

**Dnmt3a Antibody (N-term R46)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1034d**

## Specification

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### Dnmt3a Antibody (N-term R46) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">O9Y6K1</a>
Other Accession	<a href="#">O1LZ53</a> , <a href="#">O88508</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	101858
Antigen Region	31-61

### Dnmt3a Antibody (N-term R46) - Additional Information

**Gene ID** 1788

#### Other Names

DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, DNA methyltransferase HsallIA, DNA MTase HsallIA, MhsallIA, DNMT3A

#### Target/Specificity

This Dnmt3a antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-61 amino acids from the N-terminal region of human Dnmt3a.

#### Dilution

WB~~1:1000  
IHC-P~~1:10~50

#### 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 Antibody (N-term R46) is for research use only and not for use in diagnostic or therapeutic procedures.

### Dnmt3a Antibody (N-term R46) - 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

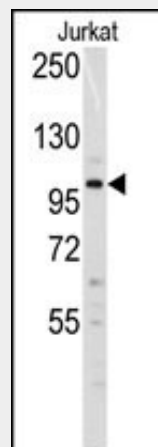
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

### Dnmt3a Antibody (N-term R46) - Protocols

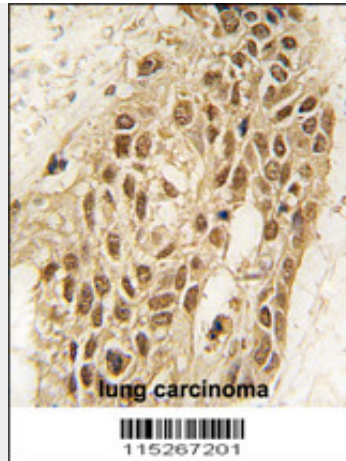
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Dnmt3a Antibody (N-term R46) - Images



Western blot analysis of anti-Dnmt3a Antibody (N-term R46) (Cat.#AP1034d) in Jurkat cell line lysates (35ug/lane). Dnmt3a(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with Dnmt3a antibody (N-term R46) (Cat.#AP1034d), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **Dnmt3a Antibody (N-term R46) - 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 Antibody (N-term R46) - References**

Xie, S., et al., *Gene* 236(1):87-95 (1999).  
Robertson, K.D., et al., *Nucleic Acids Res.* 27(11):2291-2298 (1999).