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DNMT3A Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21073a

Specification

DNMT3A Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	Q9Y6K1
Other Accession	Q1LZ53, O88508, Q4W5Z4
Reactivity	**Human**
Predicted	**Chicken, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**101858**

DNMT3A Antibody (Center) - 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 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.

DNMT3A Antibody (Center) - 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}

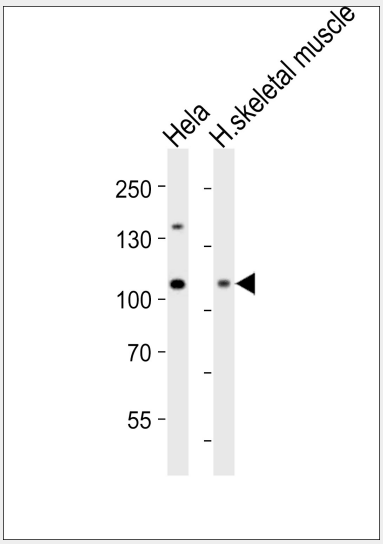
Tissue Location
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

DNMT3A Antibody (Center) - 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) - 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.

DNMT3A Antibody (Center) - 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.

DNMT3A Antibody (Center) - 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.