

HB-EGF
Catalog # PVGS1135**Specification**

HB-EGF - Product Information

Primary Accession [Q99075](#)
Species
Human

Sequence
Asp63-Leu148

Purity
> 97% as analyzed by SDS-PAGE
> 97% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

Biological Activity
Fully biologically active when compared to standard. The ED₅₀ as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 1.0 ng/ml, corresponding to a specific activity of > 1.0 × 10⁶ IU/mg.

Expression System
E. coli

Theoretical Molecular Weight
9.7 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in 20 mM PB, pH 7.4, 130 mM NaCl.**

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 sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

HB-EGF - Additional Information

Gene ID 1839

Other Names
Proheparin-binding EGF-like growth factor, Heparin-binding EGF-like growth factor, HB-EGF, HBEGF, Diphtheria toxin receptor, DT-R, HBEGF, DTR, DTS, HEGFL

Target Background

Proheparin-binding EGF-like growth factor (HB-EGF), also known as DTR, DTS and HEGFL, is a member of the EGF family of mitogens. It is expressed in macrophages, monocytes, endothelial cells and muscle cells. HB-EGF signals through the EGF receptor to stimulate the proliferation of smooth muscle cells, epithelial cells and keratinocytes. Compared to EGF, HB-EGF binds to the EGF receptor with a higher affinity and has been shown to be more mitogenic, likely due to its ability to bind to heparin and heparin sulfate proteoglycans. HB-EGF has also been reported to act as a diphtheria toxin receptor, mediating endocytosis of the bound toxin. Heparin-binding EGF-like growth factor has been shown to interact with NRD1, Zinc finger and BTB domain-containing protein 16 and BAG1.

HB-EGF - Protein Information

Name HBEGF

Synonyms DTR, DTS, HEGFL

Function

Growth factor that mediates its effects via EGFR, ERBB2 and ERBB4. Required for normal cardiac valve formation and normal heart function. Promotes smooth muscle cell proliferation. May be involved in macrophage-mediated cellular proliferation. It is mitogenic for fibroblasts, but not endothelial cells. It is able to bind EGF receptor/EGFR with higher affinity than EGF itself and is a far more potent mitogen for smooth muscle cells than EGF. Also acts as a diphtheria toxin receptor.

Cellular Location

[Heparin-binding EGF-like growth factor]: Secreted, extracellular space. Note=Mature HB-EGF is released into the extracellular space and probably binds to a receptor

HB-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 Cytometry](#)
- [Cell Culture](#)

HB-EGF - Images