

# Product Information

## **MemDX™ Antibody Discovery - Human VEGF121 (27-147) Membrane Protein, Partial, Avi-His- tag, [Biotin]**

Cat. No.: **MP0537F**

This product is for research use only and is not intended for diagnostic use.

This membrane protein is Human VEGF121 (27-147). It has been tested in SDS-PAGE, ELISA. We provide this protein to facilitate your membrane protein antibody discovery and development.

### Product Specifications

#### **Host Species**

Human

#### **Target Protein**

VEGF121

#### **Protein Length**

ECD

#### **Molecular Weight**

The protein has a calculated MW of 16.7 kDa. As a result of glycosylation, the protein migrates as 18 kDa and 22 kDa under reducing (R) condition, and 35-40 kDa under non-reducing (NR) condition (SDS-PAGE).

#### **Sequence**

AA Ala 27 - Arg 147 (Accession # P15692-9).

### Product Description

#### **Activity**

Yes

#### **Application**

SDS-PAGE, ELISA

#### **Expression Systems**

HEK293

#### **Tag**

Avi tag at the N-terminus, followed by a His tag.

#### **Protein Format**

Soluble

#### **Form**

LYOPH

### Reconstitution

Please see Certificate of Analysis for specific instructions.

### Endotoxin

<1.0 EU/μg by the LAL method

### Conjugation

Biotin

### Purity

>95% as determined by SDS-PAGE.

### Buffer

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

### Storage

Stored at lyophilized form at -20°C or lower. Avoid repeated freeze-thaw cycles.

The antigen can be stable for 12 months in lyophilized form after storage at -20°C to -80°C, 3 months under sterile conditions after reconstitution after storage at -80°C.

## Target

### Target Protein

VEGF121

### Full Name

vascular endothelial growth factor A

### Introduction

This gene is a member of the PDGF/VEGF growth factor family. It encodes a heparin-binding protein, which exists as a disulfide-linked homodimer. This growth factor induces proliferation and migration of vascular endothelial cells, and is essential for both physiological and pathological angiogenesis. Disruption of this gene in mice resulted in abnormal embryonic blood vessel formation. This gene is upregulated in many known tumors and its expression is correlated with tumor stage and progression. Elevated levels of this protein are found in patients with POEMS syndrome, also known as Crow-Fukase syndrome. Allelic variants of this gene have been associated with microvascular complications of diabetes 1 (MVCD1) and atherosclerosis. Alternatively spliced transcript variants encoding different isoforms have been described. There is also evidence for alternative translation initiation from upstream non-AUG (CUG) codons resulting in additional isoforms. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is antiangiogenic. Expression of some isoforms derived from the AUG start codon is regulated by a small upstream open reading frame, which is located within an internal ribosome entry site. The levels of VEGF are increased during infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), thus promoting inflammation by facilitating recruitment of inflammatory cells, and by increasing the level of angiopoietin II (Ang II), one of two products of the SARS-CoV-2 binding target, angiotensin-converting enzyme 2 (ACE2). In turn, Ang II facilitates the elevation of VEGF, thus forming a vicious cycle in the release of inflammatory cytokines.

### Alternative Names

VPF; VEGF; MVCD1; vascular endothelial growth factor A; vascular endothelial growth factor A121; vascular endothelial growth factor A165; vascular permeability factor

### Gene ID

[7422](#)

### UniProt ID

[P15692](#)