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Reproduction, Fertility and Development

Supplementary Material

Knockout of the family with sequence similarity 181, member A (*Fam181a*) gene does not impair spermatogenesis or male fertility in the mouse

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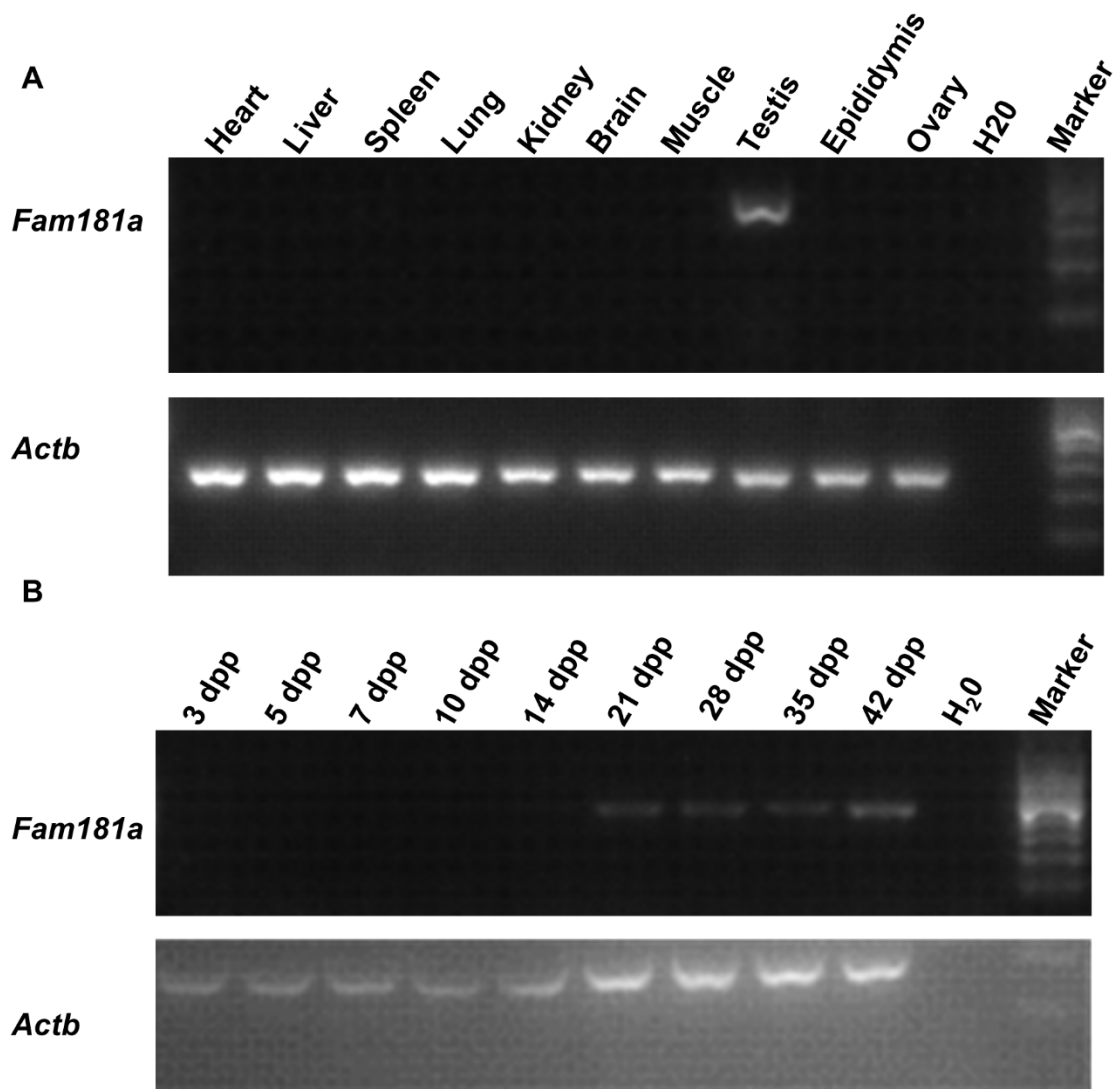


Fig. S1. Expression of FAM181a in mouse testes and different tissues (A) The mRNA level of *Fam181a* was examined in various mouse tissues using RT-PCR. The gene encoding β -actin was used as an internal reference. (B) *Fam181a* expression was detected in testes at indicated ages by R-T PCR. The gene encoding β -actin was used as an internal reference.

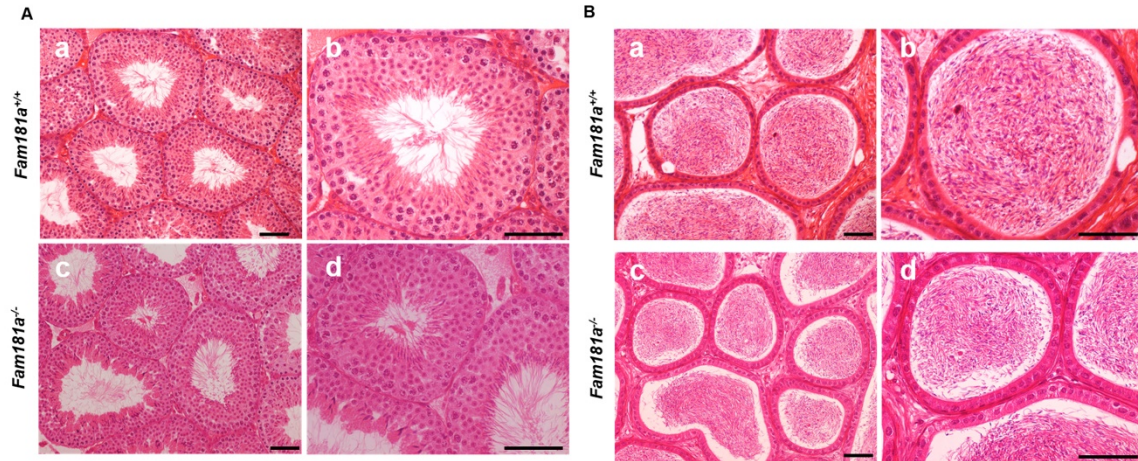


Fig. S2. H&E staining of *Fam181a*^{-/-} mice testis and epididymis (A) H&E staining of testes from 10-weeks-old *Fam181a*^{+/+} (a and b) and *Fam181a*^{-/-} (c and d) mice. Scale bars = 50 μ m. (B) H&E staining of epididymides cauda from 10-weeks-old *Fam181a*^{+/+} (a and b) and *Fam181a*^{-/-} (c and d) mice. Scale bars = 50 μ m.

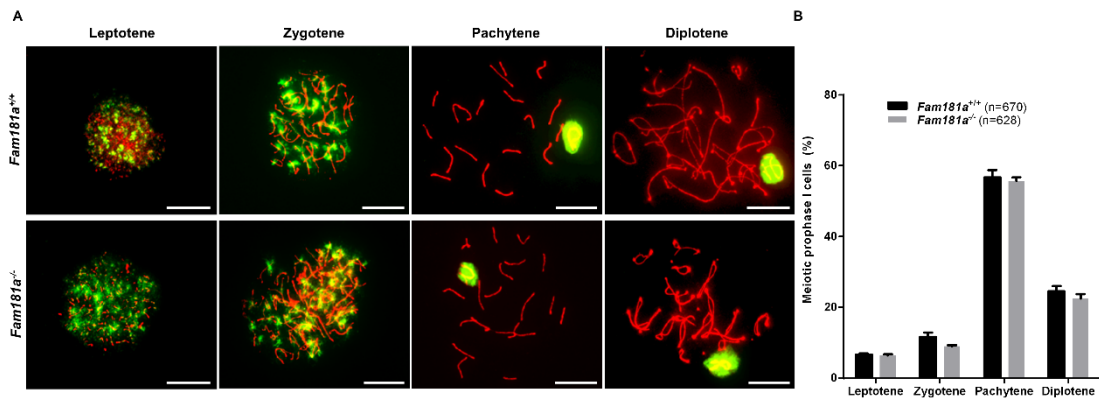


Fig. S3. Normal progression of meiotic prophase I in *Fam181a*^{-/-} mice. (A) Representative images of meiotic prophase I sub-stages from leptotene to diplotene. Meiotic spreads from 10-week-old *Fam181a*^{+/+} and *Fam181a*^{-/-} male mice were immunostained with SYCP3 (green) and γ H2AX (red) antibodies. Scale bars = 10 μ m. (B) Statistical analysis of the distributions of leptotene, zygotene, pachytene and diplotene spermatocytes. The numbers of examined cells (*n*) are indicated in brackets. These are data from three different mice per group. Pearson's chi-squared tests were used to compare the distribution of each sub-stage. Data are expressed as mean \pm SD.

Table S1. Primers used for mouse genotyping and RT-PCR

Primers	Sequence	Product size (bp)
<i>Fam181a</i> KO-F	CATTGTGGATTCTGTTTGGG	<i>Fam181a</i> ^{+/+} : 360 <i>Fam181a</i> ^{-/-} : 249
<i>Fam181a</i> KO-R	ATGCCTTTCTAAGGATCAGG	
<i>Fam181a</i> cDNA-F	GAATTTTGTCAACCTGGCGT	366
<i>Fam181a</i> -cDNA-R	CTCTTCCTCATGGGAACCTG	
Beta Actin cDNA-F	AGGCTGTGCTGTCCCTGTAT	208
Beta Actin cDNA-R	CTCTCAGCTGTGGTGGTGAA	