Canine VEGF / VEGFA Protein

Catalog Number: **70004-DNAH**

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Biological Solution Specialist

General Information

Gene Name Synonym:

VEGFA, VEGF

Protein Construction:

A DNA sequence encoding the canine VEGFA(NP_001103972.1) (Met1-Arg190) was expressed.

Source: Canine

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Immobilized canine VEGFA at 10 μg/ml (100 μl/well) can bind human VEGFR2-Fc (Cat:10012-H02H), The EC50 of human VEGFR2-Fc (Cat:10012-H02H) is 33.83-78.95 ng/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ala 27

Molecular Mass:

The recombinant canine VEGFA comprises 164 amino acids and has a predicted molecular mass of 19.1 kDa. The apparent molecular mass of the protein is approximately 23 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

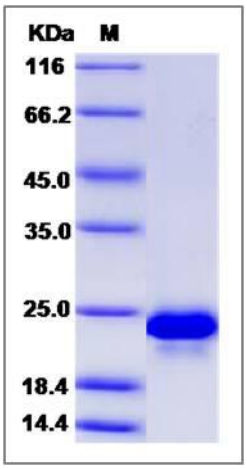
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Vascular endothelial growth factor (VEGF), also known as vascular permeability factor (VPF) and VEGF-A, is a potent mediator of both angiogenesis and vasculogenesis in the fetus and adult. It is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) family and often exists as a disulfide-linked homodimer. VEGF-A is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, and inhibiting apoptosis. As its name implies, VEGF-A activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types (stimulation monocyte/macrophage, neurons, cancer cells, kidney epithelial cells). VEGF-A is also a vasodilator and increases microvascular permeability and was originally referred to as vascular permeability factor. Alternatively spliced transcript variants of VEGF-A, encoding either secreted or cell-associated isoforms, have been identified. Alternatively spliced isoforms of 121,145,165,183,189 and 206 amino acids in length are expressed in humans. VEGF165 appears to be the most abundant and potent isoform and is a heparin-binding growth factor with mitogenic activity for vascular endothelial cells. Human VEGF165 shares 88%, 96%, 95% and 93% aa sequence identity with mouse, porcine, canine and feline VEGF165, respectively.

References

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2. Borgatti P. et al.,1998, Eur J Immunol. 27 (11): 2805-11.
3. Gengrinovitch S. et al., 1999, J Biol Chem. 274 (16): 10816-22.
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7. Lee GY. et al., 2006, Protein expressed and Purification. 46: 503-9.