

snap-8™

peptide

An octapeptide to express
yourself at ease

Maximal efficacy against expression wrinkles



Description

Octapeptide that is an elongation of **argireline® peptide**, therefore it reduces expression wrinkles topically with an alternative mechanism to botulinum toxin.

Appearance

Transparent solution containing 0.05% Acetyl Octapeptide-3.



INCI

Water (Aqua), Acetyl Octapeptide-3, Caprylyl Glycol.

Properties

snap-8™ peptide reduces the depth of wrinkles caused by the contraction of muscles of facial expression, decreasing neuronal excitability by SNARE complex destabilization.

Applications

snap-8™ peptide can be incorporated into cosmetic formulations where the removal of deep lines and wrinkles on the forehead or around the eyes area is desired.

Demonstrated mechanism

Science

Muscles responsible for the facial expression are contracted when they receive neurotransmitters released at the neuromuscular synapsis. An overstimulation of the facial muscles, due to an excess of these chemical signals, leads to a greater skin strain. After the age of 30, first wrinkles start to appear as a consequence of such muscle contractions.

The study of the basic biochemical mechanism of anti-wrinkle activity led to the revolutionary **argireline® peptide**, which has taken the cosmetic world by storm. Continuous research on the treatment of such wrinkles has driven Lipotec to **snap-8™ peptide**. This peptide is a new analogue of the N-terminal end of SNAP-25, that competes with the native protein for a position in the SNARE complex, essential for the muscle contraction.

Dosage 3-10%

Solubility

Water soluble.

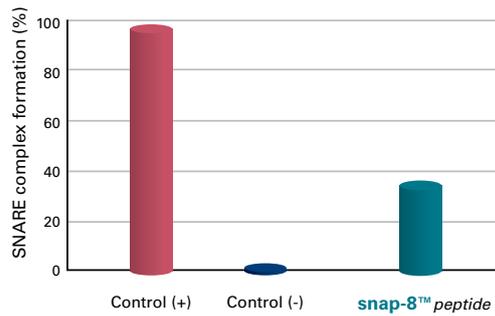
Reduces wrinkle depth up to 63%



In vitro efficacy

1. INHIBITION OF SNARE COMPLEX FORMATION

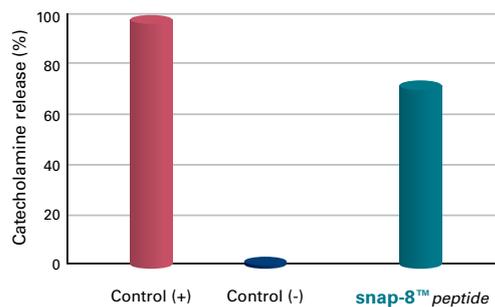
To evaluate the antagonistic competitive efficacy of the peptide patterned after the SNAP-25 N-terminal domain compared to the native SNAP-25 (positive control), **snap-8™ peptide** capacity to assemble with syntaxin and synaptobrevin forming the SNARE complex was measured. Heat and the consequent thermal decomposition was used as the negative control.



snap-8™ peptide blocks the formation of the SNARE complex
The lower the formation of the SNARE complex *in vitro*, the higher the efficacy of the anti-wrinkle active.

2. MODULATION OF CATECHOLAMINE RELEASE IN CHROMAFFIN CELLS

Inhibition in the release of catecholamines was determined by monitoring the neurotransmitters adrenaline and noradrenaline, by liquid scintillation counting. Chromaffin cells were incubated with these tritiated neurotransmitters and **snap-8™ peptide** (100 μM).

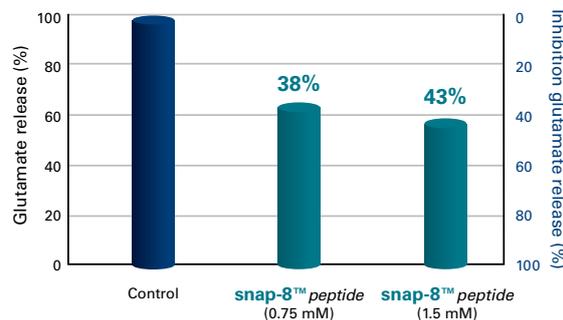


The significant modulation at μM concentrations is a clear indicator of the potent anti-wrinkle activity of snap-8™ peptide

3. MODULATION OF GLUTAMATE RELEASE IN A NEURON CELL CULTURE

Glutamate is the most excitatory abundant neurotransmitter in the nervous system and its release is used as a validated assay to determine the release of acetylcholine.

The release of glutamate in a primary cell culture of neurons was measured to compare the *in vitro* activities of **snap-8™ peptide**.

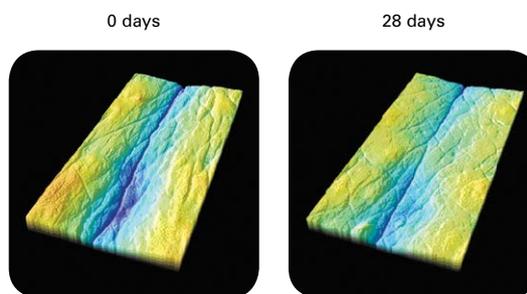


snap-8™ peptide inhibits glutamate release in a dose-dependent manner

In vivo efficacy

ANTI-WRINKLE EFFICACY EVALUATION

Skin topography analyses were performed to measure the effectiveness of a cream containing 10% **snap-8™ peptide solution**, applied twice a day. Silicon imprints were obtained from around the eyes of 17 women volunteers pre-test and after the 28 day treatment. Analyses of the imprints were performed by confocal profilometry.



The maximum reduction value of wrinkle depth was 63%