10320 Camino Santa Fe, Suite G
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VEGFR3 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AW5293

Specification

VEGFR3 Antibody - Product Information

Application	**IHC-P, FC, WB,E**
Primary Accession	P35916
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=153 KDa**
Isotype	**IgG2a**
Antigen Source	**HUMAN**

VEGFR3 Antibody - Additional Information

Gene ID 2324

Other Names
FLT4;VEGFR3; Vascular endothelial growth factor receptor 3; Vascular endothelial growth factor receptor 3; Fms-like tyrosine kinase 4; Vascular endothelial growth factor receptor 3; Tyrosine-protein kinase receptor FLT4

Dilution
IHC-P~~1:25
FC~~1:25
WB~~1:2000

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

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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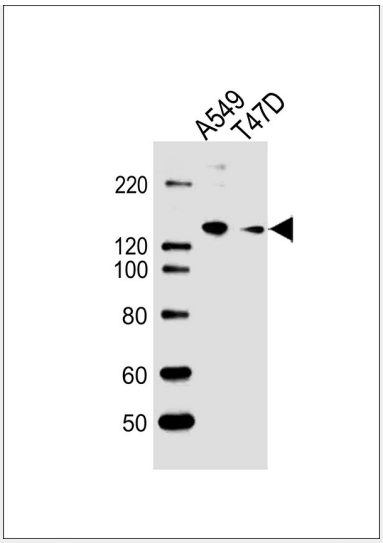
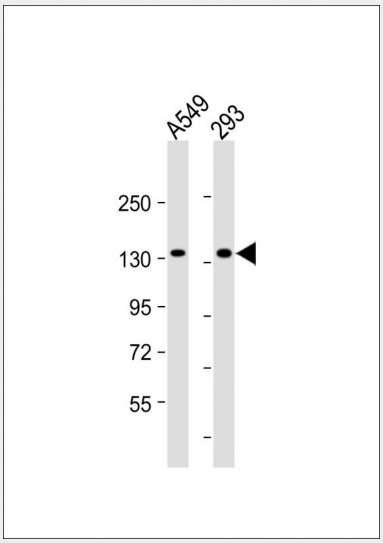


Western blot analysis of lysates from A549,T47D cell line (from left to right), using VEGFR3 Antibody(Cat. #AW5293). AW5293 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



All lanes : Anti-VEGFR3 at 1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: 293 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 153 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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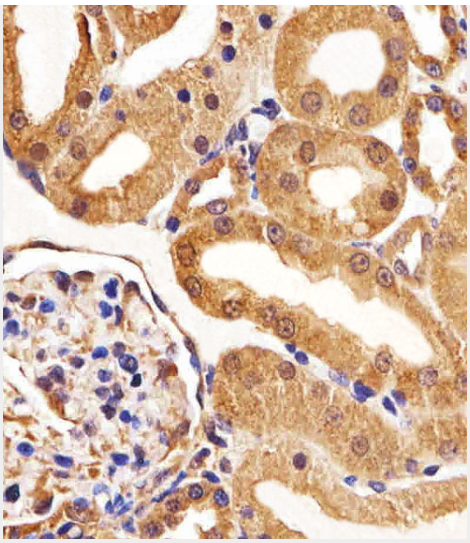
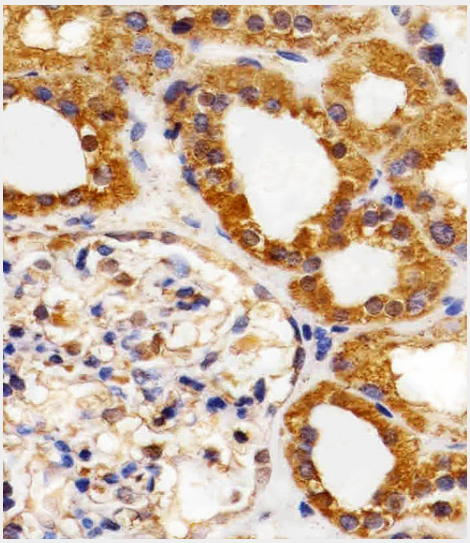


Immunohistochemical analysis of paraffin-embedded R. kidney section using VEGFR3(Cat#NA). NA was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



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.

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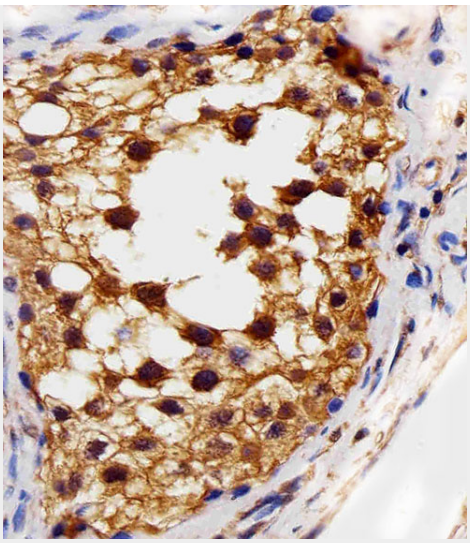
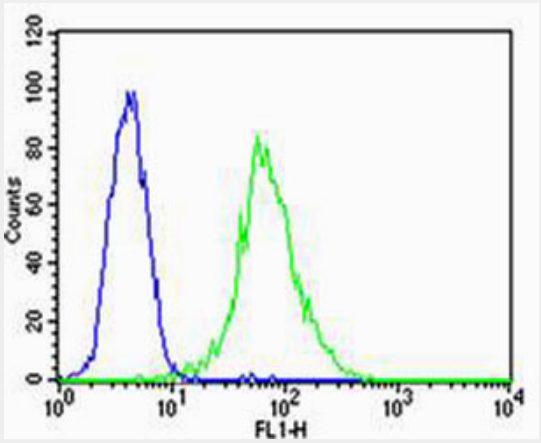


Immunohistochemical analysis of paraffin-embedded H. testis section using VEGFR3(Cat#). was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Flow cytometric analysis of HUVEC cells using VEGFR3(green, Cat#AW5293) compared to an isotype control of mouse IgG2a(blue). AW5293was 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).
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Galland F., et al. Oncogene 8:1233-1240(1993).