

IN VITRO & EX VIVO TESTING



stratiCell
Testing & Beyond

Atopic Dermatitis

Skin barrier disruption in a Th2-driven inflammation

Atopic Dermatitis is a very common skin disease affecting 2 to 20% of the general population. Dermatitis is characterized by a Th2 inflammatory response associated with epidermal barrier defects. Intense pruritis and colonization by *Staphylococcus aureus* exacerbate the inflammatory process and therefore the lesions.

StratiCELL has developed 2D and 3D skin models displaying atopic dermatitis features, allowing to study the efficacy of dermo-cosmetic active ingredient and skin care products to restore the skin barrier and reduce inflammation of atopic and sensitive skins. *In vitro* efficacy tests related to staphylococcal infections are also available at StratiCELL.



2D & 3D models

NHEK-Th2 : Normal Human Epidermal Keratinocytes stimulated with Th2-type interleukins

RHE-AD : Reconstructed Human Epidermis stimulated with Th2-type interleukins



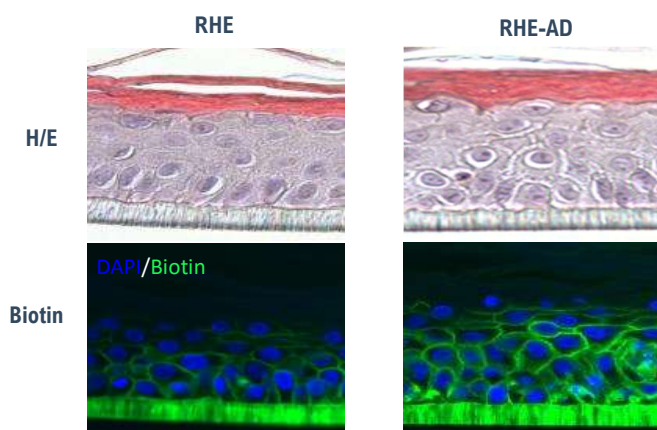
Positive References

- JAK/STAT inhibitor
- LXR agonist

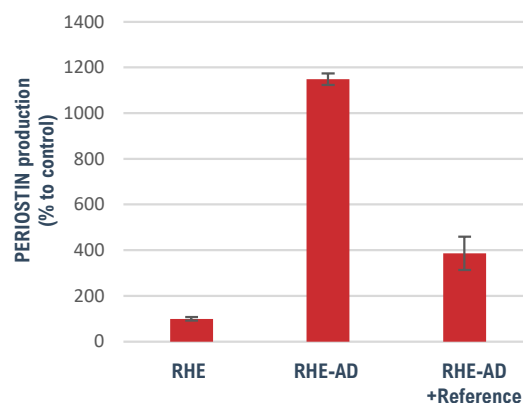


Testing Methods

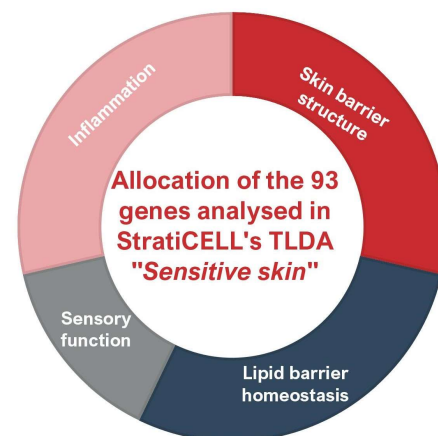
1. **Barrier function** analysis based on histological Hemalun/Eosin (H/E) images and trans-membrane Biotin diffusion assay.



2. **Quantification of Periostin** proteins by ELISA.



3. **Gene expression analysis** by RT-qPCR using StratiCELL 's TaqMan Low Density Array (TLDA) studying the expression of 93 genes playing key roles in sensitive skins (inflammation, barrier, lipids, pruritus and sensory function).



3D models

RHE-SA: Reconstructed Human Epidermis topically colonized by *Staphylococcus aureus*

RHE-SE: Reconstructed Human Epidermis topically colonized by *Staphylococcus epidermidis*

RHE-SA-SE : Reconstructed Human Epidermis topically co-colonized by *Staphylococcus aureus* and *Staphylococcus epidermidis*

Visit

www.StratiCELL.com/MicroBIOS-platform/

to download our brochure of
in vitro testing for staphylococcal infections