

## EGF, Rat

**Cat. No.:** Z03066-1

**Size:** 1.0 mg

**Synonyms:** Epidermal Growth Factor, Urogastrone, URG

### Description:

Epidermal Growth Factor (EGF) is a cytokine with 53 amino acids, originally found in mouse submaxillary gland. EGF binds to EGF receptors, ErbB1 and B4, and causes them to be dimerized and phosphorylated. The dimerized and phosphorylated EGFR can bind to several intracellular targets, such as phospholipase C $\gamma$  and Ras-GTPase-acting protein, and achieve a series of cascade reactions. EGF is involved in the regulation of cell proliferation and differentiation, and is up-regulated during wound healing, accelerating reepithelization and increasing tensile strength. It also stimulates neurite outgrowth and increases the uptake of dopamine in the central nervous system. On the other hand, EGF is up-regulated in the glioma cancer, and related to the length of survivals of the patients.

Recombinant rat Epidermal Growth Factor (rrEGF) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 54 amino acids. A fully biologically active molecule, rrEGF has a molecular mass of 6.3 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

00001 MNSNTGCPPS YDGYCLNGGV CMYVESVDYR VCNVIGYIG  
00041 ERCQHRDLRW WKLR

**Source:** *E. coli*

**Species:** Rat

**Biological Activity:** ED<sub>50</sub> < 0.08 ng/mL, measured by a cell proliferation assay using 3T3 cells, corresponding to a specific activity of > 1.25 × 10<sup>7</sup> units/mg.

**Molecular Weight:** 6.3 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100  $\mu$ g/mL.

**Purity:** > 95% by SDS-PAGE analysis.

**Endotoxin Level:** < 0.2 EU/ $\mu$ g, determined by LAL method.

**Storage:** Lyophilized recombinant rat Epidermal Growth Factor (rrEGF) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrEGF should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.