

Epidermal Growth Factor

Murine, Recombinant (rmEGF)

Expressed in *E. coli*

Cat. No. CRP0896

Lot. No. (See product label)

PRODUCT INFORMATION

Description: EGF was originally discovered in crude preparations of nerve growth factor prepared from mouse submaxillary glands as an activity that induced early eyelid opening, incisor eruption, hair growth inhibition, and stunting of growth when injected into newborn mice. 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-alpha and VGF (vaccinia virus growth factor).

Amino-Acid Sequence: 53aa, non-glycosylated

M. W. : 6,000 Da

Recombinant: Expressed in *E. coli*

Purity: >97% as determined by SDS-PAGE and HPLC.

Formulation: Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

Specific Activity: Fully biologically active when compared to standard. The ED50 as calculated by the dose-dependant proliferation of murine BALB/c 3T3 cells (measured by 3H-thymidine uptake) is less than 0.1 ng/ml.

Endotoxin: Less than 1EU/mg of rmEGF as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

FOR RESEARCH USE ONLY



[PDB](#) rendering based on 1ivo. Available structures: [1ivo](#), [1ij9](#), [1nql](#), [1p9j](#)

GENE INFORMATION

Gene Name: [Egf](#)

Synonyms: A1790464; URG; urogastrone; Pro-epidermal growth factor precursor; epidermal growth factor; epidermal growth factor (beta-urogastrone)

mRNA Refseq: [NM_010113](#)

Protein Refseq: [NP_034243](#)

MIM: [131530](#)

GenelD: [13645](#)

UniProt ID: Q3UWD7; P01132

Chromosome Location: Chr 3: 129.67 - 129.75 Mb

Pathway: Cytokine-cytokine receptor interaction; Endometrial cancer; ErbB signaling pathway; Focal adhesion; Gap junction; Glioma; MAPK signaling pathway; Melanoma; Non-small cell lung cancer; Pancreatic cancer; Prostate cancer; Regulation of actin cytoskeleton

Function: calcium ion binding; growth factor activity

REFERENCES

1. Carpenter G, and Cohen S. (1990). "Epidermal growth factor". *J. Biol. Chem.* **265** (14): 7709-7712.
2. Herbst RS (2004). "Review of epidermal growth factor receptor biology". *Int. J. Radiat. Oncol. Biol. Phys.* **59** (2 Suppl): 21-6.
3. Fallon JH, Seroogy KB et al (1984). "Epidermal growth factor immunoreactive material in the central nervous system: location and development". *Science* **224** (4653): 1107-1109.

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