

FLT1 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8459b

Specification

FLT1 Antibody - Product Information

Application	WB,E
Primary Accession	P17948
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Calculated MW	150769
Antigen Region	1-380

FLT1 Antibody - Additional Information

Gene ID 2321

Other Names

Vascular endothelial growth factor receptor 1, VEGFR-1, Fms-like tyrosine kinase 1, FLT-1, Tyrosine-protein kinase FRT, Tyrosine-protein kinase receptor FLT, FLT, Vascular permeability factor receptor, FLT1, FLT, FRT, VEGFR1

Target/Specificity

This FLT1 antibody is generated from a mouse immunized with a recombinant protein.

Dilution

WB~~1:2000

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

FLT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

FLT1 Antibody - Protein Information

Name FLT1

Synonyms FLT, FRT, VEGFR1

Function Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF,

and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. Acts as a positive regulator of postnatal retinal hyaloid vessel regression (By similarity). May play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. Can promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. Promotes PGF-mediated proliferation of endothelial cells, proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts (in vitro). Has very high affinity for VEGFA and relatively low protein kinase activity; may function as a negative regulator of VEGFA signaling by limiting the amount of free VEGFA and preventing its binding to KDR. Modulates KDR signaling by forming heterodimers with KDR. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to activation of phosphatidylinositol kinase and the downstream signaling pathway. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Phosphorylates SRC and YES1, and may also phosphorylate CBL. Promotes phosphorylation of AKT1 at 'Ser-473'. Promotes phosphorylation of PTK2/FAK1 (PubMed:[16685275](#)).

Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein. Endosome.
Note=Autophosphorylation promotes ubiquitination and endocytosis [Isoform 3]: Secreted.
[Isoform 5]: Cytoplasm. [Isoform 7]: Cytoplasm.

Tissue Location

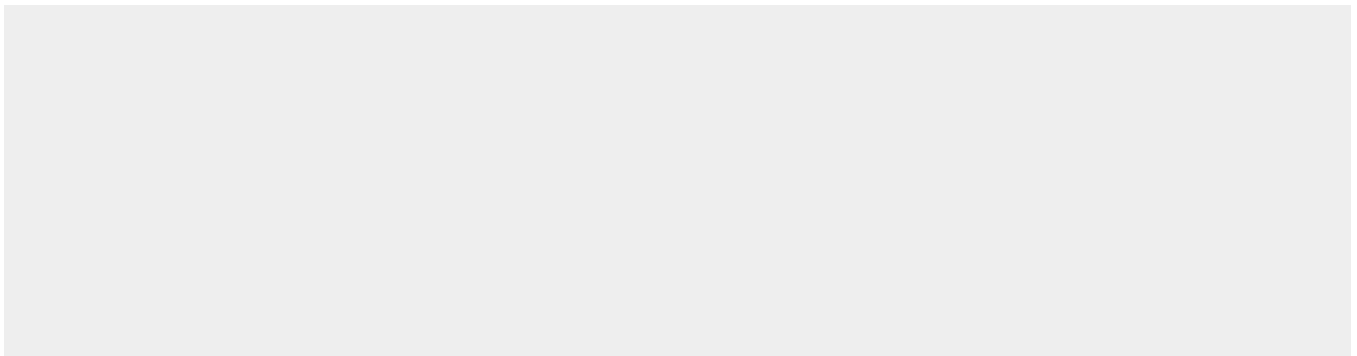
Detected in normal lung, but also in placenta, liver, kidney, heart and brain tissues. Specifically expressed in most of the vascular endothelial cells, and also expressed in peripheral blood monocytes. Isoform 2 is strongly expressed in placenta. Isoform 3 is expressed in corneal epithelial cells (at protein level). Isoform 3 is expressed in vascular smooth muscle cells (VSMC)

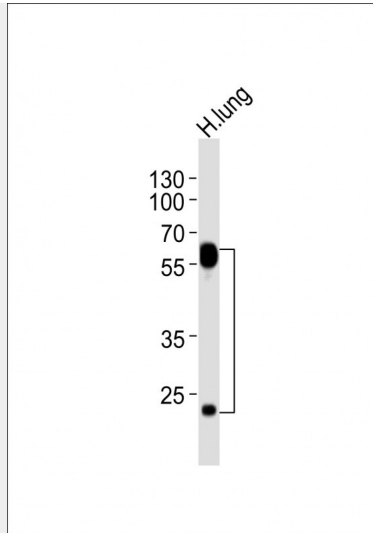
FLT1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

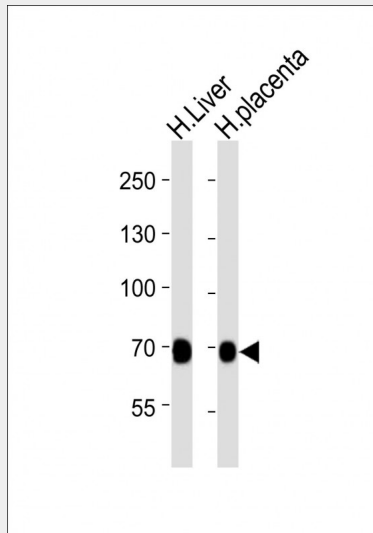
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

FLT1 Antibody - Images





Anti-FLT1 Antibody at 1:2000 dilution + human lung lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 151 kD Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-FLT1 Antibody at 1:2000 dilution Lane 1: human Liver lysates Lane 2: human placenta lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 151 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

FLT1 Antibody - Background

Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF, and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. May play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. Can promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. Promotes PGF-mediated proliferation of endothelial cells, proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts (in vitro). Has very high affinity for VEGFA and relatively low protein kinase activity; may function as a negative regulator of VEGFA signaling by limiting the amount of free VEGFA and preventing its binding to KDR. Likewise, isoforms lacking a transmembrane domain, such as isoform 2, isoform 3 and isoform 4, may function as decoy

receptors for VEGFA. Modulates KDR signaling by forming heterodimers with KDR. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to activation of phosphatidylinositol kinase and the downstream signaling pathway. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Phosphorylates SRC and YES1, and may also phosphorylate CBL. Isoform 1 phosphorylates PLCG. Promotes phosphorylation of AKT1 at 'Ser-473'. Promotes phosphorylation of PTK2/FAK1. Isoform 7 has a truncated kinase domain; it increases phosphorylation of SRC at 'Tyr-418' by unknown means and promotes tumor cell invasion.

FLT1 Antibody - References

- Shibuya M., et al. *Oncogene* 5:519-524(1990).
Kendall R.L., et al. *Proc. Natl. Acad. Sci. U.S.A.* 90:10705-10709(1993).
Herley M.T., et al. *Biochem. Biophys. Res. Commun.* 262:731-738(1999).
Jin P., et al. *Arthritis Res. Ther.* 10:R73-R73(2008).
Sela S., et al. *Circ. Res.* 102:1566-1574(2008).