

PRMT5 Monoclonal Antibody (PRMT5-21)

Catalog NumberMA1-25470

Product data sheet

Details		Species Reactivity	
Size	50 µL	Species reactivity	Bovine, Dog, Chicken, Hamster, Human, Mouse, Non-human primate, Rat
Host/Isotope	Mouse / IgG2a	Published species	Zebrafish, Not Applicable
Class	Monoclonal	Tested Applications	Dilution *
Type	Antibody	ChIP assay (ChIP)	2.5 µg/10^6 cells
Clone	PRMT5-21	ELISA (ELISA)	Assay-dependent
Immunogen	Fusion of mouse myeloma cells and splenocytes from mice immunized with PRMT5 containing the C-terminal region of the Human PRMT5 (residues 315-637).	Western Blot (WB)	2 µg/mL
Conjugate	Unconjugated	Published Applications	
Form	Liquid	ChIP assay (ChIP)	See 1 publications below
Concentration	2.4 mg/mL	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Purification	purified		
Storage buffer	0.01M PBS, pH 7.4		
Contains	15mM sodium azide		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

Recommended positive controls: G361.

Background/Target Information

PRMT5 (protein arginine N-methyltransferase 5) is an 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. PRMT5 specifically mediates the symmetrical dimethylation of arginine residues in the small nuclear ribonucleoproteins Sm D1 and Sm D3; such methylation is required for the assembly and biogenesis of snRNP core particles.

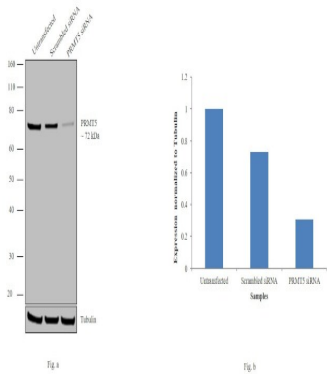
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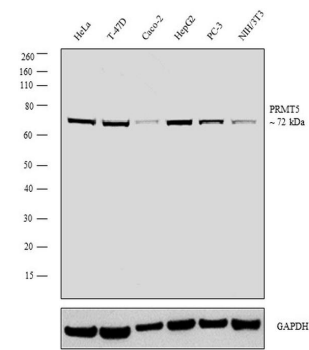
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Product Images For PRMT5 Monoclonal Antibody (PRMT5-21)



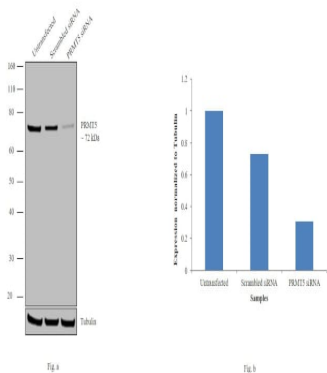
PRMT5 Antibody (MA1-25470)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. HeLa cells were transfected with PRMT5 siRNA and reduction of signal was observed in Western Blot using PRMT5 Monoclonal Antibody (PRMT521) (Product # MA1-25470). {KD}



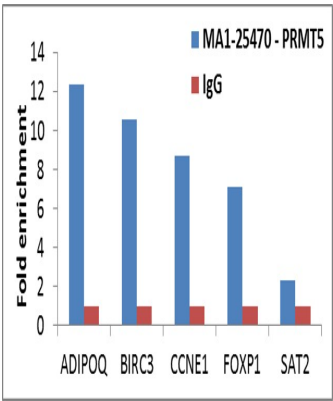
PRMT5 Antibody (MA1-25470) in WB

Western blot analysis was performed on modified whole cell extracts (30 µg lysate) of HeLa (Lane 1), T-47D (Lane 2), Caco-2 (Lane 3), HepG2 (Lane 4), PC-3 (Lane 5) and NIH/3T3 (Lane 6). The blot was probed with Anti-PRMT5 Monoclonal Antibody (PRMT5-21) (Product # MA1-25470, 1:1000 dilution) and detected by chemiluminescence using Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A28177, 0.25 µg/mL, 1:4000 dilution). A 72 kDa band corresponding to PRMT5 was observed in all human and mouse cell line(s) tested.



PRMT5 Antibody (MA1-25470) in WB

Knockdown of PRMT5 was achieved by transfecting HeLa cells with PRMT5 specific siRNAs (Silencer® select Product # s20377). Western blot analysis (Fig. a) was performed using modified whole cell extracts (1% SDS) from the PRMT5 knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blots were probed with PRMT5 Monoclonal Antibody (PRMT1) (Product # MA1-25470, 2 µg/mL) and Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A28177, 0.25 µg/mL, 1:4000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to PRMT5.



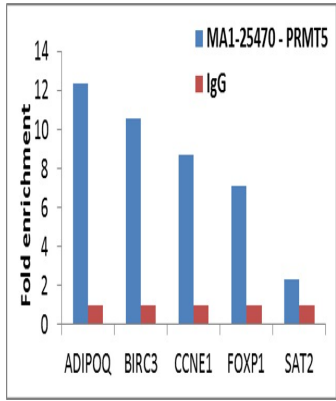
PRMT5 Antibody (MA1-25470)

Antibody specificity was demonstrated by detection of enrichment of the target protein at specific gene loci. Chromatin Immunoprecipitation (ChIP) was performed using Anti-PRMT5 monoclonal antibody (Product # MA1-25470) using PCR primer pairs over the promoters of ADIPOQ, BIRC3, CCNE1, FOXF1 (positive) and SAT2 satellite repeats (negative). {RE}

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**PRMT5 Antibody (MA1-25470) in ChIP**

Enrichment of endogenous PRMT5 protein at specific gene loci using Anti-PRMT5 Antibody: Chromatin Immunoprecipitation (ChIP) was performed using Anti-PRMT5 Mouse Monoclonal antibody (Product # MA1-25470, 5 µg) on sheared chromatin from 2 million HCT 116 cells using the MAGnify ChIP System (Product # 49-2024). Normal Rabbit IgG was used as a negative IP control. The purified DNA was analyzed by qPCR with PCR primer pairs over the promoters of ADIPOQ, BIRC3, CCNE1, FOXP1 (positive) and SAT2 satellite repeats (negative). Data is presented as fold enrichment of the antibody signal versus the negative control IgG using the comparative CT method.

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PubMed References For PRMT5 Monoclonal Antibody (PRMT5-21)

1 ChIP assay References

Species / Dilution	Summary
	MA1-25470 was used in ChIP assay to study the role of the Protein Arginine Methyl Transferase Prmt5 during blood vessel formation and hematopoiesis in a zebrafish model.
Zebrafish / Not Cited	PLoS genetics ( 2021; 17: ) <b>"Prmt5 promotes vascular morphogenesis independently of its methyltransferase activity."</b> Author(s):Quillien A,Gilbert G,Boulet M,Ethuin S,Waltzer L,Vandel L PubMed Article URL: <a href="http://dx.doi.org/10.1371/journal.pgen.1009641">http://dx.doi.org/10.1371/journal.pgen.1009641</a>

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