

## Product datasheet for **AR09159PU-L**

### VEGF-A (Isoform 121) (207-327) Human Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	VEGF-A (Isoform 121) (207-327) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MAPMAEGGGQ NHHEVVKFMD VYQRSYCHPI ETLVDIFQEY PDEIEYIFKP SCVPLMRCGG CCNDEGLECV PTEESNITMQ IMRIKPHQGG HIGEMSFLQH NKCECRPKKD RARQEKCDKP RR
Predicted MW:	14.2 kDa
Concentration:	lot specific
Purity:	>95% by SDS PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 10% glycerol
Bioactivity:	Biological: Measured in a cell proliferation assay using HUVEC human umbilical vein endothelial cells. The ED50 for this effect is less or equal to 4 ng/ml.
Preparation:	Liquid purified protein
Protein Description:	Recombinant VEGF121 protein was expressed in E.coli and purified by conventional chromatography, after refolding of the isolated inclusion bodies in a renaturation buffer.
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	<a href="#">NP_001020537</a>
Locus ID:	7422
UniProt ID:	<a href="#">P15692</a>
Cytogenetics:	6p21.1
Synonyms:	MVCD1; VEGF; VPF



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**Summary:**

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. [provided by RefSeq, Jun 2020]

**Protein Families:**

Druggable Genome, Secreted Protein

**Protein Pathways:**

Bladder cancer, Cytokine-cytokine receptor interaction, Focal adhesion, mTOR signaling pathway, Pancreatic cancer, Pathways in cancer, Renal cell carcinoma, VEGF signaling pathway

**Product images:**