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Rabbit Anti-Dnmt1 antibody

SL20663R

Product Name:	Dnmt1
Chinese Name:	DNA甲基转移酶1抗体
Alias:	AIM; CXXC finger protein 9; CXXC-type zinc finger protein 9; CXXC9; DNA (cytosine 5) methyltransferase 1; DNA (cytosine-5)-methyltransferase 1; DNA methyltransferase 1; DNA methyltransferase HsaI; DNA methyltransferase M.HsaI.; DNA MTase; DNA MTase HsaI; DNMT 1; DNMT; Dnmt1; Dnmt1; DNMT1_HUMAN; Dnmt1o; FLJ16293; HSN1E; M.HsaI; MCMT; Met1; MGC104992; mMmul; MommeD2.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	178kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Dnmt1:1201-1300/1616
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	DNA (cytosine-5-)-methyltransferase 1 has a role in the establishment and regulation of tissue-specific patterns of methylated cytosine residues. Aberrant methylation patterns

	are associated with certain human tumors and developmental abnormalities. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008]. **Function:** Methylates CpG residues. Preferentially methylates hemimethylated DNA. Associates with DNA replication sites in S phase maintaining the methylation pattern in the newly synthesized strand, that is essential for epigenetic inheritance. Associates with chromatin during G2 and M phases to maintain DNA methylation independently of replication. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2. In association with DNMT3B and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. **Subunit:** Binds to CSNK1D (By similarity). Homodimer. Interacts with HDAC1 and with PCNA. Forms a complex with DMAP1 and HDAC2, with direct interaction. Forms also a stable complex with E2F1, BB1 and HDAC1. Binds MBD2 and MBD3. Component of complexes containing SUV39H1. Interacts with DNMT3A and DNMT3B. Interacts with the PRC2/EED-EZH2 complex. Interacts with UBC9 and BAZ2A/TIP5. **Subcellular Location:** Nucleus. **Tissue Specificity:** Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1. **Post-translational modifications:** Sumoylated; sumoylation increases activity. Acetylation on multiple lysines, mainly by KAT2B/PCAF, regulates cell cycle G(2)/M transition. Deacetylation of Lys-1349 and Lys-1415 by SIRT1 increases methyltransferase activity. Phosphorylation of Ser-154 by CDKs is important for enzymatic activity and protein stability. Phosphorylation of Ser-143 by AKT1 prevents methylation by SETD7 therebye increasing DNMT1 stability. Methylation at Lys-142 by SETD7 promotes DNMT1 proteasomal degradation. **DISEASE:** Defects in DNMT1 are the cause of hereditary sensory neuropathy type 1E (HSN1E) [MIM:614116]. A neurodegenerative disorder characterized by adult onset of progressive peripheral sensory loss associated with progressive hearing impairment and early-onset dementia.

Similarity:
Belongs to the C5-methyltransferase family.
Contains 2 BAH domains.
Contains 1 CXXC-type zinc finger.

SWISS:
P26358

Gene ID:
1786

Database links:

Entrez Gene: 1786Human

Entrez Gene: 13433Mouse

Omim: 126375Human

SwissProt: P26358Human

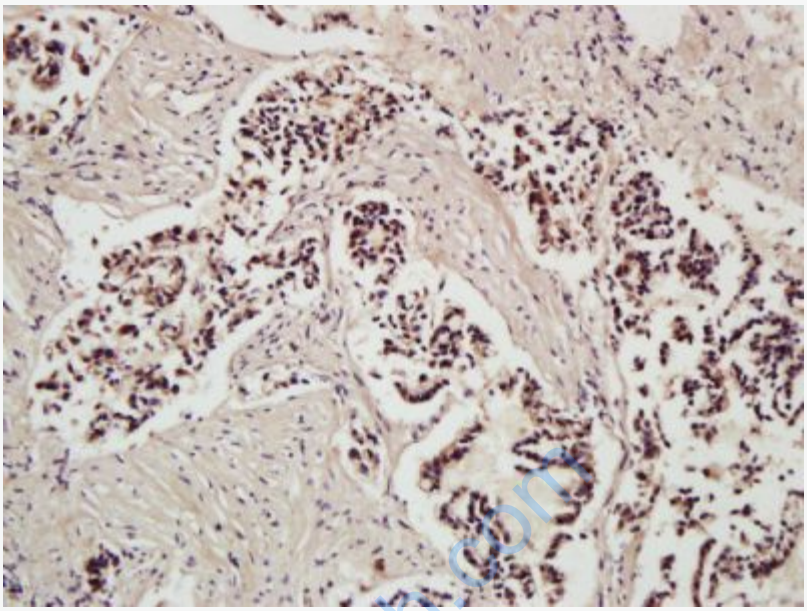
SwissProt: P13864Mouse

Unigene: 202672Human

Unigene: 128580Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

DNA甲基转移酶-1在多种Tumour细胞中表达量相当高，而在正常成人细胞中则低表达，因此dnmt1基因的高表达与Tumour的发生有密切的关系。dnmt-1对细胞周期、增殖及凋亡有一定的的影响。The nucleus表达(isoform CRA_a)为抑制细胞增殖、促进Apoptosis，为Tumour的基因治疗提供依据。

Picture:	 Paraformaldehyde-fixed, paraffin embedded (Human stomach carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Dnmt1) Polyclonal Antibody, Unconjugated (SL20663R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.