SUPPLEMENTARY DATA

Supplementary Table 1. Antibody List

Primary antibodies			
Antigen	Species	Applications	Source
menin	Rabbit	WB (1:1000); IP; ChIP	Bethyl (cat#: A300-105A)
Foxo1	Rabbit	WB (1:1000); IP	Cell Signaling (cat#: #2880)
p-Foxo1	Rabbit	WB (1:1000)	Cell Signaling (cat#: #9461)
AKT	Rabbit	WB (1:1000)	Cell Signaling (cat#: #9272)
P-AKT	Rabbit	WB (1:1000)	Cell Signaling (cat#: #4060)
Flag	Mouse	WB (1:2000); IP	Sigma (cat#: F1804)
β-actin	Mouse	WB (1:2000)	Santa Cruz (cat#: sc-47778)
SUV39H1	Mouse	WB (1:1000); ChIP	Abcam (cat#: ab12405)
H3K9me3	Rabbit	ChIP	Abcam (cat#: ab8898)
H3	Rabbit	ChIP	Abcam (cat#: ab1791)
Control IgG	Rabbit	IP; ChIP	Abcam (cat#: ab46540)
Secondary antibodies			
Name		Applications	Source
Goat Anti-Mouse IgG (H+L) HRP Conjugate		WB (1:5000)	Bio-Rad (cat#: 170-6516)
Goat Anti-Rabbit IgG (H+L) HRP Conjugate		WB (1:5000)	Bio-Rad (cat#: 170-6515)

Supplementary Table 2. Primer List

qRT-PCR primers		
Target Gene	Forward (5' to 3')	Reverse (5' to 3')
h*Men1*	CGCAAAGGCCTCTGAACTAC	GGAGAAAATCGTGGGTTTGA
h*Mafa*	GCGGAGAACGGTGATTTCTA	AGGAAAGGGAGGCTGAGAAG
h*Pdx-1*	AGCTTTACAAGGACCCATGC	ACCTCGTAAGGGGAGATGT
h*Nkx6.1*	ATTCGTTGGGGATGACAGAG	TCAACAGCTGCGTGATTTTC
h*GAPDH*	GAGTCAACGGATTTGGTCGT	TTGATTTTGGAGGGATCTCG
ChIP primers		
Target Gene	Forward (5' to 3')	Reverse (5' to 3')
hMafa amp	GAAACAATAGGCCCACTTCG	GGGGTAACTGAGACGGGAAG
hPdx-1 amp	GCGGAGCAGTGATTTTTCTC	TGGATACTCCCGAAATGAGG
hNkx6.1 amp	TGTTTTTCCTCCCCCTTTTT	CGGGAGATCTAGCCTCTGTG

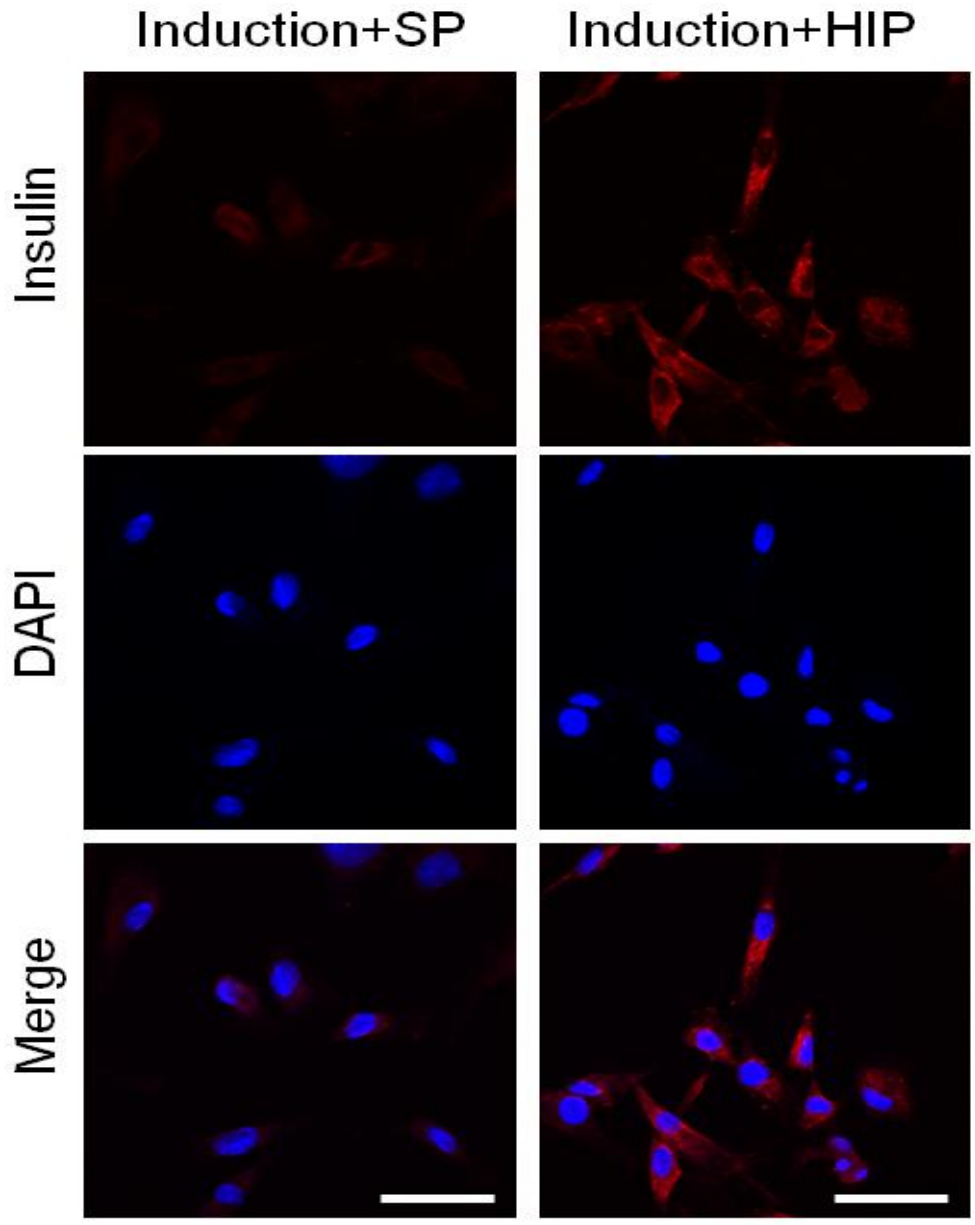
SUPPLEMENTARY DATA

Supplementary Table 3. Inhibitor List

Compound	Applications	Source
AS1842856	FOXO1 inhibitor	EMD Millipore (cat#: 344355-10MG)
LY294002	PI3K signaling inhibitor	Sigma(cat#: 934389-88-5)
MK2206	AKT signaling inhibitor	Selleck(cat#: S1078)
Wortmannin	PI3K signaling inhibitor	Selleck(cat#: S2758)

Supplementary Figure 1. Immunofluorescence micrographs of HFPPCs

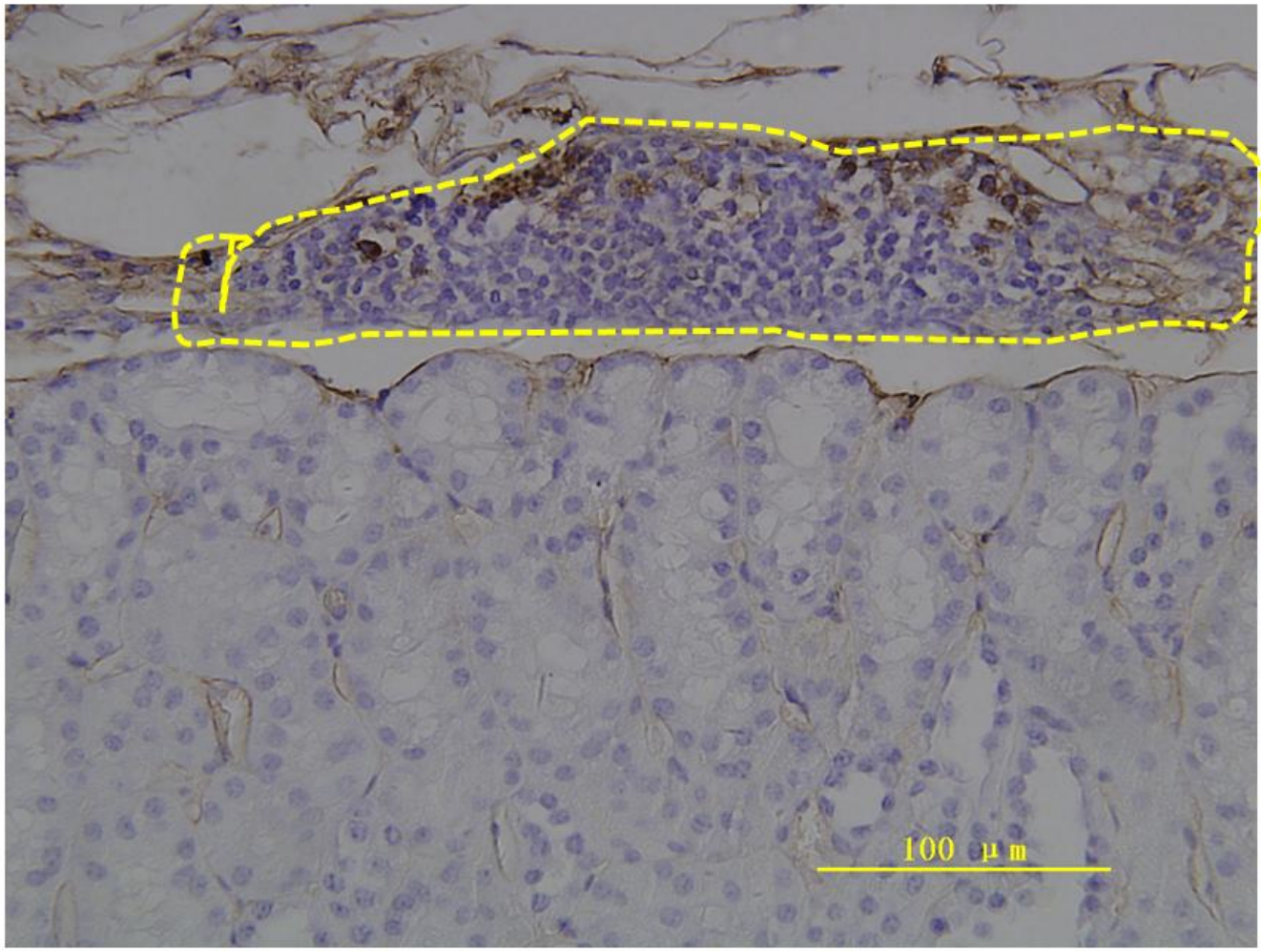
Immunofluorescence of HFPPCs stained with antibodies against insulin (red) in the presence of SP (left panels) or HIP (right panels). DAPI used for nuclei staining (Blue). Scale bar =100 µm.



SUPPLEMENTARY DATA

Supplementary Figure 2. Evaluation of the survival of grafted islet-like structures

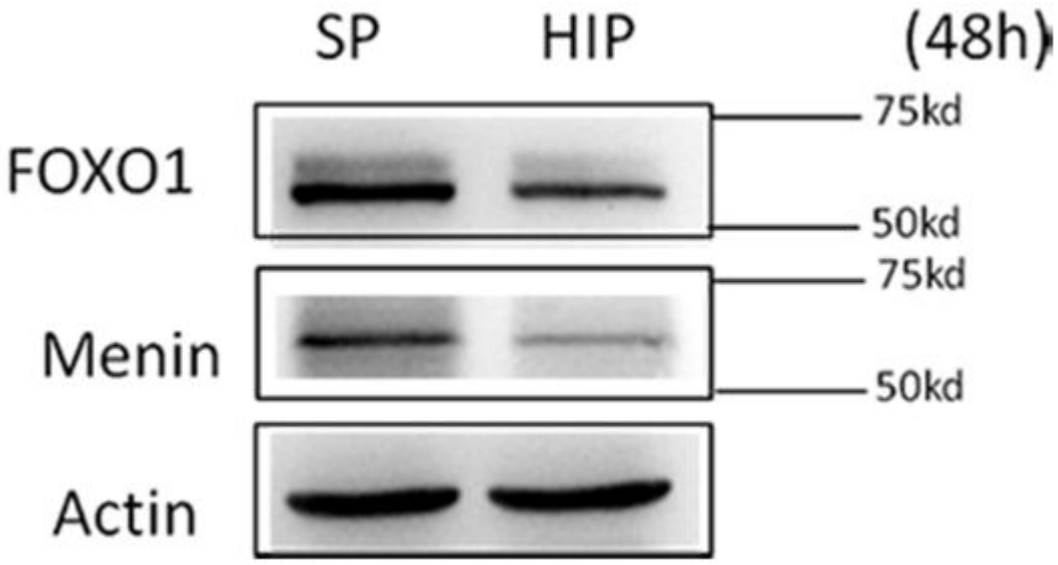
Immunohistochemistry micrographs of the grafted islet-like structures stained with antibody against human insulin. Scale bar =100 μm.



SUPPLEMENTARY DATA

Supplementary Figure 3. Effect of HIP on expression of menin and FOXO1 in mouse islets

Mouse islets were treated with 10 μg/ml HIP or 10 μg/ml SP for 48 h. Menin and FOXO1 protein level were determined by Western blotting. β-actin was used as internal control.



SUPPLEMENTARY DATA

Supplementary Figure 4. BrdU positive cells within HFPPCs transfected with *Vector* or *Sh-Men1*

HFPPCs transfected with either *Vector* or *Sh-Men1* were treated with 10 μM BrdU for 11 h. The cells were incubated overnight at 4℃ with a 1:100 dilution of mouse anti-BrdU antibody (Sigma). The cells were then incubated with a Goat anti-Mouse antibody (Abcam) for 1 h. Representative images show the BrdU+ proliferating cells **(A)**. Quantification of cell proliferation was based on the percentage of BrdU+ cells. There is no difference in %BrdU+ cells in *Sh-Men1* group (~8.4%) and *Vector* controls (~8.6%) **(B)**. Data were mean ± S.E. n = 9. NS, no significance.