Supplementary Figure Legends

Supplementary Figure 1. Reduced Pdx1 mRNA and protein but normal Ngn3 mRNA and Ngn3+ endocrine progenitor numbers in *Pdx1*$^{+/-}$ mice. **(A)** *Pdx1* mRNA levels in e13.5 total pancreas from *Pdx1*$^{+/-}$ (gray bars) and wild-type (black bars) littermate controls (n=6, *p<0.05), measured by real-time PCR and normalized to *HPRT* transcript levels. **(B)** Western Blot quantitation of total Pdx1 protein levels in e13.5 pancreata from *Pdx1*$^{+/-}$ and wild-type littermate controls normalized to cyclophilin B (n=9 per group, *p<0.05). **(C)** *ngn3* mRNA levels in total pancreas of e13.5 animals, measured by quantitative real-time RT-PCR. Values are normalized to HPRT mRNA levels and expressed relative to wild-type. N=5; *p =0.005. **(D**) Number of Ngn3+ cells per unit of epithelial area (e11.5) or pancreatic area (e13.5-P1) quantified from three (e13.5-P1) or five (e11.5) tissue sections per animal. N=5 per genotype.

Supplementary Figure 2. Decreased expression of endocrine hormones and transcription factors at e13.5 in *Pdx1*$^{\Delta C/\Delta C}$ mice. mRNA levels of endocrine hormones (A) and transcription factors (B) in total pancreas from *Pdx1*$^{+/+}$ (black bars), *Pdx1*$^{\Delta C/+}$ (gray bars) and *Pdx1*$^{\Delta C/\Delta C}$ (white bars) e13.5 embryos measured by quantitative real time RT-PCR (N=7-9 per genotype, *p<0.05). Levels were normalized to HPRT mRNA and expressed as fold change compared to wild-type.

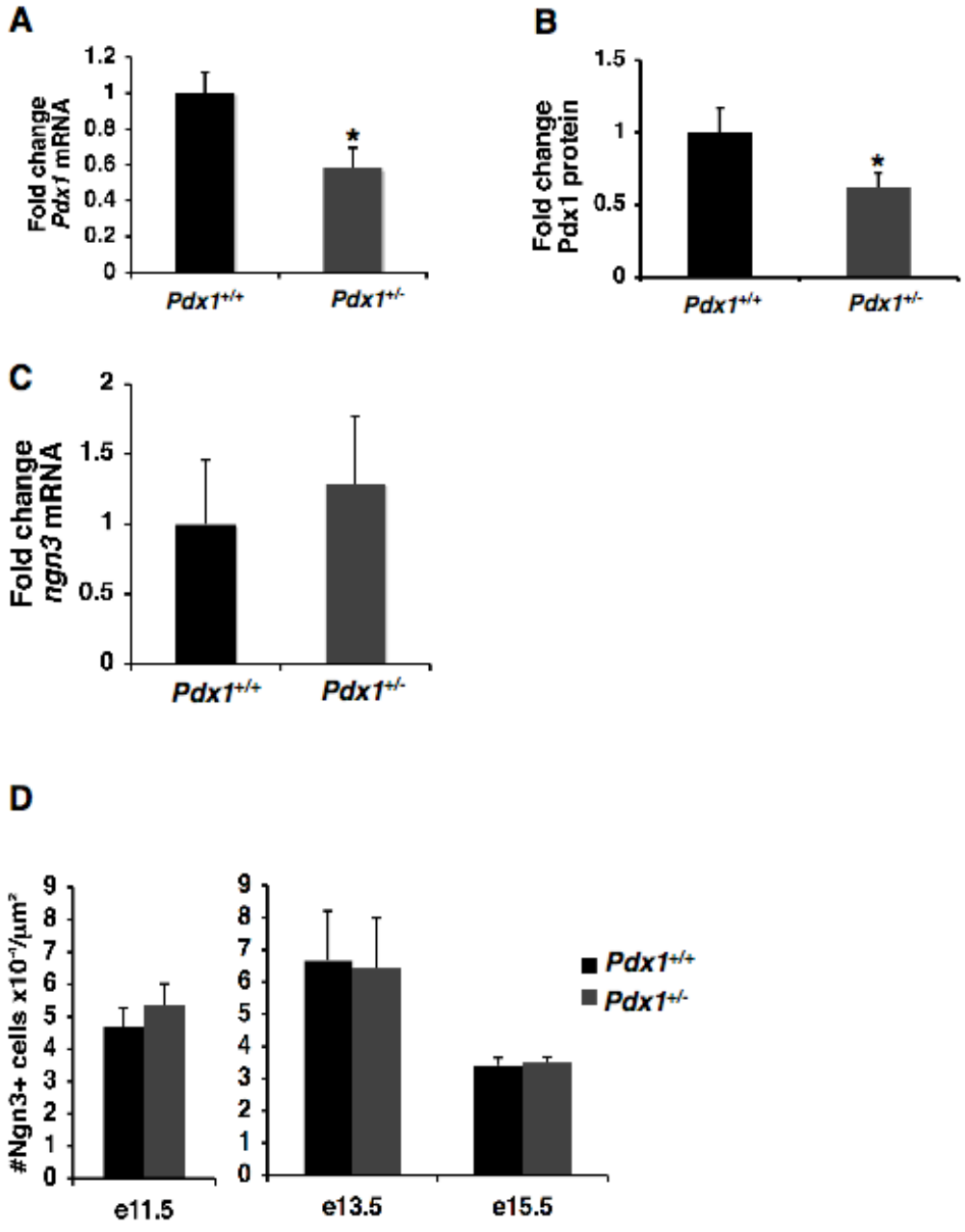
Supplementary Figure 3. Survival of Ngn3+ endocrine progenitors in *Pdx1*$^{\Delta C/\Delta C}$ mice.

Representative example of triple immunofluorescence for Ngn3 (green), TUNEL (red) and DAPI (blue) of e19.5 pancreas from *Pdx1*$^{\Delta C/\Delta C}$ mice. Arrow points to the same cell in all panels. Bar= 10μm.

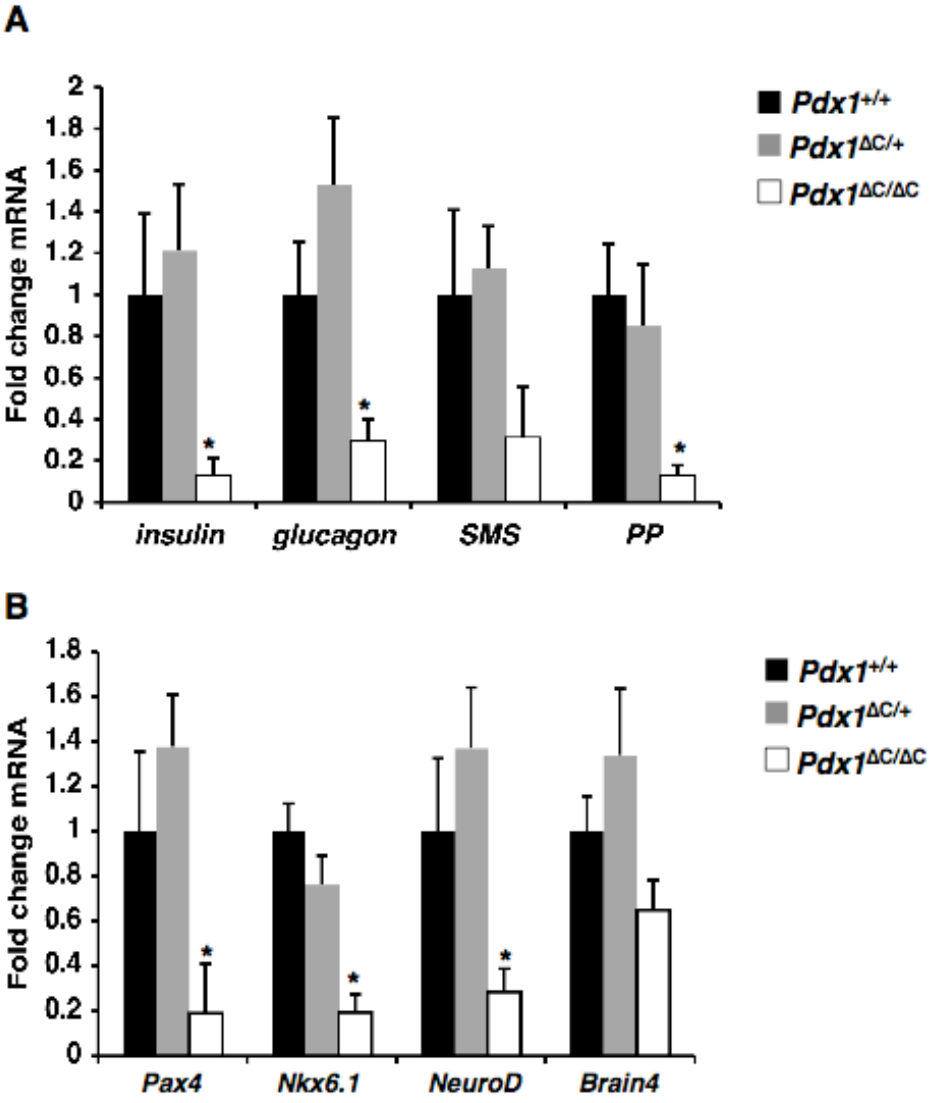
Supplementary Figure 4. Pdx1 and Ngn3 do not co-localize at e19.5. Double immuno-fluorescence for Ngn3 (green, left) and Pdx1 (red, middle) of e19.5 wild-type pancreata. Merged image is shown on the right. Bar=10μm.

Supplementary Table 1. Increase in TUNEL+Ngn3+ cells in *Pdx1*$^{\Delta C/+}$ and *Pdx1*$^{\Delta C/\Delta C}$ mice at e19.5. Number of double positive TUNEL+/Ngn3+ cells per pancreatic section at e15.5 and e19.5. N=5-6 embryos per genotype.

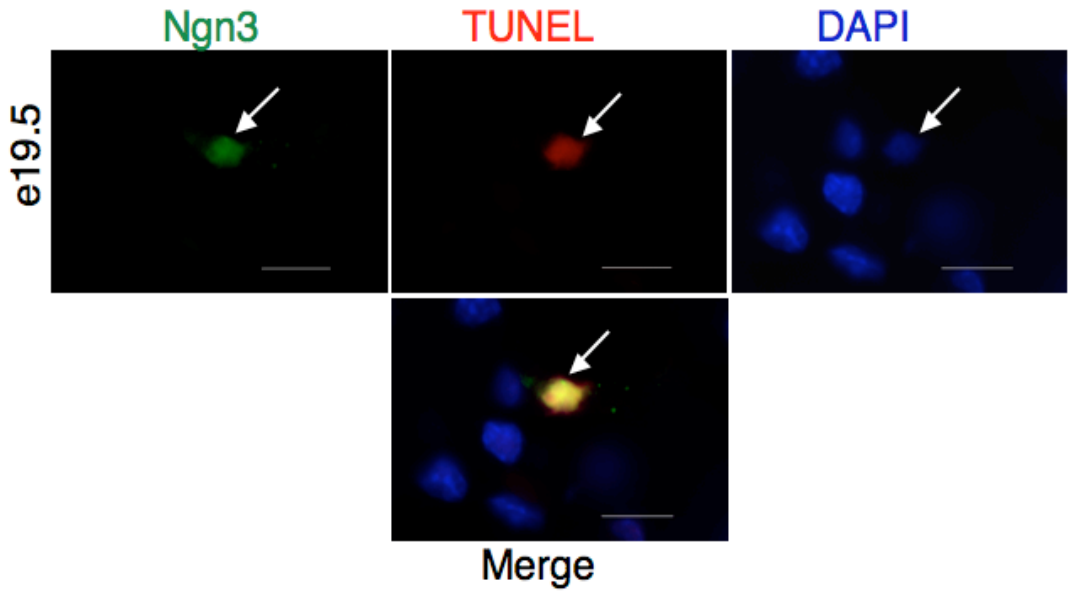
Supplementary Table 2. Quantitative PCR primers.



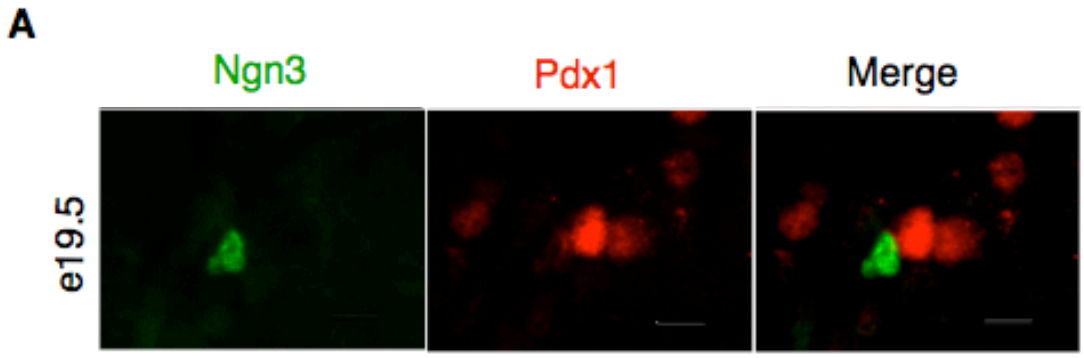
Supplementary Figure 1



Supplementary Figure 2



Supplementary Figure 3



Supplementary Figure 4

Supplementary Table 1.

	TUNEL+Ngn3+/Total Ngn3+ (%)	
Genotype	e15.5	e19.5
Pdx1$^{+/+}$	0/105 (0)	0/53 (0)
	0/123 (0)	1/35 (2.9)
	0/116 (0)	0/58 (0)
	0/129 (0)	0/39 (0)
	0/89 (0)	0/60 (0)
Pdx1$^{+/\Delta C}$	1/62 (1.6)	0/47 (0)
	1/110 (0.9)	2/66 (3.0)
	0/167 (0)	0/61 (0)
	0/56 (0)	2/18 (11.1)
	0/64 (0)	1/30 (3.3)
	0/62 (0)	1/39 (2.6)
Pdx1$^{\Delta C/\Delta C}$	0/72 (0)	1/21 (4.8)
	2/44 (4.5)	2/27 (7.4)
	0/41 (0)	0/13 (0)
	0/56 (0)	0/5 (0)
	0/37 (0)	0/19 (0)
	0/66 (0)	1/31 (3.2)

Supplementary Table 2.

Target	Forward Primer (5'-3')	Reverse Primer (5'-3')
cDNA		
Hnf4a	atgacacgtccccatctgaag	ctcgaggctccgtagtgtttg
Hnf1a	accactgcatccctcctatca	acctcaggcttgtggctgtat
Ptf1a	tcttgcagggcactctctttc	tcctctggggtccacacttta
Brain4	ggctgattcatccacaggaag	ttccagtacgcccttgacact
Pax4	tcctgtggcttcctcctcata	gaggcctcttatggccagttt
Nkx6.1	aacacaccagacccacgttct	atccccagagaataggccaag
NeuroD	gcccagcttaatgccatcttt	caaaagggctgccttctgtaa
ins	tggcttcttctacacacccaag	acaatgccacgcttctgcc
glu	gcacattcaccagcgactaca	cggttcctcttggtgttcatc
SMS	ctgaggcaaggaagatgctgt	gcagaaactgacggagtctgg
PP	ttgcagcctctcttgtcttca	tagtttgcaagggagcaggtt
Pdx1	gaacccgaggaaaacaagagg	gttcaacatcactgccagctc
Ngn3	tctcaagcatctcgcctcttc	acagcaagggtaccgatgaga
Hnf6	caaatcaccatctcccagcag	cagactcctcctcctggcatt
Sox9	cttctgtgggagcgacaactt	agggagggaaaacagagaacg
Foxa2	gagcaccattacgccttcaac	aggccttgaggtccattttgt
Hnf1b	catctgcaatggtggtcacag	ggcttgcagtggacactgttt
Hes1	agaggctgccaaggtttttg	tcccactgttgctggtgtaga
GDF11	cagccctctctgctgtcattt	tccccagttaggggtttcagt
HPRT	ggccagactttgttggatttg	tgcgctcatcttaggctttgt
Promoter		
Ngn3 (-4464)	ggcccaggtattatgtcagga	gcgacatatgttaggcagctc
Ngn3 (-4199)	actttgtttcctggctctgc	gtcctcgaacaaagggagaag
Ngn3 (-3872)	catgagcagctcgccttatct	ggctcaccaaccccatatttc
Ngn3 (-3670)	gccttgcagccaacctgttat	ctgacacatggatttggcactg
Ngn3 (-3527)	ccggatttatcacggcaaag	tgttaagcctcccccacaact
Ngn3 (-3332)	agactcccgccagagatgttt	gaaaagaaagccccacctgtc
Foxa2 (+1)	gtgagcggctggtgatatag	tgtgagctgattattcaaatgg
Foxa2 (+550)	aagcaggtgacagccaattt	gccagcgagttaaaggtgtg
Hnf1ß	ctgagccatctttctcctg	acagggctgaagctggagt
Sox9	atctctccatattttgtattaagggta	ggccttagggcattttgaa
Hnf6	caagctggcttgaagtaggg	ctctgctgggtctcaacatt