

IN VITRO & EX VIVO TESTING



stratiCell
Testing & Beyond

Acute Inflammation

Combined *in vitro* testing for full objectivation

Acute inflammation is a response of the immune system to various triggers. In the skin, inflammation can occur following infection, sun-burn, allergen or contact with irritant. Compared to long-lasting chronic inflammation, this short-term immune response aims to rapidly counteract the source of dysfunction. Multiple cytokines and chemokines have been long described as relevant signatures of anti-inflammatory treatments.

StratiCELL offers an extensive range of assays to explore the anti-inflammatory properties of raw active ingredients and final skin care products, against acute inflammation induced by specific triggers such as UV radiation, TNF-alpha, phorbol myristate acetate (PMA), bacterial lipopolysaccharides (LPS) or lipopeptides (MALP-2).



Testing Methods

Expression or quantification of **inflammatory biomarkers** by RT-qPCR or ELISA, respectively.

CELL SYSTEMS*	CHALLENGES	POSITIVE REFERENCES	INFLAMMATORY BIOMARKERS
NHEK	Phorbol diester	Dexamethasone or Ibuprofen	• IL-1-alpha, IL-6, IL-8, TNF-alpha
NHEK	TNF-alpha	Dexamethasone or Ibuprofen	• CXCL5, MCP1
NHEK	UV-AB	Dexamethasone	• IL-6, IL-8, TNF-alpha • Activation of the NFκB transcription factor
NHDF	Phorbol diester	Dexamethasone	• Activation of the NFκB transcription factor
NHDF	UV-AB	Indomethacin	• PGE-2
NHDF	Lipopolysaccharide	Ibuprofen	• IL-6, IL-8, CXCL-5, MCP-1
RHE	Urban Dust	Dexamethasone	• IL-1-alpha, IL-8
RHE	MALP-2	Oxidized lipoproteins	• IL-8, TNF-alpha, HBD2/DEFB4
THP-1	Lipopolysaccharide	Dexamethasone	• IL-1-alpha, IL-6, IL-8, TNF-alpha

* NHEK : Normal Human Epidermal Keratinocytes - NHDF : Normal Human Dermal Fibroblasts – RHE : Reconstructed Human Epidermis
THP-1: human leukemic monocyte

Quantification of inflammatory biomarkers by independent ELISA assays

