

Active Recombinant Human VEGF165

Cat. No. VEGFA-156H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human vascular endothelial growth factor A was expressed in modified human 293 cells.
Species	Human
Source	HEK293
Description	Vascular endothelial growth factor (VEGF) is a member of the cysteine-knot growth factor superfamily. Five VEGF splice variants exist including VEGF-121, VEGF-145, VEGF-165, VEGF-189; and VEGF-206. VEGF-165 is the most abundant and active isoform. VEGF-165 functions as a growth factor in angiogenesis, vasculogenesis and endothelial cell growth. VEGF-165 acts as a specific mitogen and survival factor for vascular endothelial cells, inducing microvascular permeability, cell migration and regulates the differentiation and survival of hematopoietic progenitor cells to affect hematopoiesis, immune function and tumour progression. VEGF-165 also plays roles in neurogenesis and blood brain barrier function.
Theoretical Sequence	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPSCVPLMR CGGCCNDEGLECVPTESNITMQIMRIKPHQGGHIGEMSFLQHNKCECRPKKDRA RQENPCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRCDKPRR.
Molecular Mass	VEGF-165 migrates as a band between 15 and 25 kDa in SDS-PAGE. This compares with the predicted molecular mass of 19.2kDa.
PI	Unmodified human VEGF-165 has a predicted pI of 7.6.

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Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.
Activity	The ED ₅₀ of VEGF-165 is typically 0.2 - 2.0 ng/ml as measured in a cell proliferation assay using human umbilical vein endothelial (HUVEC) cells.

GENE INFORMATION

Gene Name	VEGFA vascular endothelial growth factor A [Homo sapiens]
Synonyms	vascular endothelial growth factor A; VPF; VEGF; MVCD1; VEGF-A; MGC70609; VEGFA; vascular permeability factor; vascular endothelial growth factor isoform VEGF165; Vascular permeability factor
Gene ID	7422
mRNA Refseq	NM_001025366
Protein Refseq	NP_001020537
MIM	192240
UniProt ID	P15692

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Chromosome Location	6p12
Pathway	Bladder cancer; Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; VEGF signaling pathway; mTOR 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.	