genPROTECT

VALIDATE THE DNA PROTECTION BENEFITS OF YOUR ACTIVE INGREDIENT

Over time exposure to sun radiation and pollution have deleterious consequences upon the skin cells, such as DNA damage within the nucleus and the mitochondria.

These damages are the main cause of skin disorders such as early ageing, winkles, dehydrated skin or rash.

DNA protection is important to ensure the optimal function of cells and prevent these skin disorders.

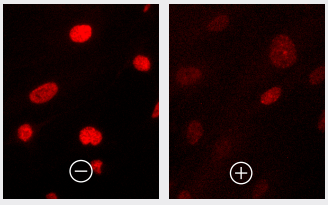
Innovative and reliable tests are key to reveal the power of the active ingredients in skin cell DNA protection.

genPROTECT is a panel of 3 innovative and complementary tests that assess the ability of your active ingredient to protect and repair the DNA.

genPROTECT Methods

DNA Damage Visualisation & Quantification

γH2AX foci are located at DNA double-strand damages to enable the recruitment of repair enzymes. In this test, the γH2AX foci are localised and quantified.

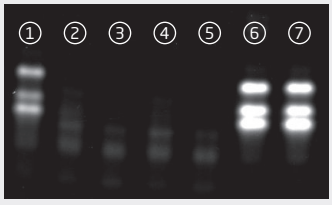


γH2AX immunostaining following H2O2 treatment with ⊕ or without ⊖ active ingredient. The numbers of foci (red dot) indicate DNA breaks. We observe that H2O2 treatment induces a large amount of DNA breaks.

These DNA breaks are significantly reduced when cells are treated with an active ingredient.

Telomerase Activity Assay

The telomerase activity decreases over time and is one of the causes of the skin ageing process. This test determines how an active ingredient stimulates the telomerase activity.

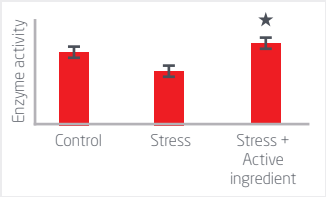


The intensity and quantity of PCR bands reflect the activity level of the active telomerase. 1: non treated, 2 to 5 are different stress conditions; 6 and 7 represent stress conditions + active ingredient at different concentrations.

Stress-induced downregulation of telomerase activity is rescued by the active ingredient.

DNA-Repair Enzyme Activity

This test involves comparative quantification of multiple DNA repair enzyme activities of the nucleus and mitochondria by fluorescence analysis.



The histogram describes the quantification of the activity of a DNA-repair enzyme with or without treatment with an active ingredient. The stress[1] induces a depletion of DNA repair activity.

The depletion is rescued when treated with the active ingredient.

([1] stress applied can be H2O2, UV light etc...)

Your Benefits

Reliable: optimized process that guarantees fast and strong results

Tailored: a combination of complementary tests showcasing repair ability (γH2AX) and mode of action (enzyme activity tests) of the active ingredient

Fast: adaptable to any type of cells and any dermoscosmetic pathway

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Innovation: genPROTECT is a panel of innovative tests assessing the ability of your active ingredient to protect and repair the DNA.
Ahead of innovation, genel is developing strategic partnerships to constantly offer new approaches.

Expertise: Our scientific team masters immunostaining, mitochondria and nuclei extraction, required to deliver reliable results and successfully reveal the DNA protecting properties of your active ingredient.

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

info@genel.fr - +33(0) 4 38 78 96 44
www.genel.fr