# Rabbit KMT1E/SETDB1 Polyclonal Antibody | anti-SETDB1 antibody

KMT1E/SETDB1 Antibody

| CATALOG # | HOST | REACTIVITY | APPLICATIONS |
|---|---|---|---|
| **AAA31191** | **Rabbit** | **Human, Mouse, RatPredicted Reactivity: Bovine(100%), Horse(100%), Sheep(100%), Rabbit(100%), Dog(100%), Chicken(86%), Xenopus(86%)** | **ELISA** |

## PRODUCT SYNONYMS

KMT1E/SETDB1; Polyclonal Antibody; KMT1E/SETDB1 Antibody; AU022152; EC 2.1.1.43; ERG-associated protein with SET domain; ESET; H3 K9 HMTase 4; H3-K9-HMTase 4; H3-K9-HMTase4; Histone H3 K9 methyltransferase 4; Histone H3-K9 methyltransferase 4; Histone-lysine N-methyltransferase SETDB1; KG1T; KIAA0067; KMT1E; Lysine N-methyltransferase 1E; MGC90670; mKIAA0067; SET domain bifurcated 1; Set domain protein; bifurcated; 1; SETB1_HUMAN; Setdb1; anti-SETDB1 antibody

## PRODUCT SPECIFICATIONS

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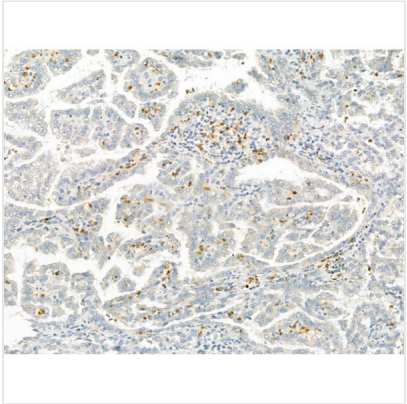
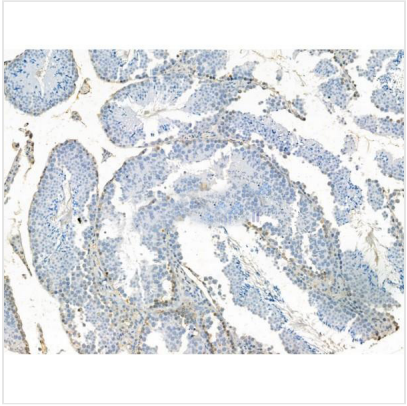
|---|---|
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat<br>Predicted Reactivity: Bovine(100%), Horse(100%), Sheep(100%), Rabbit(100%), Dog(100%), Chicken(86%), Xenopus(86%) |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Specificity** | KMT1E / SETDB1 Antibody detects endogenous levels of total KMT1E / SETDB1. |
| **Purity/Purification** | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific). |
| **Form/Format** | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol |
| **Concentration** | 1mg/ml (varies by lot) |
| **Sequence Length** | 1291 |
| **Applicable Applications for anti-SETDB1 antibody** | ELISA |
| **Application Notes** | WB: 1:500-1:2000<br>IHC: 1:50-1:200<br>ELISA(peptide): 1:20,000-1:40,000 |
| **Immunogen** | A synthesized peptide derived from human KMT1E / SETDB1, corresponding to a region within the internal amino acids. |
| **Fragment** | Fab fragment |
| **Preparation and Storage** | Store at -20 degree C. Stable for 12 months from date of receipt. |

## IMAGES



**IHC (Immunohistochemistry-Paraffin)**
AAA31191 at 1/100 staining Human kidney cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

**IHC (Immunohistchemistry-Paraffin)**
AAA31191 at 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



**IHC (Immunohistochemistry-Paraffin)**
AAA31191 at 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

**IHC (Immunohistochemistry-Paraffin)**
AAA31191 at 1/100 staining Rat kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

**IHC (Immunohistochemistry-Paraffin)**
AAA31191 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

**IHC (Immunohistochemistry-Paraffin)**
AAA31191 at 1/100 staining Rat testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

## ADDITIONAL INFORMATION

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| **Related Product Information for anti-SETDB1 antibody** | 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:17952062). 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, PubMed:15327775). 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).<br><br>Post Translational Modifications: Degraded by the proteasome, shielded by interaction with ATF7IP.<br><br>Subcellular Location: Nucleus. Cytoplasm. Chromosome. Note: Associated with non-pericentromeric regions of chromatin. Excluded from nucleoli and islands of condensed chromatin.<br><br>Tissue Specificity: Widely expressed. High expression in testis.<br><br>Subunit Structure: Part of a complex containing at least CDYL, REST, WIZ, SETDB1, EHMT1 and EHMT2 (PubMed:19061646). During DNA replication, it is recruited by SETDB1 to form a S phase-specific complex that facilitates methylation of H3 'Lys-9' during replication-coupled chromatin assembly and is at least composed of the CAF-1 subunit CHAF1A, MBD1 and SETDB1 (PubMed:15327775). Probably part of a corepressor complex containing ZNF304, TRIM28, SETDB1 and DNMT1 (PubMed:24623306). Interacts with TRIM28/TIF1B (PubMed:11959841). Interacts with ATF7IP and ATF7IP2; the interaction with ATF7IP protects SETDB1 from proteasomal degradation and is required to stimulate histone methyltransferase activity and facilitate the conversion of dimethylated to trimethylated H3 'Lys-9' (PubMed:14536086, PubMed:15691849). Interacts with MBD1; interaction is abolished when MBD1 is sumoylated (PubMed:15327775, PubMed:17066076). Interacts with CBX1 and CBX5 (PubMed:15899859). Interacts with DNMT3A and DNMT3B (PubMed:16682412). Interacts with SUMO2. Interacts with CHD7, NLK1 and PPARG (PubMed:17952062). Interacts with MPHOSPH8 (PubMed:20871592). Interacts with ERG (By similarity). Interacts with HDAC1, HDAC2, SIN3A and SIN3B (By similarity). Interacts with ATRX. Forms a complex with ATRX, TRIM28 and ZNF274 (PubMed:27029610). Interacts with RESF1 (By similarity). Interacts with ZNF638 (PubMed:30487602).<br><br>Similarity: The pre-SET, SET and post-SET domains are all required for methyltransferase activity. The 347-amino-acid insertion in the SET domain has no effect on the catalytic activity.Isoform 2 lacks all domains required for histone methyltransferase activity.In the pre-SET domain, Cys residues bind 3 zinc ions that are arranged in a triangular cluster; some of these Cys residues contribute to the binding of two zinc ions within the cluster.Belongs to the class V-like SAM-binding methyltransferase superfamily. Histone-lysine methyltransferase family. Suvar3-9 subfamily. |

## NCBI AND UNIPROT INFORMATION

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| **NCBI GI #** | 25091210 |
| **NCBI GeneID** | 9869 |
| **UniProt Accession #** | Q15047 |
| **Molecular Weight** | Observed Molecular Weight: (Observed)143kD.<br>Predicted Molecular Weight: (Calculated)143kDa. |
| **NCBI Official Full Name** | Histone-lysine N-methyltransferase SETDB1 |
| **NCBI Official Synonym Full Names** | SET domain bifurcated histone lysine methyltransferase 1 |

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| **NCBI Official Symbol** | SETDB1 |
| **NCBI Official Synonym Symbols** | ESET; KG1T; KMT1E; TDRD21; H3-K9-HMTase4 |
| **NCBI Protein Information** | histone-lysine N-methyltransferase SETDB1 |
| **UniProt Protein Name** | Histone-lysine N-methyltransferase SETDB1 |
| **UniProt Gene Name** | **SETDB1** |
| **UniProt Synonym Gene Names** | KIAA0067; KMT1E; ESET; H3-K9-HMTase 4 |
| **UniProt Entry Name** | SETB1_HUMAN |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

**AAA Biotech** | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: https://www.aaabiotech.com/polyclonal/kmt1e-setdb1-antibody-elisa/31191