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# Anti-VEGFR2 / KDR / CD309 Reference Antibody (ramucirumab)

Recombinant Antibody
Catalog # APR10219

## Product Information

| | |
|---|---|
| **Application** | Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA |
| **Primary Accession** | P35968 |
| **Reactivity** | Cynomolgus, Human |
| **Clonality** | Monoclonal |
| **Isotype** | IgG1 |
| **Calculated MW** | 151527 |

## Additional Information

| | |
|---|---|
| **Target/Specificity** | VEGFR2 / KDR / CD309 |
| **Endotoxin** | |
| **Conjugation** | Unconjugated |
| **Expression system** | CHO |
| **Format** | Purified monoclonal antibody supplied in PBS, pH6.0, without preservative.This antibody is purified through a protein A column. |

## Protein Information

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|---|---|
| **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.

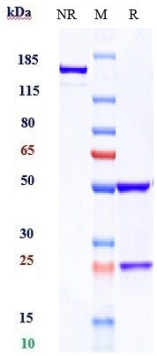
**Cellular Location**

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.

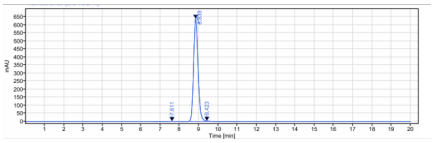
**Tissue Location**

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

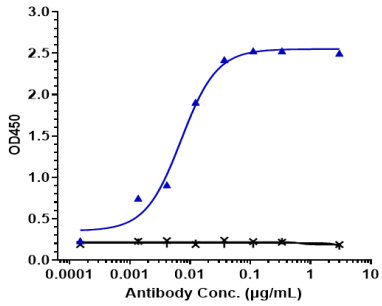
## Images



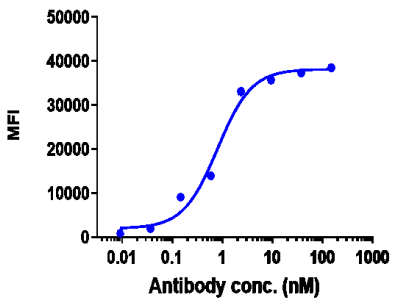

Anti-VEGFR2 / KDR / CD309 Reference Antibody (ramucirumab) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-VEGFR2 / KDR / CD309 Reference Antibody (ramucirumab) is 99.36%, determined by SEC-HPLC.




Immobilized human VGFR2 His at 4 ug/mL can bind Anti-VEGFR2 / KDR / CD309 Reference Antibody (ramucirumab), EC50=0.007088 ug/mL.




VEGFR2/NFAT-Luci-HEK293 cells were stained with Anti-VEGFR2 / KDR / CD309 Reference Antibody (ramucirumab) and negative control protein respectively, washed and then followed by PE and analyzed with FACS, EC50=0.8009 nM.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.