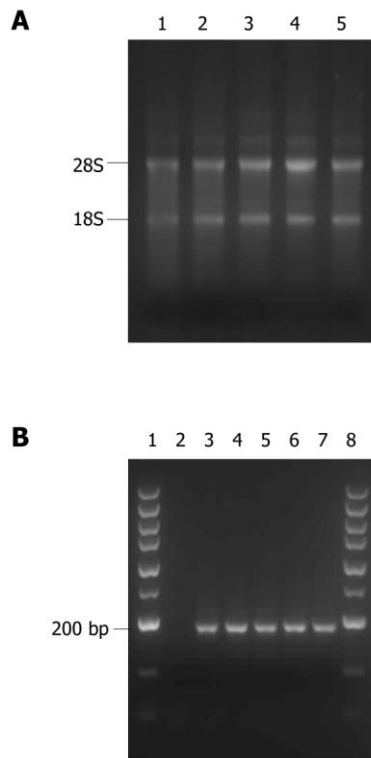




Supplementary Figure 1 A. RNA integrity assessment. Total RNA extraction and quantification from T1D-iPSCs and T1D- β -like cells were performed, with RNA integrity confirmed via electrophoresis. The RNA gel image revealed clear bands corresponding to 18S and 28S rRNA, with a peak ratio of 18S to 28S nearing 1:2, indicating high RNA integrity with minimal degradation (1-2: T1D-iPSCs; 3-5: T1D- β -like cells). **B. GAPDH expression stability verification.** For qRT-PCR, GAPDH served as a housekeeping gene, and its expression stability was validated by agarose gel electrophoresis of the reverse-transcribed cDNA. The results confirmed stable expression of GAPDH cDNA in the tested cell samples (1 and 8: DNA ladder DL1000; 2: negative control; 3-4: T1D-iPSCs; 5-7: T1D- β -like cells).

Supplementary Table 1 qRT-PCR primer sequences

primer	sequence (5'-3')
<i>OCT4</i> -F	CAGTGCCCGAAACCCACAC
<i>OCT4</i> -R	GGAGACCCAGCAGCCTCAAA
<i>NanoG</i> -F	CAGAAGGCCTCAGCACCTAC
<i>NanoG</i> -R	ATTGTTCCAGGTCTGGTTGC
<i>GADPH</i> -F1	ACCACAGTCCATGCCATCAC
<i>GADPH</i> -R1	TCCACCACCCTGTTG CTGTA
<i>OCT4</i>	AGTTTGTGCCAGGGTTTTTGACTTCACCTTCCCTCCAACC
<i>gEBNA1</i>	CAGTTCCTCGCCTTAGGTTGTAGGCTAGGAGTCACGTAGAAAGG
<i>gOrip</i>	GGCAGTGAACCTCTCCTGAATCTCGAGCACCTCACATACACCTTA
<i>GADPH</i> -F2	ACCACAGTCCAT GCCATCAC
<i>GADPH</i> -R2	TCCACCACCCTGTTGCTGTA
<i>Ins1</i> -F	CCTGTTGGTGCACCTTCCTA
<i>Ins1</i> -R	TCTGAAGGTCCCCGGGGCT
<i>Ins2</i> -F	CCCTGCTGGCCCTGCTCTT
<i>Ins2</i> -R	AGGTCTGAAGGTCACCTGCT
<i>Nkx6.1</i> -F	TCAGGTCAAGGTCTGGTTCCA
<i>Nkx6.1</i> -R	CGGTCTCCGAGTCCTGCTT
<i>NeuroD</i> -F	CACCGGGACACGAGGAATTC
<i>NeuroD</i> -R	TCGTCCTGAGAACTGAGACAC
<i>Kir6.2</i> -F	TTGACTCAGCCTTCTGCTGACACT-
<i>Kir6.2</i> -R	TGCATCTTGTATGGCAAGCACAGG
<i>Glut2</i> -F	TAGTCAGATTGCTGGCCTCAGCTT
<i>Glut2</i> -R	TTGCCCTGACTTCCTCTTCCAAC
<i>GLP-1R</i> -F	AGAACTCTCCTTCACTTCCTTCCA
<i>GLP-1R</i> -R	TCCCAGCATTTCCGAAACTC
<i>Pdx1</i> -F	ACTTAACCTAGGCGTCGCACAAGA
<i>Pdx1</i> -R	GGCATCAGAAGCAGCCTCAAAGTT
<i>Ngn3</i> -F	AGGTGATCTGCCTTCTTCTGCACT
<i>Ngn3</i> -R	ACCGTCCCTGCAACTCACACTTTA
<i>MafA</i> -F	CGGGAACGGTGATTGCTTAG
<i>MafA</i> -F	GGAGGTTGGGACGCAGAA