

Dnmt3A/Dnmt3A2 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1023b

Specification

Dnmt3A/Dnmt3A2 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	O9Y6K1
Other Accession	O1LZ53 , O88508
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	723-752

Dnmt3A/Dnmt3A2 Antibody (C-term) - Additional Information

Gene ID 1788

Other Names

DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, MhsaIIIA, DNMT3A

Target/Specificity

This Dnmt3A/Dnmt3A2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 723-752 amino acids from the C-terminal region of human Dnmt3A/Dnmt3A2.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

Dnmt3A/Dnmt3A2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Dnmt3A/Dnmt3A2 Antibody (C-term) - Protein Information

Name DNMT3A

Function Required for genome-wide de novo methylation and is essential for the establishment of DNA methylation patterns during development (PubMed:[12138111](#), PubMed:[16357870](#), PubMed:[30478443](#)). DNA methylation is coordinated with methylation of histones (PubMed:[12138111](#), PubMed:[16357870](#), PubMed:[30478443](#)). It modifies DNA in a non-processive manner and also methylates non-CpG sites (PubMed:[12138111](#), PubMed:[16357870](#), PubMed:[30478443](#)). May preferentially methylate DNA linker between 2 nucleosomal cores and is inhibited by histone H1 (By similarity). Plays a role in paternal and maternal imprinting (By similarity). Required for methylation of most imprinted loci in germ cells (By similarity). Acts as a transcriptional corepressor for ZBTB18 (By similarity). Recruited to trimethylated 'Lys-36' of histone H3 (H3K36me3) sites (By similarity). Can actively repress transcription through the recruitment of HDAC activity (By similarity). Also has weak auto-methylation activity on Cys-710 in absence of DNA (By similarity).

Cellular Location

Nucleus. Chromosome Cytoplasm. Note=Accumulates in the major satellite repeats at pericentric heterochromatin {ECO:0000250|UniProtKB:O88508}

Tissue Location

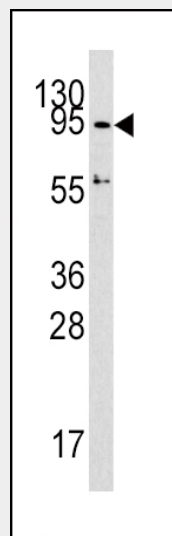
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

Dnmt3A/Dnmt3A2 Antibody (C-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 Cytometry](#)
- [Cell Culture](#)

Dnmt3A/Dnmt3A2 Antibody (C-term) - Images



Western blot analysis of DNMT3A Antibody (C-term) (Cat.# AP1023b) in HepG2 cell line lysates

(35ug/lane). DNMT3A (arrow) was detected using the purified Pab.

Dnmt3A/Dnmt3A2 Antibody (C-term) - Background

CpG methylation is an epigenetic modification that is important for embryonic development, imprinting, and X-chromosome inactivation. Studies in mice have demonstrated that DNA methylation is required for mammalian development. DNMT3A is a DNA methyltransferase that is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes to the cytoplasm and nucleus and its expression is developmentally regulated.

Dnmt3A/Dnmt3A2 Antibody (C-term) - Citations

- [Imprinted and DNA methyltransferase gene expression in the endometrium during the pre- and peri-implantation period in cattle.](#)
- [Bovine DNA methylation imprints are established in an oocyte size-specific manner, which are coordinated with the expression of the DNMT3 family proteins.](#)