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Product datasheet for DA3512X

VEGF-A (Isoform 121) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	VEGF-A (Isoform 121) human protein, 20 µg
Species:	Human
Expression Host:	Insect
Predicted MW:	36 kDa
Purity:	>90% > 90%, by SDS-PAGE and visualised by silver stain.
Buffer:	Presentation State: Purified State: Lyophilized without buffer and stabilizer.
Bioactivity:	Biological: The ED50 for stimulation of 3H-thymidine incorporation and cell proliferation by human umbilical vein endothelial cells for VEGF121 has been determined to be in the range of 2-5 ng/ml. Specific: 5 x 10e5 units/mg
Endotoxin:	< 0.1 ng per ug of VEGF.
Reconstitution Method:	Restore in PBS or medium containing at least 0.1% human or bovine serum albumin to a concentration not lower than 50 µg/ml.
Preparation:	Lyophilized without buffer and stabilizer.
Protein Description:	Human Vascular Endothelial Growth Factor121 (VEGF121)is a 18 kDa protein consisting of 121 amino acid residues, produced as a homodimer.
Note:	Centrifuge vials before opening!
Storage:	Store Lyophilized at -20°C to -70°C. Reconstituted VEGF121 should be stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles!
Stability:	Shelf life: One year from despatch.
RefSeq:	NP_001020537
Locus ID:	7422
UniProt ID:	P15692
Cytogenetics:	6p21.1

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Synonyms: MVCD1; VEGF; VPF

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