Supporting Information

Examination of Endogenous Peptides in *Medicago truncatula* using Mass Spectrometry Imaging

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Figure S1: Photographs comparing DHB and CHCA matrix application on root nodule slices

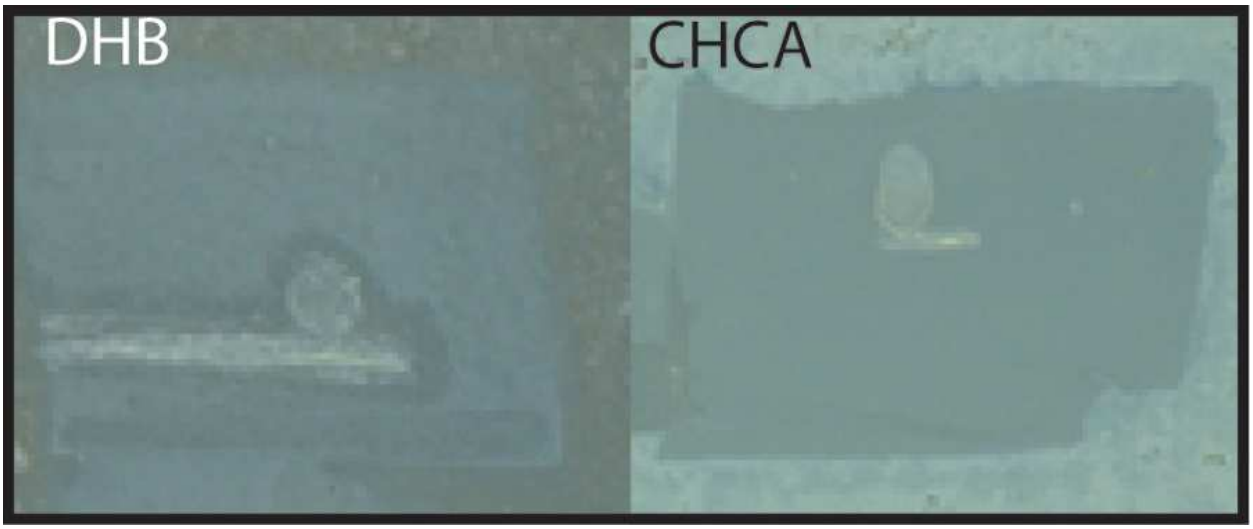
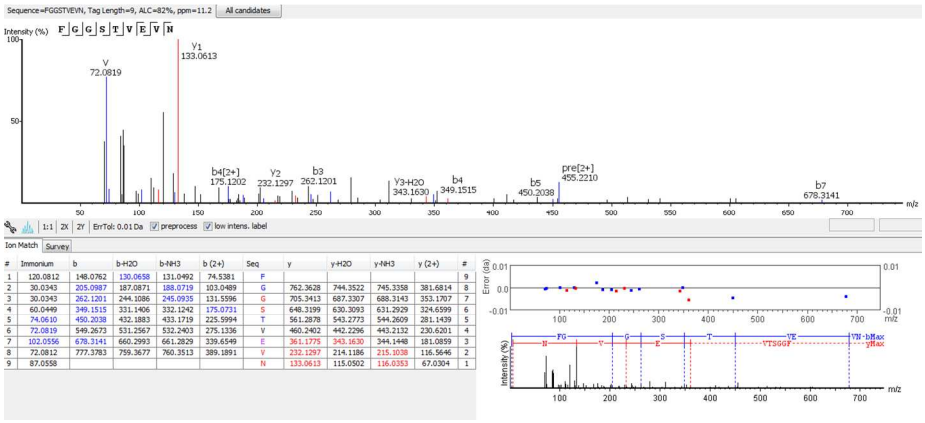


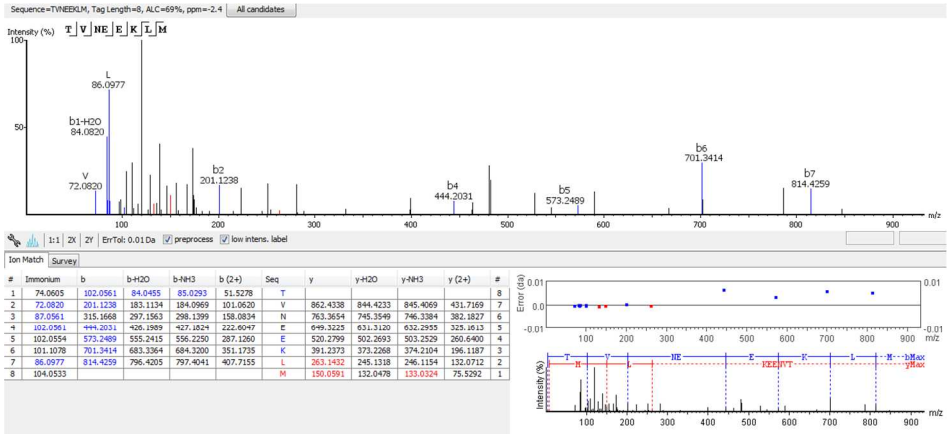
Figure S2: Annotated MS/MS spectra from *de novo* sequencing.

MW 908.4238 LC-MS/MS ALC=82%



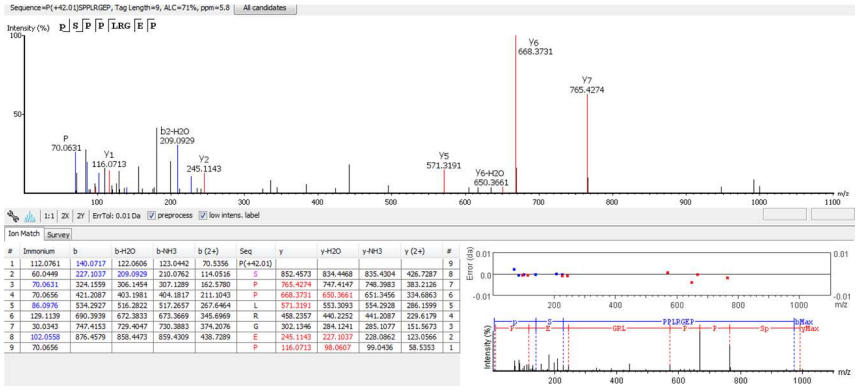
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	120.0812	148.0762	130.0658	131.0492	74.5381	F					9
2	30.0343	205.0987	187.0871	188.0719	103.0489	G	762.3628	744.3522	745.3358	381.6814	8
3	30.0343	262.1201	244.1086	245.0935	131.5596	G	705.3413	687.3307	688.3143	353.1707	7
4	60.0449	349.1515	331.1406	332.1242	175.0731	S	648.3199	630.3093	631.2929	324.6599	6
5	74.0610	450.2038	432.1883	433.1719	225.5994	T	561.2878	543.2773	544.2609	281.1439	5
6	72.0819	549.2673	531.2567	532.2403	275.1336	V	460.2402	442.2296	443.2132	230.6201	4
7	102.0556	678.3141	660.2993	661.2829	339.6549	E	361.1775	343.1630	344.1448	181.0859	3
8	72.0812	777.3783	759.3677	760.3513	389.1891	V	232.1297	214.1186	215.1038	116.5646	2
9	87.0558					N	133.0613	115.0502	116.0353	67.0304	1

MW 962.4813 LC-MS/MS ALC=69%



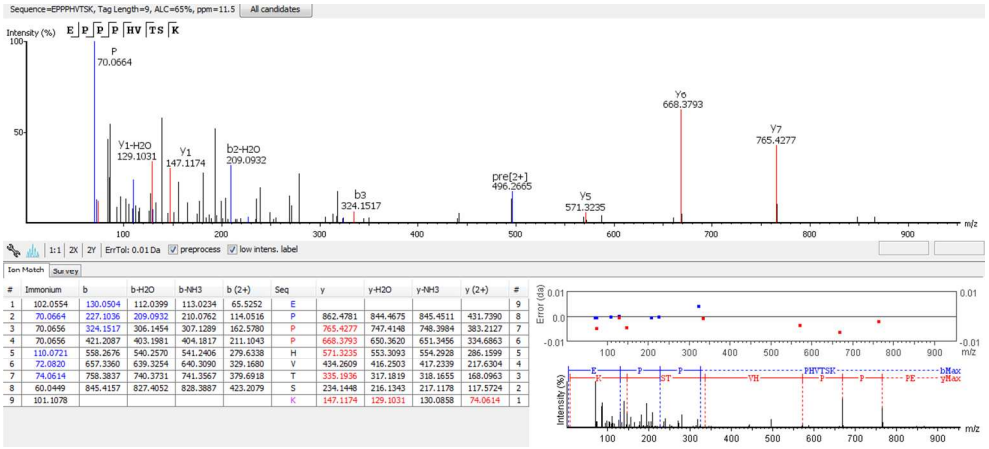
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0561	84.0455	85.0293	51.5278	T					8
2	72.0820	201.1238	183.1134	184.0969	101.0620	V	862.4338	844.4233	845.4069	431.7169	7
3	87.0561	315.1668	297.1563	298.1399	158.0834	N	763.3654	745.3549	746.3384	382.1827	6
4	102.0561	444.2031	426.1989	427.1824	222.6047	E	649.3225	631.3120	632.2955	325.1613	5
5	102.0554	573.2489	555.2415	556.2250	287.1260	E	520.2799	502.2693	503.2529	260.6400	4
6	101.1078	701.3414	683.3364	684.3200	351.1735	K	391.2373	373.2268	374.2104	196.1187	3
7	86.0977	814.4259	796.4205	797.4041	407.7155	L	263.1432	245.1318	246.1154	132.0712	2
8	104.0533					M	150.0591	132.0478	133.0324	75.5292	1

MW 990.5163 LC-MS/MS ALC=71%

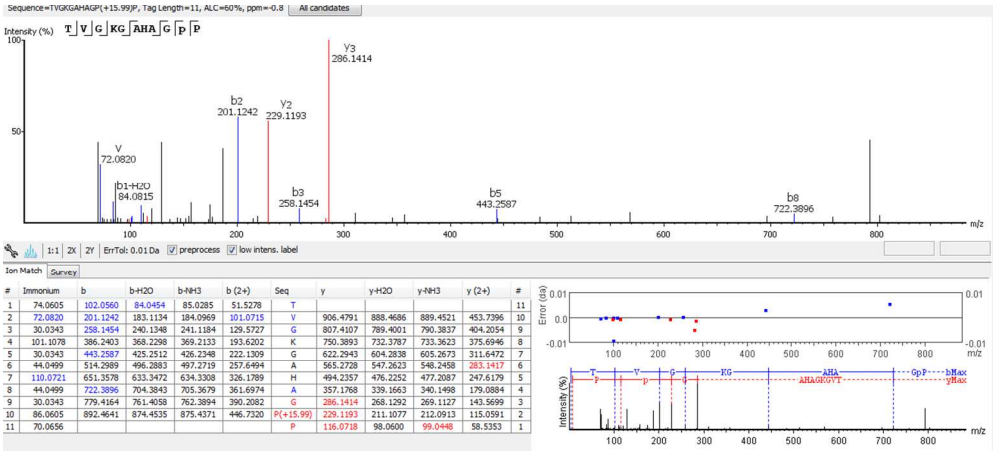


#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	112.0761	140.0717	122.0606	123.0442	70.5356	P(+42.01)					9
2	60.0449	227.1037	209.0929	210.0762	114.0516	S	852.4573	834.4468	835.4304	426.7287	8
3	70.0631	324.1559	306.1454	307.1289	162.5780	P	765.4274	747.4147	748.3983	383.2126	7
4	70.0656	421.2087	403.1981	404.1817	211.1043	P	668.3731	650.3661	651.3456	334.6863	6
5	86.0976	534.2927	516.2822	517.2657	267.6464	L	571.3191	553.3093	554.2928	286.1599	5
6	129.1139	690.3939	672.3833	673.3669	345.6969	R	458.2357	440.2252	441.2087	229.6179	4
7	30.0343	747.4153	729.4047	730.3883	374.2076	G	302.1346	284.1241	285.1077	151.5673	3
8	102.0558	876.4579	858.4473	859.4309	438.7289	E	245.1143	227.1037	228.0862	123.0566	2
9	70.0656					P	116.0713	98.0607	99.0436	58.5353	1

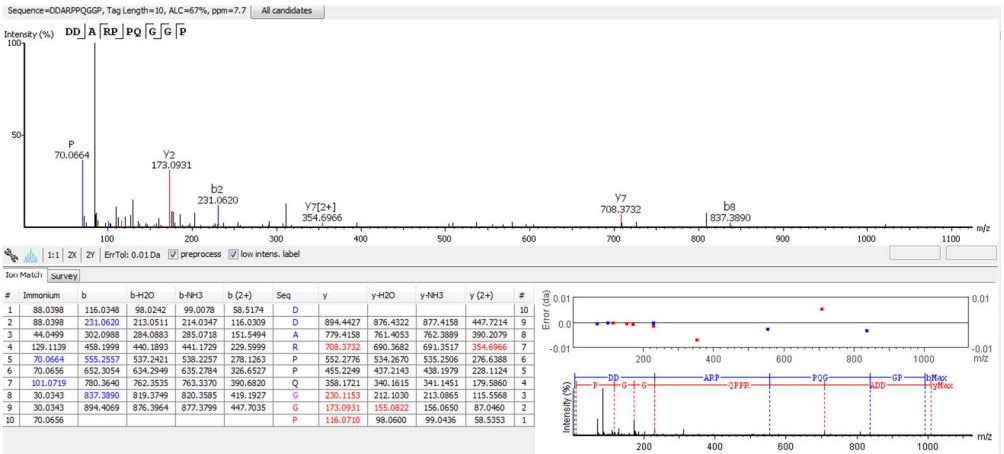
MW 990.5163 LC-MS/MS ALC=65%



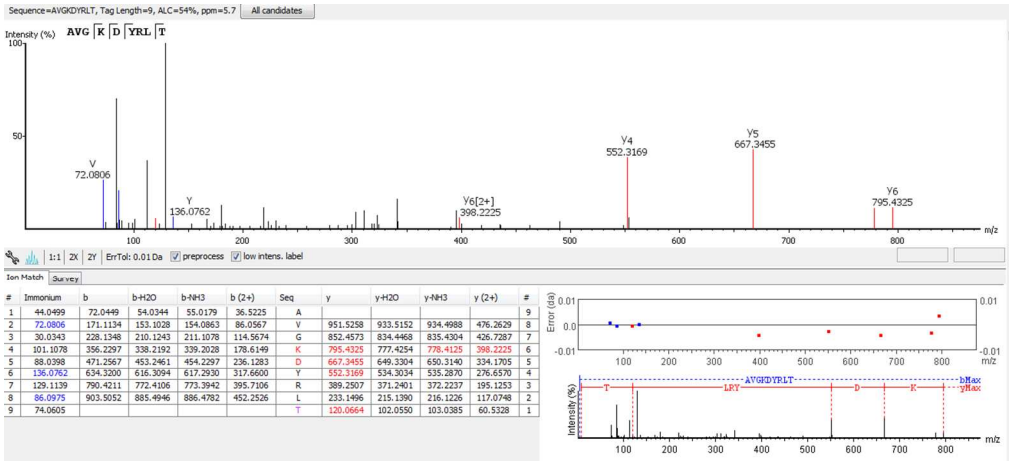
MW 1006.5114 LC-MS/MS ALC=60%



MW 1008.4694 LC-MS/MS ALC=67%

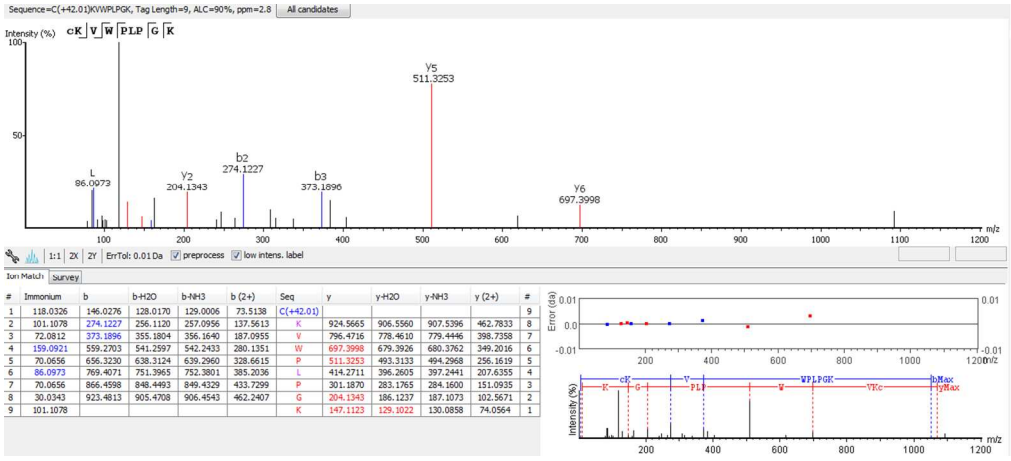


MW 1021.5575 LC-MS/MS ALC=54%



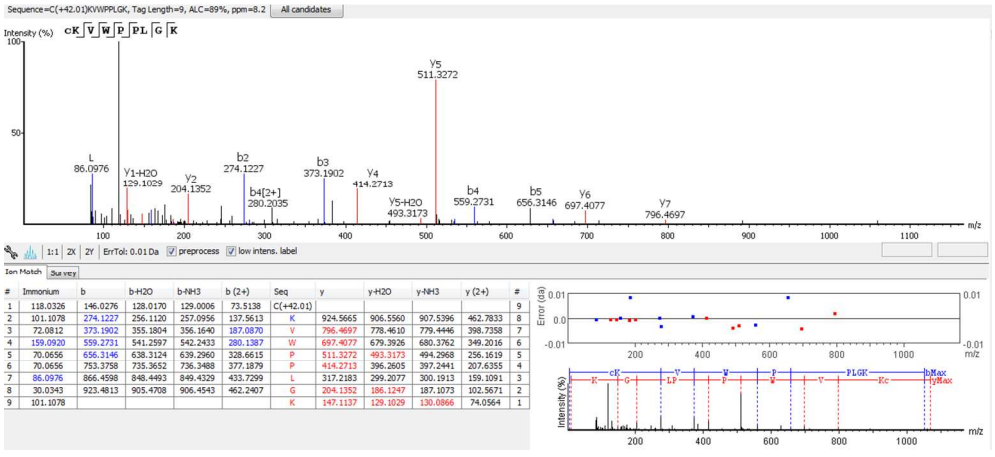
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	44.0499	72.0449	54.0344	55.0179	36.5225	A					9
2	72.0806	171.1134	153.1028	154.0863	86.0567	V	951.5258	933.5152	934.4988	476.2629	8
3	30.0343	228.1348	210.1243	211.1078	114.5674	G	852.4573	834.4468	835.4304	426.7287	7
4	101.1078	356.2297	338.2192	339.2028	178.6149	K	795.4325	777.4254	778.4125	398.2225	6
5	88.0398	471.2567	453.2461	454.2297	236.1283	D	667.3455	649.3304	650.3140	334.1705	5
6	136.0762	634.3200	616.3094	617.2930	317.6600	Y	552.3169	534.3034	535.2870	276.6570	4
7	129.1139	790.4211	772.4106	773.3942	395.7106	R	389.2507	371.2401	372.2237	195.1253	3
8	86.0975	903.5052	885.4946	886.4782	452.2526	L	233.1496	215.1390	216.1226	117.0748	2
9	74.0605					T	120.0664	102.0550	103.0385	60.5328	1

MW 1068.5733 LC-MS/MS ALC=90%



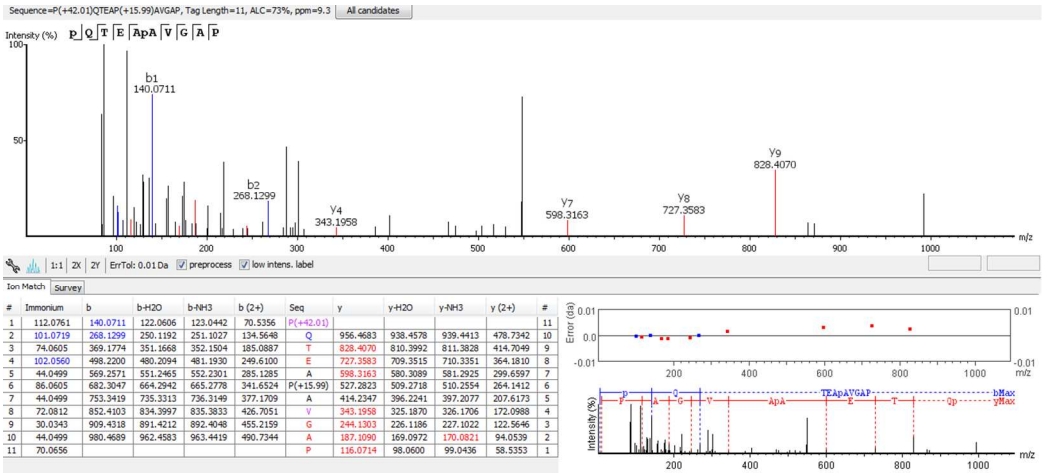
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	118.0326	146.0276	128.0170	129.0006	73.5138	C(+42.01)					9
2	101.1078	274.1227	256.1120	257.0956	137.5613	K	924.5665	906.5560	907.5396	462.7833	8
3	72.0812	373.1896	355.1804	356.1640	187.0955	V	796.4716	778.4610	779.4446	398.7358	7
4	159.0921	559.2703	541.2597	542.2433	280.1351	W	697.3998	679.3926	680.3762	349.2016	6
5	70.0656	656.3230	638.3124	639.2960	328.6615	P	511.3253	493.3133	494.2968	256.1619	5
6	86.0973	769.4071	751.3965	752.3801	385.2036	L	414.2711	396.2605	397.2441	207.6355	4
7	70.0656	866.4598	848.4493	849.4329	433.7299	P	301.1870	283.1765	284.1600	151.0935	3
8	30.0343	923.4813	905.4708	906.4543	462.2407	G	204.1343	186.1237	187.1073	102.5671	2
9	101.1078					K	147.1123	129.1022	130.0858	74.0564	1

MW 1068.5733 LC-MS/MS ALC=89%



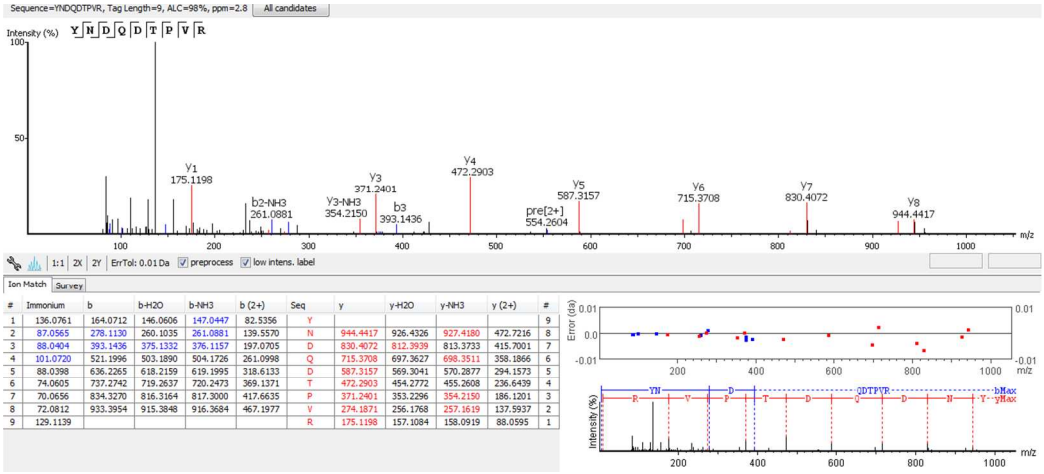
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	118.0326	146.0276	128.0170	129.0006	73.5138	C(+42.01)					9
2	101.1078	274.1227	256.1120	257.0956	137.5613	K	924.5665	906.5560	907.5396	462.7833	8
3	72.0812	373.1902	355.1804	356.1640	187.0870	V	796.4697	778.4610	779.4446	398.7358	7
4	159.0920	559.2731	541.2597	542.2433	280.1387	W	697.4077	679.3926	680.3762	349.2016	6
5	70.0656	656.3146	638.3124	639.2960	328.6615	P	511.3272	493.3173	494.2968	256.1619	5
6	70.0656	753.3758	735.3652	736.3488	377.1879	P	414.2713	396.2605	397.2441	207.6355	4
7	86.0976	866.4598	848.4493	849.4329	433.7299	L	317.2183	299.2077	300.1913	159.1091	3
8	30.0343	923.4813	905.4708	906.4543	462.2407	G	204.1352	186.1247	187.1073	102.5671	2
9	101.1078					K	147.1137	129.1029	130.0866	74.0564	1

MW 1094.5280 LC-MS/MS ALC=73%



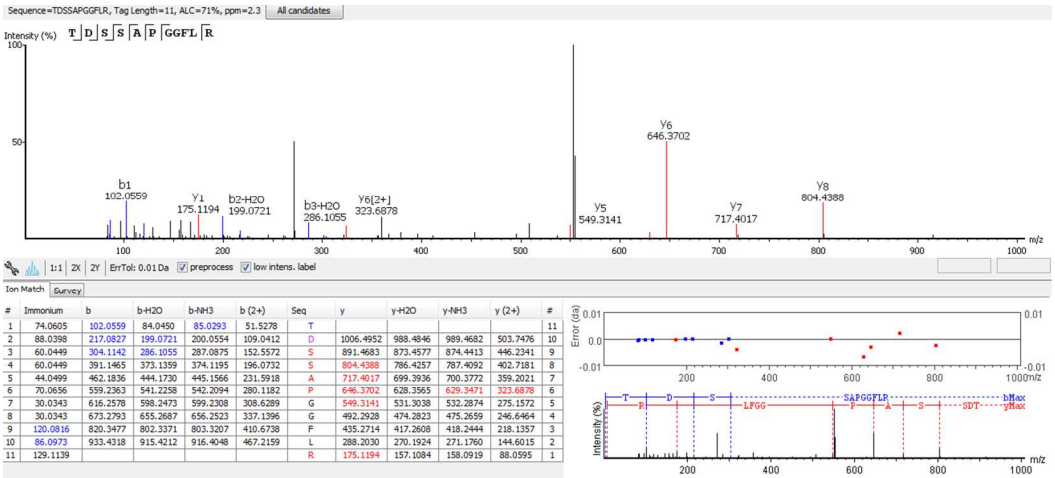
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	112.0761	140.0711	122.0606	123.0442	70.5356	P(+42.01)					11
2	101.0719	268.1299	250.1192	251.1027	134.5648	Q	956.4683	938.4578	939.4413	478.7342	10
3	74.0605	369.1774	351.1668	352.1504	185.0887	T	828.4070	810.3992	811.3828	414.7049	9
4	102.0560	498.2200	480.2094	481.1930	249.6100	E	727.3583	709.3515	710.3351	364.1810	8
5	44.0499	569.2571	551.2465	552.2301	285.1285	A	598.3163	580.3089	581.2925	299.6597	7
6	86.0605	682.3047	664.2942	665.2778	341.6524	P(+15.99)	527.2823	509.2718	510.2554	264.1412	6
7	44.0499	753.3419	735.3313	736.3149	377.1709	A	414.2347	396.2241	397.2077	207.6173	5
8	72.0812	852.4103	834.3997	835.3833	426.7051	V	343.1958	325.1870	326.1706	172.0988	4
9	30.0343	909.4318	891.4212	892.4048	455.2159	G	244.1303	226.1186	227.1022	122.5646	3
10	44.0499	980.4689	962.4583	963.4419	490.7344	A	187.1090	169.0972	170.0821	94.0539	2
11	70.0656					P	116.0714	98.0600	99.0436	58.5353	1

MW 1106.5081 LC-MS/MS ALC=98%



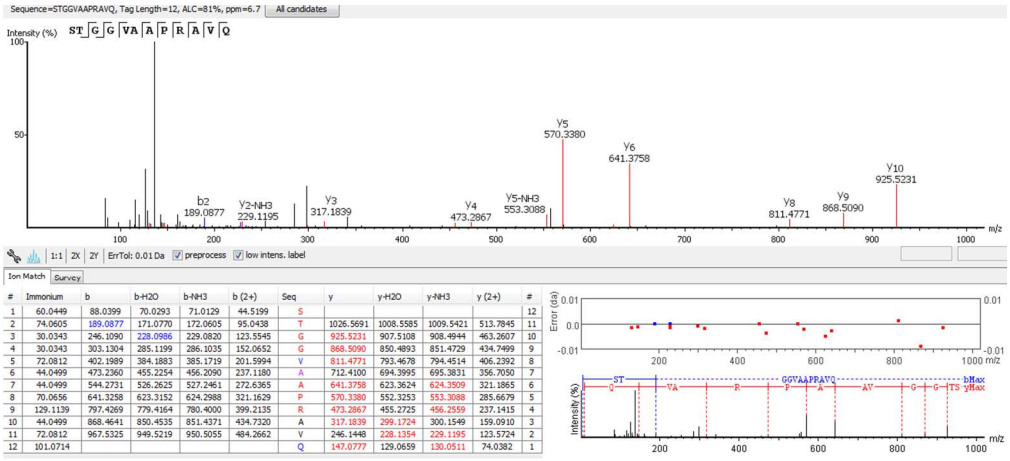
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	136.0761	164.0712	146.0606	147.0447	82.5356	Y					9
2	87.0565	278.1130	260.1035	261.0881	139.5570	N	944.4417	926.4326	927.4180	472.7216	8
3	88.0404	393.1436	375.1332	376.1157	197.0705	D	830.4072	812.3939	813.3733	415.7001	7
4	101.0720	521.1996	503.1890	504.1726	261.0998	Q	715.3708	697.3627	698.3511	358.1866	6
5	88.0398	636.2265	618.2159	619.1995	318.6133	D	587.3157	569.3041	570.2877	294.1573	5
6	74.0605	737.2742	719.2637	720.2473	369.1371	T	472.2903	454.2772	455.2608	236.6439	4
7	70.0656	834.3270	816.3164	817.3000	417.6635	P	371.2401	353.2296	354.2150	186.1201	3
8	72.0812	933.3954	915.3848	916.3684	467.1977	V	274.1871	256.1768	257.1619	137.5937	2
9	129.1139					R	175.1198	157.1084	158.0919	88.0595	1

MW 1106.5255 LC-MS/MS ALC=71%



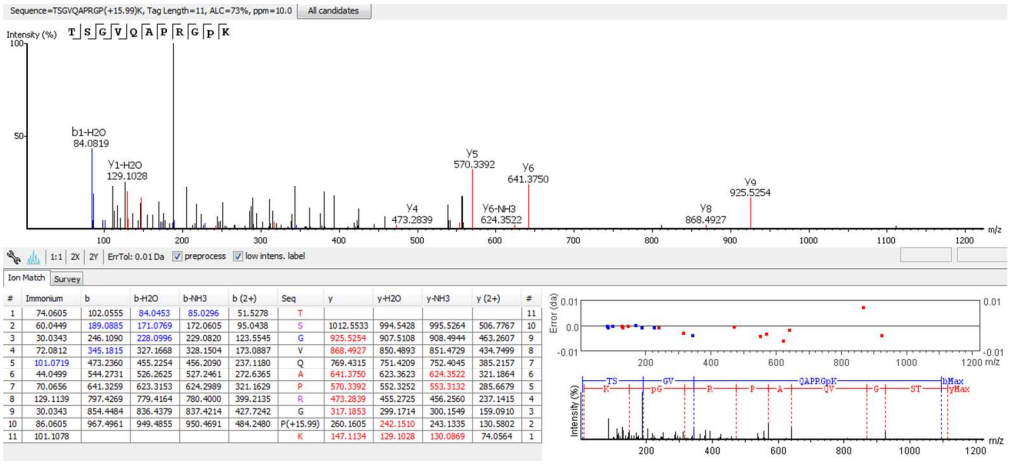
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0559	84.0450	85.0293	51.5278	T					11
2	88.0398	217.0827	199.0721	200.0554	109.0412	D	1006.4952	988.4846	989.4682	503.7476	10
3	60.0449	304.1142	286.1055	287.0875	152.5572	S	891.4683	873.4577	874.4413	446.2341	9
4	60.0449	391.1465	373.1359	374.1195	196.0732	S	804.4388	786.4257	787.4092	402.7181	8
5	44.0499	462.1836	444.1730	445.1566	231.5918	A	717.4017	699.3936	700.3772	359.2021	7
6	70.0656	559.2363	541.2258	542.2094	280.1182	P	646.3702	628.3565	629.3471	323.6878	6
7	30.0343	616.2578	598.2473	599.2308	308.6289	G	549.3141	531.3038	532.2874	275.1572	5
8	30.0343	673.2793	655.2687	656.2523	337.1396	G	492.2928	474.2823	475.2659	246.6464	4
9	120.0816	820.3477	802.3371	803.3207	410.6738	F	435.2714	417.2608	418.2444	218.1357	3
10	86.0973	933.4318	915.4212	916.4048	467.2159	L	288.2030	270.1924	271.1760	144.6015	2
11	129.1139					R	175.1194	157.1084	158.0919	88.0595	1

MW 1112.5974 LC-MS/MS ALC=81%



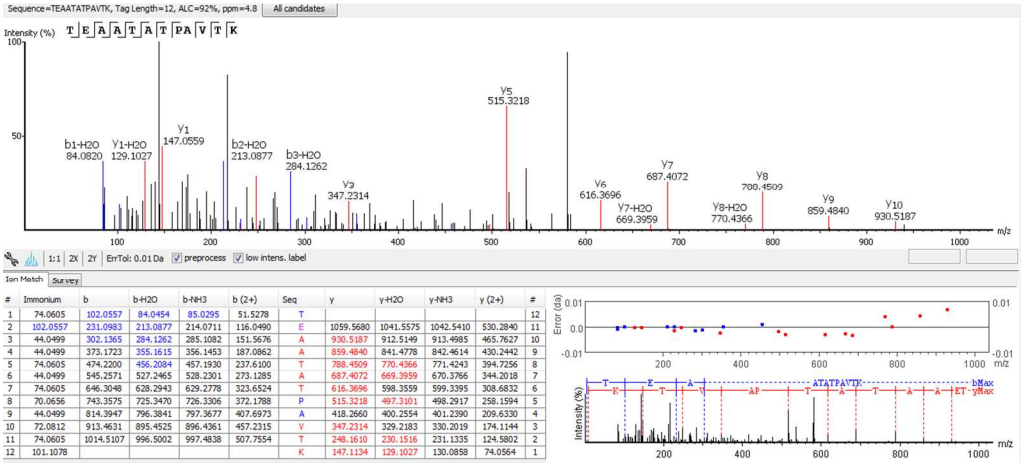
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	60.0449	88.0399	70.0293	71.0129	44.5199	S					12
2	74.0605	189.0877	171.0770	172.0605	95.0438	T	1026.5691	1008.5585	1009.5421	513.7845	11
3	30.0343	246.1090	228.0986	229.0820	123.5545	G	925.5231	907.5108	908.4944	463.2607	10
4	30.0343	303.1304	285.1199	286.1035	152.0652	G	868.5090	850.4893	851.4729	434.7499	9
5	72.0812	402.1989	384.1883	385.1719	201.5994	V	811.4771	793.4678	794.4514	406.2392	8
6	44.0499	473.2360	455.2254	456.2090	237.1180	A	712.4100	694.3995	695.3831	356.7050	7
7	44.0499	544.2731	526.2625	527.2461	272.6365	A	641.3758	623.3624	624.3509	321.1865	6
8	70.0656	641.3258	623.3152	624.2988	321.1629	P	570.3380	552.3253	553.3088	285.6679	5
9	129.1139	797.4269	779.4164	780.4000	399.2135	R	473.2867	455.2725	456.2559	237.1415	4
10	44.0499	868.4641	850.4535	851.4371	434.7320	A	317.1839	299.1724	300.1549	159.0910	3
11	72.0812	967.5325	949.5219	950.5055	484.2662	V	246.1448	228.1354	229.1195	123.5724	2
12	101.0714					Q	147.0777	129.0659	130.0511	74.0382	1

MW 1112.5974 LC-MS/MS ALC=73%



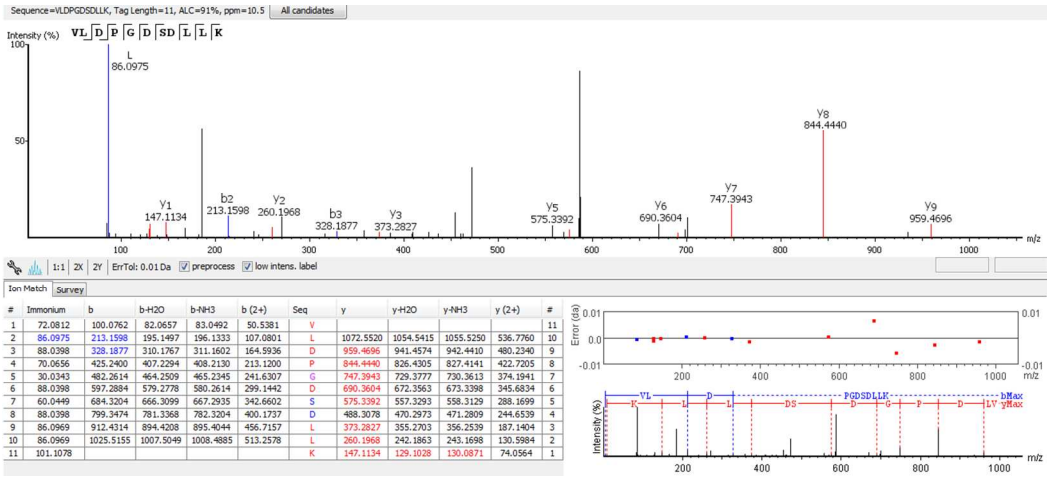
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0555	84.0453	85.0296	51.5278	T					11
2	60.0449	189.0885	171.0769	172.0605	95.0438	S	1012.5533	994.5428	995.5264	506.7767	10
3	30.0343	246.1090	228.0996	229.0820	123.5545	G	925.5254	907.5108	908.4944	463.2607	9
4	72.0812	345.1815	327.1668	328.1504	173.0887	V	868.4927	850.4893	851.4729	434.7499	8
5	101.0719	473.2360	455.2254	456.2090	237.1180	Q	769.4315	751.4209	752.4045	385.2157	7
6	44.0499	544.2731	526.2625	527.2461	272.6365	A	641.3750	623.3623	624.3522	321.1864	6
7	70.0656	641.3259	623.3153	624.2989	321.1629	P	570.3392	552.3252	553.3132	285.6679	5
8	129.1139	797.4269	779.4164	780.4000	399.2135	R	473.2839	455.2725	456.2560	237.1415	4
9	30.0343	854.4484	836.4379	837.4214	427.7242	G	317.1853	299.1714	300.1549	159.0910	3
10	86.0605	967.4961	949.4855	950.4691	484.2480	P(+15.99)	260.1605	242.1510	243.1335	130.5802	2
11	101.1078					K	147.1134	129.1028	130.0869	74.0564	1

MW 1159.6191 LC-MS/MS ALC=92%



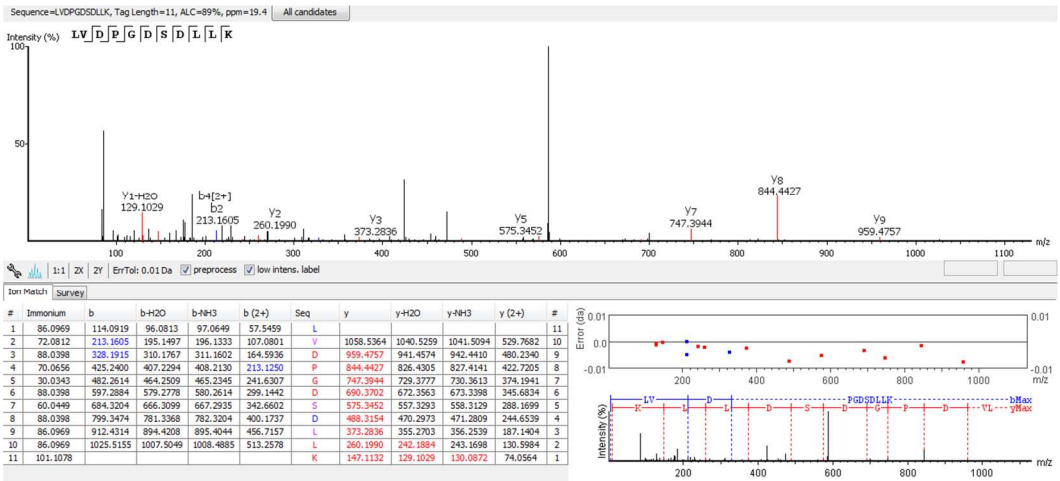
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0557	84.0454	85.0295	51.5278	T					12
2	102.0557	231.0983	213.0877	214.0711	116.0490	E	1059.5680	1041.5575	1042.5410	530.2840	11
3	44.0499	302.1365	284.1262	285.1082	151.5676	A	930.5187	912.5149	913.4985	465.7627	10
4	44.0499	373.1723	355.1615	356.1453	187.0862	A	859.4840	841.4778	842.4614	430.2442	9
5	74.0605	474.2200	456.2084	457.1930	237.6100	T	788.4509	770.4366	771.4243	394.7256	8
6	44.0499	545.2571	527.2465	528.2301	273.1285	A	687.4072	669.3959	670.3766	344.2018	7
7	74.0605	646.3048	628.2943	629.2778	323.6524	T	616.3696	598.3559	599.3395	308.6832	6
8	70.0656	743.3575	725.3470	726.3306	372.1788	P	515.3218	497.3101	498.2917	258.1594	5
9	44.0499	814.3947	796.3841	797.3677	407.6973	A	418.2660	400.2554	401.2390	209.6330	4
10	72.0812	913.4631	895.4525	896.4361	457.2315	V	347.2314	329.2183	330.2019	174.1144	3
11	74.0605	1014.5107	996.5002	997.4838	507.7554	T	248.1610	230.1516	231.1335	124.5802	2
12	101.1078					K	147.1134	129.1027	130.0858	74.0564	1

MW 1170.6070 LC-MS/MS ALC=91%



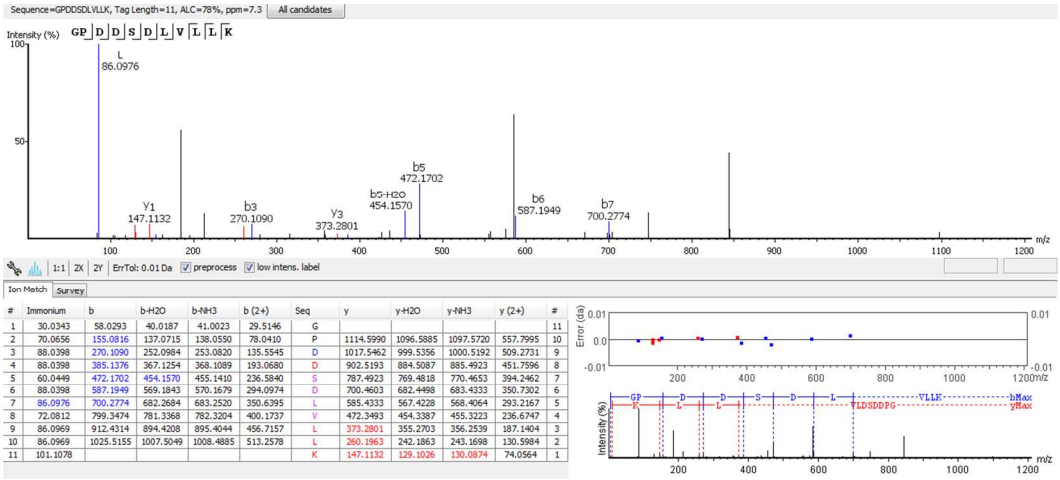
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	72.0812	100.0762	82.0657	83.0492	50.5381	V					11
2	86.0975	213.1598	195.1497	196.1333	107.0801	L	1072.5520	1054.5415	1055.5250	536.7760	10
3	88.0398	328.1877	310.1767	311.1602	164.5936	D	959.4696	941.4574	942.4410	480.2340	9
4	70.0656	425.2400	407.2294	408.2130	213.1200	P	844.4440	826.4305	827.4141	422.7205	8
5	30.0343	482.2614	464.2509	465.2345	241.6307	G	747.3943	729.3777	730.3613	374.1941	7
6	88.0398	597.2884	579.2778	580.2614	299.1442	D	690.3604	672.3563	673.3398	345.6834	6
7	60.0449	684.3204	666.3099	667.2935	342.6602	S	575.3392	557.3293	558.3129	288.1699	5
8	88.0398	799.3474	781.3368	782.3204	400.1737	D	488.3078	470.2973	471.2809	244.6539	4
9	86.0969	912.4314	894.4208	895.4044	456.7157	L	373.2827	355.2703	356.2539	187.1404	3
10	86.0969	1025.5155	1007.5049	1008.4885	513.2578	L	260.1968	242.1863	243.1698	130.5984	2
11	101.1078					K	147.1134	129.1028	130.0871	74.0564	1

MW 1170.6070 LC-MS/MS ALC=89%



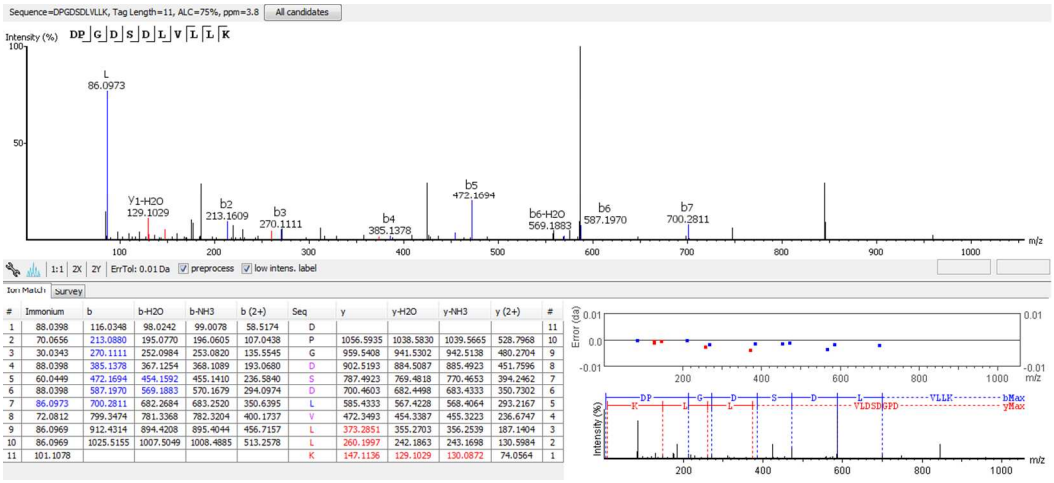
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	86.0969	114.0919	96.0813	97.0649	57.5459	L					11
2	72.0812	213.1605	195.1497	196.1333	107.0801	V	1058.5364	1040.5259	1041.5094	529.7682	10
3	88.0398	328.1915	310.1767	311.1602	164.5936	D	959.4757	941.4574	942.4410	480.2340	9
4	70.0656	425.2400	407.2294	408.2130	213.1250	P	844.4427	826.4305	827.4141	422.7205	8
5	30.0343	482.2614	464.2509	465.2345	241.6307	G	747.3944	729.3777	730.3613	374.1941	7
6	88.0398	597.2884	579.2778	580.2614	299.1442	D	690.3702	672.3563	673.3398	345.6834	6
7	60.0449	684.3204	666.3099	667.2935	342.6602	S	575.3452	557.3293	558.3129	288.1699	5
8	88.0398	799.3474	781.3368	782.3204	400.1737	D	488.3154	470.2973	471.2809	244.6539	4
9	86.0969	912.4314	894.4208	895.4044	456.7157	L	373.2836	355.2703	356.2539	187.1404	3
10	86.0969	1025.5155	1007.5049	1008.4885	513.2578	L	260.1990	242.1884	243.1698	130.5984	2
11	101.1078					K	147.1132	129.1029	130.0872	74.0564	1

MW 1170.6070 LC-MS/MS ALC=78%



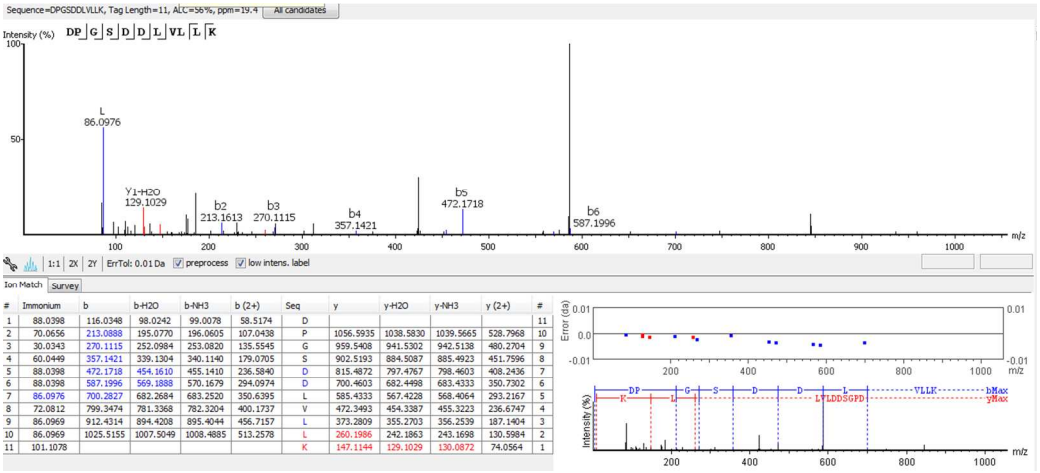
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	30.0343	58.0293	40.0187	41.0023	29.5146	G					11
2	70.0656	155.0816	137.0715	138.0550	78.0410	P	1114.5990	1096.5885	1097.5720	557.7995	10
3	88.0398	270.1090	252.0984	253.0820	135.5545	D	1017.5462	999.5356	1000.5192	509.2731	9
4	88.0398	385.1376	367.1254	368.1089	193.0680	D	902.5193	884.5087	885.4923	451.7596	8
5	60.0449	472.1702	454.1570	455.1410	236.5840	S	787.4923	769.4818	770.4653	394.2462	7
6	88.0398	587.1949	569.1843	570.1679	294.0974	D	700.4603	682.4498	683.4333	350.7302	6
7	86.0976	700.2774	682.2684	683.2520	350.6395	L	585.4333	567.4228	568.4064	293.2167	5
8	72.0812	799.3474	781.3368	782.3204	400.1737	V	472.3493	454.3387	455.3223	236.6747	4
9	86.0969	912.4314	894.4208	895.4044	456.7157	L	373.2801	355.2703	356.2539	187.1404	3
10	86.0969	1025.5155	1007.5049	1008.4885	513.2578	L	260.1963	242.1863	243.1698	130.5984	2
11	101.1078					K	147.1132	129.1026	130.0874	74.0564	1

MW 1170.6070 LC-MS/MS ALC=75%



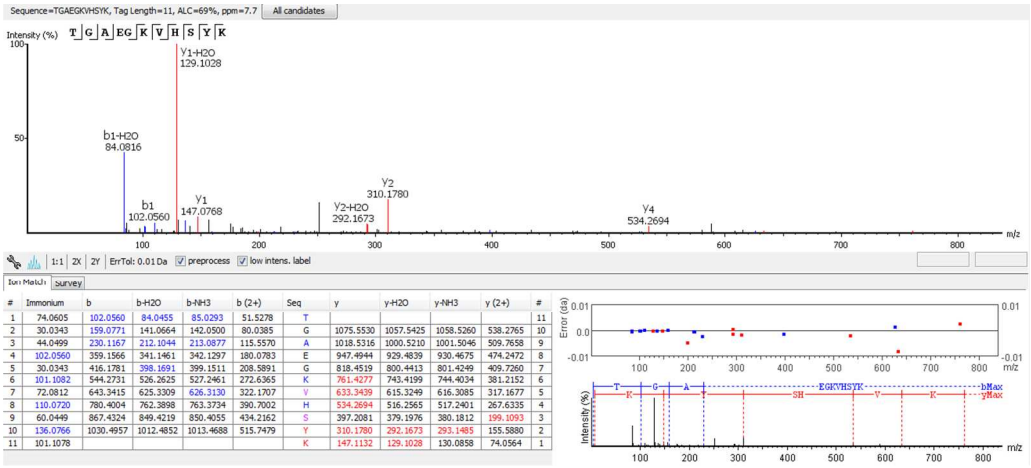
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	88.0398	116.0348	98.0242	99.0078	58.5174	D					11
2	70.0656	213.0880	195.0770	196.0605	107.0438	P	1056.5935	1038.5830	1039.5665	528.7968	10
3	30.0343	270.1111	252.0984	253.0820	135.5545	G	959.5408	941.5302	942.5138	480.2704	9
4	88.0398	385.1378	367.1254	368.1089	193.0680	D	902.5193	884.5087	885.4923	451.7596	8
5	60.0449	472.1694	454.1592	455.1410	236.5840	S	787.4923	769.4818	770.4653	394.2462	7
6	88.0398	587.1970	569.1883	570.1679	294.0974	D	700.4603	682.4498	683.4333	350.7302	6
7	86.0973	700.2811	682.2684	683.2520	350.6395	L	585.4333	567.4228	568.4064	293.2167	5
8	72.0812	799.3474	781.3368	782.3204	400.1737	V	472.3493	454.3387	455.3223	236.6747	4
9	86.0969	912.4314	894.4208	895.4044	456.7157	L	373.2851	355.2703	356.2539	187.1404	3
10	86.0969	1025.5155	1007.5049	1008.4885	513.2578	L	260.1997	242.1863	243.1698	130.5984	2
11	101.1078					K	147.1136	129.1029	130.0872	74.0564	1

MW 1170.6070 LC-MS/MS ALC=56%



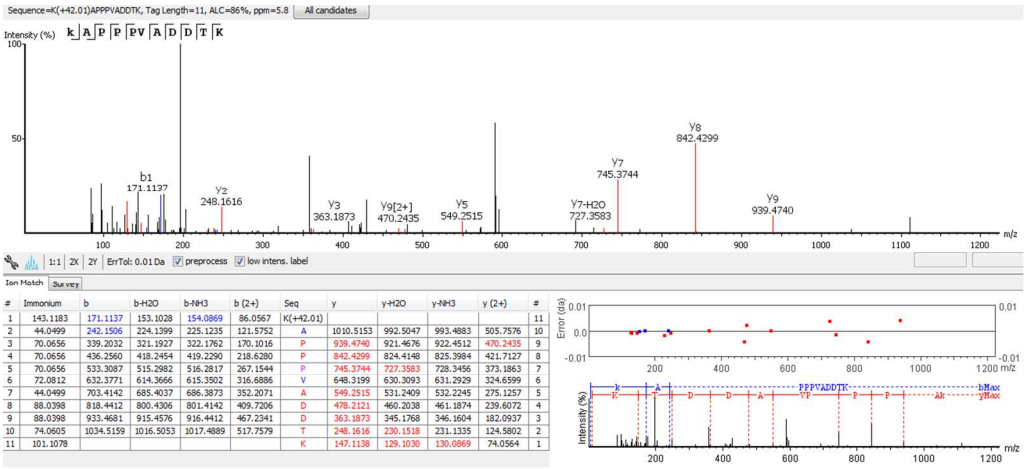
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	88.0398	116.0348	98.0242	99.0078	58.5174	D					11
2	70.0656	213.0888	195.0770	196.0605	107.0438	P	1056.5935	1038.5830	1039.5665	528.7968	10
3	30.0343	270.1115	252.0984	253.0820	135.5545	G	959.5408	941.5302	942.5138	480.2704	9
4	60.0449	357.1421	339.1304	340.1140	179.0705	S	902.5193	884.5087	885.4923	451.7596	8
5	88.0398	472.1718	454.1610	455.1410	236.5840	D	815.4872	797.4767	798.4603	408.2436	7
6	88.0398	587.1996	569.1888	570.1679	294.0974	D	700.4603	682.4498	683.4333	350.7302	6
7	86.0976	700.2827	682.2684	683.2520	350.6395	L	585.4333	567.4228	568.4064	293.2167	5
8	72.0812	799.3474	781.3368	782.3204	400.1737	V	472.3493	454.3387	455.3223	236.6747	4
9	86.0969	912.4314	894.4208	895.4044	456.7157	L	373.2809	355.2703	356.2539	187.1404	3
10	86.0969	1025.5155	1007.5049	1008.4885	513.2578	L	260.1986	242.1863	243.1698	130.5984	2
11	101.1078					K	147.1144	129.1029	130.0872	74.0564	1

MW 1175.5925 LC-MS/MS ALC=69%



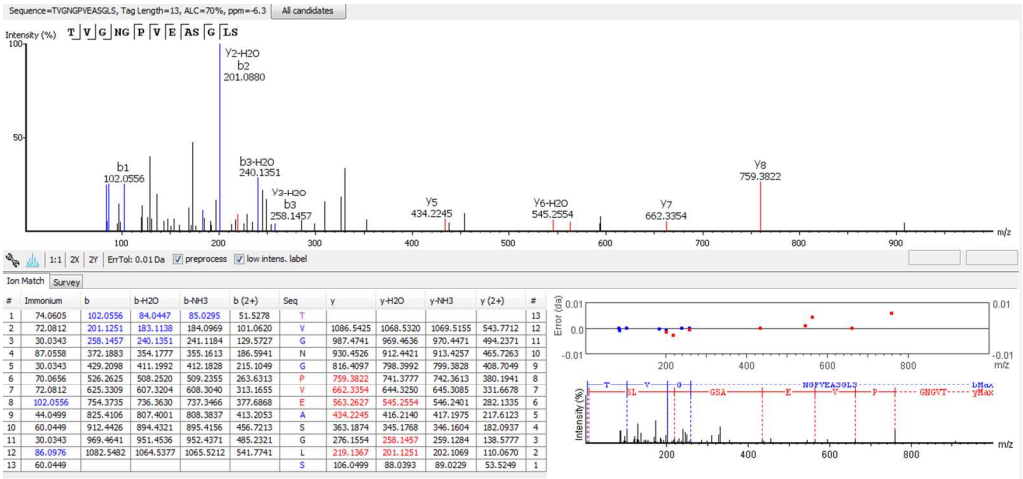
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0560	84.0455	85.0293	51.5278	T					11
2	30.0343	159.0771	141.0664	142.0500	80.0385	G	1075.5530	1057.5425	1058.5260	538.2765	10
3	44.0499	230.1167	212.1044	213.0877	115.5570	A	1018.5316	1000.5210	1001.5046	509.7658	9
4	102.0560	359.1566	341.1461	342.1297	180.0783	E	947.4944	929.4839	930.4675	474.2472	8
5	30.0343	416.1781	398.1691	399.1511	208.5891	G	818.4519	800.4413	801.4249	409.7260	7
6	101.1082	544.2731	526.2625	527.2461	272.6365	K	761.4277	743.4199	744.4034	381.2152	6
7	72.0812	643.3415	625.3309	626.3130	322.1707	V	633.3439	615.3249	616.3085	317.1677	5
8	110.0720	780.4004	762.3898	763.3734	390.7002	H	534.2694	516.2565	517.2401	267.6335	4
9	60.0449	867.4324	849.4219	850.4055	434.2162	S	397.2081	379.1976	380.1812	199.1093	3
10	136.0766	1030.4957	1012.4852	1013.4688	515.7479	Y	310.1780	292.1673	293.1485	155.5880	2
11	101.1078					K	147.1132	129.1028	130.0858	74.0564	1

MW 1179.6039 LC-MS/MS ALC=86%



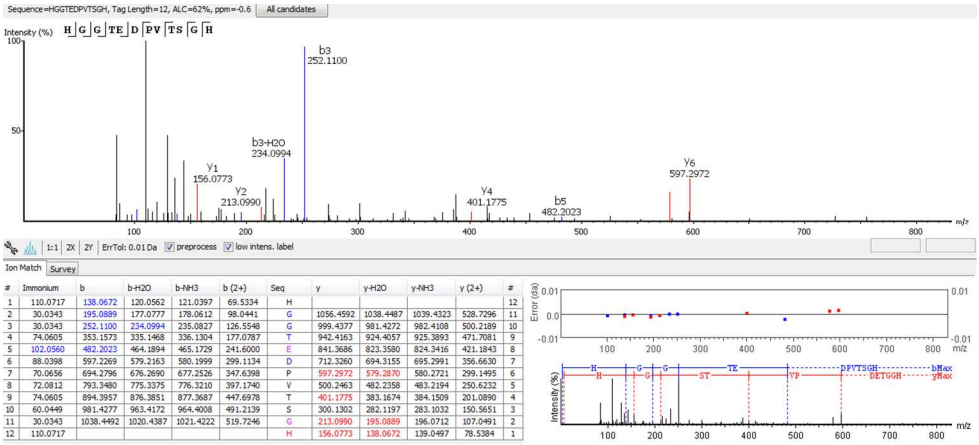
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	143.1183	171.1137	153.1028	154.0869	86.0567	K(+42.01)					11
2	44.0499	242.1506	224.1399	225.1235	121.5752	A	1010.5153	992.5047	993.4883	505.7576	10
3	70.0656	339.2032	321.1927	322.1762	170.1016	P	939.4740	921.4676	922.4512	470.2435	9
4	70.0656	436.2560	418.2454	419.2290	218.6280	P	842.4299	824.4148	825.3984	421.7127	8
5	70.0656	533.3087	515.2982	516.2817	267.1544	P	745.3744	727.3583	728.3456	373.1863	7
6	72.0812	632.3771	614.3666	615.3502	316.6886	V	648.3199	630.3093	631.2929	324.6599	6
7	44.0499	703.4142	685.4037	686.3873	352.2071	A	549.2515	531.2409	532.2245	275.1257	5
8	88.0398	818.4412	800.4306	801.4142	409.7206	D	478.2121	460.2038	461.1874	239.6072	4
9	88.0398	933.4681	915.4576	916.4412	467.2341	D	363.1873	345.1768	346.1604	182.0937	3
10	74.0605	1034.5159	1016.5053	1017.4889	517.7579	T	248.1616	230.1518	231.1355	124.5802	2
11	101.1078					K	147.1138	129.1030	130.0869	74.0564	1

MW 1186.5763 LC-MS/MS ALC=70%



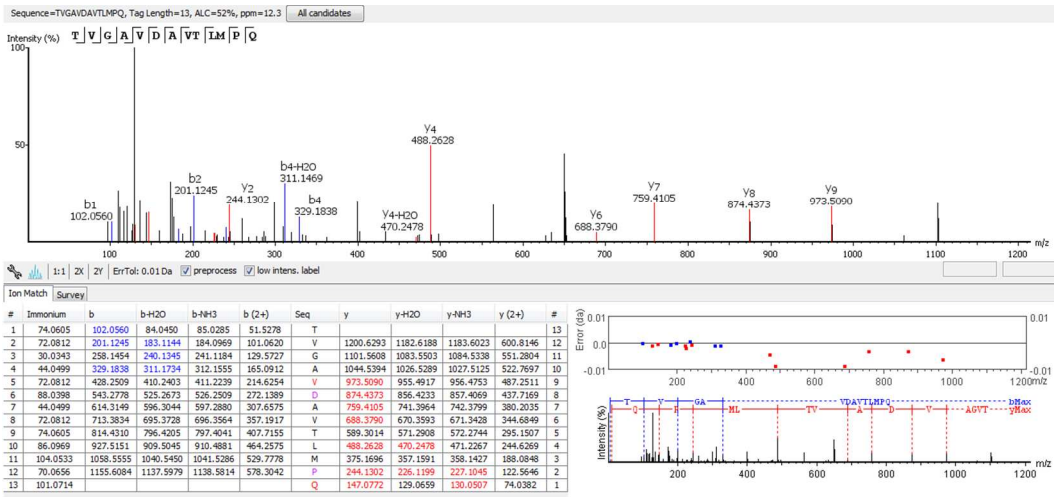
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0556	84.0447	85.0295	51.5278	T					13
2	72.0812	201.1251	183.1138	184.0969	101.0620	V	1086.5425	1068.5320	1069.5155	543.7712	12
3	30.0343	258.1457	240.1351	241.1184	129.5727	G	987.4741	969.4636	970.4471	494.2371	11
4	87.0558	372.1883	354.1777	355.1613	186.5941	N	930.4526	912.4421	913.4257	465.7263	10
5	30.0343	429.2098	411.1992	412.1828	215.1049	G	816.4097	798.3992	799.3828	408.7049	9
6	70.0656	526.2625	508.2520	509.2355	263.6313	P	759.3822	741.3777	742.3613	380.1941	8
7	72.0812	625.3309	607.3204	608.3040	313.1655	V	662.3354	644.3250	645.3085	331.6678	7
8	102.0556	754.3735	736.3630	737.3466	377.6868	E	563.2627	545.2554	546.2401	282.1335	6
9	44.0499	825.4106	807.4001	808.3837	413.2053	A	434.2245	416.2140	417.1975	217.6123	5
10	60.0449	912.4426	894.4321	895.4156	456.7213	S	363.1874	345.1768	346.1604	182.0937	4
11	30.0343	969.4641	951.4536	952.4371	485.2321	G	276.1554	258.1457	259.1284	138.5777	3
12	86.0976	1082.5482	1064.5377	1065.5212	541.7741	L	219.1367	201.1251	202.1069	110.0670	2
13	60.0449					S	106.0499	88.0393	89.0229	53.5249	1

MW 1192.5108 LC-MS/MS ALC=62%



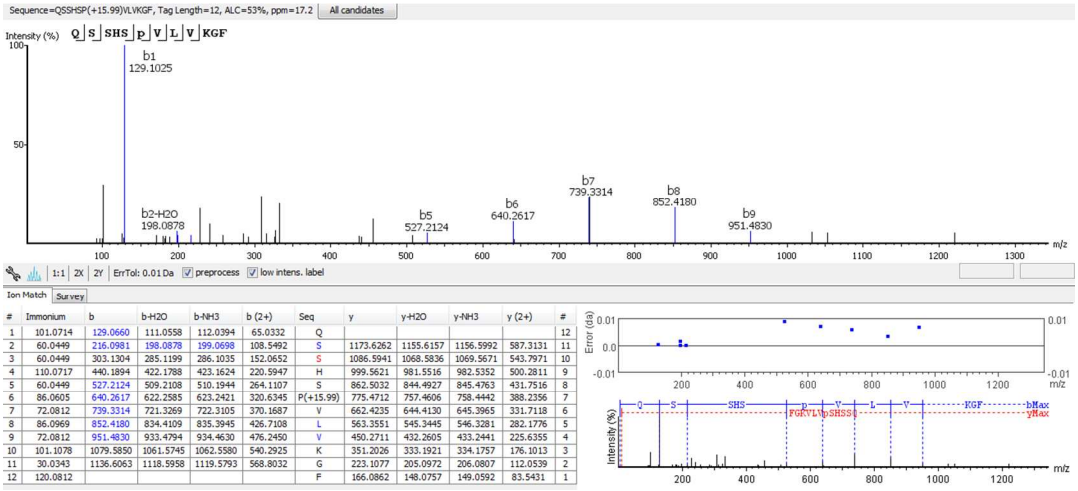
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	110.0717	138.0672	120.0562	121.0397	69.5334	H					12
2	30.0343	195.0889	177.0777	178.0612	98.0441	G	1056.4592	1038.4487	1039.4323	528.7296	11
3	30.0343	252.1100	234.0994	235.0827	126.5548	G	999.4377	981.4272	982.4108	500.2189	10
4	74.0605	353.1573	335.1468	336.1304	177.0787	T	942.4163	924.4057	925.3893	471.7081	9
5	102.0560	482.2023	464.1894	465.1729	241.6000	E	841.3686	823.3580	824.3416	421.1843	8
6	88.0398	597.2269	579.2163	580.1999	299.1134	D	712.3260	694.3155	695.2991	356.6630	7
7	70.0656	694.2796	676.2690	677.2526	347.6398	P	597.2972	579.2870	580.2721	299.1495	6
8	72.0812	793.3480	775.3375	776.3210	397.1740	V	500.2463	482.2358	483.2194	250.6232	5
9	74.0605	894.3957	876.3851	877.3687	447.6978	T	401.1775	383.1674	384.1509	201.0890	4
10	60.0449	981.4277	963.4172	964.4008	491.2139	S	300.1302	282.1197	283.1032	150.5651	3
11	30.0343	1038.4492	1020.4387	1021.4222	519.7246	G	213.0990	195.0889	196.0712	107.0491	2
12	110.0717					H	156.0773	138.0672	139.0497	78.5384	1

MW 1300.6790 LC-MS/MS ALC=52%



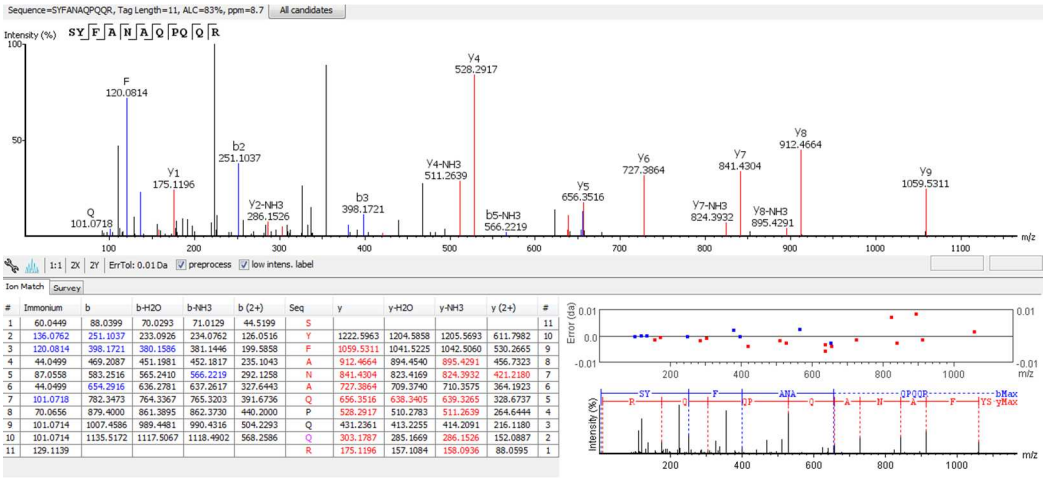
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	74.0605	102.0560	84.0450	85.0285	51.5278	T					13
2	72.0812	201.1245	183.1144	184.0969	101.0620	V	1200.6293	1182.6188	1183.6023	600.8146	12
3	30.0343	258.1454	240.1345	241.1184	129.5727	G	1101.5608	1083.5503	1084.5338	551.2804	11
4	44.0499	329.1838	311.1734	312.1555	165.0912	A	1044.5394	1026.5289	1027.5125	522.7697	10
5	72.0812	428.2509	410.2403	411.2239	214.6254	V	973.5090	955.4917	956.4753	487.2511	9
6	88.0398	543.2778	525.2673	526.2509	272.1389	D	874.4373	856.4233	857.4069	437.7169	8
7	44.0499	614.3149	596.3044	597.2880	307.6575	A	759.4105	741.3964	742.3799	380.2035	7
8	72.0812	713.3834	695.3728	696.3564	357.1917	V	688.3790	670.3593	671.3428	344.6849	6
9	74.0605	814.4310	796.4205	797.4041	407.7155	T	589.3014	571.2908	572.2744	295.1507	5
10	86.0969	927.5151	909.5045	910.4881	464.2575	L	488.2628	470.2478	471.2267	244.6269	4
11	104.0533	1058.5555	1040.5450	1041.5286	529.7778	M	375.1696	357.1591	358.1427	188.0848	3
12	70.0656	1155.6084	1137.5979	1138.5814	578.3042	P	244.1302	226.1199	227.1045	122.5646	2
13	101.0714					Q	147.0772	129.0659	130.0507	74.0382	1

MW 1300.6790 LC-MS/MS ALC=53%



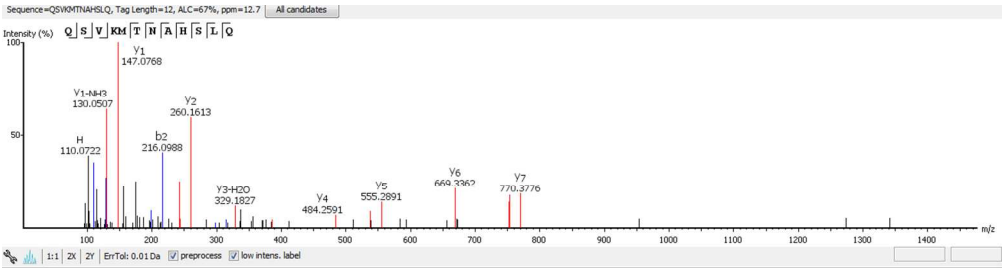
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	101.0714	129.0660	111.0558	112.0394	65.0332	Q					12
2	60.0449	216.0981	198.0878	199.0698	108.5492	S	1173.6262	1155.6157	1156.5992	587.3131	11
3	60.0449	303.1304	285.1199	286.1035	152.0652	S	1086.5941	1068.5836	1069.5671	543.7971	10
4	110.0717	440.1894	422.1788	423.1624	220.5947	H	999.5621	981.5516	982.5352	500.2811	9
5	60.0449	527.2124	509.2108	510.1944	264.1107	S	862.5032	844.4927	845.4763	431.7516	8
6	86.0605	640.2617	622.2585	623.2421	320.6345	P(+15.99)	775.4712	757.4606	758.4442	388.2356	7
7	72.0812	739.3314	721.3269	722.3105	370.1687	V	662.4235	644.4130	645.3965	331.7118	6
8	86.0969	852.4180	834.4109	835.3945	426.7108	L	563.3551	545.3445	546.3281	282.1776	5
9	72.0812	951.4830	933.4794	934.4630	476.2450	V	450.2711	432.2605	433.2441	225.6355	4
10	101.1078	1079.5850	1061.5745	1062.5580	540.2925	K	351.2026	333.1921	334.1757	176.1013	3
11	30.0343	1136.6063	1118.5958	1119.5793	568.8032	G	223.1077	205.0972	206.0807	112.0539	2
12	120.0812					F	166.0862	148.0757	149.0592	83.5431	1

MW 1308.6282 LC-MS/MS ALC=83%



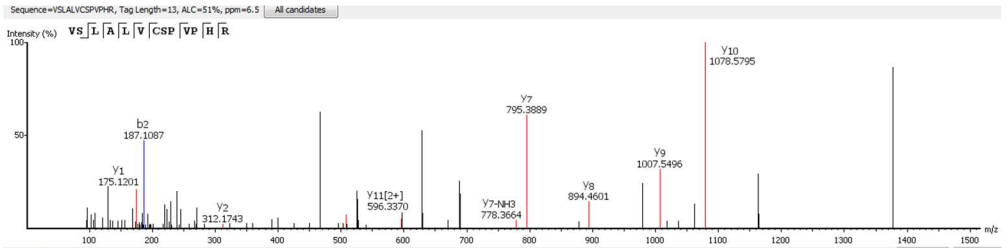
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	60.0449	88.0399	70.0293	71.0129	44.5199	S					11
2	136.0762	251.1037	233.0926	234.0762	126.0516	Y	1222.5963	1204.5858	1205.5693	611.7982	10
3	120.0814	398.1721	380.1586	381.1446	199.5858	F	1059.5311	1041.5225	1042.5060	530.2665	9
4	44.0499	469.2087	451.1981	452.1817	235.1043	A	912.4664	894.4540	895.4291	456.7323	8
5	87.0558	583.2516	565.2410	566.2219	292.1258	N	841.4304	823.4169	824.3932	421.2180	7
6	44.0499	654.2916	636.2781	637.2617	327.6443	A	727.3864	709.3740	710.3575	364.1923	6
7	101.0718	782.3473	764.3367	765.3203	391.6736	Q	656.3516	638.3405	639.3265	328.6737	5
8	70.0656	879.4000	861.3895	862.3730	440.2000	P	528.2917	510.2783	511.2639	264.6444	4
9	101.0714	1007.4586	989.4481	990.4316	504.2293	Q	431.2361	413.2255	414.2091	216.1180	3
10	101.0714	1135.5172	1117.5067	1118.4902	568.2586	Q	303.1787	285.1669	286.1526	152.0887	2
11	129.1139					R	175.1196	157.1084	158.0936	88.0595	1

MW 1342.6713 LC-MS/MS ALC=67%



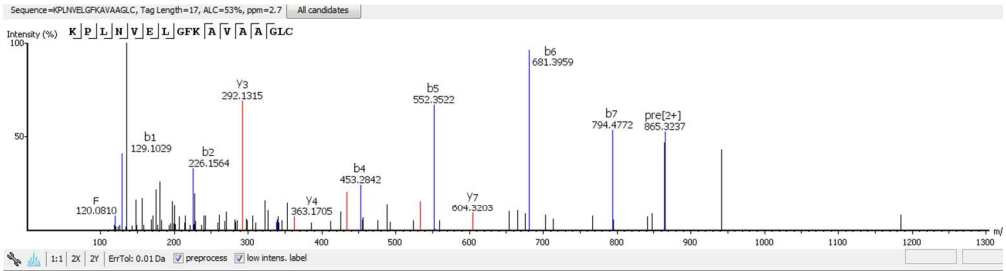
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	101.0714	129.0666	111.0558	112.0394	65.0332	Q					12
2	60.0449	216.0988	198.0883	199.0726	108.5492	S	1215.6150	1197.6045	1198.5880	608.3075	11
3	72.0812	315.1673	297.1563	298.1469	158.0834	V	1128.5830	1110.5725	1111.5560	564.7915	10
4	101.1078	443.2618	425.2512	426.2348	222.1309	K	1029.5146	1011.5040	1012.4876	515.2573	9
5	104.0533	574.3023	556.2917	557.2753	287.6512	M	901.4196	883.4091	884.3926	451.2098	8
6	74.0605	675.3500	657.3394	658.3230	338.1750	T	770.3776	752.3656	753.3552	385.6945	7
7	87.0558	789.3929	771.3823	772.3659	395.1964	N	669.3362	651.3209	652.3044	335.1657	6
8	44.0499	860.4300	842.4194	843.4030	430.7150	A	555.2891	537.2772	538.2615	278.1443	5
9	110.0722	997.4889	979.4783	980.4619	499.2444	H	484.2591	466.2408	467.2244	242.6257	4
10	60.0449	1084.5210	1066.5105	1067.4940	542.7605	S	347.1925	329.1827	330.1655	174.0963	3
11	86.0969	1197.6050	1179.5945	1180.5780	599.3025	L	260.1613	242.1502	243.1423	130.5802	2
12	101.0714					Q	147.0768	129.0666	130.0507	74.0382	1

MW 1376.7577 LC-MS/MS ALC=51%



#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	72.0812	100.0762	82.0657	83.0492	50.5381	V					13
2	60.0449	187.1087	169.0977	170.0813	94.0541	S	1278.6986	1260.6881	1261.6716	639.8493	12
3	86.0969	300.1923	282.1818	283.1653	150.5962	L	1191.6666	1173.6561	1174.6396	596.3370	11
4	44.0499	371.2294	353.2189	354.2025	186.1147	A	1078.5795	1060.5720	1061.5555	539.7913	10
5	86.0969	484.3135	466.3029	467.2865	242.6557	L	1007.5496	989.5349	990.5185	504.2727	9
6	72.0812	583.3819	565.3713	566.3549	292.1909	V	894.4601	876.4509	877.4344	447.7307	8
7	76.0220	686.3911	668.3806	669.3641	343.6956	C	795.3889	777.3824	778.3664	398.1965	7
8	60.0449	773.4231	755.4125	756.3961	387.2115	S	692.3838	674.3732	675.3568	346.6919	6
9	70.0656	870.4759	852.4653	853.4489	435.7379	P	605.3517	587.3412	588.3248	303.1759	5
10	72.0812	969.5443	951.5338	952.5173	485.2722	V	508.3026	490.2885	491.2720	254.6495	4
11	70.0656	1066.5970	1048.5865	1049.5701	533.7985	P	409.2306	391.2200	392.2036	205.1153	3
12	110.0717	1203.6560	1185.6455	1186.6290	602.3280	H	312.1743	294.1673	295.1509	156.5889	2
13	129.1139					R	175.1201	157.1084	158.0919	88.0595	1

MW 1728.9683 LC-MS/MS ALC=53%

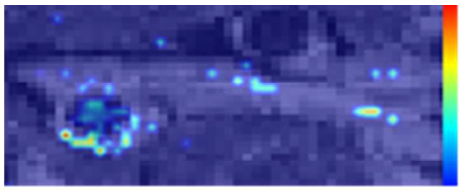


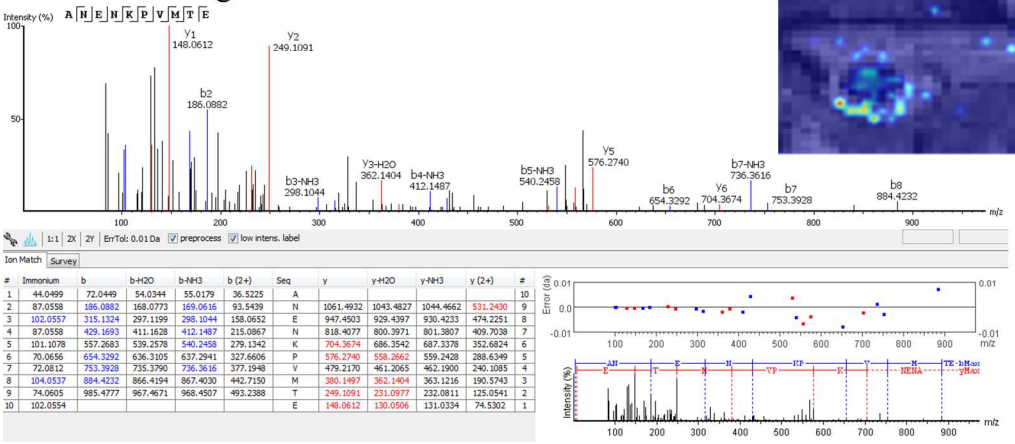
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	101.1078	129.1029	111.0922	112.0758	65.0514	K					17
2	70.0656	226.1564	208.1450	209.1285	113.5778	P	1601.8719	1583.8615	1584.8450	801.4360	16
3	86.0969	339.2389	321.2290	322.2126	170.1198	L	1504.8191	1486.8086	1487.7921	752.9095	15
4	87.0558	453.2842	435.2720	436.2556	227.1413	N	1391.7351	1373.7246	1374.7081	696.3676	14
5	72.0812	552.3522	534.3404	535.3240	276.6755	V	1277.6921	1259.6816	1260.6652	639.3461	13
6	102.0554	681.3959	663.3829	664.3665	341.1967	E	1178.6238	1160.6133	1161.5968	589.8119	12
7	86.0969	794.4772	776.4670	777.4506	397.7388	L	1049.5812	1031.5707	1032.5542	525.2906	11
8	30.0343	851.4990	833.4885	834.4720	426.2495	G	936.4971	918.4865	919.4701	468.7485	10
9	120.0810	998.5674	980.5569	981.5405	499.7837	F	879.4756	861.4651	862.4487	440.2378	9
10	101.1078	1126.6624	1108.6519	1109.6354	563.8312	K	732.4072	714.3967	715.3802	366.7036	8
11	44.0499	1197.6995	1179.6890	1180.6725	599.3497	A	604.3203	586.3017	587.2853	302.6561	7
12	72.0812	1296.7679	1278.7574	1279.7410	648.8840	V	533.2792	515.2646	516.2482	267.1376	6
13	44.0499	1367.8051	1349.7946	1350.7781	684.4025	A	434.2051	416.1962	417.1798	217.6034	5
14	44.0499	1438.8422	1420.8317	1421.8152	719.9211	A	363.1705	345.1591	346.1427	182.0848	4
15	30.0343	1495.8636	1477.8531	1478.8367	748.4318	G	292.1315	274.1220	275.1056	146.5663	3
16	86.0969	1608.9476	1590.9371	1591.9207	804.9738	L	235.1111	217.1005	218.0841	118.0555	2

Figure S3: Annotated MS/MS spectra of unique peptides.

m/z 1132.53084, Wound-inducible Basic Family Protein MALDI-MSI

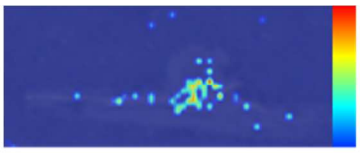
LC-MS/MS -10lgP=24.3

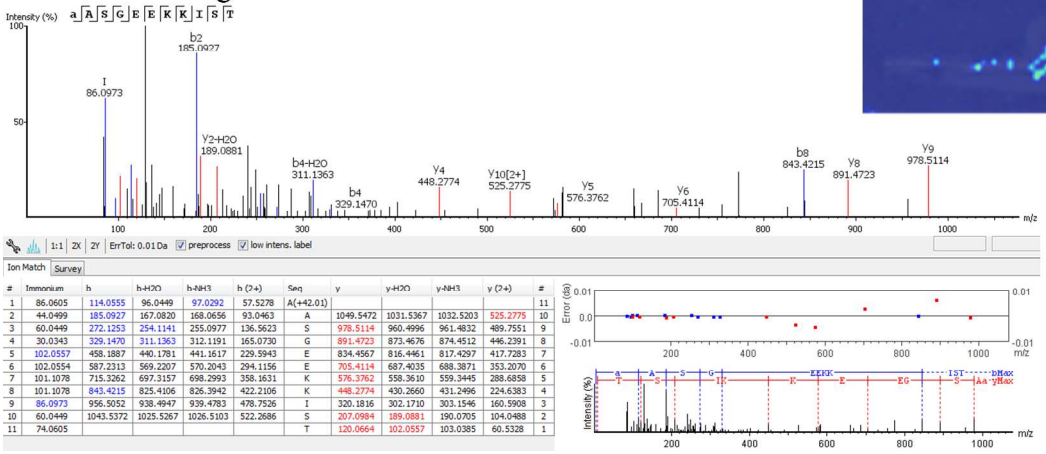




m/z 1162.59554, Low-temperature Inducible/ Nodulin-like Protein MALDI-MSI

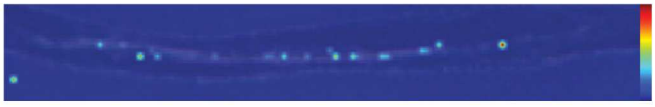
LC-MS/MS -10lgP=29.2

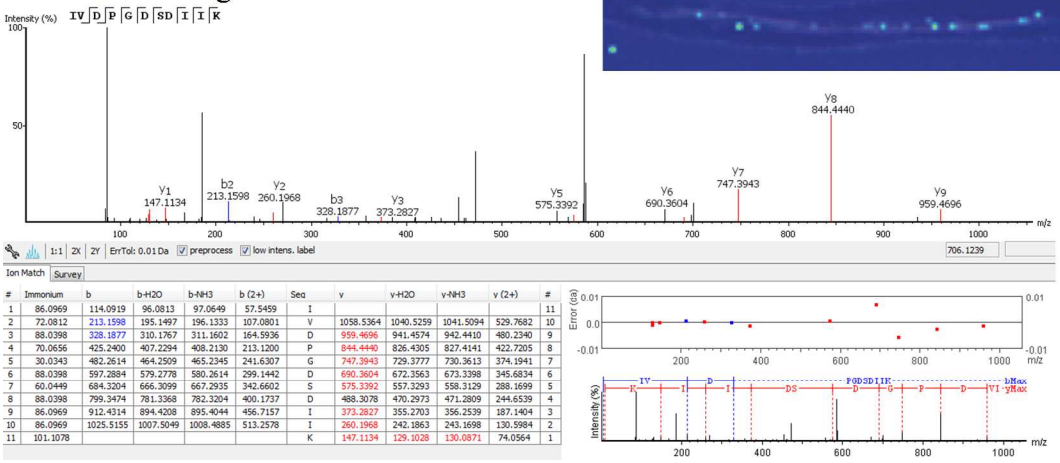




m/z 1171.62114, 60S Ribosomal Protein L30 MALDI-MSI

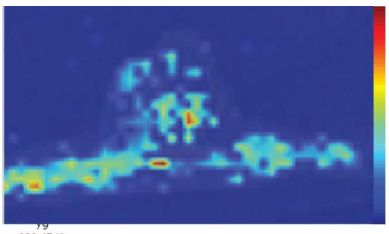
LC-MS/MS -10lgP=27.54

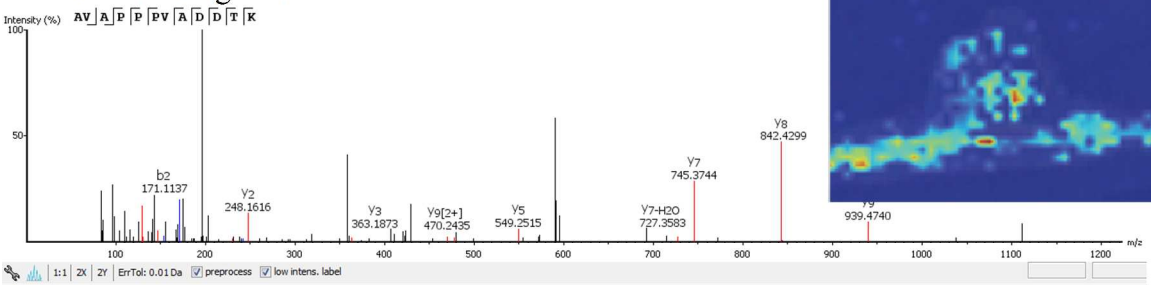




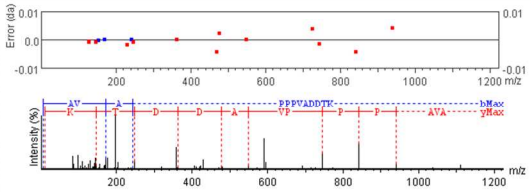
m/z 1180.62144, Carboxy-terminal Region Remorin MALDI-MSI

LC-MS/MS -10lgP=32.68



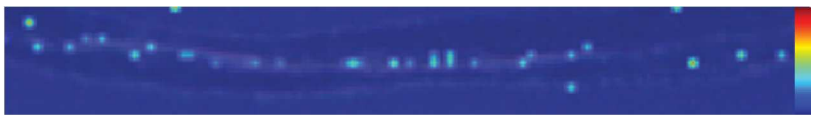


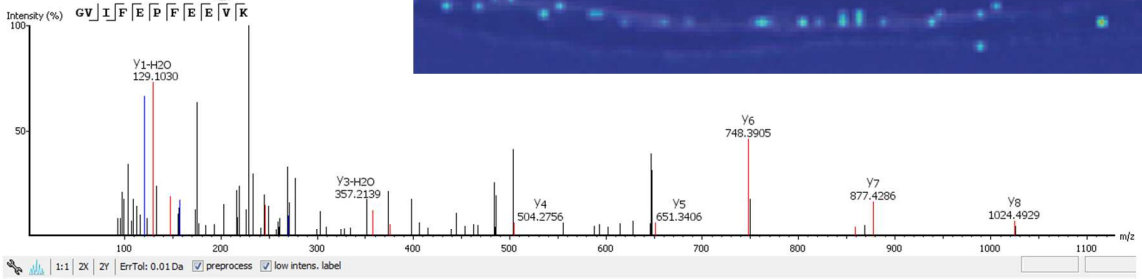
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	44.0499	72.0449	54.0344	55.0179	36.5225	A					12
2	72.0812	171.1137	153.1028	154.0869	86.0567	V	1109.5836	1091.5731	1092.5566	555.2918	11
3	44.0499	242.1506	224.1399	225.1235	121.5752	A	1010.5153	992.5047	993.4883	505.7576	10
4	70.0656	339.2032	321.1926	322.1762	170.1016	P	939.4740	921.4676	922.4512	470.2435	9
5	70.0656	436.2560	418.2454	419.2290	218.6280	P	842.4299	824.4148	825.3984	421.7127	8
6	70.0656	533.3087	515.2982	516.2817	267.1544	P	745.3744	727.3583	728.3456	373.1863	7
7	72.0812	632.3771	614.3666	615.3502	316.6886	V	648.3199	630.3093	631.2929	324.6599	6
8	44.0499	703.4142	685.4037	686.3873	352.2071	A	549.2515	531.2409	532.2245	275.1257	5
9	88.0398	818.4412	800.4306	801.4142	409.7206	D	478.2121	460.2038	461.1874	239.6072	4
10	88.0398	933.4681	915.4576	916.4412	467.2341	D	363.1873	345.1768	346.1604	182.0937	3
11	74.0605	1034.5157	1016.5052	1017.4888	517.7579	T	248.1616	230.1518	231.1335	124.5802	2
12	101.1078					K	147.1138	129.1030	130.0869	74.0564	1



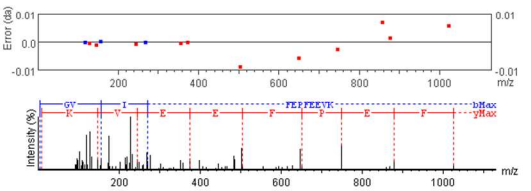
m/z 1293.67314, Ferritin MALDI-MSI

LC-MS/MS -10lgP=27.38

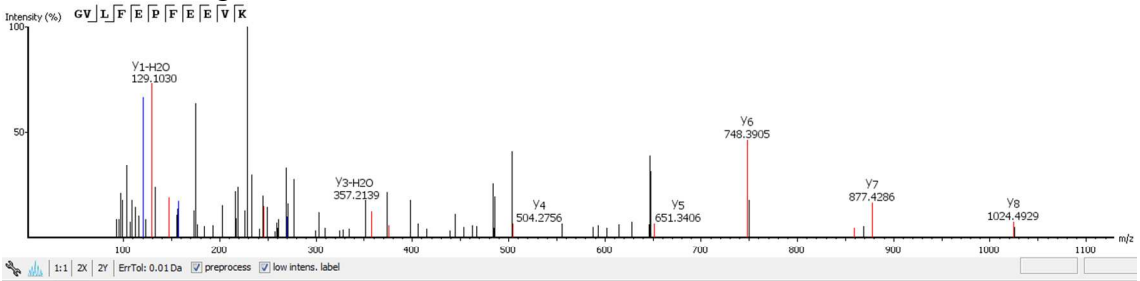




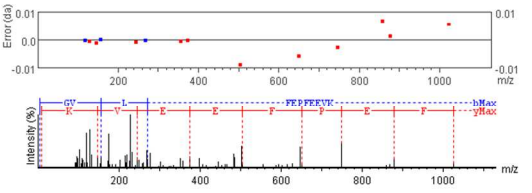
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	30.0343	58.0293	40.0187	41.0023	29.5146	G					11
2	72.0812	157.0978	139.0871	140.0707	79.0489	V	1236.6510	1218.6405	1219.6240	618.8255	10
3	86.0969	270.1822	252.1712	253.1548	135.5909	I	1137.5825	1119.5720	1120.5555	569.2913	9
4	120.0817	417.2502	399.2396	400.2232	209.1251	F	1024.4929	1006.4880	1007.4716	512.7493	8
5	102.0554	546.2927	528.2822	529.2657	273.6464	E	877.4286	859.4128	860.4031	439.2151	7
6	70.0656	643.3455	625.3350	626.3185	322.1728	P	748.3905	730.3770	731.3605	374.6938	6
7	120.0812	790.4139	772.4033	773.3869	395.7069	F	651.3406	633.3242	634.3078	326.1674	5
8	102.0554	919.4565	901.4459	902.4295	460.2282	E	504.2756	486.2558	487.2394	252.6332	4
9	102.0554	1048.4990	1030.4885	1031.4720	524.7495	E	375.2242	357.2139	358.1968	188.1119	3
10	72.0812	1147.5675	1129.5570	1130.5405	574.2838	V	246.1823	228.1706	229.1542	123.5906	2
11	101.1078					K	147.1141	129.1030	130.0858	74.0564	1



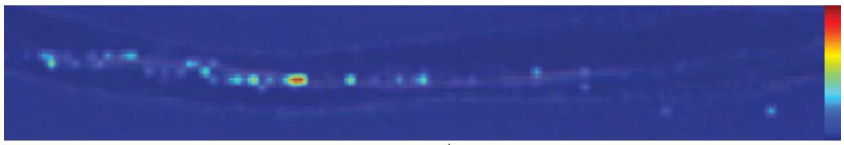
LC-MS/MS -10lgP=27.38



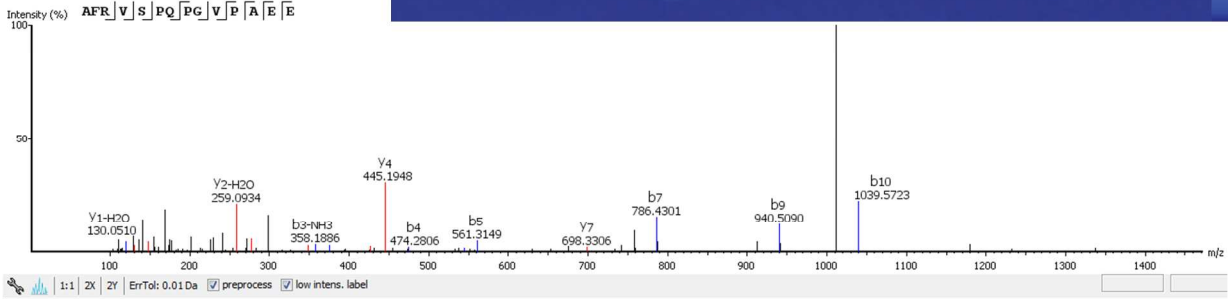
#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	30.0343	58.0293	40.0187	41.0023	29.5146	G					11
2	72.0812	157.0978	139.0871	140.0707	79.0489	V	1236.6510	1218.6405	1219.6240	618.8255	10
3	86.0969	270.1822	252.1712	253.1548	135.5909	L	1137.5825	1119.5720	1120.5555	569.2913	9
4	120.0817	417.2502	399.2396	400.2232	209.1251	F	1024.4929	1006.4880	1007.4716	512.7493	8
5	102.0554	546.2927	528.2822	529.2657	273.6464	E	877.4286	859.4128	860.4031	439.2151	7
6	70.0656	643.3455	625.3350	626.3185	322.1728	P	748.3905	730.3770	731.3605	374.6938	6
7	120.0812	790.4139	772.4033	773.3869	395.7069	F	651.3406	633.3242	634.3078	326.1674	5
8	102.0554	919.4565	901.4459	902.4295	460.2282	E	504.2756	486.2558	487.2394	252.6332	4
9	102.0554	1048.4990	1030.4885	1031.4720	524.7495	E	375.2242	357.2139	358.1968	188.1119	3
10	72.0812	1147.5675	1129.5570	1130.5405	574.2838	V	246.1823	228.1706	229.1542	123.5906	2
11	101.1078					K	147.1141	129.1030	130.0858	74.0564	1



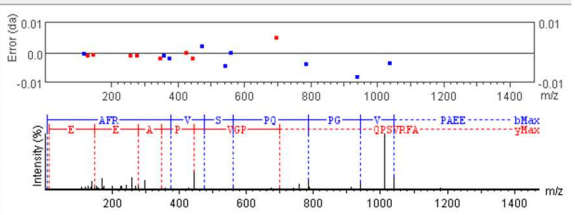
m/z 1483.75454, Ribulose Biphosphate Carboxylase/ Oxygenase Large Chain Domain Protein MALDI-MSI



LC-MS/MS -10lgP=35.64

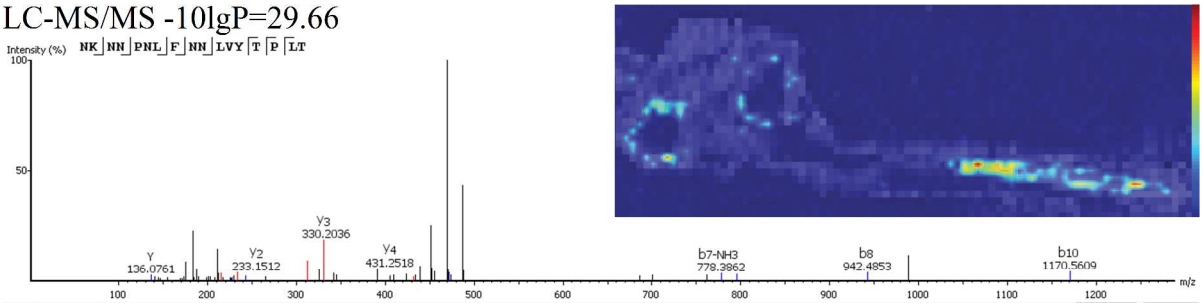
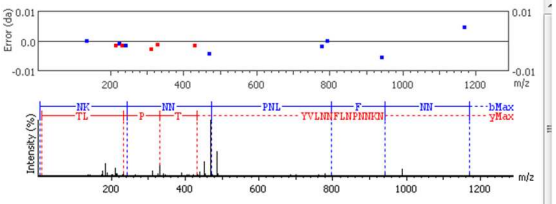


#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	44.0499	72.0449	54.0344	55.0179	36.5225	A					14
2	120.0817	219.1133	201.1028	202.0863	110.0567	F	1412.7168	1394.7063	1395.6898	706.8584	13
3	129.1139	375.2163	357.2039	358.1886	188.1072	R	1265.6484	1247.6379	1248.6215	633.3242	12
4	72.0812	474.2806	456.2723	457.2559	237.6414	V	1109.5472	1091.5367	1092.5203	555.2736	11
5	60.0449	561.3149	543.3043	544.2924	281.1574	S	1010.4789	992.4683	993.4519	505.7394	10
6	70.0656	658.3676	640.3571	641.3406	329.6838	P	923.4468	905.4363	906.4199	462.2234	9
7	101.0714	786.4301	768.4156	769.3992	393.7131	Q	826.3940	808.3835	809.3671	413.6970	8
8	70.0656	883.4789	865.4684	866.4520	442.2395	P	698.3306	680.3250	681.3085	349.6678	7
9	30.0343	940.5090	922.4899	923.4734	470.7502	G	601.2827	583.2722	584.2557	301.1414	6
10	72.0812	1039.5723	1021.5583	1022.5419	520.2844	V	544.2613	526.2507	527.2343	272.6306	5
11	70.0656	1136.6216	1118.6111	1119.5946	568.8108	P	445.1948	427.1822	428.1659	223.0964	4
12	44.0499	1207.6587	1189.6482	1190.6317	604.3293	A	348.1422	330.1295	331.1131	174.5701	3
13	102.0554	1336.7013	1318.6908	1319.6743	668.8506	E	277.1042	259.0934	260.0760	139.0515	2
14	102.0554					E	148.0611	130.0510	131.0334	74.5302	1



m/z 1976.02434, Basic 7S Globulin/ Peptidase A1, Pepsin MALDI-MSI

LC-MS/MS -10lgP=29.66



#	Immonium	b	b-H2O	b-NH3	b (2+)	Seq	y	y-H2O	y-NH3	y (2+)	#
1	87.0558	115.0508	97.0402	98.0238	58.0254	N					17
2	101.1078	243.1475	225.1351	226.1198	122.0729	K	1861.9806	1843.9701	1844.9536	931.4903	16
3	87.0558	357.1886	339.1781	340.1617	179.0943	N	1733.8857	1715.8752	1716.8588	867.4429	15
4	87.0558	471.2360	453.2210	454.2046	236.1158	N	1619.8428	1601.8323	1602.8158	810.4214	14
5	70.0656	568.2843	550.2737	551.2573	284.6422	P	1505.7998	1487.7893	1488.7728	753.3999	13
6	87.0558	682.3273	664.3167	665.3003	341.6636	N	1408.7471	1390.7366	1391.7201	704.8735	12
7	86.0969	795.4114	777.4008	778.3862	398.2057	L	1294.7041	1276.6936	1277.6771	647.8521	11
8	120.0812	942.4853	924.4692	925.4528	471.7399	F	1181.6201	1163.6096	1164.5931	591.3101	10
9	87.0558	1056.5227	1038.5122	1039.4957	528.7614	N	1034.5516	1016.5411	1017.5247	517.7758	9
10	87.0558	1170.5609	1152.5551	1153.5386	585.7828	N	920.5087	902.4982	903.4818	460.7544	8
11	86.0969	1283.6497	1265.6392	1266.6227	642.3248	L	806.4658	788.4553	789.4388	403.7329	7
12	72.0812	1382.7180	1364.7075	1365.6910	691.8590	V	693.3817	675.3712	676.3547	347.1909	6
13	136.0761	1545.7814	1527.7709	1528.7544	773.3907	Y	594.3134	576.3028	577.2864	297.6567	5
14	74.0605	1646.8291	1628.8186	1629.8021	823.9146	T	431.2518	413.2394	414.2230	216.1250	4
15	70.0656	1743.8818	1725.8713	1726.8549	872.4409	P	330.2036	312.1946	313.1754	165.6012	3
16	86.0969	1856.9658	1838.9553	1839.9388	928.9829	L	233.1512	215.1407	216.1226	117.0748	2
17	74.0605					T	120.0655	102.0550	103.0385	60.5328	1