SETDB1Polyclonal Antibody

E91005

Catalog Number: E91005
Amount: 100ul
Background: The Erg-associated protein with SET domain (ESET), also known as SET-domain, bifurcated 1 (SETDB1) protein, is a member of a family of histone lysine methyltransferases, each of which contains a conserved catalytic SET domain originally identified in Drosophila Su[var]3-9, Enhancer of zeste, and Trithorax proteins (1). ESET also contains tudor and methyl-CpG-binding domains, which may coordinate binding to methylated histones and methylated DNA, respectively (1). ESET methylates histone H3 Lys9, creating a transcriptionally repressive mark that facilitates gene silencing (1-3). However, unlike SUV39H histone H3 Lys9 methyltransferases, which function mainly in heterochromatin regions such as pericentric heterochromatin, ESET functions mainly in euchromatic regions to repress gene promoters (3). ESET interacts with a variety of proteins, including transcription factors (ERG), histone deacetylases (HDAC1/2), DNA methyltransferases (DNMT3A/B) and transcriptional co-repressors (mSin3A/B, MBD1, KAP-1, the ATFa-associated modulator mAM) (1-6). mAM forms a complex with ESET, stimulating its methyltransferase activity, specifically the conversion of di-methyl to tri-methyl histone H3 Lys9 (2). MBD1 recruits ESET to the CAF-1 complex to facilitate methylation of histone H3 Lys9 during replication-coupled chromatin assembly in S phase (5). DNMT3A recruits ESET to silenced promoters in cancer cells (7). ESET may play a role in the pathogenesis of Huntington's disease, since levels of ESET protein and tri-methyl histone H3 Lys9 are both increased in diseased brains (8).
Species: Rabbit
Isotype: IgG
Storage/Stability: Store at -20oC or -80oC. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Synonyms: ESET; H3-K9-HMTase4; KG1T; KIAA0067; KMT1E;
Immunogen: Fusion protein of human SETDB1
Purification: Affinity purification
Reactivity: H M
Applications: WB IHCIP
Molecular Weight: 143kDa
Swiss-Prot No. : Q15047
Gene ID: 9869
References: 1. Yang, L. et al. (2002) Oncogene 21, 148-152. 2. Wang, H. et al. (2003) Mol. Cell 12, 475-487. 3. Schultz, D.C. et al. (2002) Genes Dev. 16, 919-932. 4. Yang, L. et al. (2003) Biochem. J. 369, 651-657. 5. Sarraf, S.A. and Stancheva, I. (2004) Mol. Cell 15, 595-605. 6. Ichimura, T. et al. (2005) J. Biol. Chem. 280, 13928-13935. 7. Li, H. et al. (2006) J. Biol. Chem. 281, 19489-19500. 8. Ryu, H. et al. (2006) Proc. Natl. Acad. Sci. USA 103, 19176-19181.

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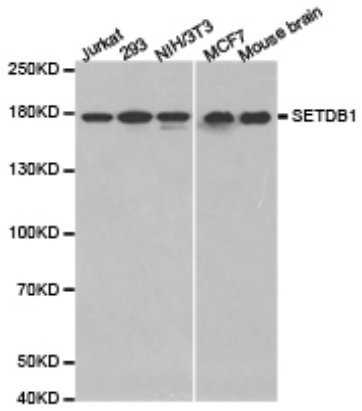
WB 1:500 - 1:1000

IHC 1:50- 1:100

IP 1:50- 1:100



Western blot analysis of extracts of variouscell lines, using SETDB1 antibody.

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