

DATASHEET

Version 20181206

HB-EGF, Human**Cat. No.:** Z02938-50**Size:** 50.0 ug**Synonyms:** Heparin Binding EGF-like growth factor, HBEGF, Diphtheria toxin receptor, DTR**Description:**

Heparin-binding EGF-like growth factor (HB-EGF) is a member of the EGF family of proteins that in humans is encoded by the HBEGF gene. HB-EGF-like growth factor is synthesized as a membrane-anchored mitogenic and chemotactic glycoprotein. An epidermal growth factor produced by monocytes and macrophages, due to an affinity for heparin is termed HB-EGF. It has been shown to play a role in wound healing, cardiac hypertrophy and heart development and function. First identified in the conditioned media of human macrophage-like cells, HB-EGF is an 87 amino acid glycoprotein which displays highly regulated gene expression. Ectodomain shedding results in the soluble mature form of HB-EGF which influences the mitogenicity and chemotactic factors for smooth muscle cells and fibroblasts. The transmembrane form of HB-EGF is the unique receptor for diphtheria toxin and functions in juxtacrine signaling in cells. Both forms of HB-EGF participate in normal physiological processes and in pathological processes including tumor progression and metastasis, organ hyperplasia, and atherosclerotic disease. HB-EGF can bind two locations on cell surfaces, heparan sulfate proteoglycans and EGF-receptor affecting cell to cell interactions.

Amino Acid Sequence:

00001 DLQEADLDLL RVTLSKPKQA LATPNKEEHG KRKKKGKGLG
00041 KKRDPCLRKY KDFCIHGECK YVKELRAPSC ICHPGYHGER
00081 CHGLSL

Source: *E. coli***Species:** Human**Biological Activity:** Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using murine Balb/c 3T3 cells is less than 1 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^6$ IU/mg.**Molecular Weight:** Approximately 9.7 kDa, a single non-glycosylated polypeptide chain containing 86 amino acids.**Formulation:** Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 130 mM NaCl.**Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.**Reconstitution:** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.**Purity:** > 97 % by SDS-PAGE and HPLC analyses.**Endotoxin Level:** Less than 1 EU/ μ g of rHuHB-EGF as determined by LAL method.**Storage:** This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.