**DESCRIPTION**

**Species Reactivity** Mouse

**Specificity** Detects mouse VEGF in ELISAs and Western blots. In sandwich immunoassays, less than 0.04% cross-reactivity with recombinant human (rh) VEGF121, rhVEGF165, and rhVEGF/PIGF is observed.

**Source** Polyclonal Goat IgG

**Purification** Antigen Affinity-purified

**Immunogen** S. frugiperda insect ovarian cell line S721-derived recombinant mouse VEGF164 (R&D Systems, Catalog # 493-MV) Ala27-Arg190 Accession # AAA40547

**Formulation** Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

**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.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
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</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>0.1 μg/mL Recombinant Mouse VEGF164 (Catalog # 493-MV)</td>
</tr>
<tr>
<td>Mouse VEGF Sandwich Immunoassay</td>
<td>0.2-0.8 μg/mL Mouse VEGF164 Antibody (Catalog # AF-493-NA)</td>
</tr>
<tr>
<td>ELISA Capture</td>
<td>0.2-0.8 μg/mL</td>
</tr>
<tr>
<td>ELISA Detection</td>
<td>0.1-0.4 μg/mL Mouse VEGF Biotinylated Antibody (Catalog # BAF493)</td>
</tr>
</tbody>
</table>

**PREPARATION AND STORAGE**

- **Reconstitution** Reconstitute at 0.2 mg/mL in sterile PBS.
- **Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
- **Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  - 12 months from date of receipt, -20 to -70 °C as supplied.
  - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
  - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**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. VEGF164 appears to be the most abundant and potent isoform, followed by VEGF120 and VEGF188. Mouse VEGF164 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 (Pik-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 VEGF165 binds the Semaphorin receptor, Neupilin-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.