

EGF

Epidermal Growth Factor

human, recombinant, *E. coli*

Cat. No.	Amount
PR-413	500 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Molecular Weight

6.22 kDa

Solubility

It is recommended to reconstitute the lyophilized EGF in sterile bidest H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

EC₅₀: 0.1 ng/ml corresponding to a specific activity of 1 x 10⁶ Units/mg, calculated by the dose dependant proliferation of murine BALB/c 3T3 cells (measured by 3H-thymidine uptake).

Purity

≥ 95% by SDS-PAGE and SEC-HPLC

Description

Recombinant human EGF produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 53 amino acids and having a molecular mass of 6.22 kDa.

Epidermal Growth Factor (EGF) is a 6 kDa polypeptide growth factor initially discovered in mouse submaxillary glands. Human epidermal growth factor was originally isolated from urine based on its ability to inhibit gastric secretion and called urogastrone. EGF exerts a wide variety of biological effects including the promotion of proliferation and differentiation of mesenchymal and epithelial cells.

The EGF is purified by proprietary chromatographic techniques.

Amino acid sequence

NSDSECPLSH DGYCLHDGVC MYIEALDKYA
CNCVVG YIGE RCQYRDLKWW ELR

Selected References:

- Jahanshahi *et al.* (2004) Alterations in antioxidant power and levels of epidermal growth factor and nitric oxide in saliva of patients with inflammatory bowel diseases. *Dig. Dis. Sci.* **49**:1752.
- Zanuttin *et al.* (2004) Folding of epidermal growth factor-like repeats from human tenascin studied through a sequence frame-shift approach. *Eur. J. Biochem.* **271**:4229.
- Leahy (2004) Structure and function of the epidermal growth factor (EGF/ErbB) family of receptors. *Adv. Protein Chem.* **68**:1.
- Chlenski *et al.* (2004) Neuroblastoma angiogenesis is inhibited with a folded synthetic molecule corresponding to the epidermal growth factor-like module of the follistatin domain of SPARC. *Cancer Res.* **64**:7420.
- Smith *et al.* (2004) Epidermal growth factor stimulates urokinasetype plasminogen activator expression in human gingival fibroblasts. Possible modulation by genistein and curcumin. *J. Periodontal Res.* **39**:380.