

SETDB1 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1073B**Specification**

SETDB1 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	Q15047
Other Accession	Q08BR4 , Q6INA9 , Q88974
Reactivity	Human
Predicted	Mouse, Xenopus, Zebrafish
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	1193-1225

SETDB1 Antibody (C-term) - Additional Information**Gene ID** 9869**Other Names**

Histone-lysine N-methyltransferase SETDB1, 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

Target/Specificity

This SETDB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1193-1225 amino acids from the C-terminal region of human SETDB1.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

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

Precautions

SETDB1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SETDB1 Antibody (C-term) - 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.

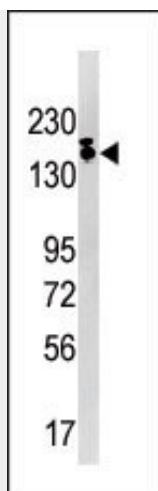
SETDB1 Antibody (C-term) - Protocols

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

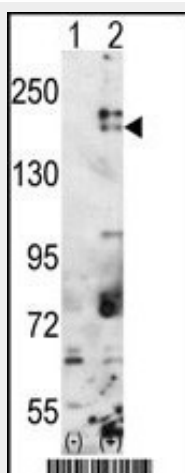
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SETDB1 Antibody (C-term) - Images





Western blot analysis of anti-SETDB1 Pab (Cat. #AP1073b) in Ramos cell line lysate (35ug/lane). SETDB1 (arrow) was detected using the purified Pab.



Western blot analysis of SETDB1 (arrow) using rabbit polyclonal SETDB1 Antibody (C-term) (Cat. #AP1073b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SETDB1 gene (Lane 2) (Origene Technologies).

SETDB1 Antibody (C-term) - Background

The SET domain is a highly conserved, approximately 150-amino acid motif implicated in the modulation of chromatin structure. It was originally identified as part of a larger conserved region present in the *Drosophila* Trithorax protein and was subsequently identified in the *Drosophila* Su(var)3-9 and 'Enhancer of zeste' proteins, from which the acronym SET is derived. Studies have suggested that the SET domain may be a signature of proteins that modulate transcriptionally active or repressed chromatin states through chromatin remodeling activities.

SETDB1 Antibody (C-term) - References

- Ichimura, T., et al., J. Biol. Chem. 280(14):13928-13935 (2005).
- Sarraf, S.A., et al., Mol. Cell 15(4):595-605 (2004).
- Wang, H., et al., Mol. Cell 12(2):475-487 (2003).
- Schultz, D.C., et al., Genes Dev. 16(8):919-932 (2002).
- Yang, L., et al., Biochem. J. 369 (PT 3), 651-657 (2003) ():