



**Fig. S1:** Impact of VIP-deficiency on circulating LH during proestrus. Serum was sampled hourly from ZT 7 to 15 on the day of proestrus to determine the concentration and timing of the proestrous LH surge. **A.** The concentration of circulating LH was not significantly different between genotypes. **B.** We did not detect significant differences in the maximum concentration of proestrous LH due to the VIP-deficiency. However, the variability within the WT samples confounds interpretation. **C,D.** [LH] normalized within each animal to its maximum value (max) is shown. The time of peak [LH] is not significantly different between WT (**C**) and VIP<sup>-/-</sup> (**D**).