

**Supplemental Fig. S3.** Overexpression of miR-146a-5p induced glucose-stimulated insulin secretion assay (GSIS) impairment and senescence in  $\beta$ -TC6 cells. (A) Overexpression of miR-146a-5p impaired GSIS in the absence of stearic acid, respectively. (B, C) The effect of miR-146a-5p mimic (mimic-146a-5p) on senescence genes expression and  $\beta$ -Gal activity in  $\beta$ -TC6 cells, respectively (C: scale bar, 100 µm). (D) The change in cell viability after transfection of mimic. (E) The transfection efficiency of mimic-146a-5p in  $\beta$ -TC6 cells. Each experiment was repeated independently three times. AMO, anti-miRNA oligonucleotides. <sup>a</sup>*P*<0.05, <sup>b</sup>*P*<0.01, compared with control (Ctrl)+mimic-negative control (NC) group; <sup>c</sup>*P*<0.05, <sup>d</sup>*P*<0.01, compared with mimic-146a-5p group; <sup>c</sup>*P*<0.05.

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