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Product datasheet for TP723804

VEGFA (NM_001025370) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Human vascular endothelial growth factor A (VEGFA), transcript variant 6
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	Human VEGF-121, the region of Ala207-Arg327, from gene Accession# NM_001025370.2
Tag:	Tag Free
Predicted MW:	14 kDa
Concentration:	lot specific
Purity:	>98%, as determined by Coomassie stained SDS-PAGE.
Buffer:	5 mM citric acid, 5 mM NaHPO4, 0.15 M NaCl, pH 4.0
Bioactivity:	The ED50 is 0.5 - 2.5 ng/ml, corresponding to a specific activity of 0.4 - 2.0 x 10^6 units/mg, determined by the dose dependent stimulation of HUVEC cells proliferation.
Endotoxin:	Less than 0.01 ng per µg protein as determined by the LAL method
Storage:	Store at -80°C.
Stability:	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to 6 months, or at -70°C or below until the expiration date. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
RefSeq:	NP_001020541
Locus ID:	7422
UniProt ID:	P15692
RefSeq Size:	3410
Cytogenetics:	6p21.1
RefSeq ORF:	981
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