

## Supplementary Material

Wang et al “A soluble activin receptor type IIB does not improve blood glucose in streptozotocin-treated mice”

**Figure S1. Weight of muscles from STZ-treated mice with ACVR2B:Fc over 11 days relative to those of STZ-treated mice receiving PBS.** Student's *t*-test, \* $P < 0.05$ . STZ-PBS,  $n = 7$ ; STZ-ACVR2B:Fc,  $n = 7$ .

**Figure S2. Reproducibility of elevated blood glucose and corticosterone but not fasting glucose after ACVR2B:Fc treatment in mice with STZ-induced diabetes.** (A) Fasting blood glucose in Group A mice (treated for 58 days with ACVR2B:Fc or PBS). Fasting blood glucose is significantly different between all treatments. Fasting blood glucose was measured the morning of day 35. (B) Blood glucose and fasting blood glucose in Group B mice (treated for 42 days with ACVR2B:Fc or PBS). Blood glucose was significantly higher those receiving ACVR2B:Fc injections by repeated measures ANOVA. Fasting blood glucose taken day 14 after the start of ACVR2B:Fc or PBS treatment was significantly higher in STZ-treated mice compared to control but not to each other. (Note that in these mice, fasting blood glucose was significantly higher in STZ-ACVR2B:Fc mice compared to STZ-PBS mice at the start of the pyruvate tolerance test but not the glutamine tolerance test shown in Figure 4A and C of the main manuscript.) (C) Blood glucose, fasting blood glucose and serum corticosterone in Group C mice treated with ACVR2B:Fc or PBS for 11 days. Fed blood glucose was significantly higher in STZ-ACVR2B:Fc mice compared to STZ-PBS mice by day 7. Fasting blood glucose measured on day 9 was not significantly elevated in STZ-ACVR2B:Fc mice compared to STZ-PBS mice. Corticosterone from serum collected at euthanasia on day 11 was significantly higher in STZ-ACVR2B:Fc mice compared to STZ-PBS mice similar to the results in Group B mice (Figure 3 of main manuscript). Control,  $n = 4$ ; STZ-PBS,  $n = 7-8$ ; STZ-ACVR2B:Fc,  $n = 7-8$ .

**Figure S3. Alpha cells in pancreatic islets from STZ-treated mice taken 11 days after the start of PBS or ACVR2B:Fc treatment.** Immunofluorescence images showing glucagon-positive alpha cells (green) and insulin-positive beta cells (red). Sections were also stained with DAPI to visualize nuclei (blue).

**Figure S1**

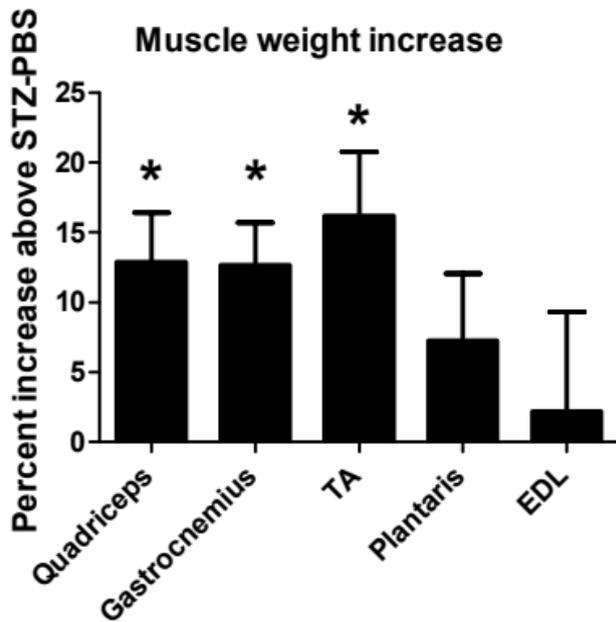
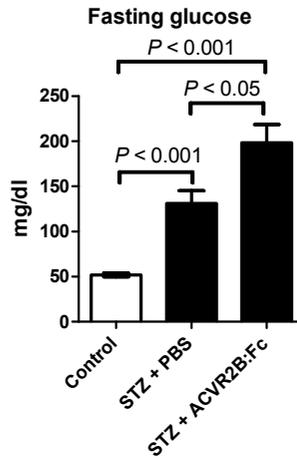
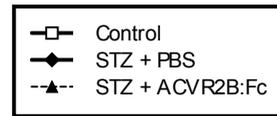
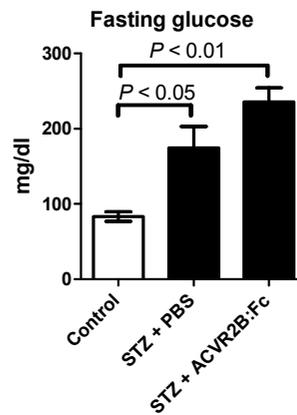
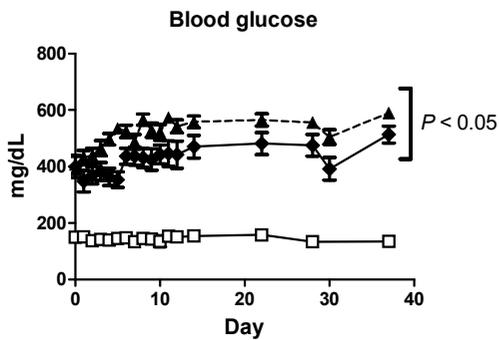


Figure S2

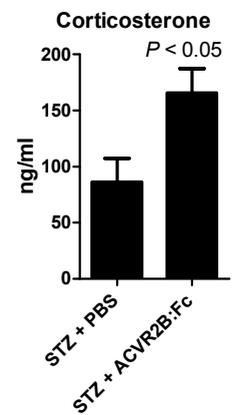
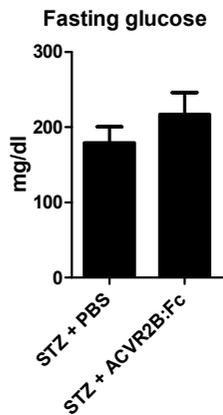
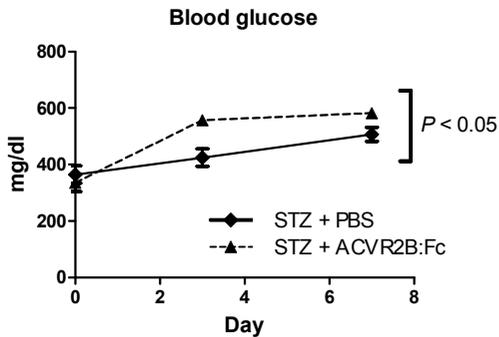
A Group A



B Group B



C Group C



**Figure S3**

**STZ-PBS**

**STZ-ACVR2B:Fc**

