Revision 3

Store at -20C

#46862

MYST1 (D5T3R) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	53	Rabbit IgG	#Q9H7Z6	84148

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

MYST1 (D5T3R) Rabbit mAb recognizes endogenous levels of total MYST1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein surrounding Val80 of human MYST1 protein.

Background

MYST1, also known as mammalian male absent on the first (MOF) and lysine acetyltransferase 8 (KAT8), is a member of the MYST (MOZ, YBF2, SAS2 and Tip60) family of histone acetyltransferases (1,2). As the catalytic subunit of two different histone acetyltransferase complexes, MSL and NSL, MYST1 is responsible for the majority of histone H4 lysine 16 acetylation in the cell. MYST1 also acetylates p53 on lysine 120 and is important for activation of pro-apoptotic genes (1,2). As a component of the MSL complex, MYST1 associates with MSL1, MSL2L1, and MSL3L1, and specifically acetylates histone H4 on lysine 16 (3-5). As part of the NSL complex, MYST1 associates with the MLL1 histone methyltransferase complex containing MLL1/KMT2A, ASH2L, HCFC1, WDR5 and RBBP5, and shows broader acetyltransferase activity for histone H4 on lysines 5, 8, and 16 (3-5). MYST1 plays a critical role in the regulation of transcription, DNA repair, autophagy, apoptosis, and emybryonic stem cell pluripotency and differentiation (1,2,6). Loss of MYST1 leads to a global reduction in histone H4 lysine 16 acetylation, a common hallmark found in many human cancers. A reduction of MYST1 protein levels and histone H4 lysine 16 acetylation is associated with poor prognosis in breast, renal, colorectal, gastric, and ovarian cancers (1).

Background References

1. Yang, Y. et al. (2014) *Front Med* 8, 79-83.
2. Li, X. and Dou, Y. (2010) *Epigenetics* 5, 185-8.
3. Dou, Y. et al. (2005) *Cell* 121, 873-85.
4. Li, X. et al. (2009) *Mol Cell* 36, 290-301.
5. Cai, Y. et al. (2010) *J Biol Chem* 285, 4268-72.
6. Füllgrabe, J. et al. (2013) *Nature* 500, 468-71.

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

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