

## Supplementary figure

**Supplementary Fig 1** (a) Specificity of pY816 antibody for immunohistochemistry. Top, Representative images in low magnification (low mag) and high magnification (high mag) from stratum lucidum of CA3a in hippocampus of pY816 immunoreactivity in sections prepared from *trkB<sup>WT/WT</sup>* and *trkB<sup>PLC/PLC</sup>* mice. Note pY816-ir is decreased in *trkB<sup>PLC/PLC</sup>* compared to *trkB<sup>WT/WT</sup>* mice, establishing specificity of antibody for pY816. Similar results were obtained in two other experiments. Bottom, quantitative analysis of pY816 immunoreactivity in hippocampal subregions of *trkB<sup>WT/WT</sup>* and *trkB<sup>PLC/PLC</sup>* mice. The pY816 immunoreactivity only in CA3a stratum lucidum, but not in other regions, revealed a significant decrease in *trkB<sup>PLC/PLC</sup>* group compared to *trkB<sup>WT/WT</sup>* group ( $p < 0.01$ ,  $n = 3$ , Student's *t* test). Mice were sacrificed and coronal sections prepared as described in methods. Scale bars: 300  $\mu\text{m}$  in low magnification; 50  $\mu\text{m}$  in high magnification. (b) Boxes denote locations within hippocampal formation at which pY816 immunoreactivity was sampled for quantitative analyses 1, corpus callosum; 2, CA1 oriens; 3, CA1 stratum lacunosum-moleculare; 4, CA3a stratum lucidum.