Recombinant Human Vascular Endothelial Growth Factor 165

Cat. No. VEGFA-50H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Vascular Endothelial Growth Factor produced in*CHO*cells is a double, glycosylated, polypeptide chain containing 165 amino acids and migrates as 42 kDa in SDS-PAGE under non-reducing conditions. The VEGF is purified by proprietary chromatographic techniques.
Species	Human
Source	CHO
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 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by

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	SDS-PAGE.
Formulation	The protein was lyophilized from a Phosphate- Buffered Saline, pH 7.4.
Solubility	It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Determined by its ability to stimulate 3H-Thymidine incorporation in human ublical vein endothelial cells, the ED50 for this effect was found to be 2-6 ng/ml.
Storage	Lyophilized Vascular Endothelial Growth Factor although stable at room temperature for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution VEGF 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 [Homo sapiens]
Synonyms	VEGFA; vascular endothelial growth factor A; VPF; VEGF; MVCD1; VEGF-A; MGC70609; vascular permeability factor; vascular endothelial growth factor isoform; VEGF165; vascular endothelial growth factor
Gene ID	7422
mRNA Refseq	NM_001025366
Protein Refseq	NP_001020537

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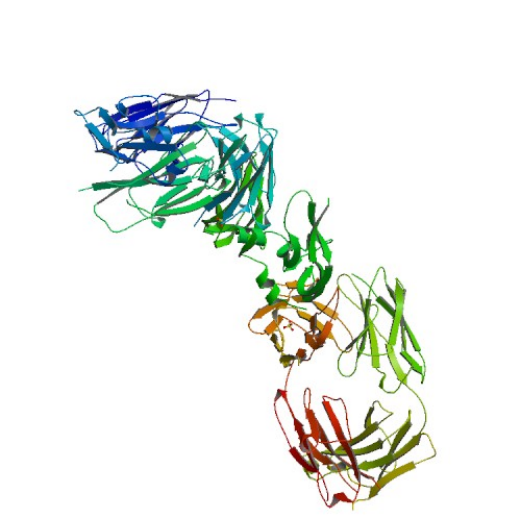
MIM	192240
UniProt ID	P15692
Chromosome Location	6p12
Pathway	Bladder cancer; mTOR signaling pathway; Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; VEGF signaling pathway; Hemostasis; Signaling by VEGF
Function	cell surface binding; cytokine activity; extracellular matrix binding; fibronectin binding; growth factor activity; heparin binding; platelet-derived growth factor receptor; binding; protein homodimerization activity; vascular endothelial growth factor receptor 1 binding; vascular endothelial growth factor receptor 2 binding
PDB rendering based on 1bj1.	

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