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Anti-KMT1E/SETDB1 Picoband Antibody
Catalog # ABO10123

Specification

Anti-KMT1E/SETDB1 Picoband Antibody - Product Information

Application	**WB, IHC-P, E**
Primary Accession	Q15047
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for KMT1E/SETDB1 detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KMT1E/SETDB1 Picoband 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

Application Details
Western blot, 0.1-0.5 µg/ml
 Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml
 Direct ELISA, 0.1-0.5 µg/ml

Subcellular Localization
Nucleus. Chromosome. Associated with non-pericentromeric regions of chromatin. Excluded from nucleoli and islands of condensed chromatin.

Tissue Specificity
Widely expressed. High expression in testis.

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen
E. coli-derived human KMT1E/SETDB1 recombinant protein (Position: K194-R390).

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C; for one year. After r˚Constitution,**

at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid repeated freezing and thawing.

Anti-KMT1E/SETDB1 Picoband 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.

Anti-KMT1E/SETDB1 Picoband 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 Cytomety
- Cell Culture

Anti-KMT1E/SETDB1 Picoband Antibody - Images

Anti-KMT1E/SETDB1 Picoband Antibody - Background

Histone-lysine N-methyltransferase SETDB1 is an enzyme that in humans is encoded by the SETDB1 gene. This gene encodes a histone methyltransferase which regulates histone methylation, gene silencing, and transcriptional repression. This gene has been identified as a target for treatment in Huntington Disease, given that gene silencing and transcription dysfunction likely play a role in the disease pathogenesis. Alternatively spliced transcript variants of this gene have been described.