

ARG40762 anti-VEGFR2 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes VEGFR2
Tested Reactivity	Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	VEGFR2
Species	Mouse
Immunogen	Recombinant protein corresponding to A20-L244 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
	FACS	1 µg - 3 µg /10 ⁶ cell
	ICC/IF	1:200 - 1:1000
	IHC-P	1:200 - 1:1000
	IP	1:100
	WB	1:500 - 1:2000

Application Note IHC-P: Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0) for 20 min.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

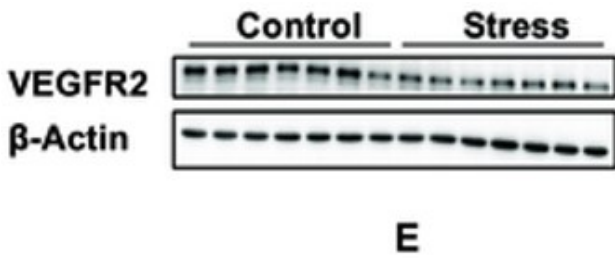
Form	Liquid
Buffer	0.2% Na2HPO4, 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C 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

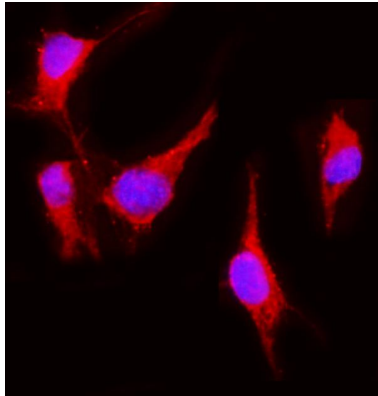
Gene Symbol	KDR
Gene Full Name	kinase insert domain receptor
Background	Vascular endothelial growth factor (VEGF) is a major growth factor for endothelial cells. This gene encodes one of the two receptors of the VEGF. This receptor, known as kinase insert domain receptor, is a type III receptor tyrosine 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. Isoform 2: Secreted. Isoform 3: Secreted. [UniProt]



ARG40762 anti-VEGFR2 antibody WB image

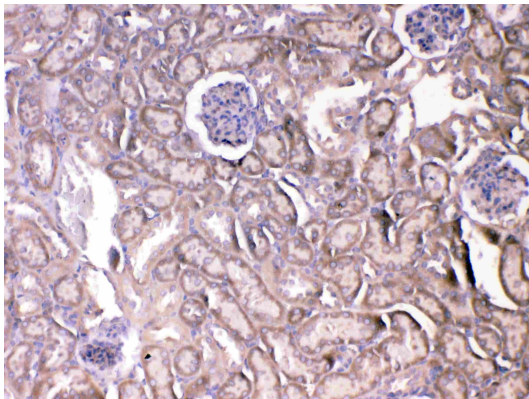
Western blot: Mouse hippocampus stained with ARG40762 anti-VEGFR2 antibody at 1:1000 dilution.

From Junzhuang Chang et al. Research (Wash D C). (2023), [doi: 10.34133/research.0120](https://doi.org/10.34133/research.0120), Fig. 4E.



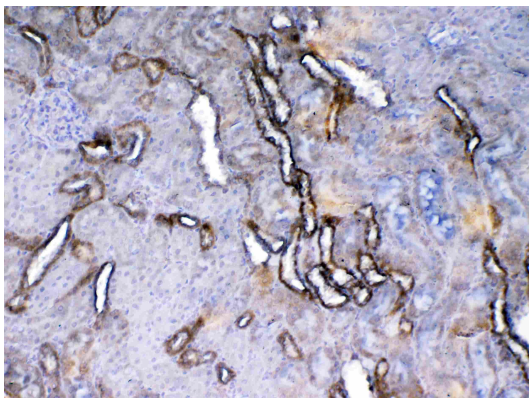
ARG40762 anti-VEGFR2 antibody ICC/IF image

Immunofluorescence: NIH/3T3 cells were blocked with 10% goat serum and then stained with ARG40762 anti-VEGFR2 antibody (red) at 2 µg/ml dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



ARG40762 anti-VEGFR2 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse kidney tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40762 anti-VEGFR2 antibody at 1 µg/ml, overnight at 4°C.



ARG40762 anti-VEGFR2 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat kidney tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40762 anti-VEGFR2 antibody at 1 µg/ml, overnight at 4°C.