Selco®

Trans Epidermal Growth Factor (T-EGF) Description

T-EGF is a fusion of the synthetic human growth factor sh-EGF and the carrier peptide TD-1 with a 10 times higher efficacy penetrating the skin barrier than normal EGFs. It revolutionizes skin care, promoting cell activity and regeneration, impairing skin aging, ensuring youthful, radiant skin. 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 youth. 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.

T-EGF is a freeze-dried powder in hermetically sealed pharma grade ampoules with a biological activity of >= 1000000 IU/mg. It has the same molecular structure and biological activity as EGF secreted naturally by the human body. It can promote epidermis cells, 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.

Efficacy

- promotes dermis fibroblasts
- increases skin elasticity
- promotes cell regeneration and cell repair
- reduces wrinkles
- smooths the skin
- strengthens the skin barrier against external harmful substances
- prevent scar formation after sun burn or acne
- enhances microcirculation

Appearance

white powder

INCI

sr-(Hexapeptide-40 Oligopeptide-232 sh-Oligopeptide-1)

Registration

CAS-No.

T-EGF sr-(Hexapeptide-40 Oligopeptide	e-232 sh-
Oligopeptide-1)	/-
Mannitol	69-65-8
Trehalose	.99-20-7
Sodium Chloride7	647-14-5
Disodium Phosphate7	558-79-4
Sodium Phosphate7	558-80-7
Aqua7	732-18-5

Nature needs no cosmetics, but cosmetics need nature

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Trans Epidermal Growth Factor (T-EGF)

EC-No.

T-EGF sr-(Hexapeptide-40	Oligopeptide-232 sh-
Oligopeptide-1)	/-
Mannitol	
Trehalose	202-739-6
Sodium Chloride	231-598-3
Disodium Phosphate	231-448-7
Sodium Phosphate	231-449-2
Aqua	

Preservatives / Stabilizers

preservativenone
stabilizer
Mannitol, Trehalose, Sodium Chloride, Disodium
Phosphate, Sodium Phosphate

Characteristics

molecular weight	9.9 kDa
purity (SDS-PAGE)	>= 95 %
endotoxin (LAL)	< 1 EU/µg
biological activity>= 10	000000 IU/mg
transdermal efficacy*	>= 10*EGF

Synonym: Synthetic Human Epidermal Growth Factor (sh EGF)

Application

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

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Application concentration

skin care formulations.....2 - 8 ppm

Incorporation

T-EGF is soluble at RT in water. Prior to using the TEGF sample in a production batch, add 10 mL demi water into the glass vial, gently revert the vial a few times. The powder will be completely dissolved and ready to be added to a production batch. For optimal dissolution, you may perform this step one day prior to production. Let the vial stand in the fridge overnight. This will ensure the most complete dissolution. You now have a TEGF stock solution with a concentration of 1 mg TEGF/10mL water (= 0.01 % TEGF solution). To make 200 mL TEGF serum at 8 ppm add 16 mL of 0.01 % TEGF solution.

T-EGF 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

T-EGF 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. At -20°C storage can be prolonged up to 3 years.

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