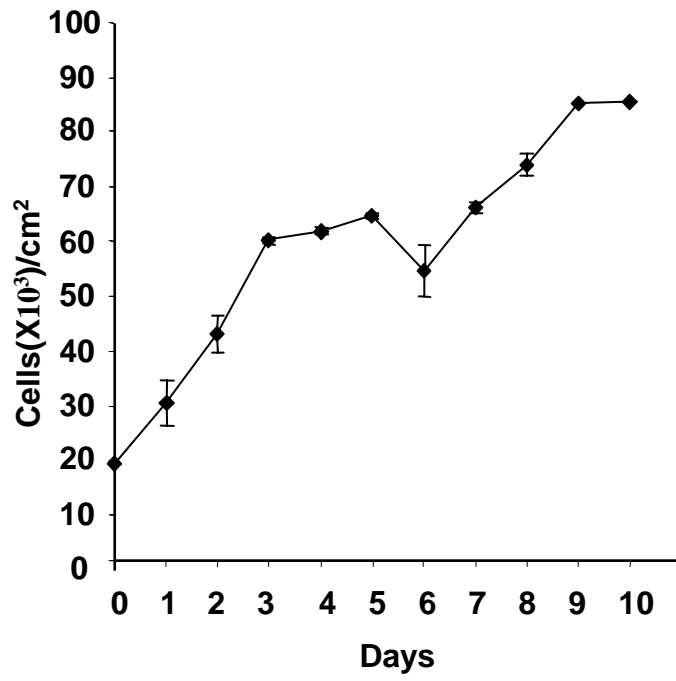


**Supplementary Figure 1.** LVEC cell proliferation.

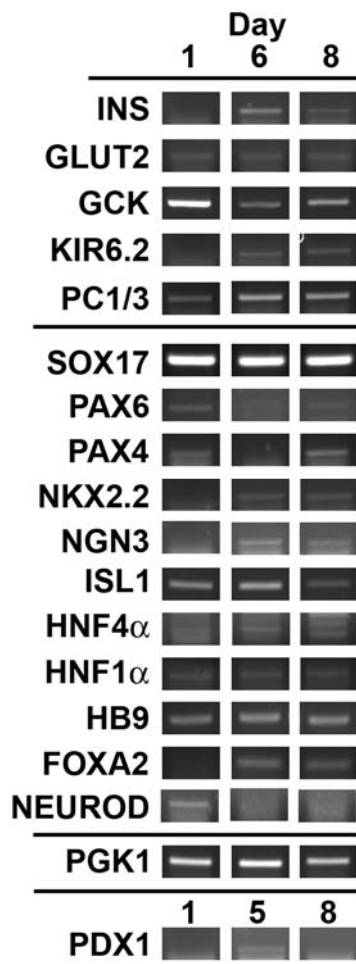
**Supplementary Figure 2.** mRNA expression of mature  $\beta$  cell markers and pancreatic transcription factors.

**Supplementary Table 1.** RTPCR amplicon size, cycle number, annealing temperature and primer sequences.

**Supplementary Table 2.** Quantitative RTPCR cycle of threshold (Ct) values. Samples are named by day of RNA harvest and glucose conditions; A, glucose supplemented to 5 mM, B, glucose supplemented to 20 mM.



Supplementary Fig. 2



## Supplementary Table 1

Gene	Amp. Size (bp)	Cycle #	Ann. Temp. (°C)	Forward Primer	Reverse Primer
FOXA2	160	30	56	AGACGGTGTGCAGAGACG	TTCTTTCCCGTTTTCTCCT
GCK	333	30	56.2	GCTCACTCAGGACTTTGATGC	AGCCACTCAGTGATGGTATGG
HLXB9	101	30	56.2	CGAGACCCAGGTGAAGATTTG	CCTTCTGTTTTCTCCGCTTCCT
HNF4 $\alpha$	245	30	48.2	CCCAGTCCCCTAAGAGAGC	GGATGAAGGTGAAGGTGAAGG
INS	368	30	65	ATCAGAAGAGGCCATCAAG	GTTGCAGTAGTTCTCCAGCTG
ISL1	330	30	56	GAGAGACACGACGGTGGCTTAC	GCAATGCAAGAGCAAACAAA
KIR6.2	110	30	60	GAGGAGGACGGACGTTACTCTGT	TCCAGTAGGCTGTGGTCTCAT
NEUROD1	203	30	50	TCAGCATCAATGGCAACTTC	CTCGCTCATGATGTGAATGG
NEUROG3	286	30	65	AGACGACGCGAAGCTCACC	AAGCCAGACTGCCTGGGCT
NKX2-2	330	30	60.5	TGCAGCACATGCAGTACAACG	TCCCAAGGTTT CAGAAGGAGAGG
PAX4	214	30	64	GTATCTAATGGCTGTGTGAGCAAG	TGGGAGTCTTGTCTGGGTGCA
PAX6	211	30	50	GAGACTGGCTCCATCAGACC	CTAGCCAGGTTGCGAAGAAC
PC1/3	226	30	63	CCCAAGTTGGAATATTCATGC	ACACTTCACTTGTGCAGACAGG
IPF1	269	35	56	CCTTTCCCATGGATGAAGTC	TTGTCTCCTCCTTTTTCCA
PGK1	246	20	60	CAGTTTGGAGCTCCTGGAAG	TGCAAATCCAGGGTGCAGTG
GLUT2	169	30	54	ATTGCGGACTTCTGTGGACCTTA	ACAGCAGCTTTTGGCCTGTG
SOX17	226	30	60	GCCAGCTCCGCGGTATATTAC	CCTCACCCCCCAAACCTGT
HNF1 $\alpha$	115	30	55	TACACCACTCTGGCAGCCACACT	CGGTGGGTACATGGTGACAGAAC

## Supplementary Table 2

<b>Sample</b>	<b>Ct</b>
1A	34.701
1B	34.438
1C	40.000
2A	40.000
2B	34.193
2C	34.624
3A	34.887
3B	33.833
3C	40.000
4A	34.751
4B	33.837
4C	34.804
5A	33.064
5B	33.878
5C	33.580
6A	32.061
6B	32.340
6C	32.896
7A	35.603
7B	34.406
7C	34.708
8A	33.355
8B	32.886
8C	31.573
9A	32.909
9B	33.711
9C	34.134
10A	40.000
10B	34.867
10C	35.237