

**Dnmt3a Antibody**  
**Rabbit mAb**  
**Catalog # AP90536****Specification**

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**Dnmt3a Antibody - Product Information**

Application	WB, IHC, FC, ICC
Primary Accession	<a href="#">O9Y6K1</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
DNMT3A2; M.HsaIIIA; Dnmt3a; MCMT; DNA methyltransferase 3a;	

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	101858 Da

**Dnmt3a Antibody - Additional Information**

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Dnmt3a
Description	Methylation of DNA at cytosine residues in mammalian cells is a heritable, epigenetic modification that is critical for proper regulation of gene expression, genomic imprinting and development. Three families of mammalian DNA methyltransferases have been identified: DNMT1, DNMT2 and DNMT3. DNMT1 is constitutively expressed in proliferating cells and functions as a maintenance methyltransferase, transferring proper methylation patterns to newly synthesized DNA during replication.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Dnmt3a Antibody - 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:<a href="http://www.uniprot.org/citations/12138111" target="\_blank">12138111</a>, PubMed:<a

href="http://www.uniprot.org/citations/16357870" target="\_blank">16357870</a>, PubMed:<a href="http://www.uniprot.org/citations/30478443" target="\_blank">30478443</a>). DNA methylation is coordinated with methylation of histones (PubMed:<a href="http://www.uniprot.org/citations/12138111" target="\_blank">12138111</a>, PubMed:<a href="http://www.uniprot.org/citations/16357870" target="\_blank">16357870</a>, PubMed:<a href="http://www.uniprot.org/citations/30478443" target="\_blank">30478443</a>). It modifies DNA in a non-processive manner and also methylates non-CpG sites (PubMed:<a href="http://www.uniprot.org/citations/12138111" target="\_blank">12138111</a>, PubMed:<a href="http://www.uniprot.org/citations/16357870" target="\_blank">16357870</a>, PubMed:<a href="http://www.uniprot.org/citations/30478443" target="\_blank">30478443</a>). 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

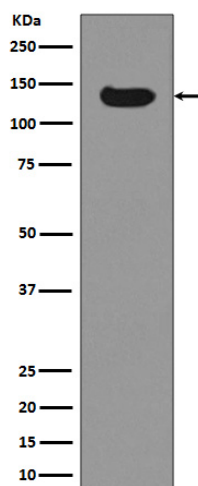
#### **Dnmt3a Antibody - Protocols**

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 - Images**





Western blot analysis of Dnmt3a expression in HeLa cell lysate.