ARG23968
anti-VEGFR2 antibody [CH-11]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [CH-11] recognizes VEGFR2
Tested Reactivity	Hu, Ms
Tested Application	ELISA, ICC/IF, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	CH-11
Isotype	IgG1
Target Name	VEGFR2
Species	Human
Immunogen	Recombinant fragment corresponding to aa. 1158-1345 (within the intracellular region) of Mouse VEGFR2.
Conjugation	Un-conjugated
Alternate Names	FLK1; VEGFR; CD antigen CD309; FLK-1; Fetal liver kinase 1; VEGFR2; Vascular endothelial growth factor receptor 2; VEGFR-2; CD309; Kinase insert domain receptor; EC 2.7.10.1; Protein-tyrosine kinase receptor flk-1; KDR

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
ICC/IF	Assay-dependent
IHC-P	Assay-dependent
WB	Assay-dependent

Application Note	IHC-P: Antigen Retrieval: Heat mediation was performed in EDTA (pH 8.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Placenta tissue, HUVEC.
Observed Size	~ 200 kDa and 230 kDa in HUVEC cell lysates.

Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS and 0.1% Sodium azide.

Preservative	0.1% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	KDR
Gene Full Name	kinase insert domain receptor
Background	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]
Function	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. [UniProt]
Calculated Mw	152 kDa
PTM	N-glycosylated. Ubiquitinated. Tyrosine phosphorylation of the receptor promotes its poly-ubiquitination, leading to its degradation via the proteasome or lysosomal proteases. Autophosphorylated on tyrosine residues upon ligand binding. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit. Phosphorylation at Tyr-951 is important for interaction with SH2D2A/TSAD and VEGFA-mediated reorganization of the actin cytoskeleton. Phosphorylation at Tyr-1175 is important for interaction with PLCG1 and SHB. Phosphorylation at Tyr-1214 is important for interaction with NCK1 and FYN. Dephosphorylated by PTPRB. Dephosphorylated by PTPRJ at Tyr-951, Tyr-996, Tyr-1054, Tyr-1059, Tyr-1175 and Tyr-1214. The inhibitory disulfide bond between Cys-1024 and Cys-1045 may serve as a specific molecular switch for H(2)S-induced modification that regulates VEGFR2 function. [UniProt]
Cellular Localization	Cell junction. Endoplasmic reticulum. Isoform 1: Cell membrane; Single-pass type I membrane protein. Cytoplasm. Nucleus. Cytoplasmic vesicle. Early endosome. Note=Detected on caveolae-enriched lipid rafts at the cell surface. Is recycled from the plasma membrane to endosomes and back again. Phosphorylation triggered by VEGFA binding promotes internalization and subsequent degradation. VEGFA binding triggers internalization and translocation to the nucleus. Isoform 2 and 3: Secreted. [UniProt]