Recombinant Mouse Vascular Endothelial Growth Factor 164

Cat. No. VEGFA-51M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Vascular Endothelial Growth Factor produced in*Sf9*insect cells is a double, glycosylated, polypeptide chain containing 164 amino acids and having a molecular mass of 48 kDa. The VEGF is purified by proprietary chromatographic techniques.
Species	Mouse
Source	Sf9 Cells
Description	Vascular endothelial growth factor is an important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types. VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell growth, promotes cell migration, and inhibits apoptosis. In vitro, VEGF has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator and increases microvascular permeability and was originally referred to as vascular permeability factor. Elevated levels of this protein is linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by

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	SDS-PAGE.
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with no additives.
Solubility	It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor-Sf9 in sterile 18MΩ-cm H_2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The ED_{50}range, determined by the dose-dependent proliferation of human umbilical vein endothelial cells (HUVEC) (measured by 3H-thymidine uptake) is 1-2 ng/ml, corresponding to a specific activity of 1x106 Units/mg.
Storage	Lyophilized Vascular Endothelial Growth Factor Sf9 although stable at room temperature for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution VEGF-Sf9 should be stored at 4℃ between 2-7 days and for future use below -18℃. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent 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 endothelial growth factor; vascular endothelial growth factor isoform VEGF165
Gene ID	22339

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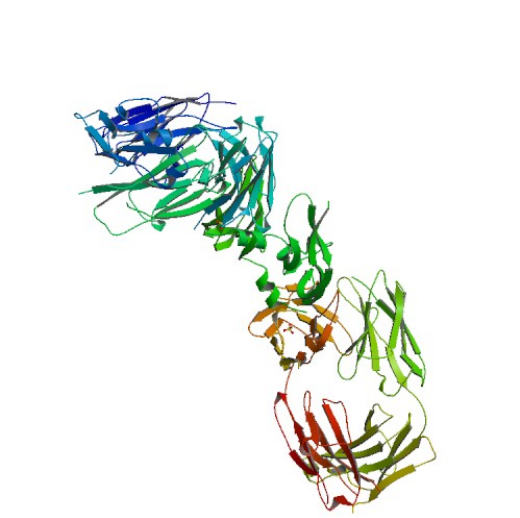
mRNA Refseq	NM_001025250
Protein Refseq	NP_001020421
UniProt ID	Q00731
Chromosome Location	17 C; 17 24.2 cM
Pathway	Bladder cancer; Focal adhesion; Cytokine-cytokine receptor interaction; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; VEGF signaling pathway; mTOR signaling pathway
Function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

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