

Active Recombinant Mouse Vegfa Protein, His-tagged

Cat. No. Vegfa-7377M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant mouse VEGF-A protein, fused to His-tag, was expressed in E. coli and purified by using conventional chromatography techniques.
Species	Mouse
Source	E.coli
Description	This gene is a member of the PDGF/VEGF growth factor family. It encodes a heparin-binding protein, which exists as a disulfide-linked homodimer. This growth factor induces proliferation and migration of vascular endothelial cells, and is essential for both physiological and pathological angiogenesis. Disruption of this gene in mice resulted in abnormal embryonic blood vessel formation. This gene is upregulated in many known tumors and its expression is correlated with tumor stage and progression. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. There is also evidence for alternative translation initiation from upstream non-AUG (CUG) codons resulting in additional isoforms. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is antiangiogenic. Expression of some isoforms derived from the AUG start codon is regulated by a small upstream open reading frame, which is located within an internal ribosome entry site.
Form	Liquid

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Bio-activity	Measured in a cell proliferation assay using NIH-3T3 mouse embryonic fibroblast. The ED50 for this effect is 0.5-1.5 ng/mL. Activity Assay 1. Cell line: NIH-3T3 (Mus musculus/Mouse embryonic fibroblast) 2. Maintenance Condition: RPMI 1640 containing 10% FBS 3. Assay medium: serum free RPMI 1640 4. Cell density: 2×10^4 cells/well (96 well plate, final volume 100 μL) 5. Incubation time: 24 hr (after sample treatment) 6. Concentration range: 1 pg/mL – 1 μg/mL 7. Detection method: BrdU assay
Molecular Mass	16.3 kDa
AA Sequence	MGSSHHHHHHSSGLVPRGSHMAPTTEGEQKSHEVIKFMDVYQRSYCRPIETLVDIF QEYPDEIEYIFKPSCVPLMRCAGCCNDEALECVPTSESNITMQIMRIKPHQSQHIGEM SFLQHSRCECRPKKDRTKPEKCDKPRR
Purity	> 90 % by SDS-PAGE
Stability	Shelf life: one year from despatch.
Storage	Store undiluted at 2-8 centigrade for up to two weeks or (in aliquots) at -20 or -70 centigrade for longer. Avoid repeated freezing and thawing.
Concentration	0.5 mg/mL (determined by Bradford assay)
Storage Buffer	20 mM Tris-HCl buffer (pH 8.0) containing 10 % glycerol

GENE INFORMATION

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Gene Name	Vegfa vascular endothelial growth factor A [Mus musculus (house mouse)]
Official Symbol	Vegfa
Synonyms	Vegfa; vascular endothelial growth factor A; V; Veg; Vpf; Vegf; VEGF12; VEGF16; VEGF18; vascular endothelial growth factor A; vascular permeability factor
Gene ID	22339
mRNA Refseq	NM_001025250
Protein Refseq	NP_001020421
UniProt ID	Q00731
SDS-PAGE	