



## User Manual

**Epidermal Growth Factor (EGF) (Human)**

**Cat. No. HEGFP-05012**



**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.

**Source:**

*Escherichia coli*

**Unit:**

500 µg

**Reconstitution:**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

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

**Storage:**

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term

storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

**Molecular Weight:**

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

**Endotoxin:**

Less than 1 EU/μg of EGF as determined by LAL method.

**Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

**Biological Activity:**

The ED50 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.

**AA Sequence:**

NSDSECPLSH DGYCLHDGVC MYIEALDKYA CNCVVG YIGE RCQYRDLKWW ELR

**Purity:**

> 98% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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