

SUPPLEMENTAL MATERIAL

Kubo et al., <http://www.jem.org/cgi/content/full/jem.20091527/DC1>

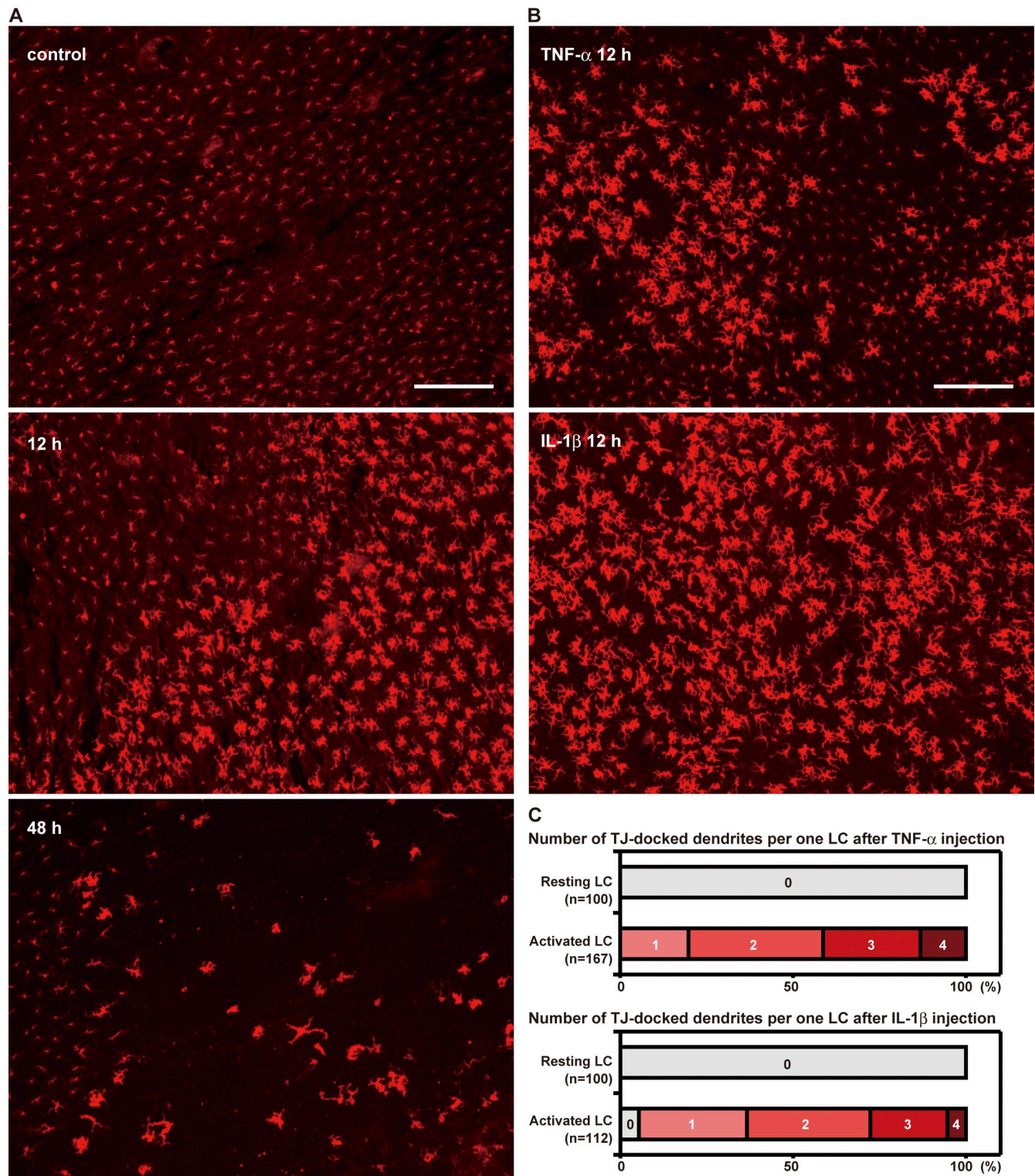


Figure S1. Tape stripping and cytokine injection induce LC activation. (A) Time course of LC activation after tape stripping. Tape stripping induced clusters of LCs to express high levels of surface MHC II within 12 h. A significant part of activated LCs emigrated out from the epidermis after 48 h. (B) Activation of LCs after 12 h of TNF- α or IL-1 β injection. Bars, 100 μ m. (C) The number of dendrites that docked or penetrated TJs was counted for each resting LC and activated LC after 12 h of TNF- α or IL-1 β injection. The number of TJ-docked dendrites was similar to that induced by tape stripping (Fig. 2 G). Data presented in A and B is representative of three mice and data in C of three independent experiments.

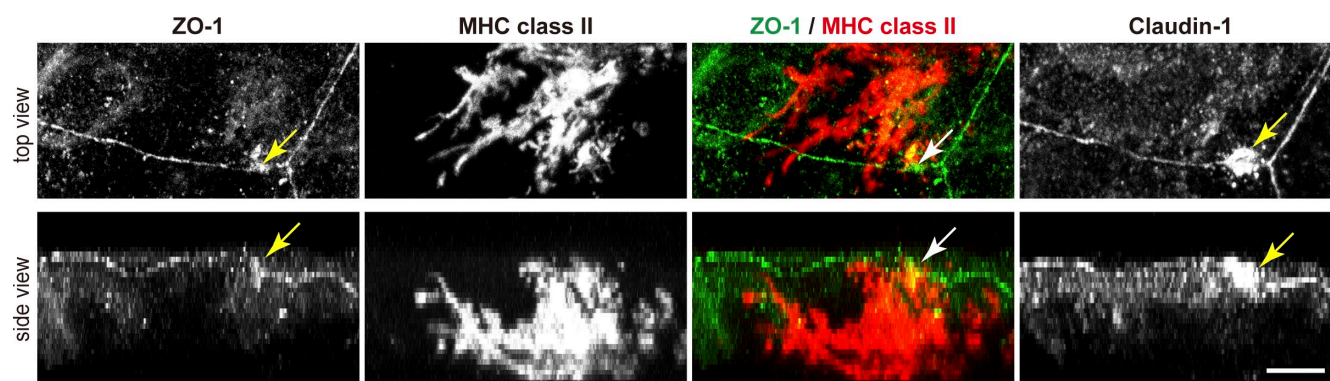
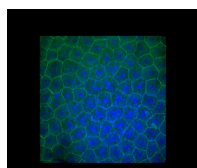
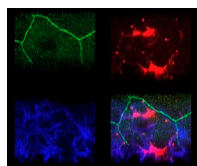


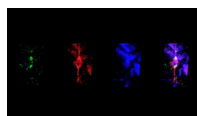
Figure S2. TJ docking by activated LCs in mouse trunk skin. Activated LCs express high levels of surface MHC II and elongate their dendrites to dock with TJs. The areas where LC dendrites dock with TJs (arrows) are Claudin-1^{high}. Bar, 5 μ m. Data presented is representative of two mice.



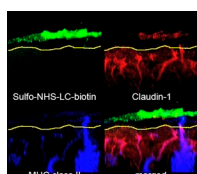
Video 1. Epidermal structure and TJs of mouse ear skin. 3D visualization of the epidermis demonstrated three layers of regularly aligned SG1–3 cells and TJs that seal between SG2 cells.



Video 2. Dendrite penetration through TJ barrier. Resting LCs elongate their dendrites toward the skin surface, which stopped short of the SG2 layer with obvious spaces between dendrite tips and TJs. In contrast, activated LCs elongate their dendrites and penetrate the TJs.



Video 3. TJ barrier integrity is maintained at the LC penetration point. Formation of tTJs at the newly formed tricellular contacts between LC dendrites and KCs indicates that dynamic reconstruction of TJ strands occurred at the penetration point to preserve TJ barrier integrity during trans-TJ penetration of LC dendrites.



Video 4. Trans-TJ endocytic activity and trans-TJ Ag uptake of LCs.