

Anti-VEGFR2/KDR Antibody
Catalog # ABO11297

Specification

Anti-VEGFR2/KDR Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	P35968
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Vascular endothelial growth factor receptor 2(KDR) detection. Tested with WB, IHC-P, IHC-F, ICC in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-VEGFR2/KDR Antibody - Additional Information

Gene ID 3791

Other Names

Vascular endothelial growth factor receptor 2, VEGFR-2, 2.7.10.1, Fetal liver kinase 1, FLK-1, Kinase insert domain receptor, KDR, Protein-tyrosine kinase receptor flk-1, CD309, KDR, FLK1, VEGFR2

Calculated MW

151527 MW KDa

Application Details

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Cell junction . Endoplasmic reticulum . 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). .

Tissue Specificity

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

Protein Name

Vascular endothelial growth factor receptor 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human VEGF Receptor 2(454-469aa HHHWYWQLEEEECANE).

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.

Anti-VEGFR2/KDR Antibody - 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

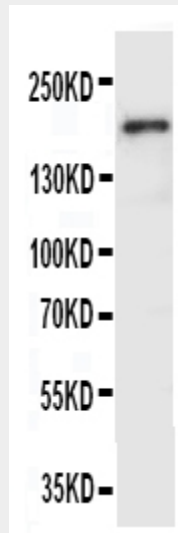
Detected in cornea (at protein level). Widely expressed.

Anti-VEGFR2/KDR Antibody - Protocols

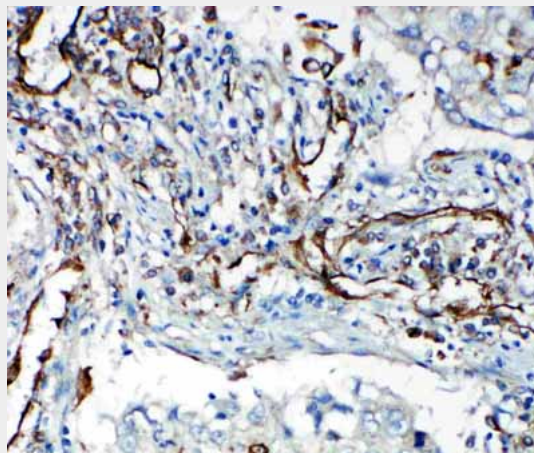
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

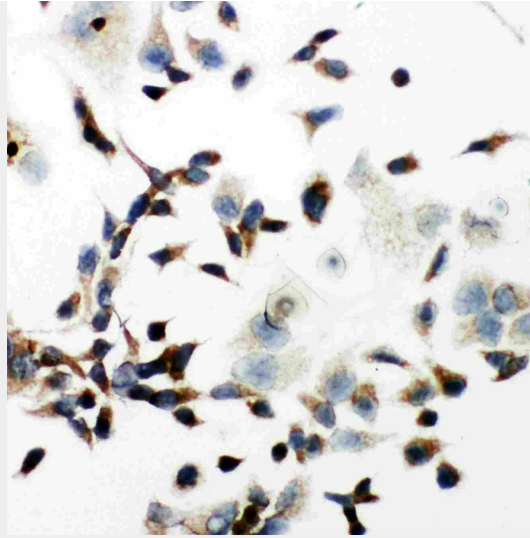
Anti-VEGFR2/KDR Antibody - Images



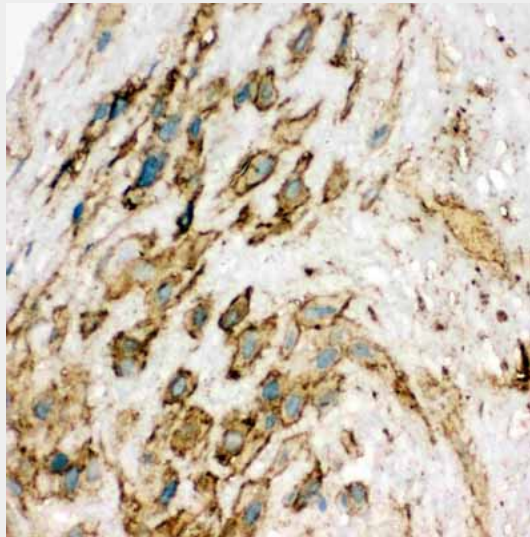
Anti-VEGF Receptor 2 antibody, ABO11297, Western blottingWB: SMMC Cell Lysate



Anti-VEGF Receptor 2 antibody, ABO11297, IHC(P)IHC(P): Human Lung Cancer Tissue



Anti-VEGF Receptor 2 antibody, ABO11297, ICC/IC: HELA Cell



Anti-VEGF Receptor 2 antibody, ABO11297, IHC(F)/IHC(F): Human Placenta Tissue

Anti-VEGFR2/KDR Antibody - Background

KDR(Kinase Insert Domain Receptor), also known as FLK1, VEGFR or VEGFR2, is a VEGF receptor. KDR is the human gene encoding it. Sait et al.(1995) likewise corrected the assignment to chromosome 4q11-q12 to the same region occupied also by PDGFRA and KIT, thus indicating the location of a cluster of receptor tyrosine kinase genes. Vascular endothelial growth factor(VEGF) is the only mitogen that specifically acts on endothelial cells. Its expression is upregulated by hypoxia, and its cell-surface receptor, known as fetal liver kinase-1(Flk1) in mouse, is exclusively expressed in endothelial cells(Plate et al., 1993). Flk1 is the mouse homolog of KDR(Matthews et al., 1991).