Barriga et al., http://www.jcb.org/cgi/content/full/jcb.201212100/DC1

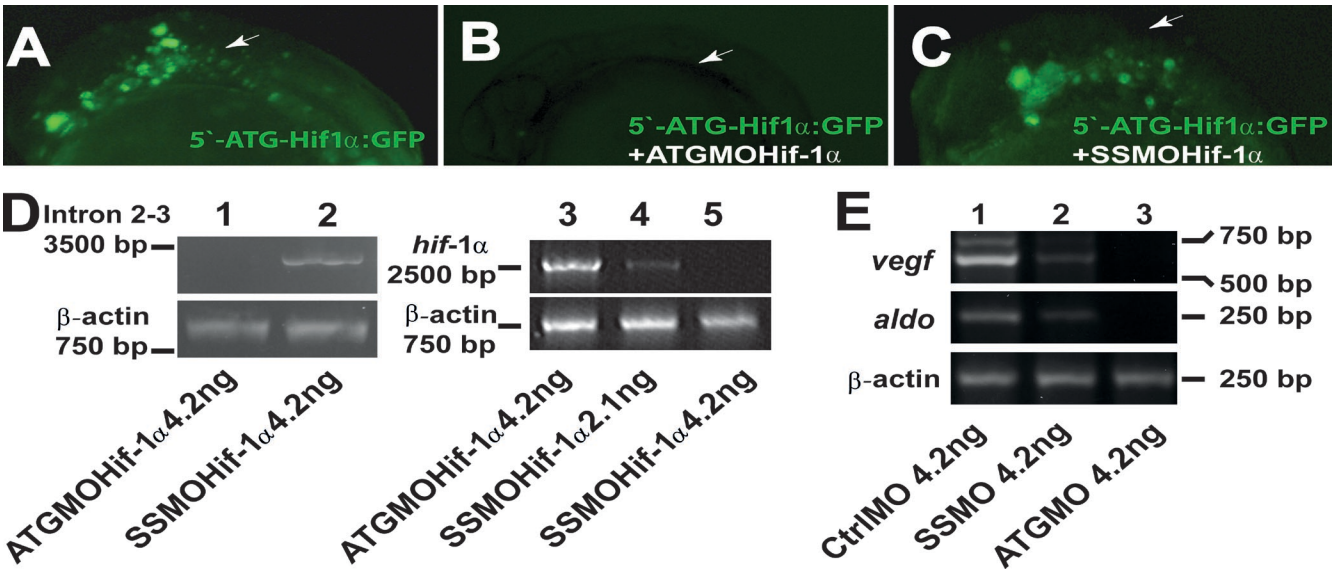


Figure S1. **Specificity of the antisense MOs against Hif-1α.** (A–C) Fluorescent images of zebrafish embryos injected with mRNA encoding a 5′ ATG-Hif-1α–GFP fusion protein. Note that injection of ATGMO*hif-1α* (B), but not of SSMO*hif-1α* (C), reduces GFP fluorescence. Arrows show injected cells. (D) RT-PCR of *hif-1α* to analyze SSMO*hif-1α* efficiency. RT-PCR to amplify a region of intron 2–3. No intron is present in embryos injected with ATGMO*hif-1α* (lane 1), but it can be detected in embryos injected with SSMO*hif-1α* (lane 2); RT-PCR to amplify a region of *hif-1α* mRNA spanning intron 2–3. Note that the normal-sized band is seen only in lane 3 (ATGMO*hif-1α*) but not in lanes 4 or 5 (SSMO*hif-1α*). (E) RT-PCR of the known Hif-1α targets *vegf* and *aldoloase*. Ctrl, control.

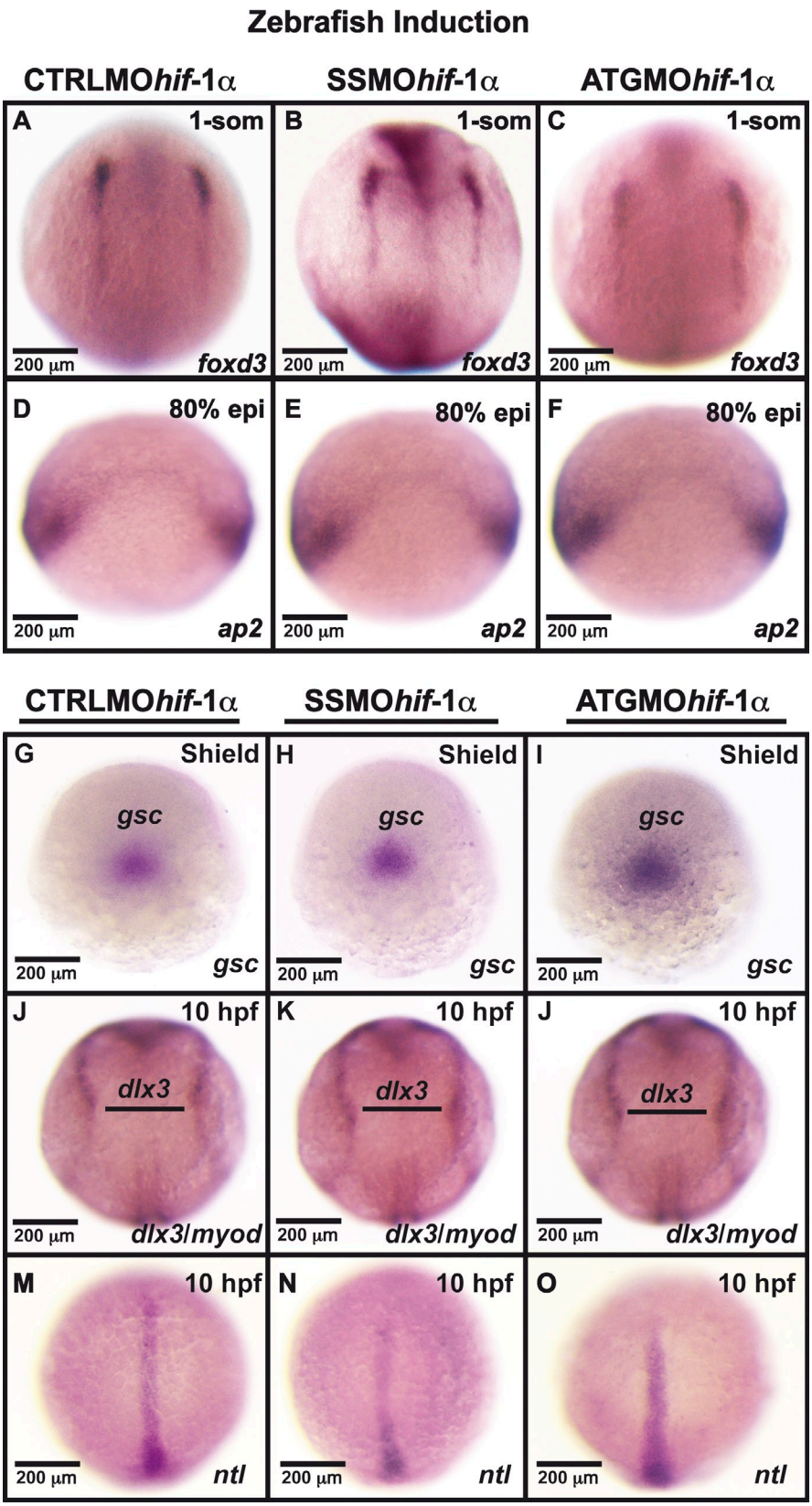
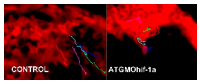
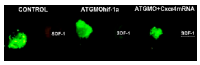


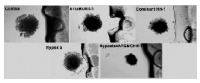
Figure S2. **Hif-1α is required for neural crest migration but not for neural crest, mesoderm, or placode induction.** (A–F) Neural crest induction. Dorsal view of *foxd3* (A–C) and lateral view of *ap2* (D–F) expression, under the indicated treatments. (G–O) Mesoderm and placode formation. Dorsal view of zebrafish embryos using different mesodermal and ectodermal markers and under different treatments as indicated. CTRL, control; hpf, hours postfertilization; som, somite; epi, epiboly.



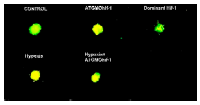
Video 1. **Hif-1α is required for normal migration of zebrafish neural crest.** Live imaging of zebrafish transgenic embryos *Tg(sox10:mRFP)* expressing membrane-RFP in the neural crest was performed. Normal neural crest migration of embryos injected with a control MO was severely affected by injection of ATGMO*hif-1α*. Leader cells were manually tracked using ImageJ. Zebrafish embryos were filmed by time-lapse microscopy using a confocal microscope (LSM 710; Carl Zeiss) equipped with a motorized stage with a 20× objective lens. Frames were taken every 5 min for 300 min.



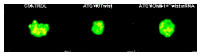
Video 2. **Hif-1α is required for *Cxcr4*/SDF-1–dependent chemotaxis.** *Xenopus* neural crest explants were cultured on fibronectin and exposed to a localized source of SDF-1. Time-lapse microscopy we performed using an upright microscope (DMX6000; Leica) equipped with a motorized stage (Prior Scientific) with 20× objective lens. Frames were taken every 5 min for 300 min.



Video 3. **Activation of Hif-1α promotes neural crest cell dispersion and blocks chemotaxis.** *Xenopus* neural crest explants were cultured on fibronectin and exposed to a localized source of SDF-1. Treatments as indicated. Time-lapse microscopy was performed using an upright microscope (DMX6000; Leica) equipped with a motorized stage (Prior Scientific) with 20× objective lens. Frames were taken every 5 min for 300 min.



Video 4. **Hif-1α is required for normal neural crest cell dispersion.** *Xenopus* neural crest explants were cultured on fibronectin. Treatments as indicated. We performed time-lapse microscopy using an upright microscope (DMX6000; Leica) equipped with a motorized stage (Prior Scientific) with 20× objective lens. Frames were taken every 5 min for 300 min.



Video 5. **Hif-1α controls neural crest dispersion in a *Twist*-dependent manner.** *Xenopus* neural crest explants were cultured on fibronectin. Treatments as indicated. Time-lapse microscopy was performed using an upright microscope (DMX6000; Leica) equipped with a motorized stage (Prior Scientific) with 20× objective lens. Frames were taken every 5 min for 300 min.