Revision 1

Store at -20C

#14641

PRMT6 (D5A2N) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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	Dilution
Western Blotting	1:1000
Immunoprecipitation	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

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. Casadio, F. et al. (2013) *Proc Natl Acad Sci U S A* 110, 14894-9.
5. Harrison, M.J. et al. (2010) *Nucleic Acids Res* 38, 2201-16.
6. Di Lorenzo, A. et al. (2014) *Nucleic Acids Res* 42, 8297-309.
7. Hyllus, D. et al. (2007) *Genes Dev* 21, 3369-80.
8. Smith, A.P. et al. (2009) *Oncogene* 28, 422-30.
9. 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

Trademarks and Patents

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.