

Title: Supplementary Video 1

Description: High-speed video microscopy recordings of mouse spermatozoa. (A) An example of normal sperm beating from a wild-type mouse. (B-E) Examples of sperm beating from a *Tekt1*^{-/-} (B), *Tekt5*^{-/-} (C), *Dusp21*^{-/-} (D) or *Tssk6*^{-/-} (E) mouse. Videos were recorded at 200 frames per second using a Nikon Spinning Disk CSU-W1 SoRa microscope equipped with camera ORCA-Fusion BT (HAMAMATSU). Videos are displayed at 25 frames per second. All mice were between 2-4 months of age.

Title: Supplementary Video 2

Description: High-speed video microscopy recordings of mouse tracheal cilia. (A) An example of normal ciliary beating from a wild-type mouse. (B-E) Examples of ciliary beating from a *Tekt1*^{-/-} (B), *Tekt5*^{-/-} (C), *Dusp21*^{-/-} (D) or *Tssk6*^{-/-} (E) mouse. Videos were recorded at 200 frames per second using an Olympus IX83 microscope equipped with a 60× magnification objective and a high-speed camera. Videos are displayed at 25 frames per second.