Canine VEGF164 / VEGFA Protein

Catalog Number: 70004-DNAH

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

VEGFA

Protein Construction:

A DNA sequence encoding the canine VEGF164 / VEGFA(NP_001103972.1) (Met1-Arg190) was expressed.

Source: Canine

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Immobilized canine VEGFA at 10 μg/ml (100 μl/well) can bind human VEGFR2-Fc (Cat:10012-H02H), The EC_{50} of human VEGFR2-Fc (Cat:10012-H02H) is 33.83-78.95 ng/ml.
2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED_{50} for this effect is typically 2-12 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 VEGF164 / 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, mannitol and 0.01% Tween80 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:

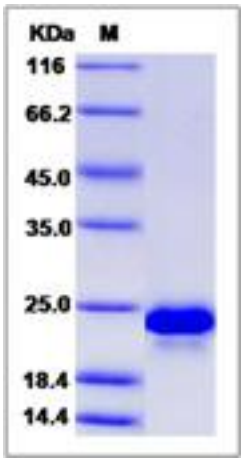
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



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 protein 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, inhibiting apoptosis and tumor growth. VEGF-A protein is also a vasodilator that increases microvascular permeability, thus it was originally referred to as vascular permeability factor.

References

1.Woolard J. et al. (2004) VEGF165b, an inhibitory vascular endothelial growth factor splice variant: mechanism of action, in vivo effect on angiogenesis and endogenous protein expression. Cancer Res. 64(21): 7822-7835.
2.Jia SF, et al. (2008) VEGF165 is necessary to the metastatic potential of Fas(-) osteosarcoma cells but will not rescue the Fas(+) cells. J Exp Ther Oncol. 7(2): 89-97.
3.Cimpean AM, et al. (2008) Vascular endothelial growth factor A (VEGF A) as individual prognostic factor in invasive breast carcinoma. Rom J Morphol Embryol. 49(3): 303-8.