilis]
16. [gi|398482](#) srfA2 [Bacillus subtilis]
17. [gi|357258184](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
18. [gi|860519617](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
19. [gi|803878925](#) non-ribosomal peptide synthetase [Bacillus subtilis]
20. [gi|740841901](#) non-ribosomal peptide synthetase [Bacillus subtilis]
21. [gi|695808907](#) non-ribosomal peptide synthetase [Bacillus subtilis]
22. [gi|499188882](#) MULTISPECIES: Surfactin synthase subunit 1 [Bacillus]
23. [gi|915488337](#) non-ribosomal peptide synthetase [Bacillus subtilis]
24. [gi|754281220](#) non-ribosomal peptide synthetase [Bacillus subtilis]
25. [gi|505915452](#) non-ribosomal peptide synthetase [Bacillus subtilis]
26. [gi|398481](#) srfA1 [Bacillus subtilis]
27. [gi|674707697](#) non-ribosomal peptide synthetase [Bacillus subtilis]
28. [gi|757756185](#) non-ribosomal peptide synthetase [Bacillus subtilis]
29. [gi|874380653](#) non-ribosomal peptide synthetase [Bacillus subtilis]
- 30

34. [gi|695818613](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

35. [gi|764654743](#) non-ribosomal peptide synthetase [Bacillus subtilis]

36. [gi|516292825](#) non-ribosomal peptide synthetase [Bacillus subtilis]

37. [gi|753213776](#) non-ribosomal peptide synthetase [Bacillus subtilis]

38. [gi|727789220](#) non-ribosomal peptide synthetase [Bacillus subtilis]

39. [gi|752689006](#) non-ribosomal peptide synthetase [Bacillus subtilis]

40. [gi|753212334](#) non-ribosomal peptide synthetase [Bacillus subtilis]

41. [gi|827042896](#) non-ribosomal peptide synthetase [Bacillus subtilis]

42. [gi|764674907](#) non-ribosomal peptide synthetase [Bacillus subtilis]

43. [gi|760325311](#) non-ribosomal peptide synthetase [Bacillus subtilis]

44. [gi|518543078](#) ATP-dependent isoleucine adenylyase, partial [Bacillus subtilis]

45. [gi|752705403](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

46. [gi|657202728](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

47. [gi|6339241916](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

48. [gi|742326987](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

49. [gi|753215568](#) non-ribosomal peptide synthetase [Bacillus subtilis]

50. [gi|764674904](#) non-ribosomal peptide synthetase [Bacillus subtilis]

51. [gi|764654741](#) non-ribosomal peptide synthetase [Bacillus subtilis]

52. [gi|773919036](#) non-ribosomal peptide synthetase [Bacillus subtilis]

53. [gi|760454014](#) Surfactin synthase subunit 1 [Bacillus subtilis]

54. [gi|768825197](#) peptide synthetase, partial [Bacillus subtilis]

55. [gi|518087235](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

56. [gi|695818466](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

57. [gi|4886972](#) recombinant surfactin/licherysin A synthetase [Bacillus subtilis]

58. [gi|443346037](#) surfactin synthetase subunit 2 SrfAB [Bacillus subtilis subsp. inaquosorum KCTC 13429]

59. [gi|623999290](#) Surfactin synthase subunit 2 [Bacillus subtilis]

60. [gi|695814150](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]

61. [gi|768825675](#) peptide synthetase, partial [Bacillus subtilis]

62. [gi|504282624](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]

63. [gi|736713228](#) non-ribosomal peptide synthetase [Bacillus subtilis]

64. [gi|768826052](#) hypothetical protein UM89_15610, partial [Bacillus subtilis]

65. [gi|320017752](#) plipastatin synthetase [Bacillus subtilis BSn5]

66. [gi|740642284](#) non-ribosomal peptide synthetase [Bacillus subtilis]

67. [gi|917518185](#) non-ribosomal peptide synthetase [Bacillus subtilis]

68. [gi|857228634](#) peptide synthetase [Bacillus subtilis]

69. [gi|917026198](#) non-ribosomal peptide synthetase [Bacillus subtilis]

70. [gi|504289870](#) non-ribosomal peptide synthetase [Bacillus subtilis]

71. [gi|819169245](#) non-ribosomal peptide synthetase [Bacillus subtilis]

72. [gi|825064565](#) peptide synthetase [Bacillus subtilis]

73. [gi|504292089](#) MULTISPECIES: hypothetical protein [Bacillus]

74. [gi|823999429](#) Surfactin synthase subunit 1 [Bacillus subtilis]

75. [gi|740678624](#) non-ribosomal peptide synthetase [Bacillus subtilis]

76. [gi|752704448](#) non-ribosomal peptide synthetase [Bacillus subtilis]

77. [gi|859925532](#) Long-chain-fatty-acid-CoA ligase [Bacillus subtilis E1]

78. [gi|727789361](#) polyketide synthase [Bacillus subtilis]

79. [gi|740642110](#) polyketide synthase [Bacillus subtilis]

80. [gi|727789763](#) non-ribosomal peptide synthetase [Bacillus subtilis]

81. [gi|505917300](#) polyketide synthase [Bacillus subtilis]

82. [gi|695807574](#) polyketide synthase [Bacillus subtilis]

83. [gi|504282623](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]

84. [gi|839242420](#) polyketide synthase [Bacillus subtilis]

85. [gi|727789758](#) non-ribosomal peptide synthetase [Bacillus subtilis]

86. [gi|740642286](#) non-ribosomal peptide synthetase [Bacillus subtilis]

87. [gi|505064947](#) polyketide synthase [Bacillus subtilis]

88. [gi|624004027](#) Polyketide synthase PksR [Bacillus subtilis]

89. [gi|740642206](#) polyketide synthase [Bacillus subtilis]

90. [gi|638114238](#) hypothetical protein BSNT_08422 [Bacillus subtilis subsp. natto BEST195]

91. [gi|751901523](#) Long-chain-fatty-acid-CoA ligase [Bacillus subtilis]

92. [gi|808340396](#) plipastatin synthetase [Bacillus subtilis HJ5]

93. [gi|753212572](#) non-ribosomal peptide synthetase [Bacillus subtilis]

94. [gi|740642208](#) polyketide synthase [Bacillus subtilis]

95. [gi|827043548](#) non-ribosomal peptide synthetase [Bacillus subtilis]

96. [gi|351468439](#) DNA-directed RNA polymerase subunit beta [Bacillus subtilis subsp. subtilis str. SC-8]

97. [gi|37577047](#) fengycin synthetase FenA [Bacillus subtilis]

98. [gi|740642428](#) integrase [Bacillus subtilis]

99. [gi|446490082](#) MULTISPECIES: DNA-directed RNA polymerase subunit beta' [Bacillus cereus group]

100. [gi|351470585](#) 2-oxoglutarate dehydrogenase E1 component [Bacillus subtilis subsp. subtilis str. SC-8]

101. [gi|740642207](#) polyketide synthase [Bacillus subtilis]

102. [gi|504290741](#) integrase [Bacillus subtilis]

103. [gi|74584702](#) non-ribosomal peptide synthase domain protein [Bacillus subtilis subsp. niger]

104. [gi|518088251](#) polyketide synthase [Bacillus subtilis]

105. [gi|695818224](#) polyketide synthase [Bacillus subtilis]

106. [gi|503155878](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]

107. [gi|740677509](#) non-ribosomal peptide synthetase [Bacillus subtilis]

108. [gi|82502197](#) SubC [Bacillus subtilis]

109. [gi|489324284](#) MULTISPECIES: aconitate hydratase [Bacillus]

110. [gi|7469241](#) polyketide synthetase pksP [similarity] - Bacillus subtilis

111. [gi|489423080](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]

112. [gi|763173615](#) hypothetical protein [Bacillus subtilis]

Figure S16. MASCOT report for MS/MS analysis of gel excised SrfAA bands from the *B. subtilis* ATCC 21332 proteome.

Database : NCBIhr 20151028 (73478315 sequences; 26746207444 residues)
 Taxonomy : *Bacillus subtilis* (127736 sequences)
 Enzyme : Trypsin
 Variable modifications : Deamidated (NQ),Gln->pyro-Glu (N-term Q),Oxidation (M),Acetyl (Protein N-term),Propionamide (C)
 Mass values : Monocotopic
 Protein Mass : Unrestricted
 Peptide Mass Tolerance: ± 15 ppm
 Fragment Mass Tolerance: ± 20 mmu
 Max Missed Cleavages : 3
 Instrument type : ESI-TRAP
 Number of queries : 11938

Protein hits [g|740641901](#) non-ribosomal peptide synthetase [*Bacillus subtilis*]
 1. [g|740641901](#) [Mass: 401919](#) [Score: 27604](#) [Matches: 685\(685\)](#) [Sequences: 245\(245\)](#) [emPAI: 30.35](#)
 non-ribosomal peptide synthetase [*Bacillus subtilis*]

Query	Observed	Mr(exp)	Mr(calc)	ppm	Miss	Score	Expect	Rank	Unique	Peptide
21	305.1952	608.3768	608.3768	-0.07	0	33	0.0033	1	KAHLLRI_20	
95	329.2182	656.4218	656.4221	-0.46	0	27	0.044	1	RIANLJKQ	
157	341.7486	681.4787	681.4788	-0.31	0	34	0.0019	1	KLVLPKCE	
181	347.6922	693.3698	693.3697	0.07	0	32	0.038	1	RTPDLAKA	
213	358.7187	715.4228	715.4228	-0.01	0	33	0.045	1	KALGTGKCG	
250	365.2345	728.4545	728.4545	0.05	0	35	0.024	1	KVLTLGRK	
273	366.7054	737.3902	737.3909	0.35	0	30	0.038	1	RTTFEIKD	
357	381.6698	761.3850	761.3854	-0.53	0	35	0.04	1	KGIQMSRL	
396	388.2009	774.3872	774.3872	0.03	0	36	0.038	1	KQETIERW	
428	397.2281	792.4417	792.4415	0.22	0	40	0.0089	1	KAMTLTKI	
490	401.7371	801.4596	801.4596	0.00	0	43	0.0098	1	R.VLLTGGDKL	
487	402.7400	803.4654	803.4654	0.01	0	42	0.0088	1	RAFQGLRR	
641	421.2204	840.4283	840.4276	-1.53	0	(41)	0.0054	1	KGVMEHRQ	
688	424.7390	847.4555	847.4552	0.34	0	37	0.03	1	R.GVSYVAPRLN	
716	429.2186	856.4228	856.4225	0.15	0	45	0.0023	1	KGVMEHRQ	
759	437.2431	872.4716	872.4716	0.02	1	52	0.00094	1	KLDAGVDRLL	
788	446.2015	890.3883	890.3882	0.12	0	31	0.044	1	KEWTFQDRV	
843	459.7213	917.4281	917.4277	0.51	1	(37)	0.014	1	KQMKEDIRH	
849	307.1605	918.4596	918.4593	0.40	1	(43)	0.0064	1	KQMKEDIRH	
950	460.2379	918.4613	918.4593	2.19	1	45	0.0047	1	KQMKEDIRH	
982	461.7351	921.4557	921.4556	0.09	0	42	0.0074	1	RLQDFANSKA	
984	462.2287	922.4387	922.4396	-0.91	0	(39)	0.013	1	RLQDFANSKA	
1006	464.2486	926.4824	926.4821	0.34	0	49	0.00077	1	K.GEQLPDRL	
1045	467.7370	933.4595	933.4590	0.59	0	52	0.00074	1	KETVLDMARL	
1049	468.2636	934.5126	934.5124	0.20	0	56	0.0002	1	RIAFSLAOKA	
1072	469.2505	936.4885	936.4851	1.54	1	(33)	0.049	1	RKIMFQGERA	
1075	469.7402	937.4688	937.4687	0.11	1	33	0.044	1	KIDQYVWKE	
1184	474.2995	946.5845	946.5851	-0.68	1	44	0.00089	1	RKLFALEVKA	
1185	316.5357	946.5853	946.5851	0.18	1	(27)	0.045	1	RKLFALEVKA	
1189	475.2579	946.5013	946.5029	-1.68	0	50	0.0019	1	K.FDLTVQARE_1180	
1207	477.2469	952.4793	952.4800	-0.77	1	38	0.014	1	RKQIFQGERA	
1247	479.2794	956.5442	956.5443	-0.10	0	40	0.0088	1	KQALLQAWKQ	
1253	479.7633	957.4920	957.4920	0.03	0	34	0.03	1	R.YLTFAPHEKE	
1447	494.7688	987.4990	987.4985	0.47	1	72	7.8e-008	1	REDDQVYKRG	
1500	801.2929	1000.5713	1000.5706	0.77	0	58	0.00028	1	KIDQLPLRLI	
1527	904.2884	1006.4962	1006.4971	1.11	0	54	0.00055	1	K.KALAEAEFKG	
1620	915.2883	1028.5820	1028.5814	0.53	0	58	0.00018	1	R.GILSLGAGEGRLT	
1633	916.2722	1030.5299	1030.5295	0.41	0	49	0.0019	1	K.GTASISPAEKQ	
1634	916.2723	1030.5301	1030.5295	0.63	0	55	0.0005	1	R.LTGLDVERL_1632	
1669	821.7645	1041.5144	1041.5131	1.23	0	38	0.012	1	KLTIDFDYLT	
1679	822.3288	1042.6390	1042.6398	0.35	1	40	0.0088	1	R.VLLTGGDKLKR	
1784	835.2802	1088.5457	1088.5451	0.59	0	(82)	4.8e-005	1	R.QLEEQVAANKL	
1851	543.7929	1085.5713	1085.5717	-0.38	0	70	9.3e-008	1	R.QLEEQVAANKL	
1864	363.8731	1088.5976	1088.5976	-0.21	1	56	0.00044	1	KLPKEAGTAPRL	
1865	545.3064	1088.5982	1088.5976	0.39	1	(55)	0.00054	1	KLPKEAGTAPRL	
1870	545.8221	1089.6297	1089.6290	0.68	0	(37)	0.013	1	R.MITAMGILKA	
1877	547.2849	1092.5553	1092.5584	-1.00	0	80	0.00016	1	KAVSGTAYTAPRLN	
1925	553.6192	1105.6237	1105.6239	-0.14	0	(34)	0.041	1	R.MITAMGILKA	
1953	557.3184	1112.6183	1112.6186	-0.61	0	63	3.8e-005	1	R.IQLGLEENRHL	
1973	559.2871	1116.5797	1116.5798	0.78	0	47	0.0031	1	R.VNVHLEGHORLE	
1992	961.6167	1121.6189	1121.6186	0.04	0	42	0.0047	1	R.MITAMGILKA	
2049	569.7827	1137.5708	1137.5708	0.13	0	44	0.0048	1	K.QFQSELYCK	
2090	574.2704	1146.6282	1146.6285	-0.24	0	82	4.9e-007	1	R.NASAGGSLDAERLF	
2094	574.7828	1147.5110	1147.5106	0.40	0	(57)	1.1e-005	1	R.NASAGGSLDAERF_2093	
2108	578.8218	1151.6291	1151.6299	-0.63	0	40	0.0072	1	RALPFPDANVSR.G	
2123	578.3089	1154.6982	1154.6972	1.78	0	(37)	0.018	1	K.QFQSELYCK	
2135	580.2883	1158.5581	1158.5557	2.04	0	40	0.0078	1	K.VTQTESSEKVA_2134	
2138	580.2911	1158.5677	1158.5689	0.69	0	58	0.00023	1	K.HADDLYGQLKQ	
2266	300.6520	1198.7389	1198.7397	-0.74	2	58	0.00011	1	R.VLLTGGDKLKR	
2267	400.5872	1198.7387	1198.7387	-0.08	2	(53)	0.00023	1	R.VLLTGGDKLKR	
2268	900.3774	1198.7403	1198.7397	0.49	2	(54)	0.00017	1	R.VLLTGGDKLKR	
2305	403.2351	1206.6938	1206.6933	0.25	0	(38)	0.011	1	K.GNIVTHANILRT	
2306	904.3497	1206.6948	1206.6933	1.24	0	51	0.00061	1	K.GNIVTHANILRT	
2309	904.3582	1206.7019	1206.7012	0.54	0	38	0.012	1	R.VSFEHPKPKI	
2312	904.8070	1207.5993	1207.5986	0.64	0	78	3.4e-008	1	K.WTGGGIVGRI_2313	
2323	404.1877	1209.5414	1209.5414	-0.03	0	53	0.00028	1	K.THSFAEYERLL	
2324	905.7784	1209.5423	1209.5414	0.74	0	(35)	0.019	1	K.THSFAEYERLL	
2380	613.2879	1224.5811	1224.5809	0.24	0	(49)	0.0012	1	R.SDEAMASVRLT	
2431	617.3174	1232.6203	1232.6190	1.09	0	57	0.0003	1	R.FVADPVPGERLM	
2451	618.8281	1235.6416	1235.6397	1.48	0	62	0.00012	1	R.IEVLQDSGAKL	
2476	821.2863	1240.6781	1240.6758	0.30	0	58	0.00013	1	R.SDEAMASVRLT	
2512	416.8891	1247.6754	1247.6781	-0.55	1	66	3.5e-005	1	K.KALAEAEAEFKG	
2513	824.8484	1247.6782	1247.6781	1.87	1	(42)	0.0085	1	K.KALAEAEAEFKG	
2524	825.8228	1249.6309	1249.6303	0.55	0	60	0.00019	1	R.TSFLVNSTPRQ	
2578	831.3883	1280.7181	1280.7190	-0.71	1	69	1.3e-005	1	K.IAKFDLTVQARE_2584	
2586	421.2473	1280.7200	1280.7190	0.80	1	(57)	1.9e-005	1	K.IAKFDLTVQARE_2580_2581_2583_2585	
2719	942.3833	1282.6921	1282.6921	0.00	1	40	0.009	1	K.QFQSELYCKQ	
2761	945.8280	1289.6414	1289.6405	0.77	0	57	0.00027	1	K.FLQDPFVPGDRM_2762	
2790	948.3182	1294.6158	1294.6153	0.40	1	50	0.0012	1	R.GYLVNREDAKLR	
2832	435.2183	1302.6272	1302.6276	-0.32	1	65	3.8e-005	1	K.RNASAGGSLDAERLF	
2845	653.3376	1304.6810	1304.6812	-0.17	0	50	0.0015	1	K.LYDGETLEPLRI	
2881	954.8729	1307.7313	1307.7310	0.25	1	45	0.0021	1	R.RALPDPDANVSR.G	
2919	980.3319	1318.8491	1318.8517	-1.56	0	(78)	2.3e-008	1	K.QNETTQLISR.V	
2939	961.6459	1321.6772	1321.6779	-0.49	0	46	0.0034	1	K.GIQLPHEPKR	
2941	441.6589	1321.6790	1321.6779	0.82	0	(34)	0.048	1	K.GIQLPHEPKR	
2992	986.3682	1330.7238	1330.7245	-0.47	1	75	4.3e-006	1	R.IYKGGQLPDLRL	
2993	444.5823	1330.7250	1330.7245	0.41	1	(69)	0.00017	1	R.IYKGGQLPDLRL	
3007	967.3889	1332.7692	1332.7686	0.38	0	72	5.5e-008	1	R.VIOMFVNTLALRT_3006	
3008	445.2805	1332.7697	1332.7686	0.67	0	(49)	0.001	1	R.VIOMFVNTLALRT	
3019	988.8475	1335.8606	1335.8593	1.58	0	107	3.6e-009	1	K.QNETTQLISR.V	
3069	674.3475	1346.6905	1346.6799	0.48	0	79	2.3e-006	1	R.LNSVMQQLMQRH	
3082	675.3813	1346.7489	1346.7397	-4.20	0	(84)	3.3e-006	1	R.VIOMFVNTLALRT_3084	
3083	450.5920	1346.7543	1346.7537	0.44	0	(48)	0.0018	1	R.VIOMFVNTLALRT	
3086	675.6180	1346.8214	1346.8211	0.21	0	49	0.0012	1	REGQEDVIQYR.G	
3091	675.8341	1346.8935	1346.8937	-0.10	0	40	0.015	1	K.DMTPELFOEKA	
3163	952.3444	1362.6742	1362.6748	-0.44	0	(66)	4.6e-005	1	R.LNSVMQQLMQRH	
3165	952.3485	1362.6794	1362.6748	2.70	0	(53)	0.00082	1	R.LNSVMQQLMQRH	
3176	953.8319	1365.8491	1365.8486	0.40	0	(37)	0.028	1	K.DMTPELFOEKA	
3228	888.3774	1374.7403	1374.7395	0.82	0	54	0.00048	1	K.QFESPELVSLKR	
3246	460.5641	1378.6704	1378.6697	0.48	0	(43)	0.0078	1	R.LNSVMQQLMQRH	
3252	890.8341	1379.6837	1379.6837	-0.02	0	(38)	0.023	1	R.LNSVMQQLMQRH	
3334	997.3785	1392.7424	1392.7401	1.65	0					

3388	700.8824	1399.7103	1399.7096	0.53	0	78	3.9e-008	1	K.VTNGAALTAYYRK
3390	703.3876	1404.7008	1404.6997	0.85	1	53	0.00085	1	K.QDTPVSSPQKRM
3404	704.3816	1406.7886	1406.7789	-5.85	1	(48)	0.0018	1	R.QLEEQVAANKPKD
3414	470.2890	1407.7731	1407.7722	0.88	0	(89)	2.8e-005	1	K.GVGPDSFVAVLIER.S
3416	704.8846	1407.7747	1407.7722	1.82	0	79	1.1e-008	1	K.GVGPDSFVAVLIER.S 3413 3415
3455	708.8870	1415.7212	1415.7197	1.01	0	88	2.8e-005	1	R.WLPNGDIEFGRJ 3453 3454 3456 3457
3465	709.3592	1416.7039	1416.7036	0.14	0	(98)	0.00039	1	R.WLPNGDIEFGRJ
3477	710.3879	1418.7212	1418.7194	1.24	0	66	0.00043	1	R.WLPDGTIEYGR.E
3478	710.4015	1418.7894	1418.7877	0.53	0	(54)	0.00038	1	R.SMDMVSILAVLKS
3500	712.9091	1423.8038	1423.8034	0.09	1	78	1.9e-008	1	R.QLEEQVAANKPKD
3501	475.6096	1423.8040	1423.8034	0.40	1	(50)	0.00064	1	R.QLEEQVAANKPKD
3517	478.9173	1427.7300	1427.7298	0.28	0	(39)	0.017	1	R.GYLHLPLETEKF
3518	714.8729	1427.7313	1427.7298	1.17	0	42	0.0078	1	R.GYLHLPLETEKF
3567	479.2862	1434.7828	1434.7826	0.17	0	(54)	0.00047	1	R.SMDMVSILAVLKS
3568	479.2884	1434.7833	1434.7826	0.48	0	(41)	0.0094	1	R.SMDMVSILAVLKS
3569	718.3980	1434.7835	1434.7828	0.87	0	(97)	1.9e-005	1	R.SMDMVSILAVLKS
3570	718.3995	1434.7844	1434.7828	1.27	0	(38)	0.015	1	R.SMDMVSILAVLKS
3592	481.2539	1440.7369	1440.7401	-0.18	1	(35)	0.046	1	R.IQKYDYAVWQK.G
3593	721.3774	1440.7403	1440.7401	0.14	1	41	0.013	1	R.IQKYDYAVWQK.G
3641	726.3858	1450.7171	1450.7184	0.49	2	70	1.8e-005	1	R.GYLNREDIETKRF
3645	484.8598	1450.7779	1450.7775	0.27	0	(37)	0.023	1	R.SMDMVSILAVLKS
3646	726.3982	1450.7779	1450.7775	0.29	0	79	1.4e-008	1	R.SMDMVSILAVLKS 3648
3652	726.8858	1451.7170	1451.7157	0.89	0	(44)	0.0089	1	K.QEYHPLSLAQGR.T
3690	729.8895	1457.7245	1457.7283	-1.25	0	(37)	0.024	1	K.VTNGAALTAYYRK
3691	486.9184	1457.7274	1457.7283	0.78	0	54	0.00081	1	K.VTNGAALTAYYRK
3711	487.9403	1460.7992	1460.7987	0.34	1	71	1.1e-008	1	R.IAFSLGAKADALR.R
3712	731.4070	1460.7995	1460.7987	0.57	1	(97)	2.3e-005	1	R.IAFSLGAKADALR.R
3749	490.5880	1468.7423	1468.7422	0.03	0	50	0.0013	1	K.QEYHPLSLAQGR.T
3750	735.3792	1468.7439	1468.7422	1.10	0	(38)	0.021	1	K.QEYHPLSLAQGR.T
3782	739.3812	1476.7478	1476.7489	0.58	0	(48)	0.0045	1	K.QMLGMFVSTVPLR.T
3786	739.8872	1477.7799	1477.7785	0.92	0	80	1.4e-008	1	K.QMLGMFVSTVPLR.T
3862	486.9214	1483.7423	1483.7436	-0.82	1	(41)	0.014	1	R.KDIMPFLFOEKA
3863	747.8795	1483.7425	1483.7259	11.2	0	(48)	0.0027	1	K.QMLGMFVSTVPLR.T
3864	747.8794	1483.7442	1483.7436	0.45	1	51	0.0015	1	R.KDIMPFLFOEKA
3867	747.8847	1483.7749	1483.7735	0.85	0	(99)	2.9e-005	1	K.QMLGMFVSTVPLR.T
3896	750.9174	1489.8203	1489.8195	0.52	0	78	3.5e-008	1	R.QSSIDLOEGGLJKA 3894 3895 3896 3899
3897	800.9476	1489.8209	1489.8195	0.82	0	(41)	0.012	1	R.QSSIDLOEGGLJKA
3941	803.9146	1508.7221	1508.7219	0.12	1	(71)	1.3e-005	1	R.NASAGSGLDAERFSK.D
3942	755.3887	1508.7229	1508.7219	0.84	1	74	6.5e-008	1	R.NASAGSGLDAERFSK.D
3945	755.8917	1509.7899	1509.7894	0.34	0	(59)	0.00021	1	K.QMLGMFVSTVPLR.T
3949	804.2640	1509.7702	1509.7694	1.21	0	(43)	0.0085	1	K.QMLGMFVSTVPLR.T
3952	804.5807	1510.7202	1510.7198	0.22	1	(45)	0.0043	1	R.GGSDIEMASVPR.T
3953	788.3877	1510.7209	1510.7198	0.73	1	55	0.00047	1	R.GGSDIEMASVPR.T
3956	788.8709	1511.7271	1511.7269	1.00	0	72	9.8e-008	1	R.TNDGQAFSEPK.D
3961	805.2580	1512.7482	1512.7480	0.13	1	38	0.027	1	K.GEKTADYLAWEKE
3962	757.3812	1512.7479	1512.7480	1.28	1	(38)	0.035	1	K.GEKTADYLAWEKE
3972	805.9399	1514.7979	1514.7954	1.88	1	43	0.0081	1	K.GSADRLTHFARL
3978	379.9810	1515.8148	1515.8158	-0.84	0	(48)	0.0046	1	K.TLQALIEHDALR.M
3979	768.9153	1515.8160	1515.8158	0.17	0	81	1.4e-008	1	K.TLQALIEHDALR.M
3981	806.2794	1515.8163	1515.8158	0.39	0	(75)	4.7e-008	1	K.TLQALIEHDALR.M 3976
3987	806.6113	1516.8122	1516.7998	8.18	0	(75)	5.8e-008	1	K.TLQALIEHDALR.M
4026	806.8564	1522.7843	1522.7827	1.01	1	(52)	0.0011	1	R.TTFEKDQETVQR.I 4025
4027	762.3906	1522.7867	1522.7827	2.81	1	70	2.1e-005	1	R.TTFEKDQETVQR.I 4022
4058	784.9098	1527.8047	1527.8045	0.10	1	71	1e-005	1	K.KVTNGAALTAYYRK
4063	785.4045	1528.7945	1528.7885	3.82	1	(97)	3.2e-005	1	K.KVTNGAALTAYYRK
4075	786.4283	1530.8421	1530.8406	1.01	1	59	0.00018	1	K.QFESVPELVSLKRN
4076	511.2883	1530.8432	1530.8406	1.89	1	(41)	0.01	1	K.QFESVPELVSLKRN
4139	773.9080	1545.8014	1545.8014	0.00	0	87	3.3e-005	1	R.MALLAPPHFASVK.Q
4140	516.2749	1545.8029	1545.8014	0.98	0	(42)	0.012	1	R.MALLAPPHFASVK.Q
4171	778.8872	1555.7897	1555.7892	0.34	0	(54)	0.00087	1	-MEITFPLTDAQR.J
4174	519.8001	1555.7785	1555.7783	0.11	1	(54)	0.00088	1	R.LQKYDYAVWQSR.Q
4175	778.8881	1555.7817	1555.7783	2.19	1	87	3e-005	1	R.LQKYDYAVWQSR.Q
4187	821.8083	1561.7971	1561.7983	0.65	0	(41)	0.013	1	R.MALLAPPHFASVK.Q
4188	781.9072	1561.7999	1561.7983	2.32	0	(99)	4.5e-005	1	R.MALLAPPHFASVK.Q
4219	823.9594	1568.8864	1568.8882	0.12	0	(41)	0.011	1	K.AJAWQDVLNVEKA 4221
4220	785.4383	1568.8891	1568.8892	1.22	0	71	1.2e-005	1	K.AJAWQDVLNVEKA 4221
4231	788.8849	1571.7852	1571.7841	0.70	0	54	0.00053	1	-MEITFPLTDAQR.J
4250	788.3820	1574.7494	1574.7484	1.89	0	80	0.00018	1	K.ALPEIDIEAGSGEYKA
4288	828.6181	1582.8325	1582.8315	0.82	0	(97)	3.2e-007	1	K.ISGQDDIVGSPVAGR.S
4290	792.4238	1582.8331	1582.8315	1.02	0	99	2.2e-008	1	K.ISGQDDIVGSPVAGR.S 4291
4249	833.3198	1598.9279	1598.9273	0.42	1	89	8.5e-008	1	K.LWPKETVLDMAR.L
4378	836.6195	1603.8367	1603.8358	0.54	0	71	1.8e-005	1	K.FYFPHSINLAGIKL
4380	802.9257	1603.8389	1603.8358	0.68	0	(64)	7e-005	1	K.FYFPHSINLAGIKL
4418	838.2836	1611.8289	1611.8290	-0.10	0	(77)	3.1e-008	1	K.HMLIGEGLSVADK.L
4419	808.9227	1611.8308	1611.8290	1.08	0	(95)	5.1e-008	1	K.HMLIGEGLSVADK.L
4433	807.8210	1613.8274	1613.8281	0.80	0	86	4.1e-007	1	R.VGESSVLDVGGAGDKL
4445	806.9075	1615.8004	1615.7995	1.88	0	57	0.00038	1	K.AGGAYVDPDGFPAER.L 4444
4446	839.8091	1615.8024	1615.7995	0.55	0	(40)	0.018	1	K.AGGAYVDPDGFPAER.L
4450	405.2324	1616.9003	1616.8998	0.33	2	39	0.018	1	R.IAFSLGAKADALR.R
4492	814.9185	1627.8225	1627.8240	-0.90	0	111	1.7e-009	1	K.HMLIGEGLSVADK.L
4493	843.6182	1627.8239	1627.8240	-0.06	0	(85)	5.8e-007	1	K.HMLIGEGLSVADK.L
4497	843.8382	1628.7839	1628.7836	0.25	1	53	0.00079	1	R.WDQKLTIDFYR.T
4587	824.9895	1647.8044	1647.8832	12.9	1	(80)	1.4e-008	1	K.QKQVGPDSFVAVLIER.S
4590	825.4109	1648.8073	1648.8057	1.01	0	77	4e-008	1	K.YTGGDDIVGTPSAGR.N 4589 4591
4592	850.8098	1648.8078	1648.8057	1.28	0	(37)	0.042	2	K.YTGGDDIVGTPSAGR.N
4652	855.8494	1683.8284	1683.8257	0.21	1	(37)	0.021	1	K.QKQVGPDSFVAVLIER.S
4653	832.9708	1683.8270	1683.8257	0.75	1	85	3.4e-007	1	K.QKQVGPDSFVAVLIER.S
4723	841.4022	1680.7889	1680.7890	0.53	0	95	4.7e-008	1	R.VSGQNDVVTGTFMGNR.T
4724	861.2713	1680.7921	1680.7890	1.83	0	(48)	0.0019	1	R.VSGQNDVVTGTFMGNR.T
4786	849.3993	1698.7840	1698.7839	0.06	0	(97)	2.2e-005	1	R.VSGQNDVVTGTFMGNR.T
4787	868.8020	1698.7843	1698.7839	0.24	0	(40)	0.011	1	R.VSGQNDVVTGTFMGNR.T
4789	868.8210	1698.8411	1698.8420	-0.57	0	(71)	1.3e-005	1	K.AELLSHPAVFEDR.T
4791	849.4286	1698.8427	1698.8420	0.42	0	87	3.8e-007	1	K.AELLSHPAVFEDR.T
4795	849.8887	1697.7829	1697.7879	-3.03	0	(38)	0.012	1	R.VSGQNDVVTGTFMGNR.T
4816	868.6199	1702.8378	1702.8413	-2.09	1	(98)	4.3e-005	1	R.KALPEIDIEAGSGEYKA
4817	852.4281	1702.8416	1702.8413	0.18	1	91	1.5e-007	1	R.KALPEIDIEAGSGEYKA
4832	858.9398	1711.8891	1711.8903	-0.71	1	(51)	0.0014	1	-MEITFPLTDAQR.J
4833	871.6276	1711.8807	1711.8903	0.21	1	(48)	0.0025	1	-MEITFPLTDAQR.J
4840	857.3889	1712.7831	1712.7828	0.18	0	102	5.1e-009	1	RETDEGIEDVYSTKL 4838 4842
4841	871.8298	1712.7845	1712.7828	0.95	0	(39)	0.01	1	RETDEGIEDVYSTKL
4850	873.2773	1718.8102	1718.8108	-0.33	0	(83)	6.5e-005	1	K.AGGAYVDPDYPDQR.L
4851	889.4130	1718.8114	1718.8108	0.35	0	77	2.5e-008	1	K.AGGAYVDPDYPDQR.L
4852	873.2783	1718.8130	1718.8141	-0.67	0	84	5.1e-005	1	K.HSDVDFNEMIER.G 4854
4858	873.6132	1717.8178	1717.7981	11.5	0	(42)	0.0079	1	K.HSDVDFNEMIER.G
4889	864.9342	1727.8538	1727.8552	-0.81	1	96	4.4e-008	1	-MEITFPLTDAQR.J
4890	876.9593	1727.8562	1727.8552	0.57	1	(97)	0.00038	1	-MEITFPLTDAQR.J
4900	878.6102	1732.8089	1732.8090	-0.09	0	(84)	5.4e-005	1	K.HSDVDFNEMIER.G 4902 4903
4901	867.4128	1732.8111	1732.8090	1.22	0	(84)	0.00046	1	K.HSDVDFNEMIER.G
4916	878.3134	1734.9182	1734.9181	1.24	1	(97)	0.00038	1	K.EKQMLGMFVSTVPLR.T
4957	876.4822	1750.9098	1750.9110	-0.70	1	(70)	2e-005	1	K.EKQMLGMFVSTVPLR.T
4958	884.8441	1750.9105	1750.9110	-0.30	1	(58)	0.00035	1	K.EKQMLGMFVSTVPLR.T
4959	884.8488	1750.9250	1750.9253	-0.22	1	43	0.011	1	K.YPYNLINDRETK.S
4970	877.9755	1753.9385							

5023	689.9758	1786.9057	1786.9059	-0.14	1	(57)	0.00039	1	K.EKQMLGMFVSTVPLR.T
5055	890.4847	1778.9149	1778.9183	-0.77	1	(78)	5.3e-008	1	R.SEVKQNETFTQISR.V
5056	693.9794	1778.9185	1778.9183	0.11	1	105	5.6e-009	1	R.SEVKQNETFTQISR.V
5066	695.2880	1782.9422	1782.8537	-6.42	1	(111)	1.3e-009	1	R.IJNDGGQAFSEFYKDR.M.5071
5068	862.4321	1782.9467	1782.8537	-2.23	1	123	6.9e-011	1	R.IJNDGGQAFSEFYKDR.M.5069
5087	696.3254	1785.9546	1785.9526	1.08	1	93	9.3e-008	1	R.HQKYPYNLLNDLRJ.5077 5078 5079 5082 5083 5084 5086
5124	699.3381	1794.9924	1794.9913	0.58	0	52	0.00083	1	K.MLALVHLLGVELSK.D
5145	452.2280	1804.8829	1804.8816	0.62	0	(58)	0.00028	1	K.LTMSLAYHSLFHEKT
5162	803.6376	1807.8911	1807.8927	-0.90	0	82	0.00014	1	R.NPLFDVAFSMQANIK.D
5163	804.9581	1807.8957	1807.8927	1.68	0	(50)	0.0024	1	R.NPLFDVAFSMQANIK.D
5199	455.2338	1816.9082	1816.9098	-0.30	0	(54)	0.00075	1	R.IELGEIHLQTHDR.V
5200	806.6433	1816.9081	1816.9098	0.74	0	(71)	1.7e-005	1	R.IELGEIHLQTHDR.V
5201	809.4814	1816.9083	1816.9098	0.68	0	120	1.9e-010	1	R.IELGEIHLQTHDR.V
5218	468.2284	1820.8787	1820.8787	-0.02	0	(59)	0.00025	1	K.LTMSLAYHSLFHEKT
5219	807.9884	1820.8776	1820.8787	0.42	0	78	5.4e-008	1	K.LTMSLAYHSLFHEKT
5220	911.4485	1820.8784	1820.8787	0.83	0	(86)	3.5e-005	1	K.LTMSLAYHSLFHEKT
5409	468.2281	1899.0033	1899.0030	0.15	1	57	0.00038	1	K.LJHMLJGGQGLSSVADK.L
5411	624.0069	1899.0047	1899.0030	0.93	1	(37)	0.037	1	K.LJHMLJGGQGLSSVADK.L
5428	937.4003	1872.8890	1872.8863	0.33	0	107	3.6e-008	1	K.GVVLDADEESYHADAR.N.5422 5424 5425 5429 5432
5430	825.3028	1872.8898	1872.8863	0.68	0	(92)	9.6e-008	1	K.GVVLDADEESYHADAR.N.5421 5423 5426 5427 5431 5433
5488	844.0524	1886.9802	1886.9917	-0.81	0	(53)	0.00031	1	K.QIFASLLGQTLVYPPK
5496	830.3220	1887.9442	1887.9485	-1.21	0	58	0.00004	1	R.LLEDAADPEKPISEYK.L.5501
5497	844.9802	1887.9458	1887.9485	-0.40	0	(49)	0.00031	1	R.LLEDAADPEKPISEYK.L.5501
5548	950.4583	1898.9891	1898.9845	0.85	1	55	0.00051	1	R.MVYREGQEDVQYNR.G.5549
5567	950.9913	1899.9890	1899.9890	-0.55	0	102	1.4e-008	1	R.LQPEGVAGELYAGDGVGR.G.5566 5568 5569 5570 5571 5572 5573
5574	834.3330	1899.9772	1899.9890	4.30	0	(40)	0.02	1	R.LQPEGVAGELYAGDGVGR.G
5591	952.5640	1903.1135	1903.1183	-2.49	0	83	1.6e-005	1	K.QIFASLLGQTLVYPPK
5592	835.3800	1903.1182	1903.1183	-0.04	0	(50)	0.00023	1	K.QIFASLLGQTLVYPPK
5647	958.4506	1914.8888	1914.8894	-1.47	1	(40)	0.014	1	R.MVYREGQEDVQYNR.G
5648	839.3042	1914.8908	1914.8894	0.72	1	(40)	0.013	1	R.MVYREGQEDVQYNR.G
5652	958.4854	1914.9581	1914.9580	0.61	0	50	0.0018	1	K.LFTVBLEYQVWQWKE
5696	961.4487	1920.8789	1920.8824	-1.84	0	(40)	0.011	1	R.LTVGWFSTBMVPLDMKH
5697	961.4488	1920.8830	1920.8824	0.32	0	41	0.011	1	R.LTVGWFSTBMVPLDMKH
5704	941.6848	1922.0328	1922.0380	-1.87	0	(62)	0.00011	1	R.IELGEIAVQAPDVAK.A.5706
5705	952.0246	1922.0346	1922.0380	-0.72	0	78	2.5e-008	1	R.IELGEIAVQAPDVAK.A
5720	482.4890	1925.9899	1925.9899	-0.03	1	44	0.0002	1	K.DLTMKQIQLPHPPER.K
5730	965.0454	1928.0783	1928.0771	-0.44	0	79	1.2e-008	1	K.VSVLVSQGLAAVLYR.V
5751	945.3395	1932.9898	1932.9793	8.97	0	(50)	0.0021	1	K.QADQGPVEVILTQIR.W
5810	970.9888	1939.9631	1939.9628	0.28	0	112	1.5e-009	1	K.TIEFSLTAETEQLTTK.V.5804 5807 5808 5809 5811 5812 5813 5816 5817 5818
5815	947.6823	1939.9650	1939.9628	1.28	0	(95)	7.9e-008	1	K.TIEFSLTAETEQLTTK.V.5814
5858	975.5181	1949.0217	1949.0218	-0.05	0	88	3e-007	1	K.QADQGPVEVILTQIR.W.5857 5859 5861
5860	950.8620	1949.0242	1949.0218	1.23	0	(81)	0.00015	2	K.QADQGPVEVILTQIR.W
5951	888.3688	1988.0845	1988.0921	-3.88	1	(58)	0.00027	1	K.HMLJGGQGLSSVADK.L.K.L.5952
5978	888.3189	1971.8947	1971.8980	-0.68	1	44	0.0067	1	R.QKHGSDVDFHEMER.G
6028	498.5291	1982.0875	1982.0870	0.21	1	(83)	6.7e-005	1	K.HMLJGGQGLSSVADK.L.K.L
6027	961.7036	1982.0898	1982.0870	0.81	1	86	2.5e-007	1	K.HMLJGGQGLSSVADK.L.K.L.6025
6057	962.8895	1985.0438	1985.0429	0.36	1	(83)	0.0001	1	R.EAERLQSSIDLQEGGLK.A.6058
6059	963.8304	1985.0462	1985.0429	1.89	1	85	6.4e-007	1	R.EAERLQSSIDLQEGGLK.A
6196	873.0040	2016.9901	2016.9912	-0.55	0	(70)	2.2e-005	1	K.LLSEEAASQIQGNPGR.T
6197	1006.0037	2016.9929	2016.9912	0.84	0	112	1.6e-009	1	K.LLSEEAASQIQGNPGR.T.6199
6307	881.4021	2041.1845	2041.1857	-0.59	0	(51)	0.00029	1	R.VGVLTKPSLEMAAIVSLVKA.6308
6309	811.3047	2041.1895	2041.1857	1.89	0	(51)	0.0002	1	R.VGVLTKPSLEMAAIVSLVKA
6378	1029.5090	2057.0035	2057.0027	0.40	0	82	1.4e-008	1	R.QVILEDDGADFLTESK.V
6377	886.7348	2057.1828	2057.1806	0.98	0	73	2.3e-008	1	R.VGVLTKPSLEMAAIVSLVKA
6378	1029.5886	2057.1827	2057.1806	1.02	0	(51)	0.0004	1	R.VGVLTKPSLEMAAIVSLVKA
6505	896.8004	2087.0463	2087.0470	1.11	0	(108)	3.7e-009	1	R.NHSDTEIGIOMFVNTLAIR.S.6504
6506	1044.5327	2087.0509	2087.0470	1.87	0	(58)	0.00037	1	R.NHSDTEIGIOMFVNTLAIR.S
6508	897.0198	2088.0375	2088.0310	3.13	0	(83)	1.2e-008	1	R.NHSDTEIGIOMFVNTLAIR.S
6518	897.6828	2090.0559	2090.0531	1.32	0	86	7.1e-007	1	K.GGNTAAAYVTPESADIEALK.S
6519	1048.0358	2090.0570	2090.0531	1.85	0	(81)	1.9e-008	1	K.GGNTAAAYVTPESADIEALK.S
6566	701.7038	2102.0898	2102.0895	0.02	0	(82)	1.4e-008	1	K.DLQFSPTVEGLAQVIAEK.G
6567	1052.0533	2102.0921	2102.0895	1.23	0	90	2.4e-007	1	K.DLQFSPTVEGLAQVIAEK.G
6573	702.0213	2103.0421	2103.0419	0.09	0	(95)	7.9e-008	1	R.NHSDTEIGIOMFVNTLAIR.S.6571 6572
6575	1052.5293	2103.0440	2103.0419	1.03	0	128	6.5e-011	1	R.NHSDTEIGIOMFVNTLAIR.S
6576	828.7896	2103.0495	2103.0419	3.62	0	(58)	0.00041	1	R.NHSDTEIGIOMFVNTLAIR.S
6578	702.3500	2104.0283	2104.0259	1.14	0	(83)	0.00012	1	R.NHSDTEIGIOMFVNTLAIR.S
6609	705.3716	2113.0931	2113.0916	0.70	1	54	0.00093	1	K.RGLQPEGVAGELYAGDGVGR.G
6627	708.8884	2117.0434	2117.0429	0.24	0	93	1.1e-007	1	K.DLQFHTIETLTOYVER.A.6626 6628
6630	1059.5314	2117.0482	2117.0429	2.49	0	(51)	0.0022	1	K.DLQFHTIETLTOYVER.A.6629
6687	1085.0327	2128.0509	2128.0398	6.20	0	(77)	5e-008	1	R.QVILEDDGADFLTESK.V
6886	734.3781	2170.1125	2170.1270	-6.68	1	52	0.0014	1	R.NETEKJAAIWDQVLAIVKA
6951	648.3228	2189.2819	2189.2812	0.30	1	(87)	8.8e-008	1	R.VSERKPKDQLPLFR.J.6952 6953 6955 6956 6957
6954	730.7815	2189.2828	2189.2812	0.62	1	74	1.8e-008	1	R.VSERKPKDQLPLFR.J.6949 6958 6959
6961	1086.6409	2189.2872	2189.2812	2.72	1	(69)	4.2e-005	1	R.VSERKPKDQLPLFR.J.6945 6947
6995	1102.5430	2203.0714	2203.0645	3.13	0	(79)	3e-008	1	K.QEGISVPSYTGQVILLDGSRT
7059	741.0398	2220.0680	2220.0910	-1.35	0	(83)	1.3e-007	1	K.QEGISVPSYTGQVILLDGSRT
7060	1111.8598	2220.0628	2220.0910	0.72	0	98	3.5e-008	1	K.QEGISVPSYTGQVILLDGSRT
7083	1111.8571	2221.0667	2221.0750	11.1	0	(82)	1.6e-008	1	K.QEGISVPSYTGQVILLDGSRT.7082
7084	742.7020	2225.0843	2225.0885	-1.01	0	53	0.0011	1	KARPVITYNGSWTYGELNAKA.7086 7087
7101	743.0359	2228.0858	2228.0705	8.89	0	(50)	0.0024	1	KARPVITYNGSWTYGELNAKA
7102	1114.0513	2228.0880	2228.0705	7.85	0	(50)	0.0024	1	KARPVITYNGSWTYGELNAKA
7105	743.0414	2228.1025	2228.0705	14.4	0	(39)	0.008	1	KARPVITYNGSWTYGELNAKA
7140	746.7174	2237.1304	2237.1288	0.65	0	(89)	3.3e-005	1	U.KETNSTLYMVLASYSFLSK.I
7141	1119.5743	2237.1341	2237.1288	2.32	0	(83)	0.00011	1	U.KETNSTLYMVLASYSFLSK.I
7178	749.8822	2246.0247	2246.0240	0.34	0	(87)	2.6e-007	1	K.HTDTEDPNAEFISQWRLE
7180	1124.0225	2246.0304	2246.0240	2.84	0	108	2.2e-009	1	K.HTDTEDPNAEFISQWRLE
7211	762.0493	2253.1280	2253.1238	0.93	0	85	8.1e-007	1	U.KETNSTLYMVLASYSFLSK.I
7212	1127.5731	2253.1317	2253.1238	3.48	0	(84)	9.9e-007	1	U.KETNSTLYMVLASYSFLSK.I
7248	764.7147	2281.1222	2281.1175	2.04	1	56	0.00072	1	K.GTAAISIPAKGDTYVPSPOK.R
7358	780.7378	2278.1917	2278.1910	0.32	1	(81)	0.00017	1	KALPVFTDKTVHQLFEETAQR.H
7359	670.8052	2278.1919	2278.1910	0.38	1	78	5.8e-008	1	KALPVFTDKTVHQLFEETAQR.H
7361	1140.8096	2278.1988	2278.1910	3.33	1	(88)	4.8e-005	1	KALPVFTDKTVHQLFEETAQR.H
7382	782.0393	2283.0961	2283.0864	0.32	1	45	0.0072	1	R.DTSRNPLFDVAFSMQANIK.D
7383	1142.5582	2283.1019	2283.0864	2.88	1	(40)	0.021	1	R.DTSRNPLFDVAFSMQANIK.D
7461	1190.1182	2298.2179	2298.2219	-1.78	1	(52)	0.0013	1	R.GYRIELGEIAVQAPDVAK.A
7464	675.5832	2298.2238	2298.2219	0.72	1	(69)	0.00027	1	R.GYRIELGEIAVQAPDVAK.A
7485	787.0819	2298.2237	2298.2219	0.78	1	82	0.00013	1	R.GYRIELGEIAVQAPDVAK.A.7466
7475	787.4130	2298.2172	2298.2099	4.91	1	(45)	0.0074	1	R.GYRIELGEIAVQAPDVAK.A
7634	1167.5839	2333.1732	2333.1750	-0.79	1	84	1.1e-008	1	K.DKGGNTAAAYVTPESADIEALK.S
7635	778.7324	2333.1754	2333.1750	0.17	1	(85)	9e-005	1	K.DKGGNTAAAYVTPESADIEALK.S.7833
7645	779.0795	2334.2188	2334.2179	-0.50	1	75	7.3e-008	1	R.AEKQADQGPVEVILTQIR.W
7756	788.7272	2383.1597	2383.1645	-2.09	0	(41)	0.023	1	R.LDENGEFQVISEYRPMK.H
7758	1182.5824	2383.1703	2383.1645	2.45	0	51	0.0023	2	R.LDENGEFQVISEYRPMK.H
7801	782.7404	2375.1894	2375.1837	2.42	1	43	0.015	1	R.LTSELDERLNSMQQLMOR.H
7856	1198.6437	2391.2728	2391.2886	1.78	0	(99)	2.8e-010	1	K.LV8ADADYVLEDAIQEFIR.R
7857	798.0963	2391.2730	2391.2886	1.85	0	117	3.9e-010	1	K.LV8ADADYVLEDAIQEFIR.R.7854 7858
7878	800.0708	2397.1906	2397						

8130	829.4073	2485.2002	2485.1981	0.85	0	(87)	5.3e-007	1	R.MYV.LQOLEDQTSYNNM.PAVLRL
8131	1243.6106	2485.2071	2485.1981	3.83	0	(89)	3.4e-007	1	R.MYV.LQOLEDQTSYNNM.PAVLRL
8132	1243.6126	2485.2105	2485.1981	5.01	0	(90)	8.5e-008	1	R.MYV.LQOLEDQTSYNNM.PAVLRL
8142	830.7743	2489.3010	2489.3013	-0.10	1	85	7.5e-005	1	K.GGNTAAIAYTPESADIEALUKALKE
8163	834.7396	2501.1970	2501.1930	1.80	0	(89)	7.3e-005	1	R.MYV.LQOLEDQTSYNNM.PAVLRL
8164	1251.6103	2501.2061	2501.1930	5.25	0	102	1.7e-008	1	R.MYV.LQOLEDQTSYNNM.PAVLRL
8174	828.5873	2502.2402	2502.2390	0.45	1	74	1.3e-005	1	K.DLFQHPHTEELTOYVERAEGK.Q
8175	835.0874	2502.2404	2502.2390	0.83	1	(70)	2.7e-005	1	K.DLFQHPHTEELTOYVERAEGK.Q 8171 8173
8197	838.7899	2507.2578	2507.2577	0.04	0	112	1.8e-009	1	R.NLAL.PLSAAMANLTYSGTGTGPK.G
8198	1254.6408	2507.2572	2507.2577	3.77	0	(78)	9e-008	1	R.NLAL.PLSAAMANLTYSGTGTGPK.G
8226	830.6111	2519.2153	2519.2198	-1.41	0	38	0.048	1	K.VHEAYHTEBNDILLAFGLAMKE
8245	842.0623	2523.2590	2523.2527	0.95	0	(77)	6.2e-008	1	R.NLAL.PLSAAMANLTYSGTGTGPK.G
8246	1282.6378	2523.2611	2523.2527	3.34	0	(78)	8.3e-008	1	R.NLAL.PLSAAMANLTYSGTGTGPK.G
8248	842.4256	2524.2590	2524.2527	7.25	0	(65)	0.00085	1	R.NLAL.PLSAAMANLTYSGTGTGPK.G
8251	842.4437	2524.3002	2524.3074	0.70	1	86	6.8e-005	1	K.FAFVREPHEKQEVYPLSLAQR.T
8276	834.5787	2534.2559	2534.2578	-0.75	0	(86)	6.4e-005	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8277	845.7708	2534.2596	2534.2578	1.12	0	(72)	1.8e-005	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8278	1268.1806	2534.3067	2534.2578	7.48	0	(71)	2e-006	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8283	834.8109	2535.2145	2535.2138	0.31	0	(37)	0.048	1	K.VHEAYHTEBNDILLAFGLAMKE
8324	850.7875	2549.3408	2549.3461	-1.75	1	48	0.00088	1	U R.LAKET.NSTL.VMLL.SASYL.SK.Y
8333	838.8357	2551.3139	2551.3143	-0.18	0	86	6.7e-007	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM 8330 8335
8337	851.4459	2551.3159	2551.3143	0.64	0	(71)	1.8e-005	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM 8331
8338	1276.8898	2551.3246	2551.3143	4.02	0	(38)	0.084	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8340	851.7778	2552.3115	2552.2983	5.16	0	(47)	0.0003	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8341	851.7794	2552.3164	2552.2983	7.10	0	(85)	8.3e-005	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8343	852.1128	2553.3198	2553.2823	13.1	0	(39)	0.033	1	R.QVH.VLSE.LQOITTYQSGSQT.LRM
8387	856.4698	2568.3575	2568.3240	13.1	1	(44)	0.0077	1	U R.LAKET.NSTL.VMLL.SASYL.SK.Y
8423	859.4208	2575.2407	2575.2401	0.21	0	(110)	2.6e-009	1	R.GLEAASQLEVOIQEQAADYEDRI
8424	1288.6310	2575.2474	2575.2401	2.82	0	138	7e-012	1	R.GLEAASQLEVOIQEQAADYEDRI
8506	866.1083	2595.2971	2595.2984	0.28	0	(58)	0.00055	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8507	866.1072	2595.2999	2595.2984	1.34	0	(78)	8.2e-008	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8508	1298.8805	2595.3085	2595.2984	3.89	0	(83)	0.00015	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8509	1298.8841	2595.3138	2595.2984	6.61	0	(78)	5.1e-008	2	R.LAEQNGATL.VMML.SAYTL.SK.Y
8525	1902.1803	2602.3060	2602.3027	1.28	1	56	0.00001	1	K.LLSEEAASQIQFNGRPT.PPK.D
8526	868.4430	2602.3073	2602.3027	1.78	1	(53)	0.00017	1	K.LLSEEAASQIQFNGRPT.PPK.D
8557	871.4373	2611.2900	2611.2913	-0.52	0	(83)	0.00015	1	R.LAEQNGATL.VMML.SAYTL.SK.Y 8556
8559	1906.8817	2611.3089	2611.2913	6.74	0	82	1.9e-008	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8560	871.7899	2612.2780	2612.2783	0.24	0	(73)	1.4e-005	1	R.LAEQNGATL.VMML.SAYTL.SK.Y 8563
8565	1907.1588	2612.3031	2612.2783	10.8	0	(82)	0.00019	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8568	1907.6523	2613.2901	2613.2989	11.8	0	(71)	2.1e-005	1	R.LAEQNGATL.VMML.SAYTL.SK.Y
8589	873.7778	2618.3117	2618.3124	-0.29	0	(42)	0.021	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8590	1310.1870	2618.3194	2618.3124	2.68	0	(59)	0.00048	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8656	1917.1825	2632.3604	2632.3498	0.31	1	(44)	0.011	1	R.LR.DENGE.PYQISEYR.PVDIKH
8662	869.3457	2633.3537	2633.3336	7.81	1	(49)	0.013	1	R.LR.DENGE.PYQISEYR.PVDIKH
8663	878.7933	2633.3582	2633.3336	9.31	1	45	0.0093	1	R.LR.DENGE.PYQISEYR.PVDIKH
8673	878.1059	2634.2959	2634.2999	-1.54	1	90	3.4e-007	1	K.LEMKDL.FQHPTTEL.TQYVERA 8677
8674	859.5819	2634.2963	2634.2999	-0.62	1	(41)	0.028	1	K.LEMKDL.FQHPTTEL.TQYVERA
8676	878.1080	2634.3021	2634.3073	-2.00	0	(82)	0.002	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8686	878.4335	2635.2788	2635.2914	-4.78	0	(82)	0.00019	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8689	1316.8594	2635.3043	2635.2914	4.91	0	(48)	0.0084	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8718	1322.6746	2643.1346	2643.1322	0.91	0	78	1.1e-008	1	R.WEEAECEIAYFEAEEETERI
8744	884.4412	2650.3018	2650.3023	-0.16	0	84	0.00013	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8745	1326.1819	2650.3092	2650.3023	2.81	0	(81)	0.00029	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8748	884.7703	2651.2890	2651.2883	1.01	0	(84)	0.00013	1	K.DLPAYM.PAVFQMDLPL.TGNGKI
8757	886.4338	2656.2795	2656.2803	-0.28	0	(89)	3.6e-005	1	K.NSIEATDGT.PAH.LQML.AAGDFEGLK.L
8758	1326.1810	2656.2874	2656.2803	2.71	0	(85)	9.5e-005	1	K.NSIEATDGT.PAH.LQML.AAGDFEGLK.L
8806	891.7884	2672.2774	2672.2752	0.82	0	(77)	5.3e-008	1	K.NSIEATDGT.PAH.LQML.AAGDFEGLK.L
8809	1337.1478	2672.2806	2672.2752	2.03	0	88	6e-007	1	K.NSIEATDGT.PAH.LQML.AAGDFEGLK.L
8824	892.4289	2674.2590	2674.2432	5.91	0	(55)	0.00072	1	K.NSIEATDGT.PAH.LQML.AAGDFEGLK.L
8842	895.1519	2682.4339	2682.4327	0.46	0	(88)	4.8e-007	1	R.IELSEIEV.LQQLSEVQDAAV.TAVK.D 8843
8844	1342.2289	2682.4432	2682.4327	3.91	0	114	7.5e-010	1	R.IELSEIEV.LQQLSEVQDAAV.TAVK.D
8863	896.8206	2687.4389	2687.4382	0.83	1	106	4.3e-009	1	K.LLLQEGISVPDYSYTDV.LL.DGSR.T 8861 8862 8864
8872	897.1530	2688.4372	2688.4222	5.80	1	(108)	4.7e-009	1	K.LLLQEGISVPDYSYTDV.LL.DGSR.T 8873
8874	1345.2324	2688.4503	2688.4222	10.5	1	(50)	0.00051	1	K.LLLQEGISVPDYSYTDV.LL.DGSR.T
8915	899.7913	2698.3821	2698.3295	8.39	0	47	0.00061	1	R.QLPDYM.PAVFTEVTEPLTPSGK.V
8925	900.7888	2699.3388	2699.3595	-7.78	1	57	0.00065	1	R.QVY.LL.PEL.TEKKL.QDPFV.PGDR.M 8927
8972	1356.8836	2711.3828	2711.3404	4.50	0	(44)	0.012	1	R.QLPDYM.PAVFTEVTEPLTPSGK.V
8982	879.6108	2714.4145	2714.4187	-0.80	0	(43)	0.012	1	R.LLLEDFAAYTLQEGNEP.VLPKCT
8984	905.6140	2714.4201	2714.4187	1.25	0	(47)	0.0048	1	R.LLLEDFAAYTLQEGNEP.VLPKCT
8985	1358.2290	2714.4354	2714.4187	6.80	0	81	0.00018	1	R.LLLEDFAAYTLQEGNEP.VLPKCT
8989	1358.7198	2715.4248	2715.4007	8.83	0	(44)	0.0092	1	R.LLLEDFAAYTLQEGNEP.VLPKCT
9031	911.6158	2732.4259	2732.4232	0.88	2	77	5.4e-008	1	K.KGGNTAAIAYTPESADIEALUKALKE
9077	889.0889	2782.3284	2782.3245	0.68	1	49	0.0039	1	K.GYV.NBRL.TEKEV.PHETS.SERM 9075
9151	929.1329	2784.3770	2784.3752	0.83	0	(88)	7.3e-007	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9152	907.1018	2784.3771	2784.3752	0.69	0	(89)	0.00075	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9172	1387.1984	2782.3783	2782.3504	9.98	0	148	8.9e-013	1	K.ETAL.SAFD.GDPL.EDLGN.VGVR.D
9224	934.4819	2800.3637	2800.3701	-2.29	1	88	4.3e-007	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9225	701.0095	2800.3689	2800.3701	-0.46	1	(89)	0.00035	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9234	935.1299	2802.3690	2802.3683	-2.25	0	81	0.00024	1	R.VLDAFSDH.QYFEW.VL.VEDLN.PRD
9236	701.8013	2802.3769	2802.3683	3.79	0	(41)	0.026	1	R.VLDAFSDH.QYFEW.VL.VEDLN.PRD
9239	935.4870	2803.3793	2803.3493	10.7	0	(49)	0.00037	1	R.VLDAFSDH.QYFEW.VL.VEDLN.PRD
9354	955.1870	2882.4491	2882.4514	-0.79	0	(82)	0.00019	1	K.ETLPDYM.PVFWTL.NEL.PV.TANGK.V
9355	1432.2434	2882.4723	2882.4514	7.30	0	84	0.00013	1	K.ETLPDYM.PVFWTL.NEL.PV.TANGK.V
9364	958.1334	2871.3794	2871.3895	-3.85	2	(40)	0.032	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9366	958.1353	2871.3841	2871.3895	-1.88	2	87	5.8e-005	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9367	718.8541	2871.3871	2871.3895	-0.82	2	(88)	0.00052	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9369	719.1058	2872.3933	2872.3735	6.88	2	(47)	0.00059	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9401	953.4671	2887.3795	2887.3844	-1.71	2	(85)	9.5e-005	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9402	722.8540	2887.3889	2887.3844	0.88	2	(44)	0.014	1	R.DTSR.NPLD.VAFSMQ.NANIKD.LTM.K.G
9418	955.4832	2893.4278	2893.4273	0.10	0	(87)	7e-005	1	K.FD.LT.TADETDGGL.TFVLEYNTAL.FK.Q 9417 9419 9421
9424	1447.7273	2893.4400	2893.4273	4.39	0	77	7e-008	1	K.FD.LT.TADETDGGL.TFVLEYNTAL.FK.Q 9420 9422 9425
9436	725.3732	2897.4638	2897.4593	1.48	1	(87)	8.9e-005	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9437	968.8289	2897.4649	2897.4593	1.95	1	72	2.4e-005	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9476	972.1589	2913.4521	2913.4542	-0.73	1	(38)	0.049	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9477	729.3709	2913.4543	2913.4542	0.04	1	(89)	4.1e-005	1	R.KNSIEATDGT.PAH.LQML.AAGDFEGLK.L
9514	1463.7844	2925.5543	2925.5546	-0.11	1	(70)	1.8e-005	1	R.IELSEIEV.LQQLSEVQDAAV.TAVK.D
9515	732.3881	2925.5551	2925.5546	0.18	1	(85)	0.00085	1	R.IELSEIEV.LQQLSEVQDAAV.TAVK.D
9516	978.1829	2925.5570	2925.5546	0.80	1	83	8.9e-007	1	R.IELSEIEV.LQQLSEVQDAAV.TAVK.D
9598	740.8293	2958.4763	2958.4694	3.32	1	59	0.00051	1	R.KV.DAFSDH.QYFEW.VL.VEDLN.PRD
9612	742.8904	2987.8304	2987.5355	-1.05	0	46	0.0078	1	K.AGL.FQAE.DGDL.LL.AHHL.VVDG.VSWR.L 9614
9616	694.5148	2987.8388	2987.5355	0.35	0	(38)	0.049	1	K.AGL.FQAE.DGDL.LL.AHHL.VVDG.VSWR.L
9627	743.1418	2988.8380	2988.5195	8.22	0	(40)	0.028	1	K.AGL.FQAE.DGDL.LL.AHHL.VVDG.VSWR.L
9652	982.1825	2973.4688	2973.4679	-0.71	1	51	0.0027	1	R.GLEAASQLEVOIQEQAADYEDRI.E
9653	744.3743	2973.4690	2973.4679	0.03	0	(49)	0.0041	1	R.GLEAASQLEVOIQEQAADYEDRI.E
9725	758.1294	3028.4685	3028.4682	1.09	0	(46)	0.0055	1	K.OMTPEL.FQEKALLESHP.VAFV.FEDR.T
9776									

9899	770.3957	3077.5537	3077.5345	6.21	0	58	0.00082	1	KETGIEPLQFEBHPITTALEAEADHRE
9945	1028.1873	3081.5400	3081.5389	0.99	1	51	0.0029	1	RQLPDMVPAVYFTEVTEPLTPSGKVDOR
9997	1033.1703	3086.4990	3086.4995	-3.37	0	(47)	0.0007	1	RMTMLENALTHPEHTIDELTJSDAEKE 9999
9998	775.1323	3086.4999	3086.4995	0.15	0	53	0.0018	1	RMTMLENALTHPEHTIDELTJSDAEKE
10038	1039.2147	3114.8223	3114.8094	4.46	1	59	0.00033	1	KDLFQSPVTEGLQVIAEAGTAAISPAEKQ
10105	790.6807	3168.6137	3168.5924	6.75	0	41	0.028	1	KEVFAGELPQLLSDYRPPVQSFEGDRV
10131	794.4031	3173.5832	3173.5591	7.61	2	44	0.014	1	RKDMTPELQFQKAEISDHPAVFEDRT
10260	1070.8749	3209.8028	3209.5954	2.30	0	78	5.5e-008	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKL
10261	1605.8090	3209.8034	3209.5954	2.47	0	(50)	0.00035	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKL
10290	1078.2090	3225.8022	3225.5904	3.67	0	(63)	0.00016	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKL
10291	1613.8096	3225.8028	3225.5904	3.80	0	(73)	2e-005	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKL
10316	1078.5801	3232.8954	3232.9478	3.25	1	44	0.012	1	K.TTLPDYMPPVWVTLNELPVTANGKVRK 10317
10321	1082.9125	3245.7158	3245.7048	3.39	1	88	2.8e-005	1	K.SALKETLPDYMPPVWVWVTLNELPVTANGKV
10384	1094.5430	3280.8071	3280.5697	11.4	0	52	0.0024	1	K.QYWMELLDVATGNPQPLSLSLVETEKQ
10413	828.4388	3301.7253	3301.7405	-4.32	2	83	1.2e-008	1	R.QYRLESEFVQLAGLSEVDDAAVTAVKQ G 10414
10416	1101.9255	3302.7548	3302.7245	9.17	2	(96)	4.5e-005	1	R.QYRLESEFVQLAGLSEVDDAAVTAVKQ.G
10487	1108.8893	3323.5990	3323.5946	-2.60	0	(39)	0.039	1	K.TVQLFEEGAANTPDHTALQYEGESLYRE
10495	832.4058	3325.5942	3325.5628	9.49	0	90	3.3e-007	1	K.TVQLFEEGAANTPDHTALQYEGESLYRE
10518	1699.8002	3337.5898	3337.5797	1.83	0	98	7.2e-008	1	K.VAAPEADAEILDQIIEGAEESLNADYVARN
10519	1113.6371	3337.5896	3337.5797	2.94	0	(98)	8.3e-008	1	K.VAAPEADAEILDQIIEGAEESLNADYVARN 10517 10520 10521
10526	1115.8790	3338.6032	3338.5837	11.8	0	(90)	0.00035	1	K.VAAPEADAEILDQIIEGAEESLNADYVARN
10530	835.6723	3338.6001	3338.6281	-10.2	1	(47)	0.0077	1	R.MTMLENALTHPEHTIDELTJSDAEKECL
10554	871.7341	3353.6340	3353.6370	-0.91	1	(91)	0.00028	1	R.MTMLENALTHPEHTIDELTJSDAEKECL
10559	1118.8882	3353.6369	3353.6370	-0.05	1	(51)	0.0026	1	R.MTMLENALTHPEHTIDELTJSDAEKECL
10557	839.4172	3353.6396	3353.6370	0.77	1	(62)	0.00028	1	R.MTMLENALTHPEHTIDELTJSDAEKECL 10558 10559
10564	839.6638	3354.6262	3354.6210	1.53	1	86	8.1e-005	1	R.MTMLENALTHPEHTIDELTJSDAEKECL
10664	1139.1818	3414.5535	3414.5238	8.68	0	90	1.7e-007	1	KEDVAFSGQDFVSNYLGQFDEMSDGLFTR.S
10689	859.2374	3432.9206	3432.8771	12.7	1	(32)	0.033	1	R.MALLAPPHFDSVQIFASLLGGTLVYPKK
10706	862.7332	3446.9035	3446.9040	-0.14	1	39	0.0098	1	R.MALLAPPHFDSVQIFASLLGGTLVYPKK
10782	1188.5798	3558.7177	3558.7128	1.44	0	48	0.0094	1	K.YAGQFDSVQIFASLLGGTLVYPKK
10812	862.6839	3586.7085	3586.7185	-2.80	1	(45)	0.0098	1	K.KTKVQLFEEGAANTPDHTALQYEGESLYRE
10813	1189.9185	3586.7277	3586.7185	3.13	1	87	7e-007	1	K.KTKVQLFEEGAANTPDHTALQYEGESLYRE
10958	1203.2889	3606.7549	3606.7832	-0.09	0	(41)	0.028	1	R.HPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
10969	1203.6173	3607.8301	3607.8232	1.91	1	80	3.4e-008	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKLER.A
10983	903.2132	3608.8237	3608.8072	4.57	1	(62)	0.00024	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKLER.A
11011	1208.2873	3621.7802	3621.7881	3.87	0	83	1.9e-008	1	R.HPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ 11010 11012
11017	1208.8024	3622.7854	3622.7801	9.74	0	(42)	0.022	1	R.HPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11027	1208.8346	3623.7819	3623.7341	13.2	0	(59)	0.00051	1	R.HPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11030	908.9826	3623.8210	3623.8181	0.79	1	(43)	0.019	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKLER.A
11035	1209.6158	3625.8257	3625.7891	10.9	1	(44)	0.014	1	R.TYVSQFEDAGVGYNMPAAALEGPLDIQKLER.A
11045	909.2330	3632.9030	3632.8900	6.33	2	42	0.014	1	K.SALKETLPDYMPPVWVWVTLNELPVTANGKVRK
11077	911.7120	3642.8198	3642.8185	0.62	0	(62)	0.00028	1	K.KPYTLVNNYQPTENTVATSAEHPFEGSLSIGR.A
11089	729.5730	3642.8288	3642.8185	3.32	0	(58)	0.00094	1	K.KPYTLVNNYQPTENTVATSAEHPFEGSLSIGR.A
11091	1215.2846	3642.8318	3642.8185	4.19	0	78	6.3e-009	1	K.KPYTLVNNYQPTENTVATSAEHPFEGSLSIGR.A
11083	911.9547	3643.7895	3643.8006	-3.03	0	(39)	0.049	1	K.KPYTLVNNYQPTENTVATSAEHPFEGSLSIGR.A
11311	1245.6182	3733.8298	3733.8185	2.22	0	95	1.2e-007	1	R.LNDYFETNGVITITLPTQLAEGFMELENTSLR.V
11333	1875.9198	3749.8248	3749.8194	2.97	0	(56)	0.00098	1	R.LNDYFETNGVITITLPTQLAEGFMELENTSLR.V
11334	1250.9514	3749.8324	3749.8194	5.08	0	(77)	8.1e-008	1	R.LNDYFETNGVITITLPTQLAEGFMELENTSLR.V
11479	1296.3179	3885.9318	3885.9272	1.19	1	80	0.00038	1	R.LLEDAAADPKPSEYKLESEEAASQIQGNPFR.T
11501	1303.6816	3907.9830	3907.9158	12.1	1	47	0.0084	1	R.LLEDAAADPKPSEYKLESEEAASQIQGNPFR.T
11552	953.9940	3971.9457	3971.9428	0.97	1	(57)	7.8e-007	1	K.TFDVLENEVKETALSADFQADYPLEDLIGNVQGRD
11553	1324.9821	3971.9544	3971.9428	2.80	1	100	4.1e-008	2	K.TFDVLENEVKETALSADFQADYPLEDLIGNVQGRD
11617	1396.0136	4085.0186	4084.9877	12.6	1	(44)	0.015	1	R.DVSRHPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11624	1390.8754	4079.0044	4079.9846	2.40	1	54	0.0014	1	R.DVSRHPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11625	1021.0079	4080.0028	4079.9786	5.88	1	(45)	0.013	1	R.DVSRHPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11626	1361.0128	4080.0169	4079.9786	9.13	1	(45)	0.012	1	R.DVSRHPLFDTMFLSQNATEGIPVGDLSLVSQETNFKJ
11652	1375.9835	4124.9888	4124.9823	-0.86	0	71	2.4e-005	1	R.TLSDPLDENDEENPETAVTAENLAMYTSQGGQPK.G
11653	1032.5002	4125.9719	4125.9843	6.19	0	(58)	0.00054	1	R.TLSDPLDENDEENPETAVTAENLAMYTSQGGQPK.G
11657	1381.3300	4140.9881	4140.9872	2.81	0	(58)	0.00054	1	R.TLSDPLDENDEENPETAVTAENLAMYTSQGGQPK.G
11659	829.3884	4141.9558	4141.9413	3.52	0	(49)	0.0042	1	R.TLSDPLDENDEENPETAVTAENLAMYTSQGGQPK.G
11672	1389.0016	4183.9829	4183.9748	1.98	0	85	1.1e-008	1	K.KETNLSITEQDTLGLSNYVDFDFMDFGSLNGAKL
11677	1042.7545	4186.9890	4186.9288	14.9	0	(68)	9e-005	1	K.KETNLSITEQDTLGLSNYVDFDFMDFGSLNGAKL
11695	1053.6334	4210.1047	4210.0886	1.92	1	(69)	4.7e-005	1	R.LAEQNGATLYMMLBAYTLLSKYTGDDIVGTPSAGR.N
11697	1405.0486	4212.1161	4212.0846	12.7	1	73	1.6e-005	1	R.LAEQNGATLYMMLBAYTLLSKYTGDDIVGTPSAGR.N
11707	1415.0325	4242.0798	4242.0884	-2.58	1	(67)	8.1e-005	1	R.LAEQNGATLYMMLBAYTLLSKYTGDDIVGTPSAGR.N
11746	1085.2590	4337.0070	4337.0283	-4.45	1	89	2.8e-007	1	R.YLTAPEKEDVAFSIQDPVSNYLGQFDEMSDGLFTR.S
11748	1085.5143	4338.0280	4338.0103	4.08	1	(77)	5.2e-008	1	R.YLTAPEKEDVAFSIQDPVSNYLGQFDEMSDGLFTR.S
11756	1089.2854	4353.0324	4353.0212	2.57	1	(63)	0.00016	1	R.YLTAPEKEDVAFSIQDPVSNYLGQFDEMSDGLFTR.S 11757 11758
11762	1089.7848	4355.0300	4354.9892	9.35	1	(44)	0.012	1	R.YLTAPEKEDVAFSIQDPVSNYLGQFDEMSDGLFTR.S
11765	1089.7898	4355.0451	4354.9892	12.8	1	(41)	0.028	1	R.YLTAPEKEDVAFSIQDPVSNYLGQFDEMSDGLFTR.S
11806	1499.0728	4494.1981	4494.1839	9.39	1	80	0.00043	1	R.TWKETNLSITEQDTLGLSNYVDFDFMDFGSLNGAKL
11829	1509.0812	4524.1617	4524.1757	-3.10	1	(43)	0.018	1	R.TWKETNLSITEQDTLGLSNYVDFDFMDFGSLNGAKL
11830	1192.0576	4524.2014	4524.1757	5.68	1	(46)	0.0091	1	R.TWKETNLSITEQDTLGLSNYVDFDFMDFGSLNGAKL
11856	1154.3378	4613.3222	4613.3040	3.94	1	88	4.8e-005	1	K.LFTVBLEYQVQWQKEEDLAFTEPFISGSLNDVSHK.CD
11890	824.0889	4615.3103	4615.2720	8.30	1	(91)	0.00028	1	K.LFTVBLEYQVQWQKEEDLAFTEPFISGSLNDVSHK.CD
11891	1539.4458	4615.3149	4615.2720	9.28	1	(51)	0.0028	1	K.LFTVBLEYQVQWQKEEDLAFTEPFISGSLNDVSHK.CD
11894	1164.8394	4615.3283	4615.2720	12.2	1	(62)	0.00019	1	K.LFTVBLEYQVQWQKEEDLAFTEPFISGSLNDVSHK.CD 11859 11863

2. [gi|499188862](#) MULTISPECIES: Surfactin synthase subunit 1 [Bacillus]
3. [gi|15488337](#) non-ribosomal peptide synthetase [Bacillus subtilis]
4. [gi|505915452](#) non-ribosomal peptide synthetase [Bacillus subtilis]
5. [gi|674707697](#) non-ribosomal peptide synthetase [Bacillus subtilis]
6. [gi|396481](#) srfA1 [Bacillus subtilis]
7. [gi|757756185](#) non-ribosomal peptide synthetase [Bacillus subtilis]
8. [gi|674300653](#) non-ribosomal peptide synthetase [Bacillus subtilis]
9. [gi|740642894](#) non-ribosomal peptide synthetase [Bacillus subtilis]
10. [gi|727789220](#) non-ribosomal peptide synthetase [Bacillus subtilis]
11. [gi|695810999](#) non-ribosomal peptide synthetase [Bacillus subtilis]
12. [gi|516292825](#) non-ribosomal peptide synthetase [Bacillus subtilis]
13. [gi|753212334](#) non-ribosomal peptide synthetase [Bacillus subtilis]
14. [gi|752706032](#) non-ribosomal peptide synthetase [Bacillus subtilis]
15. [gi|695808907](#) non-ribosomal peptide synthetase [Bacillus subtilis]
16. [gi|827042896](#) non-ribosomal peptide synthetase [Bacillus subtilis]
17. [gi|754291220](#) non-ribosomal peptide synthetase [Bacillus subtilis]
18. [gi|753213776](#) non-ribosomal peptide synthetase [Bacillus subtilis]
19. [gi|740641903](#) non-ribosomal peptide synthetase [Bacillus subtilis]
20. [gi|752689006](#) non-ribosomal peptide synthetase [Bacillus subtilis]
21. [gi|760325311](#) non-ribosomal peptide synthetase [Bacillus subtilis]
22. [gi|763172991](#) non-ribosomal peptide synthetase [Bacillus subtilis]
23. [gi|674707698](#) non-ribosomal peptide synthetase [Bacillus subtilis]
24. [gi|52705403](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
25. [gi|727789222](#) non-ribosomal peptide synthetase [Bacillus subtilis]
26. [gi|657202728](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
27. [gi|627042897](#) non-ribosomal peptide synthetase [Bacillus subtilis]
28. [gi|627042897](#) ATP-dependent isoleucine adenylyase [Bacillus subtilis]
29. [gi|499188863](#) MULTISPECIES: Surfactin synthase subunit 2 [Bacillus]
30. [gi|695816705](#) non-ribosomal peptide synthetase [Bacillus subtilis]
31. [gi|516292826](#) ATP-dependent isoleucine adenylyase [Bacillus subtilis]
32. [gi|10425190](#) non-ribosomal peptide synthetase [Bacillus subtilis]
33. [gi|639241916](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
34. [gi|752704565](#) non-ribosomal peptide synthetase [Bacillus subtilis]
35. [gi|752706030](#) non-ribosomal peptide synthetase [Bacillus subtilis]
36. [gi|742326967](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
37. [gi|760325309](#) non-ribosomal peptide synthetase [Bacillus subtilis]
38. [gi|504288673](#) non-ribosomal peptide synthetase [Bacillus subtilis]
39. [gi|396482](#) srfA2 [Bacillus subtilis]
40. [gi|757756184](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
41. [gi|753215568](#) non-ribosomal peptide synthetase [Bacillus subtilis]

42. [gi|764674904](#) non-ribosomal peptide synthetase [Bacillus subtilis]
43. [gi|764654741](#) non-ribosomal peptide synthetase [Bacillus subtilis]
44. [gi|779919036](#) non-ribosomal peptide synthetase [Bacillus subtilis]
45. [gi|680519617](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
46. [gi|5033878625](#) non-ribosomal peptide synthetase [Bacillus subtilis]
47. [gi|768925197](#) peptide synthetase, partial [Bacillus subtilis]
48. [gi|764654743](#) non-ribosomal peptide synthetase [Bacillus subtilis]
49. [gi|518087235](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
50. [gi|695618466](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
51. [gi|764674907](#) non-ribosomal peptide synthetase [Bacillus subtilis]
52. [gi|518087238](#) ATP-dependent isoleucine adenylyase, partial [Bacillus subtilis]
53. [gi|695618613](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
54. [gi|695614150](#) non-ribosomal peptide synthetase, partial [Bacillus subtilis]
55. [gi|195430078](#) ATP-dependent isoleucine adenylyase, partial [Bacillus subtilis]
56. [gi|445344970](#) surfactin synthetase [Bacillus subtilis subsp. inaquosorum KCTC 13429]
57. [gi|768925675](#) peptide synthetase, partial [Bacillus subtilis]
58. [gi|74064284](#) non-ribosomal peptide synthetase [Bacillus subtilis]
59. [gi|320017752](#) pilpastatin synthetase [Bacillus subtilis BSr5]
60. [gi|17518185](#) non-ribosomal peptide synthetase [Bacillus subtilis]
61. [gi|923999429](#) Surfactin synthase subunit 1 [Bacillus subtilis]
62. [gi|82728634](#) peptide synthetase [Bacillus subtilis]
63. [gi|505296192](#) Pilpastatin synthetase [Bacillus subtilis]
64. [gi|825064565](#) peptide synthetase [Bacillus subtilis]
65. [gi|917026198](#) non-ribosomal peptide synthetase [Bacillus subtilis]
66. [gi|736713228](#) non-ribosomal peptide synthetase [Bacillus subtilis]
67. [gi|445344937](#) surfactin synthetase subunit 2 SrfAB [Bacillus subtilis subsp. inaquosorum KCTC 13429]
68. [gi|4886972](#) recombinant surfactin/lichensyn A synthetase [Bacillus subtilis]
69. [gi|740676824](#) non-ribosomal peptide synthetase [Bacillus subtilis]
70. [gi|923999290](#) Surfactin synthase subunit 2 [Bacillus subtilis]
71. [gi|752704448](#) non-ribosomal peptide synthetase [Bacillus subtilis]
72. [gi|688756644](#) peptide synthetase, partial [Bacillus subtilis]
73. [gi|504282624](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]
74. [gi|351470200](#) pilpastatin synthetase [Bacillus subtilis subsp. subtilis str. SC-8]
75. [gi|859925332](#) Long-chain-fatty-acid-CoA ligase [Bacillus subtilis E1]
76. [gi|740676313](#) non-ribosomal peptide synthetase [Bacillus subtilis]
77. [gi|504292089](#) MULTISPECIES: hypothetical protein [Bacillus]
78. [gi|504282623](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]
79. [gi|751901523](#) Long-chain-fatty-acid-CoA ligase [Bacillus subtilis]
80. [gi|768926052](#) hypothetical protein UM89_15610, partial [Bacillus subtilis]
81. [gi|740642210](#) polyketide synthase [Bacillus subtilis]
82. [gi|505196613](#) polyketide synthase [Bacillus subtilis]
83. [gi|740642206](#) polyketide synthase [Bacillus subtilis]
84. [gi|924004027](#) Polyketide synthase PksR [Bacillus subtilis]
85. [gi|827043484](#) polyketide synthase [Bacillus subtilis]
86. [gi|92377047](#) fengycin synthetase FenA [Bacillus subtilis]
87. [gi|402363](#) RNA polymerase beta-subunit [Bacillus subtilis subsp. subtilis str. 168]
88. [gi|740642208](#) polyketide synthase [Bacillus subtilis]
89. [gi|351469279](#) polyketide synthase [Bacillus subtilis subsp. subtilis str. SC-8]
90. [gi|7469241](#) polyketide synthetase pksP [similarity] - Bacillus subtilis
91. [gi|740642428](#) integrase [Bacillus subtilis]
92. [gi|857203374](#) polyketide synthase [Bacillus subtilis]
93. [gi|827043548](#) non-ribosomal peptide synthetase [Bacillus subtilis]
94. [gi|763172872](#) non-ribosomal peptide synthetase [Bacillus subtilis]
95. [gi|740643551](#) polyketide synthase [Bacillus subtilis]
96. [gi|504290741](#) integrase [Bacillus subtilis]
97. [gi|754291355](#) polyketide synthase [Bacillus subtilis]
98. [gi|351468438](#) DNA-directed RNA polymerase subunit beta [Bacillus subtilis subsp. subtilis str. SC-8]
99. [gi|674584702](#) non-ribosomal peptide synthase domain protein [Bacillus subtilis subsp. niger]
100. [gi|924029892](#) Polyketide synthase PksR [Bacillus subtilis]
101. [gi|740676906](#) non-ribosomal peptide synthetase [Bacillus subtilis]
102. [gi|489331117](#) methyltransferase [Bacillus subtilis]
103. [gi|505917298](#) polyketide synthase [Bacillus subtilis]
104. [gi|489312316](#) flagellar hook protein FlgK [Bacillus subtilis]
105. [gi|740677509](#) non-ribosomal peptide synthetase [Bacillus subtilis]
106. [gi|446490082](#) MULTISPECIES: DNA-directed RNA polymerase subunit beta' [Bacillus cereus group]
107. [gi|39912](#) unnamed protein product [Bacillus subtilis subsp. subtilis str. 168]
108. [gi|2522214](#) fengycin synthetase FenE [Bacillus subtilis]
109. [gi|503155878](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]
110. [gi|924029695](#) Polyketide synthase PksL [Bacillus subtilis]
111. [gi|82502197](#) SubC [Bacillus subtilis]
112. [gi|57850259](#) Vpr [Bacillus subtilis]
113. [gi|489423080](#) MULTISPECIES: non-ribosomal peptide synthetase [Bacillus subtilis group]
114. [gi|757256397](#) hypothetical protein [Bacillus subtilis]
115. [gi|763173815](#) hypothetical protein [Bacillus subtilis]
116. [gi|40003](#) oxoglutarate dehydrogenase (NADP+) [Bacillus subtilis subsp. subtilis str. 168]

Figure 17. MASCOT report for MS/MS analysis of gel excised fluorescent protein (###, SrfAB) bands from the *B. subtilis* ATCC 21332 proteome.

Database : NCBI nr 20151207 (77704964 sequences; 28292933996 residues)

Taxonomy : *Bacillus subtilis* (127756 sequences)

Protein hits [gi|740641903](#) non-ribosomal peptide synthetase [*Bacillus subtilis*]

[gi|740641901](#) non-ribosomal peptide synthetase [*Bacillus subtilis*]

[gi|740642284](#) non-ribosomal peptide synthetase [*Bacillus subtilis*]

[gi|740641903](#) Mass: 400578 Score: 17251 Matches: 433(433) Sequences: 185(185) emPAI: 7.02

non-ribosomal peptide synthetase [*Bacillus subtilis*]

Query	Observed	Mr(expt)	Mr(calcd)	ppm	Miss	Score	Expect	Rank	Unique	Peptide
4624	314.7082	627.3958	627.3958	0.37	0	29	0.019	1		R.TGPLLKA
4660	635.3765	634.3692	634.3690	0.29	0	36	0.0086	1		K.DILFKV
5156	414.7631	827.5116	827.5116	-0.09	0	35	0.02	1		R.LVLGGQEKI
5159	415.7403	829.4680	829.4657	0.27	0	38	0.035	1		K.SVNEIIRS
5168	417.7270	833.4394	833.4395	-0.21	0	37	0.035	1		K.FAVVNERLN
5183	419.7301	837.4456	837.4457	-0.13	0	43	0.0033	1		K.GVQIEHRLN
5226	429.7251	857.4356	857.4355	0.12	0	(33)	0.032	1		R.ELNAAANRL
5227	429.7251	857.4356	857.4355	0.19	0	(33)	0.029	1		R.ELNAAANRL
5228	429.7251	857.4356	857.4355	0.19	0	(35)	0.016	1		R.ELNAAANRL
5229	429.7251	857.4357	857.4355	0.26	0	(37)	0.012	1		R.ELNAAANRL
5230	429.7252	857.4358	857.4355	0.33	0	(37)	0.012	1		R.ELNAAANRL
5231	429.7252	857.4359	857.4355	0.47	0	39	0.0089	1		R.ELNAAANRL
5252	436.7482	871.4759	871.4763	-0.45	0	36	0.03	1	U	R.EVAVGELRK
5281	442.2409	882.4673	882.4671	0.22	0	39	0.0085	1		K.AAAANPNVRL
5282	442.2411	882.4676	882.4671	0.58	0	(36)	0.0099	1		K.AAAANPNVRL
5406	466.2640	930.5135	930.5134	0.11	0	43	0.0097	1		K.LQSSLDLRT
5469	476.2302	950.4458	950.4457	0.09	0	45	0.0028	1		K.DANFESLRL
5475	476.7481	951.4817	951.4814	0.34	0	44	0.0043	1		K.WSEYVLR
5512	482.7642	963.5138	963.5138	0.07	0	64	5.4e-005	1		K.AGNLLTYRLE
5527	485.2299	968.4453	968.4451	0.29	0	40	0.0086	1		R.YSLEDGAKF
5528	485.2299	968.4453	968.4451	0.29	0	(39)	0.0058	1		R.YSLEDGAKF
5568	492.2345	982.4544	982.4542	0.17	0	47	0.0015	1		K.DAGMFGTLR.H + Oxidation (M)
5671	507.8006	1013.5867	1013.5869	-0.20	1	46	0.0028	1		K.IVQLEEKRH
5727	516.2847	1030.5548	1030.5548	0.17	0	42	0.012	1		R.IELGIEITKL
5745	521.2372	1040.4598	1040.4597	0.12	0	46	0.0028	1		R.FMAEDSSVR.M
5754	521.8164	1041.6161	1041.6162	-0.07	1	52	0.00044	1		R.KLVEQLQK.G
5756	522.3268	1042.6391	1042.6386	0.47	1	39	0.011	1		R.VLLTGGDKLKR
5798	529.7834	1057.5522	1057.5516	0.59	0	69	1.4e-005	1		R.DSLNQLVNR.H
5879	537.3137	1072.6128	1072.6128	-0.02	1	52	0.00087	1		R.SKLVQLEEK.R
5884	538.2613	1074.5061	1074.5080	0.10	0	44	0.0057	1		R.EEEDAEIKA
5888	538.2785	1074.5424	1074.5418	0.64	0	43	0.0088	1		K.ERPSSISGSR.N
5889	538.2787	1074.5428	1074.5418	0.99	0	(38)	0.025	1		K.ERPSSISGSR.N
5893	539.2536	1076.4926	1076.4920	0.57	0	77	2.2e-006	1		K.GETAAIMNDR.S
5924	544.3091	1086.6036	1086.6033	0.25	0	56	0.00039	1		R.DVIGSVTAGRT
5929	545.2581	1088.5016	1088.5028	-0.94	0	34	0.033	1		R.YFTETATK.G
5939	547.2511	1092.4876	1092.4870	0.64	0	(56)	0.00022	1		K.GETAAIMNDR.S + Oxidation (M)
6076	572.8396	1143.6851	1143.6852	-0.06	0	45	0.0034	1		K.IIPTDLVLR.K
6082	574.7831	1147.5517	1147.5509	0.69	0	38	0.025	1		K.EEQTFEPIR.Q
6087	575.3168	1148.6190	1148.6190	0.01	0	(76)	4.4e-006	1		R.LSDGLAFIGRA
6088	575.3173	1148.6200	1148.6190	0.87	0	80	1.5e-006	1		R.LSDGLAFIGRA
6091	576.2975	1150.5804	1150.5805	-0.03	0	55	0.0004	1		R.MYVLNQLDR.Q
6116	582.8167	1163.6189	1163.6186	0.20	0	66	3.5e-005	1		R.QIVFVNSTK.A
6121	583.3088	1164.6030	1164.6026	0.31	0	(44)	0.0081	1		R.QIVFVNSTK.A + Deamidated (NQ)
6128	584.2954	1168.5763	1168.5754	0.78	0	(41)	0.013	1		R.MYVLNQLDR.Q + Oxidation (M)
6150	589.8066	1177.5967	1177.5979	0.72	0	56	0.00033	1		K.FDLSLEAVERLE
6199	600.5870	1196.7392	1196.7397	-0.45	2	56	0.00013	1		R.VLLTGGDKLKR.A
6231	604.8071	1207.5996	1207.5986	0.84	0	69	1.9e-005	1		K.WTGGGIEYGR.I
6236	606.3168	1210.6191	1210.6234	-3.63	0	36	0.035	1		K.TFAQLFEEVKT
6249	610.8249	1219.6363	1219.6349	0.33	0	(41)	0.013	1		K.AFVQPFELN.R.A
6250	610.8251	1219.6365	1219.6349	0.62	0	50	0.0016	1		K.AFVQPFELN.R.A
6251	610.8252	1219.6368	1219.6349	0.74	0	(46)	0.0048	1		K.AFVQPFELN.R.A
6252	610.8254	1219.6363	1219.6349	1.13	0	(43)	0.007	1		K.AFVQPFELN.R.A
6253	610.8254	1219.6363	1219.6349	1.13	0	(36)	0.037	1		K.AFVQPFELN.R.A
6254	610.8254	1219.6363	1219.6349	1.13	0	(41)	0.011	1		K.AFVQPFELN.R.A
6285	610.8254	1219.6363	1219.6349	1.13	0	(41)	0.011	1		K.AFVQPFELN.R.A
6285	410.5785	1228.7136	1228.7139	-0.28	2	(40)	0.01	1		R.SKLVQLEEKRH
6286	615.3642	1228.7138	1228.7139	-0.04	2	(37)	0.021	1		R.SKLVQLEEKRH
6287	308.1859	1228.7145	1228.7139	0.52	2	(34)	0.046	1		R.SKLVQLEEKRH
6288	615.3646	1228.7147	1228.7139	0.64	2	62	6.5e-005	1		R.SKLVQLEEKRH
6302	617.3170	1232.6195	1232.6190	0.41	0	45	0.0057	1		R.FVADPFVPGIER.M
6308	618.3114	1234.6062	1234.6062	0.08	0	53	0.00086	1	U	R.VDLSDPDTPV.K.R
6319	613.5506	1237.6301	1237.6302	-0.14	1	47	0.0027	1		R.IRYSLEDGAKF
6326	620.8201	1239.6256	1239.6246	0.67	0	52	0.00084	1		K.SLFFQNYEARL.A
6329	621.3112	1240.6078	1240.6068	-0.80	0	(52)	0.001	1		K.SLFFQNYEARL.A + Deamidated (NQ)
6367	628.3265	1256.6385	1256.6401	-1.24	0	47	0.0032	1		K.AEVDLHVFEAKL
6368	419.6876	1256.6409	1256.6401	0.63	0	(40)	0.014	1		K.AEVDLHVFEAKL
6390	631.6350	1261.6554	1261.6554	-0.02	0	55	0.00084	1		R.GYVNLPELTKQ
6419	635.3437	1268.6728	1268.6724	0.31	0	38	0.02	1		R.EDIIPNVNISR.T
6435	636.6875	1271.7605	1271.7601	0.25	1	40	0.0042	1		K.IIPTDLVLR.K.M
6465	642.3010	1282.5875	1282.5863	0.92	0	55	0.00034	1		K.QDMYPLSSAGK.R + Oxidation (M)
6487	644.8231	1287.6317	1287.6306	0.83	1	47	0.0032	1		K.GREEDAEIIEKA
6494	646.6736	1291.7326	1291.7322	0.35	1	37	0.018	1		R.FKENLLMLR.H + Oxidation (M)
6495	431.5848	1291.7327	1291.7322	0.39	1	(37)	0.02	1		R.FKENLLMLR.H + Oxidation (M)
6499	647.7994	1293.6842	1293.6837	0.40	0	69	1.6e-005	1		R.EYGLVDEEQR.Q
6505	648.3169	1294.6172	1294.6153	1.43	1	35	0.045	1		R.GYLNREDETAKR
6537	651.8254	1301.6363	1301.6364	-0.08	0	50	0.0016	1		K ₂ QAQQTDPHPAVKA + Gln->pyro-Glu (N-term Q)
6554	663.3671	1304.7197	1304.7201	-0.28	1	56	0.0002	1		R.LRSDGLAFIGRA
6556	435.9139	1304.7200	1304.7201	-0.07	1	(45)	0.0042	1		R.LRSDGLAFIGRA
6599	440.5616	1318.6631	1318.6630	0.12	0	(36)	0.045	1		K.QAQQTDPHPAVKA
6600	660.3394	1318.6643	1318.6630	1.00	0	(44)	0.0067	1		K.QAQQTDPHPAVKA
6641	664.3769	1326.7373	1326.7368	0.39	1	56	0.00014	1		R.LRSDGLAFIGRA
6692	673.3906	1344.7868	1344.7867	-1.57	0	79	1e-006	1		R.SVETVGMVLAVLKA
6693	449.2637	1344.7894	1344.7867	0.61	0	(45)	0.0027	1		R.SVETVGMVLAVLKA

6713	675.3207	1348.8268	1348.8259	0.87	0	(52)	0.0013	1	K.NAGYVPVTEEDRM
6718	675.8121	1349.8098	1349.8099	-0.24	0	85	7e-005	1	K.NAGYVPVTEEDRM + Deamidated (NQ)
6728	451.5806	1351.7200	1351.7208	-0.80	0	(44)	0.0051	1	R.NALPKPNAASGGGKA
6729	676.8683	1351.7220	1351.7208	0.92	0	(53)	0.00082	1	R.NALPKPNAASGGGKA
6732	451.9089	1352.7049	1352.7048	0.08	0	(35)	0.042	1	R.NALPKPNAASGGGKA + Deamidated (NQ)
6733	451.9095	1352.7067	1352.7048	1.44	0	(52)	0.00085	1	R.NALPKPNAASGGGKA + Deamidated (NQ)
6734	677.3608	1352.7071	1352.7048	1.73	0	54	0.00056	1	R.NALPKPNAASGGGKA + Deamidated (NQ)
6736	452.5940	1354.7802	1354.7809	-0.47	0	(46)	0.0022	1	K.LAEIWEGILGVRLA
6737	678.3682	1354.7819	1354.7809	0.79	0	79	1.1e-006	1	K.LAEIWEGILGVRLA
6751	454.5963	1360.7840	1360.7836	0.31	0	(52)	0.00074	1	R.SVETVWGLAVLKA + Oxidation (M)
6752	681.3895	1360.7845	1360.7836	0.87	0	(81)	9.9e-005	1	R.SVETVWGLAVLKA + Oxidation (M)
6758	682.3704	1362.7263	1362.7251	0.88	0	56	0.00041	1	R.SAEVMVSLGVMIKA
6781	685.8763	1369.7361	1369.7354	0.49	0	92	8.8e-008	1	R.LAQFEQPSVLPGRLL
6787	686.8546	1371.6945	1371.6969	-1.70	0	(53)	0.00097	1	K.ISSYSMLHHVAK.F
6804	690.3672	1378.7198	1378.7200	-0.13	0	(55)	0.00054	1	R.SAEVMVSLGVMIKA + Oxidation (M)
6805	690.3677	1378.7208	1378.7200	0.59	0	(46)	0.0038	1	R.SAEVMVSLGVMIKA + Oxidation (M)
6835	463.6713	1387.8921	1387.8918	0.24	0	(43)	0.011	1	K.ISSYSMLHHVAK.F + Oxidation (M)
6836	694.8535	1387.8925	1387.8918	0.49	0	84	8.6e-007	1	K.ISSYSMLHHVAK.F + Oxidation (M)
6860	698.3656	1394.7168	1394.7149	1.24	0	(47)	0.0035	1	R.SAEVMVSLGVMIKA + 2 Oxidation (M)
6909	708.8689	1415.7192	1415.7197	-0.38	0	(37)	0.039	2	R.WLPDGNIEFLGR.I
6910	708.8674	1415.7202	1415.7197	0.32	0	(52)	0.0014	1	R.WLPDGNIEFLGR.I
6911	708.8680	1415.7215	1415.7197	1.28	0	(36)	0.046	1	R.WLPDGNIEFLGR.I
6912	709.3592	1416.7039	1416.7038	0.14	0	55	0.00081	1	R.WLPDGNIEFLGR.I + Deamidated (NQ)
6914	709.3813	1416.7480	1416.7473	0.49	0	55	0.00087	1	R.GYLNRPQLTAER.F
6917	709.8717	1417.7288	1417.7313	-1.78	0	(40)	0.02	1	R.GYLNRPQLTAER.F + Deamidated (NQ)
6979	480.6987	1438.8873	1438.8874	-0.12	1	82	9.9e-005	1	K.QDMYPLSSAQKRM + Oxidation (M)
6980	720.3516	1438.8888	1438.8874	0.78	1	(44)	0.0071	1	K.QDMYPLSSAQKRM + Oxidation (M)
7004	728.3672	1450.7198	1450.7164	2.35	2	70	2.2e-005	1	R.GYLNREDETAQR.F
7018	486.9180	1457.7282	1457.7283	-0.04	0	57	0.00034	1	K.TVHQLFEETAQR.H
7019	729.8751	1457.7357	1457.7283	6.45	0	(54)	0.00071	1	K.TVHQLFEETAQR.H
7023	730.3624	1458.7103	1458.7103	0.01	0	(39)	0.027	1	K.TVHQLFEETAQR.H + Deamidated (NQ)
7031	730.8457	1459.8788	1459.8732	2.82	0	84	7.3e-007	1	K.YNGAAFDSAFIER.T
7043	733.3410	1464.8674	1464.8667	0.50	0	(48)	0.0039	1	R.TSFMEANGPEVQR.I
7046	733.8336	1465.8526	1465.8507	1.28	0	(57)	0.0003	1	R.TSFMEANGPEVQR.I + Deamidated (NQ)
7073	370.9950	1479.8308	1479.8310	-0.18	0	(44)	0.0028	1	R.TVVFHQQLQKPR.Q
7074	484.2843	1479.8310	1479.8310	-0.04	0	(38)	0.013	1	R.TVVFHQQLQKPR.Q
7075	740.8246	1479.8347	1479.8310	2.47	0	59	9.9e-005	1	R.TVVFHQQLQKPR.Q
7077	494.5616	1480.8628	1480.8618	0.80	0	(36)	0.046	1	R.TSFMEANGPEVQR.I + Oxidation (M)
7078	741.3394	1480.8642	1480.8618	1.71	0	(81)	0.00015	1	R.TSFMEANGPEVQR.I + Oxidation (M)
7083	741.8306	1481.8466	1481.8456	0.64	0	63	7e-005	1	R.TSFMEANGPEVQR.I + Deamidated (NQ); Oxidation (M)
7089	495.2928	1482.8567	1482.8558	0.61	1	(50)	0.0007	1	K.KLAIEWEGILGVR.A
7090	742.4398	1482.8588	1482.8558	1.88	1	53	0.00032	1	K.KLAIEWEGILGVR.A
7142	504.2580	1509.7463	1509.7463	-0.02	1	(54)	0.0009	1	K.ETAKEWSEYVLR.L
7143	755.8909	1509.7472	1509.7463	0.58	1	55	0.00073	1	K.ETAKEWSEYVLR.L
7156	506.2790	1515.8151	1515.8158	-0.40	0	75	5.9e-006	1	K.TLQALIEHDLAR.M
7217	512.2632	1533.7879	1533.7875	0.28	0	(43)	0.014	1	K.EQQTFABELLEQAK.Q
7218	767.8925	1533.7704	1533.7875	1.90	0	57	0.00053	1	K.EQQTFABELLEQAK.Q
7222	768.3283	1534.6421	1534.8399	1.44	0	43	0.0055	1	K.TDFFEP8AFDQGR.Q + Oxidation (M)
7224	768.3722	1534.7298	1534.7272	1.71	0	(93)	1.3e-007	1	R.MMEAAVDQPAAFVRE
7225	768.3832	1534.7519	1534.7515	0.30	0	(42)	0.017	1	K.EQQTFABELLEQAK.Q + Deamidated (NQ)
7258	776.3694	1550.7242	1550.7221	1.35	0	94	7.9e-008	1	R.MMEAAVDQPAAFVRE + Oxidation (M)
7259	776.3698	1550.7251	1550.7221	1.90	0	(78)	5.2e-006	1	R.MMEAAVDQPAAFVRE + Oxidation (M)
7277	780.9117	1559.8069	1559.8051	2.46	0	(57)	0.00041	1	K.GMMLJANIAELEKS
7283	523.2483	1568.7172	1568.7170	0.10	0	(45)	0.0057	1	R.MMEAAVDQPAAFVRE + 2 Oxidation (M)
7284	784.3688	1568.7190	1568.7170	1.23	0	(58)	0.00027	1	R.MMEAAVDQPAAFVRE + 2 Oxidation (M)
7295	784.3688	1568.7190	1568.7170	1.23	0	(59)	0.00024	1	R.MMEAAVDQPAAFVRE + 2 Oxidation (M)
7296	784.3688	1568.7190	1568.7170	1.23	0	(80)	0.00018	1	R.MMEAAVDQPAAFVRE + 2 Oxidation (M)
7313	788.3819	1574.7492	1574.7484	1.82	0	57	0.00058	1	K.ALPEPDIEAGSGEYKA
7315	788.9088	1575.7990	1575.8000	-0.61	0	(54)	0.001	1	K.GMMLJANIAELEKS + Oxidation (M)
7316	788.9074	1575.8003	1575.8000	0.17	0	75	8.9e-006	1	K.GMMLJANIAELEKS + Oxidation (M)
7326	791.9157	1581.8169	1581.8151	1.12	0	85	6.5e-005	1	K.AGAAVYPLDPALPGDR.L
7327	528.2800	1581.8183	1581.8151	2.00	0	(55)	0.00073	1	K.AGAAVYPLDPALPGDR.L
7333	396.9314	1583.8984	1583.8984	-0.03	0	(36)	0.046	1	K.VHYEDISHADENR.Q
7334	792.8555	1583.8985	1583.8984	0.05	0	71	1.5e-005	1	K.VHYEDISHADENR.Q
7335	528.9084	1583.8973	1583.8984	0.54	0	(48)	0.0031	1	K.VHYEDISHADENR.Q
7336	528.9084	1583.8973	1583.8984	0.54	0	(48)	0.0029	1	K.VHYEDISHADENR.Q
7386	798.9072	1591.7999	1591.7949	3.13	0	(53)	0.00013	1	K.GMMLJANIAELEKS + 2 Oxidation (M)
7375	801.8782	1601.7378	1601.7382	0.98	0	56	0.00052	1	U KEYSFTWDETLVGR.I
7439	813.3225	1624.8303	1624.8277	1.81	0	(54)	0.00022	1	K.QDNEEAEYSWSERL + Gln->pyro-Glu (N-term Q)
7455	816.3839	1630.7732	1630.7701	1.87	0	54	0.0011	1	R.FVENPYPGSLMYKT
7475	548.9421	1637.8048	1637.8049	-0.20	0	(40)	0.024	1	R.TPANGQGGKPYSDYIKW
7478	819.9107	1637.8069	1637.8049	1.19	0	(58)	0.00036	1	R.TPANGQGGKPYSDYIKW
7484	820.4017	1638.7888	1638.7889	-0.08	0	86	5.3e-005	1	R.TPANGQGGKPYSDYIKW + Deamidated (NQ)
7485	820.4017	1638.7888	1638.7889	-0.01	0	(51)	0.0018	1	R.TPANGQGGKPYSDYIKW + Deamidated (NQ)
7499	821.8357	1641.8568	1641.8543	1.58	0	86	2.7e-007	1	K.QDNEEAEYSWSERL
7508	824.3901	1646.7857	1646.7850	0.42	0	(43)	0.014	1	R.FVENPYPGSLMYKT + Oxidation (M)
7514	550.8090	1648.8050	1648.8057	-0.39	0	(74)	1.3e-005	1	K.YASQDDIIVGSPTAGRT
7515	825.4100	1648.8054	1648.8057	-0.17	0	76	7.3e-006	1	K.YASQDDIIVGSPTAGRT
7516	825.4114	1648.8082	1648.8057	1.54	0	(47)	0.0081	3	K.YASQDDIIVGSPTAGRT
7522	825.9020	1649.7894	1649.7897	-0.16	0	(82)	0.00021	1	K.YASQDDIIVGSPTAGRT + Deamidated (NQ)
7523	550.9388	1649.7947	1649.7937	0.82	0	43	0.014	1	K.ETYTPADIEAHYIKE
7524	825.9053	1649.7961	1649.7937	1.48	0	(40)	0.032	1	K.ETYTPADIEAHYIKE
7548	553.6107	1657.8103	1657.8094	0.59	0	(59)	3e-005	1	R.AQGAGNEDIVAVMDR.S
7549	829.9128	1657.8110	1657.8094	1.00	0	115	8.2e-010	1	R.AQGAGNEDIVAVMDR.S
7550	830.4080	1658.7975	1658.7934	2.47	0	(53)	0.0012	1	R.AQGAGNEDIVAVMDR.S + Deamidated (NQ)
7558	556.3036	1665.8889	1665.8872	1.05	0	(80)	1.8e-006	1	K.LNMAEHVTEAAVIR.K
7559	834.4531	1666.8917	1666.8712	12.3	0	(58)	0.0003	1	K.LNMAEHVTEAAVIR.K + Deamidated (NQ)
7561	556.9980	1667.9721	1667.9723	-0.08	0	(40)	0.0044	1	R.HLIIGGDALVPHIVSKV
7562	418.0005	1667.9727	1667.9723	0.28	0	(42)	0.0031	1	R.HLIIGGDALVPHIVSKV
7563	834.9940	1667.9734	1667.9723	0.68	0	43	0.0023	1	R.HLIIGGDALVPHIVSKV
7580	836.9299	1671.8453	1671.8501	-2.88	0	70	2.4e-005	1	U K.ALAVPETALEESLGR.I + Propionamide (C)
7581	419.2133	1672.8238	1672.8281	-2.49	0	(55)	0.0007	1	R.ELDEQANQLAHLR.A

7582	568.6180	1672.8263	1672.8261	-1.10	0	(80)	0.00026	1	RELDEQANQLAHHLRA
7583	837.4211	1672.8277	1672.8281	-0.22	0	89	2.8e-007	1	RELDEQANQLAHHLRA
7586	837.9098	1673.8050	1673.8043	0.45	0	(91)	2.3e-007	1	R.AQGAGNEDVAVIMDR.S + Oxidation (M)
7587	837.9117	1673.8088	1673.8043	2.71	0	(94)	1.1e-007	1	R.AQGAGNEDVAVIMDR.S + Oxidation (M)
7588	568.9446	1673.8121	1673.8121	-0.01	0	(54)	0.00099	1	RELDEQANQLAHHLRA + Deamidated (NQ)
7589	568.9446	1673.8125	1673.8121	0.21	0	(56)	0.00089	1	RELDEQANQLAHHLRA + Deamidated (NQ)
7590	568.9461	1673.8134	1673.8121	0.78	0	(41)	0.02	1	RELDEQANQLAHHLRA + Deamidated (NQ)
7600	840.9426	1679.8707	1679.8703	0.24	1	39	0.034	1	R.DSLNQLVNRHESLR.T
7607	561.8280	1681.8561	1681.8383	10.8	1	(37)	0.044	1	R.DSLNQLVNRHESLR.T + 2 Deamidated (NQ)
7609	561.8351	1681.8834	1681.8821	0.78	0	109	2.4e-009	1	K.LNMAEHVTEAAVIR.K + Oxidation (M)
7610	841.9497	1681.8849	1681.8821	1.84	0	(81)	1.4e-006	1	K.LNMAEHVTEAAVIR.K + Oxidation (M)
7650	567.9579	1700.8518	1700.8522	-0.20	1	(87)	4.8e-005	1	K.IKYNGAAFDSAFIER.T
7651	851.4341	1700.8536	1700.8522	0.83	1	(53)	0.0013	1	K.IKYNGAAFDSAFIER.T
7652	851.9249	1701.8352	1701.8362	-0.59	1	72	1.6e-005	1	K.IKYNGAAFDSAFIER.T + Deamidated (NQ)
7653	598.2857	1701.8363	1701.8362	-0.53	1	(55)	0.00079	1	K.IKYNGAAFDSAFIER.T + Deamidated (NQ)
7679	856.9293	1711.8441	1711.8417	1.40	0	85	9e-005	1	K.AGAAFLPIDPETPEER.I
7680	856.9638	1711.9131	1711.9145	-0.82	0	80	1.7e-006	1	R.NLAYVYVTSGTTGPKP.KG
7681	571.8452	1711.9138	1711.9145	-0.41	0	(53)	0.00075	1	R.NLAYVYVTSGTTGPKP.KG
7688	857.4542	1712.8939	1712.8985	-2.88	0	(47)	0.0041	1	R.NLAYVYVTSGTTGPKP.KG + Deamidated (NQ)
7694	856.4115	1716.8094	1716.8108	-1.35	0	89	2.9e-007	1	K.AGAAFLPIDPYDQ.R.I
7719	871.9189	1741.8173	1741.8172	0.07	0	82	0.00019	1	R.QASYQQHYVPSPAQR.L + Gln->pyro-Glu (N-term C)
7720	581.8133	1741.8182	1741.8172	0.55	0	(47)	0.0085	1	R.QASYQQHYVPSPAQR.L + Gln->pyro-Glu (N-term C)
7725	875.3950	1748.7755	1748.7754	0.05	0	83	1.2e-006	1	U K.DFAVWQNEAEQQR.M
7744	880.4291	1758.8437	1758.8438	-0.02	0	(56)	0.00074	1	R.QASYQQHYVPSPAQR.L
7745	587.2887	1758.8443	1758.8438	0.29	0	(39)	0.034	1	R.QASYQQHYVPSPAQR.L
7796	599.0010	1793.9811	1793.9821	-0.58	1	74	5.2e-006	1	K.LNMAEHVTEAAVIR.K.N
7797	449.5029	1793.9824	1793.9821	0.13	1	(50)	0.0013	1	K.LNMAEHVTEAAVIR.K.N
7816	903.4382	1804.8839	1804.8866	-1.50	0	(80)	0.0003	1	R.TSDFMIDGVEVQTVH.K.N
7817	802.8302	1804.8867	1804.8866	1.20	0	(54)	0.0013	1	R.TSDFMIDGVEVQTVH.K.N
7819	802.8350	1804.8832	1804.8818	0.79	0	53	0.0016	1	K.IYQGADMLPQIHYK.D
7821	904.5288	1807.0390	1807.0356	1.90	1	(39)	0.0049	1	R.LAGFEQPSVLPGR.LPV.KK
7822	803.3537	1807.0393	1807.0356	2.03	1	45	0.0011	1	R.LAGFEQPSVLPGR.LPV.KK
7827	804.3309	1809.9708	1809.9771	-3.47	1	(40)	0.014	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7828	804.3309	1809.9708	1809.9771	-3.47	1	(40)	0.015	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7829	804.3309	1809.9710	1809.9771	-3.37	1	(35)	0.044	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7830	804.3313	1809.9721	1809.9771	-2.76	1	(70)	1.5e-005	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7832	483.5016	1809.9775	1809.9771	0.24	1	(48)	0.0024	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7833	905.9996	1809.9787	1809.9771	0.92	1	(56)	0.00035	1	K.LNMAEHVTEAAVIR.K.N + Oxidation (M)
7840	907.4254	1812.8363	1812.8391	-1.53	1	87	5.8e-007	1	K.TKVHYEDISHADENR.Q
7841	454.2170	1812.8387	1812.8391	-0.20	1	(78)	4.3e-006	1	K.TKVHYEDISHADENR.Q
7842	805.2670	1812.8391	1812.8391	0.04	1	(79)	3.8e-006	1	K.TKVHYEDISHADENR.Q
7856	909.9428	1817.8707	1817.8723	-0.89	0	70	2.6e-005	1	REEDIGLSFDYATALFK.D
7866	911.4380	1820.8614	1820.8615	-0.04	0	87	7.2e-007	1	R.TSDFMIDGVEVQTVH.K.N + Oxidation (M)
7867	807.9615	1820.8628	1820.8615	0.63	0	(58)	0.0006	1	R.TSDFMIDGVEVQTVH.K.N + Oxidation (M)
7868	911.4435	1820.8725	1820.8787	-2.29	0	(39)	0.047	1	K.IYQGADMLPQIHYK.D + Oxidation (M)
7869	807.9654	1820.8743	1820.8615	7.05	0	(48)	0.0082	1	R.TSDFMIDGVEVQTVH.K.N + Oxidation (M)
7879	914.4787	1828.9428	1828.9414	0.77	0	93	1.2e-007	1	U R.TPASTAVVYEGT.VLTYR.E
7903	919.4806	1838.9088	1838.9080	-0.77	0	(86)	7.5e-007	1	R.HMTQITEATFAALFEK.Q
7904	613.3107	1838.9104	1838.9080	1.28	0	(83)	1.5e-006	1	R.HMTQITEATFAALFEK.Q
7925	826.4774	1850.9403	1850.9414	-0.61	1	85	7.5e-005	1	R.TAPAGDKTFAQFLEEV.KT
7926	617.9882	1850.9428	1850.9414	0.78	1	(40)	0.025	1	R.TAPAGDKTFAQFLEEV.KT
7927	618.0074	1851.0005	1851.0003	0.14	1	39	0.019	1	K.AGAAVYPLDPALPGDR.LF
7929	618.3186	1851.9279	1851.9254	1.38	1	(80)	0.0003	1	R.TAPAGDKTFAQFLEEV.KT + Deamidated (NQ)
7930	927.4584	1852.9022	1852.9029	-0.40	0	87	8.8e-007	1	R.HMTQITEATFAALFEK.Q + Oxidation (M)
7945	932.0024	1861.9902	1861.9938	-1.93	0	96	4.7e-008	1	U K.LTPLSFHTVNTSSF.KD
7946	621.6721	1861.9944	1861.9938	0.29	0	(43)	0.0092	1	U K.LTPLSFHTVNTSSF.KD
7947	621.6724	1861.9953	1861.9938	0.78	0	(49)	0.0021	1	U K.LTPLSFHTVNTSSF.KD
7948	621.6724	1861.9953	1861.9938	0.78	0	(48)	0.0024	1	U K.LTPLSFHTVNTSSF.KD
7953	622.0005	1862.9798	1862.9778	1.08	0	(81)	0.00018	1	U K.LTPLSFHTVNTSSF.KD + Deamidated (NQ)
7972	626.3146	1875.9219	1875.9214	0.28	0	41	0.029	1	REENDIVQAYKPIGSEK.V
7991	949.5282	1897.0418	1897.0421	-0.16	0	110	1.1e-009	1	K.LVPPGASGQLYTTGQGLAR.G
7992	633.3549	1897.0429	1897.0421	0.41	0	(35)	0.04	1	K.LVPPGASGQLYTTGQGLAR.G
7993	633.3556	1897.0451	1897.0421	1.57	0	(84)	4.7e-005	1	K.LVPPGASGQLYTTGQGLAR.G
7994	949.5311	1897.0477	1897.0421	2.93	0	(91)	8.4e-008	1	K.LVPPGASGQLYTTGQGLAR.G
8040	961.0187	1920.0189	1920.0179	0.52	0	(53)	0.0011	1	R.ISTMWLTSPFLNQLAAK.D
8041	841.0138	1920.0195	1920.0179	0.88	0	85	8.7e-005	1	R.ISTMWLTSPFLNQLAAK.D
8068	484.7903	1935.1321	1935.1306	0.82	2	(29)	0.038	1	R.LAGFEQPSVLPGR.LPV.KK.D
8070	968.5737	1935.1328	1935.1306	1.15	2	32	0.018	1	R.LAGFEQPSVLPGR.LPV.KK.D
8073	969.0123	1936.0101	1936.0128	-1.39	0	(49)	0.0029	1	R.ISTMWLTSPFLNQLAAK.D + Oxidation (M)
8074	848.3444	1936.0114	1936.0128	-0.71	0	(55)	0.00079	1	R.ISTMWLTSPFLNQLAAK.D + Oxidation (M)
8076	969.5093	1937.0041	1936.9988	3.78	0	(49)	0.0028	1	R.ISTMWLTSPFLNQLAAK.D + Deamidated (NQ); Oxidation (M)
8078	647.3551	1939.0435	1939.0462	-1.39	0	74	7.3e-006	1	K.HLLLLDMHHIADGVS.R.G
8102	975.5175	1949.0205	1949.0218	-0.88	0	98	3.5e-008	1	K.QADQGPVEGEVILTPQR.W
8103	975.5194	1949.0241	1949.0218	1.20	0	(89)	2.8e-007	1	K.QADQGPVEGEVILTPQR.W
8104	850.6822	1949.0249	1949.0218	1.80	0	(42)	0.016	1	K.QADQGPVEGEVILTPQR.W
8107	488.2717	1949.0577	1949.0555	1.14	2	37	0.037	1	R.LRDSLNLQVNRHESLR.T
8126	489.7677	1955.0416	1955.0411	0.25	0	(55)	0.00088	1	R.HLLLLDMHHIADGVS.R.G + Oxidation (M)
8137	654.0419	1959.1040	1959.1013	1.34	1	40	0.009	1	R.LENAIQLNRHILR.T
8183	682.0215	1983.0428	1983.0425	0.04	1	(52)	0.0014	1	U K.RTPASTAVVYEGT.VLTYR.E
8184	982.5316	1983.0486	1983.0425	3.04	1	86	5.5e-007	1	U K.RTPASTAVVYEGT.VLTYR.E
8191	683.6744	1988.0013	1987.9997	0.83	1	56	0.00094	1	K.LVEGLQKGETAAMNDR.S + Oxidation (M)
8230	670.8684	2006.9773	2006.9775	-0.10	1	(78)	9.1e-006	1	R.MEAKAQGTFAELLEQA.K.Q + Oxidation (M)
8233	1005.9687	2009.9629	2009.9615	10.8	1	77	7.8e-006	1	R.MEAKAQGTFAELLEQA.K.Q + Deamidated (NQ); Oxidation (M)
8243	1009.4761	2016.9377	2016.9350	1.35	0	56	0.001	1	K.VSFEIVDLYSDEEMLR.S + Oxidation (M)
8257	1014.9840	2027.9353	2027.9357	8.88	0	81	2.9e-006	1	R.NMTAIGQYEGTIVSLDDGK.W + Deamidated (NQ); Oxidation (M)
8258	678.9646	2027.9619	2027.9622	-0.17	0	56	0.0011	1	K.AELPEGMVAHVQFEEQA.K.R + Oxidation (M)
8259	1014.9899	2027.9652	2027.9622	1.46	0	(55)	0.0013	1	K.AELPEGMVAHVQFEEQA.K.R + Oxidation (M)
8265	1016.5231	2031.0317	2031.0371	-2.67	0	126	8.3e-011	1	R.LSDVLLSSAETAALLEER.H
8266	678.0201	2031.0386	2031.0371	0.71	0	(102)	1.9e-008	1	R.LSDVLLSSAETAALLEER.H
8280	1021.5982	2041.1839	2041.1857	-0.86	0	(36)	0.0096	1	R.VGVLTKPSLEMSAAVLSV.LKA
8282	681.4031	2041.1878	2041.1857	0.83	0	(89)	4.9e-006	1	R.VGVLTKPSLEMSAAVLSV.LKA
8298	684.8948	2051.0628	2051.0623	0.18	0	(49)	0.0042	1	R.THPDLGGVPMFVNTVALR.T

8301	1027.0438	2052.0731	2052.0463	13.1	0	(41)	0.021	1	R.THPDLQGVPGMFVNTVALR.T + Deamidated (NQ)
8311	686.3899	2066.1478	2056.1469	0.45	1	36	0.029	1	K.IKEFIRPFDLNDAPLIRA
8314	686.7346	2057.1819	2057.1808	0.61	0	71	3.8e-006	1	R.VGLVTKPSEMSAAVLSVLKA + Oxidation (M)
8315	1029.5982	2057.1839	2057.1806	1.62	0	(89)	5.1e-006	1	R.VGLVTKPSEMSAAVLSVLKA + Oxidation (M)
8316	515.3033	2057.1840	2057.1808	1.66	0	(48)	0.00074	1	R.VGLVTKPSEMSAAVLSVLKA + Oxidation (M)
8317	687.6710	2059.9911	2059.9884	1.27	0	(40)	0.038	1	R.QVSGESEALYALFSFGMIR.N + Oxidation (M)
8318	1031.0045	2059.9945	2059.9884	2.94	0	67	6.8e-005	1	R.QVSGESEALYALFSFGMIR.N + Oxidation (M)
8329	690.0285	2067.0578	2067.0572	0.23	0	(56)	0.00075	1	R.THPDLQGVPGMFVNTVALR.T + Oxidation (M)
8331	1034.5380	2067.0614	2067.0572	2.03	0	61	0.00028	1	R.THPDLQGVPGMFVNTVALR.T + Oxidation (M)
8337	691.6651	2071.9735	2071.9698	1.77	1	47	0.008	1	K.AEVDLHVFEAKEDEADQKI
8352	695.3859	2083.1358	2083.1360	-0.14	1	72	9.9e-006	1	K.KHLLLDMMHIIADGVSR.G + Oxidation (M)
8353	521.7918	2083.1361	2083.1360	1.00	1	(49)	0.0021	1	K.KHLLLDMMHIIADGVSR.G + Oxidation (M)
8363	1046.0396	2090.0645	2090.0531	5.46	0	61	0.00029	1	K.GGNTAIAAYTPESADIEALK.S
8365	1047.0124	2092.0103	2092.0061	1.05	0	(84)	1.7e-006	1	R.TNADVQDMPGMPVNTLALRM
8374	701.0409	2100.1008	2100.0997	0.54	2	(88)	4.2e-005	1	R.KLVEQGLQKGETAJMNDR.S
8394	703.6731	2107.9975	2108.0031	-2.65	0	(52)	0.0031	1	R.TNADVQDMPGMPVNTLALRM + Oxidation (M)
8395	1055.0098	2108.0050	2108.0031	0.91	0	122	3e-010	1	R.TNADVQDMPGMPVNTLALRM + Oxidation (M)
8396	1055.0099	2108.0052	2108.0031	1.03	0	(90)	4.7e-007	1	R.TNADVQDMPGMPVNTLALRM + Oxidation (M)
8406	706.3711	2116.0914	2116.0946	-1.50	2	(86)	9.7e-005	1	R.KLVEQGLQKGETAJMNDR.S + Oxidation (M)
8409	1059.0561	2116.0977	2116.0946	1.48	2	74	1.3e-005	1	R.KLVEQGLQKGETAJMNDR.S + Oxidation (M)
8411	706.6885	2117.0438	2117.0429	0.41	0	81	3.4e-006	1	K.DLFQHPHTEELTQYVERA
8412	1059.5303	2117.0460	2117.0429	1.45	0	(80)	0.00039	1	K.DLFQHPHTEELTQYVERA
8413	530.2816	2117.0974	2117.0798	8.88	2	(46)	0.0081	1	R.KLVEQGLQKGETAJMNDR.S + Deamidated (NQ); Oxidation (M)
8418	709.0071	2123.9994	2123.9980	0.67	0	(94)	2e-007	1	R.TNADVQDMPGMPVNTLALRM + 2 Oxidation (M)
8419	1063.0085	2124.0025	2123.9980	2.14	0	(104)	1.9e-008	1	R.TNADVQDMPGMPVNTLALRM + 2 Oxidation (M)
8420	709.6520	2125.9343	2125.9341	0.11	1	(71)	2.6e-005	1	K.WLQKQDNEEAEYSWSE.RL
8421	709.6525	2125.9356	2125.9341	0.71	1	(43)	0.018	1	K.WLQKQDNEEAEYSWSE.RL
8422	1063.9773	2125.9400	2125.9341	2.80	1	76	9.6e-006	1	K.WLQKQDNEEAEYSWSE.RL
8500	723.6989	2168.0749	2168.0684	3.00	1	(41)	0.031	1	K.AELPEGMVAHVQVFEQAKR.T
8504	544.3250	2173.2709	2173.2695	0.67	0	(30)	0.027	1	K.RPTGRIPRANAGALVLEAKL
8505	725.4312	2173.2718	2173.2695	1.07	0	30	0.024	1	K.RPTGRIPRANAGALVLEAKL
8509	725.7584	2174.2533	2174.2535	-0.10	0	(30)	0.038	1	K.RPTGRIPRANAGALVLEAKL + Deamidated (NQ)
8511	1089.5228	2177.0311	2177.0317	-0.28	0	47	0.0085	1	K.GFTPEISFNYLQGFDESEVKT
8519	729.0283	2184.0631	2184.0633	-0.09	1	(70)	3.8e-005	1	K.AELPEGMVAHVQVFEQAKR.T + Oxidation (M)
8520	547.0231	2184.0634	2184.0633	0.04	1	(39)	0.047	1	K.AELPEGMVAHVQVFEQAKR.T + Oxidation (M)
8521	1093.0409	2184.0672	2184.0633	1.79	1	96	9.4e-006	1	K.AELPEGMVAHVQVFEQAKR.T + Oxidation (M)
8533	1095.0355	2188.0565	2188.0549	0.73	0	(76)	9.3e-006	1	R.DAAFADIFAVQQHVAEAE.RY
8534	730.3602	2188.0569	2188.0549	1.82	0	83	2.2e-006	1	R.DAAFADIFAVQQHVAEAE.RY
8553	1102.5414	2203.0682	2203.0645	1.69	0	(72)	3e-005	1	K.QEGISVPDSYTGVDVLLDGS.RT + Gln->pyro-Glu (N-term Q)
8567	738.0734	2211.1983	2211.1939	1.97	1	50	0.002	1	K.ELALLYKGEQLPEPALHYKD
8568	1106.6083	2211.2020	2211.1939	3.67	1	(49)	0.0023	1	K.ELALLYKGEQLPEPALHYKD
8571	738.3817	2212.1231	2212.1223	0.38	0	(74)	1.3e-005	1	K.AVADNPQPLSSLSLVTEK.Q
8572	1107.0710	2212.1275	2212.1223	2.37	0	77	7.8e-006	1	K.AVADNPQPLSSLSLVTEK.Q
8577	741.0393	2220.0961	2220.0910	2.29	0	(75)	1.3e-005	1	K.QEGISVPDSYTGVDVLLDGS.RT
8578	1111.0564	2220.0982	2220.0910	3.28	0	82	2.8e-006	1	K.QEGISVPDSYTGVDVLLDGS.RT
8583	742.7033	2225.0679	2225.0685	0.64	0	(49)	0.0058	1	K.ARPVATYNGQSWTYGELN.AKA
8594	1113.5533	2225.0621	2225.0685	2.53	0	67	8.5e-005	1	K.ARPVATYNGQSWTYGELN.AKA
8598	743.0313	2228.0721	2228.0705	0.71	0	(46)	0.012	1	K.ARPVATYNGQSWTYGELN.AKA + Deamidated (NQ)
8602	1118.0227	2234.0309	2234.0188	6.32	1	57	0.0011	1	K.EQNTYKDEEYVLDVFKG
8633	1129.0463	2256.0760	2256.0741	0.86	0	(87)	1.1e-006	1	R.SPLFSVMFMQNMIEPSLR.L + Oxidation (M)
8634	1129.0453	2256.0760	2256.0741	0.86	0	106	1.3e-006	1	R.SPLFSVMFMQNMIEPSLR.L + Oxidation (M)
8637	763.3661	2267.0766	2267.0681	8.20	0	(53)	0.0025	1	R.SPLFSVMFMQNMIEPSLR.L + Deamidated (NQ); Oxidation (M)
8659	768.3633	2272.0662	2272.0690	-0.36	0	(46)	0.012	1	R.SPLFSVMFMQNMIEPSLR.L + 2 Oxidation (M)
8660	1137.0432	2272.0719	2272.0690	1.28	0	(77)	9.8e-006	1	R.SPLFSVMFMQNMIEPSLR.L + 2 Oxidation (M)
8662	1137.0488	2272.0631	2272.0690	6.20	0	(77)	8.5e-006	1	R.SPLFSVMFMQNMIEPSLR.L + 2 Oxidation (M)
8680	760.7377	2279.1912	2279.1910	0.08	1	(85)	8e-005	1	K.ALPVPTDKTVHQLFEETAQR.H
8681	1140.8035	2279.1925	2279.1910	0.68	1	67	4.9e-005	1	K.ALPVPTDKTVHQLFEETAQR.H
8707	763.6962	2288.0667	2288.0639	1.20	0	(80)	5e-006	1	R.SPLFSVMFMQNMIEPSLR.L + 3 Oxidation (M)
8708	1145.0427	2288.0709	2288.0639	3.04	0	(103)	2.3e-008	1	R.SPLFSVMFMQNMIEPSLR.L + 3 Oxidation (M)
8718	764.3801	2290.1184	2290.1158	1.14	0	(56)	0.0013	1	K.VESAFEGTSFDFNLVYPGKT
8719	1146.0696	2290.1228	2290.1158	3.00	0	58	0.00084	1	K.VESAFEGTSFDFNLVYPGKT
8748	772.0554	2313.1444	2313.1488	-1.90	2	56	0.0012	1	K.AEVDLHVFEAKEDEADQKI.KE
8779	778.7296	2333.1668	2333.1427	10.4	0	45	0.015	1	K.TASLQAFHQSYPLELEIKL + Deamidated (NQ)
8780	778.7333	2333.1780	2333.1750	1.28	1	(62)	0.00025	1	K.DKGGNTAIAAYTPESADIEALK.S
8781	1167.5988	2333.1829	2333.1750	3.39	1	79	5.4e-006	1	K.DKGGNTAIAAYTPESADIEALK.S
8799	784.3655	2350.0748	2350.0753	-0.24	1	99	7.1e-006	1	U K.DEYVNKEYSFTWDELTVGR.I
8800	1176.0501	2350.0655	2350.0753	4.34	1	(76)	1.4e-005	1	U K.DEYVNKEYSFTWDELTVGR.I
8811	785.3672	2363.1398	2363.1372	1.09	1	(63)	0.00028	1	R.NMTAIGQYEGTIVSLDDGKWR.N
8812	1177.5790	2363.1434	2363.1372	2.62	1	(71)	4e-005	1	R.NMTAIGQYEGTIVSLDDGKWR.N
8827	780.7175	2369.1308	2369.1322	-0.59	1	(91)	4.2e-007	1	R.NMTAIGQYEGTIVSLDDGKWR.N + Oxidation (M)
8828	1185.5768	2369.1390	2369.1322	2.89	1	102	3.1e-008	1	R.NMTAIGQYEGTIVSLDDGKWR.N + Oxidation (M)
8831	791.0524	2370.1353	2370.1162	8.07	1	(75)	1.9e-005	1	R.NMTAIGQYEGTIVSLDDGKWR.N + Deamidated (NQ); Oxidation (M)
8860	798.4048	2386.1925	2386.1951	-1.06	0	(50)	0.0041	1	R.QLAAYMEASAVSGGHQVLKPADK.Q + Oxidation (M)
8861	597.5070	2386.1967	2386.1951	1.52	0	51	0.0037	1	R.QLAAYMEASAVSGGHQVLKPADK.Q + Oxidation (M)
8868	1198.5985	2395.1825	2395.1763	2.58	0	(92)	3.4e-007	1	R.QTISYNNMPSVLLMEGELDIS.RL
8869	799.4019	2395.1839	2395.1763	3.19	0	(42)	0.031	1	R.QTISYNNMPSVLLMEGELDIS.RL
8914	1206.0620	2410.1495	2410.1396	4.11	0	(58)	0.00082	1	R.QTISYNNMPSVLLMEGELDIS.RL + Gln->pyro-Glu (N-term Q); 2 Oxidation (M)
8916	1206.5955	2411.1784	2411.1712	2.14	0	(79)	5.8e-006	1	R.QTISYNNMPSVLLMEGELDIS.RL + Oxidation (M)
8918	1206.5983	2411.1820	2411.1712	4.47	0	105	1.8e-006	1	R.QTISYNNMPSVLLMEGELDIS.RL + Oxidation (M)
8920	805.0653	2412.1741	2412.1652	7.82	0	(80)	4.5e-006	1	R.QTISYNNMPSVLLMEGELDIS.RL + Deamidated (NQ); Oxidation (M)
8946	810.0620	2427.1642	2427.1661	-0.80	0	(99)	6.8e-006	1	R.QTISYNNMPSVLLMEGELDIS.RL + 2 Oxidation (M)
8947	1214.5947	2427.1749	2427.1661	3.61	0	(91)	4.4e-007	1	R.QTISYNNMPSVLLMEGELDIS.RL + 2 Oxidation (M)
8957	811.7336	2432.1789	2432.1747	1.73	1	73	2.8e-005	1	R.EEDIGLSFDYATLAKOETIR.R
9007	827.3996	2479.1678	2479.1543	5.45	2	59	0.00073	1	U K.DEYVNKEYSFTWDELTVGR.I + Deamidated (NQ)
9020	831.7914	2492.3525	2492.3540	-0.80	0	(53)	0.00087	1	K.TANLHQVTGNLQAVWGVLSK.Y
9021	831.7921	2492.3545	2492.3540	0.21	0	(58)	0.00041	1	K.TANLHQVTGNLQAVWGVLSK.Y
9022	831.7926	2492.3560	2492.3540	0.80	0	79	2e-006	1	K.TANLHQVTGNLQAVWGVLSK.Y
9023	831.7927	2492.3562	2492.3540	0.87	0	(66)	2.3e-005	1	K.TANLHQVTGNLQAVWGVLSK.Y
9024	831.7929	2492.3567	2492.3540	1.10	0	(49)	0.0018	1	K.TANLHQVTGNLQAVWGVLSK.Y
9028	1247.1898	2492.3628	2492.3540	3.47	0	(85)	4.8e-005	1	K.TANLHQVTGNLQAVWGVLSK.Y
9033	834.0620	2498.1640	2498.1652	-0.49	0	(43)	0.033	1	K.ELPAPQSEAVQPEYAAPETSEK.K
9034	1260.8919	2498.1693	2498.1652	1.62	0	67	0.00012	1	K.ELPAPQSEAVQPEYAAPETSEK.K

9122	648.0774	2588.2805	2588.2758	1.79	2	43	0.029	1	REEDIGLSFDYATALKDETRR.W
9143	889.4207	2805.2401	2805.2383	0.88	0	90	6.4e-007	1	K.MYGHTEFINHYGPTTEATIGAIAGR.V
9156	874.7624	2821.2353	2821.2333	0.78	0	(85)	1.9e-006	1	K.MYGHTEFINHYGPTTEATIGAIAGR.V + Oxidation (M)
9157	656.3162	2821.2358	2821.2333	0.98	0	(49)	0.008	1	K.MYGHTEFINHYGPTTEATIGAIAGR.V + Oxidation (M)
9158	1311.6276	2821.2408	2821.2333	2.79	0	(70)	6.5e-005	1	K.MYGHTEFINHYGPTTEATIGAIAGR.V + Oxidation (M)
9217	895.1620	2882.4341	2882.4327	0.82	0	(89)	2.8e-007	1	R.IELSEIEVQLAQLSEVQDAAVTAVKD
9218	1342.2296	2882.4427	2882.4327	3.74	0	92	1.4e-007	1	R.IELSEIEVQLAQLSEVQDAAVTAVKD
9223	896.8180	2887.4323	2887.4382	-2.17	1	113	1.3e-009	1	K.LLLKQEGISVPDSYTGVDVLLDGSRT
9224	1344.7304	2887.4461	2887.4382	2.97	1	(96)	6.3e-008	1	K.LLLKQEGISVPDSYTGVDVLLDGSRT
9256	1363.6788	2725.3431	2725.3417	0.53	0	(43)	0.034	1	K.SLMAETDTTMMFLAFAFNLLSKY + Oxidation (M)
9257	908.4581	2725.3463	2725.3417	1.71	0	(46)	0.014	1	K.SLMAETDTTMMFLAFAFNLLSKY + Oxidation (M)
9270	914.7867	2741.3382	2741.3368	0.80	0	(45)	0.021	1	K.SLMAETDTTMMFLAFAFNLLSKY + 2 Oxidation (M)
9280	888.3405	2749.3330	2749.3282	1.73	1	(43)	0.035	1	R.KMYGHTEFINHYGPTTEATIGAIAGR.V + Oxidation (M)
9282	917.7830	2750.3271	2750.3122	5.39	1	53	0.0032	1	R.KMYGHTEFINHYGPTTEATIGAIAGR.V + Deamidated (NQ); Oxidation (M)
9286	920.1189	2757.3288	2757.3315	-0.97	0	55	0.0024	1	K.SLMAETDTTMMFLAFAFNLLSKY + 3 Oxidation (M)
9310	928.5087	2782.4961	2782.5051	-2.52	0	(42)	0.011	1	R.HLLLDHMHITDGSSTGILGLDLAKI
9311	696.8332	2782.5038	2782.5051	-0.54	0	(54)	0.00075	1	R.HLLLDHMHITDGSSTGILGLDLAKI
9324	700.6314	2798.4963	2798.5000	-1.34	0	(38)	0.035	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9325	933.8395	2798.4968	2798.5000	-1.23	0	72	1.6e-005	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9326	700.6323	2798.4999	2798.5000	-0.04	0	(42)	0.013	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9327	700.6323	2798.4999	2798.5000	-0.04	0	(43)	0.01	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9328	590.7075	2798.5009	2798.5000	0.31	0	(42)	0.015	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9329	1400.2614	2798.5061	2798.5000	2.90	0	(85)	6.7e-005	1	R.HLLLDHMHITDGSSTGILGLDLAKI + Oxidation (M)
9389	729.1390	2912.5271	2912.5283	-0.43	1	(68)	4.9e-005	1	K.TASLQAFEHQSYPLELEIEKPLTR.D
9390	971.8504	2912.5294	2912.5283	0.38	1	(45)	0.011	1	K.TASLQAFEHQSYPLELEIEKPLTR.D
9391	971.8536	2912.5391	2912.5283	3.70	1	77	5.2e-006	1	K.TASLQAFEHQSYPLELEIEKPLTR.D
9393	729.3903	2913.5319	2913.5123	6.73	1	(72)	1.8e-005	1	K.TASLQAFEHQSYPLELEIEKPLTR.D + Deamidated (NQ)
9401	976.1926	2925.5561	2925.5546	0.50	1	82	0.00018	1	R.IELSEIEVQLAQLSEVQDAAVTAVKDKG
9432	984.1576	2949.4609	2949.4171	11.5	0	71	5.9e-005	1	K.FDLTLGGFTDENIGLQLEYATDLFAKE + 2 Deamidated (NQ)
9433	1475.7358	2949.4571	2949.4171	13.8	0	(83)	0.00038	1	K.FDLTLGGFTDENIGLQLEYATDLFAKE + 2 Deamidated (NQ)
9436	984.8231	2951.4474	2951.4301	5.85	0	(88)	0.00019	1	K.QTNLSALEHQEYFEDLVNQLDLPR.D + Gln->pyro-Glu (N-term Q)
9446	1485.2329	2968.4513	2968.4586	-1.81	0	(54)	0.0033	1	K.QTNLSALEHQEYFEDLVNQLDLPR.D
9447	990.4938	2968.4566	2968.4586	0.98	0	76	1.9e-005	1	K.QTNLSALEHQEYFEDLVNQLDLPR.D
9448	990.8249	2968.4528	2969.4406	4.11	0	(54)	0.0031	1	K.QTNLSALEHQEYFEDLVNQLDLPR.D + Deamidated (NQ)
9473	1003.5390	3007.5952	3007.5729	7.41	0	46	0.0076	1	K.QLSLTLPSHMIPAFFVQVDAIPLTANGKT + Deamidated (NQ); Gln->pyro-Glu (N-term Q); Oxidation (M)
9475	1003.8853	3008.6341	3008.6045	9.84	0	(41)	0.013	1	K.QLSLTLPSHMIPAFFVQVDAIPLTANGKT + Deamidated (NQ)
9483	1008.8822	3023.6248	3023.6154	3.09	0	(39)	0.03	1	K.QLSLTLPSHMIPAFFVQVDAIPLTANGKT + Oxidation (M)
9502	1020.5510	3058.6311	3058.6188	4.07	1	73	1.3e-005	1	R.GYRIELSEIEVQLAQLSEVQDAAVTAVKD
9524	1545.2476	3088.4808	3088.4778	0.90	0	101	7.7e-008	1	K.QASPSLSLWNGYGPTEINTTFFSFLIDR.E
9525	1030.5011	3088.4815	3088.4778	1.19	0	(81)	6.2e-006	1	K.QASPSLSLWNGYGPTEINTTFFSFLIDR.E
9559	1051.2280	3150.6623	3150.6661	1.97	1	78	5.2e-006	1	U K.AVADNPQPLSLSLVTETEKALLQAWK.G
9560	1051.5521	3151.6345	3151.6401	-1.75	1	(51)	0.0033	1	U K.AVADNPQPLSLSLVTETEKALLQAWK.G + Deamidated (NQ)
9562	1051.5803	3151.7191	3151.7104	2.78	1	53	0.00085	1	R.KQLSLTLPSHMIPAFFVQVDAIPLTANGKT + Oxidation (M)
9580	1058.5573	3172.8499	3172.8257	7.32	1	95	1.2e-007	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE
9582	1058.8785	3173.8138	3173.8107	0.97	1	(50)	0.0057	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Deamidated (NQ)
9583	798.1631	3188.8233	3188.8216	0.51	1	(80)	0.00081	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Oxidation (M)
9594	1063.8846	3188.8321	3188.8216	3.28	1	(79)	6.7e-006	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Oxidation (M)
9595	1064.2111	3189.8114	3189.8056	1.79	1	(86)	1e-006	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Deamidated (NQ); Oxidation (M)
9596	1064.2148	3189.8227	3189.8056	5.35	1	(51)	0.0049	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Deamidated (NQ); Oxidation (M)
9597	1064.2151	3189.8234	3189.8056	5.58	1	(84)	2.1e-006	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + Deamidated (NQ); Oxidation (M)
9601	798.6616	3190.6174	3190.5896	8.89	1	(48)	0.0084	1	R.MAQTGAVSFDAGTFFVGFALLNGAALYPVKKE + 2 Deamidated (NQ); Oxidation (M)
9631	1073.5663	3217.6741	3217.6733	0.25	1	(54)	0.0016	1	K.SALKETLPDYMIPAFWVTLNLPVTANGKV
9641	1079.2285	3234.6837	3234.6822	3.58	1	55	0.0014	1	K.SALKETLPDYMIPAFWVTLNLPVTANGKV + Deamidated (NQ); Oxidation (M)
9673	1108.2289	3315.6848	3315.6412	7.13	1	127	1.4e-010	1	K.VKQASPSLSLWNGYGPTEINTTFFSFLIDR.E
9701	890.2003	3386.7719	3386.7752	-0.95	1	57	0.00072	1	K.QLSLTLPSHMIPAFFVQVDAIPLTANGKTR.N + Deamidated (NQ); Oxidation (M)
9722	1173.8893	3518.8460	3518.8259	5.70	0	45	0.036	1	R.SALDGNLHNLVAFENYPLDQELNGSMEDRL + Oxidation (M)
9754	1215.2863	3642.8340	3642.8165	4.80	0	79	8.3e-008	1	K.KPYTLNINYGPTENTVAVTSAEIHPEEGSLSIGRA
9755	911.9579	3643.8027	3643.8008	0.59	0	(50)	0.01	1	K.KPYTLNINYGPTENTVAVTSAEIHPEEGSLSIGRA + Deamidated (NQ)
9757	1215.9443	3644.8112	3644.7846	7.31	0	(82)	0.00052	1	K.KPYTLNINYGPTENTVAVTSAEIHPEEGSLSIGRA + 2 Deamidated (NQ)
9759	912.2146	3644.8303	3644.7846	12.5	0	(48)	0.013	1	K.KPYTLNINYGPTENTVAVTSAEIHPEEGSLSIGRA + 2 Deamidated (NQ)
9777	1251.2747	3750.8022	3750.7975	1.25	0	72	7.4e-005	1	R.LNDYFETNGVTTITFLPTQLAEQFMELENTSRLV + Deamidated (NQ); Oxidation (M)
9779	1251.2817	3750.8234	3750.7975	6.92	0	(44)	0.043	1	R.LNDYFETNGVTTITFLPTQLAEQFMELENTSRLV + Deamidated (NQ); Oxidation (M)
9780	1251.0412	3752.8017	3752.7855	9.64	0	(83)	0.00059	1	R.LNDYFETNGVTTITFLPTQLAEQFMELENTSRLV + 3 Deamidated (NQ); Oxidation (M)
9793	759.3784	3791.8554	3791.8134	11.1	2	51	0.0098	1	R.QLAAYMEASAVGGHQVLPKADKQDMPYPLSSAQKRLM + 2 Deamidated (NQ); Gln->pyro-Glu (N-term Q); 2 Oxidation (M)
9840	1012.0079	4044.0024	4043.9786	5.88	1	(78)	2.4e-005	1	R.NPLFNVMVTTEPNKQELTLQNLISISPYEAHQGTSK.F + Deamidated (NQ)
9845	1012.5095	4046.0090	4045.9983	2.63	0	(52)	0.0082	1	K.YNFTDDVFGTVVSGRPSEINGIETMAGLFINTIPV.R.V + 2 Deamidated (NQ); Oxidation (M)
9846	810.2141	4046.0339	4045.9983	8.79	0	(45)	0.027	1	K.YNFTDDVFGTVVSGRPSEINGIETMAGLFINTIPV.R.V + 2 Deamidated (NQ); Oxidation (M)
9847	1012.5165	4046.0368	4045.9983	9.51	0	81	6.5e-006	1	K.YNFTDDVFGTVVSGRPSEINGIETMAGLFINTIPV.R.V + 2 Deamidated (NQ); Oxidation (M)
9848	1012.5183	4046.0439	4045.9983	11.3	0	(57)	0.0014	1	K.YNFTDDVFGTVVSGRPSEINGIETMAGLFINTIPV.R.V + 2 Deamidated (NQ); Oxidation (M)
9857	1015.7585	4058.9688	4058.9686	1.79	1	(86)	3e-006	1	R.NPLFNVMVTTEPNKQELTLQNLISISPYEAHQGTSK.F + Oxidation (M)
9858	1015.7570	4058.9687	4058.9686	2.27	1	90	1.1e-006	1	R.NPLFNVMVTTEPNKQELTLQNLISISPYEAHQGTSK.F + Oxidation (M)
9869	1378.3311	4125.9713	4125.9463	6.08	0	74	5.1e-005	1	R.TILSLPLDENDENPETAIVTAENLAYMITYSGTTGQPK.G + Deamidated (NQ)
9875	1038.2477	4140.9616	4140.9672	1.08	0	(45)	0.043	1	R.TILSLPLDENDENPETAIVTAENLAYMITYSGTTGQPK.G + Oxidation (M)
9842	1507.4189	4519.2288	4519.2370	-1.81	2	(47)	0.025	1	K.NAGYVPVTEEDRMAGTAVSFDAGTFFVGFALLNGAALYPVKKE + Oxidation (M)
9848	1131.5693	4522.2463	4522.1890	13.1	2	55	0.0031	1	K.NAGYVPVTEEDRMAGTAVSFDAGTFFVGFALLNGAALYPVKKE + 3 Deamidated (NQ); Oxidation (M)