

Supplementary Table 1. Measurements of the dorsal-ventral distribution of Sox10-positive migratory neural crest cells upon α N-catenin knock-down.

<u>αN-catenin MO</u>	<u>CL side</u>
508	420
456	318
350	268
568	452
568	534
484	426
404	456
528	458
482	350
400	296
430	376
702	652
594	414
476	440
546	452
524	498
406	342
819	570
786	744
681	456
666	570
717	597

Dorsal-ventral measurements (made in Adobe Photoshop) of the Sox10-positive migratory neural crest cell domain in at least 5 serial sections from three embryos are presented. CL, contralateral side of the section.

Supplementary Table 2. Measurements of the area occupied by HNK-1-positive migratory neural crest cells upon α N-catenin knock-down.

HH13-14 embryos (3 total)		HH15-17 embryos (4 total)	
<u>αN-catenin MO</u>	<u>CL side</u>	<u>αN-catenin MO</u>	<u>CL side</u>
43062	34089	160051	84131
70355	37574	136989	74782
62925	41464	152562	92086
80310	40086	150470	113172
72086	21370.5	115160	98598
70968.5	54082	28016	20586
60004	33347	14862	13528
47349	39258	225920	213716
45181	45984	293177	247250
46050	51141	247349	217623
61447	66602	265956	244507
55250	43423	228321	257482
45092	20946	272424	278526
34210	17637	296782	281288
31044	9914	253980	153876
20308	15033	263417	184634
38275	20638	239379	176892
91562.5	49204	286970	237069
		314254	229986
		295915	269070
		269421	269319
		202514	116331
		242406	75882
		263195	138278
		238589	89209
		115255	73793

Area measurements (made in Adobe Photoshop) of the HNK-1-positive migratory neural crest cell domain in at least 5 serial sections are presented. CL, contralateral side of the section.

Supplementary Table 3. Measurements of the dorsal-ventral distribution of Sox10-positive migratory neural crest cells upon α N-catenin overexpression.

<u>pCIG-αN-catenin</u>	<u>CL side</u>
182	316
236	494
230	470
320	484
366	562
484	750
318	464
364	610
364	566
350	574
608	590
738	956
1032	1076
968	840
958	1042
416	480
504	800
646	736
464	672
646	946
666	872
614	808

Dorsal-ventral measurements (made in Adobe Photoshop) of the Sox10-positive migratory neural crest cell domain in at least 5 serial sections from three embryos are presented. CL, contralateral side of the section.

Supplementary Table 4. Measurements of the HNK-1-positive migratory neural crest cell domain upon α N-catenin overexpression.

HH13-14 embryos (4 total)		HH15-17 embryos (4 total)	
<u>pCIG-αN-catenin</u>	<u>CL side</u>	<u>pCIG-αN-catenin</u>	<u>CL side</u>
24666	41398	129627.5	108919
32251	60422	64992	124034
35484	50273	94408	108052
41171	68979	140118	183003
46998	81793	154869	298285
43858	98346	164967	220421
23055	36617	189121	258552
14873	27833	319995	332737
16242	30059	204698	288413
15387	28908	191999	285659
14573	25573	129364	227139
15345	14298	144895	237976
37949	49978	255142	212882
27054	33540	174642.5	172864
34000	36769	87083	90645
38344	44211	96273	77914
42103	54187	83131	78734
33450	44749	91645	214235
43074	50641	115936	166401
43173	55918	208895	263745
40424	62457	226598	271928
		225854	233946
		177719	242186
		177721	236744
		128075	141254
		128413	192747
		207159	243694
		150053	140633
		129490	135455

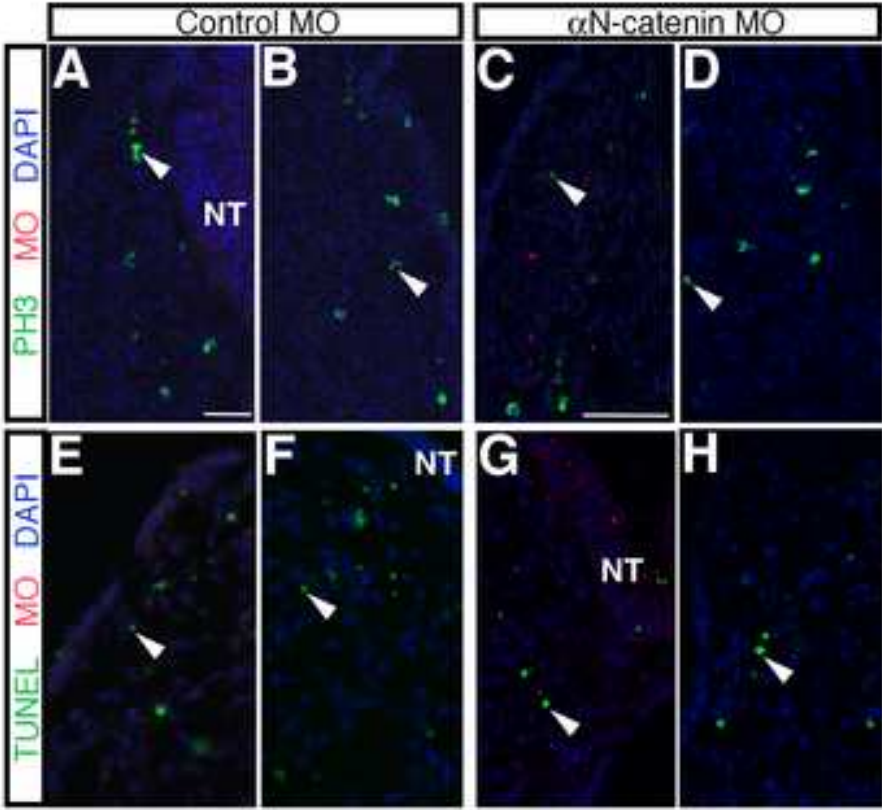
Area measurements (made in Adobe Photoshop) of the HNK-1-positive migratory neural crest cell domain in at least 5 serial sections are presented. CL, contralateral side of the section.

Supplementary Table 5. Measurements of the fluorescence intensity per area for Cadherin-7 upon α N-catenin knock-down or overexpression.

α N-catenin MO <u>positive cells</u>	α N-catenin MO <u>negative cells</u>	pCIG- α N-catenin <u>positive cells</u>	pCIG- α N-catenin <u>negative cells</u>
0.0335	0.0249	0.0415	0.0156
0.0284	0.0251	0.0178	0.0123
0.0184	0.0199	0.0142	0.0138
0.00955	0.0341	0.00995	0.0104
0.0208	0.042	0.0373	0.0169
0.0221	0.108	0.0235	0.0168
0.0115	0.0368	0.0312	0.0289
0.0239	0.0793	0.0214	0.0262
0.00695	0.0272	0.0201	0.0281
0.00623	0.0397	0.0192	0.0181
0.0145	0.0345	0.0319	0.0179
0.0179	0.0176	0.013	0.0157
0.0228	0.0273	0.0151	0.0164
0.0178	0.0171	0.011	0.0104
0.0171	0.0314	0.026	0.0144
0.0231	0.0399	0.0247	0.0136
0.0067	0.0531	0.0265	0.0265
0.00916	0.0542	0.0293	0.0326
0.0128	0.0566	0.0298	0.0208
0.00751	0.0607	0.035	0.0201
0.0246	0.124	0.0226	0.0184
0.00996	0.0482	0.0116	0.016
0.0201	0.031	0.0233	0.0286
0.013	0.0349	0.0332	0.0196
0.0141	0.0407	0.0174	0.0169
0.0112	0.0312	0.0296	0.021
0.0914	0.031		
0.032	0.0424		
0.018	0.0347		
0.0109	0.0303		

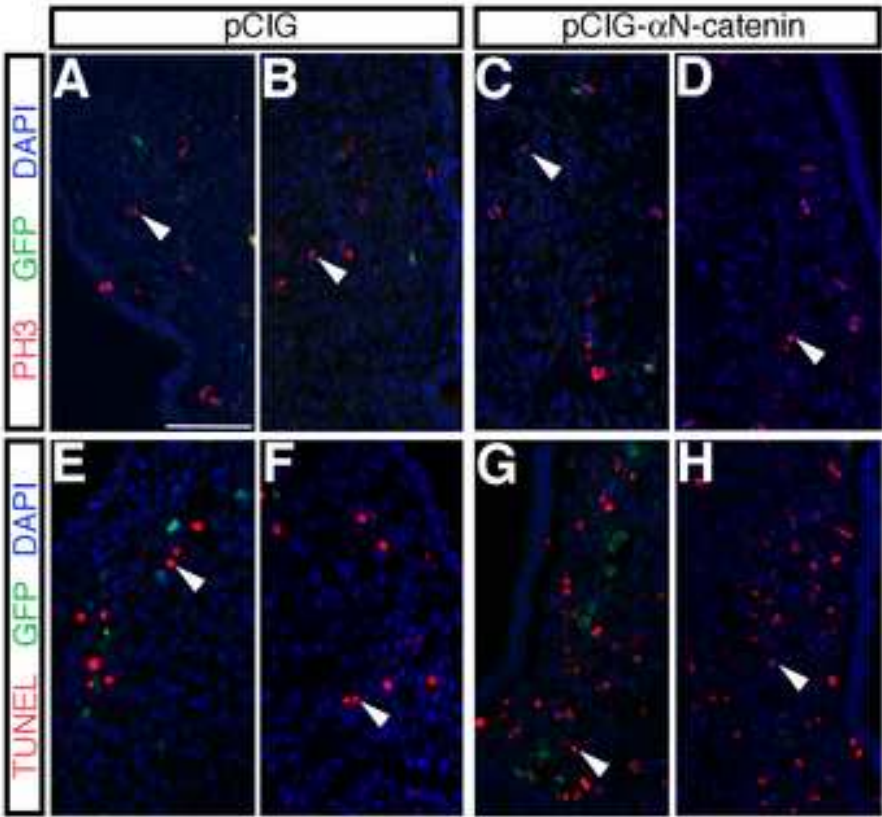
Fluorescence intensity and area measurements (made in the Zeiss Axiovision Release 4.8 software) of Cadherin-7 in MO (or GFP)-positive and -negative cells from at least 4 serial sections in three embryos are presented.

Supplemental Figure 1



Supplemental Figure 1. Electroporation of α N-catenin or the control MO does not alter cell proliferation nor cell death in the developing trigeminal ganglion. Electroporation of control (A,B,E,F) or α N-catenin (C,D,G,H) MO, followed by re-incubation of embryos to HH15 (A-D), HH14 (E,F) or HH16 (G,H), transverse sectioning, and processing for phospho-histone H3 immunohistochemistry (A-D, PH3, green) or TUNEL (E-H, green) (representative sections are shown). MO-treated (A,C,E,G) and contralateral (B,D,F,H) sides of sections are shown. Arrowheads indicate PH3- (A-D) or TUNEL-positive (E-H) nuclei, with a similar distribution in the presence of either MO (red) or with that found on the contralateral control side of the section. Asterisk marks the MO-electroporated neural tube. DAPI (blue) labels cell nuclei in all images. Scale bar in (A) is 50 μ m. Scale bar in (C) is also 50 μ m and applicable to remaining images.

Supplemental Figure 2



Supplemental Figure 2. Overexpression of α N-catenin or the pCIG control construct does not alter cell death nor cell proliferation in the chick embryonic neural tube. Electroporation of control pCIG (A,B,E,F) or pCIG- α N-catenin (C,D,G,H) constructs, followed by re-incubation of embryos to HH14 (A-D), HH15 (E,F) or HH16 (G,H), transverse sectioning, and processing for phospho-histone H3 immunohistochemistry (A-D, PH3, red) or TUNEL (E-H, red) (representative sections are shown). Electroporated (A,C,E,G) and contralateral (B,D,F,H) sides of sections are shown. Arrowheads indicate PH3- (A-D) or TUNEL-positive (E-H) nuclei, with a similar distribution in the presence of either construct (GFP, green) or with that found on the contralateral control side of the section. DAPI (blue) labels cell nuclei in all images. Scale bar in (A) is 50 μ m. Scale bar in (C) is also 50 μ m and applicable to remaining images.