

#### DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                                                              |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Amphiregulin (AR) in Western blots. In this format, this antibody shows less than 5% cross-reactivity with recombinant human HB-EGF. |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>1</sub> Clone # 31221                                                                                                    |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                                                                         |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human Amphiregulin                                                                                             |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                    |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                       |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                                                                    |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                                                |                                                                        |
|------------------------------------------------|------------------------------------------------------------------------|
| <b>ELISA Capture (Matched Antibody Pair)</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>ELISA Detection (Matched Antibody Pair)</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Neutralization</b>                          | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>                            | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Amphiregulin (AR) is a member of the EGF family of cytokines which is comprised of at least ten proteins including EGF, TGF- $\alpha$ , HB-EGF, and the various heregulins. All of these cytokines are synthesized as transmembrane precursors and are characterized by the presence of one or several EGF structural units in their extracellular domain. The soluble forms of these cytokines are released by proteolytic cleavage. Amphiregulin was originally isolated from the conditioned media of a PMA-treated MCF-7 human breast carcinoma cell line. The AR cDNA encodes a 252 amino acid (aa) residue transmembrane precursor. Multiple forms of native AR containing either 78 or 84 aa residues and both N- and O-linked oligosaccharides have been found. Amphiregulin mRNA expression can be detected in numerous carcinoma cell lines and the epithelial cells of various human tissues including colon, stomach, breast, ovary, kidney, etc.

Human AR stimulates the proliferation of various human and mouse keratinocytes, mammary epithelial cells and some fibroblasts. AR is also a growth inhibitor for various tumor cell lines. In certain colon carcinoma cell lines, AR has been shown to be an autocrine growth factor. Amphiregulin can bind to the EGF receptor. It has been suggested that in certain cell types, AR bioactivity may be mediated through the EGF receptor. The 98 aa residue long form of recombinant amphiregulin has shown to be approximately 5-10 fold more active than the 78 aa residue form of recombinant AR in an *in vitro* proliferation assay using Balb/3T3 fibroblasts.

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