

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, bed sore, 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

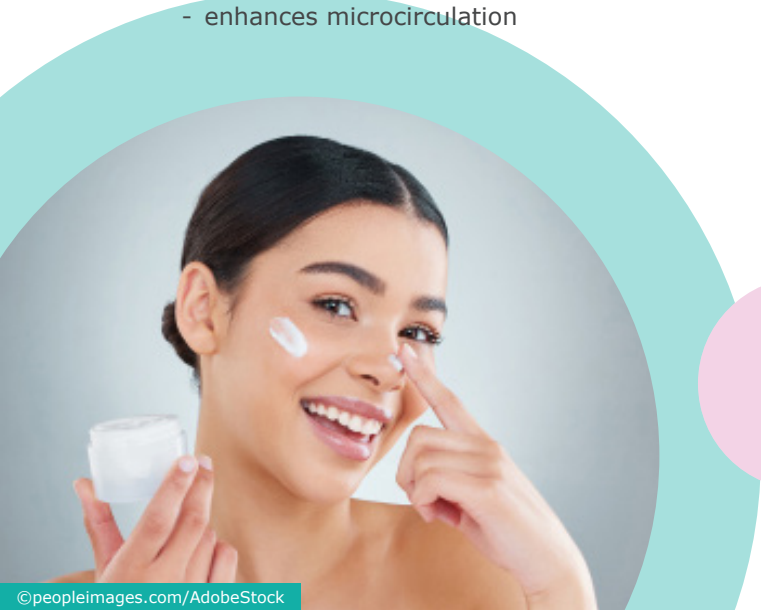
sr-(Hexapeptide-40 Oligopeptide-232 sh-Oligopeptide-1)

Registration

CAS-No.

T-EGF sr-(Hexapeptide-40 Oligopeptide-232 sh-Oligopeptide-1).....	-/-
Mannitol.....	69-65-8
Trehalose.....	99-20-7
Sodium Chloride.....	7647-14-5
Disodium Phosphate.....	7558-79-4
Sodium Phosphate.....	7558-80-7
Aqua.....	7732-18-5

Nature needs no cosmetics,
but cosmetics need nature



Trans Epidermal Growth Factor (T-EGF)

EC-No.

T-EGF sr-(Hexapeptide-40 Oligopeptide-232 sh-
Oligopeptide-1).....-/-
Mannitol.....200-711-8
Trehalose.....202-739-6
Sodium Chloride.....231-598-3
Disodium Phosphate.....231-448-7
Sodium Phosphate.....231-449-2
Aqua.....231-791-2

Raw material approved by ECOCERT GREENLIFE,
conform to the COSMOS Standard.

Preservatives / Stabilizers

preservative.....none
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.....>= 1000000 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. Optimal pH range
is 4 - 5.5 or 6 - 8.5; avoid the isoelectric point.
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.

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