

Table S1 Concentration ($\mu\text{mol/g}$) of neurometabolites in A β PP-PS1 and wild-type mice

Brain Region	Animal	Glu	GABA	Gln	Asp	NAA	m-Ino	Tau	Cho
Cortex	Wild-type	12.5 \pm 0.2	2.5 \pm 0.1	6.1 \pm 0.2	2.4 \pm 0.1	7.5 \pm 0.2	7.2 \pm 0.2	12.6 \pm 0.3	1.78 \pm 0.04
	A β PP-PS1	11.8 \pm 0.1**	2.5 \pm 0.1	6.2 \pm 0.1	2.1 \pm 0.1**	7.0 \pm 0.1*	7.8 \pm 0.2*	12.0 \pm 0.3	1.76 \pm 0.04
Hippocampus	Wild-type	11.8 \pm 0.2	3.2 \pm 0.2	5.8 \pm 0.3	2.3 \pm 0.1	7.6 \pm 0.3	7.3 \pm 0.3	11.5 \pm 0.8	2.1 \pm 0.1
	A β PP-PS1	10.7 \pm 0.4*	3.2 \pm 0.3	5.6 \pm 0.2	2.0 \pm 0.1*	6.5 \pm 0.2**	8.6 \pm 0.3**	12.3 \pm 0.9	2.0 \pm 0.1
Striatum	Wild-type	10.9 \pm 0.4	5.2 \pm 0.4	5.8 \pm 0.3	2.0 \pm 0.1	6.9 \pm 0.2	7.7 \pm 0.3	12.0 \pm 0.6	2.2 \pm 0.1
	A β PP-PS1	10.2 \pm 0.2	4.7 \pm 0.3	5.5 \pm 0.2	1.9 \pm 0.1	6.6 \pm 0.2	8.0 \pm 0.3	11.2 \pm 0.2	2.2 \pm 0.1

Concentration of brain metabolites were measured relative to [2-¹³C]glycine. Single factor ANOVA analysis was carried out to determine the significance of difference in the concentration of neurometabolites in a given brain regions. Values represent mean \pm SEM. * $p < 0.05$, ** $p < 0.01$ when A β PP-PS1 mice were compared with controls.

Figure S1 Immunohistological detection of amyloid plaque in A β PP-PS1 mouse brain using A β -antibody.

