

Recombinant Human Vascular Endothelial Growth Factor 121, His-tagged

Cat. No. VEGFA-130H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant VEGF121 protein was expressed in E.coli and purified by using conventional chromatography techniques, 16.3 kDa (142aa).
Species	Human
Source	E.coli
Description	Vascular endothelial growth factor (VEGF) is homodimeric, heparin-binding glycoprotein involved in both angiogenesis and vasculogenesis. VEGF is expressed as multiple alternately spliced isoforms of VEGF121, 165, 189 and 206. VEGF binds to the receptor tyrosine kinases VEGF R1 (Flt-1) and VEGF R2 (KDR/Flk-1) to activate signal transduction and regulate both physiological and pathological angiogenesis.
Sequences of amino acids	MGSSHHHHHH SSGLVPRGSH MAPMAEGGGQ NHHEVVKFMD VYQRSYCHPI ETLVDFIQEY PDEIEYIFKP SCVPLMRCGG CCNDEGLECV PTEESNITMQ IMRIKPHQGQ HIGEMSFLQH NKCECRPKKD RARQEKCDKP RR
Formulation	Liquid in 20mM Tris pH 8.0 containing 10% glycerol.
Molecular Weight	16.3 kDa (142aa), confirmed by MALDI-TOF
Purity	> 95% by SDS - PAGE

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Concentration	0.5 mg/ml (determined by Bradford assay).
Endotoxin Level	The ED50 for this effect is< 4.2="" ng/ml.="" measured="" in="" a="" cell="" proliferation="" assay="" using="" nih-3t3="">
Biological activity	The ED50 for this effect is< 4.2="" ng/ml.="" measured="" in="" a="" cell="" proliferation="" assay="" using="" nih-3t3="">
Activity Assay	1.Cell line: NIH-3T3 (Mus mosculus/ embryo) 2.Maintenance Condition: RPMI 1640 containing 10% FBS 3.Assay Medium: serum free RPMI 1640 4.Cell Density: 2 x 10 ⁴ cells/well (96 well plate, final volume 100ul)5.Serum Free Starvation : 24hr with RPMI1640 6.Incubation Time: 24 hr (after sample treatment)7.Concentration Range: 100 pg/ml - 10 ug/ml 8.Detection method: BrdU assay
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

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

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MIM	192240
UniProt ID	P15692
Chromosome Location	6p12
Pathway	Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic 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
	