N-glycoproteomics of urinary exosomes.

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SUPPLEMENTS

All the supplementary data is given here except supplementary Table 3 and 4 which are given as separate files.

Supplemental methods

Negative transmission electron microscopy

50 µg of urinary exosomes (P 200,000 g) were fixed with glutaraldehyde (1% (v/v), Sigma Aldrich) in water and spotted onto a Formvar/Carbon 300 mesh grid (Agar Scientific, Stansted, UK). The grids were dried at RT and washed twice in 0.1 M PBS. Thereafter the grids were incubated with 1% (w/v) OsO4 in 0.1 M PBS for 30 min at +4°C. After three washes with PBS and two with water (five minutes each), exosomes were stained with 5% (w/v) uranyl acetate in water for 10 min. After staining, vesicle populations were imaged by JEM-2100 transmission electron microscopy (Jeol Ltd, Tokyo, Japan).

Protein quantification, SDS-PAGE and Western blotting

The protein concentrations in all urine fractions were measured by Coomassie Protein Assay (1). SDS-PAGE was carried out according to Laemmli (2). The gels were blotted to nitrocellulose membrane. The membranes were blocked overnight at RT with the Odyssey blocking buffer solution (LI-COR Biosciences, Lincoln, NE, USA). All incubation steps with antibodies were performed in a 1:1 (v/v) mixture of Odyssey blocking buffer and PBS with 0.1 % (v/v) Tween 20 (PBST). Antibodies were diluted in accordance with supplier's guidelines (anti-TSG101, Sigma, St. Louis, MO). Images were acquired by Odyssey Infrared Laser Scanner (LI-COR Biosciences, Lincoln, NE).

References:

1. Bradford, M. M. (1976) A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. Analytical biochemistry 72, 248-254

2. Laemmli, U. K. (1970) Cleavage of structural proteins during the assembly of the head of bacteriophage T4. Nature 227, 680-685

Supplemental Figures:
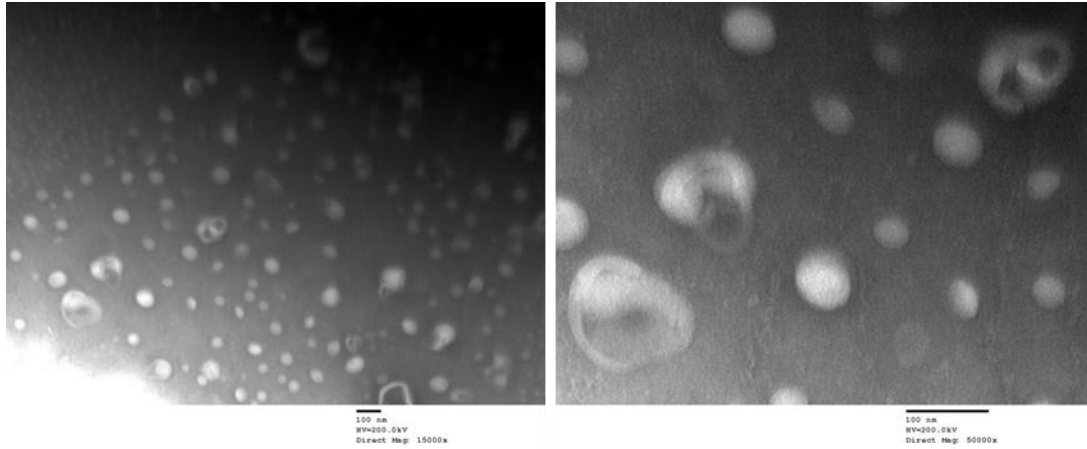
Supplemental Figure 1: Transmission electron microscopy pictures of exosomal fractions (P200,000g) at various magnifications. Panel on the left has direct magnification of 15,000 xand the panel on the right has 50,000 x. The bar shown below the picture is 100 nm in both the panels.
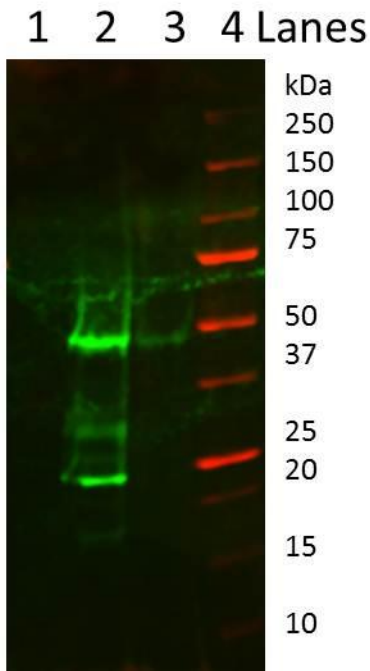
Supplementary Figure 2: Western blotting of urine fractions using anti-TSG101 antibody. Lanes 1: SN 200,000 g, 2: P 200,000 g, 3: P 18,000 g, 4: Molecular weight markers. Antibody dilutions were 1:1000 in Odyssey blocking buffer: PBS (1:1). The expected molecular weight of TSG101 is ~50 kDa.
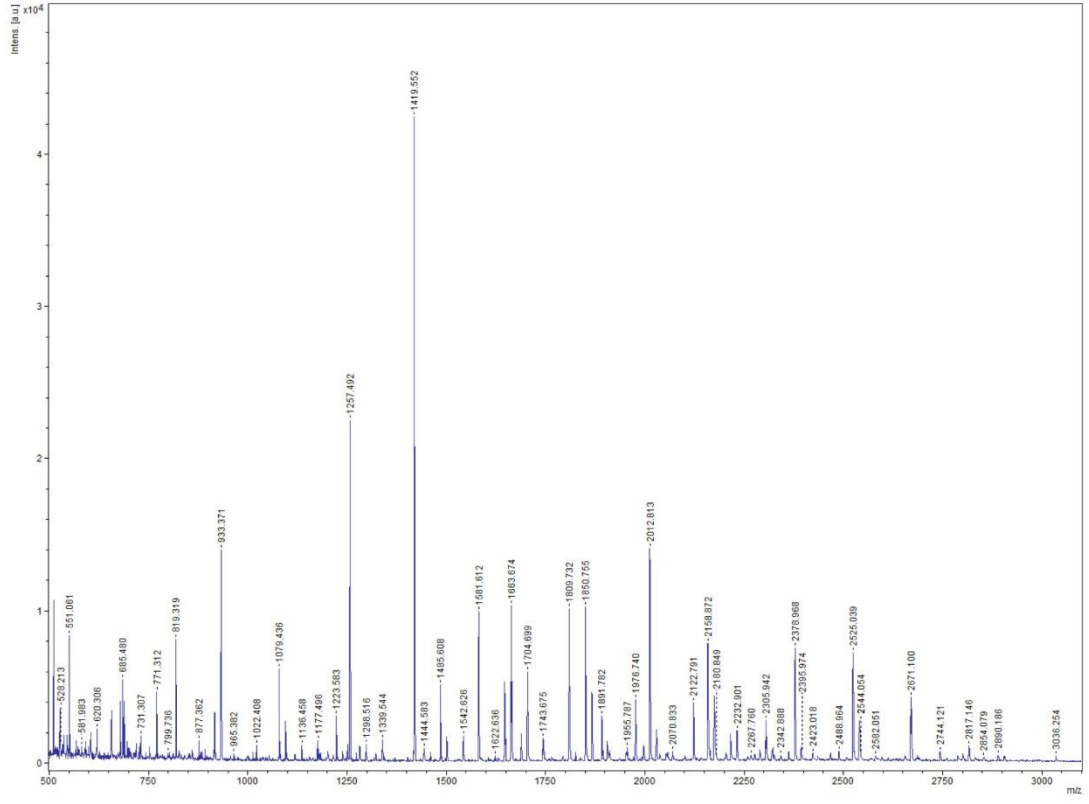
Supplementary Figure 3 MALDI spectrum of neutral N-glycans. X-axis is the mz value and Y-axis is the relative intensity.
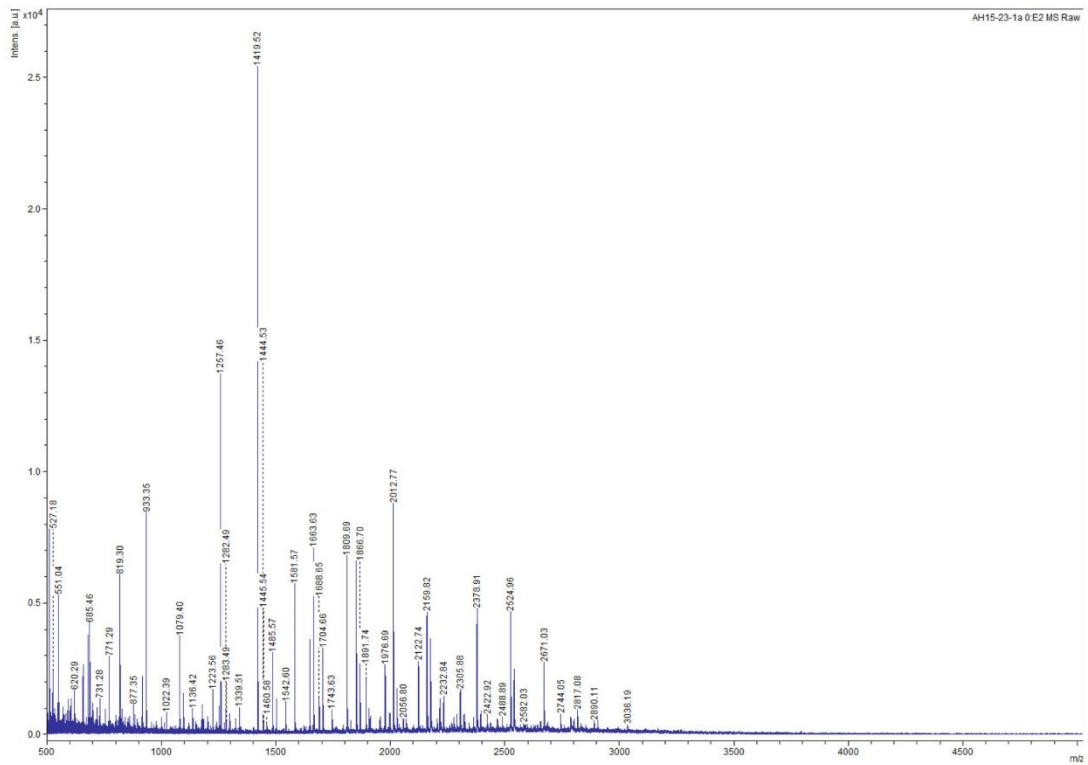
Supplementary figure 4: MALDI spectrum of total (Neutral and acidic) N-glycans. X-axis is the mz value and Y-axis is the relative intensity.
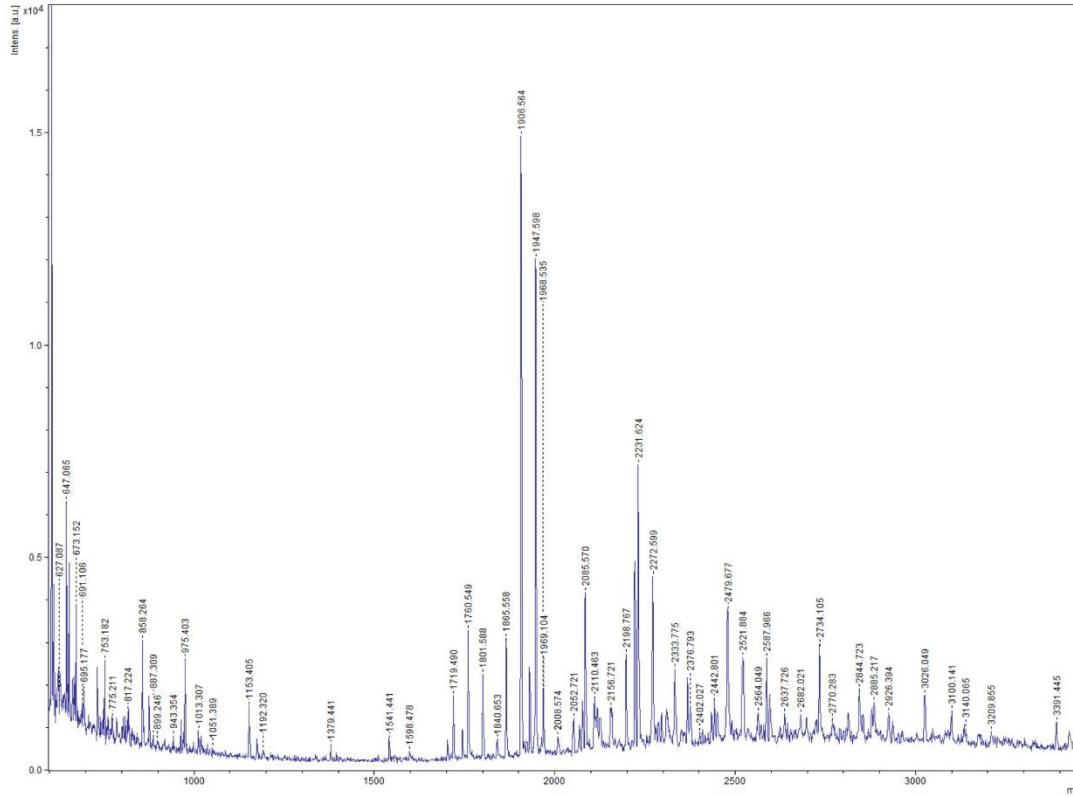
Supplementary figure 5: MALDI spectrum of acidic N-glycans. X-axis is the mz value and Y-axis is the relative intensity.

Supplemental table 1:

Supplementary Table 1: Combur[10] test values for volunteers A, B and C.

Parameters/Volunteers	A	B	C
Specific gravity	1.015	1.020	1.020
pH	6	5	6
Leukocytes	Negative	Negative	Negative
Nitrite	Negative	Negative	Negative
Protein	Negative	Negative	Negative
Glucose	Normal	Normal	Normal
Ketones	Negative	Negative	Negative
Urobilinogen	Negative	Negative	Negative
Bilirubin	Negative	Negative	Negative
Erythrocytes	Negative	Negative	Negative

(Neutral specta) Below are all the parameters used for the analysis of neutral glycans.

File name: X:\MALDI\Annari\AH15-kirja\AH15-23\AH15-23-1-1\0_F2\1

Date: 2014-09-19 13:27:09

User name: Ultraflex3

Method: D:\Methods\flexControlMethods\RePo.par

Sample: AH15-23-1-1\0_F2\1

Delay: 40907 ns

HiTurbo: false

Realtime smooth: off

RepRate: 100 Hz

SampleRate: 0.5 ns

SpecSize: 176185 pts

Uhimass: 0 kV

ULinDet: 1.653 kV

URefDet: 1.737 kV

Analog Offset: 51.8 mV

Electronic Gain: 100 mV/fullscale

Laser Focus: 27

DPCal: 0

Matrix suppression: deflection

Matrix suppression

cut-off mass: 450

PIEDelay:		60 ns

Polarity:		POS

UIS1:			18 kV

UIS2:			15.8 kV

ULens:			7.9 kV

URefl1:			19 kV

URefl2:			9.99 kV

Processing Calibration:

c0:			195.123

c1:			300576.138

c2:			-0.117

CalDate:		2014-09-19T13:21:18.000+00:00

CalRef:

HPCUse:			false

Mass error:		0.913

MClist:			Sugar_neutral

(Acidic specta) Below are all the parameters used for the analysis of acidic glycans.

File name:	X:\MALDI\Annari\AH15-kirja\AH15-23\Happamat\Uusinta\AH15-23-1-2\0_I1\1
Date:	2014-10-03 14:44:23
Instrument:	GLYD054
User name:	Ultraflex3
Method:	D:\Methods\flexControlMethods\Puolikkaat\ReNe12kV.par
Sample:	AH15-23-1-2\0_I1\1

Delay:	55205 ns
HiTurbo:	false
Realtime smooth:	off
RepRate:	100 Hz
SampleRate:	0.5 ns
SpecSize:	153872 pts
Uhimass:	0 kV
ULinDet:	1.653 kV
URefDet:	1.819 kV

Analog Offset:	53 mV
Electronic Gain:	100 mV/fullscale
Laser Focus:	27
DPCal:	0
Matrix suppression:	deflection

Matrix suppression

cut-off mass: 500

PIEDelay: 20 ns

Polarity: NEG

UIS1:   12 kV

UIS2:   10.44 kV

ULens: 4.7 kV

URefl1:   12.5 kV

URefl2:   6.69 kV

Processing Calibration:

c0:   195.184

c1:   197635.438

c2:   -0.146

CalDate: 2014-10-03T14:42:08.000+00:00

CalRef:

HPCUse: false

Mass error: 2.911

MClist: Sugar

Supplementary table 2: all the glycopeptides sequences, glycan composition and structure are given in this table along with other parameters. The false positive rate calculated was 2.56%.

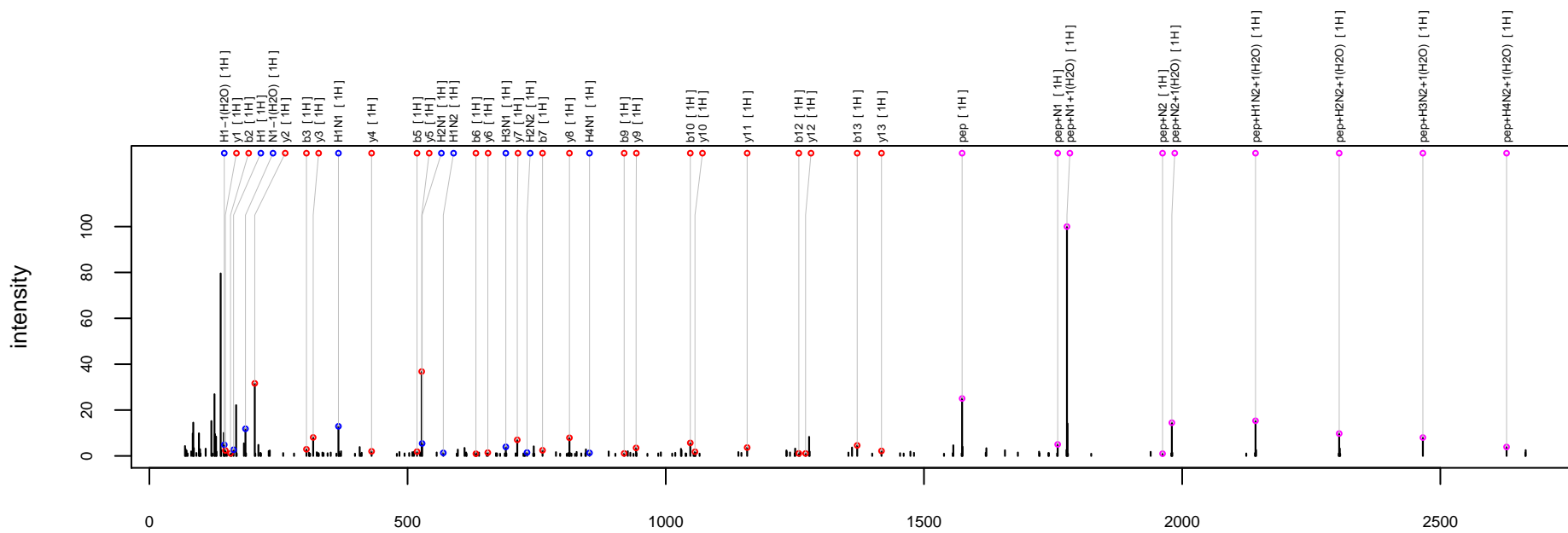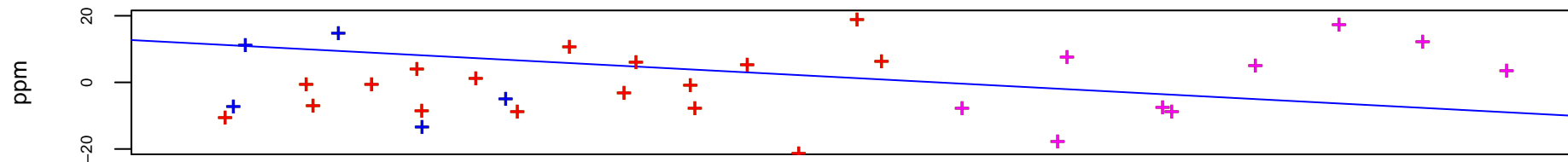| mz	charge	SNA/SEC	protein	peptide_mass	start	end	N_site	N_site_DB	sequence	score_peptide	composition	structure matching to Glycome DB	GlcomeDB ID/ De novo composition	ppm	score_glycan	rank_all	score_all
1170,737	4	SEC	A1AG1_HUMAN	2894,449	58	81	72	72	SVQEIQATFFYFTPNKTEDTIFLR	17,09	H6N4		denovo	35,55027	9,94	1	27,03
927,0483	3	SEC	AMN1_HUMAN	758,4286	90	96	93		LNLNASK	18,52	H6N3F3		denovo	12,30069	4,75	1	23,27
982,7845	3	SEC	AMPN_HUMAN	1281,7081	231	241	234	234	AEFNITLIHPK	36,83	H4N5	HNH(NH)(N)HNN	1033	-5,21986	30,72	1	67,55
950,6725	4	SEC	AMPN_HUMAN	1315,6997	126	136	128	128	KLNYTLSQGHR	21,27	H6N6F2		denovo	-13,7324	29,69	1	50,96
1139,474	4	SEC	AMPN_HUMAN	2876,3635	40	69	42		NANSSPVASTTPSASATTNPASATTLDQSK	17,69	S2H3N3		denovo	18,51293	18,55	1	36,24
1269,308	4	SNA	APOD_HUMAN	2722,402	83	108	98	98	ADGTVNQIEGEATPVNLTEPAKLEVK	23,15	S2H5N4F1	SNNH(SHNH)HN(F)N	216	5,786618	59,99	1	83,14
1098,147	3	SEC	APOD_HUMAN	2253,112	83	104	98	98	ADGTVNQIEGEATPVNLTEPAK	40,76	H3N2F1		denovo	20,61351	28,31	1	69,07
1097,932	4	SEC	APOD_HUMAN	1526,698	61	73	65	65	CIQANYSLMENGK	33,3	S3H6N5	SHNH(SHN(SHN)H)HNN	1255	-0,57381	31,81	1	65,11
1244,821	3	SEC	APOD_HUMAN	1526,698	61	73	65	65	CIQANYSLMENGK	22,45	S2H5N4	SHNH(SHNH)HNN	855	8,143074	30,49	1	52,94
933,8698	4	SEC	APOD_HUMAN	1526,698	61	73	65	65	CIQANYSLMENGK	27,19	S2H5N4	SHNH(SHNH)HNN	855	5,429022	20,12	1	47,31
896,3768	3	SEC	ASAH1_HUMAN	1469,6885	255	267	259	259	TVLENSTSYEEAK	45,84	H5N2	H(H)H(H)HNN	234	1,007761	32,8	1	78,64
950,3925	3	SEC	ASAH1_HUMAN	1469,6885	255	267	259	259	TVLENSTSYEEAK	43	H6N2	HH(H)H(H)HNN	235	2,949659	35,5	1	78,5
1004,411	3	SEC	ASAH1_HUMAN	1469,6885	255	267	259	259	TVLENSTSYEEAK	40,12	H7N2	HNH(H)(H)(H)HNN	240	1,795414	34,46	1	74,58
842,3589	3	SEC	ASAH1_HUMAN	1469,6885	255	267	259	259	TVLENSTSYEEAK	34,34	H4N2	HH(H)HNN	5746	1,428528	18,03	1	52,37
1007,75	3	SEC	ATRN_HUMAN	1317,6524	411	422	416	416	IDSTGNVTNELR	35,68	H8N2	HHH(HH(H)H)HNN	242	1,690234	40,87	1	76,55
899,7146	3	SEC	ATRN_HUMAN	1317,6524	411	422	416	416	IDSTGNVTNELR	41,24	H6N2	HHH(H)HNN	235	2,226632	33,42	1	74,66
953,7311	3	SEC	ATRN_HUMAN	1317,6524	411	422	416	416	IDSTGNVTNELR	32,8	H7N2	HHH(H(H)H)HNN	240	3,253887	39,88	1	72,68
845,6984	3	SEC	ATRN_HUMAN	1317,6524	411	422	416	416	IDSTGNVTNELR	32,61	H5N2	H(H)H(H)HNN	234	0,713414	32,56	1	65,17
1074,46	3	SEC	BGAL_HUMAN	1185,6717	458	468	464	464	NNVITLNITGK	25,93	S1H7N3		denovo	4,997858	36,5	1	62,43
830,368	3	SEC	BGLR_HUMAN	1271,683	269	281	272	272	VVANGTGTQGQLK	26,56	H5N2	H(H)H(H)HNN	234	9,477726	22,21	1	48,77
1083,699	4	SEC	CERU_HUMAN	2125,9916	396	415	397	397	ENLTAPGSDSAVFFEQGTTR	28,97	S2H5N4	SHNH(SHNH)HNN	855	-0,67362	35,07	1	64,04
1025,18	4	SNA	CERU_HUMAN	1891,8337	129	144	138	138	EHEGAIYPDNTTDFQR	23,62	S2H5N4	SHNH(SHNH)HNN	855	-20,6842	31,21	1	54,83
957,1561	4	SEC	CLUS_HUMAN	1682,8264	372	385	374	374	LANLTQGEDQYYLR	34,53	S1H3N6F1	SNNH(NNH)HN(F)N	8842	5,009632	41,83	1	76,36
1019,677	4	SEC	CLUS_HUMAN	1682,8264	372	385	374	374	LANLTQGEDQYYLR	22,21	S2H4N5F1	SNNH(SHNH)HN(F)N	8844	0,975799	29,72	1	51,93
1103,789	3	SNA	CO4A_HUMAN	1103,593	1326	1336	1328	1328	GLNVTLSSTGR	18,54	S2H5N4	SHNH(SHNH)HNN	855	6,10322	52,06	1	70,6
1125,47	3	SEC	CUBN_HUMAN	1109,5578	1800	1810	1802	1802	EGNATGHLVGR	23,47	H5N5F3	F(H)NH(F)H)NH)(N)HN(F)N	2023	1,187652	76	1	99,47
1076,783	3	SEC	CUBN_HUMAN	1109,5578	1800	1810	1802	1802	EGNATGHLVGR	25,93	H5N5F2	FHNH(HNH)(H)(H)HNN	24655	2,572478	66,4	1	92,33
1121,468	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	30,47	H5N6F1		denovo	3,242774	57,56	1	88,03
984,0692	3	SEC	CUBN_HUMAN	977,4719	2082	2090	2085	2085	AGFNASFHK	27,67	H5N5F1	HNH(F(H)NH)(H)HNN	5782	1,697035	52,27	1	79,94
1053,11	3	SEC	CUBN_HUMAN	1184,6098	778	788	781	781	VCGNGTISHK	18,45	H5N5F1	HNH(H)(N)HN(F)N	1043	6,491883	59,02	1	77,47
897,0562	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	35,37	H3N5	NH(NH)(N)HNN	1032	1,044156	41,92	1	77,29
1278,194	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	25,65	H6N6F2		denovo	7,356736	50,94	1	76,59
916,3778	3	SEC	CUBN_HUMAN	977,4719	2082	2090	2085	2085	AGFNASFHK	30,49	H5N4F1	HNH(HNH)(H)(F)N	887	-0,06091	44,26	1	74,75
951,073	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	35,5	H4N5	HNH(NH)(N)HNN	1033	1,826008	38,98	1	74,48
999,7589	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	32,72	H4N5F1		denovo	1,803768	41,13	1	73,85
937,3969	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	35,48	H5N4		denovo	2,457159	33,38	1	68,86
1107,791	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	30,32	H6N5F1	HNNH(F(H)NH)HNN	32456	4,516496	37,7	1	68,02
844,3534	4	SEC	CUBN_HUMAN	1109,5578	1800	1810	1802	1802	EGNATGHLVGR	23,46	H5N5F3	FHNH(FHNH)(H)HN(F)N	24641	2,362755	42,83	1	66,29
1107,802	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	25,25	H5N5F1	HNH(HNH)(N)HNN	1043	4,335915	40,47	1	65,72
935,3835	3	SEC	CUBN_HUMAN	977,4719	2082	2090	2085	2085	AGFNASFHK	27,59	H5N5	HNH(HNH)(N)HNN	1035	1,500276	37,05	1	64,64
1229,506	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	18,26	H6N6F1	HNH(H)HNH)(H)(N)HN(F)N	17650	8,813837	46,18	1	64,44
1326,878	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	18,41	H6N6F3		denovo	7,966065	44,75	1	63,16
1105,785	3	SEC	CUBN_HUMAN	977,4719	2082	2090	2085	2085	AGFNASFHK	19,79	H6N6F1	HNH(HN(H)H)(N)(N)HN(F)N	17650	-2,98129	40,82	1	60,61
1180,824	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	20,38	H6N6	HNH(H)(N)HNN	5374	6,41078	34,43	1	54,81
1218,502	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	18,23	S1H5N6F1		denovo	1,261112	36,46	1	54,69
1053,773	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	22,63	H5N5F1	HNH(F(H)NH)(H)HNN	5782	5,507198	31,95	1	54,58
1067,45	3	SEC	CUBN_HUMAN	1186,5942	3457	3468	3457	3457	NGSNSNSPLLGK	22,63	H4N6F1	NN(HN)H(NH)HN(F)N	1492	3,500554	31,81	1	54,44
958,8961	4	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	27,81	H6N6F2		denovo	8,311641	26,3	1	54,11
995,4046	3	SEC	CUBN_HUMAN	1348,6782	2526	2537	2531	2531	LCSSVNVSNEIK	25,36	H6N6F3		denovo	14,00938	23,74	1	49,1
918,1528	4	SEC	DPEP1_HUMAN	1550,8416	56	70	57	57	ANLTTLAGTHTNIPK	16,94	H5N5F2	FHNH(HNH)(N)HN(F)N	24655	9,87853	23,59	1	40,53
994,9092	4	SEC	FETUA_HUMAN	1770,864	145	159	156	156	VCQDCPLLAPLNDTR	21,68	S2H5N4	SNNH(SHNH)HNN	855	7,206688	27,48	1	49,16
917,7096	3	SEC	FGFR3_HUMAN	877,4141	311	319	315	315	TAGANTTDK	17,04	S1H6N3		denovo	-15,4334	16,19	1	33,23
898,7083	3	SEC	FGFR3_HUMAN	877,4141	311	319	315	315	TAGANTTDK	17,02	S1H6N2F1		denovo	-22,2875	13,69	1	30,71
1139,238	4	SEC	GGTL1_HUMAN	1632,895	160	173	167		LHNQLLPNVTTVER	22,58	S1H6N6F3		denovo	7,368959	33,92	1	56,5
903,112	4	SEC	HEMO_HUMAN	1403,674	181	193	187	187	SWPAVGNCSSALR	17,6	S2H5N4	SHNH(SHNH)HNN	855	7,60703	19,98	1	37,58
1220,08	4	SNA	IGHA1_HUMAN	2962,604	127	153	144	144	LSLHRPALLDLLLGSEANLTCTLTGLR	40,46	S1H5N4	SNNH(HNH)HNN	205	-2,03265	48,59	1	89,05
923,4094	3	SEC	IGHA2_HUMAN	957,5495	200	208	205	205	TPLTANITK	36,77	H4N5F1	HNH(H)(H)HN(F)N	1041	3,324636	43,16	1	79,93
1006,767	3	SEC	IGHA2_HUMAN	957,5495	200	208	205	205	TPLTANITK	30,58	S1H4N5F1	SHNH(HNH)HN(F)N	215	-1,724994	45,2	1	75,78
977,4273	3	SEC	IGHA2_HUMAN	957,5495	200	208	205	205	TPLTANITK	30,55	H5N5F1	HNH(HNH)(N)(N)HN(F)N	1043	2,83397	44,49	1	75,04
1074,478	3	SNA	IGHA2_HUMAN	957,5495	200	208	205	205	TPLTANITK	25,04	S1H5N5F1	SHNH(HNH)(H)HN(F)N	4685	-15,01119	44,64	1	69,68
806,0957	4	SEC	IGHA2_HUMAN	957,5495	200	208	205	205	TPLTANITK	27,86	S1H5N5F1	SHNH(HNH)(N)HN(F)N	4685	3,12618	21,77	1	49,63
922,0402	3	SEC	IGHG2_HUMAN	1156,515	172	180	176	176	EEQFNSTFR	36,5	H4N5F1	HNH(HNH)(H)HN(F)N	1026	1,052015	49,42	1	76,97
976,0581	3	SEC	IGHG2_HUMAN	1156,515	172	180	176	176	EEQFNSTFR	19,59	H5N4F1	HNH(HNH)HN(F)N	887	0,686435	56,82	1	76,41
1145,131	3	SNA	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	18,47	S2H5N4	SHNH(SHNH)HNN	855	3,204874	62,76	1	81,23
1048,101	3	SEC	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	25,87	S1H5N4	SNNH(HNH)HNN	205	1,593358	46,58	1	72,45
1029,092	3	SEC	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	18,42	S1H5N3F1		denovo	3,695815	46,64	1	65,06
926,3891	3	SEC	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	23,15	S1H4N3	SNNH(H)HNN	2113	3,170014	33,94	1	57,09
980,4081	3	SEC	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	18,36	S1H5N3	SHNH(HH)HNN	8774	1,567375	33,49	1	51,85
859,1006	4	SEC	IGJ_HUMAN	1227,6095	70	80	71	71	ENISDPTSPLR	20,79	S2H5N4	SHNH(SHNH)HNN	855	2,496797	27,53	1	48,32
1434,658	3	SNA	IPSP_HUMAN	2159,1626	254	274	262	262	VVGVPYQGNATALFILPSEGK	28,54	S1H3N6F1	SNNH(NNH)HN(F)N	8842	-0,34619	64,45	1	92,99
1049,448	3	SEC	LAMP2_HUMAN	1116,5927	352	361	356	356	VQPFNVTQGK	26,75	H5N6	HN(H)NH(H)(H)HNN	1481	3,274737	38,99	1	65,74
1098,136	3	SEC	LAMP2_HUMAN	1116,5927	352	361	356	356	VQPFNVTQGK	21,6	H6N6	FHNH(HNH)(H)HN(F)N	1485	1,46005	35,31	1	56,91
1131,479	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	27,1	H5N5F2	FHNH(HNH)(N)HN(F)N	24655	4,068423	56,12	1	83,22
907,0682	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	31,7	H3N4F1	NH(N)(N)H(N)(F)N	20910	0,775392	50,06	1	81,76
1082,795	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	24,54	H5N5F1	HNH(HNH)(N)HN(F)N	1043	2,435057	55,43	1	79,97
1028,778	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	26,8	H4N5F1	HNH(HNH)(H)HN(F)N	1041	1,979696	50,48	1	77,28
1121,954	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	20,62	S3H6N6F1	SHNH(SHN(S)H)HNH)HN(F)N	8123	0,307499	54,86	1	75,48
1136,811	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	24,66	H6N5F1	HNNH(HNH)H)(H)HN(F)N	581	3,111041	50,27	1	74,93
1015,101	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	31,98	H4N4F1	HNH(HNH)HN(F)N	887	3,057167	42,84	1	74,82
1112,137	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	24,61	S1H5N4F1	SNNH(HNH)HN(F)N	215	-0,80626	49,75	1	74,36
1258,525	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	24,96	H7N6F1	FH(HN)H(H)H(H)H)(H)HN(F)N	576	0,214537	48,79	1	73,75
1073,038	5	SEC	LG3BP_HUMAN	1696,878	394	407	398	398	YKGLNLTEDTYKPR	20,65	S4H7N6F1	SHN(SHN)H(SHN(SHN)H)HN(F)N	1455	1,649522	52,5	1	73,15
1233,846	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	22,46	S1H6N5		denovo	0,921239	48,86	1	71,32
961,0837	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	26,76	H4N4F1	HNH(NNH)HN(F)N	1026	2,916846	42,2	1	68,96
1058,115	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	19,65	S1H4N4F1	SHNH(NH)HN(F)N	1870	3,405428	47,93	1	67,58
1125,809	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	19,86	S1H4N5F1	SHNH(HNH)HN(F)N	28780	2,608496	44,95	1	64,81
944,1437	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	31,99	H7N6F1	HN(HN)H(H)H)(H)(H)HN(F)N	576	2,430774	30,06	1	62,05
1063,446	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	24,35	S1H5N4		denovo	3,701802	35,89	1	60,24
1014,809	5	SEC	LG3BP_HUMAN	1405,72	396	407	398	398	GLNLTEDTYKPR	19,12	S4H7N6F1	SHN(SHN)H(SHN(SHN)H)HN(F)N	1455	-0,62081	40,74	1	59,86
939,067	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	26,65	H7N2		denovo	0,074542	32,88	1	59,53
990,419	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	22	S1H4N3F1	SHNH(H)HN(F)N	2114	6,229687	37,35	1	59,35
1016,92	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	20,37	S1H7N6F3	SHNH(H)HN(HN)H(HN)HN(F)N	7805	-0,17147	38,86	1	59,23
831,0299	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	34,34	H5N2	H(H)H(H)HNN	234	2,370552	22,4	1	56,74
985,5985	5	SEC	LG3BP_HUMAN	1405,72	396	407	398	398	GLNLTEDTYKPR	18,97	S4H7N6	SH(SHN)H(SH(SHN)H)HNN	1578	-1,73499	37,01	1	55,98
1049,774	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	17,41	S1H6N3	SHNH(H)(H)HNN	2581	0,479468	37,93	1	55,34
1089,695	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	20,55	S2H7N6F1		denovo	-0,73874	34,63	1	55,18
1049,179	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	20,17	S2H6N6F1	SHN(S)(N)H(N)HNH)HN(F)N	8113	1,901488	34,55	1	54,72
1053,179	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	25,32	S2H7N6		denovo	0,493743	28,95	1	54,27
958,4092	4	SEC	LG3BP_HUMAN	1346,694	64	76	69	69	ALGFENATQALGR	27,5	H6N6F2		denovo	-1,23121	22,74	1	50,24
994,9189	4	SEC	LG3BP_HUMAN	1346,694	64	76	69	69	ALGFENATQALGR	25,12	H6N6F3		denovo	3,61336	24,75	1	49,87
925,6379	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	29,36	S1H6N5F1	SHNNH(F(H)NH)HNN	32450	-1,19377	20,37	1	49,73
1125,954	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	18,28	S3H7N6		denovo	-0,82597	29,89	1	48,17
995,7552	3	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	19,69	S1H5N3	SHNH(HH)HNN	8774	1,610168	28,05	1	47,74
1067,691	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	20,33	S1H7N7F1		denovo	-0,94128	23,8	1	44,13
1107,954	4	SEC	LG3BP_HUMAN	1346,694	64	76	69	69	ALGFENATQALGR	18,18	S2H7N6F1		denovo	0,311385	22,02	1	40,2
976,406	4	SEC	LG3BP_HUMAN	1273,651	542	554	551	551	AAIPSALDTNSSK	17,54	S1H6N6F1		denovo	0,660586	21,45	1	38,99
1017,748	3	SEC	LRP2_HUMAN	713,382	1550	1555	1550	1550	NLTNPR	16,93	H6N6F1		denovo	3,474992	56,72	1	73,65
944,7243	3	SEC	LRP2_HUMAN	713,382	1550	1555	1550	1550	NLTNPR	19,68	H5N5F2	FHNH(HNH)(N)HN(F)N	24655	2,72037	50,95	1	70,63
896,0397	3	SEC	LRP2_HUMAN	713,382	1550	1555	1550	1550	NLTNPR	19,64	H5N5F1	HNH(HNH)(N)HN(F)N	1043	1,73442	42,16	1	61,8
1242,243	4	SEC	LRP2_HUMAN	2336,026	285	305	299,300	299,300	VCDGILDCPGREDENNTSTGK	18,14	H6N6F3		denovo	10,13892	37,68	1	55,82
1133,688	4	SEC	LRP2_HUMAN	2266,9107	2797	2815	2809,2810	2809,2810	EFICNGVDNCHDNNTSDEK	18,36	H5N5F3	FHNH(FHNH)(N)HN(F)N	24641	5,221897	36,2	1	54,56
1150,963	4	SEC	LRP2_HUMAN	2336,026	285	305	299,300	299,300	VCDGILDCPGREDENNTSTGK	17,89	H5N5F3	FHNH(FHNH)(H)HN(F)N	24641	8,206172	35,18	1	53,07
984,784	3	SEC	LYAG_HUMAN	1572,8511	465	479	470	470	GVFITNETGQPLLGK	49,01	H6N2	HH(H)(H)(H)HNN	235	-1,18131	25,84	1	74,85
1065,453	3	SEC	LYAG_HUMAN	1572,8511	465	479	470	470	GVFITNETGQPLLGK	18,79	S2H3N2F1		denovo	24,5936	19,2	1	37,99
1102,122	3	SEC	MGA_HUMAN	966,4923	1672	1679	1672	1672	NVTAYFPR	17,97	H6N6F1	HNH(HN(H)H)(N)(N)HN(F)N	17650	0,124003	52,94	1	70,91
1109,471	4	SEC	MGA_HUMAN	1950,9799	817	834	827	827	GGYIFPTQQPNTTTLASR	27,66	H6N6F2		denovo	8,017337	29,99	1	57,65
980,4078	3	SEC	MGA_HUMAN	966,4923	1672	1679	1672	1672	NVTAYFPR	20,4	H5N5F1		denovo	3,267348	33,27	1	53,67
1150,802	3	SEC	MGA_HUMAN	966,4923	1672	1679	1672	1672	NVTAYFPR	17,86	H6N6F2		denovo	5,390446	34,23	1	52,09
899,8685	4	SEC	MGA_HUMAN	966,4923	1672	1679	1672	1672	NVTAYFPR	18,12	H6N6F3		denovo	3,967246	25,78	1	43,9
1145,984	4	SEC	MGA_HUMAN	1950,9799	817	834	827	827	GGYIFPTQQPNTTTLASR	20,92	H6N6F3		denovo	8,874471	21,7	1	42,62
863,3547	4	SEC	MGA_HUMAN	966,4923	1672	1679	1672	1672	NVTAYFPR	20,65	H6N6F2		denovo	3,353199	20,67	1	41,32
1026,413	3	SEC	NEP_HUMAN	1250,569	142	152	145	145	SCINESAIDSR	36,97	H5N5	HNH(HNH)(N)HNN	1035	3,867838	47,13	1	84,1
1075,1	3	SEC	NEP_HUMAN	1250,569	142	152	145	145	SCINESAIDSR	25,79	H5N5F1		denovo	3,382632	46,09	1	71,88
972,3946	3	SEC	NEP_HUMAN	1250,569	142	152	145	145	SCINESAIDSR	31,11	H4N5		denovo	5,213933	35,92	1	67,03
1301,53	3	SEC	PIGR_HUMAN	1987,882	498	515	499	499	WNNTGCQALPSQDEGPSK	22,62	S1H5N4		denovo	-2,66097	46,54	1	69,16
976,3981	4	SEC	PIGR_HUMAN	1987,882	498	515	499	499	WNNTGCQALPSQDEGPSK	24,75	S1H5N4	SNNH(HNH)HNN	205	-1,10611	27,57	1	52,32
1085,172	4	SEC	PLPL6_HUMAN	1076,521	1262	1270	1267		RSTDLNESR	20,43	S1H9N6F2		denovo	5,916114	15,19	1	35,62
921,71	3	SEC	RGS16_HUMAN	1221,578	54	63	54		NFSEDVLGWR	18,85	H7N2	HHH(H)(H)HNN	240	-0,64735	27,26	1	46,11
926,4069	3	SEC	SYPL1_HUMAN	1883,917	56	72	71	71	GQTEIQVNCPPAVTENK	26,73	H3N2	H(H)HNN	773	12,705	17,55	1	44,28
971,168	4	SNA	THBG_HUMAN	1675,811	27	41	36	36	VTACHSSQPNATLYK	36,42	S2H5N4	SHNH(SHNH)HNN	855	-15,3218	44,45	1	80,87
1294,486	3	SNA	THBG_HUMAN	1675,811	27	41	36	36	VTACHSSQPNATLYK	19,34	S2H5N4	SHNH(SHNH)HNN	855	37,90694	16,09	1	35,43
1001,078	3	SEC	THRB_HUMAN	795,4351	118	124	121	121	GHVNITR	21,47	S2H5N4	SHNH(SHNH)HNN	855	-1,96122	40,63	1	62,1
1331,293	4	SNA	UROM_HUMAN	2314,11	499	519	513		FALLMTNCYATPSSNATDPLK	18,37	S3H6N5F1	SHNH(SHN(SHN)H)HN(F)N	1458	4,690928	48,44	1	66,81
1055,216	5	SEC	UROM_HUMAN	2499,14	223	245	232	232	CNTAAPMWLNGTHPSSDEGIVSR	26,22	S1H11N2F2		denovo	6,946431	13,3	1	39,52
1154,72	4	SEC	UROM_HUMAN	2499,14	223	245	232	232	CNTAAPMWLNGTHPSSDEGIVSR	25,75	S2H3N3F3		denovo	11,03731	12,43	1	38,18
1318,776	4	SEC	UROM_HUMAN	2499,14	223	245	232	232	CNTAAPMWLNGTHPSSDEGIVSR	19,81	S3H4N4F3		denovo	10,19506	16,2	1	36,02
1155,495	3	SNA	VASN_HUMAN	1258,6306	112	121	117	117	LHEITNETFR	37,65	S2H5N4	SHNH(SHNH)HNN	855	-17,3634	53,31	1	85,96
866,8555	4	SEC	VASN_HUMAN	1258,6306	112	121	117	117	LHEITNETFR	24,23	S2H5N4	SHNH(SHNH)HNN	855	2,907059	24,88	1	49,11
972,4312	3	SEC	ZS18A_HUMAN	1323,5765	404	416	409		AEEGPNASSGFMK	21,94	H3N4F2		denovo	-35,4747	12,41	1	34,35

m/z 984.784 charge 3 scan 0–0

Score= 74.85 , Hits= 40 , Explained Intensity= 0.49

Peptide: LYAG_HUMAN[465,479]:GVFITNETGQPLIGK

Glycan: HH(H(H)H)HNN, H6N2

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
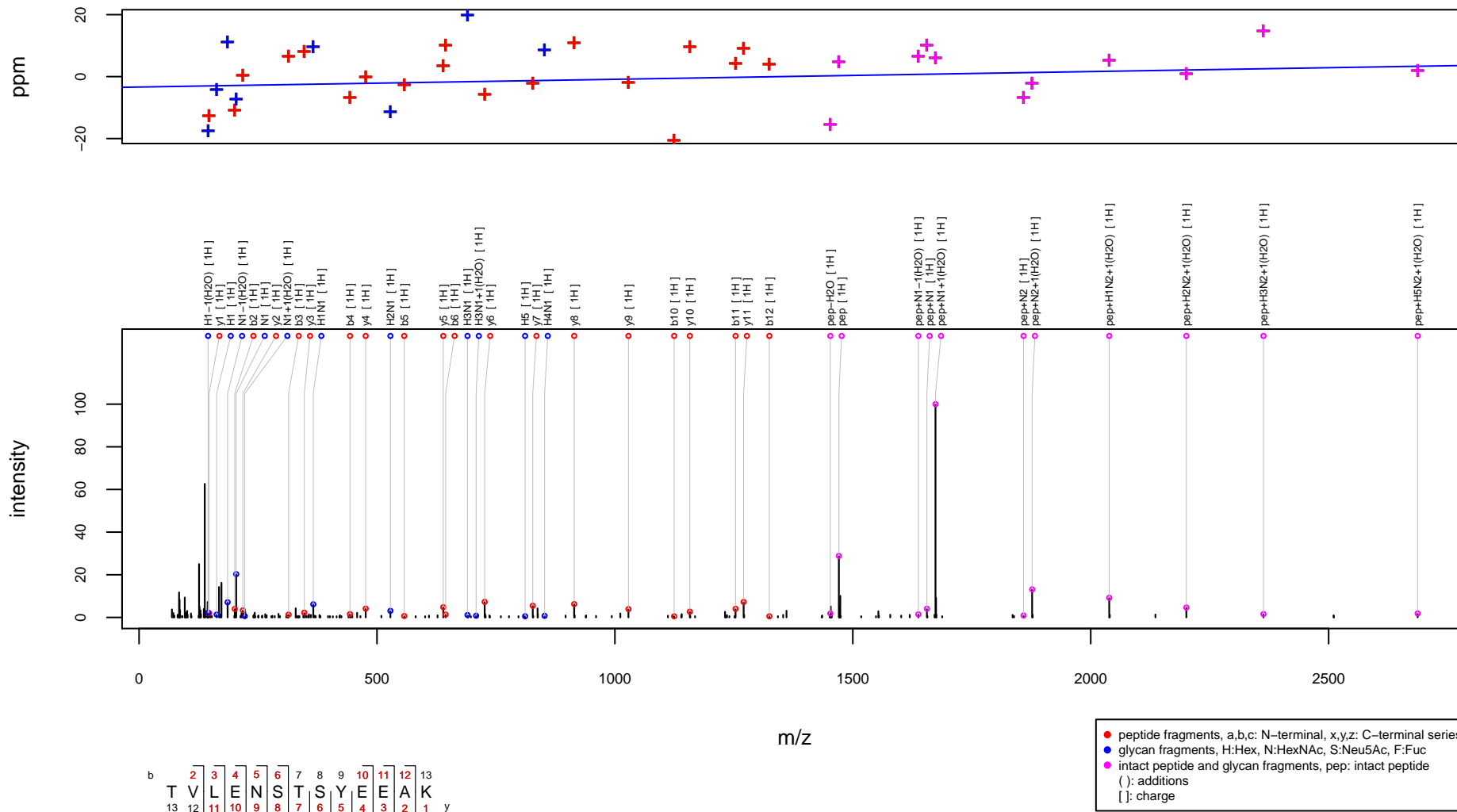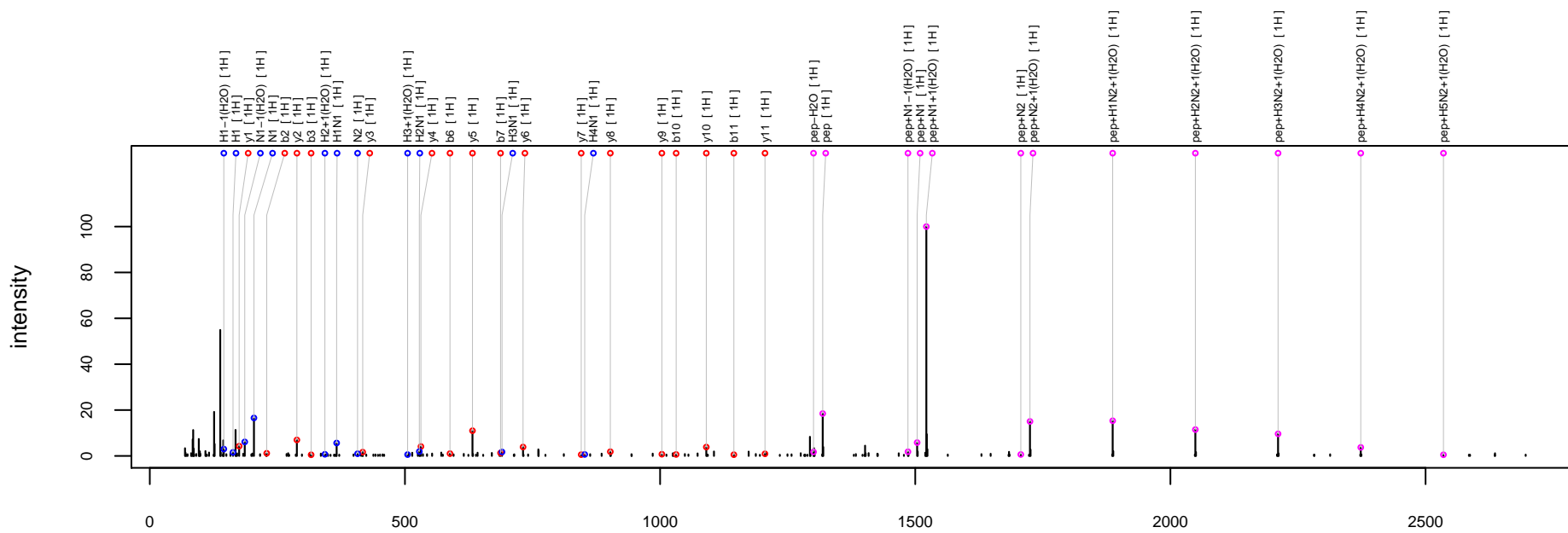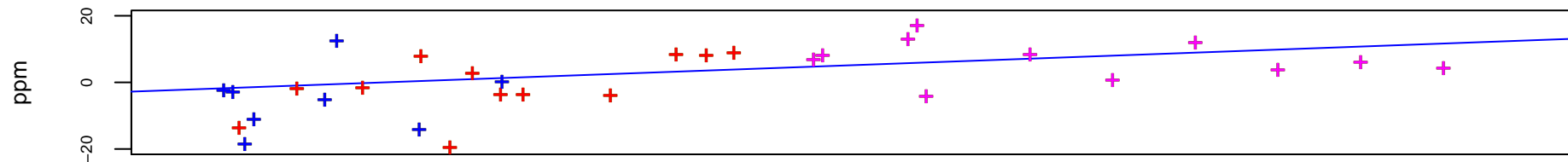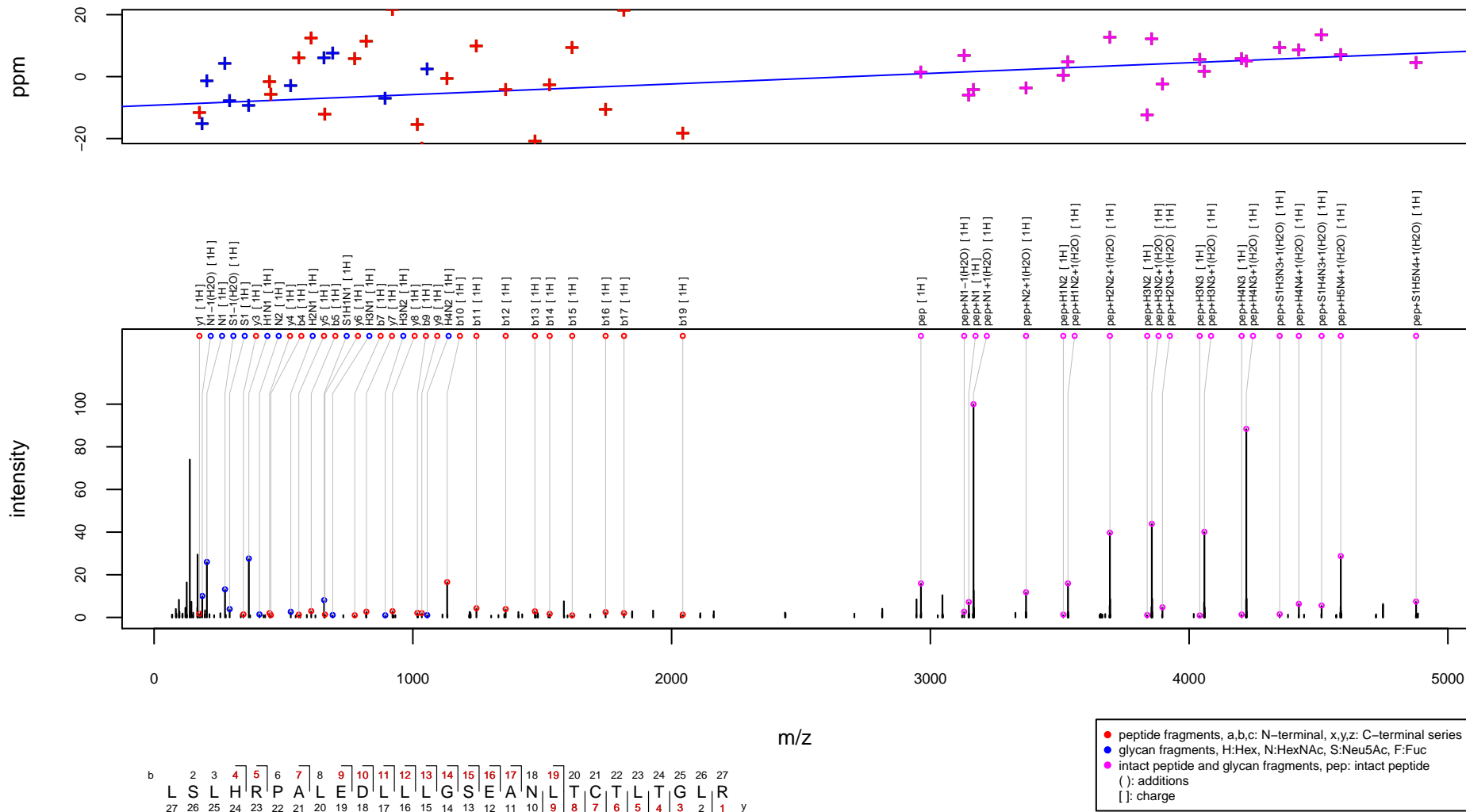 ( ): additions
  [ ]: charge

b: G V F I T N E T G Q P L I G K y

m/z 896.3768 charge 3 scan 0−0

Score= 78.64 , Hits= 41 , Explained Intensity= 0.49

Peptide: ASAH1_HUMAN[255,267]:TVLENSTSYEEAK

Glycan: H(H)H(H)HNN, H5N2

Charge: 3H

ppm

intensity

m/z

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Peptide sequence diagram:
b: 2 3 4 5 6 7 8 9 10 11 12 13
T V L E N S T S Y E E A K
y: 13 12 11 10 9 8 7 6 5 4 3 2 1

Glycopeptide ID – *Mon Feb 17 09:50:14 2014*

13

m/z 950.3925 charge 3 scan 0−0

Score= 78.5 , Hits= 42 , Explained Intensity= 0.5

Peptide: ASAH1_HUMAN[255,267]:TVLENSTSYEEAK

Glycan: HH(H(H)H)HNN, H6N2
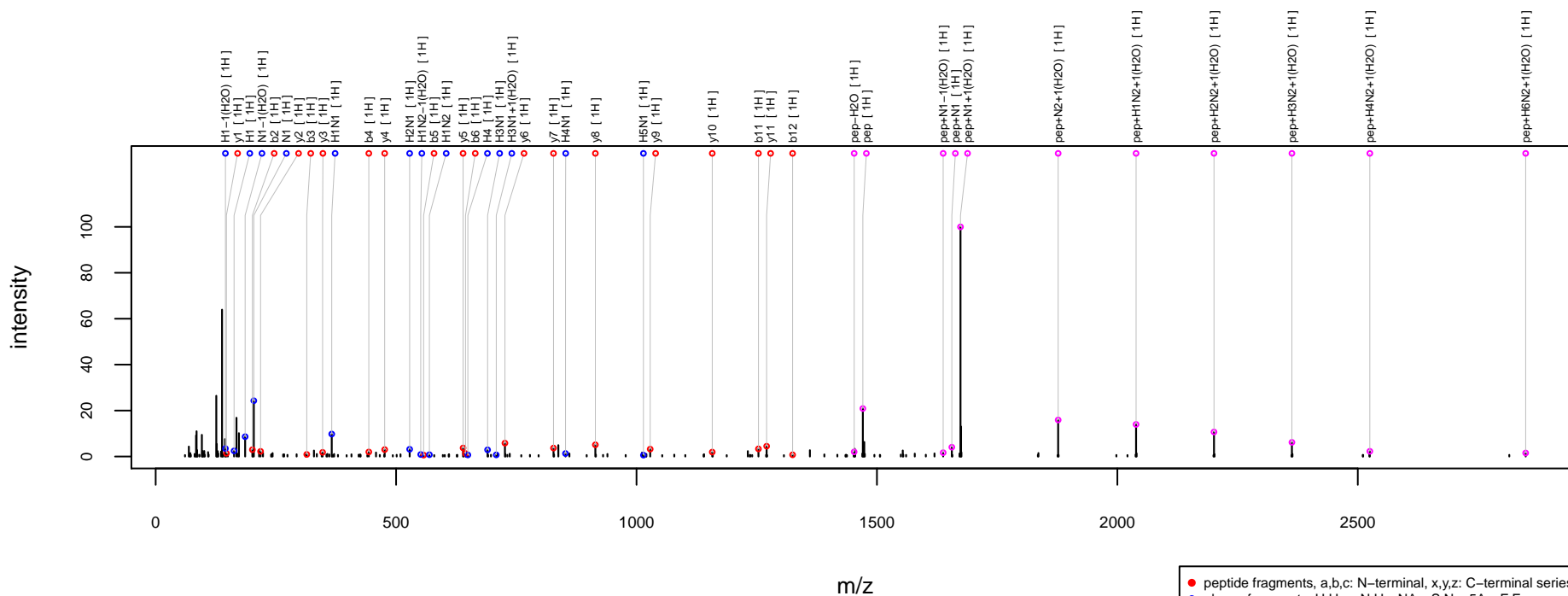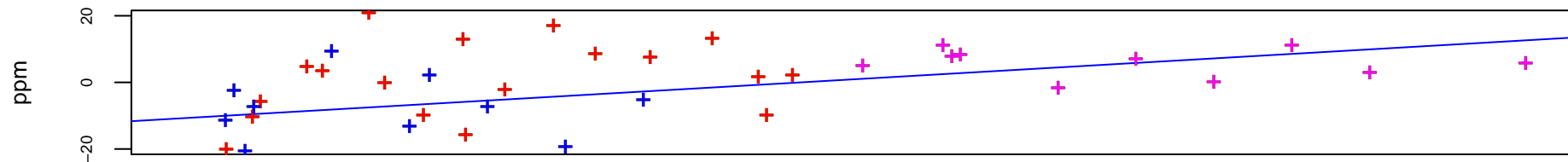
Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b 2 3 4 5 6 7 8 9 10 11 12 13
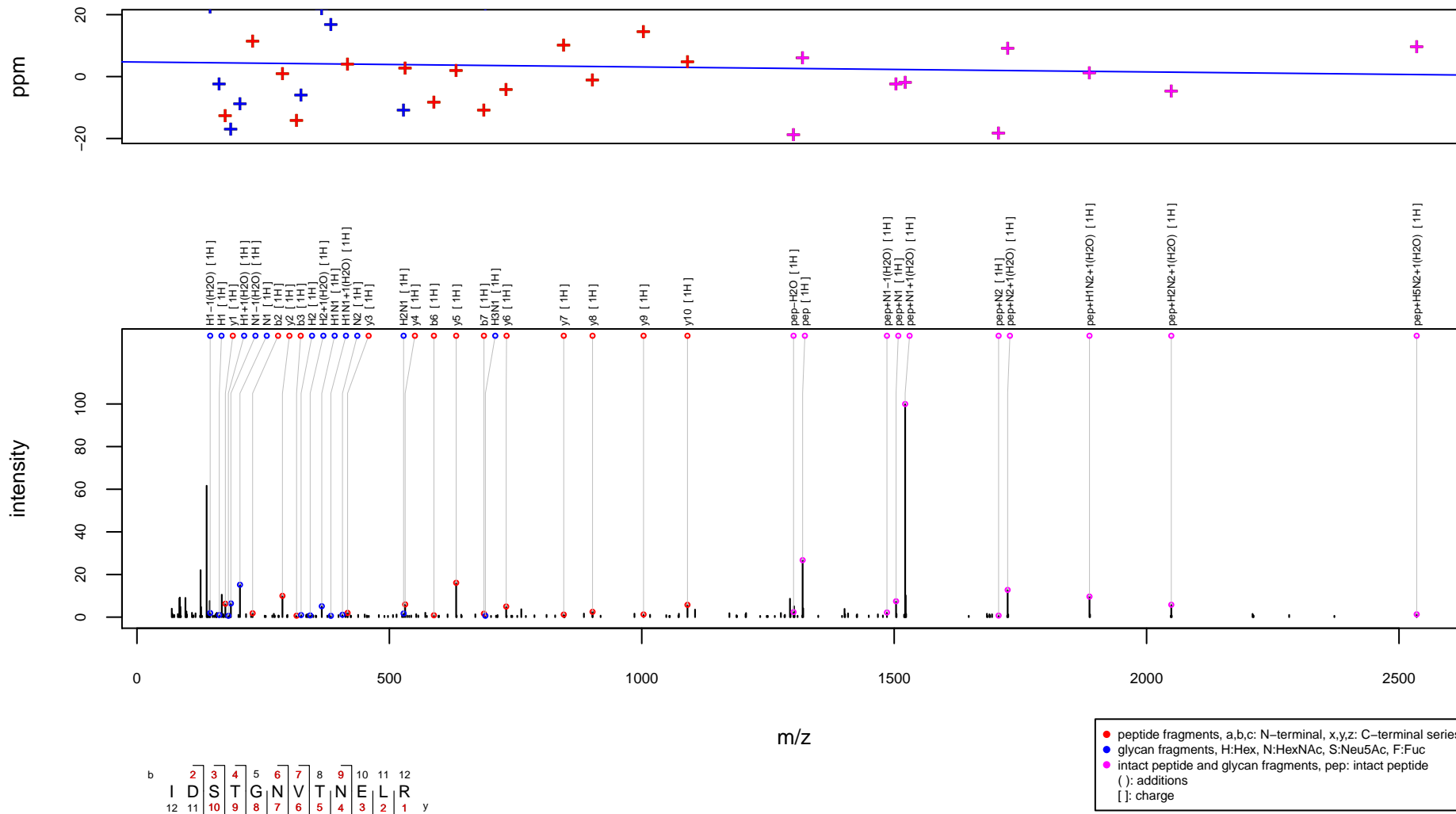T V L E N S T S Y E E A K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

14

m/z 899.7146 charge 3 scan 0−0

Score= 74.66 , Hits= 40 , Explained Intensity= 0.53

Peptide: ATRN_HUMAN[411,422]:IDSTGNVTNELR

Glycan: HH(H(H)H)HNN, H6N2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:15 2014*

m/z 1098.147 charge 3 scan 0–0

Score= 69.07 , Hits= 41 , Explained Intensity= 0.43

Peptide: APOD_HUMAN[83,104]:ADGTVNQIEGEATPVNLTEPAK

Glycan: H3N2F1

Charge: 3H
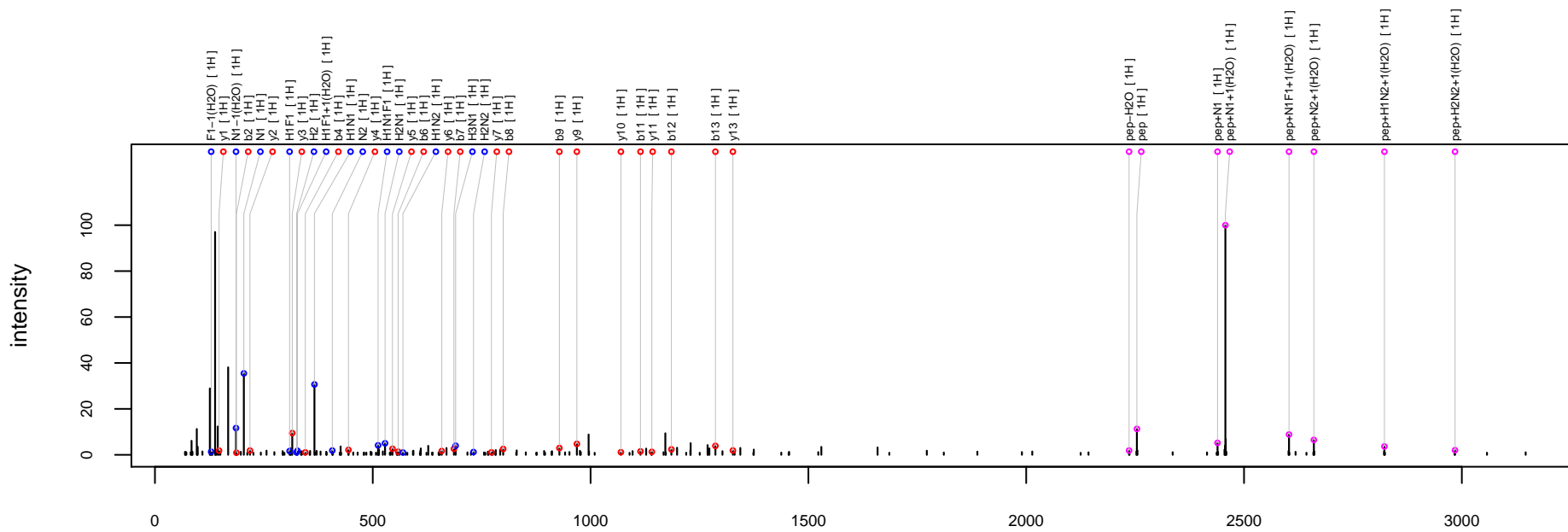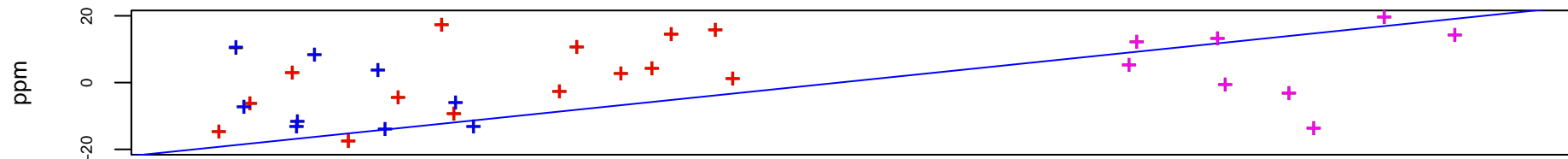
peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1220.08 charge 4 scan 0–0

Score= 89.05 , Hits= 52 , Explained Intensity= 0.59

Peptide: IGHA1_HUMAN[127,153]:LSLHRPALEDLLLGSEANLTCTLTGLR

Glycan: SHNH(HNH)HNN, S1H5N4

Charge: 4H

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
L S L H R P A L E D L L L G S E A N L T C T L T G L R
27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

- ● peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:16 2014*

17

m/z 1004.4111 charge 3 scan 0–0

Score= 74.58 , Hits= 41 , Explained Intensity= 0.53

Peptide: ASAH1_HUMAN[255,267]:TVLENSTSYEEAK

Glycan: HHH(H(H)H)HNN, H7N2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13
   T V L E N S T S Y E E A K
   13 12 11 10 9 8 7 6 5 4 3 2 1   y

Glycopeptide ID – *Mon Feb 17 09:50:16 2014*

18
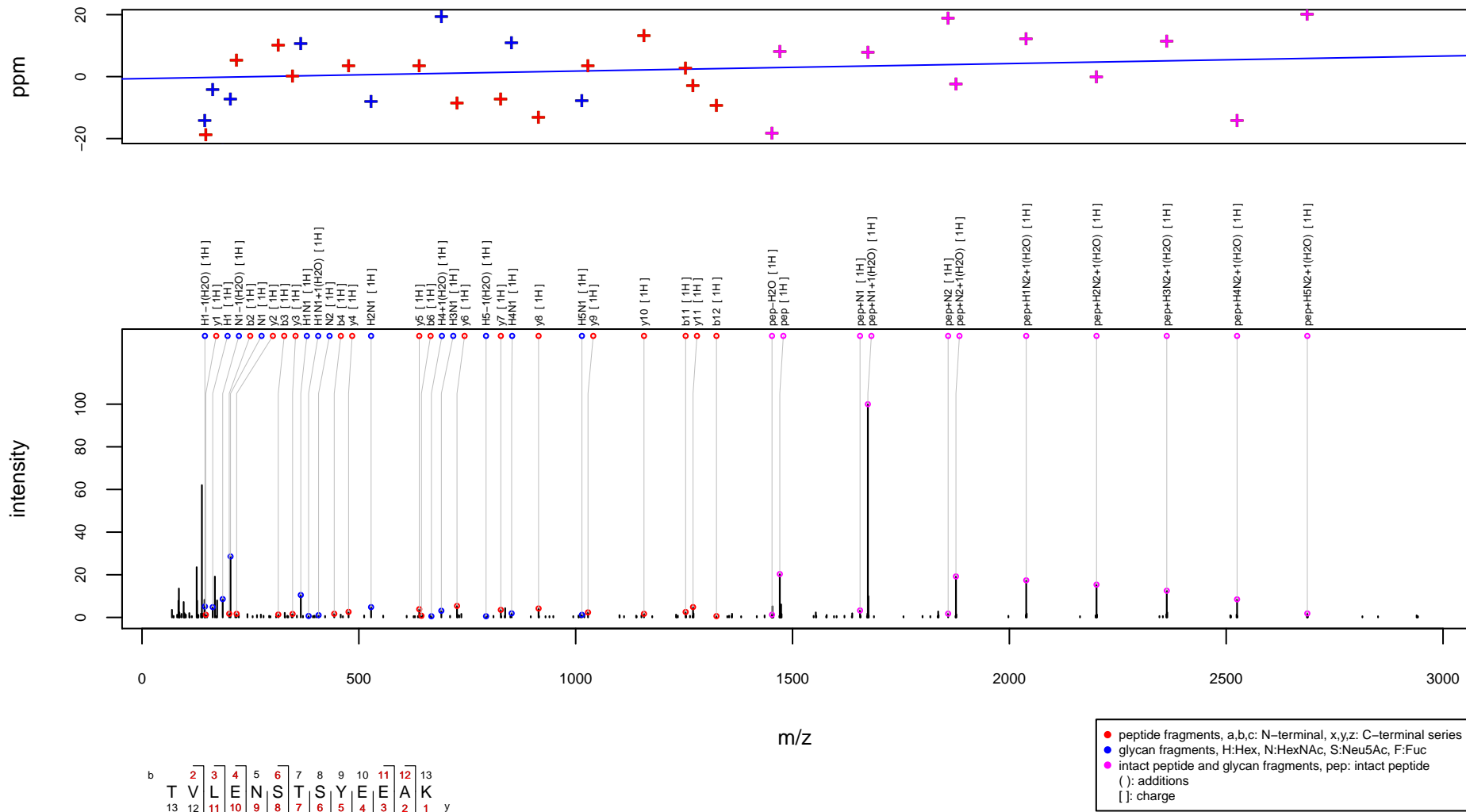
m/z 1026.4133 charge 3 scan 0−0

Score= 84.1 , Hits= 48 , Explained Intensity= 0.44

Peptide: NEP_HUMAN[142,152]:SCINESAIDSR

Glycan: HNH(HNH)(N)HNN, H5N5
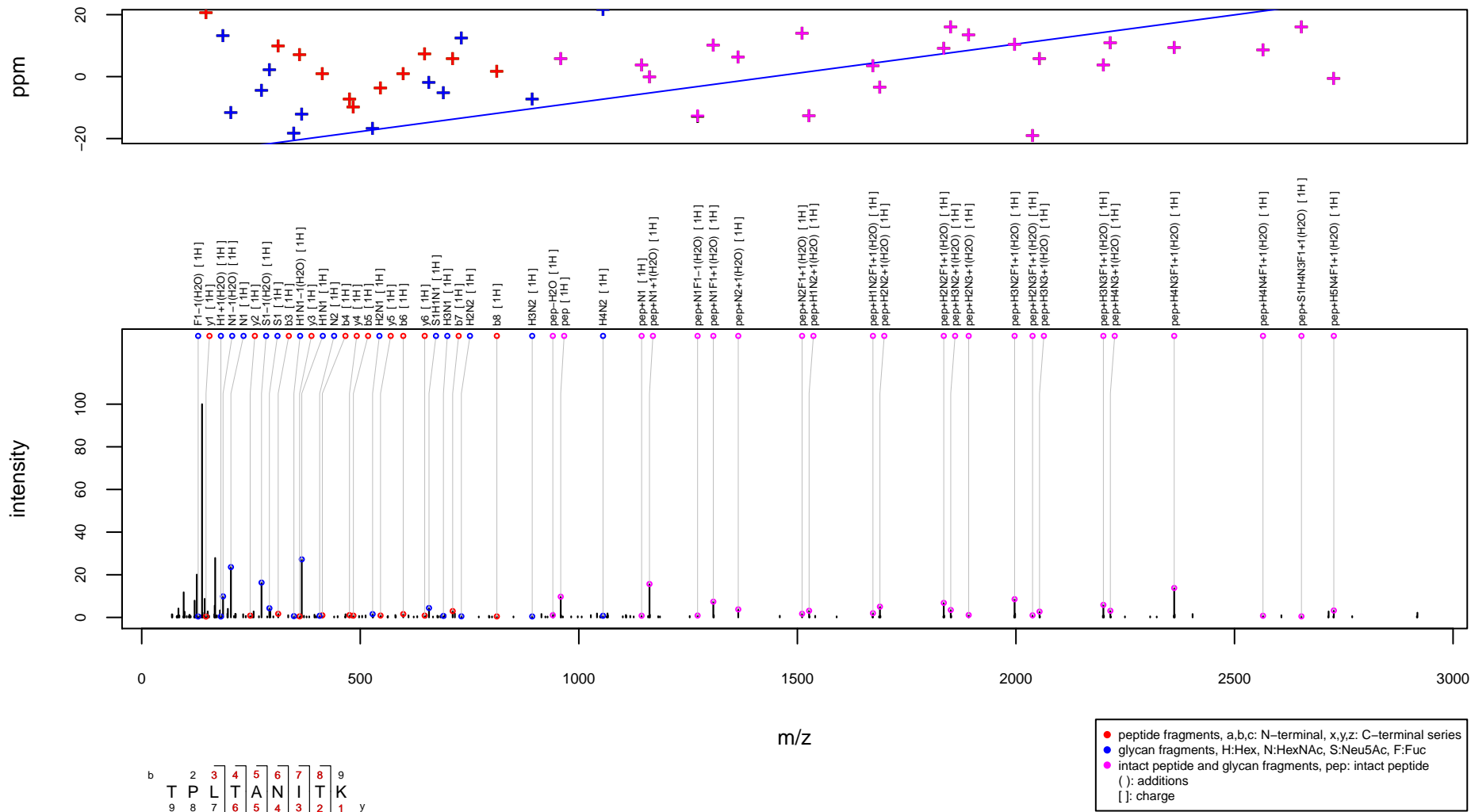
Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
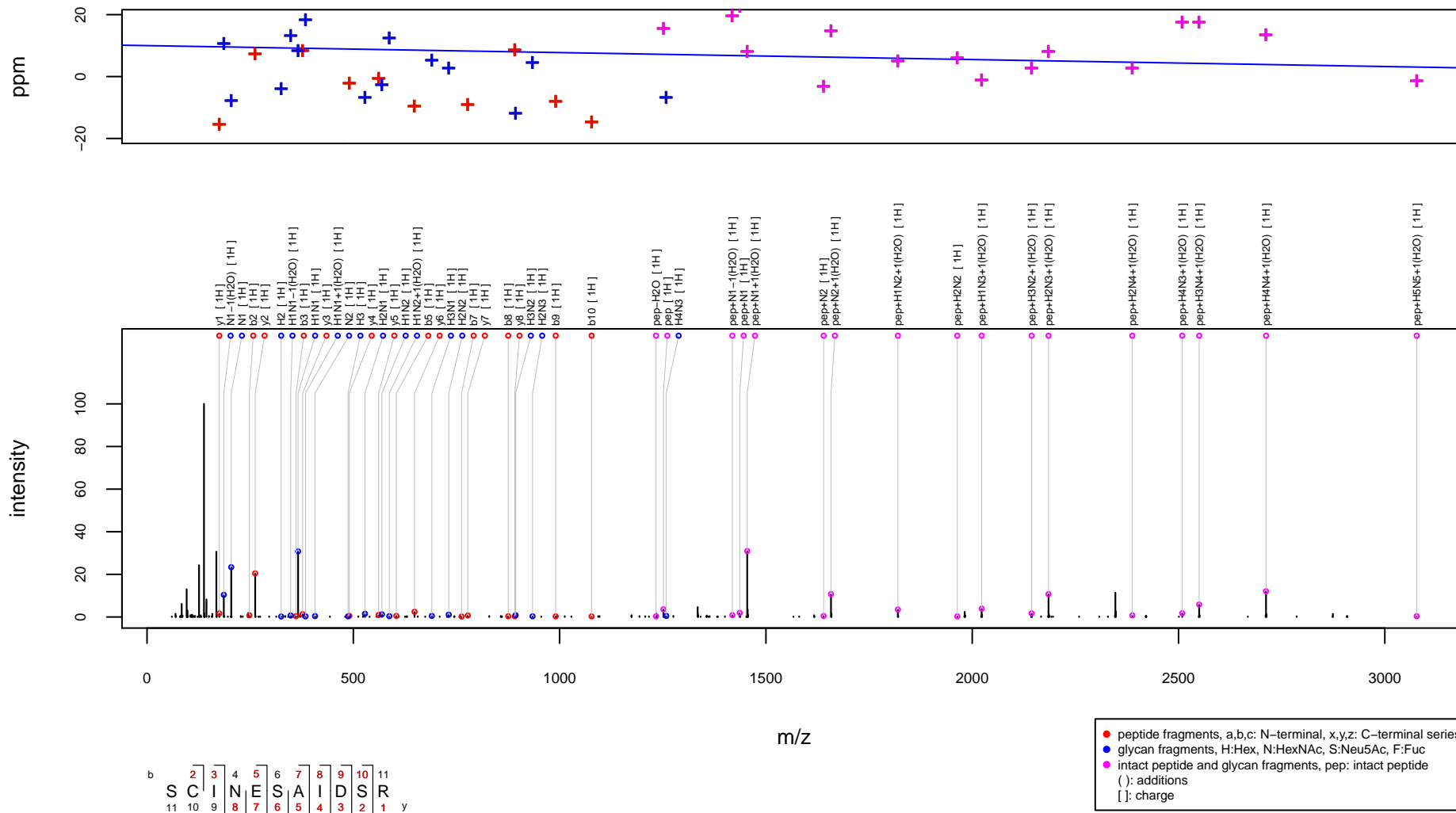
m/z 982.7845 charge 3 scan 0–0

Score= 67.55 , Hits= 38 , Explained Intensity= 0.38

Peptide: AMPN_HUMAN[231,241]:AEFNITLIHPK

Glycan: HNH(NH)(N)HNN, H4N5

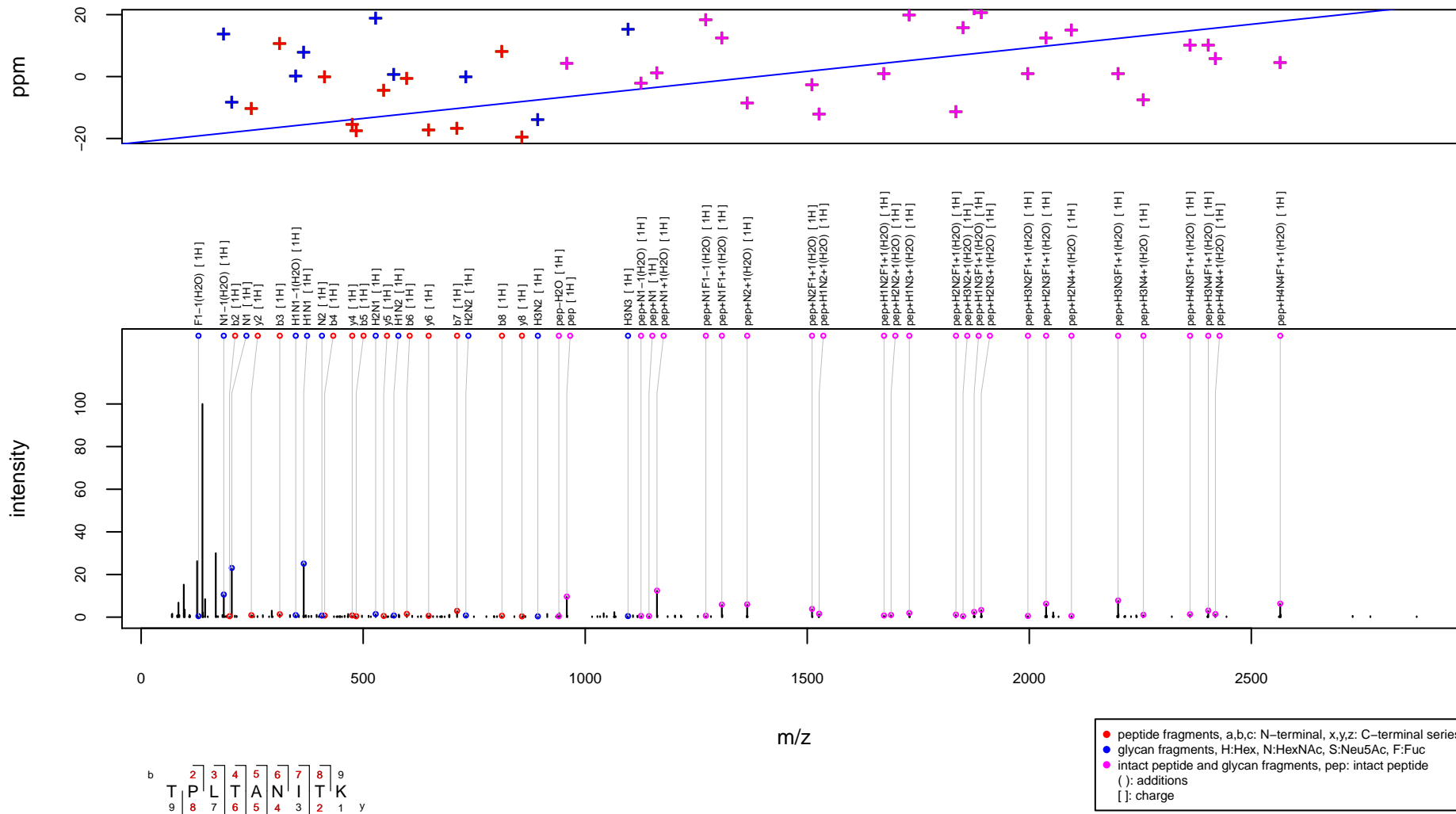Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:17 2014*
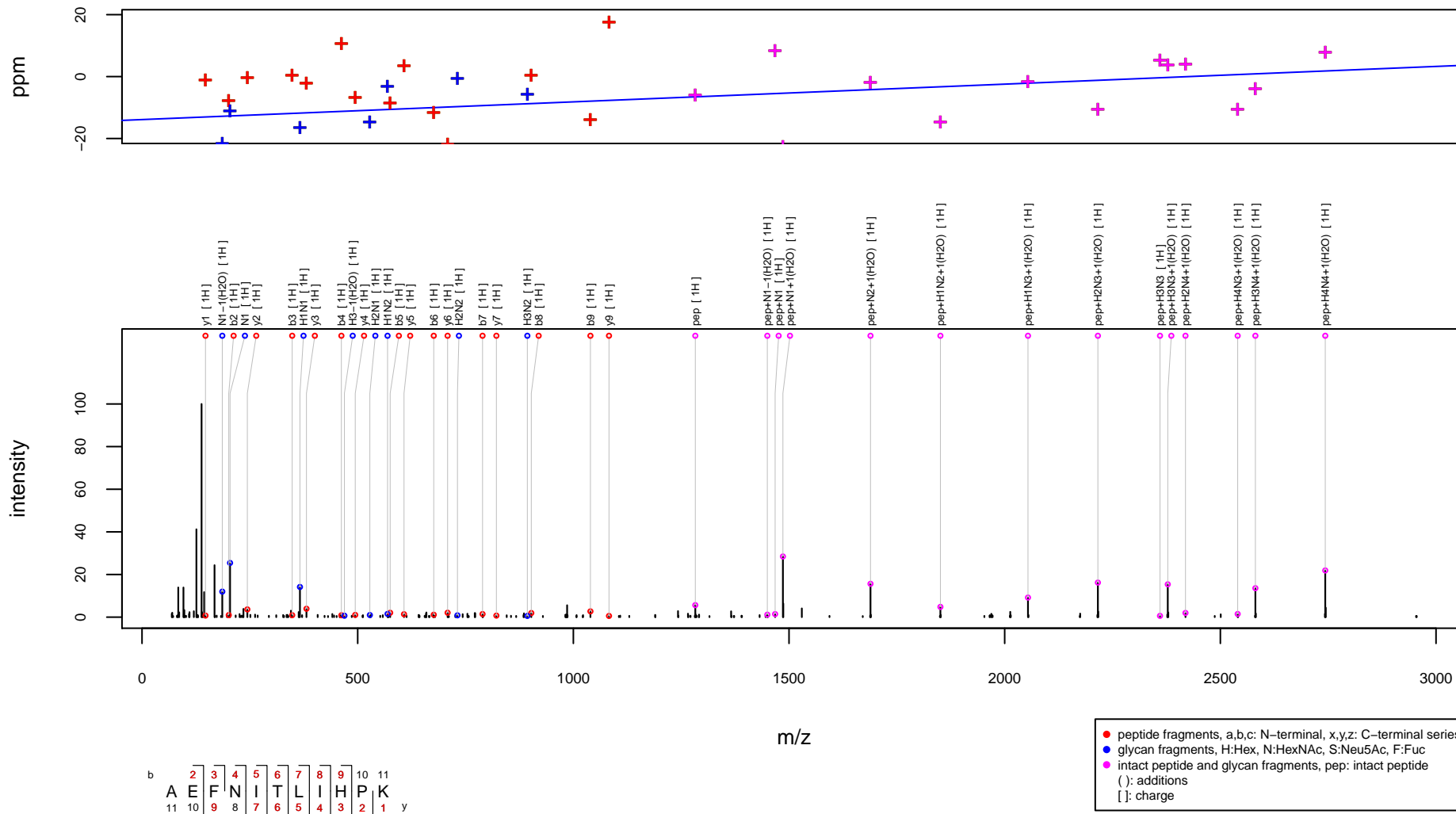
m/z 923.4094 charge 3 scan 0−0

Score= 79.93 , Hits= 49 , Explained Intensity= 0.36

Peptide: IGHA2_HUMAN[200,208]:TPLTANITK
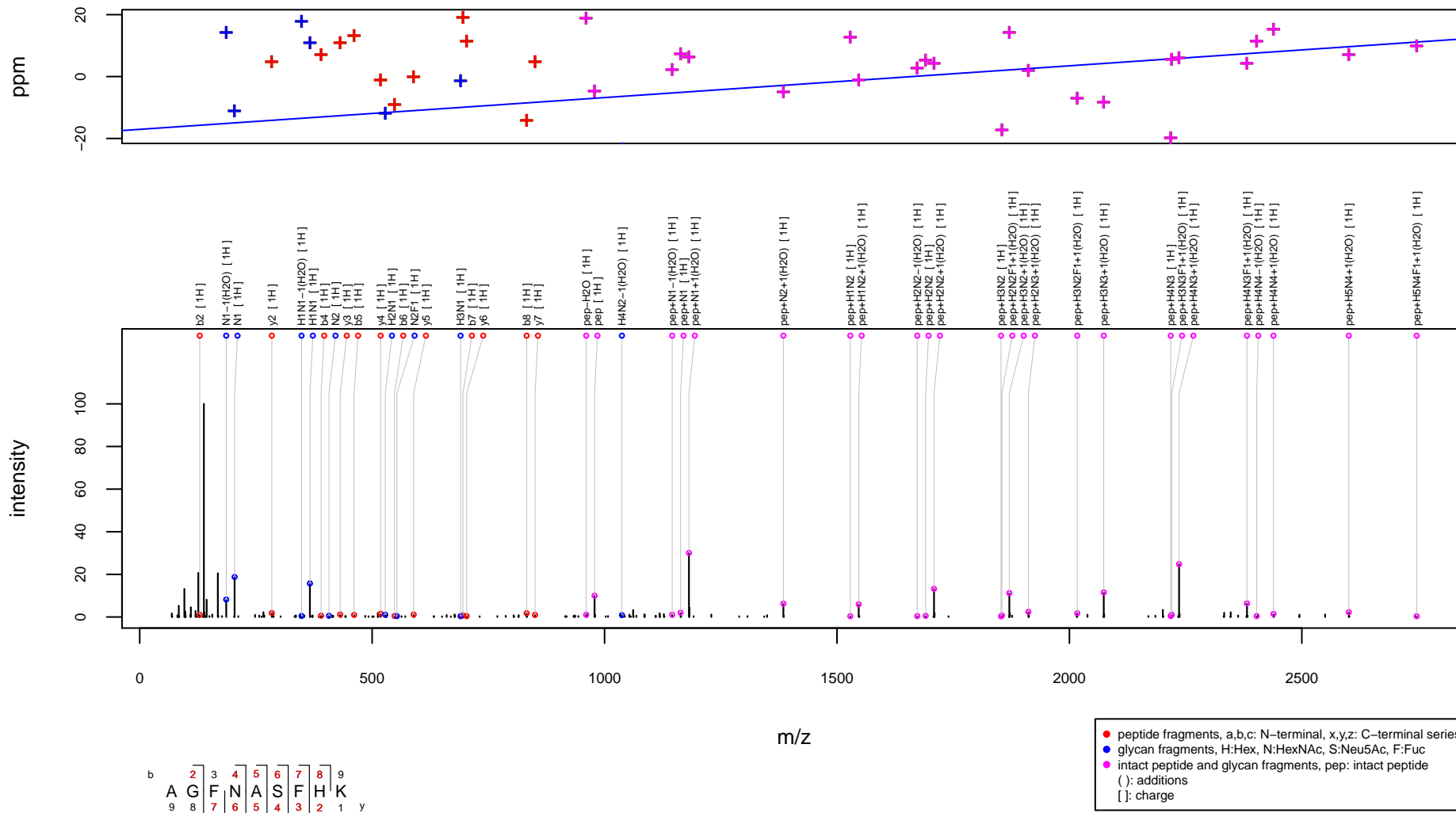
Glycan: HNH(NH)(N)HN(F)N, H4N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
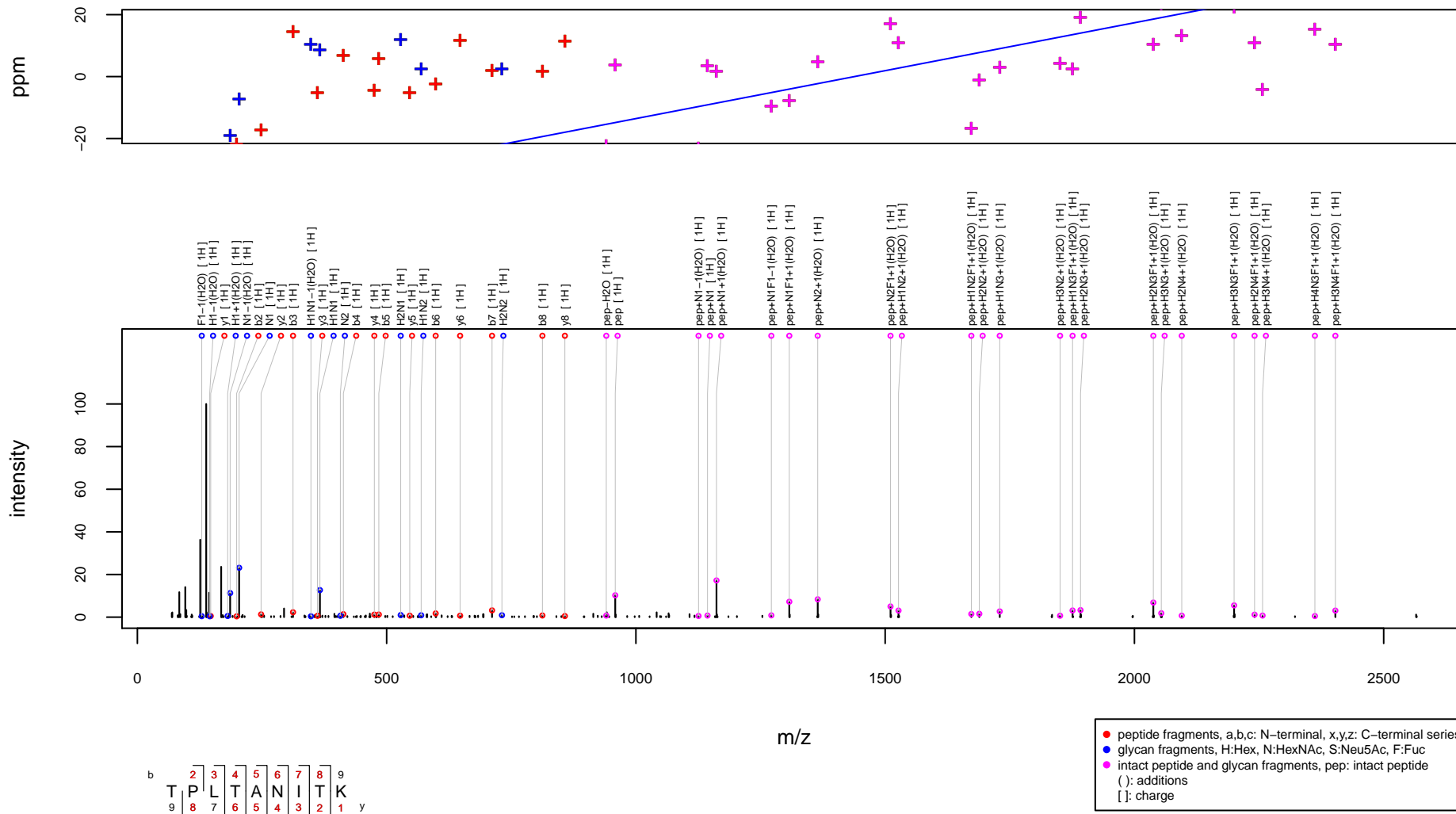
m/z 971.168 charge 4 scan 0–0

Score= 80.87 , Hits= 48 , Explained Intensity= 0.5

Peptide: THBG_HUMAN[27,41]:VTACHSSQPNATLYK

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15
V T A C H S S Q P N A T L Y K
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1   y

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:17 2014*

22
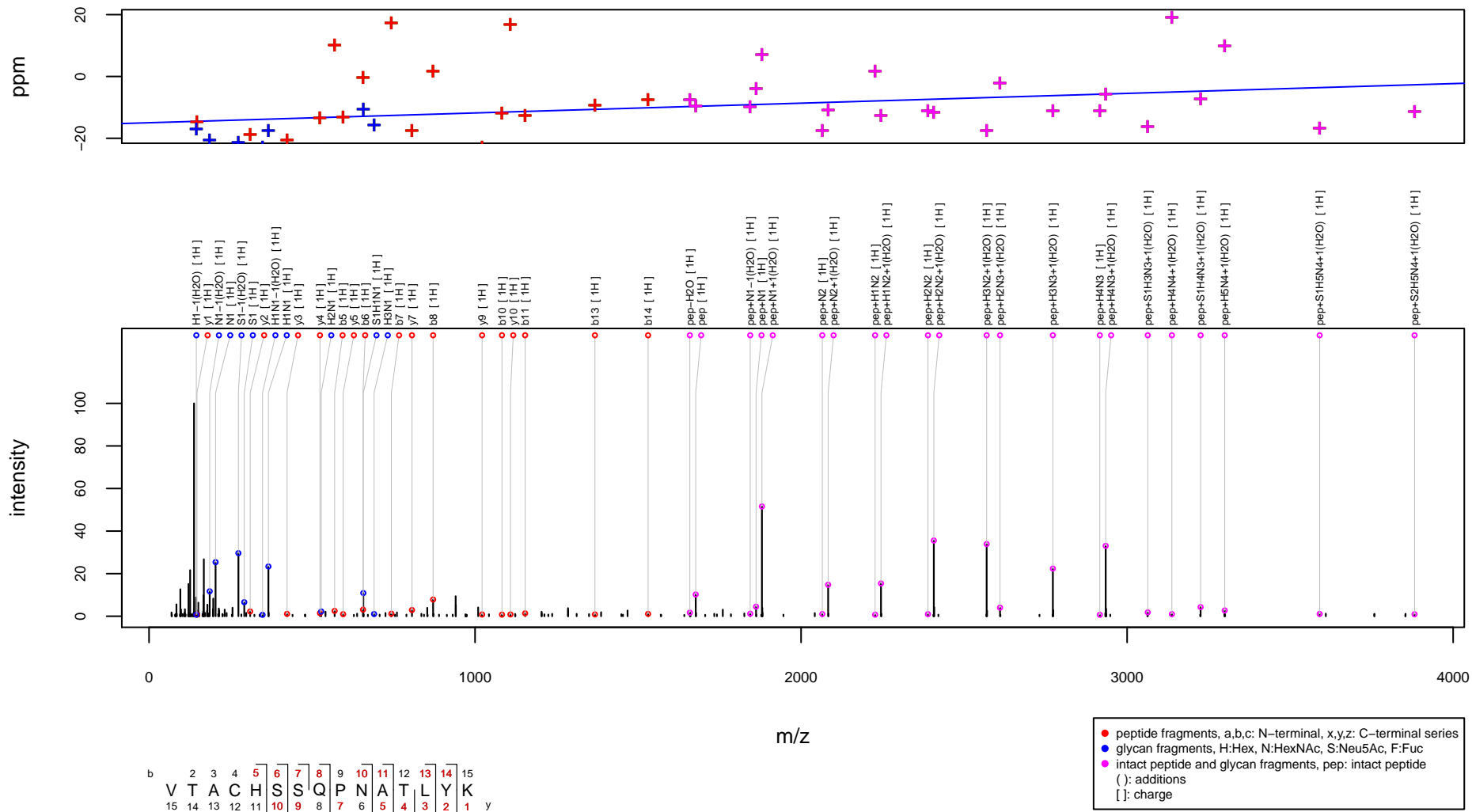
m/z 1007.7501 charge 3 scan 0–0

Score= 76.55 , Hits= 43 , Explained Intensity= 0.62

Peptide: ATRN_HUMAN[411,422]:IDSTGNVTNELR

Glycan: HHH(HH(H)H)HNN, H8N2

Charge: 3H
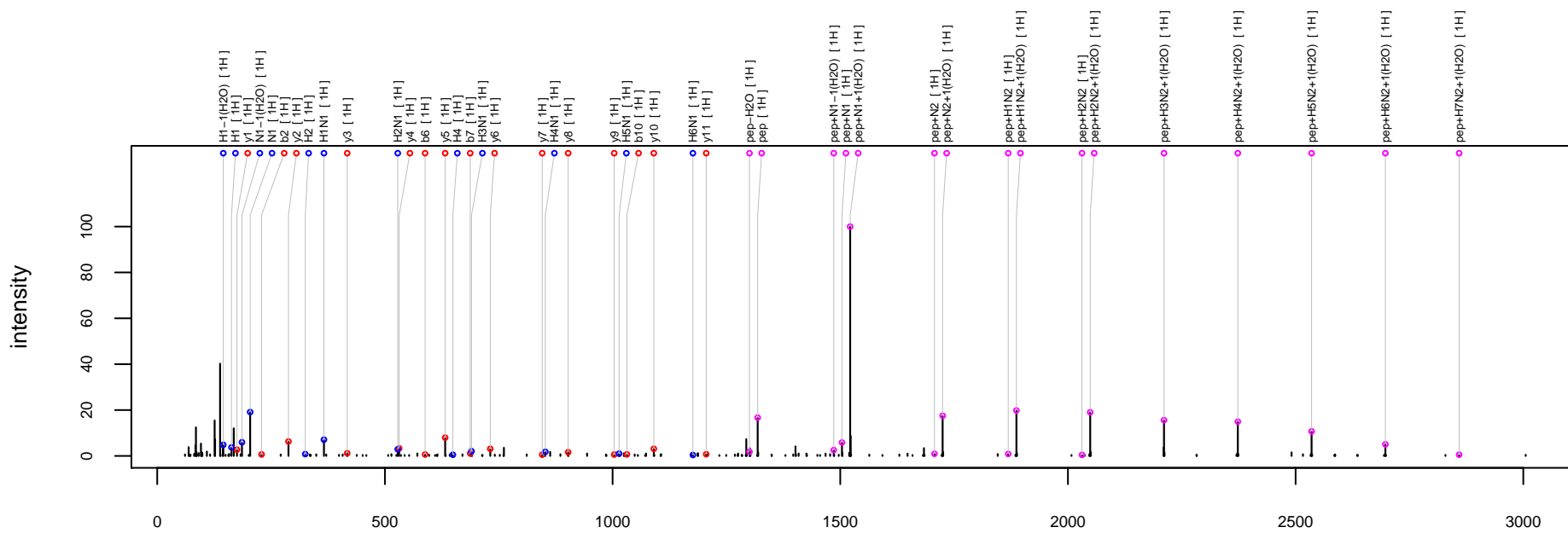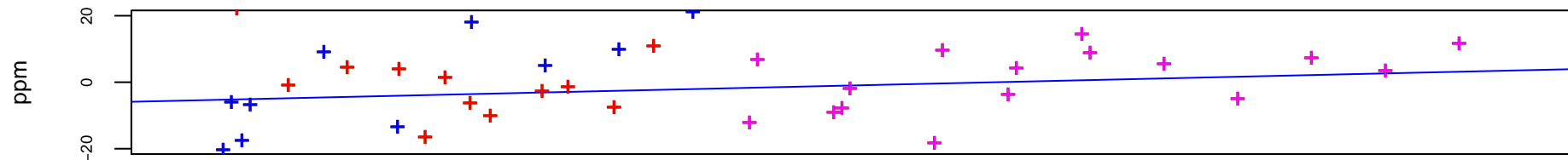
Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:18 2014*

m/z 951.073 charge 3 scan 0–0

Score= 74.48 , Hits= 43 , Explained Intensity= 0.39

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: HNH(NH)(N)HNN, H4N5

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:18 2014*
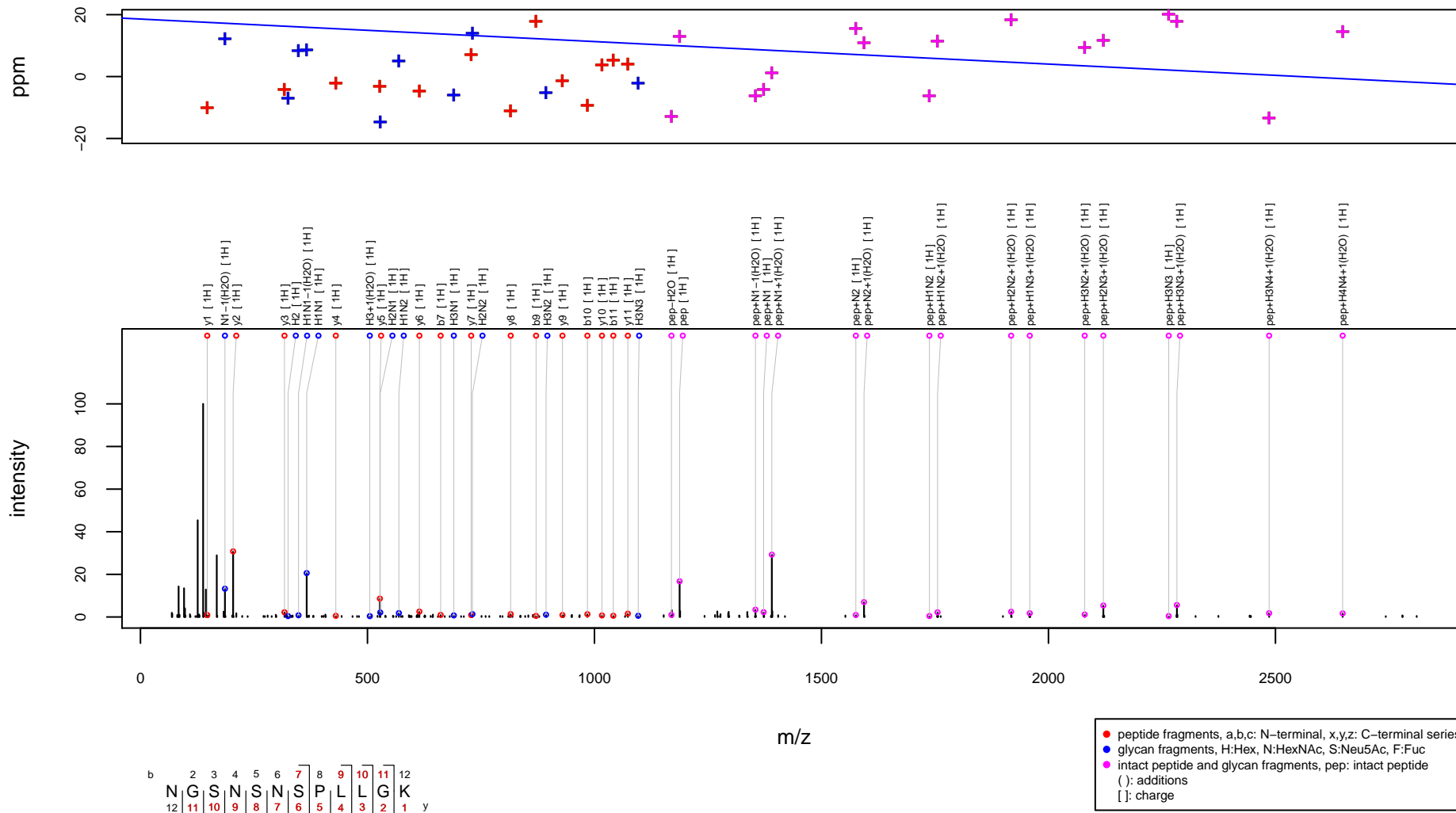
m/z 937.3969 charge 3 scan 0–0

Score= 68.86 , Hits= 41 , Explained Intensity= 0.36

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: H5N4

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:18 2014*
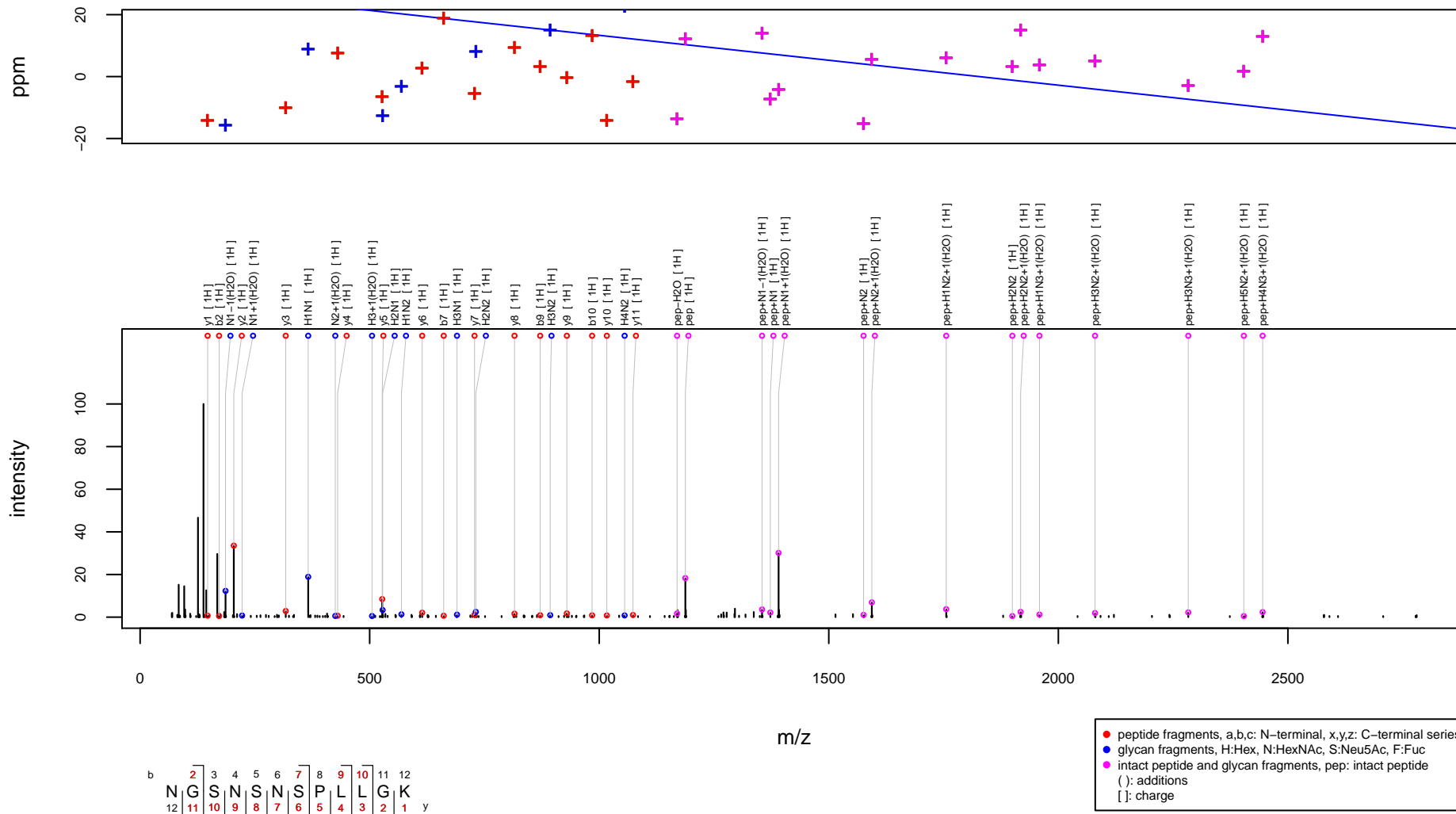
m/z 897.0562 charge 3 scan 0–0

Score= 77.29 , Hits= 43 , Explained Intensity= 0.38

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: NH(NH)(N)HNN, H3N5

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:19 2014*
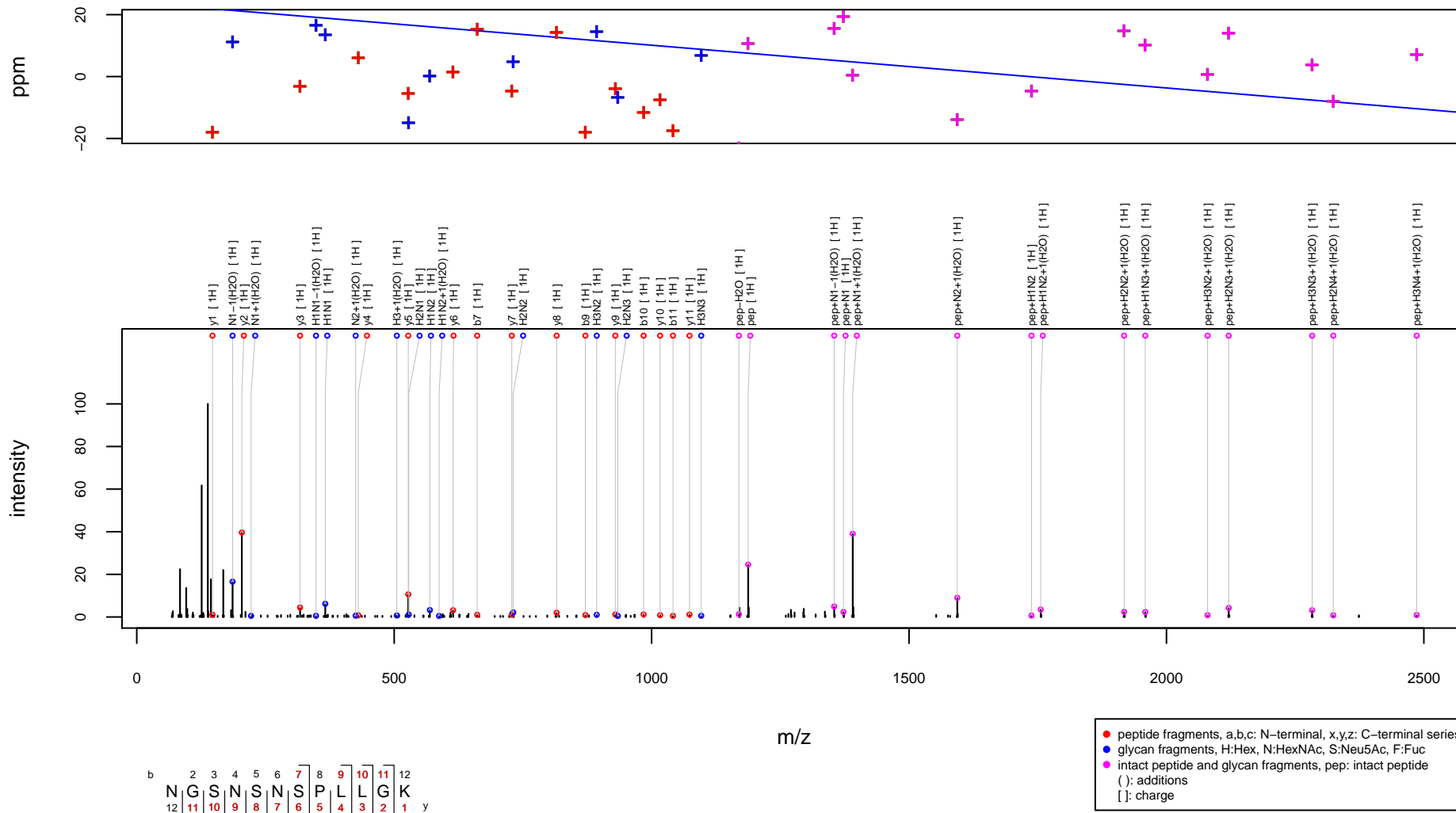
m/z 957.1561 charge 4 scan 0−0

Score= 76.36 , Hits= 49 , Explained Intensity= 0.42

Peptide: CLUS_HUMAN[372,385]:LANLTQGEDQYYLR

Glycan: SNNH(NNH)HN(F)N, S1H3N6F1

Charge: 4H

b 2 3 4 5 6 7 8 9 10 11 12 13 14
L A N L T Q G E D Q Y Y L R
14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:19 2014*
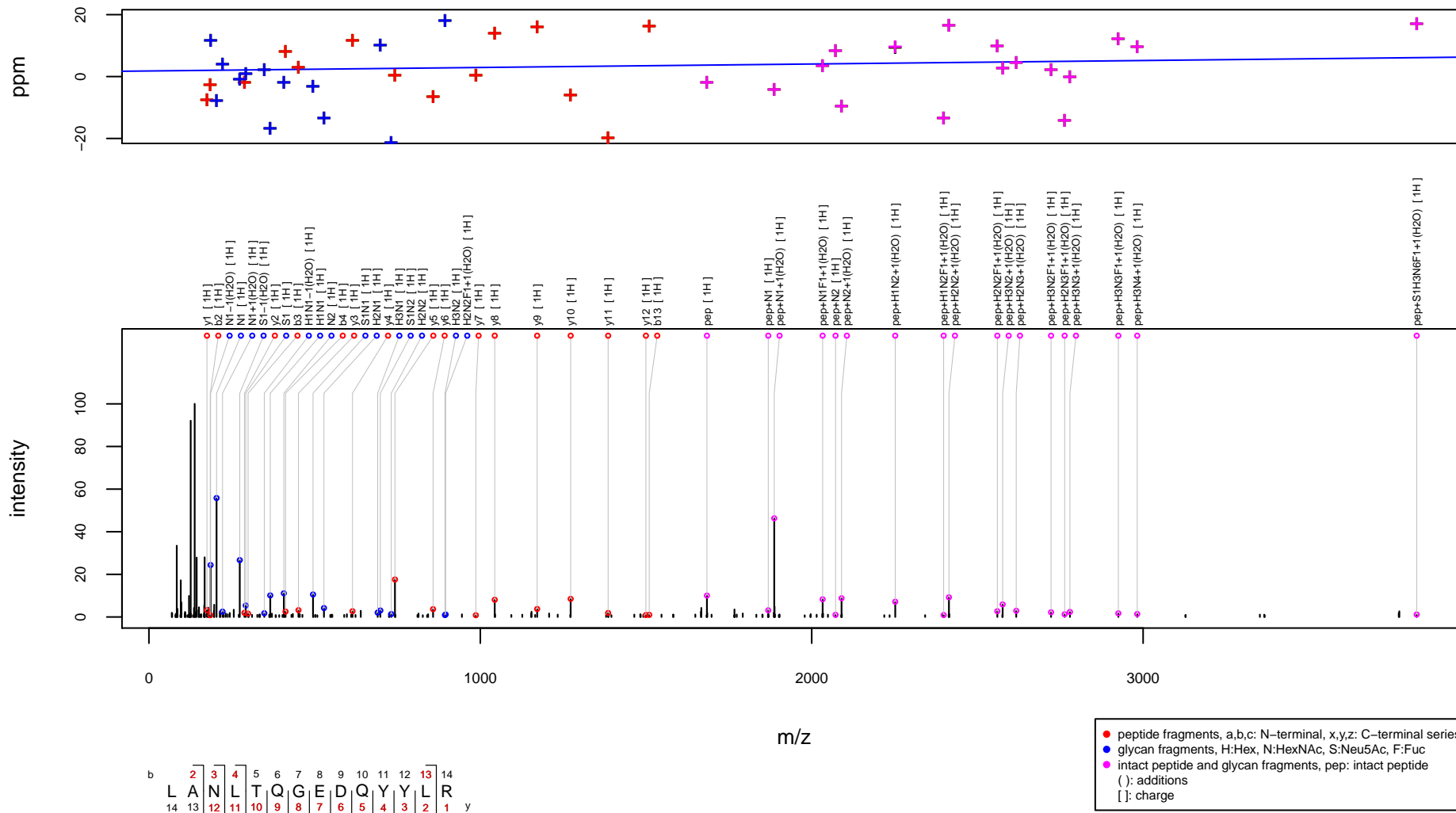
m/z 831.0299 charge 3 scan 0–0

Score= 56.74 , Hits= 32 , Explained Intensity= 0.29

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: H(H)H(H)HNN, H5N2

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
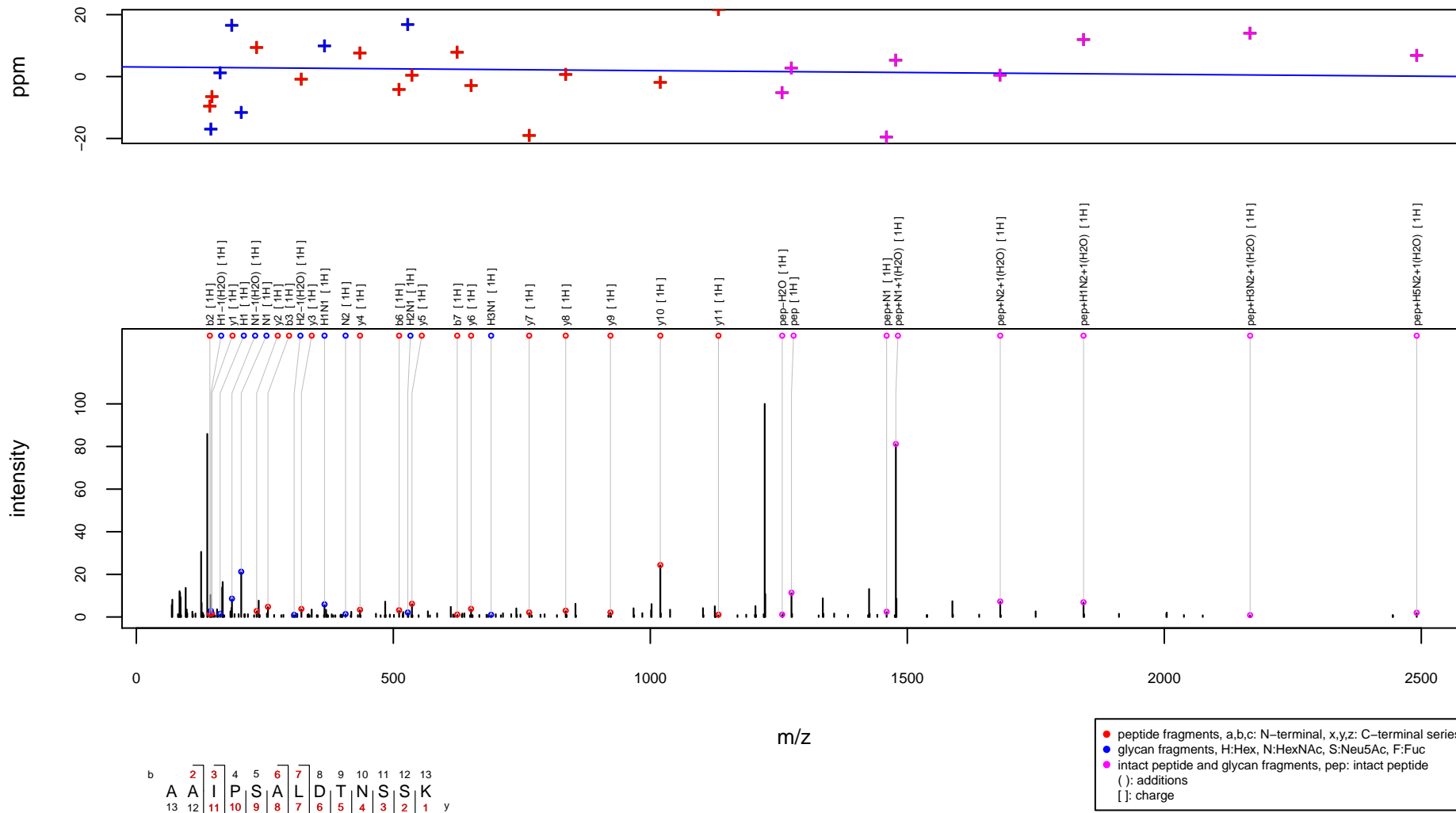
m/z 842.3589 charge 3 scan 0−0

Score= 52.37 , Hits= 29 , Explained Intensity= 0.25

Peptide: ASAH1_HUMAN[255,267]:TVLENSTSYEEAK

Glycan: HH(H)HNN, H4N2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13
T V L E N S T S Y E E A K
13 12 11 10 9 8 7 6 5 4 3 2 1   y

Glycopeptide ID – *Mon Feb 17 09:50:20 2014*
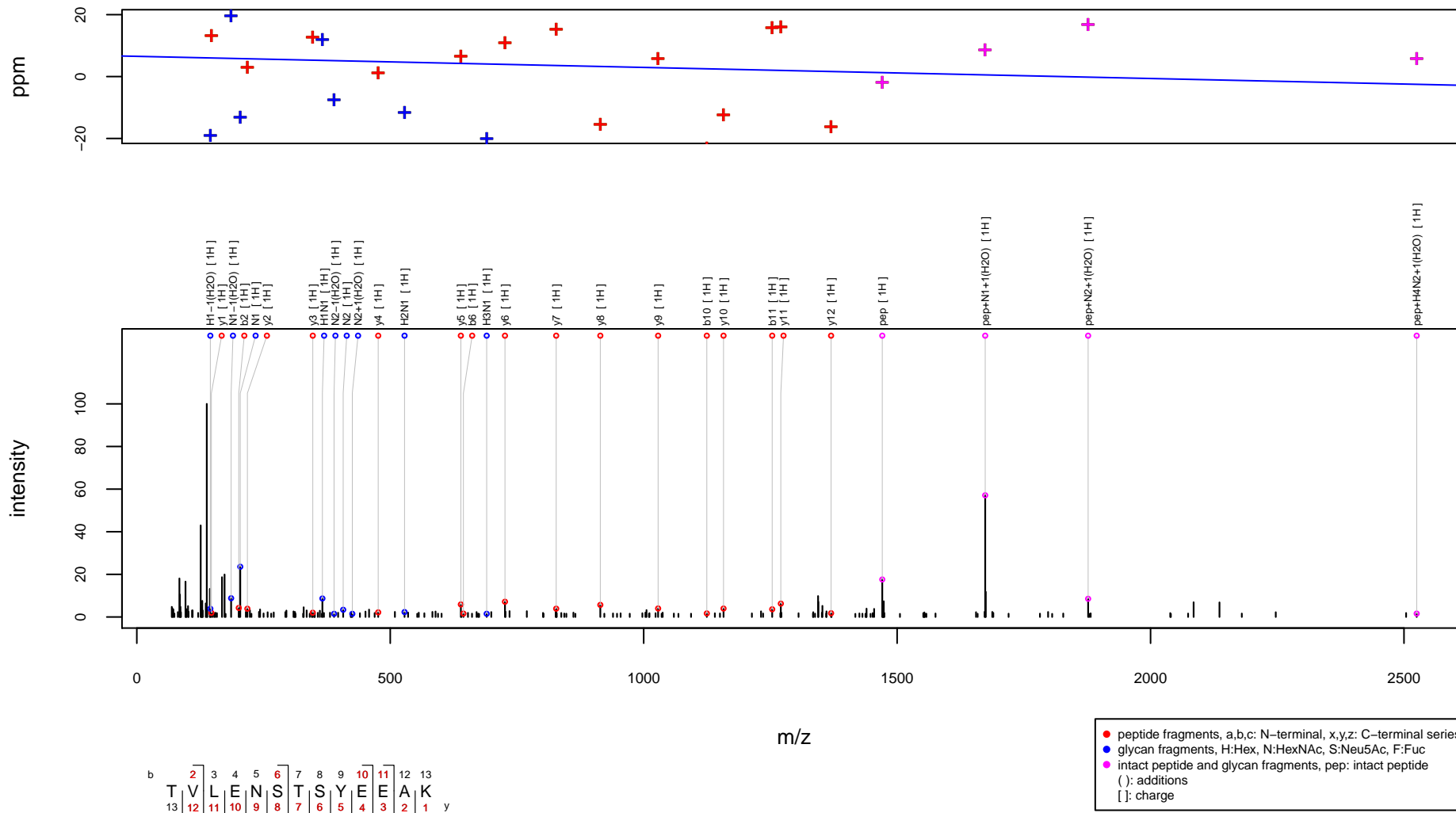
m/z 1097.9324 charge 4 scan 0–0

Score= 65.11 , Hits= 43 , Explained Intensity= 0.44

Peptide: APOD_HUMAN[61,73]:CIQANYSLMENGK

Glycan: SHNH(SHN(SHN)H)HNN, S3H6N5

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
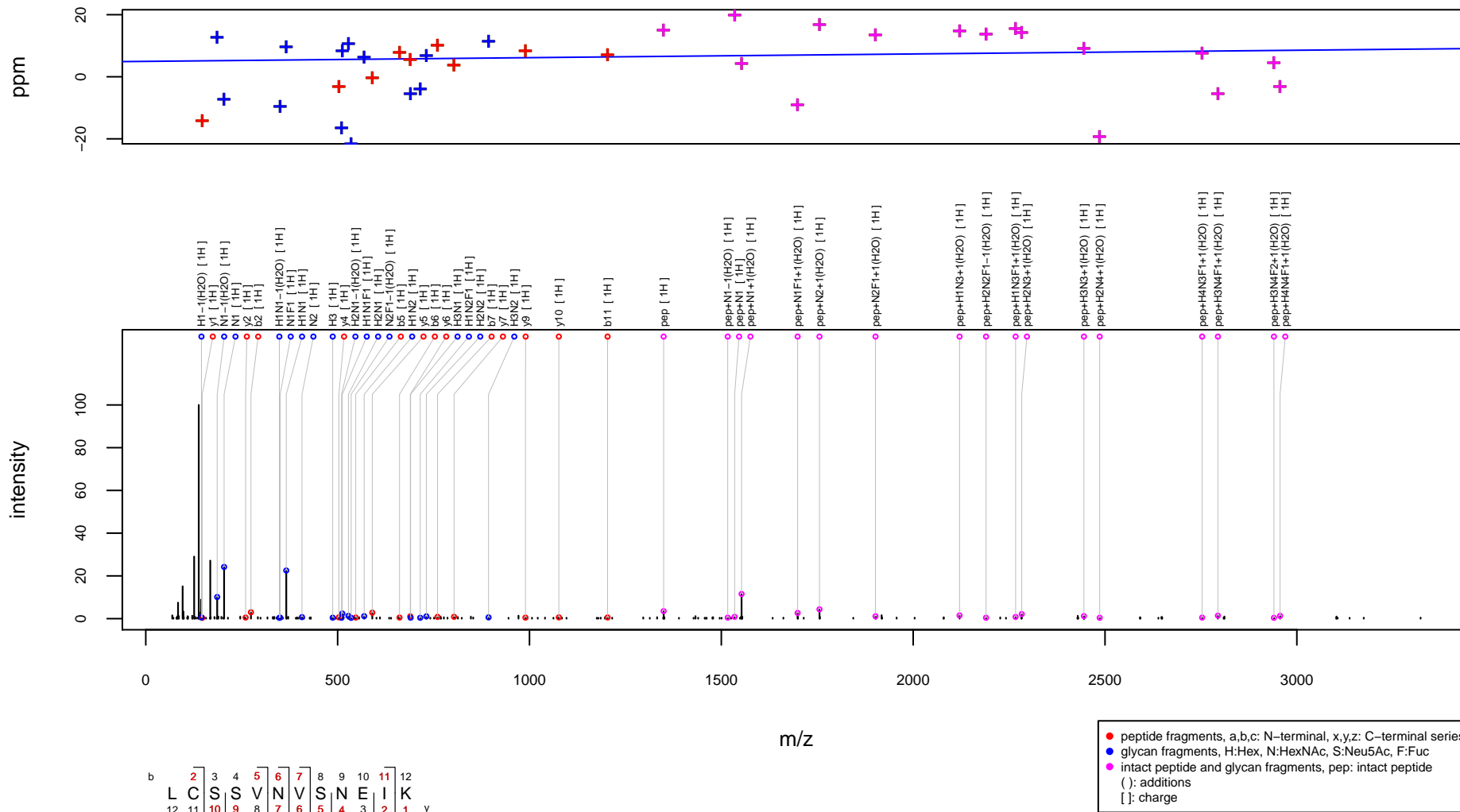intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:20 2014*

m/z 953.7311 charge 3 scan 0−0

Score= 72.68 , Hits= 41 , Explained Intensity= 0.5

Peptide: ATRN_HUMAN[411,422]:IDSTGNVTNELR

Glycan: HHH(H(H)H)HNN, H7N2

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:20 2014*

m/z 999.7589 charge 3 scan 0–0

Score= 73.85 , Hits= 50 , Explained Intensity= 0.39

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: H4N5F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:21 2014*
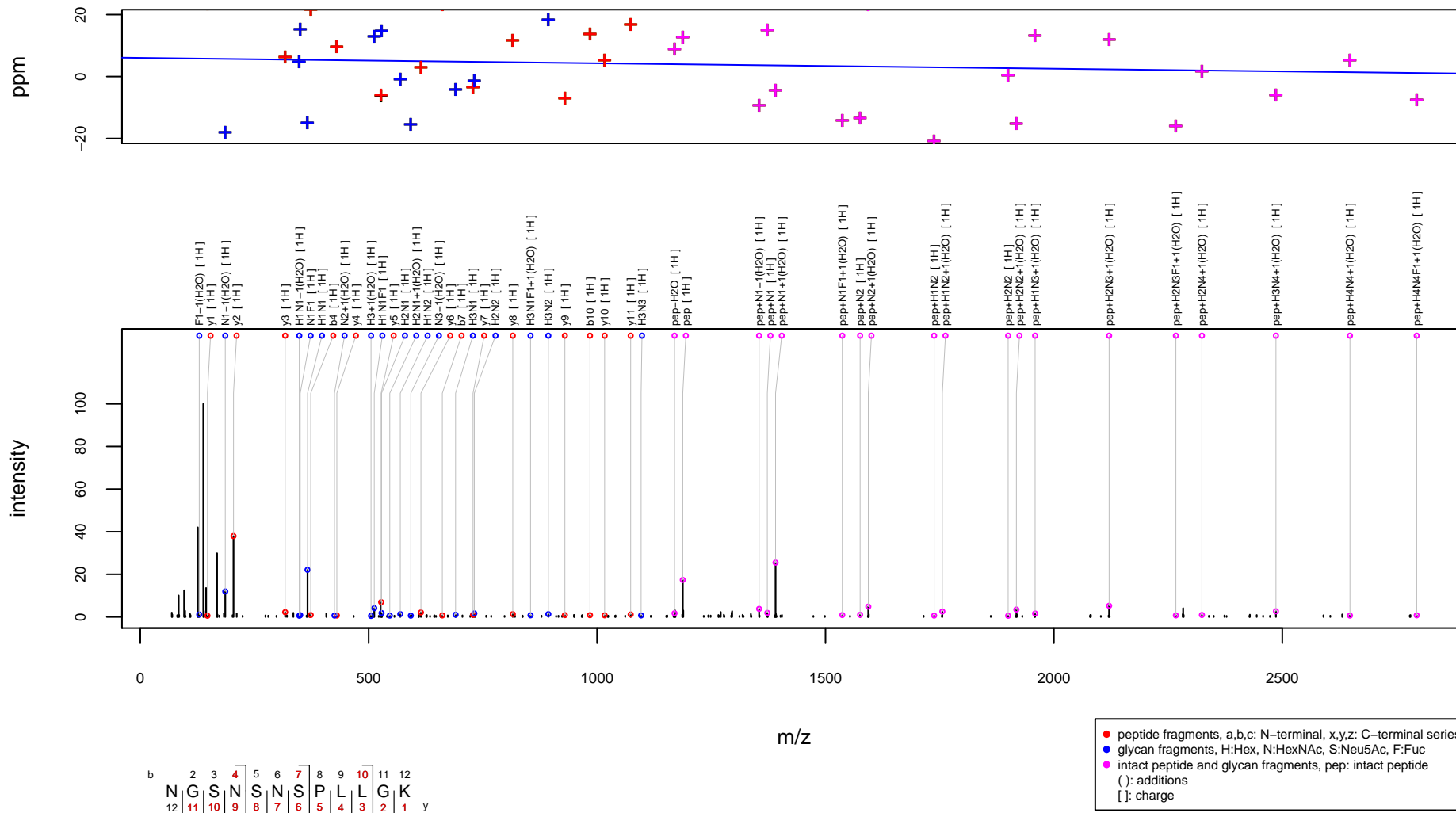
m/z 1155.495 charge 3 scan 0−0

Score= 85.96 , Hits= 50 , Explained Intensity= 0.55

Peptide: VASN_HUMAN[112,121]:LHEITNETFR

Glycan: SHNH(SHNH)HNN, S2H5N4
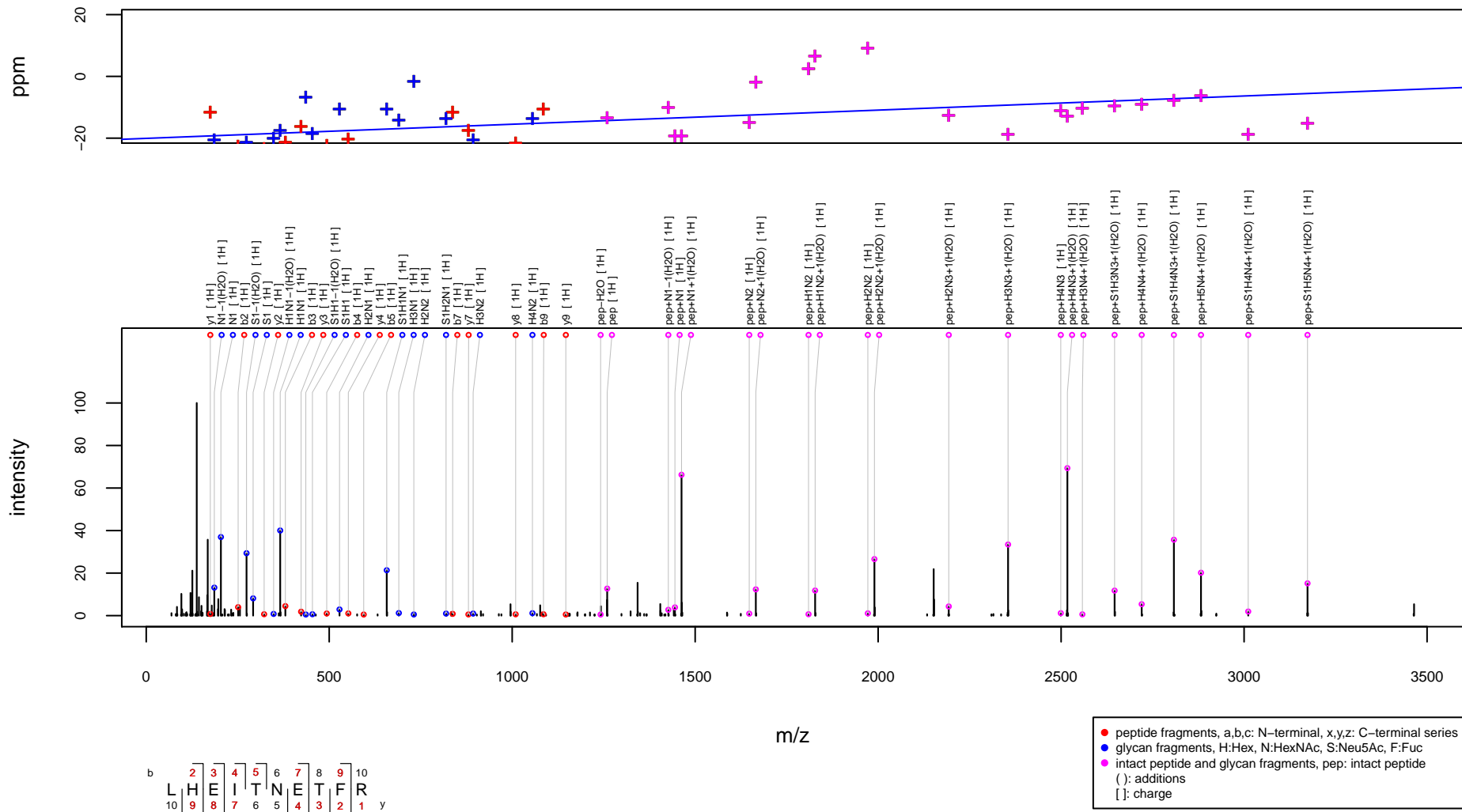
Charge: 3H

m/z 845.6984 charge 3 scan 0−0

Score= 65.17 , Hits= 36 , Explained Intensity= 0.5

Peptide: ATRN_HUMAN[411,422]:IDSTGNVTNELR

Glycan: H(H)H(H)HNN, H5N2

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  - ( ): additions
  - [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:22 2014*

m/z 944.1437 charge 4 scan 0–0

Score= 62.05 , Hits= 44 , Explained Intensity= 0.29

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HN(HN)H(HN(HN)H)HN(F)N, H7N6F1

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:22 2014*
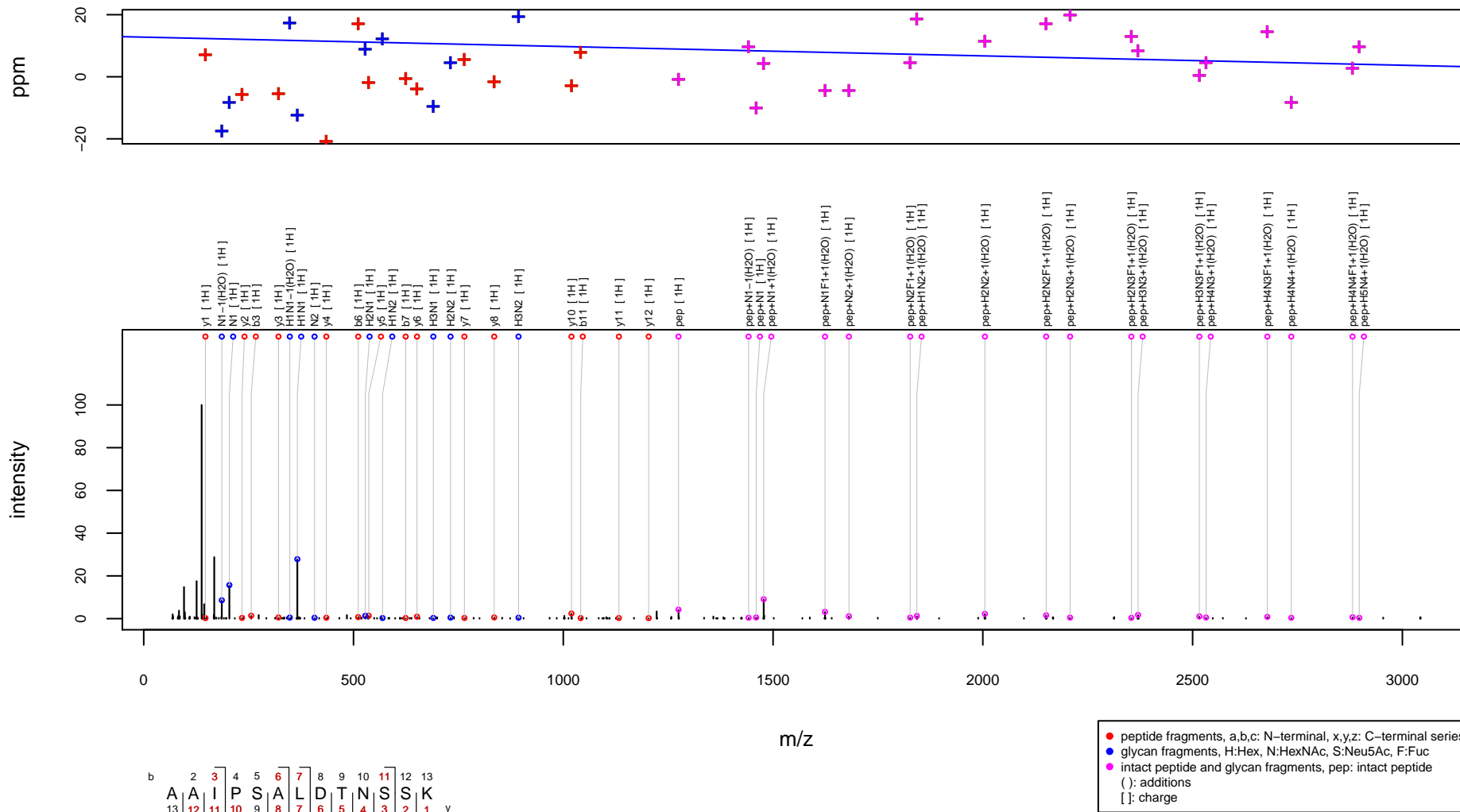
m/z 1015.101 charge 3 scan 0−0

Score= 74.82 , Hits= 47 , Explained Intensity= 0.38

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HNH(HNH)HN(F)N, H5N4F1

Charge: 3H

Peptide fragment map:

b   2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:22 2014*

36
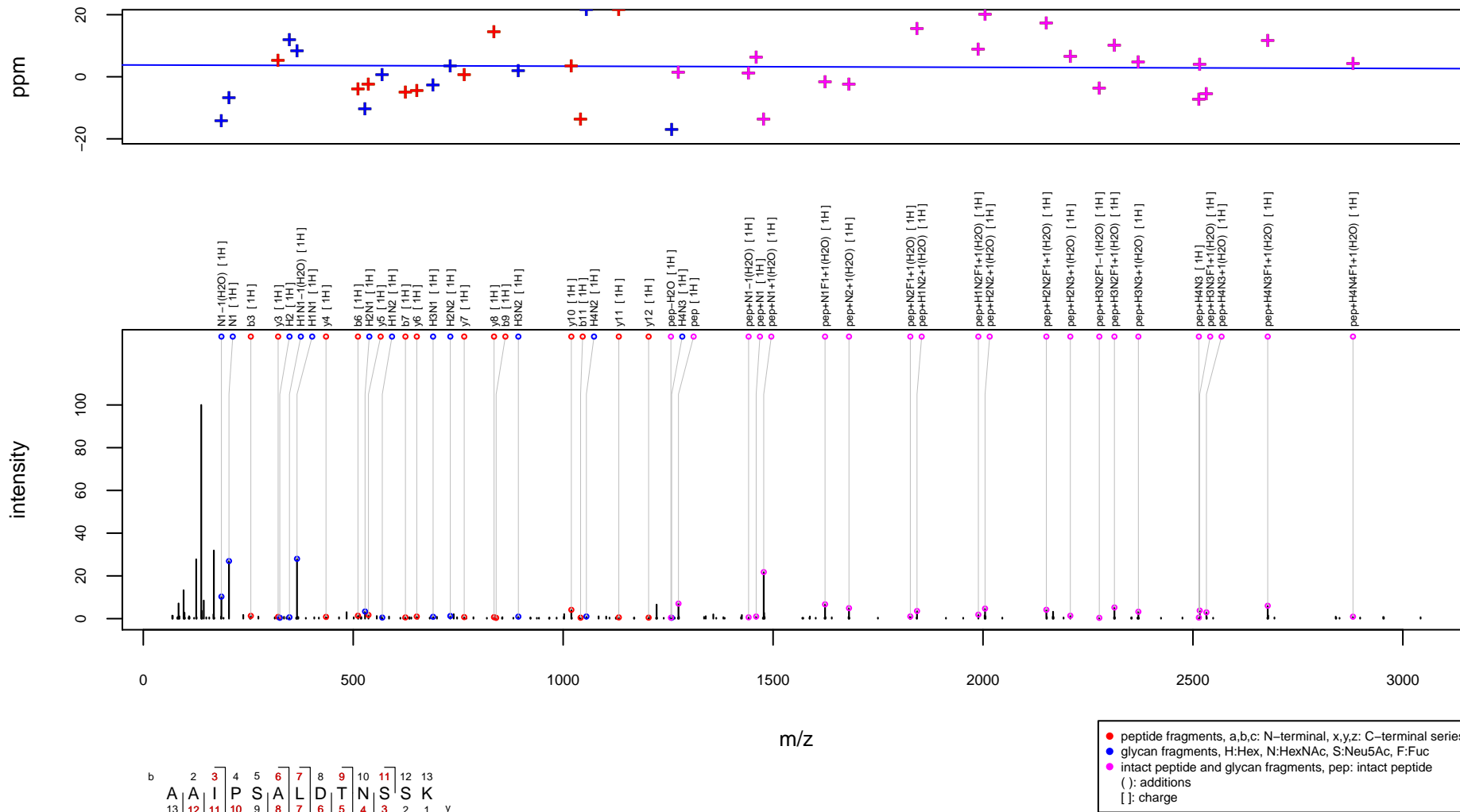
m/z 907.0682 charge 3 scan 0–0

Score= 81.76 , Hits= 50 , Explained Intensity= 0.34

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: NH(N)(H)HN(F)N, H3N4F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series (red)
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc (blue)
- intact peptide and glycan fragments, pep: intact peptide (magenta)
  - ( ): additions
  - [ ]: charge

Peptide sequence:
b: 2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:23 2014*

37
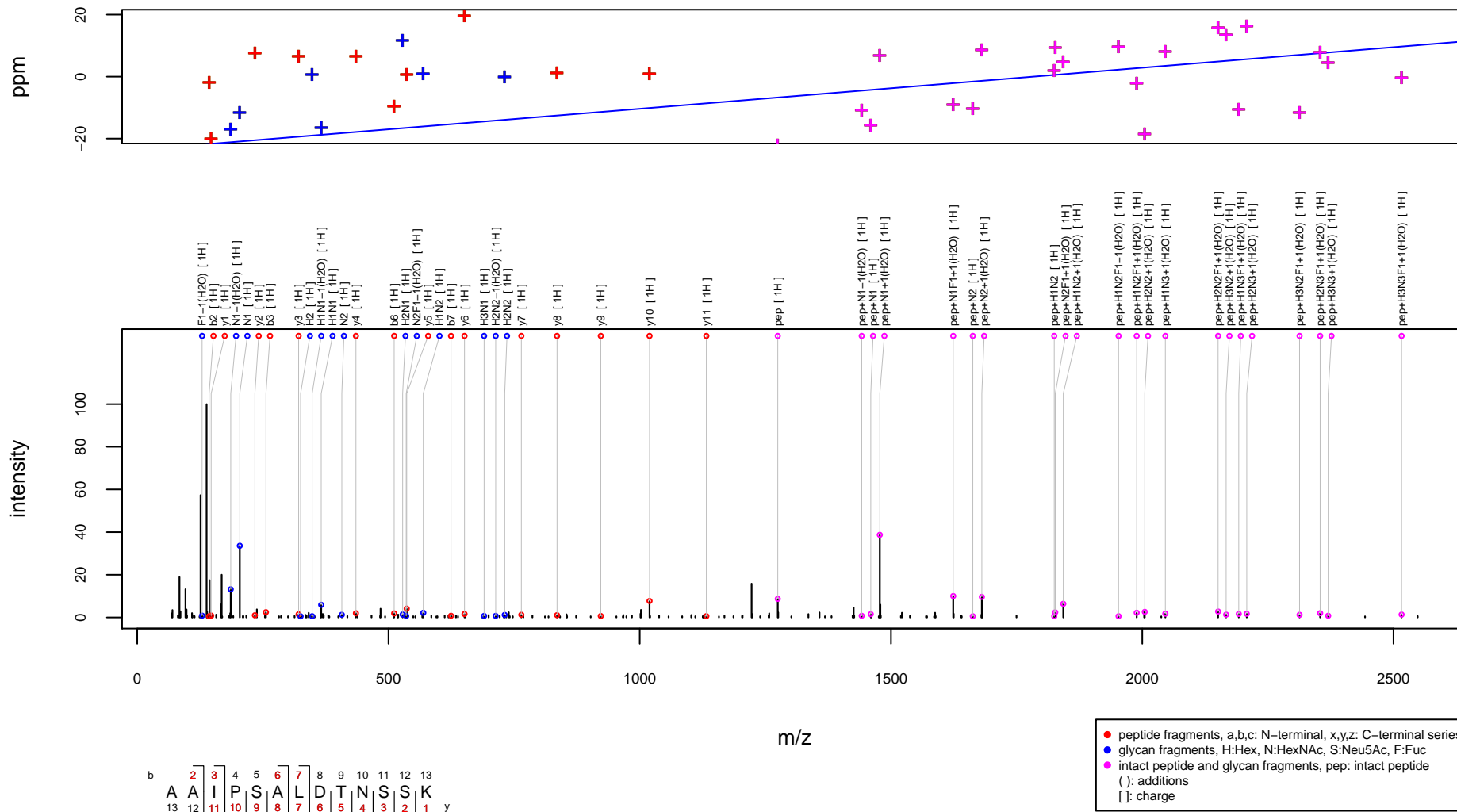
m/z 972.3946 charge 3 scan 0−0

Score= 67.03 , Hits= 40 , Explained Intensity= 0.4

Peptide: NEP_HUMAN[142,152]:SCINESAIDSR

Glycan: H4N5

Charge: 3H

intensity

m/z

b S C I N E S A I D S R
   11 10 9 8 7 6 5 4 3 2 1 y

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:23 2014*
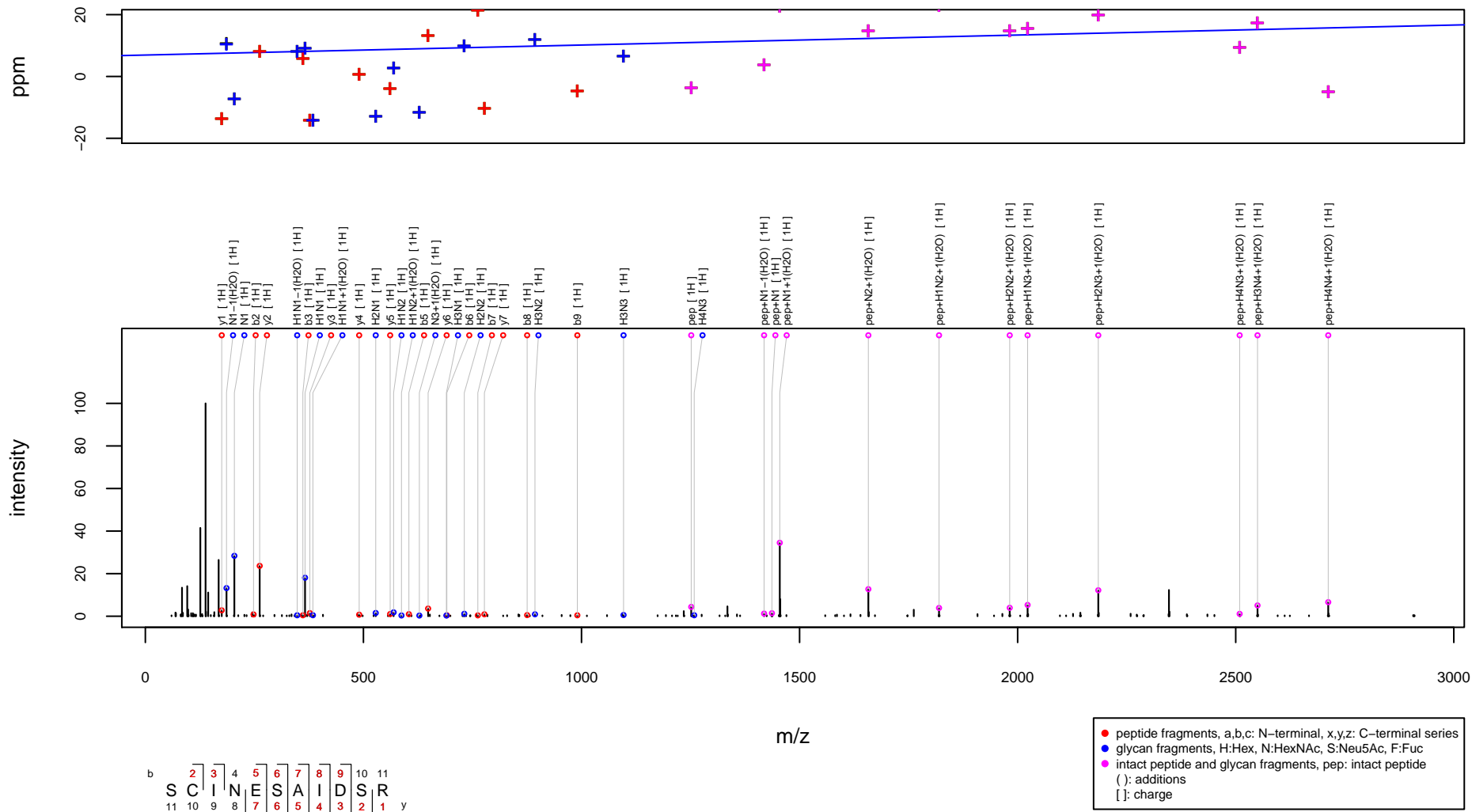
m/z 1006.767 charge 3 scan 0–0

Score= 75.78 , Hits= 50 , Explained Intensity= 0.41

Peptide: IGHA2_HUMAN[200,208]:TPLTANITK

Glycan: SHNH(HNH)HN(F)N, S1H5N4F1

Charge: 3H

- ● peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:24 2014*

39

m/z 977.4273 charge 3 scan 0−0

Score= 75.04 , Hits= 49 , Explained Intensity= 0.37

Peptide: IGHA2_HUMAN[200,208]:TPLTANITK

Glycan: HNH(HNH)(N)HN(F)N, H5N5F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 - ( ): additions
  - [ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:24 2014*

m/z 916.3778 charge 3 scan 0−0

Score= 74.75 , Hits= 46 , Explained Intensity= 0.42

Peptide: CUBN_HUMAN[2082,2090]:AGFNASFHK

Glycan: HNH(HNH)HN(F)N, H5N4F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:24 2014*

41

m/z 1121.4678 charge 3 scan 0–0

Score= 88.03 , Hits= 63 , Explained Intensity= 0.5

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: H5N6F1

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
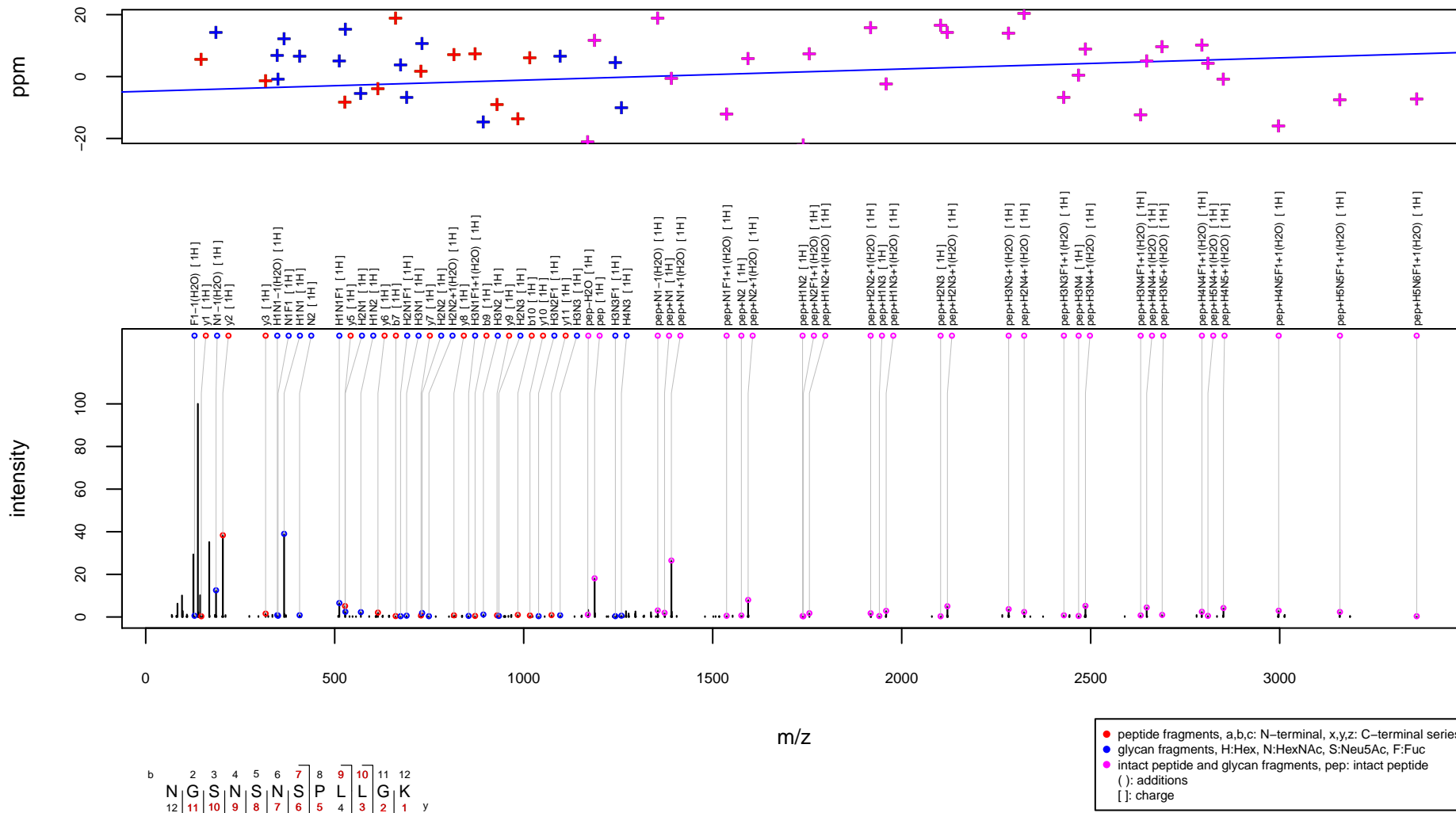
m/z 1107.7909 charge 3 scan 0–0

Score= 68.02 , Hits= 45 , Explained Intensity= 0.45

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: HNHNH(F(H)NH)HNN, H6N5F1

Charge: 3H

b   2   3   4   5   6   7   8   9   10 11 12
N | G | S | N | S | N | S | P | L | L | G | K
12 11 10 9   8   7   6   5   4   3   2   1   y

- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:25 2014*
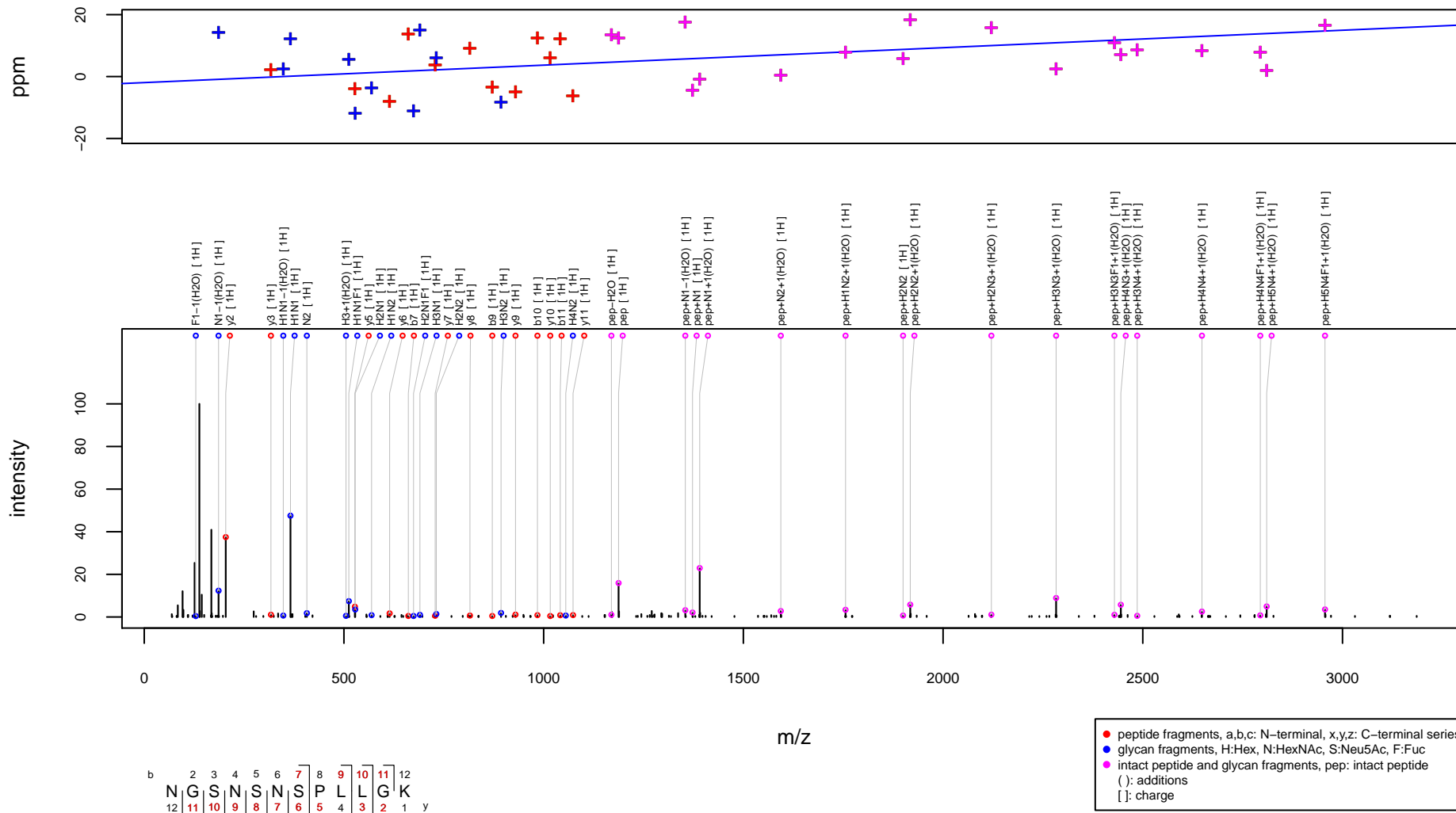
m/z 925.6379 charge 4 scan 0−0

Score= 49.73 , Hits= 36 , Explained Intensity= 0.27

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNHNH(F(H)NH)HNN, S1H6N5F1

Charge: 4H
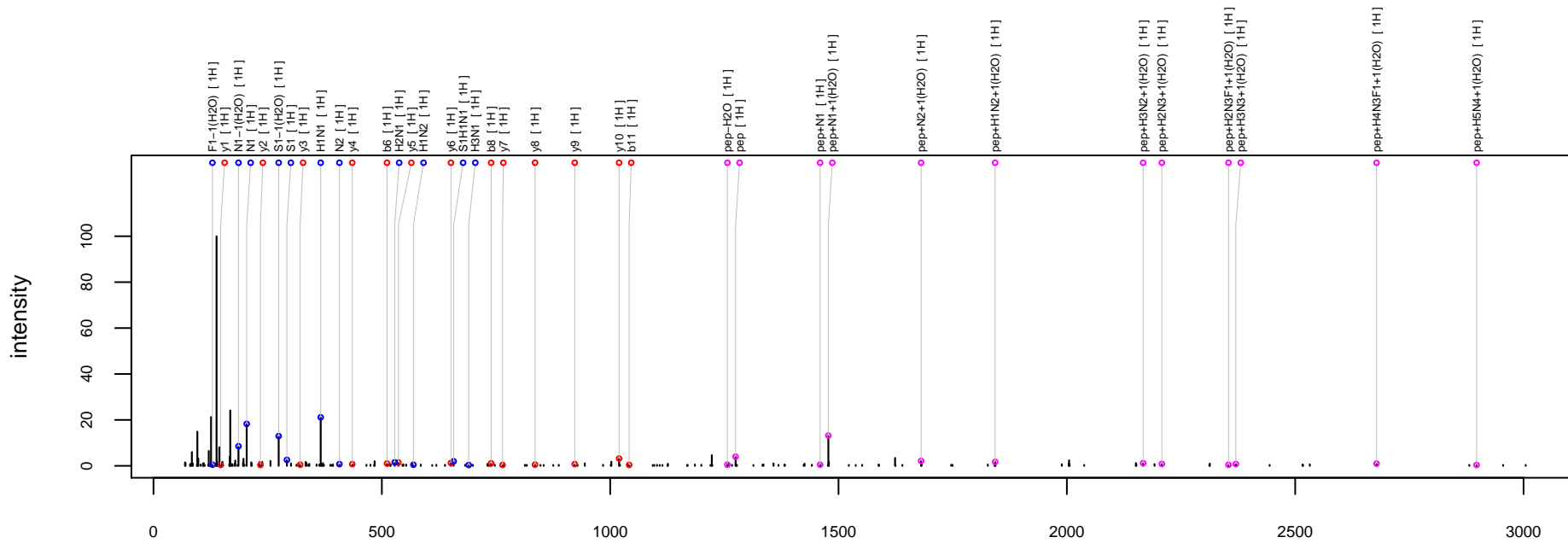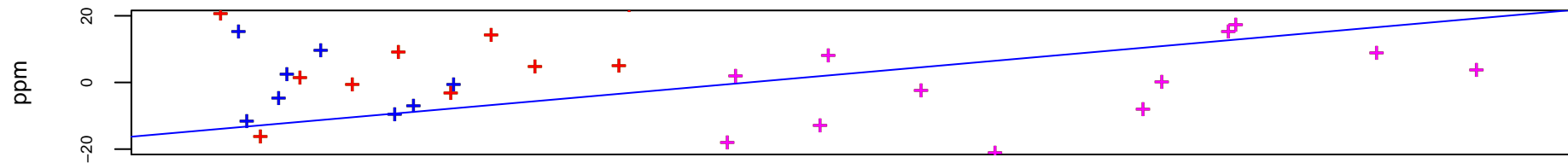
peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1083.699 charge 4 scan 0–0

Score= 64.04 , Hits= 41 , Explained Intensity= 0.37

Peptide: CERU_HUMAN[396,415]:ENLTAPGSDSAVFFEQGTTR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
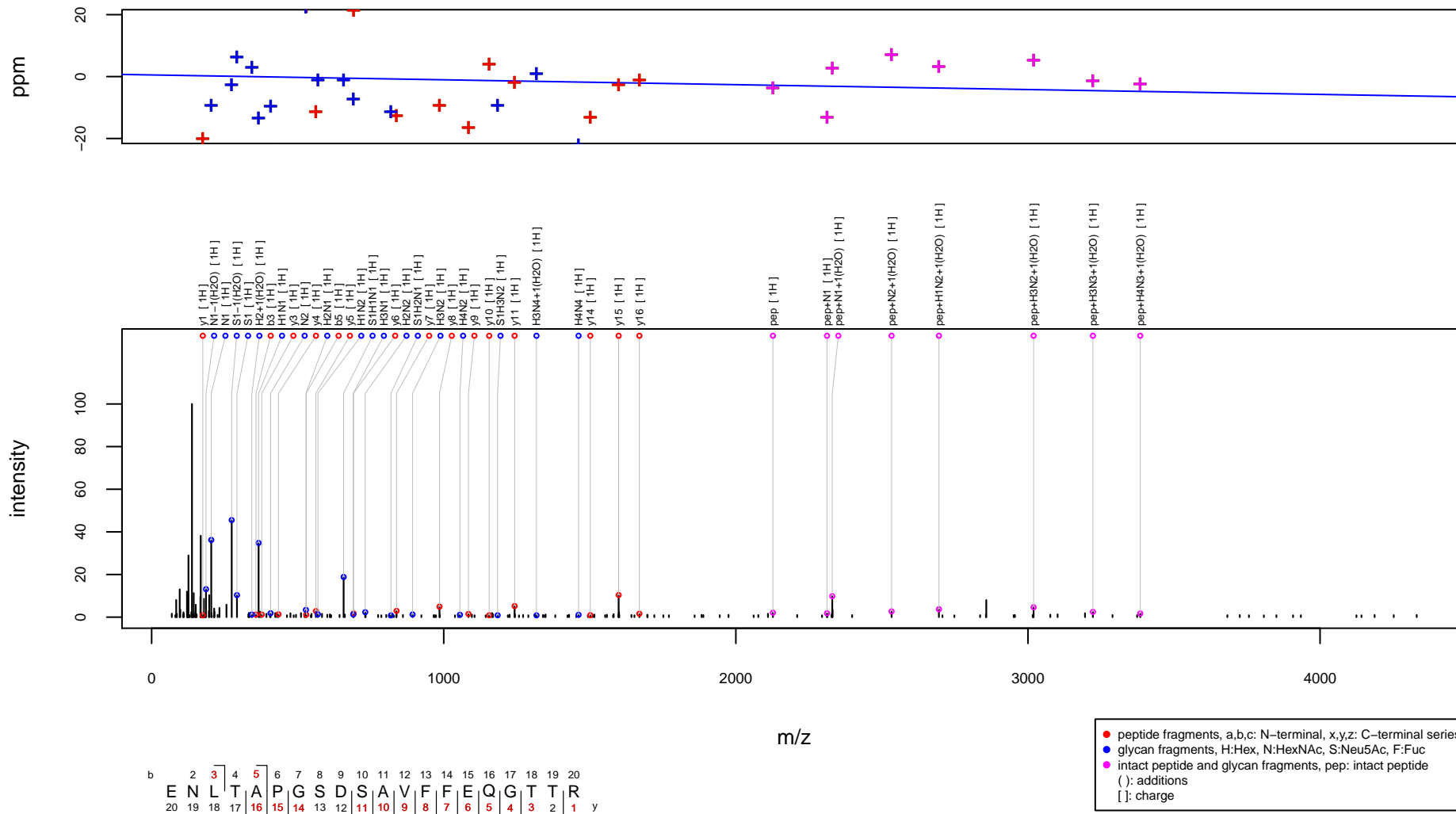
m/z 1434.658 charge 3 scan 0–0

Score= 92.99 , Hits= 59 , Explained Intensity= 0.6

Peptide: IPSP_HUMAN[254,274]:VVGVPYQGNATALFILPSEGK

Glycan: SNNH(NNH)HN(F)N, S1H3N6F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:26 2014*
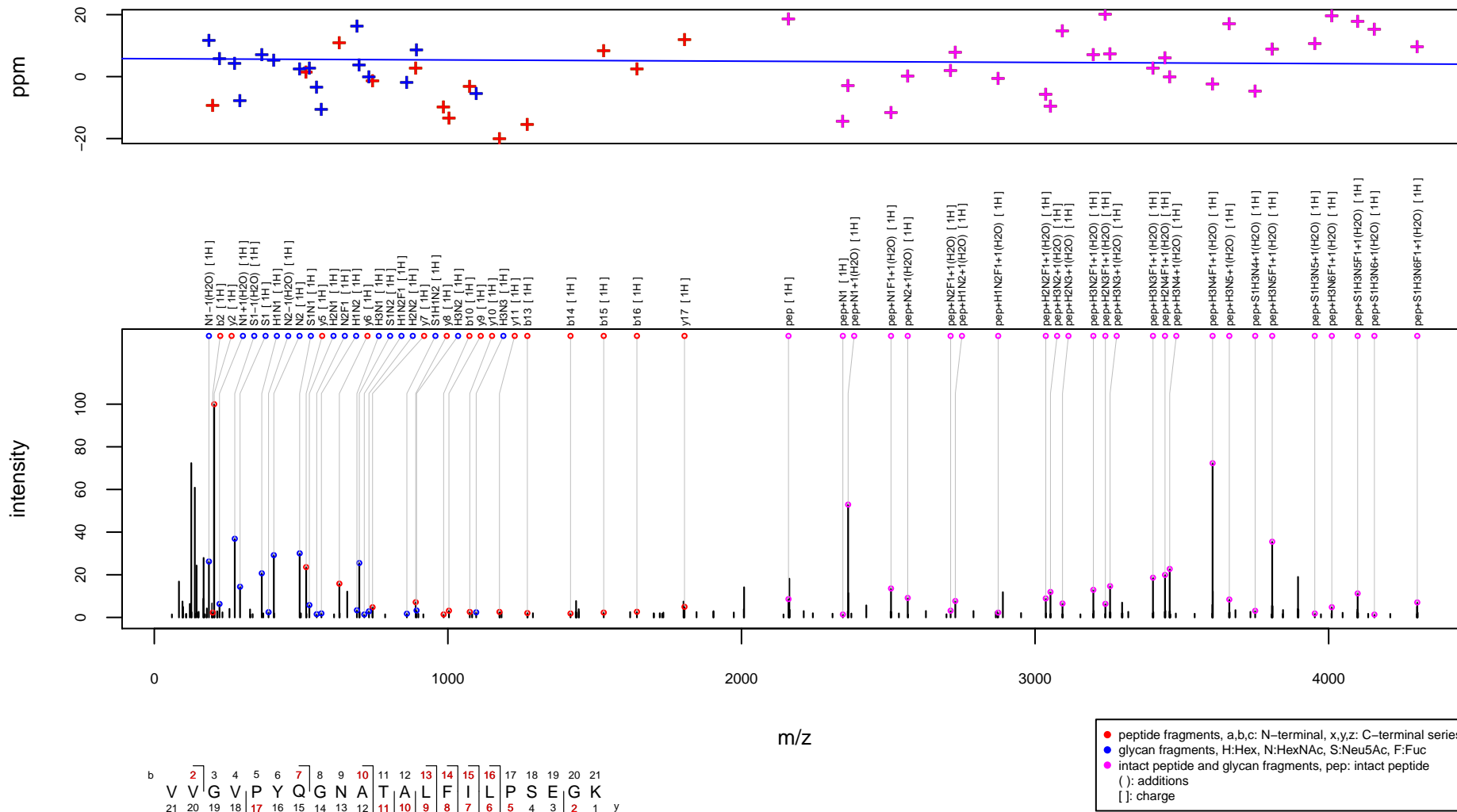
m/z 806.0957 charge 4 scan 0−0

Score= 49.63 , Hits= 36 , Explained Intensity= 0.24

Peptide: IGHA2_HUMAN[200,208]:TPLTANITK

Glycan: SHNH(HNH)(N)HN(F)N, S1H5N5F1

Charge: 4H
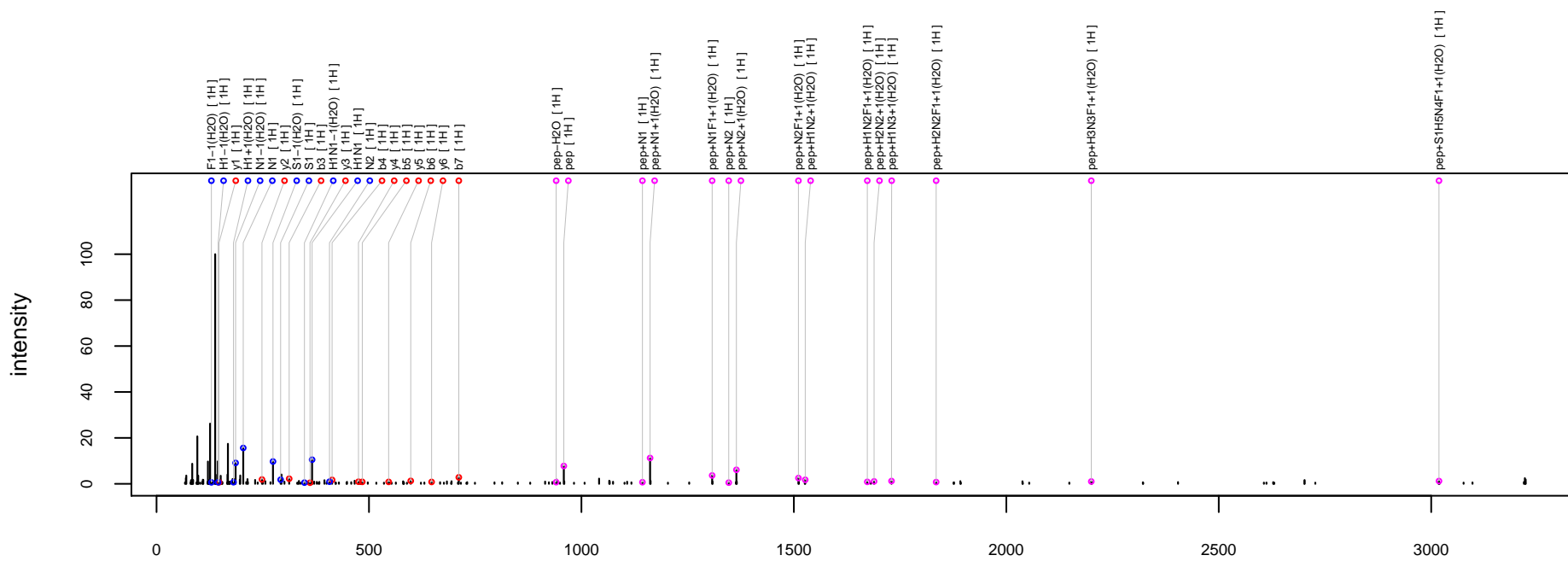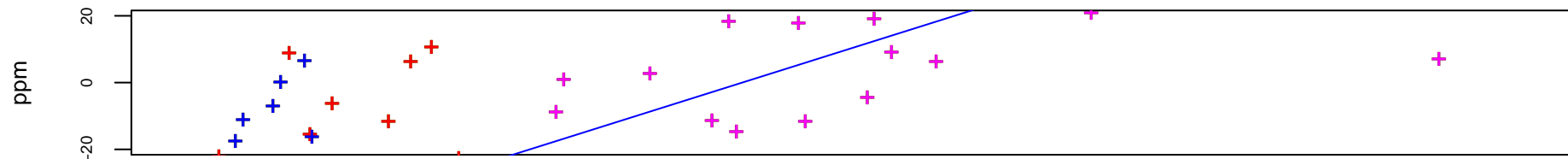
ppm

intensity

m/z

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:26 2014*

m/z 958.8961 charge 4 scan 0–0

Score= 54.11 , Hits= 47 , Explained Intensity= 0.3

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: H6N6F2

Charge: 4H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

b 2 3 4 5 6 7 8 9 10 11 12
L C S S V N V S N E I K
12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:27 2014*

m/z 984.0692 charge 3 scan 0−0

Score= 79.94 , Hits= 52 , Explained Intensity= 0.47

Peptide: CUBN_HUMAN[2082,2090]:AGFNASFHK

Glycan: HNH(F(H)NH)(N)HNN, H5N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:27 2014*
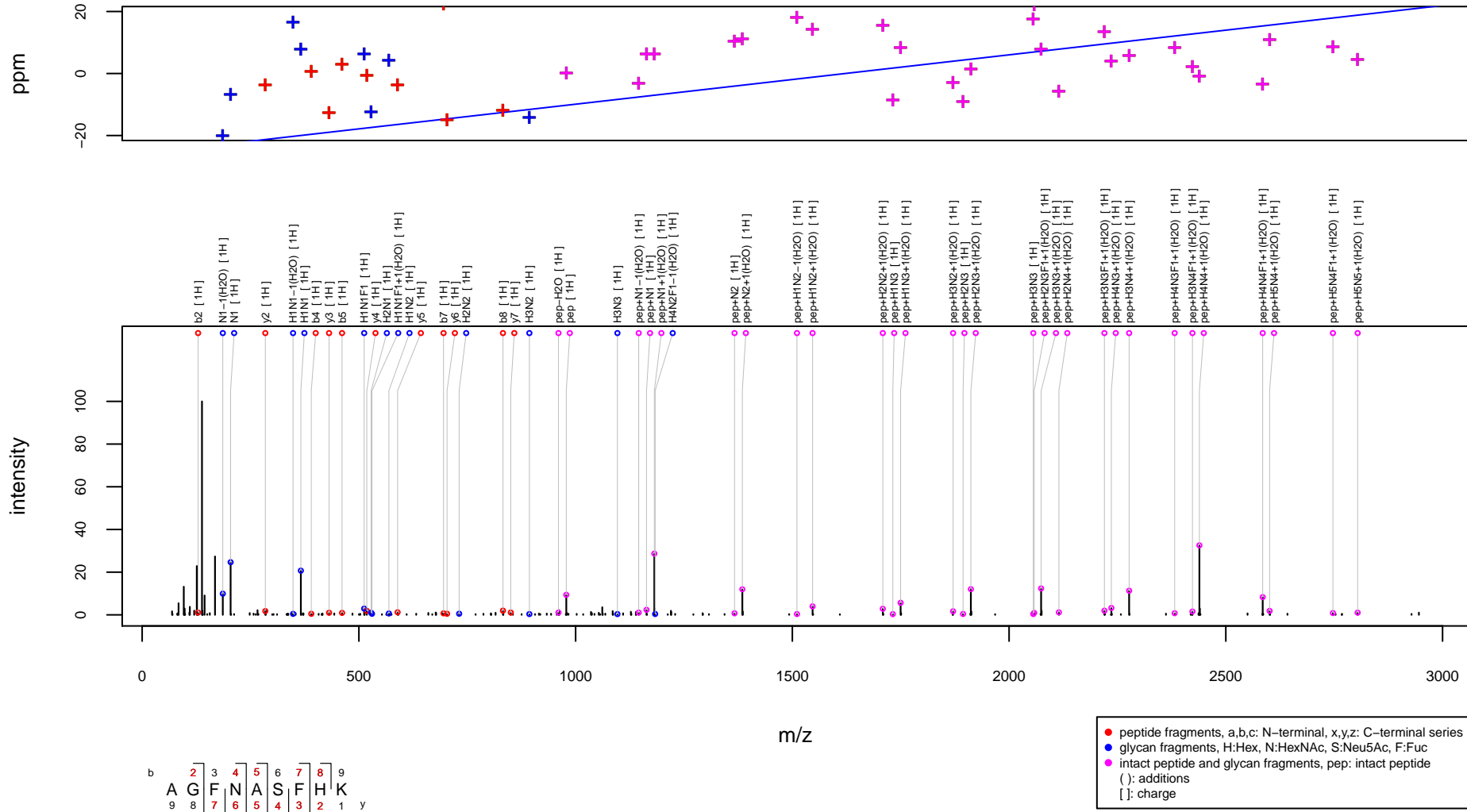
m/z 1109.4706 charge 4 scan 0–0

Score= 57.65 , Hits= 49 , Explained Intensity= 0.35

Peptide: MGA_HUMAN[817,834]:GGYIFPTQQPNTTTLASR

Glycan: H6N6F2

Charge: 4H

ppm

intensity

m/z
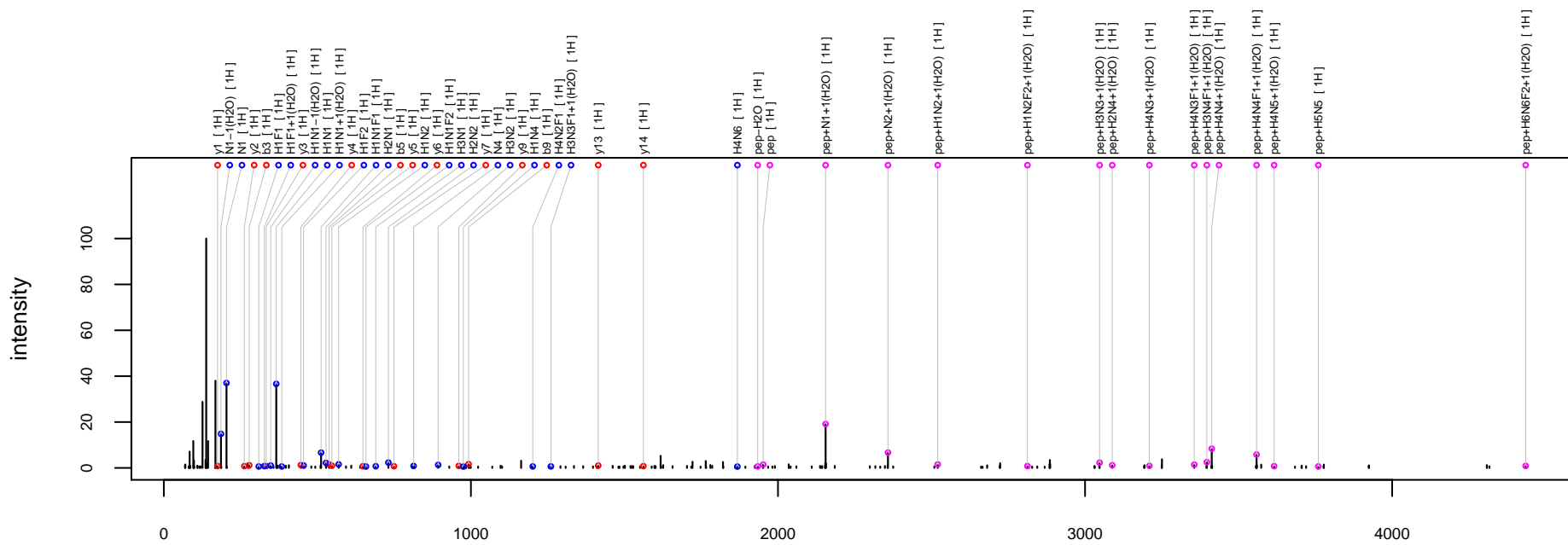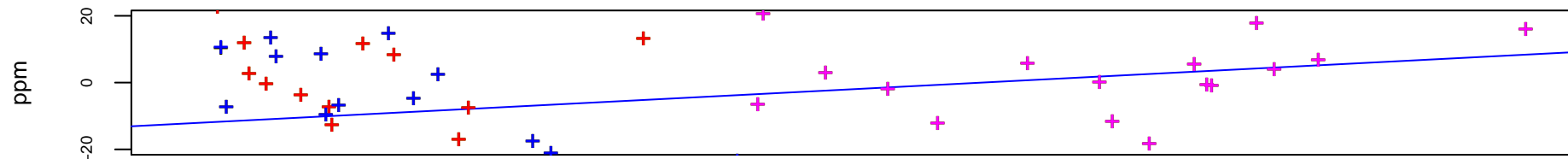
b 2 **3** 4 **5** 6 7 8 **9** 10 11 12 13 14 15 16 17 18
G G Y I F P T Q Q P N T T T L A S R
18 17 16 15 **14** **13** 12 11 10 **9** 8 **7** **6** **5** **4** **3** 2 1 y

- ● peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
    ( ): additions
    [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:27 2014*

m/z 935.3835 charge 3 scan 0−0

Score= 64.64 , Hits= 39 , Explained Intensity= 0.35

Peptide: CUBN_HUMAN[2082,2090]:AGFNASFHK

Glycan: HNH(HNH)(N)HNN, H5N5

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
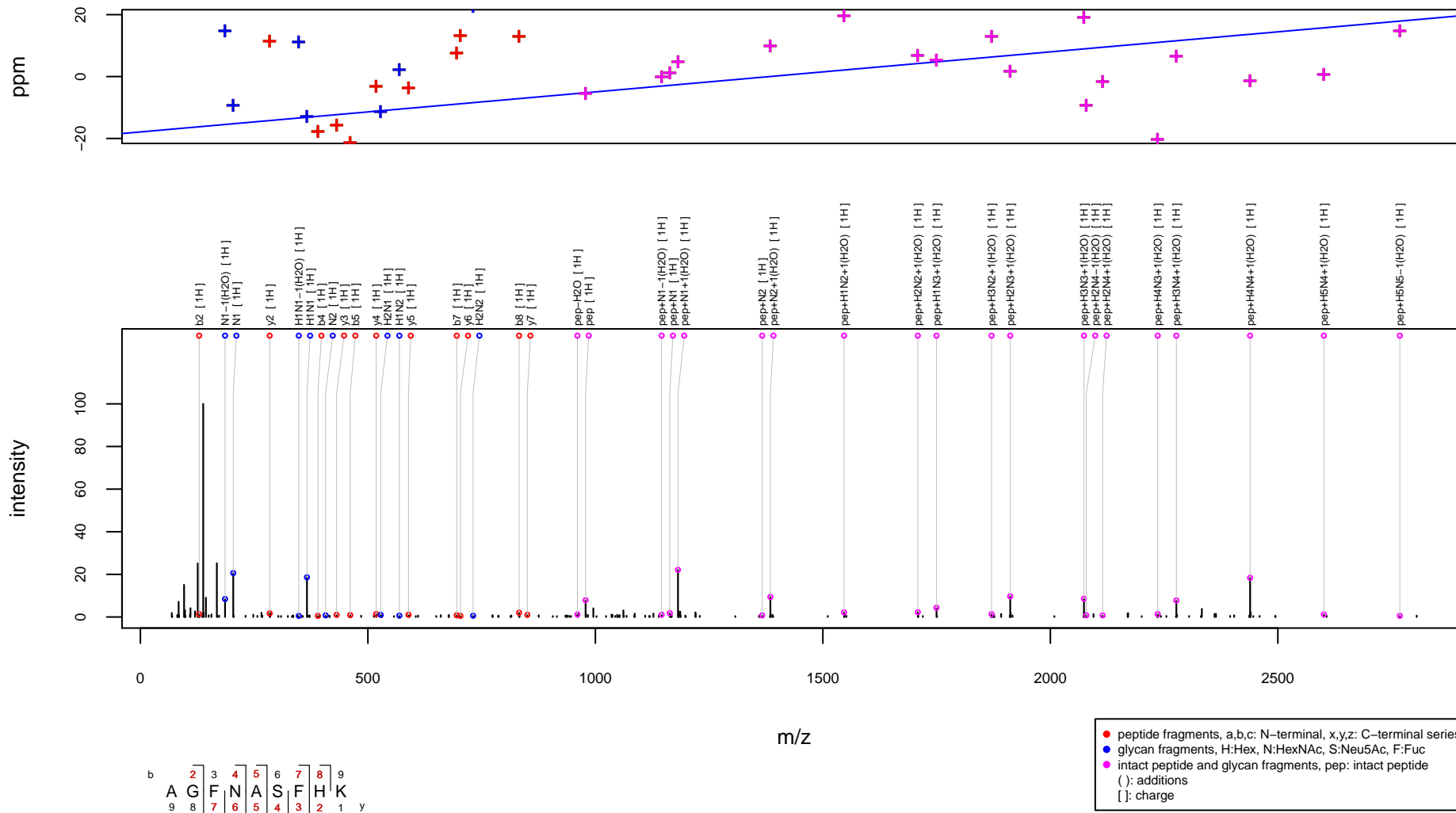
m/z 922.0402 charge 3 scan 0−0

Score= 76.97 , Hits= 47 , Explained Intensity= 0.37

Peptide: IGHG2_HUMAN[172,180]:EEQFNSTFR

Glycan: HNH(NH)HN(F)N, H4N4F1

Charge: 3H

ppm

intensity

m/z

b E E Q F N S T F R y

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:28 2014*

52
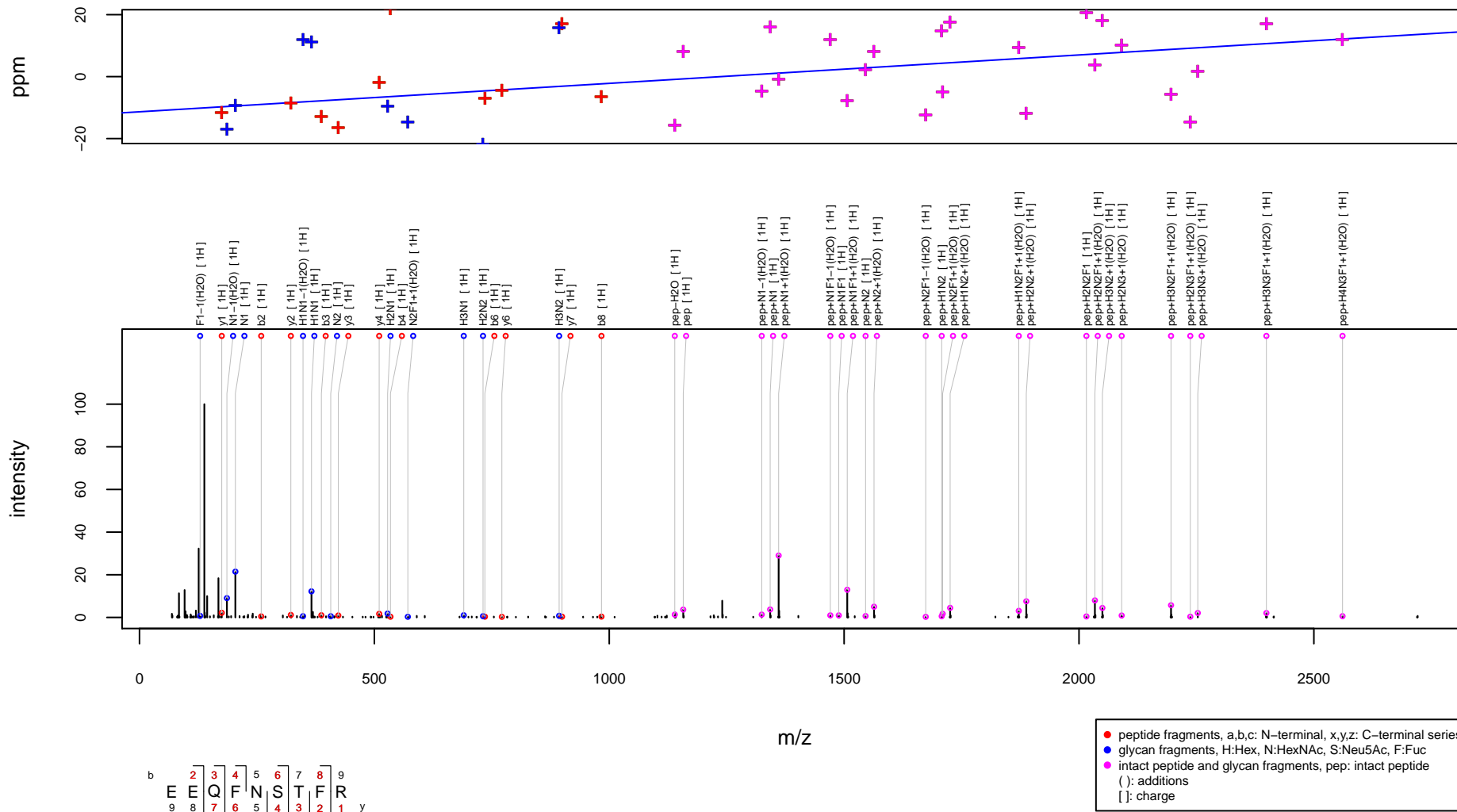
m/z 958.4092 charge 4 scan 0−0

Score= 50.24 , Hits= 43 , Explained Intensity= 0.3

Peptide: LG3BP_HUMAN[64,76]:ALGFENATQALGR

Glycan: H6N6F2

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
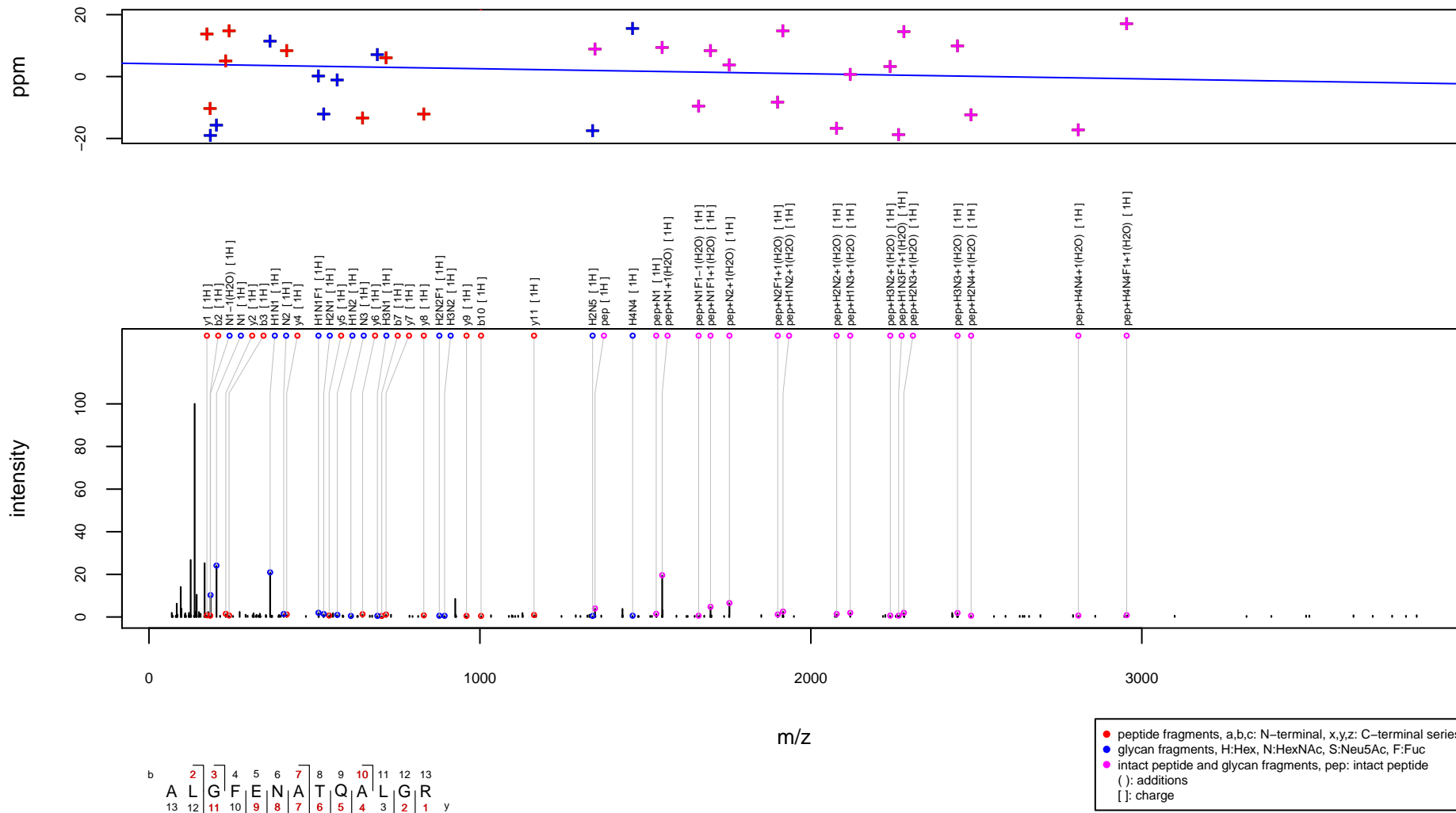
m/z 933.8698 charge 4 scan 0−0

Score= 47.31 , Hits= 31 , Explained Intensity= 0.3

Peptide: APOD_HUMAN[61,73]:CIQANYSLMENGK
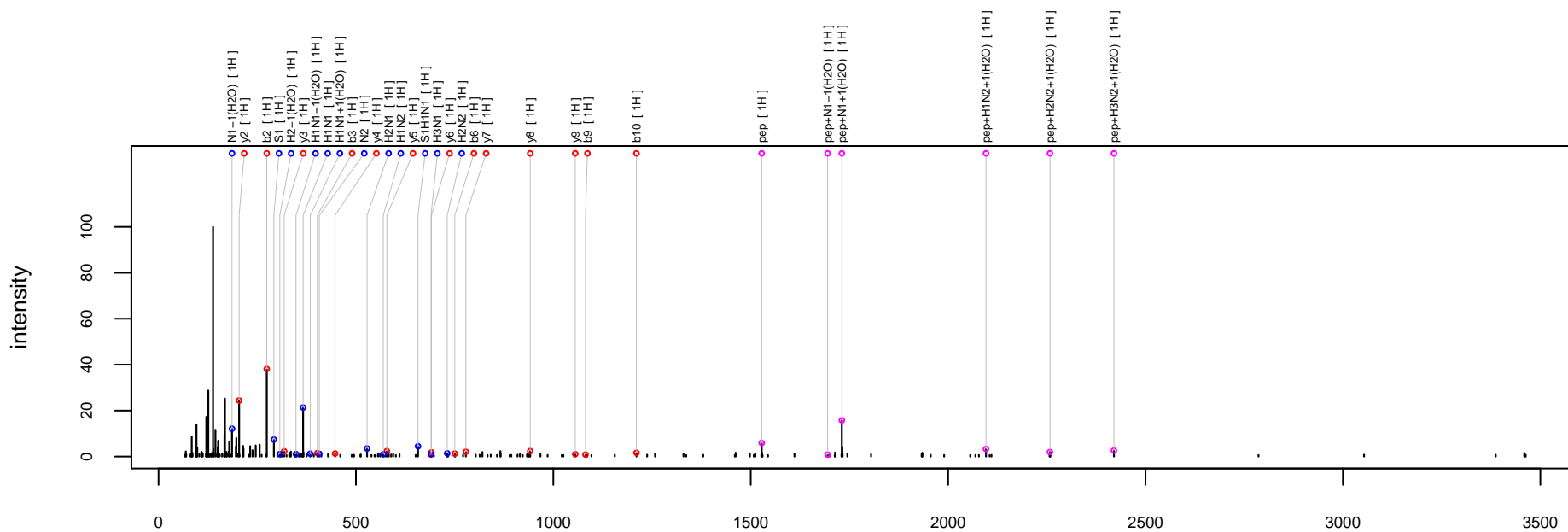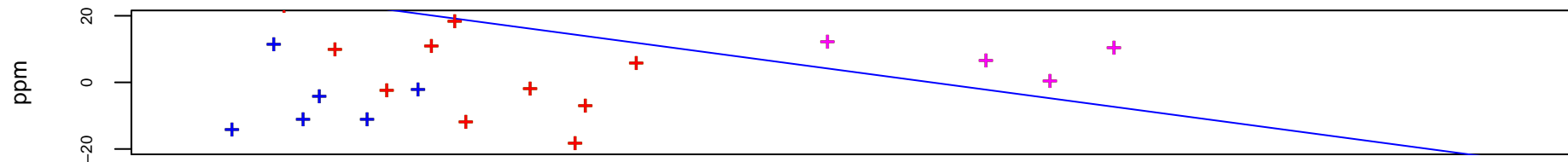
Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:28 2014*

m/z 1131.4786 charge 3 scan 0–0

Score= 83.22 , Hits= 58 , Explained Intensity= 0.44

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: FHNH(HNH)(N)HN(F)N, H5N5F2

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:29 2014*
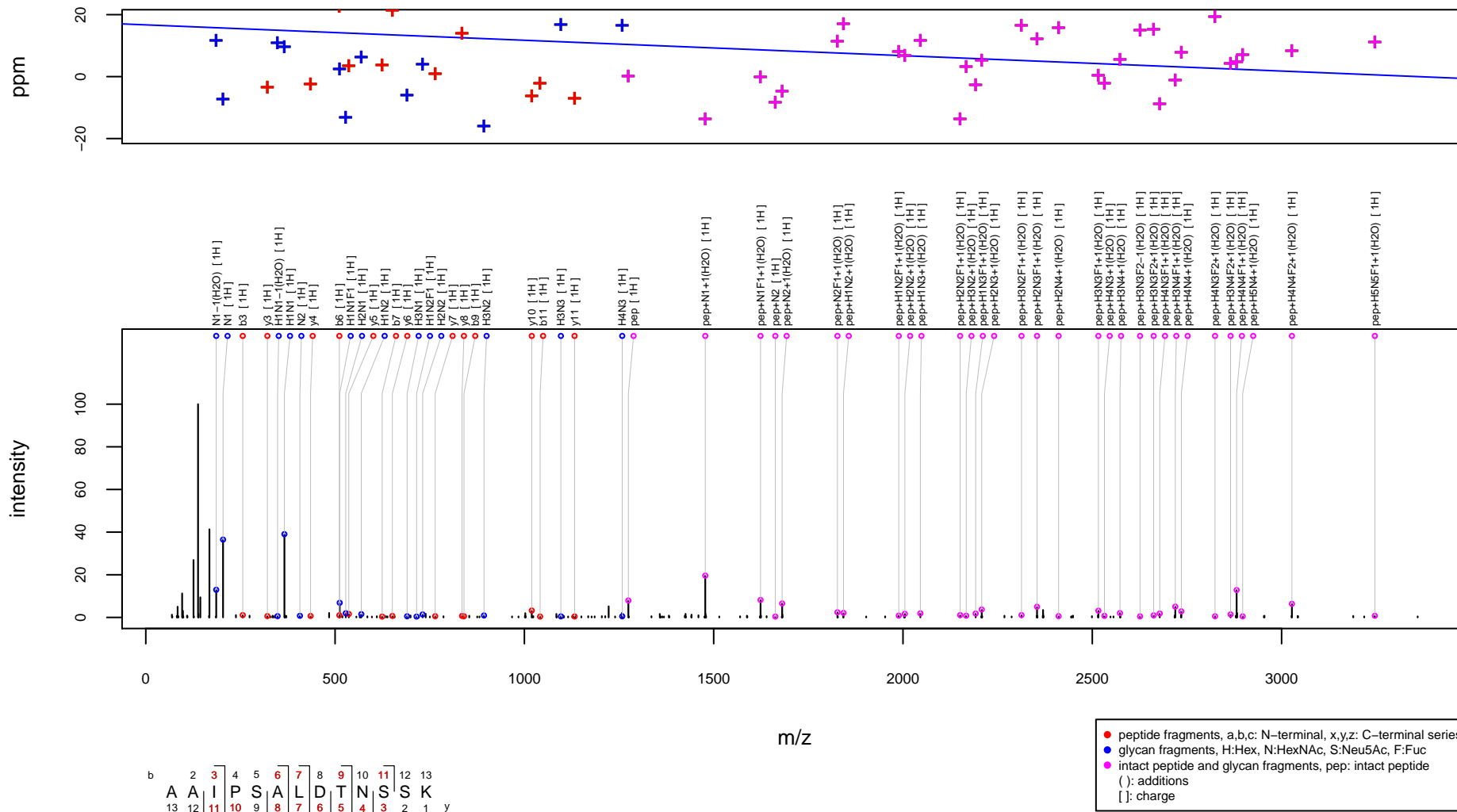
m/z 1028.7776 charge 3 scan 0–0

Score= 77.28 , Hits= 51 , Explained Intensity= 0.37

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HNH(NH)(N)HN(F)N, H4N5F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 ( ): additions
  [ ]: charge

Peptide sequence diagram:

b 2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y
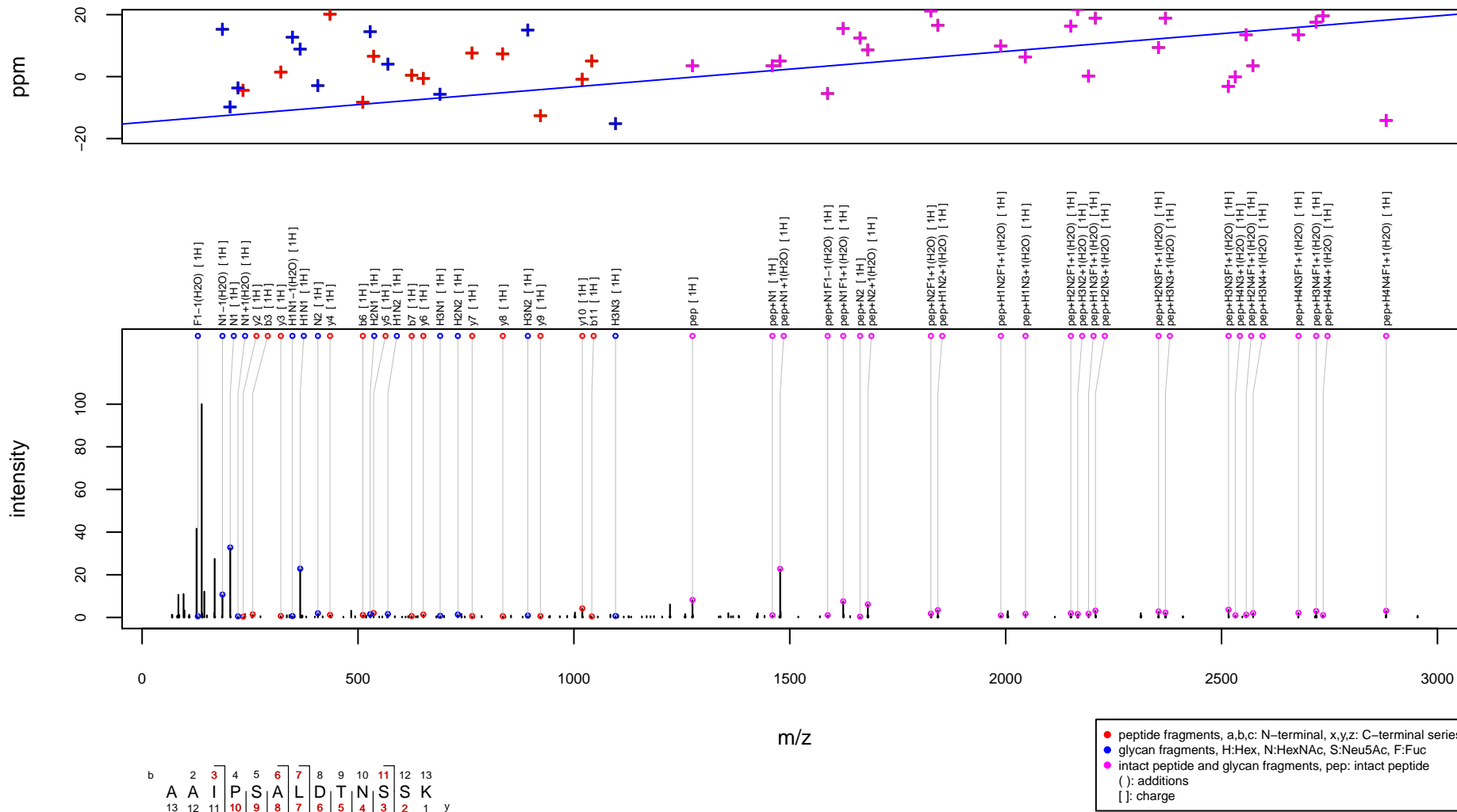
m/z 961.0837 charge 3 scan 0–0

Score= 68.96 , Hits= 44 , Explained Intensity= 0.31

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HNH(NH)HN(F)N, H4N4F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:30 2014*
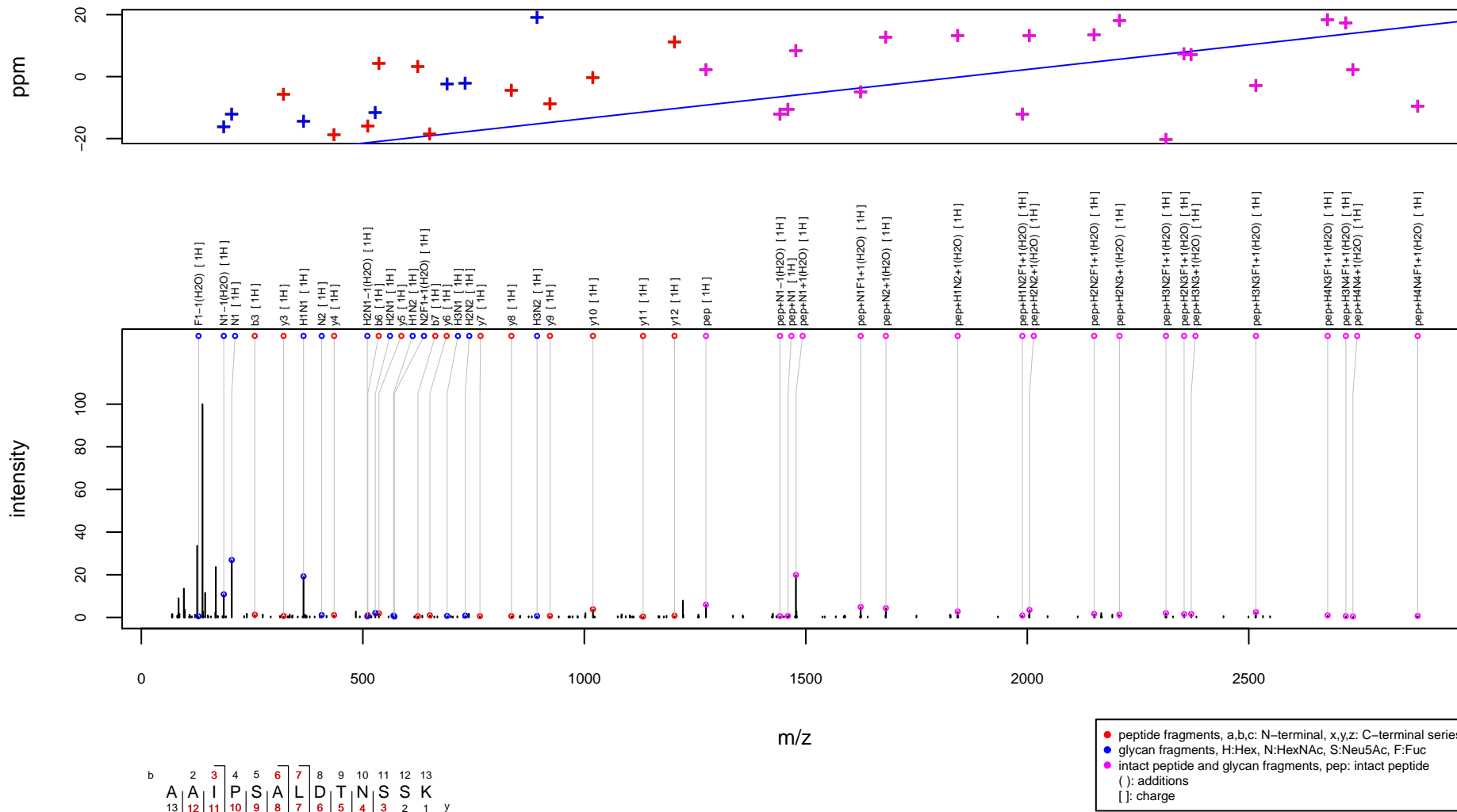
m/z 1049.4482 charge 3 scan 0–0

Score= 65.74 , Hits= 41 , Explained Intensity= 0.41

Peptide: LAMP2_HUMAN[352,361]:VQPFNVTQGK

Glycan: HNH(NN(HN)H)HNN, H5N6

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:31 2014*
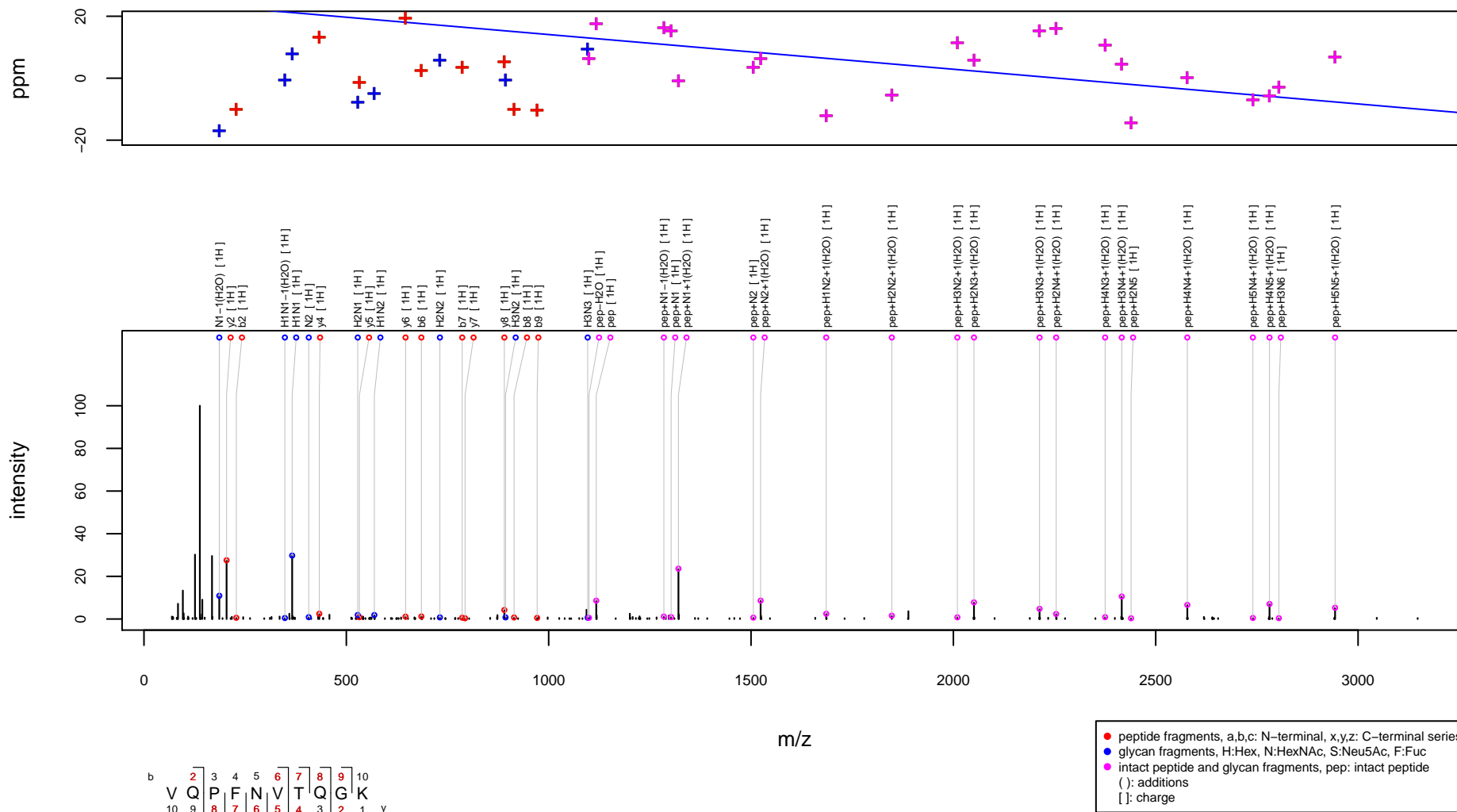
m/z 926.4069 charge 3 scan 0–0

Score= 44.28 , Hits= 26 , Explained Intensity= 0.25

Peptide: SYPL1_HUMAN[56,72]:GQTEIQVNCPPAVTENK

Glycan: H(H)HNN, H3N2

Charge: 3H
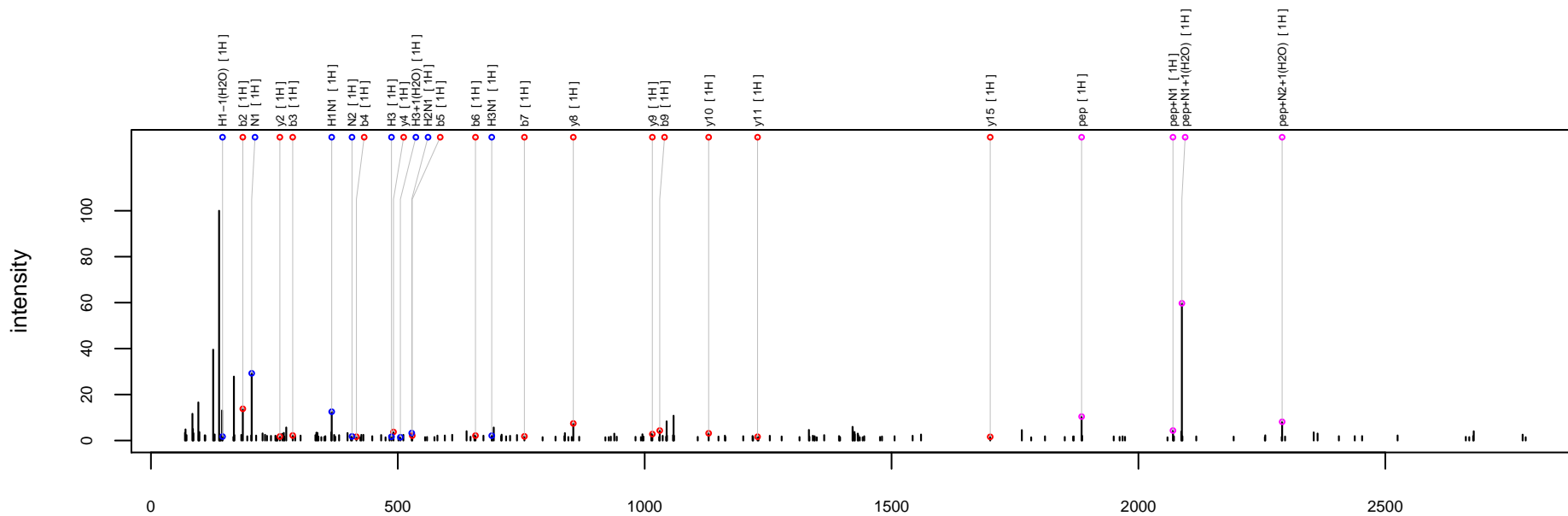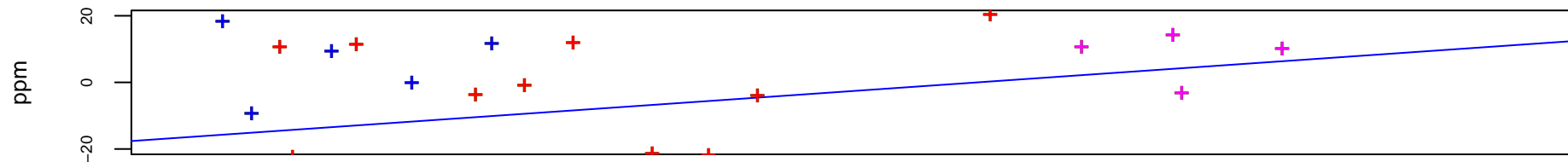
peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

# m/z 939.067 charge 3 scan 0–0

Score= 59.53 , Hits= 36 , Explained Intensity= 0.31

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

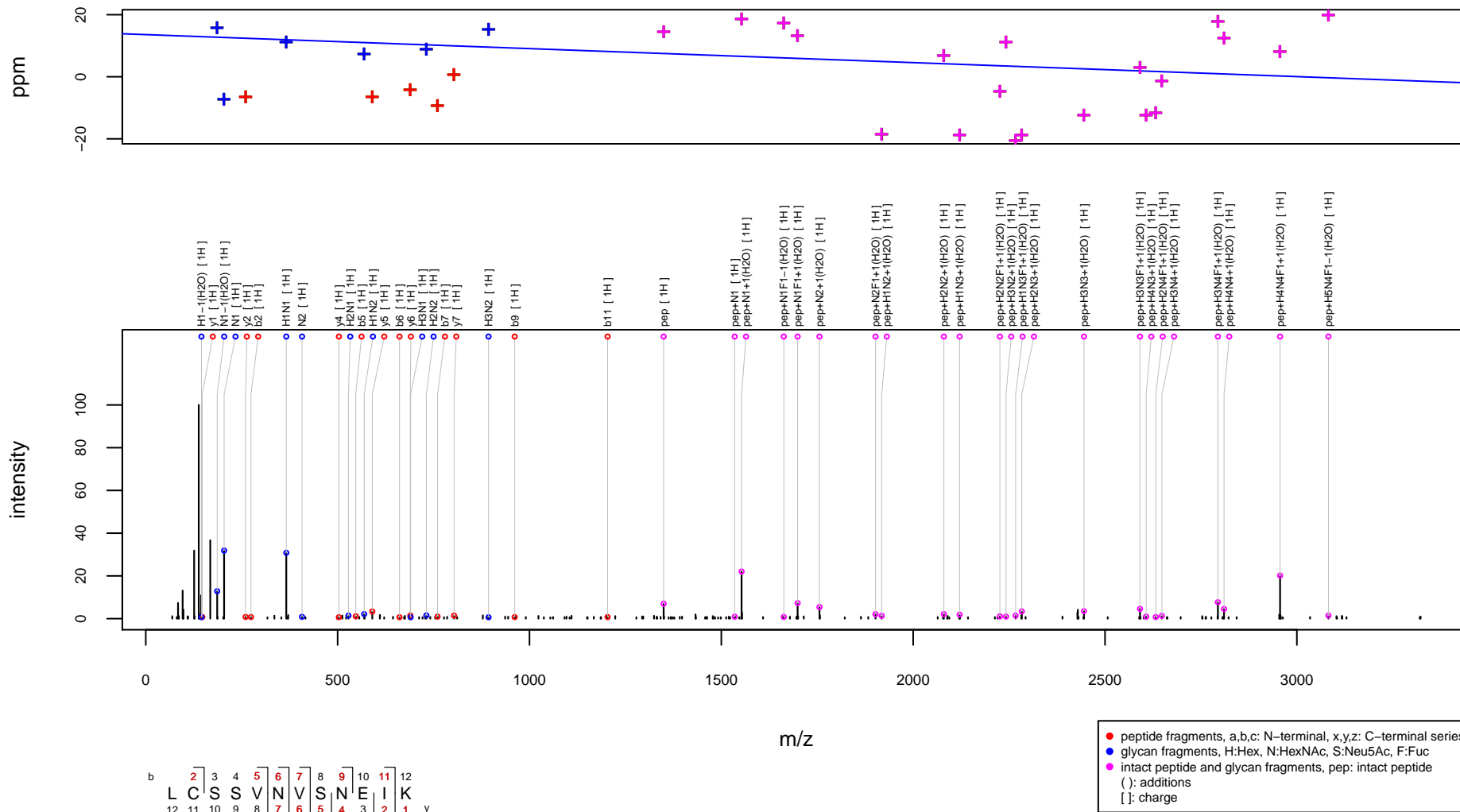Glycan: HHH(H(H)H)HNN, H7N2

Charge: 3H

- ● peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:31 2014*

60
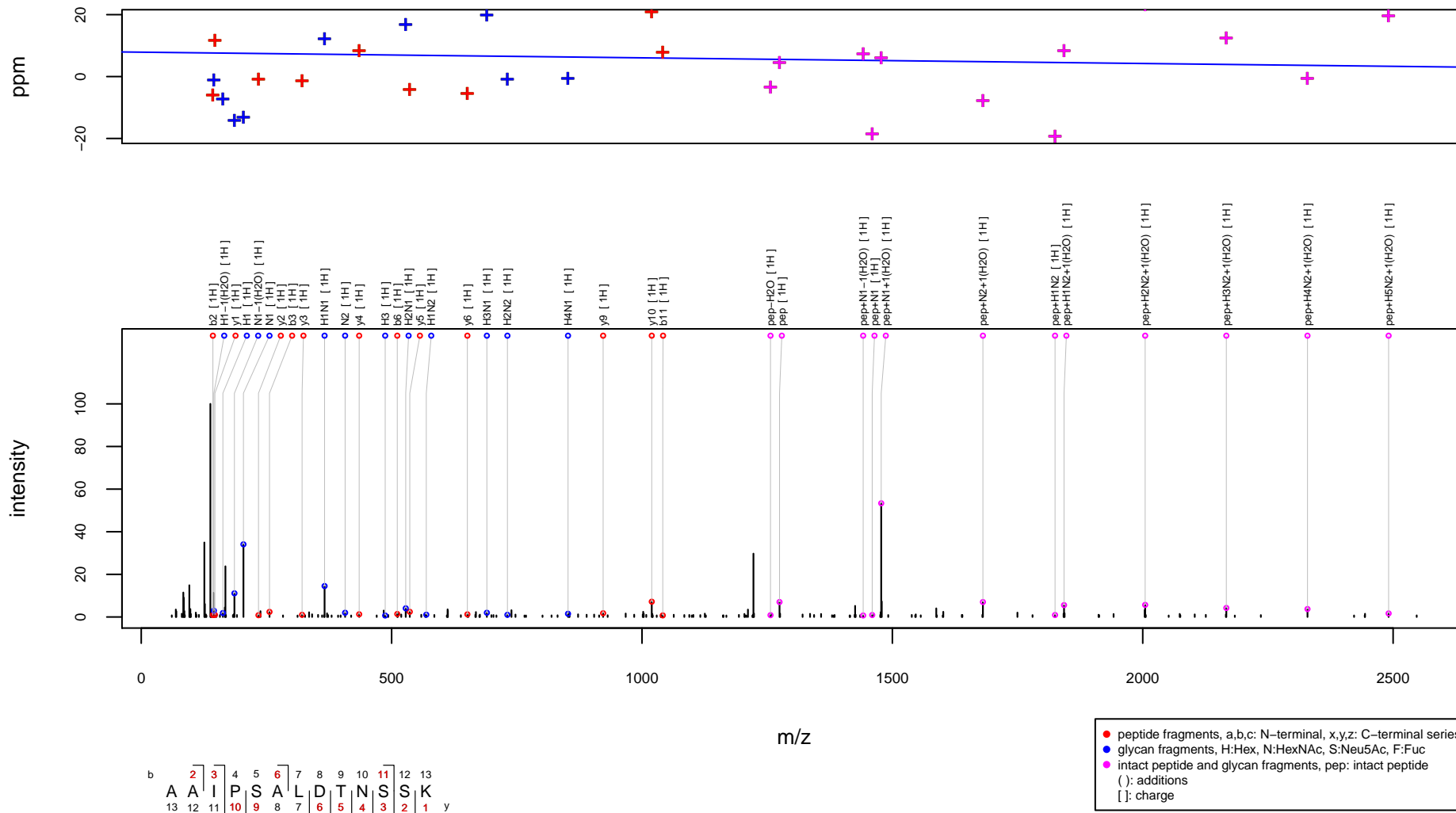
m/z 830.368 charge 3 scan 0–0

Score= 48.77 , Hits= 29 , Explained Intensity= 0.3

Peptide: BGLR_HUMAN[269,281]:VVANGTGTQGQLK

Glycan: H(H)H(H)HNN, H5N2

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:31 2014*
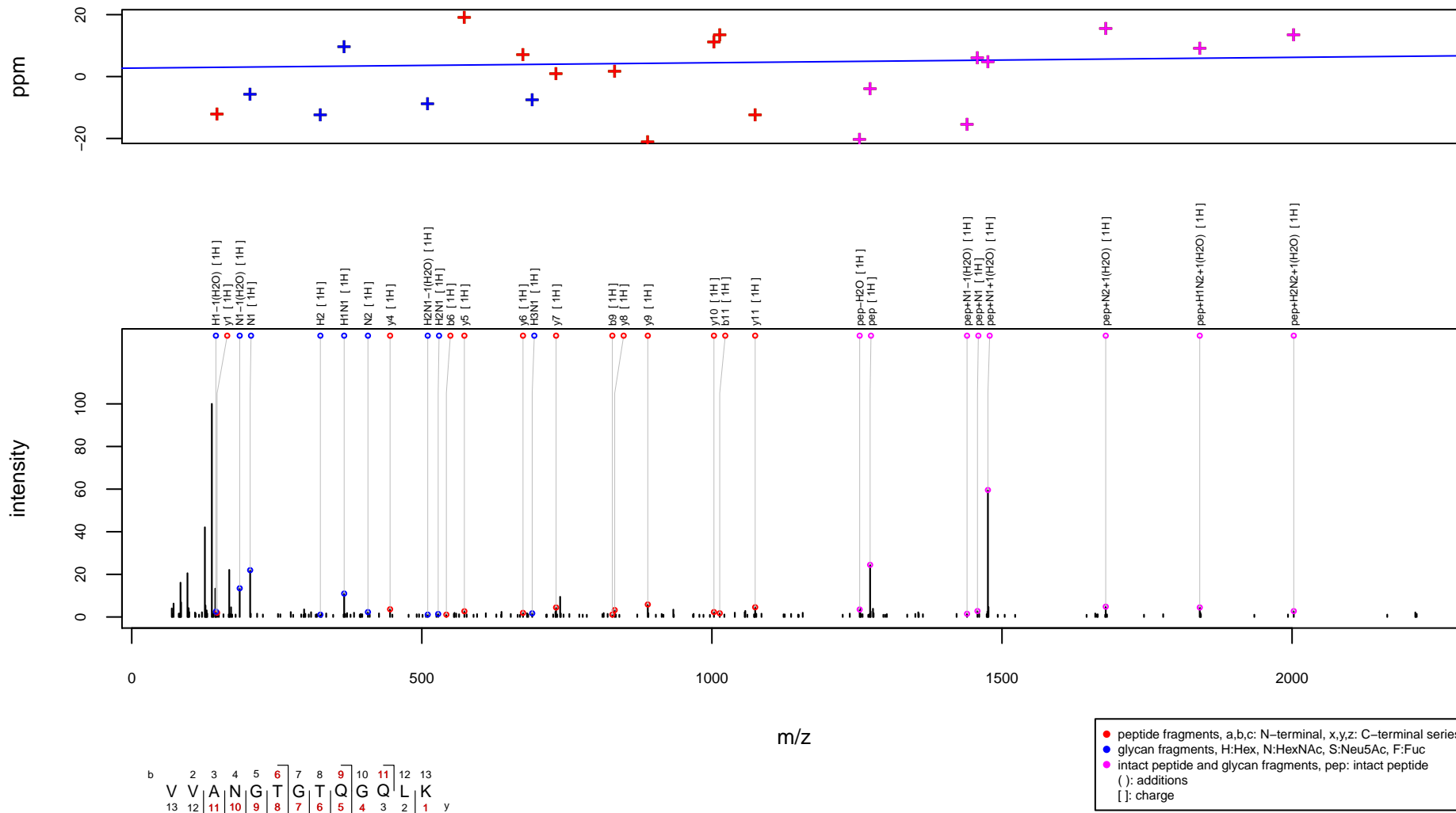
m/z 1055.2181 charge 5 scan 0–0

Score= 39.52 , Hits= 35 , Explained Intensity= 0.29

Peptide: UROM_HUMAN[223,245]:CNTAAPMWLNGTHPSSDEGIVSR

Glycan: S1H11N2F2

Charge: 5H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
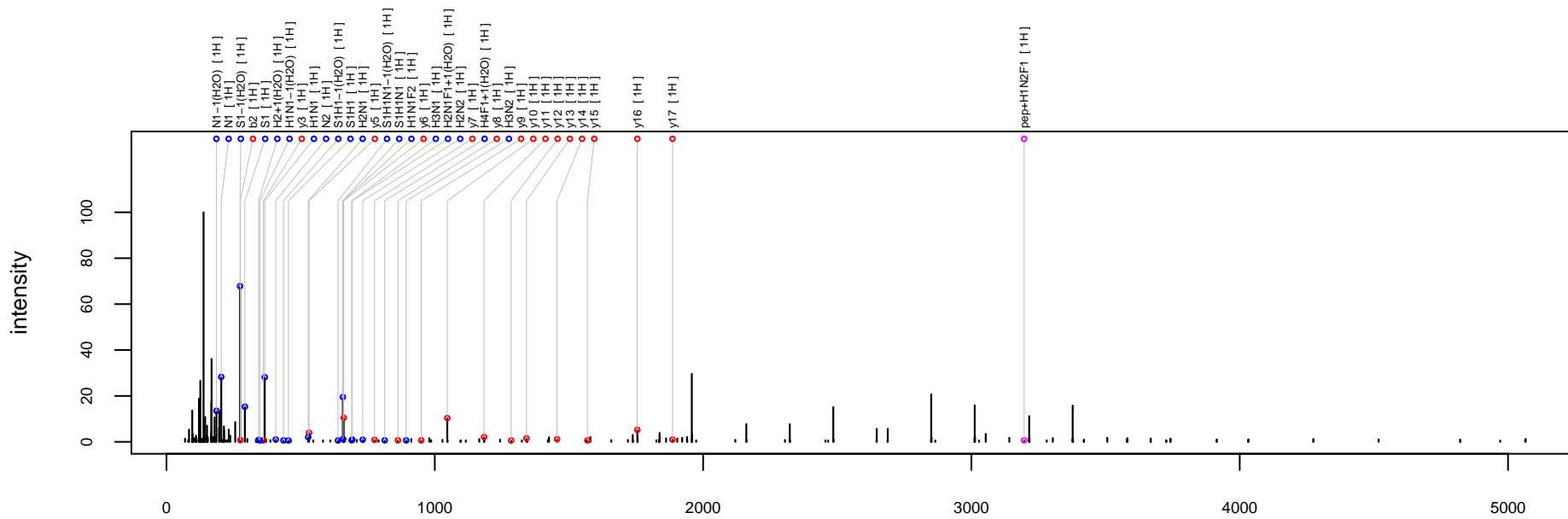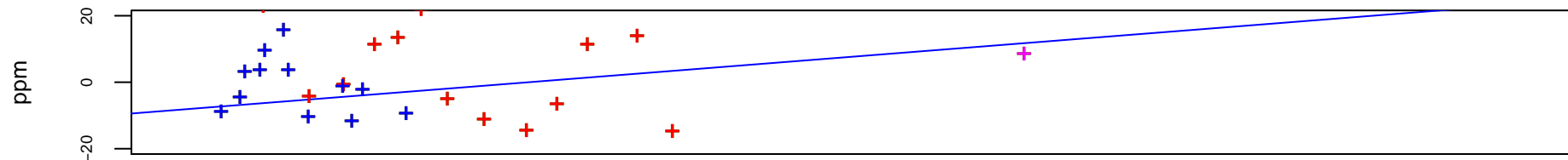
b   2   3   4   5   6   7   8   9   10 11 12 13 14 15 16 17 18 19 20 21 22 23
    C   N   T   A   A   P   M   W   L   N   G   T   H   P   S   S   D   E   G   I   V   S   R
   23 22 21 20 19 18 17 16 15 14 13 12 11 10 9   8   7   6   5   4   3   2   1   y

Glycopeptide ID – *Mon Feb 17 09:50:32 2014*

m/z 1076.7827 charge 3 scan 0–0

Score= 92.33 , Hits= 63 , Explained Intensity= 0.52

Peptide: CUBN_HUMAN[1800,1810]:EGNATGHLVGR

Glycan: FHNH(HNH)(N)HN(F)N, H5N5F2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:32 2014*

63
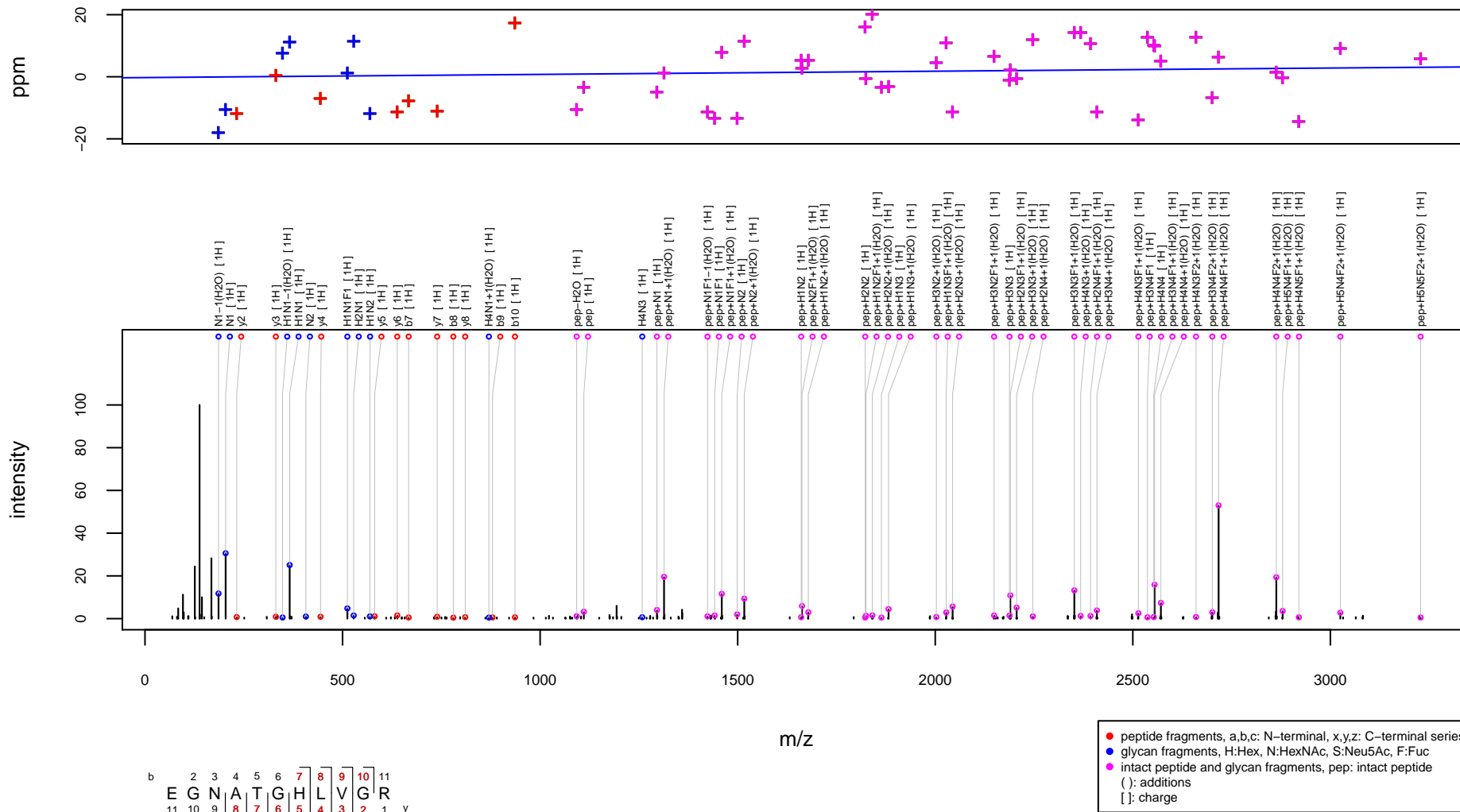
m/z 1074.4602 charge 3 scan 0–0

Score= 62.43 , Hits= 44 , Explained Intensity= 0.43

Peptide: BGAL_HUMAN[458,468]:NNVITLNITGK

Glycan: S1H7N3

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
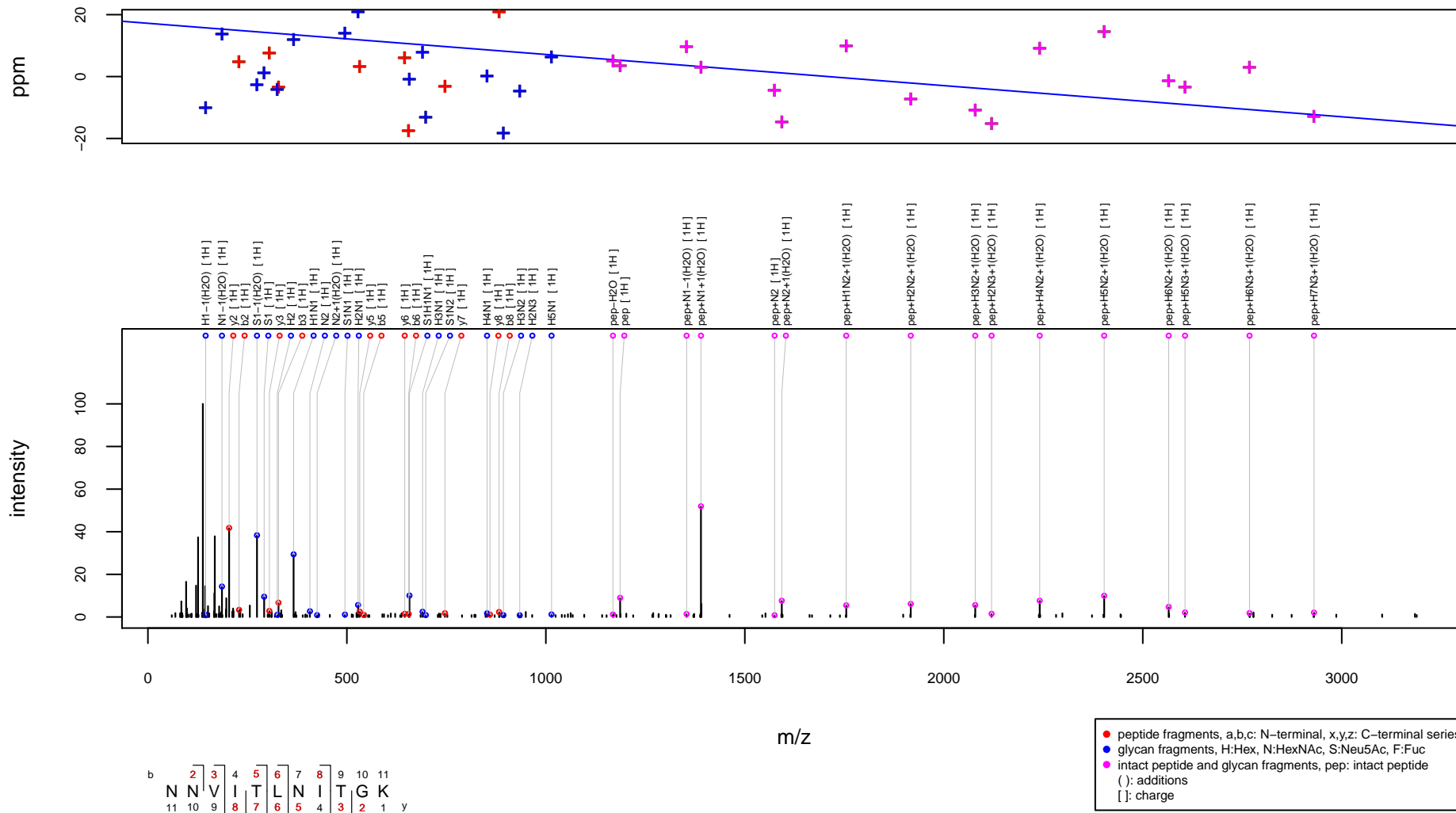
m/z 1048.1011 charge 3 scan 0–0

Score= 72.45 , Hits= 45 , Explained Intensity= 0.49

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR

Glycan: SHNH(HNH)HNN, S1H5N4

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:33 2014*

m/z 1075.0996 charge 3 scan 0–0

Score= 71.88 , Hits= 52 , Explained Intensity= 0.47

Peptide: NEP_HUMAN[142,152]:SCINESAIDSR

Glycan: H5N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:33 2014*

m/z 1154.7198 charge 4 scan 0–0

Score= 38.18 , Hits= 33 , Explained Intensity= 0.27

Peptide: UROM_HUMAN[223,245]:CNTAAPMWLNGTHPSSDEGIVSR

Glycan: S2H3N3F3

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:33 2014*

m/z 1278.1936 charge 3 scan 0–0

Score= 76.59 , Hits= 64 , Explained Intensity= 0.49

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: H6N6F2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
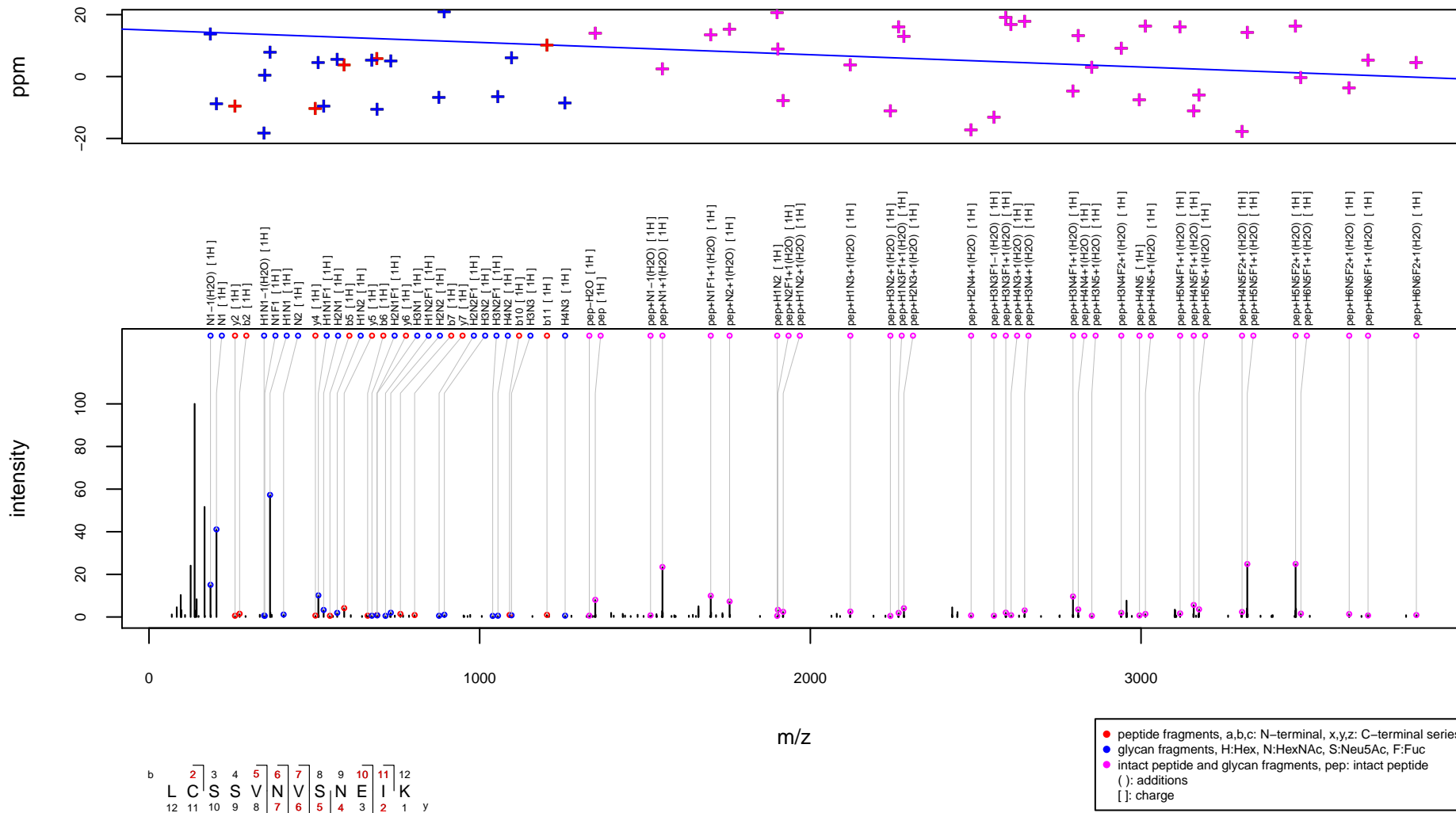
m/z 995.4046 charge 4 scan 0−0

Score= 49.1 , Hits= 47 , Explained Intensity= 0.33

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: H6N6F3

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:34 2014*
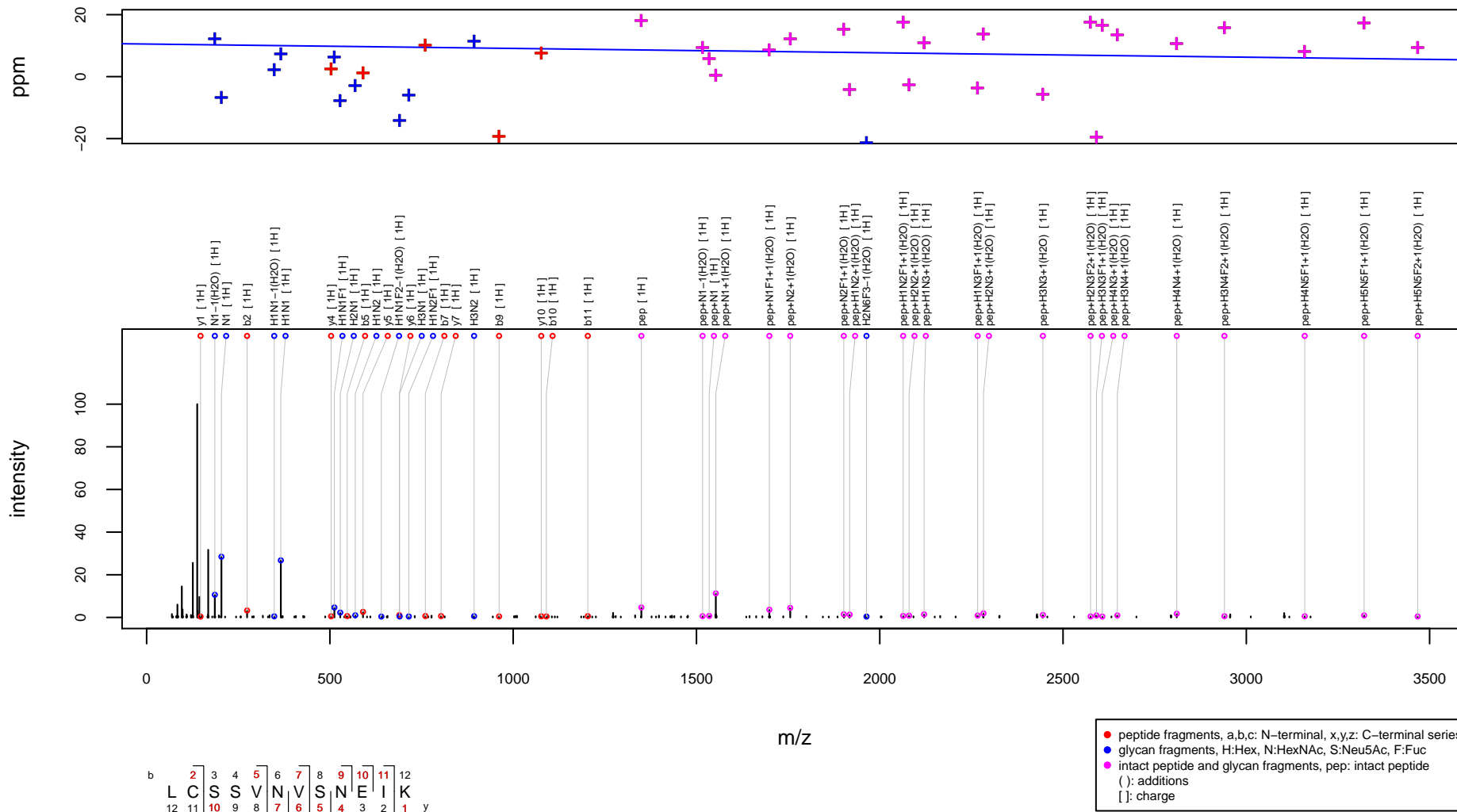
m/z 1053.1787 charge 4 scan 0–0

Score= 54.27 , Hits= 48 , Explained Intensity= 0.37

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S2H7N6

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:34 2014*
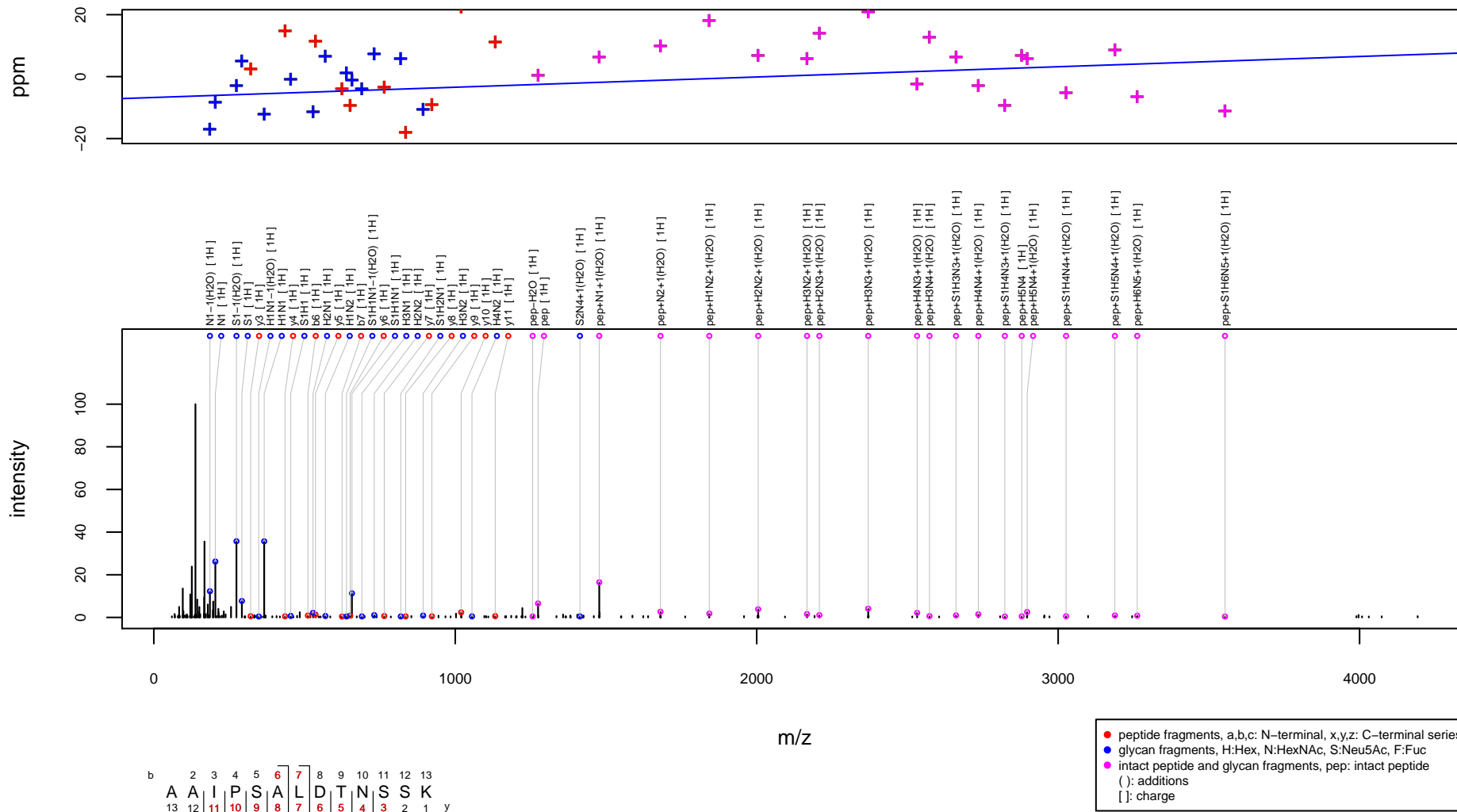
m/z 1107.8015 charge 3 scan 0–0

Score= 65.72 , Hits= 45 , Explained Intensity= 0.38

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: HNH(HNH)(N)HN(F)N, H5N5F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:34 2014*

m/z 994.9189 charge 4 scan 0−0

Score= 49.87 , Hits= 47 , Explained Intensity= 0.33

Peptide: LG3BP_HUMAN[64,76]:ALGFENATQALGR

Glycan: H6N6F3

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1074.478 charge 3 scan 0−0

Score= 69.68 , Hits= 51 , Explained Intensity= 0.37

Peptide: IGHA2_HUMAN[200,208]:TPLTANITK

Glycan: SHNH(HNH)(N)HN(F)N, S1H5N5F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:35 2014*
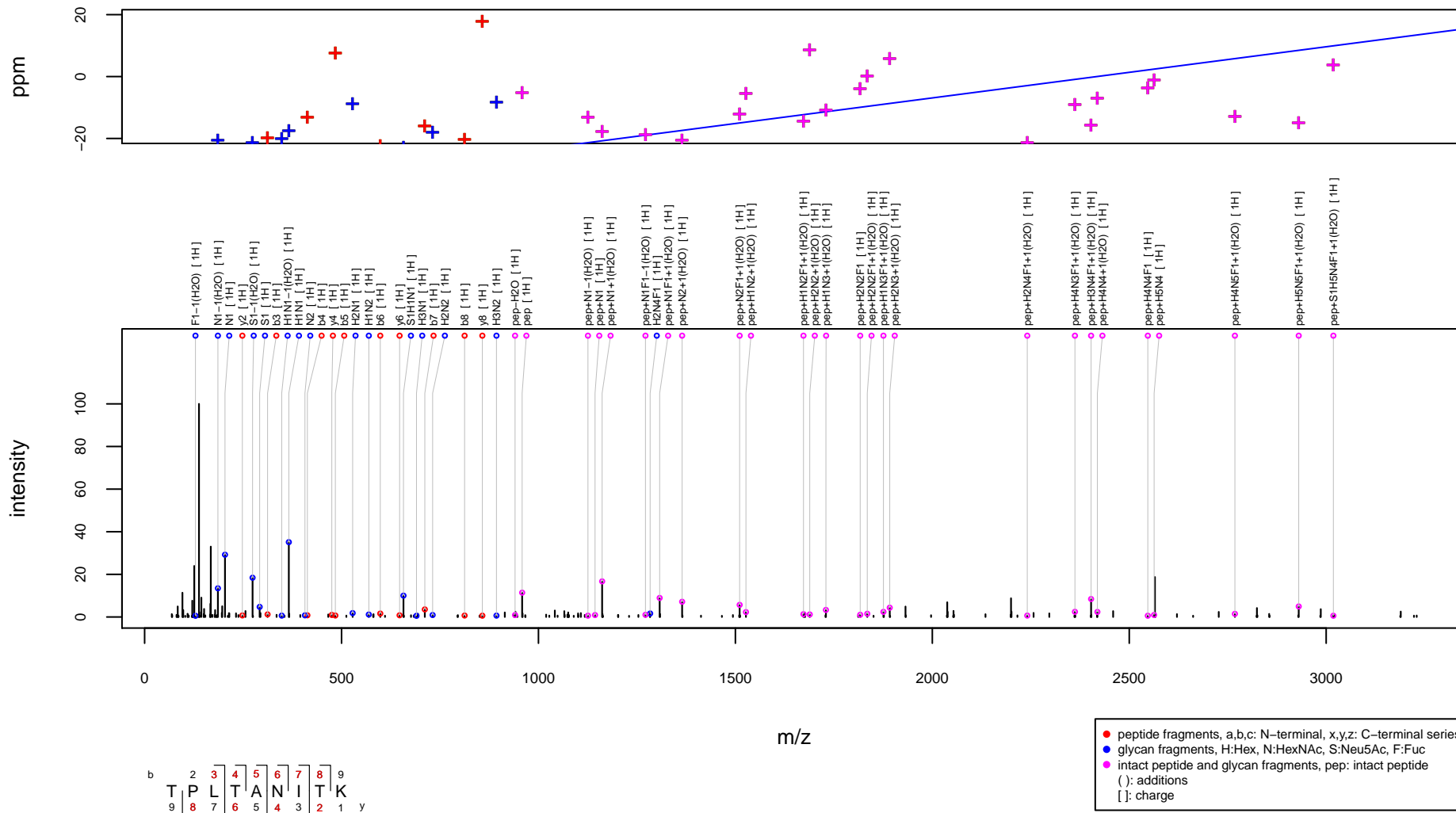
m/z 1258.5253 charge 3 scan 0–0

Score= 73.75 , Hits= 52 , Explained Intensity= 0.48

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HN(HN)H(HN(HN)H)HN(F)N, H7N6F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:35 2014*
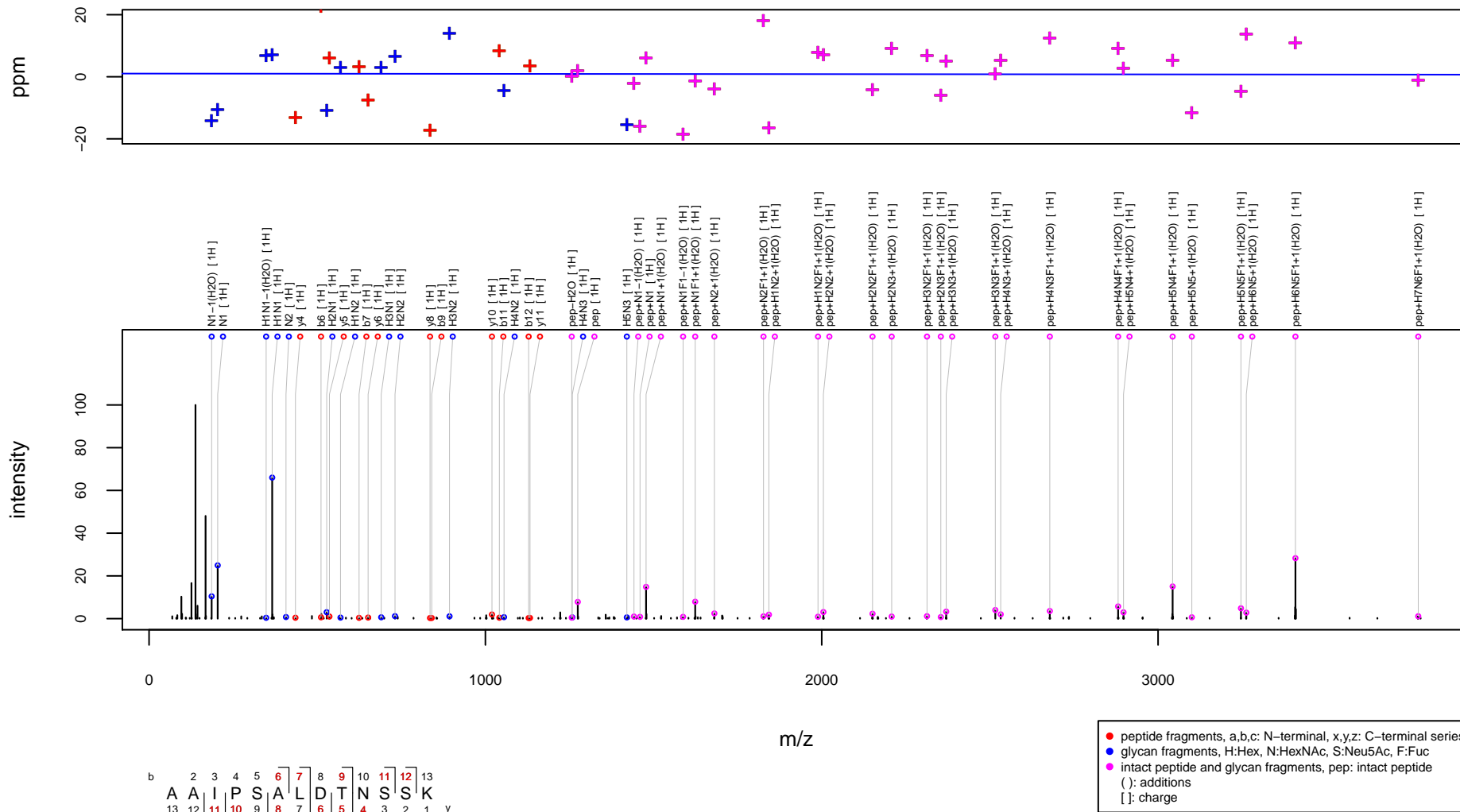
m/z 976.3981 charge 4 scan 0−0

Score= 52.32 , Hits= 35 , Explained Intensity= 0.31

Peptide: PIGR_HUMAN[498,515]:WNNTGCQALPSQDEGPSK

Glycan: SHNH(HNH)HNN, S1H5N4

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

b 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
W N N T G C Q A L P S Q D E G P S K
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID − *Mon Feb 17 09:50:36 2014*
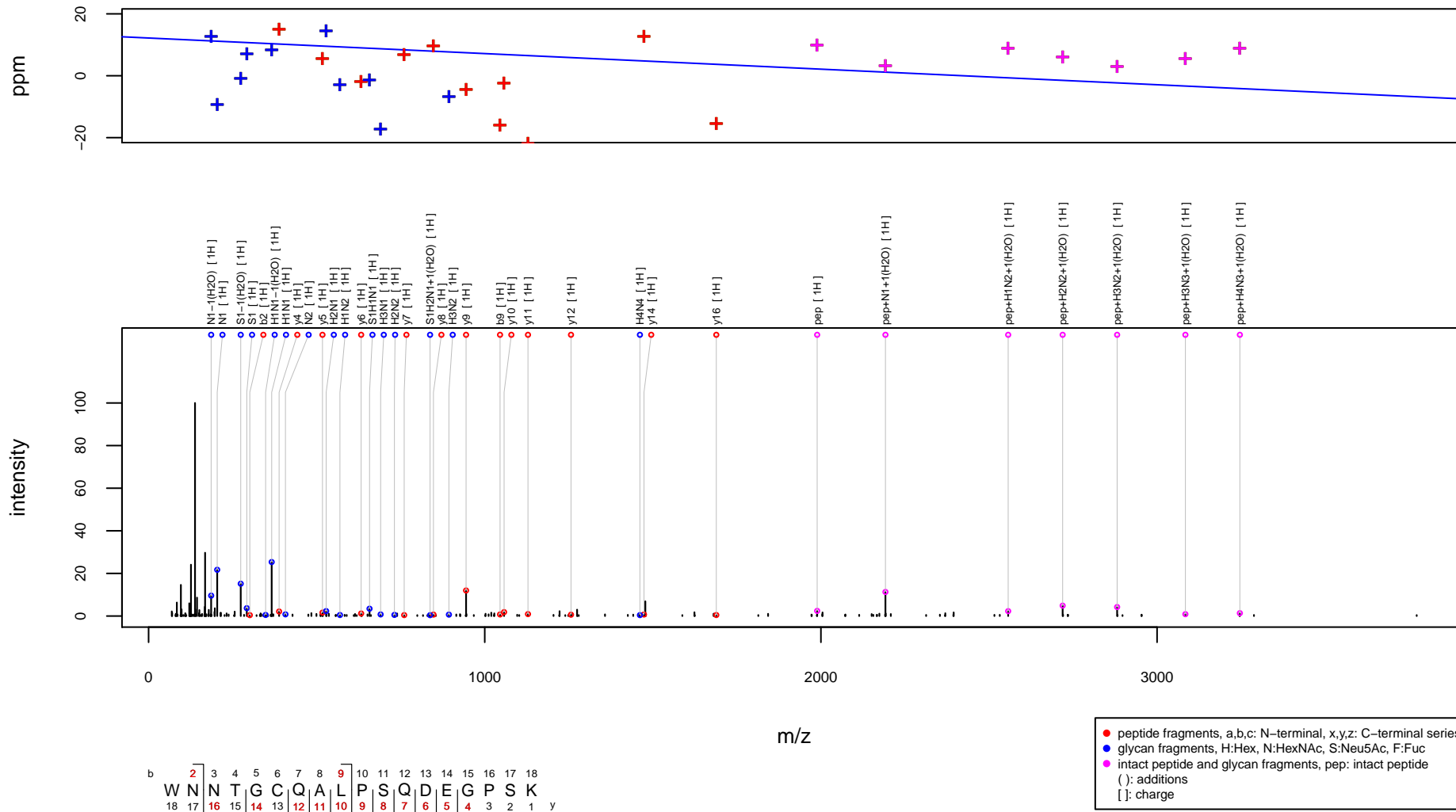
m/z 1136.8113 charge 3 scan 0–0

Score= 74.93 , Hits= 51 , Explained Intensity= 0.41

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HNH(HN(HN)H)HN(F)N, H6N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:36 2014*
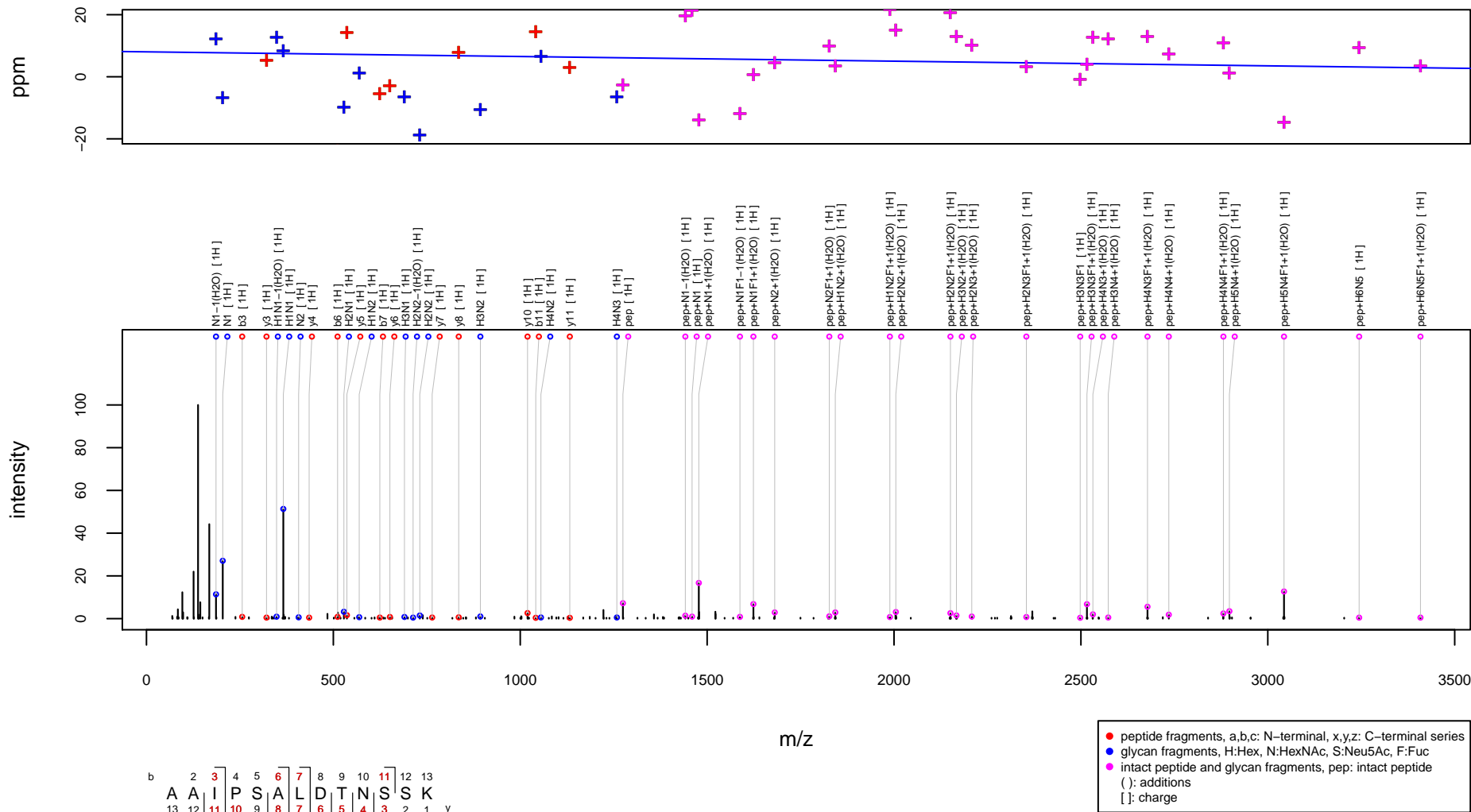
m/z 1112.1368 charge 3 scan 0–0

Score= 74.36 , Hits= 51 , Explained Intensity= 0.46

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(HNH)HN(F)N, S1H5N4F1

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series

glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc

intact peptide and glycan fragments, pep: intact peptide

( ): additions

[ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13

A A I P S A L D T N S S K

13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:37 2014*
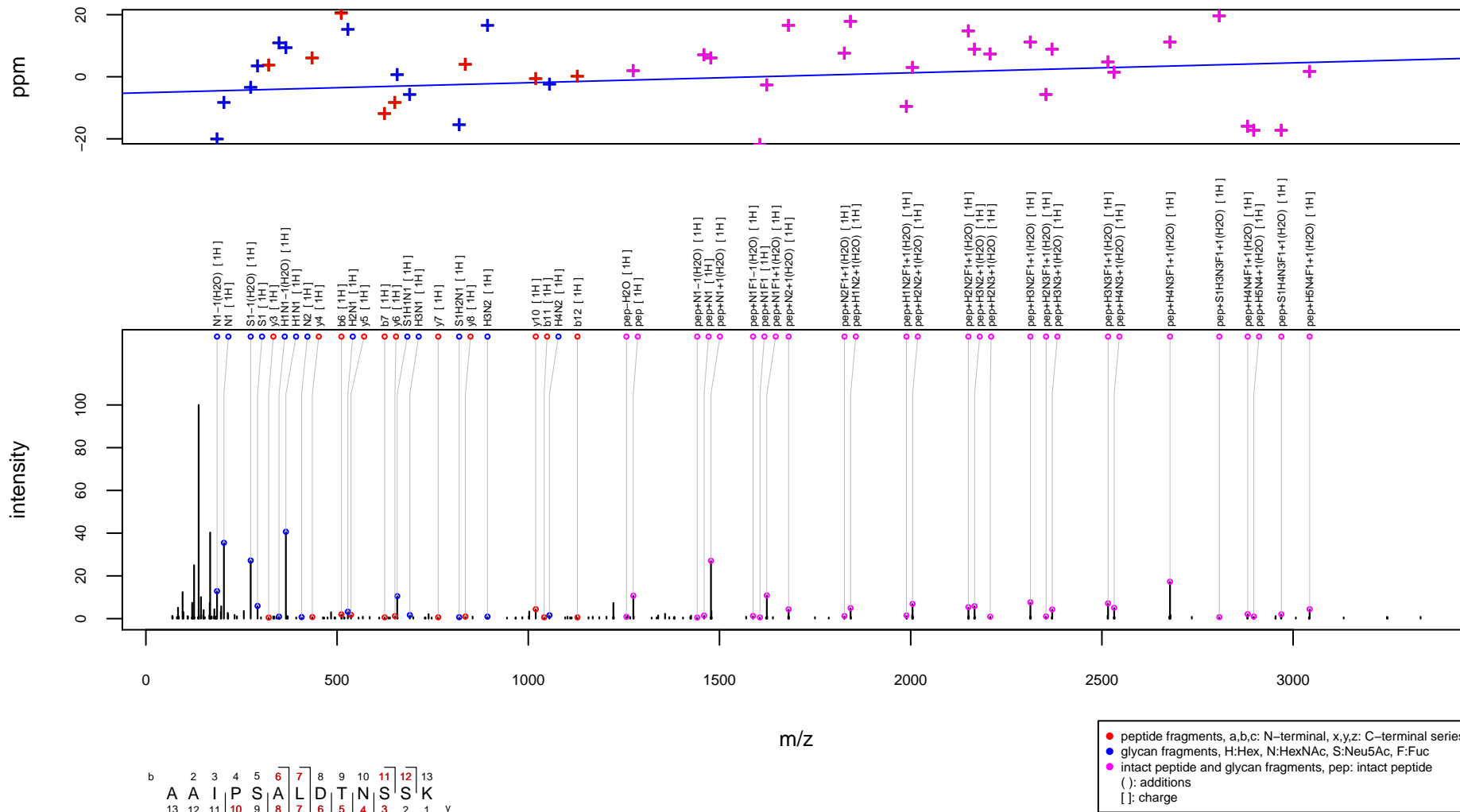
m/z 1082.7946 charge 3 scan 0–0

Score= 79.97 , Hits= 54 , Explained Intensity= 0.39

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: HNH(HNH)(N)HN(F)N, H5N5F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series (red)
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc (blue)
- intact peptide and glycan fragments, pep: intact peptide (magenta)
- ( ): additions
- [ ]: charge
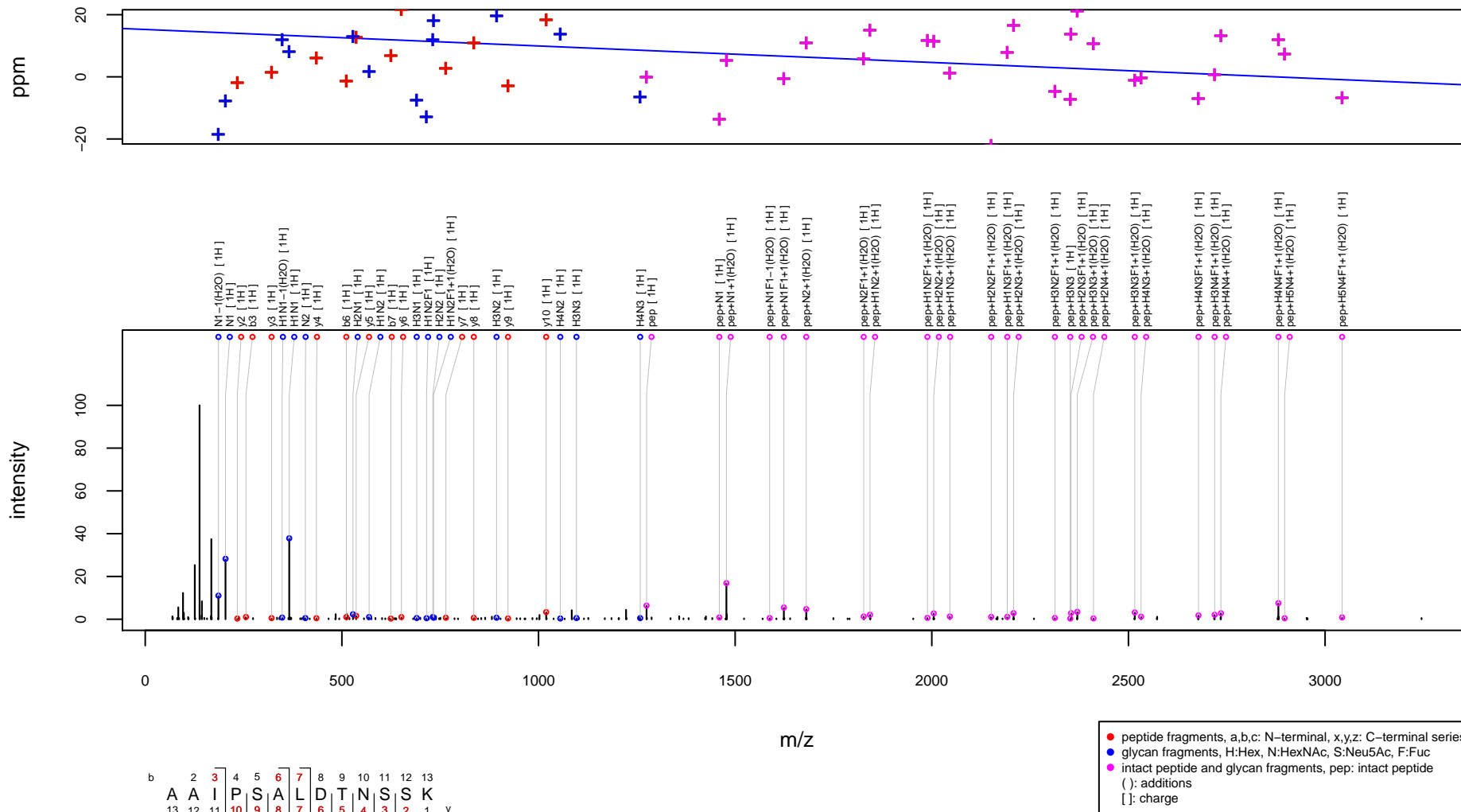
m/z 1063.446 charge 3 scan 0−0

Score= 60.24 , Hits= 43 , Explained Intensity= 0.39

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S1H5N4

Charge: 3H

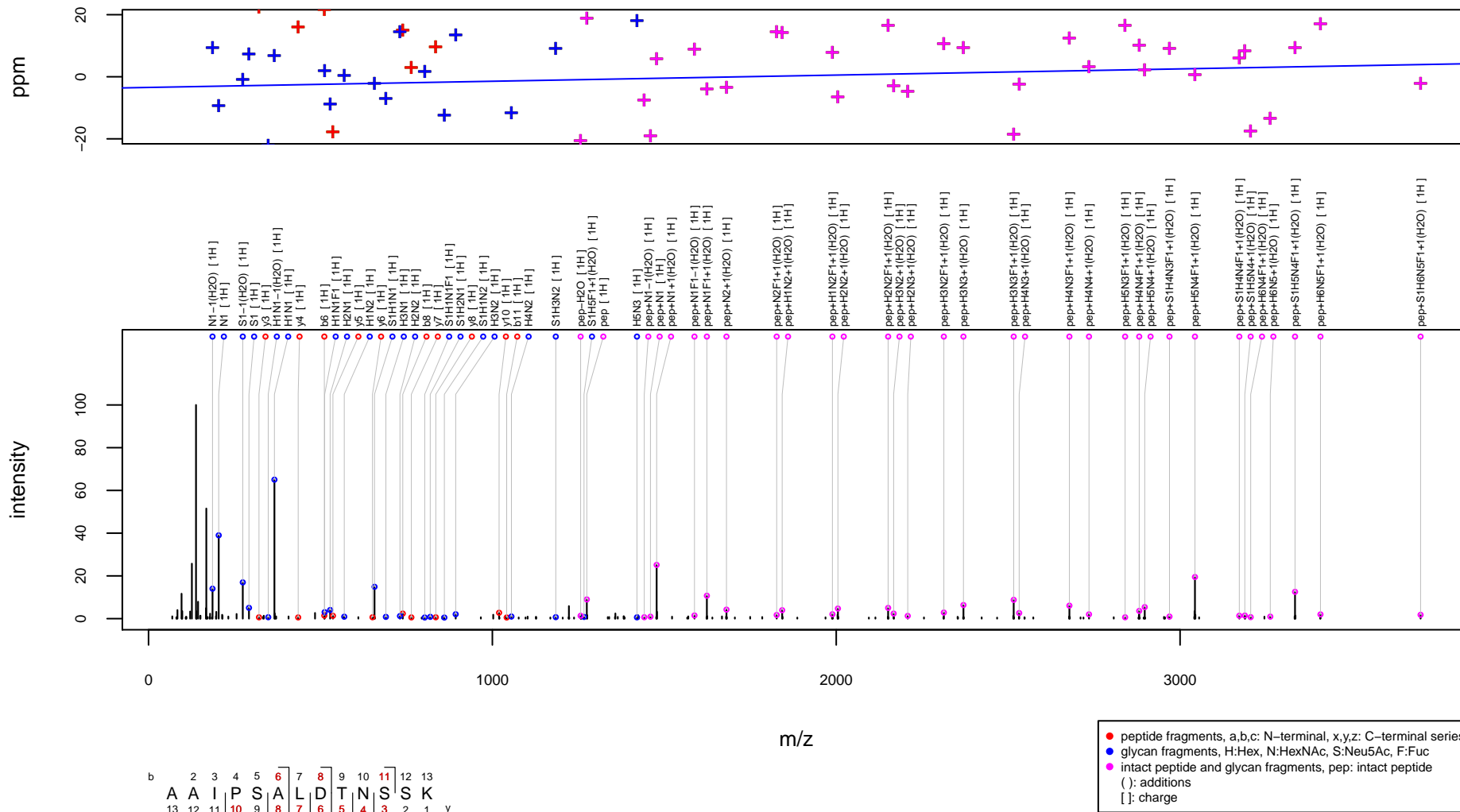peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:37 2014*

79
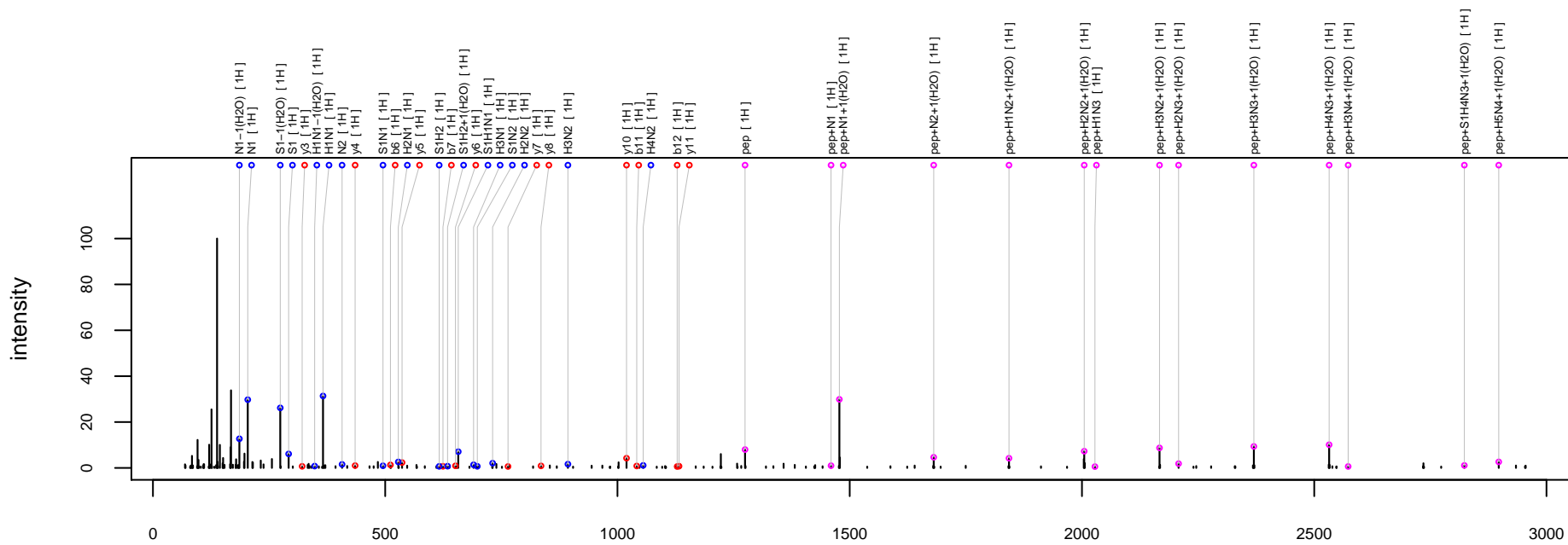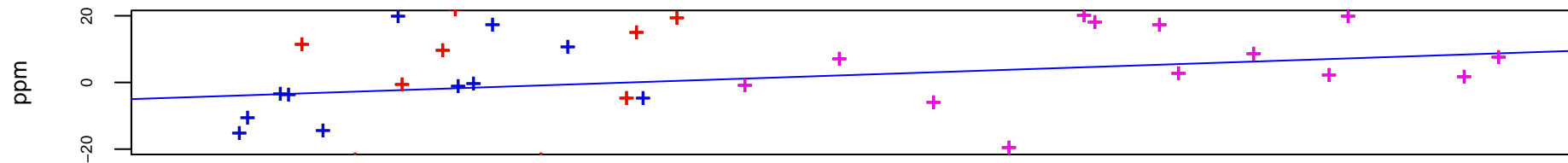
m/z 866.8555 charge 4 scan 0–0

Score= 49.11 , Hits= 32 , Explained Intensity= 0.31

Peptide: VASN_HUMAN[112,121]:LHEITNETFR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:37 2014*
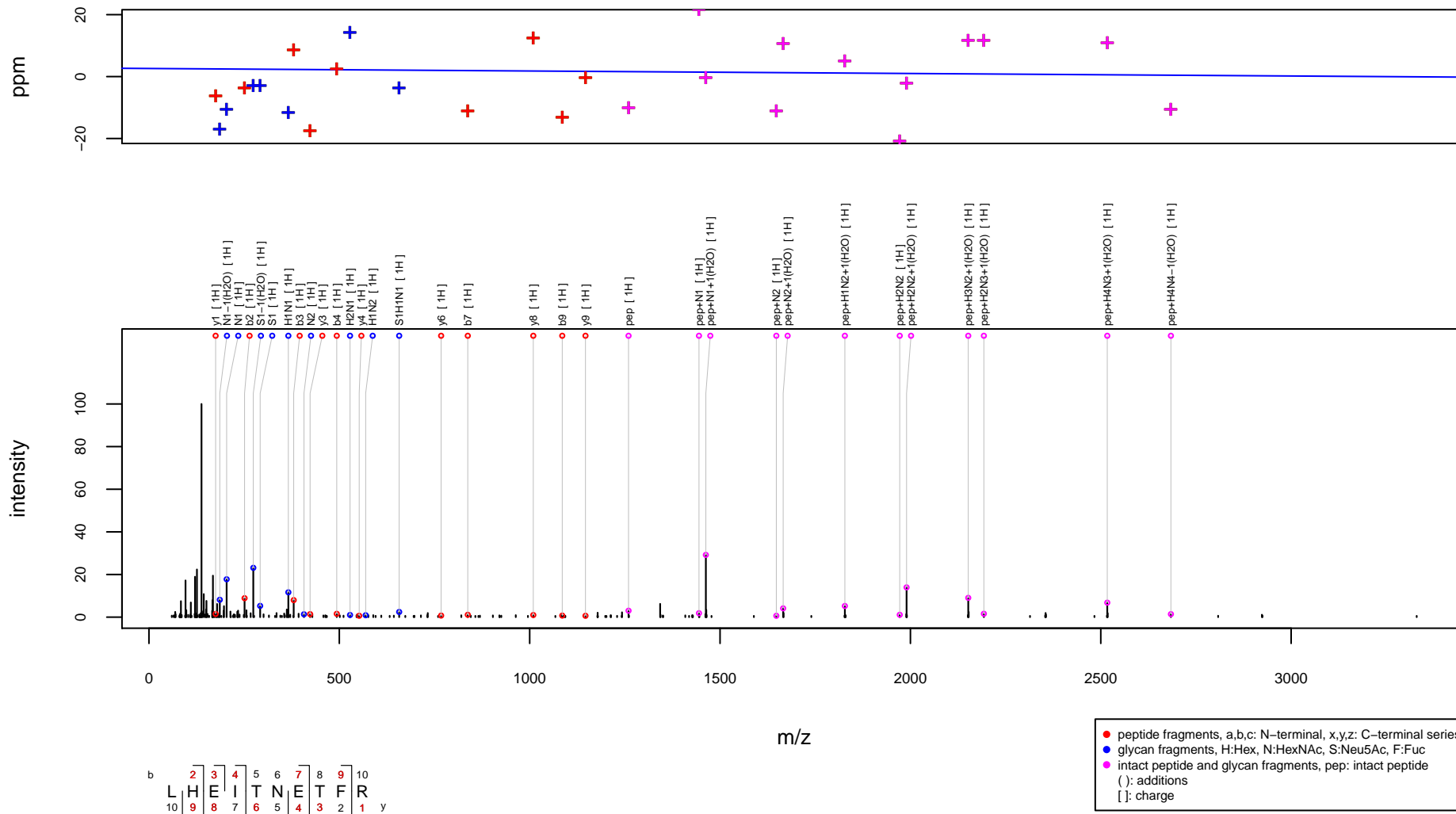
m/z 1025.18 charge 4 scan 0–0

Score= 54.83 , Hits= 36 , Explained Intensity= 0.32

Peptide: CERU_HUMAN[129,144]:EHEGAIYPDNTTDFQR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:38 2014*

m/z 1125.4701 charge 3 scan 0–0

Score= 99.47 , Hits= 70 , Explained Intensity= 0.55

Peptide: CUBN_HUMAN[1800,1810]:EGNATGHLVGR

Glycan: F(H)NH(F(H)NH)(N)HN(F)N, H5N5F3

Charge: 3H

ppm

intensity

m/z

b   2   3   4   5   6   7   8   9   10 11
E   G   N   A   T   G   H   L   V   G   R
11 10 9   8   7   6   5   4   3   2   1   y

- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:38 2014*

m/z 844.3534 charge 4 scan 0–0

Score= 66.29 , Hits= 49 , Explained Intensity= 0.22

Peptide: CUBN_HUMAN[1800,1810]:EGNATGHLVGR

Glycan: FHNH(FHNH)(N)HN(F)N, H5N5F3

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:38 2014*

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge
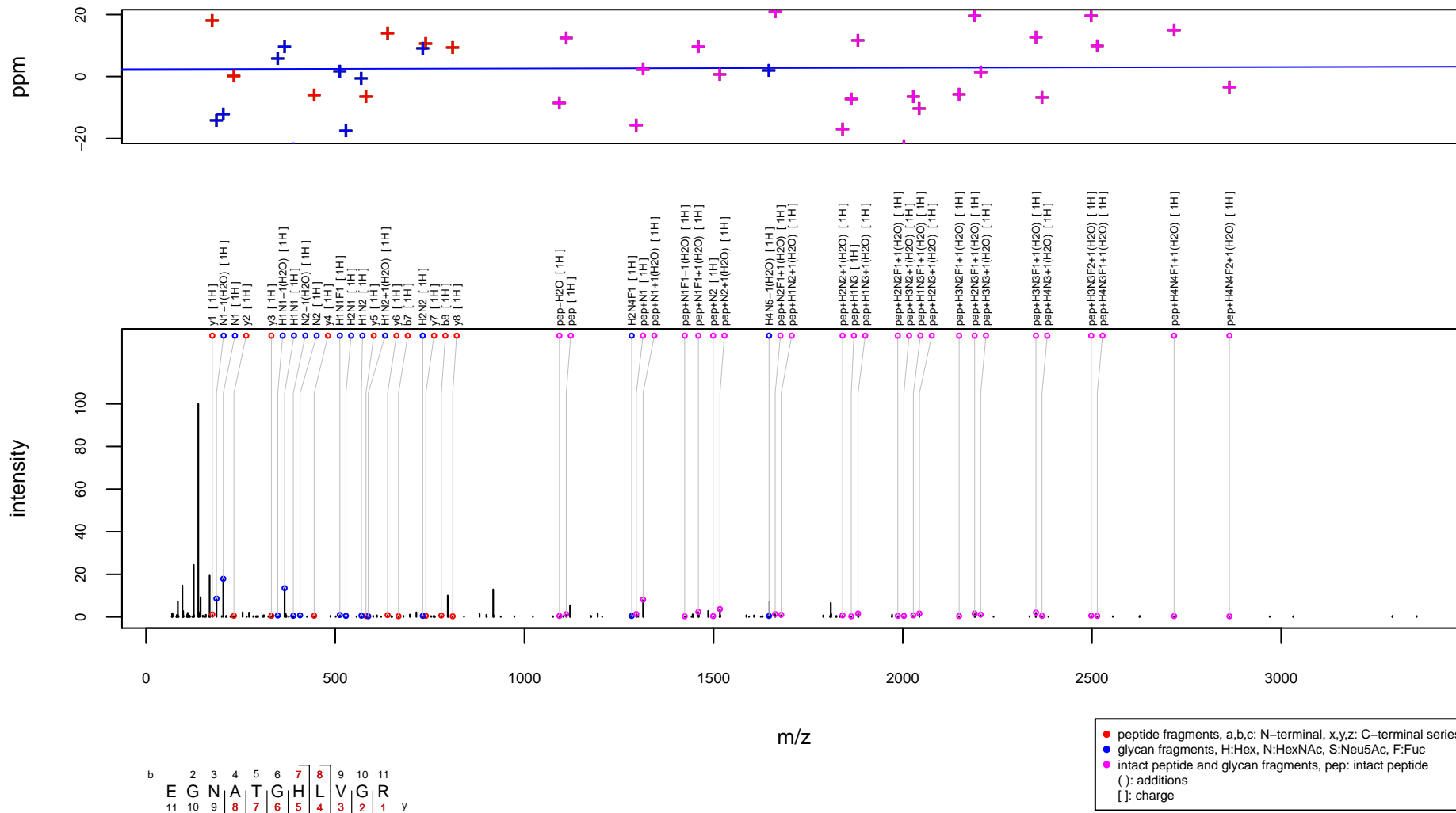
m/z 1269.308 charge 4 scan 0−0

Score= 83.14 , Hits= 55 , Explained Intensity= 0.55

Peptide: APOD_HUMAN[83,108]:ADGTVNQIEGEATPVNLTEPAKLEVK

Glycan: SHNH(SHNH)HN(F)N, S2H5N4F1

Charge: 4H

legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
     A D G T V N Q I E G E A T P V N L T E P A K L E V K
    26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:39 2014*

84
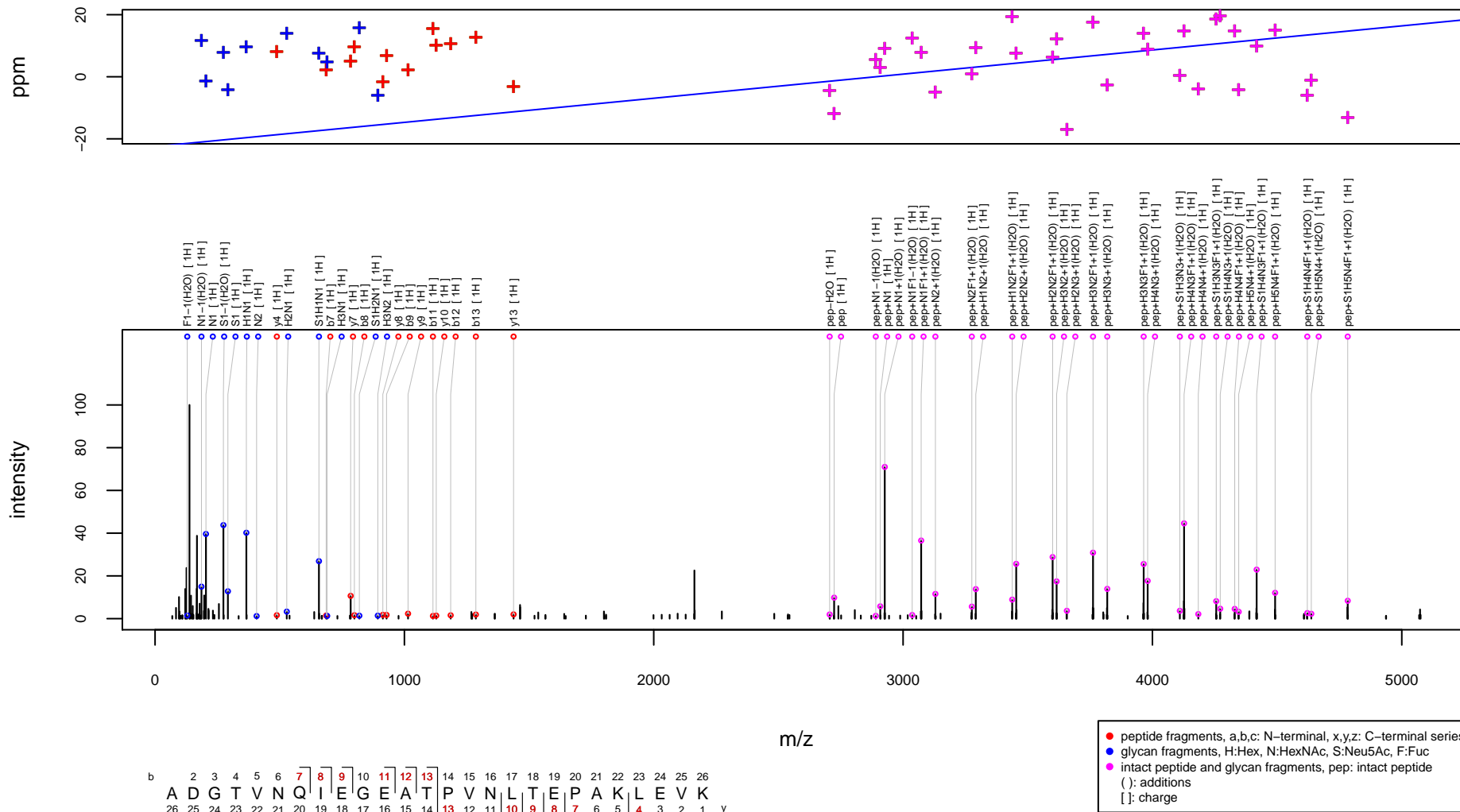
m/z 926.3891 charge 3 scan 0−0

Score= 57.09 , Hits= 35 , Explained Intensity= 0.43

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR

Glycan: SHNH(H)HNN, S1H4N3

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:40 2014*
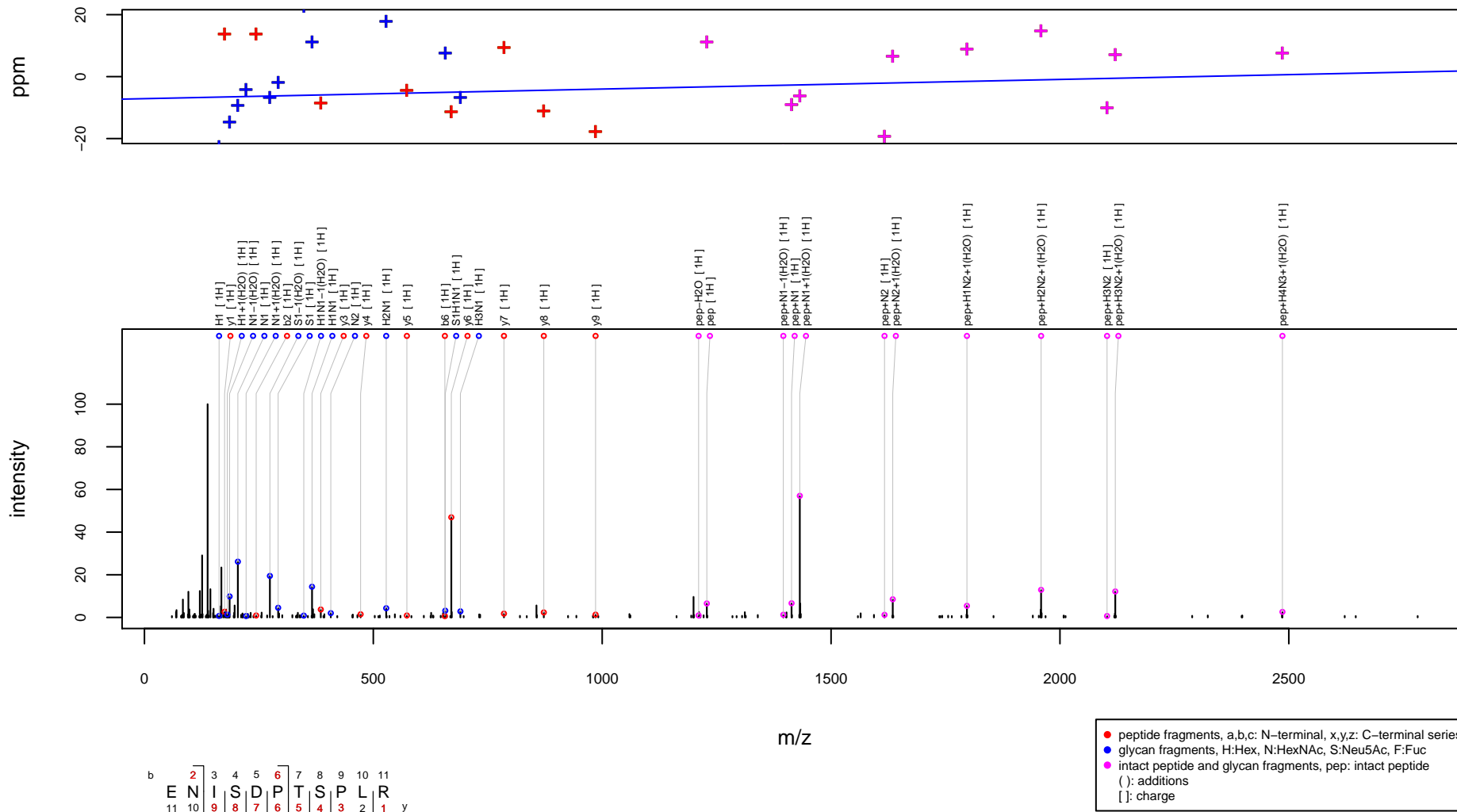
m/z 1053.7725 charge 3 scan 0–0

Score= 54.58 , Hits= 39 , Explained Intensity= 0.34

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: HNH(F(H)NH)(N)HNN, H5N5F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:40 2014*
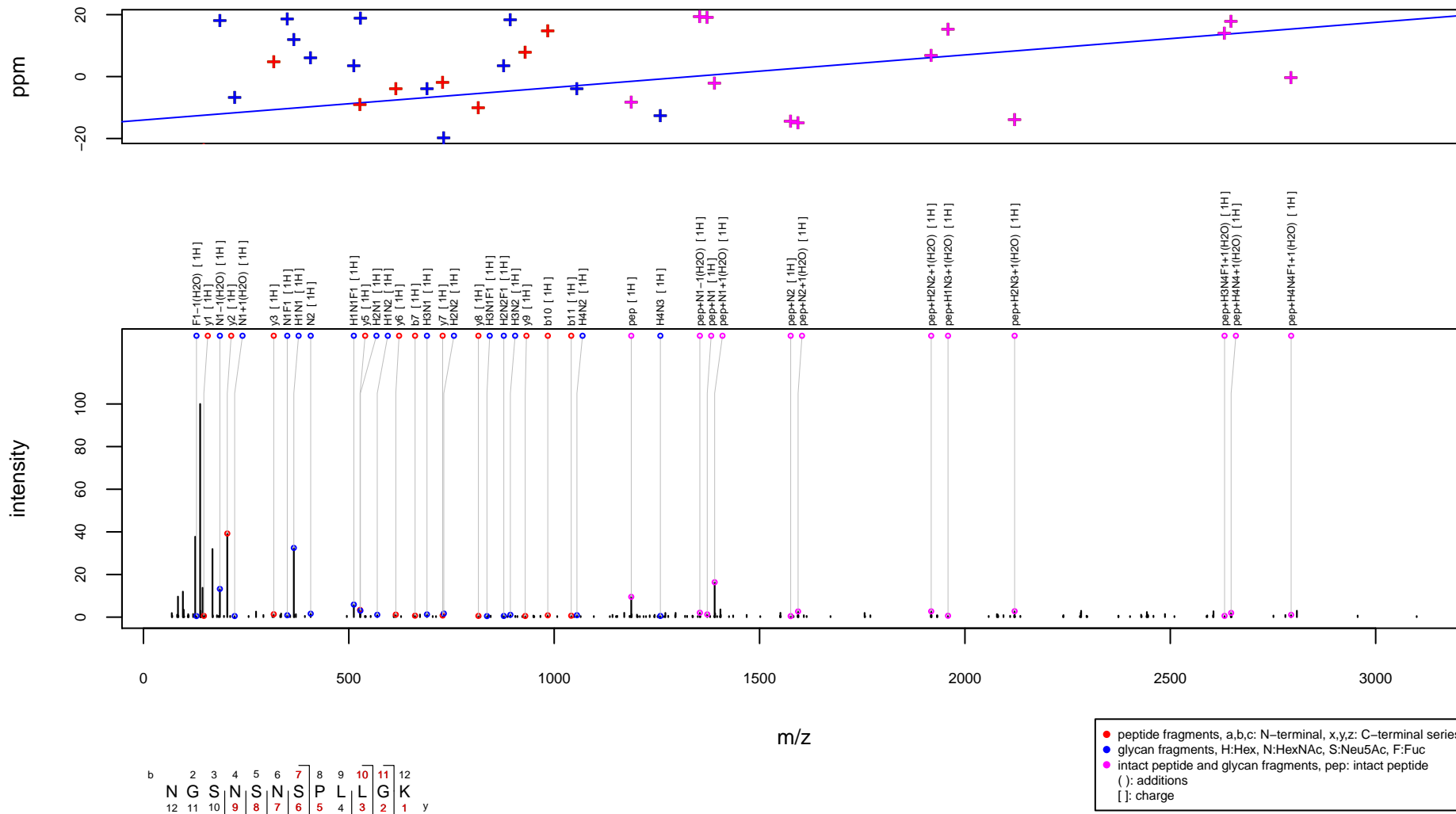
m/z 1067.4501 charge 3 scan 0–0

Score= 54.44 , Hits= 39 , Explained Intensity= 0.36

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: NN(HN)H(NH)HN(F)N, H4N6F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:40 2014*
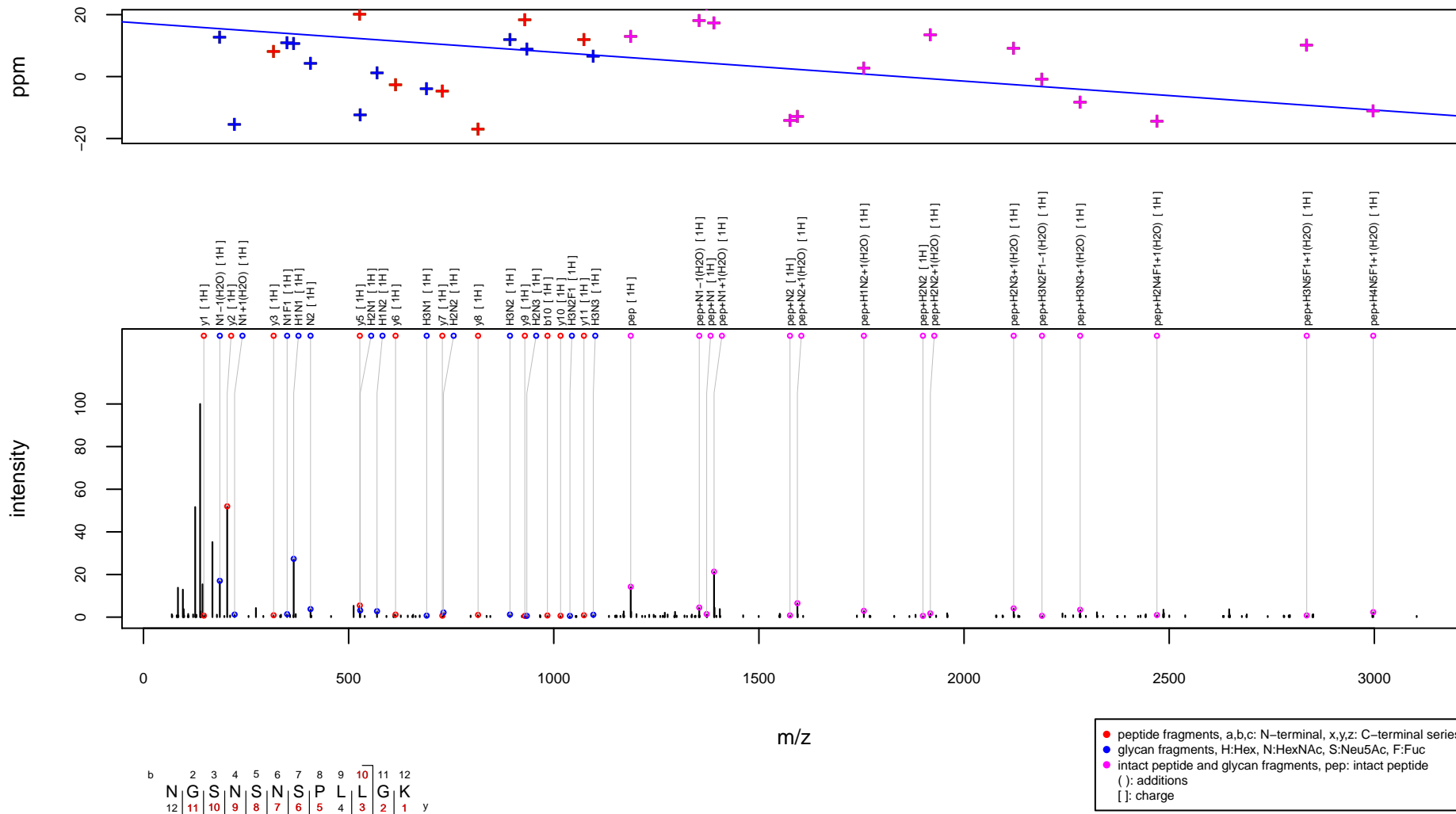
m/z 1301.5304 charge 3 scan 0–0

Score= 69.16 , Hits= 48 , Explained Intensity= 0.5

Peptide: PIGR_HUMAN[498,515]:WNNTGCQALPSQDEGPSK

Glycan: S1H5N4

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
W N N T G C Q A L P S Q D E G P S K
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:41 2014*
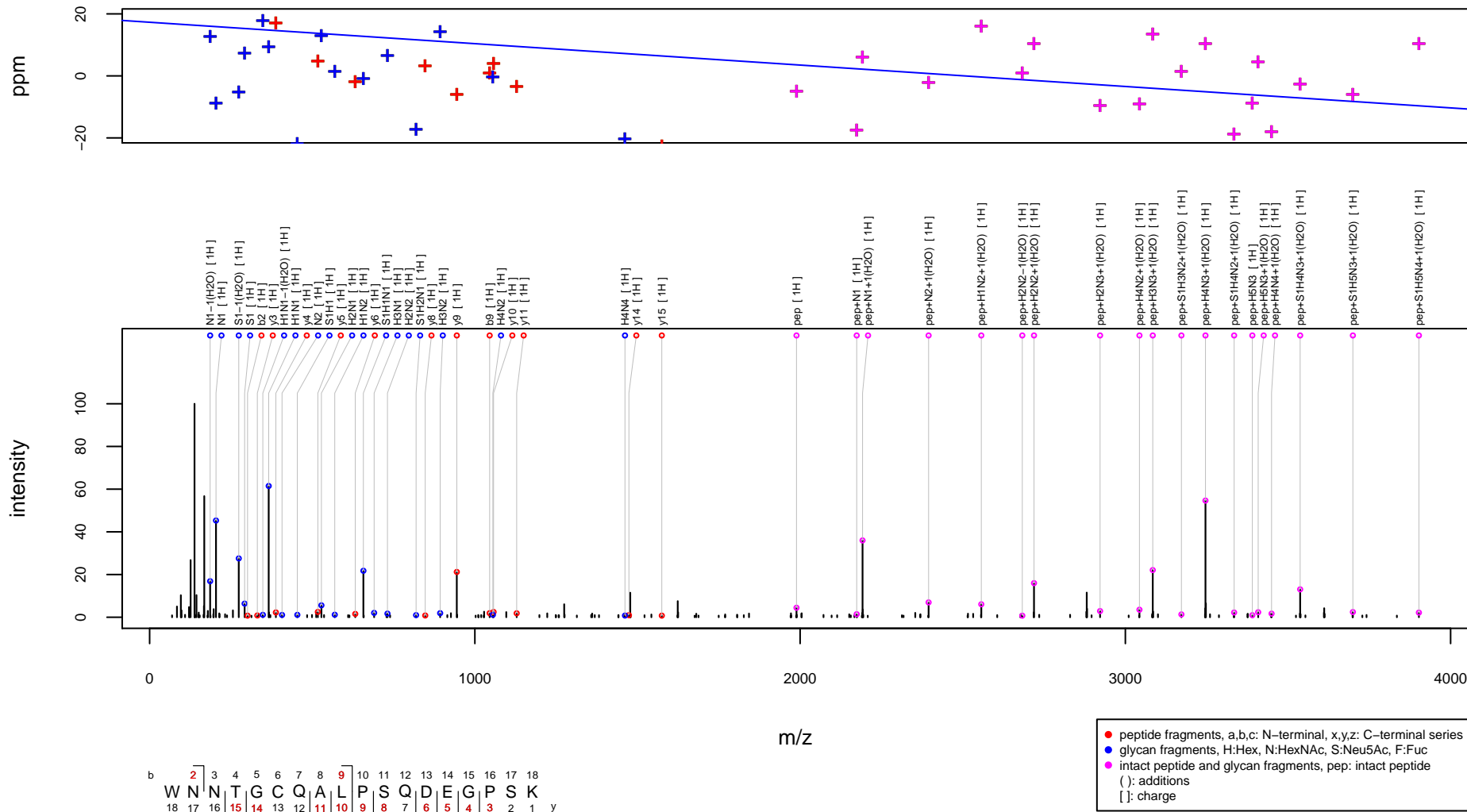
m/z 1139.2382 charge 4 scan 0–0

Score= 56.5 , Hits= 64 , Explained Intensity= 0.48

Peptide: GGTL1_HUMAN[160,173]:LHNQLLPNVTTVER

Glycan: S1H6N6F3

Charge: 4H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series (red)
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc (blue)
- intact peptide and glycan fragments, pep: intact peptide (magenta)
- ( ): additions
- [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:41 2014*
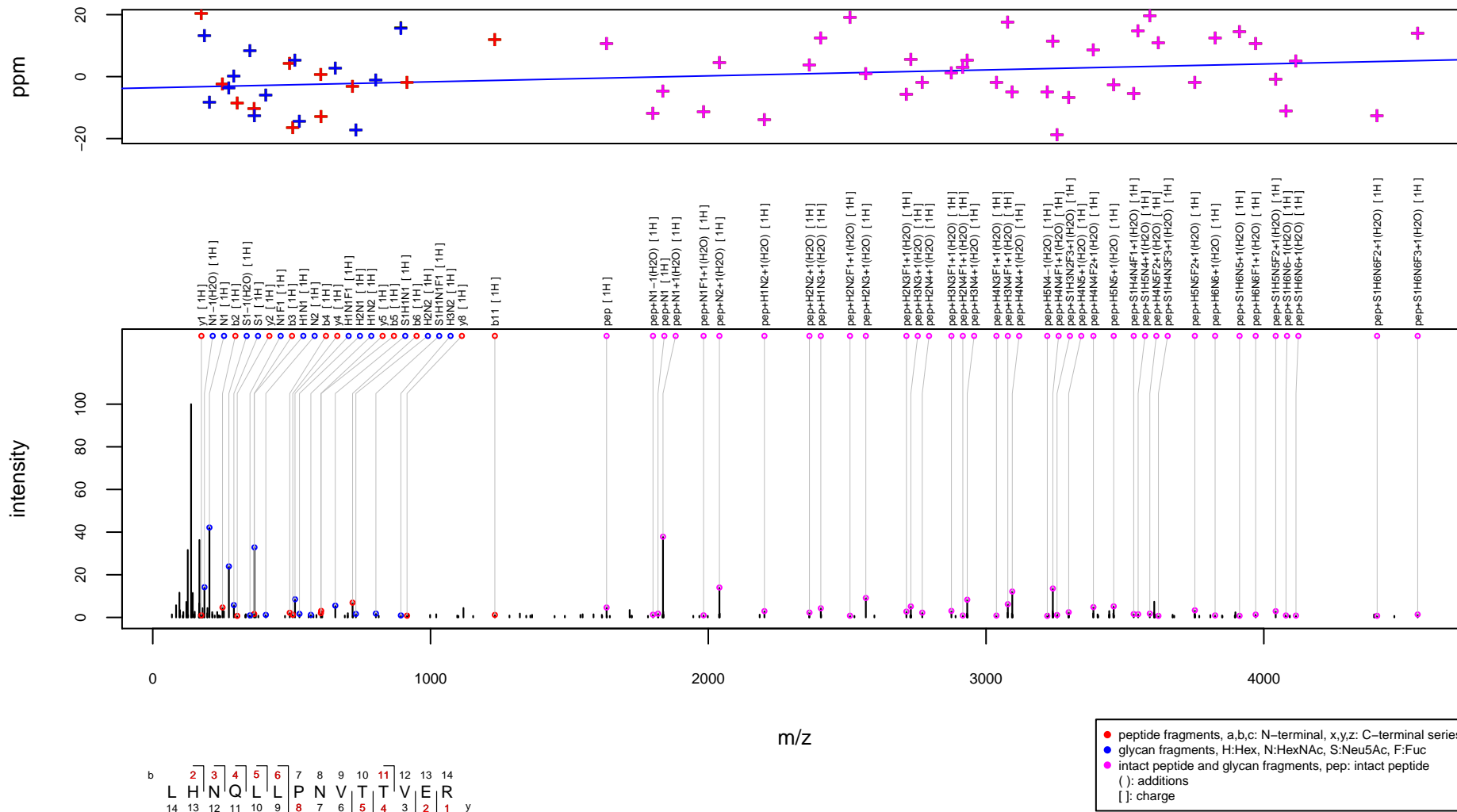
m/z 1233.8455 charge 3 scan 0−0

Score= 71.32 , Hits= 63 , Explained Intensity= 0.51

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S1H6N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1244.8206 charge 3 scan 0–0

Score= 52.94 , Hits= 35 , Explained Intensity= 0.44

Peptide: APOD_HUMAN[61,73]:CIQANYSLMENGK

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 3H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

91
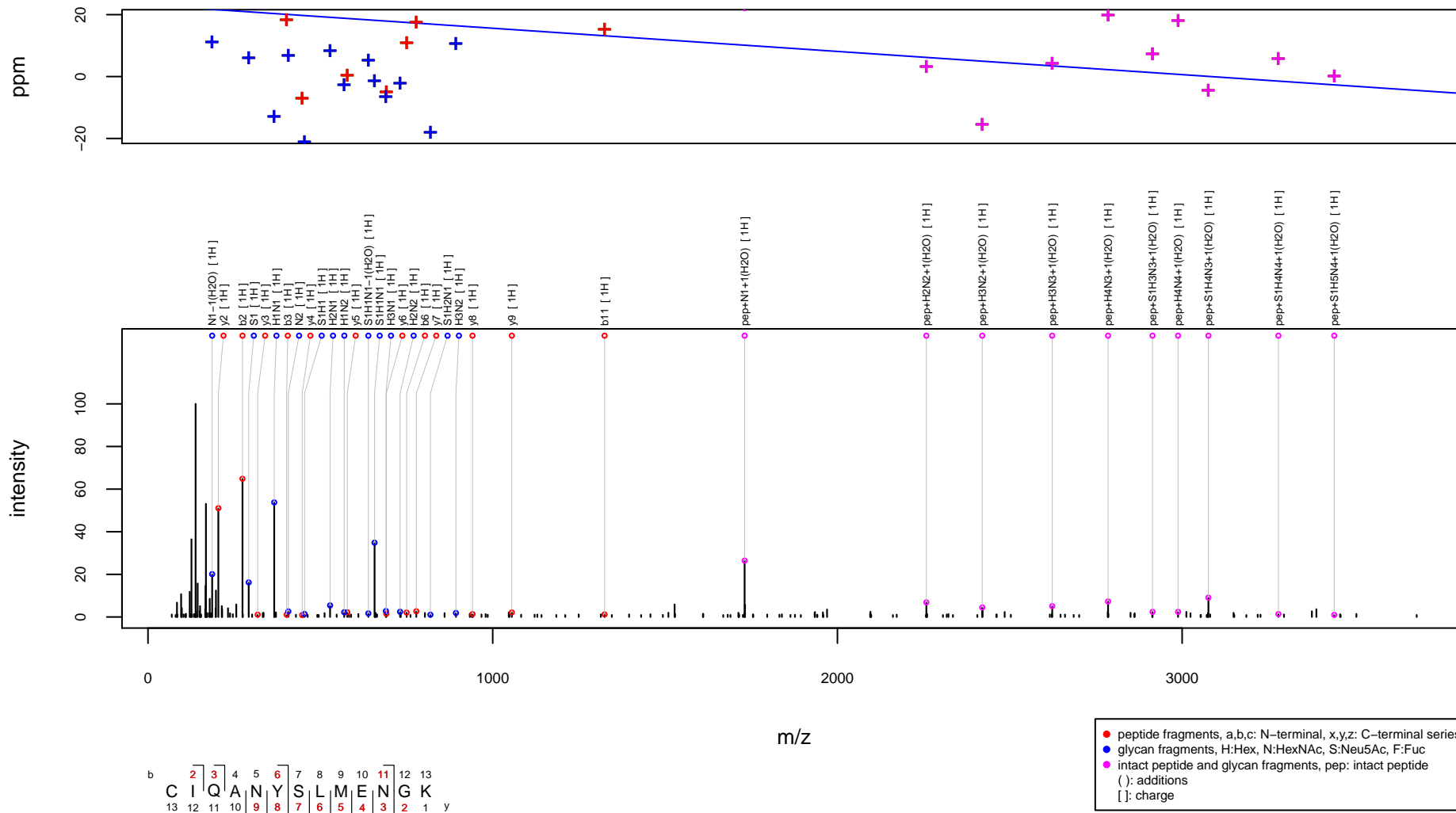
m/z 1019.6771 charge 4 scan 0–0

Score= 51.93 , Hits= 39 , Explained Intensity= 0.39

Peptide: CLUS_HUMAN[372,385]:LANLTQGEDQYYLR

Glycan: SNNH(SHNH)HN(F)N, S2H4N5F1

Charge: 4H

b 2 **3** **4** 5 6 7 8 9 10 11 12 13 14
L A N L T Q G E D Q Y Y L R
14 13 12 **11** **10** **9** **8** 7 **6** **5** **4** **3** **2** **1** y

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:42 2014*
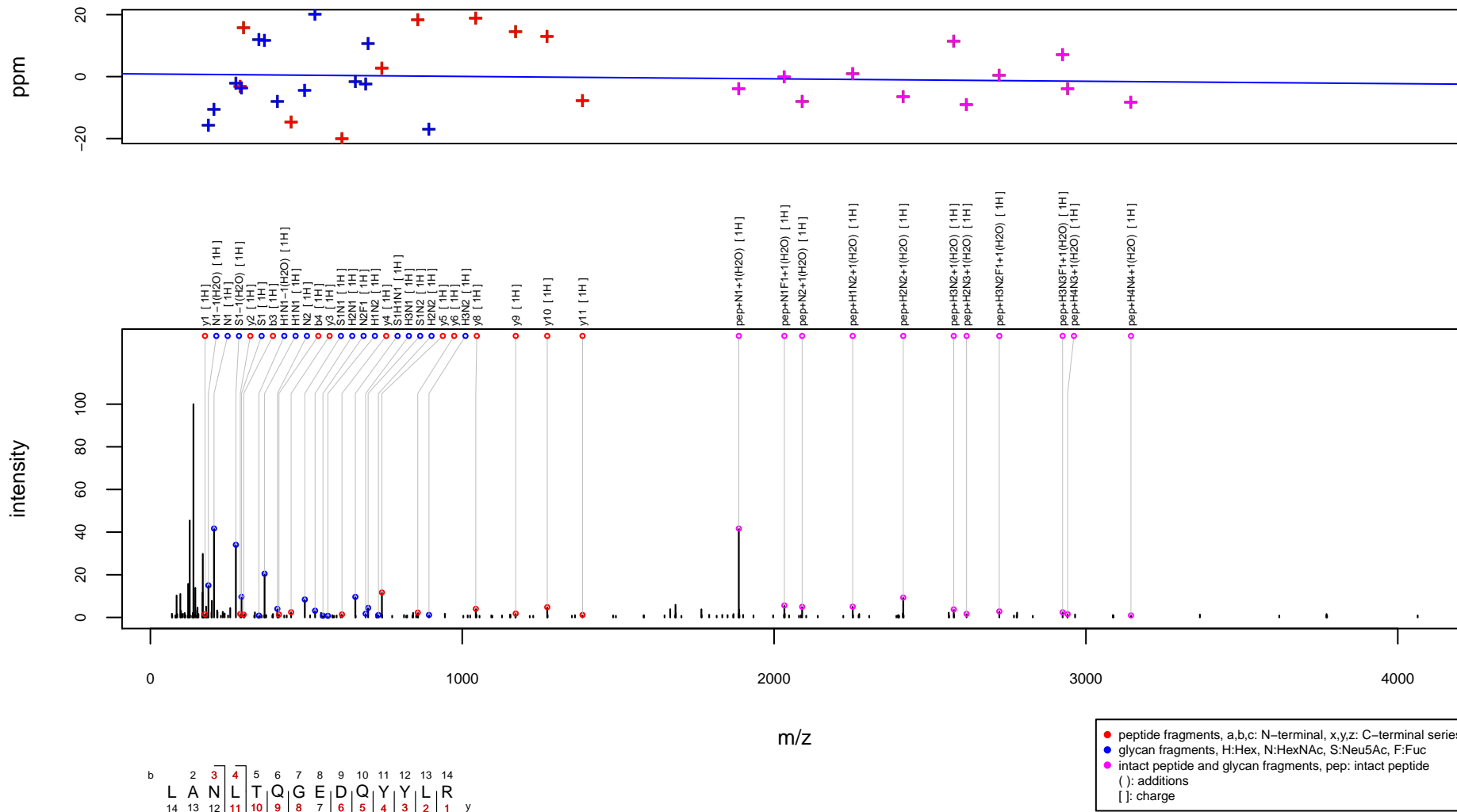
m/z 990.419 charge 3 scan 0–0

Score= 59.35 , Hits= 40 , Explained Intensity= 0.36

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(H)HN(F)N, S1H4N3F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

**Glycopeptide ID –** *Mon Feb 17 09:50:43 2014*
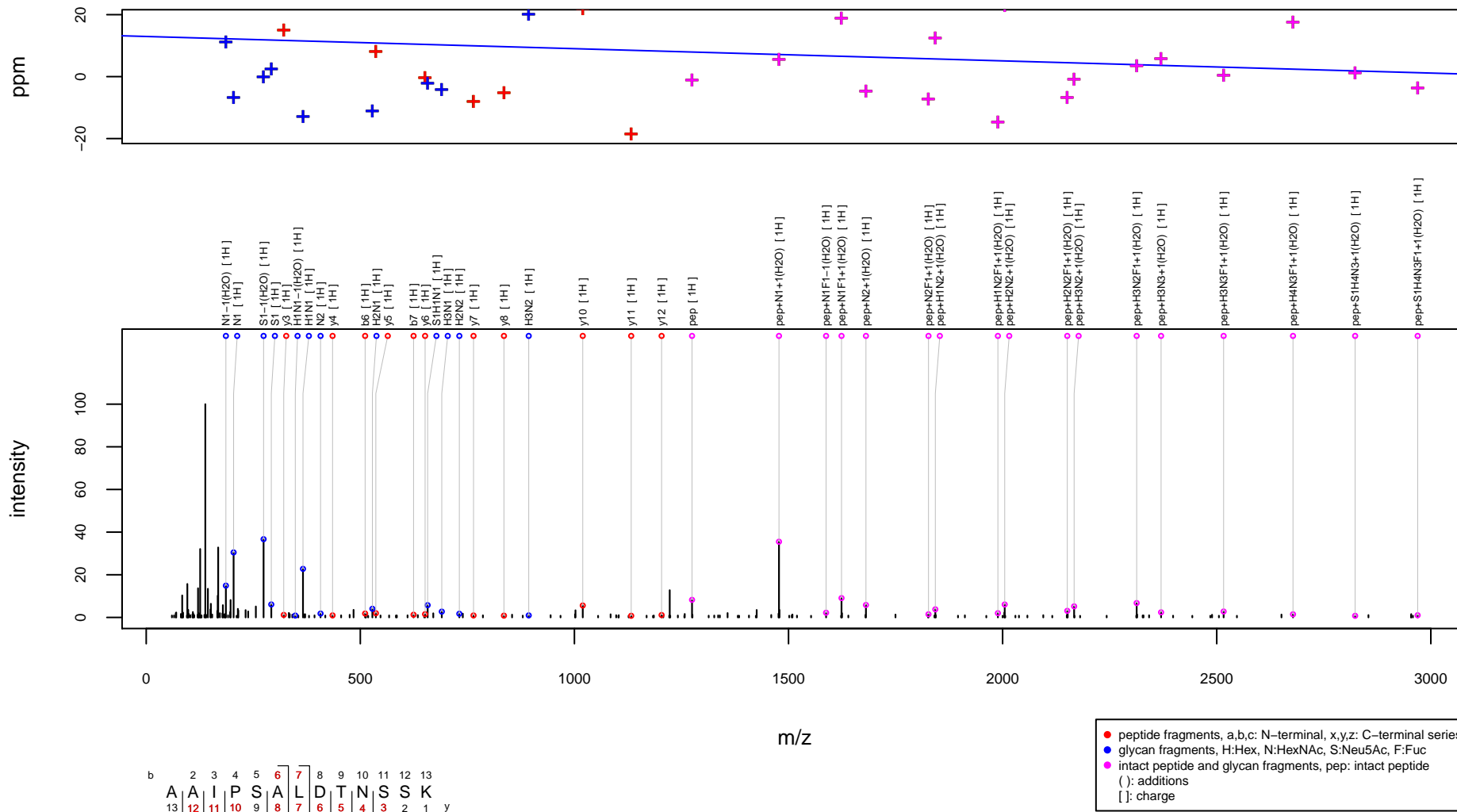
m/z 972.4312 charge 3 scan 0–0

Score= 34.35 , Hits= 26 , Explained Intensity= 0.12

Peptide: Z518A_HUMAN[404,416]:AEEGPNASSGFMK

Glycan: H3N4F2

Charge: 3H
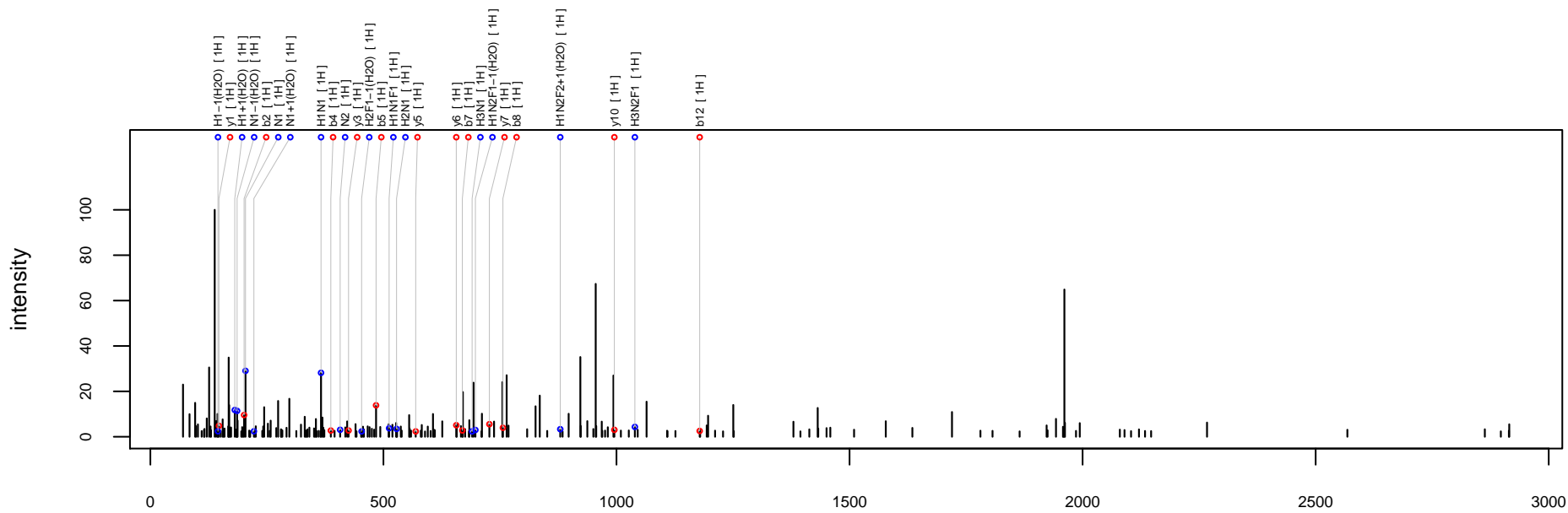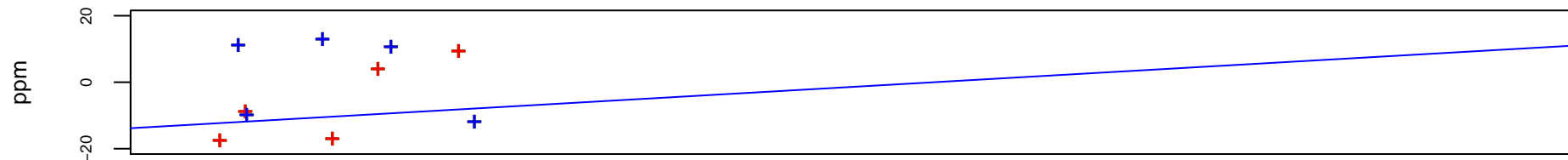
b   2 3   4   5   6   7   8   9 10 11 12 13
A   E   E   G   P   N   A   S   S   G   F   M   K
13 12 11 10 9   8   7   6   5   4   3   2   1   y

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:43 2014*

m/z 994.9092 charge 4 scan 0−0

Score= 49.16 , Hits= 33 , Explained Intensity= 0.32

Peptide: FETUA_HUMAN[145,159]:VCQDCPLLAPLNDTR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
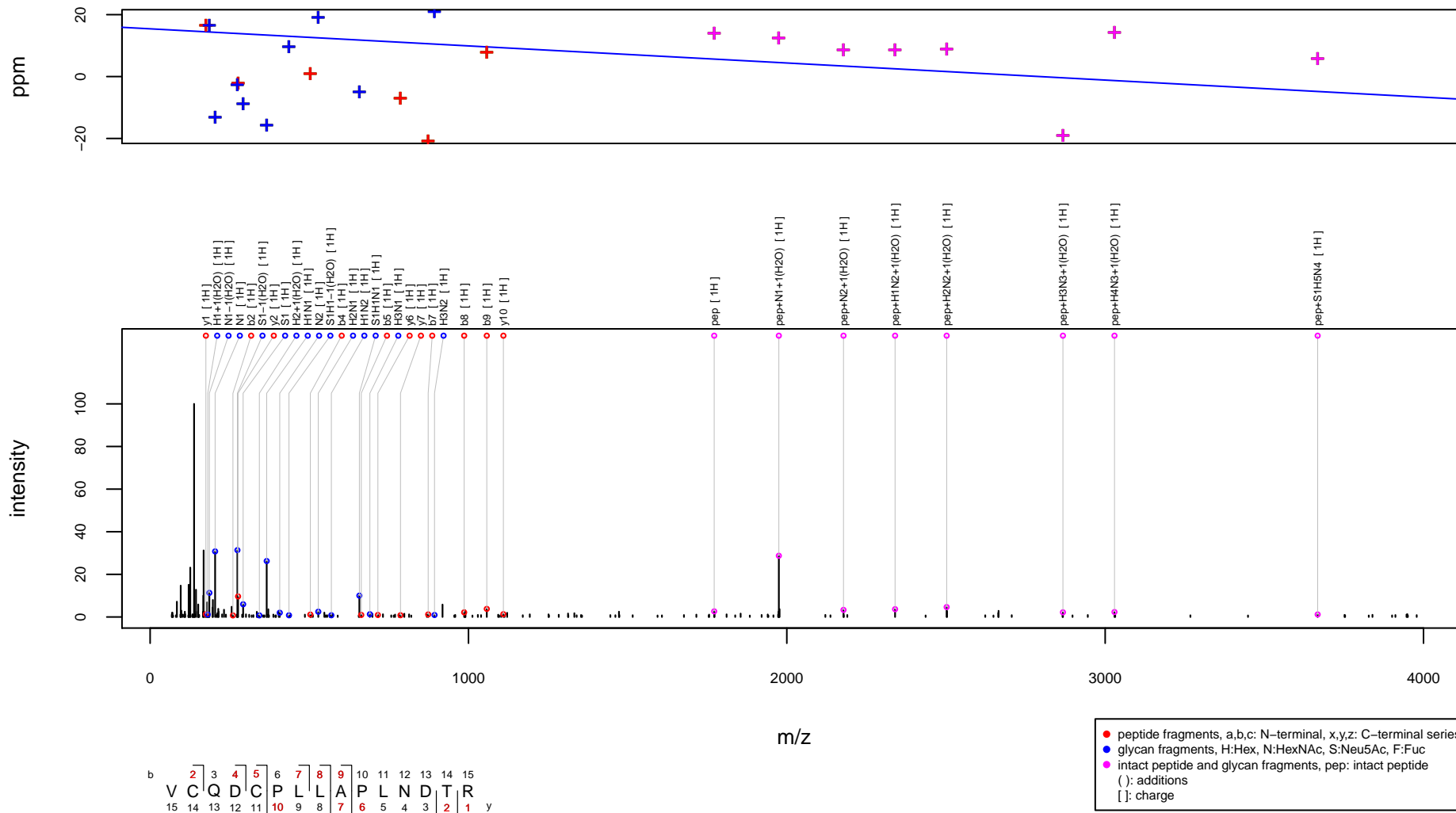
m/z 1098.136 charge 3 scan 0−0

Score= 56.91 , Hits= 41 , Explained Intensity= 0.36

Peptide: LAMP2_HUMAN[352,361]:VQPFNVTQGK

Glycan: NNH(HN(HN)H)HN(F)N, H5N6F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:43 2014*
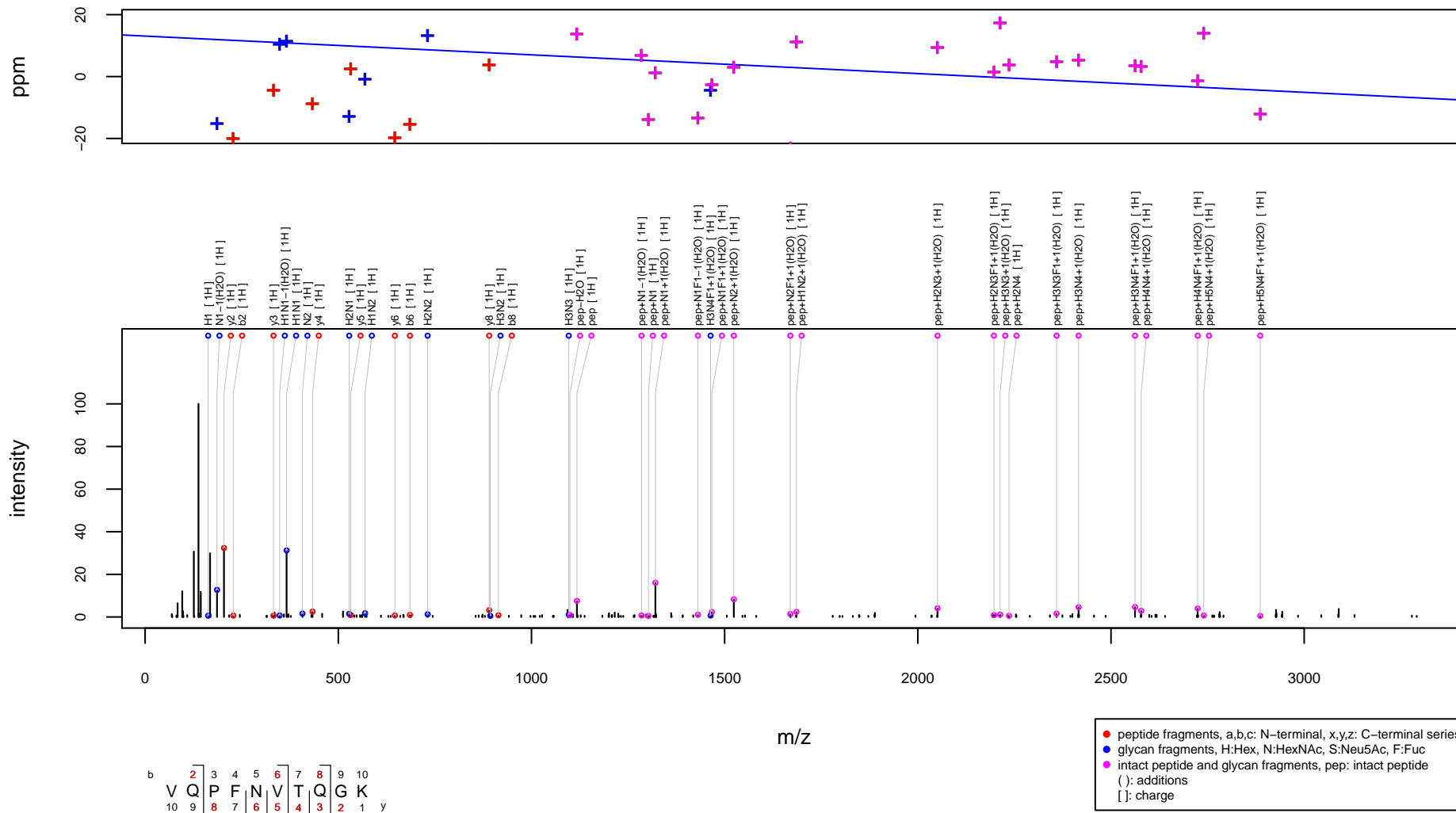
m/z 1001.0784 charge 3 scan 0–0

Score= 62.1 , Hits= 39 , Explained Intensity= 0.47

Peptide: THRB_HUMAN[118,124]:GHVNITR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:44 2014*
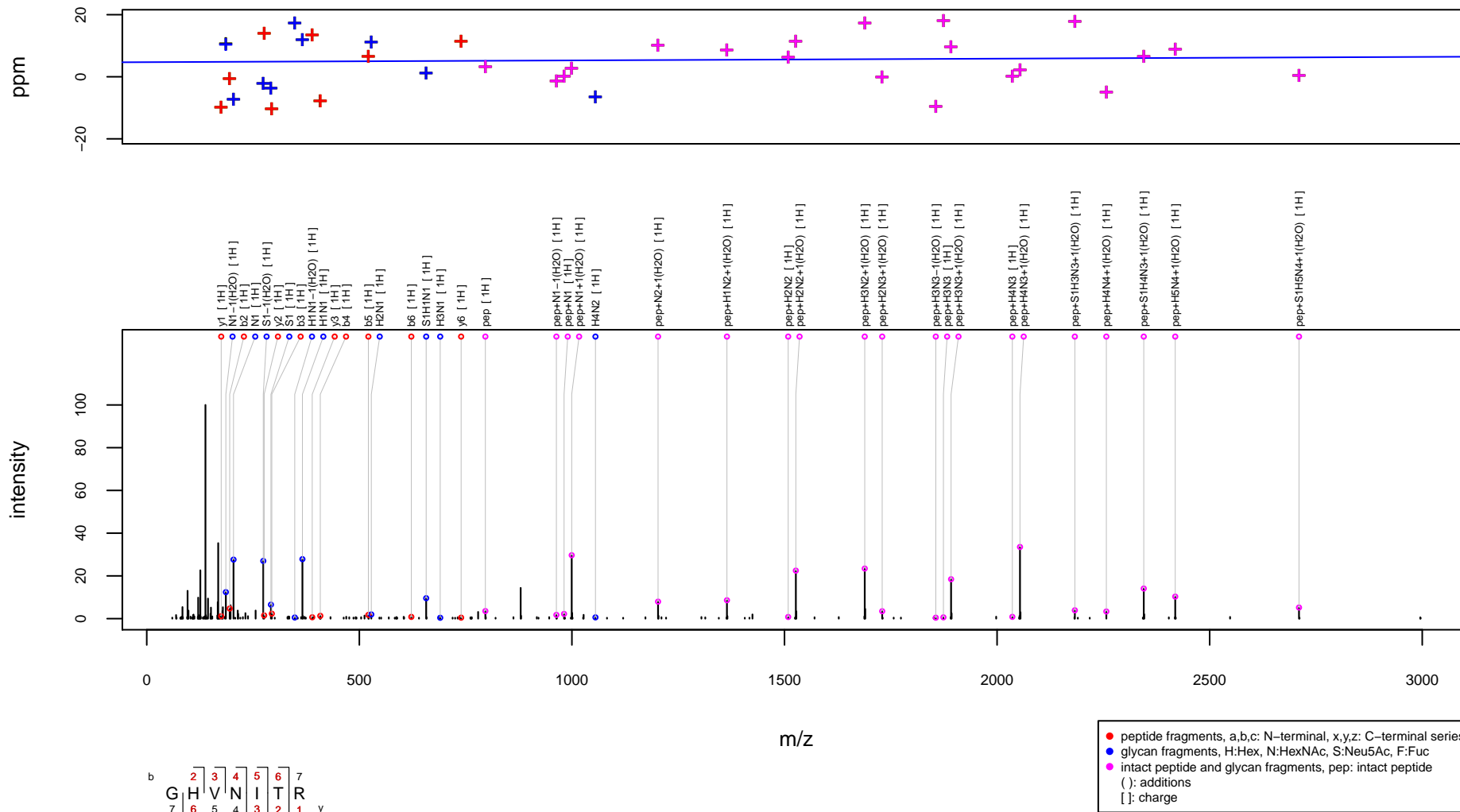
m/z 950.6725 charge 4 scan 0−0

Score= 50.96 , Hits= 46 , Explained Intensity= 0.39

Peptide: AMPN_HUMAN[126,136]:KLNYTLSQGHR

Glycan: H6N6F2

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
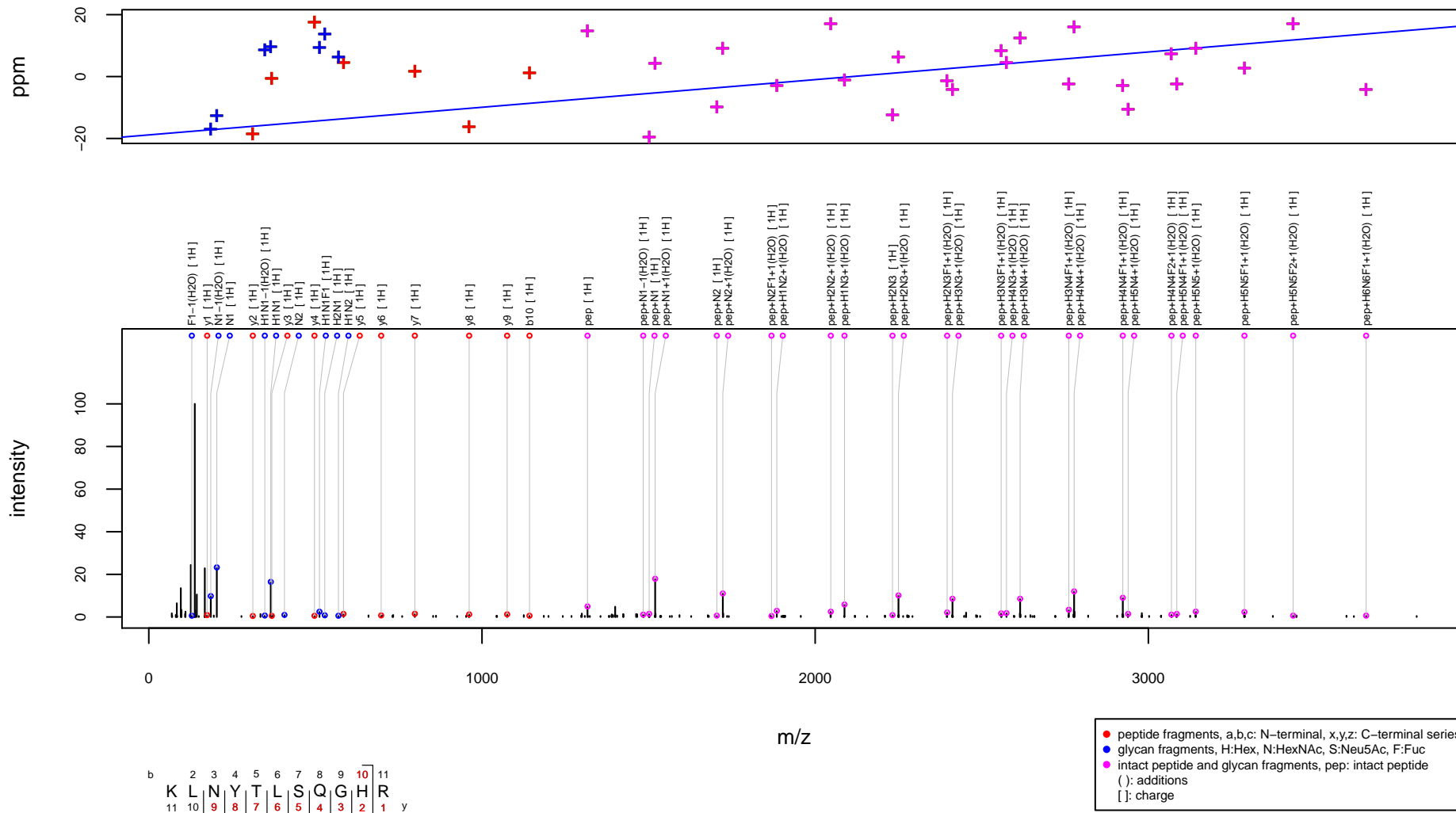
m/z 1145.9838 charge 4 scan 0–0

Score= 42.62 , Hits= 42 , Explained Intensity= 0.32

Peptide: MGA_HUMAN[817,834]:GGYIFPTQQPNTTTLASR

Glycan: H6N6F3

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:44 2014*
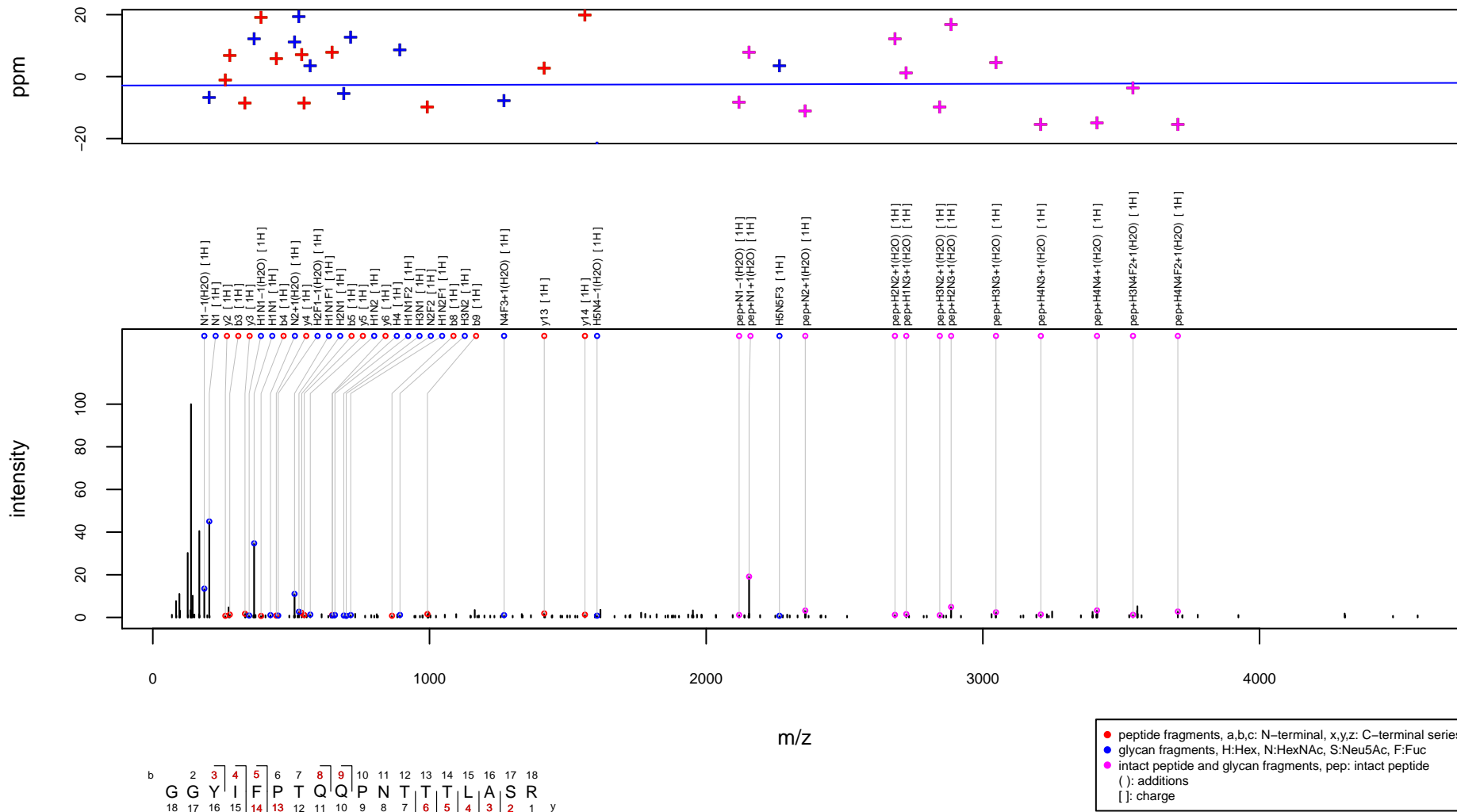
m/z 859.1006 charge 4 scan 0−0

Score= 48.32 , Hits= 33 , Explained Intensity= 0.37

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR
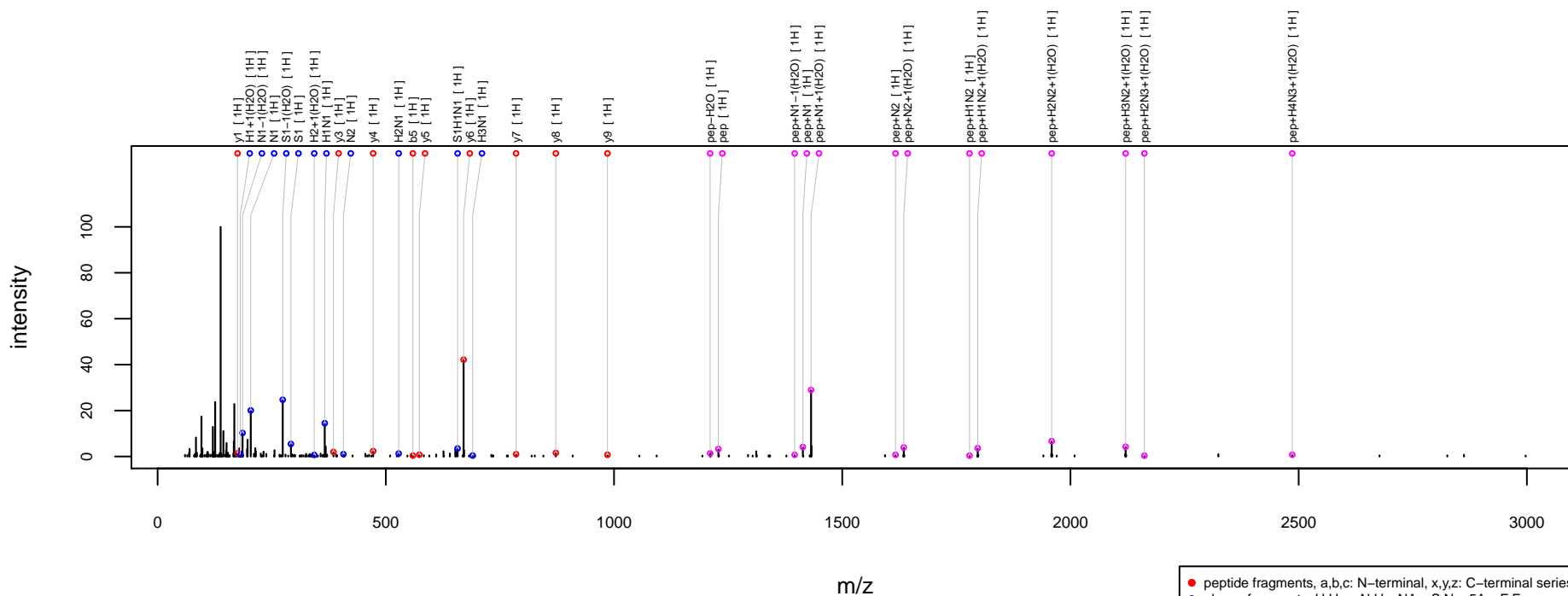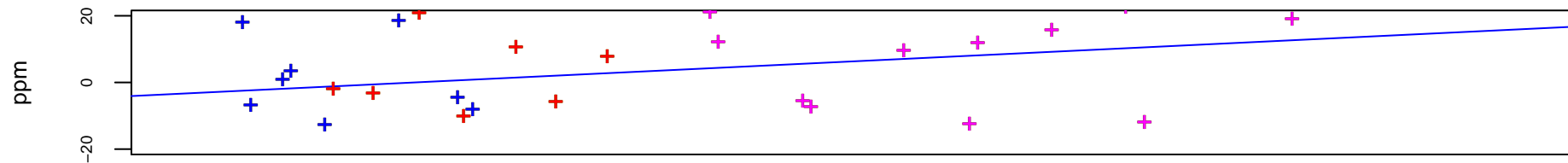
Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:45 2014*

100

m/z 1073.0382 charge 5 scan 0–0

Score= 73.15 , Hits= 60 , Explained Intensity= 0.46

Peptide: LG3BP_HUMAN[394,407]:YKGLNLTEDTYKPR

Glycan: SHN(SHN)H(SHN(SHN)H)HN(F)N, S4H7N6F1

Charge: 5H

ppm

intensity

m/z

```
     2  3  4  5  6  7  8  9  10 11 12 13 14
  Y  K  G  L  N  L  T  E  D  T  Y  K  P  R
  14 13 12 11 10 9  8  7  6  5  4  3  2  1  y
```

- ● peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
  - ( ): additions
  - [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:45 2014*
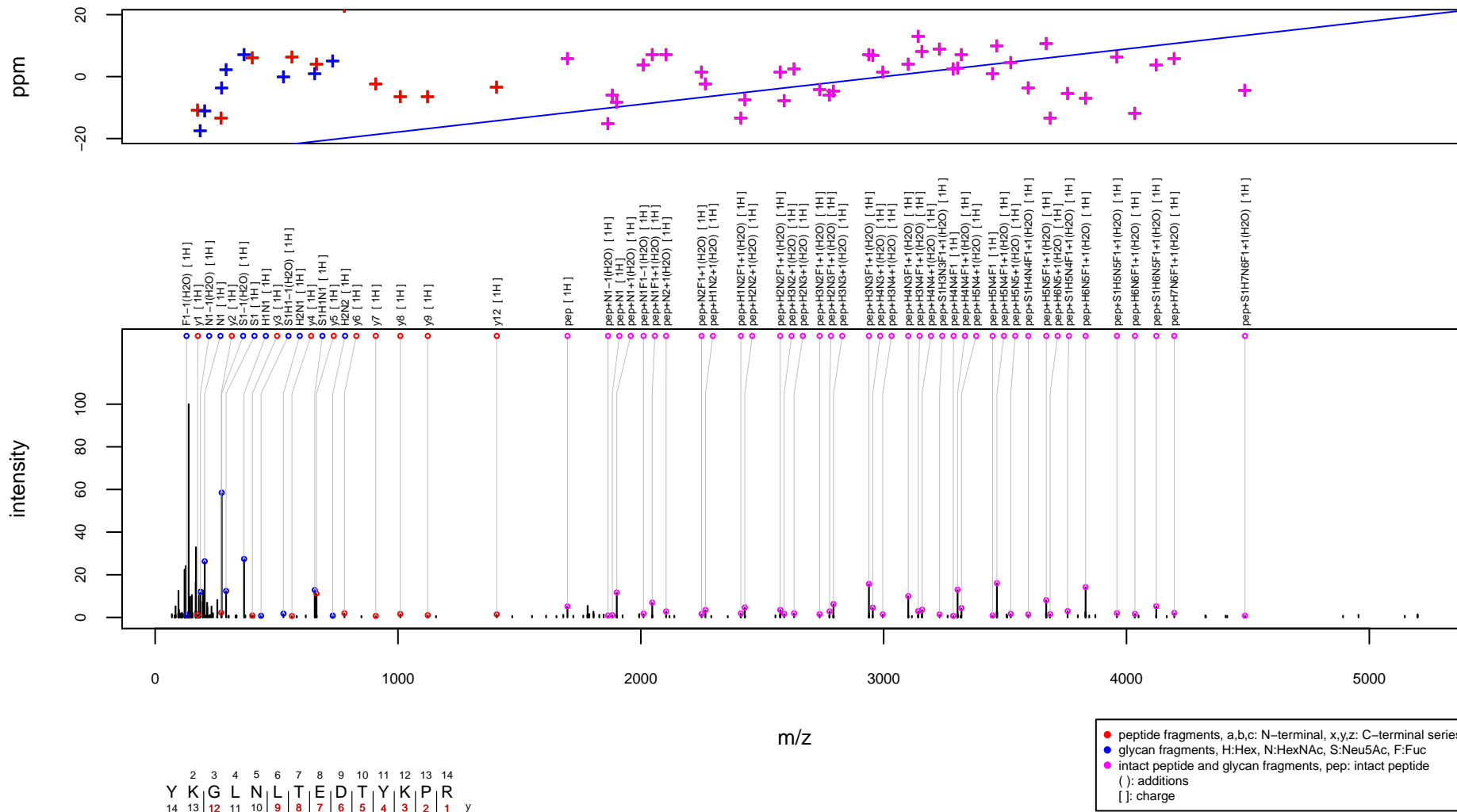
m/z 863.3547 charge 4 scan 0−0

Score= 41.32 , Hits= 38 , Explained Intensity= 0.27

Peptide: MGA_HUMAN[1672,1679]:NVTAYFPR

Glycan: H6N6F2

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:46 2014*
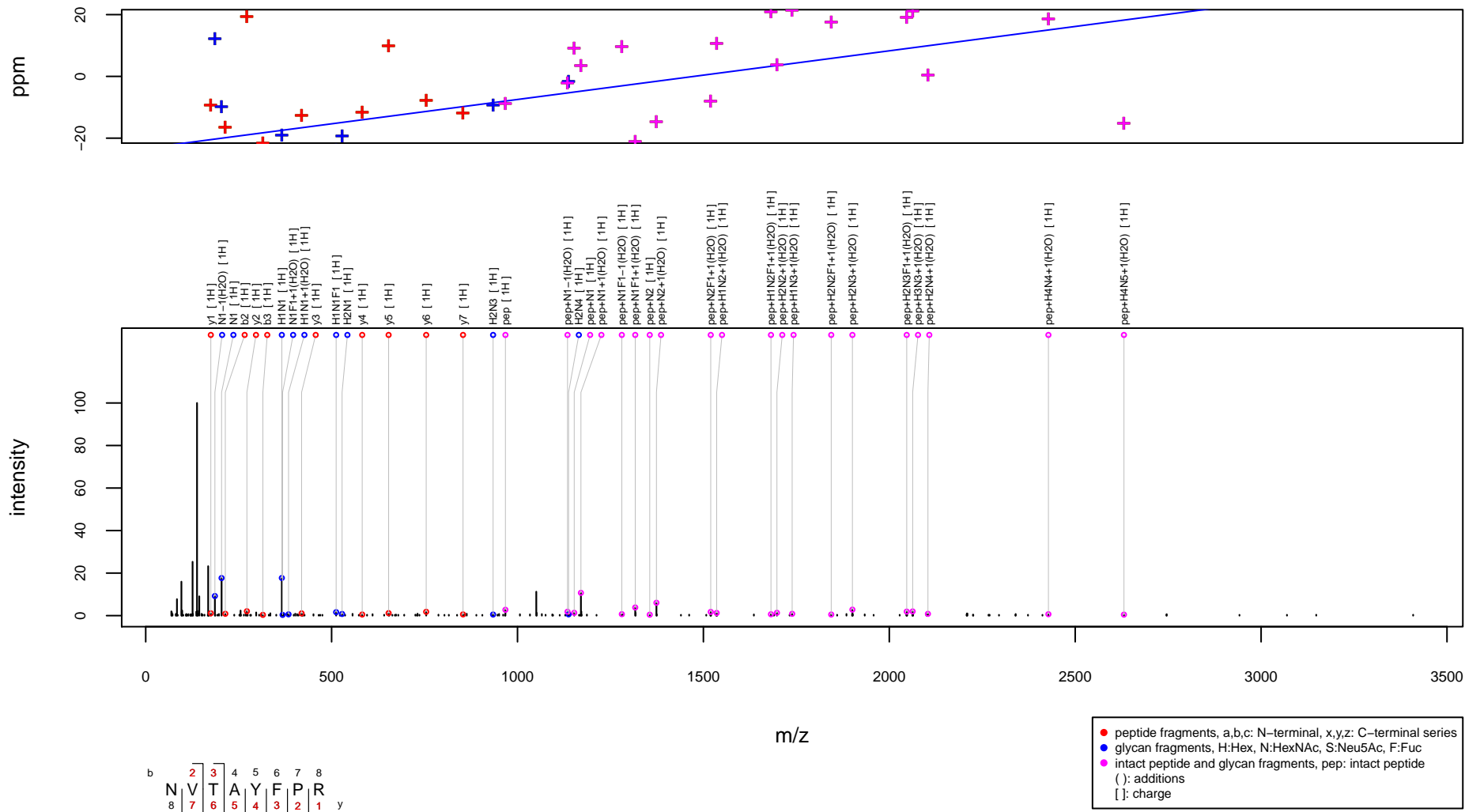
m/z 1121.954 charge 4 scan 0–0

Score= 75.48 , Hits= 62 , Explained Intensity= 0.43

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(SHN(S(N)HN)H)HN(F)N, S3H6N6F1

Charge: 4H
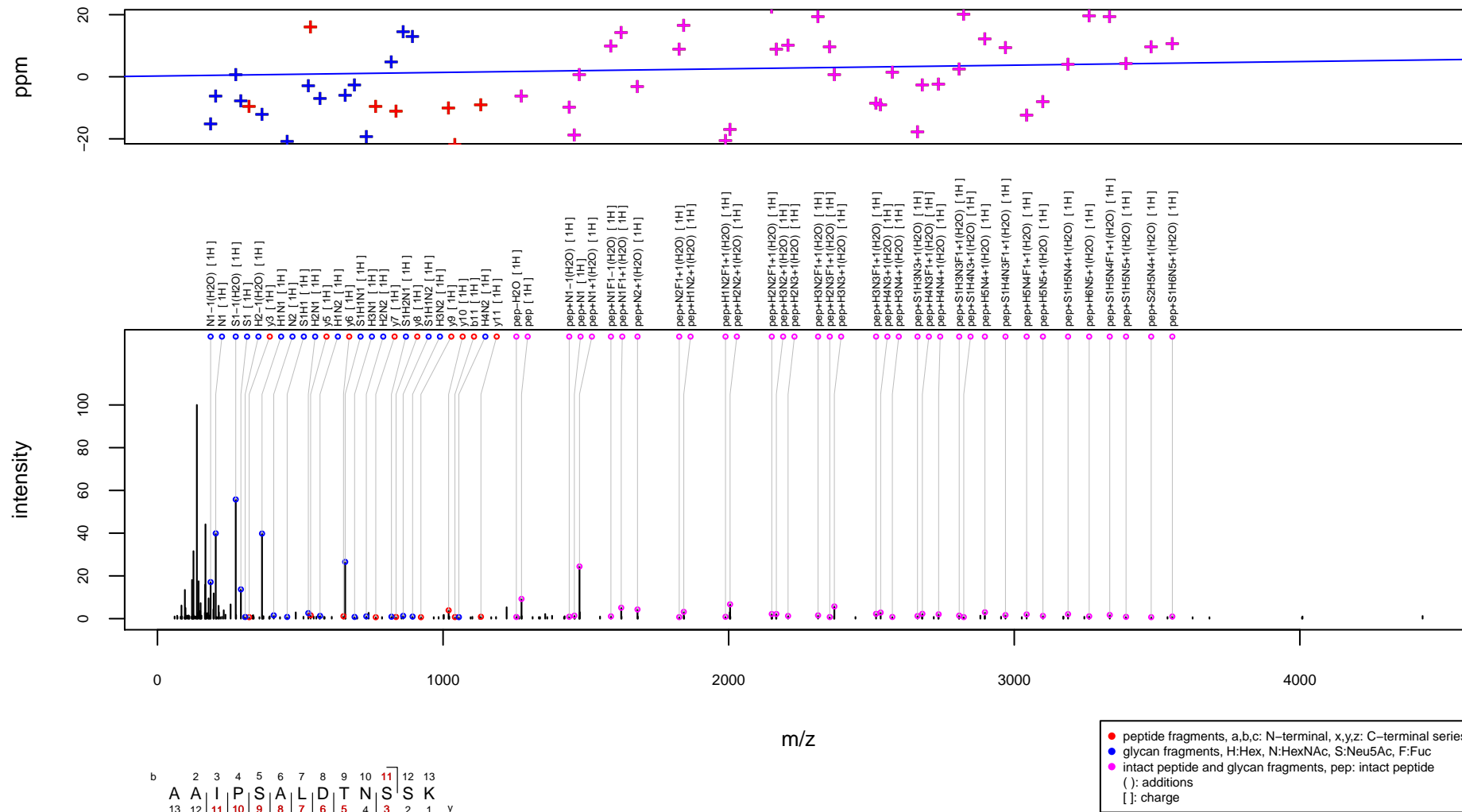
m/z 1089.6945 charge 4 scan 0–0

Score= 55.18 , Hits= 62 , Explained Intensity= 0.42

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S2H7N6F1

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 ( ): additions
  [ ]: charge

m/z 1085.1718 charge 4 scan 0–0

Score= 35.62 , Hits= 44 , Explained Intensity= 0.34

Peptide: PLPL6_HUMAN[1262,1270]:RSTDLNESR

Glycan: S1H9N6F2

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:47 2014*

m/z 980.4078 charge 3 scan 0−0

Score= 53.67 , Hits= 41 , Explained Intensity= 0.29

Peptide: MGA_HUMAN[1672,1679]:NVTAYFPR

Glycan: H5N5F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:47 2014*
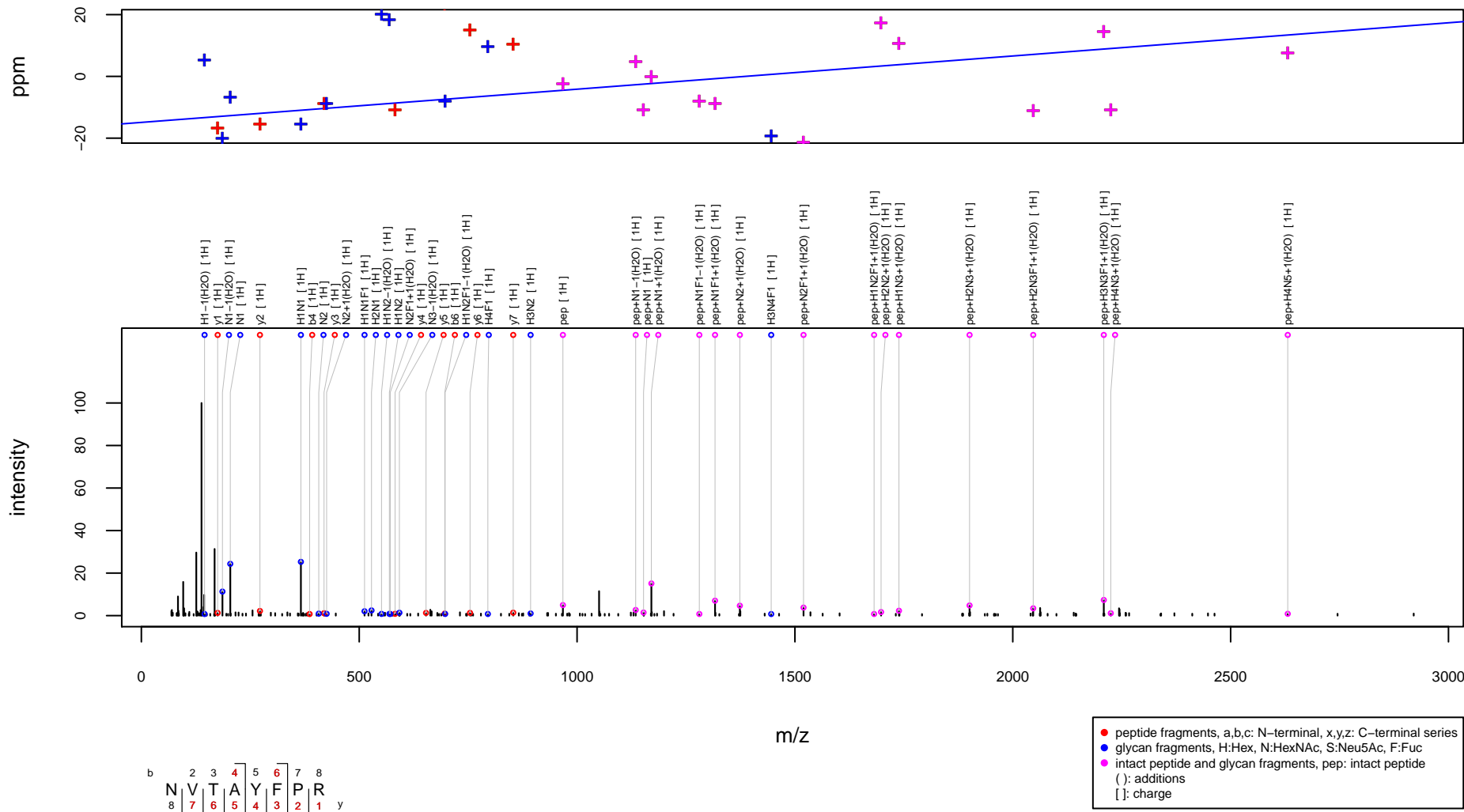
m/z 1180.8235 charge 3 scan 0–0

Score= 54.81 , Hits= 37 , Explained Intensity= 0.37

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: HNH(HN(HN)H)(N)HNN, H6N6

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
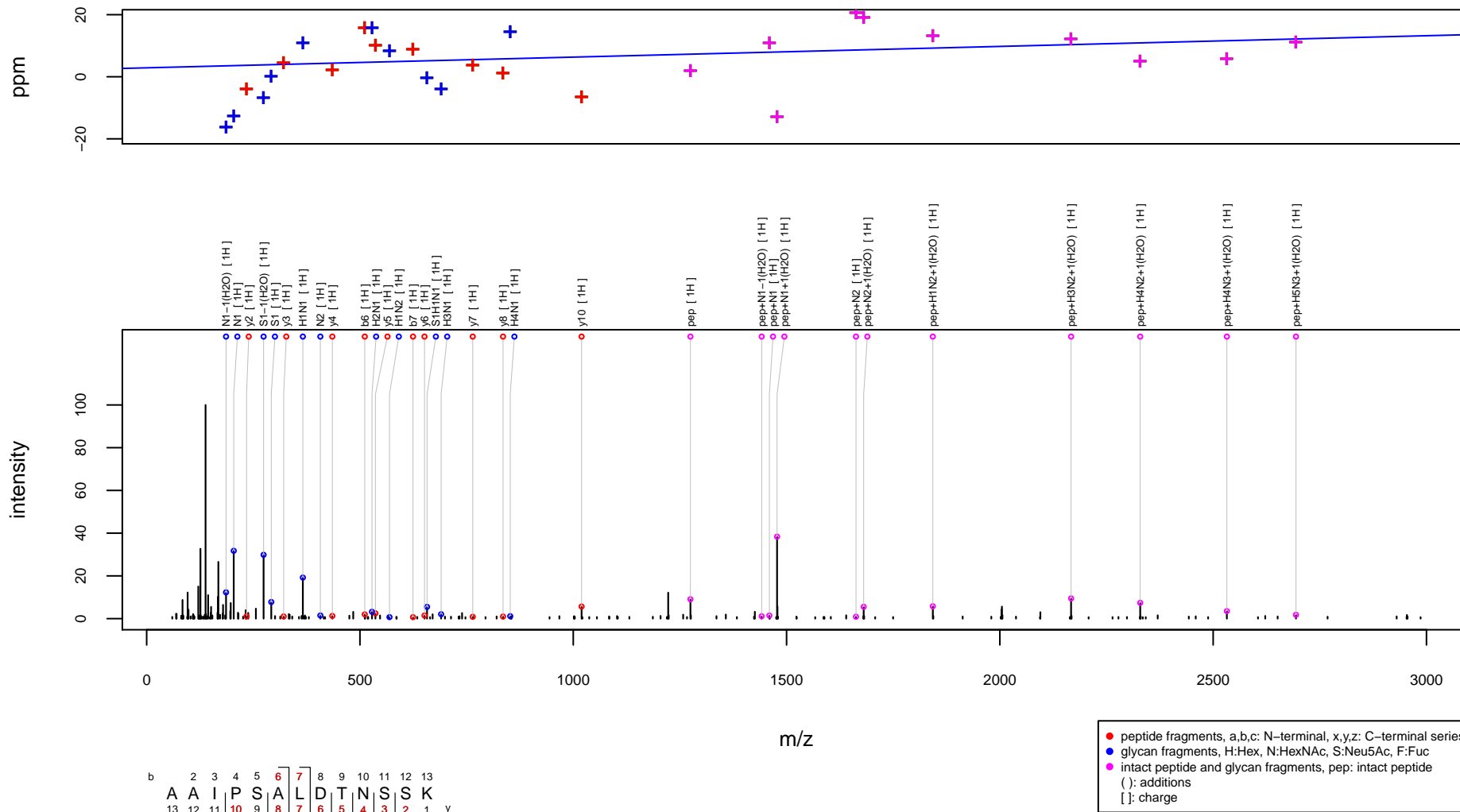[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:47 2014*
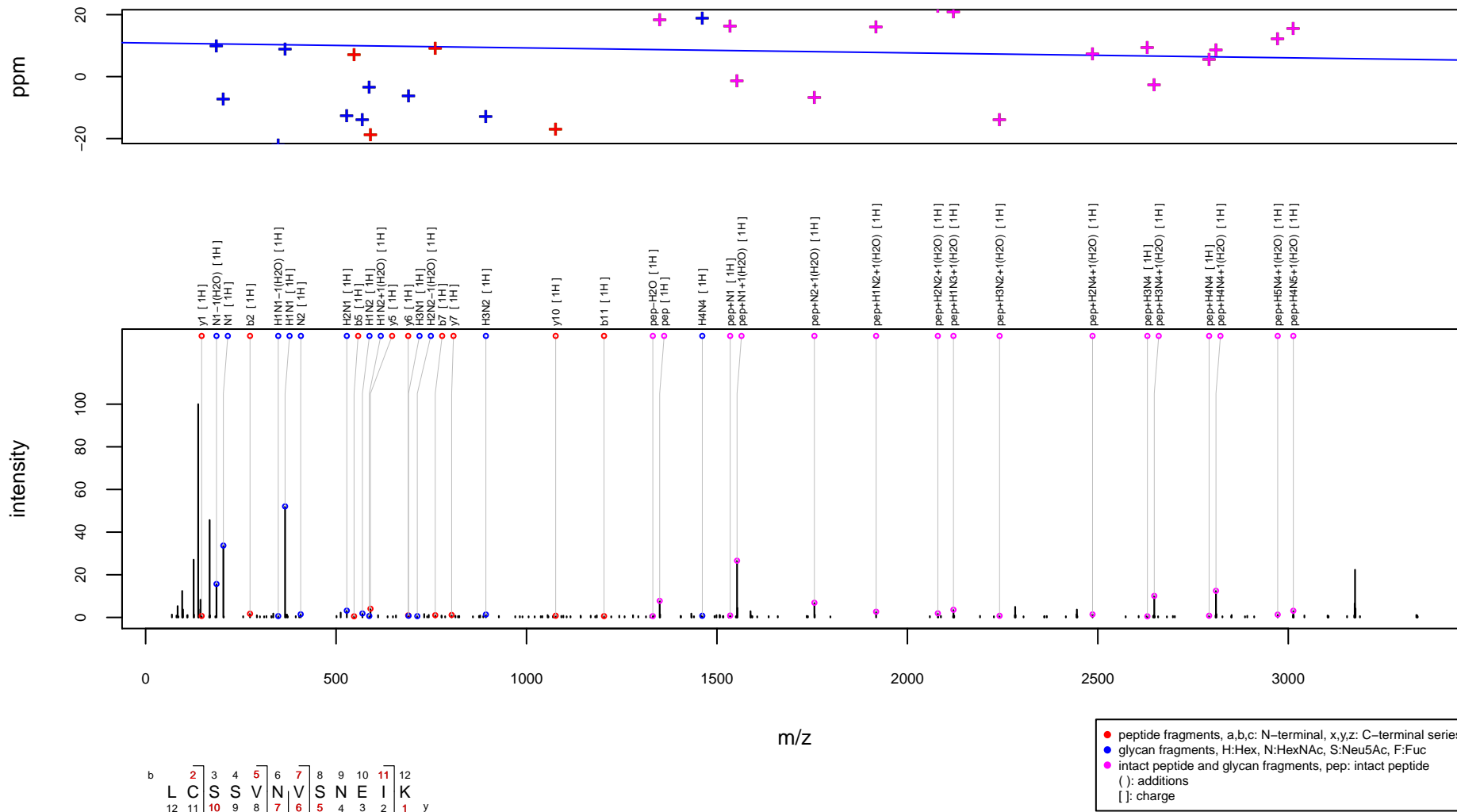
m/z 1016.92 charge 4 scan 0–0

Score= 59.23 , Hits= 49 , Explained Intensity= 0.34

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHN(HN)H(HN(HN)H)HN(F)N, S1H7N6F1

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:47 2014*
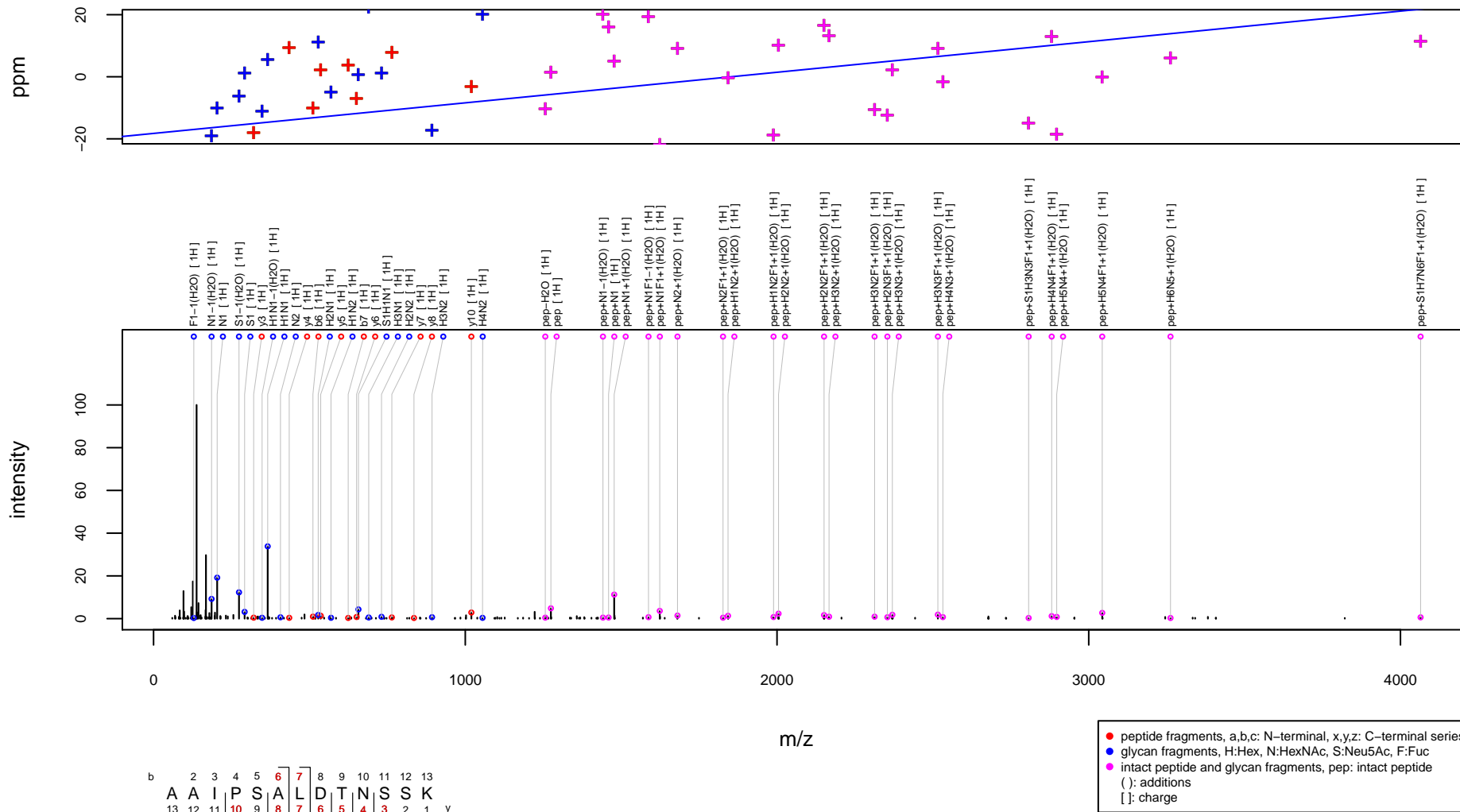
m/z 1067.6907 charge 4 scan 0−0

Score= 44.13 , Hits= 48 , Explained Intensity= 0.35

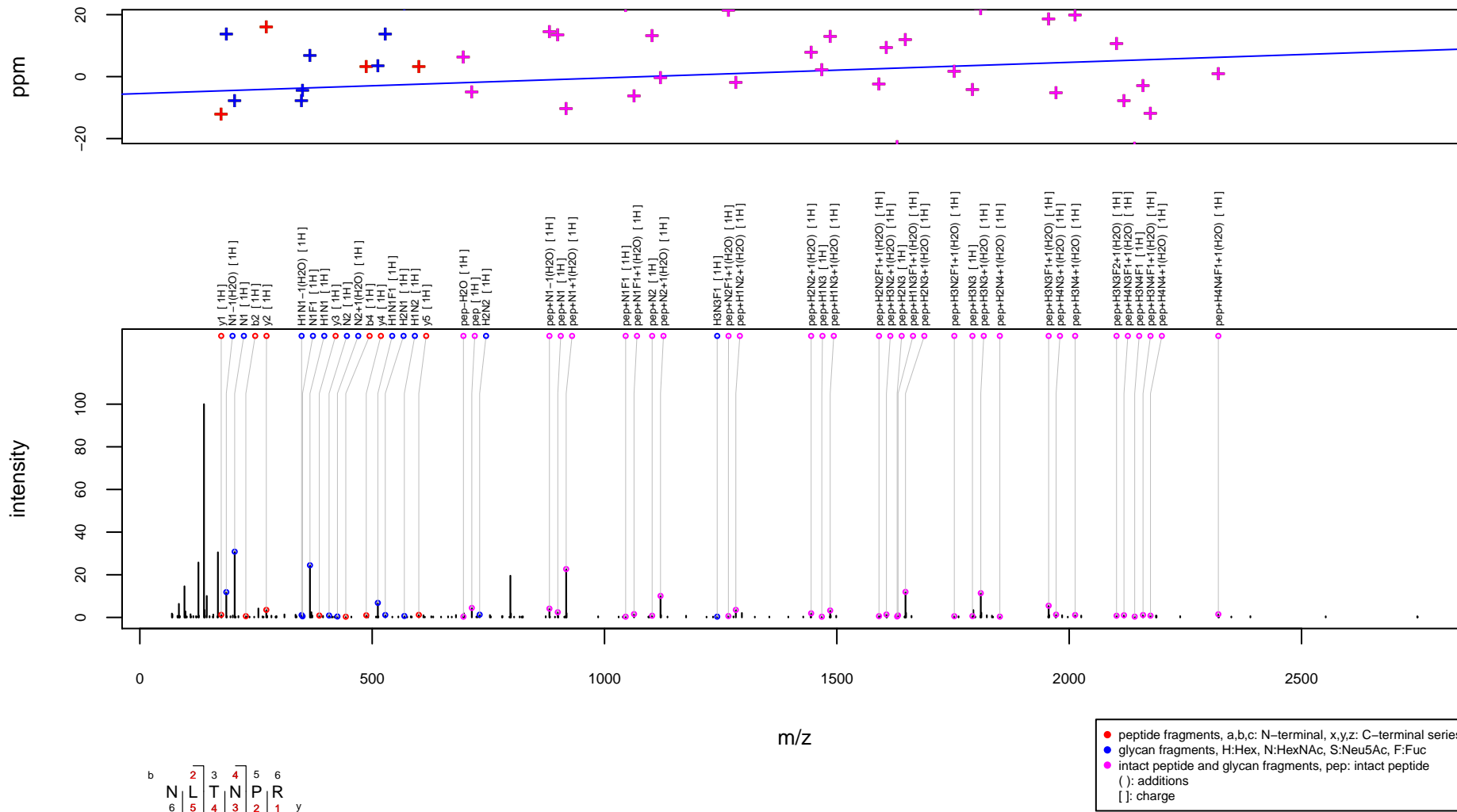Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S1H7N7F1

Charge: 4H
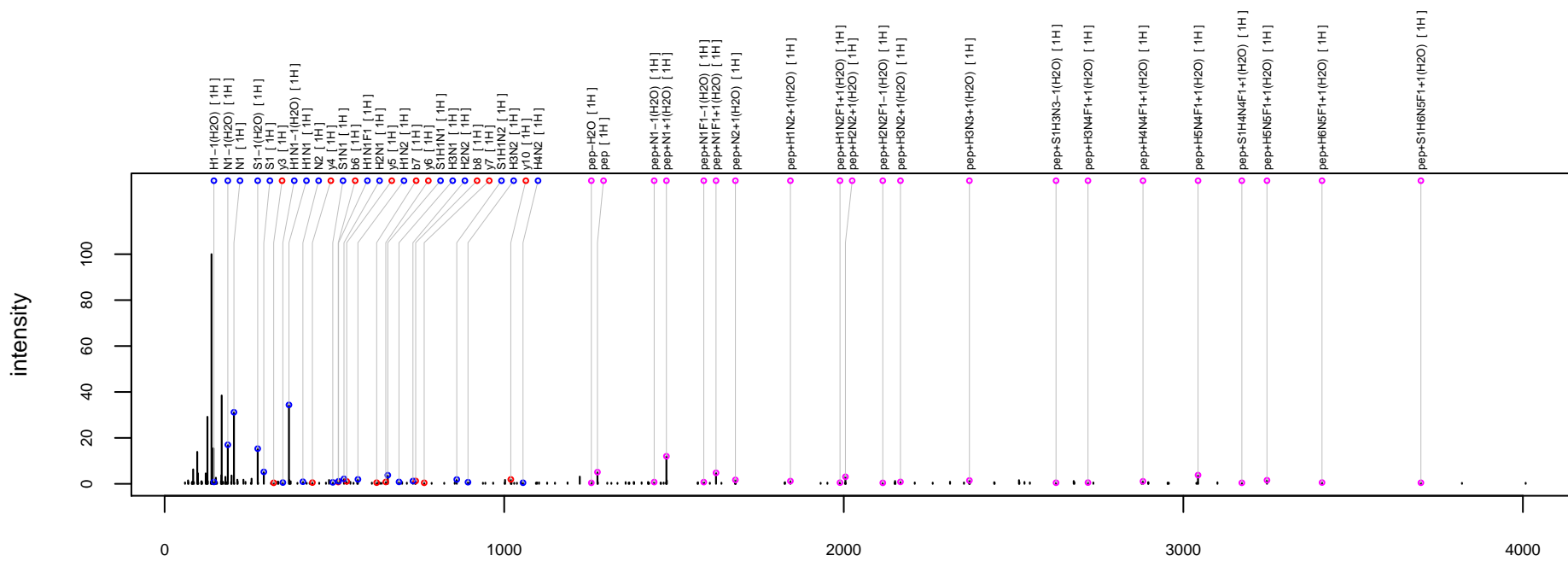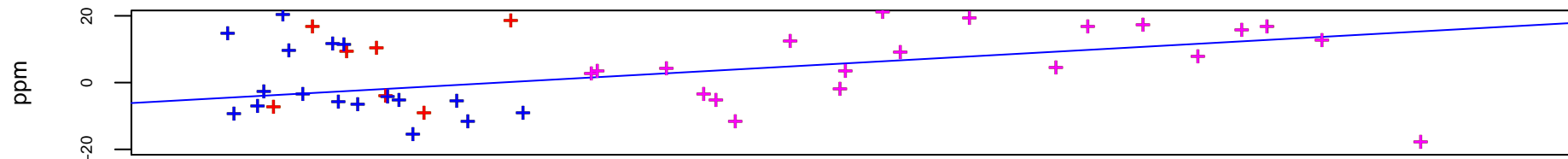
b 2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
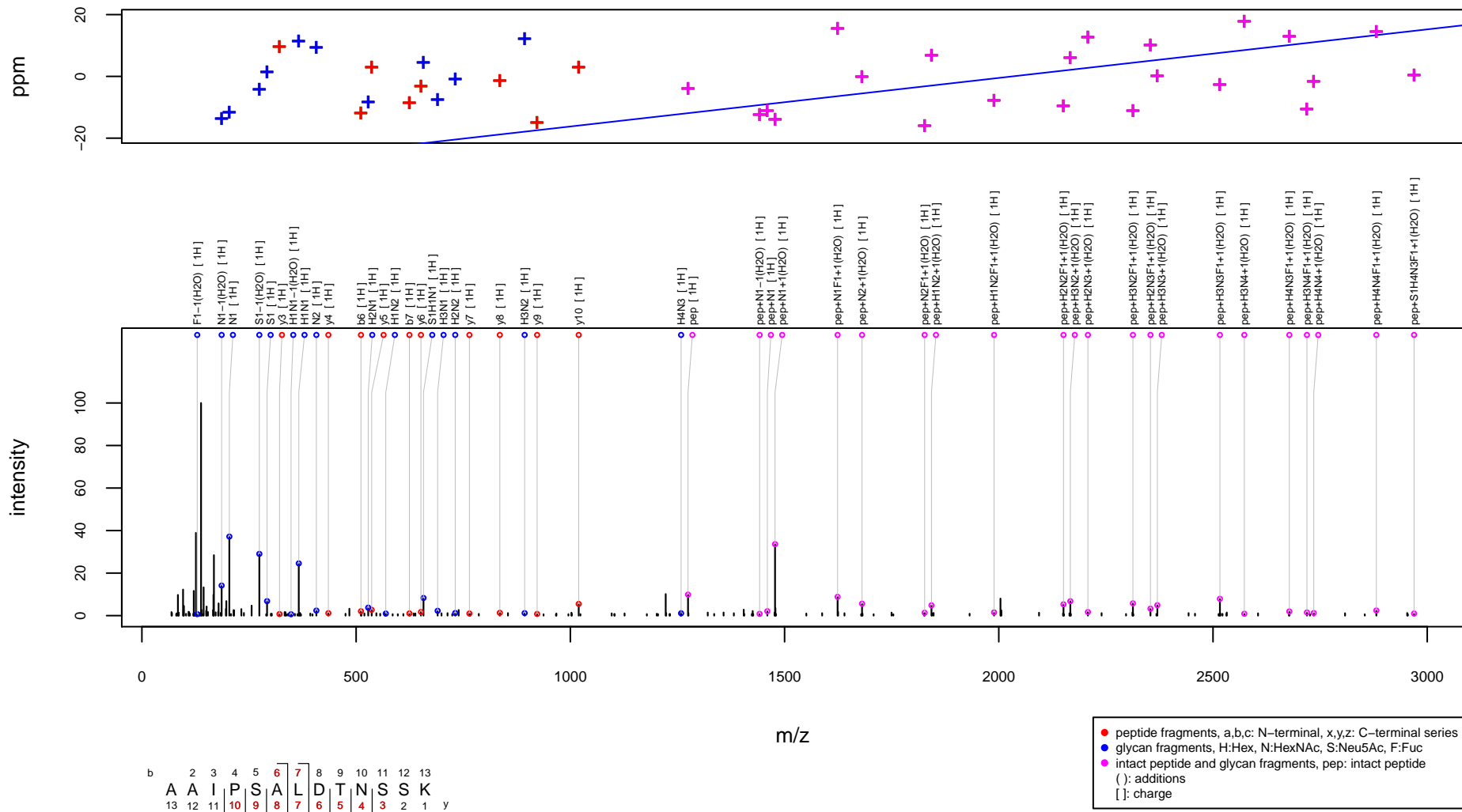intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1049.1785 charge 4 scan 0–0

Score= 54.72 , Hits= 48 , Explained Intensity= 0.36

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHN(S(N)HN)H(HNH)HN(F)N, S2H6N6F1

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID − *Mon Feb 17 09:50:48 2014*
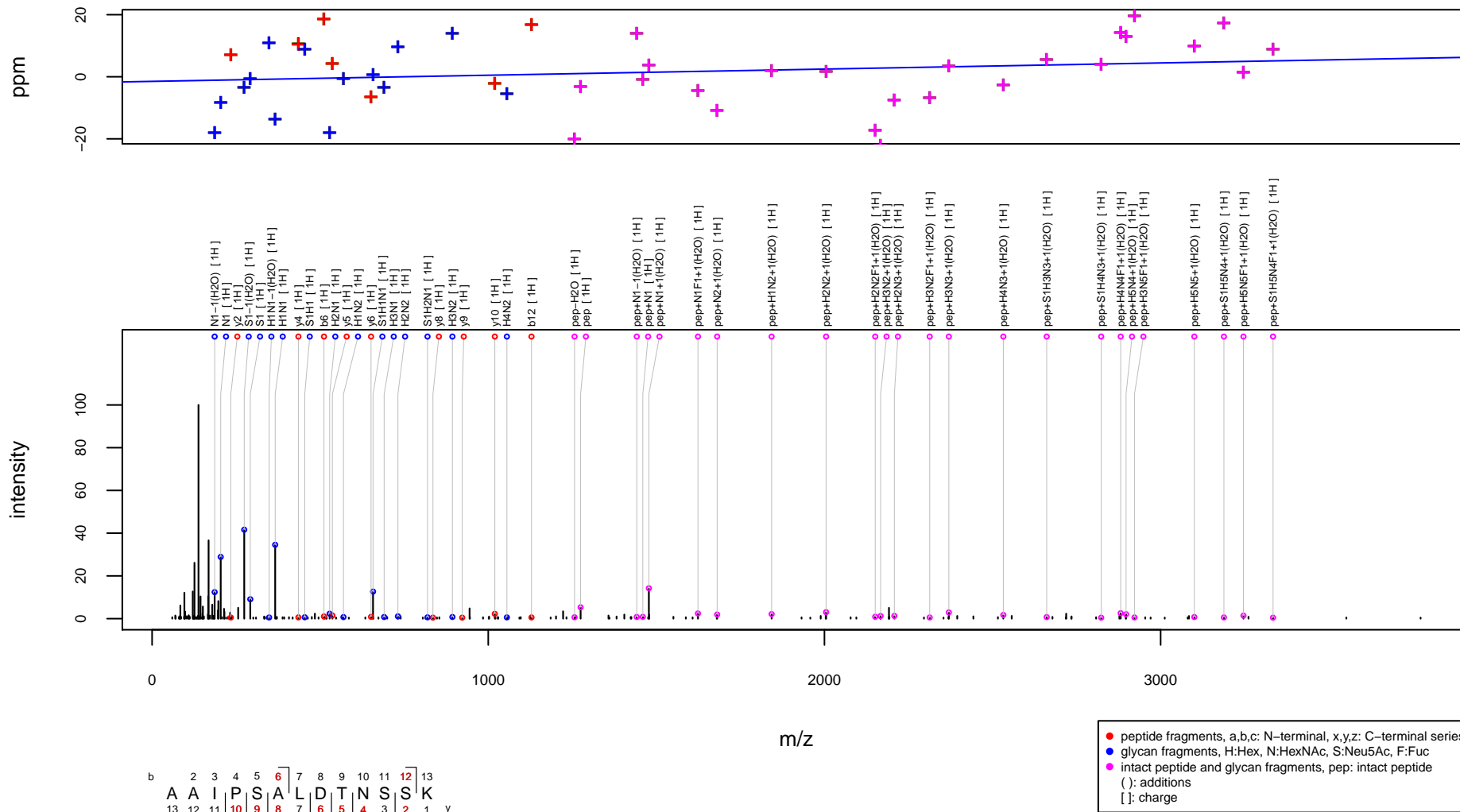
m/z 1125.8085 charge 3 scan 0–0

Score= 64.81 , Hits= 47 , Explained Intensity= 0.41

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SNNH(HNH)HN(F)N, S1H4N5F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
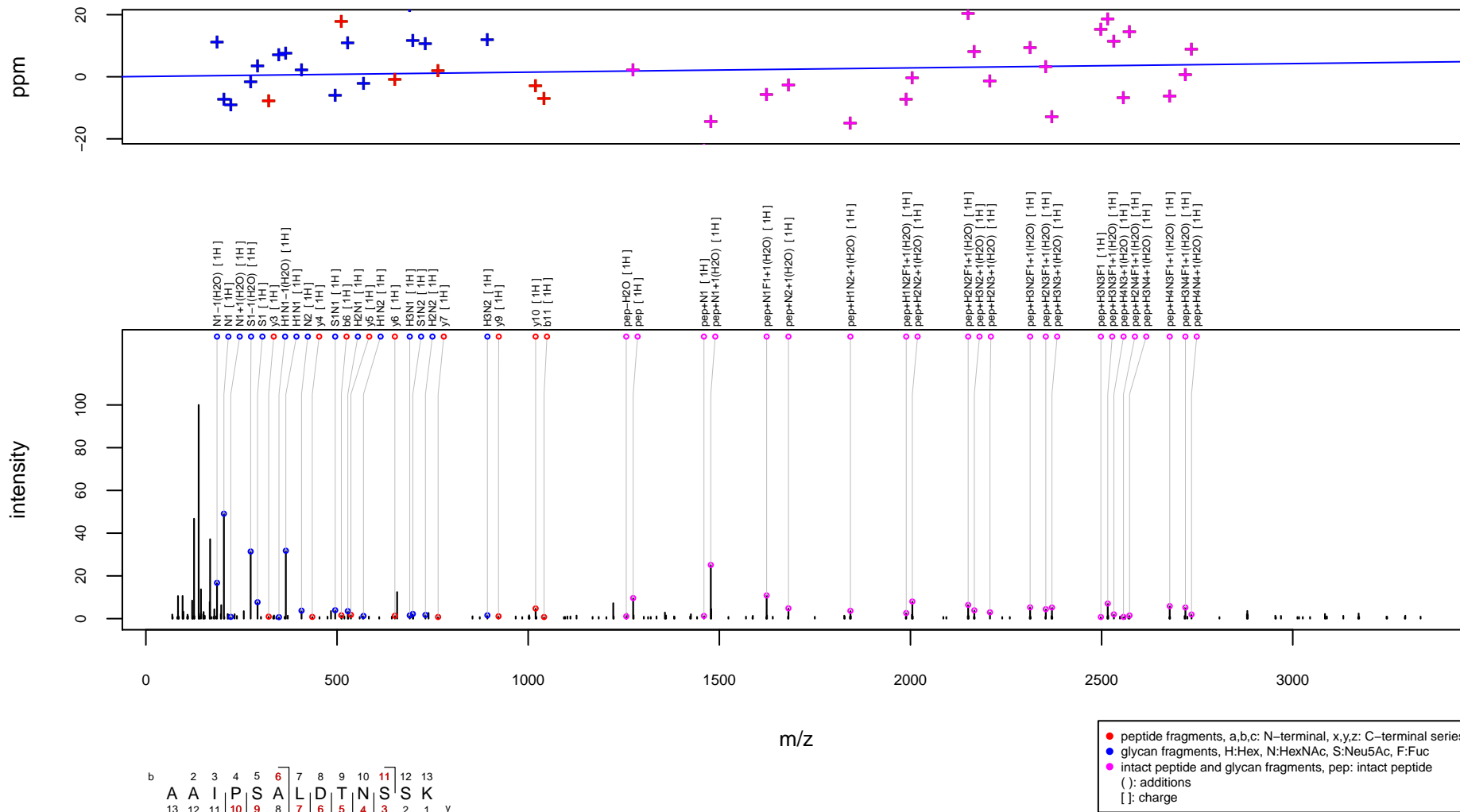
m/z 1318.776 charge 4 scan 0–0

Score= 36.02 , Hits= 41 , Explained Intensity= 0.31

Peptide: UROM_HUMAN[223,245]:CNTAAPMWLNGTHPSSDEGIVSR

Glycan: S3H4N4F3

Charge: 4H
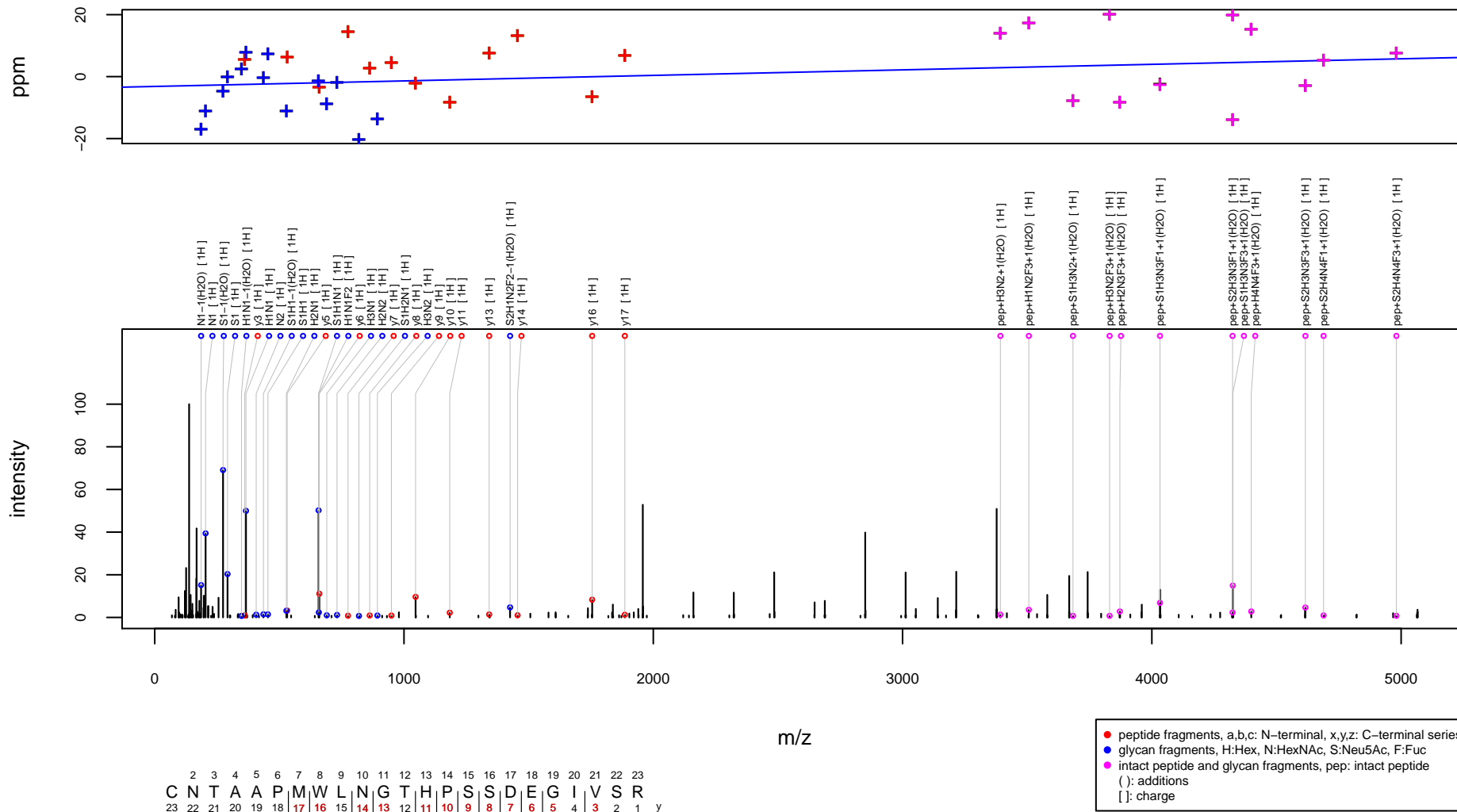
m/z 1105.7849 charge 3 scan 0–0

Score= 60.61 , Hits= 45 , Explained Intensity= 0.42

Peptide: CUBN_HUMAN[2082,2090]:AGFNASFHK

Glycan: HNH(HN(HN)H)(N)HN(F)N, H6N6F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:49 2014*
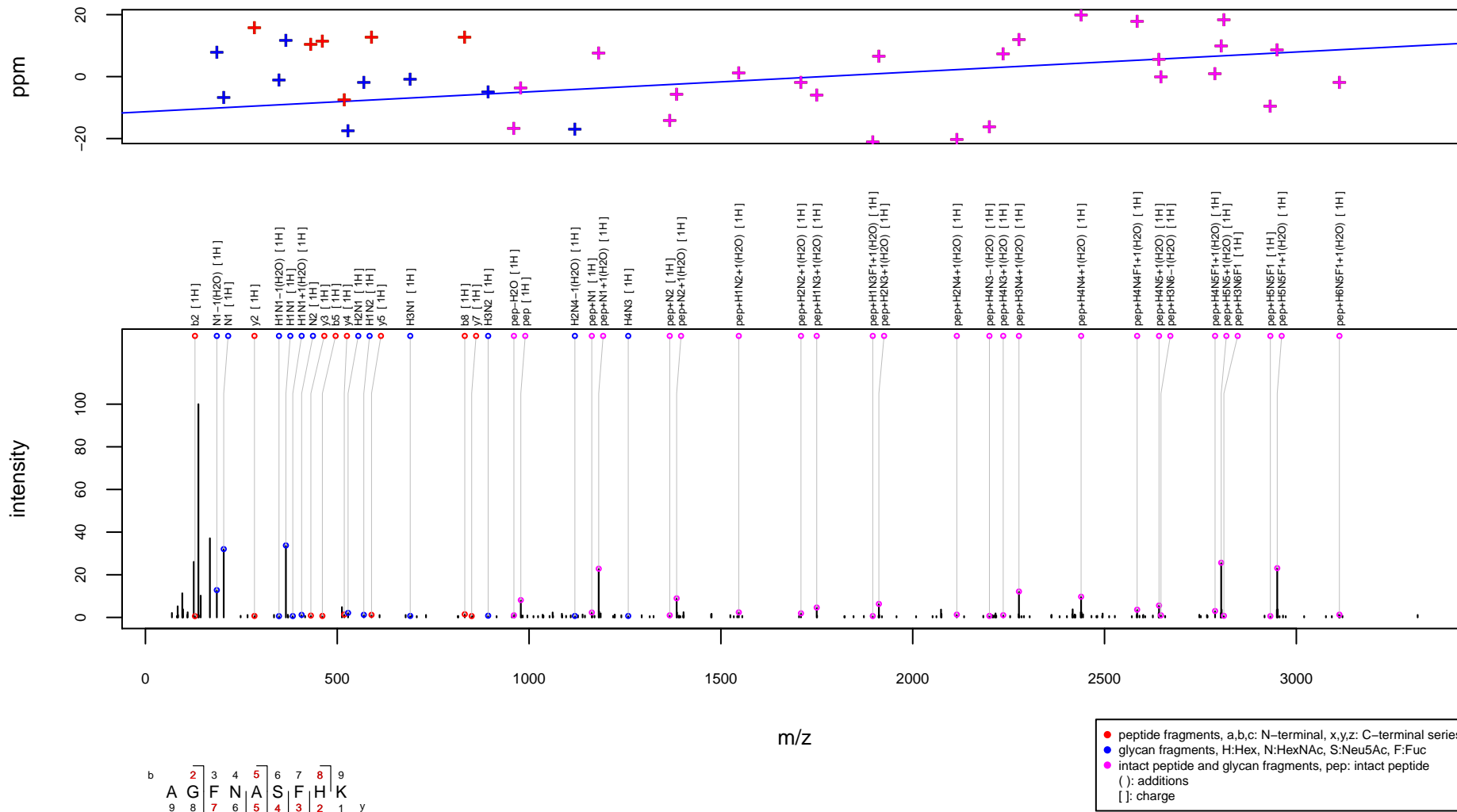
m/z 995.7552 charge 3 scan 0–0

Score= 47.74 , Hits= 32 , Explained Intensity= 0.33

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(HH)HNN, S1H5N3

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

m/z 944.7243 charge 3 scan 0–0

Score= 70.63 , Hits= 51 , Explained Intensity= 0.38

Peptide: LRP2_HUMAN[1550,1555]:NLTNPR

Glycan: FHNH(HNH)(N)HN(F)N, H5N5F2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1058.1147 charge 3 scan 0–0

Score= 67.58 , Hits= 47 , Explained Intensity= 0.39

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(NH)HN(F)N, S1H4N4F1

Charge: 3H

b   2 3 4 5 6 7 8 9 10 11 12 13
A A I P S A L D T N S S K
13 12 11 10 9 8 7 6 5 4 3 2 1 y

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:51 2014*

m/z 896.0397 charge 3 scan 0−0

Score= 61.8 , Hits= 43 , Explained Intensity= 0.36

Peptide: LRP2_HUMAN[1550,1555]:NLTNPR

Glycan: HNH(HNH)(N)HN(F)N, H5N5F1

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:51 2014*
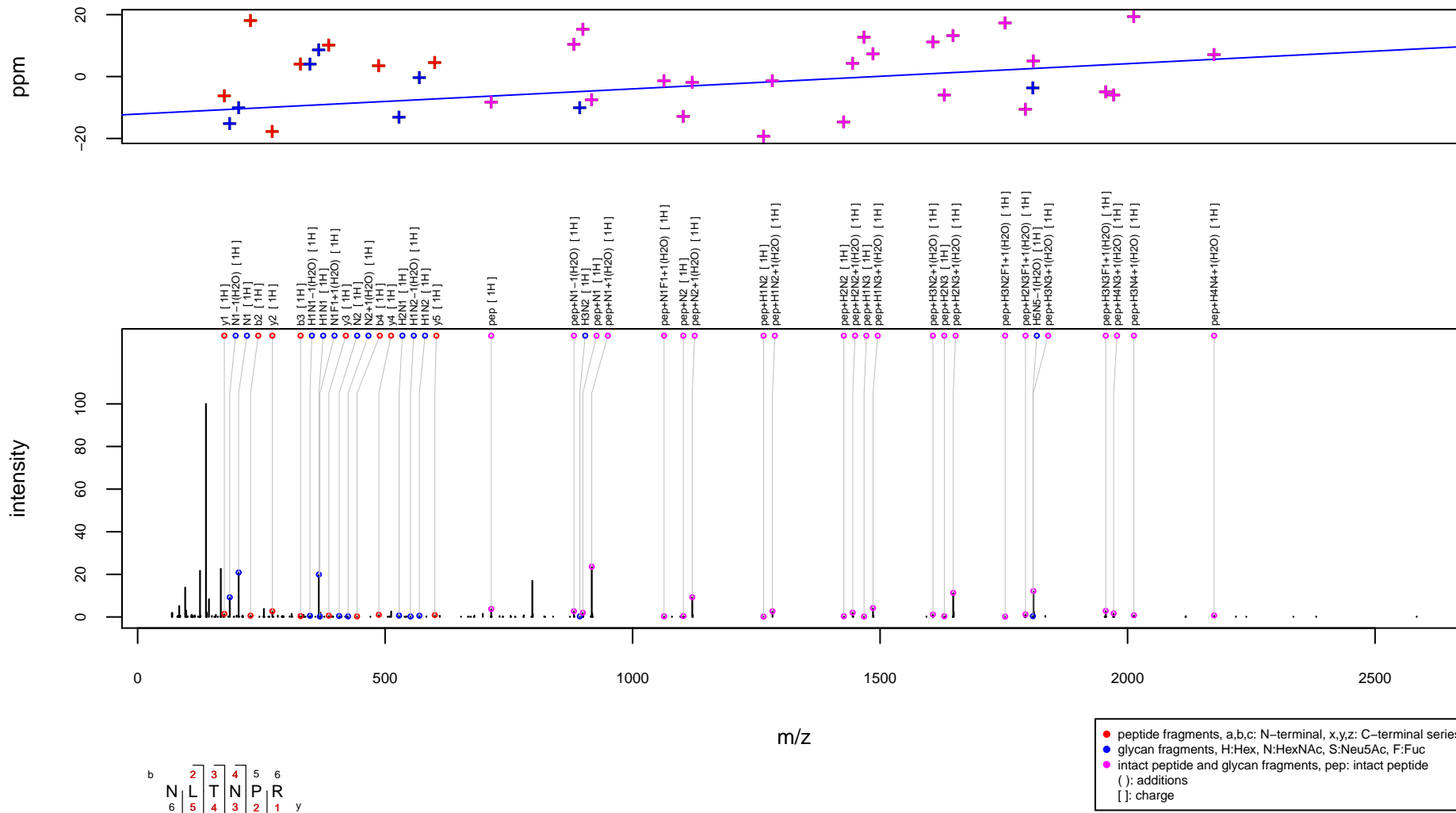
m/z 976.0581 charge 3 scan 0−0

Score= 76.41 , Hits= 49 , Explained Intensity= 0.38

Peptide: IGHG2_HUMAN[172,180]:EEQFNSTFR

Glycan: HNH(HNH)HN(F)N, H5N4F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1294.486 charge 3 scan 0–0

Score= 35.43 , Hits= 25 , Explained Intensity= 0.17

Peptide: THBG_HUMAN[27,41]:VTACHSSQPNATLYK

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 3H

Glycopeptide ID – *Mon Feb 17 09:50:52 2014*
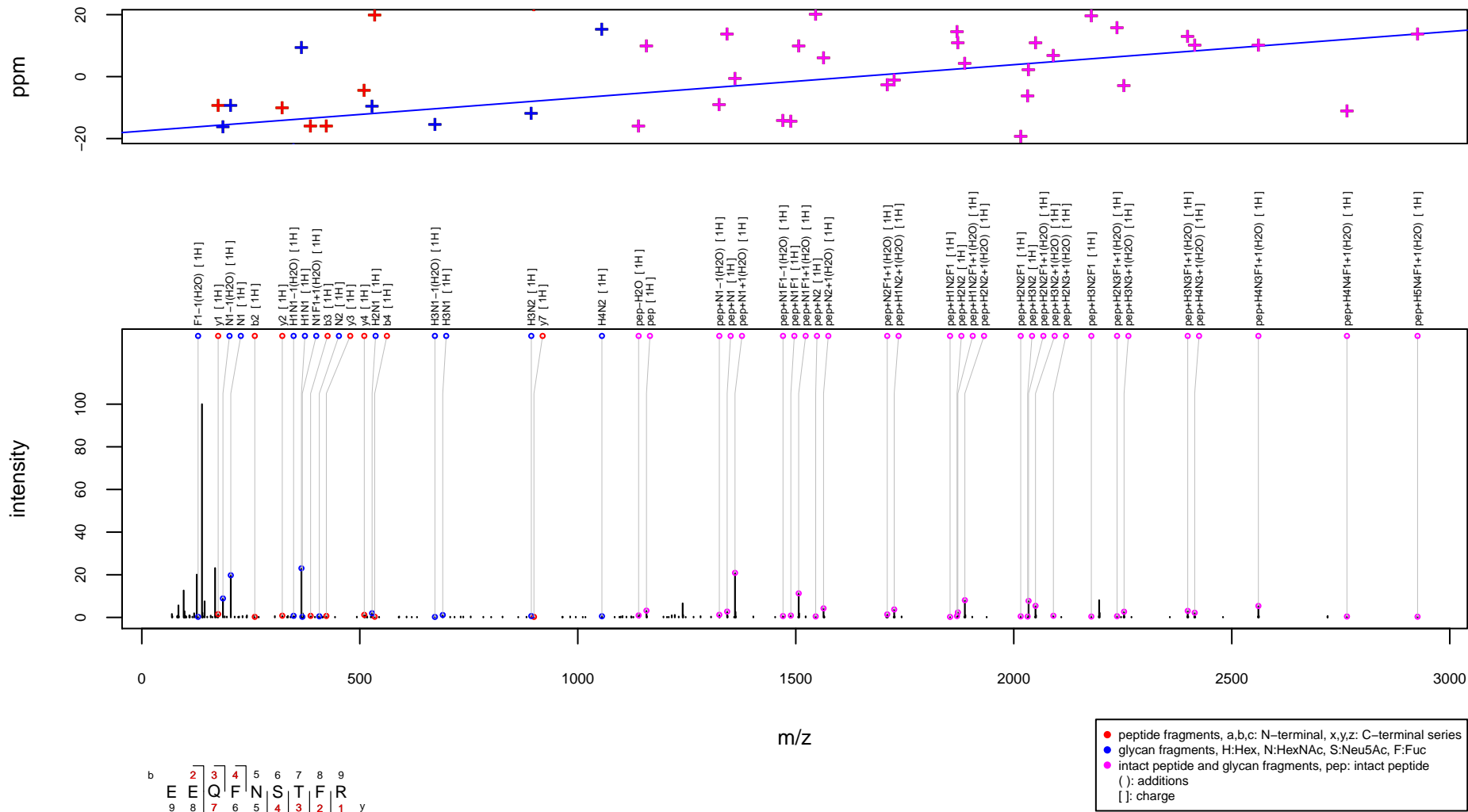
m/z 1014.809 charge 5 scan 0–0

Score= 59.86 , Hits= 51 , Explained Intensity= 0.39

Peptide: LG3BP_HUMAN[396,407]:GLNLTEDTYKPR

Glycan: SHN(SHN)H(SHN(SHN)H)HN(F)N, S4H7N6F1

Charge: 5H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

G L N L T E D T Y K P R
12 11 10 9 8 7 6 5 4 3 2 1   y

Glycopeptide ID – *Mon Feb 17 09:50:52 2014*

120
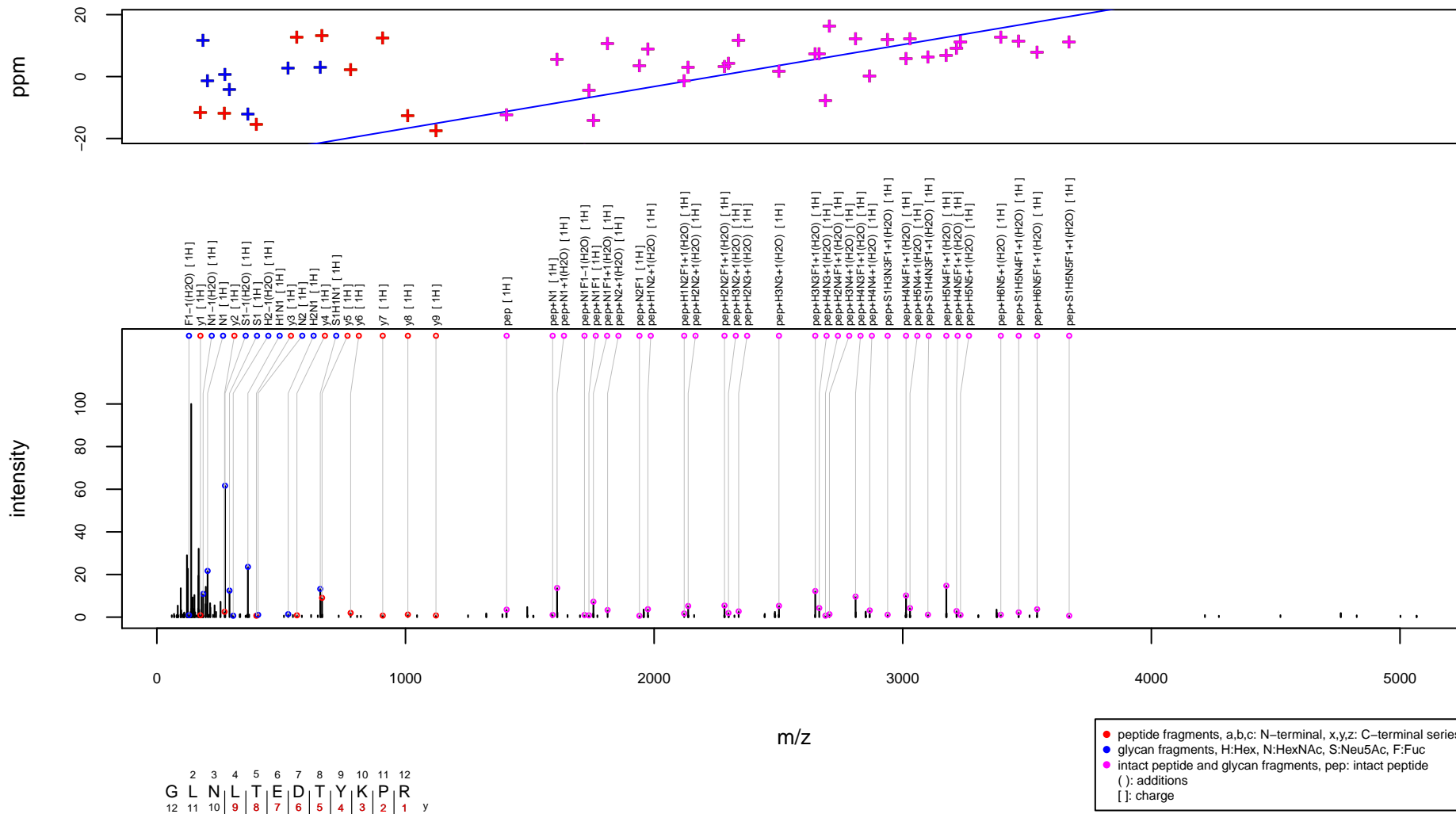
m/z 985.5985 charge 5 scan 0−0

Score= 55.98 , Hits= 43 , Explained Intensity= 0.4

Peptide: LG3BP_HUMAN[396,407]:GLNLTEDTYKPR

Glycan: SHN(SHN)H(SHN(SHN)H)HNN, S4H7N6

Charge: 5H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:54 2014*
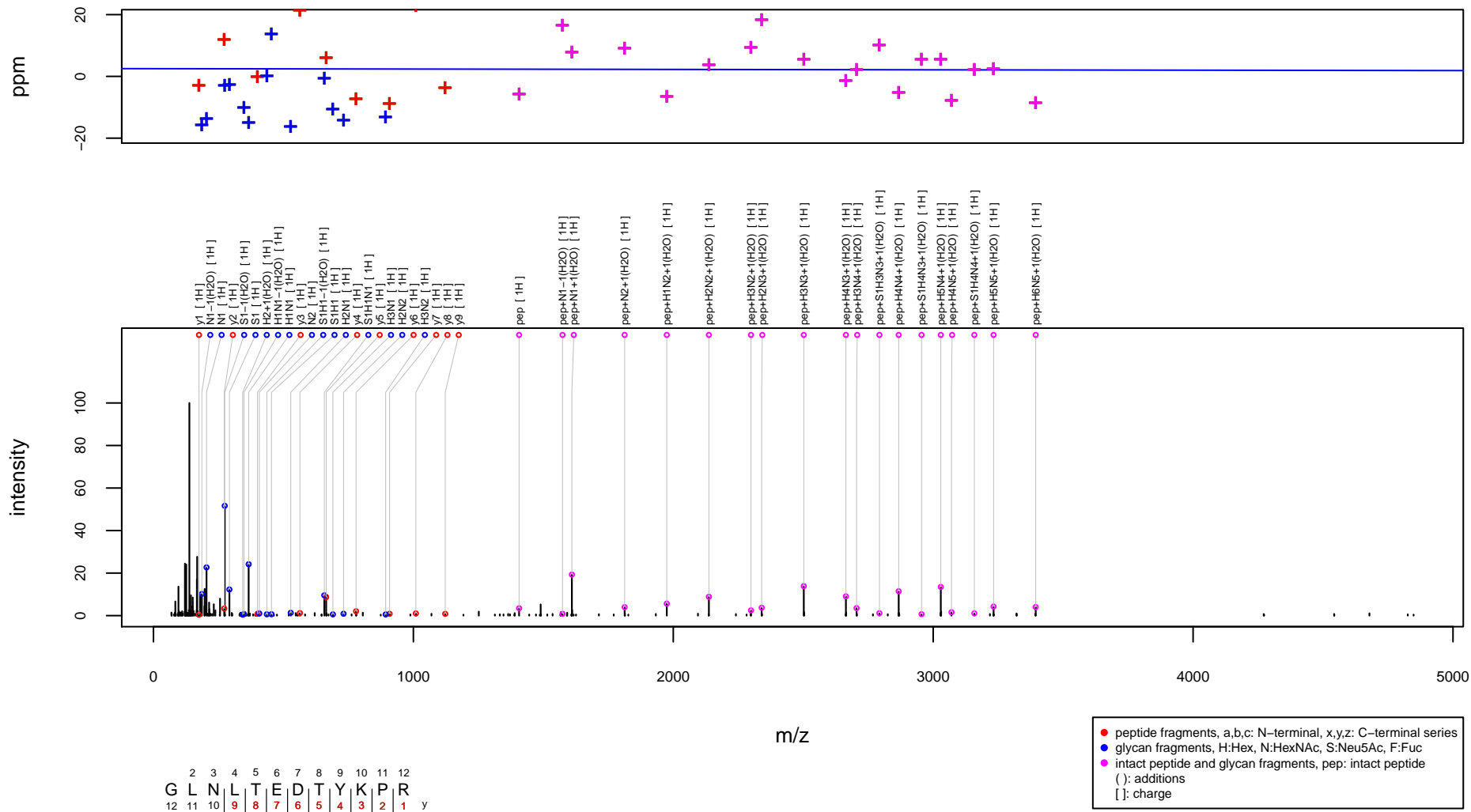
m/z 921.71 charge 3 scan 0–0

Score= 46.11 , Hits= 29 , Explained Intensity= 0.27

Peptide: RGS16_HUMAN[54,63]:NFSEDVLGWR

Glycan: HHH(H(H)H)HNN, H7N2

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  - ( ): additions
  - [ ]: charge
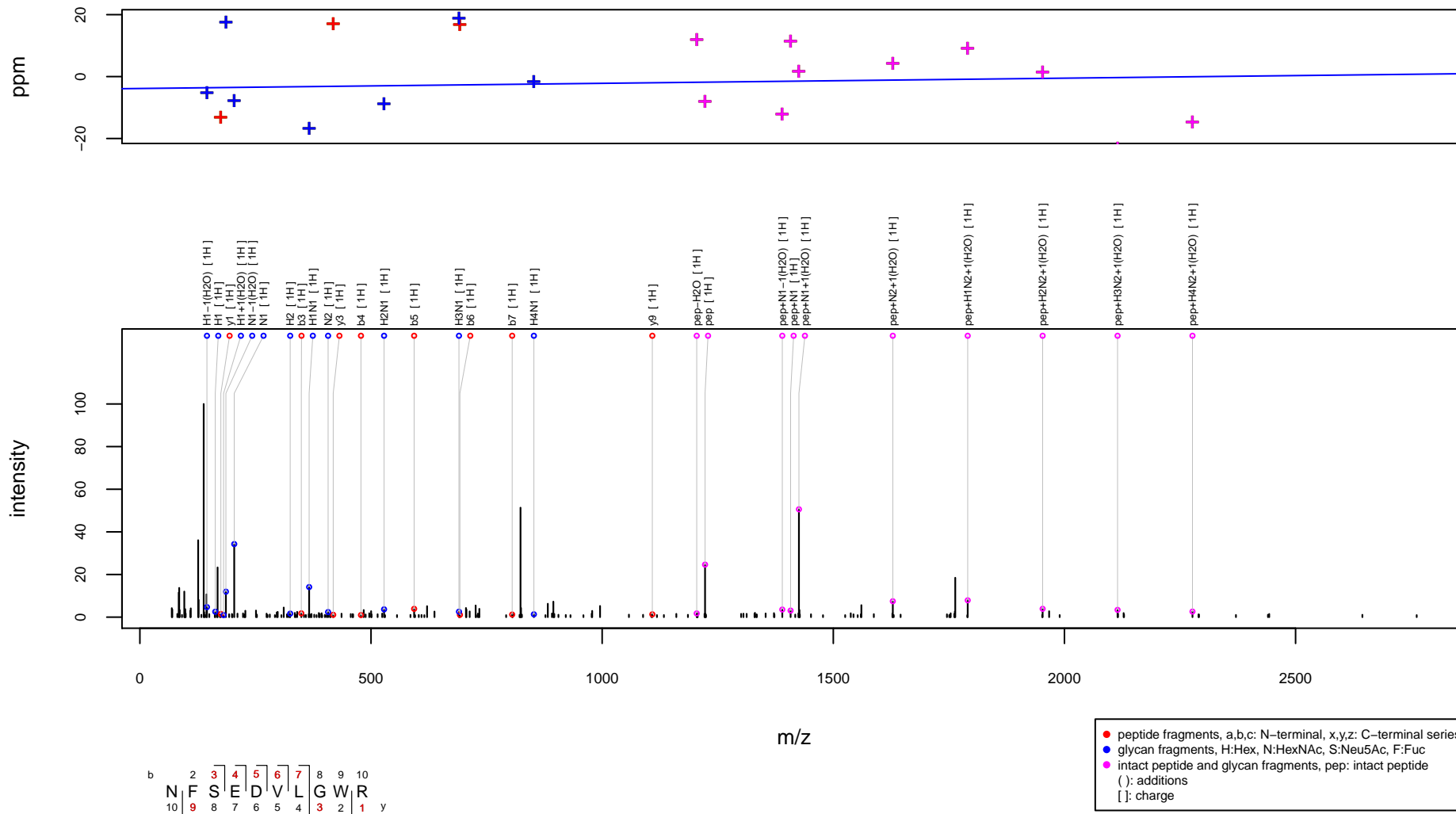
m/z 1065.4534 charge 3 scan 0–0

Score= 37.99 , Hits= 30 , Explained Intensity= 0.26

Peptide: LYAG_HUMAN[465,479]:GVFITNETGQPLIGK

Glycan: S2H3N2F1

Charge: 3H

b   G V F I T N E T G Q P L I G K
    2 3 4 5 6 7 8 9 10 11 12 13 14 15
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:54 2014*
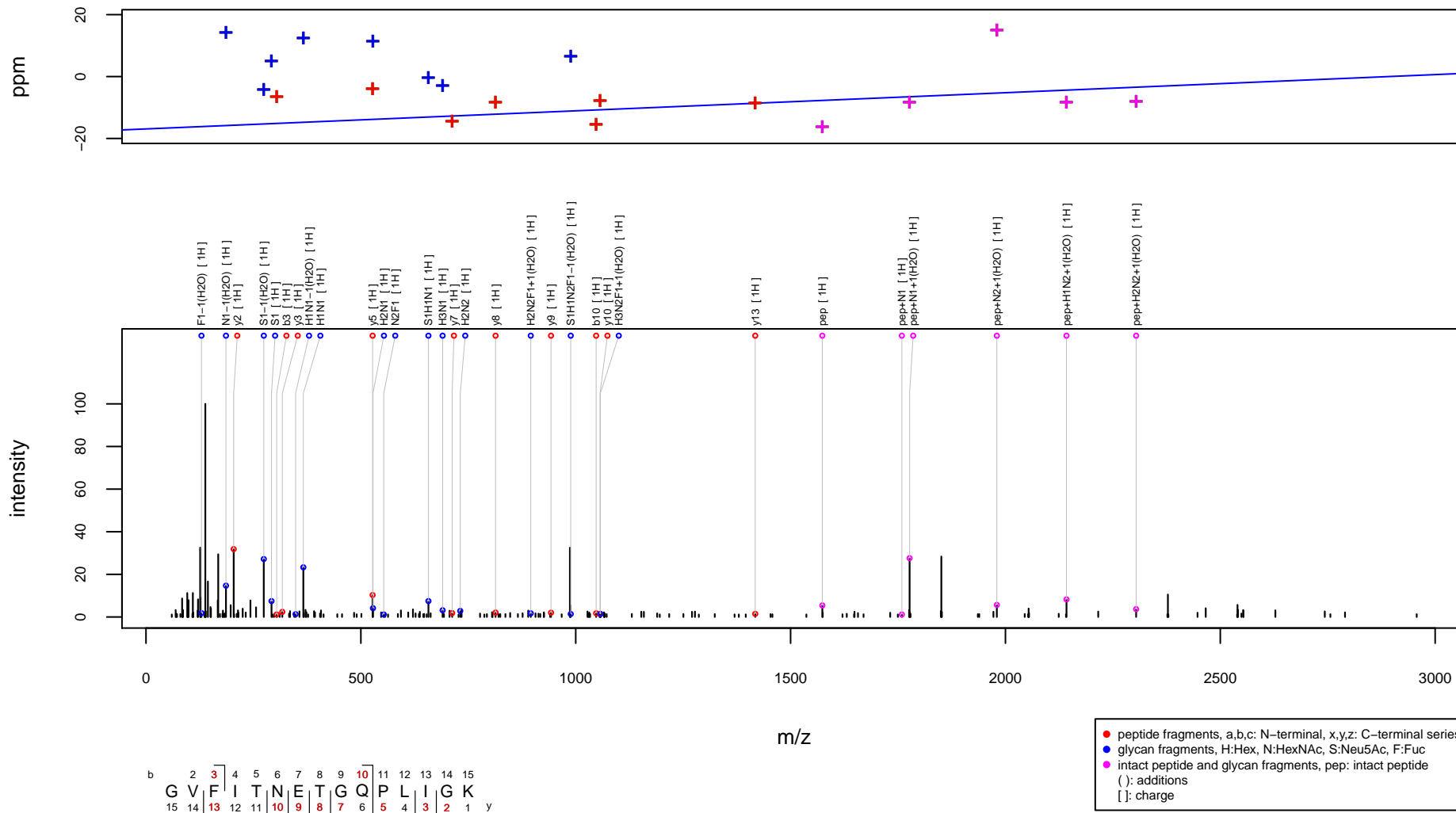
m/z 1103.789 charge 3 scan 0−0

Score= 70.6 , Hits= 45 , Explained Intensity= 0.51

Peptide: CO4A_HUMAN[1326,1336]:GLNVTLSSTGR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 3H

legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Peptide sequence diagram:

b: G 2 L 3 N 4 V 5 T 6 L 7 S 8 S 9 T 10 G 11 R

y: 11 G 10 L 9 N 8 V 7 T 6 L 5 S 4 S 3 T 2 G 1 R
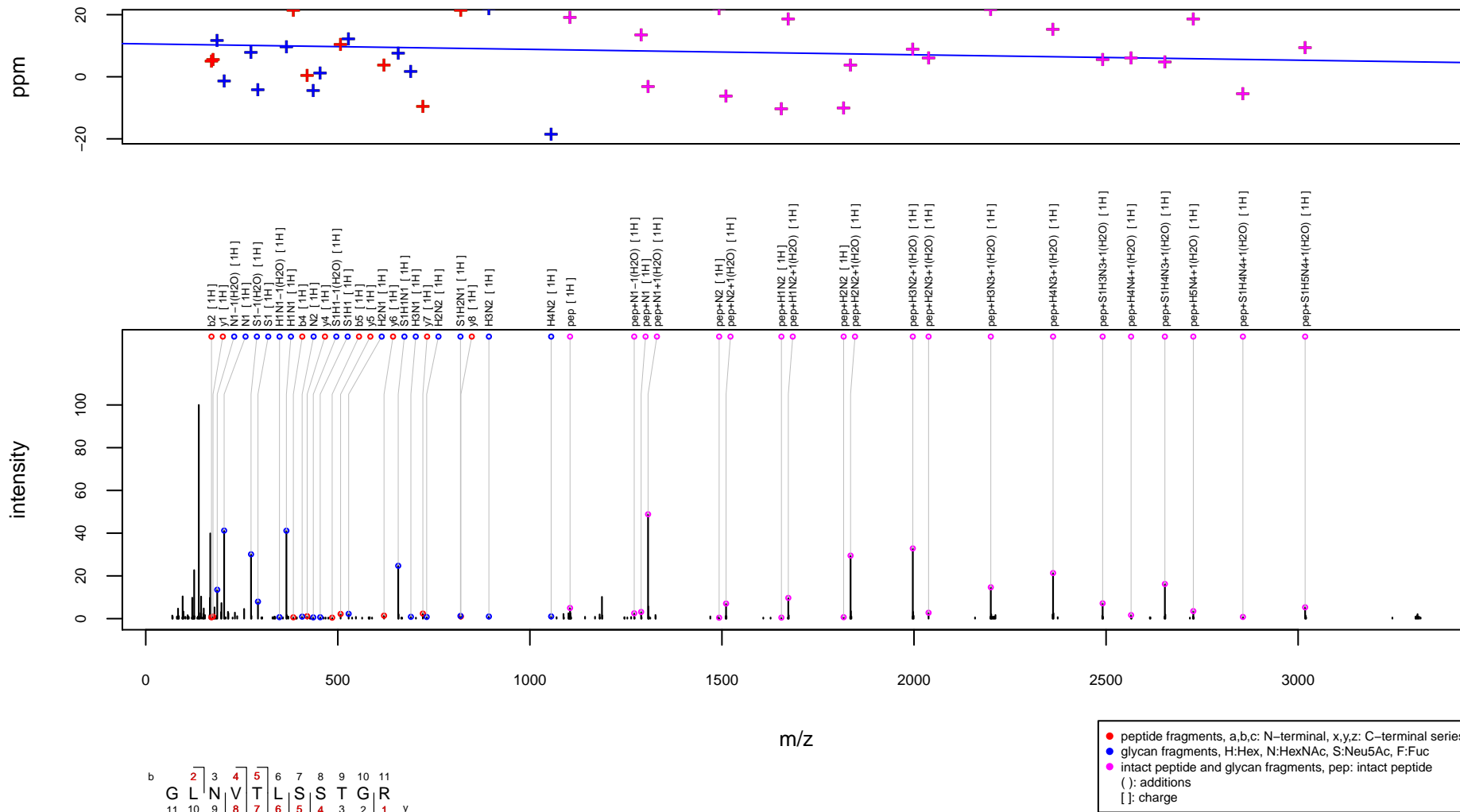
m/z 927.0483 charge 3 scan 0−0

Score= 23.27 , Hits= 18 , Explained Intensity= 0.11

Peptide: AMN1_HUMAN[90,96]:LNLNASK

Glycan: H6N3F3

Charge: 3H
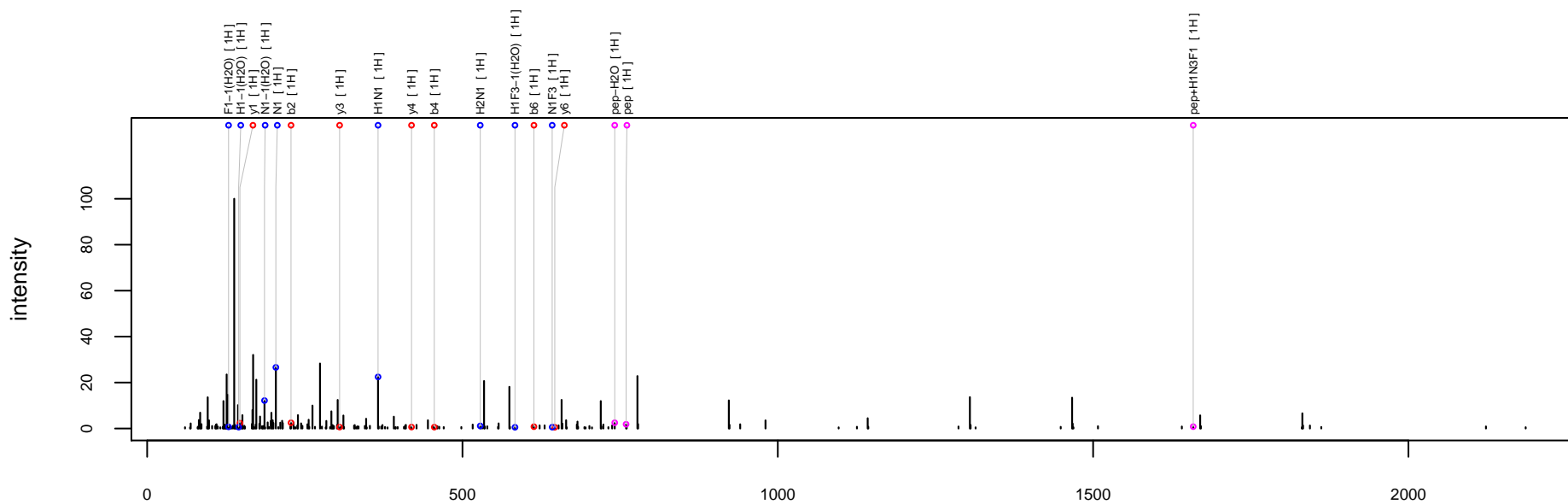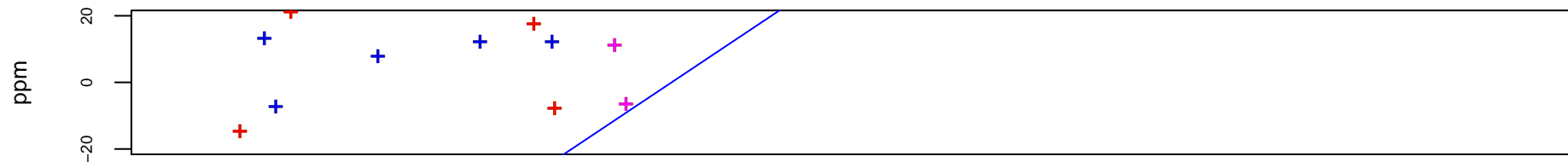
peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

# m/z 1145.1309 charge 3 scan 0–0

Score= 81.23 , Hits= 51 , Explained Intensity= 0.59

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 3H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:55 2014*
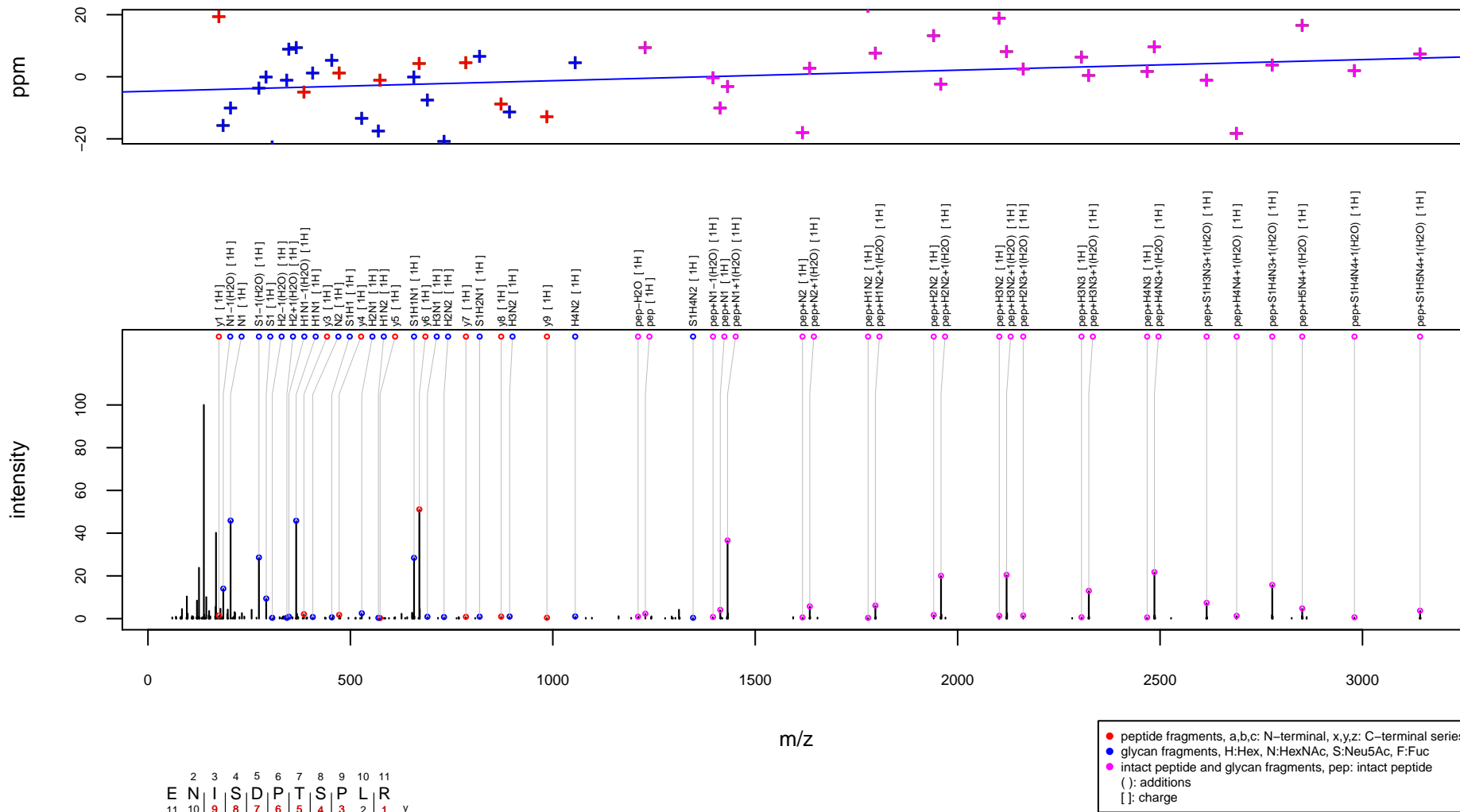
m/z 1053.11 charge 3 scan 0–0

Score= 77.47 , Hits= 53 , Explained Intensity= 0.48

Peptide: CUBN_HUMAN[778,788]:VCGNGTISHIK

Glycan: HNH(HNH)(N)HN(F)N, H5N5F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
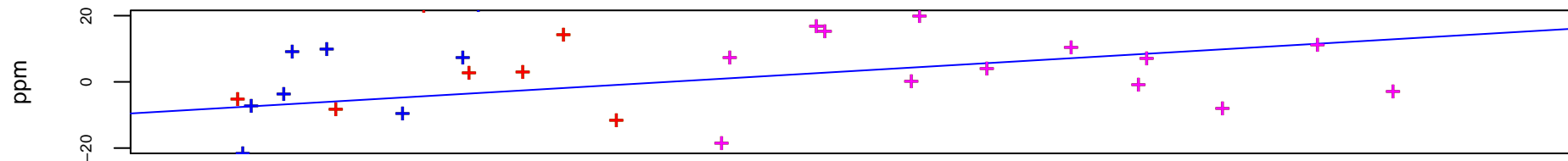 [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:55 2014*
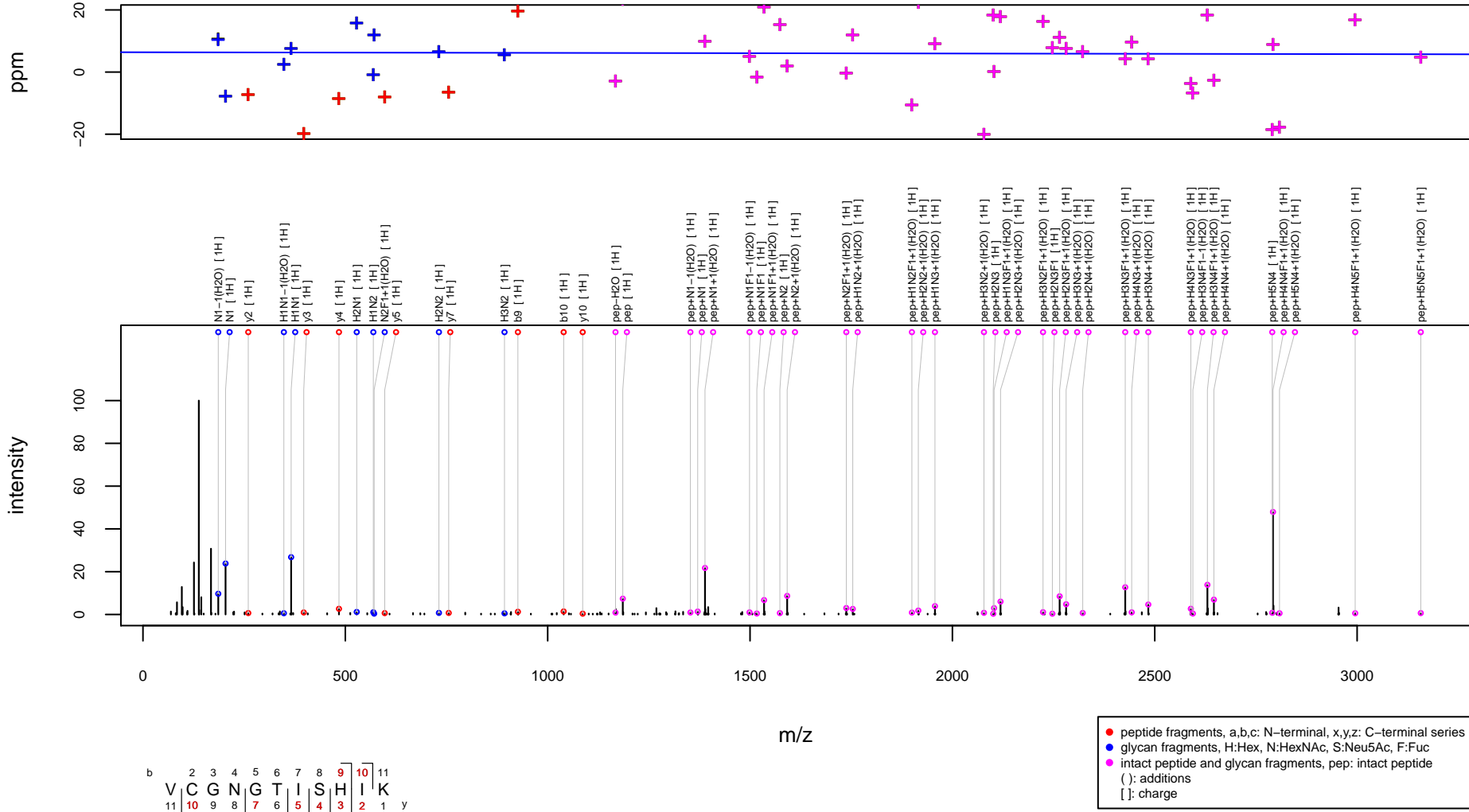
m/z 1029.0918 charge 3 scan 0–0

Score= 65.06 , Hits= 52 , Explained Intensity= 0.5

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR

Glycan: S1H5N3F1

Charge: 3H

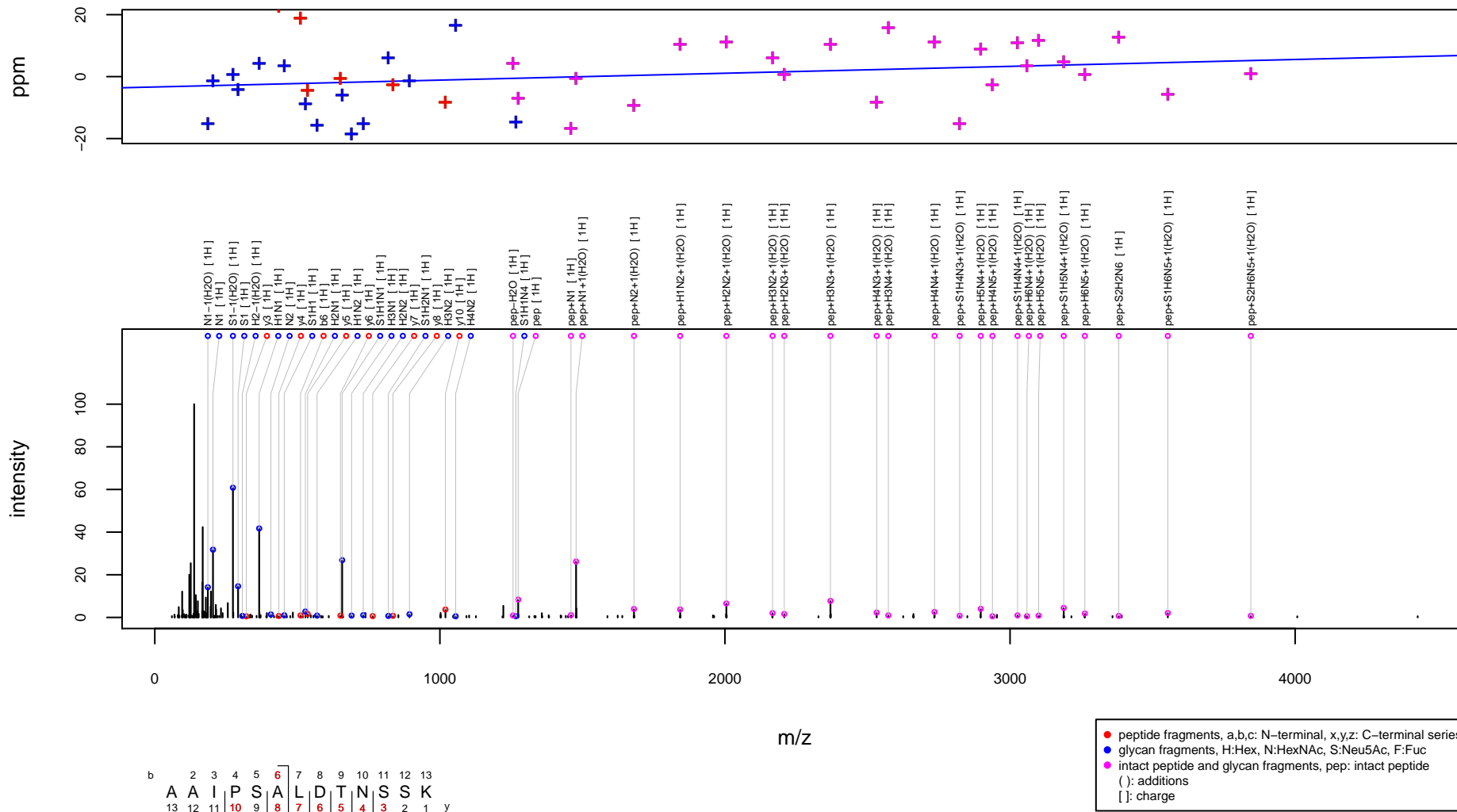**Glycopeptide ID –** *Mon Feb 17 09:50:56 2014*
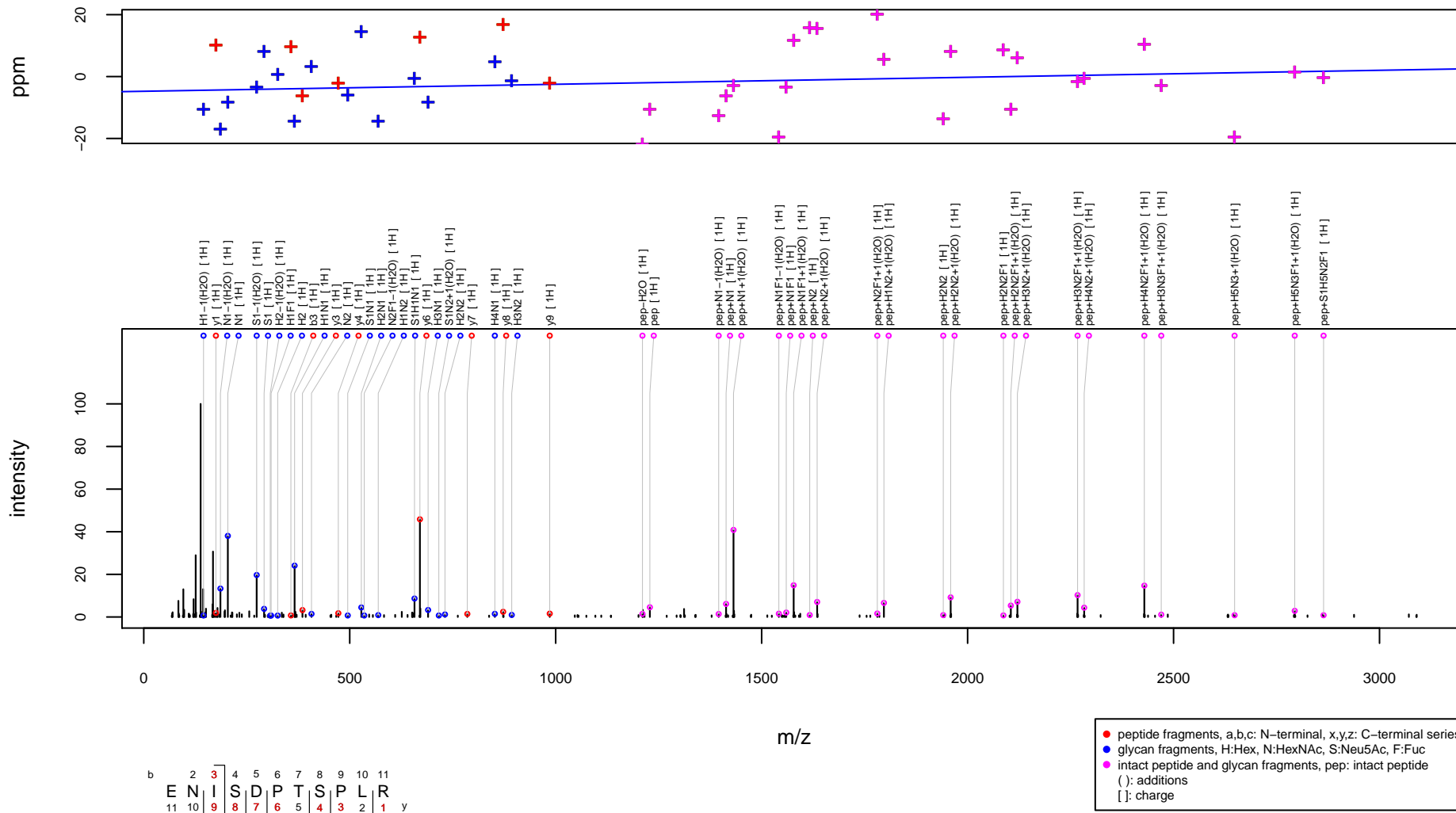
m/z 1326.8784 charge 3 scan 0–0

Score= 63.16 , Hits= 61 , Explained Intensity= 0.49

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: H6N6F3

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
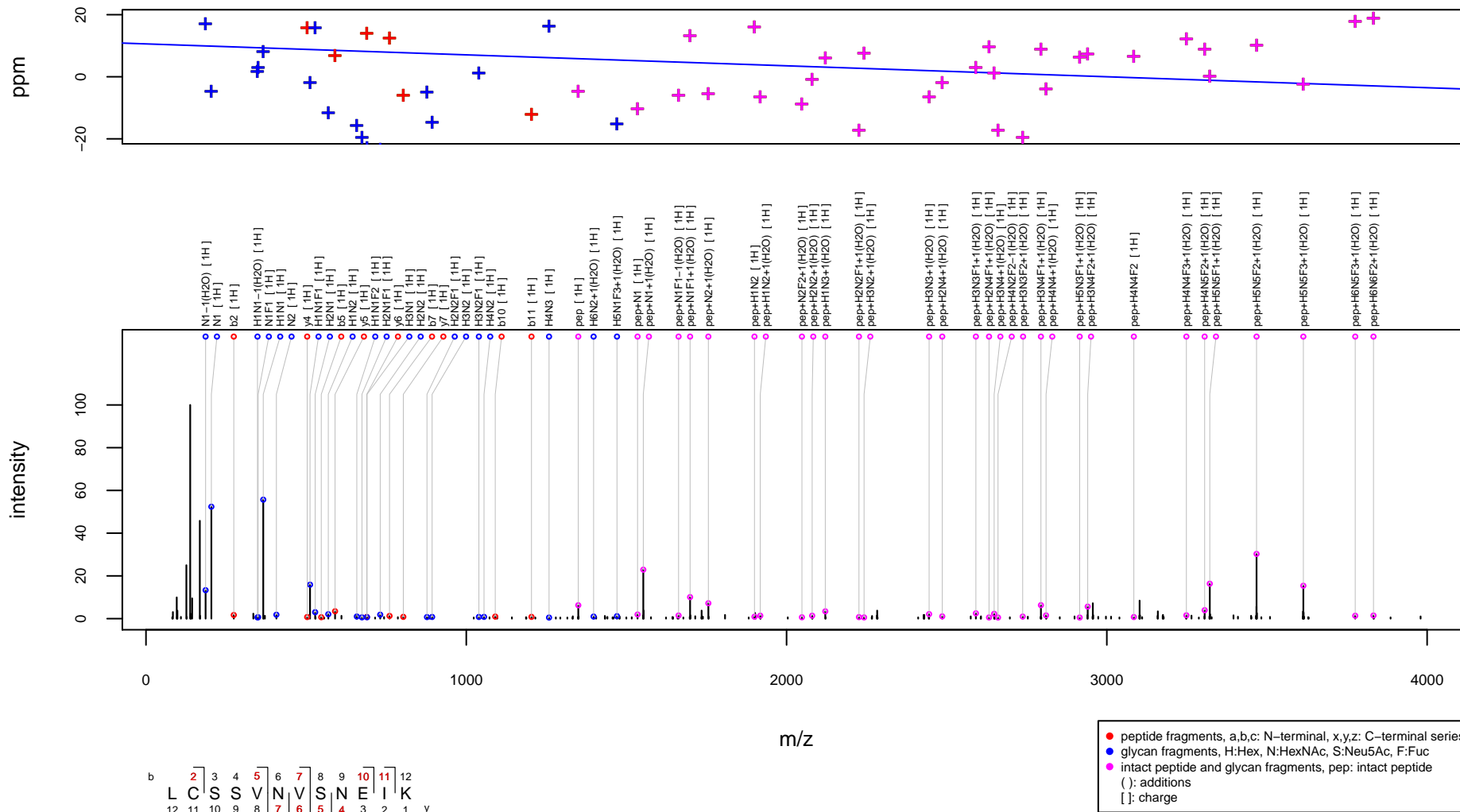
m/z 1331.293 charge 4 scan 0–0

Score= 66.81 , Hits= 52 , Explained Intensity= 0.46

Peptide: UROM_HUMAN[499,519]:FALLMTNCYATPSSNATDPLK

Glycan: SHNH(SHN(SHN)H)HN(F)N, S3H6N5F1

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:56 2014*
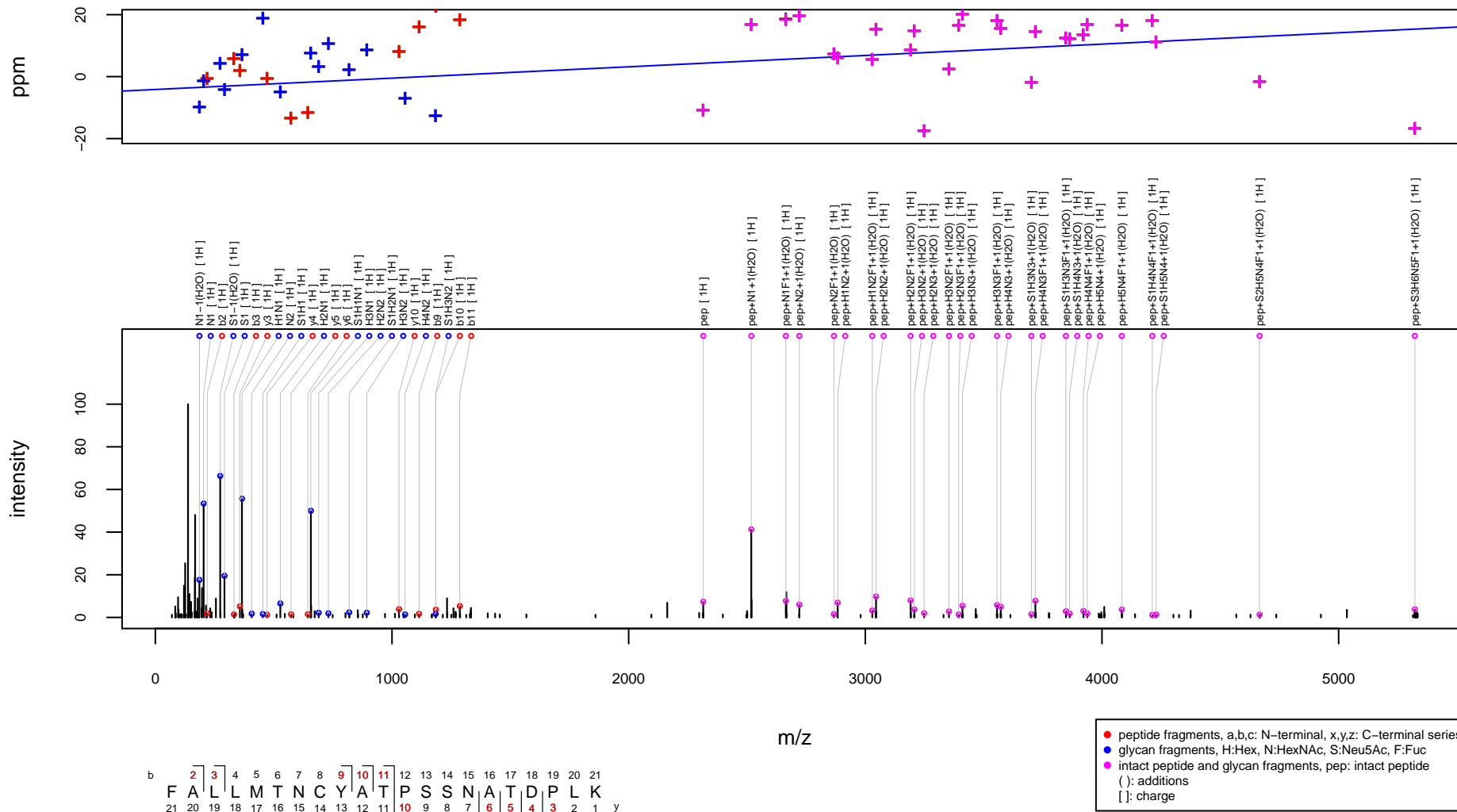
m/z 1133.6877 charge 4 scan 0–0

Score= 54.56 , Hits= 42 , Explained Intensity= 0.32

Peptide: LRP2_HUMAN[2797,2815]:EFICNGVDNCHDNNTSDEK

Glycan: FHNH(FHNH)(N)HN(F)N, H5N5F3

Charge: 4H

Glycopeptide ID – *Mon Feb 17 09:50:56 2014*
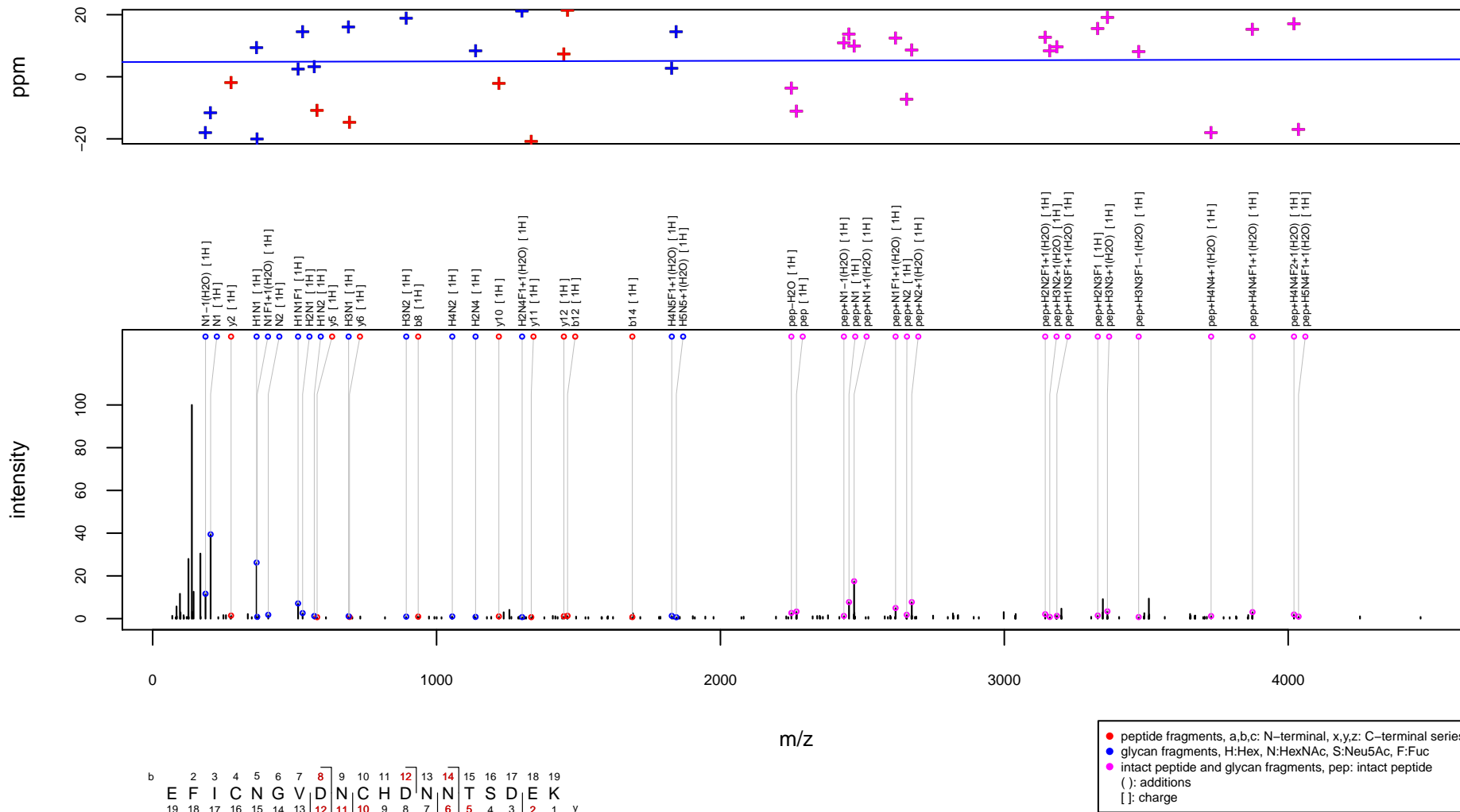
m/z 980.4081 charge 3 scan 0−0

Score= 51.85 , Hits= 34 , Explained Intensity= 0.47

Peptide: IGJ_HUMAN[70,80]:ENISDPTSPLR

Glycan: SHNH(HH)HNN, S1H5N3
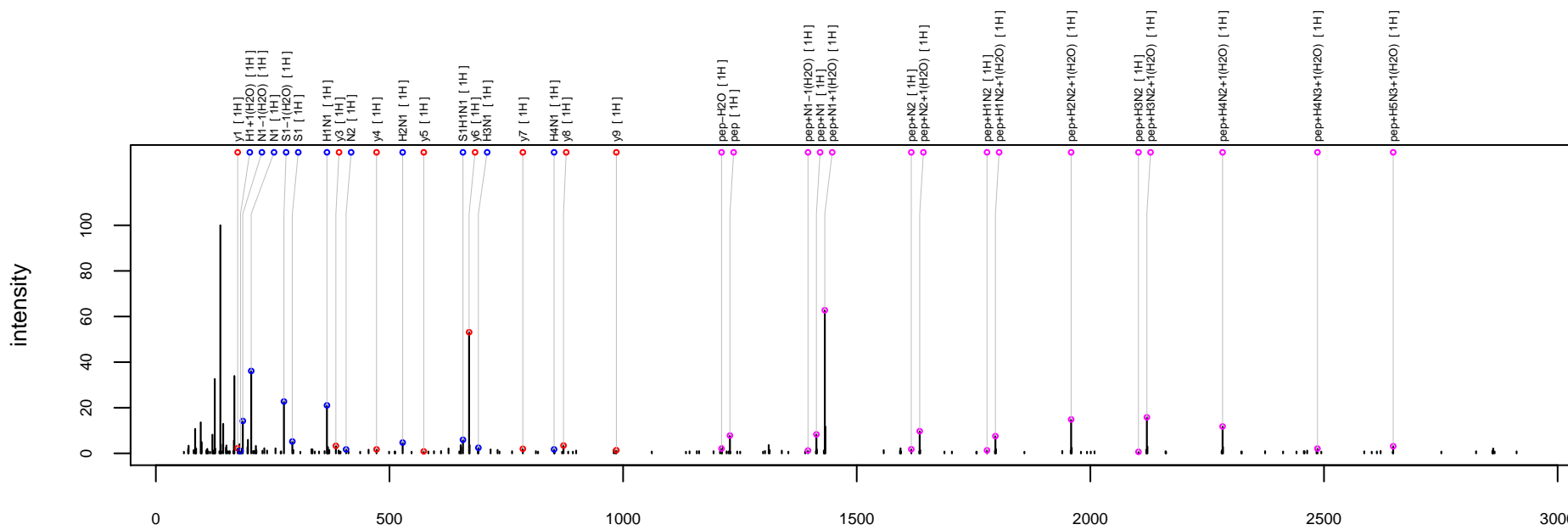
Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:57 2014*

m/z 1125.954 charge 4 scan 0–0

Score= 48.17 , Hits= 49 , Explained Intensity= 0.42

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S3H7N6

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:57 2014*

m/z 1229.5062 charge 3 scan 0–0

Score= 64.44 , Hits= 48 , Explained Intensity= 0.43

Peptide: CUBN_HUMAN[2526,2537]:LCSSVNVSNEIK

Glycan: HNH(HN(HN)H)(N)HN(F)N, H6N6F1

Charge: 3H

ppm

intensity

m/z

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

b 2 3 4 5 6 7 8 9 10 11 12
L C S S V N V S N E I K
12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:58 2014*

134
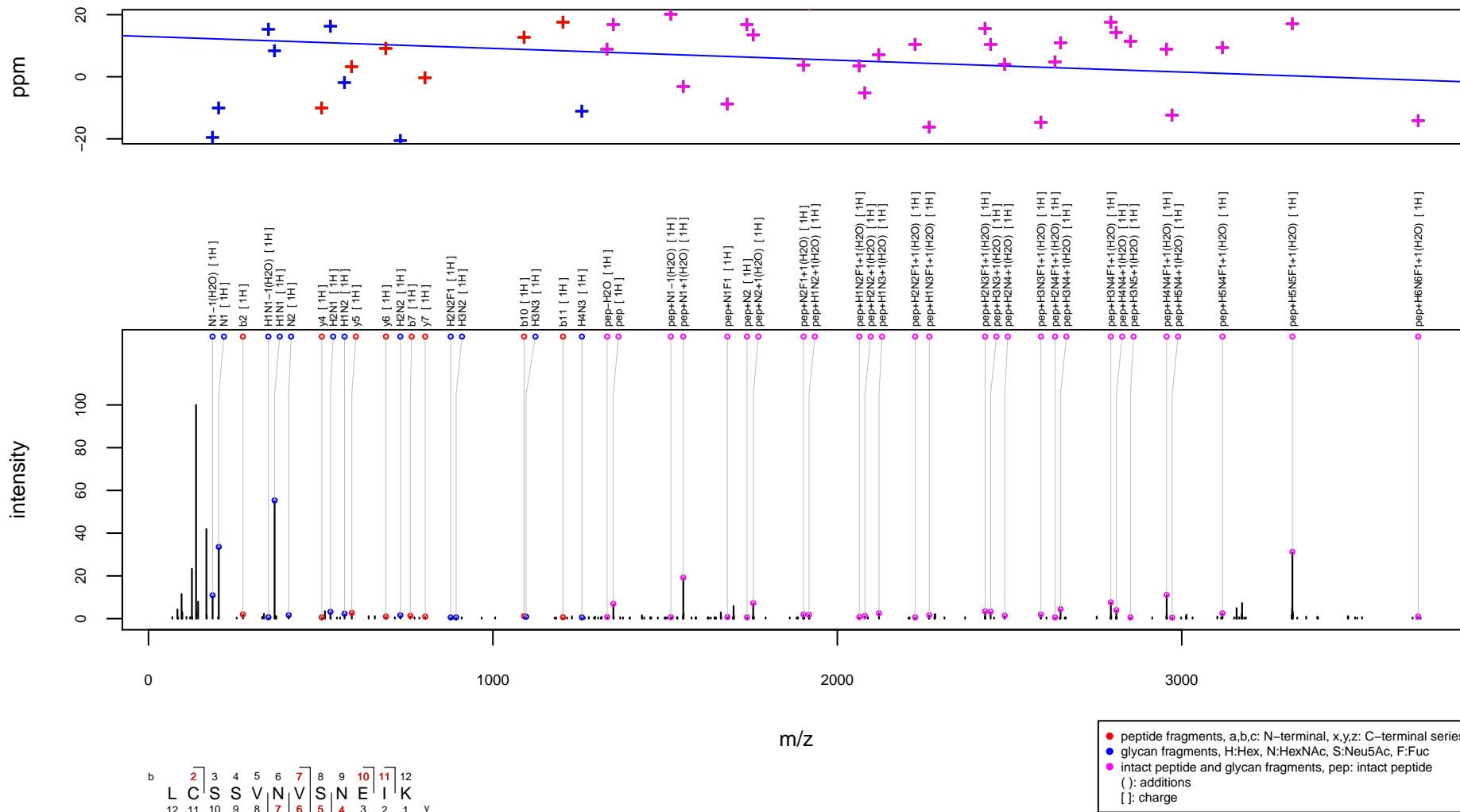
m/z 1218.5017 charge 3 scan 0–0

Score= 54.69 , Hits= 52 , Explained Intensity= 0.43

Peptide: CUBN_HUMAN[3457,3468]:NGSNSNSPLLGK

Glycan: S1H5N6F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
- ( ): additions
- [ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12
N G S N S N S P L L G K
12 11 10 9 8 7 6 5 4 3 2 1 y

Glycopeptide ID – *Mon Feb 17 09:50:58 2014*
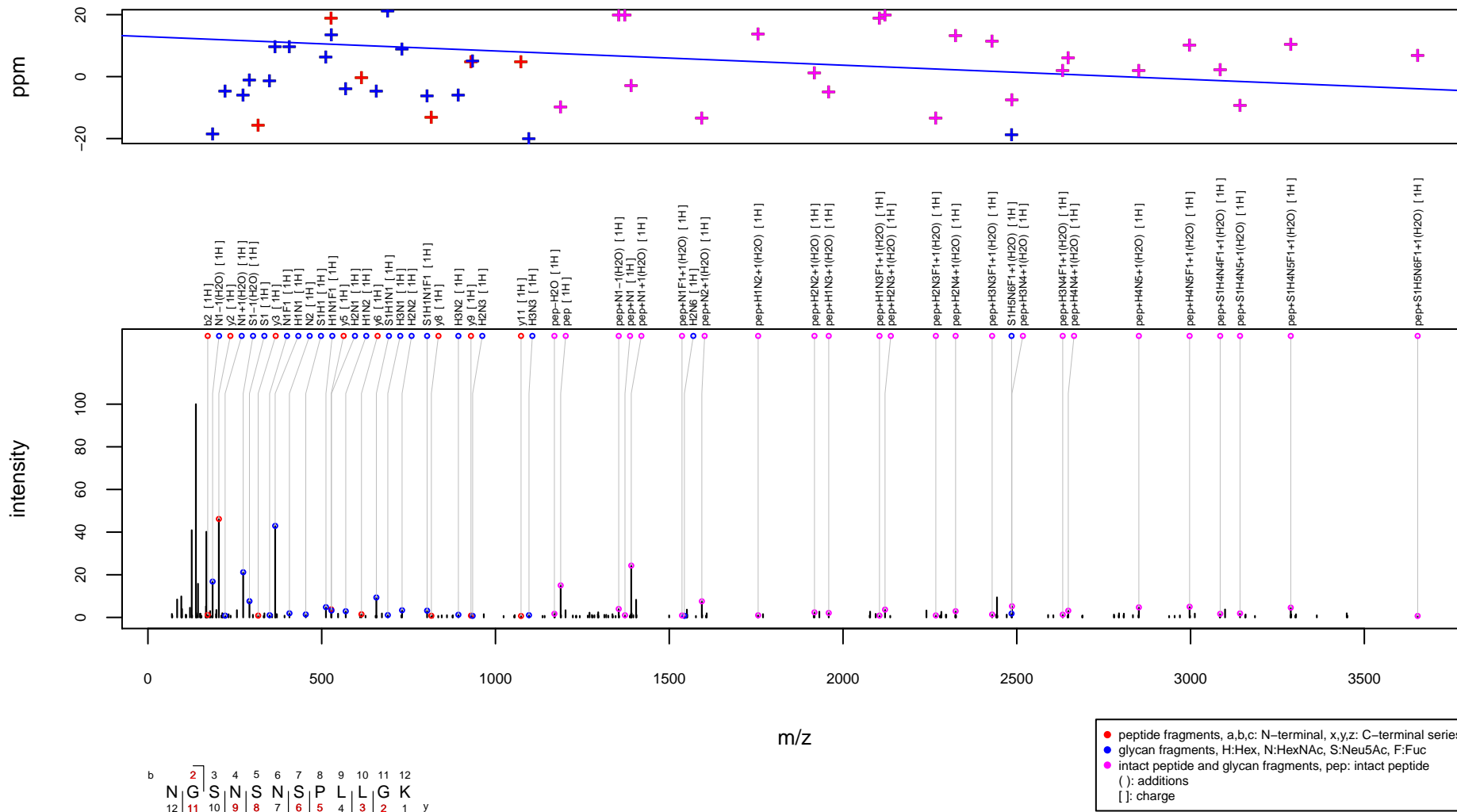
m/z 1107.9541 charge 4 scan 0–0

Score= 40.2 , Hits= 48 , Explained Intensity= 0.4

Peptide: LG3BP_HUMAN[64,76]:ALGFENATQALGR

Glycan: S2H7N6F1

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
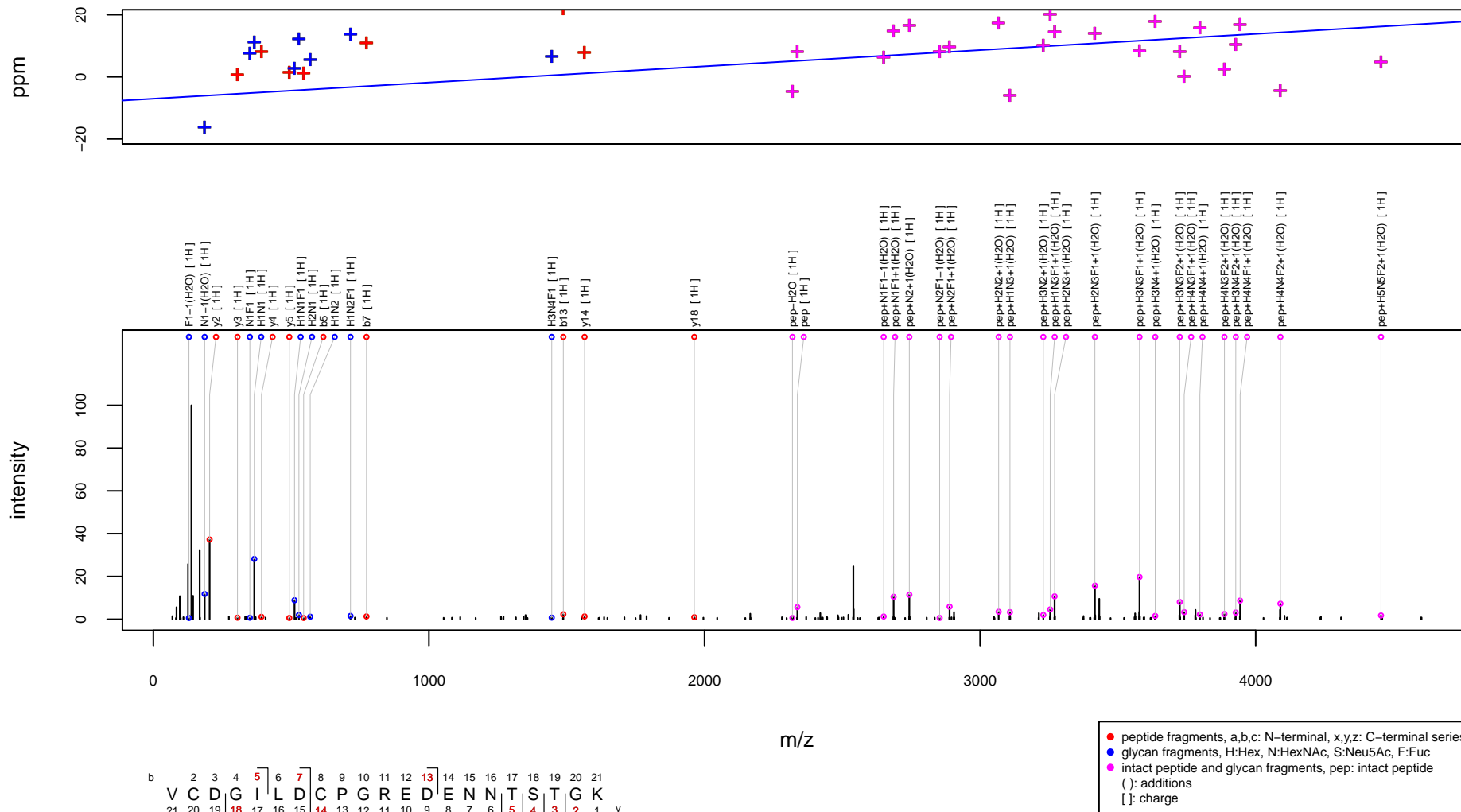
Glycopeptide ID – *Mon Feb 17 09:50:58 2014*
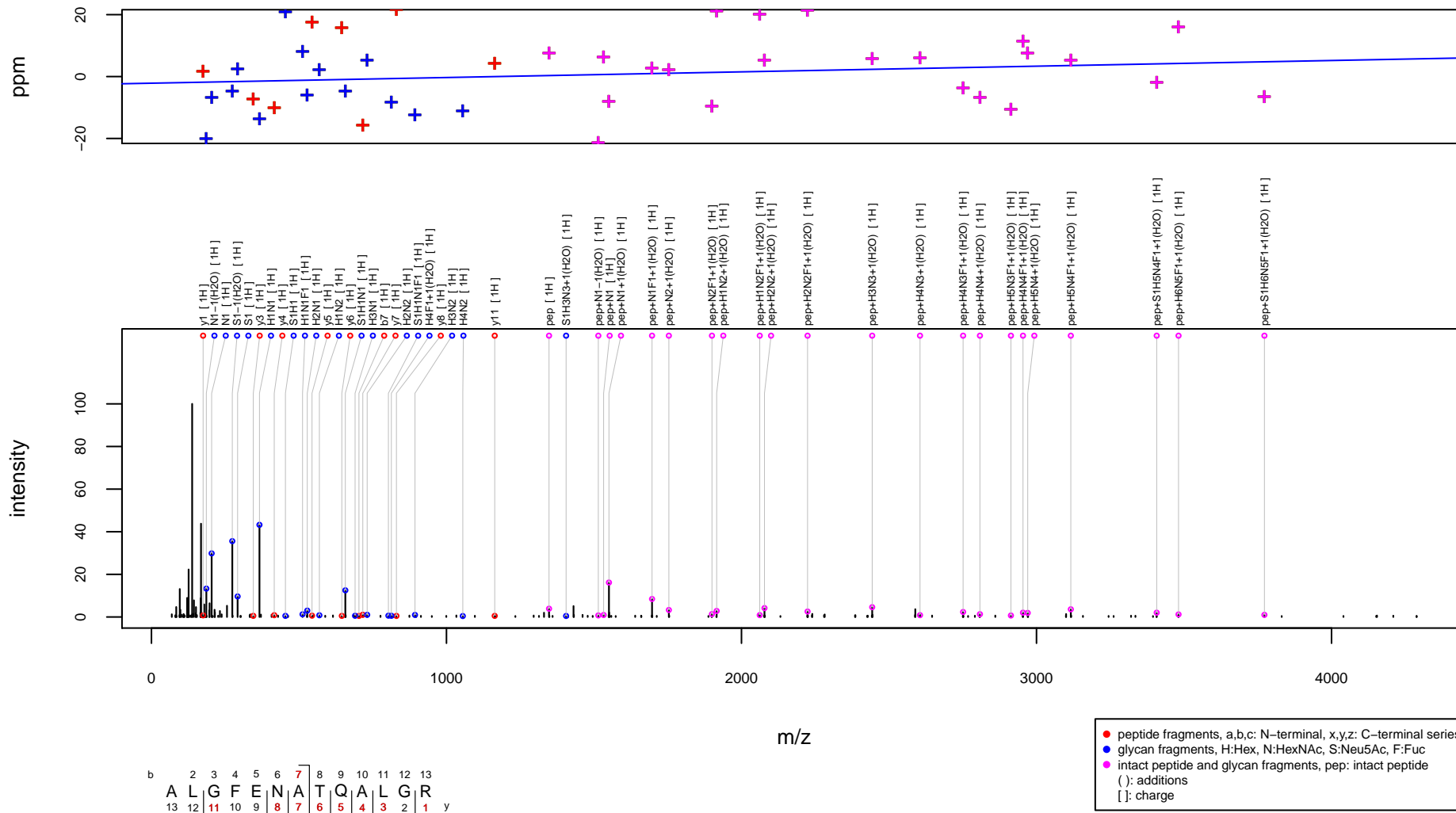
m/z 1242.2429 charge 4 scan 0–0

Score= 55.82 , Hits= 54 , Explained Intensity= 0.48

Peptide: LRP2_HUMAN[285,305]:VCDGILDCPGREDENNTSTGK

Glycan: H6N6F3

Charge: 4H

ppm

intensity

m/z

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
V C D G I L D C P G R E D E N N T S T G K
21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

- ● peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- ● glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- ● intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge
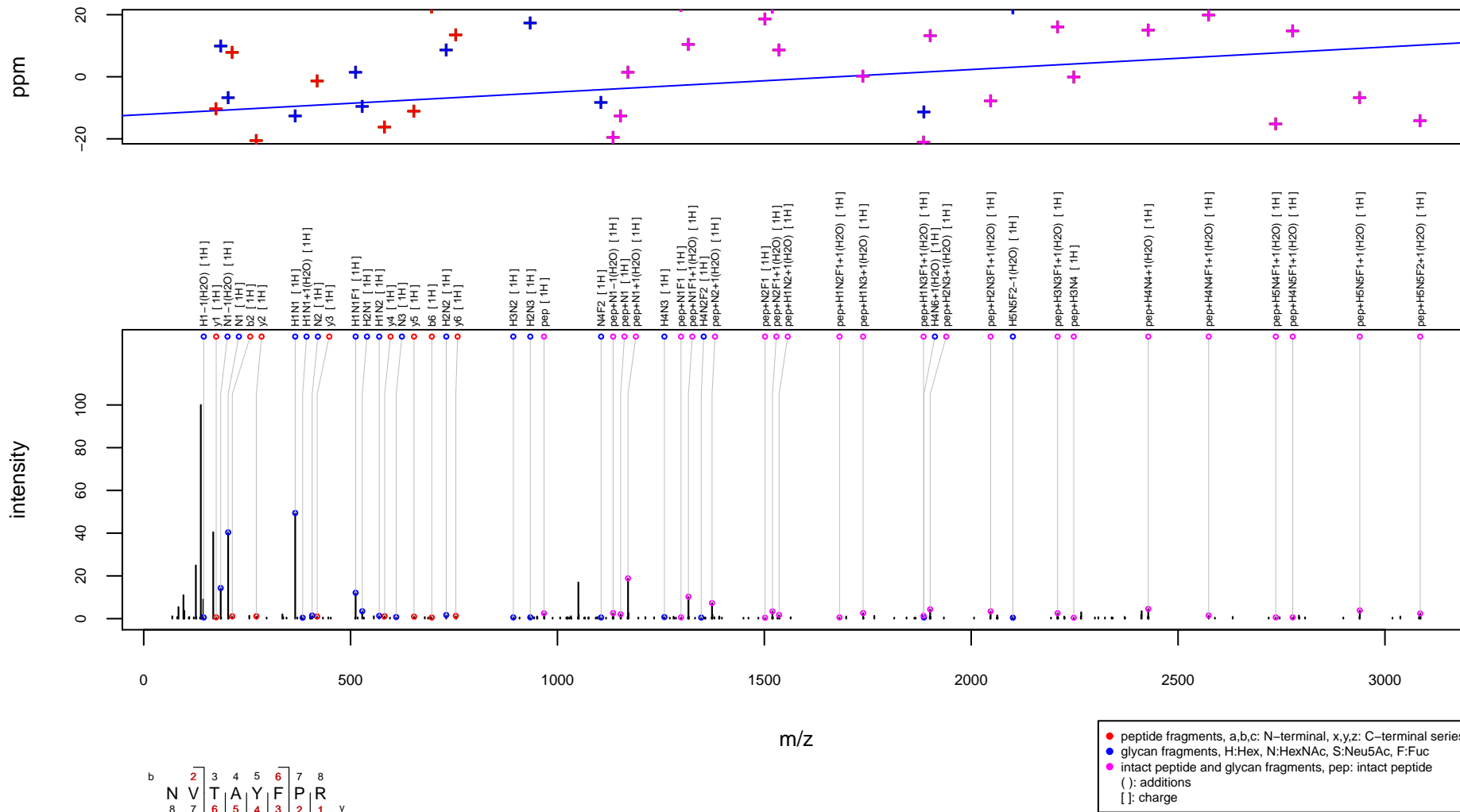
Glycopeptide ID – *Mon Feb 17 09:50:59 2014*
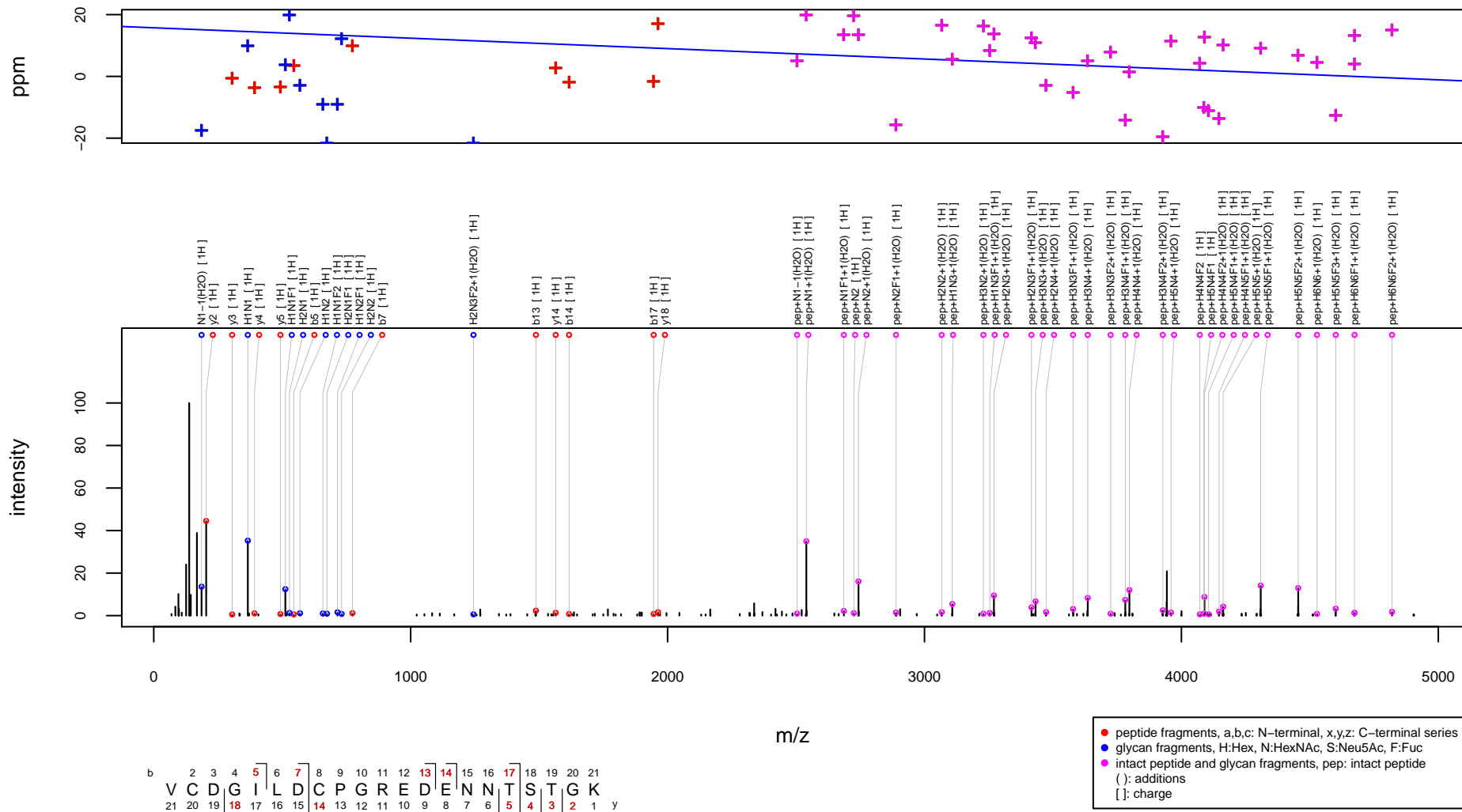
m/z 899.8685 charge 4 scan 0–0

Score= 43.9 , Hits= 45 , Explained Intensity= 0.29

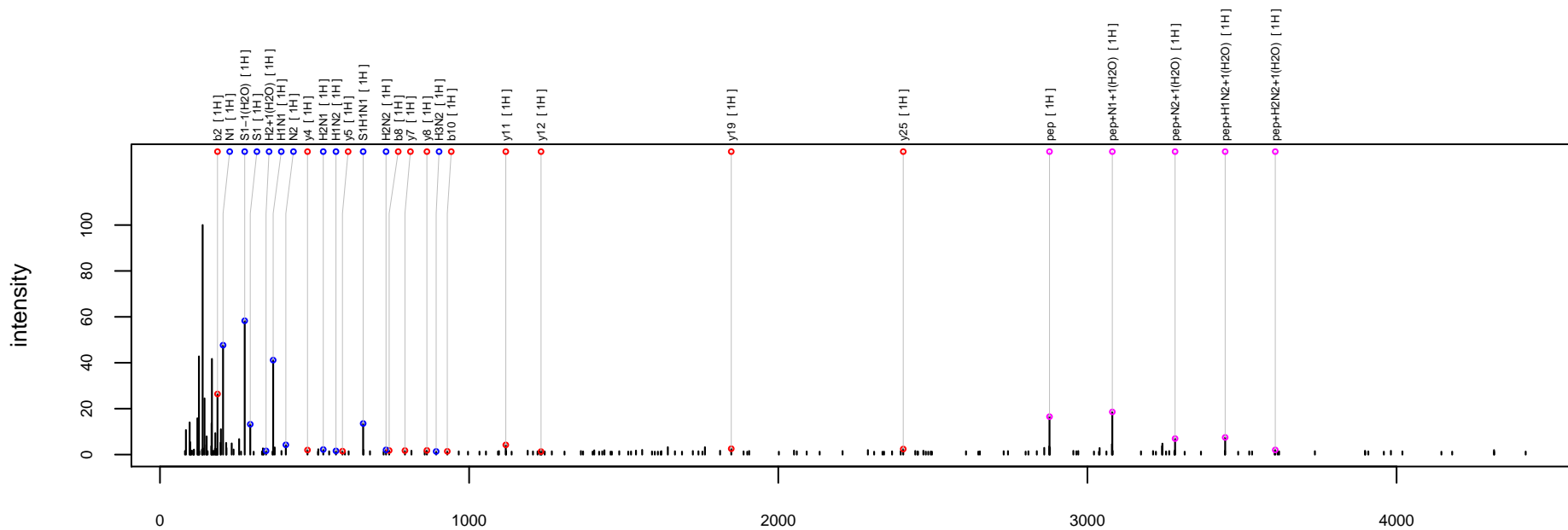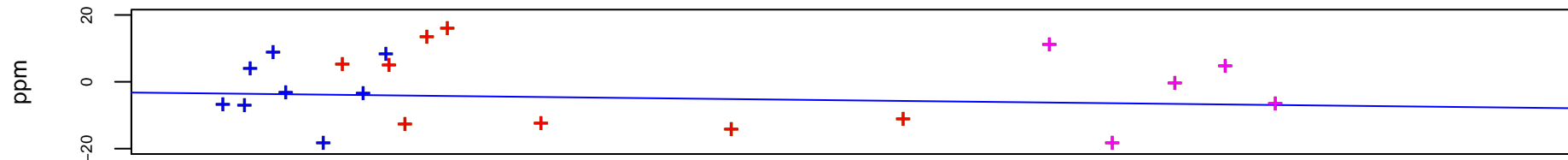Peptide: MGA_HUMAN[1672,1679]:NVTAYFPR

Glycan: H6N6F3

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:59 2014*
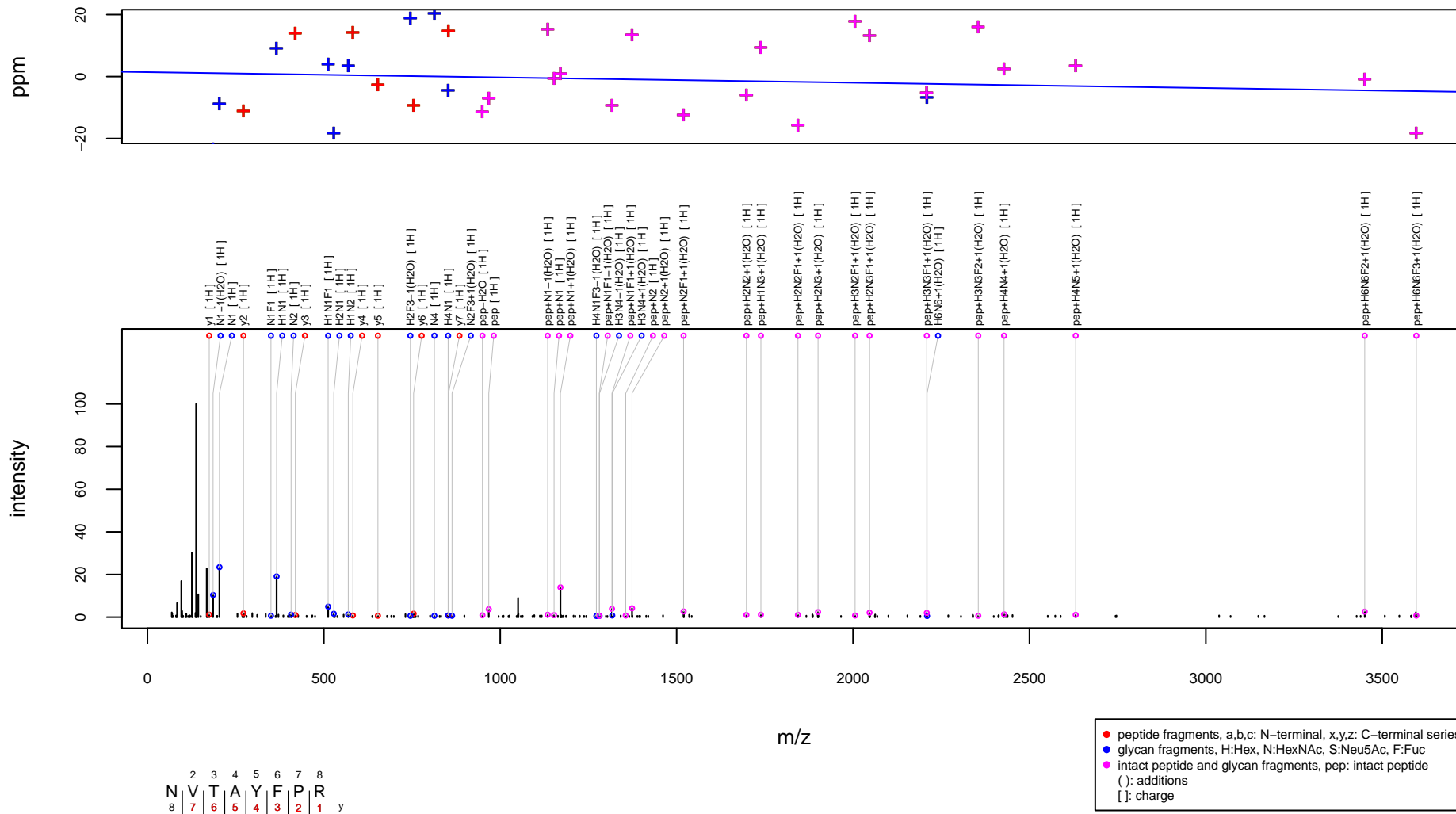
m/z 1102.1216 charge 3 scan 0–0

Score= 70.91 , Hits= 52 , Explained Intensity= 0.38

Peptide: MGA_HUMAN[1672,1679]:NVTAYFPR

Glycan: HNH(HN(HN)H)(N)HN(F)N, H6N6F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series (red)
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc (blue)
- intact peptide and glycan fragments, pep: intact peptide (magenta)
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:59 2014*
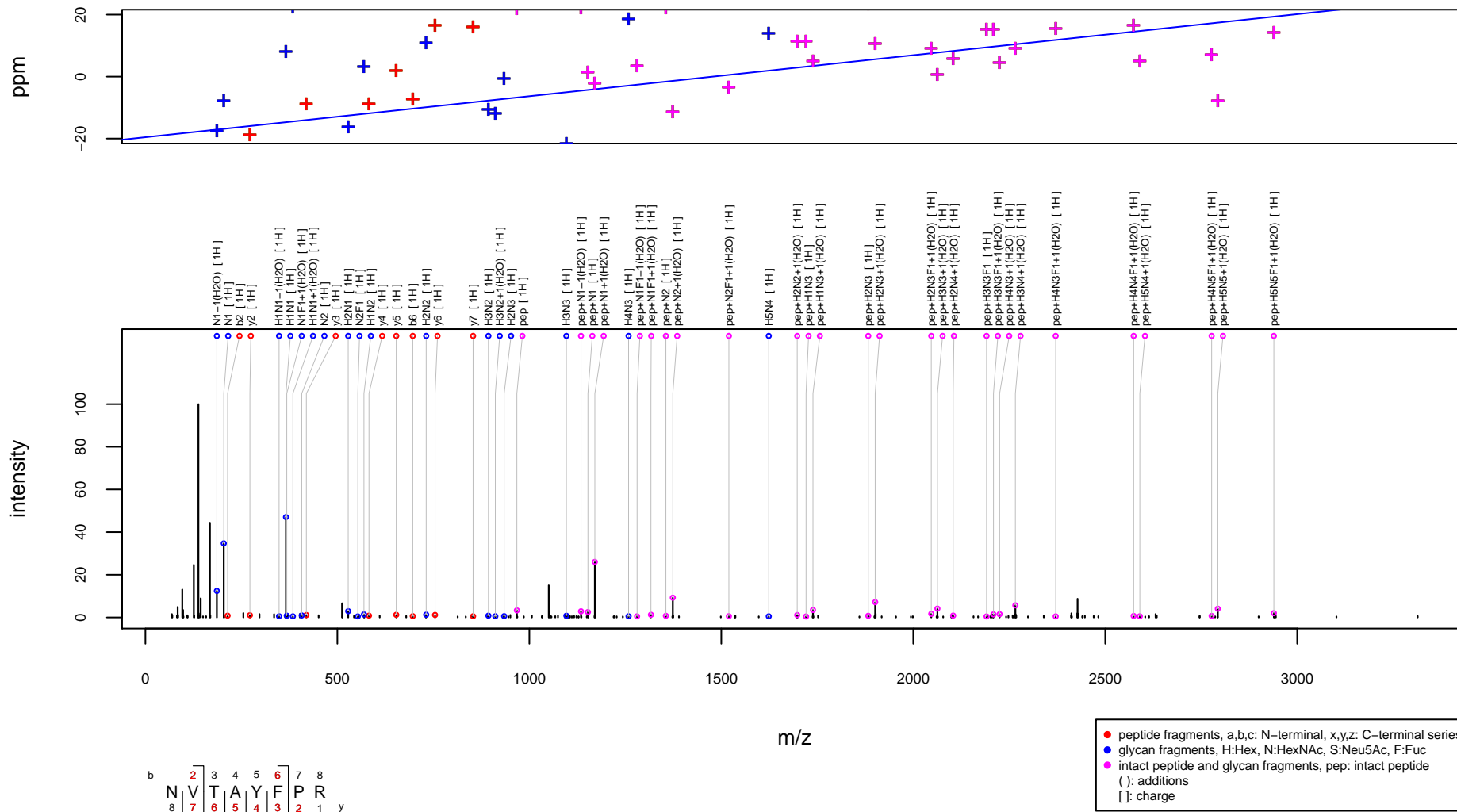
m/z 1150.963 charge 4 scan 0−0

Score= 53.07 , Hits= 41 , Explained Intensity= 0.41

Peptide: LRP2_HUMAN[285,305]:VCDGILDCPGREDENNTSTGK

Glycan: FHNH(FHNH)(N)HN(F)N, H5N5F3

Charge: 4H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
 ( ): additions
  [ ]: charge

b: 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
V C D G I L D C P G R E D E N N T S T G K
21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 y

m/z 1150.8015 charge 3 scan 0–0

Score= 52.09 , Hits= 49 , Explained Intensity= 0.41

Peptide: MGA_HUMAN[1672,1679]:NVTAYFPR

Glycan: H6N6F2

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 1139.4739 charge 4 scan 0–0

Score= 36.24 , Hits= 27 , Explained Intensity= 0.35

Peptide: AMPN_HUMAN[40,69]:NANSSPVASTTPSASATTNPASATTLDQSK

Glycan: S2H3N3

Charge: 4H

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

N A N S S P V A S T T P S A S A T T N P A S A T T L D Q S K

30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1   y

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 903.112 charge 4 scan 0–0

Score= 37.58 , Hits= 27 , Explained Intensity= 0.26

Peptide: HEMO_HUMAN[181,193]:SWPAVGNCSSALR

Glycan: SHNH(SHNH)HNN, S2H5N4

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:15 2014*
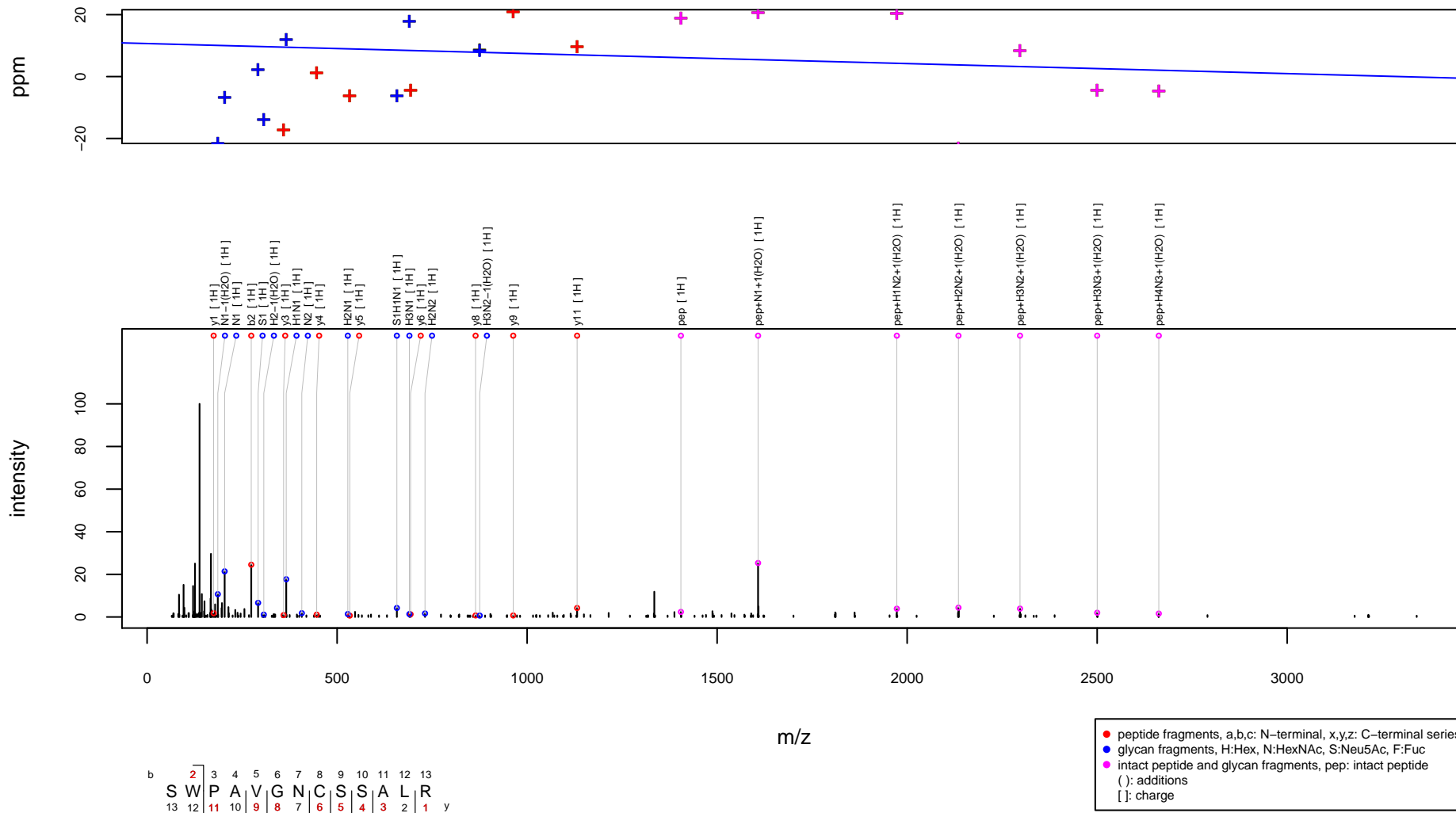
m/z 976.406 charge 4 scan 0–0

Score= 38.99 , Hits= 42 , Explained Intensity= 0.31

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: S1H6N6F1

Charge: 4H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
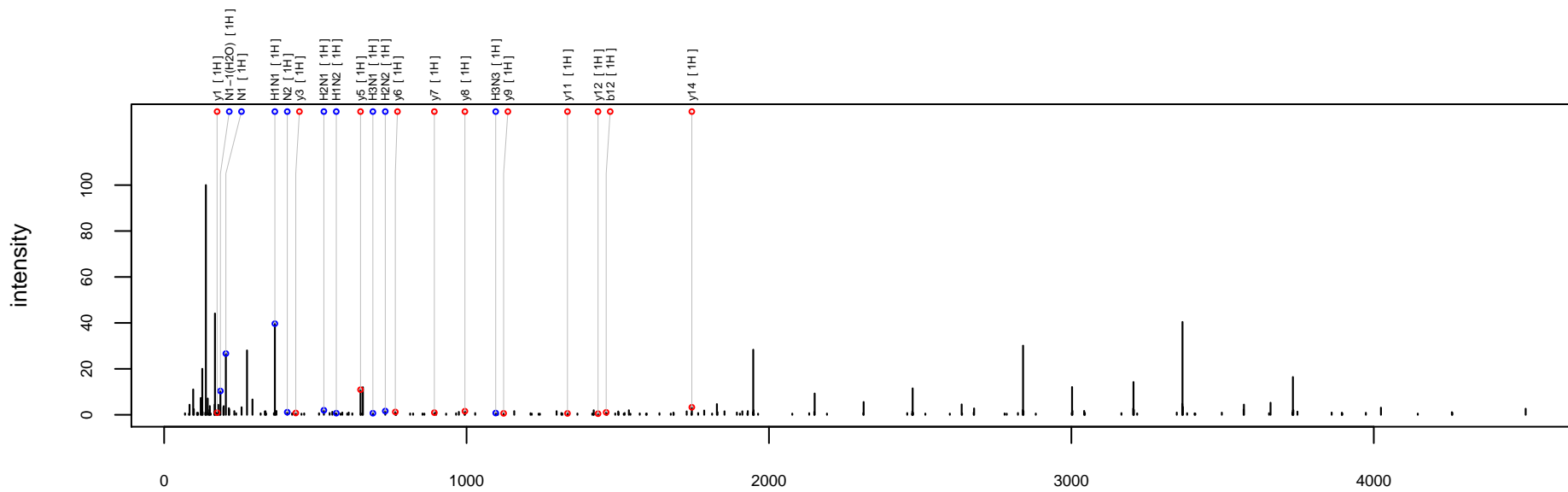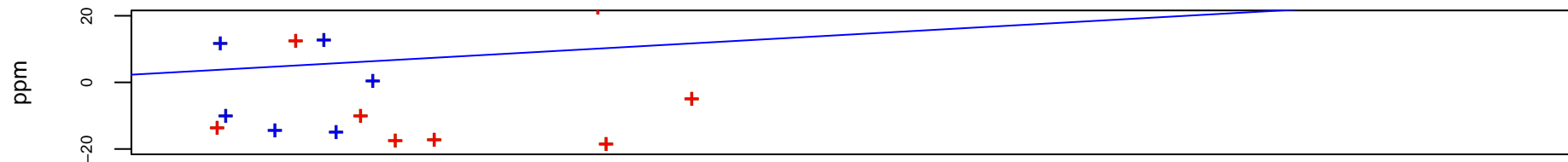intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge
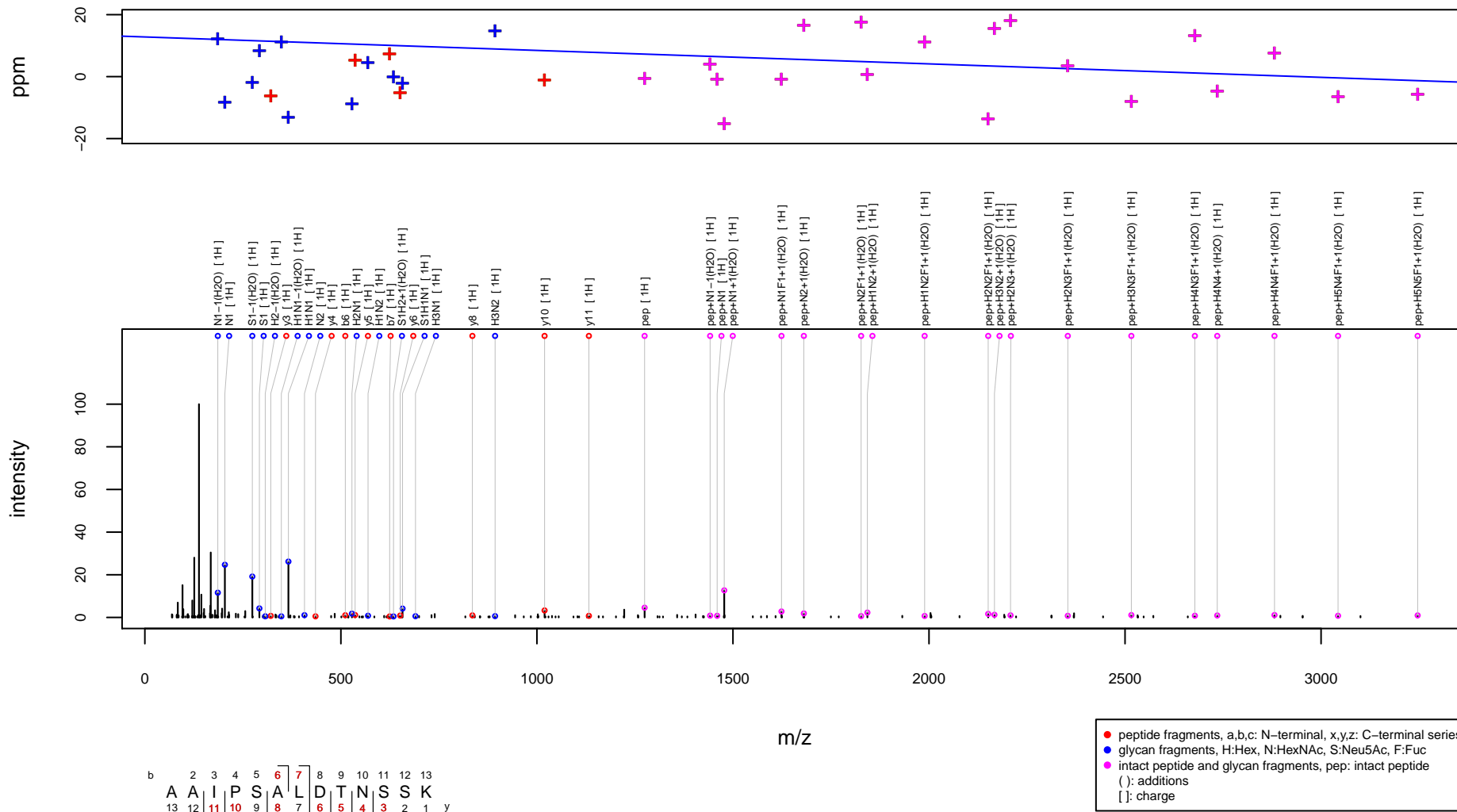
m/z 1049.7739 charge 3 scan 0–0

Score= 55.34 , Hits= 38 , Explained Intensity= 0.4

Peptide: LG3BP_HUMAN[542,554]:AAIPSALDTNSSK

Glycan: SHNH(H(H)H)HNN, S1H6N3

Charge: 3H
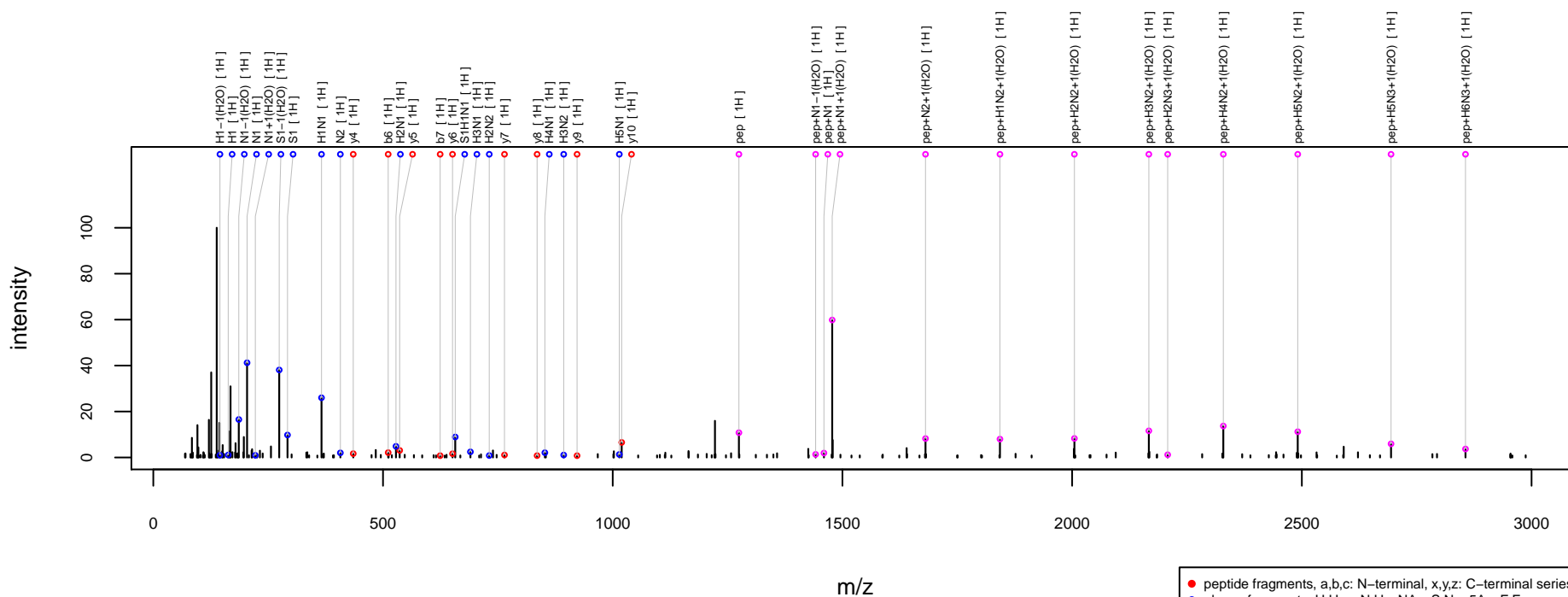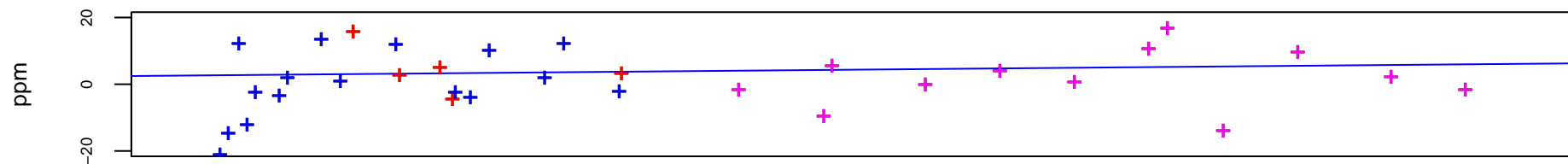
Legend:
- peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series (red)
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc (blue)
- intact peptide and glycan fragments, pep: intact peptide (magenta)
  ( ): additions
  [ ]: charge

Peptide diagram:
```
b    2  3  4  5  6  7  8  9  10 11 12 13
     A  A  I  P  S  A  L  D  T  N  S  S  K
    13 12 11 10  9  8  7  6  5  4  3  2  1  y
```

Glycopeptide ID – *Mon Feb 17 09:50:16 2014*

m/z 1170.7365 charge 4 scan 0–0

Score= 27.03 , Hits= 20 , Explained Intensity= 0.15

Peptide: A1AG1_HUMAN[58,81]:SVQEIQATFFYFTPNKTEDTIFLR

Glycan: H6N4

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

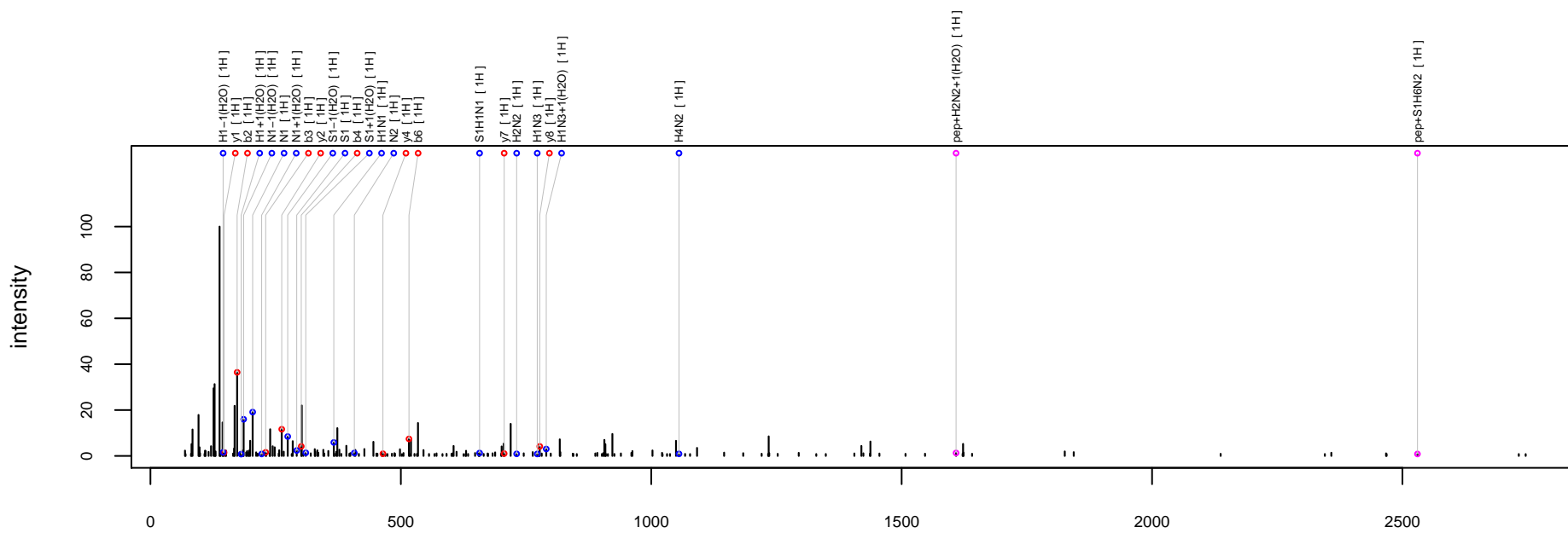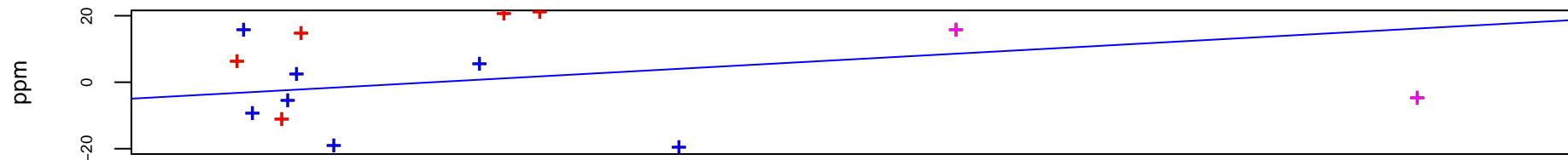**Glycopeptide ID** – *Mon Feb 17 09:50:16 2014*

m/z 917.7096 charge 3 scan 0−0

Score= 33.23 , Hits= 26 , Explained Intensity= 0.19

Peptide: FGFR3_HUMAN[311,319]:TAGANTTDK

Glycan: S1H6N3

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

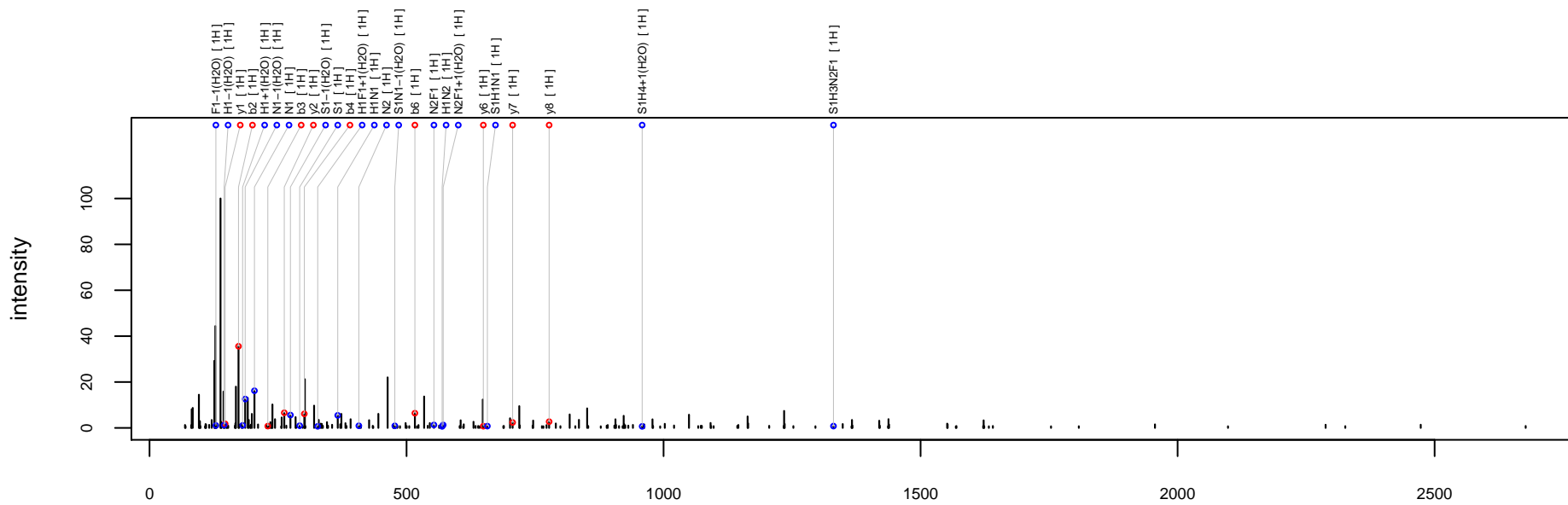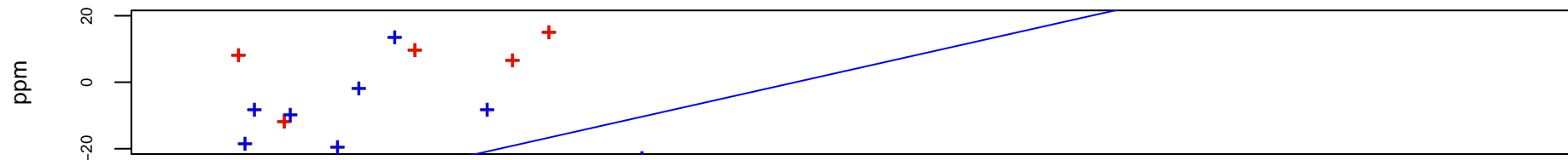**Glycopeptide ID –** *Mon Feb 17 09:50:16 2014*

m/z 898.7083 charge 3 scan 0–0

Score= 30.71 , Hits= 26 , Explained Intensity= 0.16

Peptide: FGFR3_HUMAN[311,319]:TAGANTTDK

Glycan: S1H6N2F1

Charge: 3H

peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

m/z 918.1528 charge 4 scan 0–0

Score= 40.53 , Hits= 33 , Explained Intensity= 0.26

Peptide: DPEP1_HUMAN[56,70]:ANLTTLAGTHTNIPK

Glycan: FHNH(HNH)(N)HN(F)N, H5N5F2

Charge: 4H

peptide fragments, a,b,c: N–terminal, x,y,z: C–terminal series
glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
intact peptide and glycan fragments, pep: intact peptide
( ): additions
[ ]: charge

b   2 3 4 5 6 7 8 9 10 11 12 13 14 15
A N L T T L A G T H T N I P K
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1   y

Glycopeptide ID – *Mon Feb 17 09:50:17 2014*

149

m/z 1017.7481 charge 3 scan 0–0

Score= 73.65 , Hits= 59 , Explained Intensity= 0.38

Peptide: LRP2_HUMAN[1550,1555]:NLTNPR

Glycan: H6N6F1

Charge: 3H

Legend:
- peptide fragments, a,b,c: N−terminal, x,y,z: C−terminal series
- glycan fragments, H:Hex, N:HexNAc, S:Neu5Ac, F:Fuc
- intact peptide and glycan fragments, pep: intact peptide
  ( ): additions
  [ ]: charge

Glycopeptide ID – *Mon Feb 17 09:50:17 2014*