

Control GFP-MC injected mice have a normal appearing epidermis with no intercellular edema and a thin stratum corneum (arrow). Scale bars for panels f, g, and h are 5µm.

Supplementary Figures

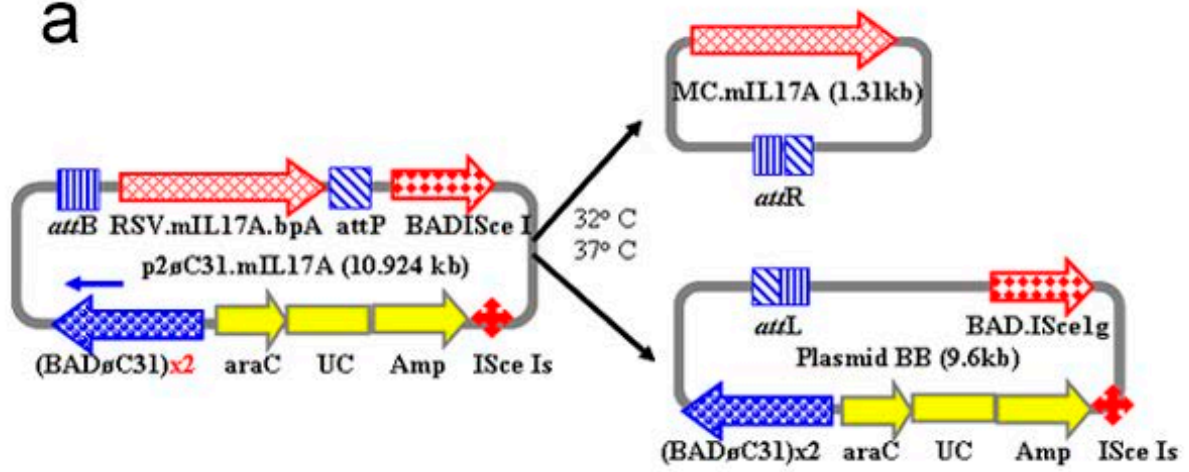
Supplementary Figure 1. IL-17A Gene transfer construct. **a)** Schematic representation of the minicircle DNA vector carrying the IL-17A construct. Left side illustrates the entire construct whereas on the right side the by-products of arabinose induction IL-17A MC episomal DNA (top) and bacterial backbone (bottom). **b)** Agarose gel electrophoresis showing the separation of individual fragments and corresponding sizes obtained from minicircle recombination.

Supplementary Figure 2. IL-17A induces osteoclast differentiation in a RANKL-dependent manner *in vivo*. Serum CTX-I concentration of GFP MC and IL-17A MC injected mice at **a)** 3 weeks and **b)** 26 weeks post gene transfer. **c)** Map of recombinant MC vector carrying the RANKL gene. **d)** Serum TRAP5b concentration after gene transfer of GFP MC and dose response of RANKL MC.

Supplementary Figure 3. IL-17A exacerbates synovial inflammation and bone destruction. Histological scoring comparison of C57BL/6 mice post-gene transfer of IL-17A or GFP, immunized and challenged with bovine collagen type II showing the degree of **a)** pannus formation **b)** reactive synovium **c)** leucocyte infiltration, **d)** cartilage proliferation, **e)** articular cartilage damage and **f)** bone erosion. The thick line represents the median value of histology scores. Both hind paws were analyzed for each mouse.

Supplementary 1

a



b

