

Recombinant Rat Epidermal Growth Factor

Cat. No. Egf-460R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Epidermal Growth Factor is expressed in <i>E. coli</i> .
Species	Rat
Source	E.coli
Description	EGF is a potent growth factor that stimulates the proliferation of various epidermal and epithelial cells. Additionally, EGF has been shown to inhibit gastric secretion, and to be involved in wound healing. EGF signals through a receptor known as c-erbB, which is a class I tyrosine kinase receptor. This receptor also binds with TGF- α and VGF (vaccinia virus growth factor). Recombinant rat EGF is a 6.2 kDa globular protein containing 54 amino acid residues including 3 intramolecular disulfide-bonds.
Specific Activity	$\geq 1 \times 10^7$ units/mg.
Endotoxin Level	< 0.1 ng per g of rRa EGF (1EU/g).
Purity	Greater than 98% (determined by SDS-PAGE and HPLC analysis).
Biological Activity	The ED ₅₀ was determined by a cell proliferation assay using BALB/c 3T3 cells is < 0.1 ng/ml, corresponding to a specific activity of > 1×10^7 units/mg.
Formulation	Lyophilized from a sterile-filtered solution with no additives.
Reconstitution	Please Note: Always centrifuge product before opening vial. The lyophilized protein

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should be reconstituted with distilled, sterile water to a concentration of 0.1-1.0 mg/ml. For further dilution, carrier protein (0.1% BSA or HSA) should be added to avoid loss of bioactivity.

Storage & Stability

The lyophilized protein, though stable at room temperature for up to 3 weeks, is best stored desiccated at -20°C. Reconstituted protein should be used immediately or stored long-term in undiluted working aliquots at -20°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name [Egf epidermal growth factor \[Rattus norvegicus \]](#)

Synonyms Egf; epidermal growth factor (beta-urogastrone); URG; HOMG4; Pro-epidermal growth factor; Epidermal growth factor; Urogastrone

Gene ID [25313](#)

mRNA Refseq [NM_012842](#)

Protein Refseq [NP_036974](#)

UniProt ID [P07522](#)

Chromosome Location 2q42-q43

Pathway Bladder cancer; Cytokine-cytokine receptor interaction; Endocytosis; Endometrial cancer; ErbB signaling pathway; Focal adhesion; Gap junction; Glioma; MAPK signaling pathway; Melanoma; Non-small cell lung cancer; Melanoma; Non-small cell

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lung cancer; Pancreatic cancer; Pathways in cancer; Prostate cancer; Regulation of actin cytoskeleton

Function

calcium ion binding; epidermal growth factor receptor binding; growth factor activity; protein binding

**Rainbow colored
NMR structure of
EGF.**

