

Recombinant Human VEGFB, His-tagged

Cat. No. VEGFB-554H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant VEGF-B protein was expressed in E.coli and purified by using conventional chromatography techniques (22-207 aa).
Species	Human
Source	Human
Description	VEGF-B, also known as Vascular endothelial growth factor-B, is one of 5 mammalian VEGF family members, the others being VEGF-A, VEGF-C, VEGF-D, and placental growth factor (PlGF). VEGF-B binds to one of the VEGF receptor tyrosine kinases, namely VEGF receptor-1(VEGFR1, Flt1), but not to VEGFR2 and VEGFR3. VEGF-B is homodimeric, heparin-binding glycoprotein involved in embryonic angiogenesis and vasculogenesis.
Form	Liquid. In 20 mM Tris-HCl buffer (pH 7.5) containing 10% glycerol
Molecular Weight	21.6 kDa (207aa), confirmed by MALDI-TOF. (molecular weight on SDS-PAGE will appear higher)
Purity	> 90% by SDS - PAGE
Concentration	1 mg/ml (determined by Bradford assay)
Endotoxin Level	< 1.0 EU per 1µg of protein (determined by LAL method)

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Biological activity	Measured in a cell proliferation assay using NIH-3T3 mouse embryonic fibroblast. The ED50 for this effect is < 1ng/ml.
Activity Assay	1. Cell line: NIH-3T3 (Mus mosculus/Mouse embryonic fibroblast) 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. Incubation time : 24 hr (after sample treatment) 6. Concentration range: 10pg/ml - 10ug/ml 7. Detection method : BrdU assay
Sequences of amino acids	MGSSHHHHHH SSGLVPRGSH MPVSQPDAPG HQRKVVSUID VYTRATCQPR EVVPLTVEL MGTVAKQLVP SCVTVQRCGG CCPDDGLECV PTGQHQVRMQ ILMIRYPSSQ LGEMSLEEHS QCECRPKKKD SAVKPDRAAT PHHRPQPRSV PGWDSAPGAP SPADITHPTP APGPSAHAAP STTSALTPGP AAAAADAAAS SVAKGGA
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	VEGFB vascular endothelial growth factor B [Homo sapiens]
Official Symbol	VEGFB
Synonyms	VEGFB; VEGF-B; VEGFL; VRF; VEGF-related factor; vascular endothelial growth factor B; VEGF-related factor (VRF)
Gene ID	7423
mRNA Refseq	NM_003377

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Protein Refseq	NP_003368
MIM	601398
UniProt ID	P49765
Chromosome Location	11q13
Pathway	Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Renal cell carcinoma; mTOR signaling pathway; Hemostasis; Signaling by VEGF
Function	growth factor activity; heparin binding; protein binding; vascular endothelial growth factor receptor binding
PDBrendering based on 2c7w.	