

# Amphiregulin (C-13): sc-5796

## 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: 2547-2457.
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 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Amphiregulin 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-5796 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Amphiregulin (C-13) is recommended for detection of precursor and mature Amphiregulin of mouse, rat and 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); cross reactive with Amphiregulin B.

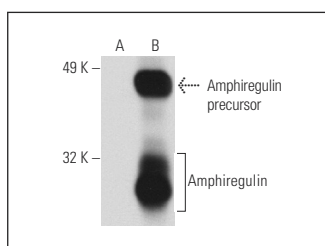
Suitable for use as control antibody for Amphiregulin siRNA (h): sc-39412, Amphiregulin siRNA (m): sc-39413, Amphiregulin shRNA Plasmid (h): sc-39412-SH, Amphiregulin shRNA Plasmid (m): sc-39413-SH, Amphiregulin shRNA (h) Lentiviral Particles: sc-39412-V and Amphiregulin shRNA (m) Lentiviral Particles: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

Molecular Weight of Amphiregulin precursor: 50 kDa.

Molecular Weight of mature Amphiregulin: 43 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, OV-90 whole cell lysate: sc-364191 or rat ovary extract: sc-2399.

## DATA



Amphiregulin (C-13): sc-5796. Western blot analysis of Amphiregulin expression in non-transfected: sc-110760 (A) and Amphiregulin transfected (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Plant, L., et al. 2004. Epithelial cell responses induced upon adherence of pathogenic *Neisseria*. *Cell. Microbiol.* 6: 663-670.
2. Chen, H., et al. 2007. Epidermal growth factor receptor in adult retinal neurons of rat, mouse, and human. *J. Comp. Neurol.* 500: 299-310.
3. Oliveras-Ferraros, C., et al. 2012. Cross-suppression of EGFR ligands amphiregulin and epiregulin and de-repression of FGFR3 signalling contribute to cetuximab resistance in wild-type KRAS tumour cells. *Br. J. Cancer* 106: 1406-1414.
4. Mustafi, R., et al. 2012. Both stromal cell and colonocyte epidermal growth factor receptors control HCT116 colon cancer cell growth in tumor xenografts. *Carcinogenesis* 33: 1930-1939.

## RESEARCH USE

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