

SETDB1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1483a**Specification**

SETDB1 Antibody - Product Information

Application	WB
Primary Accession	Q15047
Reactivity	Human, Mouse, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	180kDa KDa

Description

This gene encodes a histone methyltransferase. The encoded enzyme catalyzes the reaction of S-adenosyl-L-methionine and histone L-lysine to produce S-adenosyl-L-homocysteine and histone N(6)-methyl-L-lysine. The encoded protein likely functions in transcriptional repression. Tissue specificity: Widely expressed. High expression in testis.

Immunogen

Purified recombinant fragment of human SETDB1 expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

SETDB1 Antibody - Additional Information

Gene ID 9869

Other Names

Histone-lysine N-methyltransferase SETDB1, 2.1.1.43, ERG-associated protein with SET domain, ESET, Histone H3-K9 methyltransferase 4, H3-K9-HMTase 4, Lysine N-methyltransferase 1E, SET domain bifurcated 1, SETDB1, KIAA0067, KMT1E

Dilution

WB~~1/500 - 1/2000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SETDB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SETDB1 Antibody - Protein Information

Name SETDB1 ([HGNC:10761](#))

Function

Histone methyltransferase that specifically trimethylates 'Lys-9' of histone H3. H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes. H3 'Lys-9' trimethylation is coordinated with DNA methylation (PubMed:12869583). Required for HUSH-mediated heterochromatin formation and gene silencing. Forms a complex with MBD1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation (PubMed:27732843, PubMed:14536086). Its activity is dependent on MBD1 and is heritably maintained through DNA replication by being recruited by CAF-1 (PubMed:14536086). SETDB1 is targeted to histone H3 by TRIM28/TIF1B, a factor recruited by KRAB zinc-finger proteins. Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). In ESCs, in collaboration with TRIM28, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA- methylation independent-pathway (By similarity). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). The SETDB1-TRIM28-ZNF274 complex may play a role in recruiting ATRX to the 3'-exons of zinc-finger coding genes with atypical chromatin signatures to establish or maintain/protect H3K9me3 at these transcriptionally active regions (PubMed:27029610).

Cellular Location

Nucleus. Cytoplasm. Chromosome. Note=Associated with non- pericentromeric regions of chromatin. Excluded from nucleoli and islands of condensed chromatin.

Tissue Location

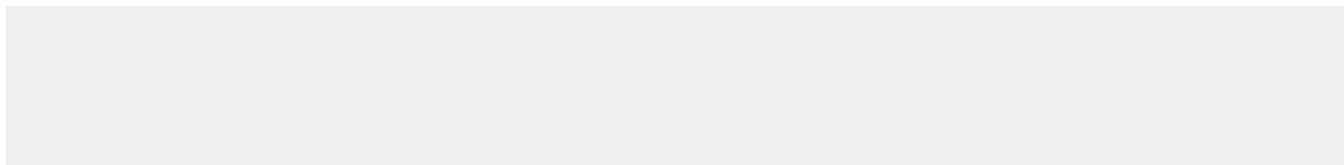
Widely expressed. High expression in testis.

SETDB1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SETDB1 Antibody - Images



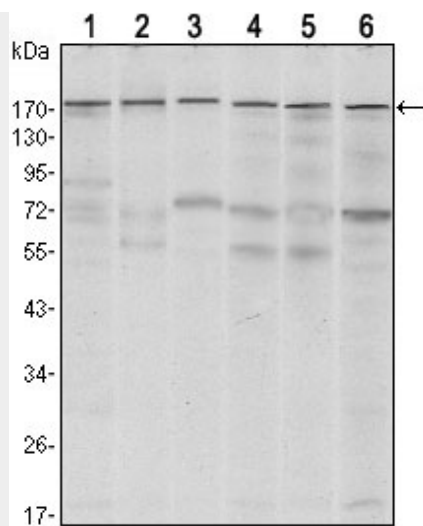


Figure 1: Western blot analysis using SETDB1 mouse mAb against MCF-7 (1) T47D (2), HEK293 (3), JURKAT (4), NIH/3T3 (5) and F9 (6) cell lysate.

SETDB1 Antibody - References

1. Proteomics. 2005 Sep;5(14):3589-99.
2. Proc Natl Acad Sci U S A. 2006 Apr 4;103(14):5308-13.
3. Mol Cell Biochem. 2007 Nov;305(1-2):35-44.