

**DNMT3A polyclonal antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11383****Specification**

---

**DNMT3A polyclonal antibody - Product Information**

Application	E, WB
Primary Accession	<a href="#">Q9Y6K1</a>
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	101858

**DNMT3A polyclonal antibody - Additional Information****Gene ID** 1788

Positive Control

**Western blot: HEK 293 T cells, ELISA:**  
**Peptides, IP: HEK 293 T cells.**

Application &amp; Usage

**Western Blot: 1:2,500, ELISA: 1:100, IP: 2**  
**µg/IP.****Other Names**

DNA Methyltransferase 3a

**Target/Specificity**

DNMT3A

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

In PBS with 0.05% sodium azide and 0.05% ProClin 300.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

DNMT3A polyclonal antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## DNMT3A polyclonal 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

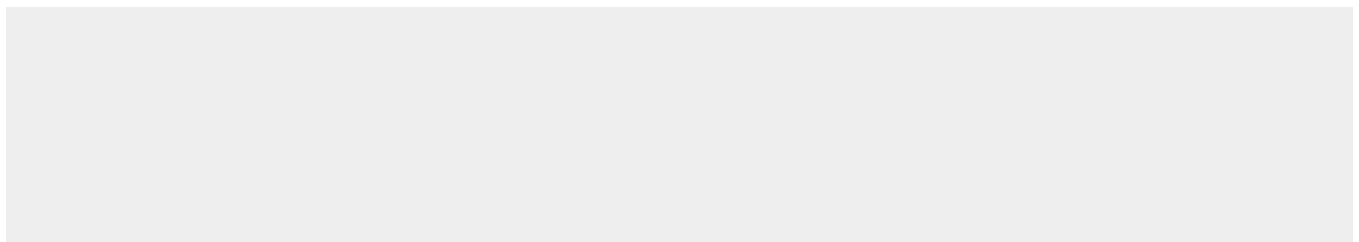
Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

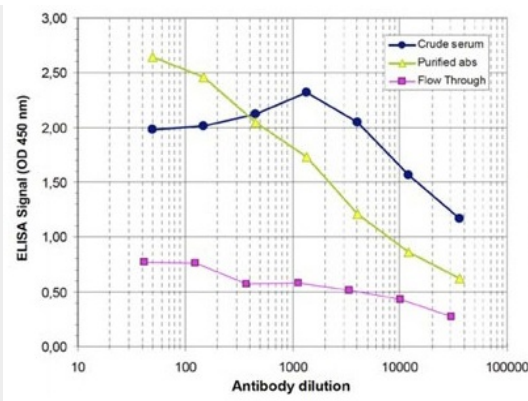
## DNMT3A polyclonal antibody - Protocols

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

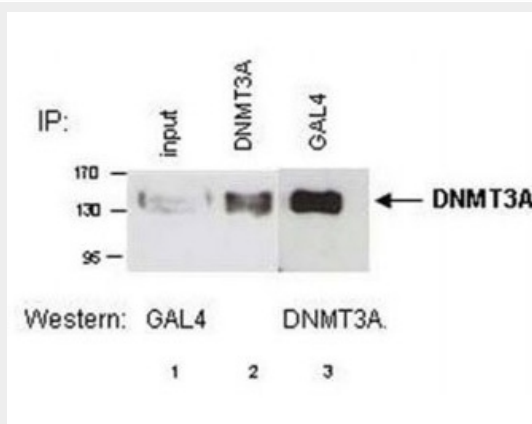
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## DNMT3A polyclonal antibody - Images





To determine the titer of the antibody, an ELISA was performed using a serial dilution of the antibody directed crude serum and Flow Through in antigen coated wells. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:2,000.



Human embryonic kidney cells (HEK293T) were transiently transfected with an expression vector for GAL4-tagged DNMT3A. Whole cell extracts were immunoprecipitated with 2 µg of antibody. The presence of GAL4-DNMT3A in the non-treated cell extracts and in the immunoprecipitates was demonstrated by western blot analysis with anti-GAL4 antibody (lane 1 and 2 respectively). Alternatively, GAL4-DNMT3A was immunoprecipitated and western blot analysis was performed with the DNMT3A antibody (diluted 1:2,500) (lane 3).

### DNMT3A polyclonal antibody - Background

DNMT3A catalyzes the genome wide de novo methylation of CpG residues. DNA methylation on CpG residues by DNMT3A regulates gene expression and is essential for development. DNMT3A is strongly expressed in embryonic stem cells, but low in adult somatic cells. DNA methylation is coordinated with methylation of histones. DNMT3A binds to SETDB1 and HDAC1, and is involved in the repression of transcription from promoters containing an E2F binding site.