



**Fig. S1. mRNA expression profiles in human epidermis equivalents ( $n=7$ ).** (a) LOR: loricrin, (b) FLG: filaggrin, (c) IVL: involucrin, (d) HNRN: hornerin, (e) CA2: carbonic anhydrase II, (f) CCL26: chemokine (C-C motif) ligand 26, (g) TLR4: toll-like receptor 4, (h) IL-33: interleukin-33, (i) IL1RL1: interleukin-1 receptor-like 1 (ST2), (j) KLK5: kallikrein 5, (k) KLK7: kallikrein 7, (l) FLG2: filaggrin 2, (m) KRT10: keratin 10, (n) KRT14: keratin 14, (o) IL-18: interleukin-18, (p) LCE2A: late cornified envelope 2A. HMBG1: high mobility group box 1 protein, IL-4: interleukin-4. Graphs show the relative (to unstimulated control) mean + standard deviation of measured mRNA levels. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  compared with control.