

New generation cosmeceutical ingredient
for sensitive skin

SKINASENSYL™

- Pure tetrapeptide targeting over-reactive skin by:
 - a decrease of the release of pro-inflammatory neuromediators (CGRP),
 - a reduction of the response of the sensory nerve fibers to external stimuli,
 - *via* its binding to the μ opioid receptor on nerve endings.
- Increase of the skin's tolerance threshold.
- Reduction of sensations of pain and discomfort, perceived by the end-users.

FOR A SOOTHING AND "PAIN KILLER"
EFFECT ON THE SKIN

ACTIVE INGREDIENT FOR SKIN CARE



LABORATOIRES
SÉROBIOLOGIQUES
Division de Cognis France

DEFINITION

Approximately 40% of the population, of all categories and phototypes, complains of having sensitive skin. Sensitive skin is healthy but over-responsive, i.e. it will react faster and more intensely to several parameters (outside factors such as temperature changes and sun, use of cosmetic products, certain medicines,...): experiences of discomfort, tingling, burning and intolerance to certain types of products, a condition referred to as neurosensitivity, characterized by a lower threshold of tolerance. Currently all of the causes for this are not known yet, but an increase of the permeability of the *stratum corneum* as well as an exaggeration of the nerve response are considered to be involved in the phenomenon of sensitive skin. Lifestyle has also an effect: tobacco, alcohol, stress, fatigue, emotions...

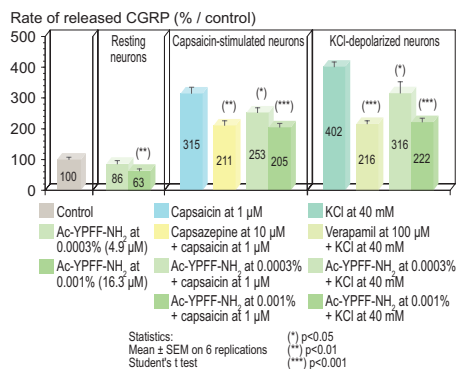
Laboratoires Sérobiologiques has developed a pure tetrapeptide based on a new mechanism of action, mainly targeting neurosensitive skin (normal barrier function, no inflammation, but exaggeration of the nerve response in the skin), able to reduce the nerve response to external stimuli by:

- decreasing the release of pro-inflammatory neuro-mediators (CGRP: Calcitonin Gene Related Peptide - a neuro-mediator involved in pain transmission),
- an action mediated via the activation of the μ opioid receptor.

The tolerance threshold of skin is increased, skin is less reactive to different stimuli and sensations of pain and discomfort are diminished. This development is especially relevant taking into consideration the growing demand for cosmeceutical products and "home-use" treatments with effects similar to dermatological procedures, such as microdermabrasion and peels. While becoming increasingly targeted and 'smart', recent skin care products may tend to generate discomfort on very sensitive skin. To allow sensitive skin to benefit from these performing ingredients and treatments without any restriction, it was necessary to develop an active to boost its tolerance... mission accomplished with SKINASENSYL™, the first soothing cosmeceutical active which offers sensitive skin the latest advances in cosmetic research.

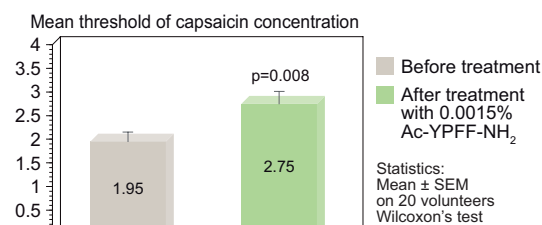
EFFICACY TESTS

CGRP release from cultured sensory neurons (*in vitro* test)



Decrease of CGRP release from cultured sensory neurons.

Soothing effect: cutaneous capsaicin sensitivity (clinical test)



Increase of perception threshold after treatment with Ac-YPPF-NH₂ at 0.0015% (i.e. 3% SKINASENSYL™) in hydroalcoholic solution / capsaicin stimulus.

The skin treated with a bi-daily application of SKINASENSYL™ during 4 days is more tolerant to capsaicin.

Thanks to its demonstrated activity on inhibition of the release of CGRP by its binding on the μ opioid receptor, SKINASENSYL™ has the capacity to increase the tolerance threshold of over-reactive skin. Two clinical studies with different stimuli have confirmed the preventive effect on sensations of pain and discomfort which can be extrapolated to other stimuli also known to induce neuron stimulation. With SKINASENSYL™, over-reactive skin is soothed.

Complementary tests

- Inhibition of CGRP release *via* μ opioid receptor (*in vitro* test): confirmation of the capacity of the tetrapeptide to reduce the neuronal stimulation by binding on the μ opioid receptor.
- Cutaneous thermal sensitivity (*in vivo* test): significant increase of the tolerance threshold of the skin.

COSMETIC APPLICATION

- Skin care products for sensitive skin.
- Anti-stress skin care products.
- Cosmeceutical ranges.
- Men care products.

TECHNICAL DATA

SKINASENSYL™ LS 9749

INCI Name : Water (and) Glycerin (and) Coco-Glucoside (and) Acetyl Tetrapeptide-15
 Aspect : colorless clear liquid, of weak odor
 Preservatives : sorbic acid
 Dose of use : 1 - 3%

SKINASENSYL™ PW LS 9852

INCI Name : Mannitol (and) Sodium Citrate (and) Acetyl Tetrapeptide-15
 Aspect : white powder, of weak odor
 Preservatives : preservative free
 Dose of use : 0.3 - 1%
 Solubility : soluble in water, insoluble in oils