

RP01502

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Recombinant Human EGF Protein

Catalog No.: RP01502

Recombinant

Sequence Information

Species Gene ID Swiss Prot

<I>Pichia</I> 1950 P01133

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Tags

No tag

Synonyms

EGF;HOMG4;URG

Product Information

Source

Purification

> 97% by SDS-PAGE

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

Background

Epidermal growth factor (EGF) is the founding member of the EGF family that also includes TGF-α, amphiregulin (AR), betacellulin (BTC), epiregulin (EPR), heparin binding EGF like growth factor (HB_x001e_EGF), epigen, and the neuregulins (NRG)-1 through -6. Members of this protein family have highly similar structural and functional characteristics. The 1207 amino acid (aa) human EGF precursor contains 9 EGF domains and 9 LDLR class B repeats. Human EGF is a 645-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. 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. EGF is present in various body fluids, including blood, milk, urine, saliva, seminal fluid, pancreatic juice, cerebrospinal fluid, and amniotic fluid (4). Four ErbB (HER) family receptor tyrosine kinases including EGFR/ErbB1, ErbB2, ErbB3 and ErbB4, mediate responses to EGF family members (5). EGF binds ErbB1 and depending on the context, induces the formation of homodimers or heterodimers containing ErbB2. Dimerization results in autophosphorylation of the receptor at specific tyrosine residues to create docking sites for a variety of signaling molecules (5,78). EGF seems regulated by dietary inorganic iodine and plays an important physiological role in the maintenance of oro-esophageal and gastric tissue integrity.

Basic Information

Description

1. Recombinant Human EGF Protein is produced by <I>Pichia</I> expression system. The target protein is expressed with sequence (Asn971-Arg1023) of human EGF (Accession #NP_001954.2) fused with no tag.

Bio-Activity

Active Recombinant Human EGF enhances AKT(Ser473) autophosphorylation in A431 cells. 10 ng/mL of Recombinant Human EGF can effectively enhance AKT(Ser473) autophosphorylation.

Storage

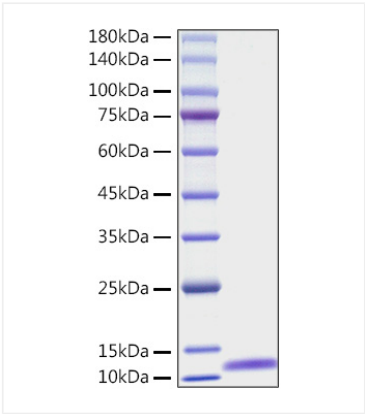
Store the lyophilized protein at -20°C to -80°C for long term. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Contact

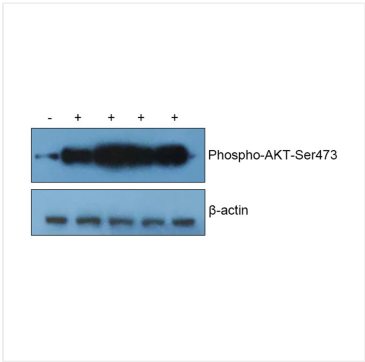


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Validation Data



Recombinant Human EGF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 12kDa.



Recombinant Human EGF enhances AKT(Ser473) autophosphorylation in A431 cells. 10 ng/mL of Recombinant Human EGF can effectively enhance AKT(Ser473) autophosphorylation.