

# Recombinant Mouse Epidermal Growth Factor (rm EGF)

**Synonyms:** Urogastrone, URG.

**Introduction:** Epidermal growth factor has a profound effect on the differentiation of specific cells in vivo and is a potent mitogenic factor for a variety of cultured cells of both ectodermal and mesodermal origin. The EGF precursor is believed to exist as a membrane-bound molecule which is proteolytically cleaved to generate the 53-amino acid peptide hormone that stimulates cells to divide. EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture.

**Description:** Recombinant mouse Epidermal Growth Factor produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 53 amino acids including 3 intramolecular disulfide-bonds and having a molecular mass of 6 kDa. The EGF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** The protein was lyophilized with no additives.  
The aliquots of 1µg contain Trehalose 5% (w/vol) for better recovery.

**Solubility:** It is recommended to reconstitute the lyophilized rm EGF in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rm EGF, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm EGF should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 98.0% as determined by RP-HPLC and by SDS-PAGE

**Amino acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Ser-Tyr-Pro-Gly, which agrees with the sequence of native Epidermal Growth Factor human.

**Biological Activity:** The ED50, calculated by the dose-dependant proliferation of murine BALB/c 3T3 cells (measured by <sup>3</sup>H-thymidine uptake) is < 0.1 ng/ml.

**Protein content:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 3 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of EGF as a Reference Standard.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	100 µg	Cat.N°	12343406
<i>medium</i>	500 µg	Cat.N°	12343407

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