abcam

ab269864

Anti-PPM1D/WIP1 antibody [EPR22960-39] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR22960-39
Purification technique	Affinity purification Protein A
Specificity	**The antibody detects specifically PPM1D430.**
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Expected

Species	Mouse, Rat, Human

Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab269864 is the carrier-free version of ab234439.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

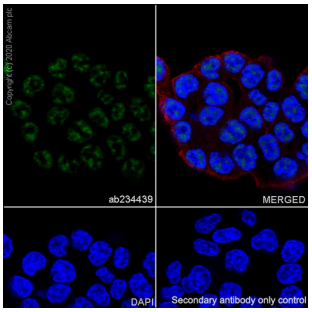
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images



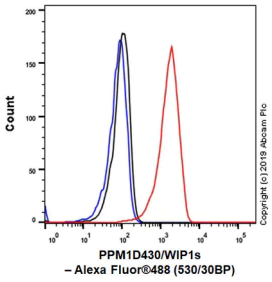
Immunocytochemistry/ Immunofluorescence - Anti-PPM1D/WIP1 antibody [EPR22960-39] - BSA and Azide free (ab269864)

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.

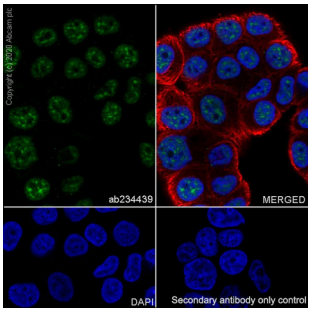
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab234439).



Flow Cytometry (Intracellular) - Anti-PPM1D/WIP1 antibody [EPR22960-39] - BSA and Azide free (ab269864)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab234439).



Immunocytochemistry/ Immunofluorescence - Anti-PPM1D/WIP1 antibody [EPR22960-39] - BSA and Azide free (ab269864)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab234439).

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