

Product datasheet

Recombinant human VEGF189 protein ab106307

[2 References](#) [3 Images](#)

Description

Product name	Recombinant human VEGF189 protein
Biological activity	Measured by the stimulation of cell proliferation in human umbilical vein endothelial cells in the range of 2-20 ng/ml.
Purity	> 98 % SDS-PAGE. Gel filtration, purification via Uno S6
Endotoxin level	< 0.100 Eu/μg
Expression system	Escherichia coli
Accession	<u>P15692</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYP DEIEYIFKPS CVPLMRCGGCCNDEGLECVPTTEESNITMQIMRIKPHQQG HIGEMSFLQHN KCECRPKKDRARQEKKSVRGKGGQKRKRKKSRYKSW SVPCGPCSERRKH LFVQDPQTCKCCKNTDSRCKARQLELNERTCRCDKPR R
Predicted molecular weight	42 kDa
Amino acids	27 to 232
Additional sequence information	Mature protein without signal peptide.

Specifications

Our **Abpromise guarantee** covers the use of **ab106307** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Lyophilized

Additional notes**Molecular weight:** ~42 kDa (Dimer)**Preparation and Storage**

Stability and Storage

Shipped at 4°C. The lyophilized protein is stable for a few weeks at room temperature. Store at -20°C long term.

Constituent: 0.3% Acetic acid

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

Reconstitution

Should be reconstituted in PBS or medium containing at least 0.1% human or bovine serum albumin to a concentration not lower than 50 µg/ml.

General Info

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.

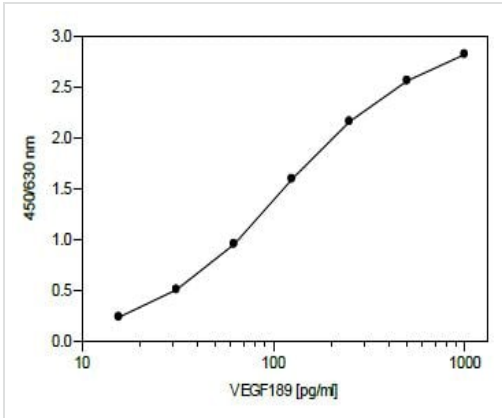
Sequence similarities

Belongs to the PDGF/VEGF growth factor family.

Cellular localization

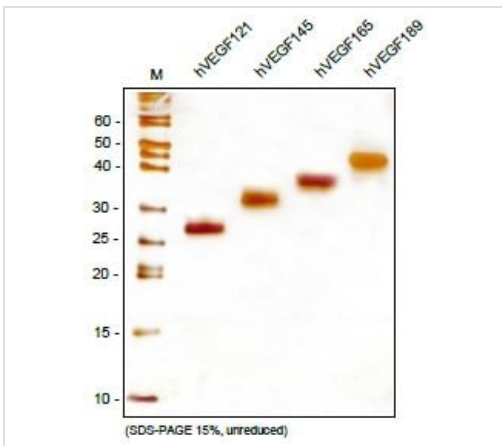
Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

Images



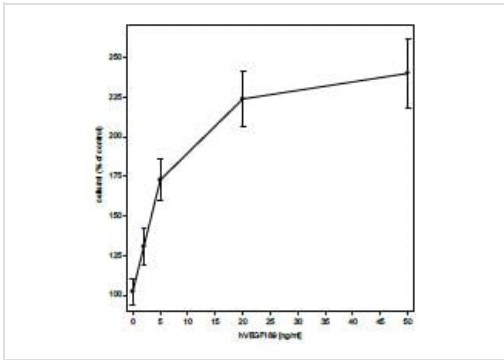
Functional Studies - Recombinant human VEGF189 protein (ab106307)

VEGF-A Sandwich-ELISA using VEGF189 as standard. Mouse anti-human VEGF-A was used as capture antibody, Biotinylated mouse anti-human VEGF-A was used for detection.



SDS-PAGE - Recombinant human VEGF189 protein (ab106307)

SDS-PAGE analysis of recombinant human VEGF-A isoforms produced in *E. coli*. Samples were loaded under non-reducing conditions in 15% SDS-polyacrylamide gel and stained with Silver stain.



VEGF189-induced proliferation of primary human dermal lymphatic endothelial cells (HDLEC). HDLECs were stimulated with increasing amounts of recombinant human VEGF189.

Functional Studies - Recombinant human VEGF189 protein (ab106307)

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