Supplemental Figure Legends

Supplemental Figure 1. Lack of apoE staining in brain sections from mice deficient for apoE (**A**; apoE$^{-/-}$) compared to mice expressing human apoE2 (**B**;TRE2). The specificity of immunolabeling was confirmed by lack of signal in TRE2 brain sections when primary (anti-apoE antibody) was omitted (**C**; 2^0 only).

Supplemental Figure 2. Levels of amyloid precursor protein in hippocampal (**A**), cortical (**B**), or cerebellar (**C**) homogenates from PDAPP /TRE mice expressing various human apoE alleles (E2, E3, or E4). *$p<0.01$ versus PDAPP/TRE4 ANOVA Tukey-Kramer post test

Supplemental Figure 3. Relative level of apolipoprotein E (**A**) or amyloid precursor protein mRNA (**B**) in PDAPP mice expressing various human apolipoprotein E alleles (PDAPP/TRE2, PDAPP/TRE3, or PDAPP/TRE4). Relative level of apolipoprotein E mRNA in the hippocampus (**C**) or cortex (**D**) in TRE (TRE2, TRE3, or TRE4)mice expressing various human apolipoprotein E alleles.

Supplemental Figure 4. No significant correlation between soluble levels of apolipoprotein E and Aβ 42 extracted from the hippocampus of PDAPP/TRE3 (**A**) or PDAPP/TRE4 (**B**) .

<u>Supplemental Methods:</u>

Primers for Quantitative PCR

APP

forward primer: 5'TGGAGGCTAAGGACTTGTTTCG-3'

reverse primer: 5'-ATGTGACCAGCAACGCAGC-3',

probe: 6FAM-CCTGTGATTGGCCAGTCCAGCTCCT-TAMRA) .

APOE

forward primer: 5'-AGAGAACCAGCATTGCC-3'

reverse primer: 5"-TCATCCCCAGGTGTCTCGAG-3' ,

probe 5'-6FAM-CTGCTGTTGTAGGAACTCGAACCACCTCCT-TAMRA3'