abcam

ab206887

Alexa Fluor® 647 Anti-VEGFA antibody [EP1176Y]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1176Y
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/100
Notes	This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min).

Expected

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

Flow Cyt (Intra)

Expected

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

IHC-P

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information VEGFA

Function	N-VEGF. Participates in the induction of key genes involved in the response to hypoxia and in the induction of angiogenesis such as HIF1A (PubMed:35455969).

Involved in protecting cells from hypoxia-mediated cell death (By similarity). VEGFA. Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth (PubMed:34530889). Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. Binds to the NRP1/neuropilin-1 receptor. Binding to NRP1 initiates a signaling pathway needed for motor neuron axon guidance and cell body migration, including for the caudal migration of facial motor neurons from rhombomere 4 to rhombomere 6 during embryonic development (By similarity). Also binds the DEAR/FBXW7-AS1 receptor (PubMed:17446437). Isoform VEGF165B. Binds to the KDR receptor but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth.

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, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

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

Activity summary	Vascular endothelial growth factor A (VEGFA) also known as VEGF or vascular permeability factor (VPF) is a protein that plays a central role in angiogenesis as well as in the growth of blood vessels. The molecular weight of VEGFA varies depending on the isoform typically ranging from 34 to 42 kDa. VEGFA is expressed in many tissues including fibroblasts macrophages endothelial cells and platelets. Its expression levels can increase in response to stimuli like hypoxia or inflammatory cytokines. VEGFA is an important target in research for therapies related to vascular diseases and cancer.
Biological function summary	VEGFA functions by promoting the proliferation and migration of vascular endothelial cells. It operates both as a homodimer and as part of complex signaling cascades interacting with VEGF receptors on cell surfaces to trigger downstream signals for angiogenesis. This includes endothelial cell growth migration and the new blood vessel formation process. VEGFA's activity is important for physiological processes such as wound healing and embryonic development and it also contributes to pathological conditions through its unregulated expression in diseases.
Pathways	Many processes involve VEGFA including the PI3K/AKT pathway and the MAPK/ERK pathway. These pathways regulate cell survival growth and differentiation. Other proteins like PLGF (placenta growth factor) and VEGFB often accompany VEGFA in these pathways aiding in distinct but overlapping roles. These interactions are transmitted through binding to VEGF receptors such as VEGFR-1 and VEGFR-2 subsequently activating various signaling cascades necessary for cellular and tissue homeostasis.
Associated diseases and disorders	VEGFA relates to cancer and age-related macular degeneration among others. In cancer overexpression of VEGFA can lead to excessive angiogenesis supplying blood to tumors and facilitating tumor growth. In age-related macular degeneration upregulation of VEGFA contributes to the progression of the disease by promoting the formation of abnormal blood vessels under the retina. Anti-VEGFA therapies such as anti-VEGF antibodies (e.g. bevacizumab) can target these overexpressed pathways. VEGFA interacts with other proteins like HIF-1α which regulates its expression under hypoxia a common condition in tumors.

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

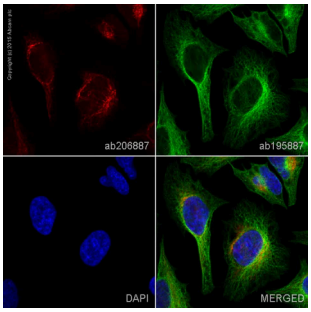
We do not recommend this combination. It is not covered by our product promise.

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



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-VEGFA antibody [EP1176Y] (ab206887)

VEGFA Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VEGFA antibody

ab206887 staining VEGF in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab206887 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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