Mouse EGF / Epidermal Growth Factor Protein

Catalog Number: **50482-MNAY**

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Biological Solution Specialist

General Information

Gene Name Synonym:

EGF

Protein Construction:

A DNA sequence encoding the mouse EGF (P01132) (Asn977-Arg1029) was expressed and purified.

Source: Mouse

Expression Host: Yeast

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured in a cell proliferation assay using Balb/3T3 mouse embryonic fibroblast cells.
The ED50 for this effect is typically 20-100 pg/mL.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Asn 977

Molecular Mass:

The recombinant mouse EGF consists of 53 amino acids and predicts a molecular mass of 6 KDa. It migrates as an approximately 6 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

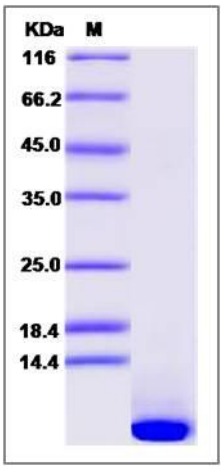
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Epidermal growth factor (EGF), also known as urogastrone (URG) since it was isolated from urine based on its inhibitory effect on gastric secretion, is the founding member of the EGF-family of growth factors. All the members of this protein family have highly similar structural and functional characteristics. EGF is initially synthesized as a 130 kDa single-pass transmembrane protein containing 9 EGF-like units and 9 LDL-receptor class B repeats. The mature soluble EGF is a 6 kDa peptide corresponding to the EGF unit located proximal to the transmembrane domain. EGF is expressed in kidney, salivary gland, cerebrum and prostate, and plays an important role in the regulation of cell growth, proliferation, and differentiation by binding to its receptor EGFR. As a potent mitogen, EGF stimulates the growth of various epidermal and epithelial tissues both in vivo and in vitro. Furthermore, EGF is also identified as a magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6. Defects in EGF are the cause of hypomagnesemia type 4 (HOMG4), a disorder characterized by massive renal hypomagnesemia and normal levels of serum calcium and calcium excretion.

References

1. Ciardiello F. et al., 1991, Proc Natl Acad Sci. 88: 7792-6.
2. Gout I. et al., 1992, Biochem J. 288: 395-405.
3. Harris RC. et al., 2003, Exp Cell Res. 284: 2-13.
4. Dreux AC. et al., 2006, Atherosclerosis. 186: 38-53.
5. Groenestege WMT. et al., 2007, J Clin Invest. 117: 2260-7.