

SUPPLEMENTARY INFORMATION

FIGURE LEGENDS

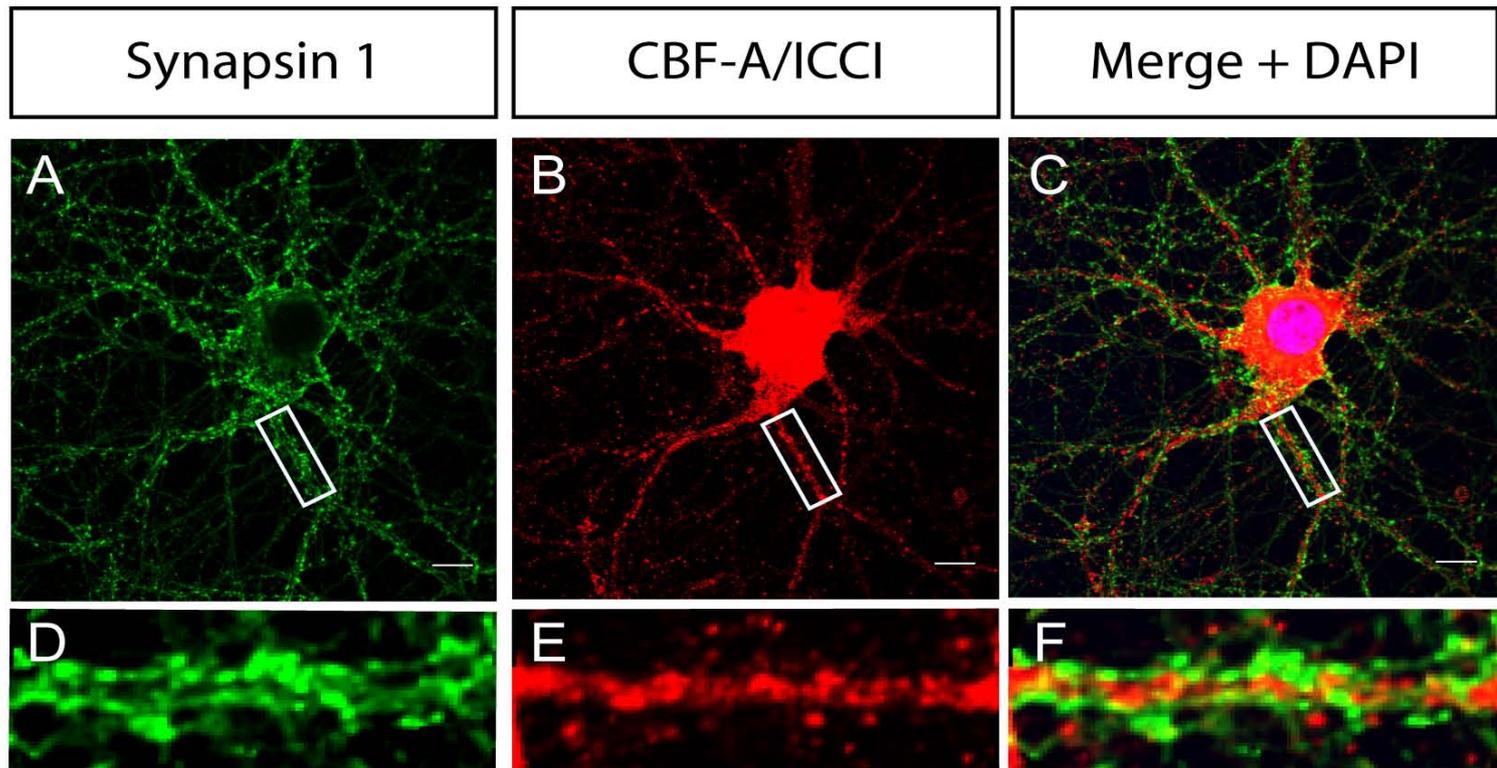
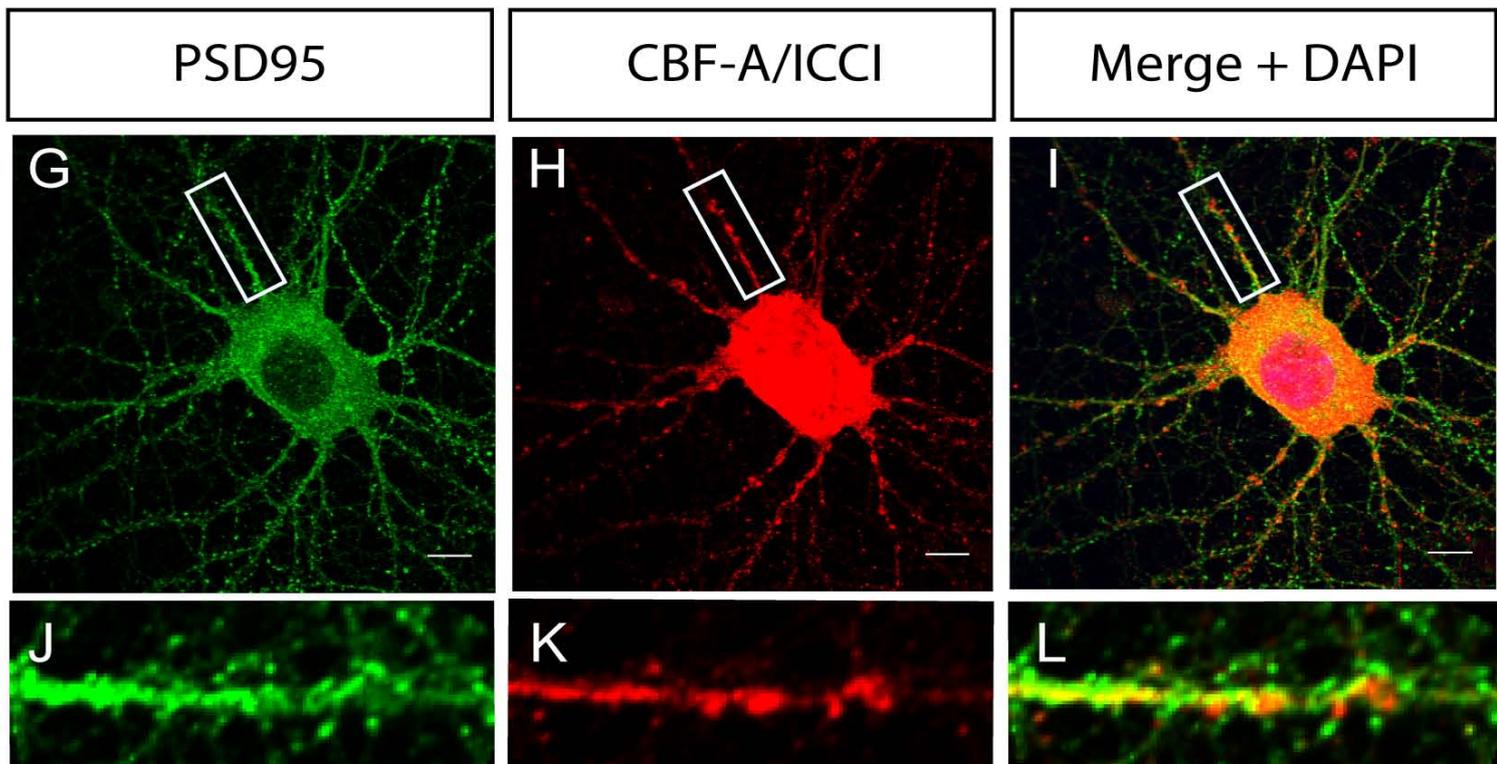
Supplementary figure 1. Distribution of CBF-A in hippocampal neurons using the rabbit anti-CBF-A antibody ICC1. **(A)** Panels A-F, 18 DIV hippocampal neurons co-immunostained with antibodies against the pre-synaptic marker synapsin 1 and ICC1. Panels D-F, fivefold magnifications of boxed area. **(B)** Panels G-L, cells co-immunostained with antibodies against post-synaptic marker PSD95. Panels J-L, fivefold magnifications of boxed areas. In all cases immunofluorescence images were taken by confocal laser scanning microscopy. Scale bar, 10 μm .

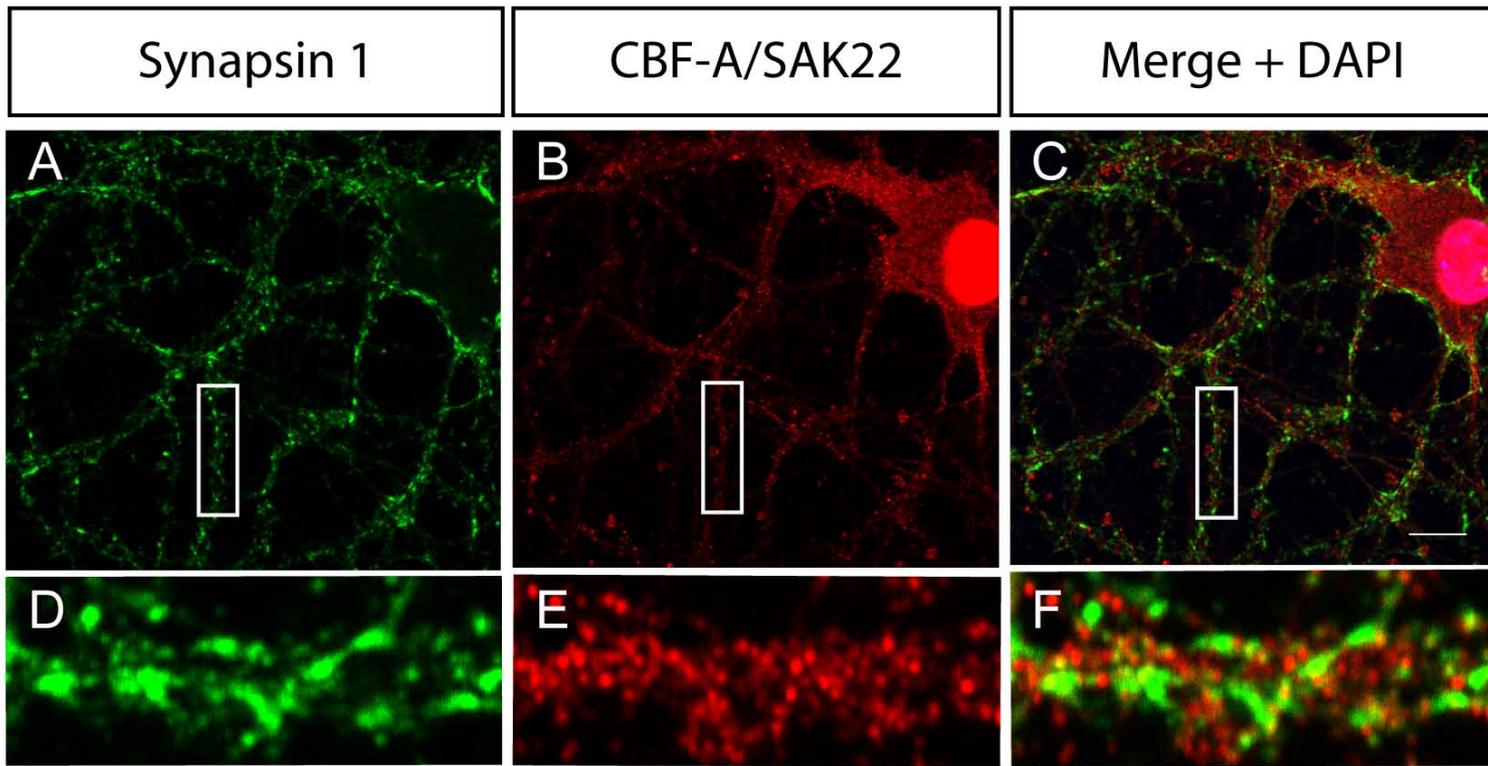
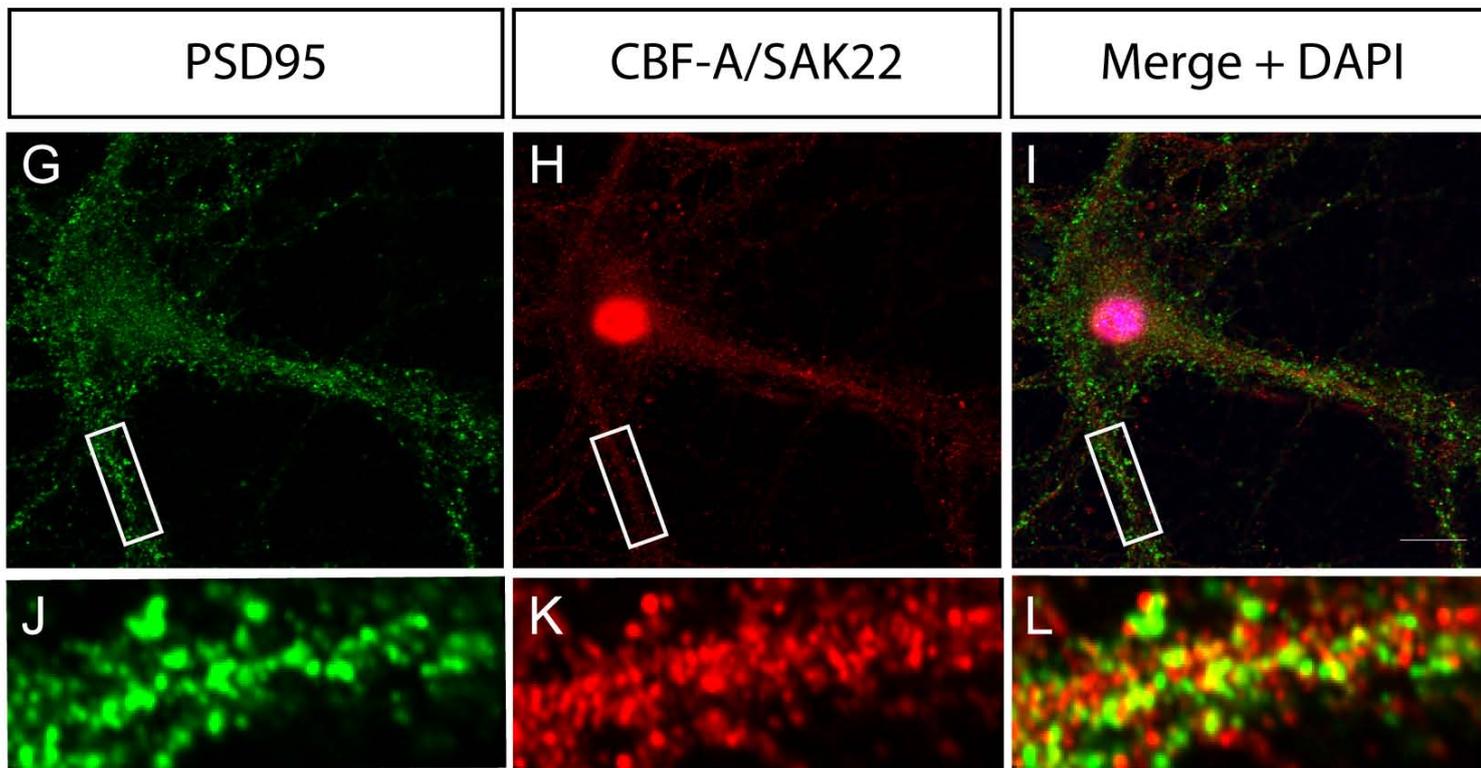
Supplementary figure 2. Distribution of CBF-A in hippocampal neurons using the anti-CBF-A antibody SAK22. **(A)** Panels A-F, 18 DIV hippocampal neurons co-immunostained with antibodies against pre-synaptic marker synapsin 1 and SAK22. Panels D-F, fivefold magnifications of boxed areas. **(B)** Panels G-L, cells co-immunostained with antibodies against post-synaptic marker PSD95. Panels J-L, fivefold magnifications of boxed areas. In all cases immunofluorescence images were taken by confocal microscopy. Scale bar, 10 μm .

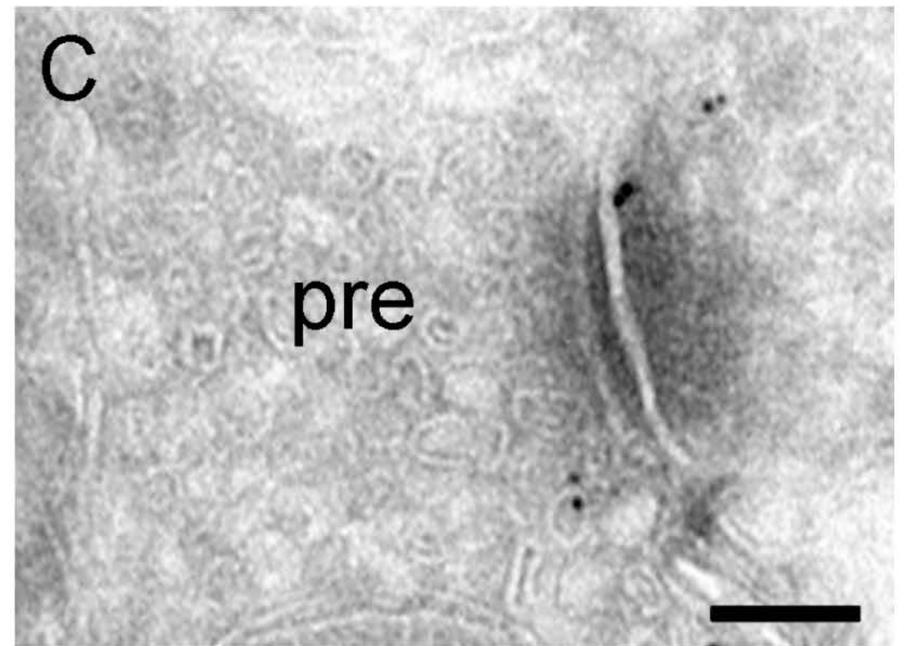
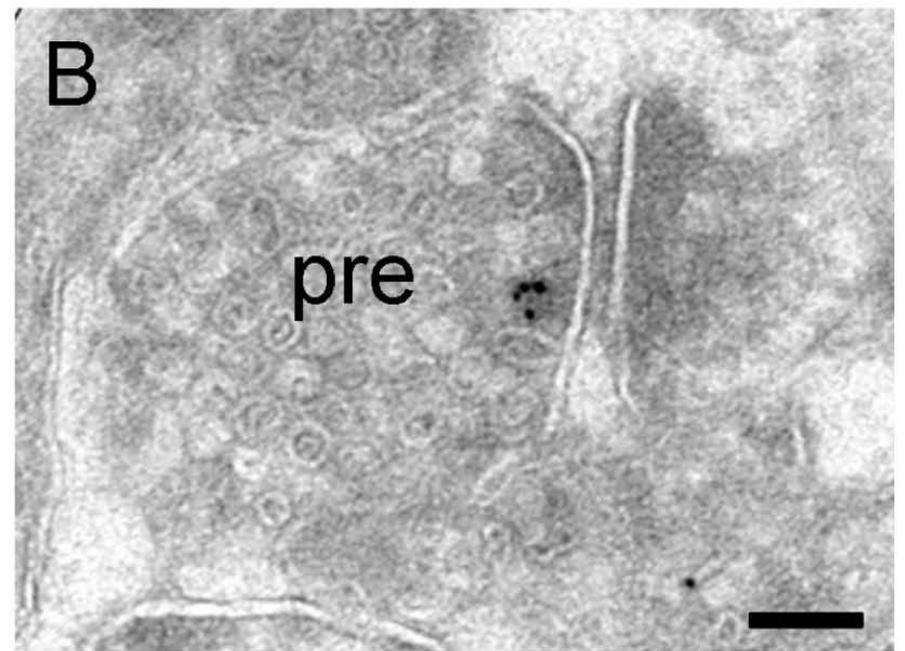
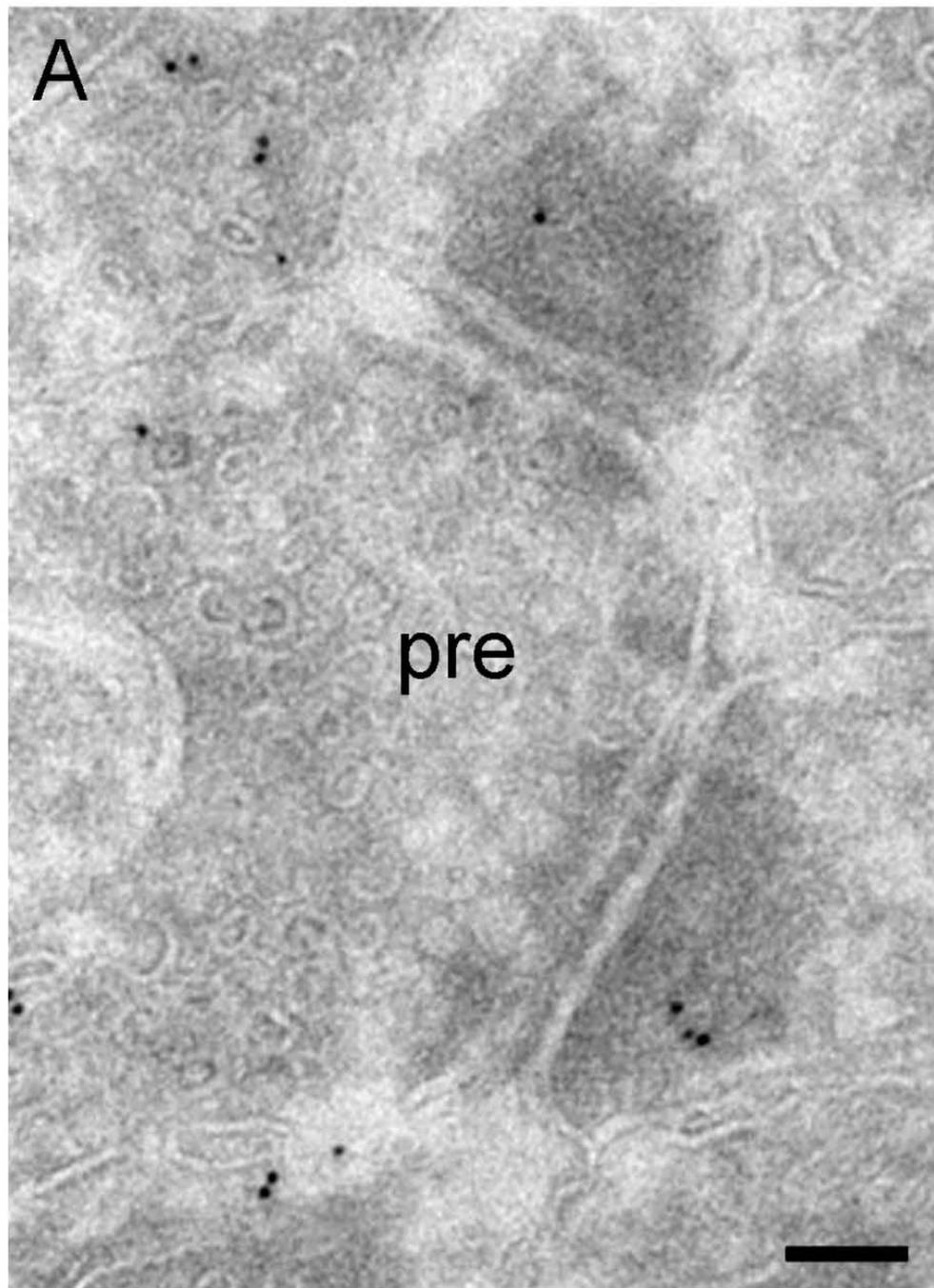
Supplementary figure 3. Immuno-electron microscopy labeling of CBF-A in hippocampal synapses.

Thin sections of adult mouse brain were immunostained with the rabbit polyclonal anti-CBF-A antibody ICC1. The antibody binding was detected with a secondary antibody conjugated to colloidal gold particles. **(A-C)** Examples of anti-CBF-A labeling in synapses in the hippocampus. CBF-A was detected in both pre-synaptic and post-synaptic compartments. The magnification bars represent 100 nm.

Supplementary figure 4. 10 DIV hippocampal neurons were subjected to immuno-FISH with an antibody against MAP2 and with sense probes directed to Arc, BDNF and α CaMKII mRNAs and analyzed by confocal microscopy. The sense probes, complementary to the antisense probes, were obtained by in vitro transcription using the same primers as in the material and method section in the main text using SP6 RNA polymerase. As expected no signal was detected with the sense probe against the indicated transcripts, which support the specificity of the immune FISH data reported in figure 7 of the main text. Scale bar, 10 μ m.

A**B**

A**B**



MAP2

ARC mRNA/sense

Merge + DAPI

A

B

C

MAP2

BDNF mRNA/sense

Merge + DAPI

D

E

F

MAP2

CaMKII α mRNA/sense

Merge + DAPI

G

H

I