Mast cells and neutrophils release IL-17 through extracellular trap formation in psoriasis

Supplementary Data

Supplementary Figure 1. T cells do not represent the majority of IL-17$^+$ cells in human skin. Punch biopsies of skin from subjects without psoriasis (NN), uninvolved skin from subjects with psoriasis (PN), or lesional psoriasis plaques (PP) were subjected to dual-color immunofluorescence staining for IL-17 (green) and CD3 (red), with DAPI counterstain (blue). A few IL-17$^+$ T cells are noted (solid arrows) as well as other cells that are IL-17$^+$ but CD3$^-$ (open arrows). Representative images from one of 10 NN, 10 PN, and 13 PP sections stained with CD3 and IL-17 are shown at 200x magnification. Rabbit and goat isotype staining with DAPI counterstain on a representative PP section is also shown. The dotted line represents the dermal-epidermal junction. Bar = 100 μm.

Supplementary Figure 2. Most IL-17$^+$ in normal or psoriatic skin are also tryptase$^+$. Punch biopsies of skin from subjects without psoriasis (NN), uninvolved skin from subjects with psoriasis (PN), or lesional psoriasis plaques (PP) were subjected to dual-color immunofluorescence staining for IL-17 (green) and tryptase (red), with DAPI counterstain (blue). Most IL-17$^+$ cells are tryptase$^+$ (solid arrows) though other IL-17$^+$tryptase$^-$ cells can also be seen (open arrows). Representative images from one of 10 NN, 10 PN, and 11 PP sections stained with tryptase and IL-17 are shown at 200x magnification. Mouse and goat isotype staining with DAPI counterstain on a representative PP section is also shown. The dotted line represents the dermal-epidermal junction. Bar = 100 μm.
Supplementary Figure 3. Most IL-17+ cells in human skin are chymase+ mast cells. Punch biopsies of skin from subjects without psoriasis (NN), uninvolved skin from subjects with psoriasis (PN), or lesional psoriasis plaques (PP) were subjected to dual-color immunofluorescence staining for IL-17 (green) and chymase (red), with DAPI counterstain (blue). While most IL-17+ cells are also chymase+ (solid arrows), there are a few other IL-17+ cells that are not IL-17+ (open arrows). Representative images from one of 11 NN, 10 PN, and 11 PP sections stained with chymase and IL-17 are shown at 200x magnification. Mouse and goat isotype staining with DAPI counterstain on a representative PP section is also shown. The dotted line represents the dermal-epidermal junction. Bar = 100 μm.

Supplementary Figure 4. Neutrophils contain IL-17 in fully developed psoriasis lesions. Punch biopsies of skin from subjects without psoriasis (NN), uninvolved skin from subjects with psoriasis (PN), or lesional psoriasis plaques (PP) were subjected to dual-color immunofluorescence staining for IL-17 (green) and MPO (red), with DAPI counterstain (blue). Representative images from one of 12 NN, 10 PN, and 12 PP sections stained with MPO and IL-17 are shown at 200x magnification. Rabbit and goat isotype staining with DAPI counterstain on a representative PP section is also shown. The dotted line represents the dermal-epidermal junction. Bar = 100 μm.
Supplementary Figure 2

A. NN

B. PN

C. PP

D. PP - Isotype