

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse VEGF <sub>120/164</sub> in direct ELISAs and Western blots. This antibody does not recognize recombinant mouse VEGF <sub>115</sub> or any isoform of human VEGF.                                                                                              |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2B</sub> Clone # 39917                                                                                                                                                                                                                              |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse VEGF <sub>164</sub><br>Ala27-Arg190<br>Accession # AAA40547                                                                                                                                   |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 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.

**Western Blot** 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

Vascular Endothelial Growth Factor (VEGF or VEGF-A), also known as Vascular Permeability Factor (VPF), is a potent mediator of both angiogenesis and vasculogenesis in the fetus and adult. It is a member of the PDGF family that is characterized by the presence of eight conserved cysteine residues and a cystine knot structure. VEGF<sub>164</sub> appears to be the most abundant and potent isoform, followed by VEGF<sub>120</sub> and VEGF<sub>188</sub>. Mouse VEGF<sub>164</sub> is an approximately 50 kDa molecular weight homodimer sharing 97% aa sequence identity with corresponding regions of rat, 89% with human and porcine, 90% with feline, equine and canine, and 88% with bovine VEGF, respectively. VEGF binds the type I transmembrane receptor tyrosine kinases VEGF R1 (also called Flt-1) and VEGF R2 (Flk-1/KDR) on endothelial cells. Although VEGF affinity is highest for binding to VEGF R1, VEGF R2 appears to be the primary mediator of VEGF angiogenic activity. Human VEGF<sub>165</sub> binds the Semaphorin receptor, Neuropilin-1 and promotes complex formation with VEGF R2. VEGF is required during embryogenesis and functions to regulate the proliferation, migration, and survival of endothelial cells. In adults, VEGF functions mainly in wound healing and the female reproductive cycle. Pathologically, it is involved in tumor angiogenesis and vascular leakage. Circulating VEGF levels correlate with disease activity in autoimmune diseases such as rheumatoid arthritis, multiple sclerosis and systemic lupus erythematosus. VEGF is induced by hypoxia and cytokines such as IL-1, IL-6, IL-8, Oncostatin M (OSM) and TNF-alpha.

## PRODUCT SPECIFIC NOTICES

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