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DNMT3A Antibody (Center R478)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14633c

Specification

DNMT3A Antibody (Center R478) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q9Y6K1
Other Accession	NP_783328.1, NP_715640.2
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**101858**
Antigen Region	**457-486**

DNMT3A Antibody (Center R478) - 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 R478) is for research use only and not for use in diagnostic or therapeutic procedures.

DNMT3A Antibody (Center R478) - 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}

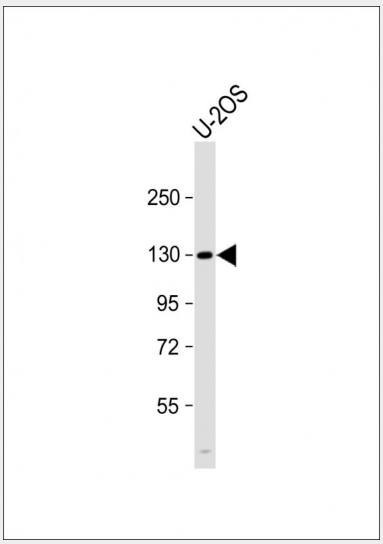
Tissue Location
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

DNMT3A Antibody (Center R478) - Protocols

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

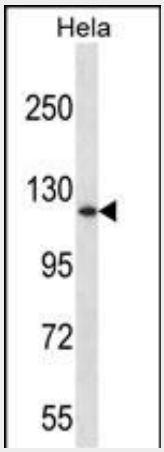
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DNMT3A Antibody (Center R478) - Images

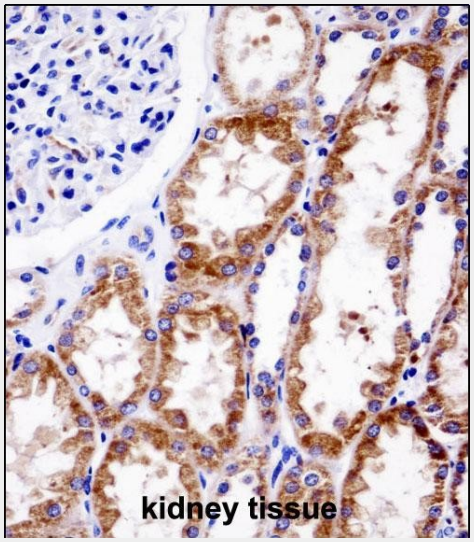


Anti-DNMT3A Antibody (R478WMutant) at 1:1000 dilution + U-2OS whole cell lysate

Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 102 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



DNMT3A Antibody (Center R478)(Cat. #AP14633c) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the DNMT3A antibody detected the DNMT3A protein (arrow).



DNMT3A Antibody (Center R478WMutant) (AP14633c)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DNMT3A Antibody (Center R478WMutant) for immunohistochemistry. Clinical relevance has not been evaluated.

DNMT3A Antibody (Center R478) - 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. This gene encodes 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. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq].

DNMT3A Antibody (Center R478) - References

Holz-Schietinger, C., et al. J. Biol. Chem. 285(38):29091-29100(2010) Kelemen, L.E., et al. Cancer Epidemiol. Biomarkers Prev. 19(7):1822-1830(2010) Park, C.W., et al. J Cardiovasc Transl Res 3(3):290-295(2010) Haggarty, P., et al. PLoS ONE 5 (6), E11329 (2010) : Zhao, Z., et al. J. Biomed.

Biotechnol. 2010, 737535 (2010) :