

Epidermal Growth Factor L CEG

Description

The Epidermal Growth Factor (EGF) is a single-chain, non-glycosylated protein that naturally occurs in our skin cells. Its main purpose is to heal our skin by promoting DNA synthesis and cell proliferation. Once it binds to EGFR, which is its receptor on the surface of the cell, the combination of the two kickstarts several signaling pathways that ultimately lead to results such as cell proliferation, differentiation, and survival. There are three intramolecular disulfide bonds consisting of six cysteines, forming three intramolecular ring-type structures, and this receptor binding domain determines EGF biological activity. EGF was discovered by scientist Dr. Cohen and Prof. Montalcini in 1962. Its content directly affects new skin cells growth speed and differentiation which determines the extent of the skin young. This observation made it become the "Beautiful Factor". EGF as a pharmaceutical is widely used in the treatment of skin burns, corneal transplantation, postoperative wound, ulcer, bedsore, etc. where it shows good therapeutic effect.

The Epidermal Growth Factor L CEG is a solution of synthetic human growth factor sh-EGF. The active component, sh-Oligopeptide-1, is produced by modern bioengineering methods like fermentation, using glucose as raw material. It has the same molecular structure and biological activity as EGF secreted naturally by the human body. It can promote the epidermis cell, nerve cell and organ tissue epithelial cell growth, thus can be applied in anti-wrinkle, anti-aging cosmetics. In addition, it can also brighten the skin and remove scars. The Epidermal Growth Factor L CEG overcomes the shortcomings of common sh-Oligopeptide-1 which requires low temperature storage and transportation, instead it can be stored, transported and used at room temperature, and its biological activity can remain stable.

Efficacy

- promotes fibroblast synthesis
- improves skin elasticity
- supports natural cell regeneration and cell repair
- reduces fine lines and wrinkles
- smooths the skin
- strengthens the skin barrier and helps protect against external stressors
- boosts microcirculation

Appearance

clear, colourless liquid

INCI

Aqua, Glycerin, Mannitol, sh-Oligopeptide-1

Registration

CAS-No.:

Aqua.....	7732-18-5
Glycerin.....	56-81-5
Mannitol.....	69-65-8
Caprylyl Glycol.....	1117-86-8
Ethylhexylglycerin.....	70445-33-9
sh-Oligopeptide-1.....	62253-63-8



The power behind cosmetics.
Nature & Science in perfect balance!

Epidermal Growth Factor L CEG

EC-No.:

Aqua.....	231-791-2
Glycerin.....	200-289-5
Mannitol.....	200-711-8
Caprylyl Glycol.....	214-254-7
Ethylhexylglycerin.....	408-080-2
sh-Oligopeptide-1.....	810-845-4

Preservatives / Stabilizers

preservative.....	none
stabilizer	
Caprylyl Glycol.....	<= 0.4 %
Ethylhexylglycerin.....	<= 0.1 %

Characteristics

pH-value.....	6.5 - 7.5
bioactivity.....	7.000 - 13.000 IU/ml

Synonym:

Synthetic Human Epidermal Growth Factor
(sh EGF)

Application

in high quality cosmetic products
creams and lotions
face masks
gels and ampoules
body care

Application concentration

skin care formulations.....0.2 - 20 %

Incorporation

Epidermal Growth Factor L CEG is soluble at RT in water, ethanol and mixtures of water:ethanol 1:1. It is soluble in glycerin at 35 °C. In propylene glycol and Dermosoft 1388 it is soluble at 40 °C. At 60 °C it is soluble in pentylene glycol.

Epidermal Growth Factor L CEG can maintain long-term stability at -20 °C and remain stable after boiling at 100 °C for 30 min. at neutral pH. Avoid strong acidic and strong alkaline environments with pH < 5 or pH > 9. We recommend the incorporation at the end of the formulation process at temperatures below 40 °C.

Avoiding contact with formaldehyde preservatives, protease, or tannin.

Toxicology

non hazardous in normal use concentration

Storage & Shelf life

Epidermal Growth Factor L CEG should be stored in sealed containers at a cool, dry and light protected place at 2 - 8 °C.

In closed original containers the shelf life is 24 months.