# Active Recombinant human EGF

**Cat. No.** EGF-9H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant human EGF, expressed in the endosperm tissue of barley grain (Hordeum vulgare), that exhibits up to 50 times less protease activity than E.coli or mammalian cells. Barley seed is void of any human or animal viral contaminants that could jeopardize your cell culture. |
| **Species** | Human |
| **Source** | Hordeum Vulgare |
| **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** | Lyophilized . PBS, pH 7.2, sterile filtered. |
| **Bio-activity** | Each batch of ISOkine™ growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. Bioactivity of ISOkine™ recombinant human EGF is assayed by measuring its dose dependent effect on proliferation of |

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| | 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 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 (0.05EU/μg). |
| **Purity** | Greater than 95% by SDS-PAGE gel analysis |
| **Usage** | FOR RESEARCH USE ONLY |
| **Quality Control Test** | 12 months from date of receipt, -20 to 70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months,- 20 to 70 centigrade under sterile conditions after reconstitution. |
| **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). |
| **Warning** | Avoid repeated freeze-thaw cycles. |

## GENE INFORMATION

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| **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; |

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