

Recombinant human EGF, Active, His-tagged

Cat. No. EGF-1549H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length EGF is a 7 kDa globular protein containing 54 amino acid residues (amino acids 971 al 1023 P01133 (EGF_HUMAN) with His tag at N-terminal.
Species	Human
Source	Nicotiana Benthamiana
ProteinLength	971 a.a.
Description	Human Recombinant Epidermal Growth Factor, (rh EGF) is a is a small mitogenic polypeptide which is present in many mammalian species and is distributed throughout a wide number of tissues and body fluids. EGF stimulates the proliferation and differentiation of epithelial cells from skin, cornea, lung and tracheal tissue and the gastrointestinal tract. EGF also promotes growth and migration of keratinocytes and enhances the proliferation of fibroblasts and embryonic cells. It is a member of a growth factor family which is characterized by the presence of 6 conserved cysteine motifs that form three disulphide bonds. The biological effects of EGF are mediated by a specific transmembrane receptor (EGF-R). The binding of EGF to EGFR will induce receptor dimerization, which is required for activating the tyrosine kinase in the receptor cytoplasmic domain. Thus, EGF triggers several signal transduction pathways including JAK/STAT, Ras/ERK and PI3K/AKT pathways. EGF plays an important role in wound healing and organogenesis .In addition to its proliferative effects, it participle of a variety of other bioactivities, including effects on cytoskeletal organization, cell migration and the synthesis and turnover of extracellular matrix

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	molecules. Therefore, hEGF has wide application prospects in clinical and cosmetic fields.
Form	Recombinant human EGF is lyophilized from 10mM Phosphate Potassium buffer pH 7.5 and 230 mM NaCl.
Molecular Mass	7 kDa
AA Sequence	HHHHHHNSDSECPLSHDGYCLHDGVCMYIEALDKYACNCVVG YIGERCQYRDLKW WELR
Endotoxin	< 0.04 EU/μg protein (LAL=)
Purity	>97% by SDS-PAGE gel
Storage	This lyophilized preparation is stable at 2-8o C for short term, long storage it should be kept at -20oC. Reconstituted protein should be stored in working aliquots at -20°C. Repeated freezing and thawing is not recommended.
Reconstitution	Centrifuge vial before opening. Lyophilized protein should be reconstituted in water to a concentration of 200 ng/μl. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. Optimal concentration should be determined for specific application and cell lines.
Full Length	Full L.
GENE INFORMATION	
Gene Name	EGF epidermal growth factor [Homo sapiens]
Official Symbol	EGF

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Synonyms	EGF; epidermal growth factor; epidermal growth factor (beta urogastrone); pro-epidermal growth factor; beta-urogastrone; URG; HOMG4;
Gene ID	1950
mRNA Refseq	NM_001178130
Protein Refseq	NP_001171601
MIM	131530
UniProt ID	P01133
Chromosome Location	4q25
Pathway	Arf6 signaling events, organism-specific biosystem; Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; Ceramide signaling pathway, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Delta-Notch Signaling Pathway, organism-specific biosystem;
Function	calcium ion binding; epidermal growth factor receptor binding; growth factor activity; protein binding; transmembrane receptor protein tyrosine kinase activator activity;