

## Product datasheet

# Recombinant human VEGFA protein ab50078

## 2 References

### Description

<b>Product name</b>	Recombinant human VEGFA protein
<b>Biological activity</b>	Determined by its ability to stimulate the proliferation of human umbilical vein endothelial cells (HUVEC). The expected ED <sub>50</sub> for this effect is 1.0-5.0 ng/ml.
<b>Purity</b>	> 95 % SDS-PAGE. ab50078 purity was determined also by HPLC Endotoxin level is less than 0.1 ng per µg (1EU/µg).
<b>Expression system</b>	Escherichia coli
<b>Accession</b>	<b><u>P15692-9</u></b>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Sequence</b>	APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYFKPS CVPLMRCGGC CNDEGLECV TTESNITMQI MRKPHQGQH IGEMSFLQHN KCECRPKKDR ARQENCDKPR R
<b>Amino acids</b>	27 to 232
<b>Additional sequence information</b>	Recombinant Human VEGF121 is a 28.4 kDa, disulfide-linked homodimeric protein consisting of two 121 amino acid polypeptide chains.

### Specifications

Our **Abpromise guarantee** covers the use of **ab50078** 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>	SDS-PAGE Functional Studies
<b>Form</b>	Lyophilized

### Preparation and Storage

<b>Stability and Storage</b>	Shipped at 4°C. The lyophilized protein is stable for a few weeks at room temperature. Store at -
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20°C long term.

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

#### Reconstitution

Reconstitute to 1mg/ml in distilled water

#### 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) [MM: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.

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

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- Extensive multi-media technical resources to help you
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