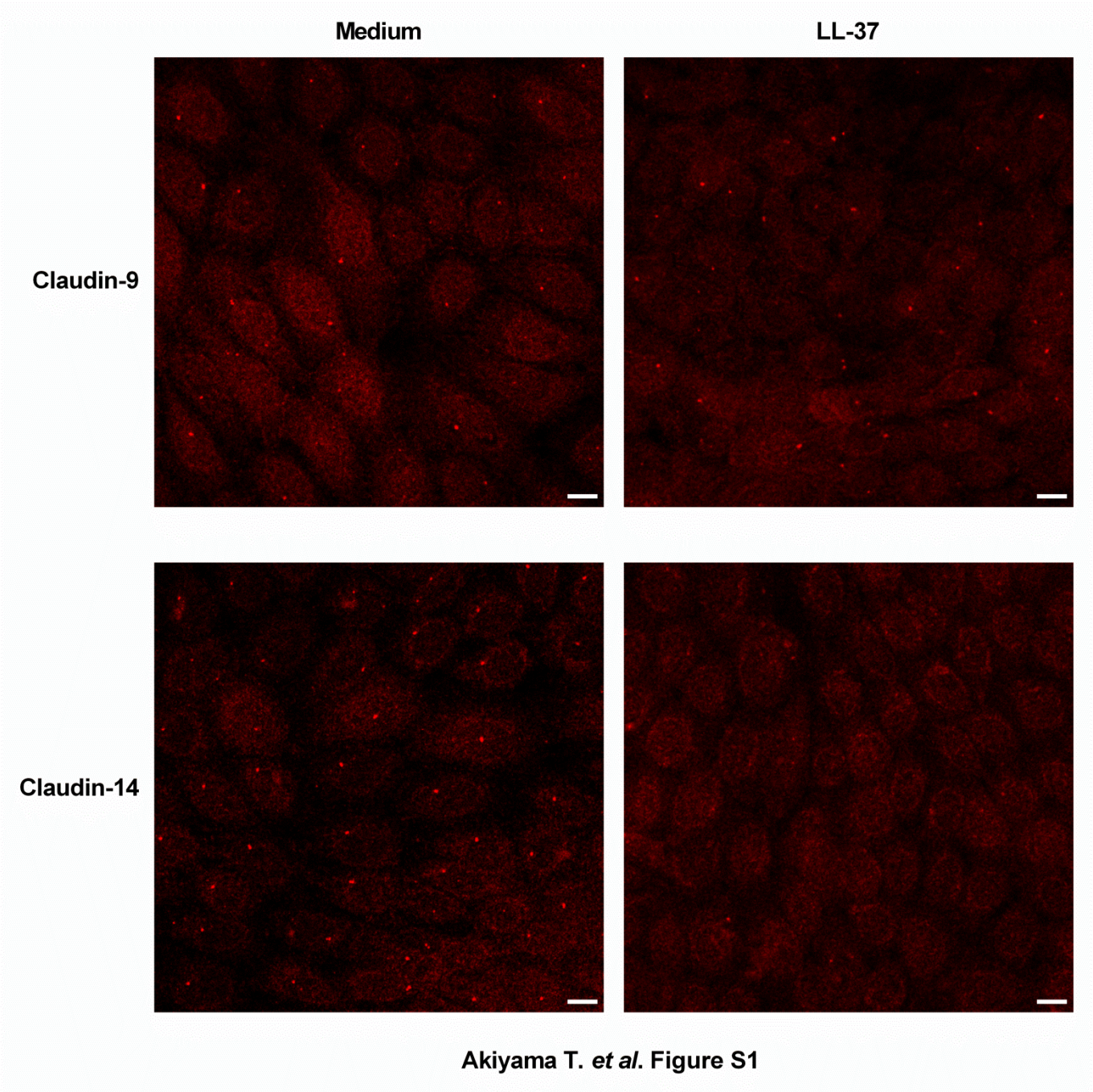


**Fig. S1. LL-37 on membrane distribution of claudin-9 and claudin-14.** Keratinocytes grown to confluence on collagen I-coated chamber slides were stimulated with 20 μg/ml LL-37 or diluent alone (Medium) for 96 h. Following fixation in methanol, the cells were processed for overnight immunofluorescence staining with antibodies against claudin-9 and claudin-14, followed by incubation with specific secondary antibodies coupled to Alexa 594. TJ proteins were visualized in red using confocal laser scanning microscopy. The results of one representative experiment of four separate experiments yielding similar results are shown. Scale bar = 10 μm.

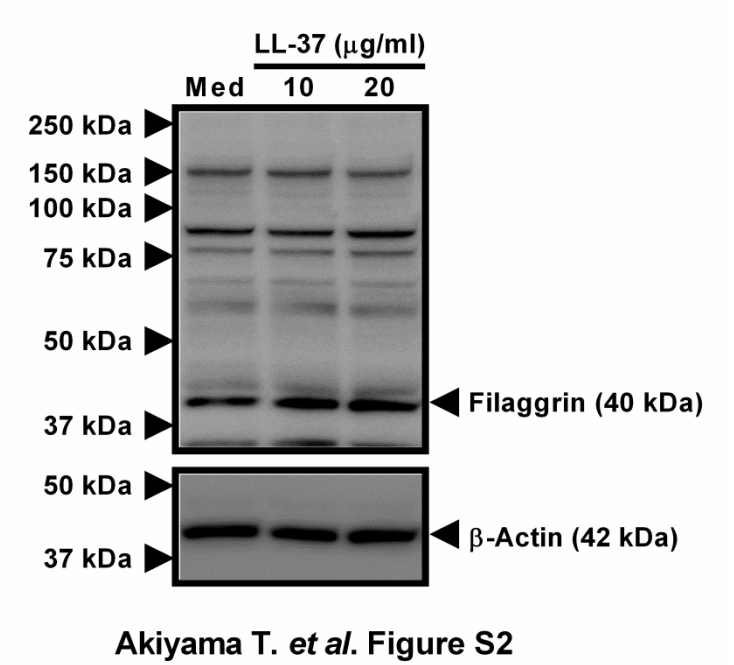


**Fig. S2. Effect of LL-37 on the expression of filaggrin.** Keratinocytes were stimulated with 10 and 20 μg/ml of LL-37 or the diluent alone (Med) for 48 h. Cell lysates were then obtained, and equal amounts of total protein were subjected to 12.5% SDS-PAGE analysis. The whole blot was incubated with antibody against filaggrin. The results of one representative experiment of three separate experiments yielding similar results are shown.

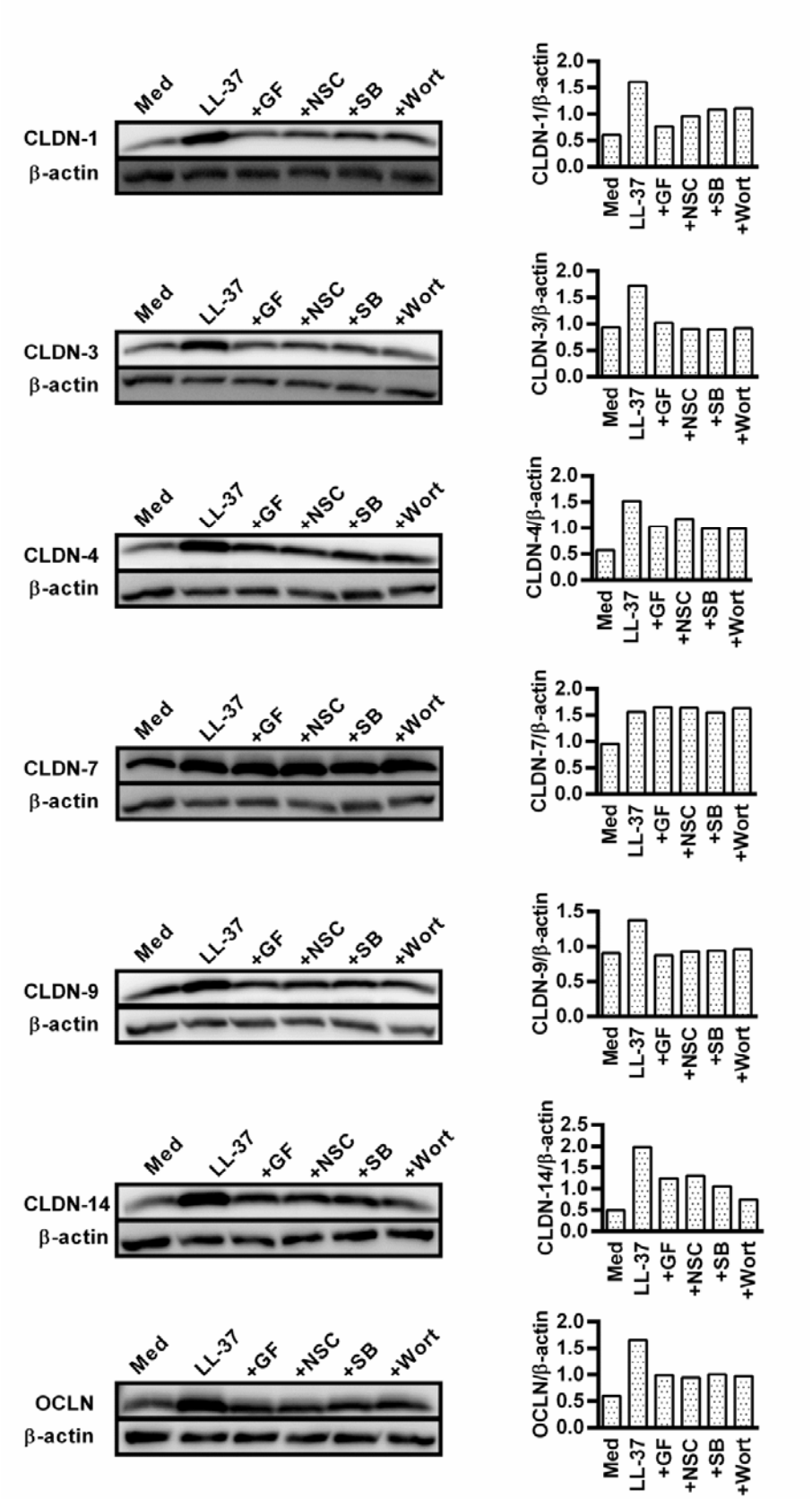


**Fig. S3. Effects of GF109203X, NSC23766, SB 415286 and wortmannin on the LL-37-mediated expression of TJ proteins.** Keratinocyte layers were pretreated with 250 nM GF109203X (+GF), 100 μM NSC23766 (+NSC), 50 nM SB 415286 (+SB), 10 μM wortmannin (+Wort) or 0.1% DMSO for 48 h

and were then stimulated with 20 μg/ml LL-37 or diluent alone (Med) for 48 h. The levels of TJ proteins in cell lysates were determined by Western blotting. The results of one representative experiment of three separate experiments yielding similar results are shown. **Right panels:** Bands were quantified by densitometry to correct for protein loading discrepancies. The data represent the ratio of the intensity of the target protein divided by that of β-actin.