Revision 1

Store at -20C

#14762

PRMT7 (D1K6R) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M Mk	Endogenous	78	Rabbit IgG	#Q9NVM4	54496

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

PRMT7 (D1K6R) Rabbit mAb recognizes endogenous levels of total PRMT7 protein.

Species predicted to react based on 100% sequence homology

Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val233 of human PRMT7 protein.

Background

Protein arginine N-methyltransferase 7 (PRMT7) 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). Research studies indicate that PRMT7 is a type III PRMT that displays substrate specificity for an arginine-X-arginine (RXR) motif surrounded by several basic residues (4,5). PRMT7 interacts with a wide array of protein substrates and likely plays a role in many biological processes including pluripotency, neuronal differentiation, genomic instability, snRNP biogenesis, and breast cancer metastasis (6-11).

Background References

1. Di Lorenzo, A. and Bedford, M.T. (2011) *FEBS Lett* 585, 2024-31.
2. Yang, Y. and Bedford, M.T. (2013) *Nat Rev Cancer* 13, 37-50.
3. Molina-Serrano, D. et al. (2013) *Biochem Soc Trans* 41, 751-9.
4. Feng, Y. et al. (2013) *J Biol Chem* 288, 37010-25.
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6. Buhr, N. et al. (2008) *Electrophoresis* 29, 2381-90.
7. Dhar, S.S. et al. (2012) *Genes Dev* 26, 2749-62.
8. Verbiest, V. et al. (2008) *FEBS Lett* 582, 1483-9.
9. Gros, L. et al. (2003) *Cancer Res* 63, 164-71.
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11. Gonsalvez, G.B. et al. (2007) *J Cell Biol* 178, 733-40.

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

Cross-Reactivity Key

H: Human **M:** Mouse **Mk:** Monkey

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