



**Fig. S1. Histamine 2 receptor (H2R) stimulation and histamine 4 receptor (H4R) blockade reduced imiquimod (IMQ)-induced skin inflammation.** Severity of inflammation of the back skin was evaluated using a modified Psoriasis Area and Severity Index (PASI). Total scores are shown in Fig. 1. (A) Scaling, (B) skin thickening, and (C) erythema for each experimental setting is displayed on a scale from 0 (no symptoms) to 4 (marked symptoms).  $n = 6$  BALB/c mice treated with amthamine and  $n = 7$  BALB/c mice all other treatment groups;  $n = 6$  wild-type and  $n = 6$  H4R<sup>-/-</sup> mice; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  two-way ANOVA followed by Sidak's multiple comparisons test. Data are presented as mean  $\pm$  standard deviation of the mean (SD). All drugs were given in 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.).