



Proheparin-Binding EGF-like Growth Factor, human recombinant (rHuHB-EGF)

Catalog No: 97560
Lot No: XXXXX
Source: *E. coli*
Synonyms: Proheparin-binding EGF-like growth factor, HBEGF, DTR, DTS, HEGFL, HB-EGF, Heparin-binding EGF-like growth factor, Diphtheria toxin receptor, DT-R, DTSF

Background

HB-EGF is an EGF related growth factor which signals via the EGF receptor, and stimulates the proliferation of SMC (smooth muscle cells), fibroblasts, epithelial cells and keratinocytes. HB-EGF is expressed in various cell types and tissues, including vascular endothelial cells and SMC, macrophages, skeletal muscle, keratinocytes and particular tumor cells. HB-EGF's ability to explicitly bind heparin and heparin sulfate proteoglycans is dissimilar from other EGF-like molecules, and might be related to the enhanced mitogenic activity, relative to EGF, that HB-EGF exerts on smooth muscle cells.

Description

HB-EGF human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 86 amino acids and having a molecular mass of 9.7 kDa. HB-EGF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (1 mg/ml) solution containing 1xPBS pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized HB-EGF in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Human HB-EGF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution HB-EGF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

DLQEADLDLL RVTLSKPKQA LATPNKEEHG KRKKKGKGLG KKRDPCLRKY KDFCIHGECK YVKELRAPSC ICHPGYHGER
CHGLSL

Activity

The ED₅₀ was determined by a cell proliferation assay using balb/c 3T3 cells is <1.0 ng/ml, corresponding to a specific activity of >1.0 × 10⁶ units/mg.

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