10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EGF

Catalog # PVGS1005

Specification

EGF - Product Information

Primary Accession P01133

Species
Human

Sequence
Asn971-Arg1023, expressed with an N-terminal Met

Purity
> 95% as analyzed by SDS-PAGE
> 95% as analyzed by SEC-HPLC

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
The ED₅₀, calculated by the dose-dependant proliferation of murine BALB/c 3T3 cells is less than 0.2 ng/ml, corresponding to a specific activity of 5.0 × 10⁶ IU/ mg.

Expression System
E. coli

Formulation **Lyophilized after extensive dialysis against 10 mM phosphate buffer, pH 7.0, 200 mM NaCl buffer.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

EGF - Additional Information

Gene ID 1950

Other Names
Pro-epidermal growth factor, EGF, Epidermal growth factor, Urogastrone, EGF

Target Background
Epidermal Growth Factor (EGF) is a potent growth factor that stimulates the proliferation of various epidermal and epithelial cells. Additionally, EGF has been shown to inhibit gastric secretion, and to be involved in wound healing. EGF signals through the EGF receptor (EGFR) also known as erbB1,

is a class I tyrosine kinase receptor. This receptor also binds with TGF-α and VGF (vaccinia virus growth factor). EGF-receptor binding results in cellular proliferation, differentiation, and survival. EGF is a low-molecular-weight polypeptide first purified from the mouse submandibular gland, but since then found in many human tissues including submandibular gland, parotid gland. 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. The biological effects of salivary EGF include healing of oral and gastroesophageal ulcers, inhibition of gastric acid secretion, stimulation of DNA synthesis as well as mucosal protection from intraluminal injurious factors such as gastric acid, bile acids, pepsin, and trypsin and to physical, chemical and bacterial agents.

EGF - Protein Information

Name EGF

Function
EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. Magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6. Can induce neurite outgrowth in motoneurons of the pond snail Lymnaea stagnalis in vitro (PubMed:10964941).

Cellular Location
Membrane; Single-pass type I membrane protein.

Tissue Location
Expressed in kidney, salivary gland, cerebrum and prostate.

EGF - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

EGF - Images