

Active Recombinant Mouse Vegfa, His-tagged

Cat. No. Vegfa-36M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Vegfa was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Mouse
Source	Barley Grain
Description	Vascular endothelial growth factor (VEGF) stimulates vascular permeability and actively mediates both angiogenesis and vasculogenesis in the fetus as well as the adult. It binds to transmembrane receptors (VEGF R1 and R2) on endothelial cells, thereby promoting endothelial proliferation, migration and survival, and inhibiting apoptosis. VEGF is required during embryogenesis and has a role in wound healing in adults. Alternately spliced isoforms of VEGF have been identified in the mouse, consisting of 120, 164 and 188 amino acids (aa). VEGF164 shares 97% aa sequence identity with the corresponding regions of rat and 89% with human, and its biological activities are not species-specific.
Form	Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2
Bio-activity	Recombinant mouse VEGF164 was determined by its dose dependent effect on proliferation of Human Umbilical Vein Endothelial Cells (HUVEC). The ED50 for this effect is typically between 1-5 ng/ml corresponding to specific activity range of 0.2 - 1 x 10 ⁵ U/mg. Optimal concentration should be determined for specific applications and cell lines.

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Molecular Mass	Recombinant mouse VEGF164 contains 164 amino acids and a 16 a.a. histidine-based tag for a total length of 180 a.a. and has a predicted molecular mass of 21.4 kDa including his-tag. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 26 - 28 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.005ng per µg of product (<>)
Purity	Greater than 98% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

GENE INFORMATION

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

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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;