

## EGF

### Epidermal Growth Factor

human, recombinant, *Pichia pastoris*

Cat. No.	Amount
PR-414	500 µg

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

#### Avoid freeze / thaw cycles

#### Form

Lyophilized. Solution contained 0.15M NaCl and 0.025M sodium bicarbonate pH 7.5.

#### Solubility

It is recommended to reconstitute the lyophilized EGF in sterile bidest H<sub>2</sub>O 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

EC<sub>50</sub>: 0.1 ng/ml corresponding to a specific activity of 1 x 10<sup>7</sup> Units/mg, calculated by the dose-dependent proliferation of murine BALB/c 3T3 cells (measured by 3H-thymidine uptake).

#### Molecular Weight

6 kDa

#### Purity

≥ 95% by SDS-PAGE and RP-HPLC

#### Description

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.

Recombinant human Epidermal Growth Factor produced in *Pichia pastoris* is a single, glycosylated polypeptide chain containing 51 amino acids and having a molecular mass of 6.2 kDa.

Recombinant EGF is purified by proprietary chromatographic techniques.

#### Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Ser-Asp-Ser-Glu, which agrees with the sequence of native EGF human.

N-terminal methionine has been completely removed enzymatically.

#### 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.