

Fig. S1. Expression of *CreER^{T2}* recapitulates the endogenous *pax2a* expression during OEPD development. (A-J) The temporal and spatial expression of *CreER^{T2}* (F-I) within the OEPD is identical to *pax2a* (A-D) in *Tg(pax2a:CreER^{T2})^{#31}* transgenic embryos. Subsequently, *pax2a* (E) is maintained exclusively in the otic placode (bracket) but is downregulated in non-incorporated cells anteriorly to it (arrow), whereas *CreER^{T2}* (J) is sustained in both regions. Dorsal views with anterior to the top at the 1-, 3-, 5-, 8- and 12-somite (so) stages, as indicated. Scale bar: 100 μ m.

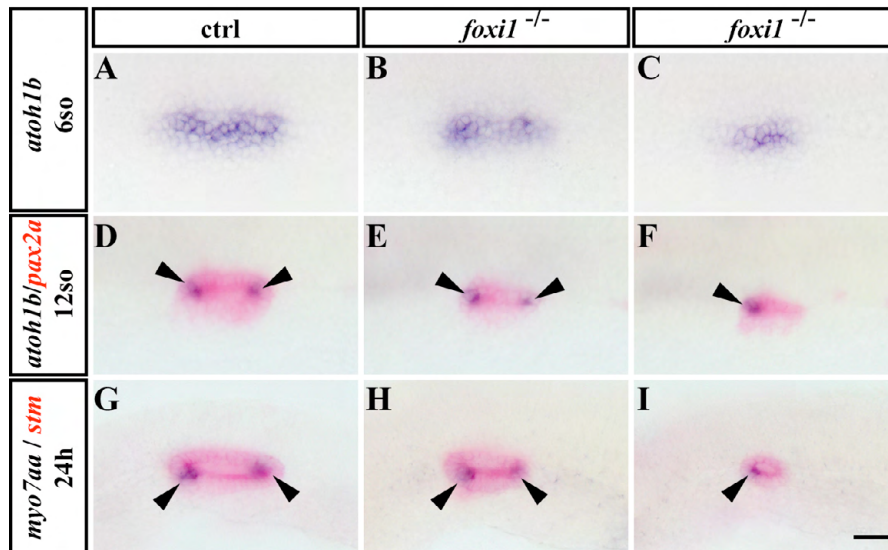


Fig. S2. Hair cell formation is highly variably in *foxi1* mutants, which is foreshadowed by *atoh1b* expression at OEPD stages. (A-I) Blue: Expression of *atoh1b* (A-F) and *myo7aa* (G-I) in control (A,D,G) and *foxi1* mutant embryos (B,C,E,F,H,I). Red: Expression of *pax2a* and *stm* reveal size of the otic placode and vesicle, respectively. A-C are dorsal views with anterior to the top at the 3-somite stage. D-F are dorsolateral views with anterior to the left at the 12-somite stage. G-I are lateral views with anterior to the left at 24 hpf. Arrowheads indicate the position of the sensory patches. Scale bar: 35 μ m.

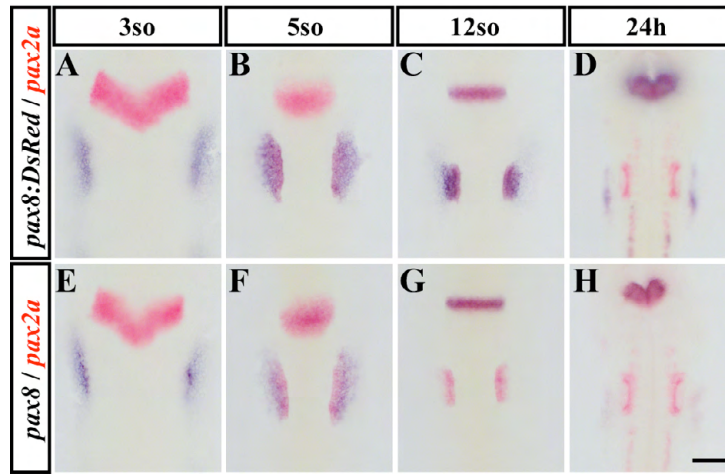


Fig. S3. Expression of *DsRed* in a gene trap in which the coding sequence of *DsRed* is inserted into the *pax8* locus, recapitulates the endogenous *pax8* expression during otic development. (A-H) Blue: Expression of *DsRed* (A-D) and *pax8* (E-H) in *pax8^{nia03Gt}* transgenic embryos. Red: Expression of *pax2a*. Dorsal views with anterior to the top at the 3-, 5-, 12-somite (so) stage and 24 hpf, as indicated. Scale bar: 100 μ m.