

**#2453** Store at -20°C

## PRMT1 (F339) Antibody


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<b>Applications:</b> WB	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 41	<b>Source:</b> Rabbit	<b>UniProt ID:</b> #Q99873	<b>Entrez-Gene Id:</b> 3276
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	PRMT1 (F339) Antibody detects endogenous levels of total PRMT1 protein (all three isoforms). The antibody does not cross-react with other PRMT proteins.	
<b>Species predicted to react based on 100% sequence homology:</b>	Bovine	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of human PRMT1. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	<p>Protein arginine N-methyltransferase 1 (PRMT1) is a member of the protein arginine N-methyltransferase (PRMT) family of proteins that catalyze the transfer of a methyl group from S-adenosylmethionine (AdoMet) to a guanidine nitrogen of arginine (1). Though all PRMT proteins catalyze the formation of mono-methyl arginine, Type I PRMTs (PRMT1, 3, 4, and 6) add an additional methyl group to produce an asymmetric di-methyl arginine while Type II PRMTs (PRMT 5 and 7) produce symmetric di-methyl arginine (1). Mono-methyl arginine, but not di-methyl arginine, can be converted to citrulline through deimination catalyzed by enzymes such as PADI4 (2). Most PRMTs, including PRMT1, methylate arginine residues found within glycine-arginine rich (GAR) protein domains, such as RGG, RG, and RXR repeats (1). However, PRMT4/CARM1 and PRMT5 methylate arginine residues within PGM (proline-, glycine-, methionine-rich) motifs (3). PRMT1 methylates Arg3 of histone H4 and cooperates synergistically with p300/CBP to enhance transcriptional activation by nuclear receptor proteins (4-6). In addition, PRMT1 methylates many non-histone proteins, including the orphan nuclear receptor HNF4 (6), components of the heterogeneous nuclear ribonucleoprotein (hnRNP) particle (7), the RNA binding protein Sam68 (8), interleukin enhancer-binding factor 3 (ILF3) (9) and interferon-α and β receptors (10). These interactions suggest additional functions in transcriptional regulation, mRNA processing and signal transduction. Alternative mRNA splicing produces three enzymatically active PRMT1 isoforms that differ in their amino-terminal regions (11). PRMT1 is localized to the nucleus or cytoplasm, depending on cell type (12,13), and appears in many distinct protein complexes. ILF3, TIS21 and the leukemia-associated BTG1 proteins bind PRMT1 to regulate its methyltransferase activity (9,14).</p>	

**Background References**

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7. Nichols, R.C. et al. (2000) *Exp. Cell Res.* 256, 522-532.
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12. Frankel, A. et al. (2002) *J. Biol. Chem.* 277, 3537-3543.
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**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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