



Cutaneous wound healing is a complex physiological process requiring a sequence of molecular and cellular events, categorized into the following phases: exudative (inflammatory), proliferative, and maturation with extracellular matrix remodelling.

StratiCELL evaluates the re-epithelialization and wound healing properties of actives and formulations using in vitro assays able to study cell proliferation, migration and invasion, but also the sequential expression of tissue repair biomarkers including cytokine secretions and protease activities.

SKIN MODELS:

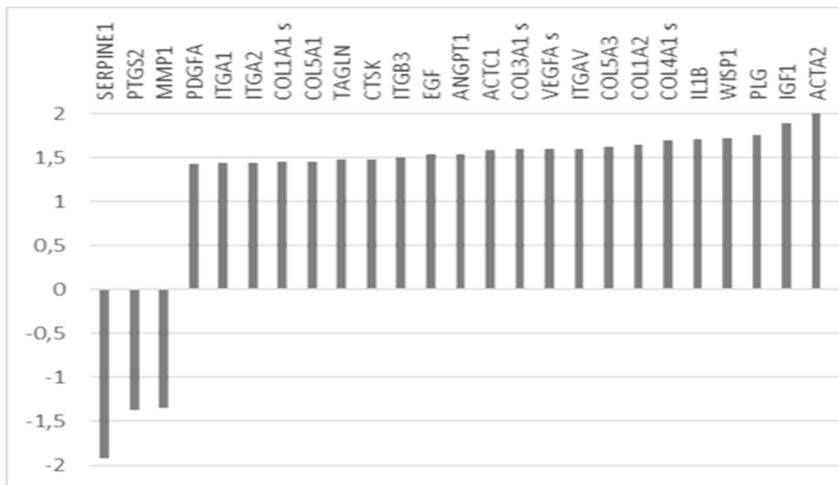
NHDF: normal human dermal fibroblasts in monolayer cell cultures

NHEK: normal human epidermal keratinocytes in monolayer cell cultures

ENDPOINTS:

- **Scratch test** based on a standardized acellular surface generated from a confluent monolayer of human dermal fibroblasts or keratinocytes using a dedicated culture device (IBIDI micro-dishes)
- **Boyden chamber assay** to study cell migration chemotaxis (without extra-cellular matrix coating) or haptotaxis (with fibronectin, vitronectin or collagen I coating) with fluorescent or colorimetric detection
- **Expression of genes playing key roles in cell proliferation and migration, by RT-qPCR** : individual gene expression by TaqMan or 96 key genes expression by TaqMan Low-Density Array (contact StratiCELL for more details about the *WoundHealing-TLDA* array)

Scratch test images (A) and quantification of the scratch area colonized over time following different treatments (B)



Gene expression levels evaluated by RT-qPCR treatment (fold changes compared to untreated control, all genes with t test p values below 0.05).

