Active Recombinant Human KDR Protein, His&Avi tagged

Cat. No. KDR-79H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	VEGFR2 dimer protein contains a VEGFR2 extracellular domain (UniProt# P35968) fused with a proprietary dimer motif followed by a tandem His-Avi tag at the C-terminus.
Species	Human
Source	HEK293T
ProteinLength	20-764 aa
Description	Human vascular endothelial growth factor receptor 2 (VEGFR2) belongs to the Type IV receptor tyrosine kinase (RTK) family. VEGFR2 is a key receptor in the VEGF (Vascular Endothelial Growth Factor) signaling pathway, involved in angiogenesis, the formation of new blood vessels. VEGFR2 is also known as kinase insert domain receptor (KDR), cluster of differentiation 309 (CD309), and fetal liver kinase 1 (Flk1). VEGFR2, a Type I transmembrane protein, contains an extracellular domain with 7 immunoglobulin-like (Ig-like) domains, a single transmembrane domain, and an intracellular domain. VEGFR2 is mainly expressed on vascular endothelial cells and can bind VEGF-A and VEGF-D. VEGF binding by VEGFR2 causes it to homodimerize which is essential for it to stimulate cellular responses such as vasculogenesis and angiogenesis. In pathological conditions, ligand-independent dimerization of VEGFR2 can contribute to abnormal angiogenesis. Abnormal angiogenesis is associated with a variety of diseases such as tumor neovascularization, diabetic retinopathy,

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	rheumatoid arthritis, and age-related macular degeneration. Abnormal angiogenesis is a major contributing factor in the growth and spread of a variety of cancers and inhibition of VEGFR2 activity offers a potential and promising approach to cancer therapy.
Molecular Mass	187 kDa
Homodimer/Heterodimer	Homodimer
Purity	Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition
Application	Verified Applications: ELISA for VEGFR2-specific antibody and vascular endothelial growth factor A (VEGF-A) ligand protein binding assays. Suggested Applications: SPR & BLI for VEGFR2-specific antibody and VEGF-A protein binding assays. Animal immunization, RUO.
Storage	At -80 centigrade
Storage Buffer	0.2μm filtered PBS, pH 7.4, no preservatives
Shipping	Frozen Dry Ice

GENE INFORMATION

Gene ID	3791
Gene Name	KDR kinase insert domain receptor (a type III receptor tyrosine kinase) [Homo sapiens (human)]
Official Symbol	3791

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Synonyms	KDR; kinase insert domain receptor (a type III receptor tyrosine kinase); vascular endothelial growth factor receptor 2; CD309; FLK1; VEGFR; VEGFR2; soluble VEGFR2; fetal liver kinase 1; fetal liver kinase-1; protein-tyrosine kinase receptor Flk-1; tyrosine kinase growth factor receptor;
mRNA Refseq	NM_002253
Official Symbol 2	KDR
Gene ID 2	3791
Gene Name 2	KDR kinase insert domain receptor (a type III receptor tyrosine kinase) [Homo sapiens (human)]
mRNA Refseq 2	NM_002253
Protein Refseq 2	NP_002244
MIM 2	191306
UniProt ID 2	P35968
Bioactivity-Antibody Binding	Immobilized human VEGFR2-His-Avi dimer protein at 2 μg/mL (100 μL/well) can bind anti-human VEGFR2 monoclonal antibody with half maximal effective concentration (EC50) range of 13-51.8 ng/mL (QC tested).
Bioactivity-Antibody Binding	Immobilized human VEGF-A 2 μg/mL (100 μL/well) can bind human VEGFR2 dimer protein, His-Avi tag, with half maximal effective concentration (EC50)

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	range of 38.8-155.2 μg/mL (QC tested).
SDS-PAGE	MW: Molecular Weight marker reduced condition NR: VEGFR2 dimer under non-reduced condition

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