

Recombinant Human KDR

Cat. No. KDR-61H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human KDR contains only the first 7 extracellular domains, which contain all the information necessary for ligand binding. The protein is purified by proprietary chromatographic techniques.
Species	Human
Source	Insect Cells
Description	Vascular endothelial growth factor (VEGF) is a major growth factor for endothelial cells. This gene encodes one of the two receptors of the VEGF. This receptor, known as kinase insert domain receptor, is a type III receptor tyrosine kinase. It functions as the main mediator of VEGF-induced endothelial proliferation, survival, migration, tubular morphogenesis and sprouting. The signalling and trafficking of this receptor are regulated by multiple factors, including Rab GTPase, P2Y purine nucleotide receptor, integrin alphaVbeta3, T-cell protein tyrosine phosphatase, etc.. Mutations of this gene are implicated in infantile capillary hemangiomas.
Molecular Mass	Recombinant Human KDR produced in baculovirus is monomeric, glycosylated, polypeptide having a molecular mass of 116 kDa.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	KDR was lyophilized from a concentrated (1 mg/ml) sterile solution containing 25mM MES pH-5.5 and 100mM NaCl.

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Purity	Greater than 95.0% as determined by SDS-PAGE.
Solubility	It is recommended to reconstitute the lyophilized VEGFR2 in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The activity of VEGFR2 D1-7 was determined by its ability to abolish the binding of iodinated VEGF to solid surfaces or cell surfaces receptors. The ED50 for this effect is typically 10.0 ng/ml, corresponding to a specific activity of 100,000IU/mg.
Amino acid sequence	<p>A SVGLPSVSLD LPRLSIQKDI LTIKANTTLQ ITCRGQRDL D WLWPNNQSGS EQRVEVTECS DGLFCKTLTI PKVIGNDTGA YKCFYRETDL ASVIYVYVQD YRSPFIASVS DQHG VVYITE NKNKTVVIP C LGSISNLNVS LCARYPEKRF VPDGNRISWD SKKGFTIPSY MISYAGMVFC EAKINDESYQ SIMYIVVVVG YRIYDVVLS P SHGIELSVGE KLVLNCTART ELNVGIDFNW EYPSSKHQHK KLVNRDLKTQ SGSEMKKFLS TLTIDGVTRS DQGLYTCAAS SGLMTKKNST FVRVHEKPFV AFGSGMESLV EATVGERVRI PAKYLGYP P EIKWYKNGIP LESNHTIKAG HVLTIMEVSE RDTGNYTVIL TNPISKEKQS HVVSLVVYVP PQIGEKSLIS PVDSYQYGTT QTLTCTVYAI PPPHHIHWY W QLEEECANEP SQAVSVTNPY PCEEWR SVED FQGGNKIEVN KNQFALIEGK NKTVSTLVIQ AANVSALYKC EAVNKVGRGE RVISFHVTRG PEITLQPDMQ PTEQESVSLW CTADRSTFEN LTWYKLG PQP LPIHVGELPT PVCKNLDTLW KLNATMFSNS TNDILIMELK NASLQDQGDY VCLAQDRKTK KRHCVVRQLT VLERVAPTIT GNLENQTTSI GESIEV SCTA SGNPPPQIMW FK DNETLVED SGIVLKDGNR NLTIRRV RKE DEGLYTCQAC SVLGCAKVEA FFIIEGA.</p>
Stability	Lyophilized VEGFR-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FLK1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

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OfficialSymbol KDR

GENE INFORMATION

Gene Name KDR kinase insert domain receptor (a type III receptor tyrosine kinase) [Homo sapiens]

Synonyms KDR; kinase insert domain receptor (a type III receptor tyrosine kinase); FLK1; CD309; VEGFR; VEGFR2; Vascular endothelial growth factor receptor 2; VEGFR-2; Kinase insert domain receptor; Protein-tyrosine kinase receptor Flk-1; EC 2.7.10.1; fetal liver kinase-1; soluble VEGFR2; tyrosine kinase growth factor receptor

Gene ID 3791

mRNA Refseq NM_002253

Protein Refseq NP_002244

MIM 191306

UniProt ID P35968

Chromosome Location 4q11-q12

Pathway Cytokine-cytokine receptor interaction; Endocytosis; Focal adhesion; VEGF signaling pathway; Signaling by VEGF

Function ATP binding; growth factor binding; integrin binding; protein binding; transmembrane receptor protein tyrosine kinase activity

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