

37-1115: Human EGF / Epidermal Growth Factor Recombinant Protein(Discontinued)

Reactivity : Human

Alternative Name : Epidermal Growth Factor Protein, HOMG4 Protein, URG Protein,

Description

Source : E. coli

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 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.

Product Info

Amount : Human EGF / Epidermal Growth Factor Recombinant Protein(Discontinued) / 1 mg

Purification : > 92 % as determined by SDS-PAGE

Content : Formulation Lyophilized from sterile PBS, pH 7.4
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Storage condition : Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Amino Acid : Asn971-Arg1023

Application Note

Measured in a cell proliferation assay using Balb/C 3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 0.15-0.75 ng/mL.

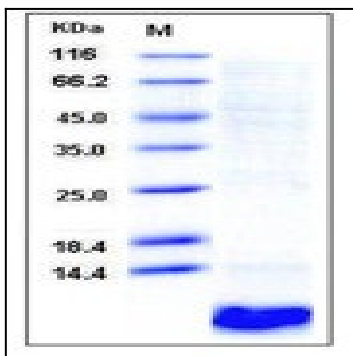


Fig 1: Human EGF / Epidermal Growth Factor Recombinant Protein

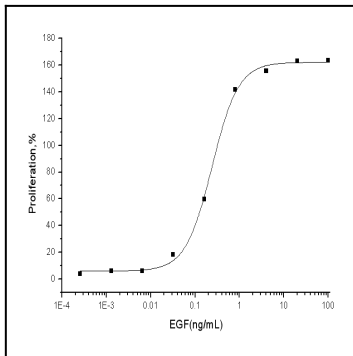


Fig 2: Human EGF / Epidermal Growth Factor Recombinant Protein measured in a cell proliferation assay using Balb/C 3T3 mouse embryonic fibroblasts.