Mouse $VEGF_{164}$ Antibody

Monoclonal Rat IgG_{2A} Clone # 156902

Catalog Number: MAB4931

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse $VEGF_{164}$ in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody shows 25-100% cross-reactivity with recombinant human $VEGF_{165}$ and recombinant rat $VEGF_{164}$ and no cross-reactivity with recombinant mouse (rm) $VEGF_{115}$, $rmVEGF_{120}$, rmVEGF-B, rhVEGF-C, or rmVEGF-D. Cross-reactivity with $rmVEGF_{188}$ was not determined.
Source	Monoclonal Rat IgG_{2A} Clone # 156902
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant mouse $VEGF_{164}$ Ala27-Arg190 Accession # AAA40547
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	1 µg/mL	Recombinant Mouse $VEGF_{164}$ (Catalog # 493-MV) under non-reducing conditions only

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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.** • 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 (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 VEGF165 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.

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