Recombinant Mouse Vascular Endothelial Growth Factor A 164AA

Cat. No. Vegfa-464M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant mouse Vascular endothelial growth factor is a disulfide-linked homodimer protein consisting of 165 amino acid residue subunits, and migrates as an approximately 28 kDa protein under non-reducing and as 14kDa under reducing conditions in SDS-PAGE. It was expressed in*E.coli.*
Species	Mouse
Source	E.coli
Description	VEGF is a homodimeric heavily glycosylated protein.The human factor occurs in several molecular variants of 121, 162, 145, 148, 165, 183, 189 , 206 amino acids, arising by alternative splicing of the mRNA.The splice forms of VEGF differ in biological properties such as the receptor types, which they recognize and their interaction with heparan sulfate proteoglycans. The 165 amino acid form of the factor is the most common form in most tissues. The interaction of VEGF with heparin-like molecules of the extracellular matrix is required for efficient receptor binding. Protamine sulfate and suramin are capable of replacing the receptor-bound factor. The high-affinity receptor for VEGF, now known as VEGFR1, has been identified as the gene product of the FLT-1. Another receptor for VEGF, now known as VEGFR2, is KDR, also known as FLK-1. A factor that competes with the 165 amino acid form of VEGF for receptor binding is PLGF. A third receptor type, VEGFR3 is known also as FLT- 4. An isoform-specific receptor for VEGF165 has been identified as human Neuropilin-1.

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Purity	>95%, as determined by SDS-PAGE and HPLC.
Biological Activity	The ED(50) was determined by the dose-dependent proliferation of human umbilical vein endothelial cells and was found to be in the range of 2.0-4.0 ng/ml.
Protein Sequence	MNFLLSWVHW TLALLLYLHH AKWSQAAPTT EGEQKSHEVI KFMDVYQRSY CR PIE TLVDI FQEYPDEIEY IFKPSCVPLM RCAGCCNDEA LECVPTSESN ITMQ IMRIKP HQSQHIGEMS FLQHSRCECR PKKDRTKPEN HCEPCSERRK HL FV QDPQTC KCSCKNTDSR CKARQLELNE RTCRCDKPRR.
Endotoxin	Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/ɡ(1EU/ɡ).
Presentation	Recombinant mouse VEGF was lyophilized from 0.2 μm filtered PBS solution, pH 7.0.
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Storage	The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2°C - 8°C for one month, or at -20° C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name	Vegfa vascular endothelial growth factor A [Mus musculus]
Synonyms	Vegfa; vascular endothelial growth factor A; Vpf; Vegf; Vegf-a; Vegf120; Vegf164; VEGF120; VPF; Vegf188; OTTMUSP00000017463; VEGF164; OTTMUSP00000017464; VEGF-A; OTTMUSP00000022243; vascular permeability factor; VEGF188; MGC70609; MVCD1; VEGF; Vascular permeability factor; vascular

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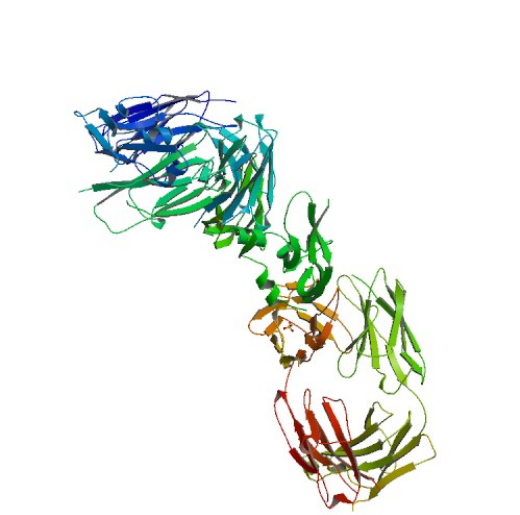
	endothelial growth factor; vascular endothelial growth factor isoform VEGF165
Gene ID	22339
mRNA Refseq	NM_001025250
Protein Refseq	NP_001020421
UniProt ID	Q00731
Chromosome Location	17 C; 17 24.2 cM
Pathway	Bladder cancer; Focal adhesion; Cytokine-cytokine receptor interaction; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; VEGF signaling pathway; mTOR signaling pathway
Function	growth factor activity; heparin binding
PDB rendering based on 1bj1.	

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