

Amphiregulin (G-4): sc-74501

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.

CHROMOSOMAL LOCATION

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

SOURCE

Amphiregulin (G-4) is a mouse monoclonal antibody raised against amino acids 1-155 of Amphiregulin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Amphiregulin (G-4) is available conjugated to agarose (sc-74501 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74501 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74501 PE), fluorescein (sc-74501 FITC), Alexa Fluor[®] 488 (sc-74501 AF488), Alexa Fluor[®] 546 (sc-74501 AF546), Alexa Fluor[®] 594 (sc-74501 AF594) or Alexa Fluor[®] 647 (sc-74501 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74501 AF680) or Alexa Fluor[®] 790 (sc-74501 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Amphiregulin (G-4) is recommended for detection of 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), 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).

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.

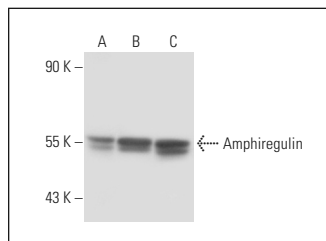
Molecular Weight of mature Amphiregulin: 43 kDa.

Positive Controls: Amphiregulin (m): 293T Lysate: sc-118381, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

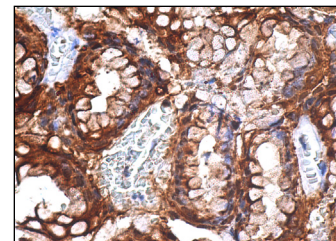
STORAGE

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

DATA



Amphiregulin (G-4): sc-74501. Western blot analysis of amphiregulin expression in non-transfected 293T: sc-117752 (A), mouse amphiregulin transfected 293T: sc-118381 (B) and HeLa (C) whole cell lysates.



Amphiregulin (G-4): sc-74501. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

- Zhao, Y., et al. 2010. Perfluorooctanoic acid effects on steroid hormone and growth factor levels mediate stimulation of peripubertal mammary gland development in C57BL/6 mice. *Toxicol. Sci.* 115: 214-224.
- Zhao, Y., et al. 2012. Perfluorooctanoic acid effects on ovaries mediate its inhibition of peripubertal mammary gland development in Balb/c and C57Bl/6 mice. *Reprod. Toxicol.* 33: 563-576.
- Liang, N., et al. 2014. Regulation of YAP by mTOR and autophagy reveals a therapeutic target of tuberous sclerosis complex. *J. Exp. Med.* 211: 2249-2263.
- Kaija, H., et al. 2015. Hypothermia and rewarming induce gene expression and multiplication of cells in healthy rat prostate tissue. *PLoS ONE* 10: e0127854.
- Jeffery, H.C., et al. 2017. Human intrahepatic ILC2 are IL-13 positive Amphiregulin positive and their frequency correlates with model of end stage liver disease score. *PLoS ONE* 12: e0188649.
- Martini, A., et al. 2017. YAP, TAZ and AREG expression in eighth cranial nerve schwannoma. *Int. J. Biol. Markers* 32: e319-e324.
- Koepfen, M., et al. 2018. Hypoxia-inducible factor 2- α -dependent induction of Amphiregulin dampens myocardial ischemia-reperfusion injury. *Nat. Commun.* 9: 816.
- Ha, S.J., et al. 2018. Syngic acid prevents skin carcinogenesis via regulation of NoX and EGFR signaling. *Biochem. Pharmacol.* 154: 435-445.
- Yu, Y., et al. 2019. Amphiregulin promotes trophoblast invasion and increases MMP9/TIMP1 ratio through ERK1/2 and Akt signal pathways. *Life Sci.* 236: 116899.

RESEARCH USE

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

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