

## Product datasheet

# Recombinant human VEGF 165A protein (Active) (Biotin) ab168684

[4 Images](#)

### Description

---

<b>Product name</b>	Recombinant human VEGF 165A protein (Active) (Biotin)
<b>Biological activity</b>	The bio-activity was determined by dose-dependent stimulation of the proliferation of HUVEC cells. <b>ED<sub>50</sub></b> : 2X10 <sup>5</sup> Unit/mg.
<b>Purity</b>	> 95 % SDS-PAGE. Purified by ion exchange chromatography + Label
<b>Endotoxin level</b>	< 1.000 Eu/μg
<b>Expression system</b>	HEK 293 cells
<b>Accession</b>	<b><u>P15692-11</u></b>
<b>Protein length</b>	Protein fragment
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Sequence</b>	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYP DEIEYFKPS CVPLMRCGGCCNDEGLECVPTTEESNITMQIMRIKPHQQQ HIGEMSFLQHN KCECRPKKDRARQENPCGPCSERRKHLFVQDPQTCKCS CKNTDSRCKARQ LELNERTCRCDKPRR
<b>Predicted molecular weight</b>	19 kDa
<b>Amino acids</b>	27 to 191
<b>Conjugation</b>	Biotin

### Specifications

---

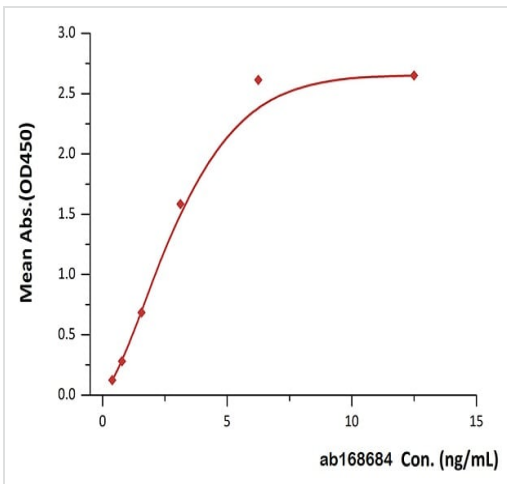
Our **Abpromise guarantee** covers the use of **ab168684** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Functional Studies SDS-PAGE
---------------------	--------------------------------

<b>Form</b>	Lyophilized
<b>Additional notes</b>	A standard biotin reagent (13.5 angstroms) is used in this product. <b>Biotin:Protein ratio</b> The biotin to protein ratio is 3-5 as determined by the HABA assay.
<b>Preparation and Storage</b>	
<b>Stability and Storage</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituents: PBS, 5% Trehalose  Lyophilized from 0.22 µm filtered solution.  This product is an active protein and may elicit a biological response in vivo, handle with caution.
<b>Reconstitution</b>	It is recommended to reconstitute the lyophilized protein in sterile deionized water to a final concentration of 100 µg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing.
<b>General Info</b>	
<b>Function</b>	Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth.
<b>Tissue specificity</b>	Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.
<b>Involvement in disease</b>	Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1) [MIM:603933]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.
<b>Sequence similarities</b>	Belongs to the PDGF/VEGF growth factor family.
<b>Cellular localization</b>	Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

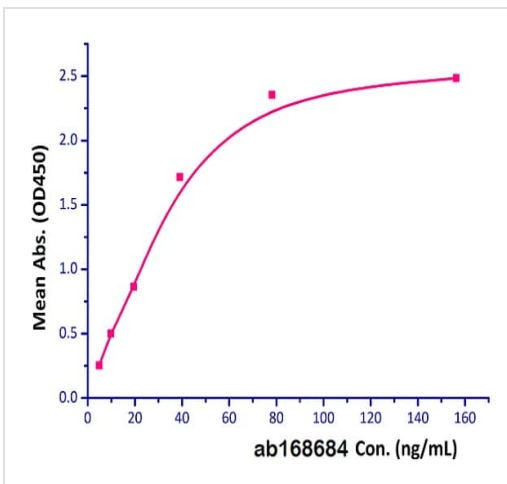
## Images



Immobilized human VEGFR1/R2, Fc tag at 2µg/mL (100 µL/well) binds ab168684.

Linear range: 0.39-3.1 ng/mL (QC tested).

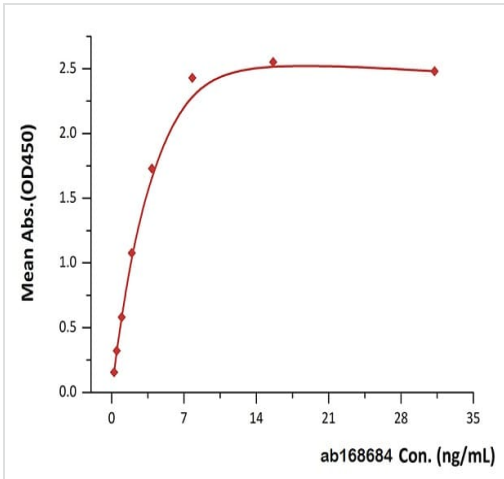
Functional Studies - Recombinant human VEGF  
165A protein (Biotin) (ab168684)



Immobilized Human Neuropilin-1, His Tag at 2 µg/mL (100 µL/well) binds ab168684.

Linear range: 5-40 ng/mL (Routinely tested).

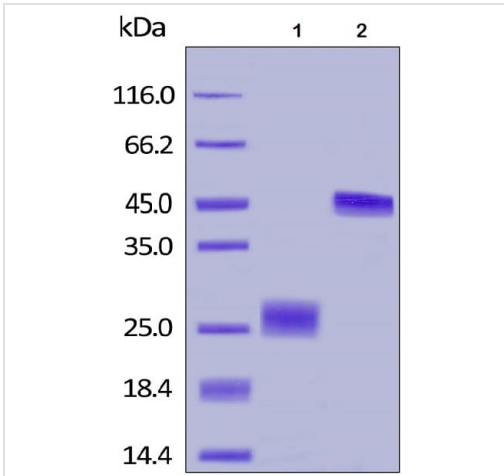
Functional Studies - Recombinant human VEGF  
165A protein (Biotin) (ab168684)



Immobilized Anti-VEGF MAb, Human IgG1 (Avastin) at 5µg/mL (100 µL/well) binds ab168684.

Linear range: 0.24-1.95 ng/mL (Routinely tested).

Functional Studies - Recombinant human VEGF 165A protein (Biotin) (ab168684)



Reduced (Lane 1) and non-reduced (Lane 2) ab168684 on SDS-PAGE, stained overnight with Coomassie Blue.

Purity of protein >95%.

As a result of glycosylation, the protein migrates as 25-30 kDa (monomer) under reducing condition, and 43-50 kDa under non-reducing condition.

SDS-PAGE - Recombinant human VEGF 165A protein (Biotin) (ab168684)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors