Active Recombinant Human EGF, His-tagged

Cat. No. EGF-18H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human EGF was purified from the endosperm tissue of barley grain (Hordeum vulgare).
Species	Human
Source	Barley Grain
Description	Epidermal Growth Factor (EGF) is a potent growth factor that plays an important role in the regulation of cell growth, proliferation and differentiation. It stimulates the proliferation of various epidermal and epithelial cells. EGF has been shown to inhibit gastric secretion, promote colony formation of epidermal cells in culture and to be involved in wound healing. EGF is the prototype of a large family of EGF-like proteins, it signals through the c-erbB receptor. Recombinant human EGF is a globular protein with 3 intramolecular disulfide-bonds essential for biological activity. Approximately 70% homology is found between human EGF and EGF isolated from other species. The relative positions of the cysteine residues is conserved.
Form	PBS pH 7.2, sterile filtered
Bio-activity	Recombinant human EGF is assayed by measuring its dose dependent effect on proliferation of 3T3 cells. The ED50 for this effect using EGF is typically< 0.1="" ng/ml,="" corresponding="" to="" a="" specific="" activity="">10 x10e6 U/mg. Optimal concentration should be determined for specific applications and cell lines.
Molecular Mass	Recombinant human EGF contains 54 amino acids and a 16 a.a. histidine-based tag

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	for a total length of 70 a.a. and has a predicted molecular mass of 8.5 kDa including his-tag. The recombinant protein migrates with an apparent molecular mass of 11 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.005ng per μg of product (0.05EU/μg).
Purity	Greater than 95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 μg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

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;
Gene ID	1950
mRNA Refseq	NM_001178130
Protein Refseq	NP_001171601

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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;

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