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## 1. Description

Products

Mouse EGF, research grade.

Recombinant mouse epidermal growth factor.

	Content in µg	Order no.
	100	130-094-036
	500	130-094-037
Biological activity	The ED <sub>50</sub> is $\leq 0.1$ ng/mL corresponding to an activity of $\geq 1 \times 10^7$ U/mg.	
	▲ Note: The ED <sub>50</sub> was determined by a cell proliferation assay using BALB/c 3T3 cells.	
Primary structure	Single, non-glycosylated polypeptide chain (53 amino acid residues).	
Molecular mass	6 kDa.	
Source	Produced in <i>E. coli</i> .	
Product format	Lyophilized from a filtered (0.2 $\mu m)$ buffer solution.	
Stabilizer	None.	
Purity	>97% as determined by SDS-PAGE analysis.	
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.	
Storage	Lyophilized Mouse EGF, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.	
Reconstitution	It is recommended to reconstitute lyophilized Mouse EGF, research grade with deionized sterile-filtered water to a final concentration of $0.5-1.0 \text{ mg/mL}$ in a minimal volume of $100 \mu$ L. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.	

## 1.1 Background information

Epidermal growth factor (EGF) is the prototype of the large family of EGF-like proteins with a common structural motif comprising three intramolecular disulfide bonds. EGF is produced by various cell types like mammary gland cells, gut epithelial cells, and cells in the nervous system and the kidney. Production of EGF is induced by testosterone and inhibited by estrogens. EGF stimulates the proliferation and differentiation of mesenchymal cells, acts

# Mouse EGF research grade

as a mitogen for fibroblasts, epithelial and endothelial cells, and promotes colony formation of epidermal cells.

## 1.2 Applications

Mouse EGF can be used for a variety of applications, including:

 Proliferation and differentiation of a wide variety of cell types deriving from ectoderm and mesoderm.

Optimal concentration for a specific application should be determined by a dose-response experiment.

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