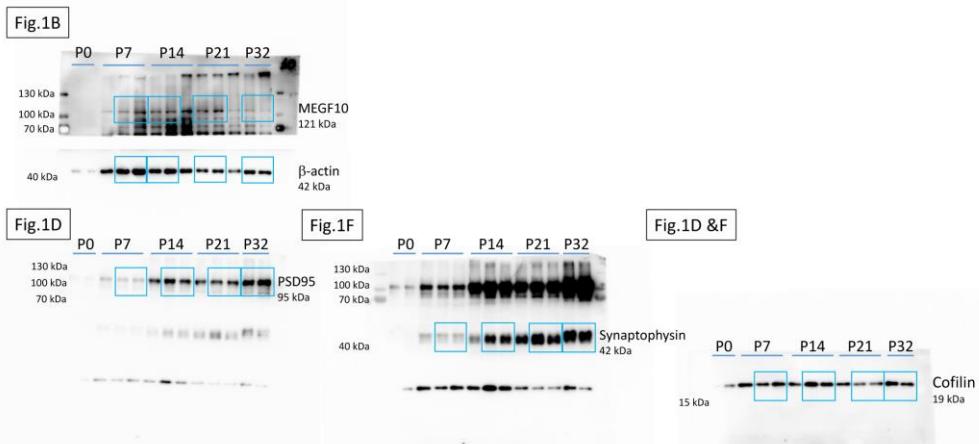
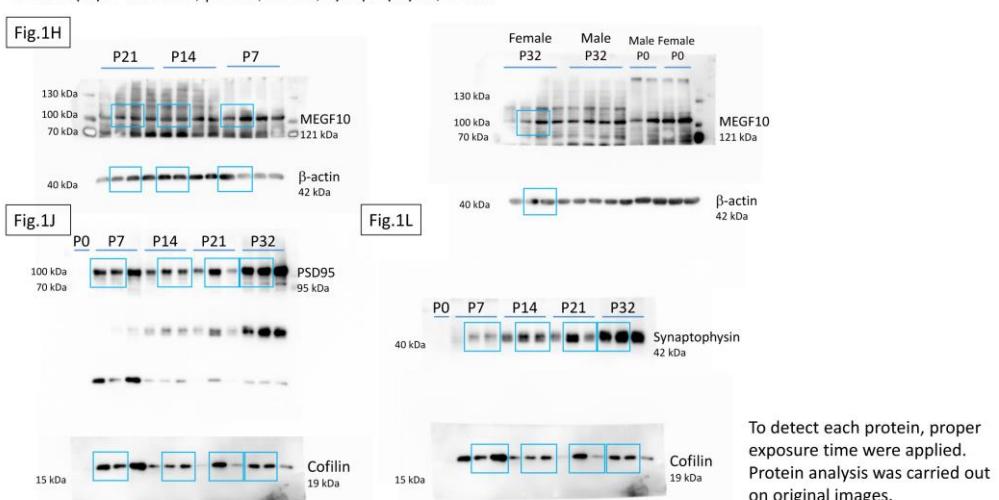


**Supplementary Figure 1 – Uncropped Western Blots**  
 Male pups – MEGF10,  $\beta$ -actin, PSD95, Synaptophysin, Cofilin

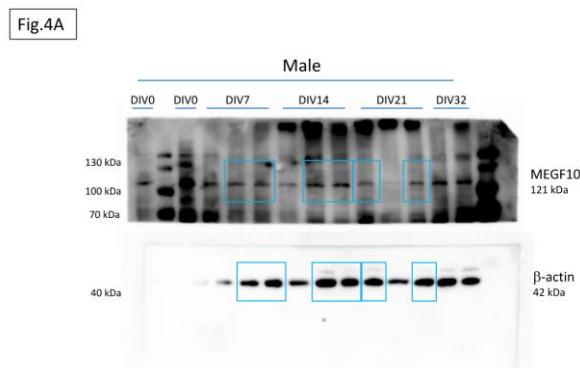


Female pups – MEGF10,  $\beta$ -actin, PSD95, Synaptophysin, Cofilin



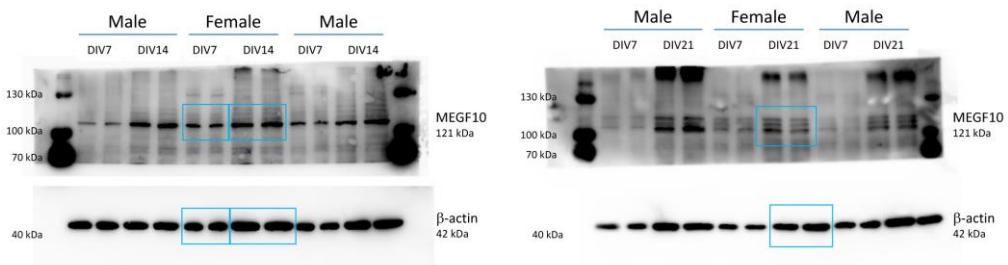
**Supplementary Figure 4 – Uncropped Western Blots**

male OBSCs – MEGF10 &  $\beta$ -actin



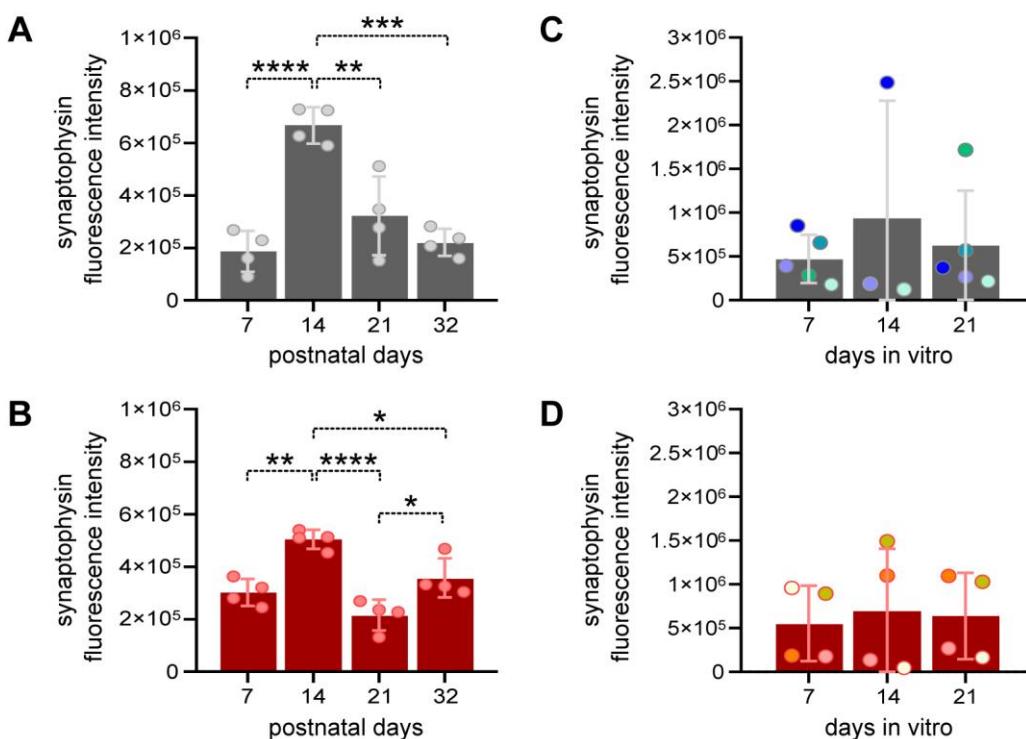
female OBSCs– MEGF10 &  $\beta$ -actin

Fig.4E



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

**Figure S1 to Figure1 and Figure 4:** Original uncropped Western blots from which representative bands were cropped to prepare Figure1 and Figure4.



**Figure S2. to Figure1 and Figure 4:** Quantification of age- and sex-dependent changes in synaptophysin fluorescent intensiy 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.