

Supplemental Table 2. Mascot scores and sequence coverage for differentially expressed proteins identified in Table 1.

Protein	Accession number	Gene symbol	MW (kDa)	Mascot Score	Sequence Coverage (%)
bassoon	12217	Bsn	420	1266	12.4
spectrin beta 2	20742	Spnb2	275	2148	28.1
NMDA receptor, NR2B	14812	Grin2b	168	174	7.6
synaptojanin-1	104015	Synj1	146	1425	29.1
contactin associated protein 1	53321	Cntnap1	158	395	9.9
contactin 2	21367	Cntn2	135	429	11.7
dynammin-1	13429	Dnm1	96	1810	39.1
intercellular adhesion molecule 5	15898	Icam5	98	185	10.6
PSD-95	13385	Dlg4	95	492	23.2
AMPA2 receptor	14800	Gria2	104	322	10.8
synaptic vesicle glycoprotein 2 a	64051	Sv2a	83	445	10.4
synaptic vesicle glycoprotein 2 b	64176	Sv2b	78	428	13.0
PSD-93	23859	Dlg2	95	115	10.3
synapsin I	20964	Syn1	74	1509	68.3
synaptopodin	104027	Synpo	74	267	7.3
synaptotagmin I	20979	Syt1	48	472	22.6
munc 18-1	20910	Stxbp1	68	1017	36.0
syntaxin 1A	20907	Stx1a	40	354	14.2

^a: A list of proteins with their accession number obtained from NCBI database, gene symbol, molecular weight (MW), mascot score and sequence coverage. For identification, only the proteins with the Mascot score greater than 50 and more than 2 distinct peptides were considered. All differentially expressed proteins showed the Mascot score greater than 100.

Supplemental Table 3. Peptide sequences and $^{18}\text{O}/^{16}\text{O}$ ratios for peptides belonging to differentially expressed proteins identified in Table 1 from a representative experiment.

Protein Name	Accession No.	Sequence	Heavy/Light	Average Heavy/Light
PSD-95	13385			0.57
		1 DLLGEEDIPR	0.5526	
		2 SLENVLEINK	0.6147	
		3 EVTHSAAVEALK	0.5517	
		4 HCILDVSANAVR	0.5440	
		5 ANDDLLSEFPDK	0.5999	
		6 NAGQTVTIIAQYKPEEYSR	0.5475	
spectrin beta 2	20742			0.58
		1 AQGSVAFDYR	0.5740	
		2 NQEAVQQLLGR	0.5624	
		3 IIGTQEQLNQR	0.5484	
		4 SLDDFQAWLGR	0.6293	
		5 DQADPQCLFLR	0.5705	
		6 LGEVQAGWEDLR	0.5977	
synaptopodin	104027			0.53
		1 SPPSYSTLYPSSDPK	0.5096	
		2 VASEEEEEVPLVVYLK	0.5215	
		3 VTPNPDLLDLVQTADK	0.5430	
synapsin I	20964			0.61
		1 SLKPDFVLIR	0.6560	
		2 PVAGGPGAPPAARPPASPPQR	0.5718	

3	TYATAEPFIDAK	0.7529
4	QGPPQKPPGPAGPTR	0.6856
5	GSHSQSSSPGALTGR	0.6406
6	VLLVIDEPHTDWAK	0.5977
7	VDNQHDFQDIASVVALTK	0.6085
8	LGTEEFPLIDQTFYPNHK	0.5424
9	KLGTEEFPLIDQTFYPNHK	0.5186
10	LPSPTAAPQQSASQATPVTQGQGR	0.5827
11	QSRPVAGGPGAPPAARPPASPSPQR	0.6069
12	SQSLTNAFNLPEPAPPRPSLSQDEVK	0.5181
13	ASTAAPVASPAAPSPGSSGGGGFFSSLSNAVK	0.5002
14	PQLAQKPSQDVPPPITAAAGGPPHPQLNK	0.5042
15	QTSQQPAGPPAQQRPPPQGGPPQPGPGPQR	0.7530
16	PAKPQLAQKPSQDVPPPITAAAGGPPHPQLNK	0.5613
17	EMLSSTTYPVVVK	0.6963

**synaptic vesicle
glycoprotein 2a**

64051

0.61

	VFSVTHIK	0.5847
	TTAFGFLNALCK	0.6269
	EELAQQYETILR	0.5826
	DREELAQQYETILR	0.6346

**synaptic vesicle
glycoprotein 2b**

64176

0.47

1	ATAFGILNGLCK	0.4510
2	HVLFEFTFFDK	0.4800
3	ADGLGGQADLMAER	0.4723

dynamin 1	13429		0.64
		1 GYIGVVNR	0.6406
		2 FPFELVK	0.6105
		3 DITAALAAER	0.6700
		4 FTDFEEVR	0.7252
		5 LEIEAETDR	0.7777
		6 SSVLENFVGR	0.5290
		7 LQSQLLSIEK	0.7629
		8 LDLMDEGTDAR	0.5233
		9 VLNQQLTDHIR	0.5750
		10 TSGNQDEILVIR	0.5515
		11 NLVDSYMAIVNK	0.6688
		12 HIFALFNTEQR	0.6259
		13 VPVGDQPPDIEFQIR	0.6117
munc18-1	20910		0.49
		1 VLVVDQLSMR	0.4553
		2 ISEQTYQLSR	0.5201
		3 SSASFSTTAVSAR	0.5225
		4 DNALLAQLIQDK	0.4760
		5 LAEQIATLCATLK	0.5261
		6 VEQDLAMGTDAEGEK	0.3577
		7 YSTHLHLAEDCMK	0.5454
		8 WEVLIGSTHILTPQK	0.5476
		9 AIVPILLDANVSTYDK	0.4910
		10 SVHSLISDFKDPPTAK	0.4139

		11	EPLPSLEAVYLITPSEK	0.4997	
		12	REPLPSLEAVYLITPSEK	0.5023	
synaptotagmin-1	20979				0.60
		1	HDIIGEFK	0.6359	
		2	HWSDMLANPR	0.6046	
		3	MDVGGLSDPYVK	0.5846	
		4	TLVMAVYDFDR	0.5664	
NMDA receptor, NR2B	14812				0.58
		1	ALVTNKPVVSALHGAVPGR	0.4822	
		2	HSQLSDLYGK	0.5755	
		3	NLTNVDWEDR	0.6249	
		4	VFASTGYGIAIQK	0.6215	
contactin-associated protein 1	53321				
		1	GCIENVIYNR	0.5804	0.53
		2	AVATQGAFNSWDWVTR	0.5090	
		3	TGTSYFFGGCPK	0.4856	
contactin-2	21367				0.64
		1	GPPGPPGGVVVR	0.7608	
		2	IIVQAQPEWLK	0.5503	
		3	TTGPGGDGIPAEVHIVR	0.7090	
intercellular adhesion molecule 5	15898				0.61
		1	LFSCEVDGKPEPR	0.6117	
		2	VECVGSEGASEGIVLPLVSSNSGPR	0.5999	
bassoon	12217				0.57

1	LTEAVSAFGK	0.7434
2	LGQLFQGPGR	0.7708
3	YGLALDPVSGR	0.7688
4	HSYSLGFADGR	0.6025
5	LLDTSFASSER	0.6826
6	QQEQLLQLER	0.5739
7	DPEPPEPLTFR	0.5316
8	LHSSPVSSTLTSK	0.4720
9	YNLPNQVTPLAR	0.4375
10	QVEQAVQTAPYR	0.5815
11	QPVVYGDPFQSR	0.5401
12	GPQGLGQPSGSLPAK	0.4315
13	YSSVSNIYSDHR	0.5197
14	HREEEQLLVQR	0.4593
15	HPTDLLSHPLPLR	0.5477
16	DACEPESGPDPTVR	0.5983
17	YLGQGLQYGSFTDLR	0.4760
18	ATSVPGPTQATAPPEVGR	0.5132
19	SPQVLYSPVSPLSPHR	0.6196
20	EAGPRPPGSGPGPGPTPGAK	0.6012
21	EKPLSGGDSEVGAPQPSR	0.5990
22	APQAQTTPGPGPAGAKPGAR	0.4845
23	PGGTPGAPASQPGAEGESVFSK	0.5086

synaptojanin-1

104015

0.58

1	IDLPNEEVK	0.5886
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AMPA2 receptor	14800	2	LAGIQEFQDK	0.6020	0.54
		3	VTSTEFISLR	0.5707	
		4	GFEANAPAFDR	0.5698	
		1	NSIQIGGLFPR	0.5771	
		2	VNDIVDQVITIGK	0.4749	
		3	GLSTLQAVLDSAAEK	0.5619	
		4	QTEIAYGTLD SGSTK	0.5602	
syntaxin 1A	20907				0.50
		1	SIEQSIEQEEGLNR	0.5066	
		2	IEYNVEHAVDYVER	0.4954	
PSD-93	23859				0.58
		1	VNEVDVSEVSHSK	0.5860	
		2	FIEAGQYNDNLYGTSVQSVR	0.6060	
		3	HCILDVSGNAIK	0.5570	