

## DESCRIPTION

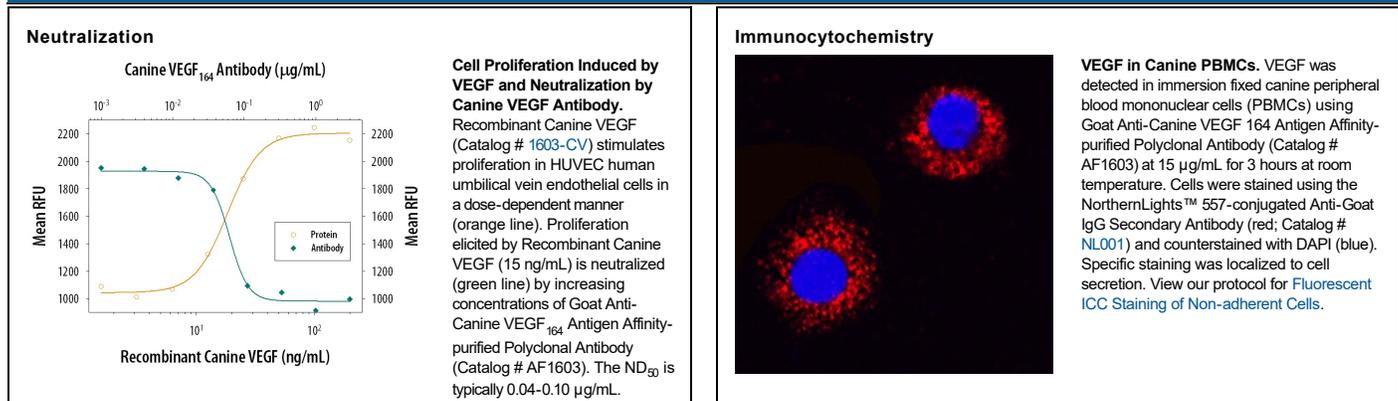
<b>Species Reactivity</b>	Canine
<b>Specificity</b>	Detects canine VEGF <sub>164</sub> in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human VEGF, recombinant mouse VEGF, and recombinant rat VEGF is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant canine VEGF <sub>164</sub> Pro28-Arg190 Accession # Q9MYV3
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	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
<b>Western Blot</b>	0.1 µg/mL	Recombinant Canine VEGF (Catalog # 1603-CV)
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize VEGF-induced proliferation in HUVEC human umbilical vein endothelial cells. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.04-0.10 µg/mL in the presence of 15 ng/mL Recombinant Canine VEGF.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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. In human, at least eight alternately spliced isoforms of VEGF ranging from 206 amino acids (aa) to 121 aa in length are known. Three isoforms, VEGF<sub>188</sub>, VEGF<sub>182</sub>, and VEGF<sub>164</sub>, have been identified in canine. Canine VEGF<sub>164</sub> shares 91%, 90%, and 98% aa sequence identity with the rat, mouse, and feline homologs, respectively. Two type I transmembrane receptor tyrosine kinases, VEGF R1 and VEGF R2, that bind VEGF with high affinity, have been identified. Neuropilin-1, a receptor for semaphorin, also binds VEGF and acts as a co-receptor to enhance the affinity between VEGF and VEGF R2. Neuropilin-1 alone can also mediate VEGF-induced endothelial cell migration. VEGF regulates cell proliferation, migration, and survival of endothelial cells. These functions are partially mediated through the induction of nitric oxide, prostacyclin, and metalloproteinases. Together with angiopoietins or other vascular-specific growth factors, VEGF plays a separate but complementary role in angiogenesis and vasculogenesis (1-7).

#### References:

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5. Chevalier, S. (2002) *Mol. Cell Endocrinol.* **189**:169.
6. Robinson, C.J. and Stringer, S.E. (2001) *J. Cell. Sci.* **114**:853.
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