abcam

ab20346

Anti-Vimentin antibody [VI-10]

Anti-Vimentin antibody [VI-10] (ab20346) is a mouse monoclonal antibody detecting Vimentin in **Western Blot, Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Chicken, Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Over 120 publications
- Trusted since 2005

Lab Essentials | KO Validated

Key facts

Isotype	IgM
Host species	Mouse
Storage buffer	pH: 8 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	VI-10
Purification technique	Proprietary technique
Specificity	The antibody VI-10 reacts with vimentin, a 57 kDa intermediate filament expressed in variety of mesenchymal and mesodermal cell types.
Light chain type	unknown
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified by precipitation and chromatography.

Reactivity data

ICC/IF

Tested

Species	Rat
Dilution info	1 µg/mL
Notes	Staining technique: (a) fix cells for 10 min in methanol at -20°C and for 6 min in acetone at -20°C; (b) fix cells directly in methanol for 10 min at -20°C or in acetone for 10 min at -20°C.

Species	Chicken
Dilution info	1 µg/mL
Notes	Staining technique: (a) fix cells for 10 min in methanol at -20°C and for 6 min in acetone at -20°C; (b) fix cells directly in methanol for 10 min at -20°C or in acetone for 10 min at -20°C.

Species	Human
Dilution info	1 µg/mL
Notes	Staining technique: (a) fix cells for 10 min in methanol at -20°C and for 6 min in acetone at -20°C; (b) fix cells directly in methanol for 10 min at -20°C or in acetone for 10 min at -20°C.

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1 µg for 10^6 Cells
Notes	ab91545 - Mouse monoclonal IgM, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Pig
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Pig

Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1-5 µg/mL
Notes	-

Expected

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

Predicted

Species	Pig
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 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

Notes

What is this antibody validated in?
Anti-Vimentin antibody [VI-10] (ab20346) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Chicken, Human, Mouse, Rat samples.

What is the molecular weight of Vimentin?
Anti-Vimentin [VI-10] (ab20346) specifically detects a band for Vimentin (UniProt: P08670) at a molecular weight of 54kDa.

Trusted by the scientific community
Anti-Vimentin [VI-10] (ab20346) was first used in a scientific publication in 2005 and has been cited over 120 times in peer-reviewed journals.

Reviewed by scientists
Anti-Vimentin [VI-10] (ab20346) has over 20 independent reviews from customers.

Specificity confirmed
The specificity of Anti-Vimentin antibody [VI-10] (ab20346) has been confirmed by Immunocytochemistry testing in VIM Knockout HAP1 cells.

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.

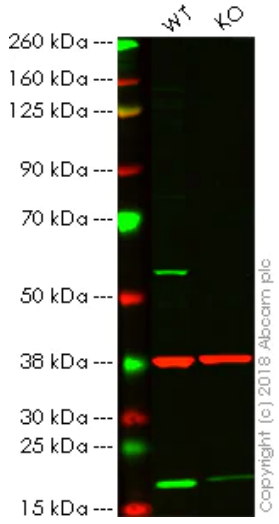
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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10 product images



Western blot - Anti-Vimentin antibody [VI-10] (ab20346)

Vimentin Western blot staining using mouse Anti-Vimentin antibody

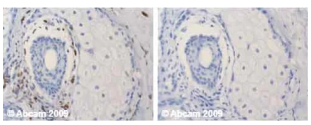
Lanes 1 - 2: Merged signal (red and green). Green - ab20346 observed at 57 kDa. Red - loading control, ab181602, observed at 37 kDa.
ab20346 was shown to specifically react with Vimentin in wild-type HAP1 cells as signal was lost in VIM (Vimentin) knockout cells. Wild-type and VIM (Vimentin) knockout samples were subjected to SDS-PAGE. ab20346 and ab181602 (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ab216777 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Vimentin antibody [VI-10] (ab20346) at 1 µg/mL

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
VIM (Vimentin) knockout HAP1 whole cell lysate at 20 µg

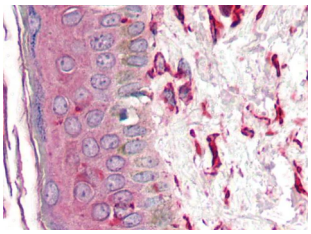
Predicted band size: 53 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vimentin antibody [VI-10] (ab20346)

Human normal skin. Staining is localised to cytoplasm. Left panel: with primary antibody at 1 ug/mL. Right panel: isotype control. Sections were stained using an automated system DAKO Autostainer Plus , at room temperature: sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers citrate pH6.1 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for mouse for 30 minutes. Colorimetric detection was

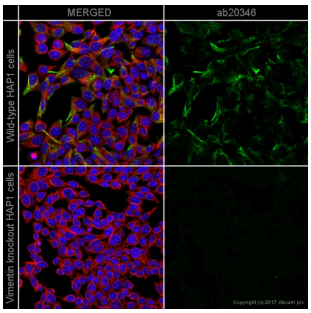
completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vimentin antibody [VI-10] (ab20346)

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

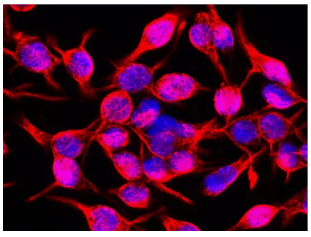
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human skin tissue labeling Vimentin with ab20346 at 5 ug/ml.



Immunocytochemistry - Anti-Vimentin antibody [VI-10] (ab20346)

Vimentin Immunocytochemistry staining using mouse Anti-Vimentin antibody

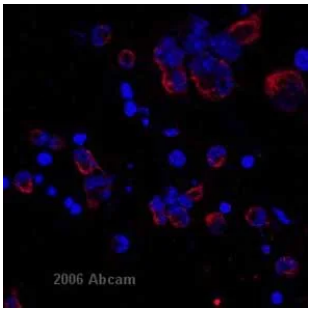
ab20346 staining Vimentin in wild-type HAP1 cells (top panel) and Vimentin knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab20346 at 1µg/ml dilution and ab202272 at 1/250 dilution (shown in pseudo-color red) overnight at +4°C. The cells were then incubated with ab150117 (Goat Anti-Mouse 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).



Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody [VI-10] (ab20346)

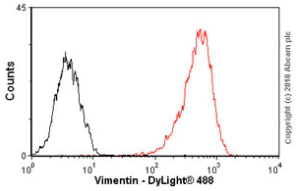
Vimentin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Vimentin antibody

Immunofluorescence staining of RBL rat basophiilioc cell line with anti-Vimentin (VI--10). Nuclei are stained with DAPI (blue).



Immunocytochemistry - Anti-Vimentin antibody [VI-10] (ab20346)

Image from **Sato M et al., J Clin Med., 8, 695. Fig 3.; doi: 10.3390/jcm8050695.**



Flow Cytometry - Anti-Vimentin antibody [VI-10] (ab20346)

Vimentin Flow Cytometry staining using mouse Anti-Vimentin antibody

Overlay histogram showing NIH3T3 cells stained with ab20346 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Triton 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 (ab20346, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was a Goat Anti-Mouse DyLight® 488 (IgG; H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgM [ICIGM] (ab91545, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in NIH3T3 cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Triton used under the same conditions.

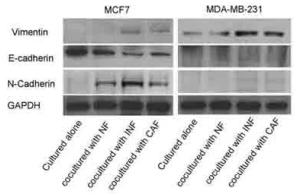


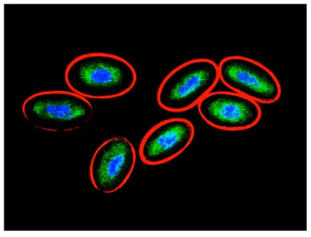
Image from Gao MQ et al, J Cell Sci. 2010 Oct 15;123(Pt 20):3507-14. Epub 2010 Sep 14, Fig 3. DOI 10.1242/jcs.072900

Western blot - Anti-Vimentin antibody [VI-10] (ab20346)

Vimentin Western blot staining using mouse Anti-Vimentin antibody

ab20346 used at a 1/1000 dilution in Western Blot. 5-20µg of total protein from each sample was loaded.
All lanes:
Western blot - Anti-Vimentin antibody [VI-10] (ab20346) at 1/1000 dilution

Predicted band size: 53 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Vimentin antibody [VI-10] (ab20346)

Immunocytochemical analysis of chicken postnatal erythrocytes labeling Vimentin with ab20346 at 1 ug/ml (green). Cells were counterstained with anti-alpha-tubulin (red) and DAPI (blue).

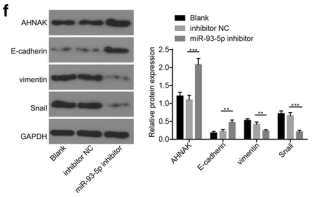


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-Vimentin antibody [VI-10] (ab20346)

Vimentin Western blot staining using mouse Anti-Vimentin antibody

Vimentin western blot using anti-Vimentin antibody [VI-10] ab20346. Publication image and figure legend from Shen, E., Wang, X., et al., 2020, Cancer Cell Int, PubMed 32190000.

ab20346 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab20346 please see the product overview.

Repressed miR-93-5p inhibits HGC-27 cell migration, invasion and EMT. a The migration and invasion ability of GC cells determined by Transwell assay (×200). Blank group: HGC-27 cells without transfection of any plasmids; Inhibitor NC group: HGC-27 cells transfected with NC of miR-93-5p; miR-93-5p inhibitor group: HGC-27 cells transfected with miR-93-5p inhibitor. b, c Migration and invasive ability of GC cells determined by the Transwell assays and the quantitative analysis. d Morphological characteristics of HGC-27 cells after transfection with inhibitor NC or miR-93-5p inhibitor (×100). e Immunofluorescence to determine the expression of EMT-related markers (E-cadherin, Vimentin and Snail) (×400). f Western blot assay and quantitative analysis for the expression of AHNAK, E-cadherin, Vimentin and Snail. Data were measurement data and expressed as mean ± standard deviation. One-way analysis of variance was used for comparison among multi-groups. The cell experiment was repeated three times. *p < 0.05, **p < 0.01, ***p < 0.001, and ****p < 0.0001

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