

Amphiregulin (M-18): sc-5797

BACKGROUND

Epidermal growth factor (EGF) family member Amphiregulin was initially characterized as a schwannoma-derived growth factor (SDGF) that was expressed in response to androgen in the SC2G murine cell line. Amphiregulin has subsequently been characterized as an important growth factor for normal human keratinocyte proliferation. Amphiregulin is produced and secreted by keratinocytes and acts as an autocrine growth factor. Amphiregulin binds ErbB1 which is essential for epithelial development in the skin, lung and gastrointestinal tract. Withdrawal of Amphiregulin has been shown to result in down regulation of telomerase activity in human keratinocytes and this suggests that Amphiregulin plays a role in cell senescence.

REFERENCES

1. Cook, P.W., et al. 1991. A heparin sulfate-regulated human keratinocyte autocrine factor is similar or identical to Amphiregulin. *Mol. Cell. Biol.* 11: 2547-2557.
2. Sonoda, H., et al. 1992. Androgen-responsive expression and mitogenic activity of schwannoma-derived growth factor on an androgen-dependent Shionogi mouse mammary carcinoma cell line. *Biochem. Biophys. Res. Commun.* 185: 103-109.
3. Elenius, K., et al. 1997. Activation of HER4 by heparin-binding EGF-like growth factor stimulates chemotaxis but not proliferation. *EMBO J.* 16: 1268-1278.
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. *Biol. Chem.* 275: 5748-5753.

CHROMOSOMAL LOCATION

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

SOURCE

Amphiregulin (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Amphiregulin of mouse 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-5797 P, (100 µg 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.

PROTOCOLS

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

APPLICATIONS

Amphiregulin (M-18) is recommended for detection of precursor and mature Amphiregulin of mouse, rat and, to a lesser extent, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Amphiregulin (M-18) is also recommended for detection of precursor and mature Amphiregulin in additional species, including bovine.

Suitable for use as control antibody for Amphiregulin siRNA (h): sc-39412, Amphiregulin siRNA (m): sc-39413, Amphiregulin shRNA Plasmid (h): sc-39412-SH, Amphiregulin shRNA Plasmid (m): sc-39413-SH, Amphiregulin shRNA (h) Lentiviral Particles: sc-39412-V and Amphiregulin shRNA (m) Lentiviral Particles: sc-39413-V.

Molecular Weight of Smurf1 precursor: 50 kDa.

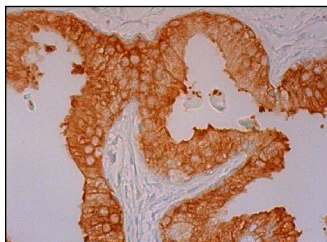
Molecular Weight of mature Smurf1: 43 kDa.

Positive Controls: rat ovary extract: sc-2399.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Amphiregulin (M-18): sc-5797. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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