

Active Recombinant Human EGF protein

Cat. No. EGF-407H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human EGF protein(NP_001954.2) (Asn971-Arg1023) was produced by Yeast expression system.
Species	Human
Source	Yeast
ProteinLength	971-1023 aa
Description	EGF is the founding member of the EGF-family of proteins. Members of this protein family have highly similar structural and functional characteristics. EGF contains 9 EGF-like domains and 9 LDL-receptor class B repeats. Human EGF is a 645-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. As a low-molecular-weight polypeptide, EGF was first purified from the mouse submandibular gland, but since then it was found in many human tissues including submandibular gland, parotid gland. It can also be found in human platelets, macrophages, urine, saliva, milk, and plasma. EGF is a growth factor that stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. It results in cellular proliferation, differentiation, and survival. Salivary EGF, which seems also regulated by dietary inorganic iodine, also plays an important physiological role in the maintenance of oro-esophageal and gastric tissue integrity. EGF acts by binding with high affinity to epidermal growth factor receptor on the cell surface and stimulating the intrinsic protein-tyrosine kinase activity of the receptor. The tyrosine kinase activity, in turn, initiates a signal transduction cascade

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that results in a variety of biochemical changes within the cell - a rise in intracellular calcium levels, increased glycolysis and protein synthesis, and increases in the expression of certain genes including the gene for EGFR - that ultimately lead to DNA synthesis and cell proliferation.

Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Bio-activity	$\geq 1.0 \times 10^6$ IU/mg
Molecular Mass	6.2 kDa
Endotoxin	1.0 EU/mg
Purity	$\geq 98\%$ SDS-PAGE
Storage	Stored at -20°C.
Reconstitution	It is recommended to reconstitute the rhEGF lyophilisate with sterile water to a concentration of 100-200 µg/ml. Further dilution can be made with other solvents. The dissolved rhEGF can be stored at 4°C for 2-7 days and should be used up as soon as possible. If it is not to be used in the short term, it should be stored at -20°C.

GENE INFORMATION

Gene Name	EGF epidermal growth factor [Homo sapiens]
Official Symbol	EGF
Synonyms	EGF; epidermal growth factor; epidermal growth factor (beta urogastrone); pro-epidermal growth factor; beta-urogastrone; URG; HOMG4;

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Gene ID	1950
mRNA Refseq	NM_001178130
Protein Refseq	NP_001171601
MIM	131530
UniProt ID	P01133

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