

# IN VITRO & EX VIVO TESTING



stratiCell  
Testing & Beyond

## Acute Inflammation

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### 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).



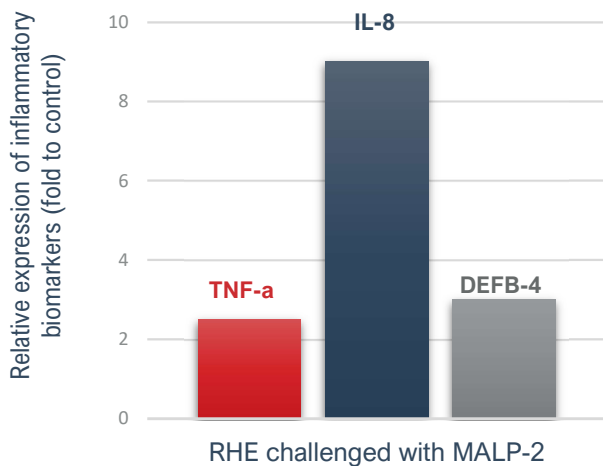
# Testing Methods

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

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 NFkB transcription factor
NHDF	UV-AB	Indomethacin	• PGE-2
RHE	Urban Dust		• IL-1-alpha, IL-8
RHE	MALP-2	Oxidized lipoproteins	• IL-8, TNF-alpha, HBD2/DEFB4
NHDF	Lipopolysaccharide	Ibuprofen	• IL-6, IL-8, CXCL-5, MCP-1
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

## Expression of inflammatory biomarkers by RT-qPCR



## Quantification of inflammatory biomarkers by ELISA

