

Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP1023b**Specification**

Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [Q9Y6K1](#)**Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 1788

Other Names

DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, MHsaIIIA, DNMT3A

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1023b](/product/products/AP1023b) was selected from the C-term region of human DNMT3A2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide - 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](http://www.uniprot.org/citations/12138111), PubMed:[16357870](http://www.uniprot.org/citations/16357870), PubMed:[30478443](http://www.uniprot.org/citations/30478443)). DNA methylation is coordinated with methylation of histones (PubMed:[12138111](http://www.uniprot.org/citations/12138111), PubMed:[16357870](http://www.uniprot.org/citations/16357870), PubMed:[30478443](http://www.uniprot.org/citations/30478443)). It modifies DNA in a non-processive manner and also methylates non-CpG sites (PubMed:[12138111](http://www.uniprot.org/citations/12138111), PubMed:[16357870](http://www.uniprot.org/citations/16357870), PubMed:[30478443](http://www.uniprot.org/citations/30478443)).

href="http://www.uniprot.org/citations/16357870" target="_blank">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/Dnmt3A2 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide - Images**Dnmt3A/Dnmt3A2 Antibody (C-term) Blocking Peptide - 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.