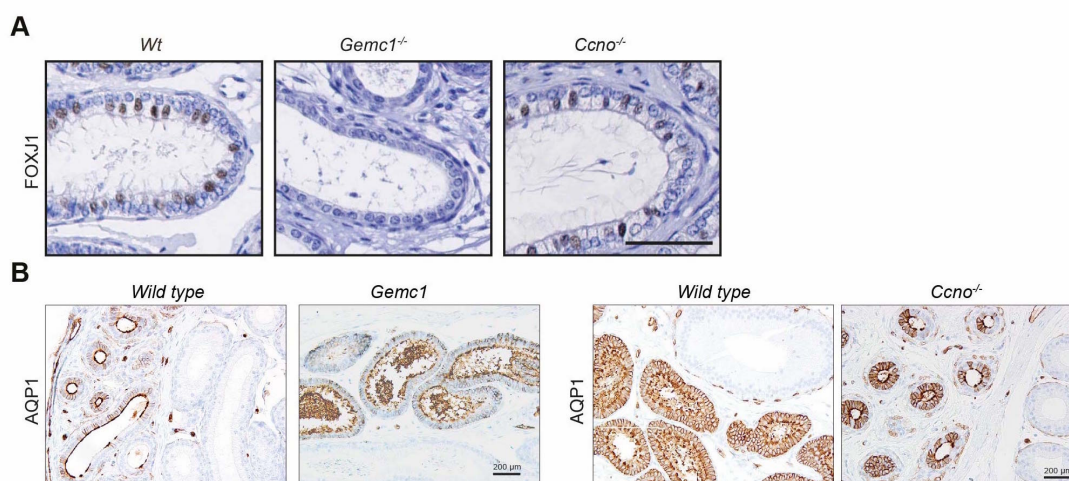


**Figure S1. Characterization of *Gemc1*<sup>-/-</sup> testes.** (A) Representative (p35) H3-S10 (mitotic marker) staining of the seminiferous tubules of the indicated genotypes. Scale bars=50 $\mu$ m. Quantification is shown (n=4 for *Wt/Gemc1*<sup>+/+</sup>, n=7 animals for *Gemc1*<sup>-/-</sup>). (B) Representative (p27) TUNEL (cell death marker) staining of the seminiferous tubules of the indicated genotypes. Scale bars=50 $\mu$ m. Quantification is shown (n $\geq$ 2 animals per genotype, all tubules scored from 2 sections per animal). (C) Quantification of prophase I stages in meiotic cells of the indicated genotype based on SCP1 and SCP3 co-staining from spermatocyte spreads of two month old mice (n=2 animals per genotype, *Wt* n=252 and 502, *Gemc1*<sup>-/-</sup> n=248 and 286 cells scored, respectively). (D) Dissected seminal vesicles, which are highly sensitive to perturbed hormonal levels, from mice of the indicated genotype appeared similar in size. Ruler=mm. (E) RT-PCR of mRNA levels of *FSH* and *LH* in the pituitary gland of mice of the indicated genotypes (n=5 and 4 animals, respectively). *ACTB*

and *GAPDH* were used as normalization controls. Statistical analysis performed using an unpaired t-test, two-tailed. (F) A representative plot of the sorting strategy used to isolate cells at different stages of spermatogenesis from the testes. LZ=leptotene, zygotene, PD=pachytene, diplotene, RS=round spermatids and ES=elongated spermatids.



**Figure S2. Characterization of the efferent ducts.** (A) Representative (p35) staining of the efferent ducts for the FOXJ1 transcription factor. Scale bars=50μm. (B) Representative staining for AQP1 in the efferent ducts of the indicated genotypes. Scale bar=200μm.

### Table S1

Additional antibodies used in experiments performed as described in the materials and methods of the main text.

Antigen	Species	Vendor	Clone	Reference no.	Dilution
SCP3	mouse	abcam	Cor 10G11/7	ab97672	1:500
SCP1	rabbit	abcam		ab15087	1:500
γH2AX	mouse	Millipore	JBW301	05-636	1:500
pH3Ser10	Rabbit	Millipore		05-598	1:500
AQP1	rabbit	EMD Millipore		AB2219	1:1000
FOXJ1	mouse	eBioscience	2A5	14-9965-83	1:500

## Table S2

Additional primers used in QRT-PCR performed as described in the materials and methods of the main text.

Oligo	Sequence (5'-3')
<i>mFSH_FW</i>	CAGTAGAGAAGGAAGAGTGCCG
<i>mFSH_RV</i>	CGGTCTCGTATACCAGCTCC
<i>mLH_FW</i>	GCCGGCCTGTCAACGCAACT
<i>mLH_RV</i>	TGGGGTCTACACCCGGTGGG
<i>mActB_FW</i>	GGCTGTATTCCCCTCCATCG
<i>mActB_RV</i>	CCAGTTGGTAACAATGCCATGT