

Product datasheet

Anti-Vimentin (phospho S56) antibody [EPR21084] ab217673

Recombinant RabMAb

[1 References](#) [6 Images](#)

Overview

Product name	Anti-Vimentin (phospho S56) antibody [EPR21084]
Description	Rabbit monoclonal [EPR21084] to Vimentin (phospho S56)
Host species	Rabbit
Tested applications	Suitable for: WB, Dot blot, ICC/IF, IP, Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human Vimentin aa 1-100 (phospho S56). The exact sequence is proprietary. Database link: P08670
Positive control	WB: HeLa treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate. ICC/IF: HeLa cells. IP: HeLa treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p>

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21084
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab217673** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

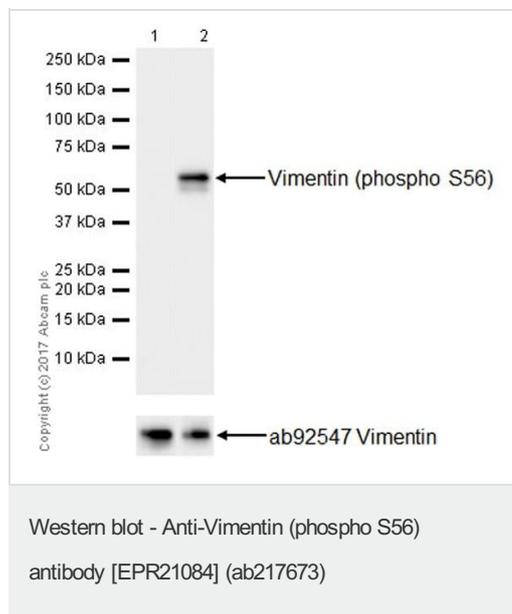
Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 57 kDa (predicted molecular weight: 54 kDa).
Dot blot		1/1000.
ICC/IF		1/1000.
IP		1/30.
Flow Cyt		Use at an assay dependent concentration.

Target

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. Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2.
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Tissue specificity	Highly expressed in fibroblasts, some expression in T- and B-lymphocytes, and little or no expression in Burkitt's lymphoma cell lines. Expressed in many hormone-independent mammary carcinoma cell lines.
Involvement in disease	Cataract 30
Sequence similarities	Belongs to the intermediate filament family.
Domain	The central alpha-helical coiled-coil rod region mediates elementary homodimerization. The [IL]-x-C-x-x-[DE] motif is a proposed target motif for cysteine S-nitrosylation mediated by the iNOS-S100A8/A9 transnitrosylase complex.
Post-translational modifications	Filament disassembly during mitosis is promoted by phosphorylation at Ser-55 as well as by nestin (By similarity). One of the most prominent phosphoproteins in various cells of mesenchymal origin. Phosphorylation is enhanced during cell division, at which time vimentin filaments are significantly reorganized. Phosphorylation by PKN1 inhibits the formation of filaments. Phosphorylated at Ser-56 by CDK5 during neutrophil secretion in the cytoplasm. Phosphorylated by STK33. O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status. S-nitrosylation is induced by interferon-gamma and oxidatively-modified low-density lipoprotein (LDL(ox)) possibly implicating the iNOS-S100A8/9 transnitrosylase complex.
Cellular localization	Cytoplasm.
Form	Vimentin is found in connective tissue and in the cytoskeleton.

Images



All lanes : Anti-Vimentin (phospho S56) antibody [EPR21084] (ab217673) at 1/1000 dilution

Lane 1 : Untreated HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

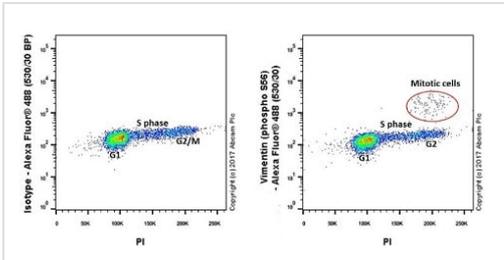
Predicted band size: 54 kDa

Observed band size: 57 kDa

[why is the actual band size different from the predicted?](#)

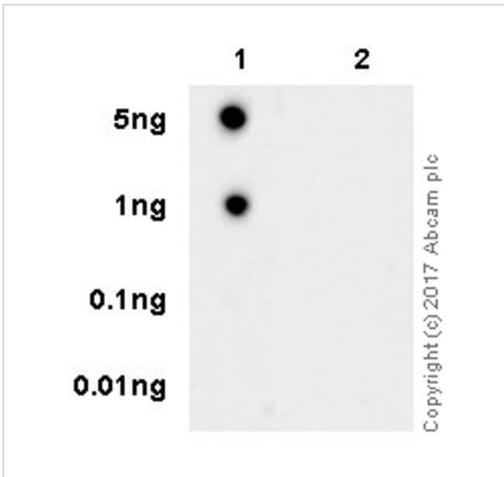
Exposure time: 23 seconds

Blocking/Dilution buffer: 5% NFDN/TBST.



Flow Cytometry - Anti-Vimentin (phospho S56) antibody [EPR21084] (ab217673)

Ab217673 staining Vimentin (phospho S56) in HeLa (human cervix adenocarcinoma epithelial cell) cells by Flow Cytometry. Cells were fixed using 80% Methanol and permeabilized with 0.1% Tween-20. The sample was incubated with primary antibody at 1:500 dilution. An Alexa Fluor® 488 Goat anti-rabbit IgG (ab150077) was used as a secondary antibody. Rabbit monoclonal IgG (ab172730) was used as an isotype control (left). Cells were pre-treated with 20 µg/ml RNase A for 30 minutes to eliminate the non-specific binding between RNA and PI (Propidium iodide). Vimentin (phospho S56) is highly expressed in mitotic cells. (PMID: 16260496)



Dot Blot - Anti-Vimentin (phospho S56) antibody [EPR21084] (ab217673)

Dot blot analysis of Vimentin (phospho S56) labeled with ab217673 at 1/1000 dilution.

Lane 1: Vimentin (phospho S56) peptide.

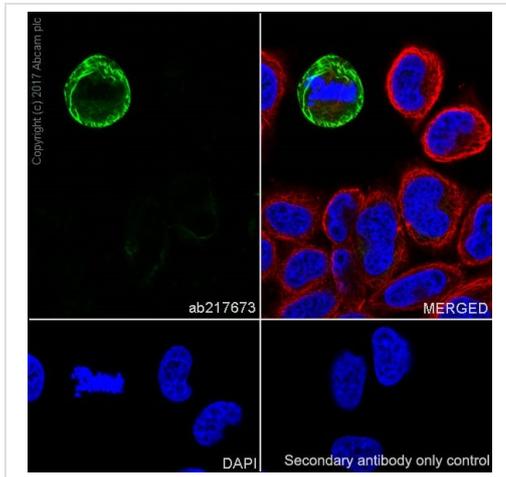
Lane 2: Vimentin non-phospho peptide.

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution was used as secondary antibody.

Blocking and dilution buffer: 5% NFDN/TBST.

Exposure time: 1 minute.

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

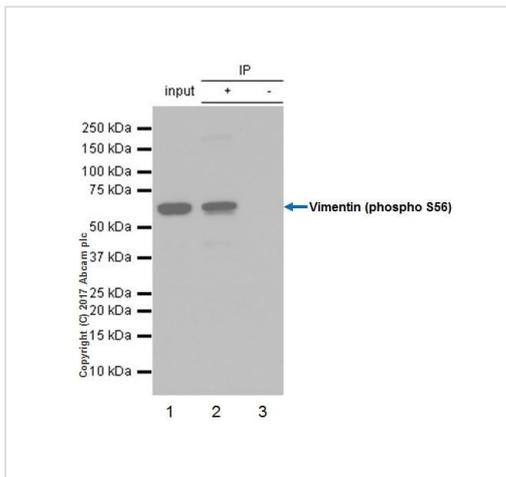


Immunocytochemistry/ Immunofluorescence - Anti-Vimentin (phospho S56) antibody [EPR21084] (ab217673)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Vimentin (phospho S56) with ab217673 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing strong positive staining in HeLa cells in M phase.

The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

Secondary antibody only control: PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Immunoprecipitation - Anti-Vimentin (phospho S56) antibody [EPR21084] (ab217673)

Vimentin (phospho S56) was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate with ab217673 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab217673 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: HeLa treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate 10 µg (Input).

Lane 2: ab217673 IP in HeLa treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab217673 in HeLa treated with 100 ng/ml nocodazole (ab120630) for 18 hours, whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDN/TBST.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Vimentin (phospho S56) antibody [EPR21084]
(ab217673)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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