

# Human VEGF121 / VEGF-A Protein

Catalog Number: 10008-HNAH



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

MVCD1; VEGF; VEGF165; VPF

### Protein Construction:

A DNA sequence encoding the human VEGF 121 isoform (P15692-9) (Met1-Arg147) was expressed.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** (55.6 + 41.6) % as determined by SDS-PAGE

### Bio Activity:

1. Measured by its binding ability in a functional ELISA.
2. Immobilized human VEGF121 (Cat: 10008-HNAH) at 10 µg/mL (100 µL/well) can bind human VEGFR2-Fc (Cat: 10012-H02H), the EC<sub>50</sub> of human VEGFR2-Fc is 5-50 ng/mL.
3. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED<sub>50</sub> for this effect is typically 3-15 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 °C

**Predicted N terminal:** Ala 27

### Molecular Mass:

The recombinant human VEGF consists of 121 amino acids and has a predicted molecular mass of 14 kDa. The apparent molecular mass of the human VEGF 121 is approximately 19.9 and 17.0 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:

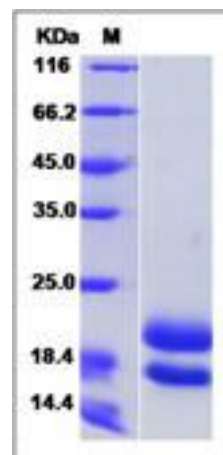
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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.

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