

# Amphiregulin (C-1): sc-393433

## 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 ErbB-1 which is essential for epithelial development in the skin, lung and gastrointestinal tract. Withdrawal of Amphiregulin has been shown to result in downregulation 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 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 161-185 near the C-terminus of Amphiregulin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393433 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## 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

Amphiregulin (C-1) is recommended for detection of precursor and mature Amphiregulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

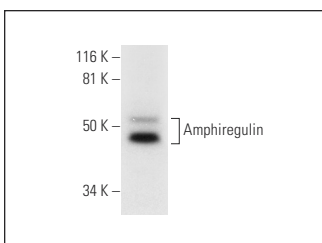
Molecular Weight of mature Amphiregulin: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or RPE-J whole cell lysate.

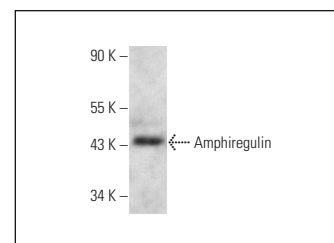
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Amphiregulin (C-1): sc-393433. Western blot analysis of Amphiregulin expression in HeLa whole cell lysate.



Amphiregulin (C-1): sc-393433. Western blot analysis of Amphiregulin expression in RPE-J whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Scheffschick, A., et al. 2019. Keratin defects trigger the itch-inducing cytokine thymic stromal lymphopoietin through Amphiregulin-epidermal growth factor receptor signaling. *J. Allergy Clin. Immunol.* 144: 1719-1722.

## CONJUGATES

See **Amphiregulin (G-4): sc-74501** for Amphiregulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.