

## Supplementary Material

**Table 1:** Predicted sub-cellular localization for various amyloid protein processing enzymes as well as its interacting partners.

	Cyto	Extr	Pero	Plas	ER	Mito	Cyto- pero	Lys	Gol	Nucl	Cyto- Mito	Cyto- Nucl
Amyloid beta1-42	17	10								3		
Amyloid beta 1-40	17	12										
beta-APP		13	8.5		7		5					
Secretase BETA A		7	13	5	3	2						
Secretase BETA B		8	12	4	4	2						
Secretase BETA C	2	8	13	3	4							
Secretase BETA D	2	8	13	3	3							
Presenilin 1				31								
Apo E		25			2	3						
TGF beta		8	3			14		5			8.8	
AchE precursor		18	8						3			
GAPDH	28					2						
Caspase 3 Precursor	19	6			3					2		
Cathepsin beta		25						7				
Insulin protease	7.5					21					5.5	
Cyclophilin D	23					5						13.5
ANT	12				3	15						

**Table 2:** List of APP interacting proteins

Protein STITCH database	NCBI-ID	STITCH score
PSEN1 (Presenilin-1) (467 aa)	AAH11729	0.999
APOE (Apolipoprotein E precursor) (317 aa)	EAW57306	0.999
BACE1 (Beta-secretase 1 precursor) (531 aa)	NP_036236	0.998
LRP1 (Low-density lipoprotein receptor-related protein 1 precursor) (4544 aa)	NP_002323	0.998
BACE2 (Beta secretase 2 precursor) (518 aa)	AAQ89286	0.992
HADH2 (ABAD, 3-hydroxyacyl-CoA dehydrogenase type) (261 aa)	NP_001032900	0.988
TGFB1 (Transforming growth factor beta 1 precursor) (390 aa)	NP_000651	0.988
PSEN2 (Presenilin-2) (448 aa)	AAH06365	0.98
ACHE (Acetylcholinesterase precursor) (641 aa)	AAC60618	0.973
LRP1B (Low-density lipoprotein receptor-related protein 1B precursor) (4599 aa)	NP_061027	0.971
ENSP00000229239 (Glyceraldehyde-3-phosphate dehydrogenase) (335 aa)	NP_002037	0.938
NCSTN (Nicastrin precursor) (709 aa)	CAI15009	0.934
CASP3 (Caspase-3 precursor) (277 aa)	CAC88866	0.929
IDE (Insulin-degrading enzyme) (Insulin protease) (1019 aa)	CAI13670	0.927
IL6 (Interleukin-6 precursor) (212 aa)	CAG29292	0.918
MAPT (Microtubule-associated protein tau) (758 aa)	CAG26750	0.918
HMOX2 (Heme oxygenase 2) (316 aa)	CAG46638	0.915
CTSD (Cathepsin D precursor) (412 aa)	CAG33228	0.914