SUPPLEMENTAL FIGURE LEGENDS

Supplemental Figure 1. Electroporation of a 5 base pair mismatch *αN-catenin* control morpholino into the developing neural crest cell population of the chick midbrain does not affect neural crest cell migration *in vivo*. (A,C) Whole-mount *in situ* hybridization followed by indicated transverse sections (B,D) for *Sox10* and *Snail2*, respectively, after 8 hour treatment with control MO. No change is noted in whole-mount images or sections with respect to neural crest cell migration. (E,F) Representative transverse sections taken from embryos treated with control MO for 8 hours followed by whole-mount *in situ* hybridization for *FoxD3* (E) or whole-mount immunohistochemistry for HNK-1 (F, green), respectively. No alterations in neural crest cell migration are observed with either molecular marker. In all experiments, the right side of the embryo is electroporated with control MO, as indicated by the lissamine (red) fluorescence of the MO in the transverse sections and/or in inset images of each whole-mount. Scale bar in (A) is 50 μm and applicable to all images. MO, morpholino (red); DAPI, blue.

Supplemental Figure 2. Depletion of αN-catenin does not alter cell proliferation nor cell death in the chick embryonic neural tube. (A-D) Electroporation of control (A,C) or *αN-catenin* (B,D) MO, followed by 8 hour incubation, transverse sectioning, and processing for phospho-histone H3 immunohistochemistry (A,B, PH3, green) or TUNEL (C,D, green) (representative sections are shown). Arrowheads indicate PH3-positive (A,B) or TUNEL-positive

(C,D) nuclei, with a similar distribution observed in the neural tube and in migratory neural crest cells in the presence of either MO and with that found on the contralateral control side of the embryo. In all experiments, the right side of the embryo is electroporated with the MO, as indicated by the lissamine (red) fluorescence of the MO in the sections. Scale bar in (A) is 50 μm and applicable to all images. MO, red; DAPI, blue.

Supplemental Figure 3. Morpholino-mediated depletion of αN-catenin from the developing neural crest cell population of the chick midbrain results in reduced levels of αN-catenin protein at both early and late time points post-electroporation *in vivo*. (A-C,E-G) Individual channel and (D,H) merge images of a representative transverse section taken through an embryo electroporated with *αN-catenin* MO (red) after 3 (A-D) and 20 (E-H) hours of MO incubation and processing by whole-mount immunohistochemistry for αN-catenin protein (A,D,E,H, green). Note the loss of αN-catenin protein throughout the transfected side of the neural tube (A,D,E,H, arrows) and *αN-catenin* MO-positive cells (αN-catenin protein-negative) in the neural tube lumen (E,H, arrowheads). Scale bar in (A) is 50 μm and applicable to all images.

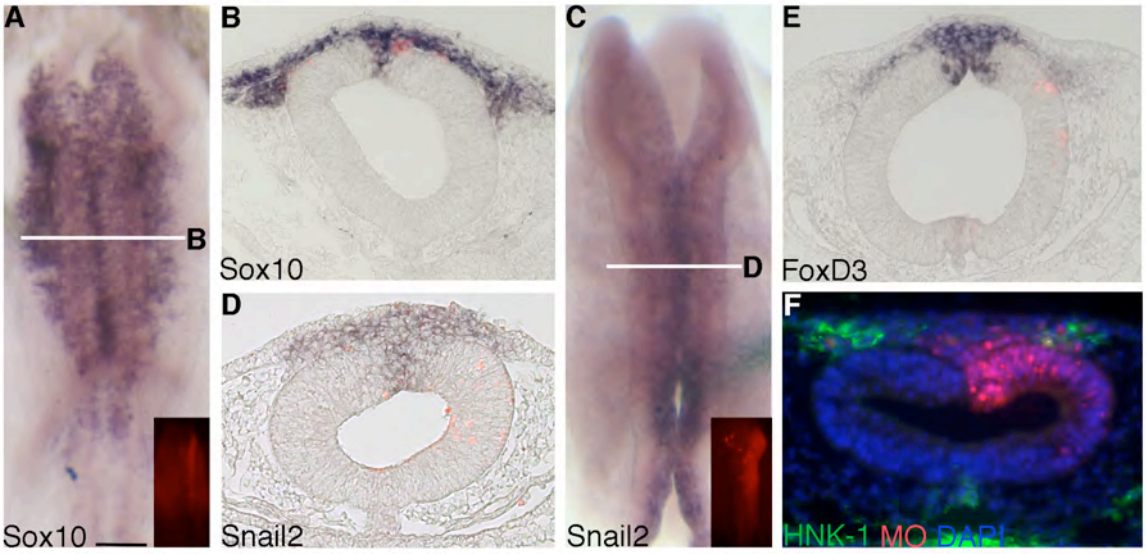
Supplemental Figure 4. Electroporation of the pCIG control construct into the developing neural crest cell population of the chick midbrain does not affect neural crest cell migration *in vivo*. (A,C) Whole-mount *in situ* hybridization followed by indicated transverse sections (B,D) for *Sox10* and

Snail2, respectively, after 8 hour treatment with the pCIG control construct. No change is noted in whole-mount images or sections with respect to neural crest cell migration. (E,F) Representative transverse sections taken from embryos treated with pCIG for 8 hours followed by whole-mount *in situ* hybridization for *FoxD3* (E) or whole-mount immunohistochemistry for HNK-1 (F, red), respectively. No alterations in neural crest cell migration are observed with either molecular marker. In all experiments, the right side of the embryo is electroporated with pCIG, as indicated by the GFP (green) fluorescence in the inset images of each whole-mount and in (F). Scale bar in (A) is 50 μm and applicable to all images. GFP, green; DAPI, blue.

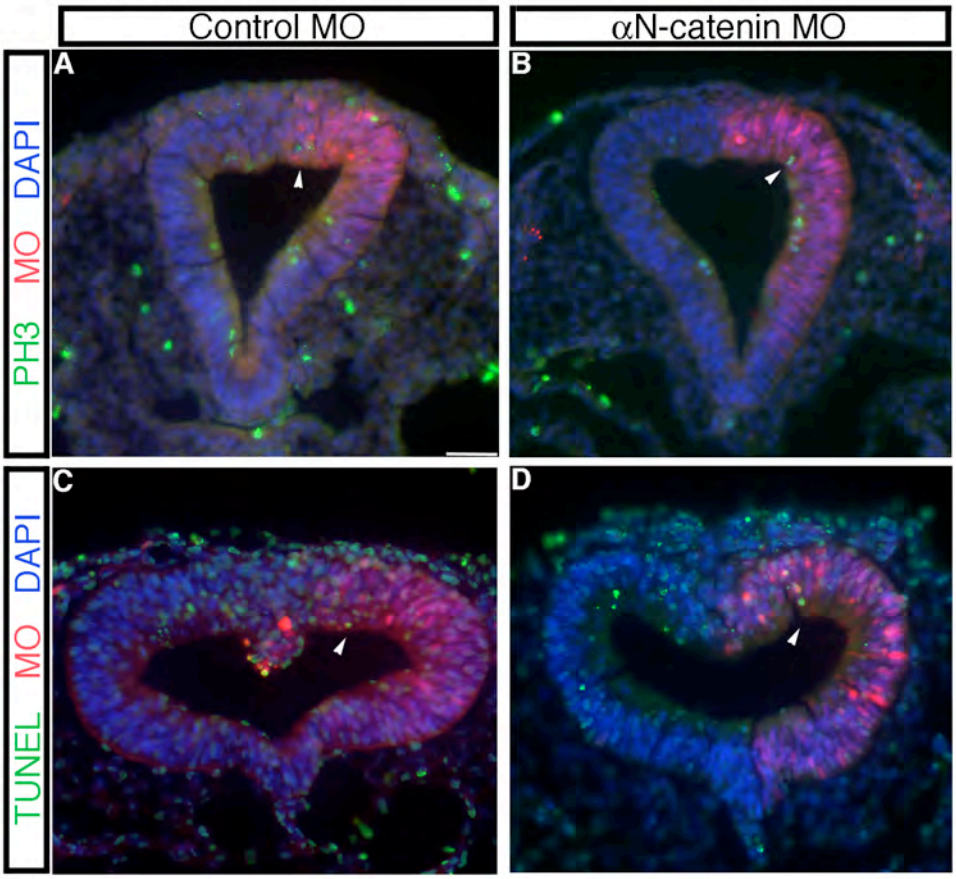
Supplemental Figure 5. Overexpression of αN-catenin does not alter cell death nor cell proliferation in the chick embryonic neural tube. (A-D) Electroporation of the pCIG control (A,C) or pCIG-αN-catenin (B,D) constructs, followed by 8 hour incubation, transverse sectioning, and processing for phospho-histone H3 immunohistochemistry (A,B, PH3, red) or TUNEL (C,D, red) (representative sections are shown). Arrowheads indicate PH3-positive (A,B) or TUNEL-positive (C,D) nuclei, with a similar distribution in the neural tube and in migratory neural crest cells observed in the presence of either construct and with that found on the contralateral control side of the embryo. Some of the cells that have entered the lumen of the neural tube (D, arrows) upon treatment with pCIG-αN-catenin are TUNEL-positive (apoptotic). In all experiments, the right side of the embryo is electroporated with the construct, as indicated by the GFP (green)

fluorescence in the sections. Scale bar in (A) is 50 μm and applicable to all images. GFP, green; DAPI, blue.

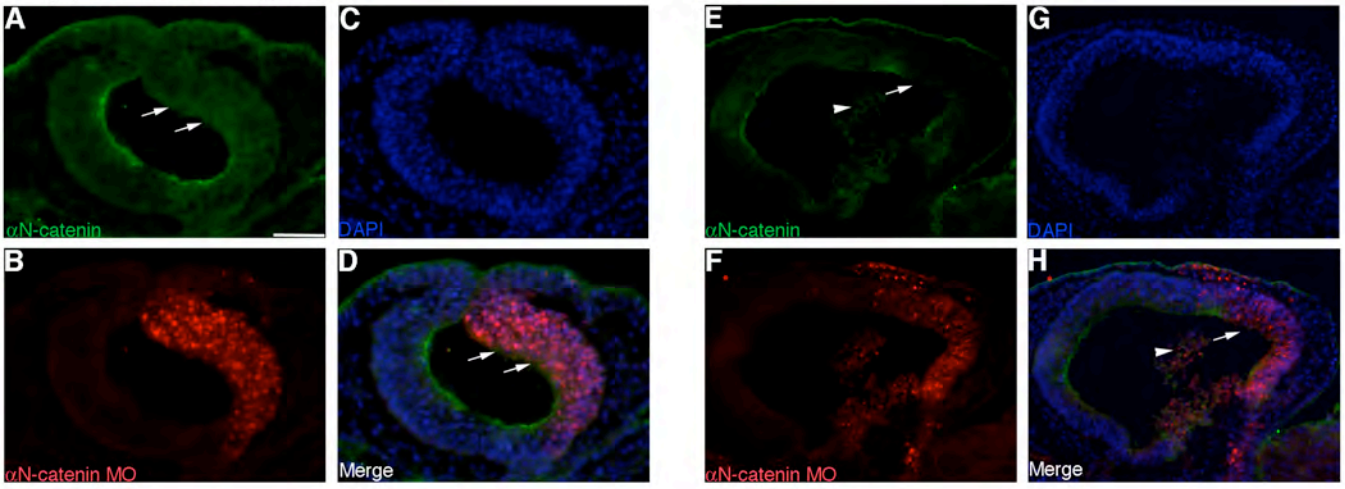
Supplemental Figure 1



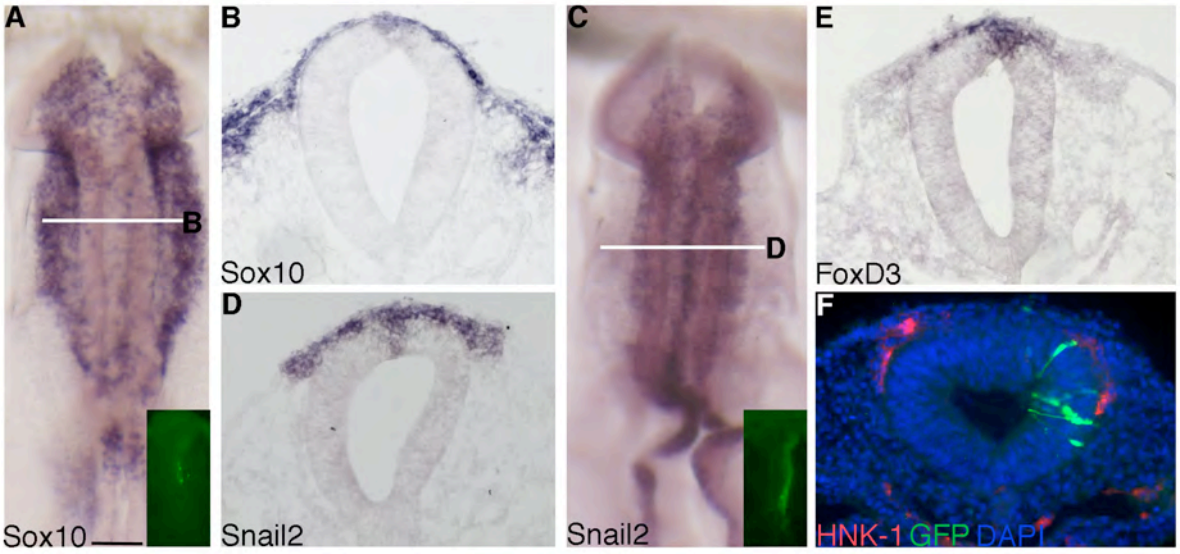
Supplemental Figure 2



Supplemental Figure 3



Supplemental Figure 4



Supplemental Figure 5