

Supplemental Table 1 : List of the GlcNAc containing peptides identified from the yeast whole cell lysate. MS/MS data were searched using the Sequest algorithm with the following parameters : full tryptic specificity was required, 1 missed cleavage was allowed, carbamidomethylation of the Cys residues was set as a fixed modification, oxidation of the Met residues and GlcNAc on the Asn residues (+203.09 Da) were set as variable modifications. The results were validated using the Peptide Prophet tool insuring a false discovery rate below 2%. # corresponds to the attached GlcNAc.

Peptide sequence	m/z	Protein	Peptide Prophet Probability
K.AAFSN#LTTVGGGFIIAN#NTQLK.V	1322,10	ECM33_YEAST	0,9293
K.AATHMWPGSDVN#YTK.Y	627,59	YCR6_YEAST	0,973
K.AHHLN#YTLVPFDGR.S	921,92	APE3_YEAST	1
K.EHWSYPEWIN#QTK.A	960,90	KRE2_YEAST	1
K.FASYAN#DTITVK.G	848,37	EXG2_YEAST	0,9749
K.FFYSNN#GSQFYIR.G	923,39	GAS1_YEAST	0,9638
K.FGDEN#YTLYQFSHLGYGLK.E	819,03	GDA1_YEAST	0,9948
K.FMFEN#CSLCSK.I	813,27	ECM38_YEAST	0,8351
K.FPN#ITEGELEK.K	740,32	YIA5_YEAST	0,9978
K.FQCSN#DTYVR.Y	746,77	PPA5_YEAST	0,993
K.FQSSN#LTLAGEVPK.N	847,40	AXL2_YEAST	0,9992
K.FSNN#GTFEETEEPIVETK.S	1146,49	SEC66_YEAST	0,8815
K.FTN#ESLLWAPYR.S	850,38	CWH41_YEAST	0,9987
K.GRLDLAASN#ITGFVSTR.T	990,98	YJT2_YEAST	0,956
K.HYN#DTLLK.Q	603,76	PPAB_YEAST	0,9947
K.IDADFN#ATFYSMoxANK.H	963,89	PDI_YEAST	0,8815
K.IDADFN#ATFYSMANK.H	955,89	PDI_YEAST	0,9919
K.IISFN#LSDAETGK.S	799,36	APE3_YEAST	1
K.IISFN#LSDAETGKSFAN#TTAFALSPVDGFGVK.L	1269,91	APE3_YEAST	0,9998
K.IKVDDLN#ATAWDLYR.L	998,47	APE3_YEAST	1
K.IMN#VTDSLTK.V	713,32	PO152_YEAST	0,9963
K.IPTELVSEN#GTK.W	745,84	HMDH2_YEAST	0,9951
K.ISLAQANWN#ASEVSK.K	910,92	BAR1_YEAST	0,9695
K.ISSFLSLSN#STADTFHLR.N	733,68	GLU2A_YEAST	0,9728
K.KEPEESVEEN#TSK.T	570,24	UBP3_YEAST	0,8714
K.LDPNEVFN#VTFDR.S	884,88	AXL2_YEAST	0,9954
K.LLGLNSGFSN#STILQETLSK.N	1220,09	ERG3_YEAST	0,9453
K.LLVFN#QTEFDR.V	792,86	GNT1_YEAST	0,9966
K.LN#FSIPQR.E	589,27	YJS6_YEAST	0,9901
K.LN#STFEDAVIPLIFSEYGCNK.N	1310,58	GAS3_YEAST	0,8224

K.LN#YTASWVTANPDGLHEK.R	740,33	FET5_YEAST	1
K.LSN#EELYDVFTR.G	888,38	LHS1_YEAST	0,9995
K.LTGSAAILGN#ITK.S	731,37	RAD26_YEAST	0,9847
K.N#GTSAYVYTSSEFLAK.D	1014,44	CRH2_YEAST	1
K.N#LSIPVFFSEYGCNEVTPR.L	811,35	GAS1_YEAST	1
K.N#LTDLEYIPPLVVYIPNTK.H	1203,11	PLB2_YEAST	0,9988
K.N#TSAITTDGGIYK.T	772,34	EGT2_YEAST	0,9868
K.N#VSDLQ GK.L	532,23	HIM1_YEAST	0,9646
K.NDLN#ETELVK.E	689,30	RNY1_YEAST	0,9065
K.NGVNYAFFNN#ITYTAPK.V	1068,98	FET3_YEAST	0,933
K.NLEN#GTLQLNAFK.N	832,89	YJT2_YEAST	0,9008
K.NLLLPFN#R.T	595,29	YFI8_YEAST	0,8482
K.NNLQHN#ITLK.D	699,33	GLU2A_YEAST	0,998
K.NSDVN#NSIDYEGPR.T	891,85	PDI_YEAST	0,9721
K.QSQPAVAVVADLPAYLAN#ETFVTPVIVQSGK.I	1139,24	PDI_YEAST	1
K.RLPTYQELADTYAN#ATSDVLIK.L	943,12	PDI_YEAST	0,9998
K.SFAN#TTAFALSPVDGFGVK.L	1115,02	APE3_YEAST	1
K.SIVNPGGSN#LTYTIER.W	962,45	PLB2_YEAST	0,9628
K.SNSEGTSVSVN#NSDYSPINR.I	1209,00	YL001_YEAST	0,7861
K.SSEDALNN#NTDTYGNFIR.F	1160,97	PDAT_YEAST	0,8929
K.STAYSLFAN#DSDSK.H	854,84	MKC7_YEAST	1
K.SVGSNLFN#ASVK.L	713,33	PPA5_YEAST	0,9708
K.TEVNNDNEENSGDEEGQFEIFN#ITR.C	1035,09	PEP1_YEAST	1
K.TGVIFNNEMDDFAQFN#K.S	1096,95	ECM38_YEAST	0,9985
K.TLDNDGNDIPVGLN#DSVAYSK.Y	1205,53	GNT1_YEAST	0,9257
K.TTNHWELVN#TTK.M	549,58	ALG12_YEAST	0,9999
K.VALVLPN#K.T	528,78	YIA5_YEAST	0,996
K.VDDLN#ATAWDLYR.L	877,88	APE3_YEAST	1
K.VLAESN#VSYAESSSHNVLLQRF.F	916,77	Q12754_YEAST	0,9265
K.VRN#WTASITDEVAGEVK.S	693,33	CBPY_YEAST	1
K.YAFFNN#ITYVTPK.V	890,90	FET5_YEAST	0,8987
K.YLGTN#VTNGKPVNK.D	569,94	PLB2_YEAST	0,9621
R.AMLSGAGMLAAMDNR.T	856,35	PLB1_YEAST	0,9602
R.DLEN#GTYLEK.R	692,79	YL001_YEAST	0,9439
R.EASGLSDN#ETEWLK.K	891,37	PLB1_YEAST	0,9988
R.EFLAQGYMFEN#QTSFPIFAASSER.V	1046,12	PPA3_YEAST	1
R.EYFN#ETR.S	581,22	YGX8_YEAST	0,9086
R.FATN#TTLTK.A	600,27	INV1_YEAST	0,7632
R.FN#DTSVDDIR.L	692,78	STE13_YEAST	0,9986
R.FTSDN#YSTLVR.D	753,32	ECM14_YEAST	0,9686
R.FYWVQGN#TTGIPNAGDETR.W	1165,00	SUR7_YEAST	0,9102

R.GEYVETQFIFEN#NTLK.N	1067,97	GLU2A_YEAST	0,8726
R.GGANFDSSSSN#FSCNALK.K	1033,39	ECM33_YEAST	0,971
R.GGANFDSSSSN#FSCNALKK.L	1097,44	ECM33_YEAST	0,879
R.GLPSWSEN#ETDIEYLKPGTSYR.L	1373,11	PMT2_YEAST	1
R.GPCEDN#STDGMCYTGLR.Y	1068,36	YBY9_YEAST	0,9992
R.GVAYQADTAN#ETSGSTVNDPLANYESCSR.D	1640,66	GAS1_YEAST	0,9914
R.GVDYQPGGSSN#LTDPLADASVCDR.D	1349,05	GAS5_YEAST	1
R.GVDYQPGGSSN#LTDPLADASVCDRDVPVLK.D	1116,83	GAS5_YEAST	1
R.HSFNGN#QSTFK.M	735,30	PLB1_YEAST	0,8617
R.LAN#YSTPDYGHPTV.V	897,88	APE3_YEAST	1
R.LAPTYQELADTYAN#ATSDVLIK.L	1336,13	PDI_YEAST	1
R.LDLAASN#ITGFVSTR.T	884,42	YJT2_YEAST	0,9992
R.LFN#SSSALN#ITELYNVAR.V	1209,53	YGP1_YEAST	0,9264
R.LTLSPSGN#DSETQYTTGEFILPDR.H	1504,17	OSTB_YEAST	1
R.MPTN#SSGLLISSQR.F	847,39	GLU2A_YEAST	0,9992
R.N#ASGLSTAETDWLK.K	848,37	PLB2_YEAST	0,997
R.N#LTDLEYIPPLIVIPNSR.H	1217,11	PLB1_YEAST	0,9992
R.N#WTASITDEVAGEVK.S	911,90	CBPY_YEAST	0,9986
R.NQIMSWLN#TSAIAAK.S	961,45	Q66R60_YEAST	0,9841
R.QVTASYPQYVWPQVLAN#ATHSGEFLK.R	1100,85	Q66RD0_YEAST	0,9986
R.RVN#ETENLK.N	653,30	MNR2_YEAST	0,941
R.SILFQQQDPFN#ESSR.F	999,93	YBS4_YEAST	1
R.SSGLELDQN#GTLNGK.I	868,38	PMT6_YEAST	0,9581
R.SVGANLFN#ASVK.L	705,33	PPAB_YEAST	0,9937
R.SVGANLFN#ATLK.L	719,34	PPA3_YEAST	0,996
R.TAEFKN#LSIPVFFSEYGCNEVTPR.L	1003,45	ERG3_YEAST	0,9961
R.TLYKN#ETYN#ATTQK.Y	1040,92	CRH2_YEAST	0,809
R.TTLVDNNTWN#NTHIAIVGK.A	1157,55	STT3_YEAST	0,9141
R.VVAYAQN#DTEFETPLACVQAILSNGK.T	1014,46	FLC2_YEAST	0,9559
R.VVN#ETIQDK.S	624,78	YGP1_YEAST	0,9964
R.VYAIN#TTLDHSECMoxK.A	1000,90	GAS1_YEAST	1
R.VYAIN#TTLDHSECMK.A	992,90	GAS1_YEAST	1
R.YTIENIN#STK.E	693,30	ERO1_YEAST	0,8953

Supplemental Figure 1: Demonstration of the low mass chemical background elimination. Three successive recorded spectra are represented: (i) a full scan MS spectrum without low mass cut-off and without collision energy, (ii) a full scan MS spectrum with low mass cut-off, without collision energy, (iii) a full scan MS spectrum with low mass cut-off, with low collision energy (CE=15V).

