## **Supplementary Data**



**Figure S1.** Representative flow cytometry dot plots of CD19<sup>+</sup>IL-36R<sup>+</sup> lymphocytes gated from CD19<sup>+</sup>B cells in NC and SLE patients.



**Figure S2.** Comparison of expression level of IL-36 receptors on immune cells. (A) The expression levels of IL-1RAcp on CD19+ B cells from inactive (n = 22), active (n = 21) SLE patients and NC (n = 16); and (**B**,**C**) IL-36R and IL-1RAcp on CD138+ plasma cells from inactive (n = 5), active (n = 5) SLE patients and NC (n = 5) were detected using flow cytometry. Results are presented as box and whisker plots with median (interquartile range) of mean fluorescence intensity (MFI) subtracting corresponding isotypic controls.



**Figure S3.** Comparison of circulating CD3<sup>+</sup>IL-22<sup>+</sup>IL-17<sup>+</sup> T lymphocytes frequency between SLE patients and NC.PBMC (2 × 10<sup>6</sup> cells/mL) were pre-incubated with 50 ng/mL phorbol myristate acetate (PMA) and 1 µg/mL ionomycin overnight, followed by treatment with 10 µg/mL Brefeldin A (BFA) for 4 h. Cells were fixed and Fc receptors were blocked with normal mouse serum. The proportion of circulating CD3<sup>+</sup>IL-22<sup>+</sup>IL-17<sup>+</sup> T lymphocytes from inactive (n = 22), active (n = 21) SLE patients and NC (n = 16) were determined by flow cytometry. Results are presented as box and Whisker plots with median (interquartile range). Statistical significances are indicated by \*\* p < 0.01 and \*\*\* p < 0.001 when compared with NC (Mann-Whitney U test).



**Figure S4.** *Ex vivo* production of CXCL8 from PBMC stimulated with IL-36 $\alpha$  at different concentrations for 24 h. *n* = 3.