



**Supplemental Fig. 2** Model of amyloid- $\beta$  regulation of glutamate receptor trafficking. **(a)** Amyloid- $\beta$  activates the  $\alpha$ -7 nicotinic receptor and promotes calcium influx. Calcium can then activate the serine/threonine phosphatase PP2B which dephosphorylates and activates STEP. When STEP is activated, it can regulate phosphorylation of postsynaptic tyrosine residues, such as tyrosine 1472 on NR2B. **(b)** We hypothesize that de-phosphorylation of NR2B reduces its anchoring to cytoskeletal proteins, including PSD-95. NR2B can then interact with the clathrin adaptor protein, AP-2. **(c)** Following interaction with AP-2, the NMDA receptor is endocytosed.