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FLT4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1413a

Product Information

Application	WB, E
Primary Accession	P35916
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4H4
Isotype	IgG1
Calculated MW	152757
Description	This gene encodes a tyrosine kinase receptor for vascular endothelial growth factors C and D. The protein is thought to be involved in lymphangiogenesis and maintenance of the lymphatic endothelium. Mutations in this gene cause hereditary lymphedema type IA. Tissue specificity: Placenta, lung, heart, and kidney, does not seem to be expressed in pancreas and brain. VEGFR-3 is induced in all endothelial cells (EC's) during early embryogenesis, and its expression eventually disappears from the vascular endothelial cells of adult tissues. VEGFR-3 is constitutively expressed in the adult lymphatic endothelium. Although VEGFR-3 is not expressed in adult blood vessels, it is induced in vascular endothelial cells of tumor-bearing tissues.VEGFR-3 expression in adults is largely restricted to the endothelial cells of the lymphatic system, and high endothelial venules (HEV).
Immunogen	Purified recombinant fragment of human FLT4 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2324
Other Names	Vascular endothelial growth factor receptor 3, VEGFR-3, 2.7.10.1, Fms-like tyrosine kinase 4, FLT-4, Tyrosine-protein kinase receptor FLT4, FLT4, VEGFR3
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	FLT4 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.

References

1. Prostate. 2009 Jun 15;69(9):982-90. 2. J Cell Sci. 2009 Sep 15;122(Pt 18):3358-64. 3. Oncol Rep. 2009 Nov;22(5):1093-100.

Images

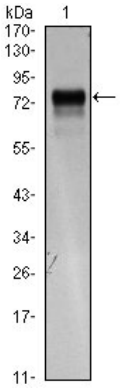

Figure 1: Western blot analysis using FLT4 mAb against FLT4(AA: 25-330)-hIgGFc transfected HEK293 cell lysate.