abcam

ab185238

Anti-VEGFA antibody [EP1176Y] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP1176Y
Purification technique	Affinity purification Protein A
Specificity	We do not guarantee IHC-P for mouse. This antibody fails to detect endogenous natural samples in WB. We recommend to use ab214424 for WB.
Concentration	0.969 - 1.009 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Human

Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	We do not guarantee IHC-P for mouse.

Not recommended

Species	Mouse
Dilution info	-
Notes	We do not guarantee IHC-P for mouse.

Species	Rat
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
Storage information	Do Not Freeze

Notes

ab185238 is the carrier-free version of ab52917.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

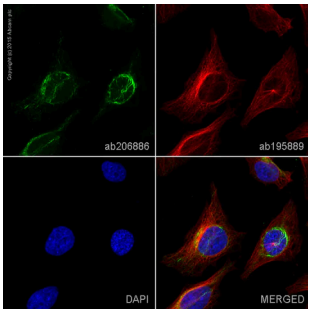
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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9 product images

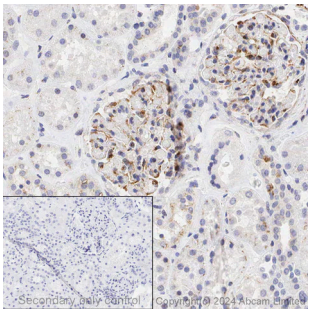


Immunocytochemistry/ Immunofluorescence - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VEGFA antibody

Clone EP1176Y (ab185238) has been successfully conjugated by Abcam. This image was generated using Anti-VEGFA antibody [EP1176Y] (Alexa Fluor® 488). Please refer to ab206886 for protocol details.
ab206886 staining VEGF in HeLa (Human epithelial cell line from cervix adenocarcinoma) cells. The cells were fixed with 4% formaldehyde (10 minutes), 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 1 hour. The cells were then incubated overnight at +4°C with ab206886 at 1/1000 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

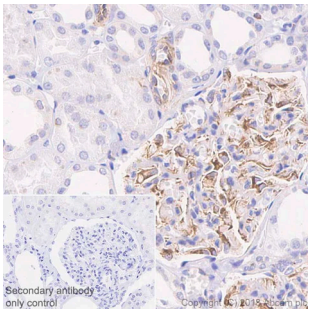
VEGFA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human kidney using rabbit Anti-VEGFA antibody

This data was developed using ab52917, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of formalin fixed paraffin embedded human kidney labelling VEGFA with ab52917 at a concentration of 2µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a ChromoMap DAB IHC Detection Kit followed by anti rabbit HQ and anti HQ HRP detection. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 64mins.

ab52917 Anti-VEGFA antibody [EP1176Y] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

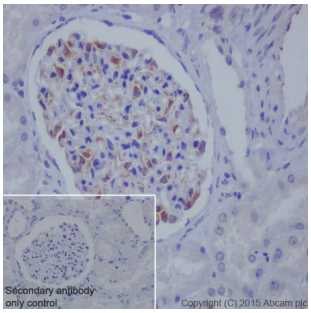
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VEGFA antibody

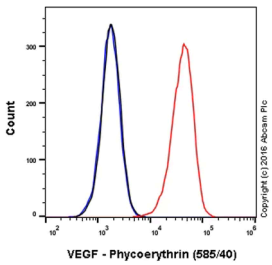
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human kidney tissue sections labeling VEGFA with Purified ab52917 at 1:100 dilution (2.96 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0)
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52917).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VEGFA antibody

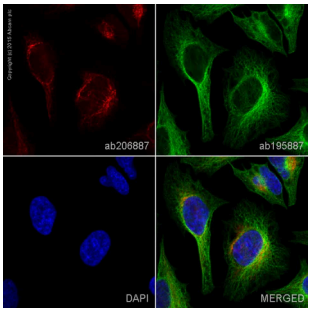
Immunohistochemistry (Paraffin-embedded sections) analysis of Human kidney tissue labeling VEGF with ab185238 at 1/250. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9.0. Anti-rabbit IgG H&L (HRP) (ab97051) was used as the secondary antibody. Counterstained with Hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52917).



Flow Cytometry (Intracellular) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

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

Clone EP1176Y (ab185238) has been successfully conjugated by Abcam. This image was generated using Anti-VEGFA antibody [EP1176Y] (PE). Please refer to ab209439 for protocol details.
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.

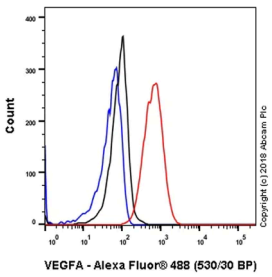


Immunocytochemistry/ Immunofluorescence - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VEGFA antibody

Clone EP1176Y (ab185238) has been successfully conjugated by Abcam. This image was generated using Anti-VEGFA antibody [EP1176Y] (Alexa Fluor® 647). Please refer to ab206887 for protocol details.
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).

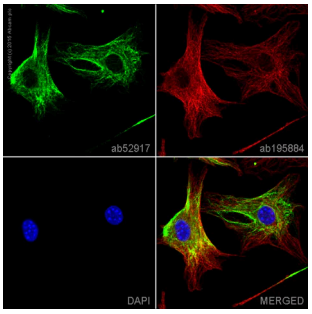
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

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

Intracellular Flow Cytometry analysis of NIH/3T3 (Mouse embryonic fibroblast) cells labeling VEGFA with purified ab52917 at 1/30 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52917).

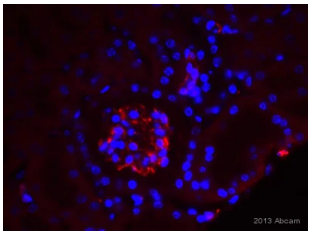


Immunocytochemistry/ Immunofluorescence - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VEGFA antibody

Purified ab52917 staining VEGF in NIH3T3 cells. The cells were fixed with 4% formaldehyde (10min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with purified ab52917 at 5µg/ml and ab195884, at 1/250 dilution, overnight at +4°C, followed by a further incubation at room temperature for 1h with an Goat anti-Rabbit Alexa Fluor 488 secondary (ab150081) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52917).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [EP1176Y] - BSA and Azide free (ab185238)

VEGFA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VEGFA antibody

This image is courtesy of an anonymous customer review.

Unpurified ab52917 staining VEGF in Mouse kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde, permeabilized with 0.3% Triton X-100 and blocked with 5% serum for 45 minutes at 25°C. Samples were incubated with primary antibody (1/400 in 4% BSA + 5% serum in PBST) for 14 hours at 4°C. An Alexa Fluor® 546-conjugated Donkey anti-rabbit IgG polyclonal (1/300) was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52917).

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