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Supplementary Information for

## **Synaptic memory survives molecular turnover**

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## **Supplementary Information Text**

### **Methods**

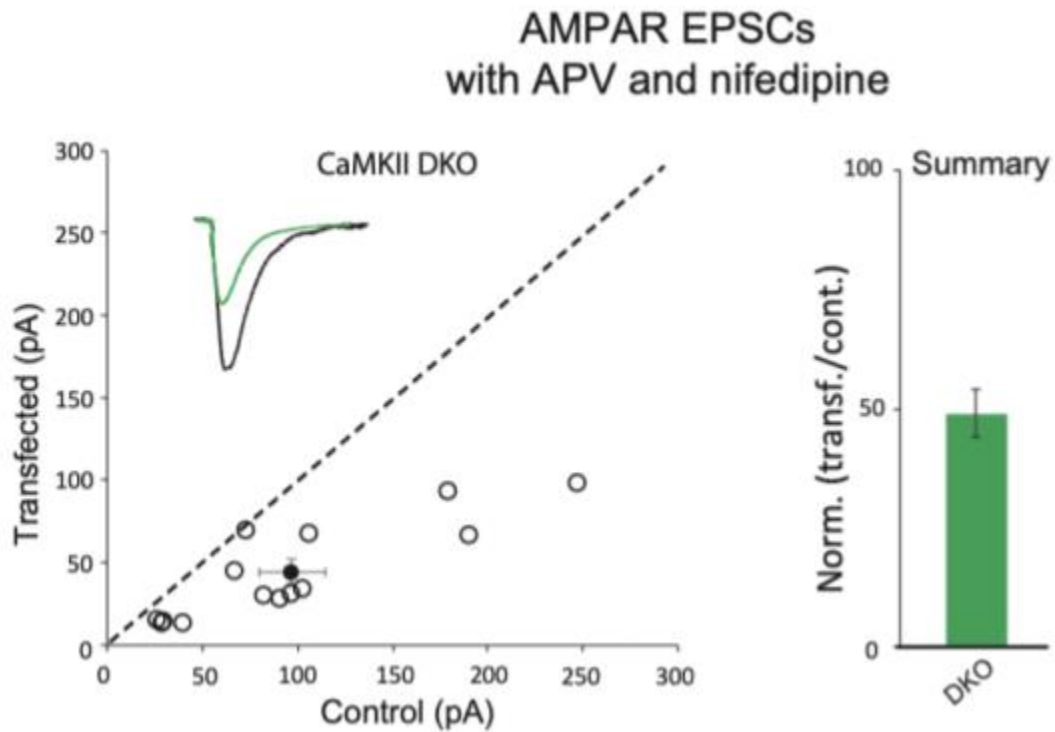
#### **Experimental Constructs and chemical agents**

CaMKII DKO constructs had been described previously (1). APV and nifedipine were purchased from Sigma.

#### **Slice culture and biolistic transfection**

Hippocampal slices are made according to previous paper (1). A Helio Gene Gun with 1  $\mu\text{m}$  DNA-coated gold particles (Bio-Rad) was used on slices for biolistically transfection, 2 day after slicing. Slices were maintained at 34°C and the medium was changed every 2 to 3 days. Once the slices had been made, its media had APV and nifedipine added to it to concentrations of 100  $\mu\text{M}$  and 20  $\mu\text{M}$ .

Fig. S1.



**Figure S1.** DKO of CaMKII still depresses synaptic transmission, while slice cultures are bathed in APV and nifedipine to prevent  $\text{Ca}^{2+}$  entry into the cells. Paired AMPA currents measured between CaMKII DKO and control cells. The example traces shown in green (CaMKII DKO cell) and black color (control cell). AMPA currents of transfected cells are significantly reduced. (WT =  $97.1 \pm 17$ , TF =  $44.6 \pm 8$ , n = 14 pairs.)

## References

1. S. Incontro *et al.*, The CaMKII/NMDA receptor complex controls hippocampal synaptic transmission by kinase-dependent and independent mechanisms. *Nat Commun* **9**, 2069 (2018).