

KD-Validated Anti-FLT1 Mouse Monoclonal Antibody

Mouse monoclonal antibody

Catalog # AGI1992

Product Information

Application	WB, FC, ICC
Primary Accession	P17948
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1 kappa
Clone Names	24GB7115
Calculated MW	150769
Gene Name	FLT1
Aliases	FLT1; Fms Related Receptor Tyrosine Kinase 1; VEGFR1; Vascular Endothelial Growth Factor Receptor 1; Vascular Permeability Factor Receptor; FLT; Fms-Related Tyrosine Kinase 1 (Vascular Endothelial Growth Factor/Vascular Permeability Factor Receptor); Tyrosine-Protein Kinase Receptor FLT; Fms Related Tyrosine Kinase 1; Tyrosine-Protein Kinase FRT; Fms-Like Tyrosine Kinase 1; EC 2.7.10.1; VEGFR-1; FLT-1; Fms-Related Tyrosine Kinase 1; EC 2.7.10; FRT
Immunogen	Recombinant protein of human VEGFR1

Additional Information

Gene ID	2321
Other Names	Vascular endothelial growth factor receptor 1, VEGFR-1, 2.7.10.1, 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

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)

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