**Supplementary Figure 2:** Phenotypic onset of the enlarged eye phenotype. **A)** The phenotypic progression of the enlarged eye phenotype in *bugeye* mutant zebrafish. Twenty *bugeye* mutant fish were raised individually and their eye development was monitored. Photographs of representative *bugeye* mutant fish are shown for each of the following three categories of phenotypic eye enlargement: 1) both eyes, 2) one eye, and 3) not apparent. The red line indicates the divide between no phenotype being visible (before 2 months of age) and when the phenotype first becomes apparent (at 2 months of age) for the first two categories. Scale bar = 2 mm. **B)** Penetrance of the enlarged eye phenotype in the *bugeye* mutant population at 3 months of age. The percentage of *bugeye* mutant fish with the phenotype, pre-phenotypic, and without any indication of phenotypic onset are shown. A significant phenotype was defined to be a normalized eye size more than 3 standard deviations above the WT mean. Pre-phenotypic indicated a normalized eye size between 2 and 3 standard deviations above the mean.