abcam

Product datasheet

Anti-PPM1A antibody [p6c7] ab14824

KO VALIDATED

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Overview

Product name	Anti-PPM1A antibody [p6c7]
Description	Mouse monoclonal [p6c7] to PPM1A
Host species	Mouse
Tested applications	**Suitable for:** ELISA, IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant full length protein (Human).
Positive control	WB: HeLa, HAP1, Jurkat, K562, MCF7, A549 and Raji cell lysates; Mouse kidney, brain and liver lysates; Mouse liver cytosol extract. ICC: HeLa cells.
General notes	This product was changed from ascites to tissue culture supernatant on 28/02/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. 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. 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&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 10% Glycerol
Purity	Protein G purified
Clonality	Monoclonal
Clone number	p6c7

Myeloma	Sp2/0
Isotype	IgG2b
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab14824 in the following tested applications.

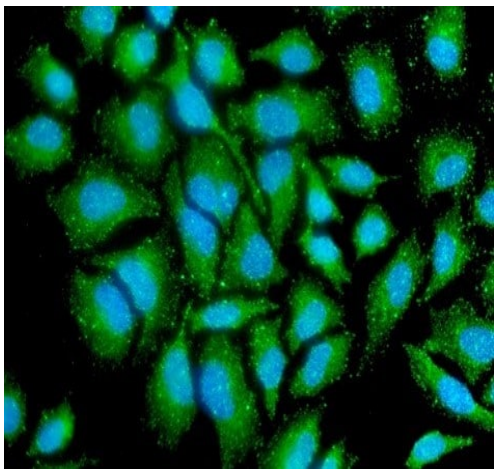
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.
IHC-P		1/100.
WB	★★★★★ (3)	1/250 - 1/1000. Predicted molecular weight: 42 kDa.
ICC/IF		1/100.

Target

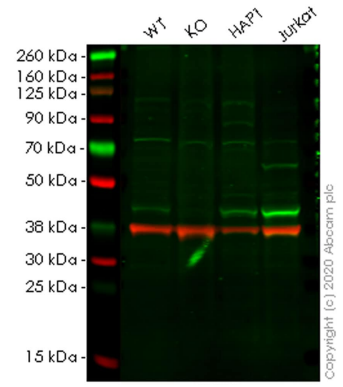
Function	Enzyme with a broad specificity. Negatively regulates TGF-beta signaling through dephosphorylating SMAD2 and SMAD3, resulting in their dissociation from SMAD4, nuclear export of the SMADs and termination of the TGF-beta-mediated signaling.
Sequence similarities	Belongs to the PP2C family.
Cellular localization	Nucleus.

Images



Immunocytochemistry/ Immunofluorescence - Anti-PPM1A antibody [p6c7] (ab14824)

Immunocytochemistry/ Immunofluorescence analysis of PP2C alpha/PPM1A in HeLa cells. The cell was stained with ab14824 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).



Western blot - Anti-PPM1A antibody [p6c7] (ab14824)

All lanes : Anti-PPM1A antibody [p6c7] (ab14824) at 1/500 dilution

Lane 1 : Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2 : PPM1A knockout HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 3 : HAP1 whole cell lyate
Lane 4 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

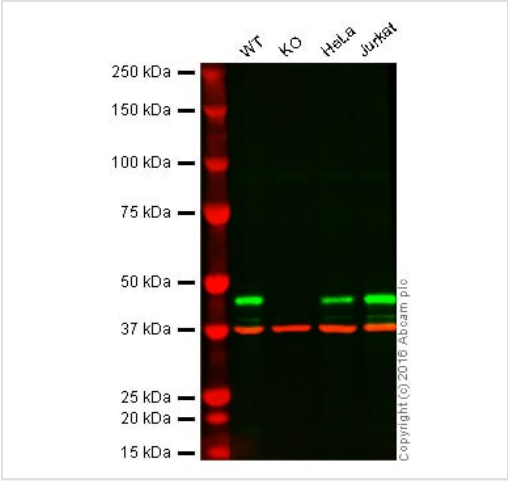
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) at 1/10000 dilution

Predicted band size: 42 kDa
Observed band size: 42 kDa

Lanes 1-4: Merged signal (red and green). Green - ab14824 observed at 42 kDa. Red - loading control **ab181602** observed at 36 kDa.

ab14824 Anti-PPM1A antibody [p6c7] was shown to specifically react with PPM1A in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265348** (knockout cell lysate **ab259055**) was used. Wild-type and PPM1A knockout samples were subjected to SDS-PAGE. ab14824 and Anti-GAPDH antibody[EPR16891] - Loading Control (**ab181602**) were incubated overnight at 4°C at 1 in 500 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) and Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

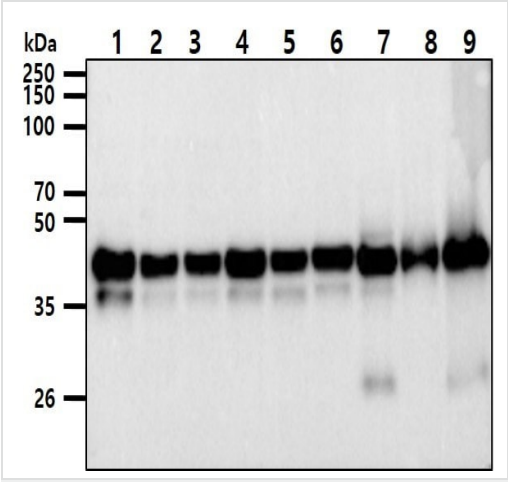


Western blot - Anti-PPM1A antibody [p6c7] (ab14824)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: PPM1A knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: Jurkat cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab14824 observed at 42 kDa. Red - loading control, **ab18251**, observed at 52 kDa.

ab14824 was shown to specifically react with PPM1A when PPM1A knockout samples were used. Wild-type and PPM1A knockout samples were subjected to SDS-PAGE. ab14824 diluted to 1/250 and **ab18251** (loading control to alpha Tubulin) diluted to 1/10000 were incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

This image was generated using the ascites version of the product.



Western blot - Anti-PPM1A antibody [p6c7] (ab14824)

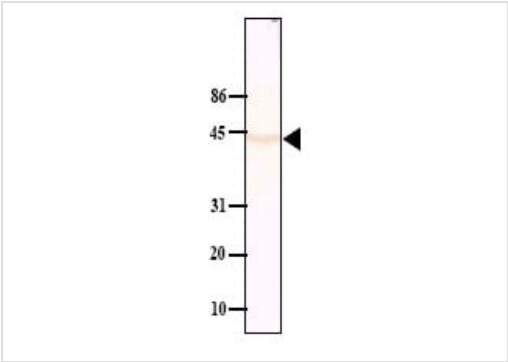
All lanes : Anti-PPM1A antibody [p6c7] (ab14824) at 1/1000 dilution

Lane 1 : Jurkat cell lysate
Lane 2 : HeLa cell lysate
Lane 3 : K-562 cell lysate
Lane 4 : MCF7 cell lysate
Lane 5 : A549 cell lysate
Lane 6 : Raji cell lysate
Lane 7 : Mouse kidney tissue lysate
Lane 8 : Mouse brain tissue lysate
Lane 9 : Mouse liver tissue lysate

Lysates/proteins at 40 µg per lane.

Secondary
All lanes : goat anti-mouse secondary antibody conjugated to HRP

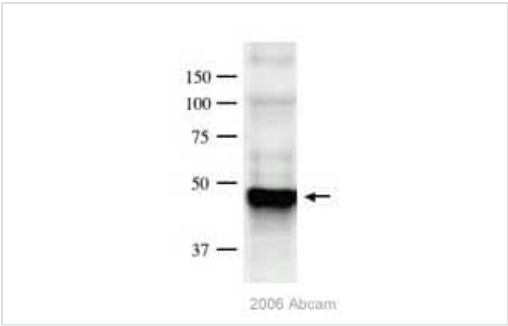
Predicted band size: 42 kDa



Western blot - Anti-PPM1A antibody [p6c7] (ab14824)

Western blot analysis of mouse liver cytosol extract using ab14824 at a dilution of 1/250. Proteins were visualised using a goat anti-mouse secondary antibody conjugated to HRP and a DAB detection system. Western blot analysis of mouse liver cytosol extract using ab14824 at a dilution of 1/250. Proteins were visualised using a goat anti-mouse secondary antibody conjugated to HRP and a DAB detection system.

This image was generated using the ascites version of the product.



Western blot - Anti-PPM1A antibody [p6c7] (ab14824)

Anti-PPM1A antibody [p6c7] (ab14824) at 1/1000 dilution + HeLa whole cell lysate

Secondary
HRP conjugated anti-mouse antibody

Developed using the ECL technique.

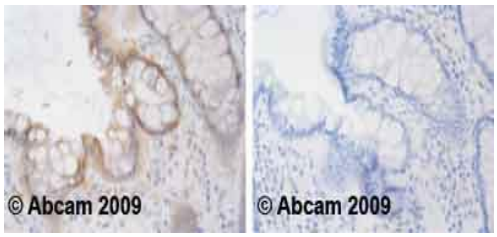
Performed under reducing conditions.

Predicted band size: 42 kDa
Observed band size: 45 kDa

Exposure time: 10 seconds

This image is courtesy of an Abreview submitted by **Xia Lin** on **2 March 2006.**

This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PPM1A antibody [p6c7] (ab14824)

Ab14824 staining human colon. Staining is localised to cytoplasm. Left panel: with primary antibody at 4ug/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 antigen retrieval buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit 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.

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