

DESCRIPTION

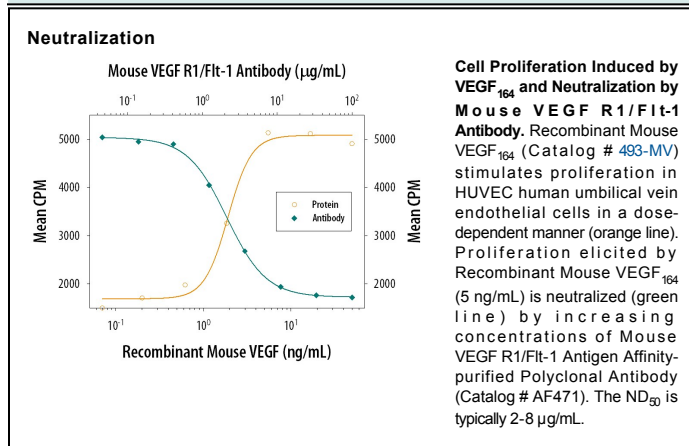
| | |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Species Reactivity | Mouse |
| Specificity | Detects mouse VEGF R1/Flt-1 in ELISAs and Western blots. In sandwich ELISAs, approximately 7% cross-reactivity with recombinant human VEGF R1 is observed, approximately 4% cross-reactivity with recombinant mouse (rm) VEGF ₁₆₄ is observed, less than 1% cross-reactivity with recombinant rat VEGF ₁₆₄ is observed, and less than 0.2% cross-reactivity with rmVEGF R2 and rmVEGF R3 is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant mouse VEGF R1/Flt-1 Ser27-Glu759 Accession # P35969 |
| Endotoxin Level | <0.10 EU per 1 µg of the antibody by the LAL method. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

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.

| | Recommended Concentration | Sample |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Western Blot | 0.1 µg/mL | Recombinant Mouse VEGF R1/Flt-1 Fc Chimera (Catalog # 471-F1) |
| Flow Cytometry | 2.5 µg/10 ⁶ cells | bEnd.3 mouse endothelioma cell line |
| Mouse VEGF R1/Flt-1 Sandwich Immunoassay | | Reagent |
| ELISA Capture | 0.2-0.8 µg/mL | Mouse VEGF R1/Flt-1 Antibody (Catalog # AF471) |
| ELISA Detection | 0.1-0.4 µg/mL | Mouse VEGF R1/Flt-1 Biotinylated Antibody (Catalog # BAF471) |
| Standard | | Recombinant Mouse VEGF R1/Flt-1 Fc Chimera (Catalog # 471-F1) |
| Neutralization | Measured by its ability to neutralize VEGF ₁₆₄ -induced proliferation in HUVEC human umbilical vein endothelial cells. The Neutralization Dose (ND ₅₀) is typically 2-8 µg/mL in the presence of 5 ng/mL Recombinant Mouse VEGF ₁₆₄ . | |
| Blockade of Receptor-ligand Interaction | In a functional ELISA, 1-4 µg/mL of this antibody will block 50% of the binding of 10 ng/mL of Recombinant Mouse PlGF-2 (Catalog # 465-PL) to immobilized Recombinant Mouse VEGF R1/Flt-1 Fc Chimera (Catalog # 471-F1) coated at 1 µg/mL (100 µL/well). At 50 µg/mL, this antibody will block >90% of the binding. | |

DATA



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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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

VEGF R1 is one of the five receptor tyrosine kinases (RTKs) (VEGF R1, KDR/Fik-1, Flt-4, Tie-1, and Tek/Tie-2) whose expression is almost exclusively restricted to the endothelial cells. Tie-1 and tek/tie-2 define a new class of RTKs containing two immunoglobulin-like domains, three EGF homology domains and three fibronectin type III domains in their extracellular regions. VEGF R1/Flt-1, VEGF R2/KDR/Fik-1, VEGF R3/Flt-4 are members of the class III subfamily of RTKs containing seven immunoglobulin-like repeats in their extracellular domains. All five RTKs are likely to play central roles in vasculogenesis and angiogenesis.

Full length mouse VEGF R1 mRNA encodes a 1333 amino acid (aa) residue precursor with a predicted 22 aa residue signal peptide. Mature VEGF R1 is composed of a 737 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 552 aa residue cytoplasmic domain. As a result of alternative splicing of the mRNA, a cDNA encoding a truncated form of VEGF R1, lacking the seventh immunoglobulin-like domain, the transmembrane and intracellular domains, has been cloned. The recombinant soluble VEGF R1/Fc chimera binds VEGF and PlGF with high affinity and is a potent VEGF antagonist.

References:

1. He, Y. *et al.* (1999) *Molecular Endocrinology* **13**:537.
2. Ferrara, N. and T. Davis-Smyth (1997) *Endocrine Reviews* **8**:4.