## **ONLINE APPENDIX**

40, 111 1111001				
	Ad-GFP db/m	Ad-GFP db/db	Ad-hACE2-eGFP db/m	Ad-hACE2-eGFP db/db
Body Weight (g)	$18.18 \pm 0.56$	24.70 ± 1.14*	$18.82 \pm 0.57$	23.2 ± 1.42*
Fasting Blood Glucose ( <i>mg/dl</i> )	85.75 ± 6.5	123.8 ± 13.2	126.00 ± 10.3†	$144.4 \pm 13.38$
IPGT AUC ( <i>mg/dl/min</i> )	$12.68\pm0.4$	$18.48 \pm 1.8*$	$13.35\pm0.5$	18.05 ± 1.2*
Insulin sensitivity AUC ( <i>mg/dl/min</i> )	$8.05 \pm 0.9$	$10.9 \pm 2.5$	$5.3 \pm 0.1$	$9.06\pm0.8$

Supplemental Table 1. Metabolic parameters in Ad-hACE2 and Ad-GFP infected db/db and db/m mice.

Data represent metabolic parameters of 4 week-old db/m and db/db mice (n=6 per group) following infection with Ad-hACE2-eGFP or Ad-eGFP viruses. Statistical significance: \*P<0.001 vs. treatment- matched db/m,  $^{\dagger}P<0.05$  vs. GFP treated controls. Abbreviation: IPGT AUC, intra-peritoneal glucose tolerance area under the curve.

## Supplemental Figure 1



Adenoviral delivery via direct injection does not cause pancreatic inflammation. *A*: H&E staining revealed preservation of pancreatic architecture following direct viral injection. *B*: Immunostaining for CD3+ revealed only occasional lymphocytes present in pancreatic tissue.

## Supplemental Figure 2



ACE2 overexpression enhanced islet insulin content in db/db mice in comparison to Ad-eGFPexpressing db/db mice (A,C). There was no significant change in pancreatic  $\beta$ -cell proliferation (D) apoptosis (C,E) or pancreatic  $\beta$ -cell mass (F). Values expressed as mean  $\pm$  SEM.