

DNA Methyltransferase 3b (Clone 52A1018) Antibody
Mouse Monoclonal Antibody
Catalog # ABV11111**Specification**

DNA Methyltransferase 3b (Clone 52A1018) Antibody - Product Information

Application	WB
Primary Accession	O88509
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1k

DNA Methyltransferase 3b (Clone 52A1018) Antibody - Additional Information**Gene ID** 13436**Positive Control****Application & Usage****Western blot: NIH 3T3 cell lysate,
Recombinant DNMT3b1 protein
Western blot: 2-4 µg/ml, IP/ICC/IF/ChIP/IHC
(paraffin embedded sections): 1-2 µg/ml.
However, the optimal conditions should be
determined individually.****Other Names**
DNMT3, DNMT3B**Target/Specificity**
DNMT3B**Antibody Form**
Liquid**Appearance**
Colorless liquid**Formulation**
50 µg of antibody in 100 µl PBS containing 0.05% BSA and 0.05% sodium azide.**Handling**
The antibody solution should be gently mixed before use.**Reconstitution & Storage**
-20 °C**Background Descriptions****Precautions**

DNA Methyltransferase 3b (Clone 52A1018) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

DNA Methyltransferase 3b (Clone 52A1018) 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. 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. Functions as a transcriptional corepressor by associating with ZHX1 (By similarity). Required for DUX4 silencing in somatic cells (By similarity).

Cellular Location

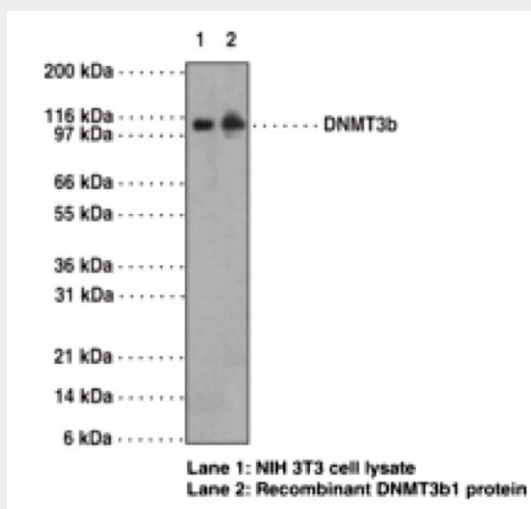
Nucleus. Note=Accumulates in the major satellite repeats at pericentric heterochromatin

DNA Methyltransferase 3b (Clone 52A1018) 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](#)

DNA Methyltransferase 3b (Clone 52A1018) Antibody - Images



WB using DNMT3b mAb

DNA Methyltransferase 3b (Clone 52A1018) Antibody - Background

Methylation of DNA at cytosine residues plays an important role in regulation of gene expression, genomic imprinting, and is essential for mammalian development. Hypermethylation of CpG islands in tumor suppressor genes or hypomethylation of bulk genomic DNA may be linked with development of cancer. To date, three families of mammalian DNA methyltransferase genes have been identified which include DNMT1, DNMT2, and DNMT3. DNMT1 is constitutively expressed in proliferating cells and inactivation of this gene causes global demethylation of genomic DNA and embryonic lethality. DNMT2 is expressed at low levels in adult tissues and its inactivation does not affect DNA methylation or maintenance of methylation. The DNMT3 family members, DNMT3a and DNMT3b, are strongly expressed in embryonic stem (ES) cells but their expression is down regulated in differentiating ES cells and is low in adult somatic tissue. Recently, it has been shown that naturally occurring mutations of DNMT3b gene occur in patients with a rare autosomal recessive disorder, termed ICF (immunodeficiency, centromeric instability, and facial anomalies) syndrome.