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## Product Data Sheet

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Product Name: HB-EGF Human

Cat. No.: GP20273

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
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.		
Amino Acid Sequence	MDLQEADLDL LRVTLSKPQ ALATPNKEEH GKRKKKGKGL GKKRDPCLRK YKDFCIHGECKYVKELRAPS CICHPGYHGE RCHGLSL.		
Solubility	It is recommended to reconstitute the lyophilized Human HB-EGF in sterile 18M-cm H <sub>2</sub> O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution containing 10mM sodium phosphate pH-7.5.		

**Introduction**

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.

**Biological Activity**

The ED<sub>50</sub> was determined by the ability to induce proliferation of 3T3 cells and is 0.13-0.2ng/ml. This corresponds to an expected specific activity of 7.7 x 10<sup>6</sup>units/mg.

**Stability**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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

### Background

HB-EGF Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 87 amino acids and having a molecular mass of 9.9kDa. The HB-EGF is purified by proprietary chromatographic techniques.

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