

# DNMT3A Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP21073a

## Product Information

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Application	WB, E
Primary Accession	<a href="#">Q9Y6K1</a>
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB51574
Calculated MW	101858

## Additional Information

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Gene ID	1788
Other Names	DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, MHsaIIIA, DNMT3A
Target/Specificity	This DNMT3A antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 463-497 amino acids from the Central region of human DNMT3A.
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	DNMT3A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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Name	DNMT3A
Function	Required for genome-wide de novo methylation and is essential for the establishment of DNA methylation patterns during development (PubMed: <a href="#">12138111</a> , PubMed: <a href="#">16357870</a> , PubMed: <a href="#">30478443</a> ). DNA methylation is coordinated with methylation of histones (PubMed: <a href="#">12138111</a> , PubMed: <a href="#">16357870</a> , PubMed: <a href="#">30478443</a> ). 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

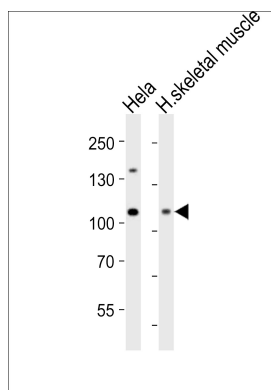
## Background

Required for genome-wide de novo methylation and is essential for the establishment of DNA methylation patterns during development. DNA methylation is coordinated with methylation of histones. It modifies DNA in a non-processive manner and also methylates non-CpG sites. May preferentially methylate DNA linker between 2 nucleosomal cores and is inhibited by histone H1. Plays a role in paternal and maternal imprinting. Required for methylation of most imprinted loci in germ cells. Acts as a transcriptional corepressor for ZBTB18. Recruited to trimethylated 'Lys-36' of histone H3 (H3K36me3) sites. Can actively repress transcription through the recruitment of HDAC activity.

## References

Xie S.,et al.Gene 236:87-95(1999).  
Chen T.,et al.J. Biol. Chem. 277:38746-38754(2002).  
Kim G.-D.,et al.EMBO J. 21:4183-4195(2002).  
Hillier L.W.,et al.Nature 434:724-731(2005).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

## Images



Western blot analysis of lysates from HeLa cell line and human skeletal muscle tissue (from left to right), using DNMT3A Antibody (Center)(Cat. #AP21073a). AP21073a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.