

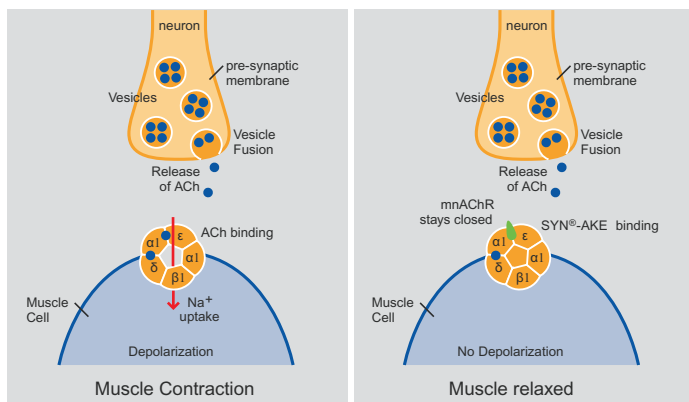
# SYN®-AKE

SYN®-AKE is a new anti-wrinkle active compound based on a synthetic tripeptide that mimics the effect of *Waglerin 1*, a peptide that is found in the venom of the Temple Viper, *Tropidolaemus wagleri*.



SYN®-AKE acts in a manner similar to that of *Waglerin 1* which acts at the post-synaptic membrane. The peptide is an antagonist of the muscular nicotinic acetylcholine membrane's receptor (mnAChR). As the muscular nicotinic ACh receptors are blocked, the ion canal remains closed. There is no uptake of Na<sup>+</sup> and the muscles stay relaxed.

Source: McArdle, JJ, T L Lentz, V Witzemann, H Schwarz, SA Weinstein & JJ Schmidt. 1999. *Waglerin-1 selectively blocks the epsilon form of the muscle nicotinic acetylcholine receptor. J. Pharmacol. Exp. Therap.* 289:543-550.



SYN®-AKE has been thoroughly tested and is considered to be appropriate for cosmetic applications.

## Properties:

- Antagonist of the muscle nicotinic acetylcholine receptor (mnAChR)
- Blocks Na<sup>+</sup> uptake at the post-synaptic membrane
- Inhibits muscle contractions

## Function:

- SYN®-AKE is an excellent anti-wrinkle active compound with a snake venom-like mode of activity.
- SYN®-AKE smoothes mimic wrinkles in a short period.

## Cosmetic applications:

- Age killing effect particularly effective against expression lines
- Intensive anti-wrinkles care

## Formulation:

SYN®-AKE is a clear glycerine-based aqueous solution that can easily be incorporated into the aqueous phase of a formulation.

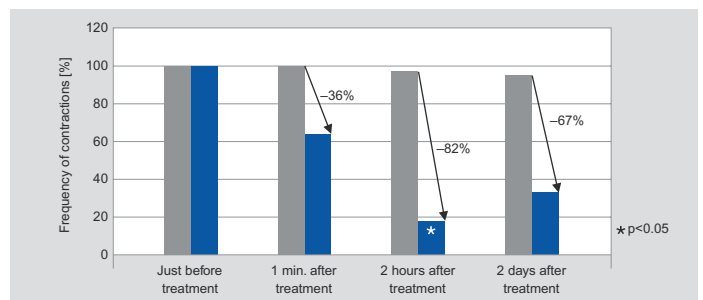
## INCI Name:

Glycerine, Water, Dipeptide Diaminobutyroyl Benzylamide Diacetate

## Efficacy Tests

*in vitro* tests:

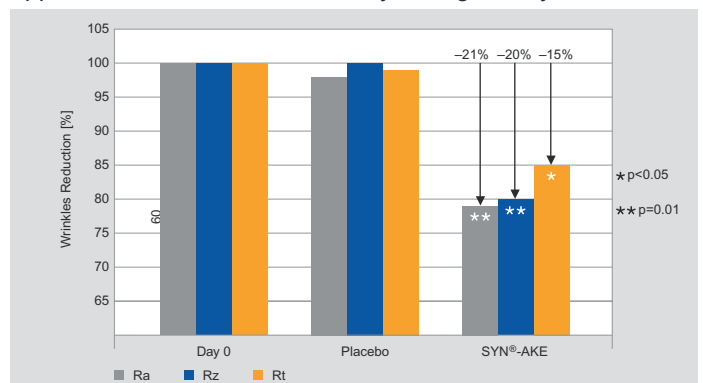
The efficacy of the SYN®-AKE tripeptide (at a concentration of 0.5mM) has been demonstrated *in vitro* by measuring the frequency of contraction of the innervated muscle cells as a function of the incubation time.



SYN®-AKE peptide reduces muscle cell contraction and its action is reversible.

*in vivo* tests:

The measurement of the smoothing and anti-wrinkle effect of SYN®-AKE (4%) was compared to a placebo. A cream was applied to the forehead twice daily during 28 days.



## SYN®-AKE – Age Killing Effect.

The smoothing effect (Ra) was measured on 80% of the volunteers and the anti-wrinkle effect (Rz, Rt) measured on 73% of the volunteers.

Results showed up to -52% of wrinkle size after 28 days application!

