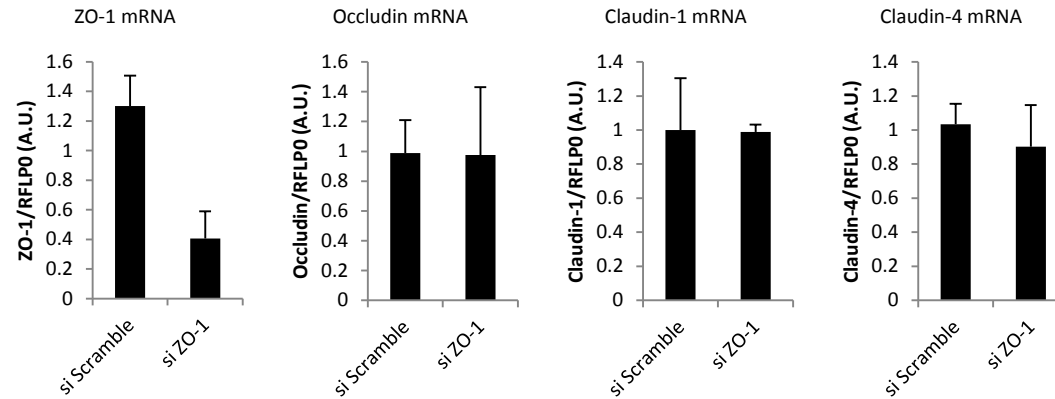


## S1 Fig. The tight junction (TJ) barrier was impaired by ZO-1 knockdown in the skin-equivalent model.

- (a) The skin-equivalent model (J-TEC, Kyoto, Japan) was used according to the manufacturer's instructions. Scramble siRNA or ZO-1 siRNA mixed with RNAiMAX was added to the Transwell filter and the keratinocytes were seeded onto the Transwell filter insert. After 1 day, the keratinocytes were exposed to air and stratification was induced. Ten days later, the expressions of ZO-1, occludin, and claudin-1 and -4 were measured by the real-time reverse transcription-polymerase chain reaction method. The skin model transfected with ZO-1 siRNA showed significantly decreased ZO-1 mRNA. In contrast, there were no effects on occludin or claudin-1 or -4.
- (b) A TJ permeability assay was performed in the skin model transfected with ZO-1 siRNA. The injected intercellular tracer did not stop at the sites where occludin was expressed in this skin model transfected with ZO-1 siRNA

a



b

