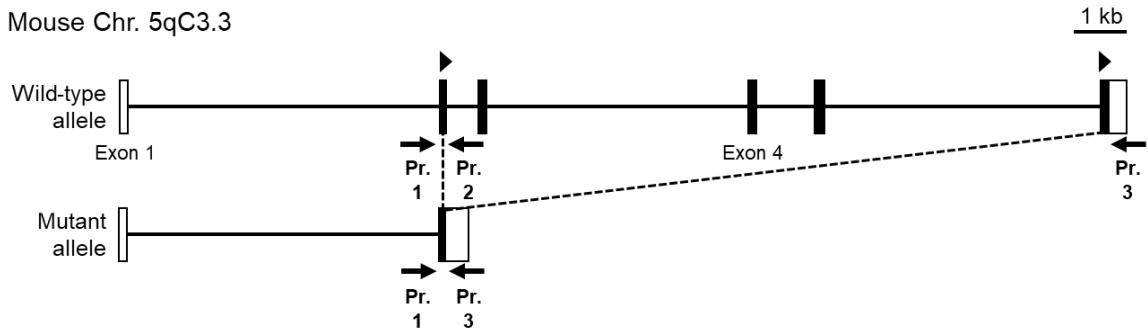


Figure S1 (Fujihara et al.)

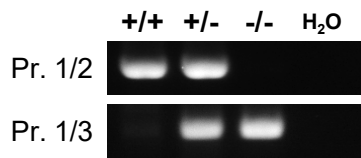
A

H. sapiens PDCL2	1	MQDPNEDTEW	NILRDFGILPPKEE	SKDEIEEMVLR	LQEQEAMVKP	FEKMT	50
M. musculus PDCL2	1	MQDPNEDTEW	NEILRNF	FGILPPKEE	PKDEIEEMVLR	LQEQEAMVKP	YEKMT 50
H. sapiens PDCL2	51	LAQLKEAEDE	FDEEDMCAVE	TYRKRRLQEW	KALKKKKQ	KFGELREIS	GNQY 100
M. musculus PDCL2	51	LAQLKEAEDE	FDEEDIKAI	EIYREKRLQEW	KALKKKKQ	KFGELREIS	GNQY 100
H. sapiens PDCL2	101	VNEVTNAE	KDLWVVIHLYR	SSVPMCLLVN	QHLSVLARK	FPETK	FVKAI 150
M. musculus PDCL2	101	VNEVTNAE	KDLWVVIHLYR	SSVPMCLLVN	QHLSV	LARKFPET	KFVKAI 150
H. sapiens PDCL2	151	SCIEHYHDN	CLPTIFVYK	NGQIEGK	FIGIIECGG	INLKL	EELEW 200
M. musculus PDCL2	151	SCIEHYHDN	CLPTIFVYK	NGQIEG	KFIGIIECGG	INLKL	EELEW 200
H. sapiens PDCL2	201	AIQSDLEEN	PKKGIADMM	VSSIRN	TSIYDSD	SSSG	SDTEAK 241
M. musculus PDCL2	201	AIQSDLEEN	PKKGIADMM	VSSIRN	TSIYDSD	SSSG	SDTEAK 240

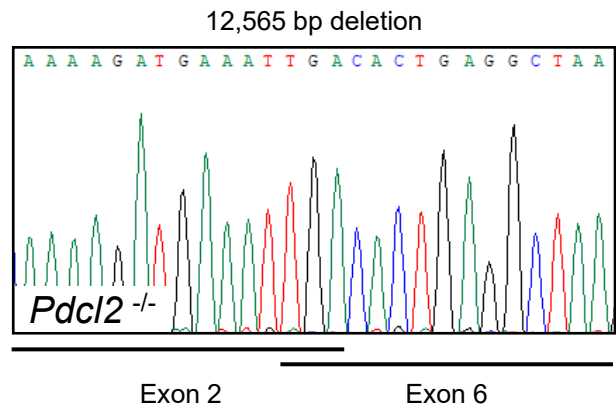
B



C



D



E

PDCL2 wild-type mice	1	MQDPNEDTEW	NEILRNF	FGILPPKEE	PKDEIEEMVLR	LQEQEAMVKP	YEKMT 50
PDCL2 mutant mice	1	MQDPNEDTEW	NEILRNF	FGILPPKEE	PKDEI	DTEAK-----	35
PDCL2 wild-type mice	51	LAQLKEAEDE	FDEEDMCAVE	TYRKRRLQEW	KALKKKKQ	KFGELREIS	GNQY 100
PDCL2 mutant mice	35	-----	-----	-----	-----	-----	35
PDCL2 wild-type mice	101	VNEVTNAE	KDLWVVIHLYR	SSVPMCLLVN	QHLSVLARK	FPETK	FVKAI 150
PDCL2 mutant mice	35	-----	-----	-----	-----	-----	35
PDCL2 wild-type mice	151	SCIEHYHDN	CLPTIFVYK	NGQIEGK	FIGIIECGG	INLKL	EELEW 200
PDCL2 mutant mice	35	-----	-----	-----	-----	-----	35
PDCL2 wild-type mice	201	AIQSDLEEN	PKKGIADMM	VSSIRN	TSIYDSD	SSSG	SDTEAK 240
PDCL2 mutant mice	35	-----	-----	-----	-----	-----	35

Figure S1: Generation of *Pdc12*^{-/-} mice via the CRISPR-Cas9 system

(A) Amino acid sequence similarity of PDCL2 in mice and humans. 87.5% of the sequence (210/240 amino acids) is identical. (B) Schematic of the *Pdc12* locus and CRISPR-Cas9 targeting scheme. Arrows represent primers. (C) Genotyping *Pdc12*^{-/-} mice via PCR amplification. *Pdc12*^{-/-} mice had an amplified band using primers 1 and 3. (D) Wave pattern sequence of the *Pdc12* mutant allele (12,565 bp deletion) in *Pdc12*^{-/-} mice. (E) Amino acid sequence of *Pdc12*^{-/-} mice. The 12,565 bp deletion caused a 205 (out of 240) amino acid deletion.

Figure S2 (Fujihara et al.)

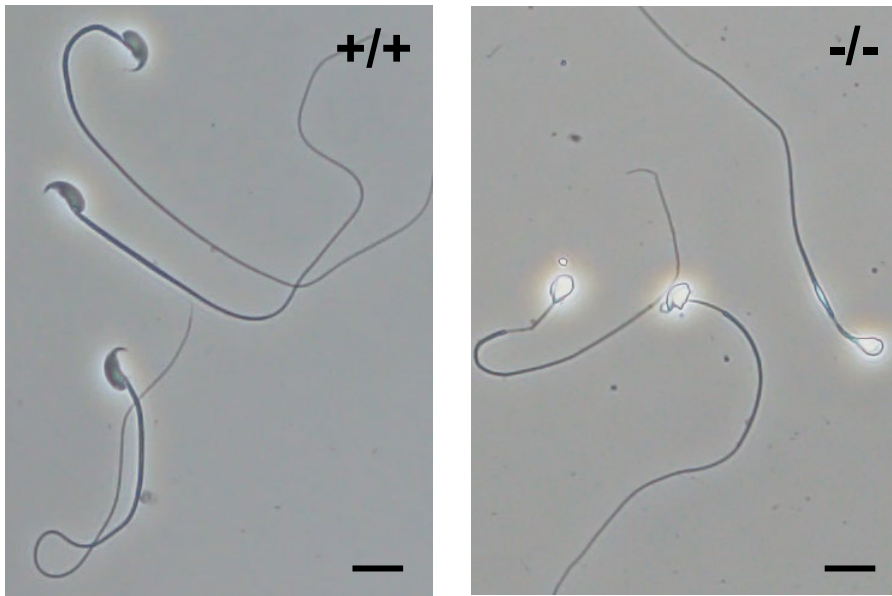


Figure S2: Phase-contrast microscopy of spermatozoa from the cauda epididymis
Scale bars: 10 μm .