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Product Information

Epidermal Growth Factor, mouse recombinant, expressed in *Escherichia coli*

Catalog Number **E5160**
Storage Temperature –20 °C

Synonyms: EGF, Urogastrone

Product Description

Epidermal Growth Factor (EGF) is a small mitogenic polypeptide (~6 kDa) present in many mammalian species and distributed throughout a wide number of tissues and body fluids.[1] Four ErbB (HER) family receptor tyrosine kinases, including EGFR/ErbB1, ErbB2, ErbB3, and ErbB4 mediate responses to EGF family members.[2]

EGF is involved in cellular proliferation, differentiation, and survival.[3] Moreover, it was found to affect various biological activities like angiogenesis, inhibition of gastric acid secretion, modulation of the synthesis of a number of hormones, synthesis and turn-over of proteins of the extracellular matrix, calcium release from bone tissue (thus promoting bone resorption), chemoattraction of fibroblasts and epithelial cells, and alone or in combination with other cytokines, mediation of wound healing processes.[4-10] EGF is mitogenic for a large variety cell types, including fibroblasts, epithelial cells, endothelial cells, chondrocytes, and SV40-3T3 cells.[1]

Human and mouse EGFs are very similar, but not identical in their physical and chemical properties. Of the 53 amino acid residues comprising each of the two polypeptides, 37 are common to both molecules, and 3 disulfide bonds are formed in the same relative positions.[11]

The product is lyophilized from a 0.2 μm-filtered solution of phosphate buffered saline (PBS), pH 7.4.

Purity: ≥90% (SDS-PAGE)

EC_{50}: 0.05–1 ng/mL

The biological activity of recombinant mouse EGF is measured by its ability to stimulate the mouse fibroblast cell line BALB/3T3. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Endotoxin: ≤1 EU/μg-P (≤100 EU/vial)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial to ~1 mg/mL using 100 μL of 0.2 μm-filtered 10 mM acetic acid. When reconstituted to 1 mg/mL, the solution will have a concentration of ~4× PBS. Dilution to lower concentrations (≥10 μg/mL), will require addition of 0.1% BSA or HSA. For proliferation assays further dilute the sample with medium without albumin to prevent interference with the assay.

Storage/Stability

Store the product at –20 °C. Under this condition the product is stable for at least 2 years.

After reconstitution, the product may be stored for a week at 2–8 °C or may be stored in aliquots at –20 °C for at least one month. Repeated freezing and thawing of reconstituted product are not recommended.

References

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JF,EB,MAM 08/10-1