



## Synonym

RP1-261G23.1,MGC70609,MVCD1,VEGFA,VPF

## Source

Human VEGF121 Protein, premium grade(VE1-H4213) is expressed from human 293 cells (HEK293). It contains AA Ala 27 - Arg 147 (Accession # [P15692-9](#)).

Predicted N-terminus: Ala 27

*It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.*

## Molecular Characterization

**VEGF121(Ala 27 - Arg 147)  
P15692-9**

This protein carries no "tag".

The protein has a calculated MW of 14.1 kDa. The protein migrates as 15-16 kDa and 17-20 kDa under reducing (R) condition, and 30-40 kDa under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 0.1 EU per µg by the LAL method.

## Sterility

Negative

## Purity

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

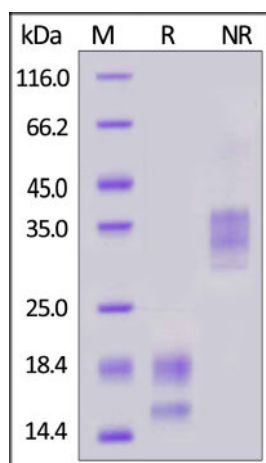
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



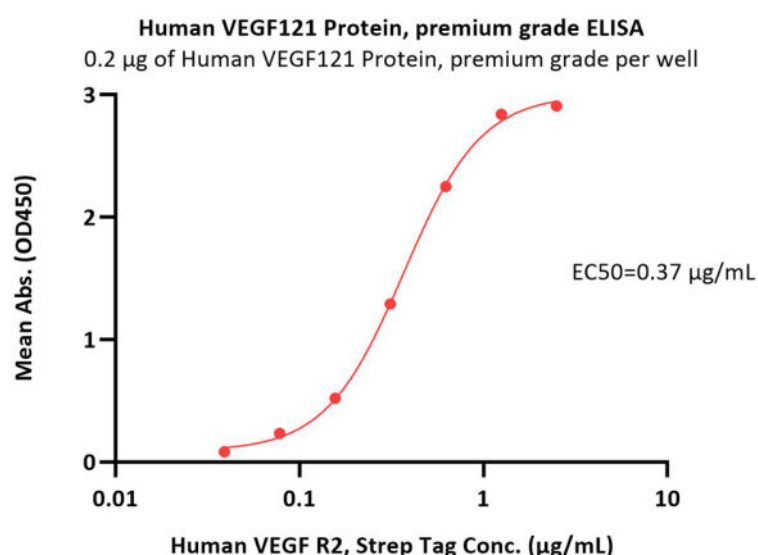
Human VEGF121 Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

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and more!





## Bioactivity-ELISA



Immobilized Human VEGF121 Protein, premium grade (Cat. No. VE1-H4213) at 2 µg/mL (100 µL/well) can bind Human VEGF R2, Strep Tag (Cat. No. KDR-H5280) with a linear range of 0.15-2.5 µg/mL (QC tested).

## Background

Vascular endothelial growth factor (VEGF) is also known as vascular permeability factor (VPF) and VEGF-A, and is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) family and encodes a protein that is often found as a disulfide linked homodimer. This 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, and inhibiting apoptosis. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. 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, followed by VEGF121 and VEGF189. VEGF121 is the only form that lacks a basic heparinbinding region and is freely diffusible. Mouse embryos expressing only the corresponding isoform (VEGF120) do not survive to term, and show defects in skeletogenesis. Human VEGF121 shares 87% aa sequence identity with corresponding regions of mouse and rat, 93% with feline, equine and bovine, and 91%, 95% and 96% with ovine, canine and porcine VEGF, respectively. VEGF121 induces the proliferation of lymphatic endothelial cells. The lymphangiogenesis may be promoted by upregulation of VEGF121, which may in turn act in part via induction of VEGF-C.

## Clinical and Translational Updates

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