

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine VEGF in ELISAs and Western blots. In sandwich immunoassays, 100% cross-reactivity with recombinant human (rh) VEGF ₁₂₁ and rhVEGF ₁₆₅ , less than 25% cross-reactivity with recombinant rat VEGF ₁₆₄ , and no c
Source	Monoclonal Mouse IgG ₁ Clone # 247109
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant canine VEGF ₁₆₄ Pro28-Arg190 Accession # NP_001103972
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide

*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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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. VEGF₁₆₄ appears to be the most abundant and potent isoform, followed by VEGF₁₂₀ and VEGF₁₈₈. Canine VEGF₁₆₄ is an approximately 45 kDa molecular weight homodimer Canine sharing 91%, 90%, and 98% aa sequence identity with the rat, mouse, and feline 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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