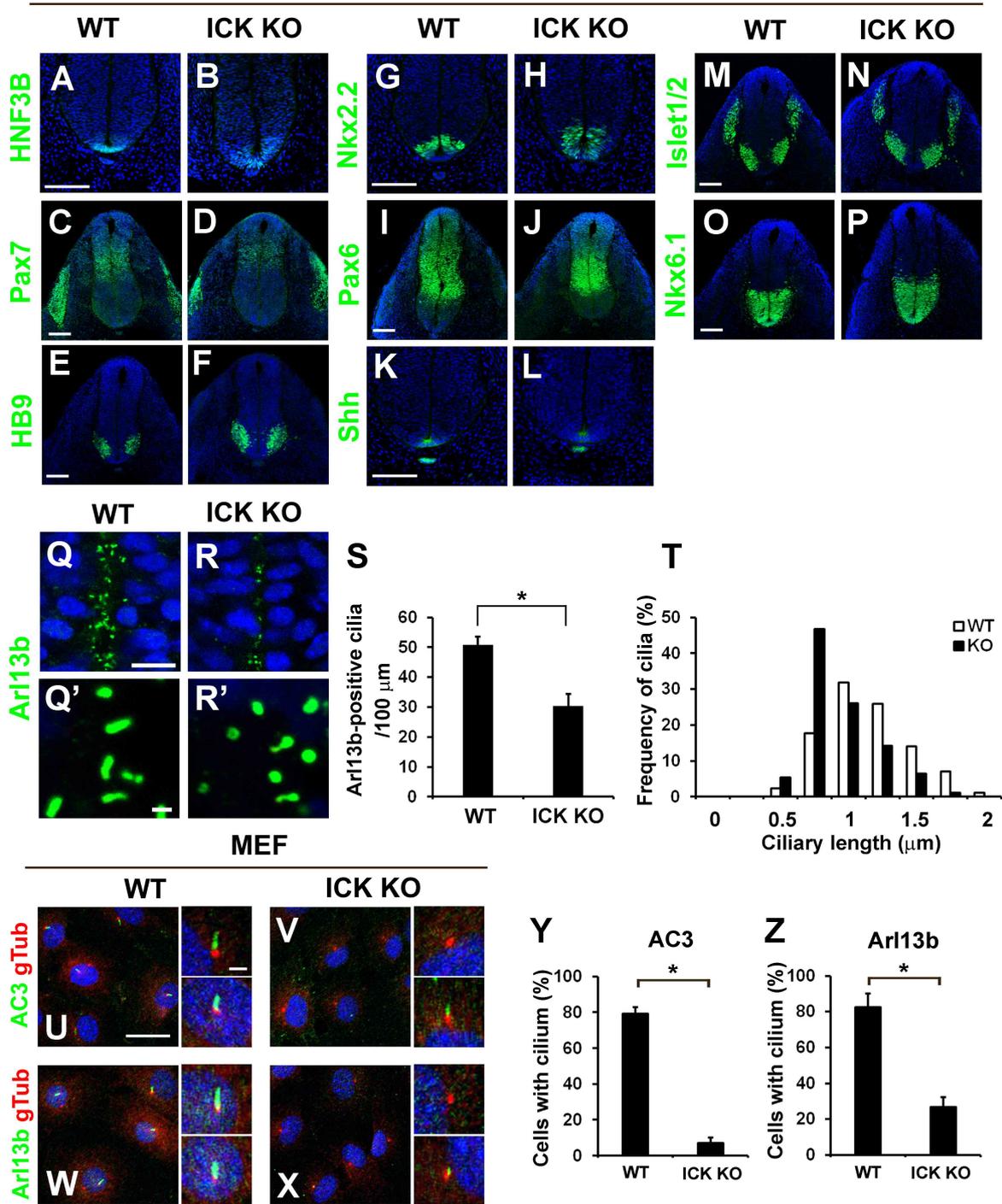


E10.5 Neural tube



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Figure S3 Neural tube patterning of *ICK*^{-/-} embryos and ciliary defects in *ICK*^{-/-} MEFs. (A–P) Neural tube patterning of *ICK*^{-/-} embryos. Sections from caudal regions of E10.5 embryos were immunostained with anti-HNF3B (A, B), anti-Pax7 (C, D), anti-HB9 (E, F), anti-Nkx2.2 (G, H), anti-Pax6 (I, J), anti-Shh (K, L), Islet1/2 (M, N), and anti-Nkx6.1 (O, P) antibodies. Shh signaling is normal in the neural tube of *ICK*^{-/-} embryos. (Q–T) Ciliary defects in the *ICK*^{-/-} neural tube. *ICK*^{+/+} (Q, Q') and *ICK*^{-/-} (R, R') neural tube cilia were immunostained with an antibody against Arl13b. The numbers (S) and length (T) of the neural tube cilia stained with an anti-Arl13b antibody were measured. The cilia in the *ICK*^{-/-} neural tube are markedly fewer and shorter. (U–Z) Ciliary defects in *ICK*^{-/-} MEFs. *ICK*^{+/+} and *ICK*^{-/-} MEFs were immunostained with antibodies against γ -tubulin (a marker for centrioles, red in U–X), AC3 (a marker for ciliary membrane, green in U, V), and Arl13b (a marker for the ciliary membrane, green in W, X). The numbers of the cilia stained with antibodies against AC3 (Y), and Arl13b (Z) were measured. The cilia in *ICK*^{-/-} MEFs are markedly fewer and shorter. Nuclei were stained with DAPI (blue). Scale bars, 100 μ m (A–P), 20 μ m (left panels in U–X), 10 μ m (Q, R), 2 μ m (right panels in U–X), and 1 μ m (Q', R'). Error bars show the SD. * $p < 0.03$.