abcam

ab234439

Anti-PPM1D/WIP1 antibody [EPR22960-39]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22960-39
Purification technique	Affinity purification Protein A
Specificity	**The antibody detects specifically PPM1D430.**
Concentration	0.525 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PPM1D

Function Involved in the negative regulation of p53 expression (PubMed:23242139). Required for the relief of p53-dependent checkpoint mediated cell cycle arrest. Binds to and dephosphorylates 'Ser-15' of TP53 and 'Ser-345' of CHEK1 which contributes to the functional inactivation of these proteins (PubMed:15870257, PubMed:16311512). Mediates MAPK14 dephosphorylation and inactivation

(PubMed:21283629). Is also an important regulator of global heterochromatin silencing and critical in maintaining genome integrity (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The PPM1D protein also known as wild-type p53-induced phosphatase 1 (WIP1) is a serine/threonine phosphatase. Its molecular weight is approximately 66 kDa. PPM1D is an enzyme expressed in various tissues including the brain heart and kidney. This phosphatase plays an important role in the regulation of the cellular stress response by dephosphorylating specific substrates.
Biological function summary	PPM1D/WIP1 acts as a modulator of cellular stress and survival mechanisms. The protein influences the DNA damage response and supports cell cycle progression

	by deactivating critical checkpoint proteins such as p38 MAPK and p53. It does not form part of a larger protein complex but interacts directly with these proteins to exert its biological functions.
Pathways	PPM1D engages with mechanisms linked to the DNA damage response and the p53 signaling pathway. It counteracts the activation of p53 a protein integral in cell cycle arrest and apoptosis which helps cells to recover post-DNA damage. PPM1D also interacts with proteins like ATM and CHK2 which are part of the DNA repair pathway playing a role in cellular recovery and survival.
Associated diseases and disorders	PPM1D links to cancer development and progression. Its role in deactivating p53 and facilitating continued cell proliferation makes it relevant to tumorigenesis. Also PPM1D's connection to ATM and the DNA damage response becomes significant in neurodegenerative diseases. Dysregulation of PPM1D can contribute to an improper cellular response to genomic instability contributing to disease pathogenesis.

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

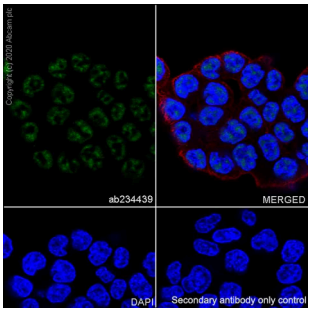
We do not recommend this combination. It is not covered by our product promise.

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.

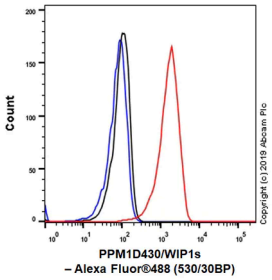
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

PPM1D/WIP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPM1D/WIP1 antibody

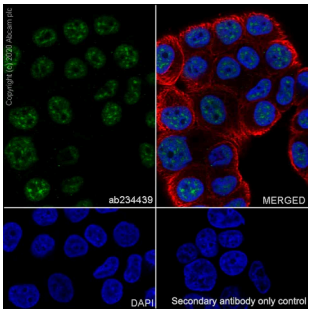
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HCT-116 (Human colorectal carcinoma cell line) cells labelling PPM1D430/WIP1s with ab234439 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HCT-116 cells. Tubulin is detected with Anti-alpha Tubulin antibody (Alexa Fluor® 594) ab195889 at 1/200 dilution (Red). Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

PPM1D/WIP1 Flow Cytometry (Intracellular) staining using rabbit Anti-PPM1D/WIP1 antibody

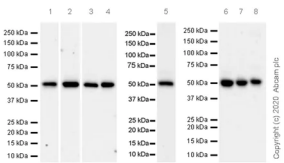
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labelling PPM1D430/WIP1s with ab234439 at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

PPM1D/WIP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPM1D/WIP1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labelling PPM1D430/WIP1s with ab234439 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in MCF7 cells. Tubulin is detected with Anti-alpha Tubulin antibody (Alexa Fluor® 594) ab195889 at 1/200 dilution (Red). Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

PPM1D/WIP1 Western blot staining using rabbit Anti-PPM1D/WIP1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: Lanes 1-4: 70 seconds; Lanes 5-8: 48 seconds.

All lanes:
Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439) at 1/1000 dilution

Lane 1:
MCF7 (Human breast adenocarcinoma epithelial cell line) whole cell lysate at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

Lane 3:
A549 (Human lung carcinoma cell line) whole cell lysate at 20 µg

Lane 4:
F9 (Mouse embryonic testicular cancer cell line) whole cell lysate at 20 µg

Lane 5:
HCT 116 (Human colorectal carcinoma cell line) whole cell lysate at 20 µg

Lane 6:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 20 µg

Lane 7:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate at 20 µg

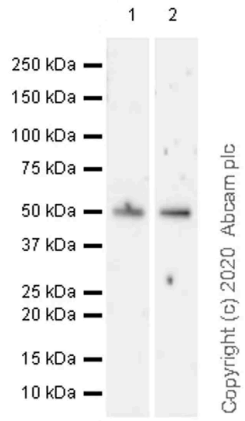
Lane 8:
NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 67 kDa

Observed band size: 50 kDa



Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

PPM1D/WIP1 Western blot staining using rabbit Anti-PPM1D/WIP1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST Exposure time: 3 minutes
All lanes:
Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439) at 1/1000 dilution

Lane 1:
Human testis tissue lysate at 20 µg

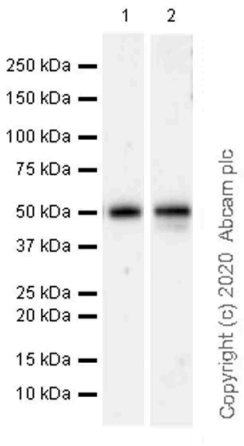
Lane 2:
Human lung cancer tissue lysate at 20 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 67 kDa

Observed band size: 50 kDa



Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439)

Blocking buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 minutes.

All lanes:
Western blot - Anti-PPM1D/WIP1 antibody [EPR22960-39] (ab234439) at 1/1000 dilution

Lane 1:
Mouse spleen tissue lysate at 20 µg

Lane 2:
Rat spleen tissue lysate at 20 µg

Secondary

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

Predicted band size: 67 kDa

Observed band size: 50 kDa

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