abcam

ab325972

Anti-Vimentin antibody [SP20] - BSA and Azide free

Lab Essentials | Recombinant | KO Validated

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	SP20
Purification technique	Affinity purification Protein A
Specificity	We have data to show that ab16700 is not suitable for work on mouse tissue. For researchers working on mouse we recommend using ab92547. If you would like further information on this, please do not hesitate to contact our technical support team.
Concentration	1.008 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Antigen Retrieval: None

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information VIM

Function	Vimentins are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is attached to the nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally. Plays a role in cell directional movement, orientation, cell sheet organization and Golgi complex polarization at the cell migration front (By similarity). Protects SCRIB from proteasomal degradation and facilitates its localization to intermediate filaments in a cell contact-mediated manner (By similarity). May promote axon outgrowth

and motor fiber repair via DSP-mediated recruitment to outgrowth tips (By similarity). Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2.

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

ab325972 is the carrier-free version of ab16700

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.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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

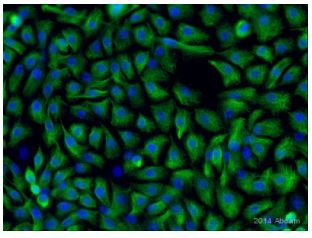
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images



This image is courtesy of an anonymous customer review

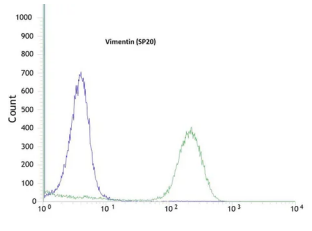
Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

Vimentin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

ab16700 staining Vimentin in human corneal limbal epithelial cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde and permeabilized with 0.3% Triton X-100 for 5 minutes. Samples were incubated with primary antibody (1/200 in PBS + 10% normal goat serum) for 18 hours at 4°C. An Alexa Fluor®488-conjugated goat anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody.



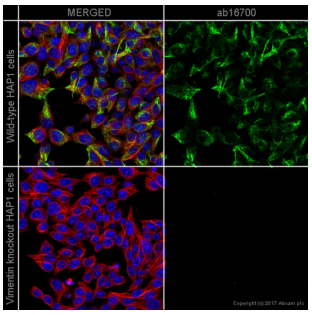
Flow Cytometry - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

Vimentin Flow Cytometry staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

Flow cytometric analysis of rabbit anti-Vimentin (SP20) antibody ab16700 (1/100) in HeLa cells (green) compared to negative control of rabbit IgG (blue).



Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

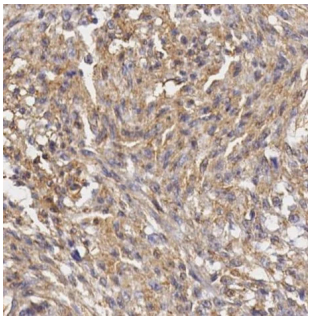
Vimentin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

ab16700 staining Vimentin in wild-type HAP1 cells (top panel) and Vimentin knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min) 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 with ab16700 at 1/1000 dilution and ab195889 at 1/250 dilution (shown in pseudo-color red) overnight at +4°C. The cells were then incubated with ab150081 (Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488)) at 1/1000 dilution for 1 hour. Nuclear DNA was labelled in blue with DAPI.

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

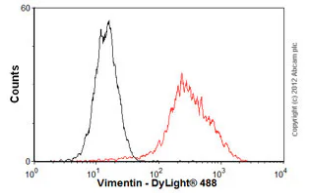


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

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

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human melanoma tissue labeling Vimentin with ab16700 at 1/200 dilution. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0 Epitope Retrieval Solution 1) for 20 mins.



Flow Cytometry - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

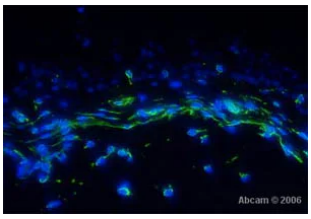
Vimentin Flow Cytometry staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

Overlay histogram showing HeLa cells stained with ab16700 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab16700 1/100 dilution) for 30 min at 22°C. The

secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5000 events was performed.



This image is courtesy of a customer review submitted by Miss Szu-Yu Chen

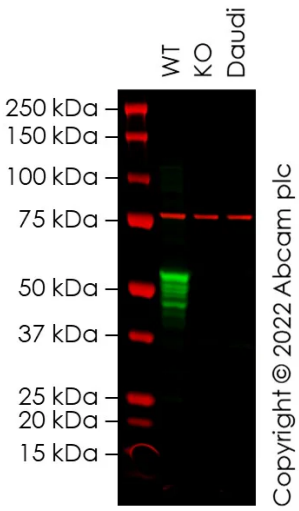
Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

Vimentin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

ab16700 at 1/200 staining Human Limbal Epithelial Cells by ICC/IF. The cells were incubated with the antibody for 1 hour and then a FITC conjugated goat antibody was used as the secondary. The image shows vimentin staining in green and hoechst staining in blue. The upper cells in the image (vimentin negative) are epithelium cells. the vimentin positive cells are stroma cells.



Western blot - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

Vimentin Western blot staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

False colour image of Western blot: Anti-Vimentin antibody [SP20] staining at 1/120 dilution shown in green; Mouse anti-CANX [CANX/1543] (ab238078) loading control staining at 1/20000 dilution shown in red. In Western blot ab16700 was shown to bind specifically to Vimentin. A band was observed at 55 kDa in wild-type A549 cell lysates with no signal observed at this size in VIM knockout cell line ab288984. To generate this image wild-type and VIM knockout A549 cell lysates were analysed. First samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween$^®$ 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T incubated with secondary antibodies for 1 h at room temperature washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.

All lanes:
Western blot - Anti-Vimentin antibody [SP20] (ab16700) at 1/120 dilution

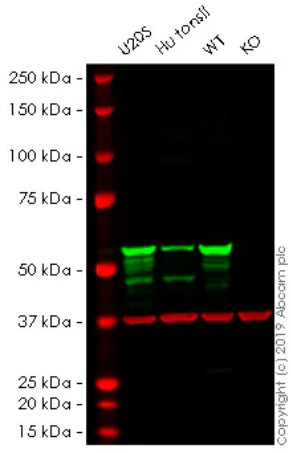
Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
Vimentin knockout A549 cell lysate at 20 µg

Lane 3:
Daudi cell lysate at 20 µg

Performed under reducing conditions.

Observed band size: 55 kDa



Western blot - Anti-Vimentin antibody [SP20] - BSA and Azide free (ab325972)

Vimentin Western blot staining using rabbit Anti-Vimentin antibody

This data was developed using ab16700, the same antibody clone in a different buffer formulation.

This image was generated using a previous batch manufactured using the hybridoma production method.

Lanes 1 - 4: Merged signal (red and green). Green - ab16700 observed at 53 kDa. Red - loading control ab8245 observed at 37 kDa.
ab16700 was shown to react with Vimentin in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab255446 (knockout cell lysate ab263775) was used. Wild-type and Vimentin knockout samples were subjected to SDS-PAGE. ab16700 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4° at 1 in 100 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Lanes 1 - 4:
Western blot - Anti-Vimentin antibody [SP20], prediluted (ab27608) at 1/100 dilution

Lanes 1 - 4:
Western blot - Anti-Vimentin antibody [SP20] (ab16700) at 1/100 dilution

Lane 1:
U20S cell lysate at 20 µg

Lane 2:
Human tonsil cell lysate at 20 µg

Lane 2:
Western blot - Human VIM (Vimentin) knockout HeLa cell line (ab255446)

Lane 3:
Wild-type HeLa cell lysate at 20 µg

Lane 4:
VIM knockout HeLa cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 53 kDa

Observed band size: 37 kDa, 53 kDa

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