

Snap-8

SNAP-25 Inhibiting Octapeptide · Investigational Research Compound ·
Acetyl Octapeptide-3



A plain-language guide to what Snap-8 is, how its neuromuscular signaling is designed to work, and what published peptide research has found so far — written for newcomers to peptide science, not just specialists.

COMPOSITION

Acetyl Octapeptide-3
10mg

STRUCTURE

8-aa acetylated peptide, an extended analog of Argireline (Acetyl Hexapeptide-3)

STUDIED HALF-LIFE

Acts locally at the site of topical application; systemic PK not well characterized

1 What Is Snap-8?

Snap-8 (Acetyl Octapeptide-3) is a synthetic peptide designed as an extended version of Argireline (Acetyl Hexapeptide-3), lengthening the original six-amino-acid sequence to eight residues. It belongs to a class of peptides studied for mimicking the N-terminal end of SNAP-25, a protein required for the vesicle fusion machinery that releases neurotransmitters at nerve endings.

Because it is studied as competing with native SNAP-25 in the SNARE complex, Snap-8's research interest centers on topical dermatology — reducing the neuromuscular signaling that drives repetitive facial muscle contractions — rather than any systemic or endocrine application.

NEW TO THIS? KEY TERMS

SNAP-25 — a protein required for neurotransmitter vesicles to fuse with the nerve cell membrane and release their contents.

SNARE complex — the protein machinery (including SNAP-25) that mediates neurotransmitter release at synapses.

Acetylcholine — the neurotransmitter that signals facial muscles to contract; its release is the target of Snap-8 research.

Argireline — Acetyl Hexapeptide-3, the shorter six-amino-acid peptide Snap-8 was designed to extend and improve on.

2 How It's Designed to Work

Snap-8's research profile rests on three linked steps — competitive interference at the SNARE complex, reduced neurotransmitter release at the neuromuscular junction, and a downstream cascade of reduced muscle contraction:

SNARE INTERFERENCE

COMPETITIVE SNAP-25 MIMICRY

Studied as mimicking the N-terminal domain of SNAP-25, competitively occupying a position in the SNARE complex needed for vesicle docking.

REDUCED RELEASE

NEUROTRANSMITTER SIGNALING

Studied as reducing vesicle fusion and acetylcholine release at the neuromuscular junction, extending on Argireline's reported activity with a longer sequence.

DOWNSTREAM CASCADE

MUSCLE CONTRACTION EFFECTS

Downstream effects studied include reduced repetitive contraction of facial expression muscles, applied topically in dermatology research.

The SNARE interference, reduced neurotransmitter release, and downstream contraction effects are studied together as one mechanism — a topical peptide acting locally rather than through systemic circulation.

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3 What the Research Shows

Snap-8's research base is concentrated in cosmetic-science literature comparing it to its predecessor Argireline, largely through in-vitro and small human dermatology studies. Below is a plain-language summary of frequently cited findings.

Comparative Efficacy vs. Argireline Lipotec (Lubrizon) manufacturer research summary, 2007

Manufacturer-sponsored in-vitro and human application studies reported Snap-8 inhibited neurotransmitter release more effectively than Argireline at comparable concentrations, attributed to its extended peptide sequence.

Wrinkle Depth Reduction Study Lipotec (Lubrizon) 28-day human application study

A 28-day topical application study in human volunteers reported a measurable reduction in expression-line wrinkle depth, particularly around the eye area, compared to baseline.

Broader SNAP-25-Targeting Peptide Class Review Wang et al., International Journal of Cosmetic Science, 2013 (review)

A review of neuropeptide-based cosmetic ingredients situated Snap-8 within a class of "Botox-like" topical peptides, noting its studied mechanism is distinct from but analogous to botulinum toxin's blockade of SNARE-mediated release.

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4 Effects Observed in Research

Across the studies above, three effects recur most often. These are findings from controlled research settings, not guarantees or claims about any individual outcome.

Reduced Expression-Line Depth Measurable reduction in wrinkle depth reported in topical application studies, most notably around the eye area.	Reduced Neurotransmitter Release Greater inhibition of neurotransmitter release reported compared to the shorter Argireline sequence at similar concentrations.	Reduced Muscle Contraction Signaling Diminished repetitive facial muscle contraction signaling reported, consistent with its studied SNARE-interference mechanism.
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5 Storage & Reconstitution Guide

Snap-8 is supplied as a lyophilized (freeze-dried) powder that must be reconstituted before use in the lab. The steps below reflect standard peptide-handling practice — always defer to the certificate of analysis (COA) that ships with each vial.

BEFORE RECONSTITUTION Keep the lyophilized vial refrigerated (2–8°C) for short-term storage, or frozen (–20°C) for longer-term storage, protected from light at all times. The unreconstituted powder is stable for the longest window — reconstitute only what will be used in the near term.	RECONSTITUTING WITH BACTERIOSTATIC WATER Bring the vial to room temperature. Using a sterile syringe, draw bacteriostatic water and inject it slowly down the inside wall of the vial — not directly onto the powder — to avoid agitating and denaturing the peptide. Gently swirl to dissolve; never shake.
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RESULTING CONCENTRATION FOR A 10MG VIAL

Bacteriostatic Water Added	Resulting Concentration
1 mL	10 mg/mL
2 mL	5 mg/mL
3 mL	3.3 mg/mL
5 mL	2 mg/mL

AFTER RECONSTITUTION Store the reconstituted solution refrigerated at 2–8°C and protected from light. Reconstituted peptide solutions are generally most stable when used within a few weeks — check the COA for the exact window for each lot. Avoid repeated freeze–thaw cycles, label vials with the reconstitution date, and discard any solution that appears cloudy, discolored, or has been left at room temperature for an extended period.

SOURCES

Lipotec S.A. (Lubrizon Life Science). SNAP-8: a new peptide with a strong anti-wrinkle effect · Manufacturer technical research summary, 2007 · Wang, Y. et al. Peptides in cosmetics: from adhesion to anti-wrinkle · International Journal of Cosmetic Science, 2013.

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