Supplementary Files

Behavior of ACRBP-deficient mouse sperm in the female reproductive tract

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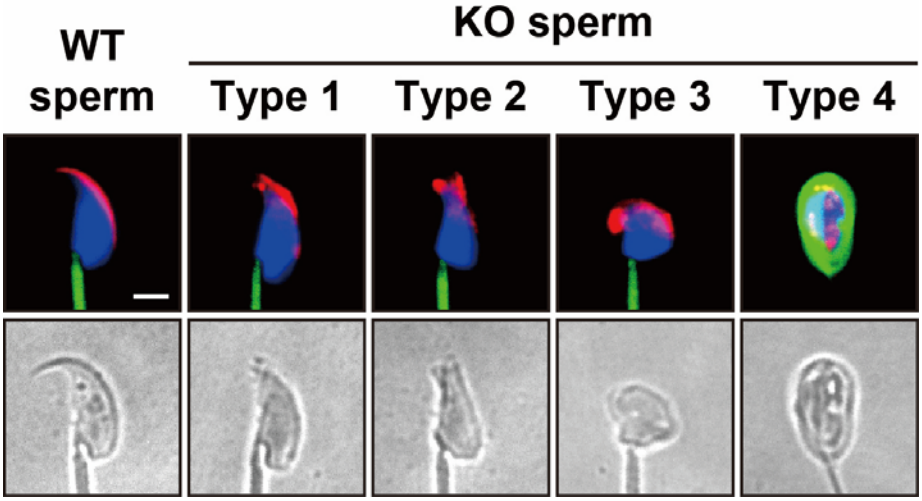
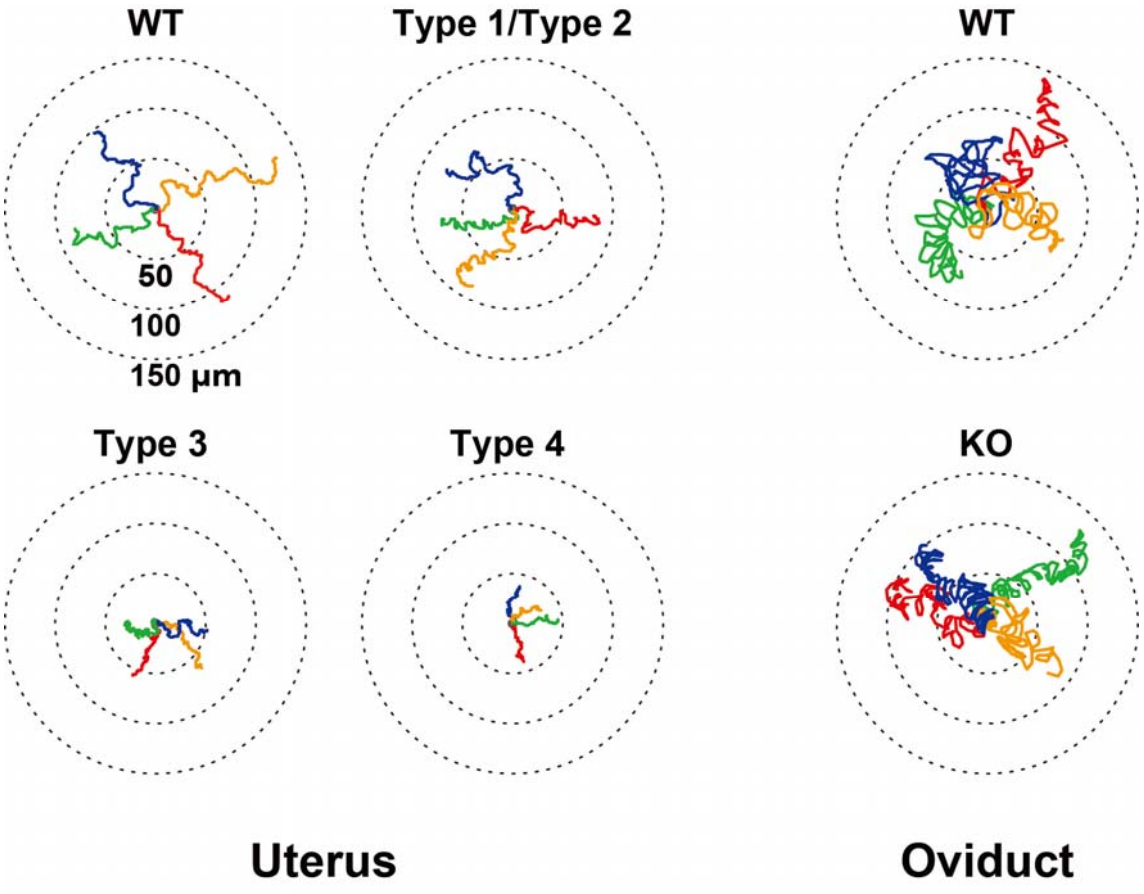


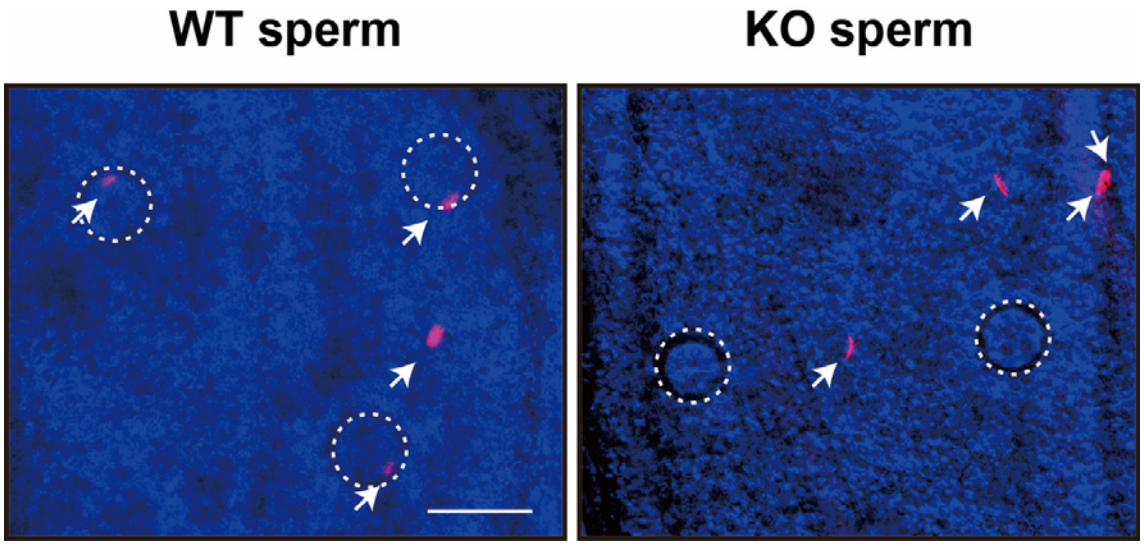
Supplementary Fig. 1.

Sperm morphology. Cauda epididymal sperm of wild-type (WT) and ACRBP-deficient (KO) mice were capacitated by incubation for 2 h in TYH drops, stained with Alexa Fluor 568-conjugated peanut agglutinin (red), MitoTracker Green FM (green), and Hoechst 33342 (blue), and then observed under a fluorescence microscope. KO sperm were morphologically divided into four types, types 1-4 (for details, see the text). Scale bar = 4 μm.



Supplementary Fig. 2.

Trajectories of sperm movement. Following mating between wild-type (WT) or ACRBP-deficient (KO) males and WT females, sperm were recovered from the uterus and oviduct 1.5 and 4 h after mating, respectively, and monitored by video recording at 200 frames/sec with a high-speed camera. Motile sperm were tracked by the Manual Tracking plugin of ImageJ software for 1 sec. Note that type-1 KO mouse sperm were morphologically indistinguishable from the type-2 sperm without staining the acrosome and nucleus.



Supplementary Fig. 3.

Behavior of sperm in the oviductal ampulla (R7). The oocytes and fertilizing sperm are indicated by dotted circles and arrows, respectively. WT sperm, wild-type mouse sperm; KO sperm, ACRBP-deficient mouse sperm. Scale bar = 100 μm.