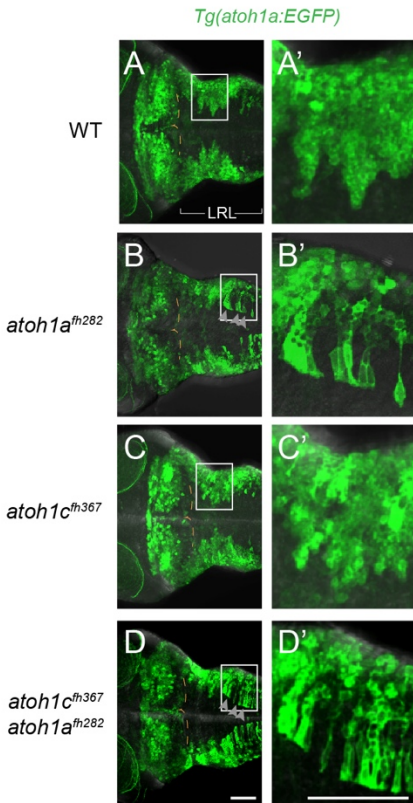


**Supplementary Figure 1. Specification of the *atoh1c* MHB domain.** A-D: Double RNA *in situ* for *atoh1c* (blue) and *otx2* (A), *gbx2* (B), *fgf8* (C), and *wnt1* (D) (red) show that the *atoh1c* expression in a few cells immediately posterior to the MHB. E-G: *atoh1c* expression is absent when Fgf (F) or Wnt (G) signaling is blocked with heat-inducible dominant-negative transgenes activated at 10 hpf. H-J: *atoh1c* expression requires cell-autonomous Fgf and Wnt signaling. Live imaging of chimeras with donor-derived cells (blue) expressing dn-FGFR1 (I, green) or dn-TCF $\Delta$ C (J, green) that are unable to express *Tg(atoh1c::kaede)* (red in the control chimera in H) even if they lie at the MHB (red arrowheads). All embryos are at 22 hpf and are shown in dorsal views with anterior to left. Scale bars: 50  $\mu$ M.



**Supplemental Figure 2: Atoh1a is required for delamination of neural progenitors in the lower rhombic lip (LRL).** Expression of *Tg(ato1a:EGFP)* in wild-type (A), *ato1a<sup>fh282</sup>* (B), *ato1c<sup>fh367</sup>* (C), and *ato1a, atoh1c* double mutants (D) at 5 dpf. Gray arrowheads indicate the apical surfaces of progenitors that are retained at the LRL in *ato1a* mutants. Orange dash line indicates URL; White bracket indicates LRL. Dorsal views with anterior to the left. Scale bar: 50  $\mu$ M.

**Movie 1. Cerebellar granule neuron behavior in wild-type embryo.** Maximum projection time lapse movie of wild-type embryo expressing *atoh1c::kaede* transgene. Movie starts at 3.5 dpf. Time stamp indicated in hours. White dash line indicates location of the URL. Scale bar: 50  $\mu$ M.

**Movie 2. *atoh1c*<sup>fh367</sup> cerebellar cells accumulate and fail to migrate away from the URL.** Maximum projection time lapse movie of *atoh1c*<sup>fh367</sup> embryo expressing the *atoh1c::kaede* transgene. Movie starts at 3.5 dpf. Time stamp indicated in hours. White dash line indicates location of the URL. Scale bar: 50  $\mu$ M.

**Movie 3. Cerebellar granule neurons quickly delaminate and migrate away from URL.** Maximum projection time lapse movie of wild-type *Tg(atoh1c::kaede)* embryo at 3 dpf. Time stamp indicated in hours. White dash line indicates location of the URL. Scale bar: 50  $\mu$ M.

**Movie 4. *Atoh1c* is required for delamination of granule neuron progenitors from the URL.** Maximum projection time lapse movie of *atoh1c*<sup>fh367</sup>; *Tg(atoh1c::kaede)* embryo at 3 dpf. Time stamp indicated in hours. White dash line indicates the location of the URL. Scale bar: 50  $\mu$ M.