

PRODUCT INFORMATION



Soluble HB-EGF (human, recombinant)

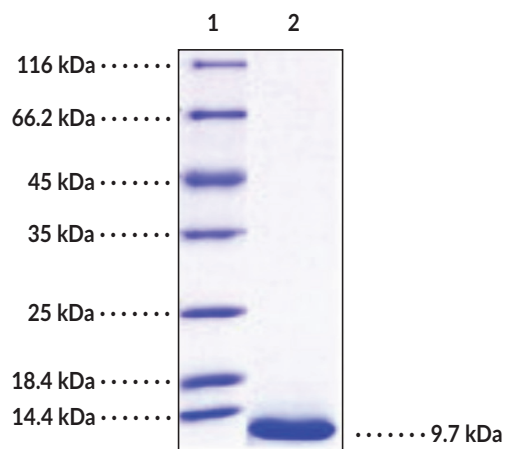
Item No. 42767

Overview and Properties

Synonyms: Diphtheria Toxin Receptor, DT-R, Heparin-binding EGF-like Growth Factor, Proheparin-binding EGF-like Growth Factor
Source: Recombinant human soluble HB-EGF expressed in insect cells
Amino Acids: 63-148
Uniprot No.: Q99075
Molecular Weight: 9.7 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥95% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4.
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Soluble HB-EGF

SDS-PAGE Analysis of Soluble HB-EGF.
Soluble HB-EGF has a calculated molecular weight of 9.7 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Heparin-binding EGF-like growth factor (HB-EGF) is a member of the EGF family.^{1,2} It is expressed as a membrane-bound receptor that is composed of an N-terminal signal peptide, a propeptide sequence, a heparin-binding motif, an EGF fold, a linker region, a transmembrane region, and a C-terminal region.² It can be proteolytically cleaved to release soluble HB-EGF composed of the heparin-binding motif and an EGF fold, which can bind and activate EGFR and HER4 receptors and activate HER2 receptors by inducing receptor heterodimerization.^{1,2} HB-EGF is involved in stimulating cell growth, wound healing, and heart development and maintenance and is a receptor for diphtheria toxin.¹⁻⁴ Protein levels of HB-EGF are decreased in the placenta of patients with preeclampsia.⁵ Cayman's Soluble HB-EGF (human, recombinant) protein consists of 86 amino acids and has a calculated molecular weight of 9.7 kDa.

References

1. Iwamoto, R. and Mekada, E. ErbB and HB-EGF signaling in heart development and function. *Cell Struct. Funct.* **31(1)**, 1-14 (2006).
2. Louie, G.V., Yang, W., Bowman, M.E., *et al.* Crystal structure of the complex of diphtheria toxin with an extracellular fragment of its receptor. *Mol. Cell* **1(1)**, 67-78 (1997).
3. Hashimoto, K., Higashiyama, S., Asada, H., *et al.* Heparin-binding epidermal growth factor-like growth factor is an autocrine growth factor for human keratinocytes. *J. Biol. Chem.* **269(31)**, 20060-20066 (1994).
4. Naglich, J.G., Metherall, J.E., Russell, D.W., *et al.* Expression cloning of a diphtheria toxin receptor: Identity with a heparin-binding EGF-like growth factor precursor. *Cell* **69(6)**, 1051-1061 (1992).
5. Leach, R.E., Romero, R., Kim, Y.M., *et al.* Pre-eclampsia and expression of heparin-binding EGF-like growth factor. *Lancet* **360(9341)**, 1215-1219 (2002).

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