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VEGF Receptor 2 Antibody

Rabbit mAb
Catalog # AP90420

Product Information

Application	WB, IP
Primary Accession	P35968
Reactivity	Human
Clonality	Monoclonal
Other Names	EC 2.7.10.1; FLK1; KDR; VGFR2; VGR2; VEGFR2; kinase insert domain receptor; protein-tyrosine kinase receptor Flk-1; vascular endothelial growth factor receptor 2;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	151527

Additional Information

Dilution	WB 1:500~1:1000 IP 1:20
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human VEGF Receptor 2
Description	VEGFR-2 is a receptor tyrosine kinase of the VEGFR family. High affinity receptor for VEGF and VEGF-C. Ligand binding induces autophosphorylation and activation. Activated receptor recruits proteins including Shc, GRB2, PI3K, Nck, SHP-1 and SHP-2.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	KDR (HGNC:6307)
Synonyms	FLK1, VEGFR2
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.

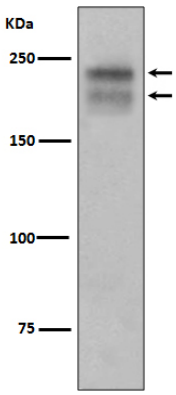
Cellular Location

Cell junction. Endoplasmic reticulum. Cell membrane. Note=Localized with RAP1A at cell-cell junctions (By similarity). Colocalizes with ERN1 and XBP1 in the endoplasmic reticulum in endothelial cells in a vascular endothelial growth factor (VEGF)-dependent manner (PubMed:23529610). {ECO:0000250, ECO:0000269|PubMed:23529610} [Isoform 2]: Secreted.

Tissue Location

Detected in cornea (at protein level). Widely expressed.

Images



Western blot analysis of VEGFR2 expression in Human placenta lysate.

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