

# SOMITINE®

PATENT

## RADIANCE BOOSTER



ENERGIZING

SOMITINE®

PHYTOBIOACTIVE

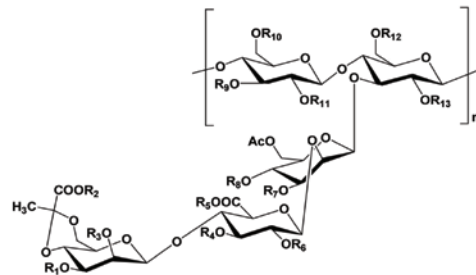
BIOTECHNOLOGY

### > ACTIONS

- Increases energy and cell activity
- Restores the skin's brightness and radiance

### ORIGIN

**Acid mannosyl polyglucan from purified glucuronic acid,** obtained by biotechnology.

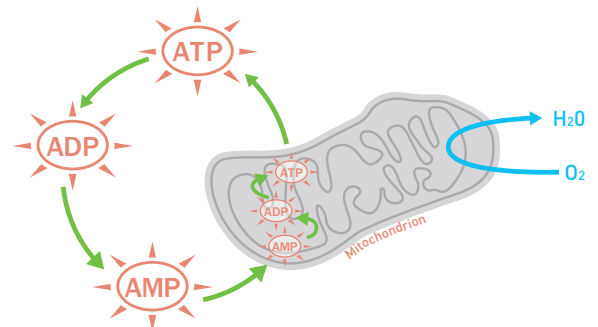


### > MECHANISM OF ACTION

SOMITINE® boosts energy metabolism by stimulating ATP levels, thus recharging the cell's energy reserves.

Cellular, basal and mitochondria respiration, and metabolic activity in the cells are stimulated.

SOMITINE® increases cell regeneration and revitalises the skin to restore its full radiance.



### > COSMETIC BENEFITS

- The signs of aging are delayed, the skin's brightness is restored.
- The skin is less granular and the complexion is radiant.

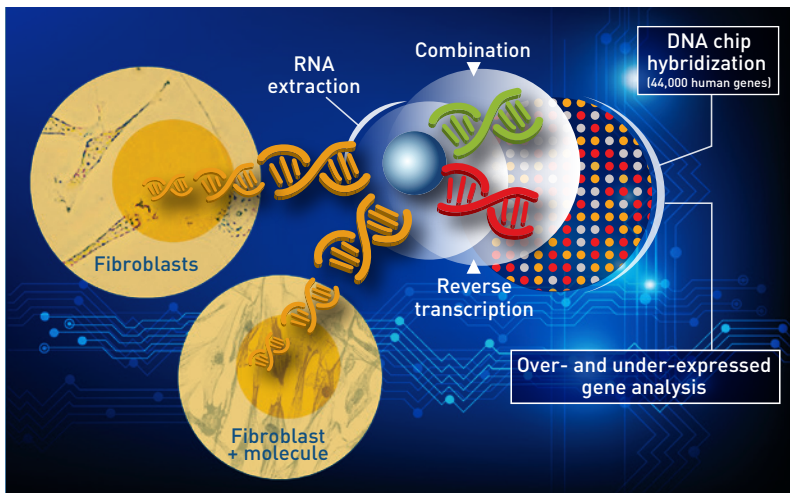
### > COSMETIC USES

- ▶ **Anti-age, regenerating and moisturizing care products**
- ▶ **Complexion radiance care products**
- ▶ **Sensitive and reactive skin care products**
- ▶ **Care products intended to attenuate skin defects**

## > SCIENTIFIC PROCESS

- **ATP** is the cell's fuel source and is a key component of energy metabolism. When ATP levels drop, the cell's "batteries" weaken. One of the causes of this is reduced respiratory chain activity; energy metabolism thus decreases, the cells receive less oxygen, skin structures become disorganized and the skin is damaged.
- **SOMITINE®** recharges the cell's batteries and accelerates the energy cycle and metabolism by boosting the respiratory chain and glucose metabolism. Cell regeneration is increased, the skin is revitalized, better oxygenated, regaining its youthful look, radiance and brightness.

## > DNA CHIP TRANSCRIPTOME ANALYSIS



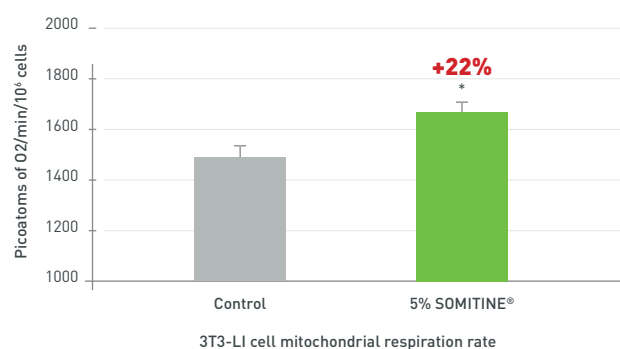
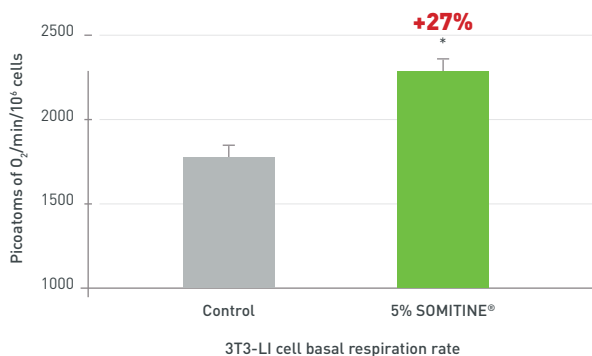
**SOMITINE®** acts on energy metabolism by stimulating the expression of genes (EDNRA, CYGB and KYNU) that induce ATP production, the cell's energy source.

## > PROVEN EFFICACY

IN VITRO  
TESTS

### CELL RESPIRATION RATE

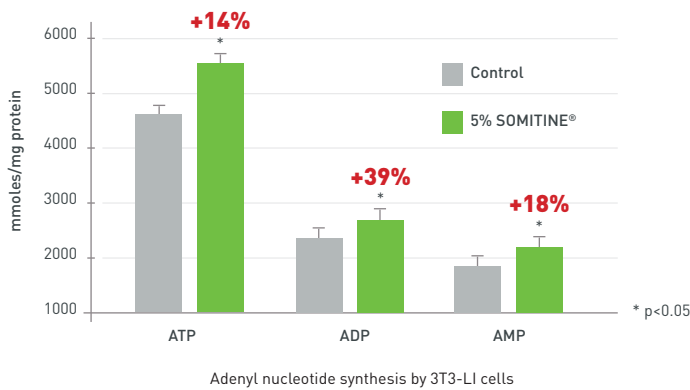
- **SOMITINE®** stimulates cell basal respiration: global oxygen consumption rate increased by **+27%**
- **SOMITINE®** stimulates mitochondrial respiration: rate of mitochondrial oxygen consumption increased by **+22%**



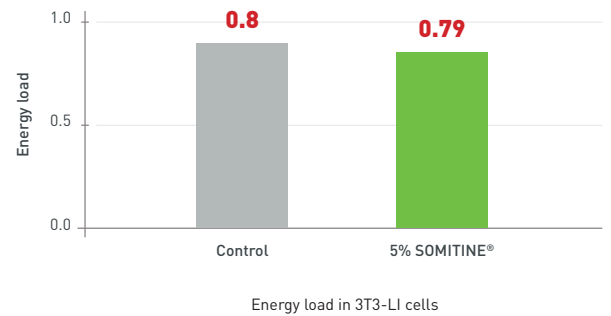
\* p<0.05

## CELLULAR ENERGY METABOLISM

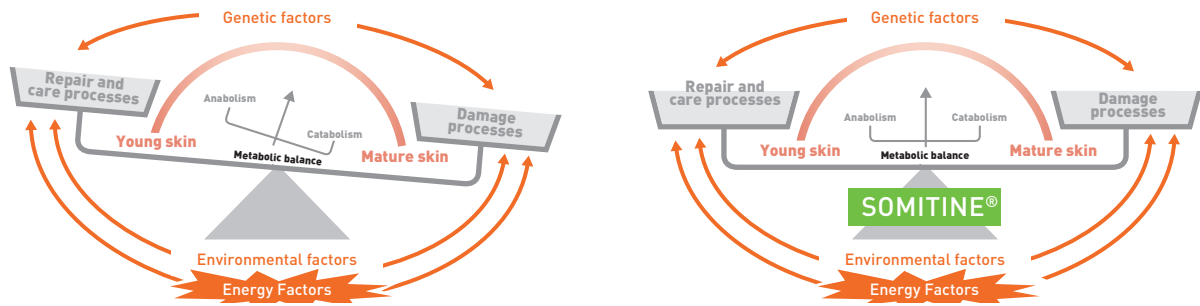
- 5% SOMITINE® significantly increases the synthesis of adenyl nucleotides: ATP **+14%**, ADP **+39%**, AMP **+18%**.



- 5% SOMITINE® does not alter the energy load inside the cells, equilibrium is reached and hence the catabolic and anabolic processes are balanced.



- SOMITINE®, by maintaining a stable energy load, is able to balance anabolic and catabolic processes, thus delaying cell aging.

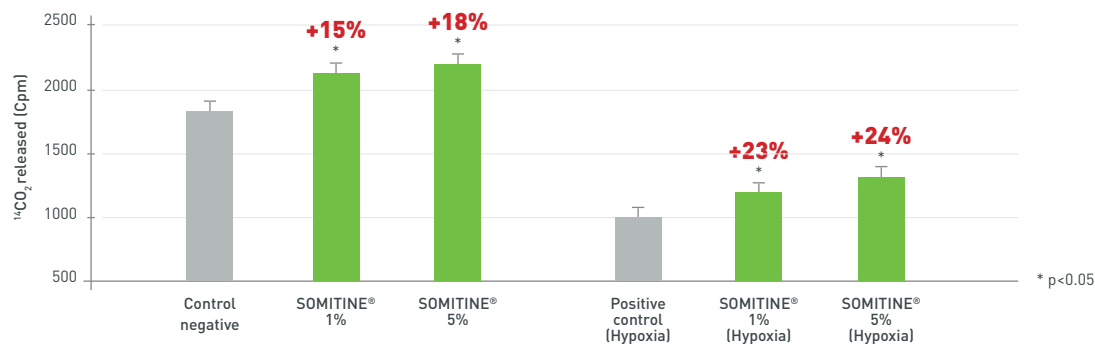


In the cells, 5% SOMITINE® induces better basal and mitochondrial respiration rates. Energy metabolism is accelerated. Energy production, storage and release in ATP form are enhanced. In parallel to this, there is no energy imbalance: the cell uses up the additional energy produced.

## ENERGY AND PHYSIOLOGICAL METABOLISMS

- Evaluation of respiratory metabolism in reconstructed epidermis SOMITINE® at concentrations of 1 and 5% increases glucose metabolism in reconstructed epidermis by **15%** and **18%** respectively under physiological conditions.

Under conditions of hypoxia, 1% and 5% SOMITINE® increases glucose metabolism by **23%** and **24%** respectively. SOMITINE® stimulates cell metabolism by using glucose. The stimulation of glucose utilization by cells under hypoxic conditions shows that SOMITINE® provides protection against metabolic damage, particularly respiratory metabolism.

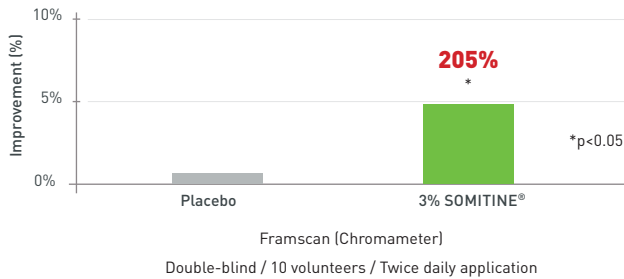


## > PROVEN EFFICACY

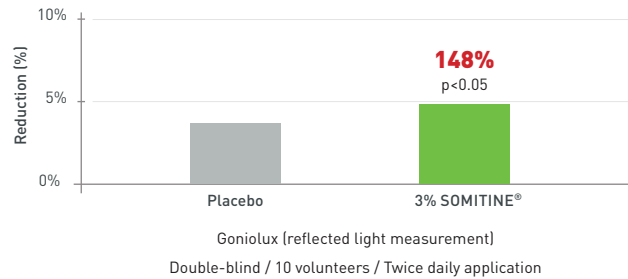
TESTS  
IN VIVO

### RADIANT COMPLEXION

- 3% SOMITINE® increases brightness (L\*) by a **factor of 2** vs placebo.



- 3% SOMITINE® reduces the shiny appearance of skin by **50%** vs placebo.



### FORMULATION

**Concentration for use:** 3%

#### Caution for use:

Add to emulsions, at the end of the preparation process, either cold or at 35-40 °C, during cooling.

### TECHNICAL DATA

#### Characteristics

Organoleptic	Appearance: liquid Colour: yellow
Solubility	Water: soluble (10%)

#### Storage

Keep in a dark place, in the original packaging and at ambient temperature (15-25 °C). Use rapidly once opened, or transfer to sterile packaging.

#### Tolerance tests

- Eye irritation: practically non-irritant
- Skin irritation: non-irritant / very good skin compatibility
- Sensitization: good compatibility
- Mutagenicity: non-mutagenic and non-pro-mutagenic

INCI name: Glycerin, Water, Hydrolyzed Xanthomonas campestris Polysaccharide  
Preservative: None

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