

Epiregulin (C-15): sc-25231

BACKGROUND

Epiregulin (EPR, EREG), is an epidermal growth factor (EGF)-related growth regulating peptide which exhibits bifunctional properties in the regulation of cell growth. Epiregulin activates two members of the ErbB family of receptor tyrosine kinases, epidermal growth factor receptor (EGFR) and ErbB4. Epiregulin is a potent vascular smooth muscle cell-derived mitogen induced by angiotensin II, endothelin-1, and thrombin. Epiregulin acts as an autocrine growth factor in human epidermal keratinocytes and is part of auto- and cross-induction mechanisms involving HB-EGF, amphiregulin, and TGF- α . Epiregulin is Up-regulated in pancreatic cancer and stimulates pancreatic cancer cell growth.

REFERENCES

1. Toyoda, H., et al. 1995. Epiregulin. A novel epidermal growth factor with mitogenic activity for rat primary hepatocytes. *J. Biol. Chem.* 270: 7495-7500.
2. Riese, D.J., et al. 1998. Activation of ErbB4 by the bifunctional epidermal growth factor family hormone epiregulin is regulated by ErbB2. *J. Biol. Chem.* 273: 11288-11294.
3. Taylor, D.S., et al. 1999. Epiregulin is a potent vascular smooth muscle cell-derived mitogen induced by angiotensin II, endothelin-1, and thrombin. *Proc. Natl. Acad. Sci. USA* 96: 1633-1638.
4. Shirakata, Y., et al. 2000. Epiregulin, a novel member of the epidermal growth factor family, is an autocrine growth factor in normal human keratinocytes. *J. Biol. Chem.* 275: 5748-5753.
5. Zhu, Z., et al. 2000. Epiregulin is Up-regulated in pancreatic cancer and stimulates pancreatic cancer cell growth. *Biochem. Biophys. Res. Commun.* 273: 1019-1024.

CHROMOSOMAL LOCATION

Genetic locus: EREG (human) mapping to 4q13.3; Ereg (mouse) mapping to 5 E1.

SOURCE

Epiregulin (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Epiregulin 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.

Blocking peptide available for competition studies, sc-25231 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Epiregulin (C-15) is recommended for detection of Epiregulin precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Epiregulin (C-15) is also recommended for detection of Epiregulin precursor in additional species, including equine and bovine.

Suitable for use as control antibody for Epiregulin siRNA (h): sc-39418, Epiregulin siRNA (m): sc-39419, Epiregulin shRNA Plasmid (h): sc-39418-SH, Epiregulin shRNA Plasmid (m): sc-39419-SH, Epiregulin shRNA (h) Lentiviral Particles: sc-39418-V and Epiregulin shRNA (m) Lentiviral Particles: sc-39419-V.

Molecular Weight of mature Epiregulin: 27 kDa.

Molecular Weight of secreted Epiregulin: 6 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Charalambous, C.T., et al. 2007. Latent membrane protein 1-induced EGFR signalling is negatively regulated by TGF α prior to neoplasia. *Carcinogenesis* 28: 1839-1848.
2. Ding, X., et al. 2009. Epiregulin as a key molecule to suppress hepatitis B virus propagation *in vitro*. *Arch. Virol.* 154: 9-17.

PROTOCOLS

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



Try **Epiregulin (C-9): sc-376284**, our highly recommended monoclonal alternative to Epiregulin (C-15).