



Figure 1
Pineal precursors fail to reach the midline of the forebrain in *squint* mutants. (A-C) WT embryos were processed for whole mount in situ hybridization with an antisense probe for the gene *flh*, which is expressed in the pineal precursors (arrowheads). Images are dorsal views of the entire embryo, anterior to the top. (A) At the 2–3 somite stage, pineal precursors are located in two widely spaced lateral domains. (B) By the 5–6 somite stage, these domains have moved towards the dorsal midline of the forebrain. (C) By the 7–8 somite stage, a single, round-shaped pineal anlage has formed. (D-F) At 2 dpf, *sqt* mutant embryos from the same clutch have a wide range of eye phenotypes. Frontal views of live embryos with dorsal to the top. (D) The eyes of WT embryos and some *sqt* mutants (not shown) are completely separated from one another. (E) Other *sqt* mutants have partially fused eyes that form two lenses or (F) a single eye with one lens. (G-L) Embryos at the (G-I) 7–8 somite stage and (J-L) 24 hpf were processed for whole mount in situ hybridization with a probe for the pineal gene (G-I) *flh* or (J-O) *otx5*, dorsal views, anterior to the top. (G,J) In WT siblings, the pineal precursors (arrowhead) have converged to form a round pineal anlage. In *sqt* mutants the pineal precursors (arrowheads) form a domain that is (H,K) elongated or (I,L) divided in two. The pineal anlagen of the (M) *cyc* mutant and the (N) *Zoep* mutant have a round shape that is similar to that of WT fish, while the pineal precursors of the (O) *MZoep* mutant are divided in two domains. All images are dorsal views with anterior to the top. Scale bars: 100 μ m (A-C, G-I), 70 μ m (D-F), 30 μ m (J-O).