abcam

Product datasheet

Anti-PRMT5 antibody [EPR5772] ab109451

Recombinant RabMAb

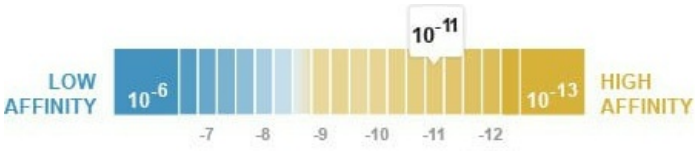
★★★★★ 2 Abreviews 46 References 12 Images

Overview

Product name	Anti-PRMT5 antibody [EPR5772]
Description	Rabbit monoclonal [EPR5772] to PRMT5
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, ICC/IF, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293, HepG2, HeLa, and NIH/3T3 cell lysates; mouse and rat brain tissue lysate. ICC/IF: HepG2 and HeLa cells. IHC-P: Human infiltrating duct carcinoma of breast tissue, mouse liver tissue. Flow Cyt (intra): HeLa cells. IP: Mouse brain cell.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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. Stable for 12 months at -20°C.
Dissociation constant (K_D)	$K_D = 6.70 \times 10^{-11}$ M



Learn more about K_D

Storage buffer	pH: 7.20

	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR5772
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109451 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
Flow Cyt (Intra)		1/100. For unpurified use at 1/500 - 1/1000.**ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ **(1)**	1/10000 - 1/50000. Detects a band of approximately 72 kDa (predicted molecular weight: 73 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. **For unpurified use at 1/100 - 1/250.**
ICC/IF		1/50. For purifed use at 1/50For unpurified use at 1/100 - 1/250.
IP		1/30.

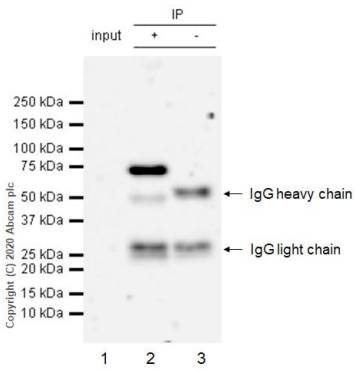
Target

Function Arginine methyltransferase that can both catalyze the formation of omega-N monomethylarginine (MMA) and symmetrical dimethylarginine (sDMA), with a preference for the formation of MMA. Specifically mediates the symmetrical dimethylation of arginine residues in the small nuclear ribonucleoproteins Sm D1 (SNRPD1) and Sm D3 (SNRPD3); such methylation being required for the assembly and biogenesis of snRNP core particles. Methylates SUPT5H. Mono- and dimethylates arginine residues of myelin basic protein (MBP) in vitro. Plays a role in the assembly of snRNP core particles. May play a role in cytokine-activated transduction pathways. Negatively regulates cyclin E1 promoter activity and cellular proliferation. May regulate the SUPT5H transcriptional elongation properties. May be part of a pathway that is connected to a chloride current, possibly through cytoskeletal rearrangement. Methylates histone H2A and H4 'Arg-3' during germ cell development. Methylates histone H3 'Arg-8', which may repress transcription. Methylates the Piwi proteins (PIWIL1, PIWIL2 and PIWIL4), methylation of Piwi proteins being required for the interaction with Tudor domain-containing proteins and subsequent localization to the meiotic nuage. Methylates RPS10.

Tissue specificity Ubiquitous.

Sequence similarities	Belongs to the protein arginine N-methyltransferase family.
Post-translational modifications	Disulfide bonds and non-covalent association mediate homooligomers formation.
Cellular localization	Cytoplasm. Nucleus.

Images



Immunoprecipitation - Anti-PRMT5 antibody [EPR5772] (ab109451)

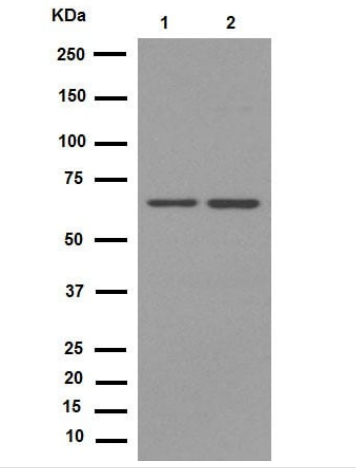
PRMT5 was immunoprecipitated from 0.35 mg Mouse brain tissue lysate 10 ug with ab109451 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab109451 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(**ab131366**) was used at 1/5000 dilution.
Lane 1: Mouse brain tissue lysate 10 ug

Lane 2: ab109451 IP in Mouse brain tissue lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab109451 in mouse brain tissue lysate

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

Exposure time: 100 seconds



Western blot - Anti-PRMT5 antibody [EPR5772] (ab109451)

All lanes : Anti-PRMT5 antibody [EPR5772] (ab109451) at 1/50000 dilution (purified)

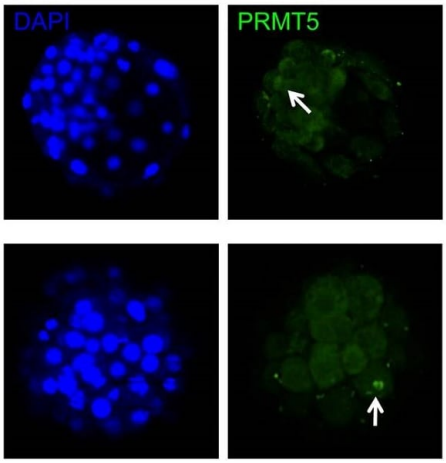
Lane 1 : HEK-293 (Human epithelial cell line from embryonic kidney) cell lysate
Lane 2 : HepG2 (Human liver hepatocellular carcinoma cell line) cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 73 kDa
Observed band size: 72 kDa

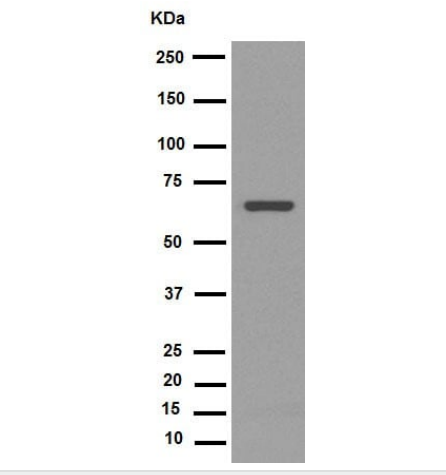
Blocking/Dilution buffer and concentration: 5% NFDM/TBST.



Immunocytochemistry/ Immunofluorescence - Anti-PRMT5 antibody [EPR5772] (ab109451)

Expression and localization of candidate epigenetic reprogramming factors in human embryos.

Human blastocysts were incubated with primary antibodies for (**Panel B**) PRMT5 (green), the nuclear DNA stained with DAPI (blue) and visualized by multi-channel confocal microscopy. Note that the expression of PRMT5 primarily localized to the ICM of human blastocysts (indicated by white arrows).



Western blot - Anti-PRMT5 antibody [EPR5772] (ab109451)

Anti-PRMT5 antibody [EPR5772] (ab109451) at 1/10000 dilution (purified) + HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate at 20 µg

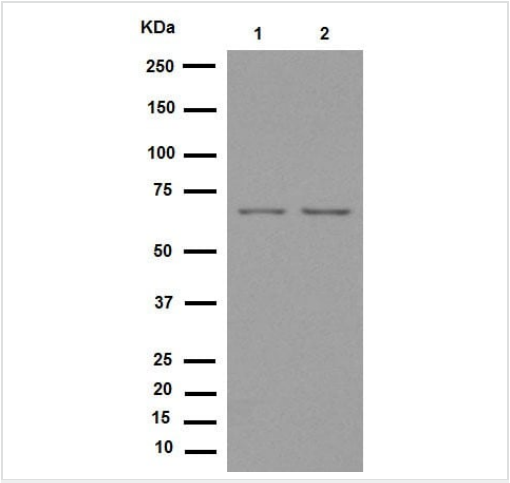
Secondary

Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 73 kDa

Observed band size: 72 kDa

Blocking/Dilution buffer and concentration: 5% NFDM/TBST.



Western blot - Anti-PRMT5 antibody [EPR5772] (ab109451)

All lanes : Anti-PRMT5 antibody [EPR5772] (ab109451) at 1/10000 dilution (purified)

Lane 1 : Mouse brain tissue lysate

Lane 2 : Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

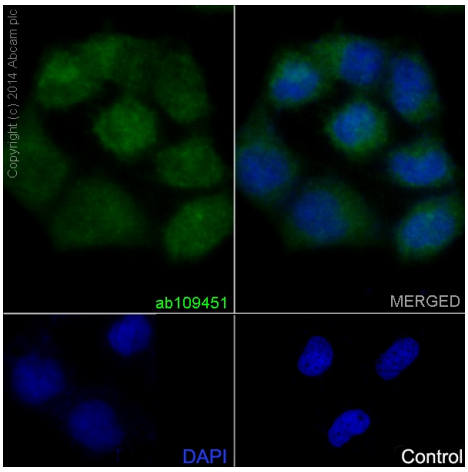
Secondary

All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 73 kDa

Observed band size: 72 kDa

Blocking/Dilution buffer and concentration: 5% NFDM/TBST.

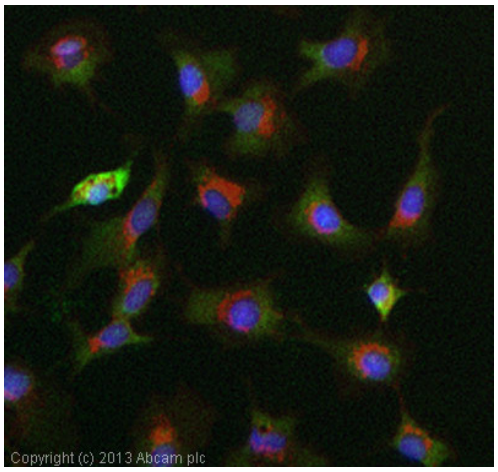


Immunocytochemistry/ Immunofluorescence - Anti-PRMT5 antibody [EPR5772] (ab109451)

Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling PRMT5 (green) with purified ab109451 at 1/50.

Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/200) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

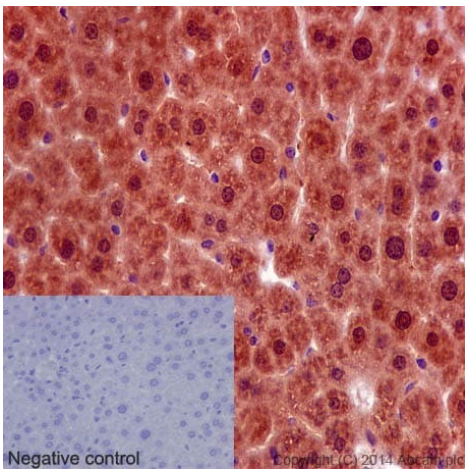
Control: Secondary antibody Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/400).



Immunocytochemistry/ Immunofluorescence - Anti-PRMT5 antibody [EPR5772] (ab109451)

ICC/IF image of ab109451 (unpurified) stained HepG2 (Human liver hepatocellular carcinoma cell line) cells.

The cells were fixed with 100% methanol (5 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab109451, 1/100 dilution) overnight at +4°C. The secondary antibody (green) was **ab96899**, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PRMT5 antibody [EPR5772] (ab109451)

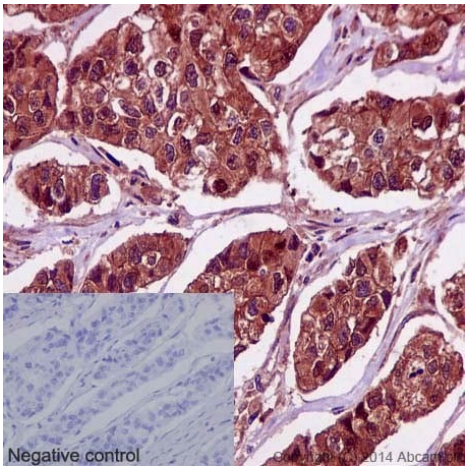
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling PRMT5 with purified ab109451 at 1/100.

A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody.

Negative control using PBS instead of primary antibody.

Counterstained with hematoxylin.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PRMT5 antibody [EPR5772] (ab109451)

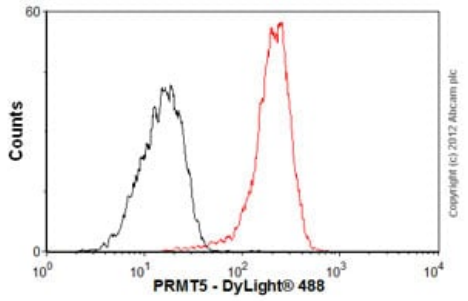
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human infiltrating duct carcinoma of breast tissue sections labeling PRMT5 with purified ab109451 at 1/100.

A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody.

Negative control using PBS instead of primary antibody.

Counterstained with hematoxylin.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

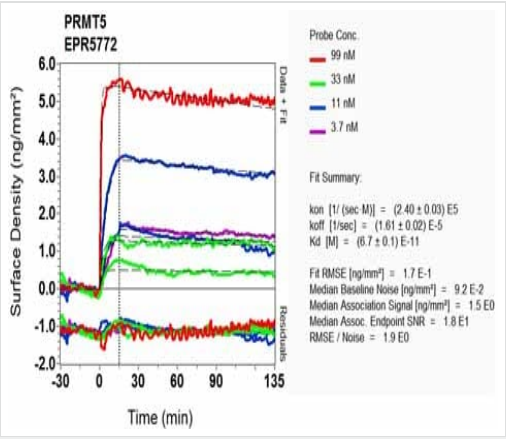


Flow Cytometry (Intracellular) - Anti-PRMT5 antibody [EPR5772] (ab109451)

Overlay histogram showing HeLa (Human liver hepatocellular carcinoma cell line) cells stained with ab109451 (unpurified, red line).

The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109451, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (**ab96899**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monclonal) (1µg/1x10^6 cells) used under the same conditions.

Acquisition of >5,000 events was performed.



OI-RD Scanning - Anti-PRMT5 antibody [EPR5772] (ab109451)

Equilibrium disassociation constant (K_D)

Click here to learn more about K_D

Anti-PRMT5 antibody [EPR5772] (ab109451)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors