



# **Gene Expression Panels** for Dermal Product Development

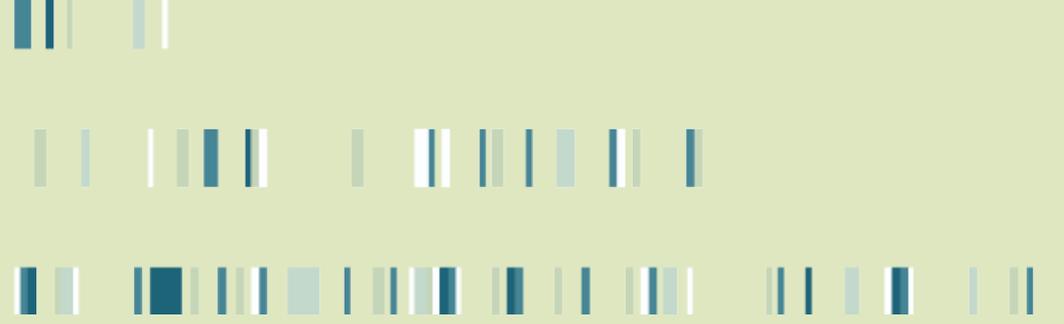


# Gene Expression Panels

Genemarkers offers gene expression analysis using Thermo Fisher Scientific's quantitative polymerase chain reaction (qPCR) instrumentation and Taqman® assays—the gold standard in gene expression analysis. The assays are run using a QuantStudio™ 12K Flex instrument in either a 96-well, 384-well or OpenArray format. Multiple formats allow Genemarkers to help design the most value-based and efficient study design to meet each client's needs.

Genemarkers has developed several off-the-shelf gene expression panels for dermal product development. Each panel contains assays for target genes and endogenous control genes. The panels were developed based on peer reviewed scientific literature and include genes with well-established functions in skin biology.

The panels can be run using 2D cultured cells, 3D in vitro and ex vivo tissue models, and clinical samples (i.e., punch biopsies, tape strips). The results are provided in a comprehensive, easy to understand report.



## Benefits

- Develop high performing, innovative products
- Streamline product development costs
- Enhance clinical studies

## Technology

- Fast turn-around and cost-effective technology
- Gold standard qPCR methods
- Flexible, customizable platform

## Applications

- Screen raw materials
- Optimize blends and concentrations
- Establish efficacy

**A cost effective way**  
to incorporate genomics  
into skin biology research  
and dermal product  
development

# Genemarkers' Panels

STANDARD SKIN PANEL  
**112 GENES**

MICRORNA PANEL  
**112 GENES**

CBD PANEL  
**165 GENES**

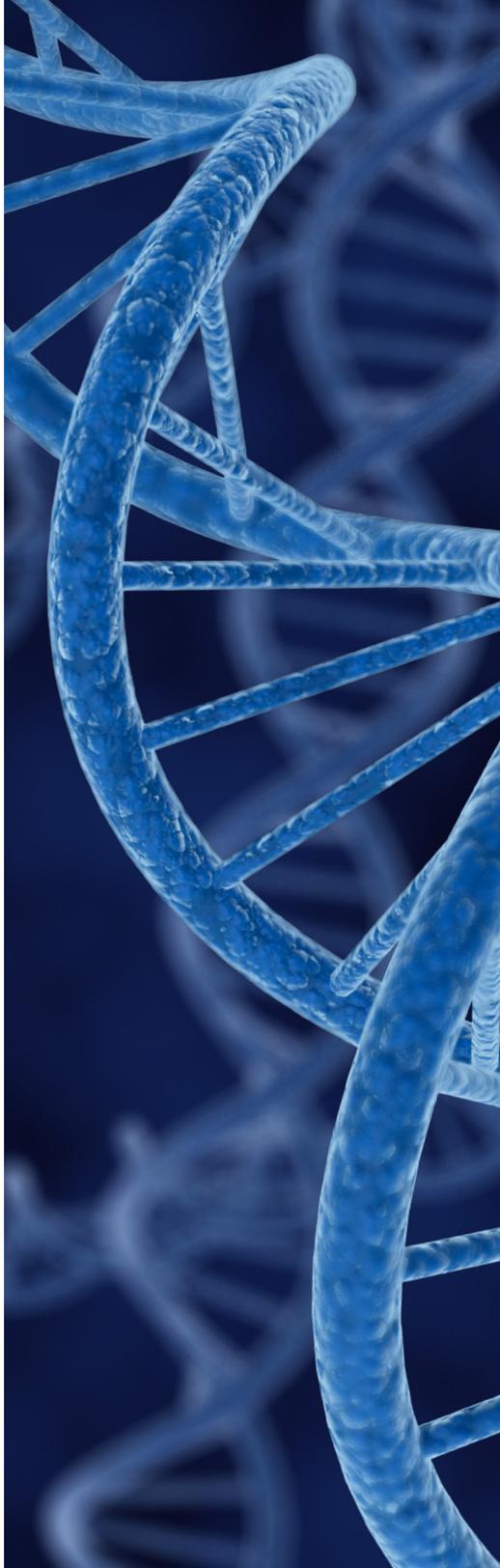
ENVIRONMENTAL  
STRESS PANEL  
**112 GENES**

BRIGHTENING PANEL  
**56 GENES**

BLUE LIGHT PANEL  
**56 GENES**

DERMAL PAPILLA  
CELL PANEL  
**56 GENES**

CUSTOM PANELS  
**FROM 25 TO 200 GENES**



# Cell & Tissue Models

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2D CELL CULTURE (FIBROBLASTS, KERATINOCYTES,  
MELANOCYTES, ADIPOCYTES, DERMAL PAPILLA CELLS)

2D CO-CULTURES

*IN VITRO* SKIN CULTURES

*EX VIVO* SKIN EXPLANTS

# Tissue Challenges

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UV IRRADIATION

BLUE LIGHT (HEV)

DIESEL PARTICULATE MATTER (DPM)

WOUND METHODS

# Ensure product efficacy

by identifying specific biological activities of raw materials and formulations



State-of-the-art  
testing to expedite the  
development of safe  
and effective products

126 East South Street  
Kalamazoo, MI 49007  
269 337 4145  
844 220 6231  
[genemarkersllc.com](http://genemarkersllc.com)

