Mouse VEGFR1/Flt-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF471

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VEGFR1/Flt-1 in ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VEGFR1/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 either lyophilized or as a 0.2 µm filtered solution in PBS.

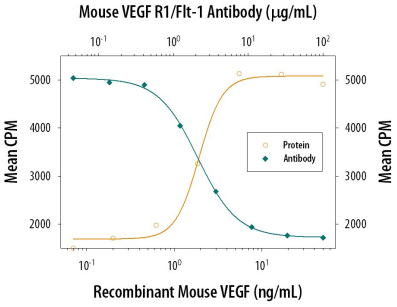
APPLICATIONS

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 VEGFR1/Flt-1 Fc Chimera (Catalog # 471-F1)
Mouse VEGFR1/Flt-1 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse VEGFR1/Flt-1 Antibody (Catalog # AF471)
ELISA Detection	0.1-0.4 µg/mL	Mouse VEGFR1/Flt-1 Biotinylated Antibody (Catalog # BAF471)
Standard		Recombinant Mouse VEGFR1/Flt-1 Fc Chimera (Catalog # 471-F1)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
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 $VEGF_{164}$.	

DATA

Neutralization



Cell Proliferation Induced by $VEGF_{164}$ and Neutralization by Mouse VEGFR1/Flt-1 Antibody. Recombinant Mouse $VEGF_{164}$ Catalog # 493-MV) stimulates proliferation in HUVEC human umbilical vein endothelial cells in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse $VEGF_{164}$ (5 ng/mL) is neutralized (green line) by increasing concentrations of Mouse VEGFR1/Flt-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF471). The ND_{50} is typically 2-8 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store 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.

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BACKGROUND

VEGFR1 is one of the five receptor tyrosine kinases (RTKs) (VEGFR1, KDR/Flk-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. VEGFR1/Flt-1, VEGFR2/KDR/Flk-1, VEGFR3/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 VEGFR1 mRNA encodes a 1333 amino acid (aa) residue precursor with a predicted 22 aa residue signal peptide. Mature VEGFR1 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 VEGFR1, lacking the seventh immunoglobulin-like domain, the transmembrane and intracellular domains, has been cloned. The recombinant soluble VEGFR1/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.

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