

## Supplemental information

[Title]

### **Signs of atopic dermatitis and contact dermatitis affected by distinct *H2*-haplotype in the NC/Nga genetic background**

[Short Title]

AD sensitivity by distinct *H2*-haplotype in the NC/Nga background

Kozo Ohkusu-Tsukada<sup>1</sup>, Daiki Ito<sup>1</sup>, Yuki Okuno<sup>1</sup>, Teruyo Tsukada<sup>2</sup> and Kimimasa Takahashi<sup>1</sup>

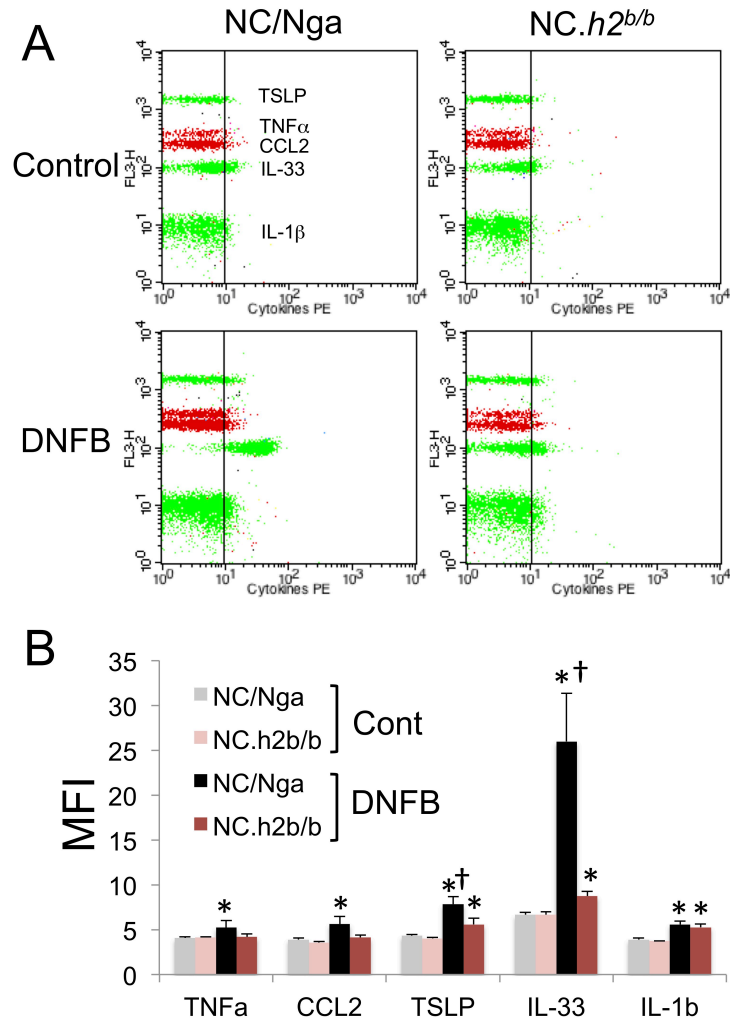
<sup>1</sup> Department of Veterinary Pathology, Nippon Veterinary and Life-science University (NVLU).

<sup>2</sup> Radiation Biology Team, Nishina Center for Accelerator-based Science, RIKEN.

[Keyword] H-2<sup>nc</sup>, *H2*-congenic NC/Nga mice, DNFB, atopic dermatitis (AD), allergic contact dermatitis (ACD)

**Correspondence:** Kozo Ohkusu-Tsukada, Ph.D., DVM. Department of Veterinary Pathology, Nippon Veterinary & Life-science University (NVLU). 1-7-1 Kyonan-cho, Musashino, Tokyo, Japan. E-mail: [tkd-oks@nvl.u.ac.jp](mailto:tkd-oks@nvl.u.ac.jp)

## Supplementary Figure



**Supplemental Figure S1.** The expression pattern of serum cytokines in NC/Nga and

NC.h2<sup>b/b</sup> were analyzed by flow cytometry. **A.** A typical DATA of flow cytometry is

shown. **B.** The bar graphs (n = 4) depicting the mean fluorescence intensity (MFI) are

indicated as mean ± SD. \* DNFB vs. control,  $p < 0.05$ , ANOVA. † NC/Nga vs.

NC.h2<sup>b/b</sup>,  $p < 0.05$ , ANOVA

## Supplemental Material

Cytokines concentration in serum was determined using LEGENDplex™ Multi-Analyte Flow Assay Kit (BioLegend, TNF $\alpha$ -A7, CCL2-A8, IL-1 $\beta$ -B2, IL-33-B5, and TSLP-B9) according to the manufacturer's instructions.<sup>1</sup> Briefly, two size populations of bead A and bead B for the microsphere populations are distinguished by FSC/SSC analysis. Each beads have a characteristic fluorescence intensity that can be detected with FL3, and were coated by each cytokine-specific mAbs. Serum cytokines are sandwiched with biotinylated each cytokine-specific mAbs on each mixed beads, followed to labeling with streptavidin-PE. The intensities in the classification fluorescence channels which are easy to gate and quantify are clearly defined by FL3/FL2 assays.

## Reference

1. Lehmann J.S., *et al.* Multiplex cytokine profiling of stimulated mouse splenocytes using a cytometric bead-based immunoassay platform. *J Vis Exp.* 129: e56440. doi: 10.3791/56440 (2017)