

HB-EGF (H-88): sc-28908

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 histiocytic 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.

REFERENCES

1. Higashiyama, S., et al. 1991. A heparin-binding growth factor secreted by macrophage-like cells that is related to EGF. *Science* 251: 936-939.
2. Lanzrein, M., et al. 1995. Diphtheria toxin endocytosis and membrane translocation are dependent on the intact membrane-anchored receptor (HB-EGF precursor): studies on the cell-associated receptor cleaved by a metalloprotease in phorbol-ester-treated cells. *Biochem. J.* 310: 285-289.
4. Lee, Y.J., et al. 1995. Increased expression of heparin binding epidermal growth-factor-like growth factor mRNA in the kidney of streptozotocin-induced diabetic rats. *Biochem. Biophys. Res. Commun.* 207: 216-222.
3. Modjtahedi, H. and Dean, C. 1995. The binding of HB-EGF to tumour cells is blocked by mAbs which act as EGF and TGF α antagonists. *Biochem. Biophys. Res. Commun.* 207: 389-397.

CHROMOSOMAL LOCATION

Genetic locus: HBEGF (human) mapping to 5q31.3; Hbegf (mouse) mapping to 18 B2.

SOURCE

HB-EGF (H-88) is a rabbit polyclonal antibody raised against amino acids 121-208 mapping at the C-terminus of mature HB-EGF of human origin.

PRODUCT

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

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

HB-EGF (H-88) is recommended for detection of precursor and mature HB-EGF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 (H-88) is also recommended for detection of precursor and mature HB-EGF in additional species, including canine, bovine and porcine.

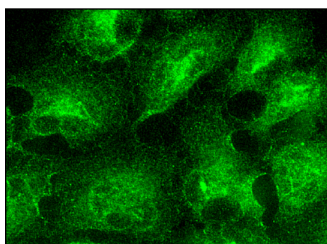
Suitable for use as control antibody for HB-EGF siRNA (h): sc-39420, HB-EGF siRNA (m): sc-39421, HB-EGF shRNA Plasmid (h): sc-39420-SH, HB-EGF shRNA Plasmid (m): sc-39421-SH, HB-EGF shRNA (h) Lentiviral Particles: sc-39420-V and HB-EGF shRNA (m) Lentiviral Particles: sc-39421-V.

Molecular Weight of HB-EGF: 22 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HB-EGF (H-88): sc-28908. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Abou-Rjaily, G.A., et al. 2004. CEACAM1 modulates epidermal growth factor receptor—mediated cell proliferation. *J. Clin. Invest.* 114: 944-952.
2. Lu, J., et al. 2007. Activation of epidermal akt by diverse mouse skin tumor promoters. *Mol. Cancer Res.* 5: 1342-1352.
3. Yang, L., et al. 2013. Prolidase directly binds and activates epidermal growth factor receptor and stimulates downstream signaling. *J. Biol. Chem.* 288: 2365-2375.