**Supplementary Table 1.** Protein interactome of the βAPP and its catabolites related to other cellular pathways

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| **Mitochondria and ER structure** |
| **Uniprot ID** | **Name (a)** | **Peptides (95%)(b)** | **Function** |
| Q5U458 | DnaJ homolog subfamily C member 11 GN=Dnajc11  | 1 | Chaperone, may associates with the mitochondrial contact site and cristae organizing system (MICOS) complex |
| Q62465 | Synaptic vesicle membrane protein VAT-1 homolog GN=Vat1  | 1 | Negatively regulates mitochondrial fusion in cooperation with MFN1-2  |
| Q91YH5 | Atlastin-3 GN=Atl3  | 1 | GTPase tethering membranes, Functions in endoplasmic reticulum tubular network biogenesis |
| **Apoptosis** |
| **Uniprot ID** | **Name (a)** | **Peptides (95%)(b)** | **Function** |
| P53702 | Cytochrome c-type heme lyase GN=Hccs  | 1 | Links the heme group of cytochrome c |
| Q8BXV2 | BRI3-binding protein GN=Bri3bp  | 1 | May function by stabilizing p53/TP53 |
| **Signaling** |
| **Uniprot ID** | **Name (a)** | **Peptides (95%)(b)** | **Function** |
| P63001 | Ras-related C3 botulinum toxin substrate 1 GN=Rac1  | 1 | Plasma membrane-associated small GTPase  |
| Q3TIR3 | Synembryn-A GN=Ric8a  | 1 | Guanine nucleotide exchange factor (GEF), can activate some G-α proteins |
| Q6R0H7 | Guanine nucleotide-binding protein G(s) subunit alpha isoforms XLas GN=Gnas  | 1 | Guanine nucleotide-binding G proteins |
| Q80UU9 | Membrane-associated progesterone receptor component 2 GN=Pgrmc2  | 1 | Receptor for steroids. |
| Q8BX10 | Serine/threonine-protein phosphatase PGAM5, mitochondrial GN=Pgam5  | 1 | Phosphatase activity for serine/threonine residues, and, dephosphorylates and activates MAP3K5 kinase |
| P49817 | Caveolin-1 GN=Cav1  | 1 | Costimulatory signal essential for T-cell receptor-mediated T-cell activation. |
| Q6ZPF3 | T-lymphoma invasion and metastasis-inducing protein 2 GN=Tiam2  | 1 | Modulates the activity of RHO-like proteins and connects extracellular signals to cytoskeletal activities  |
| **Other metabolic pathways** |  |  |
| **Uniprot ID** | **Name (a)** | **Peptides (95%)(b)** | **Function** |
| P14231 | Sodium/potassium-transporting ATPase subunit beta-2 GN=Atp1b2  | 1 | Non-catalytic component of the active enzyme, catalyzes the hydrolysis of ATP coupled with the exchange of Na+ and K+ ions |
| Q8BHC4 | Dephospho-CoA kinase domain-containing protein GN=Dcakd  | 1 | dephospho-CoA kinase activity |
| P52480 | Pyruvate kinase isozymes M1/M2 GN=Pkm2  | 1 | Glycolytic enzyme  |
| P50431 | Serine hydroxymethyltransferase, cytosolic GN=Shmt1  | 2 | Interconversion of serine and glycine  |

UniProtID: protein accession number in Swiss-Prot/Trembl

(a) Protein name given by UniProt database.

(b) Number of peptides matching the protein with a confidence limit of 95%.

GN, gene name; Mit, mitochondria; PM, plasma membrane; ER, endoplasmic reticulum; Cyt, cytosol