Revision 5

#58418 Store at -20C

MYST2 (D4N3F) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, ChIP, ChIP-seq, C&R	H M R Mk	Endogenous	80	Rabbit IgG	#O95251	11143

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:1000
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	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

MYST2 (D4N3F) Rabbit mAb recognizes endogenous levels of total MYST2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein surrounding Val222 of human MYST2 protein.

Background

MYST2, also known as HBO1 and lysine acetyltransferase 7 (KAT7), is a member of the MYST (MOZ, YBF2, SAS2 and Tip60) family of histone acetyltransferases (HATs). MYST2 is the catalytic subunit of the HBO1 acetyltransferase complex, which consists of MYST2, MYST/ESA1-associated factor 6 (MEAF6), inhibitor of growth protein 4 (ING4) or inhibitor of growth protein 5 (ING5), and one of two families of scaffold proteins (JADE-1/2/3 or BRPF1/2/3) (1,2). The substrate specificity of the HBO1 complex is determined by the associated scaffold protein. HBO1 complexes containing JADE scaffold proteins acetylate histone H4 on lysines 5, 8 and 12, while complexes containing BRPF scaffold proteins acetylate histone H3 on lysines 14 and 23 (2). In addition, the scaffold protein appears to regulate the function of the HBO1 complex. Complexes containing JADE scaffold proteins bind to origin recognition complex 1 (ORC1) and regulate licensing of DNA replication, while HBO1 complexes containing BRPF scaffold proteins regulate transcription (2-5). MYST2 is required for regulation of cell proliferation (1), adipogenesis (6), embryonic development (7) and survival of fetal liver erythroblasts (8). In addition, MYST2 is over-expressed in several human cancers, including cancers of the testis, ovary, breast, stomach, esophagus, and bladder (9). The MYST2 gene is amplified and protein is over-expressed in breast cancers, and over-expression of MYST2 increases anchorage-independent growth of several breast cancer cell lines (10).

Background References

1. Avvakumov, N. et al. (2012) *Mol Cell Biol* 32, 689-703.
2. Lalonde, M.E. et al. (2013) *Genes Dev* 27, 2009-24.
3. Iizuka, M. and Stillman, B. (1999) *J Biol Chem* 274, 23027-34.
4. Iizuka, M. et al. (2006) *Mol Cell Biol* 26, 1098-108.
5. Miotto, B. and Struhl, K. (2010) *Mol Cell* 37, 57-66.
6. Johmura, Y. et al. (2008) *J Biol Chem* 283, 2265-74.
7. Kueh, A.J. et al. (2011) *Mol Cell Biol* 31, 845-60.
8. Mishima, Y. et al. (2011) *Blood* 118, 2443-53.
9. Iizuka, M. et al. (2009) *Gene* 436, 108-14.
10. Hu, X. et al. (2009) *Mol Cancer Res* 7, 511-22.

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

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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