Active Recombinant mouse VEGF 164

Cat. No. Vegfa-26M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant mouse VEGF 164, expressed in Sf 21 insect cells using a baculovirus expression system. A DNA sequence encoding the mouse VEGF protein sequence (Claffey, K.P. et al., 1992 J. Biol. Chem. 267:16317 - 16322) was expressed in Sf 21 insect cells using a baculovirus expression system.
Species	Mouse
Source	Sf21 Cells
Description	Vascular endothelial growth factor (VEGF), also known as vascular permeability factor (VPF) or vasculotropin, is a homodimeric 34 - 42 kDa, heparin-binding glycoprotein with potent angiogenic, mitogenic and vascular permeability-enhancing activities specific for endothelial cells. The amino acid sequence of VEGF exhibits primary structural, as well as limited amino acid sequence, homology with that of the A and B chains of PDGF. All eight cysteine residues involved in intra- and inter-chain disulfide bonds are conserved among these growth factors. A cDNA encoding a protein having a 53% amino acid sequence homology in the PDGF-like region of VEGF has been isolated from a human placental cDNA library. This protein, named placenta growth factor (PlGF), is now recognized to be a member of the VEGF family of growth factors. Based on its homology with VEGF, PlGF was also proposed to be an angiogenic factor. Two receptor tyrosine kinases have been described as putative VEGF receptors. Flt-1 (fms-like tyrosine kinase), and KDR (kinase-insert-domain-containing receptor) proteins have been shown to bind VEGF with high affinity.

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Form	Lyophilized from a 0.2 μm filtered solution in PBS containing 50 μg of bovine serum albumin per 1 μg of cytokine.
Bio-activity	Measured by its ability to stimulate 3H-thymidine incorporation in HUVE cells (Conn, G. et al., 1990, Pr centigrade. Natl. Acad. Sci. USA 87:1323 - 1327). The ED50 for this effect is typically 2 - 4 ng/mL.
Molecular Mass	The disulfide-linked homodimeric recombinant mouse VEGF, (consisting of two 164 amino acid residue subunits) is glycosylated and migrates as a 42 kDa protein in SDS-PAGE under non-reducing conditions.
Endotoxin	< 1.0 eu per 1 μg of the cytokine as determined by the lal
Purity	>97%, as determined by SDS-PAGE and visualized by silver stain.
Usage	FOR RESEARCH USE ONLY
Quality Control Test	Lyophilized samples are stable for up to six months at -20 centigrade to -70 centigrade. Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at 2 - 8 centigrade for one month or at -20 centigrade to -70 centigrade in a manual defrost freezer for three months without detectable loss of activity.
Reconstitution	It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a st centigradek solution of no less than 5 μg/mL.
Warning	Avoid repeated freeze-thaw cycles.

GENE INFORMATION

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Gene Name	Vegfa vascular endothelial growth factor A [Mus musculus]
Official Symbol	Vegfa
Synonyms	VEGFA; vascular endothelial growth factor A; vascular permeability factor; Vpf; Vegf; Vegf120; Vegf164; Vegf188;
Gene ID	22339
mRNA Refseq	NM_001025250
Protein Refseq	NP_001020421
UniProt ID	Q00731
Chromosome Location	17 C; 17 22.79 cM
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, organism-specific biosystem;
Function	cell surface binding; chemoattractant activity; cytokine activity; fibronectin binding; growth factor activity; heparin binding; platelet-derived growth factor receptor binding; protein heterodimerization activity; protein homodimerization activity; receptor agonist activity; vascular endothelial growth factor receptor 1 binding; vascular endothelial growth factor receptor 2 binding; vascular endothelial growth factor receptor binding;

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