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Product Information

MemDX™ Antibody Discovery - Human VEGF121 (27-147) Membrane Protein, Partial, His-tag

Cat. No.: **MP0538F**
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 14.9 kDa. As a result of glycosylation, the protein migrates as 17 kDa and 20 kDa under reducing (R) condition, and 35-45 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
His tag at the N-terminus

Protein Format
Soluble

Form

LYOPH

Reconstitution

Please see Certificate of Analysis for specific instructions.

Endotoxin

<1.0 EU/μg by the LAL method

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 coditions 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

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