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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, O88974
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
E~~Use at an assay dependent concentration.

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, PubMed:27237050, PubMed:39096901). 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:14536086, PubMed:27732843). 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 Cytomety
- Cell Culture

SETDB1 Antibody (C-term) - Images

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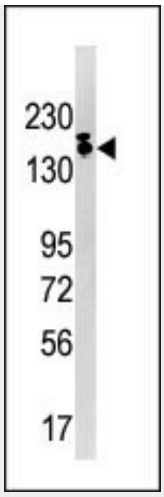
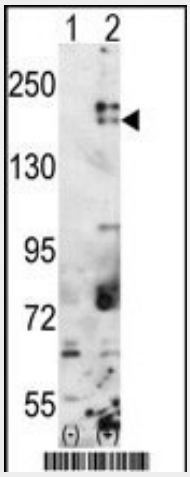


Western blot analysis of anti-SETDB1 Pab(Cat. #AP1073b) in Ramos cell line lysate (35ug/lane). SETDB1(arrow) was detected using the purified Pab.



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) (): ().