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VEGFR3 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM2233b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P35916
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Clone Names	818CT12.1.1
Calculated MW	152757
Antigen Region	1-439

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~~1:100~500 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.

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.

Background

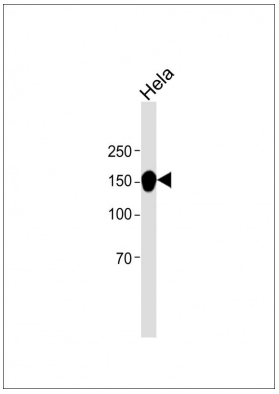
Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial 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'.

References

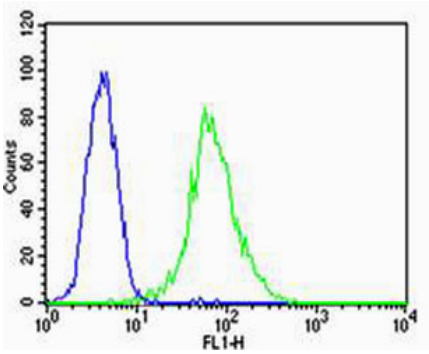
Irrthum A., et al. Am. J. Hum. Genet. 67:295-301(2000).
Pajusola K., et al. Cancer Res. 52:5738-5743(1992).
Pajusola K., et al. Cancer Res. 53:3845-3845(1993).
Galland F., et al. Genomics 13:475-478(1992).
Galland F., et al. Oncogene 8:1233-1240(1993).

Images

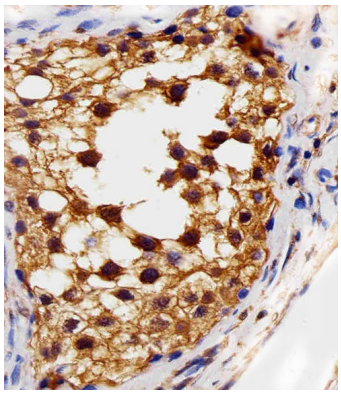
All lanes: Anti-VEGFR3 Antibody at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase



conjugated (ASP1613) at 1/8000 dilution. Observed band size: 153 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Flow cytometric analysis of HUVEC cells using VEGFR3(green, Cat#AM2233b) compared to an isotype control of mouse IgG2a(blue). AM2233bwas diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody.



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.

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.