

Human / Cynomolgus VEGF / VEGFA / VEGF165 Protein

Catalog Number: 11066-HNAH



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

VEGFA

Protein Construction:

A DNA sequence encoding the human / cynomolgus VEGF165 isoform (P15692-4) (Met1-Arg191) was expressed. Human and Cynomolgus VEGF165 sequences are identical.

Source: Human, Cynomolgus

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Bio Activity:

1. iPSC-derived human vascular organoids (Day 7) were cultured with FGF2 (Cat#10014-HNAE), VEGFA (Cat# 11066-HNAH), EGF (Cat#10605-HNAE). Red arrows represent vascular organoids. Image taken at 10x magnification. (Routinely tested)

2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED50 for this effect is typically 2-10 ng/mL.

3. Labeled biotin to VEGF165 Protein, Human / Cynomolgus, Recombinant by a certain molar ratio; Using the Octet RED System, the affinity constant (Kd) of VEGF165 Protein, Human / Cynomolgus, Recombinant, Biotinylated (Cat:11066-HNAH-B) bound to Avastin was 0.1 nM.

4. Anti-VEGF (Research Grade Bevacizumab Biosimilar) captured on Protein A chip can bind Recombinant Human, Cynomolgus VEGF165 Protein (Cat. No. 11066-HNAH) with an affinity constant of 14.9 pM as determined in an SPR assay (Biacore 8K) (Routinely tested).

5. Loaded Biotinylated Recombinant Human VEGFR1/FLT1 Protein, His & AVI Tag (Cat. No. 10136-H49H-B) on SA Biosensor, can bind Recombinant VEGF165 Protein, Human, Cynomolgus (Cat. No. 11066-HNAH) with an affinity constant of 0.506 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).

Endotoxin:

< 10 EU per mg protein.

Predicted N terminal: Ala 27

Molecular Mass:

The recombinant human / cynomolgus VEGF165 consists of 165 amino acids and predicts a molecular mass of 19.2 KDa. It migrates as an approximately 22 kDa and 24 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 150mM NaCl, pH 8.0

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

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

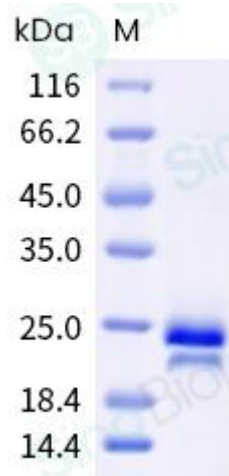
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.