

### VEGFR2

Rabbit Monoclonal antibody(Mab) Catalog # AD80376

## **Specification**

# VEGFR2 - Product info

IHC-P, IHC P35968 Human Rabbit Monoclonal 151527

## VEGFR2 - Additional info

Gene ID Gene Name Other Names

3791 KDR

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 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=6307" target="\_blank">HGNC:6307</a>), FLK1, VEGFR2

Dilution IHC-P~~Ready-to-use IHC~~Ready-to-use

Storage Maintain refrigerated at 2-8°C

Precautions

VEGFR2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### VEGFR2 - Protein Information

Name KDR (HGNC:6307)

Synonyms Function FLK1, VEGFR2

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. Cell junction. Endoplasmic reticulum. 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. Detected in cornea (at protein level). Widely expressed.

Cellular Location

**Tissue Location** 

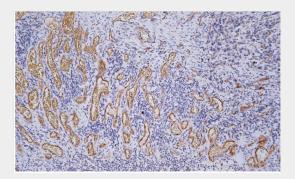
#### **VEGFR2 - Protocols**

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

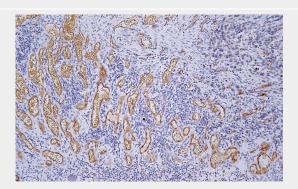
- Western Blot
- <u>Blocking Peptides</u>
- <u>Dot Blot</u>
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

#### VEGFR2 - Images





Gastric Cancer



Immunohistochemical analysis of paraffin-embedded seminoma tissue using AD80302 performed on the Abcarta® FAIP-30 Fully automated IHC platform.Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a Citrate buffer (pH6. 0).Samples were incubated with primary antibody(Ready-to-use) for 15 min at room temperature. AmpSeeTM Detection Systems[Abcepta:AR005] was used as the secondary antibody.