

PRMT6 (D5A2N) Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W, IP | H M R | Endogenous | 42 | Rabbit IgG | #Q96LA8 | 55170 |

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

PRMT6 (D5A2N) Rabbit mAb recognizes endogenous levels of total PRMT6 protein.

Species predicted to react based on 100% sequence homology

Bovine, *S. cerevisiae*

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala62 of human PRMT6 protein.

Background

Protein arginine N-methyltransferase 6 (PRMT6) 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). The three types of PRMTs share the ability to mono-methylate arginine residues, but vary in their ability to generate differential methylation states (1-3). Mono-methylated arginine residues are further methylated by type I PRMTs to generate an asymmetric di-methyl arginine or by type II PRMTs to form a symmetric-dimethyl arginine. Type III methyltransferases are only able to mono-methylate arginine residues (1-3). PRMT6 is a type I PRMT that acts as both a transcriptional coactivator and a corepressor and catalyzes the asymmetric di-methylation of histone H3 (Arg 2, Arg42), histone H4 (Arg3), and histone H2A at Arg29 (2,4). PRMT6 acts as a coactivator for transcription factors, including estrogen receptor and NFκB, while asymmetric di-methylation of histone H3 (Arg2) by PRMT6 prevents MLL methylation of histone H3 at Lys4 and inhibits transcription activation (5-8). In addition to its role in regulating transcription, PRMT6 methylates DNA polymerase β, leading to enhanced DNA binding and processivity during base excision repair of damaged DNA (9).

Background References

- Di Lorenzo, A. and Bedford, M.T. (2011) *FEBS Lett* 585, 2024-31.
- Yang, Y. and Bedford, M.T. (2013) *Nat Rev Cancer* 13, 37-50.
- Molina-Serrano, D. et al. (2013) *Biochem Soc Trans* 41, 751-9.
- Casadio, F. et al. (2013) *Proc Natl Acad Sci U S A* 110, 14894-9.
- Harrison, M.J. et al. (2010) *Nucleic Acids Res* 38, 2201-16.
- Di Lorenzo, A. et al. (2014) *Nucleic Acids Res* 42, 8297-309.
- Hyllus, D. et al. (2007) *Genes Dev* 21, 3369-80.
- Smith, A.P. et al. (2009) *Oncogene* 28, 422-30.
- El-Andaloussi, N. et al. (2006) *Mol Cell* 22, 51-62.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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