

## Recombinant Human EGF, Fc-tagged

**Cat. No.** EGF-232H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Product Overview</b> | The extracellular domain of human EGF (aa 971-1023) is fused to the N-terminus of the Fc region of human IgG1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>           | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>    | 971-1023 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | <p>Epidermal growth factor (EGF) is a growth factor and the founding member of the EGF family. All EGF family members are synthesized as type I transmembrane precursor proteins that may contain several EGF domains in the extracellular region. The mature proteins are released from the cell surface by regulated proteolysis. EGF is present in various body fluids, including blood, milk, urine, saliva, seminal fluid, pancreatic juice, cerebrospinal fluid, and amniotic fluid. Four ErbB (HER) family receptor tyrosine kinases including EGFR/ErbB1, ErbB2, ErbB3 and ErbB4, mediate responses to EGF family members. These receptors undergo a complex pattern of ligand induced homo or heterodimerization to transduce EGF family signals. EGF binds to the receptor EGFR stimulating the intrinsic protein-tyrosine kinase activity of the receptor. The tyrosine kinase activity initiates a signal transduction cascade that results in a variety of biochemical changes within the cell, including a rise in intracellular calcium levels, increased glycolysis and protein synthesis, and increases in the expression of certain genes including the gene for EGFR, which lead to DNA synthesis, cell growth, proliferation and differentiation. Other biological activities</p> |

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ascribed to EGF include epithelial development, angiogenesis, inhibition of gastric acid secretion, fibroblast proliferation, and colony formation of epidermal cells in culture. Defects in EGF are the cause of hypomagnesemia type 4 (HOMG4), also known as renal hypomagnesemia normocalciuric. HOMG4 is a disorder characterized by massive renal hypomagnesemia and normal levels of serum calcium and calcium excretion. Clinical features include seizures, mild-to moderate psychomotor retardation, and brisk tendon reflexes.

|                  |                                                                                                                                     |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>      | Lyophilized from 0.2µm-filtered solution in PBS.                                                                                    |
| <b>Purity</b>    | ≥98% (SDS-PAGE)                                                                                                                     |
| <b>Stability</b> | Stable for at least 1 year after receipt when stored at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C. |
| <b>Storage</b>   | Short Term Storage: +4°C; Long Term Storage: -20°C. Avoid freeze/thaw cycles.                                                       |

## GENE INFORMATION

|                        |                                                                                                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | EGF epidermal growth factor [ Homo sapiens ]                                                                                         |
| <b>Official Symbol</b> | EGF                                                                                                                                  |
| <b>Synonyms</b>        | EGF; epidermal growth factor; epidermal growth factor (beta urogastrone); pro-epidermal growth factor; beta-urogastrone; URG; HOMG4; |
| <b>Gene ID</b>         | 1950                                                                                                                                 |
| <b>mRNA Refseq</b>     | NM_001178130                                                                                                                         |
| <b>Protein Refseq</b>  | NP_001171601                                                                                                                         |

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|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIM</b>                 | 131530                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID</b>          | P01133                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 4q25                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Pathway</b>             | 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; |
| <b>Function</b>            | calcium ion binding; epidermal growth factor receptor binding; growth factor activity; protein binding; transmembrane receptor protein tyrosine kinase activator activity;                                                                                                                                                                                                                   |

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