

# Dnmt3a Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AM8628b

## Product Information

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Application	WB, E
Primary Accession	<a href="#">Q9Y6K1</a>
Reactivity	Human, Rat, Mouse
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Clone Names	1823CT281.43.36
Calculated MW	101858

## Additional Information

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Gene ID	1788
Other Names	DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, 2.1.1.37, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, M.HsaIIIA, DNMT3A
Target/Specificity	This Dnmt3a antibody is generated from a mouse immunized with a recombinant protein of human Dnmt3a.
Dilution	WB~~1:2000-1:4000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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 Antibody 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: <a href="#">12138111</a> ,

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

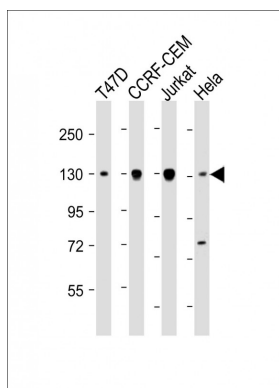
## Background

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



All lanes : Anti-Dnmt3a Antibody at 1:2000-1:4000 dilution  
Lane 1: T47D whole cell lysate Lane 2: CCRF-CEM whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 102 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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