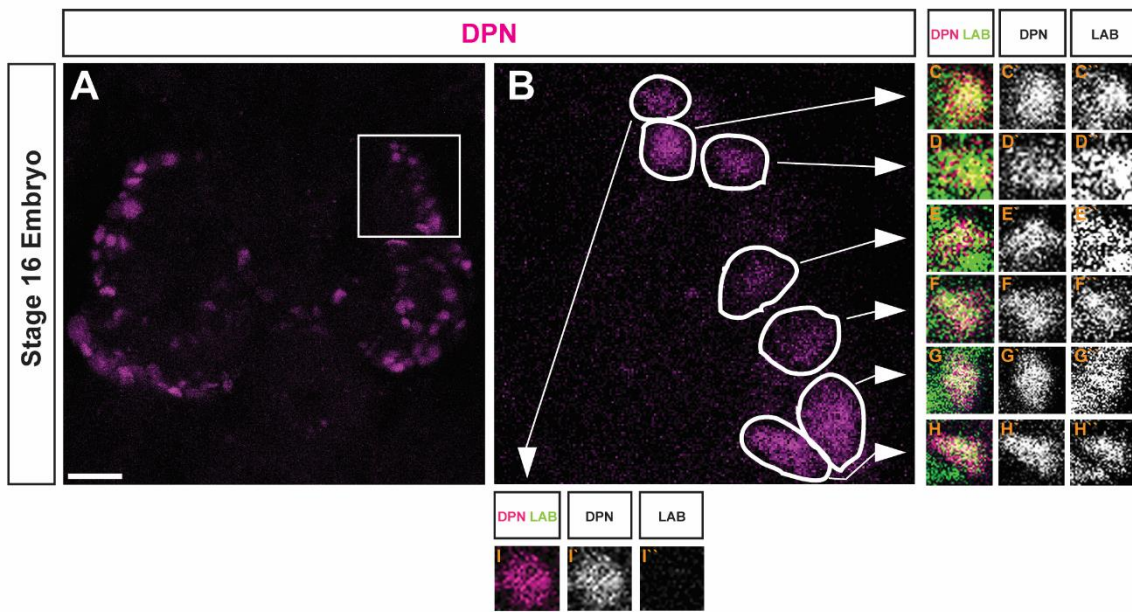
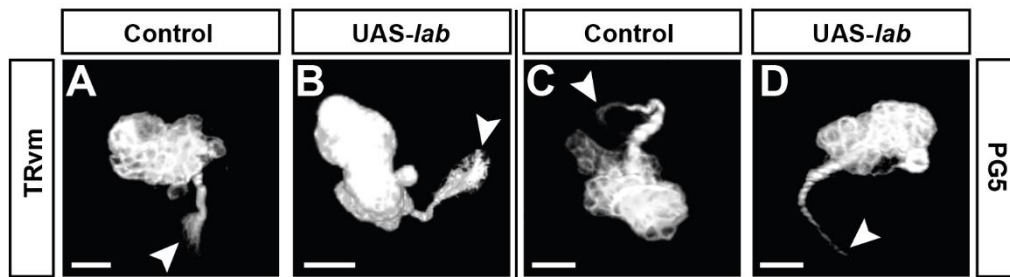


**Fig. S1. Clonal mutation of *labial* does not affect cell number and secondary axon tract projections in the BAIp4, BAIV, TRdm and TRdl lineages.** (A,B,D,E,G,H,J,K) The projection pattern of secondary axon tracts is not significantly altered in *labial* mutant clones compared to corresponding wildtype clones. GFP labeled wildtype and *lab<sup>14</sup>* mutant clones of the BAIp4, BAIV, TRdm and TRdl lineages. Superposition of multiple optical sections of late L3 brains. (C,F,I,L) The number of cells is not significantly different in *labial* mutant clones compared to corresponding wildtype clones. Average cell number in wildtype and *lab<sup>14</sup>* mutant clones of the BAIp4, BAIV, TRdm and TRdl neuroblast lineages in late L3 brains. Number of clone samples indicated as n. Scale bars: 20  $\mu$ m.



**Fig. S2. Six *labial* expressing neuroblasts are present at embryonic stage 17.** (A) Overview of anti-Deadpan immunolabeled cells in the embryonic stage 17 brain. Z-Projection of optical sections (B) Magnified view of the region in the box of A. Neuroblasts co-immunolabeled with anti-Deadpan and anti-Labial are indicated by circles. (C-I'') Single optical sections of each of the six anti-Deadpan immunolabeled neuroblasts that express *labial* at embryonic stage 17. Scale bar: 20  $\mu$ m.



**Fig. S3. Misexpression of *labial* can induce axonal projection defects.** Superposition of multiple optical sections of GFP-labeled clones in late L3 brains. (A) Wildtype clone of the TRvm lineage; its secondary axon tract projects posteriorly and terminates close to the midline (arrowhead). (B) Clonal misexpression of *labial* in the TRvm lineage; compared to the wildtype, the secondary axon tract terminates more laterally (arrowhead). (C) Wildtype clone of the PG5 lineage; its secondary axon tract projects and terminates medially (arrowhead). (D) Clonal misexpression of *labial* in the PG5 lineage; compared to the wildtype, the secondary axon tract projects medially but then turns to terminate more posteriorly (arrowhead). Scale bars: 10  $\mu$ m.