

VEGFR2/KDR Active Protein | KDR active protein

VEGFR2/KDR Protein, Human, Recombinant (Domain 2&3, hFc Tag)

CATALOG #
AAA257815

HOST
HEK293 Cells

PRODUCT SYNONYMS

VEGFR2/KDR; VEGFR2/KDR Protein; Human; Recombinant (Domain 2&3; hFc Tag); Human VEGFR2/Flk-1/CD309/KDR Protein (Domain 2&3; Fc Tag); CD309 Protein; Flk-1 Protein; FLK1 Protein; VEGFR Protein; VEGFR2 Protein; kinase insert domain receptor; KDR active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Asp120-Lys 327
Species	Human
Activity	Measured by its ability to inhibit VEGF-dependent proliferation of human umbilical vein endothelial cells (HUVEC) in the presence of 10ng/mL rhVEGF165. The ED50 for this effect is 20-80ng/mL.
Endotoxin	<1.0EU per ug protein as determined by the LAL method.
Predicted N Terminal	Asp 120
Tag	C-human IgG1-Fc
Protein Construction	A DNA sequence encoding the human KDR (NP_002244.1)(Asp120-Lys327) was expressed with the Fc region of human IgG1 at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.



SDS-PAGE

Application Data
Measured by its ability to inhibit VEGF-dependent proliferation of human umbilical vein endothelial cells (HUVEC) in the presence of 10 ng/mL rhVEGF165. The ED50 for this effect is 20-80 ng/mL.

ADDITIONAL INFORMATION

Related Product Information for KDR active protein	Background: VEGFR2 also called KDR or Flk-1, is identified as the receptor for VEGF and VEGFC and an early marker for endothelial cell progenitors, whose expression is restricted to endothelial cells in vivo. VEGFR2 was shown to be the primary signal transducer for angiogenesis and the development of pathological conditions such as cancer and diabetic retinopathy. It has been shown that VEGFR2 is expressed mainly in the endothelial cells, and the expression is upregulated in the tumor vasculature. Thus the inhibition of VEGFR2 activity and its downstream signaling are important targets for the treatment of diseases involving angiogenesis. VEGFR2 transduces the major signals for angiogenesis via its strong tyrosine kinase activity. However, unlike other representative tyrosine kinase receptors, VEGFR2 does not use the Ras pathway as major downstream signaling but rather uses the phospholipase C-protein kinase C pathway to signal mitogen-activated protein (MAP)-kinase activation and DNA synthesis. VEGFR2 is a direct and major signal transducer for pathological angiogenesis, including cancer and diabetic retinopathy, in cooperation with many other signaling partners; thus, VEGFR2 and its downstream signaling appear to be critical targets for the suppression of these diseases. VEGF and VEGFR2-mediated survival signaling are critical to endothelial cell survival, maintenance of the vasculature and alveolar structure, and regeneration of lung tissue. Reduced VEGF and VEGFR2 expression in emphysematous lungs has been linked to increased endothelial cell death and vascular regression.
Product Categories/Family for KDR active protein	Cancer Drug Targets Hemangioblast Markers Receptor Tyrosine Kinases (RTKs)
References	Shibuya M. (2006) Vascular endothelial growth factor (VEGF)-Receptor2: its biological functions, major signaling pathway, and specific ligand VEGF-E. Endothelium. 13(2): 63-9. Marwick JA, et al. (2010) Cigarette smoke regulates VEGFR2-mediated survival signaling in rat lungs. J Inflamm (Lond). 7(1): 11. Bruns AF, et al. (2010) Ligand-stimulated VEGFR2 signaling is regulated by co-ordinated trafficking and proteolysis. Traffic. 11(1): 161-74.

NCBI AND UNIPROT INFORMATION

NCBI GI #	11321597
NCBI GeneID	3791
NCBI Accession #	NP_002244.1
NCBI GenBank Nucleotide #	NM_002253.2
UniProt Accession #	P35968; O60723; Q14178; A2RRS0; B5A925; C5IFA0
Molecular Weight	151,527 Da
NCBI Official Full Name	vascular endothelial growth factor receptor 2

NCBI Official Synonym Full Names	kinase insert domain receptor (a type III receptor tyrosine kinase)
NCBI Official Symbol	KDR
NCBI Official Synonym Symbols	FLK1; CD309; VEGFR; VEGFR2
NCBI Protein Information	vascular endothelial growth factor receptor 2; soluble VEGFR2; fetal liver kinase 1; fetal liver kinase-1; protein-tyrosine kinase receptor Flk-1; tyrosine kinase growth factor receptor
UniProt Protein Name	Vascular endothelial growth factor receptor 2
UniProt Gene Name	KDR
UniProt Synonym Gene Names	FLK1; VEGFR2; VEGFR-2; FLK-1; KDR
UniProt Entry Name	VGFR2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/vegfr2-kdr/257815>