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Dnmt3a Antibody (Center D472)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP1034c

Specification

Dnmt3a Antibody (Center D472) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	Q9Y6K1
Other Accession	Q1LZ53, O88508, Q4W5Z4
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
IHC-P~~1:10~50
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 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}

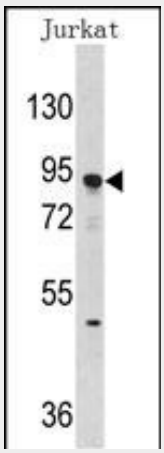
Tissue Location
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

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 Cytomety
- 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.

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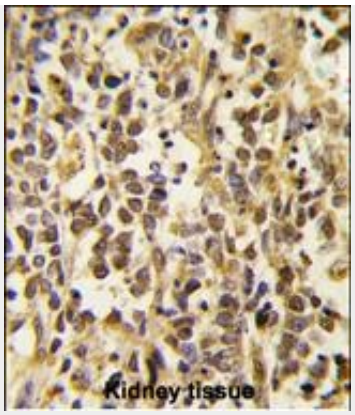

Formalin-fixed and paraffin-embedded human kidney tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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.