

Active Recombinant Human VEGFA

Cat. No. VEGFA-521H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human VEGF165 Protein (rhVEGF165) Ala207-Arg371 (Accession# NP_001020539) was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	207-371 a.a.
Description	VEGF165 is the most abundant splice variant of VEGF-A. VEGF165 is produced by a number of cells including endothelial cells, macrophages and T cells. VEGF165 is involved in angiogenesis, vascular endothelial cell survival, growth, migration and vascular permeability. VEGF gene expression is induced by hypoxia, inflammatory cytokines and oncogenes. VEGF165 binds to heparan sulfate and is retained on the cell surface and in the extracellular matrix. VEGF165 binds to the receptor tyrosine kinases, VEGFR1 and VEGFR2. VEGF165 is the only splice variant that binds to co-receptors NRP-1 and NRP-2 that function to enhance VEGFR2 signaling. Binding of VEGF165 to VEGFR1 and VEGFR2 leads to activation of the PI3K/AKT, p38 MAPK, FAK and paxillin. VEGF plays a key role in tumor angiogenesis in many cancers.
Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Bio-activity	The bio-activity was determined by dose-dependent stimulation of the proliferation of HUVEC cells. The ED50<5ng l,="" corresponding="" to="" a="" specific="" activity=""

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of="">2X10⁵ Unit/mg.

Molecular Mass

rhVEGF165 contains no "tags" and has a calculated MW of 19 kDa. DTT-reduced protein migrates as a 24 kDa polypeptide and the non-reduced cystine-linked homodimer migrates as a 43 kDa protein.

Endotoxin

Less than 1.0 EU per µg of the rhVEGF165 by the LAL method.

Purity

>98% as determined by SDS-PAGE of reduced (+) and non-reduced (-) rhVEGF165.

Storage

Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4 centigrade-8 centigrade); After reconstitution under sterile conditions for 1 month (4 centigrade-8 centigrade) or 3 months (-20 centigrade to -70 centigrade).

GENE INFORMATION

Gene Name

VEGFA vascular endothelial growth factor A [Homo sapiens]

Official Symbol

VEGFA

Synonyms

VEGFA; vascular endothelial growth factor A; vascular endothelial growth factor , VEGF; VEGF A; VPF; vascular permeability factor; VEGF; MVCD1; MGC70609;

Gene ID

7422

mRNA Refseq

NM_001025366

Protein Refseq

NP_001020537

UniProt ID

P15692

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Chromosome Location	6p12
Pathway	Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Endochondral Ossification, organism-specific biosystem; Focal adhesion, organism-specific biosystem; Focal adhesion, conserved biosystem;
Function	cell surface binding; chemoattractant activity; cytokine activity; cytokine activity; extracellular matrix binding; fibronectin binding; growth factor activity; growth factor activity; heparin binding; heparin binding; platelet-derived growth factor recep

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