

**Dnmt3a Antibody (Center D472)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1034c**

## Specification

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### Dnmt3a Antibody (Center D472) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q9Y6K1</a>
Other Accession	<a href="#">Q1LZ53</a> , <a href="#">Q88508</a> , <a href="#">Q4W5Z4</a>
Reactivity	Human
Predicted	Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	457-486

### Dnmt3a Antibody (Center D472) - 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 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 457-486 amino acids from the Central 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 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 D472) is for research use only and not for use in diagnostic or therapeutic procedures.

### Dnmt3a Antibody (Center D472) - 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

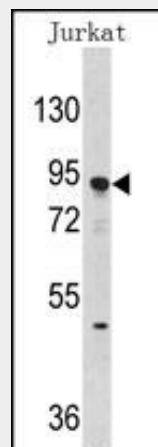
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

### Dnmt3a Antibody (Center D472) - Protocols

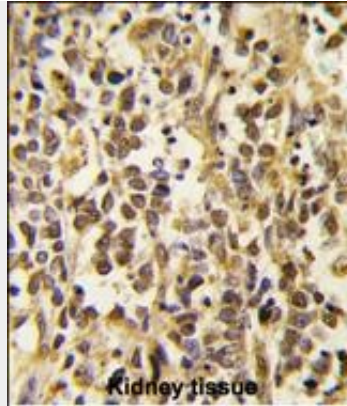
Provided below are standard protocols that you may find useful for product applications.

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

### Dnmt3a Antibody (Center D472) - Images



Western blot analysis of anti-DNMT3A Antibody (Center D472) (Cat.#AP1034c) in Jurkat cell line lysates (35ug/lane).DNMT3A(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human kidney tissue reacted with the primary antibody, 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 (Center D472) - 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 (Center D472) - References**

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

#### **Dnmt3a Antibody (Center D472) - Citations**

- [DNMT3a expression pattern and its prognostic value in lung adenocarcinoma.](#)
- [Epigenetic regulation of motor neuron cell death through DNA methylation.](#)