



Supplementary Materials

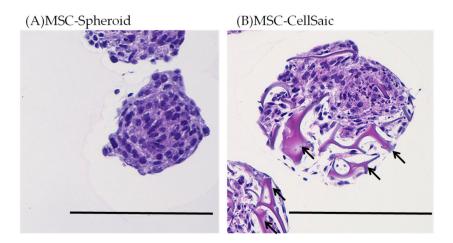


Figure S1. Histology images of MSC-Spheroid and MSC-CellSaic. Hematoxylin and eosin stained images of MSC-Spheroid (A) and MSC-CellSaic before transplantation. Arrows indicate recombinant peptide pieces. Scale bar = $200~\mu m$

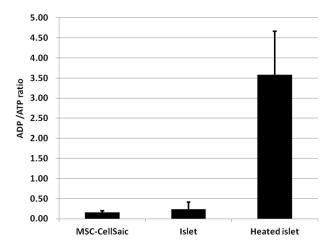


Figure S2. Evaluation of Islet Cell Viability. Islet survival was evaluated by ADP/ATP ratio assay using the ADP/ATP Ratio Assay Kit, ApoSENSOR (K255-200, BioVision, San Francisco, USA). Islet survival was evaluated by ADP/ATP ratio assay using the ADP/ATP Ratio Assay Kit, ApoSENSOR (K255-200, BioVision, San Francisco, USA). As a control for necrotic islets, islets heated at 60°C for

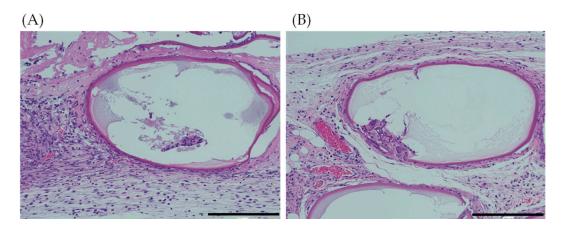


Figure S3. Histological images of microencapsulated islets and MSC-CellSaic at 14 days of transplantation. H&E stained photographs of microencapsulated pancreatic islets (A) and MSC-CellSaic (B) implanted subcutaneously in mice. They were removed 14 days after transplantation and tissue sections were prepared. The inflammatory response around the capsule is mild and the cells inside are viable. scale bar = $200 \, \mu m$.