10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DNMT1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20862a

Specification

DNMT1 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	P26358
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**183165**

DNMT1 Antibody (N-term) - Additional Information

Gene ID 1786

Other Names
DNA (cytosine-5)-methyltransferase 1, Dnmt1, CXXC-type zinc finger protein 9, DNA methyltransferase HsaI, DNA MTase HsaI, MHsaI, MCMT, DNMT1, AIM, CXXC9, DNMT

Target/Specificity
This DNMT1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 363-396 amino acids from the N-terminal region of human DNMT1.

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 purified through a protein A column, followed by peptide affinity purification.

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
DNMT1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

DNMT1 Antibody (N-term) - Protein Information

Name DNMT1

Synonyms AIM, CXXC9, DNMT

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. 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). Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). Promotes tumor growth (PubMed:24623306).

Cellular Location
Nucleus. Note=Localized to the perinucleolar region.

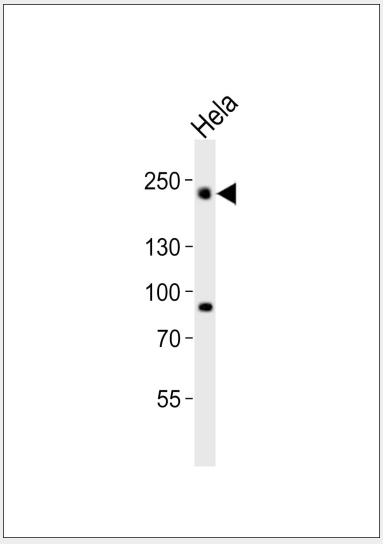
Tissue Location
Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.

DNMT1 Antibody (N-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

DNMT1 Antibody (N-term) - Images



10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Western blot analysis of lysate from Hela cell line, using DNMT1 Antibody (N-term)(Cat. #AP20862a). AP20862a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

DNMT1 Antibody (N-term) - Background

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.

DNMT1 Antibody (N-term) - References

Yen R.-W.C.,et al.Nucleic Acids Res. 20:2287-2291(1992).
Yoder J.A.,et al.J. Biol. Chem. 271:31092-31097(1996).
Li L.C.,et al.Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
Grimwood J.,et al.Nature 428:529-535(2004).
Hsu D.-W.,et al.Proc. Natl. Acad. Sci. U.S.A. 96:9751-9756(1999).