

RPES8231

Product Information

Product SKU: RPES8231	Expression Host: E.coli	Size: 20µg
Tag: N-Gst	Reactivity: Rat	Accession: P07522

Additional Information

Calculated MW: 32 kDa	Observed MW: 38 kDa
Sequence: Asn974-Arg1026	

Protein Information

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-EGF), epigen, and the neuregulins (NRG)-1 through-6. Members of the EGF family share a structural motif, the EGF-like domain, which is characterized by three intramolecular disulfide bonds that are formed by six similarly spaced conserved cysteine residues. 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. The 1207 amino acid (aa) human EGF precursor contains nine EGF domains and nine LDLR class B repeats. The mature protein consists of 53 aa and is generated by proteolytic excision of the EGF domain proximal to the transmembrane region. Mature human EGF shares 70% aa sequence identity with an mature mouse and rat EGF. 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 hetero-dimerization to transduce EGF family signals. EGF binds ErbB1 and depending on the context, induces the formation of homodimers or heterodimers containing ErbB2.

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Dimerization results in autophosphorylation of the receptor at specific tyrosine residues to create docking sites for a variety of signaling molecules. Biological activities ascribed to EGF include epithelial development, angiogenesis, inhibition of gastric acid secretion, fibroblast proliferation, and colony formation of epidermal cells in culture.

Synonyms:	Beta urogastrone, beta-urogastrone, EGF, EGF, Epidermal growth factor, HOMG4, OTTHUMP00000219721, OTTHUMP00000219722, Pro epidermal growth factor, URG, Urogastrone
Endotoxin:	< 10 EU/mg of the protein as determined by the LAL method
Formulation:	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Purity:	> 90% as determined by reducing SDS-PAGE.
Bio-Activity:	Not validated for activity
Storage:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.