Gene Expression Analysis by TaqMan Low Density Array Technology

Analysing gene expression changes using RT-qPCR TaqMan Low Density Arrays (TLDA) offers the advantage of focusing on panels of 48 or 96 targeted genes, carefully selected and identified as key factors in various skin processes.

Discover StratiCELL's standardized arrays to investigate the efficacy of active ingredients on the main dermo-cosmetic research topics.

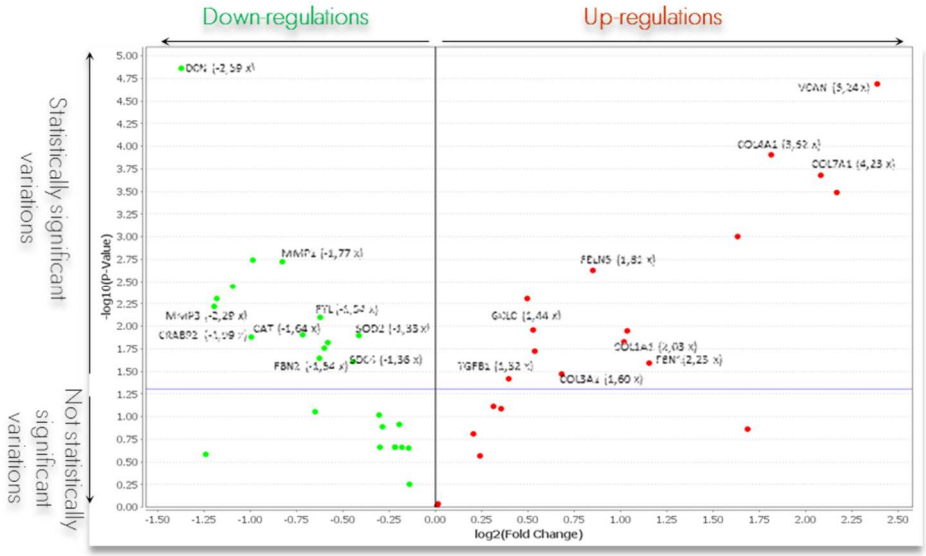
Resarch Topic	Cell and tissue functions	Model compatibility
Epidermal barrier & homeostasis	Epidermal biology, cell junctions, barrier, antioxidant, antimicrobial, lipid synthesis & transport, melanogenesis.	NHEK, RHE, RHE-MEL
Melanogenesis	Melanin synthesis, melanogenic factors & signal transduction, melanosome biogenesis, maturation & transport, melanosome transfer, apoptosis.	NHEM, RHE-MEL
Dermal biology, re-modeling & ageing	Extracellular matrix components & enzymes, cell proliferation, antioxidant, proteasome, glycosaminoglycans synthesis & elongation, dermo-epidermal junction.	NHDF
Wound healing	Extracellular matrix components & enzymes, cell adhesion, inflammatory cytokines & chemokines, growth factors, TGF signaling.	NHEK, NHDF
Inflammation	Chemokines & receptors, interleukins & receptors, innate immune response, inflammatory response.	NHEK, RHE, NHDF
Glycosaminoglycans	Glycosaminoglycans synthesis & elongation, transferases, metabolism & degradation.	NHDF
Sensitive skin & barrier resilience	Barrier function, cell junctions, lipid synthesis & transport, pruritus, inflammation, immune response.	NHEK, RHE
Pollution & detoxification	Biotransformation & metabolism enzymes of phases I and II, antioxidant & oxidative stress response, inflammatory response, barrier function & terminal differentiation, autophagy, unfolded protein response.	NHEK, NHDF, RHE, RHE-MEL
Epidermal lipids & corneocyte lipid envelope	Ceramide and long-chain ceramide metabolism, cholesterol and fatty acid metabolism, regulation of lipid homeostasis, corneocyte-bound lipid envelope.	RHE
Customized array	*Tailored to your needs.*	*Contact us to assess feasibility.*

COMPATIBLE MODELS:

NHEK : Normal Human Epidermal Keratinocytes in monolayer cultures
NHEM : Normal Human Epidermal Melanocytes in monolayer cultures
NHDF : Normal Human Dermal Fibroblasts in monolayer cultures
RHE : Human Reconstructed Epidermis (under normal condition)
RHE-MEL : Human Reconstructed Epidermis with Human Melanocytes (NHEM)

METHODOLOGY and REPORTING:

- Total RNA extraction and quality control by capillary electrophoresis
- cDNA synthesis and quantitative PCR amplification following the TLDA technology procedure
- Statistical analysis : data analysis by the DDCt method, by comparison to negative control(s) and normalization using internal housekeeping genes
- Reporting on gene transcripts that are statistically up and down-regulated, compared to negative control(s), and their relevance on the skin biology : list of gene and volcano plot



Volcano plot illustration of gene expression modulations: negative logarithm of the p-value on the y-axis, and the logarithm with base 2 of the fold change between the test conditions on the x-axis. Genes with fold increase (red dots) or decrease (green dots) lie on both sides of the vertical threshold line. Gene symbols and fold changes are given for significant results.

Relies on StratiCELL' strong expertise to interpret the outcoming data with regards to dermo-cosmetics benefits.

+32 (0)81 72 85 82
info@StratiCELL.com
www.StratiCELL.com