argireline®

peptide

The first peptide for expression wrinkles

ARGIRELINE® 1st. antiexpression wrinkles

www.argireline.com

A safer topical alternative to Botulinum Toxin

Effective in just 1 week

A widely known solution for 1st to appear wrinkles

anti-wrinkles

Description

The first hexapeptide that is a replica of the N-terminal end of SNAP-25, thereby competing with it for a position in the SNARE complex. argireline® *peptide* is an alternative to Botulinum Toxin, topically targeting the same wrinkle-formation mechanism in a very different way.

Appearance

Transparent solution containing 0.05% active ingredient.

INCI

Water (Aqua), Acetyl Hexapeptide-8, Caprylyl Glycol.

Preservative free.

Properties

A unique anti-wrinkle peptide that is a topical alternative to Botulinum Toxin A, and is effective in reducing the appearance of expression wrinkles, as proven through significant testing.

Applications

argireline® *peptide* can be incorporated into cosmetic formulations where the removal of deep lines or wrinkles on the forehead or around the eyes is desired.

Science

One of the most striking signs of aging is the increase of wrinkles on the face. This can occur naturally over time and is identified by certain biochemical, histological, and physiological changes that are amplified by environmental exposure and other secondary factors such as the pull of gravity or repeated facial movements caused by the contraction of muscles of facial expression. Muscles are contracted when the vesicle in the motor neuron releases a neurotransmitter.

argireline® *peptide* mimics the N-terminal end of SNAP-25 and it competes with the natural protein for a position in the SNARE complex. If the SNARE complex is slightly destabilized, the vesicle cannot release neurotransmitters efficiently and therefore muscle contraction is attenuated, preventing the formation of lines and wrinkles.

Dosage 2-10%

Solubility

Water soluble.

In vitro action mechanism

argireline® *peptide*

MUSCLE CONTRACTION

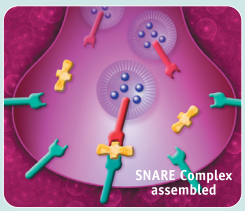
The neurotransmitter involved in muscle contraction is acetylcholine and it is released from a vesicle into the synapse. The SNARE protein complex is formed by three proteins: VAMP, Syntaxin, and SNAP-25. Its formation is essential for neurotransmitter release at the sinapsis and mediates the final steps of exocytosis. This complex is like a cellular hook that captures vesicles and brings them close to the membrane to enable their fusion.

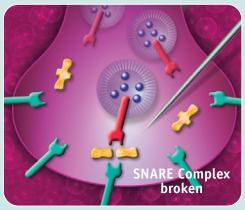
BOTULINUM TOXIN A

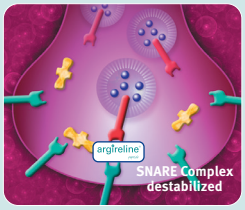
Botulinum Toxin A paralyzes the muscle by selectively blocking acetylcholine release at the neuromuscular junction. BoNT-A irreversibly cleaves the SNAP-25 protein, and therefore prevents the assembly of the SNARE complex. The nerve signal cannot be relayed, the muscle cannot be contracted and it becomes paralyzed.

ARGIRELINE® *peptide*

argireline® *peptide* is a replica of the N-terminal end of SNAP-25 and it competes with the natural protein for a position in the SNARE complex, thereby destabilizing its formation without breaking any of its components. If the SNARE complex is slightly destabilized, the vesicle cannot release neurotransmitters. As a consequence, muscle contraction is attenuated and the muscle is relaxed.



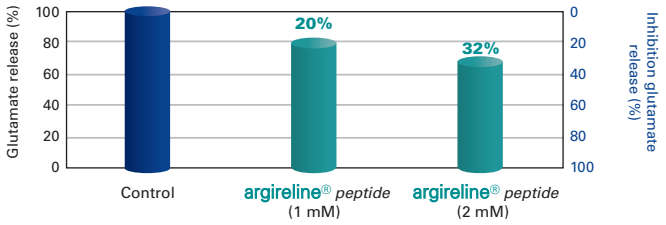




In vitro efficacy

MODULATION OF GLUTAMATE RELEASE IN A NEURON CELL CULTURE

Inhibition of glutamate release by depolarized neuron cells is a validated cell assay for measuring the potential activity of compounds on the inhibition of neuronal exocytosis. Untreated neuron cultures were used as a negative control.



argireline® *peptide* shows a high inhibitory potential of glutamate release

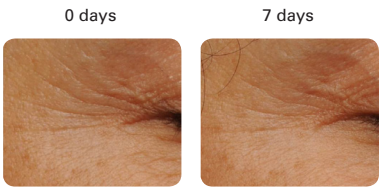
The inhibition of glutamate release at mM concentrations is a clear indicator of the potent anti-expression wrinkle activity of this hexapeptide.

In vivo efficacy

argireline® *peptide solution* 2%

EFFECT ON WRINKLE VOLUME AND LENGTH

A panel of 24 female volunteers applied a cream containing 2% argireline® *peptide solution* on half of the face, especially on the crow's feet area, and a placebo cream on the other half, twice a day for 7 days. Skin pictures were taken and topography was quantitatively evaluated.



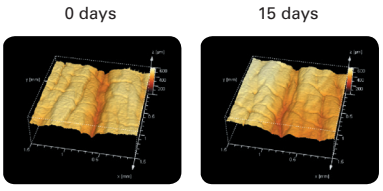
argireline® *peptide* decreased wrinkle volume and length just after 1 week

Volume was diminished by 20.6% and length by 15.9% (statistically significant).

argireline® *peptide solution* 10%

REDUCTION OF WRINKLE DEPTH

10 female volunteers applied an emulsion containing 10% argireline® *peptide solution* around the eyes, twice a day for 30 days.
Silicon imprints were obtained before and after 15 and 30 days. Analyses of the imprints were performed by confocal laser scanning microscopy.



Reduction of 17% in wrinkle depth after 15 days

Isaac Peral 17 Pol. Industrial Camí Ral - 08850 Gavà (Barcelona) Spain - Tel +34 93 638 80 00 - commercial@lipotec.com

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