



**Fig. S7. *Il33* expression in DPP4<sup>+</sup> APCs is regulated by  $\beta$ -adrenergic receptor signaling.**

**A)** mRNA levels of *Il33* gene in whole iWAT of wildtype mice following injection of isoproterenol or vehicle (saline) for 1.5 hours. n=6 for each group.

**B)** mRNA levels of *Il33* in freshly sorted DPP4+ and DPP4- APCs from iWAT of wildtype mice following injection of isoproterenol (ISO) or vehicle (saline) for 1.5 hours. n=5 for each group.

**C)** mRNA levels of *Il33* in cultured DPP4+ and DPP4- APCs treated with either isoproterenol or the  $\beta$ 3-adrenergic receptor agonist, CL316243, for the indicated times. Each timepoint represents cells pooled from both inguinal depots of 4 mice.

**D)** Western blot of IL-33 protein levels in the cell lysates of DPP4+ cells following treatment with isoproterenol for the indicated timepoints. Levels of  $\beta$ -ACTIN were used as a loading control. Each timepoint represents cells pooled from both inguinal depots of two mice.

**E)** Western blot of IL-33 protein levels in cell medium of DPP4+ cells following treatment with isoproterenol for the indicated timepoints.

**F)** mRNA levels of *Adrb1*, *Adrb2*, and *Adrb3*, within freshly isolated DPP4+ and DPP4- APCs of room temperature housed wildtype mice. n=6 for each group with cells pooled from both inguinal depots of 4 mice.

**G)** Western blot of protein levels of p-CREB, CREB, IL-33 and  $\alpha$ -Tubulin in isolated DPP4+ APCs. The cells were pretreated with the indicated inhibitors for 1hr and then in combination with ISO for additional 4 hours, respectively. Inhibitors: PKA, H89; pan-AR, Propranolol;  $\beta$ 1-AR, CGP-20712A;  $\beta$ 2-AR, ICI-118551. The cells were pooled from both inguinal depots of 10 mice.

**H)** Western blot of protein levels of p-CREB levels in DPP4+ and DPP4- APCs following treatment with isoproterenol for the indicated time periods.

**I)** ChIP-PCR illustrating total CREB occupancy at regions P1-P3 of the *Il33* locus (see Fig. 4a) within cultured DPP4+ and DPP4- APCs following treatment with vehicle or isoproterenol. The cells were pooled from both inguinal depots of 6 mice.

Representative data from at least two experiments is shown. In all panels, bars represent mean + s.e.m. \* $p$ < 0.05, \*\* $p$ <0.01 or \*\*\* $p$ <0.001 by one-way or two-way ANOVA.