10320 Camino Santa Fe, Suite G
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# VEGFR3 Antibody
**Mouse Monoclonal Antibody (Mab)**
**Catalog # AM2233b**

## Specification

### VEGFR3 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC-P, FC,E** |
| Primary Accession | P35916 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **IgG2a** |
| Antigen Region | **1-439** |

### VEGFR3 Antibody - Additional Information

**Gene ID** 2324

**Other Names**
Vascular endothelial growth factor receptor 3, VEGFR-3, Fms-like tyrosine kinase 4, FLT-4, Tyrosine-protein kinase receptor FLT4, FLT4, VEGFR3

**Target/Specificity**
Purified His-tagged VEGFR3 protein was used to produced this monoclonal antibody.

**Dilution**
WB~~1:2000
IHC-P~~1:25
FC~~1:25
E~~Use at an assay dependent concentration.

**Format**
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
VEGFR3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### VEGFR3 Antibody - Protein Information

**Name** FLT4

**Synonyms** VEGFR3

**Function** Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. The secreted isoform 3 may function as a decoy receptor for VEGFC and/or VEGFD and play an important role as a negative regulator of VEGFC-mediated lymphangiogenesis and angiogenesis. Binding of vascular growth factors to isoform 1 or isoform 2 leads to the activation of several signaling cascades; isoform 2 seems to be less efficient in signal transduction, because it has a truncated C-terminus and therefore lacks several phosphorylation sites. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'.

**Cellular Location**
Cell membrane; Single-pass type I membrane protein Cytoplasm Nucleus. Note=Ligand-mediated autophosphorylation leads to rapid internalization [Isoform 2]: Cell membrane; Single-pass type I membrane protein

**Tissue Location**
Detected in endothelial cells (at protein level). Widely expressed. Detected in fetal spleen, lung and brain. Detected in adult liver, muscle, thymus, placenta, lung, testis, ovary, prostate, heart, and kidney.

## VEGFR3 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 Cytomety
- Cell Culture

## VEGFR3 Antibody - Images

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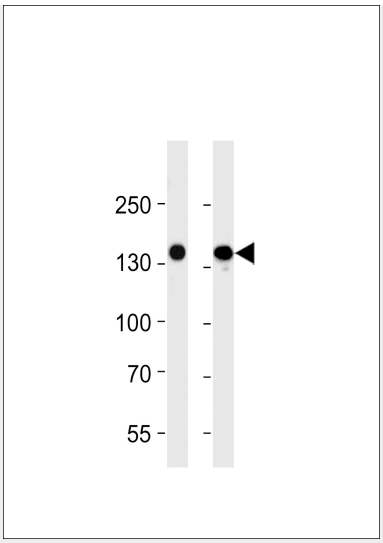
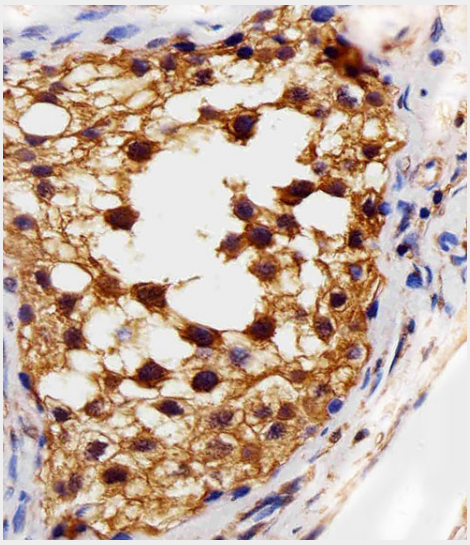



VEGFR3 Antibody (Cat. #AM2233b) western blot analysis in 293 and A549 cell line lysates (35µg/lane).This demonstrates the VEGFR3 antibody detected the VEGFR3 protein (arrow).



Immunohistochemical analysis of paraffin-embedded H. testis section using VEGFR3(Cat#). was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

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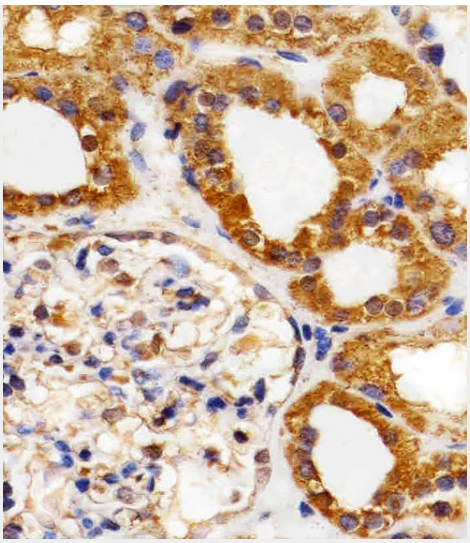
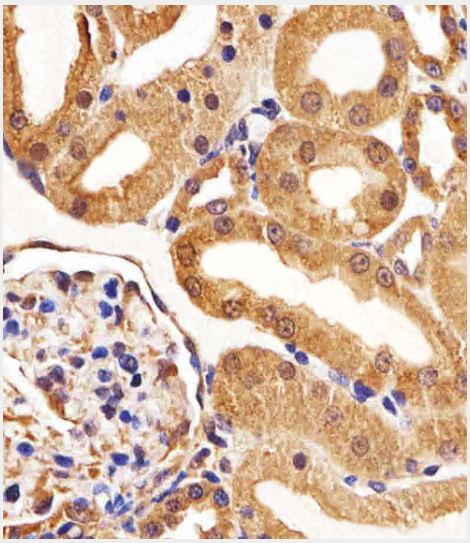
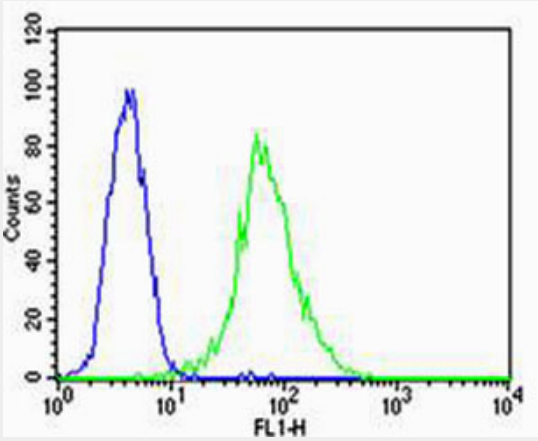


Immunohistochemical analysis of paraffin-embedded H. kidney section using VEGFR3(Cat#). was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded R. kidney section using VEGFR3(Cat#NA). NA was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Flow cytometric analysis of HUVEC cells using VEGFR3(green, Cat# AM2233b) compared to an isotype control of mouse IgG2a(blue). AM2233b was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody.

**VEGFR3 Antibody - Background**

Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. The secreted isoform 3 may function as a decoy receptor for VEGFC and/or VEGFD and play an important role as a negative regulator of VEGFC-mediated lymphangiogenesis and angiogenesis. Binding of vascular growth factors to isoform 1 or isoform 2 leads to the activation of several signaling cascades; isoform 2 seems to be less efficient in signal transduction, because it has a truncated C-terminus and therefore lacks several phosphorylation sites. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'.

**VEGFR3 Antibody - References**

Irrthum A., et al. Am. J. Hum. Genet. 67:295-301(2000).
Pajusola K., et al. Cancer Res. 52:5738-5743(1992).
Pajusola K., et al. Cancer Res. 53:3845-3845(1993).
Galland F., et al. Genomics 13:475-478(1992).
Galland F., et al. Oncogene 8:1233-1240(1993).

**VEGFR3 Antibody - Citations**

- Anti-metastatic Efficacy of Traditional Chinese Medicine (TCM) Ginsenoside Conjugated to a VEFGR-3 Antibody on Human Gastric Cancer in an Orthotopic Mouse Model.