

Figure S1. Histological analysis of kidney from Zucker Fatty Diabetes Mellitus (ZFDM)-Lepr^{fa/+} (Hetero) and ZFDM-Lepr^{fa/fa} (Homo) rats. Thin sections (4 μ m) were made from paraffin-embedded isolated kidney from ZFDM rats at 36–38 weeks old (Hetero: $n = 8$, Homo: $n = 10$). Representative hematoxylin and eosin (HE) and picosirius red stained sections were shown. In the picosirius red staining, collagen was stained in red and cytoplasm was stained in yellow. Scale bar: 100 μ m.

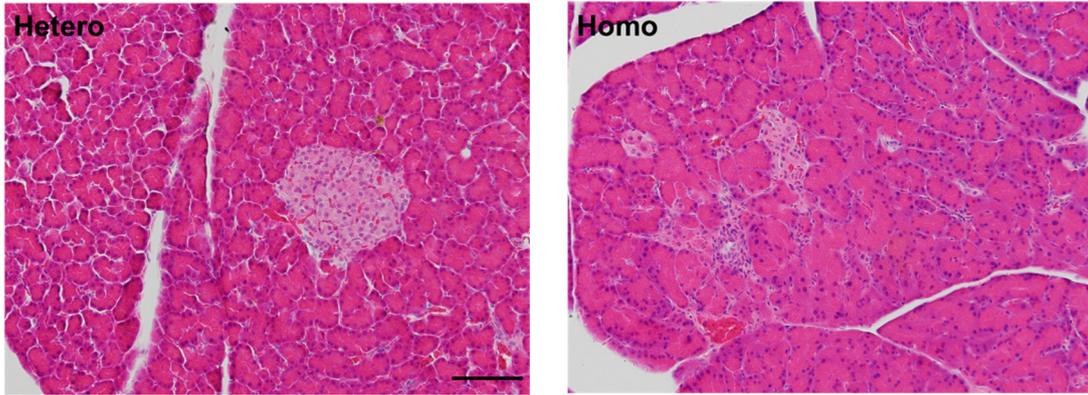


Figure S2. Histological analysis of pancreas from ZFDM rats. Thin sections (4 μm) were made from paraffin-embedded isolated pancreas from ZFDM rats at 36–38 weeks old (Hetero: $n = 6$, Homo: $n = 7$). Representative HE stained sections were shown. Scale bar: 100 μm .

Table S1. The electrocardiogram analysis of Zucker Fatty Diabetes Mellitus (ZFDM)-Lepr^{fa/+} (Hetero) and ZFDM-Lepr^{fa/fa} (Homo) at 20 weeks old (Hetero: *n* = 8, Homo: *n* = 10). The rats were anesthetized by an isoflurane (2.5%) inhalation. Electrocardiogram was recorded in lead II configuration. Results were expressed as means ± standard error of the mean. ***p* < 0.01 vs. Hetero.

	Hetero	Homo
R interval (ms)	214.9 ± 5.6	236.2 ± 3.8**
Heart rates (b. p. m.)	280.6 ± 7.5	254.7 ± 4.0**
PR interval (ms)	53.1 ± 1.1	50.2 ± 1.9
P duration (ms)	16.0 ± 1.7	22.6 ± 2.8
QRS interval (ms)	16.0 ± 0.7	16.7 ± 1.4
P amplitude (μV)	25.8 ± 3.3	33.9 ± 13.1
R amplitude (μV)	377.1 ± 40.0	395.2 ± 69.4