

# Recombinant Rat EGF Protein

Catalog No.: RP02816 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Rat	25313	P07522

### Tags

No tag

### Synonyms

EGF;HOMG4;URG

## Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Calculated MW	Observed MW
6.3 kDa	6-9 kDa

### Endotoxin

Please contact us for more information.

### Formulation

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Background

Epidermal growth factor (EGF) is the founding member of the EGF family that also includes TGF-α, amphiregulin (AR), betacellulin (BTC), epiregulin (EPR), heparin binding EGF like growth factor (HB\_x001e\_EGF), epigen, and the neuregulins (NRG)-1 through -6. Members of this protein family have highly similar structural and functional characteristics. The 1207 amino acid (aa) human EGF precursor contains 9 EGF domains and 9 LDLR class B repeats. Human EGF is a 645-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. EGF is a growth factor that stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. EGF is present in various body fluids, including blood, milk, urine, saliva, seminal fluid, pancreatic juice, cerebrospinal fluid, and amniotic fluid (4). Four ErbB (HER) family receptor tyrosine kinases including EGFR/ErbB1, ErbB2, ErbB3 and ErbB4, mediate responses to EGF family members (5). EGF binds ErbB1 and depending on the context, induces the formation of homodimers or heterodimers containing ErbB2. Dimerization results in autophosphorylation of the receptor at specific tyrosine residues to create docking sites for a variety of signaling molecules (5,78). EGF seems regulated by dietary inorganic iodine and plays an important physiological role in the maintenance of oro-esophageal and gastric tissue integrity.

## Basic Information

### Description

Recombinant Rat EGF Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Asn974-Arg1026) of rat EGF (Accession #NP\_036974.1) fused with no additional amino acid.

### Bio-Activity

Measured in a cell proliferation assay using BALB/c 3T3 mouse fibroblasts. The ED<sub>50</sub> for this effect is typically 0.05-0.3ng/mL.

### Storage

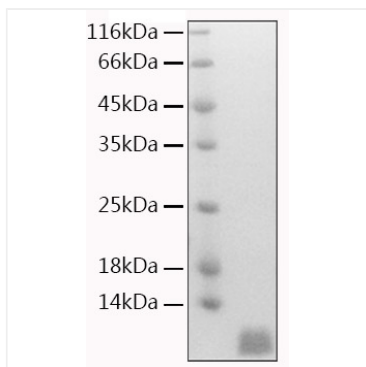
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Contact

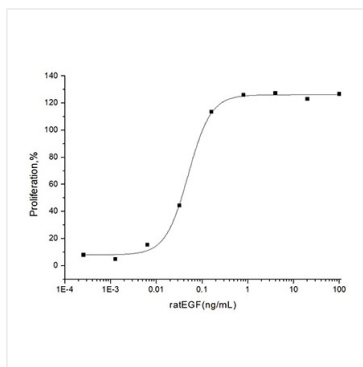
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## Validation Data



Recombinant Rat EGF Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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