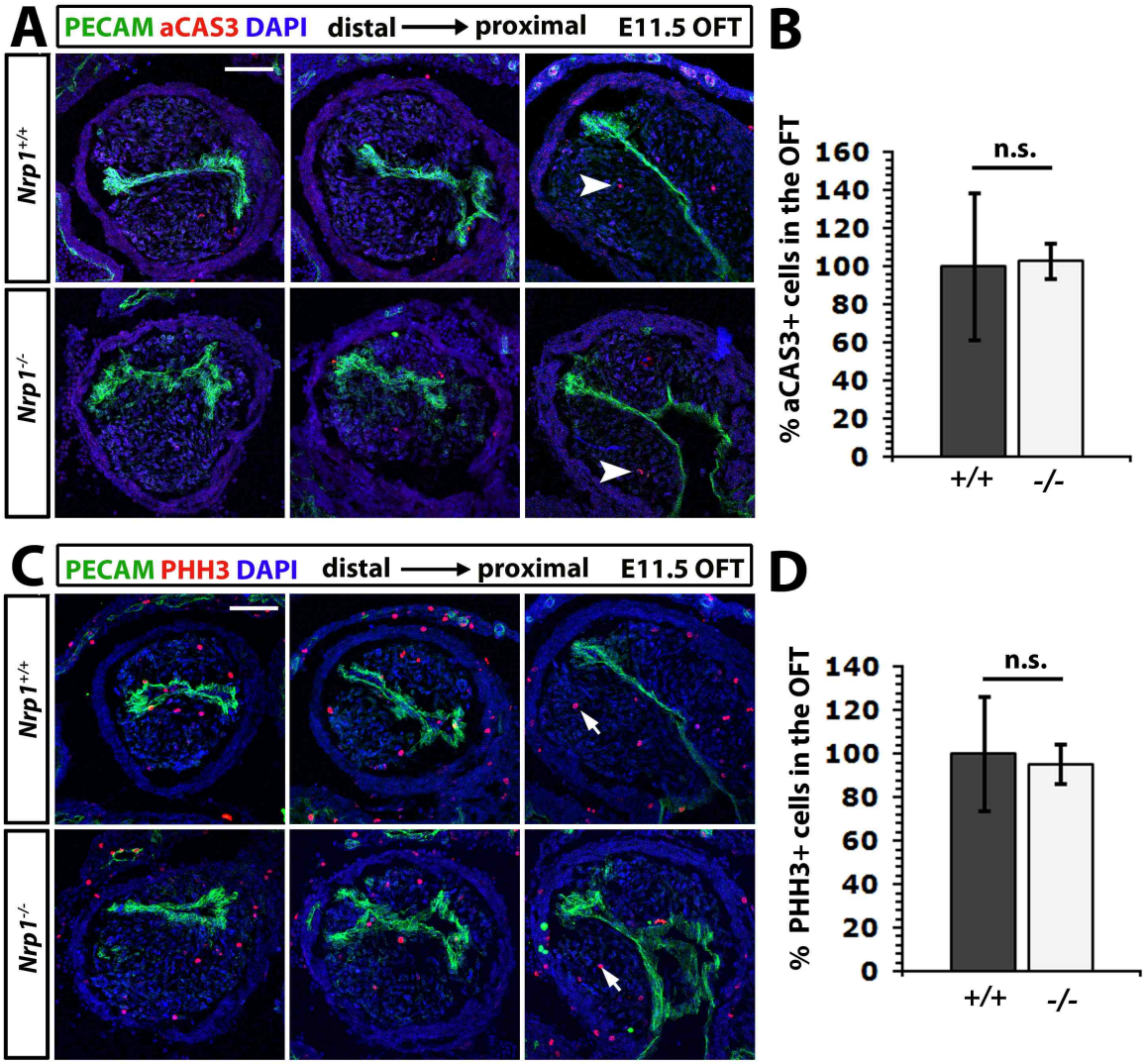
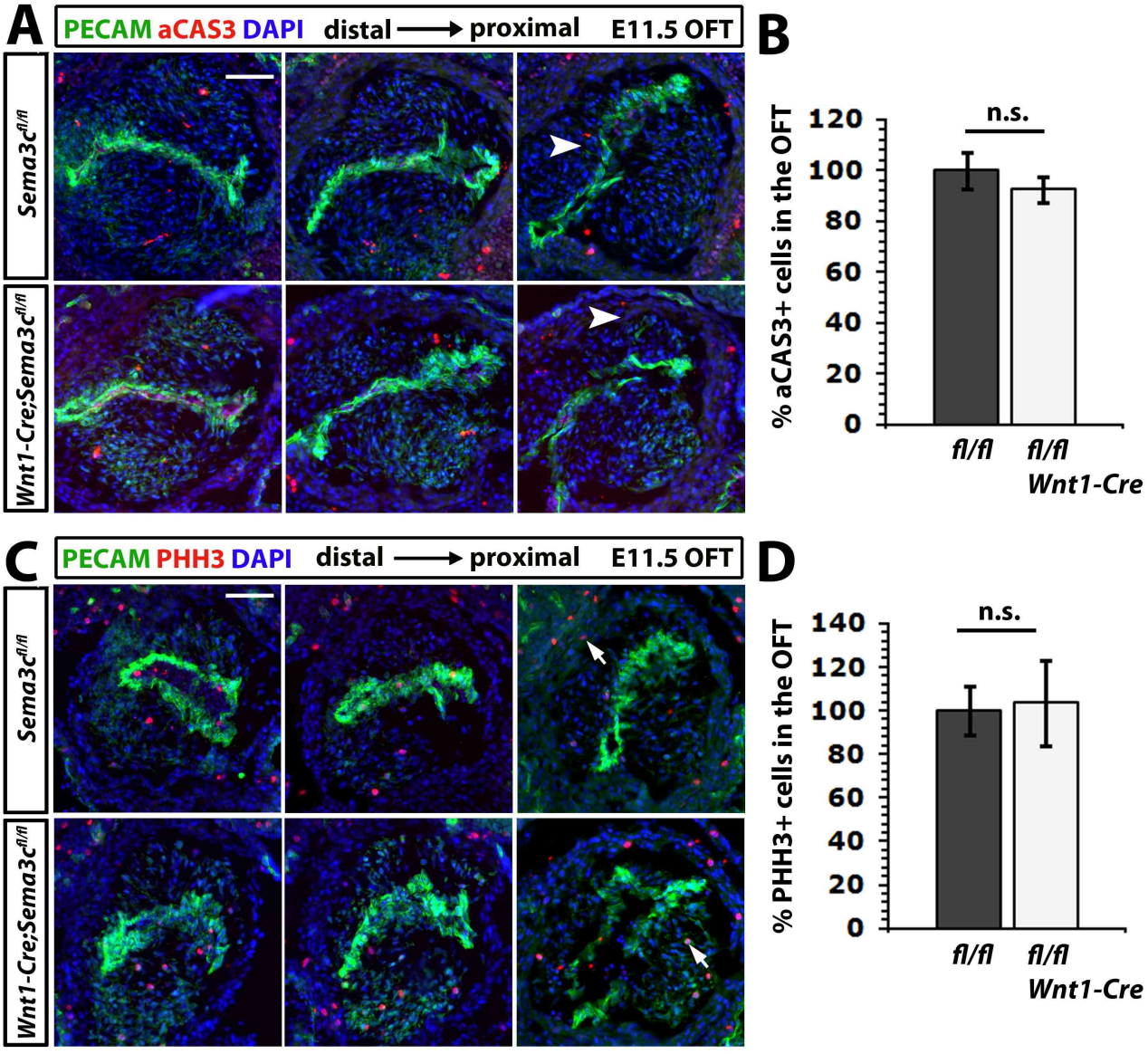
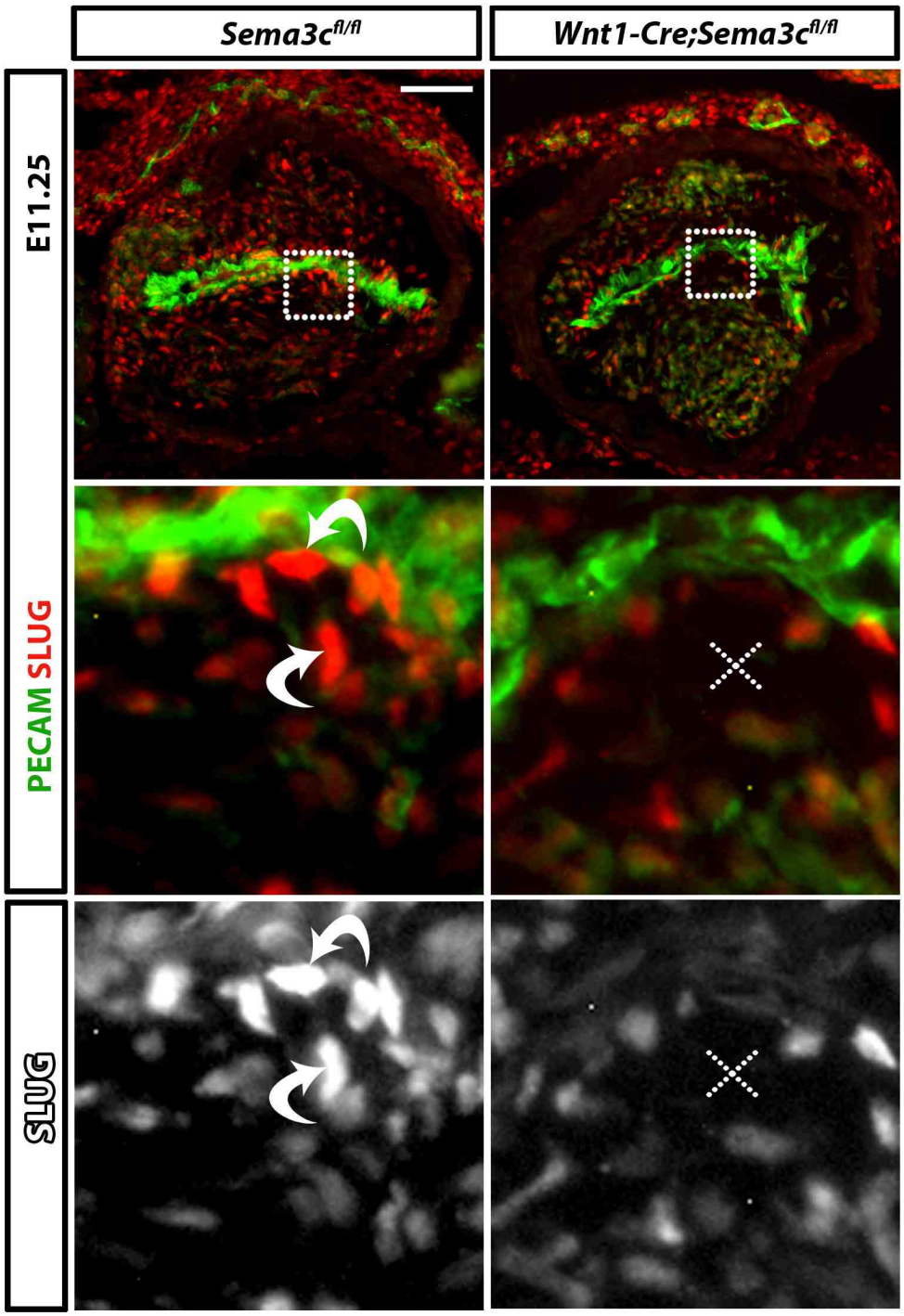
Supplemental Figures:



Supplemental Figure 1. ***NRP1 is not required for cell proliferation or survival in E11.5 OFTs.*** **(A,C)** Sections through E11.5 OFTs from *Nrp1*-nulls and wildtype littermates (n=3 each) were immunolabelled for PECAM, DAPI and aCAS3 or PHH3, respectively. Arrowheads indicate aCAS-positive and arrows PHH3-positive cells. **(B,D)** Quantitation of aCAS3- or pHH3-positive cells in the proximal OFT of *Nrp1*-null and control littermates (n=3 each; for each OFT, the most proximal 8 sections were counted to obtain the average number for that OFT and expressed as mean ± SD; n.s., not significant with a 2-tailed, unpaired Student's t test. Scale bars: 100 µm **(A,C)**.



Supplemental Figure 2. ***NCC-derived SEMA3C is not required for cell proliferation or survival in E11.5 OFTs.*** **(A,C)** Sections through E11.5 OFTs of *Wnt1-Cre;Sema3c*$^{fl/fl}$ and wildtype littermates were immunolabelled for PECAM, DAPI and aCAS3 or PHH3, respectively. Arrowheads indicate aCAS-positive and arrows PHH3-positive cells. **(B,D)** Quantitation of aCAS3- or pHH3-positive cells in the proximal OFT of *Wnt1-Cre;Sema3c*$^{fl/fl}$ and control littermates (n=3 each; for each OFT, the most proximal 8 sections were counted to obtain the average number for that OFT and expressed as mean ± SD; n.s., not significant with a 2-tailed, unpaired Student's t test. Scale bars: 100 μm **(A,C)**.



Supplemental Figure 3. ***Fewer SLUG–positive cells near the OFT endothelium in mice lacking NCC-derived SEMA3C.*** Immunolabelling of sections from E11.25 *Wnt1-Cre;Sema3c*$^{fl/fl}$ and littermate control OFTs (n=3 each) for PECAM and SLUG. The boxed area is shown in higher magnification, with the single SLUG channel in grey scale. The curved arrows indicate examples of individual SLUG-expressing cells near control OFT endothelium, and the dotted cross an area with few SLUG-positive individual cells adjacent to OFT endothelium lacking NCC-derived SEMA3C. Scale bar: 100 µm.

Supplemental Table 1:

Gene	Oligonucleotide sequence
Nrp1, *Nrp1*^{fl}	5'-CGTGATATTGCTGAAGAGCTTGGC-3'
	5'-CAATGACACTGACCAGGCTTATCATC-3'
	5'-GATTTTTATGGTCCCGCCACATTTGTC-3'
Nrp1^{Sema}	5'-AGGCCAATCAAAGTCCTGAAAGACAGTCCC-3'
	5'-AAACCCCCTCAATTGATGTTAACACAGCCC-3'
Nrp1^{Vegfa}	5'-ATTGCTGGGATTACAGGCGTGAACC-3'
	5'-GTGTGCTGATCTGGGAAGGTAGGCAG-3'
	5'-GGAGACGGGAGCAACCAGAGTGC-3'
Nrp2	5'-CAGTGACAACGTCGAGCACAG-3'
	5'-TCAGGACACGAAGTGAGAAGC-3'
	5'-GCTCAATGTAGCTAAGTGGAGGG-3'
Tie2-Cre	5'-CCCTGTGCTCAGACAGAAATGAGA-3'
	5'-GTGGCAGATGGCGCGGCAACACCATT-3'
Wnt1-Cre	5'-TAAGAGGCCTATAAGAGGCGG-3'
	5'-GTGGCAGATGGCGCGGCAACACCATT-3'
Vegfa^{120}	5'-CGCACGGGTGTTGGGTCGTTTGTTCGG-3'
	5'-CAGTCTATTGCCTCCTGACCTTCAGGGTC-3'
	5'-TTCAGAGCGGAGAAAGCATTTGTTTGTCCA-3'
Vegfa^{LacZ}	5'-CTTGCGTCCACACCGTCACATTAAGTCAC-3'
	5'-ATGTGACAAGCCAAGGCGGTG-3'
	5'-TGGCGATTTAGCAGCAGATA-3'
Vegfa^{fl}	5'-GGTAGGGGTTTTTCACAGAC-3'
	5'-CCTGGCCCTCAAGTACACCTT-3'
	5'-TCCGTACGACGCATTTCTAG-3'
Sema3c^{fl}	5'-GAATCTGGCAAAGGACGATG-3'
	5'-GACCACTGGGCTTGAGAGAG-3'
Rosa$^{Yfp/LacZ}$	5'-AAAGTCGCTCTGAGTTGTTAT-3'
	5'-GGAGCGGGAGAAATGGATATG-3'
	5'-GCGAAGAGTTTGTCCTCAACC-3'