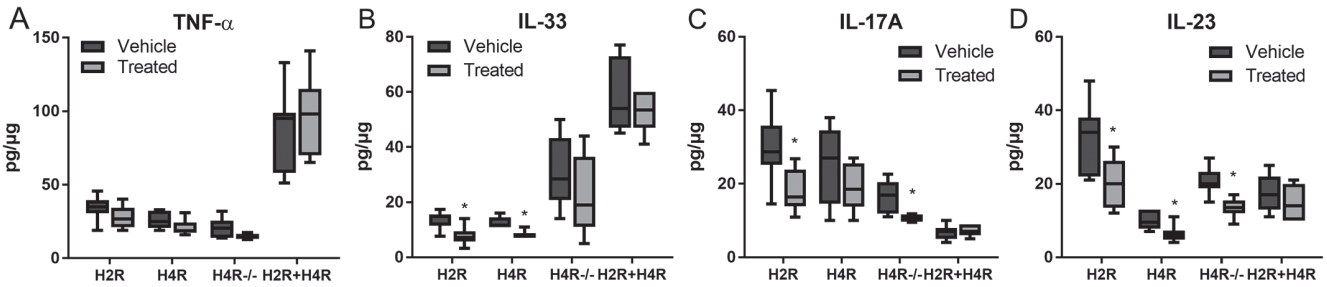

Fig. S2. Histamine 2 receptor (H2R) stimulation and histamine 4 receptor (H4R) blockade reduced pro-inflammatory cytokines in imiquimod (IMQ) treated lesional skin. (A) The content of tumour necrosis factor (TNF)-α in the skin was not significantly reduced by amthamine (H2R) or JNJ-39758979 (H4R) compared with the corresponding vehicle group. Also in $H4R^{-/-}$ mice, the amount of TNF-α in the skin did not differ from wild-type mice ("vehicle" on the graph). (B) The content of interleukin (IL)-33 in the skin was significantly reduced by amthamine (H2R) and JNJ-39758979 (H4R). (C) The content of IL-17A in the skin was significantly reduced by amthamine (H2R). JNJ-39758979 (H4R) only slightly decreased IL-17A, but not statistically significant. In $H4R^{-/-}$ mice (referred as "treatment + IMQ"), a significantly lower amount of IL-17A was measured compared with wild-type mice (also referred as "vehicle + IMQ"). (C) The content of IL-23 in the skin was significantly reduced by stimulation of H2R with amthamine (H2R) and by blockade of H4R with JNJ-39758979 (H4R). Also in $H4R^{-/-}$ mice, a significantly lower amount of IL-23 was measured compared with wild-type mice All data are given in pg cytokine/µg protein of the skin. Data show box plots of $n = 6$ BALB/c mice treated with amthamine and $n = 7$ BALB/c mice all other treatment groups; $n = 6$ wild-type and $n = 6$ $H4R^{-/-}$ mice. $^*p < 0.05$ Mann–Whitney test. All drugs were given at a dosage of 20 mg/kg administered intraperitoneally (i.p.) twice daily and were compared with treatment with vehicle (aqua ad injectionem, twice daily i.p.).