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PRMT3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1004a

Product Information

Application	WB, IHC-P, E
Primary Accession	O60678
Other Accession	Q922H1
Reactivity	Human, Rat, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB0029
Calculated MW	59903
Antigen Region	142-173

Additional Information

Gene ID	10196
Other Names	Protein arginine N-methyltransferase 3, 211-, Heterogeneous nuclear ribonucleoprotein methyltransferase-like protein 3, PRMT3, HRMT1L3
Target/Specificity	This PRMT3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 142-173 amino acids from the N-terminal region of human PRMT3.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PRMT3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRMT3 (HGNC:30163)
Function	Protein-arginine N-methyltransferase that catalyzes both the monomethylation and asymmetric dimethylation of the guanidino nitrogens

of arginine residues in target proteins, and therefore falls into the group of type I methyltransferases (PubMed:22795084, PubMed:23445220, PubMed:25728001, PubMed:31378783, PubMed:33495566, PubMed:39513743). Catalyzes the asymmetric arginine dimethylation at multiple sites in the Arg/Gly-rich region of small ribosomal subunit protein uS5/RPS2 (PubMed:22795084). Also appears to methylate other ribosomal proteins (By similarity). May regulate retinoic acid synthesis and signaling by inhibiting ALDH1A1 retinal dehydrogenase activity (PubMed:33495566). Contributes to methylation of histone H4 'Arg-3', a specific tag for epigenetic transcriptional activation (PubMed:25728001, PubMed:31378783, PubMed:39513743). Mediates asymmetric arginine dimethylation of histone H4 'Arg-3' (H4R3me2a) in the promoter region of miRNA miR-3648, to promote its transcription and osteogenesis (PubMed:31378783).

Cellular Location Cytoplasm, cytosol. Nucleus Note=Localized to the nucleus by ZNF200.

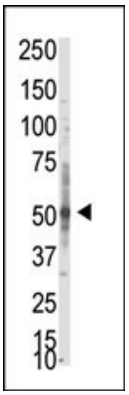
Background

Arginine methylation is an irreversible post translational modification which has only recently been linked to protein activity. At least three types of PRMT enzymes have been identified in mammalian cells. These enzymes have been shown to have essential regulatory functions by methylation of key proteins in several fundamental areas. These protein include nuclear proteins, IL enhancer binding factor, nuclear factors, cell cycle proteins, signal transduction proteins, apoptosis proteins, and viral proteins. The mammalian PRMT family currently consists of 7 members that share two large domains of homology. Outside of these domains, epitopes were identified and antibodies against all 7 PRMT members have been developed.

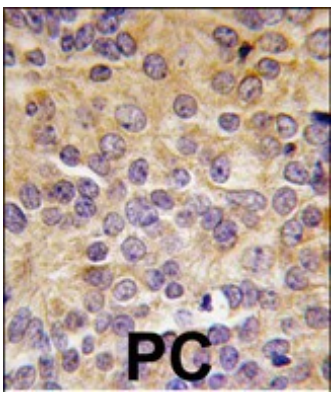
References

Tang, J., et al., J. Biol. Chem. 273(27):16935-16945 (1998).

Images



Western blot analysis of anti-PRMT3 Pab (Cat. #AP1004a)in whole HL60 cell lysate: PRMT3 (Arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human prostata carcinoma tissue reacted with PRMT3 antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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