

# Recombinant Human Epidermal Growth Factor (rHuEGF)

**Catalog Number:** 500-10

**Description:**

Epidermal Growth Factor (EGF) was originally discovered in crude preparations of nerve growth factor prepared from mouse submaxillary glands as an activity that induced early eyelid opening, incisor eruption, hair growth inhibition, and stunting of growth when injected into newborn mice. Human EGF was isolated from urine based on its inhibitory effect on gastric secretion and named urogastrone, accordingly. EGF is prototypic of a family of growth factors that are derived from membrane-anchored precursors. All members of this family are characterized by the presence of at least one EGF structural unit (defined by the presence of a conserved 6 cysteine motif that forms three disulfide bonds) in their extracellular domain. EGF is initially synthesized as a 130 kDa precursor transmembrane protein containing 9 EGF units. The mature soluble EGF sequence corresponds to the EGF unit located proximal to the transmembrane domain. The membrane EGF precursor is capable of binding to the EGF receptor and was reported to be biologically active. Mature human EGF shares 70% a.a. sequence identity with mature mouse and rat EGF.

**AA Sequence:**

NSDSECLSH DGYCLHDGVC MYIEALDKYA CNCVVG YIGE RCQYRDLKWW ELR

**Quantity:** 100µg/500µg/1000µg

**Source:** E. coli.

**Molecular Weight:**

Approximately 6.2 kDa, a single non-glycosylated polypeptide chain containing 53 amino acids.

**Purity:** Greater than 98% by SDS-PAGE and HPLC analyses.

**Biological Activity:**

Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 0.1 ng/ml, corresponding to a specific activity of  $> 1.0 \times 10^7$  IU/mg.

**Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

**Endotoxin:** Less than 1 EU/µg of rHuEGF as determined by LAL method.

**Stability & Storage:**

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70°C as supplied.
- 1 month, 2 to 8°C under sterile conditions after reconstitution.
- 3 months, -20 to -70°C under sterile conditions after reconstitution.

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