

# Supplementary Figure S1 – Uncropped Western Blots.

Male pups – MEGF10,  $\beta$ -actin, PSD95, Synaptophysin, Cofilin

Fig.1B

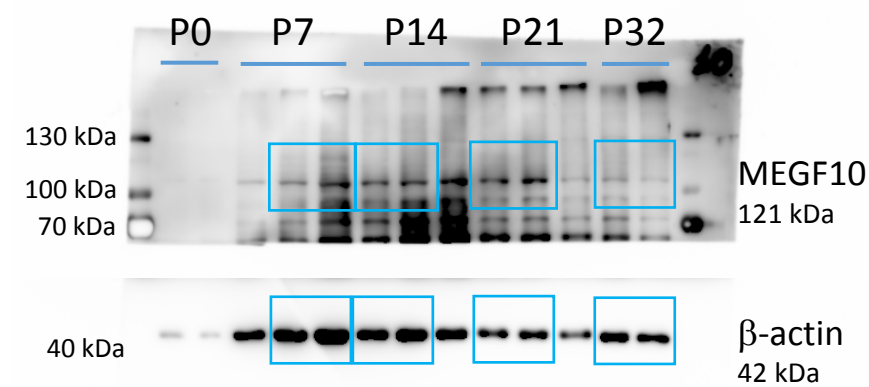


Fig.1D

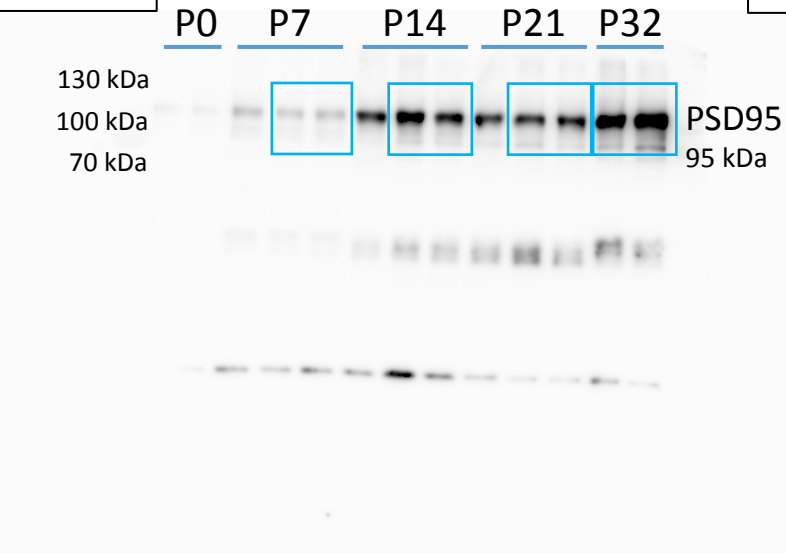


Fig.1F

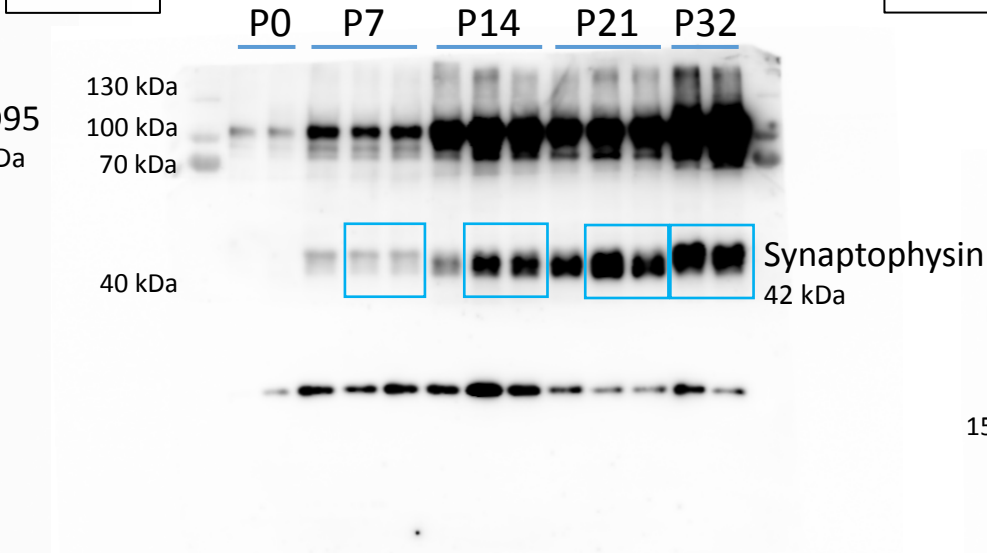
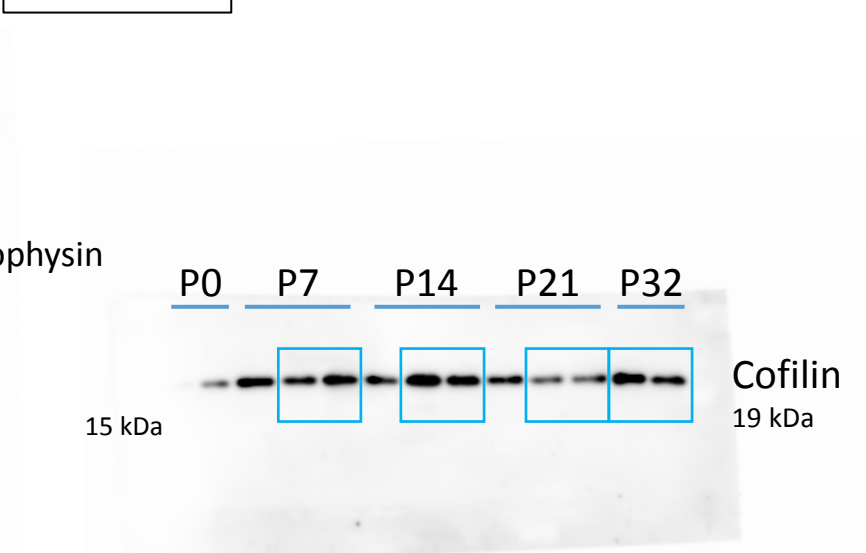


Fig.1D & F



To detect each protein, proper exposure time were applied. Protein analysis was carried out on original images.

Female pups – MEGF10,  $\beta$ -actin, PSD95, Synaptophysin, Cofilin

Fig.1H

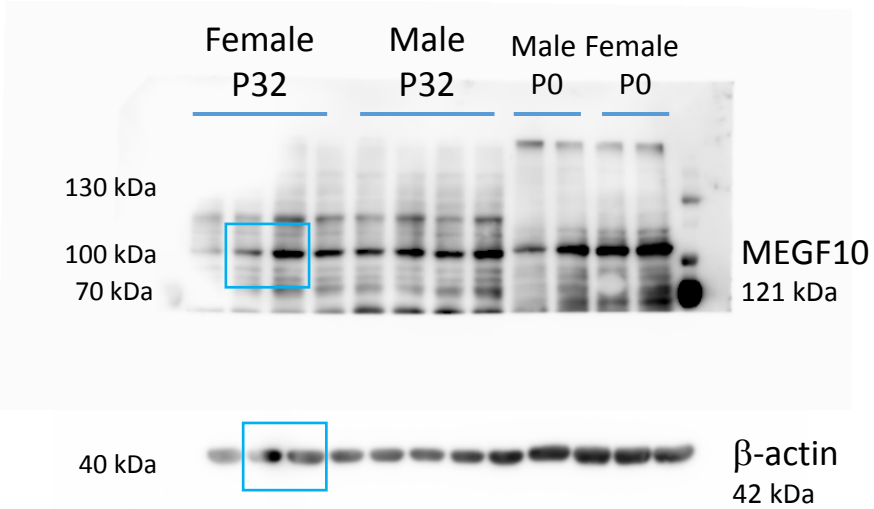
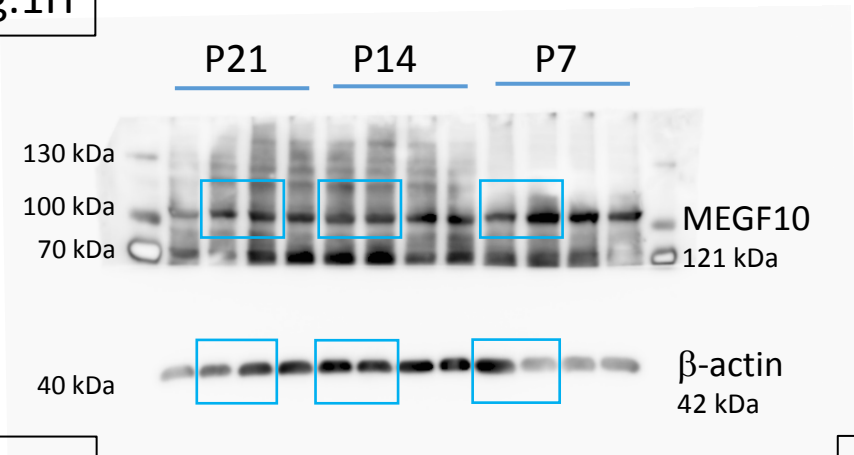


Fig.1J

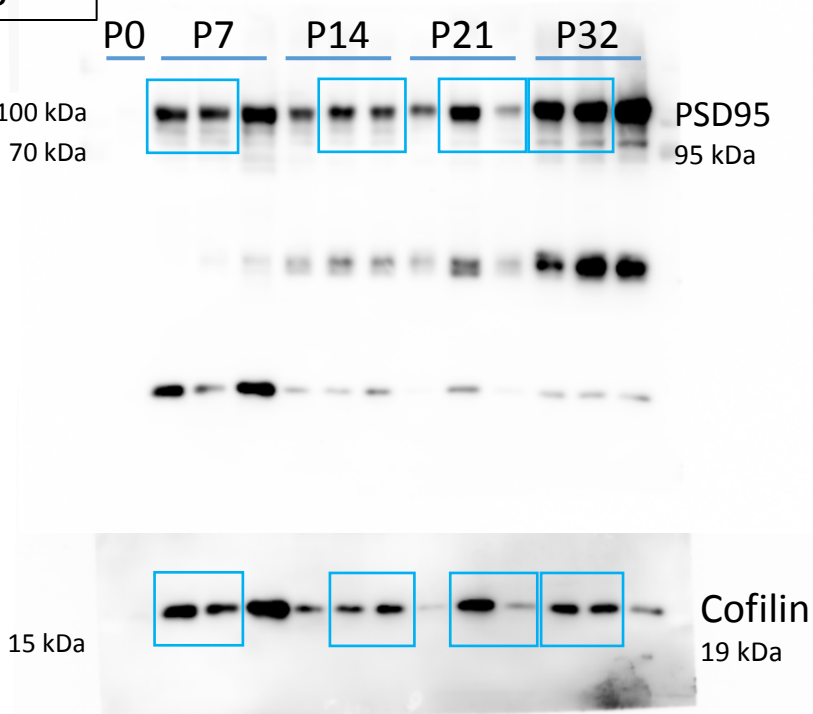
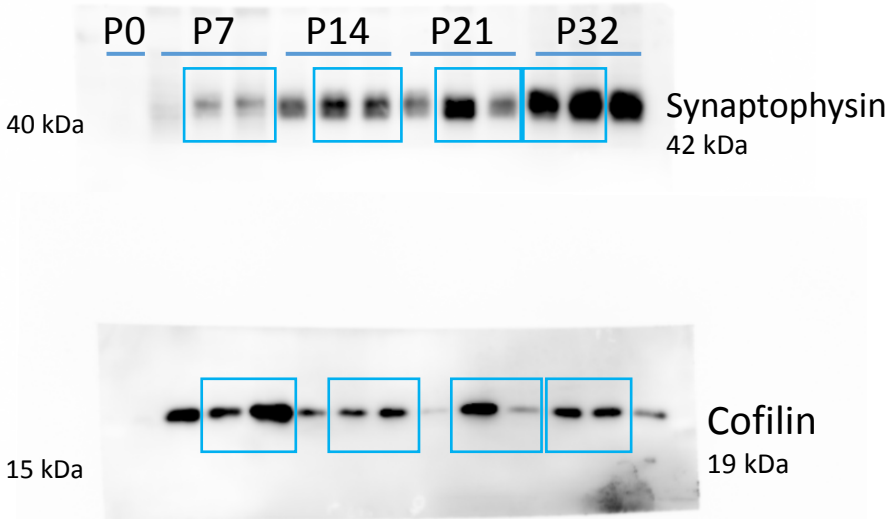


Fig.1L

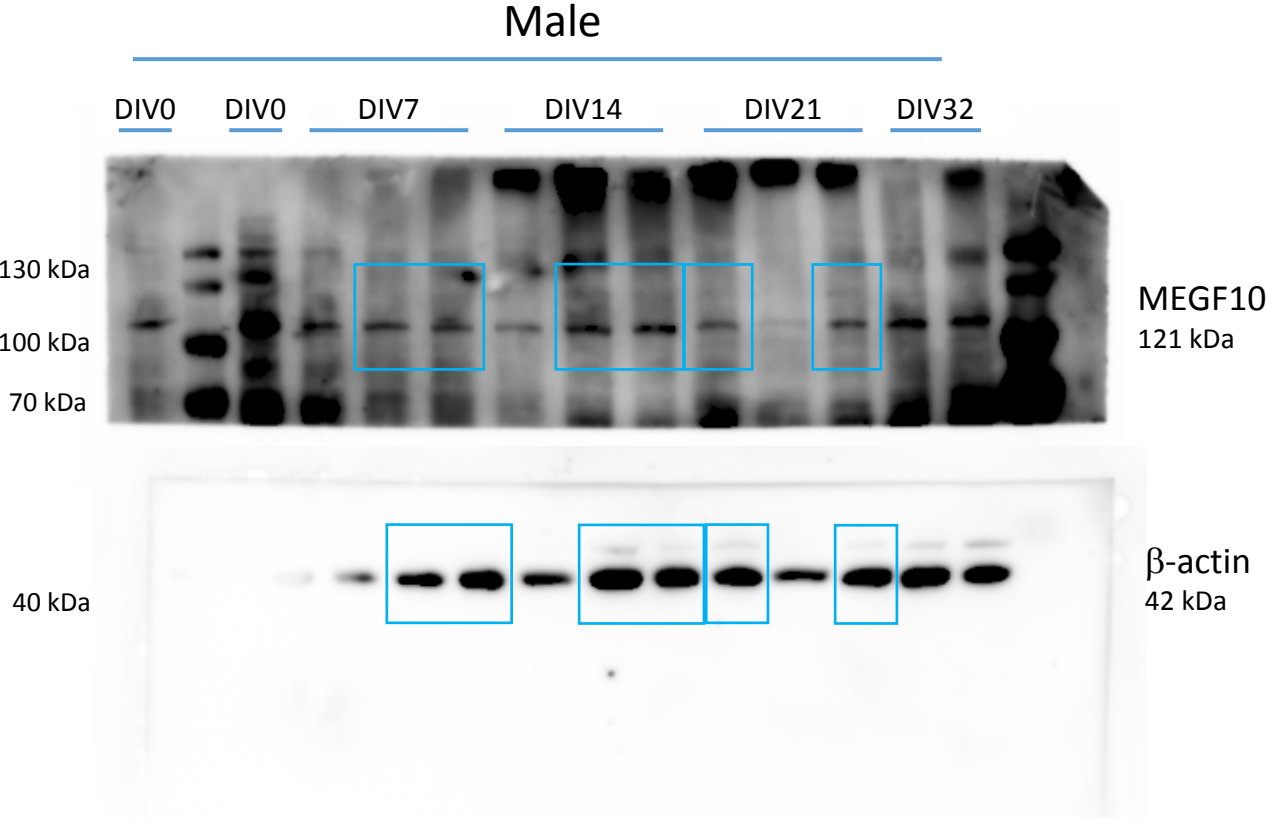


To detect each protein, proper exposure time were applied. Protein analysis was carried out on original images.

# Supplementary Figure 4 – Uncropped Western Blots

male OBSCs– MEGF10 &  $\beta$ -actin

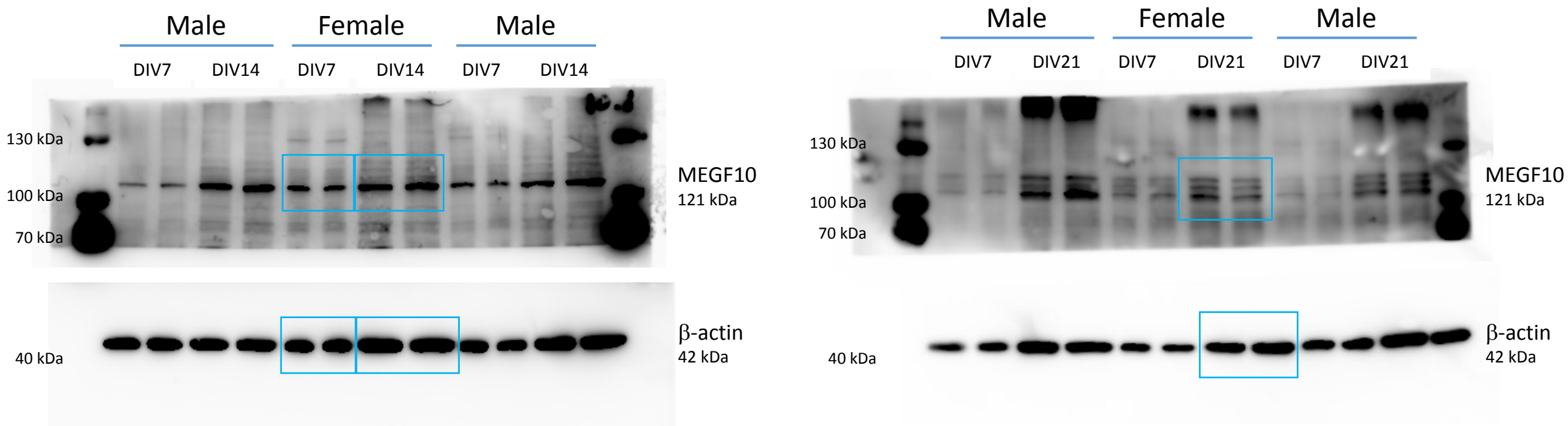
Fig.4A



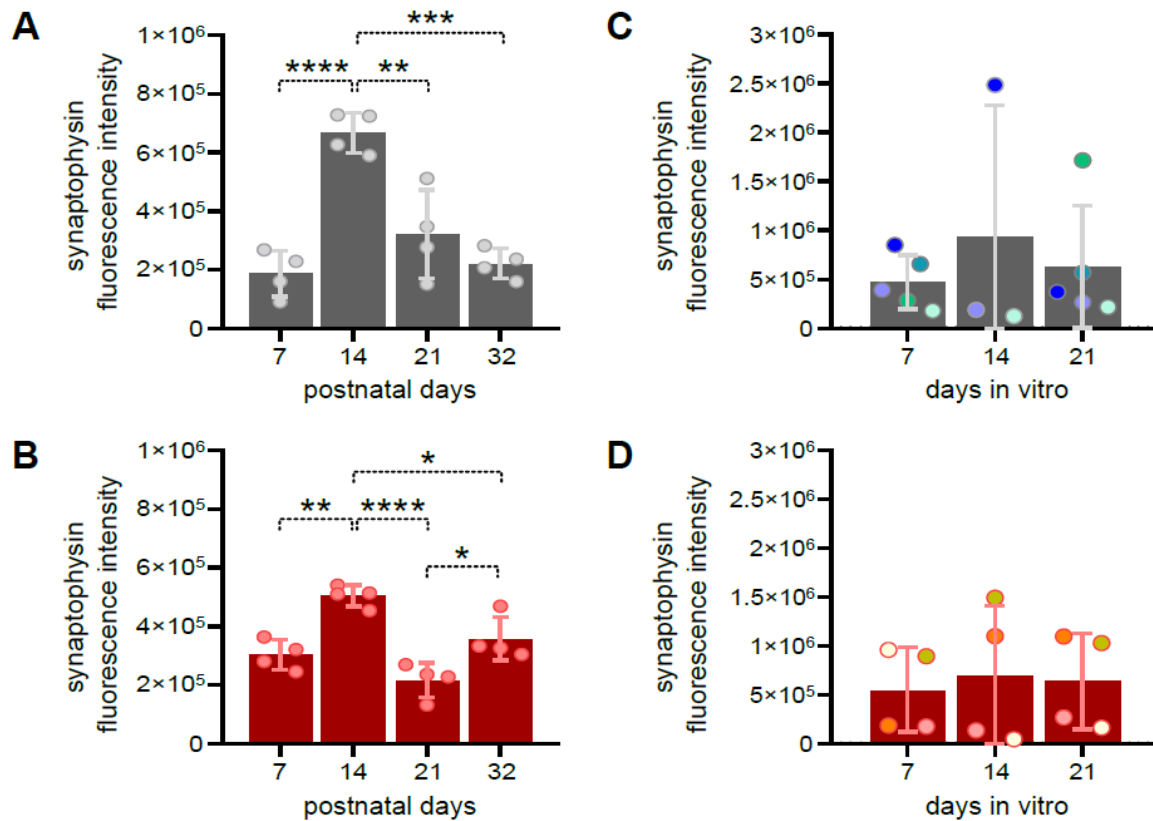
To detect each protein, proper exposure time were applied. Protein analysis was carried out on original images.

female OBSCs– MEGF10 &  $\beta$ -actin

Fig.4E



To detect each protein, proper exposure time were applied. Protein analysis was carried out on original images.



**Supplementary Figure S2**—Quantification of age- and sex-dependent changes in synaptophysin fluorescent intensity in vivo. (A,B) and in OBSCs (C,D) in males (A,C) and females (B,D). (A) Quantification of synaptophysin fluorescent intensity in the PFC at different postnatal developmental stages in male littermates. Each dot represents the average data of 6 pictures from at least 2 slices for each animal:  $n = 4$  animals. One-way ANOVA, Tukey's multiple comparison, \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ; \*\*\*\*  $p < 0.0001$ . (B) Quantification of synaptophysin fluorescent intensity in the PFC at different postnatal developmental stages of female littermates. Each dot represents the average data of 6 pictures from at least 2 slices for each animal:  $n = 4$  animals. One-way ANOVA, Tukey's multiple comparison, \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*\*  $p < 0.0001$ . (C) Quantification of synaptophysin fluorescent intensity in male-derived OBSCs at different timepoints. Each dot represents one animal,  $n = 3$ –5 animals. Statistical analysis was performed via one-way ANOVA repeated measures, with Tukey's multiple comparison. (D) Quantification of synaptophysin fluorescent intensity in female-derived OBSCs at different timepoints. Each dot represents one animal,  $n = 4$  animals. Statistical analysis was performed via one-way ANOVA repeated measures, with Tukey's multiple comparison.