abcam

ab238632

Anti-VEGF Receptor 1 antibody [EWI]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Lyophilized
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human FLT1. Database link P17948
Carrier free	Yes
Clone number	EWI
Purification technique	Affinity purification Protein G
Specificity	This antibody can detect the native form of VEGF Receptor 1.
Reconstitution	Reconstitute in water
Purification notes	Purified from TCS.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	2-10 µg/mL

Notes	-

WB

Tested

Species	Human
Dilution info	1-10 µg/mL
Notes	-

Target data

See full target information FLT1

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). Isoform 1. Phosphorylates PLCG. Isoform 2. May function as decoy receptor for VEGFA. Isoform 3. May function as decoy receptor for VEGFA. Isoform 4. May function as decoy receptor for VEGFA. Isoform 7. Has a truncated kinase domain; it increases phosphorylation of SRC at 'Tyr-418' by unknown means and promotes tumor cell invasion.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	VEGF Receptor 1 also known as FLT-1 is a protein that plays a critical role in the regulation of angiogenesis. Its mass is approximately 180 kDa. FLT-1 is a receptor tyrosine kinase expressed mainly on the surface of endothelial cells but also in monocytes and macrophages. The receptor binds vascular endothelial growth factor (VEGF) and placental growth factor (PlGF) which initiates a series of signaling cascades important for vascular development and function.
Biological function summary	FLT-1 mediates important cellular responses such as cell migration and proliferation. Although it often functions in conjunction with other receptors like VEGFR-2 FLT-1 has unique binding affinities that modulate the availability of VEGF for other receptors. FLT-1 proteins as part of complex signaling networks actively contribute to maintaining vascular homeostasis and regulating blood vessel permeability.
Pathways	FLT-1 is an important component in the VEGF signaling pathway and also part of the PlGF/VEGF pathway. The receptor serves as a decoy to regulate the amount of VEGF interaction with VEGFR-2 influencing endothelial cell function and vascular permeability. By sequestering VEGF FLT-1 helps maintain the balance in this angiogenic signaling network interacting with proteins like VEGF PlGF and the anti-VEGF agents that target these pathways.
Associated diseases and disorders	FLT-1 is implicated in cancer and diabetic retinopathy. Overexpression or dysregulation of FLT-1 can contribute to tumor angiogenesis which can enhance tumor growth and metastasis. In diabetic retinopathy abnormal FLT-1 activity affects retinal blood vessels leading to vision impairment. Similar interactions involve VEGFR-2 and other downstream effectors emphasizing the potential of FLT-1 as a therapeutic target for conditions associated with excessive angiogenesis and vascular dysfunction.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

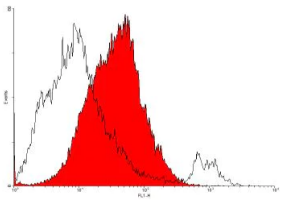
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - Anti-VEGF Receptor 1 antibody [EWI] (ab238632)

VEGF Receptor 1 Flow Cytometry staining using mouse Anti-VEGF Receptor 1 antibody

Flow cytometric analysis of porcine aortic endothelial cells expressing human VEGF Receptor 1 using ab238632 at 10 µg/ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.