

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Angiopoietin-4 in direct ELISAs and Western blots. In direct ELISAs, this antibody does not cross-react with recombinant human (rh) Ang-1, rhAng-2, rhAng-X, or rhANGPTL3.                                                                                    |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 156215                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Angiopoietin-4 Met1-Ile503<br>Accession # Q9Y264                                                                                                                                                                      |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</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

Human Angiopoietin-4 (Ang-4) (1), alternatively named Ang-3 (2), is a secreted glycoprotein belonging to the angiopoietin family. It has the characteristic structural motifs of angiopoietins including the coiled-coiled domain near the amino-terminus and a fibrinogen-like domain at the C-terminus. Human Ang-4 cDNA encodes a 503 amino acid (aa) precursor protein with a 23 aa signal peptide. It shares 45%, 47%, and 54% aa sequence identity with human Ang-1, human Ang-2, and mouse Ang-3, respectively. Although the sequence homology is much higher between the human and mouse counterparts for Ang-1 (97%) and Ang-2 (85%), mouse Ang-3 is believed to be an ortholog of human Ang-4 based on chromosomal localization studies (2). Human Ang-4 is highly expressed in lung and in cultured human umbilical vein endothelial cells (HUVECs). In contrast, mouse Ang-3 is expressed multiple mouse tissues. Human Ang-4 is an agonist that can bind and activate Tie-2, a receptor tyrosine kinase with immunoglobulin and epidermal growth factor homology domains expressed primarily on endothelial cells and early hematopoietic cells (2, 3). Mouse Ang-3 has been reported to be a Tie-2 antagonist. It is likely that mouse Ang-3, like Ang-2, may exert agonist or antagonist activities depending on the cell context (1, 3, 4).

## PRODUCT SPECIFIC NOTICES

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