

DNMT3B Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO2112a**Specification****DNMT3B Antibody - Product Information**

Application	WB, FC, ICC, E
Primary Accession	Q9UBC3
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	95.8kDa KDa

Description

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 which is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes primarily to the nucleus and its expression is developmentally regulated. Mutations in this gene cause the immunodeficiency-centromeric instability-facial anomalies (ICF) syndrome. Eight alternatively spliced transcript variants have been described. The full length sequences of variants 4 and 5 have not been determined.

Immunogen

Purified recombinant fragment of human DNMT3B (AA: 1-150) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

DNMT3B Antibody - Additional Information

Gene ID 1789

Other Names

DNA (cytosine-5)-methyltransferase 3B, Dnmt3b, 2.1.1.37, DNA methyltransferase HsaIIIB, DNA MTase HsaIIIB, M.HsaIIIB, DNMT3B

Dilution

WB~~1/500 - 1/2000

FC~~1/200 - 1/400

ICC~~N/A

E~~1/10000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

DNMT3B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

DNMT3B Antibody - Protein Information

Name DNMT3B

Function

Required for genome-wide de novo methylation and is essential for the establishment of DNA methylation patterns during development. DNA methylation is coordinated with methylation of histones. May preferentially methylates nucleosomal DNA within the nucleosome core region. May function as transcriptional co-repressor by associating with CBX4 and independently of DNA methylation. Seems to be involved in gene silencing (By similarity). In association with DNMT1 and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. Isoforms 4 and 5 are probably not functional due to the deletion of two conserved methyltransferase motifs. Functions as a transcriptional corepressor by associating with ZHX1. Required for DUX4 silencing in somatic cells (PubMed:27153398).

Cellular Location

Nucleus

Tissue Location

Ubiquitous; highly expressed in fetal liver, heart, kidney, placenta, and at lower levels in spleen, colon, brain, liver, small intestine, lung, peripheral blood mononuclear cells, and skeletal muscle. Isoform 1 is expressed in all tissues except brain, skeletal muscle and PBMC, 3 is ubiquitous, 4 is expressed in all tissues except brain, skeletal muscle, lung and prostate and 5 is detectable only in testis and at very low level in brain and prostate

DNMT3B 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](#)