Revision 1

Store at -20C

#2825

SET7/SET9 (C24B1) 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	H M R Mk	Endogenous	48	Rabbit IgG	#Q8WTS6	80854

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

SET7/SET9 (C24B1) Rabbit mAb detects endogenous levels of total SET7/SET9 protein. This antibody does not cross-react with other SET domain-containing proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the amino terminus of the human SET7/SET9 protein.

Background

SET7/SET9 is a member of the SET domain-containing family, and can specifically methylate Lys4 on histone H3 (1). Like most other lysine-directed histone methyltransferases, it contains a conserved catalytic SET domain originally identified in the Drosophila Su(var)3-9, Enhancer of zeste and Trithorax proteins. Histone methylation is a major determinant for the formation of active and inactive regions of the genome and is crucial for the proper programming of the genome during development (2,3). Methylation of histone H3 Lys4 enhances transcriptional activation by coordinating the recruitment of BPTF, a component of the NURF chromatin remodeling complex, and WDR5, a component of multiple histone methyltransferase complexes (4,5). In addition, methylation of lysine 4 blocks transcriptional repression by inhibiting the binding of the NURD histone deacetylation complex to the amino-terminal tail of histone H3 and interfering with SUV39H1-mediated methylation of histone H3 Lys9 (1). SET7/SET9 is highly active on free histone H3, but only very weakly methylates H3 within nucleosomes (1). Besides histones, SET7/SET9 also methylates Lys189 of the TAF10, a member of the TFIID transcription factor complex, and Lys372 of the p53 tumor suppressor protein (6,7). Methylation of TAF10 stimulates transcription in a promoter-specific manner by increasing the affinity of TAF10 for RNA polymerase II, which may potentiate pre-initiation complex formation (6). Methylation of p53 at Lys372 increases protein stability and leads to upregulation of target genes such as p21. Thus the loss of SET7/SET9 may represent another mechanism for the inactivation of p53 in human cancers (7).

Background References

1. Nishioka, K. et al. (2002) *Genes Dev.* 16, 479-489.
2. Kubicek, S. et al. (2006) *Ernst Schering Res. Found. Workshop* , 1-27.
3. Lin, W. and Dent, S.Y. (2006) *Curr. Opin. Genet. Dev.* 16, 137-142.
4. Wysocka, J. et al. (2006) *Nature* 442, 86-90.
5. Wysocka, J. et al. (2005) *Cell* 121, 859-872.
6. Kouskouti, A. et al. (2004) *Mol. Cell* 14, 175-182.
7. Chuikov, S. et al. (2004) *Nature* 432, 353-360.

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 **R:** Rat **Mk:** Monkey

Trademarks and Patents

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.