Recombinant Canine VEGF  
Catalog Number: 1603-CV

DESCRIPTION

Source  
E. coli-derived  
Pro28-Arg190  
Accession # AAD29682

N-terminal Sequence Analysis  
Pro28

Structure / Form  
Disulfide-linked homodimer

Predicted Molecular Mass  
19 kDa (monomer)

SPECIFICATIONS

Activity  
The ED50 for this effect is 1.5-7.5 ng/mL.

Endotoxin Level  
<0.10 EU per 1 μg of the protein by the LAL method.

Purity  
>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation  
Lyophilized from a 0.2 μm filtered solution in Acetonitrile and TFA with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution  
Reconstitute at 100 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping  
The product is shipped at ambient temperature. Upon receipt, store it 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.  
- 3 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. 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, VEGF188, VEGF182, and VEGF164, have been identified in canine. Canine VEGF184 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: