



Nonapeptide-1

Nonapeptide-1 is an alpha-melanocyte-stimulating hormone (α -MSH) antagonist that can reduce melanin production and has a whitening effect.

Nonapeptide-1

Nonapeptide-1

INCI Name

Nonapeptide-1

CAS

158563-45-2

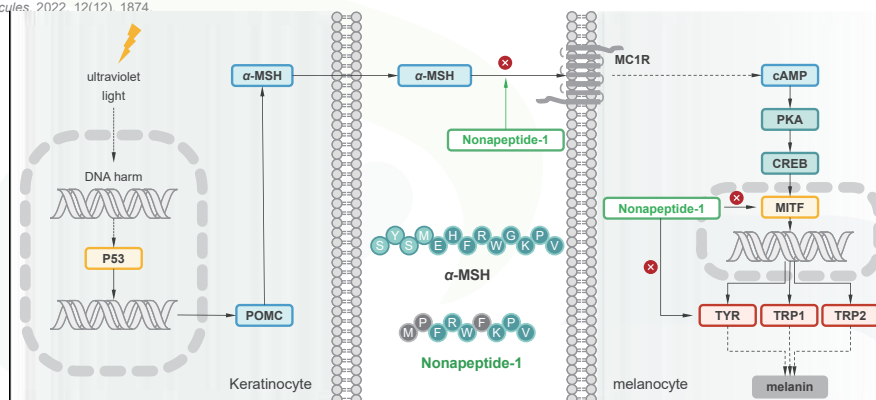
Molecular Formula

$C_{61}H_{87}N_{15}O_9S$

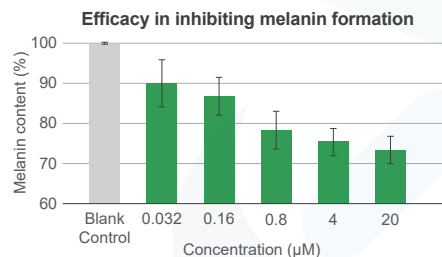
Product Information

Alpha-melanocyte-stimulating hormone (α -MSH) is a short peptide consisting of 13 amino acids. When α -MSH binds to its receptor (MC1R), it will activate the downstream melanin synthesis pathway, resulting in increased melanin production and skin darkening. Nonapeptide-1, a biomimetic peptide designed to mimic the sequence of α -MSH, competitively inhibits the binding of α -MSH to MC1R. By blocking the melanin synthesis pathway, nonapeptide-1 can effectively reduce melanin production at its source, leading to skin whitening effects.

Reference: C. Li et al., *Biomolecules*, 2022, 12(12), 1874

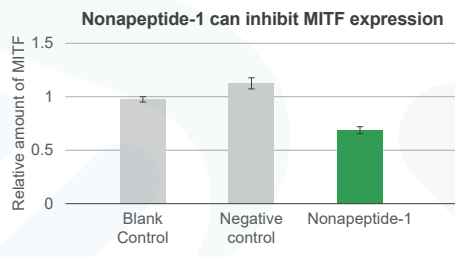


Efficacy



Experiment condition: B16F10 cells; Blank control: complete medium; Test group: Nonapeptide-1+200 J/cm² UVA

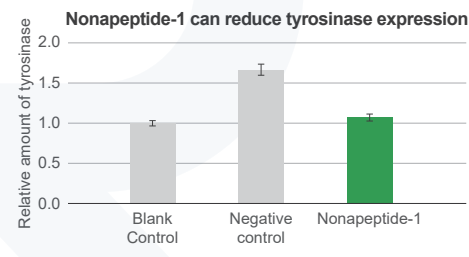
Results: Nonapeptide-1 can inhibit the generation of melanin in a dosage dependent manner.



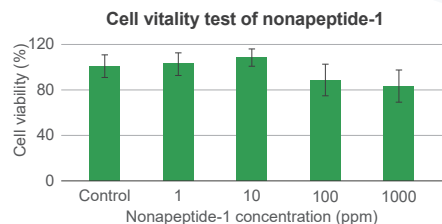
Experiment condition: Human epidermal melanocytes; Blank control: Cell culture medium; Negative control: 15 J/cm² UVA; Test group: 15 J/cm² UVA+30 ppm nonapeptide-1

Results: Nonapeptide-1 can effectively inhibit the expression of Microphthalmia-associated transcription factor (MITF) and tyrosinase, resulting in a brightening and whitening effect.

Reference: J. Chen et al., *Postepy Dermatol. Alergol.*, 2022, 39(2), 327, 335.



Safety Test



Nonapeptide-1 exhibits no cytotoxicity within the tested concentration range (0-1000 ppm). It has been extensively utilized in various skincare products, with no reported adverse reactions.

Formulation Guidelines

- Recommended dosage: 50-500 ppm
- Nonapeptide-1 is highly soluble in water and is compatible with most of cosmetic ingredients.
- Nonapeptide-1 has high biological activity, and should be processed below 45 °C and added at the final stage of formulation.




ABOUT US

READLINE is a bio-tech company focusing on developing and manufacturing active ingredients for cosmetics, nutritional supplements and pharmaceuticals in a green and sustainable manner. We are driven by a shared value to enable customer success with high quality green active ingredients, from making to using, from health to beauty.

Copyright © 2024 by Shenzhen Readline Biotech. Co. Ltd. All rights reserved.

This product information and all further technical advice are based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. No warranty or guarantee of product properties in the legal sense is intended or implied. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified and tested by qualified experts in the sole responsibility of a customer. This product information is not intended to provide legal or regulatory advice about product uses or claims in any jurisdiction and should not be relied upon for such guidance.

CONTACT US

 www.szreadline.com
 +86 755 2665 9310
 sales@szreadline.com



Readline Biotech