

Purified anti-Amphiregulin Antibody

Catalog# / Size	684802 / 100 µg
Clone	1501107
Regulatory Status	RUO
Other Names	Amphiregulin (AR), AREG, Schwannoma-derived growth factor (SDGF), Colorectum cell-derived growth factor (CRDGF)
Isotype	Rat IgG2a, κ
Description	<p>Amphiregulin was initially identified in the conditioned medium of human mammary gland MCF-7 cells treated with TPA. The mouse gene was cloned from the androgen-dependent SC2G cell line derived from Shionogi mouse mammary carcinoma SC115. It belongs to the EGF family of proteins that includes EGF, TGF-α, heparin-binding EGF like-growth factor (HB-EGF), epigen, epiregulin, and betacellulin. Mouse amphiregulin is derived from a 248 amino acid transmembrane precursor and it has 66% identity to the human protein. All the EGF family members are synthesized as type I membrane protein precursors, which can undergo proteolytic cleavage at the plasma membrane to release a mature soluble ectodomain. ADAM17 (TACE) has an important role in ectodomain shedding of amphiregulin, TNF-α, and HB-EGF. This cleavage is a key step in the control of ligand availability and receptor activation. It is stimulated by physiological and pharmacological agonists, including TPA, calcium ionophores, GPCR ligands, cytokines, and growth factors. Amphiregulin is a paracrine regulator of estrogen action during ductal morphogenesis (mammary gland development), and it has been associated with breast cancer initiation and progression. Amphiregulin is elevated in psoriatic lesional skin, gastrointestinal carcinomas, colorectal cancer, and hepatocellular carcinoma tissues. In addition, FOXP3⁺ Tregs express EGFR under inflammatory conditions, and amphiregulin enhances regulatory T cell-suppressive function in vitro and in vivo in a colitis and tumor vaccination model.</p>

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Purified mouse Amphiregulin, amino acids (Ser94-Lys191) (Accession# NM_009704) expressed in <i>E. coli</i> .
Formulation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.5 - 2.5 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This antibody works for Western blotting under non-reducing conditions.
RRID	AB_2572176 (BioLegend Cat. No. 684802)

Antigen Details

Structure	248 amino acids with a predicted molecular weight of approximately 27 kD.
Distribution	Fibroblasts, epithelial cells, carcinoma cell lines, T cell subsets, naive and memory CD4 and CD8 T cells, Th1 and Th2 cells, mast cells, eosinophils, and basophils.

Function	Amphiregulin induces proliferation of fibroblasts, keratinocytes, and normal and malignant epithelial cells. It acts in normal development, organogenesis, and tumorigenesis. Amphiregulin release is mediated by IL-1 β in fibroblast-like synoviocytes in rheumatoid arthritis patients. It is induced by IL-3 and IL-5 in basophils and eosinophils, respectively.
Interaction	Keratinocytes, epithelial cells, fibroblasts, carcinoma cells, and FOXP3 Tregs.
Ligand/Receptor	EGFR (HER1).
Cell Type	Basophils, Eosinophils, Epithelial cells, Fibroblasts, Mast cells, T cells, Th1, Th2, Tregs
Biology Area	Cancer Biomarkers, Cell Biology, Cell Cycle/DNA Replication, Cell Proliferation and Viability, Immunology, Signal Transduction
Antigen References	<ol style="list-style-type: none"> 1. Plowman GD, <i>et al.</i> 1990. <i>Mol. Cell Biol.</i> 10:1969. 2. Sonoda H, <i>et al.</i> 1992. <i>Biochem. Biophys. Res. Commun.</i> 185:103. 3. Le Gall SM, <i>et al.</i> 2003. <i>J. Biol. Chem.</i> 278:45255. 4. Berasain C, <i>et al.</i> 2007. <i>Cancer Letters</i> 254:30. 5. Busser B, <i>et al.</i> 2011. <i>Biochem. Biophys. Acta.</i> 2:119. 6. Latasa MU, <i>et al.</i> 2012. <i>PLoS One</i> 7:e52711. 7. Qi Y, <i>et al.</i> 2012. <i>PLoS One</i> 7:e39072. 8. Zaiss DM, <i>et al.</i> 2013. <i>Immunity</i> 38:275. 9. Taira N, <i>et al.</i> 2014. <i>Proc. Natl. Acad. Sci. USA</i> 111:717.
Gene ID	11839

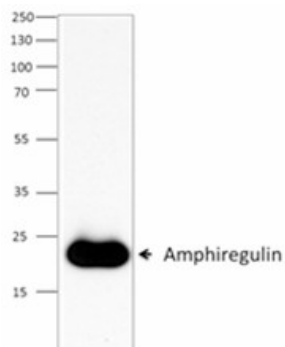
Related Protocols

[Western Blotting Protocol](#)

Other Formats

Purified anti-Amphiregulin

Product Data



Western blot analysis of 50ng of Recombinant Mouse Amphiregulin (carrier-free) under non-reducing condition. Purified rat anti-mouse Amphiregulin antibody (clone 1501107) was used, followed by HRP Goat anti-rat IgG (minimal x-reactivity) antibody.

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