

# Recombinant human VEGFA protein (Active) ab155722

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### Description

<b>Product name</b>	Recombinant human VEGFA protein (Active)
<b>Biological activity</b>	Measured by its binding ability in a functional ELISA. ab155722 at 2 µg/mL can bind Human VEGF R2, Strep Tag with a linear range of 0.15-2.5 µg/mL.
<b>Purity</b>	> 95 % SDS-PAGE. ab155722 was lyophilized from 0.22 µm filtered solution.
<b>Endotoxin level</b>	< 1.000 Eu/µg
<b>Expression system</b>	HEK 293 cells
<b>Accession</b>	<b><u>P15692-12</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 CVPLMRCGGCCNDEGLECVPTESNITMQIMRIKPHQGQ HIGEMSFLQHN KCECRPKKDRARQEKCDKPRR
<b>Predicted molecular weight</b>	14 kDa
<b>Amino acids</b>	27 to 147

### Specifications

Our **Abpromise guarantee** covers the use of **ab155722** 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>	ELISA SDS-PAGE
<b>Form</b>	Lyophilized
<b>Additional notes</b>	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.

## Preparation and Storage

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### Stability and Storage

Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 7.40

Constituents: 95% PBS, 5% Trehalose

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

### Reconstitution

Reconstitute with sterile deionized water to a concentration of 400 µg/ml.

## General Info

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### Function

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.

### Tissue specificity

Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

### Involvement in disease

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.

### Sequence similarities

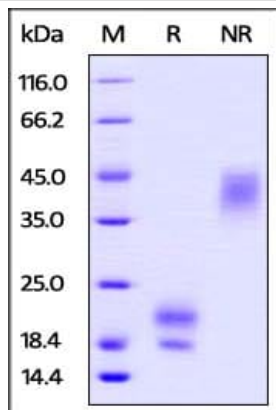
Belongs to the PDGF/VEGF growth factor family.

### Cellular localization

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.

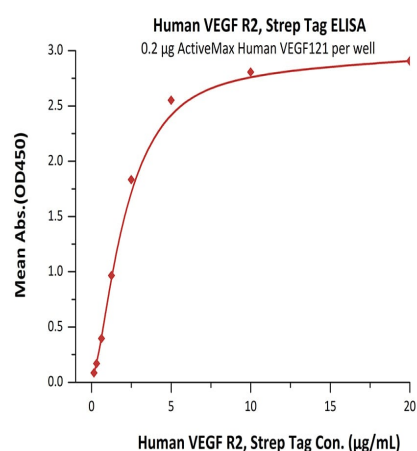
## Images

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Functional Studies - Recombinant human VEGFA protein (ab155722)

SDS-PAGE of ab155722 under reducing (R) and non-reducing (NR) conditions, stained overnight with Coomassie Blue. The protein migrates as 19 kDa and 20 kDa under reducing conditions, and 40-45 kDa (homodimer) under non-reducing conditions.



Functional Studies - Recombinant human VEGFA protein (ab155722)

ab155722 at 2 µg/mL can bind Human VEGF R2, Strep Tag with a linear range of 0.15-2.5 µg/mL.

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

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