seboGEN

EVALUATE THE SEBOREGULATORY PERFORMANCE OF YOUR ACTIVE INGREDIENT

Acne vulgaris, one of the most common skin disorders, is a long-term disease that affects the oil glands present in the skin. The primary factor for acne is the excessive production of sebum, an oily waxy substance which accumulates within the sebaceous glands, resulting in inflammation.

The application of cosmetic ingredients that can reduce and/or control sebum production appears to be a popular approach to address this problem.

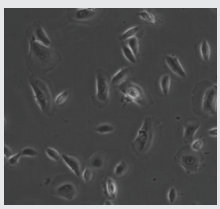
Therefore, the availability of reliable methods to assess the seboregulatory functions of active ingredients becomes imperative.

seboGEN is a panel of innovative and reliable *in vitro* tests that assess the ability of your active ingredient to regulate sebum production in primary sebocytes.

seboGEN Methods

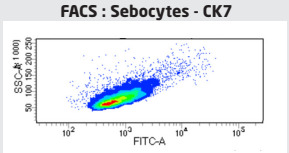
Culturing of primary sebocytes

Overcoming the challenges in culturing primary sebocytes such a slow proliferation and senescence, we have now optimized a specific culture protocol to grow primary sebocytes.



Primary sebocytes

FACS : Sebocytes - CK7

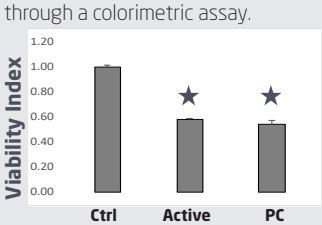


CK7 (Cytokeratin 7) - an early sebaceous differentiation marker is used to validate the differential status of the cultured sebocytes through FACS.

Functional tests to analyse sebum reduction

• Modulation/ Reduction of sebocyte proliferation

The effect of the active ingredient in controling the balance between proliferation and differentiation of primary sebocytes is examined through a colorimetric assay.



For comparison, Dorsomorphin - a strong inhibitor of lipid synthesis is used as a positive control (PC).

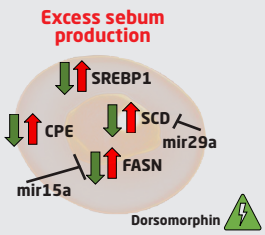
• Reduction of intracellular lipids

The effect of the active ingredient in reducing the accumulation of intracellular lipids is visually quantified using any of the below options:

- AdipoRed™ reagent which specifically partitions into fat droplets
- Perilipin immunofluorescent marker that coats the surface of lipid droplets
- Nile red lipophilic staining

Genomic and epigenetic pathway analysis (Key genes & miRNAs)

The key genes and the miRNAs involved in the regulation of sebum production are examined through Reverse Transcriptase- Quantitative PCR. The gene & miRNA expression profile of cells treated with Dorsomorphin, a strong inhibitor of lipid synthesis, is indicated.



Your Benefits

Reliable: optimized process that guarantees fast and accurate results in as less as 2 months

Tailored: a combination of complementary functional and genomic tests that highlight the seboregulatory activity of the active ingredient

Relevant: application of scientific techniques that address the current needs to develop ingredients for fighting acne

seboGEN

Innovation: seboGEN is a panel of innovative *in vitro* tests that assess the ability of your active ingredient to regulate sebum production in primary sebocytes.

Expertise: Our scientific team masters the techniques of culturing primary sebocytes, immunostaining and nucleic acid extraction, required to deliver reliable results to support your active ingredient claims.

Support: Working together as one team, we partner with you to determine the most efficient and appropriate strategy to reveal the power of your cosmetic active ingredients.

genel
THE RNAi SWITCH

Contact us for a free scientific diagnosis

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