FLK-1 Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	Flk-1, Polyclonal Antibody
Full Product Name	Flk-1 Polyclonal Antibody
Product Gene Name	anti-Flk-1 antibody
Clonality	Polyclonal
Molecular Weight	79,634 Da
OMIM	191306
3D Structure	ModBase 3D Structure for P35968
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-Flk-1 antibody	MBS8522705 is an antibody targeting Flk-1. Also known as Flk-1 Polyclonal Antibody.
Other Notes	Small volumes of anti-Flk-1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Flk-1. It may not necessarily be applicable to this product.

NCBI GI #	11321597
NCBI GeneID	3791
NCBI Accession #	NP_002244.1
UniProt Primary Accession #	P35968
UniProt Secondary Accession #	O60723; Q14178; A2RRS0; B5A925; C5IFA0
UniProt Related Accession #	P35968
GenBank Nucleotide #	NM_002253.3
NCBI Official Full Name	vascular endothelial growth factor receptor 2
NCBI Official Synonym Full Names	kinase insert domain receptor
NCBI Official Symbol	KDR
NCBI Official Synonym Symbols	FLK1; CD309; VEGFR; VEGFR2
UniProt Protein Name	Vascular endothelial growth factor receptor 2
UniProt Synonym Protein Names	Fetal liver kinase 1; FLK-1; Kinase insert domain receptor; KDR; Protein-tyrosine kinase receptor flk-1; CD_antigen: CD309
Protein Family	Vascular endothelial growth factor receptor
UniProt Gene Name	KDR
UniProt Synonym Gene Names	FLK1; VEGFR2; VEGFR-2; FLK-1; KDR
NCBI Protein Information	vascular endothelial growth factor receptor 2

NCBI Summary for Flk-1	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. [provided by RefSeq, May 2009]
UniProt Comments for Flk-1	Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFC and VEGFD. Plays an essential role in the regulation of angiogenesis, vascular development, vascular permeability, and embryonic hematopoiesis. Promotes proliferation, survival, migration and differentiation of endothelial cells. Promotes reorganization of the actin cytoskeleton. Isoforms lacking a transmembrane domain, such as isoform 2 and isoform 3, may function as decoy receptors for VEGFA, VEGFC and/or VEGFD. Isoform 2 plays an important role as negative regulator of VEGFA- and VEGFC-mediated lymphangiogenesis by limiting the amount of free VEGFA and/or VEGFC and preventing their binding to FLT4. Modulates FLT1 and FLT4 signaling by forming heterodimers. Binding of vascular growth factors to isoform 1 leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, reorganization of the actin cytoskeleton and activation of PTK2/FAK1. Required for VEGFA-mediated induction of NOS2 and NOS3, leading to the production of the signaling molecule nitric oxide (NO) by endothelial cells. Phosphorylates PLCG1. Promotes phosphorylation of FYN, NCK1, NOS3, PIK3R1, PTK2/FAK1 and SRC.
Research Articles on Flk-1	**1.** Increased expression of VEGFR2 correlated with differentiation.
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