HB221018

Recombinant Mouse EGF Protein

Product Information

Product Name	Cat#	Size
Recombinant Mouse EGF Protein	92703ES60	100 μg
	92703ES76	500 μg

Product Description

Epidermal growth factor (EGF) is a small, potent growth factor capable of inducing cell proliferation, differentiation, and survival. EGF is the founding member of the EGF family that also includes TGF-alpha, 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 are characterized by a shared structural motif, the EGF-like domain, which contains three intramolecular disulfide bonds that are formed by six similarly spaced, conserved cysteine residues. These disulfide bonds are essential for proper protein conformation and receptor binding. 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 full length EGF protein is 1207 amino acids (aa) (EGF precursor) containing nine EGF domains and nine LDLR class B repeats. However, the mature protein is much smaller, only 53 aa, and is generated by proteolytic cleavage of the EGF domain proximal to the transmembrane region. EGF is well conserved across mammals with mature human EGF 70% identical to mature mouse and rat EGF. Physiologically, EGF is found in various body fluids, including blood, milk, urine, saliva, seminal fluid, pancreatic juice, cerebrospinal fluid, and amniotic fluid. EGF is a high affinity ligand of the EGF receptor (ErbB). Four ErbB (HER) family receptor tyrosine kinases including EGFR/ErbB1, ErbB2, ErbB3 and ErbB4, mediate responses to EGF family members. EGF binding induces dimerization of the EGF receptor resulting in activation of the protein tyrosine kinase signaling pathway. 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.

Product Properties

Synonyms	Urogastrone, URG
Accession	P01132
GeneID	13645
Source	E.coli-derived Mouse EGF, Asn977-Arg1029.
Molecular Weight	Approximately 6.0 kDa.
AA Sequence	NSYPGCPSSY DGYCLNGGVC MHIESLDSYT CNCVIGYSGD RCQTRDLRWW ELR
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	The ED_{50} as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 0.1 ng/mL, corresponding to a specific activity of > 1.0×10^7 IU/mg. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1μg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20℃. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20 ℃ for 1 year.

1 month, 2 to 8 °C under sterile conditions after reconstitution.

3 months, -20 °C under sterile conditions after reconstitution.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!