

**DNMT3A Antibody (Center R478) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP14633c****Specification**

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**DNMT3A Antibody (Center R478) Blocking peptide - Product Information**Primary Accession [Q9Y6K1](#)**DNMT3A Antibody (Center R478) Blocking peptide - Additional Information****Gene ID** 1788**Other Names**

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

**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 Antibody (Center R478) 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:<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 (Center R478) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

**DNMT3A Antibody (Center R478) Blocking peptide - Images****DNMT3A Antibody (Center R478) 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. 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) Blocking peptide - 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) :