

Supplementary information, Figure S7

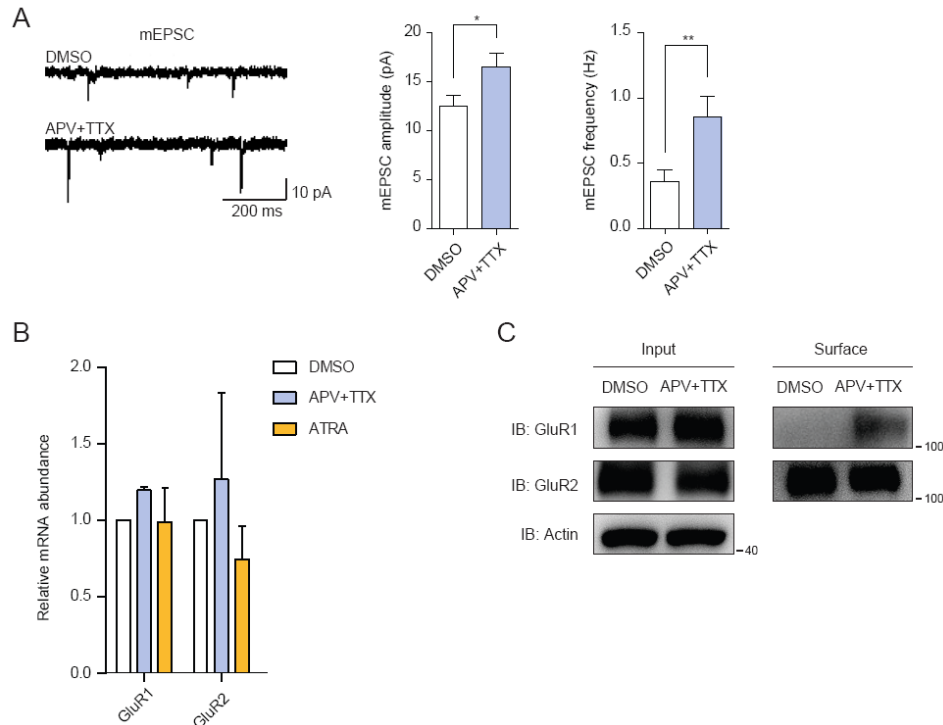


Figure S7 Neuronal activity blockade induced changes in synaptic homeostasis through translational control. (A) Both amplitudes and frequencies of mEPSC of primary PFC neuron cells were increased after treatment of APV and TTX for 24 h in electrophysiology test. Left, representative mEPSC traces; right, quantitation of amplitudes and frequencies (DMSO, $n = 15$; APV/TTX, $n = 12$). Data were shown in means \pm SEM; $*P < 0.05$, $**P < 0.01$; two-tailed t -test. (B) Neuronal activity blockade did not induce changes in transcription of the indicated genes in primary PFC neuron cells. Relative mRNA abundances of the indicated genes were assessed in primary PFC neuron cells treated with DMSO, APV/TTX, or ATRA. Quantitative reverse-transcription (qRT-PCR) assays were performed using the specific primers. The results were

normalized against those of the cells treated with DMSO only. Not significant, one-way ANOVA, with Bonferroni *post-hoc* test; n = 4. (C) Neuronal activity blockade significantly upregulated the protein levels of GluR1, but not GluR2, on the surfaces of primary PFC cells. Surface biotinylation assays (see online methods for detailed procedures) were performed with the cells after treatment with DMSO or APV/TTX for 24 h. All experiments were conducted at least three times.