

Table S18: Acetylated N-termini identified in the TAILS experiment comparing wild-type and Ctsl<sup>-/-</sup> skin (replicate 2). Up to two potential protein IDs per peptide are stated.

Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	AAAAAAAAAAGAAGGR	N-ter + 42.01 Da	69.2	49.8	2	1239.69	n.d.	n.d.	PABP2_MOUSE		Polyadenylate-binding protein 2;	Nuclear poly(A)-binding protein 1;Poly(A)-binding protein II;Polyadenylate-binding nuclear protein 1;
MA	AAAAAAAAAAGAAGGR	N-ter + 42.01 Da	61.1	42.0	2	1168.64	n.d.	n.d.	PABP2_MOUSE		Polyadenylate-binding protein 2;	Nuclear poly(A)-binding protein 1;Poly(A)-binding protein II;Polyadenylate-binding nuclear protein 1;
MAA	AAAAAAAAAAGGRSGPGRR	N-ter + 42.01 Da	46.3	41.7	3	1764.98	n.d.	n.d.	PABP2_MOUSE		Polyadenylate-binding protein 2;	Nuclear poly(A)-binding protein 1;Poly(A)-binding protein II;Polyadenylate-binding nuclear protein 1;
M	AAAAAAGPEMVR	N-ter + 42.01 Da	40.3	57.5	2	1155.64	n.d.	n.d.	MK01_MOUSE	E9QAI2_MOUSE	Mitogen-activated protein kinase 1;	ERT2;Extracellular signal-regulated kinase 1;Insulin-stimulated MAP2 kinase;MAP kinase isoform p44;MNK1;Microtubule-associated protein 2 kinase;Mitogen-activated protein kinase 1;p44-ERK1;
M	AAAAAPGGGGPEPR	N-ter + 42.01 Da	40.7	62.0	2	1250.68	n.d.	n.d.	MK03_MOUSE	D3Z3G6_MOUSE	Mitogen-activated protein kinase 3;	
M	AAAAAVAGAGR	N-ter + 42.01 Da	44.6	16.3	2	997.55	n.d.	n.d.	E9QNR6_MOUSE			
M	AAAAAGPASSQR	N-ter + 42.01 Da	30.9	65.1	2	1098.61	n.d.	n.d.	SUGT1_MOUSE		Suppressor of G2 allele of SKP1 homolog;	
M	AAAAAMAEQEGAR	N-ter + 42.01 Da	52.7	57.5	2	1287.66	n.d.	n.d.	GET4_MOUSE	D3Z4J5_MOUSE	Golgi to ER traffic protein 4 homolog;	
M	AAAAASGAGVAVAGAGGAPAGR	N-ter + 42.01 Da	64.8	70.5	3	1836.05	n.d.	n.d.	E9PU87_MOUSE			
M	AAAAATAAAAAAPSGGGGGEER	N-ter + 42.01 Da	44.6	81.7	3	2012.08	n.d.	n.d.	D3Z7U4_MOUSE		Biogenesis of lysosome-related organelles complex 1 subunit 2;	
M	AAAAEGVPATR	N-ter + 42.01 Da	37.3	50.8	2	1054.59	n.d.	n.d.	BL1S2_MOUSE			Modulator of estrogen-induced transcription;SAF-like transcription modulator;
M	AAAAGAVVASAASGPAEGKKITELR	N-ter + 42.01 Da, K +28.03 Da	38.6	52.1	4	2393.45	-0.67	0.03	SLTM_MOUSE		SAFB-like transcription modulator;	26S proteasome regulatory subunit RPN6;26S proteasome regulatory subunit S9;26S proteasome regulatory subunit p44.5;
M	AAAAVVEFQR	N-ter + 42.01 Da	37.5	55.2	2	1102.64	n.d.	n.d.	PSD11_MOUSE		26S proteasome non-ATPase regulatory subunit 11;	
M	AAEEGCGVGEDDR	N-ter + 42.01 Da, C +57.02 Da	40.8	62.4	2	1575.75	n.d.	n.d.	PEX19_MOUSE		Peroxisomal biogenesis factor 19;	Peroxin-19;Peroxisomal farnesylated protein;
M	AAAGAGPGPGVAVAGGPGAAASATTAEDR	N-ter + 42.01 Da	70.8	69.9	3	2433.32	n.d.	n.d.	ASH2L_MOUSE	D6RI55_MOUSE	ASH2;	ASH2-like protein;
M	AAAGGGAAAAAGR	N-ter + 42.01 Da	55.7	62.4	2	1012.57	n.d.	n.d.	RAB21_MOUSE	Q6A0C7_MOUSE	Ras-related protein Rab-21;	Rab-12;
M	AAAGSAVSGAGTPVAGPTGR	N-ter + 42.01 Da	49.7	77.4	3	1767.03	n.d.	n.d.	SNAPN_MOUSE		SNARE-associated protein Snapin;	Synaptosomal-associated protein 25-binding protein;
M	AAAKDGCLETAAGNGR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	46.7	48.8	3	1687.88	0.54	0.13	PF3_MOUSE	Q3TIR6_MOUSE	Prefoldin subunit 3;	Von Hippel-Lindau-binding protein 1;
M	AAAMDVDTPSGTNSGAGKKR	N-ter + 42.01 Da, K +34.06 Da	44.9	58.5	3	2043.19	-0.67	0.19	RBX1_MOUSE		E3 ubiquitin-protein ligase RBX1;	RING finger protein 75;RING-box protein 1;
M	AAAQAVEEMR	N-ter + 42.01 Da	45.9	62.9	2	1116.59	n.d.	n.d.	RPAC1_MOUSE	F6ZKX9_MOUSE	DNA-directed RNA polymerases I and III subunit RPAC1;	AC40;DNA-directed RNA polymerases I and III 40 kDa polypeptide;RPC40;
M	AAASGYDLR	N-ter + 42.01 Da	36.8	63.7	2	1065.58	n.d.	n.d.	ALKB5_MOUSE		Alkylated DNA repair protein alkB homolog 5;	Alkylated DNA repair protein alkB homolog 5;
M	AAATLSFGPER	N-ter + 42.01 Da	35.3	41.1	2	1160.63	n.d.	n.d.	NISCH_MOUSE	E9PWZ1_MOUSE	Nischarin;	Imidazole receptor 1;imidazole receptor I-1-like protein;imidazole-1 receptor;
M	AAATPTETPAPEGSLGMDAR	N-ter + 42.01 Da	40.4	74.4	3	2041.09	n.d.	n.d.	PGM2_MOUSE		Phosphoglucomutase-2;	Glucose phosphomutase
M	AAAVVAASR	N-ter + 42.01 Da	40.2	52.2	2	998.60	n.d.	n.d.	E9Q1P8_MOUSE			2;Phosphodeoxyribomutase;Phosphopentomutase;
M	AAAVVDPOQSVVMR	N-ter + 42.01 Da	28.2	82.0	3	1511.90	n.d.	n.d.	PLIN2_MOUSE	B1AXR5_MOUSE	Perilipin-2;	Adipophilin;Adipose differentiation-related protein;
M	AADIEQVFR	N-ter + 42.01 Da	45.2	59.7	2	1089.61	n.d.	n.d.	SON_MOUSE		Protein SON;	Negative regulatory element-binding protein;
M	AADISQWAGPLCLQEVEPPQHALR	N-ter + 42.01 Da, C +57.02 Da	49.5	51.6	4	2842.52	n.d.	n.d.	PEBP1_MOUSE	D3Z1V4_MOUSE	Phosphatidylethanolamine-binding protein 1;	HCPNpp;
M	AAEEATLTVR	N-ter + 42.01 Da	41.9	54.3	2	1101.63	n.d.	n.d.	CB076_MOUSE		UPF0538 protein C2orf76 homolog;	
M	AAEIQQPLTR	N-ter + 42.01 Da	35.2	44.6	2	1264.73	n.d.	n.d.	WDFY2_MOUSE		WD repeat and FYVE domain-containing protein 2;	WD40- and FYVE domain-containing protein 2;
M	AAETVELHKLKLAELKQELAR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	28.2	73.0	4	2675.70	-0.67	0.11	SARNP_MOUSE		SAP domain-containing ribonucleoprotein;	Nuclear protein Hcc-1;
M	AAGCEGIAPPTLGER	N-ter + 42.01 Da, C +57.02 Da	30.0	71.9	3	1539.85	n.d.	n.d.	HBAP1_MOUSE		HSPB1-associated protein 1;	27 kDa heat shock protein-associated protein 1;Protein associated with small stress protein 1;
M	AAGGAVVAPEFCR	N-ter + 42.01 Da, C +57.02 Da	48.3	60.0	2	1269.69	n.d.	n.d.	MKLN1_MOUSE		Muskelin;	
M	AAGTLYTPENWR	N-ter + 42.01 Da	37.2	52.6	2	1582.83	n.d.	n.d.	EF1G_MOUSE		Elongation factor 1-gamma;	eEF-1B gamma;
M	AAGTSNYWEDLR	N-ter + 42.01 Da	38.5	54.6	2	1423.71	n.d.	n.d.	GOSR1_MOUSE	Q91VU9_MOUSE	Golgi SNAP receptor complex member 1;	28 kDa Golgi SNARE protein;28 kDa cis-Golgi SNARE p28;
M	AAKPKLYFNGR	N-ter + 42.01 Da, K +28.03 Da	33.4	61.6	3	1524.94	-0.22	0.04	GSTA4_MOUSE		Glutathione S-transferase A4;	GST A4-4;GST class-alpha member 4;Glutathione S-transferase 5.7;
AQPVPRLSIP	AALALGSAALGAATFATLLGKR	N-ter + 42.01 Da, K +28.03 Da	29.2	22.5	4	2182.33	1.09	0.24	CMTD1_MOUSE		Catechol O-methyltransferase domain-containing protein 1;	
M	AALGSSQNVTVEVVR	N-ter + 42.01 Da	36.8	68.6	3	1721.98	n.d.	n.d.	T2FA_MOUSE	E9Q7N7_MOUSE	General transcription factor IIF subunit 1;	Transcription initiation factor IIF subunit alpha;
M	AALVSETAEPGSR	N-ter + 42.01 Da	33.8	59.7	2	1427.81	n.d.	n.d.	DPH1_MOUSE		Diphthamide biosynthesis protein 1;	DPH1 homolog;Diphthamide biosynthesis protein 2 homolog-like 1;Ovarian cancer-associated gene 1 protein homolog;
M	AALYGGVEGGTR	N-ter + 42.01 Da	42.2	45.2	2	1248.67	n.d.	n.d.	NAGK_MOUSE	D3YXG2_MOUSE	N-acetyl-D-glucosamine kinase;	GlcNAc kinase;

Table S5, Tholen et al.

Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	AANATTNPQLLPLELVDKICISR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	53.1	38.6	3	2637.48	0.33	0.32	LSM5_MOUSE		U6 snRNA-associated Sm-like protein LSm5;	
M	AAPAAPAAGETGPDAR	N-ter + 42.01 Da	40.9	56.4	2	1463.78	n.d.	n.d.	GLGB_MOUSE		1,4-alpha-glucan-branching enzyme;	Brancher enzyme;Glycogen-branching enzyme;
M	AAPAGGGGSAVSVLAPNGR	N-ter + 42.01 Da	26.6	70.8	3	1649.97	n.d.	n.d.	ASPC1_MOUSE		Tether containing UBX domain for GLUT4;	
ADTSKQESNM	AAPAKGENLSLVVHGPDIR	N-ter + 42.01 Da, K +28.03 Da	47.9	49.3	3	2070.22	-0.40	0.13	DHSO_MOUSE		Sorbitol dehydrogenase;	Alveolar soft part sarcoma chromosomal region candidate gene 1 protein homolog;
M	AAPPGYFYSVGSQVSCR	N-ter + 42.01 Da, C +57.02 Da	36.1	76.7	3	1852.98	n.d.	n.d.	LSM12_MOUSE		Protein LSM12 homolog;	L-iditol 2-dehydrogenase;
M	AAPQDVHVR	N-ter + 42.01 Da	32.6	30.7	2	1033.56	n.d.	n.d.	SEC20_MOUSE	B8JJI4_MOUSE	Vesicle transport protein SEC20;	
M	AAPSEPAGFPR	N-ter + 42.01 Da	35.0	43.4	2	1140.61	n.d.	n.d.	ALR_MOUSE		FAD-linked sulfhydryl oxidase ALR;	Augmenter of liver regeneration;
M	AAPSVPTPLGVHGR	N-ter + 42.01 Da	53.7	54.1	3	1562.91	n.d.	n.d.	D326J0_MOUSE	Q6PRU9_MOUSE		
M	AAQALAAQAVASR	N-ter + 42.01 Da	49.0	48.4	2	1268.75	n.d.	n.d.	SYTC2_MOUSE		Probable threonine-tRNA ligase 2, cytoplasmic;	Threonyl-tRNA synthetase;Threonyl-tRNA synthetase-like protein 2;
M	AAQAVLLR	N-ter + 42.01 Da	36.2	54.9	2	969.61	n.d.	n.d.	PSMD5_MOUSE		26S proteasome non-ATPase regulatory subunit 5;	26S protease subunit S5 basic;26S proteasome subunit S5B;
M	AASAAASSEHFEKLHEIFR	N-ter + 42.01 Da, K +28.03 Da	27.5	96.8	4	2099.25	-1.03	0.15	VTI1B_MOUSE	Q91XH6_MOUSE	Vesicle transport through interaction with t-SNAREs homolog 1B;	Vesicle transport v-SNARE protein Vti1-like 1;Vti1-rp1;
M	AASAIKGLSALR	N-ter + 42.01 Da, K +28.03 Da	58.8	30.4	2	1226.77	-0.36	0.10	SLIRP_MOUSE		SRA stem-loop-interacting RNA-binding protein, mitochondrial;	
SSGFLSFHKM	AASEDELLPR	N-ter + 42.01 Da	44.0	53.6	2	1254.71	n.d.	n.d.	IGBP1_MOUSE	E9Q2M7_MOUSE	Immunoglobulin-binding protein 1;	Alpha4 phosphoprotein;CD79a-binding protein 1;Lymphocyte signal transduction molecule alpha 4;p52;
M	AASGDPGSAESYR	N-ter + 42.01 Da	34.4	62.6	2	1308.64	n.d.	n.d.	PUR8_MOUSE	E9Q0A0_MOUSE	Adenylosuccinate lyase;	Adenylosuccinase;
M	AASPSKTEIQTFKR	N-ter + 42.01 Da, K +28.03 Da	39.1	46.9	3	1774.08	0.43	0.11	ARFG2_MOUSE		ADP-ribosylation factor GTPase-activating protein 2; Tubulin polymerization-promoting protein family member 3;	GTPase-activating protein ZNF289;Zinc finger protein 289;
M	AASTDIAGLEESFR	N-ter + 42.01 Da	44.8	51.6	2	1507.79	n.d.	n.d.	TPPP3_MOUSE		Hypoxia-inducible factor 1-alpha inhibitor;	Hypoxia-inducible factor asparagine hydroxylase;
M	AATAAAEVAASGSGEAR	N-ter + 42.01 Da	65.1	54.7	2	1459.77	n.d.	n.d.	HIF1N_MOUSE		Translation initiation factor eIF-2B subunit epsilon;	eIF-2B GDP-GTP exchange factor subunit epsilon;
M	AATAAVPGAAAGR	N-ter + 42.01 Da	35.8	41.3	2	1124.64	n.d.	n.d.	EI2B_MOUSE			PTE-2b;Peroxisomal acyl coenzyme A thioester hydrolase lb;Peroxisomal long-chain acyl-CoA thioesterase lb;
M	AATLSVEPTGR	N-ter + 42.01 Da	30.3	54.0	2	1142.65	n.d.	n.d.	ACOT4_MOUSE		Acyl-coenzyme A thioesterase 4;	
M	AATTAAVVAEEDTELK	N-ter + 42.01 Da	55.9	57.6	2	1687.92	n.d.	n.d.	FR1OP_MOUSE	TGAP1_MOUSE	FGFR1 oncogene partner;	
M	AATTGSGVKVPR	N-ter + 42.01 Da, K +34.06 Da	57.4	26.0	2	1218.75	1.89	0.36	UB2V1_MOUSE	D321I3_MOUSE	Ubiquitin-conjugating enzyme E2 variant 1;	CROC-1;
M	AAVGSPPGLESAPR	N-ter + 42.01 Da	42.0	59.1	2	1339.75	n.d.	n.d.	TGT_MOUSE		Queuine tRNA-ribosyltransferase;	Guanine insertion enzyme;tRNA-guanine transglycosylase;
M	AAVKTLNPKAEVAR	N-ter + 42.01 Da, K +28.03 Da	41.3	51.7	3	1565.01	0.42	0.12	TCPCZ_MOUSE	E9QPA6_MOUSE	T-complex protein 1 subunit zeta;	CCT-zeta-1;
M	AAVPSAVHLPR	N-ter + 42.01 Da	33.4	26.3	2	1158.68	n.d.	n.d.	LYPL1_MOUSE	E9QLB2_MOUSE	Lysophospholipase-like protein 1;	
MA	AAVVDPPQSVVMR	N-ter + 42.01 Da	43.5	48.7	2	1440.81	n.d.	n.d.	PLIN2_MOUSE	B1AXR5_MOUSE	Perilipin-2;	Adipophilin;Adipose differentiation-related protein;
M	AAVVLGGDTMGPER	N-ter + 42.01 Da	43.7	56.8	2	1413.77	n.d.	n.d.	MEA1_MOUSE		Male-enhanced antigen 1;	
M	AAYKLVLR	N-ter + 42.01 Da, K +28.03 Da	48.8	42.0	2	1115.75	0.85	0.19	PGAM1_MOUSE		Phosphoglycerate mutase 1;	BPG-dependent PGAM 1;Phosphoglycerate mutase isozyme B;
M	ACGLVASNLNLKPGCECLKVR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	43.6	57.0	3	2308.43	0.20	0.02	LEG1_MOUSE		Galectin-1;	14 kDa lectin;Beta-galactoside-binding lectin L-14-l;Galaptin;Lactose-binding lectin 1;Lectin galactoside-binding soluble 1;S-Lac lectin 1; Ezrin-radixin-moesin-binding phosphoprotein 50;Regulatory cofactor of Na(+)/H(+) exchanger;Sodium-hydrogen exchanger regulatory factor 1;Solute carrier family 9 isoform A3 regulatory factor 1;
MS	ADAAAGEPLPR	N-ter + 42.01 Da	30.1	59.8	2	1108.62	n.d.	n.d.	NHRF1_MOUSE		Na(+)/H(+) exchange regulatory cofactor NHE-RF1;	Cardiomyopathy-associated protein 1;
M	ADAGMQVAPTPTIQMR	N-ter + 42.01 Da	35.0	79.4	3	1799.01	n.d.	n.d.	XIRP1_MOUSE	E9QQ93_MOUSE	Xin actin-binding repeat-containing protein 1;	
M	ADDVDQQQTNTTVEEPLDLIR	N-ter + 42.01 Da	38.4	72.9	3	2441.33	n.d.	n.d.	LSM3_MOUSE		U6 snRNA-associated Sm-like protein LSm3;	
M	ADEALAGLDEGALR	N-ter + 42.01 Da	48.5	54.0	2	1441.78	n.d.	n.d.	SMTN_MOUSE	D3YZ10_MOUSE	Smoothelin;	
M	ADEDEGEGHPSAPHR	N-ter + 42.01 Da	36.9	87.9	3	1628.86	n.d.	n.d.	SNX27_MOUSE	D6RES4_MOUSE	Sorting nexin-27;	
M	ADEEKLPPGWKVR	N-ter + 42.01 Da, K +28.03 Da	50.5	55.5	3	1651.95	-0.23	0.01	PIN1_MOUSE		Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1;	Peptidyl-prolyl cis-trans isomerase Pin1;
M	ADEEELALR	N-ter + 42.01 Da	28.5	62.6	2	1086.59	n.d.	n.d.	PDCD5_MOUSE		Programmed cell death protein 5;	TF-1 cell apoptosis-related protein 19;
M	ADEIAKAQVAOPGGDTIFGKIIR	N-ter + 42.01 Da, K +28.03 Da	65.0	76.0	4	2495.56	-0.76	0.36	HINT1_MOUSE	80R1E3_MOUSE	Histidine triad nucleotide-binding protein 1;	Adenosine 5'-monophosphoramidase;Protein kinase C inhibitor 1;Protein kinase C-interacting protein 1;
NIYKPNNKAM	ADEVTEKQVYDAHTKEIDLNVNR	N-ter + 42.01 Da, K +28.03 Da	44.6	80.2	4	2670.56	-0.71	0.27	CAV1_MOUSE	D32148_MOUSE	Caveolin-1;	
M	ADFDTYDDR	N-ter + 42.01 Da	36.3	75.1	2	1158.53	n.d.	n.d.	IF4H_MOUSE	Q80U88_MOUSE	Eukaryotic translation initiation factor 4H;	Williams-Beuren syndrome chromosomal region 1 protein homolog;
M	ADGELNVDSLITR	N-ter + 42.01 Da	41.9	51.5	2	1443.80	n.d.	n.d.	PP1B_MOUSE		Serine/threonine-protein phosphatase PP1-beta catalytic subunit;	
M	ADGGAAASQDESSAAAAAADS	N-ter + 42.01 Da	52.9	79.5	3	1991.01	n.d.	n.d.	E9Q6Z8_MOUSE			
M	ADIDKLNIDSIQR	N-ter + 42.01 Da, K +34.06 Da	58.1	43.3	3	1689.03	-0.81	0.58	PP1G_MOUSE		Serine/threonine-protein phosphatase PP1-gamma catalytic subunit;	Protein phosphatase 1C catalytic subunit;

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M	ADKEAFAFDVAEER	N-ter + 42.01 Da, K +34.06 Da	53.4	37.0	3	1640.83	-0.04	0.01	RBBP4_MOUSE	E9PYH8_MOUSE	Histone-binding protein RBBP4;	Chromatin assembly factor 1 subunit C;Chromatin assembly factor 1 p48 subunit;Nucleosome-remodeling factor subunit RBAP48;Retinoblastoma-binding protein 4;Retinoblastoma-binding protein p48;
M	ADLEEQLSDEEKVR	N-ter + 42.01 Da, K +34.06 Da	62.1	48.6	3	1735.95	-0.25	0.07	CAZ2_MOUSE	D6RCW7_MOUSE	F-actin-capping protein subunit alpha-2;	Cap2 alpha-2;
M	ADMQLNLEVER	N-ter + 42.01 Da	46.4	60.7	2	1116.59	n.d.	n.d.	CAP1_MOUSE	B1ARS0_MOUSE	Adenylyl cyclase-associated protein 1;	
M	ADPAAAGPPPEGEESTVR	N-ter + 42.01 Da	50.9	67.6	3	1807.95	n.d.	n.d.	KPCB_MOUSE		Protein kinase C beta type;	
M	ADPESPWSQIGR	N-ter + 42.01 Da	48.3	60.0	2	1383.72	n.d.	n.d.	STAR4_MOUSE	Q80SX0_MOUSE	STAR-related lipid transfer protein 4;	START domain-containing protein 4;
M	ADPKYADLPGIAR	N-ter + 42.01 Da, K +28.03 Da	26.6	53.5	3	1455.85	0.58	0.29	DCTN2_MOUSE		Dynactin subunit 2;	50 kDa dynein-associated polypeptide;Dynactin complex 50 kDa subunit;Growth cone membrane protein 23-48k;p50 dynamitin;
M	PVAEAPAEAL	ADQGAMAAADIAR	42.9	62.7	2	1301.69	n.d.	n.d.	A2A3W1_MOUSE			
M	ADSGPAGGAALAAPAPGGSGSTGPR	N-ter + 42.01 Da	47.6	61.2	3	2188.18	n.d.	n.d.	PP14B_MOUSE		Protein phosphatase 1 regulatory subunit 14B;	Phosphatase holoenzyme inhibitor 1;Phospholipase C-beta-3 neighbouring gene protein;
M	ADTAPQLKR	N-ter + 42.01 Da, K +28.03 Da	37.4	33.8	2	1068.63	-0.14	0.04	DGPS_MOUSE	Q3TBW9_MOUSE	Scavenger mRNA-decapping enzyme Dcp5;	DCS-1;Hint-related 7meGMP-directed hydrolase;Histidine triad protein member 5;
M	IQTQQLHAAM	ADTFLEHMCR	57.6	49.8	2	1320.62	n.d.	n.d.	KPYM_MOUSE		Pyruvate kinase isozymes M1/M2;	Pyruvate kinase muscle isozyme;
M	ADTPSVYETR	N-ter + 42.01 Da	37.3	63.1	2	1179.62	n.d.	n.d.	ACBD5_MOUSE	E9QN7_MOUSE	Acyl-CoA-binding domain-containing protein 5;	
M	ADTQYILPNDIGVSSLDLDR	N-ter + 42.01 Da, C +57.02 Da	46.6	72.0	3	2178.18	n.d.	n.d.	DPP3_MOUSE		Dipeptidyl peptidase 3;	Dipeptidyl aminopeptidase III;Dipeptidyl arylamidase III;Dipeptidyl peptidase III;
M	ADVSVDQSKLPGVKEVCR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	42.6	50.7	3	2096.26	0.33	0.06	CCD50_MOUSE		Coiled-coil domain-containing protein 50;	Protein Ymer;
M	ADVVPANDSTASQDVANR	N-ter + 42.01 Da	47.4	74.3	3	1935.00	n.d.	n.d.	KPCA_MOUSE	Q4VA93_MOUSE	Protein kinase C alpha type;	
M	AEAAIDPR	N-ter + 42.01 Da	33.9	53.0	2	883.49	n.d.	n.d.	LSP1_MOUSE	A2A6J7_MOUSE	Lymphocyte-specific protein 1;	52 kDa phosphoprotein;Lymphocyte-specific antigen WP34;S37 protein;
M	AEAAALLPPEAAER	N-ter + 42.01 Da	30.1	36.7	2	1562.89	n.d.	n.d.	E9QL65_MOUSE			
M	AEAEAAQLKEEGNR	N-ter + 42.01 Da, K +28.03 Da	40.9	60.1	3	1584.87	-2.32	0.35	UN45B_MOUSE		Protein unc-45 homolog B;	
M	MSNGYEDHM	AEDCRDDIGR	35.8	41.9	2	1247.57	n.d.	n.d.	ELAV1_MOUSE		ELAV-like protein 1;	Elav-like generic protein;Hu-antigen R;MeIG;
M	AEGGAADLDTQR	N-ter + 42.01 Da	50.7	57.7	2	1244.64	n.d.	n.d.	UBP15_MOUSE	Q3UZH0_MOUSE	Ubiquitin carboxyl-terminal hydrolase 15;	Deubiquitinating enzyme 15;Ubiquitin thiolesterase 15;Ubiquitin-specific-processing protease 15;
M	AEGGQAQQPPQLPGGAAAR	N-ter + 42.01 Da	35.0	76.3	3	1973.12	n.d.	n.d.	RFOX2_MOUSE		RNA binding protein fox-1 homolog 2;	Fox-1 homolog B;Fox-1 homolog Fxh;Hexaribonucleotide-binding protein 2;RNA-binding motif protein 9;RNA-binding protein 9;
M	AEGQVLVLDGR	N-ter + 42.01 Da	29.8	46.3	2	1197.69	n.d.	n.d.	RL13A_MOUSE	Q3TDS9_MOUSE	60S ribosomal protein L13a;	Transplantation antigen P198;Tum-P198 antigen;
M	AELGEADEAELQR	N-ter + 42.01 Da	44.3	55.4	2	1471.76	n.d.	n.d.	TIM8B_MOUSE		Mitochondrial import inner membrane translocase subunit Tim8 B;	Deafness dystonia protein 2 homolog;
M	AELVQGSQAPVGMKAEGFVDALHR	N-ter + 42.01 Da, K +28.03 Da	37.9	72.0	4	2579.50	0.20	0.07	A2AJ72_MOUSE	Q3TIX6_MOUSE		Chap1;Dsk2 homolog;Protein linking IAP with cytoskeleton 2;Ubiquitin-like product Chap1/Dsk2;
M	AENGESGPPRPSR	N-ter + 42.01 Da	33.2	56.3	3	1481.77	n.d.	n.d.	UBQL2_MOUSE		Ubiquilin-2;	
M	AENNAQNKAKLISETR	N-ter + 42.01 Da, K +28.03 Da	45.4	55.0	3	1884.11	0.23	0.11	MSPD2_MOUSE	B1AU74_MOUSE	Motile sperm domain-containing protein 2;	
M	AENPGLNHR	N-ter + 42.01 Da	55.0	37.0	2	1177.59	n.d.	n.d.	IMA3_MOUSE	E9Q1R3_MOUSE	Importin subunit alpha-3;	Importin alpha Q2;Karyopherin subunit alpha-3;
M	AEPGTSGDPAFGPGESESGTR	N-ter + 42.01 Da	49.5	77.5	3	2046.05	n.d.	n.d.	SAFB2_MOUSE	D6RJ78_MOUSE	Scaffold attachment factor B2;	
M	AEPWGNELASAAAR	N-ter + 42.01 Da	52.9	48.8	2	1483.78	n.d.	n.d.	CDN2C_MOUSE		Cyclin-dependent kinase 4 inhibitor C;	Cyclin-dependent kinase 6 inhibitor;p18-INK4c;p18-INK6;
M	AERPDLNLPNAVITR	N-ter + 42.01 Da	46.5	9.2	3	1848.99	n.d.	n.d.	DPOE3_MOUSE	D6RDT4_MOUSE	DNA polymerase epsilon subunit 3;	DNA polymerase II subunit 3;DNA polymerase epsilon subunit p17;NF-YB-like protein;YB-like protein 1;
M	AESDWDTVTVLR	N-ter + 42.01 Da	43.2	47.5	2	1432.75	n.d.	n.d.	EDF1_MOUSE		Endothelial differentiation-related factor 1;	Multiprotein-bridging factor 1;
M	AESNEEVAVLVQR	N-ter + 42.01 Da	30.3	86.0	3	1484.87	n.d.	n.d.	E9QAB6_MOUSE			
M	AESPAPGAAAEESCGEEQER	N-ter + 42.01 Da, C +57.02 Da	50.5	75.3	3	1986.97	n.d.	n.d.	E9QL96_MOUSE			
M	AESSELSASSPAR	N-ter + 42.01 Da	54.3	47.0	2	1419.71	n.d.	n.d.	MCM2_MOUSE		DNA replication licensing factor MCM2;	Minichromosome maintenance protein 2 homolog;Nuclear protein BM28;
M	AETAAGSGGGDSGVGACER	N-ter + 42.01 Da, C +57.02 Da	46.5	87.9	3	1878.93	n.d.	n.d.	DUS3L_MOUSE		tRNA-dihydrouridine(47) synthase [NAD(P)(+)]-like;	tRNA-dihydrouridine synthase 3-like;
M	AETLSGLGDASAAAGAAVSSAASETGTR	N-ter + 42.01 Da	66.7	67.1	3	2520.36	n.d.	n.d.	D3YXK2_MOUSE	E9PZM6_MOUSE		
M	MAFPPLLWE	AEVETLKR	54.6	33.9	2	1143.65	0.68	0.20	DLR1_MOUSE	A2AVR9_MOUSE	Dynein light chain roadblock-type 1;	Dynein light chain 2A, cytoplasmic; 60 kDa Tat-interactive protein;Histone acetyltransferase HTATIP;Lysine acetyltransferase 5;
M	AEVGEIIEGCR	N-ter + 42.01 Da, C +57.02 Da	41.8	62.3	2	1273.68	n.d.	n.d.	KAT5_MOUSE	E9PXP9_MOUSE	Histone acetyltransferase KAT5;	Exosome component 3;Ribosomal RNA-processing protein 40;
M	AEVLSAGPESVAGCR	N-ter + 42.01 Da, C +57.02 Da	35.1	71.9	2	1543.84	n.d.	n.d.	EXOS3_MOUSE		Exosome complex component RRP40;	Eukaryotic translation initiation factor 3 subunit 6;MMTV integration site 6;Mammary tumor-associated protein INT-6;Viral integration site protein INT-6;eIF-3 p48;
M	AEYDLTTR	N-ter + 42.01 Da	32.5	56.3	2	1009.53	n.d.	n.d.	EIF3E_MOUSE		Eukaryotic translation initiation factor 3 subunit E;	Complex I-B22;NADH-ubiquinone oxidoreductase B22 subunit;
M	AFCAPPAYLTHQKVLRL	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	30.1	50.9	3	2069.19	-1.69	0.44	NDU89_MOUSE		NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 9;	
M	AFKDTGKTPVEVAIHR	N-ter + 42.01 Da, K +34.06 Da	42.1	69.3	4	2104.34	-0.52	0.10	RS20_MOUSE		40S ribosomal protein S20;	

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	AGAACCFSDQFR	N-ter + 42.01 Da, C +57.02 Da	36.2	77.9	3	1559.74	n.d.	n.d.	PPCT_MOUSE	Q5SV41_MOUSE	Phosphatidylcholine transfer protein;	START domain-containing protein 2;STAR-related lipid transfer protein 2; Protein kinase C-like 1;Protein kinase C-like PKN;Protein-kinase C-related kinase 1;Serine-threonine protein kinase N;
M	AGDAVQSEPR	N-ter + 42.01 Da	32.0	53.9	2	1070.56	n.d.	n.d.	PKN1_MOUSE		Serine/threonine-protein kinase N1;	
M	AGEGLGQGSASATAAPETR	N-ter + 42.01 Da	32.7	83.4	3	1813.01	n.d.	n.d.	RAB32_MOUSE		Ras-related protein Rab-32;	
M	AGGEAGVTLGQPHLR	N-ter + 42.01 Da	49.0	51.2	3	1590.89	n.d.	n.d.	IF2H_MOUSE		Eukaryotic translation initiation factor 2 subunit 3, Y-linked;	Eukaryotic translation initiation factor 2 subunit gamma, Y-linked;
M	AGGEGGVTLGQPHLR	N-ter + 42.01 Da	56.2	52.3	3	1576.88	n.d.	n.d.	IF2G_MOUSE	A2AAW9_MOUSE	Eukaryotic translation initiation factor 2 subunit 3, X-linked;	Eukaryotic translation initiation factor 2 subunit gamma, X-linked;
M	AGGPPKALPSTGPQSLR	N-ter + 42.01 Da, K +28.03 Da	56.4	49.0	3	1703.02	-0.76	0.17	SNX30_MOUSE		Sorting nexin-30;	
M	AGKPVLYHFDGR	N-ter + 42.01 Da, K +34.06 Da	35.6	21.7	3	1434.81	-1.00	0.30	GSTA3_MOUSE		Glutathione S-transferase A3;	GST class-alpha member 3;Glutathione S-transferase Ya3;Glutathione S-transferase Yc;
M	AGKPVLYHFNAR	N-ter + 42.01 Da, K +28.03 Da	30.8	66.0	3	1441.88	-1.43	0.27	GSTA1_MOUSE	GSTA2_MOUSE	Glutathione S-transferase A1;	GST class-alpha member 1;Glutathione S-transferase Ya;Glutathione S-transferase Ya1;
M	AGLELLSDQGYR	N-ter + 42.01 Da	36.9	53.7	2	1362.75	n.d.	n.d.	EXOS4_MOUSE		Exosome complex component RRP41;	Exosome component 4;Ribosomal RNA-processing protein 41;
M	AGLGHSPAFGR	N-ter + 42.01 Da	38.4	36.9	2	1110.60	n.d.	n.d.	DDAH1_MOUSE		N(G),N(G)-dimethylarginine dimethylaminohydrolase 1;	DDAH1;Dimethylargininase-1;
M	AGLNSLEAVKR	N-ter + 42.01 Da, K +28.03 Da	53.6	29.8	2	1226.74	1.42	0.31	TPM4_MOUSE		Tropomyosin-4;	Tropomyosin-4;
M	AGNKVPPALASHQPDR	N-ter + 42.01 Da, K +28.03 Da	60.4	45.8	3	1726.99	-1.56	0.18	TRUA_MOUSE	D3Z092_MOUSE	tRNA pseudouridine synthase A, mitochondrial;	tRNA pseudouridine synthase I;RNA-uridine isomerase I;
M	AGPGGGALESPPR	N-ter + 42.01 Da	26.5	27.6	2	1220.65	n.d.	n.d.	HECD3_MOUSE		E3 ubiquitin-protein ligase HECTD3;	HECT domain-containing protein 3;
M	AGQEDPVQR	N-ter + 42.01 Da	30.7	71.9	2	1040.56	n.d.	n.d.	BRK1_MOUSE		Protein BRICK1;	
M	AGSSAEQAADYR	N-ter + 42.01 Da	49.2	73.0	2	1266.64	n.d.	n.d.	SYCC_MOUSE		Cysteine-tRNA ligase, cytoplasmic;	CysteinyI-tRNA synthetase;
M	AGTSSAEAEALAAAR	N-ter + 42.01 Da	41.3	89.6	3	1545.87	n.d.	n.d.	PRPK_MOUSE	Q5U452_MOUSE	TP53-regulating kinase;	Nori-2;p53-related protein kinase;
M	AGTTTIEAVKR	N-ter + 42.01 Da, K +28.03 Da	56.3	31.6	2	1215.72	1.95	0.44	Q8C7C3_MOUSE	D3Z618_MOUSE		
M	AGTVVLDVELR	N-ter + 42.01 Da	35.1	51.7	2	1327.77	n.d.	n.d.	MCM3_MOUSE		DNA replication licensing factor MCM3;	DNA polymerase alpha holoenzyme-associated protein P1;p1-MCM3;
M	AGVDQHEGTIVQVQQLFFR	N-ter + 42.01 Da	50.3	54.1	3	2285.24	n.d.	n.d.	ABHEB_MOUSE		Abhydrolase domain-containing protein 14B;	CCG1-interacting factor B;
LLADAYSGRM	AGVRPNDVAEVVAGAR	N-ter + 42.01 Da	53.9	53.6	3	1621.94	n.d.	n.d.	KBTBB_MOUSE		Kelch repeat and BTB domain-containing protein 11;	
M	AHATPPSALEGGPIR	N-ter + 42.01 Da	51.3	47.7	3	1642.92	n.d.	n.d.	GTL3B_MOUSE		Protein GTLF3B;	Gene trap locus protein F3-2;Gene trap locus protein F3b;
M	AKCLTSSLSVR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	56.8	25.9	2	1403.82	0.64	0.12	ECHD1_MOUSE	E0CX53_MOUSE	Enoyl-CoA hydratase domain-containing protein 1;	
M	AKIAKTHEIEAQIR	N-ter + 42.01 Da, K +34.06 Da	32.5	69.1	4	1832.21	0.06	0.02	SF3B1_MOUSE		Splicing factor 3B subunit 1;	Pre-mRNA-splicing factor SF3b 155 kDa subunit;Spliceosome-associated protein 155;
M	AKIAQGAMYSR	N-ter + 42.01 Da, K +34.06 Da	43.8	31.1	2	1183.70	0.35	0.03	ANXA6_MOUSE	F8WIT2_MOUSE	Annexin A6;	67 kDa calelectrin;Annexin VI;Annexin-6;Calphobindin-II;Chromobindin-20;Lipocortin VI;Protein III;p68;p70;
EVSSVPTNGM	AKNGSEADIDESLYSR	N-ter + 42.01 Da, K +28.03 Da	63.3	46.3	3	1823.94	-0.22	0.05	UBA1_MOUSE		Ubiquitin-like modifier-activating enzyme 1;	Ubiquitin-activating enzyme E1;Ubiquitin-activating enzyme 1 X;
M	AKTEEMVQTEEMETPR	N-ter + 42.01 Da, K +34.06 Da	43.6	53.6	3	1984.04	-0.25	0.11	BAG1_MOUSE	F6TCF9_MOUSE	BAG family molecular chaperone regulator 1;	Bcl-2-associated athanogene 1;
M	AKVEQVLSLEPQHELFKR	N-ter + 42.01 Da, K +28.03 Da	49.6	84.6	4	2248.45	0.03	0.01	VAPB_MOUSE	Q8BH80_MOUSE	Vesicle-associated membrane protein-associated protein B;	
M	ALDQPEQMELEEGKAGSGLR	N-ter + 42.01 Da, K +28.03 Da	59.6	42.9	3	2156.13	1.37	0.50	PR58_MOUSE		26S protease regulatory subunit 8;	VAMP-associated protein 33b;
M	ALKQISSNR	N-ter + 42.01 Da, K +28.03 Da	35.4	37.8	2	1085.66	0.01	0.00	ESTD_MOUSE		5-formylglutathione hydrolase;	26S proteasome AAA-ATPase subunit RPT6;Proteasome 26S subunit ATPase 5;Proteasome subunit p45;p45/SUG;
M	ALLAEHLKPLPADR	N-ter + 42.01 Da, K +34.06 Da	32.1	60.0	3	1732.15	0.29	0.17	GLTP_MOUSE	D3Z1H9_MOUSE	Glycolipid transfer protein;	Esterase 10;Esterase D;Sid 478;
M	ALPGPAVFGPGR	N-ter + 42.01 Da	39.8	48.5	2	1266.73	n.d.	n.d.	F116A_MOUSE		Protein FAM116A;	
M	ALQALHSSGVGLR	N-ter + 42.01 Da	69.9	34.3	2	1349.79	n.d.	n.d.	MMP37_MOUSE	D6RGT1_MOUSE	Mitochondrial translocator assembly and maintenance protein 41 homolog;	MMP37-like protein, mitochondrial;
QDGLGQSQV	ALSSEALEAEER	N-ter + 42.01 Da	22.7	30.1	3	1482.74	n.d.	n.d.	CEP72_MOUSE		Centrosomal protein of 72 kDa;	
M	AMQKIFAR	N-ter + 42.01 Da, K +28.03 Da	40.9	12.7	2	1033.59	-1.47	0.04	ENOB_MOUSE	Q5SX59_MOUSE	Beta-enolase;	2-phospho-D-glycerate hydro-lyase;Enolase 3;Muscle-specific enolase;Skeletal muscle enolase;
YTLRNKEMKV	AMRRLFAR	N-ter + 42.01 Da	37.4	44.8	2	1061.64	n.d.	n.d.	Q8VF84_MOUSE			
M	AMVSEFLKQAR	N-ter + 42.01 Da, K +28.03 Da	53.3	34.9	2	1348.76	0.50	0.08	ANXA1_MOUSE	E9QA30_MOUSE	Annexin A1;	Annexin I;Annexin-1;Calpactin II;Calpactin-2;Chromobindin-9;Lipocortin I;Phospholipase A2 inhibitory protein;p35;
M	ANKGPGSYGMSR	N-ter + 42.01 Da, K +28.03 Da	46.8	43.3	2	1236.65	-0.38	0.08	TAGL_MOUSE		Transgelin;	Actin-associated protein p27;Smooth muscle protein 22-alpha;
M	ANSANTNTVPKLYR	N-ter + 42.01 Da, K +28.03 Da	28.2	37.8	3	1617.91	0.08	0.01	TF2AA_MOUSE		Transcription initiation factor IIA subunit 1;	General transcription factor IIA subunit 1;
M	AQALSEEERFQR	N-ter + 42.01 Da	34.9	63.3	2	1348.71	n.d.	n.d.	GRAP1_MOUSE	A2AEW6_MOUSE	GRIP1-associated protein 1;	HCMV-interacting protein;
M	AQAPAKCPSYPGSDGEMGKLR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	34.6	63.0	4	2374.29	-1.79	0.43	GMDS_MOUSE		GDP-mannose 4,6 dehydratase;	GDP-D-mannose dehydratase;
M	AQAPTIVITQPGFVR	N-ter + 42.01 Da	38.9	76.1	3	1625.02	n.d.	n.d.	PLAC8_MOUSE		Placenta-specific gene 8 protein;	Onzin;Protein C15;
M	AQDGVLEKSVR	N-ter + 42.01 Da, K +28.03 Da	49.3	36.5	2	1399.78	0.04	0.01	CS066_MOUSE		UPF0515 protein C19orf66 homolog;	

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	AQDSEKELLR	N-ter + 42.01 Da, K +34.06 Da	62.6	28.0	2	1376.81	-0.17	0.04	GBGT2_MOUSE		Guanine nucleotide-binding protein G(i)/G(s)/G(o) subunit gamma-T2;	G gamma-C;G-gamma-8;
M	AQDQGEKENPMR	N-ter + 42.01 Da, K +28.03 Da	31.1	47.3	3	1471.74	-0.92	0.24	RL11_MOUSE	D323K1_MOUSE	60S ribosomal protein L11;	
M	AQELQHPFAR	N-ter + 42.01 Da	43.8	49.3	3	1366.73	n.d.	n.d.	ADSV_MOUSE	E9QM03_MOUSE	Adseverin;	Gelsolin-like protein;Scinderin;
M	AQERPSCAVEPEHVQR	N-ter + 42.01 Da, C +57.02 Da	55.1	53.4	3	1934.01	n.d.	n.d.	CDD_MOUSE		Cytidine deaminase;	Cytidine aminohydrolase;
M	AQEVSEYLSQNPR	N-ter + 42.01 Da	37.1	80.5	3	1561.86	n.d.	n.d.	CARF_MOUSE		CDKN2A-interacting protein;	Collaborator of ARF;
M	AQGLIEVER	N-ter + 42.01 Da	35.2	56.0	2	1055.62	n.d.	n.d.	THTPA_MOUSE		Thiamine-triphosphatase;	
M	AQGSHQIDFQVLHDLR	N-ter + 42.01 Da	58.7	66.5	3	1905.08	n.d.	n.d.	TAB2_MOUSE	D32216_MOUSE	TGF-beta-activated kinase 1 and MAP3K7-binding protein 2;	Mitogen-activated protein kinase kinase kinase 7-interacting protein 2;TAK1-binding protein 2;TGF-beta-activated kinase 1-binding protein 2;
SALARETRAM	AQKPDGGAGLR	N-ter + 42.01 Da, K +34.06 Da	35.9	41.3	2	1144.69	0.12	0.03	MAGD1_MOUSE	F6YTL0_MOUSE	Melanoma-associated antigen D1;	Dixin-1;MAGE-D1 antigen;Neurotrophin receptor-interacting MAGE homolog;
M	AQNLKDLAGR	N-ter + 42.01 Da, K +34.06 Da	44.8	27.3	2	1160.70	0.40	0.09	PHB2_MOUSE	E9Q313_MOUSE	Prohibitin-2;	B-cell receptor-associated protein BAP37;Repressor of estrogen receptor activity;
M	AQNPSPNMEPLR	N-ter + 42.01 Da	37.7	61.3	2	1297.69	n.d.	n.d.	O91W19_MOUSE			
M	AQPGPAPQPDVSLQQR	N-ter + 42.01 Da	35.1	74.8	3	1730.00	n.d.	n.d.	RABE1_MOUSE	Q5QNU4_MOUSE	Rab GTPase-binding effector protein 1;	Rabaptin-5;Rabaptin-5alpha;
VVYAAPAPTS	AQTASPPQPAR	N-ter + 42.01 Da	30.6	1.4	2	1067.54	n.d.	n.d.	AKNA_MOUSE		AT-hook-containing transcription factor;	
M	ASALEQFVNSVR	N-ter + 42.01 Da	36.8	62.0	2	1361.78	n.d.	n.d.	CSN3_MOUSE	Q88X58_MOUSE	COP9 signalosome complex subunit 3;	JAB1-containing signalosome subunit 3;
M	ASASEPPASPR	N-ter + 42.01 Da	33.2	58.1	2	1110.60	n.d.	n.d.	RAB3D_MOUSE	D3YW33_MOUSE	Ras-related protein Rab-3D;	
M	ASAVSPANLPAVLLQPR	N-ter + 42.01 Da	40.4	72.0	3	1745.11	n.d.	n.d.	HCF1_MOUSE	B1AUX2_MOUSE	Host cell factor 1;	C1 factor;
M	ASCASIEDATQHLR	N-ter + 42.01 Da, K +57.02 Da	48.9	54.2	3	1827.94	n.d.	n.d.	EDC4_MOUSE	D6RE33_MOUSE	Enhancer of mRNA-decapping protein 4;	
M	ASCDEIHEHPR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	23.9	68.0	3	1416.78	-0.47	0.16	SEP10_MOUSE		Septin-10;	
M	ASDSGGPVLASER	N-ter + 42.01 Da	44.4	65.6	2	1430.76	n.d.	n.d.	EGLN1_MOUSE		Egl nine homolog 1;	Hypoxia-inducible factor prolyl hydroxylase 2;Prolyl hydroxylase domain-containing protein 2;SM-20;
M	ASDTPGFYMDKLNKYR	N-ter + 42.01 Da, K +28.03 Da	30.5	55.0	3	2003.09	-0.67	0.11	E2AK2_MOUSE		Interferon-induced, double-stranded RNA-activated protein kinase;	Eukaryotic translation initiation factor 2-alpha kinase 2;Interferon-inducible RNA-dependent protein kinase;P1/eIF-2A protein kinase;Protein kinase RNA-activated;Serine/threonine-protein kinase TIK;Tyrosine-protein kinase EIF2AK2;p68 kinase;
M	ASESGKLWGGRR	N-ter + 42.01 Da, K +28.03 Da	40.8	27.7	2	1216.65	-0.06	0.01	ARLY_MOUSE	E0CY49_MOUSE	Argininosuccinate lyase;	Argininosuccinase;
M	ASESSPLLAYR	N-ter + 42.01 Da	40.7	56.6	2	1234.69	n.d.	n.d.	S12A9_MOUSE	D3Z362_MOUSE	Solute carrier family 12 member 9;	Cation-chloride cotransporter-interacting protein 1;Potassium-chloride transporter 9;
M	ASEVEEQIPVRR	N-ter + 42.01 Da	33.9	47.6	2	1297.71	n.d.	n.d.	CB043_MOUSE		UPF0554 protein C2orf43 homolog;	15S Mg(2+)-ATPase p97 subunit;Valosin-containing protein;
M	ASGADSKGDDLSTAILKQKNRPNR	N-ter + 42.01 Da, K +28.03 Da	40.5	56.6	4	2667.58	1.01	0.30	TERA_MOUSE		Transitional endoplasmic reticulum ATPase;	
M	ASGCKIGPSILNSDLANLGAELR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	48.2	40.5	3	2585.40	0.24	0.20	RPE_MOUSE	B2KGF0_MOUSE	Ribulose-phosphate 3-epimerase;	Ribulose-5-phosphate-epimerase;
M	ASGSMATSEER	N-ter + 42.01 Da	38.0	55.3	2	1295.60	n.d.	n.d.	KAPO_MOUSE	A2AI69_MOUSE	cAMP-dependent protein kinase type I-alpha regulatory subunit;	
M	ASGSSDAEPAAGPAGR	N-ter + 42.01 Da	41.4	61.6	2	1528.77	n.d.	n.d.	TYDP2_MOUSE		Tyrosyl-DNA phosphodiesterase 2;	5'-tyrosyl-DNA phosphodiesterase;TRAF and TNF receptor-associated protein;
M	ASGVAVSDGVKVFNDMKVR	N-ter + 42.01 Da, K +34.06 Da	45.0	59.7	3	2201.38	0.51	0.32	COF1_MOUSE	E9Q1T2_MOUSE	Cofilin-1;	Cofilin, non-muscle isoform;
M	ASGVQADVECR	N-ter + 42.01 Da, C +57.02 Da	45.8	57.9	2	1331.69	n.d.	n.d.	DEST_MOUSE		Destrin;	Actin-depolymerizing factor;Sid 23;
M	ASGVTVNDEVIKVFNDMKVR	N-ter + 42.01 Da, K +28.03 Da	45.1	63.8	3	2318.38	-0.23	0.20	COF2_MOUSE		Cofilin, muscle isoform;	Cofilin, muscle isoform;
M	ASKEMFEDTVEER	N-ter + 42.01 Da, K +28.03 Da	48.7	54.4	3	1639.83	0.16	0.05	RBBP7_MOUSE	A2AF19_MOUSE	Histone-binding protein RBBP7;	Histone acetyltransferase type B subunit 2;Nucleosome-remodeling factor subunit RBAP46;Retinoblastoma-binding protein 7;Retinoblastoma-binding protein p46;
M	ASLKDLQKWR	N-ter + 42.01 Da, K +34.06 Da	46.2	39.3	2	1411.90	3.24	0.25	FABP5_MOUSE	E9Q964_MOUSE	Fatty acid-binding protein, epidermal;	Epidermal-type fatty acid-binding protein;Fatty acid-binding protein homolog;
M	ASGLAPVNFKAGADDEER	N-ter + 42.01 Da, K +34.06 Da	55.5	38.3	3	2063.19	1.81	1.78	TCPB_MOUSE		T-complex protein 1 subunit beta;	Protein homolog;
M	ASNFKTTMASSAQR	N-ter + 42.01 Da, K +28.03 Da	36.0	62.5	3	1725.00	-0.58	0.23	CETN2_MOUSE		Centrin-2;	CCT-beta;
M	ASNNTASIAQAR	N-ter + 42.01 Da	34.3	43.2	2	1244.66	n.d.	n.d.	GBG2_MOUSE		Guanine nucleotide-binding protein G(i)/G(s)/G(o) subunit gamma-2;	G gamma-1;
M	ASPAAGGVVIVGSLIGR	N-ter + 42.01 Da	60.5	49.3	2	1621.99	n.d.	n.d.	CRYL1_MOUSE	Q9D221_MOUSE	Lambda-crystallin homolog;	L-gulonate 3-dehydrogenase;
M	ASQSQQIQLLQAEKR	N-ter + 42.01 Da, K +28.03 Da	49.4	54.7	3	1854.10	1.37	0.28	VATG1_MOUSE		V-type proton ATPase subunit G 1;	V-ATPase 13 kDa subunit 1;Vacuolar proton pump subunit G 1;
M	ASSAQSSGGPAPVTVQR	N-ter + 42.01 Da	31.6	79.3	3	1872.05	n.d.	n.d.	SND1_MOUSE	Q3TJ56_MOUSE	Staphylococcal nuclease domain-containing protein 1;	100 kDa coactivator;p100 co-activator;
M	ASSDIQVKELEKR	N-ter + 42.01 Da, K +28.03 Da	36.3	58.5	3	1599.98	0.75	0.21	STMN1_MOUSE	D3Z1Z8_MOUSE	Stathmin;	Leukemia-associated gene protein;Leukemia-associated phosphoprotein
M	ASSGYNPYVEIEQPR	N-ter + 42.01 Da	24.7	68.9	3	1864.03	n.d.	n.d.	REL_MOUSE	A4QPD3_MOUSE	Proto-oncogene c-Rel;	p18;Metablastin;Oncoprotein 18;Phosphoprotein p19;Proslin;Protein Pr22;pp17;
M	ASSHTVLMR	N-ter + 42.01 Da	45.0	37.6	2	1042.56	n.d.	n.d.	BPNT1_MOUSE	D3Z5X0_MOUSE	3'(2'),5'-bisphosphate nucleotidase 1;	Bisphosphate 3'-nucleotidase 1;PAP-inositol-1,4-phosphatase;

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	ASSKIVTLSEVLSR	N-ter + 42.01 Da, K +34.06 Da	41.6	45.0	3	1485.02	0.10	0.03	PIR_MOUSE	A2AIH8_MOUSE	Pirin;	Probable quercetin 2,3-dioxygenase PIR;
QAQHSPPGEM	ASSPQGLDNPALLR	N-ter + 42.01 Da	34.6	71.7	3	1479.87	n.d.	n.d.	DDI2_MOUSE		Protein DDI1 homolog 2;	Down-regulator of transcription 1;Negative cofactor 2-beta;TATA-binding protein-associated phosphoprotein;
M	ASSSGNDDLTIPR	N-ter + 42.01 Da	31.3	47.4	2	1488.74	n.d.	n.d.	NC2B_MOUSE		Protein Dr1;	
MA	ASTDIAGLEESFR	N-ter + 42.01 Da	48.0	53.0	2	1436.76	n.d.	n.d.	TPPP3_MOUSE		Tubulin polymerization-promoting protein family member 3;	
M	ASWAEPEPAALR	N-ter + 42.01 Da	31.4	51.1	2	1425.76	n.d.	n.d.	FKBP8_MOUSE	D3Z597_MOUSE	Peptidyl-prolyl cis-trans isomerase FKBP8;	38 kDa FK506-binding protein;FK506-binding protein 8;FKBP38;Rotamase;
M	ASYFDEHDCPLNPER	N-ter + 42.01 Da, C +57.02 Da	50.9	57.4	3	2019.94	n.d.	n.d.	RN181_MOUSE	D3YUJ1_MOUSE	E3 ubiquitin-protein ligase RNF181;	RING finger protein 181;
M	ASYEILDVPR	N-ter + 42.01 Da	41.1	59.9	2	1366.76	n.d.	n.d.	DNJB2_MOUSE	Q3TB24_MOUSE	DnaI homolog subfamily B member 2;	DnaI homolog subfamily B member 10;MDJ8; Cytosolic sialidase;Mouse skeletal muscle sialidase;Murine thymic sialidase;N-acetyl-alpha-neuraminidase 2;
SPWFSDLRPM	ATCPVLQKELFR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	23.5	46.0	3	1631.95	-1.43	0.62	NEUR2_MOUSE	E9Q2Z0_MOUSE	Sialidase-2;	FYVE finger-containing phosphoinositide kinase;PIKfyve;Phosphatidylinositol-3-phosphate 5-kinase type III;p235;
M	ATDDKSSPTLDSANDLPR	N-ter + 42.01 Da, K +28.03 Da	39.9	50.0	3	1972.04	-0.43	0.11	FYV1_MOUSE	D3Z5N5_MOUSE	1-phosphatidylinositol-3-phosphate 5-kinase;	Swiprosin-1;
M	ATDELASKLSR	N-ter + 42.01 Da, K +34.06 Da	57.7	31.2	2	1265.74	1.55	0.56	EFHD2_MOUSE	Q8C845_MOUSE	EF-hand domain-containing protein D2;	
M	ATEGMILTNHHDQIR	N-ter + 42.01 Da	52.7	68.5	3	1776.98	n.d.	n.d.	GEPH_MOUSE	A0JNY3_MOUSE	Gephyrin;	
M	ATESSLTHLVDLTASGLPAQGLCLR	N-ter + 42.01 Da, C +57.02 Da	43.6	40.5	3	2736.49	n.d.	n.d.	HIUH_MOUSE		5-hydroxyisourate hydrolase;	Transthyretin-related protein; CW17;Mammalian branch point-binding protein;Transcription factor ZFM1;Zinc finger gene in MEN1 locus;Zinc finger protein 162;
M	ATGANATPLDFPSKRR	N-ter + 42.01 Da, K +34.06 Da	46.4	50.4	3	1783.12	0.90	0.15	SF01_MOUSE	Q3UI45_MOUSE	Splicing factor 1;	
M	ATIATMPVPETR	N-ter + 42.01 Da	30.3	53.0	2	1327.75	n.d.	n.d.	SNRPA_MOUSE	E9Q4T6_MOUSE	U1 small nuclear ribonucleoprotein A;	
M	ATIGPSGLHPGER	N-ter + 42.01 Da	50.8	28.5	2	1332.72	n.d.	n.d.	HXX3_MOUSE	D6RCV7_MOUSE	Hexokinase-3;	Hexokinase type III;
M	ATKCTKCGPYSTPLEAMKGR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	71.5	78.7	4	2553.56	-1.18	0.24	SBP1_MOUSE	D6RHN2_MOUSE	Selenium-binding protein 1;	56 kDa selenium-binding protein;
M	ATKIDKEACR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	27.7	65.0	3	1300.83	0.90	0.52	COTL1_MOUSE		Coactosin-like protein;	
MFLCRFWGKM	ATNDAVLKR	N-ter + 42.01 Da, K +34.06 Da	37.0	29.7	2	1062.66	1.61	0.27	AIMP1_MOUSE	Q3UZG4_MOUSE	Aminoacyl tRNA synthase complex-interacting multifunctional protein 1;	Multisynthase complex auxiliary component p43;
M	ATPAAPASGVR	N-ter + 42.01 Da	31.5	67.3	2	1038.62	n.d.	n.d.	YIPF3_MOUSE	D3YXM6_MOUSE	Protein YIPF3;	Killer lineage protein 1;YIP1 family member 3; Cytochrome b5 outer mitochondrial membrane isoform;
M	ATPEASGSGEKVEGSEPSVTYYR	N-ter + 42.01 Da, K +34.06 Da	46.9	43.4	3	2476.29	0.53	0.30	CYB5B_MOUSE		Cytochrome b5 type B;	
MS	ATQHKTSLPQGVRR	N-ter + 42.01 Da, K +28.03 Da	35.1	96.2	3	1491.96	-6.64	0.00	Q9CRB1_MOUSE	D3Z141_MOUSE		Anchorin CII;Annexin V;Annexin-5;Calphobindin I;Endonexin II;Lipocortin V;Placental anticoagulant protein 4;Placental anticoagulant protein I;Thromboplastin inhibitor;Vascular anticoagulant-alpha;
M	ATRGTVDFFPFDGR	N-ter + 42.01 Da	37.9	55.2	3	1637.87	n.d.	n.d.	ANXA5_MOUSE		Annexin A5;	
M	ATELSQCQVEENQER	N-ter + 42.01 Da, C +57.02 Da	37.4	84.6	3	1907.98	n.d.	n.d.	TELT_MOUSE		Telethonin;	Titin cap protein;
M	ATTAQQSPQPVAGKR	N-ter + 42.01 Da, K +28.03 Da	42.0	40.1	3	1608.92	0.90	0.40	THUM1_MOUSE		THUMP domain-containing protein 1;	
M	ATVAATTKVPEIR	N-ter + 42.01 Da, K +28.03 Da	64.3	27.6	2	1425.86	0.44	0.16	RUVB2_MOUSE	D3YXQ8_MOUSE	RuvB-like 2;	p47 protein; Phosphofructo-1-kinase isozyme B;Phosphofructokinase 1;Phosphohexokinase; SEC23-related protein B;
M	ATVDLEKLR	N-ter + 42.01 Da, K +28.03 Da	34.7	27.2	2	1113.67	-0.47	0.09	K6PL_MOUSE		6-phosphofructokinase, liver type;	
M	ATYLEFIQQNEER	N-ter + 42.01 Da	45.6	40.7	2	1681.86	n.d.	n.d.	SC23B_MOUSE	A2AN98_MOUSE	Protein transport protein Sec23B;	
M	AVAAAAAATAASAAGGGGASAAR	N-ter + 42.01 Da	66.4	84.4	3	1873.07	n.d.	n.d.	ARHL2_MOUSE		Poly(ADP-ribose) glycohydrolase ARH3;	
M	AVAAAAVAAPAGGGGAR	N-ter + 42.01 Da	48.4	33.9	2	1378.78	n.d.	n.d.	SNTB1_MOUSE		Beta-1-syntrophin;	59 kDa dystrophin-associated protein A1 basic component 1;Syntrophin-2;
M	AVAVGRPSNEELR	N-ter + 42.01 Da	35.7	31.0	2	1438.80	n.d.	n.d.	SEP11_MOUSE		Septin-11;	
MADGEEPM	AVDGGCGDTGDWEGR	N-ter + 42.01 Da, C +57.02 Da	46.8	59.4	2	1592.71	n.d.	n.d.	UBA3_MOUSE	Q3TL72_MOUSE	NEDD8-activating enzyme E1 catalytic subunit;	NEDD8-activating enzyme E1C;Ubiquitin-activating enzyme 3;
EATGGKYVPR	AVLVDLEPMTDMSVR	N-ter + 42.01 Da	32.9	76.6	3	1642.95	n.d.	n.d.	TBB2C_MOUSE	TBB4_MOUSE	Tubulin beta-4B chain;	Tubulin beta-2C chain;
M	AVNVYSTVSDNLSR	N-ter + 42.01 Da	32.6	72.3	3	1753.98	n.d.	n.d.	MARE1_MOUSE		Microtubule-associated protein RP/EB family member 1;	APC-binding protein EB1;End-binding protein 1;
M	AVSTGVKVP	N-ter + 42.01 Da, K +28.03 Da	51.1	27.8	2	1082.67	1.14	0.21	UB2V2_MOUSE		Ubiquitin-conjugating enzyme E2 variant 2;	Ubc-like protein MMS2; L-isospartyl protein carboxyl methyltransferase;Protein L-isospartyl/D-aspartyl methyltransferase;Protein-beta-aspartate methyltransferase;
M	AWKSGGASHSELIHNL	N-ter + 42.01 Da, K +28.03 Da	36.7	31.9	4	1932.06	0.42	0.11	PIMT_MOUSE	E9PWE0_MOUSE	Protein-L-isospartate(D-aspartate) O-methyltransferase;	
M	AYHSFLVEPISCHAWNKDR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	38.5	82.1	4	2405.38	-0.29	0.05	ARC1B_MOUSE	D3Z6S0_MOUSE	Actin-related protein 2/3 complex subunit 1B;	Arp2/3 complex 41 kDa subunit;p41-ARC; BPG-dependent PGAM 1;Phosphoglycerate mutase isozyme B;
MA	AYKLVLR	N-ter + 42.01 Da, K +28.03 Da	40.9	35.3	2	1044.71	0.18	0.03	PGAM1_MOUSE		Phosphoglycerate mutase 1;	
M	DAATLTYDTLR	N-ter + 42.01 Da	45.2	53.4	2	1411.74	n.d.	n.d.	ATG4B_MOUSE		Cysteine protease ATG4B;	AUT-like 1 cysteine endopeptidase;Autophagin-1;Autophagy-related cysteine endopeptidase 1;Autophagy-related protein 4 homolog B;
M	DDIIAALVDNDSGMCKAGFAGDDAPR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	71.0	40.4	3	2806.37	1.06	0.73	ACTB_MOUSE	E9Q1F2_MOUSE	Actin, cytoplasmic 1;	Beta-actin;

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	DDEEETYSR	N-ter + 42.01 Da	40.9	80.3	2	1228.55	n.d.	n.d.	RPAB1_MOUSE		DNA-directed RNA polymerases I, II, and III subunit RPABC1;	DNA-directed RNA polymerase II subunit E;RPB5 homolog;
M	DDIIFTQCR	N-ter + 42.01 Da, C +57.02 Da	34.0	60.0	2	1226.58	n.d.	n.d.	ILK_MOUSE	D3YZA5_MOUSE	Integrin-linked protein kinase;	
M	DDREDLVYQAKLAEQAER	N-ter + 42.01 Da, K +34.06 Da	56.0	56.7	3	2355.29	0.42	0.16	1433E_MOUSE	D6REF3_MOUSE	14-3-3 protein epsilon;	
MC	DEDETTALVCDNGSLVKAGFAGDDAPR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	63.9	38.5	3	2955.48	-0.60	0.39	ACTS_MOUSE		Actin, alpha skeletal muscle;	Alpha-actin-1;
M	DETSPLVSPER	N-ter + 42.01 Da	33.9	51.4	2	1401.72	n.d.	n.d.	P4K2A_MOUSE		Phosphatidylinositol 4-kinase type 2-alpha;	Phosphatidylinositol 4-kinase type II-alpha;
M	DFSCLKPIR	N-ter + 42.01 Da, K +34.06 Da	24.2	69.3	3	1343.92	0.25	0.08	VATA_MOUSE	D3YWH3_MOUSE	V-type proton ATPase catalytic subunit A;	V-ATPase 69 kDa subunit;Vacuolar proton pump subunit alpha;
M	DFSCLKPK	N-ter + 42.01 Da, K +28.03 Da	39.6	40.7	2	1062.62	0.52	0.11	VATA_MOUSE	D3YWH3_MOUSE	V-type proton ATPase catalytic subunit A;	V-ATPase 69 kDa subunit;Vacuolar proton pump subunit alpha;
GKSTTKRRK	DGDKLVECEVMKGVTSR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	36.7	94.4	4	2091.27	-3.47	0.39	FABP4_MOUSE		Fatty acid-binding protein, adipocyte;	3T3-L1 lipid-binding protein;Adipocyte lipid-binding protein;Adipocyte-type fatty acid-binding protein;Fatty acid-binding protein 4;Myelin P2 protein homolog;P15;P2 adipocyte protein;Protein 422;
M	DGEDDNLVIKKR	N-ter + 42.01 Da, K +28.03 Da	29.7	69.6	3	1716.99	-4.64	1.16	F192A_MOUSE		Protein FAM192A;	NEFA-interacting nuclear protein NIP30;
M	DGIVPDIAGVTKR	N-ter + 42.01 Da, K +28.03 Da	40.3	35.3	2	1540.88	2.00	0.76	PTBP1_MOUSE	Q922I7_MOUSE	Polypyrimidine tract-binding protein 1;	Heterogeneous nuclear ribonucleoprotein I;
M	DGLVAQCSAR	N-ter + 42.01 Da, C +57.02 Da	45.3	55.8	2	1248.63	n.d.	n.d.	SYRC_MOUSE		Arginine-tRNA ligase, cytoplasmic;	Arginyl-tRNA synthetase;
M	DGSEDDPTFSAR	N-ter + 42.01 Da	33.8	56.3	2	1581.75	n.d.	n.d.	ATHL1_MOUSE	E9QA85_MOUSE	Acid trehalase-like protein 1;	
LLQDGLKMDL	DHGKFLDCVVR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	31.7	89.1	3	1420.86	-2.18	1.19	KBTB5_MOUSE		Kelch repeat and BTB domain-containing protein 5;	Alpha(B)-crystallin;P23;
M	DIAIHPWIR	N-ter + 42.01 Da	36.1	75.6	3	1429.84	n.d.	n.d.	CRYAB_MOUSE		Alpha-crystallin B chain;	Alpha(B)-crystallin;P23;
KLPGRVAFGE	DIDLPEFDAR	N-ter + 42.01 Da	40.1	72.8	2	1332.72	n.d.	n.d.	CATB_MOUSE		Cathepsin B;	Cathepsin B1;
DDSESRRRL	DKDSGFAYSWHR	N-ter + 42.01 Da, K +34.06 Da	27.0	53.4	2	1543.81	-6.64	0.00	SNRK_MOUSE		SNF-related serine/threonine-protein kinase;	SNF1-related kinase;
M	DKNELVQKAKLAEQAER	N-ter + 42.01 Da, K +34.06 Da	37.4	45.1	3	2244.40	0.57	0.07	1433Z_MOUSE	D3YXF4_MOUSE	14-3-3 protein zeta/delta;	Protein kinase C inhibitor protein 1;SEZ-2;
M	DKNELVQKAK	N-ter + 42.01 Da, K +34.06 Da	35.0	52.2	3	1446.97	0.78	0.26	1433Z_MOUSE	D3YXF4_MOUSE	14-3-3 protein zeta/delta;	Protein kinase C inhibitor protein 1;SEZ-2;
M	DLAAAEPGAGSQHPEVR	N-ter + 42.01 Da	54.9	57.7	3	1948.02	n.d.	n.d.	MCM6_MOUSE	Q3ULG5_MOUSE	DNA replication licensing factor MCM6;	Mis5 homolog;
M	DLEAVCKR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	53.2	39.7	2	1190.63	-0.76	0.16	AGM1_MOUSE	Q8BWW3_MOUSE	Phosphoacetylglucosamine mutase;	Acetylglucosamine phosphomutase;N-acetylglucosamine-phosphate mutase;Phosphoglucosmutase-3;
M	DLDLAGR	N-ter + 42.01 Da	25.7	62.1	2	873.49	n.d.	n.d.	DCXR_MOUSE	A2AC16_MOUSE	L-xylulose reductase;	Dicarbonyl/L-xylulose reductase;
M	DLLFGR	N-ter + 42.01 Da	26.7	54.7	2	892.50	n.d.	n.d.	CHM2A_MOUSE		Charged multivesicular body protein 2a;	Chromatin-modifying protein 2a;Vacuolar protein sorting-associated protein 2;
TIVGCRRGSM	DLSELER	N-ter + 42.01 Da	30.5	70.6	2	1033.55	n.d.	n.d.	RNH2A_MOUSE	Q05C51_MOUSE	Ribonuclease H2 subunit A;	Ribonuclease HI large subunit;Ribonuclease HI subunit A;
LTSESSRPTR	DLSSSDLTASKIVK	N-ter + 42.01 Da, K +28.03 Da	41.1	79.2	3	1648.02	-0.56	0.10	A2M_MOUSE	D3YW52_MOUSE	Alpha-2-macroglobulin;	Pregnancy zone protein;
M	DMIGNQHPISIR	N-ter + 42.01 Da	46.7	42.9	2	1413.67	n.d.	n.d.	BAG5_MOUSE	E0CX76_MOUSE	BAG family molecular chaperone regulator 5;	Bcl-2-associated athanogene 5;
M	DNLSPEEVQLR	N-ter + 42.01 Da	36.7	60.7	2	1471.79	n.d.	n.d.	SNP23_MOUSE	Q9D3L3_MOUSE	Synaptosomal-associated protein 23;	Syndet;Vesicle-membrane fusion protein SNAP-23;
M	DNSGKQAEAMALLAEAR	N-ter + 42.01 Da, K +34.06 Da	71.1	42.4	3	2110.11	-0.34	0.19	SNAA_MOUSE		Alpha-soluble NSF attachment protein;	Alpha-II spectrin;Fodrin alpha chain;Spectrin, non-erythroid alpha chain;
M	DPNTIIEALR	N-ter + 42.01 Da	34.1	56.8	2	1313.74	n.d.	n.d.	IPO7_MOUSE		Importin-7;	Ran-binding protein 7;
RPEREPYACM	DPSAALHR	N-ter + 42.01 Da	34.8	72.4	2	1038.57	n.d.	n.d.	RAB12_MOUSE	A2CG35_MOUSE	Ras-related protein Rab-12;	Rab-13;
M	DPSGVKLVETAEDIQER	N-ter + 42.01 Da, K +34.06 Da	49.7	41.2	3	2092.14	-0.64	0.27	SPTA2_MOUSE	A3KGU7_MOUSE	Spectrin alpha chain, brain;	Alpha-II spectrin;Fodrin alpha chain;Spectrin, non-erythroid alpha chain;
TLRHPNTNM	DQVMQFVPSR	N-ter + 42.01 Da	40.5	63.4	2	1507.78	n.d.	n.d.	SC61G_MOUSE		Protein transport protein Sec61 subunit gamma;	
M	DSEAFQHR	N-ter + 42.01 Da	54.8	59.8	2	1232.60	n.d.	n.d.	IASPP_MOUSE	D3YXE7_MOUSE	RelA-associated inhibitor;	Inhibitor of ASPP protein;NFkB-interacting protein 1;PPP1R13B-like protein;
M	DSFEDKLQQLR	N-ter + 42.01 Da, K +34.06 Da	30.1	58.2	3	1584.90	-1.40	0.22	AL3B1_MOUSE		Aldehyde dehydrogenase family 3 member B1;	Aldehyde dehydrogenase 7;
IPDWFLNRQK	DVKDGKYR	N-ter + 42.01 Da, K +34.06 Da, K +28.03 Da	9.4	36.3	2	1083.65	n.d.	n.d.	D3YVW7_MOUSE			
M	DVNLAPLR	N-ter + 42.01 Da	33.6	65.1	2	1069.63	n.d.	n.d.	PRAF3_MOUSE			ADP-ribosylation factor-like protein 6-interacting protein 5;Addicins;GTRAP3-18;Glutamate transporter EAAC1-interacting protein;Prenylated Rab acceptor protein 2;Protein JWA;
M	DVSGQETDWR	N-ter + 42.01 Da	34.3	70.8	2	1364.66	n.d.	n.d.	Q3TE00_MOUSE	E9Q7C1_MOUSE		
M	DWLMGKSK	N-ter + 42.01 Da, K +28.03 Da	37.1	38.4	2	1192.64	-1.03	0.19	MOB2_MOUSE		MOB kinase activator 2;	Mob2 homolog;Mps one binder kinase activator-like 2;Ovary-specific MOB-like protein;
M	EAALADGEPDR	N-ter + 42.01 Da	40.3	60.3	2	1315.65	n.d.	n.d.	B9EJ86_MOUSE		Oxysterol-binding protein;	
M	EAALAVTR	N-ter + 42.01 Da	32.4	69.8	2	1002.59	n.d.	n.d.	PRCM_MOUSE		Probable proline racemase;	
M	EAATHQVMAGPR	N-ter + 42.01 Da	38.2	50.1	3	1496.76	n.d.	n.d.	E9Q7K1_MOUSE			
M	EAEAADAPPPR	N-ter + 42.01 Da	48.0	60.0	2	1255.63	n.d.	n.d.	WIP1_MOUSE	B1AT64_MOUSE	WD repeat domain phosphoinositide-interacting protein 1;	WD40 repeat protein interacting with phosphoinositides of 49 kDa;
M	EAGGLGCAVCVLTGASR	N-ter + 42.01 Da, C +57.02 Da	54.1	73.3	3	1849.98	n.d.	n.d.	Q91XH5_MOUSE			
M	EAKGGTVKAASGFNATEDAQLR	N-ter + 42.01 Da, K +34.06 Da	57.0	69.1	4	2562.52	0.69	0.21	ANXA4_MOUSE	E9Q073_MOUSE	Annexin A4;	Annexin IV;Annexin-4;
M	EAPELGPGLVLR	N-ter + 42.01 Da	41.6	52.6	2	1438.79	n.d.	n.d.	A2RT81_MOUSE			
M	EATGLVPFVR	N-ter + 42.01 Da	34.2	44.4	2	1260.71	n.d.	n.d.	FLII_MOUSE		Protein flightless-1 homolog;	
M	EATLNLEPSGR	N-ter + 42.01 Da	40.9	59.1	2	1227.68	n.d.	n.d.	ACOT1_MOUSE		Acyl-coenzyme A thioesterase 1;	CTE-1;Inducible cytosolic acyl-coenzyme A thioesterase 1;
M	EAVAAAEEVTER	N-ter + 42.01 Da	46.0	52.5	2	1317.69	n.d.	n.d.	CCD97_MOUSE		Coiled-coil domain-containing protein 97;	hydrolase;Long chain acyl-CoA thioester hydrolase;





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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	EQAVHGESKR	N-ter + 42.01 Da, K +34.06 Da	28.2	53.3	3	1346.75	0.07	0.02	NSDHL_MOUSE		Sterol-4-alpha-carboxylate 3-dehydrogenase, decarboxylating;	
M	EQTETLTR	N-ter + 42.01 Da	32.0	54.8	2	1149.60	n.d.	n.d.	Q8QZW8_MOUSE	Q1H DU4_MOUSE		
M	ESDFYLR	N-ter + 42.01 Da	31.7	64.2	2	1101.55	n.d.	n.d.	MG_N_MOUSE		Protein mago nashi homolog;	
M	ESMSDPQLQEER	N-ter + 42.01 Da	32.4	79.3	3	1846.92	n.d.	n.d.	CASPE_MOUSE		Caspase-14;	Mini-ICE;
M	ESGFTSKDTYLSHFNFR	N-ter + 42.01 Da, K +28.03 Da	65.0	49.6	3	2186.12	-0.69	0.10	NNMT_MOUSE	D3YX59_MOUSE	Nicotinamide N-methyltransferase;	
M	ESTFSSPAEALQR	N-ter + 42.01 Da	38.2	82.6	3	1665.90	n.d.	n.d.	DPH2_MOUSE		Diphthamide biosynthesis protein 2;	DPH2 homolog;Diphthamide biosynthesis protein 2
M	ETELSSQDR	N-ter + 42.01 Da	35.0	81.6	2	1236.63	n.d.	n.d.	ATG13_MOUSE		Autophagy-related protein 13;	
M	ETGPAPLVAPPR	N-ter + 42.01 Da	46.4	45.3	2	1376.77	n.d.	n.d.	TB10B_MOUSE		TBC1 domain family member 10B;	Protein w23-85;
M	ETGSDSQQLER	N-ter + 42.01 Da	42.4	76.1	2	1408.68	n.d.	n.d.	ECM29_MOUSE	A2ALW1_MOUSE	Proteasome-associated protein ECM29 homolog;	
M	ETILEQQR	N-ter + 42.01 Da	38.1	61.2	2	1188.65	n.d.	n.d.	SF3A3_MOUSE		Splicing factor 3A subunit 3;	SF3a60;Spliceosome-associated protein 61;
M	ETPKPR	N-ter + 42.01 Da, K +28.03 Da	35.3	32.3	2	927.51	-0.49	0.07	IRF3_MOUSE		Interferon regulatory factor 3;	
M	ETPLDVLNR	N-ter + 42.01 Da	44.3	56.5	2	1201.67	n.d.	n.d.	Q3TQI9_MOUSE	D3Z130_MOUSE		
M	EVKPPGPRPQPSGGR	N-ter + 42.01 Da, K +28.03 Da	26.3	61.4	3	1817.04	-0.25	0.03	ROA3_MOUSE	A2AL12_MOUSE	Heterogeneous nuclear ribonucleoprotein A3;	
M	EVLATDTASQQER	N-ter + 42.01 Da	47.9	68.4	3	1619.86	n.d.	n.d.	PALM_MOUSE		Paralemmin-1;	Paralemmin;
M	EVQCGGAGFIPESR	N-ter + 42.01 Da, C +57.02 Da	31.9	79.3	3	1765.92	n.d.	n.d.	GIMA4_MOUSE	D3Z7Q4_MOUSE	GTPase IMAP family member 4;	Immunity-associated nucleotide 1 protein;immunity-associated protein 4;
M	EVSQAASTGTVGR	N-ter + 42.01 Da	61.1	55.5	2	1448.74	n.d.	n.d.	CD003_MOUSE		Uncharacterized protein C4orf3 homolog;	
M	FAKKGKSAVPSDGGAR	N-ter + 42.01 Da, K +28.03 Da	38.9	53.5	3	1804.03	-2.12	0.37	SSBP3_MOUSE	B1A534_MOUSE	Single-stranded DNA-binding protein 3;	Lck-associated signal transducer;Sequence-specific single-stranded-DNA-binding protein;
MSVFDLFRG	FFGFPGPR	N-ter + 42.01 Da	13.4	7.2	2	965.48	n.d.	n.d.	HAX1_MOUSE		HCL1-associated protein X-1;	HS1-associating protein X-1;HS1-binding protein 1; Empty spiracles homolog 1;Empty spiracles-like protein 1;
SAAETAFVSG	FPAAAAAGAGR	N-ter + 42.01 Da	31.9	11.9	2	1000.52	n.d.	n.d.	EMX1_MOUSE		Homeobox protein EMX1;	
VAASPVSGIM	FOGADSOAGKSGSR	N-ter + 42.01 Da, K +28.03 Da	20.1	49.8	3	1595.82	-0.58	0.07	HN11_MOUSE		Hematological and neurological expressed 1-like protein;	
M	FSWVSKDAR	N-ter + 42.01 Da, K +28.03 Da	45.5	37.8	2	1295.68	-0.97	0.13	EHD1_MOUSE	F6Y7R7_MOUSE	EH domain-containing protein 1;	PAST homolog 1;
M	GDMDAMIPER	N-ter + 42.01 Da	29.8	66.6	2	1304.62	n.d.	n.d.	NU214_MOUSE		Nuclear pore complex protein Nup214;	214 kDa nucleoporin;Nucleoporin Nup214;
M	RVSTQDLTFE	GDLSHIER	44.5	18.5	2	967.49	n.d.	n.d.	POTE1_MOUSE	Q3UXR7_MOUSE	Protection of telomeres protein 1;	POT1-like telomere end-binding protein;
M	GDREQLLQR	N-ter + 42.01 Da	33.6	31.3	2	1155.64	n.d.	n.d.	1433F_MOUSE	E9Q4V8_MOUSE	14-3-3 protein eta;	
M	PGLIGLPGTK	GEKGRPGEPGLDGFPGPR	34.7	12.6	3	1891.98	5.55	1.05	CONA1_MOUSE		Collagen alpha-1(XIII) chain;	
M	GEQPIFSTR	N-ter + 42.01 Da	27.9	56.4	2	1075.59	n.d.	n.d.	HOME1_MOUSE	Q3UVL6_MOUSE	Homer protein homolog 1;	VASP/Ena-related gene up-regulated during seizure and LTP 1;
M	VGPAKNGDR	GETGPAGPAGIPAGAR	64.2	68.2	3	1573.89	n.d.	n.d.	CO1A1_MOUSE	F8WGB7_MOUSE	Collagen alpha-1(I) chain;	Alpha-1 type I collagen;
M	GEVAGGAAPGPR	N-ter + 42.01 Da	40.7	55.8	2	1176.65	n.d.	n.d.	ARHG1_MOUSE	E9PUF7_MOUSE	Rho guanine nucleotide exchange factor 1;	Lbc's second cousin;Lymphoid blast crisis-like 2; HD domain-containing protein 3;Metazoan Spot homolog 1;Penta-phosphate guanosine-3'-pyrophosphohydrolase;
M	GSEAAQLLEAADAFAHKHR	N-ter + 42.01 Da, K +34.06 Da	34.9	86.9	4	2097.26	0.06	0.01	MESH1_MOUSE		Guanosine-3',5'-bis(diphosphate) 3'-pyrophosphohydrolase MESH1;	
M	GTALVYHEDMTATR	N-ter + 42.01 Da	29.9	88.1	3	1605.89	n.d.	n.d.	HDA10_MOUSE	D3Z7T4_MOUSE	Histone deacetylase 10;	
VEAARNLGRV	GTKCCTLPEDQR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	31.4	78.5	3	1539.84	-1.47	0.25	ALBU_MOUSE		Serum albumin;	12 kDa FK506-binding protein;FK506-binding protein 1A;immunophilin FKBP12;Rotamase;
M	GTSEAAPPFFAR	N-ter + 42.01 Da	32.7	46.2	2	1241.66	n.d.	n.d.	DUS28_MOUSE		Dual specificity phosphatase 28;	
M	GVQVETISPGDGR	N-ter + 42.01 Da	41.9	57.7	2	1355.75	n.d.	n.d.	FKB1A_MOUSE	Q1JUQ8_MOUSE	Peptidyl-prolyl cis-trans isomerase FKBP1A;	
M	HFSIPETESR	N-ter + 42.01 Da	39.5	40.8	2	1374.68	n.d.	n.d.	SNX17_MOUSE	D3Z3J1_MOUSE	Sorting nexin-17;	
M	MVSKSIATTL	IDTSSSEVLDELVR	25.2	92.5	3	1695.94	n.d.	n.d.	TFIP8_MOUSE	D3YWJ5_MOUSE	Tumor necrosis factor alpha-induced protein 8;	
AAVCAQPRGR	ILGGQEAHAAR	N-ter + 42.01 Da	46.3	90.1	3	1234.75	n.d.	n.d.	CFAD_MOUSE		Complement factor D;	28 kDa adipocyte protein;Adipsin;C3 convertase activator;Properdin factor D;
D	IQMTQSTSSLSASLGDR	N-ter + 42.01 Da	39.4	63.8	3	1938.02	n.d.	n.d.	KV5AD_MOUSE		Ig kappa chain V-V region HP 123E6;	
D	IQMTQTTSSLSASLGDR	N-ter + 42.01 Da	32.7	34.0	3	1951.98	n.d.	n.d.	KV5AA_MOUSE		Ig kappa chain V-V region MOPC 173;	
M	IALNDFVKL	ISWYDNEYGYSNR	26.2	86.2	3	1707.86	n.d.	n.d.	G3P_MOUSE	KV5AB_MOUSE F8WJL5_MOUSE	Glyceraldehyde-3-phosphate dehydrogenase;	Peptidyl-cysteine S-nitrosylase GAPDH;
M	IYENLQNSR	N-ter + 42.01 Da	39.0	57.1	2	1308.69	n.d.	n.d.	MMGL_MOUSE	B1AU01_MOUSE	Macrophage asialoglycoprotein-binding protein 1;	MMGL;Macrophage galactose/N-acetylgalactosamine-specific lectin;
M	KIDAREISIR	KAEIILK	8.0	101.8	2	1079.91	n.d.	n.d.	FCS2_MOUSE		FCH and double SH3 domains protein 2;	SH3 multiple domains protein 3;
M	KLNFSGLR	N-ter + 42.01 Da, K +28.03 Da	36.6	36.9	2	1134.66	-0.69	0.30	CBR2_MOUSE		Carbonyl reductase [NADPH] 2;	Adipocyte protein P27;Lung carbonyl reductase;NADPH-dependent carbonyl reductase 2;
M	VPPGPTNEMS	KNKEMIDESLYSR	46.4	14.4	3	1824.92	2.59	0.87	UBA1Y_MOUSE		Ubiquitin-like modifier-activating enzyme 1 Y;	Ubiquitin-activating enzyme E1;Ubiquitin-activating enzyme E1 Y;
M	KQPKNLEGVGFANLNQVYR	N-ter + 42.01 Da, K +34.06 Da	52.0	72.0	4	2544.60	-0.56	0.09	E9Q1G8_MOUSE			
M	TSQEEHRPFE	KVVNKESLVISGLR	9.4	28.1	4	1645.08	n.d.	n.d.	INSR_MOUSE	F8VPU4_MOUSE	Insulin receptor;	
M	LQRDIAPGVK	LFVLEEDLSR	22.7	59.9	3	1261.73	n.d.	n.d.	PAR14_MOUSE		Poly [ADP-ribose] polymerase 14;	Collaborator of STAT6;
M	LGAADESVR	N-ter + 42.01 Da	42.7	56.2	2	1176.61	n.d.	n.d.	KI21A_MOUSE	E9Q100_MOUSE	Kinesin-like protein KIF21A;	
M	LGGLGKLAEGLAHR	N-ter + 42.01 Da, K +28.03 Da	60.3	72.9	3	1663.05	0.65	0.10	FAM25_MOUSE		Protein FAM25;	
M	LGSFKAER	N-ter + 42.01 Da, K +34.06 Da	46.0	31.6	2	1170.66	1.21	0.25	IST1_MOUSE	Q8BHC2_MOUSE	IST1 homolog;	
M	NLLVSEVYVQ	LKFPVKPADLKR	11.4	71.0	3	1699.25	n.d.	n.d.	CUL4B_MOUSE	E9PYX1_MOUSE	Cullin-4B;	
M	LKPQPPQTSQPQPPPTQAVAR	N-ter + 42.01 Da, K +28.03 Da	36.5	58.3	4	2850.65	0.14	0.02	ATX2L_MOUSE		Ataxin-2-like protein;	

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
RELMLGEDAR	LPKRLVKKGKK	N-ter + 42.01 Da, K +34.06 Da, K +28.03 Da	13.2	66.0	3	1500.29	n.d.	n.d.	A2A8L1_MOUSE	E9PYU4_MOUSE	Tumor necrosis factor alpha-induced protein 8;	
APVAVHPDMS	LSEAEPR	N-ter + 42.01 Da	32.7	61.0	2	1102.56	n.d.	n.d.	TFIP8_MOUSE	D3Z325_MOUSE		Post-proline cleaving enzyme;
M	LSFYQPDVYR	N-ter + 42.01 Da	49.3	52.3	2	1459.76	n.d.	n.d.	PPCE_MOUSE	E9Q0H7_MOUSE	Prolyl endopeptidase;	
MTLD	MDAVLSDVFR	N-ter + 42.01 Da	37.8	53.3	2	1193.64	n.d.	n.d.	OTU7A_MOUSE	B2RUR8_MOUSE	OTU domain-containing protein 7A;	Zinc finger protein Cezanne 2;
	MDKSELVQKAKLAEQAER	N-ter + 42.01 Da, K +28.03 Da	29.8	64.7	4	2199.34	0.38	0.11	1433B_MOUSE	A2A5N1_MOUSE	14-3-3 protein beta/alpha;	Protein kinase C inhibitor protein 1;
MAE	MDLVAELPRPAGAAR	N-ter + 42.01 Da	33.2	53.1	3	1607.93	n.d.	n.d.	PPCS_MOUSE		Phosphopantothene--cysteine ligase;	Phosphopantothenoylecysteine synthetase;
											Regulatory protein TSC2;TGF-beta-stimulated clone 22 homolog;TSC2-related inducible leucine zipper 1b;Transforming growth factor beta-1-induced transcript 4 protein;	
VAIDNKIEQA	MDLVKSHLMYAVR	N-ter + 42.01 Da, K +28.03 Da	54.0	61.3	3	1631.95	-1.29	0.25	T22D1_MOUSE	D3Z0V7_MOUSE	TSC2 domain family protein 1;	
PVETLGPPEPR	MDPESEGASQALR	N-ter + 42.01 Da	45.2	48.8	2	1431.70	n.d.	n.d.	PBIP1_MOUSE	D3Z2F0_MOUSE	Pre-B-cell leukemia transcription factor-interacting protein 1;	Hematopoietic PBX-interacting protein;
PAQPAARSS	MDSAELLAPLR	N-ter + 42.01 Da	51.8	51.5	2	1385.76	n.d.	n.d.	SYG_MOUSE		Glycine--tRNA ligase;	Diadenosine tetraphosphate synthetase;Glycyl-tRNA synthetase;
MSA	MEAADVFHR	N-ter + 42.01 Da	41.9	49.7	2	1116.56	n.d.	n.d.	CPPED_MOUSE	D3Z7F7_MOUSE	Calcineurin-like phosphoesterase domain-containing protein 1;	
PHALWLAETV	MEGTMEGPEAVQR	N-ter + 42.01 Da	40.6	55.8	2	1475.72	n.d.	n.d.	ANKR2_MOUSE		Ankyrin repeat domain-containing protein 2;	Skeletal muscle ankyrin repeat protein;
	MEGYSEASLLR	N-ter + 42.01 Da	41.1	54.8	2	1425.72	n.d.	n.d.	SYNPO_MOUSE	E9Q3E2_MOUSE	Synaptopodin;	
MV	MEKPSLLVGR	N-ter + 42.01 Da, K +28.03 Da	54.9	23.3	2	1295.76	0.65	0.10	G3BP1_MOUSE	G3BP2_MOUSE	Ras GTPase-activating protein-binding protein 1;	ATP-dependent DNA helicase VIII;GAP SH3 domain-binding protein 1;HDH-VIII;
IEKRLNRGDK	MEMLPDITGKALMFAKR	N-ter + 42.01 Da, K +34.06 Da	27.8	69.9	3	2106.28	-1.84	0.39	SYNP2_MOUSE	D3YVW9_MOUSE	Synaptopodin-2;	Myopodin;
	MENCLGDSR	N-ter + 42.01 Da, C +57.02 Da	46.7	84.5	2	1122.54	n.d.	n.d.	LIMA1_MOUSE	Q8CD09_MOUSE	LIM domain and actin-binding protein 1;	Epithelial protein lost in neoplasm;
SLHTAHATKD	MENFLQLVR	N-ter + 42.01 Da	35.2	57.7	2	1190.68	n.d.	n.d.	CARKD_MOUSE		Carbohydrate kinase domain-containing protein;	
MEPA	MEPETLEAR	N-ter + 42.01 Da	32.8	63.5	2	1116.58	n.d.	n.d.	GGA1_MOUSE		ADP-ribosylation factor-binding protein GGA1;	Gamma-adaptin-related protein 1;Golgi-localized, gamma ear-containing, ARF-binding protein 1;
VGAERSEGRR	MENPEELEEESPPGGR	N-ter + 42.01 Da	27.8	88.4	3	1858.92	n.d.	n.d.	E9QNR6_MOUSE	CK068_MOUSE		
M	MLGPEGEGEVVVKLR	N-ter + 42.01 Da, K +28.03 Da	40.2	49.1	3	1673.96	0.28	0.06	HNRPF_MOUSE		Heterogeneous nuclear ribonucleoprotein F;	Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 1;
EKLNATEE	MLQQLLSR	N-ter + 42.01 Da	42.9	41.4	2	1158.65	n.d.	n.d.	LIPB1_MOUSE	LIPB2_MOUSE	Liprin-beta-1;	Heterogeneous nuclear ribonucleoprotein H2;
M	MLSTEGR	N-ter + 42.01 Da	30.1	57.5	2	965.49	n.d.	n.d.	HNRH2_MOUSE			Heterogeneous nuclear ribonucleoprotein H1;
M	MMAAAAER	N-ter + 42.01 Da	36.9	69.4	2	1022.51	n.d.	n.d.	CP013_MOUSE	D3YZM4_MOUSE	UPF0585 protein C16orf13 homolog;	
	MNTEQSQNTIVSR	N-ter + 42.01 Da	21.5	73.8	3	1548.83	n.d.	n.d.	SH319_MOUSE	F8W117_MOUSE	SH3 domain-containing protein 19;	Kryn;
MA	MQKIFAR	N-ter + 42.01 Da, K +28.03 Da	28.0	30.4	2	962.57	-2.64	0.83	ENOB_MOUSE	Q5SX59_MOUSE	Beta-enolase;	2-phospho-D-glycerate hydro-lyase;Enolase 3;Muscle-specific enolase;Skeletal muscle enolase;
	MQQVEASLQPETLR	N-ter + 42.01 Da	46.1	61.5	3	1670.93	n.d.	n.d.	SPA3C_MOUSE		Serine protease inhibitor A3C;	Kallikrein-binding protein;
M	MTEEHTDLAR	N-ter + 42.01 Da	69.7	36.6	2	1503.69	n.d.	n.d.	CAV3_MOUSE		Caveolin-3;	M-caveolin;
M	NAGSDPVVIVSAAR	N-ter + 42.01 Da	58.0	59.9	2	1527.86	n.d.	n.d.	THIC_MOUSE		Acetyl-CoA acetyltransferase, cytosolic;	Cytosolic acetoacetyl-CoA thiolase;
PEPSIRPQIM	NGPLHPR	N-ter + 42.01 Da	29.2	41.2	2	962.52	n.d.	n.d.	Q91YZ2_MOUSE			
M	NHTSQAFITAASGGPPNYER	N-ter + 42.01 Da	53.1	41.5	3	2418.20	n.d.	n.d.	IFM3_MOUSE		Interferon-induced transmembrane protein 3;	Fragilis protein;Interferon-inducible protein 15;Mouse iftm-like protein 1;
M	NKAPQPTGPPPAR	N-ter + 42.01 Da, K +28.03 Da	45.2	44.1	3	1530.87	1.05	0.27	IF4G1_MOUSE	D3YWC6_MOUSE	Eukaryotic translation initiation factor 4 gamma 1;	
GGPWWEWNQNG	NNASEGPRPPR	N-ter + 42.01 Da	14.0	0.7	3	1292.62	n.d.	n.d.	SEM6C_MOUSE	E9Q4N1_MOUSE	Semaphorin-6C;	Semaphorin-Y;
EQQMKMETIM	NQEKLAKLQAQVR	N-ter + 42.01 Da, K +34.06 Da	23.4	51.0	3	1766.14	-0.20	0.07	BT3L4_MOUSE	8TF3_MOUSE	Transcription factor BTF3 homolog 4;	Basic transcription factor 3-like 4;
M	NRPAVVEISYENMR	N-ter + 42.01 Da	46.8	50.2	3	1847.96	n.d.	n.d.	TP4A2_MOUSE		Protein tyrosine phosphatase type IVA 2;	Protein-tyrosine phosphatase 4a2;Protein-tyrosine phosphatase of regenerating liver 2;
M	NSVGEACTDMKR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	64.0	36.7	2	1573.77	0.01	0.01	TRIA1_MOUSE		TP53-regulated inhibitor of apoptosis 1;	Protein 15E1.1;WF-1;p53-inducible cell-survival factor;
M	NVEHEVNLLVEEHR	N-ter + 42.01 Da	54.4	74.3	3	2002.14	n.d.	n.d.	CF115_MOUSE	E9QMV2_MOUSE	Costars family protein C6orf115 homolog;	
M	NVNDLKQR	N-ter + 42.01 Da, K +34.06 Da	39.4	31.7	2	1192.68	-2.06	0.34	UAP1_MOUSE	Q3UHZ7_MOUSE	UDP-N-acetylhexosamine pyrophosphorylase;	
M	NVVDLGR	N-ter + 42.01 Da	23.0	56.6	2	944.53	n.d.	n.d.	PGF5_MOUSE		Prostamide/prostaglandin F synthase;	
											Coiled-coil-helix-coiled-coil-helix domain-containing protein 5;	
M	QAALVETAR	N-ter + 42.01 Da	42.2	64.1	2	1130.65	n.d.	n.d.	CHCH5_MOUSE			Eukaryotic translation initiation factor 3 subunit 9;eIF-3-eta;eIF3 p116;
M	QDAENVAPPEAAER	N-ter + 42.01 Da	45.2	79.2	3	1799.94	n.d.	n.d.	E1F3B_MOUSE	E9PX78_MOUSE	Eukaryotic translation initiation factor 3 subunit B;	Fast skeletal myosin light chain 2;MLC2F;
VFSMFDQTOI	QEFKEAFVTDQNR	N-ter + 42.01 Da, K +28.03 Da	35.5	87.4	3	1794.05	3.80	0.82	MLR5_MOUSE	F6ULR7_MOUSE	Myosin regulatory light chain 2, skeletal muscle isoform;	26S proteasome AAA-ATPase subunit RPT5;Proteasome 26S subunit ATPase 3;Tat-binding protein 1;
M	QEMNLLPTSPVTR	N-ter + 42.01 Da	39.3	70.5	3	1884.04	n.d.	n.d.	PR56A_MOUSE	87ZCF1_MOUSE	26S protease regulatory subunit 6A;	
NTEENRRFYR	QLLLTADDR	N-ter + 42.01 Da	31.0	63.3	2	1085.64	n.d.	n.d.	ALDOA_MOUSE	Q9CPQ9_MOUSE	Fructose-bisphosphate aldolase A;	Aldolase 1;Muscle-type aldolase;
M	QNDAGEFVDLYVPR	N-ter + 42.01 Da	39.7	73.8	3	1794.96	n.d.	n.d.	RS21_MOUSE		40S ribosomal protein S21;	
EQEDGVEDLQ	QNGKTLININIDMEPGAIVDQLR	N-ter + 42.01 Da, K +28.03 Da	26.6	29.2	4	2622.43	1.61	0.50	E9Q777_MOUSE	E9Q774_MOUSE		
M	QNVINTYKGG	N-ter + 42.01 Da, K +28.03 Da	46.0	5.9	2	1328.76	-0.49	0.04	ATG3_MOUSE		Ubiquitin-like-conjugating enzyme ATG3;	Autophagy-related protein 3;
											Cytosolic prostaglandin E2 synthase;Hsp90 co-chaperone;Progesterone receptor complex p23;Sid 3177;Telomerase-binding protein p23;	
M	QPASAKWYDR	N-ter + 42.01 Da, K +28.03 Da	60.3	32.7	2	1421.72	0.90	0.18	TEBP_MOUSE	D3Z7C6_MOUSE	Prostaglandin E synthase 3;	
SQPRVSEVAM	QSAPLEQPAKRPR	N-ter + 42.01 Da, K +28.03 Da	27.7	57.5	3	1678.00	-0.45	0.16	SAMH1_MOUSE	E9Q0K6_MOUSE	SAM domain and HD domain-containing protein 1;	Interferon-gamma-inducible protein Mg11;
											ATPase class I type 8B member 2-like protein;ATPase class I type 8B member 5;Flippase expressed in testis A;	
HFCLKHPIPT	QVQTKIKHPSLRR	N-ter + 42.01 Da, K +34.06 Da	10.2	18.1	3	1700.12	-4.64	1.16	AT8B5_MOUSE		Probable phospholipid-transporting ATPase FetA;	

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
LPAEGKKNTL	RVDGDNIYVR	N-ter + 42.01 Da	9.3	25.2	2	1247.66	n.d.	n.d.	E41L2_MOUSE		Band 4.1-like protein 2;	Generally expressed protein 4.1;
M	SAAEEVDGLGVVRRPHYGSVLDNER	N-ter + 42.01 Da	48.8	54.4	3	2610.41	n.d.	n.d.	IQGA1_MOUSE	F6ZJBO_MOUSE	Ras GTPase-activating-like protein IQGAP1;	
M	SAAETGSEPSQAGPSEATLHSLR	N-ter + 42.01 Da	57.1	40.4	3	2381.21	n.d.	n.d.	E9Q3E1_MOUSE		Aldehyde dehydrogenase;	
M	SADAAAGEPLPR	N-ter + 42.01 Da	40.9	58.1	2	1195.65	n.d.	n.d.	NHRF1_MOUSE		Na(+)/H(+) exchange regulatory cofactor NHE-RF1;	Ezrin-radixin-moesin-binding phosphoprotein 50;Regulatory cofactor of Na(+)/H(+) exchanger;Sodium-hydrogen exchanger regulatory factor 1;Solute carrier family 9 isoform A3 regulatory factor 1;
M	SAFNLLHLVTKSQPVAPR	N-ter + 42.01 Da, K +28.03 Da	58.4	62.6	3	2047.29	-2.00	0.80	MSRB3_MOUSE	D3YUC9_MOUSE	Methionine-R-sulfoxide reductase B3, mitochondrial;	
M	SAGGAVPPPNPAVSPAPR	N-ter + 42.01 Da	41.7	68.2	3	1927.13	n.d.	n.d.	MAL2_MOUSE		Protein MAL2;	
M	SAHLQWVMVVR	N-ter + 42.01 Da	41.4	32.4	2	1267.69	n.d.	n.d.	RL28_MOUSE		60S ribosomal protein L28;	
M	SAKAISEQTGKELLYKICTSAIQNR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	31.4	85.5	4	3198.97	1.95	1.38	ACLY_MOUSE	Q3TS02_MOUSE	ATP-citrate synthase;	ATP-citrate (pro-S)-lyase;Citrate cleavage enzyme;
M	SALEKSMHLGR	N-ter + 42.01 Da, K +34.06 Da	32.0	63.2	3	1303.80	1.28	0.27	PPME1_MOUSE		Protein phosphatase methylesterase 1;	
KM	SALKAVFQYIDENQDR	N-ter + 42.01 Da, K +28.03 Da	40.9	58.3	3	1966.09	0.21	0.15	CNDP2_MOUSE	F6XEL6_MOUSE	Cytosolic non-specific dipeptidase;	CNDP dipeptidase 2;Glutamate carboxypeptidase-like protein 1;
M	SAMEAADVFHR	N-ter + 42.01 Da	51.8	50.4	2	1274.64	n.d.	n.d.	CPPED_MOUSE	D3Z7F7_MOUSE	Protein bicaudal D homolog 2;	
M	SAPAGSPHPAAGAR	N-ter + 42.01 Da	57.2	38.8	2	1287.68	n.d.	n.d.	Q80ZX0_MOUSE			
MCGNNM	SAPMPAVVPAAR	N-ter + 42.01 Da	55.3	51.7	2	1207.70	n.d.	n.d.	LYPE1_MOUSE	D3Z269_MOUSE	Acyl-protein thioesterase 1;	Lysophospholipase 1;Lysophospholipase I;
M	SAPSEEEYAR	N-ter + 42.01 Da	40.3	59.7	2	1308.62	n.d.	n.d.	BICD2_MOUSE		Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit DAD1;	
M	SASVVSVISR	N-ter + 42.01 Da	36.5	61.4	2	1045.64	n.d.	n.d.	DAD1_MOUSE			Defender against cell death 1;
M	SATQHKTSLPOGVR	N-ter + 42.01 Da, K +34.06 Da	61.4	56.9	3	1584.97	1.35	0.14	Q9CRB1_MOUSE	D3Z141_MOUSE		
M	SDEKNLGVSKLVSPSR	N-ter + 42.01 Da, K +28.03 Da	29.0	51.5	3	1941.15	0.19	0.02	OSBL3_MOUSE	F8WH20_MOUSE	Oxysterol-binding protein-related protein 3;	
M	SDNGELEDKPPAPPVVR	N-ter + 42.01 Da, K +34.06 Da	47.1	43.7	3	1796.00	1.15	0.60	PAK2_MOUSE		Serine/threonine-protein kinase PAK 2;	Gamma-PAK;p21-activated kinase 2;
MESEM	SDPQLQEER	N-ter + 42.01 Da	44.1	60.8	2	1239.65	n.d.	n.d.	CASPE_MOUSE		Caspase-14;	Mini-ICE;
M	SDQQLDCALDLMR	N-ter + 42.01 Da, C +57.02 Da	37.5	57.0	2	1605.80	n.d.	n.d.	CAPZB_MOUSE	A2AMV7_MOUSE	F-actin-capping protein subunit beta;	CapZ beta;
M	SDSEKLNLDIIGR	N-ter + 42.01 Da, K +34.06 Da	49.7	50.7	3	1621.96	-0.43	0.15	PP1A_MOUSE		Serine/threonine-protein phosphatase PP1-alpha catalytic subunit;	
M	SDSLDNEEKPPAPPLR	N-ter + 42.01 Da, K +34.06 Da	47.6	52.2	3	1840.04	-0.03	0.01	PAK3_MOUSE	A3KGC2_MOUSE	Serine/threonine-protein kinase PAK 3;	Beta-PAK;CDC42/RAC effector kinase PAK-B;p21-activated kinase 3;
NKLHHHHHHQ	SDSLVVCEDPELKETLR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	42.1	38.1	3	2164.20	0.10	0.06	GMFG_MOUSE		Glia maturation factor gamma;	
LQTRGFVSDS	SDSMDTGAGSIR	N-ter + 42.01 Da	39.8	69.3	2	1237.61	n.d.	n.d.	ATIF1_MOUSE	Q9D879_MOUSE	ATPase inhibitor, mitochondrial;	Inhibitor of F(1)F(o)-ATPase;
MKVLQTRGFV	SDSSDSMDTGAGSIR	N-ter + 42.01 Da	45.2	66.1	2	1526.72	n.d.	n.d.	ATIF1_MOUSE	Q9D879_MOUSE	ATPase inhibitor, mitochondrial;	Inhibitor of F(1)F(o)-ATPase;
M	SDTAVADTR	N-ter + 42.01 Da	30.3	62.1	2	976.51	n.d.	n.d.	SNX12_MOUSE	Q6ZWQ5_MOUSE	Sorting nexin-12;	SDP8 protein;
M	SDTPASTFGGR	N-ter + 42.01 Da	35.1	69.7	2	1136.59	n.d.	n.d.	F13A_MOUSE	Q3TQH1_MOUSE	Coagulation factor XIII A chain;	Protein-glutamine gamma-glutamyltransferase A chain;Transglutaminase A chain;
A	SDVLELTDENFESR	N-ter + 42.01 Da	39.2	79.3	3	1694.90	n.d.	n.d.	PDIA3_MOUSE	F6Q404_MOUSE	Protein disulfide-isomerase A3;	58 kDa glucose-regulated protein;58 kDa microsomal protein;Disulfide isomerase ER-60;Endoplasmic reticulum resident protein 57;Endoplasmic reticulum resident protein 60;
M	SDYNTGGPPPPPPAGGGGAAGAGGGPPPPGPPGAGDR	N-ter + 42.01 Da	50.4	81.5	4	3286.77	n.d.	n.d.	FUBP2_MOUSE		Far upstream element-binding protein 2;	KH type-splicing regulatory protein;
M	SEAFDCAKCNESLYGR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	51.3	49.1	3	1975.94	-0.54	0.17	FHL3_MOUSE	A6H6N4_MOUSE	Four and a half LIM domains protein 3;	Skeletal muscle LIM-protein 2;
M	SESSALPWSINR	N-ter + 42.01 Da	36.0	50.3	2	1502.78	n.d.	n.d.	OXSRI_MOUSE	D6RFV0_MOUSE	Serine/threonine-protein kinase OSR1;	Oxidative stress-responsive 1 protein;
M	SEGDSVGVSVHGKPSVVYR	N-ter + 42.01 Da, K +28.03 Da	52.1	54.4	3	2044.10	-0.43	0.14	RER1_MOUSE		Protein RER1;	
GPSSYKVGTM	SEKFDCHYCR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	27.7	64.5	3	1470.70	-2.40	0.76	FHL1_MOUSE	A2AEX8_MOUSE	Four and a half LIM domains protein 1;	KyOT;RBP-associated molecule 14-1;Skeletal muscle LIM-protein 1;
M	SELEQLRQEAELQR	N-ter + 42.01 Da	37.1	59.2	3	1770.00	n.d.	n.d.	GBB2_MOUSE	GBB4_MOUSE	Guanine nucleotide-binding protein G(i)/G(s)/G(t) subunit beta-2;	G protein subunit beta-2;Transducin beta chain 2;
M	SETAPAAPAAPAPAEKTPVKKKAR	N-ter + 42.01 Da, K +28.03 Da	36.8	73.5	4	2540.66	-0.03	0.01	H14_MOUSE		Histone H1.4;	H1 VAR.2;H1e;
M	SETVICSRR	N-ter + 42.01 Da, C +57.02 Da	27.9	61.6	2	1079.56	n.d.	n.d.	VASP_MOUSE		Vasodilator-stimulated phosphoprotein;	
M	SGAPPSYFVALPPR	N-ter + 42.01 Da	56.5	48.5	2	1586.89	n.d.	n.d.	SCRNI1_MOUSE	D3YXW0_MOUSE	Secernin-1;	
M	SGCQAQGDCCSRPCAQDKHEPR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	37.4	78.6	4	2730.33	-0.43	0.26	MTN8_MOUSE		Probable methylthioribulose-1-phosphate dehydratase;	APAF1-interacting protein;Monocyte/macrophage protein 19;
M	SGEDGPAAGPGAAAAAAAR	N-ter + 42.01 Da	43.2	78.9	3	1679.92	n.d.	n.d.	PP12C_MOUSE		Protein phosphatase 1 regulatory subunit 12C;	Protein phosphatase 1 myosin-binding subunit of 85 kDa;
M	SGEGENPASKPTPVQDVQGDGR	N-ter + 42.01 Da, K +34.06 Da	62.9	42.4	3	2300.21	0.06	0.03	PA1B3_MOUSE	Q8CA83_MOUSE	Platelet-activating factor acetylhydrolase IB subunit gamma;	PAF acetylhydrolase 29 kDa subunit;PAF-AH subunit gamma;
M	SGGKYVDSEGHLYTPIR	N-ter + 42.01 Da, K +28.03 Da	51.6	53.6	3	2047.15	-1.18	0.38	CAV1_MOUSE		Caveolin-1;	
M	RKDLFANTVL	N-ter + 42.01 Da	30.5	64.9	2	1352.69	n.d.	n.d.	ACTBL_MOUSE		Beta-actin-like protein 2;	Kappa-actin;
M	PSGPVKGDKGR	N-ter + 42.01 Da	34.9	55.7	2	1219.70	n.d.	n.d.	CO1A2_MOUSE	E9Q6U9_MOUSE	Collagen alpha-2(I) chain;	Alpha-2 type I collagen;
M	SGSSSVAAMKVVQQLR	N-ter + 42.01 Da, K +28.03 Da	32.6	58.0	3	1873.15	0.16	0.04	GBG5_MOUSE		Guanine nucleotide-binding protein G(i)/G(s)/G(o) subunit gamma-5;	
MA	SGVQVADEVCR	N-ter + 42.01 Da, C +57.02 Da	37.4	61.7	2	1260.65	n.d.	n.d.	DEST_MOUSE		Destrin;	Actin-depolymerizing factor;Sid 23;
M	SGYTPDEKLR	N-ter + 42.01 Da, K +28.03 Da	38.3	30.6	2	1234.66	-0.20	0.05	NDUB6_MOUSE	A2AP32_MOUSE	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 6;	Complex I-B17;NADH-ubiquinone oxidoreductase B17 subunit;

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	SHGFTKEEVAEFOAAFNR	N-ter + 42.01 Da, K +28.03 Da	41.6	80.8	4	2137.20	1.40	0.19	CALM4_MOUSE		Calmodulin-4;	Calcium-binding protein Dd112;
M	SHPSWLPKSTGEPGLHVPAR	N-ter + 42.01 Da, K +34.06 Da	38.6	75.4	4	2325.42	0.86	0.05	LPP_MOUSE		Lipoma-preferred partner homolog;	
M	SHQTGIQASEDVKEIFAR	N-ter + 42.01 Da, K +28.03 Da	51.1	67.1	3	2085.19	-0.36	0.12	TWF1_MOUSE		Twinfilin-1;	Protein A6;
M	SHTILLQPTKRPKEGR	N-ter + 42.01 Da, K +34.06 Da	29.7	56.9	4	1907.23	0.20	0.04	ERH_MOUSE		Enhancer of rudimentary homolog;	
M	SILVYSPHPDAPFSLR	N-ter + 42.01 Da	35.2	48.1	3	1840.04	n.d.	n.d.	SYVC_MOUSE		Valine-tRNA ligase;	Protein G7a;Valyl-tRNA synthetase;
M	SISESSPAATSLPNGDCGRPR	N-ter + 42.01 Da, C +57.02 Da	42.4	52.2	3	2200.13	n.d.	n.d.	PUR2_MOUSE		Adenylosuccinate synthetase isozyme 2;	Adenylosuccinate synthetase, acidic isozyme;Adenylosuccinate synthetase, liver isozyme;IMP-aspartate ligase 2;
RTSPVPRQKR	SIVVSPILPENQR	N-ter + 42.01 Da	39.6	72.3	3	1606.03	n.d.	n.d.	CAD13_MOUSE		Cadherin-13;	Heart cadherin;Truncated cadherin;
LSHCERPHRF	SKGLNGTPR	N-ter + 42.01 Da, K +34.06 Da	25.0	99.7	2	1004.68	-0.23	0.03	KDM2B_MOUSE	E9QL25_MOUSE	Lysine-specific demethylase 2B;	F-box and leucine-rich repeat protein 10;F-box protein FBL10;F-box/LRR-repeat protein 10;ImJc domain-containing histone demethylation protein 1B;[Histone-H3]-lysine-36 demethylase 1B;HDP-1;Helix-destabilizing protein;Single-strand-binding protein;Topoisomerase-inhibitor suppressed;hnrPC core protein A1;
M	SKSESPKEPEQLR	N-ter + 42.01 Da, K +34.06 Da	46.8	54.6	3	1624.00	0.88	0.49	ROA1_MOUSE	Q5EBP8_MOUSE	Heterogeneous nuclear ribonucleoprotein A1;	Ribonuclease inhibitor;
TRRLHCAPTAM	SLDIQCEQLSDAR	N-ter + 42.01 Da, C +57.02 Da	47.1	49.6	2	1575.80	n.d.	n.d.	RINI_MOUSE			Ribonuclease/angiogenin inhibitor 1;
M	SLGCVSEASR	N-ter + 42.01 Da	40.5	55.2	2	1003.55	n.d.	n.d.	CYT1_MOUSE	Q497J0_MOUSE	Stefin-1;	
CEPVYGLTAM	SLKPPQPPAPATGR	N-ter + 42.01 Da, K +28.03 Da	32.9	51.0	3	1613.97	0.44	0.07	ATX2_MOUSE	E9QQG6_MOUSE	Ataxin-2;	Spinocerebellar ataxia type 2 protein homolog;
M	SLSNKLTLKLDVKKGR	N-ter + 42.01 Da, K +28.03 Da	40.3	51.2	3	2068.37	-0.89	0.05	PGK1_MOUSE		Phosphoglycerate kinase 1;	
ASVILQHLRM	SMHTEAAEVLLER	N-ter + 42.01 Da	30.2	41.1	3	1526.80	n.d.	n.d.	HIBCH_MOUSE	E0CX19_MOUSE	3-hydroxyisobutyryl-CoA hydrolase, mitochondrial;	3-hydroxyisobutyryl-coenzyme A hydrolase;
M	SMNKGPTLLDGLPEQENVLQR	N-ter + 42.01 Da, K +28.03 Da	51.4	52.9	3	2523.40	0.04	0.02	PLIN1_MOUSE		Perilipin-1;	Lipid droplet-associated protein;Perilipin A;
M	SNGYEDHMAEDCR	N-ter + 42.01 Da, C +57.02 Da	43.7	48.8	3	1624.67	n.d.	n.d.	ELAV1_MOUSE		ELAV-like protein 1;	Elav-like generic protein;Hu-antigen R;MeIG;
M	SNNGVDIQDKPPAPPMR	N-ter + 42.01 Da, K +28.03 Da	24.3	45.2	3	1905.03	-0.32	0.06	PAK1_MOUSE		Serine/threonine-protein kinase PAK 1;	Alpha-PAK;CDC42/RAC effector kinase PAK-A;p21-activated kinase 1;p65-PAK;
M	SPEIALNR	N-ter + 42.01 Da	37.9	58.0	2	1071.60	n.d.	n.d.	BRE_MOUSE	E9Q8Q1_MOUSE	BRCA1-A complex subunit BRE;	BRCA1/BRCA2-containing complex subunit 45;Brain and reproductive organ-expressed protein;
M	SQAEFDKAAEEVKR	N-ter + 42.01 Da, K +28.03 Da	58.3	33.3	2	1704.93	0.21	0.02	ACBP_MOUSE		Acyl-CoA-binding protein;	Diazepam-binding inhibitor;Endozepine;
M	SQEKASSPSGKMDGKPVDAESEKR	N-ter + 42.01 Da, K +28.03 Da	46.0	69.7	4	2830.60	-0.11	0.05	SYTC_MOUSE		Threonine-tRNA ligase, cytoplasmic;	Threonyl-tRNA synthetase;
M	SQERPTFYR	N-ter + 42.01 Da	25.2	38.0	2	1224.64	n.d.	n.d.	MK14_MOUSE	B2KF35_MOUSE	Mitogen-activated protein kinase 14;	CRK1;Mitogen-activated protein kinase p38 alpha;PAF acetylhydrolase 30 kDa subunit;PAF-AH subunit beta;
M	SQGDSNPAAIPIHAEIDQGGDR	N-ter + 42.01 Da	50.3	41.2	3	2305.12	n.d.	n.d.	PA1B2_MOUSE	F8WIW7_MOUSE	Platelet-activating factor acetylhydrolase IB subunit beta;	
KTTWKEVSKA	SQKTEGHR	N-ter + 42.01 Da, K +34.06 Da	29.6	40.5	2	1017.58	-1.06	0.09	F6VUL6_MOUSE			PP2A B subunit isoform B'-epsilon;PP2A B subunit isoform B56-epsilon;PP2A B subunit isoform PR61-epsilon;PP2A B subunit isoform R5-epsilon;
M	SSAPTPPSVDKVDGFSR	N-ter + 42.01 Da, K +28.03 Da	31.2	39.9	3	1917.02	0.12	0.04	2A5E_MOUSE	Q3UZJ4_MOUSE	Serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit epsilon isoform;	Myosin heavy chain 1;Myosin heavy chain 2x;Myosin heavy chain, skeletal muscle, adult 1;
M	SSDAEMAVFGAAPPYLR	N-ter + 42.01 Da	52.1	47.9	2	1854.93	n.d.	n.d.	MYH1_MOUSE	MYH4_MOUSE	Myosin-1;	4-alpha-hydroxy-tetrahydropterin dehydratase 2;DcoH-like protein DCoH;Dimerization cofactor of hepatocyte nuclear factor 1 from muscle;HNF-1-alpha dimerization cofactor;
RSPGASRAAM	SSDAQWLTAEER	N-ter + 42.01 Da	30.6	56.2	2	1433.72	n.d.	n.d.	PHS2_MOUSE		Pterin-4-alpha-carbinolamine dehydratase 2;	Calcium-regulated heat stable protein of 24 kDa;
M	SSEPPPPPLQPPHTQTSVGLLDTPR	N-ter + 42.01 Da	32.3	52.5	4	2689.51	n.d.	n.d.	CHSP1_MOUSE		Calcium-regulated heat stable protein 1;	Cytochrome c oxidase polypeptide VIc;
M	SSGALLPKPQMR	N-ter + 42.01 Da, K +28.03 Da	41.4	32.9	2	1353.79	-0.14	0.02	COX6C_MOUSE	D3Z6E1_MOUSE	Cytochrome c oxidase subunit 6C;	Macropain subunit C8;Multicatalytic endopeptidase complex subunit C8;Proteasome component C8;Proteasome subunit K;
M	SSIGTGYDLSASTFSPDGR	N-ter + 42.01 Da	38.1	77.8	3	1959.04	n.d.	n.d.	PSA3_MOUSE	E0CZ34_MOUSE	Proteasome subunit alpha type-3;	
M	SSIKVECVLR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	33.5	26.2	2	1265.76	2.32	0.34	RGN_MOUSE		Regucalcin;	Glucuronolactonase;Senescence marker protein 30;
M	SSKTASTNSIAQAR	N-ter + 42.01 Da, K +34.06 Da	34.5	50.0	3	1496.88	0.59	0.29	GBG12_MOUSE		Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-12;	
M	SSLEISNCFSPETR	N-ter + 42.01 Da, C +57.02 Da	45.2	50.4	2	1754.87	n.d.	n.d.	MOC2B_MOUSE		Molybdopterin synthase catalytic subunit;	Molybdenum cofactor synthesis protein 2 large subunit;Molybdenum cofactor synthesis protein 2B;
M	SSSAASPLFAPGEDCGPAWR	N-ter + 42.01 Da, C +57.02 Da	43.7	77.3	3	2104.09	n.d.	n.d.	GAMT_MOUSE		Guanidinoacetate N-methyltransferase;	
TCVSNPGPFIM	SSSASAANGNSDKFKFGDNR	N-ter + 42.01 Da, K +28.03 Da	38.0	78.4	4	2166.24	2.42	2.51	PTBP1_MOUSE	Q922I7_MOUSE	Polypyrimidine tract-binding protein 1;	Heterogeneous nuclear ribonucleoprotein I;
M	SSSRPVALVTGANKGIGFAITR	N-ter + 42.01 Da, K +28.03 Da	54.3	52.2	3	2271.39	0.84	0.21	CBR1_MOUSE		Carbonyl reductase [NADPH] 1;	15-hydroxyprostaglandin dehydrogenase
M	SSQTQFNKPSYGLSAEYKNNR	N-ter + 42.01 Da, K +28.03 Da	67.2	52.2	3	2267.27	1.83	0.70	CNN2_MOUSE	D3Z7R6_MOUSE	Calponin-2;	Calponin H2, smooth muscle;Neutral calponin;
M	SSVAVLQESFAEHR	N-ter + 42.01 Da	43.1	63.4	3	1701.94	n.d.	n.d.	VIGLN_MOUSE		Vigilin;	High density lipoprotein-binding protein;
IHRAAVAAM	STGTFFVSNPLNYR	N-ter + 42.01 Da	48.8	37.8	2	1609.87	n.d.	n.d.	AL9A1_MOUSE	Q3U367_MOUSE	4-trimethylaminobutylaldehyde dehydrogenase;	Aldehyde dehydrogenase family 9 member A1;
M	STGVPSGSSAATGSNR	N-ter + 42.01 Da	32.2	45.0	2	1476.75	n.d.	n.d.	VAMP3_MOUSE		Vesicle-associated membrane protein 3;	Cellubrevin;Synaptobrevin-3;
LFANTVLSGG	STMYPGIADR	N-ter + 42.01 Da	23.6	70.2	2	1151.61	n.d.	n.d.	ACTBL_MOUSE		Beta-actin-like protein 2;	Kappa-actin;
M	STTTGPEAAPKPSAKSIYEQR	N-ter + 42.01 Da, K +28.03 Da	32.5	54.9	3	2316.32	1.31	0.53	ES8L1_MOUSE	E9Q4X5_MOUSE	Epidermal growth factor receptor kinase substrate 8-like protein 1;	Epidermal growth factor receptor pathway substrate 8-related protein 1;
M	SVFGKLFAGGGKAGKGGPTPQEAQR	N-ter + 42.01 Da, K +28.03 Da	48.2	80.8	4	2740.72	0.36	0.11	CHM4B_MOUSE		Charged multivesicular body protein 4b;	Chromatin-modifying protein 4b;
MCGNTM	SVPLLTDAATVSGAER	N-ter + 42.01 Da	50.4	50.6	2	1627.92	n.d.	n.d.	LYPE2_MOUSE		Acyl-protein thioesterase 2;	Lysophospholipase 2;Lysophospholipase II;

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Non Prime Site	Prime Site	Modifications	Hyperscore	Mass error in ppm	Charge	Precursor neutral mass in Da	Fold change (log <sub>2</sub> ) of ASAPRatio	FC-error of ASAPRatio	Uniprot ID 1	Uniprot ID 2	Protein Name 1	Protein Name 2
M	SVQVAAPGSTGLGPER	N-ter + 42.01 Da	26.6	21.5	2	1566.83	n.d.	n.d.	KLC3_MOUSE	D32710_MOUSE	Kinesin light chain 3;	
M	SVVTGGGEAAGGGGGGAR	N-ter + 42.01 Da	60.1	46.7	2	1514.78	n.d.	n.d.	PP14C_MOUSE		Protein phosphatase 1 regulatory subunit 14C;	Kinase-enhanced PP1 inhibitor;PKC-potiated PP1 inhibitory protein;
M	SYGPDIMYR	N-ter + 42.01 Da	44.8	58.1	2	1142.57	n.d.	n.d.	STX12_MOUSE		Syntaxin-12;	
SDEHGIDPTG	SYHGSDQLQER	N-ter + 42.01 Da	37.5	104.7	3	1460.81	n.d.	n.d.	TBB2A_MOUSE	TBB2B_MOUSE	Tubulin beta-2A chain;	
M	SYQGKKNIPR	N-ter + 42.01 Da, K +34.06 Da	27.4	56.5	3	1299.87	-0.52	0.40	DPYL2_MOUSE	DPYL3_MOUSE	Dihydropyrimidinase-related protein 2;	Unc-33-like phosphoprotein 2; 160 kDa neurofilament protein;Neurofilament 3;Neurofilament triplet M protein;
M	SYTLDSLGNPSAYR	N-ter + 42.01 Da	36.0	43.6	2	1584.81	n.d.	n.d.	NFM_MOUSE	D3Y235_MOUSE	Neurofilament medium polypeptide;	
M	SYTPGIGGDSQAQLAQR	N-ter + 42.01 Da	47.1	78.7	3	1661.93	n.d.	n.d.	STX7_MOUSE	Q88H40_MOUSE	Syntaxin-7;	
M	SYTPGQPVTAVVQR	N-ter + 42.01 Da	32.4	78.4	3	1543.92	n.d.	n.d.	TX1B3_MOUSE	B1AUD9_MOUSE	Tax1-binding protein 3;	Tax interaction protein 1; Mutated in multiple advanced cancers
M	TAIKEIVSR	N-ter + 42.01 Da, K +28.03 Da	50.2	38.5	2	1198.77	0.12	0.05	PTEN_MOUSE		Phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN;	Mutated in multiple advanced cancers
M	TDMAGLMER	N-ter + 42.01 Da	33.7	66.1	2	1064.53	n.d.	n.d.	CAP2_MOUSE	D3YTR7_MOUSE	Adenylyl cyclase-associated protein 2;	3;Phosphatase and tensin homolog;
LQSQYRSLDM	TDNTNSQLVVR	N-ter + 42.01 Da	30.3	62.5	2	1287.72	n.d.	n.d.	ARHG7_MOUSE	D320V2_MOUSE	Rho guanine nucleotide exchange factor 7;	Beta-Pix;PAK-interacting exchange factor beta;p85SPR;
SVMRTDSSEM	TDVESVITSFASSAR	N-ter + 42.01 Da	44.9	46.6	2	1610.85	n.d.	n.d.	IPKB_MOUSE	Q3TZU5_MOUSE	cAMP-dependent protein kinase inhibitor beta;	PKI-beta;cAMP-dependent protein kinase inhibitor, testis isoform;
M	TDVETTYADFIASGR	N-ter + 42.01 Da	42.2	58.6	2	1686.87	n.d.	n.d.	IPKA_MOUSE		cAMP-dependent protein kinase inhibitor alpha;	cAMP-dependent protein kinase inhibitor, muscle/brain isoform;
MM	TEEHTDLEAR	N-ter + 42.01 Da	52.8	37.6	2	1241.60	n.d.	n.d.	CAV3_MOUSE		Caveolin-3;	M-caveolin;
M	TEELITPVYCTGVSAQVQKQR	N-ter + 42.01 Da, K +28.03 Da, C +57.02 Da	27.2	52.6	3	2504.46	0.40	0.14	CAN1_MOUSE		Calpain-1 catalytic subunit;	Calcium-activated neutral proteinase 1;Calpain mu-type;Calpain-1 large subunit;Micromolar-calpain;
AALIRNTSSM	TEGLQPASVVVLP	N-ter + 42.01 Da	25.1	47.6	2	1506.91	n.d.	n.d.	CN159_MOUSE	E9QMK9_MOUSE	UPF0317 protein C14orf159 homolog, mitochondrial;	
M	TELQSAALLR	N-ter + 42.01 Da	40.0	60.2	2	1184.75	n.d.	n.d.	UB2G1_MOUSE	D6RES1_MOUSE	Ubiquitin-conjugating enzyme E2 G1;	E217K;UBC7;Ubiquitin carrier protein G1;Ubiquitin-protein ligase G1;
M	TETDGFYKSR	N-ter + 42.01 Da, K +28.03 Da	47.1	35.4	2	1272.64	-0.17	0.02	CASP6_MOUSE		Caspase-6;	Apoptotic protease Mch-2; CARD adapter inducing interferon beta;Interferon beta promoter stimulator protein 1;Virus-induced-signaling adapter;
M	TFAEDKTYKIR	N-ter + 42.01 Da, K +28.03 Da	23.4	73.3	3	1631.98	-1.84	0.33	MAVS_MOUSE		Mitochondrial antiviral-signaling protein;	
M	THSSQDAGSHGIEEGR	N-ter + 42.01 Da	52.5	84.7	3	1836.95	n.d.	n.d.	CG053_MOUSE		Coiled-coil domain-containing transmembrane protein C7orf53 homolog;	
M	TKLKEAQEEQR	N-ter + 42.01 Da	53.6	51.5	2	1314.71	n.d.	n.d.	KBTB5_MOUSE		Kelch repeat and BTB domain-containing protein 5;	
M	TMDKLELVQKAKLAEQAER	N-ter + 42.01 Da, K +28.03 Da	53.4	63.6	4	2300.39	0.45	0.12	1433B_MOUSE	A2A5N1_MOUSE	14-3-3 protein beta/alpha;	Protein kinase C inhibitor protein 1; TR4 orphan receptor-associated 16 kDa protein;
M	TQSLVCPDVTISR	N-ter + 42.01 Da, C +57.02 Da	33.8	50.5	2	1403.74	n.d.	n.d.	NR2CA_MOUSE		Nuclear receptor 2C2-associated protein;	U6 snRNA-associated Sm-like protein LSM8;
M	TSALENYINR	N-ter + 42.01 Da	42.6	55.3	2	1221.67	n.d.	n.d.	NAA38_MOUSE		N-alpha-acetyltransferase 38, NatC auxiliary subunit;	La ribonucleoprotein domain family member 4B;La ribonucleoprotein domain family member 5;La-related protein 5;
M	TSDQDAKVAEPQAQR	N-ter + 42.01 Da, K +28.03 Da	34.7	43.8	3	1811.98	2.48	1.36	LAR4B_MOUSE		La-related protein 4B;	
M	TSPEGAQNKEIDCLSPQAQR	N-ter + 42.01 Da, K +34.06 Da, C +57.02 Da	48.8	47.6	3	2305.22	0.20	0.10	LRRF1_MOUSE	E9Q9T1_MOUSE	Leucine-rich repeat flightless-interacting protein 1;	FLI-LRR-associated protein 1;H186 FLAP;
M	TSSYGHVLR	N-ter + 42.01 Da	61.6	44.0	2	1189.63	n.d.	n.d.	PRRX1_MOUSE		Paired mesoderm homeobox protein 1;	Homeobox protein K-2;Homeobox protein mHox;Paired-related homeobox protein 1;
M	TTKDPSEHPSVTLFR	N-ter + 42.01 Da, K +28.03 Da	38.5	46.3	3	1913.04	0.19	0.05	ACY1_MOUSE		Aminoacylase-1;	N-acyl-L-amino-acid amidohydrolase; C-terminal LIM domain protein 1;Elfin;LIM domain protein CLP-36;
M	TTQQIVLQGPWPWGR	N-ter + 42.01 Da	44.3	75.1	3	1826.09	n.d.	n.d.	PDLI1_MOUSE		PDZ and LIM domain protein 1;	110 kDa cell membrane glycoprotein;Adhesion-regulating molecule 1;Rpn13 homolog; SEC23-related protein A;
M	TTSYGALFPLVPSGR	N-ter + 42.01 Da	33.9	59.0	2	1530.89	n.d.	n.d.	ADRM1_MOUSE	D3YUD8_MOUSE	Proteasomal ubiquitin receptor ADRM1;	DEAD box RNA helicase DEAD1;DEAD box protein 5;RNA helicase p68;
M	TTYLEFIQNEER	N-ter + 42.01 Da	42.9	53.6	2	1711.90	n.d.	n.d.	SC23A_MOUSE	E9Q153_MOUSE	Protein transport protein Sec23A;	Biiliverdin reductase B;Biiliverdin-IX beta-reductase;NADPH-dependent diaphorase;NADPH-flavin reductase;
LECGKTLNRR	TTYLVLEADR	N-ter + 42.01 Da	34.3	34.5	2	1336.70	n.d.	n.d.	DDX5_MOUSE	Q8BT50_MOUSE	Probable ATP-dependent RNA helicase DDX5;	Kappa-actin; Protein Nezha; Ubiquitin-like 1-activating enzyme E1A;
M	TVKKIAIFGATGR	N-ter + 42.01 Da, K +28.03 Da	27.8	41.9	3	1458.95	-0.09	0.02	BLVRB_MOUSE	E9P2C3_MOUSE	Flavin reductase (NADPH);	Peptidyl-cysteine S-nitrosylase GAPDH;
M	TVLSGGSTMYPGIADR	N-ter + 42.01 Da	31.8	68.5	3	1665.92	n.d.	n.d.	ACTBL_MOUSE		Beta-actin-like protein 2;	Aromatic amino acid transporter 1;Solute carrier family 16 member 10;T-type amino acid transporter 1;
M	VEAAPAGSGPLR	N-ter + 42.01 Da	35.8	54.0	2	1165.67	n.d.	n.d.	CAMP3_MOUSE	E9Q580_MOUSE	Calmodulin-regulated spectrin-associated protein 3;	SEC13-like protein 1;SEC13-related protein; Carbonate dehydratase III;Carbonic anhydrase III;
M	VEKEEAGGGGGGISEEEAAQYDR	N-ter + 42.01 Da, K +28.03 Da	80.2	49.7	3	2464.22	0.15	0.11	SAE1_MOUSE		SUMO-activating enzyme subunit 1;	Beta-1-globin;Hemoglobin beta-1 chain;Hemoglobin beta-major chain;
M	VEQDAAPLL	N-ter + 42.01 Da	41.3	59.6	2	1209.71	n.d.	n.d.	LCHN_MOUSE		Protein LCHN;	Alpha-actin-1;
PVDKM	VKGVGVNGFR	N-ter + 42.01 Da, K +34.06 Da	31.0	36.2	2	1107.70	-1.18	0.19	G3P_MOUSE	E9PX99_MOUSE	Glyceraldehyde-3-phosphate dehydrogenase;	Apollipoprotein E receptor 2;
M	VPSQEEPAER	N-ter + 42.01 Da	44.7	63.0	2	1384.72	n.d.	n.d.	MOT10_MOUSE		Monocarboxylate transporter 10;	
M	VVMVNTVDTSHEDMIHQMDYVYGR	N-ter + 42.01 Da	37.1	73.1	4	3056.52	n.d.	n.d.	SEC13_MOUSE		Protein SEC13 homolog;	
TILNNGKTCR	VVFDTDYDR	N-ter + 42.01 Da	29.1	58.2	2	1170.59	n.d.	n.d.	CAH3_MOUSE		Carbonic anhydrase 3;	
DAEKAASCL	WGKVNDSVEGGEALGR	N-ter + 42.01 Da, K +28.03 Da	44.1	90.3	3	1743.02	0.28	0.06	HBB1_MOUSE		Hemoglobin subunit beta-1;	
LASLSTFQQM	WTLKQEQYDEAGPSIVHR	N-ter + 42.01 Da, K +28.03 Da	33.3	95.6	4	2098.25	-0.52	0.09	ACTS_MOUSE		Actin, alpha skeletal muscle;	
RQTLVSDNIE	WPNGITLDLSQR	N-ter + 42.01 Da	25.3	71.9	3	1553.93	n.d.	n.d.	LRP8_MOUSE	B1AXJ4_MOUSE	Low-density lipoprotein receptor-related protein 8;	
YGFQNAILVR	YTQKAPQVSTPTLVEAAR	N-ter + 42.01 Da, K +28.03 Da	61.0	65.3	3	2029.22	-0.36	0.12	ALBU_MOUSE		Serum albumin;	