abcam

ab209439

PE Anti-VEGFA antibody [EP1176Y]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/2500

Notes	The cellular localisation of this product has been verified in ICC/IF.

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	-
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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Do Not Freeze, 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.

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.

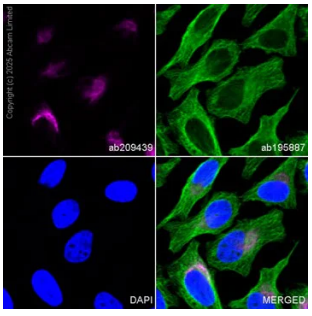
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

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

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2 product images



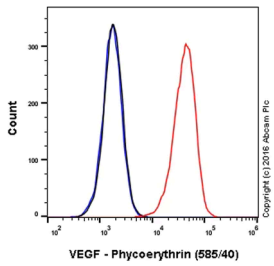
Immunocytochemistry/ Immunofluorescence - PE Anti-VEGFA antibody [EP1176Y] (ab209439)

VEGFA Immunocytochemistry/ Immunofluorescence staining of HeLa (human cervical adenocarcinoma epithelial cell) cells using rabbit Anti-VEGFA antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling VEGFA with ab209439 at 1/50 dilution (Magenta).

Confocal image showing cytoplasmic staining in HeLa cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195887 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 488) was used to counterstain tubulin at 1/200 dilution (Green).



Flow Cytometry (Intracellular) - PE Anti-VEGFA antibody [EP1176Y] (ab209439)

VEGFA Flow Cytometry (Intracellular) staining using rabbit Anti-VEGFA antibody

Overlay histogram showing HeLa cells stained with ab209439 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 90% methanol at -20°C for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab209439, 1/2500 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was rabbit IgG (monoclonal) Phycoerythrin (ab209478) used

at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 20 mW Solid State Blue Laser (488nm) and 585/40 bandpass filter.

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