abcam

ab10284

Anti-VEGF Receptor 3 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Recombinant Fragment Protein within Human FLT4 aa 1 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P35916
Purification technique	Affinity purification Protein A
Specificity	In Western blots, this antibody shows a moderate cross-reactivity with VEGFR2/KDR and a weak cross-reactivity with VEGFR1/FLT1.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Human
Dilution info	-
Notes	-

IP

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1-5 µg/mL
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.

Notes	-

Target data

See full target information FLT4

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'.

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 3 also known as FLT-4 is a protein essential for lymphatic development and is expressed mainly in lymphatic endothelial cells. This receptor has a molecular mass of approximately 195 kDa. VEGF Receptor 3 belongs to the tyrosine kinase family and binds with high affinity to its ligands VEGF-C and VEGF-D. These interactions lead to the activation of intracellular signaling cascades that promote cell proliferation migration and survival.
Biological function summary	The VEGF Receptor 3 acts as an important regulator of lymphangiogenesis which is the growth of new lymphatic vessels from pre-existing ones. It is not typically part of larger protein complexes but it works closely with its ligands to facilitate the processes associated with lymph vessel formation and function. Proper activity of VEGF Receptor 3 is necessary for maintaining normal lymphatic vessel remodeling and function during development and in some adult tissues.
Pathways	The receptor is involved in the VEGF signaling pathway which plays an important role in vascular and lymphatic development. This pathway intersects with others like the PI3K/AKT pathway a critical mediator of cell growth and survival. VEGF Receptor 3 interacts with related receptors such as VEGF Receptor 2 in these pathways to regulate complex and essential physiological processes.
Associated diseases and disorders	VEGF Receptor 3 has been linked to lymphedema which is swelling due to lymphatic system dysfunction and certain cancers where excessive angiogenesis occurs. Mutations or dysregulations in the receptor's signaling can lead to these conditions. In cancer for instance VEGF Receptor 3 along with its associated protein VEGF-C can promote tumor lymphangiogenesis facilitating metastasis. Antagonists like anti-VEGF therapies target these receptors to inhibit tumor progression and manage these disorders.

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

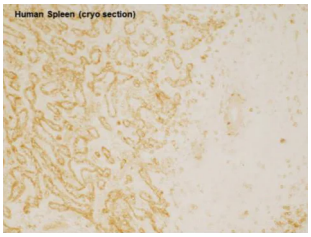
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

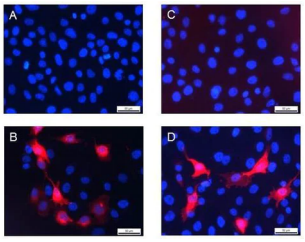
3 product images



Immunohistochemistry (Frozen sections) - Anti-VEGF Receptor 3 antibody (ab10284)

VEGF Receptor 3 Immunohistochemistry (Frozen sections) staining using rabbit Anti-VEGF Receptor 3 antibody

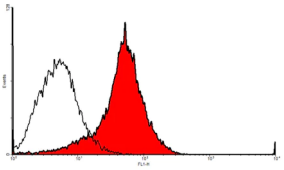
Immunohistochemistry (Frozen sections) analysis of human spleen tissue labelling VEGF Receptor 3 with ab10284.



Immunocytochemistry/ Immunofluorescence - Anti-VEGF Receptor 3 antibody (ab10284)

VEGF Receptor 3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VEGF Receptor 3 antibody

Immunocytochemistry/Immunofluorescence analysis of human VEGF Receptor 3 transfected MG63 cells labelling VEGF Receptor 3 (red) with ab10284 (D). A and C are negative controls with secondary antibody only. B uses a monoclonal antibody specific for VEGF Receptor 3.



Flow Cytometry - Anti-VEGF Receptor 3 antibody (ab10284)

VEGF Receptor 3 Flow Cytometry staining using rabbit Anti-VEGF Receptor 3 antibody

Flow Cytometry analysis of human dermal lymphatic endothelial cells (HDLEC) labelling VEGF Receptor 3 with ab10284.

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