

Table 2: Proteins identified in CCV preparations

No	Protein name Gel band number, range	Molecular mass kDa	Specific Peptides			Shared Peptides			Reference GI Number				
			Total Prep. A Prep. B Prep. C	Total Prep. A Prep. B Prep. C	Total Prep. A Prep. B Prep. C	Validated (Fig. 3)							
coat proteins (18)													
1	clathrin heavy chain 49,2-61 50,13-62 48,15-61	193.1	1460 398 550 512	0 0 0 0	0 0 0 0	Y							
2	clathrin light chain A1 or A2 or A3 24,9-25 23,9-24 20,19-23	25.6	74 28 20 26	0 0 0 0	0 0 0 0	Y	203276	14010873	71562	203278	116500	4502899	
3	clathrin light chain B1 or B2 22,6-23 21,7-26 21,14-23	25.2	131 54 44 33	0 0 0 0	0 0 0 0	Y	116507	514	71563	4502901	203361	116504	6005995
4	AP1 beta 1 46,40-47 45,37-47 43,40-55	105.4	64 15 26 23	90 14 43 33	0 0 0 0	a	8392872	6671553	4501973				
5	AP1 gamma 43 42/43,40-43 39,38-39	92.1	27 2 9 16	0 0 0 0	0 0 0 0	Y	6753070	12643391	4501979				
6	AP1 mu 1 30,30-31 29,27-30 27,27-28	48.7	48 17 18 13	0 0 0 0	0 0 0 0		14210504	6671557					
7	AP1 sigma 1 7,6-7 8/9/13,8-13 9/11,9-11	18.8	15 3 7 5	0 0 0 0	0 0 0 0		4557471	5630084					
8	AP2 alpha 1 46,37-58 45,25-58 42,37-44	108.7	150 41 69 40	32 3 14 15	0 0 0 0	b	6671561	14786902	12585138				
9	AP2 alpha C 43,37-58 43,37-58 39,17-54	104.9	169 35 60 74	32 3 14 15	0 0 0 0	b	13591908	90292					
10	AP2 beta 2 44,14-56 43,15-47 40,36-55	105.5	208 61 86 61	90 14 43 33	0 0 0 0	a	4557469	14785749	12836566				
11	AP2 mu 1 32,29-34 31,28-35 28,25-31	49.9	199 67 54 78	0 0 0 0	0 0 0 0		6753074	7448828					
12	AP2 sigma 2 or 1 2,2-12 4/5,4-5 11,9-16	17.1	33 21 2 10	0 0 0 0	0 0 0 0		4757996	11038643	13654962				
13	AP180 52,23-55	91.5	97 18	16 3	0 0	c	13994177	486929	7662228	7305507	193209		

	23/34,18-60 48,25-53		44 35	9 4					
14	auxilin (DNAj) 46,5-47 41/44,37-59 41,38-44	100.2	86 20 45 21	0 0 0 0					Brodsky FM. et al. Annu Rev Cell Dev Biol.17:517-68. (2001) 7662146 2498170 13278253
15	CALM 39,29-55 38/39,18-59 35,33-43	69.5	56 15 13 28	16 3 9 4	c				Brodsky FM. et al. Annu Rev Cell Dev Biol.17:517-68. (2001) 2792502 2792500 16758324
16	cyclin G-associated kinase 60,47-62 48,47-49	145	18 ND 8 10	0 ND 0 0					Brodsky FM. et al. Annu Rev Cell Dev Biol.17:517-68. (2001) 13591947 17375734 4885251
17	Hsc70 39 38,38-39 36,35-36	71.1	45 12 17 16	0 0 0 0					Brodsky FM. et al. Annu Rev Cell Dev Biol.17:517-68. (2001) 13242237 347019 123647 5729877
18	huntingtin interacting protein 12 (HIP1R) 47 46,41-46 44,43-44	127.2	51 9 10 32	0 0 0 0				Y	Brodsky FM. et al. Annu Rev Cell Dev Biol.17:517-68. (2001) 12718814 13431575 12852463
accessory proteins (1)									
19	epsin 40/42,40-42 41 37/38,37-38	60.2	6 2 2 2	0 0 0 0				Y	Slepnev VI. & De Camilli P. Nat. Rev. Neurosci. 1:161-172 (2000) 3249559 16923990
synaptic vesicles (32)									
20	cysteine string protein 18 19,18-19	22.8	4 ND 1 3	0 ND 0 0					Evans GJ. & Morgan A. Biochem J. 364:343-7. (2002) 12643505 7512369 7949027 18591697 1232165
21	Rab3A 15 15,14-15 14,14-15	25.2	17 4 5 8	2 1 1 0	d				Schluter OM. et al. J Biol Chem. 277:40919-40929. (2002) 6679593 7689363 129323 89582 4506367
22	Rab3C 16 14	26.1	4 ND 3 1	0 ND 0 0					Schluter OM. et al. J Biol Chem. 277:40919-40929. (2002) 13470090 6174943 1045640
23	SCAMP-1 20/21,20-21 19/20,19-20 20	38.3	14 4 8 2	0 0 0 0					Fernandez-Chacon R. & Sudhof TC. J Neurosci. 20:7941-50. (2000) 3914958 3395572
24	SCAMP-5 10/12/13/14,10-14 13 13	26.4	6 4 1 1	0 0 0 0					Fernandez-Chacon R. & Sudhof TC. J Neurosci. 20:7941-50. (2000) 13929020 9937988
25	synaptic vesicle protein 2 (SV2) 43,42-43 42,41-45 39,38-40	83.3	33 3 20 10	0 0 0 0					Xu T. & Bajjalieh SM. Nat Cell Biol. 3:691-8. (2001) 285432 17105366 11528518
26	synaptic vesicle protein 2 form B (SV2B) 42,39-42 41,39-42 37	78.2	21 7 13 1	0 0 0 0					Janz R. et al. Neuron. 24:1003-16. (1999) 17105360 420291
27	synaptogyrin 1 7/17/18,6-18 8/16/17/18,8-18 16/17,16-17	25.9	19 7 10 2	0 0 0 0					Janz R. et al. Neuron. 24:687-700. (1999) 1587032 12833341 9507167 14779004 4759200 6678193 11418146

28	synaptogyrin 3 7 8/15,8-15	24.7	3 1 2 ND	0 0 0 ND	Hubner K. et al. Int Rev Cytol. 214:103-59. (2002) 6631112 6755708			
29	synaptophysin 24/25,23-27 18/23/25,18-26 23,22-24	33.6	41 13 10 18	0 0 0 0	Hubner K. et al. Int Rev Cytol. 214:103-59. (2002) 6981622 56823 6678195			Y
30	synaptoporin 23 22,21-23	29.3	5 1 4 ND	0 0 0 ND	Hubner K. et al. Int Rev Cytol. 214:103-59. (2002) 135158 13027428			
31	synaptotagmin I 36,36-37 35/36,35-39 32,32-34	47.9	52 8 15 29	15 2 6 7	e O'Connor V. & Lee AG. Nat Neurosci. 5:823-4. (2002) 1351175 6678197 92791 226865 5032139			Y
32	synaptotagmin II 37 37,36-37 33,33-34	47.7	16 3 3 10	15 2 6 7	e O'Connor V. & Lee AG. Nat Neurosci. 5:823-4. (2002) 1083522 6981624			
33	synuclein alpha 6 8	22.4	2 1 1 ND	0 0 0 ND	Leng Y. et al. J Biol Chem. 276:28212-8. (2001) 9507125 2829293 12852348 285435 6678047			
34	vacuolar ATPase, subunit A (V1 sector) 39 38 36,35-37	68.6	39 5 6 28	0 0 0 0	Morel N. et al. Journal of Neurochemistry 79:485-488. (2001) 6680752 108733 383059 401321			
35	vacuolar ATPase, subunit a (Vo sector) 45/46,45-46 45,43-45 44,39-44	96.4	14 2 4 9	0 0 0 0	Galli T. et al. J. Biol. Chem. 271:2193-2198. (1996) 13928826 12643433 4885085 7329154 12025532 12643966 3915315			
36	vacuolar ATPase, subunit B (V1 sector) 34,33-34 34,33-35 29,29-32	56.8	54 7 15 32	0 0 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 12643430 549205 17105370 1184661			
37	vacuolar ATPase, subunit C (V1 sector) 26 24	44.1	5 ND 2 9	0 ND 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 13384916 12585525 16307356			
38	vacuolar ATPase, subunit D (V1 sector) 19 19 18,18-19	28.5	8 1 3 4	0 0 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 12963799 5138993 7022231 7706757 731097 11999090			
39	vacuolar ATPase, subunit d (Vo sector) 24,23-25 23,20-24 22,21-23	40.7	33 9 14 10	0 0 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 12643287 7304909			
40	vacuolar ATPase, subunit E (V1 sector) 19 19,18-19 19,18-19	26.2	22 6 10 6	0 0 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 137473 313014 6680756 13097342 4502317 539608			
41	vacuolar ATPase, subunit G (V1 sector) 2 4	13.7	2 1 1 ND	0 0 0 ND	Morel N. et al. J Neurochem 79:485-488. (2001) 15617197 4757818 14735257			
42	vacuolar ATPase, subunit H (V1 sector) 31,30-31 30/32,30-32	56.4	14 3 2	0 0 0	Morel N. et al. J Neurochem 79:485-488. (2001) 12643371 19527044 7706262 11640592			

	28,26-29		9	0								
43	vesicular inhibitory amino acid transporter 34/35,34-35 30/31/33/34,30-34 30,29-30	58.3	11 2 4 5	0 0 0 0	Jellali A. et al. J Comp Neurol. 449:76-87. (2002) 13929106 6678569							
44	VGLUT1 (solute carrier family 17, member 7) 36 31/33,31-32 31,30-31	62.3	13 3 5 5	0 0 0 0	Kaneko T. & Fujiyama F. Neurosci Res. 42:243-50. (2002) 16758726 9945322 2143624							
45	VGLUT2 37 35 32,32-34	65	7 1 1 5	0 0 0 0	Kaneko T. & Fujiyama F. Neurosci Res. 42:243-50. (2002) 16758166 9966811 8515881 18252796							
	<i>SNARE apparatus</i>											
46	VAMP-1 6,5-7 9,3-9 10,10-11	12.9	17 7 6 4	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 2501080 6981612							
47	VAMP-2 4,3-6 7,3-11 7/10,7-11	14.5	34 16 8 10	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 7657675 6678553 6678551 6729809 2253399 13653389 4894188							
48	SNAP-25 16 15,15&56 16,15-16	23.5	15 4 6 5	0 0 0 0	Walch-Solimena C. et al. J Cell Biol. 128:637-45. (1995) 4507099 6755588 1314856							
49	syntaxin 1A 20 20 19	34.1	7 2 4 1	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 417842 285304 4759182 7595847 7767102 207127 6665797							
50	syntaxin 1B 20,20-21 20,20-21 20,19-20&53	33.4	16 4 7 5	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 1174533 383088 6981600							
51	Sec1 (munc-18) 38,37-38 37,36-38 34,34-35	67.9	64 9 23 32	0 0 0 0	Garcia EP. et al. J Cell Biol. 129:105-20. (1995) 6981602 435430 3810884 2501510 17225417							
vesicle trafficking (29)												
	<i>SNARE proteins</i>											
52	NSF 40 39 37	83.2	32 10 14 8	0 0 0 0	McDonald PH. et al. J Biol Chem. 274:10677-80. (1999) 13489067							
53	SNAP alpha 20 20 19	33.5	10 2 3 5	1 0 1 0	f Hanley JG. et al. Neuron. 34:53-67. (2002) 6094309 18034791 13385392 2143586 12851441							
54	SNAP beta 20/21,20-21 20,20-21 20	34.2	9 2 4 3	1 0 1 0	f Hanley JG. et al. Neuron. 34:53-67. (2002) 11414800 3024628 114980							
55	syntaxin 6 20 18 19/20,19-20	29.1	7 1 2 4	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 13928922 12844640 10946800							
56	syntaxin 13 or 12 22 23,22-23 21,20-21	30.5	8 2 3 3	0 0 0 0	Chen YA. & Scheller RH. Nat Rev Mol Cell Biol. 2:98-106. (2001) 3184552 12621104 19527102							

115	enolase gamma 30 30,28-30 27,26-27	47.5	14 3 5 6	0 0 0 0	119349	26023949								
116	pyruvate kinase 36 35 31,31-32	58.2	20 2 9 9	0 0 0 0	1346398	16757994	2506796	1363219	6755074	125598	2117873	16741633		
117	lactate dehydrogenase 23 20/22,20-22 21/22,21-22	36.8	11 2 5 4	0 0 0 0	6981146	6678674	4557032	13786847						
118	aspartate transaminase 27 26 24	46.6	7 3 3 1	0 0 0 0	91997	345752	6980970	6754034	90313					
119	creatine kinase B (brain form) 29,29-30 29,28-29 26,25-26	40.9	33 6 7 20	0 0 0 0	203476	125296	12852054	6978659	10946574					
120	glutamine synthetase 28 25 25,24-26	42.9	8 1 1 6	0 0 0 0	121376	8393456	228136							
121	malate dehydrogenase 21 21 20,20-21	36.6	9 2 3 4	0 0 0 0	6678918	12837652	15100179	7431153	5174539	5107783	6226874			
122	S-adenosylhomocysteine hydrolase-like 1 36 35 32,31-32	67.9	10 2 1 7	0 0 0 0	5729724	7435520	21361647							
123	2'-3'-cyclic-nucleotide 3'-phosphodiesterase 29 28/29/30,28-30 25,25-26	47.6	18 5 3 10	0 0 0 0	27689495	2143555	116560							
cytoskeleton (11)														
124	actin beta or gamma 28,28-29 28,26-28 25,24-26	42.1	34 10 12 12	0 0 0 0	Qualmann B. & Kessels MM. Int Rev Cytol. 220:93-144. (2002) 71625	4501887	13278939	71621	1351867	4501885	71620	2624850	576368	231506
125	ARP3 actin-related protein 3 homolog; ARP3 31 30	47.8	2 1 1 ND	0 0 0 ND	Qualmann B. & Kessels MM. Int Rev Cytol. 220:93-144. (2002) 5031573	14745483	9966913	12835802	13542701					
126	centractin alpha 29 25,25-26	42.7	5 2 ND 3	0 0 ND 0	5031569	22122615	381964	12859778						
127	Cofilin 1 non-muscle 7/8,7-8 8	18.7	5 4 1 ND	0 0 0 ND	8393101	6680924	116850	5031635	12861068					
128	dynein cytoplasmic heavy chain 1 58 55,54-56	534.4	13 2 ND 11	0 0 ND 0	9506549	729378	23503061	13384736						
129	ezrin (villin 2) 40	67.8	4 ND 3	0 ND 0	6678571	12832989	119717	340217	11276938	21614499	17902245			

144	CD9 antigen 11 12	25.7	3 1 2 ND	0 0 0 ND	729088								
145	EAAT1 (GLAST1) 34,33-37 34,31-37 31/32,17-34	59.7	44 11 15 18	2 0 1 1	j	1169457	5577964	9507115	232176	20141407	8118689	543221	
146	EAAT2 (Glt1) 36,34-41 37,32-57 34,30-37	62.6	84 18 30 36	0 0 0 0	Y	10121878	705398	8394286	417074	1363971	1169460	2459554	
147	EAAT4 37 34,33-35	60.1	10 ND 1 9	2 ND 1 1	j	4827012	14091748	6678003					
148	GAT-1 (GABA transporter) 38 33/34,33-34	67.6	3 ND 1 2	0 ND 0 0		400622	1352530	13242269	4507039	639478			
149	GAT-3 (GABA transporter) 36/37,36-37 36,35-38 32/33/34/35,32-35	71.3	11 2 5 4	0 0 0 0		13242271	400625						
150	limbic system-associated membrane protein 36 31/32/33,31-33	37.3	4 1 ND 3	0 0 ND 0		25742796	4505025						
151	Na ⁺ /K ⁺ ATPase alpha 1 43 42,42-46 39	114.2	10 1 3 6	30 4 8 18	k Uriu T. et al. J Neurochem. 56:1548-56. (1991)	358959	205632	6978543	16307541	21450277			
152	Na ⁺ /K ⁺ ATPase alpha 2 43,43-44 42,40-46 40,39-41	113.4	20 4 8 8	60 8 17 35	k Uriu T. et al. J Neurochem. 56:1548-56. (1991)	6978545	4502271	15488862					
153	Na ⁺ /K ⁺ ATPase alpha 3 44,43-44 42,40-46 39,38-44	113	50 5 14 31	61 8 17 36	k Uriu T. et al. J Neurochem. 56:1548-56. (1991)	6978547	55770	358960	19855078				
154	Na ⁺ /K ⁺ ATPase beta 1 29/30,28-31 26/27/28,26-30 27,25-28	35.6	41 11 13 17	0 0 0 0	Uriu T. et al. J Neurochem. 56:1548-56. (1991)	6978549	114395	54130	6753138				
155	Na ⁺ /K ⁺ ATPase beta 2 29/30,29-31 27/28/30,27-30 26,26-27	33.6	14 5 3 6	0 0 0 0	Uriu T. et al. J Neurochem. 56:1548-56. (1991)	6978551	91127	4502279	13651387	2136790	7242138	2493014	110052
156	Na ⁺ /K ⁺ ATPase gamma (FXD ion transport regulator 1) 2 4/5,4-5	10.7	3 1 2 ND	0 0 0 ND		9506705	11612670	3024391	13928896	3024392			
157	neuronal membrane glycoprotein M6-A 18/19,18-20 18	31.9	7 ND 5 2	0 ND 0 0		14149619	1263038						
158	neuronal membrane glycoprotein M6-B 20 17,17-21	36.9	4 1 ND 3	0 0 ND 0		9502121	12855370	547882	12963495				

	26		1	0					
203	KIAA0171 (enthoprotin) 39/40,33-40 34,32-40 37,36-37	68.3	44 11 25 8	0 0 0 0	Wasiak S. et al. J Cell Biol. 158:855-62. (2002) 7661968				
204	KIAA1048 (AAK1) 47,39-47 46,28-47 44,27-44	93.5	62 7 19 36	0 0 0 0	Conner SD. & Schmid SL. J Cell Biol. 156:921-9. (2002) 7662462 12803719 12728973 5689433				
205	KIAA1360 41 39/40,39-40	82.5	3 ND 1 2	0 ND 0 0	7243101 8922218 14042309 10436614				
206	KIAA1435 (FENS1) 28 27,26-28 25	47.3	12 2 7 3	0 0 0 0	7243268 14728270 10435345 18482373				
207	NECAP 1 26,22-28 25/26,19-27 23,23-25	29.6	23 7 10 6	0 0 0 0	15079260 13385774				Y
208	NECAP 2 18 18 17/18,17-18	28.6	4 1 1 2	0 0 0 0	13384758 10435511 8922416 10440450				Y
209	SEC14 domain 21 20/22/23,20-23 22,21-23	40.7	12 1 3 8	0 0 0 0	12855458 20821325 13874579 13676421 18571255				

The gel band number represents the band in which the peak number of peptides were identified for each protein within each preparation. The range of bands from which peptide matches were obtained is also indicated. The number of specific and shared peptides is indicated for the corresponding protein. Proteins with like lower case letters share peptides. The upper case Y indicates proteins that were validated by Western blot in Fig 3. Not detected (ND) denotes the lack of identifiable peptides in the indicated preparation. References are given for those proteins previously linked to clathrin-mediated vesicle trafficking.