

ProlCell®
from nature to natural

GOLDSTEM

Gold Effect Against Senescence



Effective
DNA
Repair

ACTV
BIOTECH

Gold Effect Against Senescence

DNA Repair Active Ingredient

Effects

- Suppresses UV-induced inflammation on the skin.
- Prolongs the life of cells by suppressing the effects of senescence.
- Activates DNA repair by increasing the synthesis of genes related to DNA repair mechanism in the formation of DNA damage originating from the environment.
- Reduces melanin formation and reduces skin spots by suppressing tyrosinase activity.
- Protects organelle and cell membrane integrity by preventing lipid peroxidation and so increase life span of cells.

Origin

Developed from *Helichrysum arenarium* (*Helichrysum flos*) stem cells using ProlCell® Technology.



What is ProlCell® Technology?

ProlCell® Technology enables to benefit the effects of plant stem cells and small RNAs in their vesicles.

Effect Mechanism

ProlCell® GoldStem contains enriched stem cell components and stem cell specific exogenous small RNAs thanks to the elicitor application.

What is the effect of small RNA?

Small RNAs, including miRNA are non-coding RNA fragments, which regulate the post-transcriptional silencing of target genes. Plant small RNAs may exert similar functions in both human and plant. This provides exogenous plant small RNAs to play a key role on the physiological function of the human body, including the skin.



Activity Tests

In vitro Tests

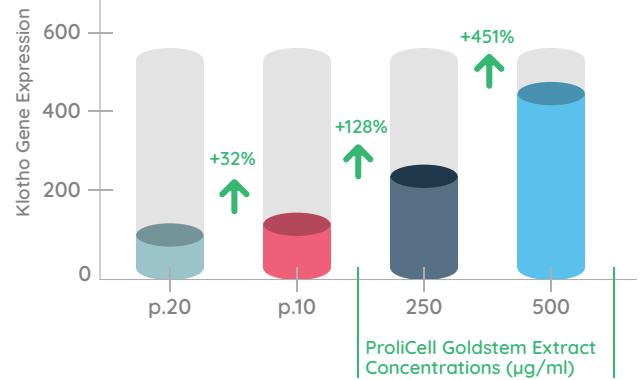
Cell Line: Human normal fibroblast, human normal keratinocyte cells

Test Ingredient: 250 ve 500 µg/mL ProliCell GoldStem

Parameter: *Analysis of expression of Klotho, Gadd45a, IL-6 and TNFα genes by RT-qPCR

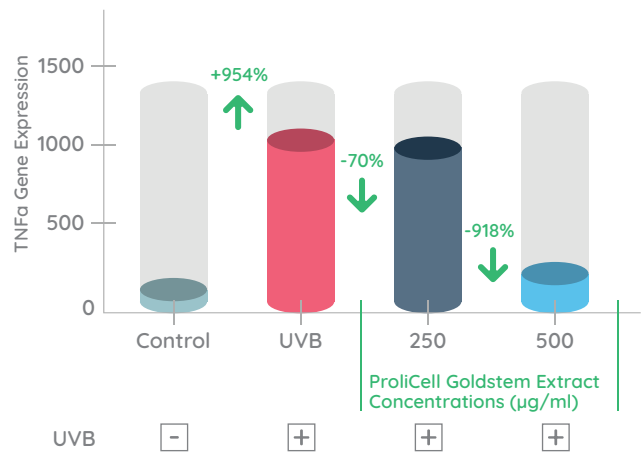
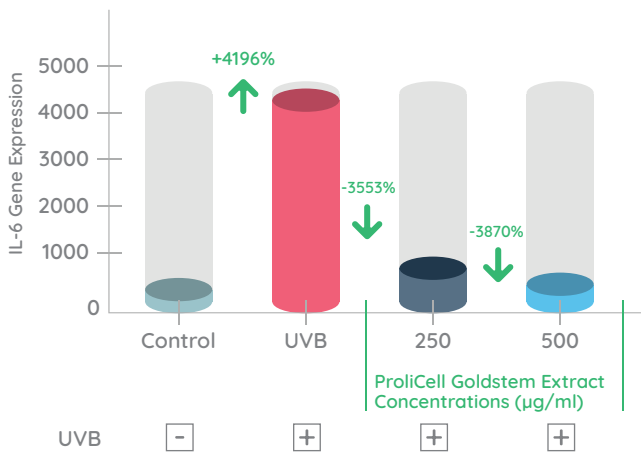
For gene expression analysis, fibroblast cells were incubated with ProliCell GoldStem concentrations for 24 hours.

Life Time Associated Gene Expression Analysis



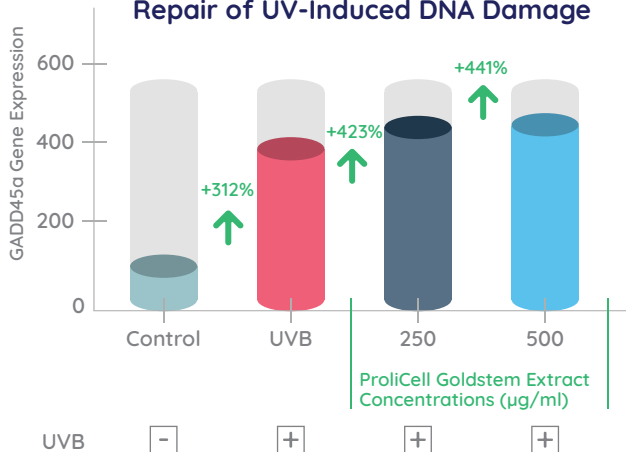
ProliCell GoldStem Klotho extends the lifespan of cells by increasing gene expression.

Expression Analysis of Genes Associated with Inflammation Induced by UVB Radiation



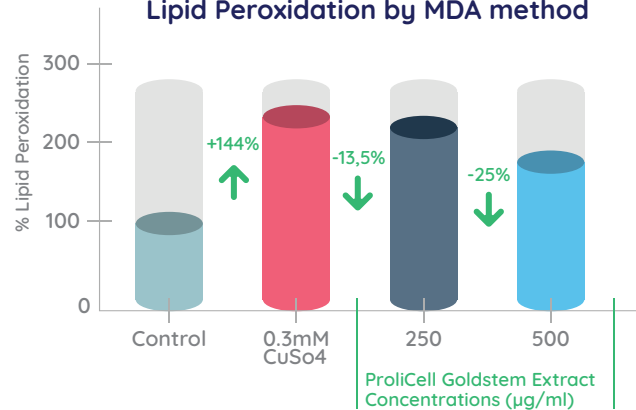
ProliCell GoldStem significantly reduces inflammation caused by UVB.

Gene Expression Analysis Associated with Repair of UV-Induced DNA Damage



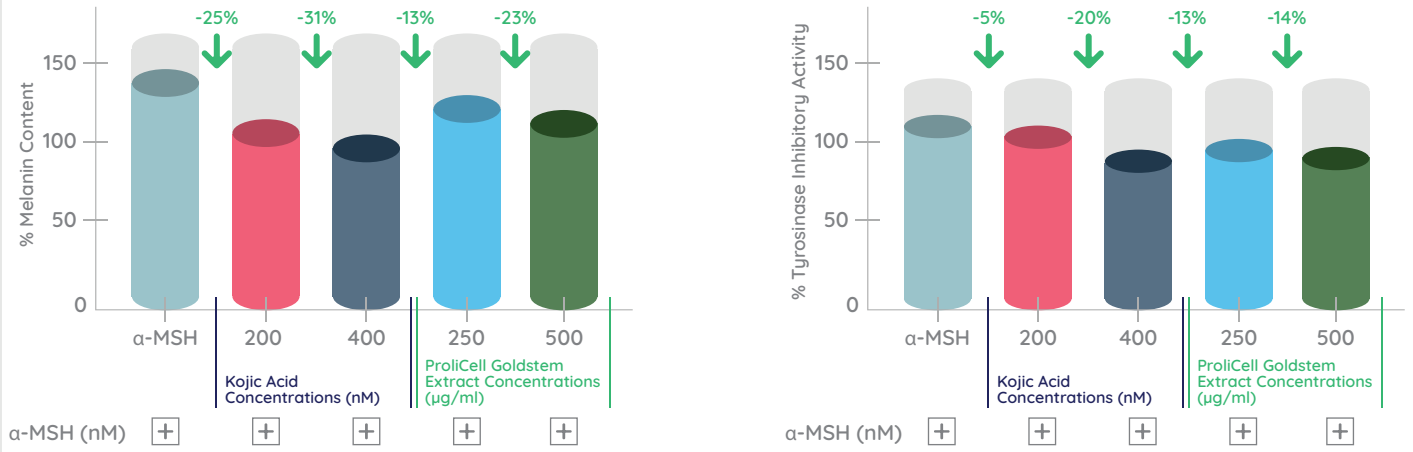
ProliCell GoldStem increases the life span of cells by activating the DNA repair mechanism.

Determination of the effect on Lipid Peroxidation by MDA method



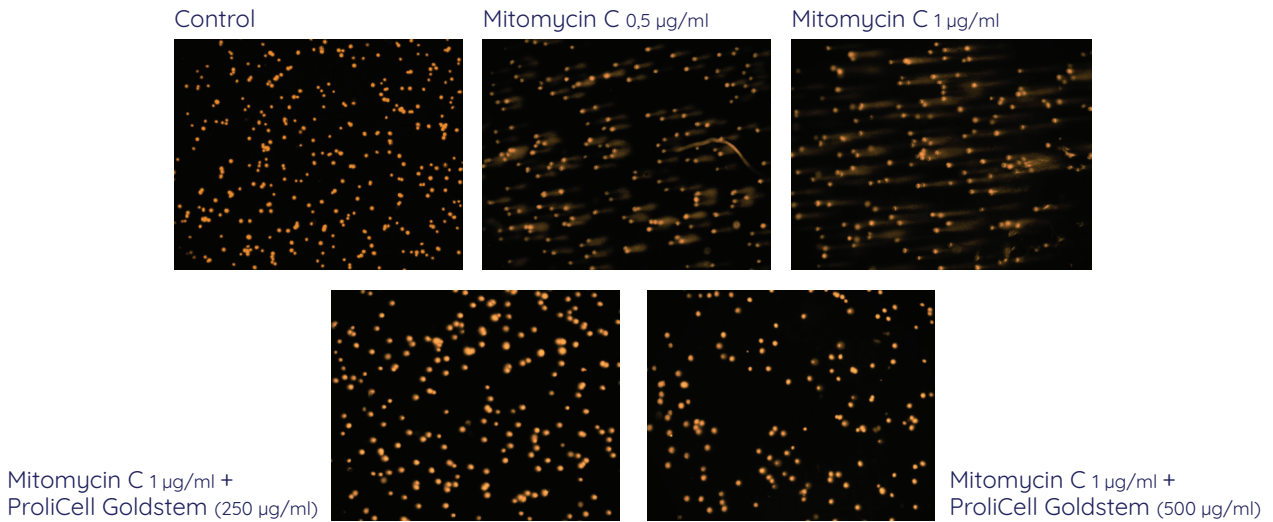
ProliCell GoldStem ensures the protection of cell membrane integrity and significantly prevents lipid peroxidation occurring in cell membranes.

Determination of the Effect on Melanin Synthesis and Tyrosinase Activity



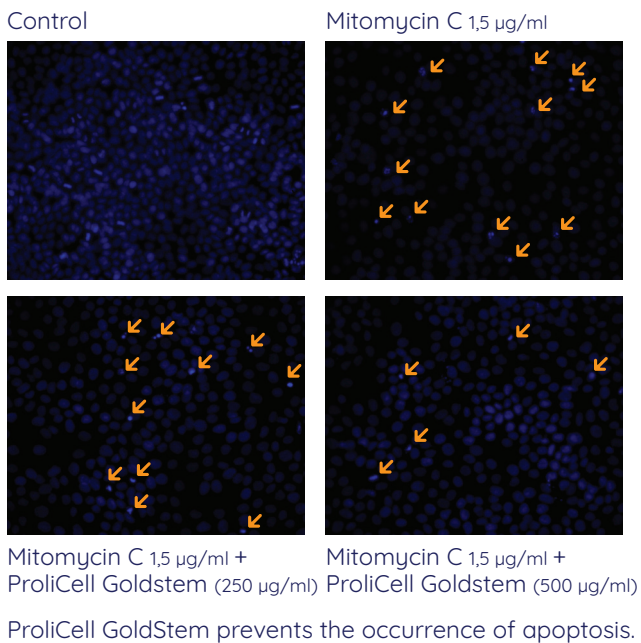
ProlCell GoldStem, suppresses melanin synthesis and tyrosinase activity, significantly preventing excess pigmentation on the skin and brightening the skin.

Determination of Effect on DNA Damage Repair

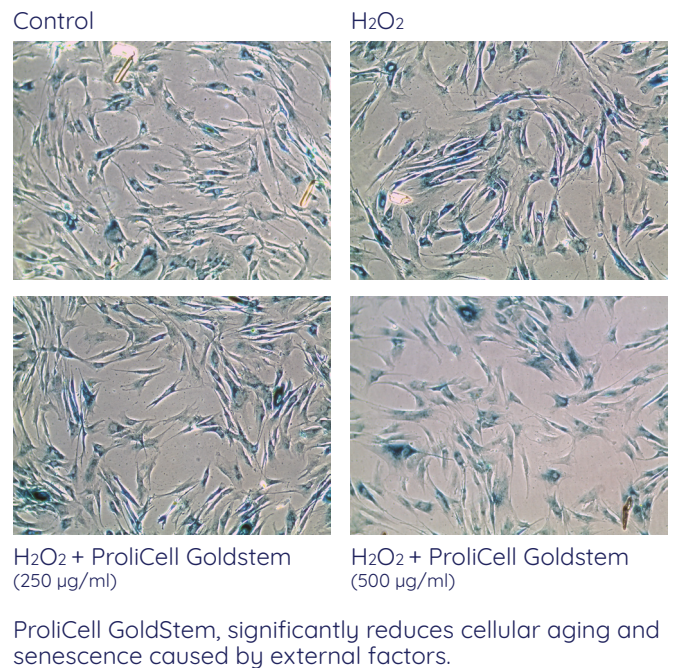


ProlCell GoldStem provides repair of DNA damage.

Detection of Apoptosis by DAPI Staining



Determination of Senescence by Senescence-Associated β-galactosidase (SA-β galactosidase) Test





DNA
Repair



Anti
Inflammation



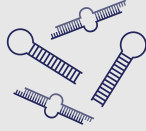
Cell Life
Extension



Brightness

Gold Effect Against Senescence

Effect Mechanisms



- Cellular anti-aging.
- Anti-senescence, which consists of environmental effects and takes place in the natural process.
- Protective against oxidative stress.
- Repairs UV-induced DNA damage.
- Repairs DNA damage caused by chemicals.
- Reduces skin blemishes and gives luminosity to the skin.

Cosmetic Uses



- Anti-aging Products (Face and Skin Care Products)
- UV Protective Products (Face and Skin Care Products)
- Skin Whitening Products (Face and Skin Care Products)
- Skin Cleansing Products (Tonics, face wash gels)

INCI Name: Glycerin, Helichrysum arenarium Extract, Xanthan Gum.

Usage rate: 2-5%

Solubility: Water-soluble

Preservative: No preservative

pH: 4.0-7.0



Features



Origin: Herbal

Appearance: Viscous cell lysate suspension

Color: Amber

Fragrance: Characteristic

Usage: Add below 40°C in cold-hot processes.

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