

# HB-EGF (C-18): sc-1413

## BACKGROUND

Heparin binding epidermal-like growth factor (HB-EGF), a member of the EGF family of mitogens, binds to the EGF receptor (EGFR) and to heparin sulfate proteoglycans on the cell surface. HB-EGF was originally isolated from medium conditioned by the growth of the human histocytic lymphoma cell U-937 on the basis of its heparin-binding ability and its mitogenic activity for Balb-3T3 fibroblasts. The HB-EGF gene encodes a 208 amino acid precursor containing a signal peptide and transmembrane domain. Mature HB-EGF is a soluble protein 86 amino acids in length and results from the enzymatic cleavage of the membrane bound precursor. The membrane-bound form of HB-EGF has been identified as the diphtheria toxin receptor. Preincubation of Vero cells with phorbol 12-myristate 13-acetate (PMA) induces the proteolytic cleavage of HB-EGF outside the membrane anchor.

## CHROMOSOMAL LOCATION

Genetic locus: HBEGF (human) mapping to 5q31.3.

## SOURCE

HB-EGF (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HB-EGF of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1413 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HB-EGF (C-18) is recommended for detection of precursor and mature HB-EGF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HB-EGF (C-18) is also recommended for detection of precursor and mature HB-EGF in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HB-EGF siRNA (h): sc-39420, HB-EGF shRNA Plasmid (h): sc-39420-SH and HB-EGF shRNA (h) Lentiviral Particles: sc-39420-V.

Molecular Weight of HB-EGF: 22 kDa.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

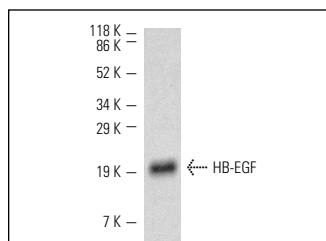
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



HB-EGF (C-18): sc-1413. Western blot analysis of human recombinant HB-EGF.

## SELECT PRODUCT CITATIONS

1. Prenzel, N., et al. 1999. EGF receptor transactivation by G protein-coupled receptors requires metalloproteinase cleavage of proHB-EGF. *Nature* 402: 884-888.
2. Kraus, S., et al. 2004. Gonadotropin-releasing hormone induces apoptosis of prostate cancer cells: role of c-Jun NH<sub>2</sub>-terminal kinase, protein kinase B, and extracellular signal-regulated kinase pathways. *Cancer Res.* 64: 5736-5744.
3. Ramnarain, D.B., et al. 2006. Differential gene expression analysis reveals generation of an autocrine loop by a mutant epidermal growth factor receptor in glioma cells. *Cancer Res.* 66: 867-874.
4. Clarke, P.A., et al. 2006. Gastrin enhances the angiogenic potential of endothelial cells via modulation of heparin-binding epidermal-like growth factor. *Cancer Res.* 66: 3504-3512.
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6. Friedman, J., et al. 2007. Mechanism of short-term ERK activation by electromagnetic fields at mobile phone frequencies. *Biochem. J.* 405: 559-568.
7. Bertram, C. and Hass, R. 2009. Cellular senescence of human mammary epithelial cells (HMEC) is associated with an altered MMP-7/HB-EGF signaling and increased formation of elastin-like structures. *Mech. Ageing Dev.* 130: 657-669.
8. Hamaoka, M., et al. 2010. Anti-human HB-EGF monoclonal antibodies inhibiting ectodomain shedding of HB-EGF and diphtheria toxin binding. *J. Biochem.* 148: 55-69.

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Try **HB-EGF (G-11): sc-74441** or **HB-EGF (E-10): sc-74526**, our highly recommended monoclonal alternatives to HB-EGF (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **HB-EGF (G-11): sc-74441**.