sensory neuron sites. There is an apparently consistent low frequency of caspase labeled cells, some of which overlap with *Wnt1*:Cre recombined cells and some that do not, in each of the structures. In response to FgfR-I, Caspase 3-labelled cells increase in frequency in the mesenchyme adjacent to the OE, in gCN V, and in the mesenchyme adjacent to the OV. There is little caspase 3 labeling in gCN IX/X in response to FgfR-I. In contrast, the frequency of caspase labeled cells in response to DEAB is little changed from the normal in the OE, gCN V, gCN VII/VIII and OV. There is noticeably increased frequency, however, in gCN IX/X. **Center**: qPCR analysis of neurotrophin receptor expression, associated with distinct classes of cranial sensory neurons in all five structures analyzed, in response to FgfR-I and DEAB. Both treatments cause increased expression of subsets of *Trk* receptors and *p75* across all of the cranial sensory ganglia. **Right:** Immunolabeling for Trk receptor and p75 proteins in WT (left), FgfRI-treated (center), and DEAB-treated (right) in gCN V. The increased protein expression in treated samples compared to untreated samples is consistent with increased expression seen in mRNA levels by qPCR.

Supplemental Figure 1: Quantitative PCR (qPCR) analysis of 22 cranial sensory neuron-associated transcription factors (based upon previous expression studies and mutant phenotypes) shows limited systematic expression along the A-P axis. Relative expression levels of each transcription factor were measured for each enzymatically isolated (OE, OV) or micro-dissected (cranial ganglion complexes) site of cranial sensory neuron differentiation (relative to the mean expression across all five sites). Expression levels have been displayed based on highest to lowest mean expression left

to right (as indicated at left), and individual relative values have been plotted as dots corresponding to a color code for each structure (key at left). Error values (SEM) are indicated by horizontal bars and correspond to the scale of the Y-axis.

Figures

Fig. 1