

## Product datasheet

# Anti-Vimentin (phospho S73) antibody [EP1070Y] ab52944

RabMAb

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### Overview

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<b>Product name</b>	Anti-Vimentin (phospho S73) antibody [EP1070Y]
<b>Description</b>	Rabbit monoclonal [EP1070Y] to Vimentin (phospho S73)
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, Dot blot <b>Unsuitable for:</b> ICC/IF or IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HeLa; NIH/3T3; C6 lysates. IP: HeLa cells (untreated and Calyculin A treated).
<b>General notes</b>	<p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>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, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

**Clone number** EP1070Y

**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab52944 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
<b>WB</b>		1/10000. Detects a band of approximately 54 kDa (predicted molecular weight: 54 kDa).
<b>IP</b>		1/20. <b>For unpurified use at 1:40.</b>
<b>Dot blot</b>		Use at an assay dependent concentration.

**Application notes** Is unsuitable for ICC/IF or IHC-P.

## 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.

**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.

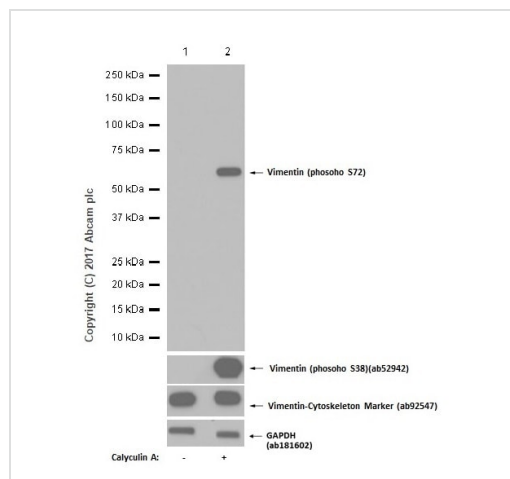
**Post-translational modifications** Filament disassembly during mitosis is promoted by phosphorylation at Ser-55 as well as by nestin (By similarity). One of the most prominent phosphoproteins in various cells of mesenchymal origin. Phosphorylation is enhanced during cell division, at which time vimentin 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.



Western blot - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

**All lanes :** Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944) at 1/10000 dilution (purified)

**Lane 1 :** C6 (Rat glial tumor cell line) whole cell lysate, untreated

**Lane 2 :** C6 (Rat glial tumor glial cell) starved for 24 hours, then treated with 100ng Calyculin A for 60 minutes, whole cell lysate

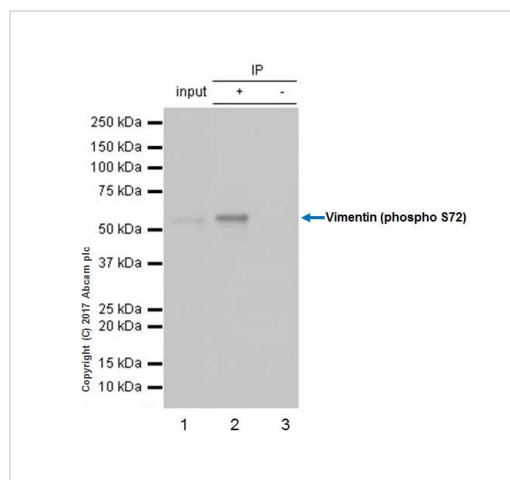
Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 54 kDa

Blocking and diluting buffer : 5% NFDm/TBST



Immunoprecipitation - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

ab52944 (purified) at 1:20 dilution (2µg) immunoprecipitating Vimentin in HeLa starved 24 hours, then treated with 100nM Calyculin A for 30 minutes whole cell lysate.

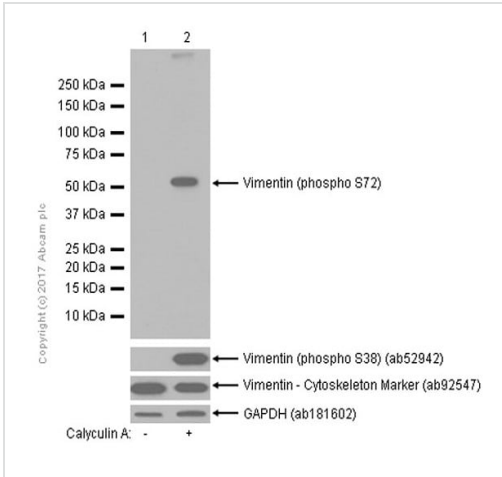
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) starved 24 hours, then treated with 100nM Calyculin A for 30 minutes whole cell lysate 10ug

Lane 2 (+): ab52944 & HeLa starved 24 hours, then treated with 100nM Calyculin A for 30 minutes whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab52944 in HeLa starved 24 hours, then treated with 100nM Calyculin A for 30 minutes whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.

Blocking and diluting buffer: 5% NFDm/TBST.



Western blot - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

**All lanes** : Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944) at 1/10000 dilution (purified)

**Lane 1** : Untreated with HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates

**Lane 2** : HeLa (Human cervix adenocarcinoma epithelial cell) starved for 24 hours, then treated with 100nM Calyculin A for 30 minutes whole cell lysates

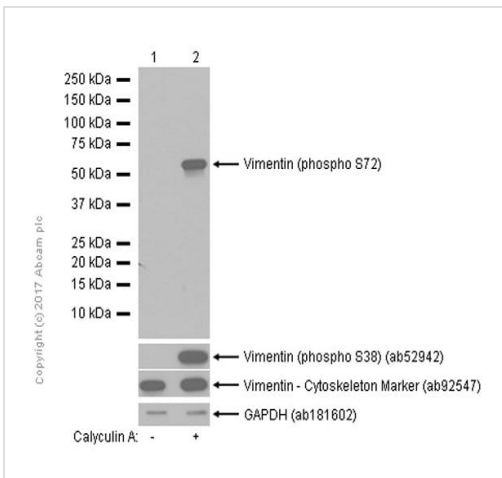
Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 54 kDa

Blocking and diluting buffer : 5% NFD/MTBST



Western blot - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

**All lanes** : Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944) at 1/10000 dilution (purified)

**Lane 1** : Untreated with NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates

**Lane 2** : NIH/3T3 (Mouse embryonic fibroblast) treated with 100ng/ml Calyculin A for 30 minutes whole cell lysates

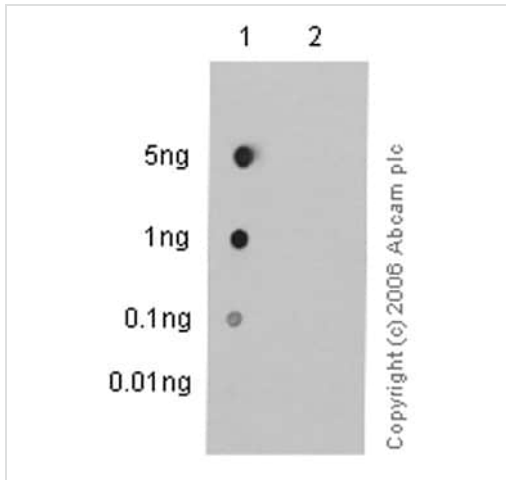
Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 54 kDa

Blocking and diluting buffer : 5% NFDm/TBST



Dot Blot - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

Primary antibody dilution: 1/1000

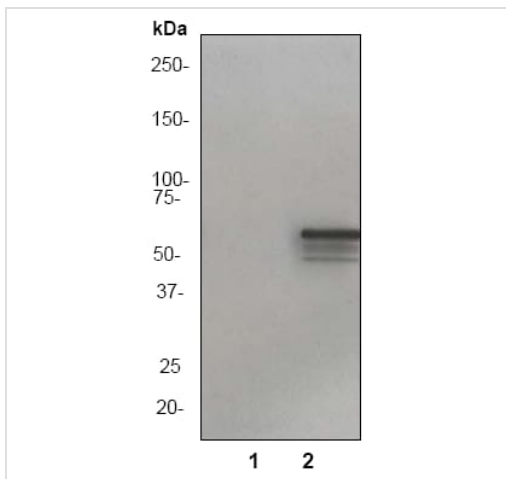
Secondary antibody: goat anti-rabbit IgG, (H+L), peroxidase conjugated (1/2500 dilution)

Blocking & diluting buffer: 5% NFDm/TBST

Lane 1 sample: Vimentin (pS72) phospho peptide

Lane 2 sample: Vimentin non-phospho peptide

Exposure time: 3 minutes



Western blot - Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944)

**All lanes :** Anti-Vimentin (phospho S73) antibody [EP1070Y] (ab52944) at 1/1000000 dilution

**Lane 1 :** HeLa cell lysate untreated

**Lane 2 :** HeLa cell lysate treated with Calyculin A

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes :** goat anti-rabbit HRP at 1/2000 dilution

**Predicted band size:** 54 kDa

**Observed band size:** 54 kDa

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

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