



## Proheparin-Binding EGF-like Growth Factor, rat recombinant (rrHB-EGF)

**Catalog No:** 97591  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Proheparin-binding EGF-like growth factor, Heparin-binding EGF-like growth factor, HB-EGF, HBEGF, Dtr, Hegfl, GFHB

### 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 rat 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 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized 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 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

DLEGTDLDLF KVAFSSKPQA LATPGKEKNG KKKRKGKGLG KKRDPCLKKY KDYCIHGECR YLKELRIPSC HCLPGYHGQR  
CHGLTL

### Activity

The ED<sub>50</sub> as determined by a cell proliferation assay using balb/c 3T3 cells is <1.0 ng/ml, corresponding to a specific activity of >1.0 × 10<sup>6</sup> units/mg.

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### Usage

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