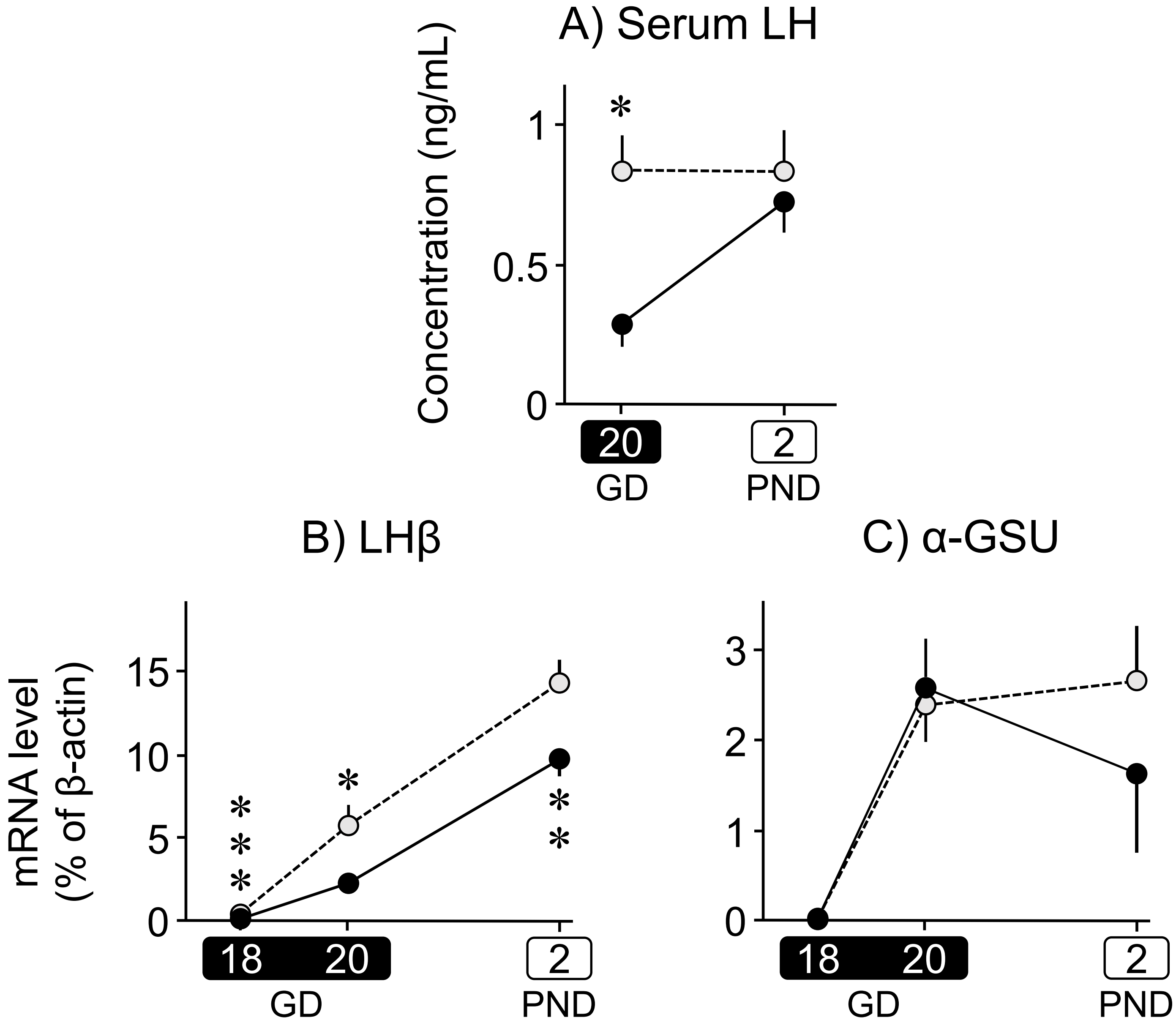

Fig. 1. The age-dependent effects of the AHR deletion on the circulation level of LH (A) and the pituitary expression of LHβ mRNA (B) and αGSU mRNA (C) in male rats. Each bar represents the mean ±S.E.M. of 6-15 fetuses (neonates). Significantly different from the control: *$p<0.05$, **$p<0.01$, ***$p<0.001$. abbreviation used: αGSU, glycoprotein hormone α-subunit. Data for serum LH and LHβ mRNA level at GD20 are quoted from Hattori et al (2018)(15). Data for the mRNA level of LHβ at PND2 are quoted from the annual report at Fiscal year 2018.

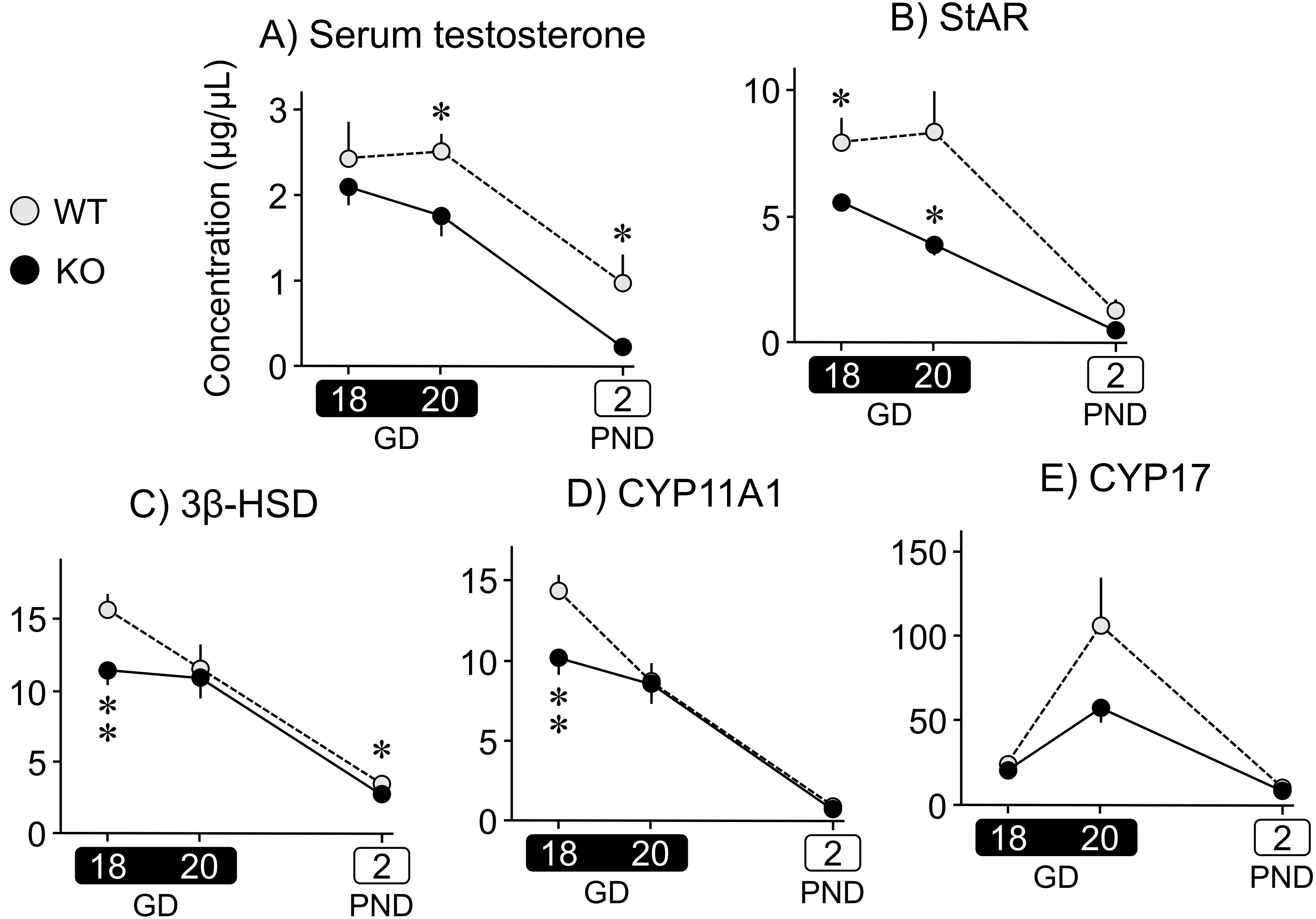

Fig. 2. The age-dependent effects of the AHR deletion on circulation level of testosterone (A) and the testicular expression of sex-steroid synthesis proteins mRNAs (B-G). Each bar represents the mean ±S.E.M. of 5-10 fetuses (neonates). Significantly different from the control: *p<0.05, **p<0.01. Data for the serum testosterone and mRNA levels (StAR and CYP17) at GD20 are quoted from Hattori et al (2018)(15) . Data for the serum testosterone at PND2 are quoted from the annual report at Fiscal year 2018.

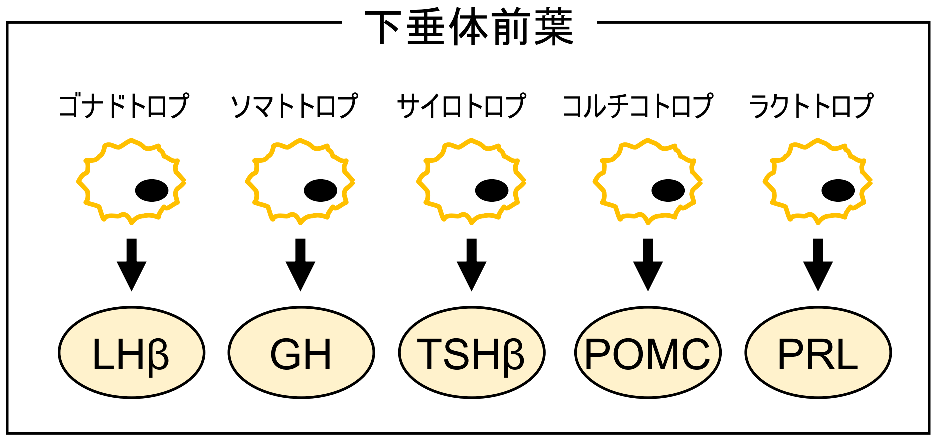

Fig. 3. The hormone production in the anterior pituitary gland. Abbreviations used: GH, growth hormone; TSHβ, thyroid-stimulating hormone β; POMC, propiomelanocortin; PRL, prolactin.

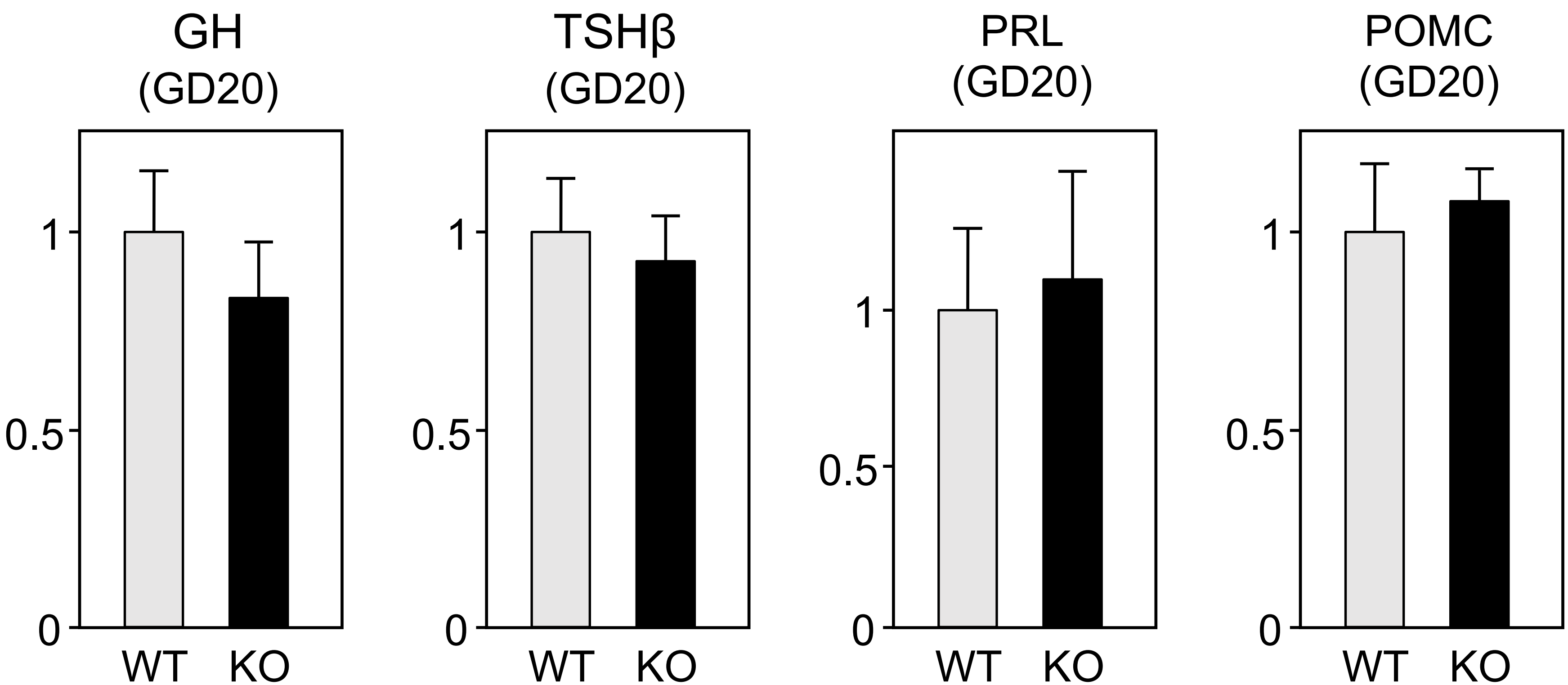

Fig. 4. Effect of AHR ablation on the pituitary expression of mRNAs coding for GH, TSHβ, POMC PRL in GD20 male fetuses. Each bar represents the mean ±S.E.M. of 6-9 fetuses. The WT levels of mRNAs (% of β-actin; mean ±S.E.M.) were as follows: GH (445 ± 70), TSHβ (34.2 ± 4.8), POMC (74.8 ± 12.4), PRL (1.72 ± 0.43).

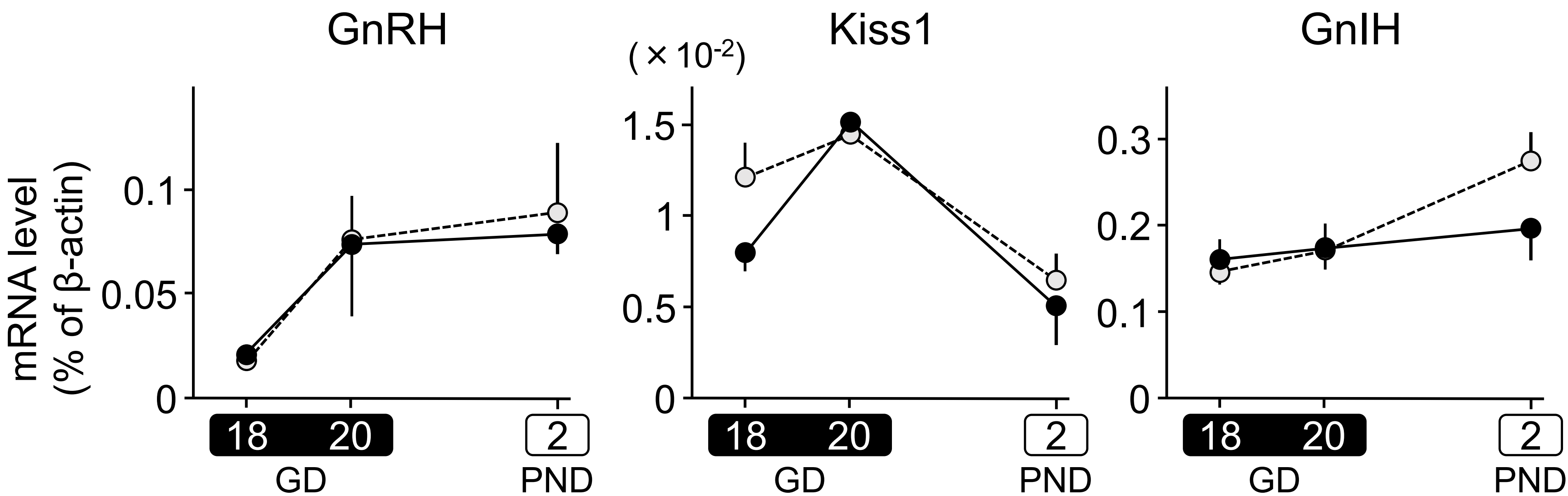

Fig. 5. The age-dependent effects of the AHR deletion on the hypothalamic expression of mRNAs coding for upstream regulators of LH synthesis in male rats. Each bar represents the mean ±S.E.M. of 4-11 fetuses (neonates). Abbreviations used: GnRH, gonadotropin-releasing hormone; Kiss1, Kisspeptin; GnIH, gonadotropin-inhibitory hormone.
Data for mRNA levels of GnRH, Kiss1 and GnIH at GD20 are quoted from Hattori et al (2018)(15) .

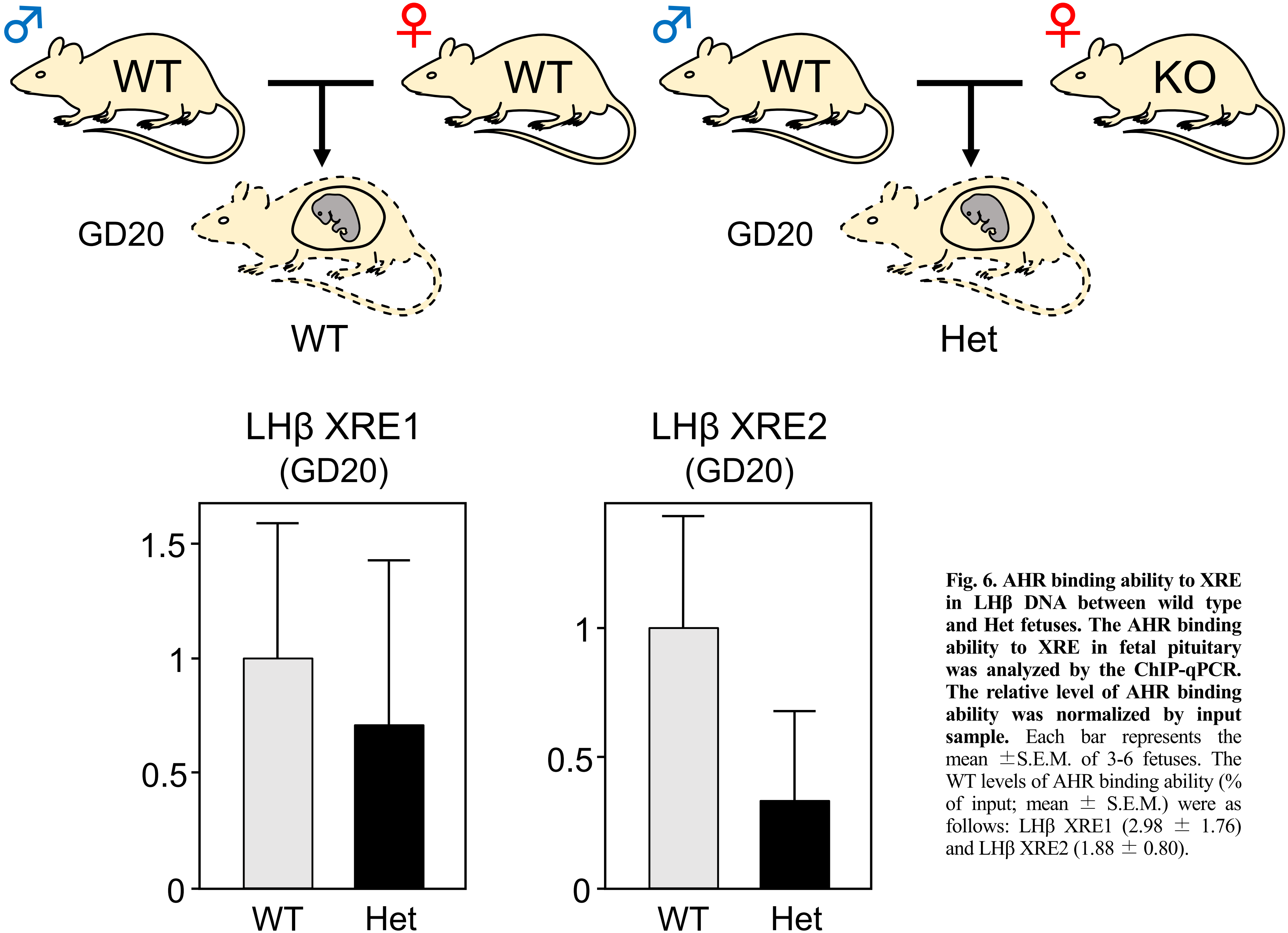

Fig. 6. AHR binding ability to XRE in LHβ DNA between wild type and Het fetuses. The AHR binding ability to XRE in fetal pituitary was analyzed by the ChIP-qPCR. The relative level of AHR binding ability was normalized by input sample. Each bar represents the mean ±S.E.M. of 3-6 fetuses. The WT levels of AHR binding ability (% of input; mean ± S.E.M.) were as follows: LHβ XRE1 (2.98 ± 1.76) and LHβ XRE2 (1.88 ± 0.80).

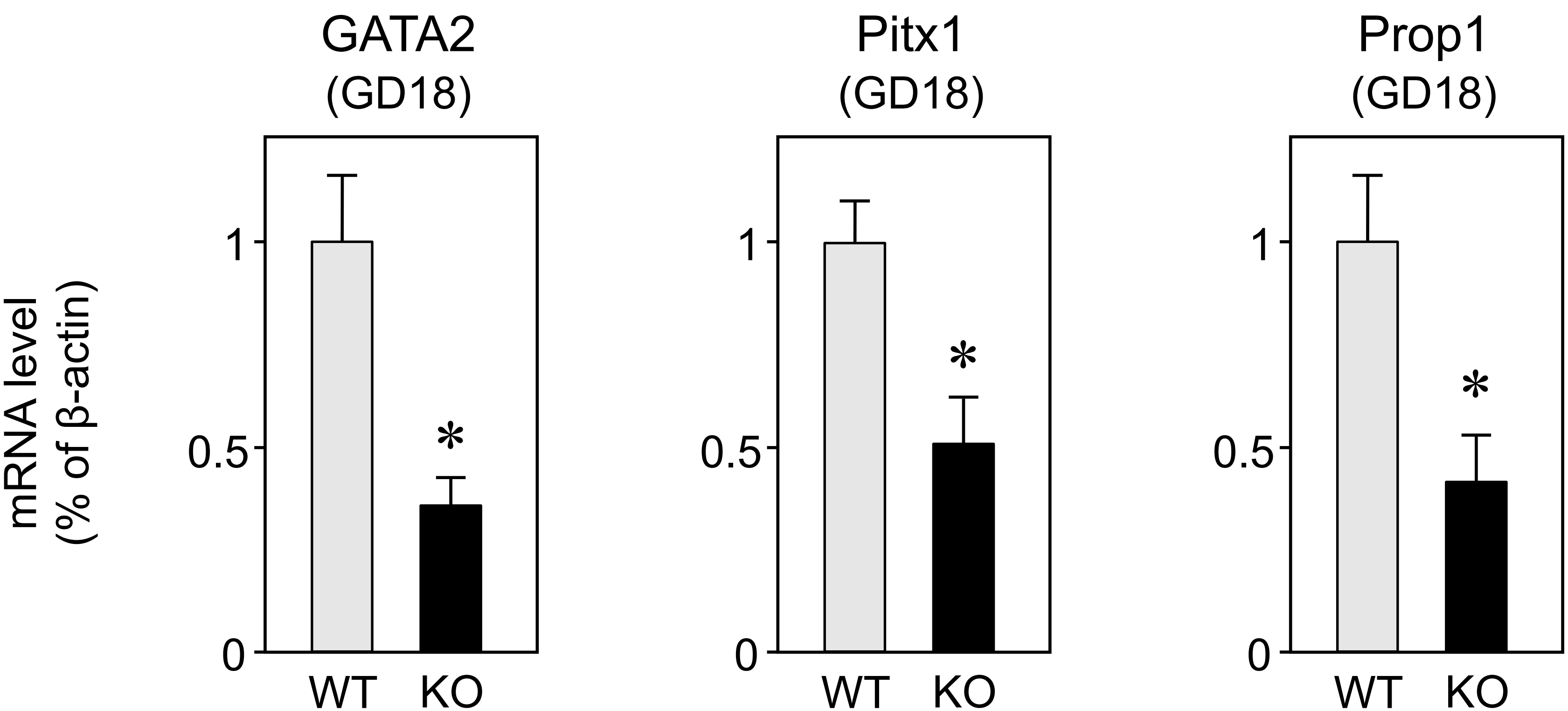

Fig. 7. Effect of AHR ablation on the pituitary expression of mRNAs coding for GATA2, Pitx1, Prop1 in GD18 male fetuses. Each bar represents the mean ±S.E.M. of 8-10 fetuses. Significantly different from the control: *p<0.01. The WT levels of mRNAs (% of β-actin; mean ±S.E.M.) were as follows: GATA2 (0.220 ± 0.037), Pitx1 (0.167 ± 0.018), Prop1 (0.853 ± 0.089).

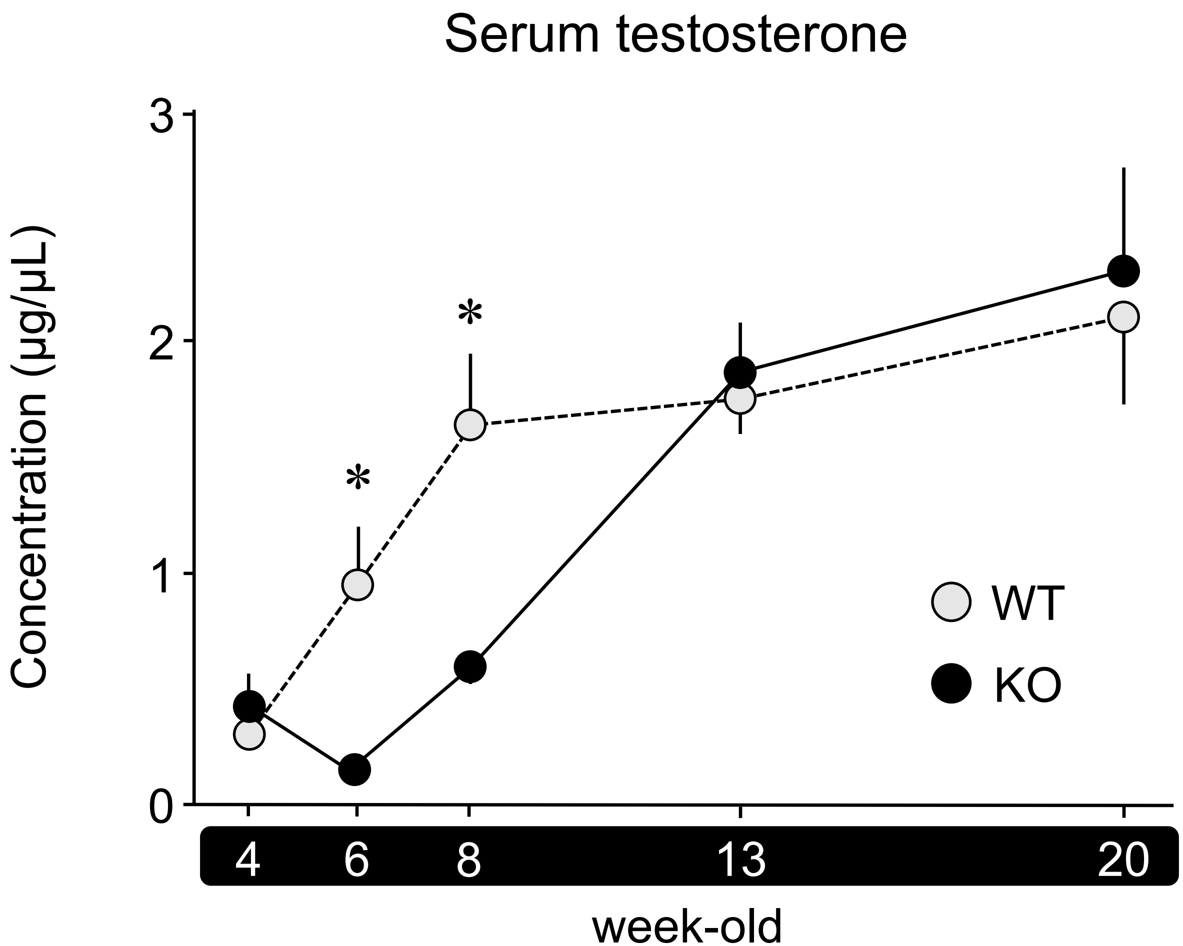

Fig. 8. The age-dependent effects of the AHR deletion on circulating level of testosterone in male rats. Each bar represents the mean ± S.E.M. of 6-13 rats. Significantly different from the wild-type: *p<0.05. Data for the serum testosterone at 4 and 6 week-old rats are quoted from the annual report at Fiscal year 2018.

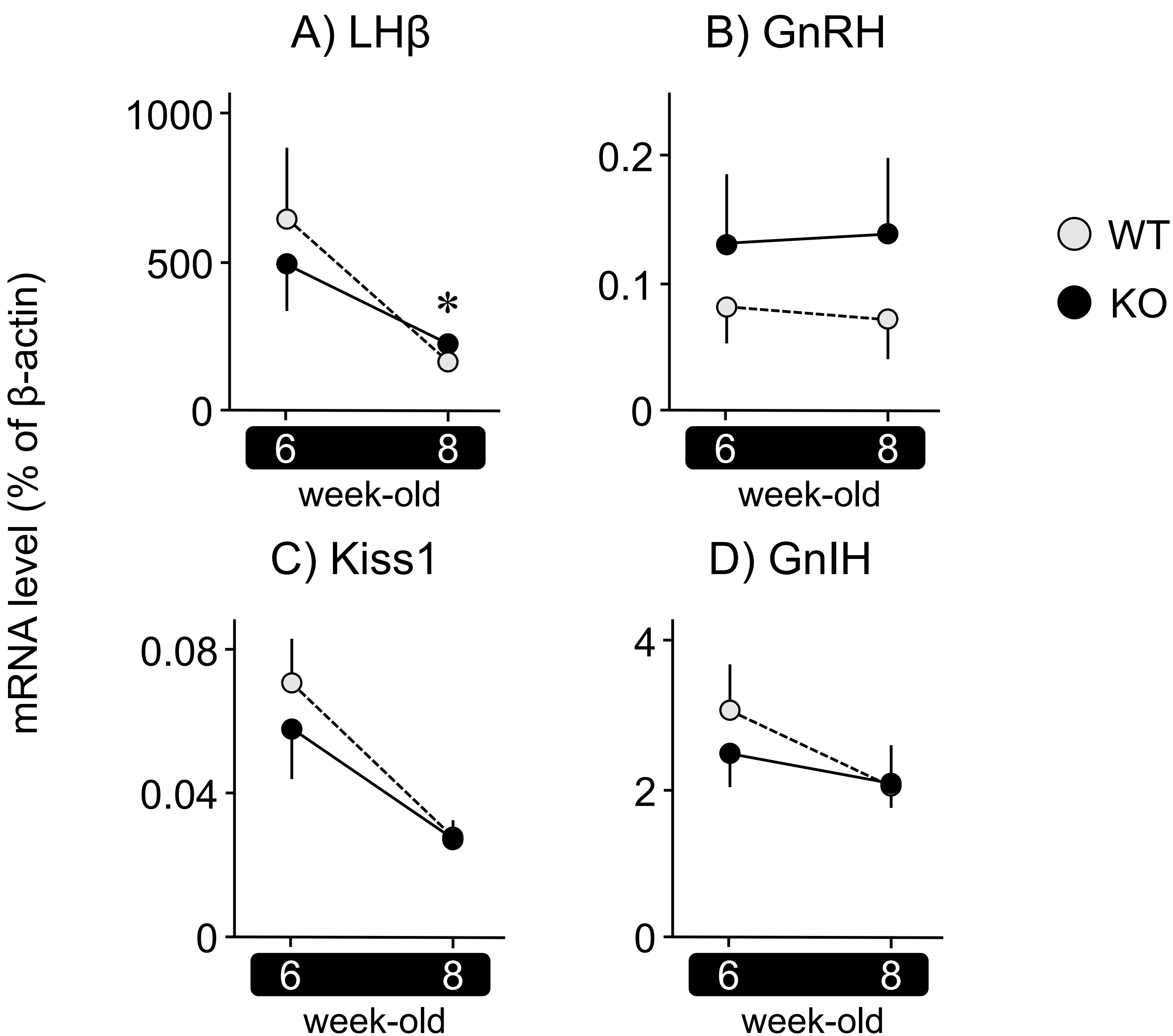

Fig. 9. The pubertal effects of the AHR deletion on the pituitary expression of LHβ mRNA (A) and the hypothalamic expression of mRNAs coding for upstream regulators of LH synthesis in male rats. Each bar represents the mean ±S.E.M. of 3-8 rats. Significantly different from the wild-type: **p*<0.05.

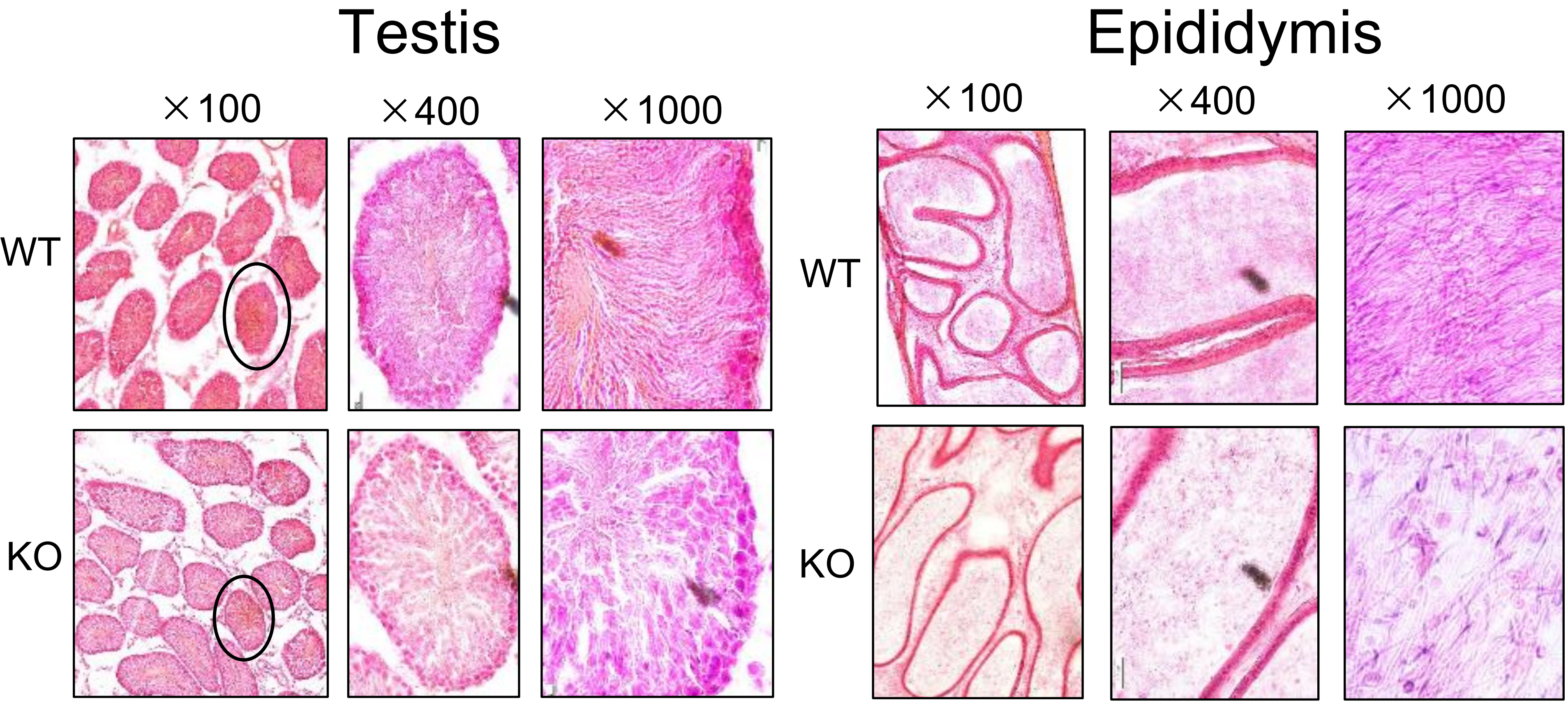

Fig. 10. Histopathological changes by knocking out the AHR in the testis (A) and epididymis (B) of male rats at 8 weeks old. The sections (14 μm) of testis and epididymis were stained by hematoxylin and eosin solutions. Data are quoted from the annual report at Fiscal year 2018.

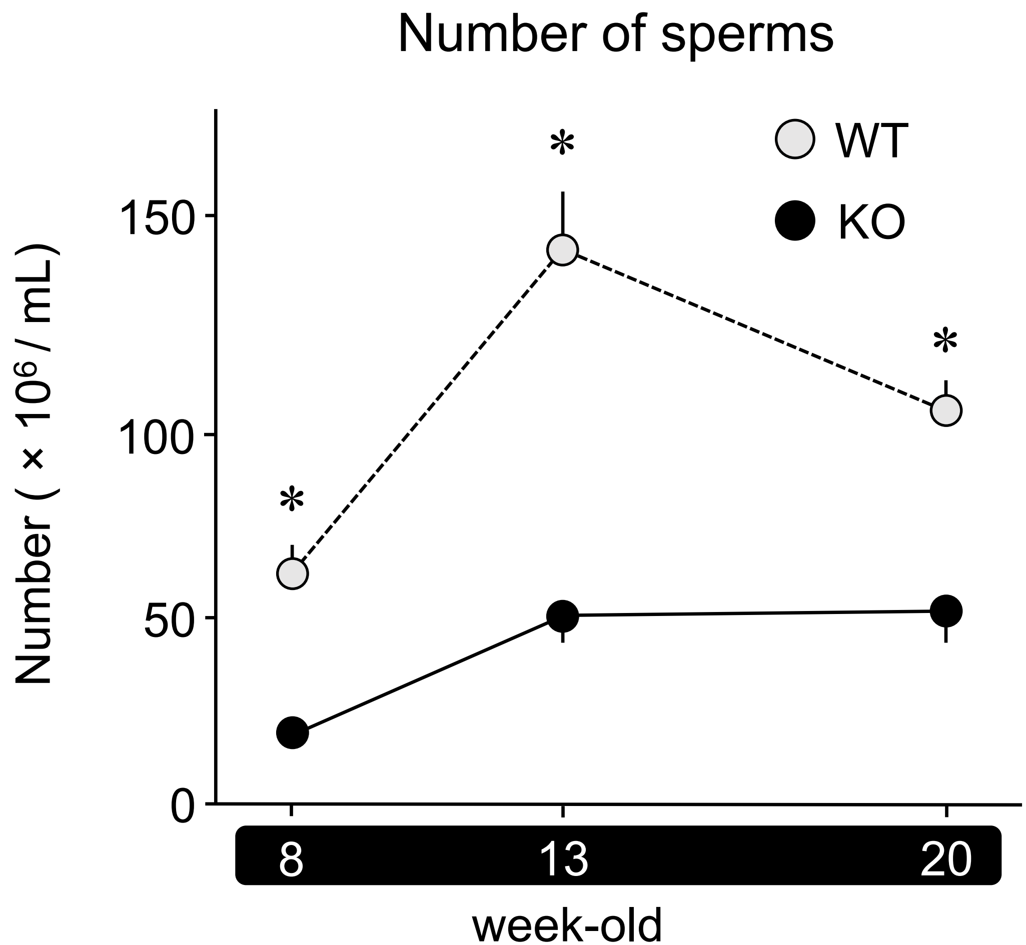

Fig. 11. The age-dependent effect of the AHR deletion on the number of sperms in male rats. Each bar represents the mean ±S.E.M. of 4-7 rats. Significantly different from the wild-type: *p<0.05. Data are quoted from the annual report at Fiscal year 2018.

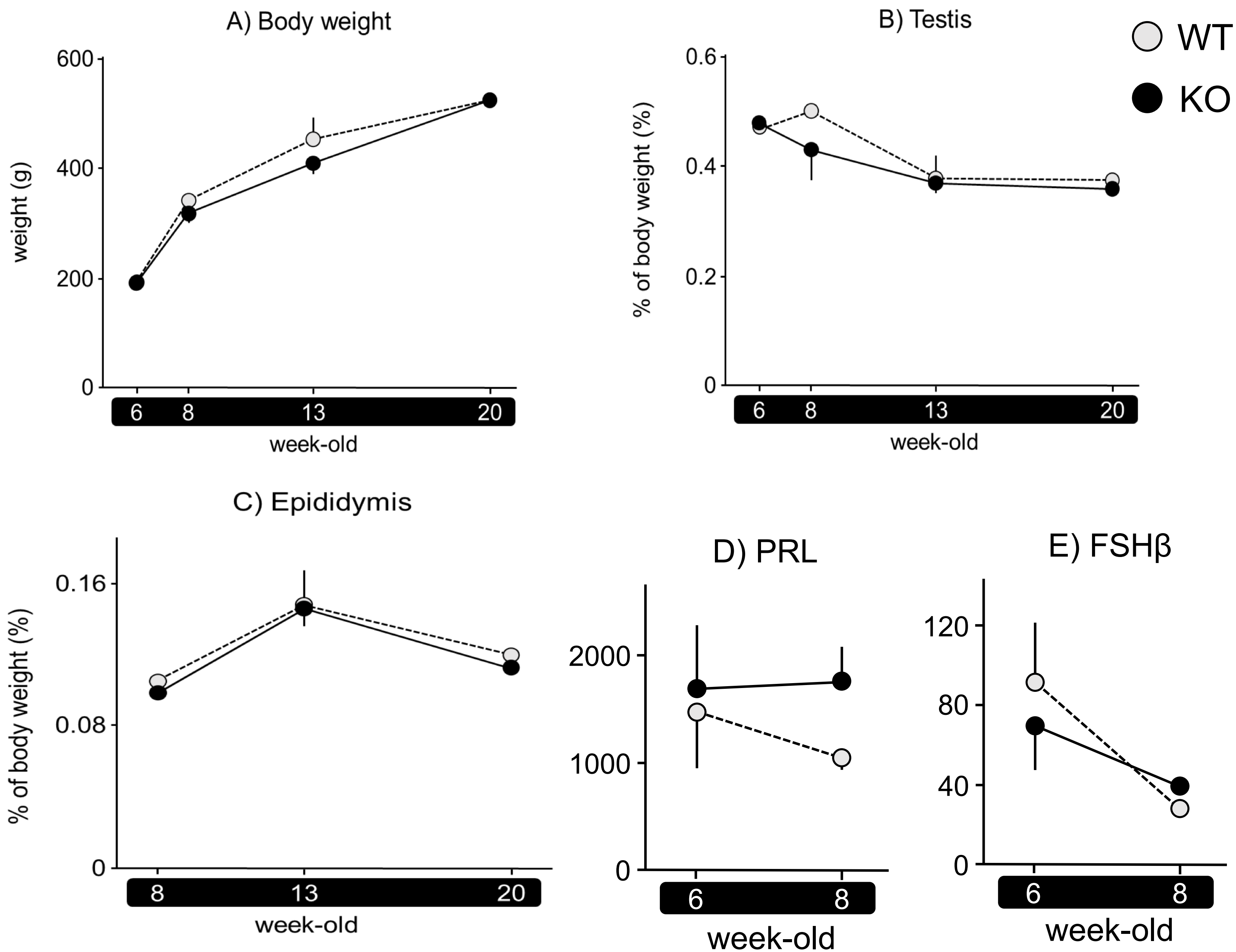

Fig. 12. The age-dependent effect of the AHR deletion on the body weight (A), the relative weight of testis (B), epididymis (C), and the pituitary expression of PRL mRNA (D) and FSHβ mRNA (E) in male rats. Each bar represents the mean ±S.E.M. of 4-7 rats. Significantly different from the wild-type: $^{*}p<0.05$. Data for (A), (B) and (C) at 8-week old are quoted from the annual report at Fiscal year 2018.