



**Supplementary Figure 1: Pathological changes in AD brains include breakdown of the BBB, activation of astrocytes, and neuronal expression of vimentin.** (A) Control cortex shows IgG is confined to BV lumen. (B) Section of AD cortex shows BBB breakdown and extravasated IgG surrounding BV as demarcated by dotted outline. (C) Control cortex exhibits GFAP positive BVs (indicated by arrows) and few GFAP positive astrocytes (indicated by arrowheads). (D) AD cortex displays more intensely GFAP positive astrocytes (indicated by arrowheads). (E) Vimentin expression is restricted to BVs (indicated by arrows) in control cortex while it is negative for neurons (indicated by black arrow heads). (F) In AD cortex, vimentin is localized in the perikaryon and apical dendrite of pyramidal neurons (indicated by red arrow heads) as well as BV (indicated by arrow). All of the sections are visualized by DAB shown in brown and counterstained with hematoxylin to show nucleus in blue/purple as described in the Materials and Methods. (A-D) Scale Bar, 250  $\mu$ m; (E-F) Scale Bar, 100  $\mu$ m.