

Anti-DNMT3B Antibody

Catalog # AP51168

Product Information

Application	WB, IHC
Primary Accession	Q9UBC3
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	95751

Additional Information

Gene ID	1789
Other Names	DNA (cytosine-5)-methyltransferase 3B; Dnmt3b; DNA methyltransferase HsaIIIB; DNA MTase HsaIIIB; M.HsaIIIB
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human DNMT3B. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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

References

Xie S.,et al.Gene 236:87-95(1999).

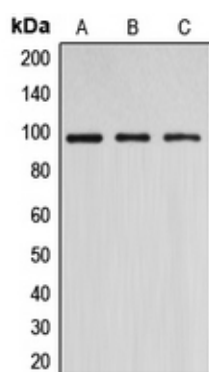
Xu G.-L.,et al.Nature 402:187-191(1999).

Ni J.,et al.Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.

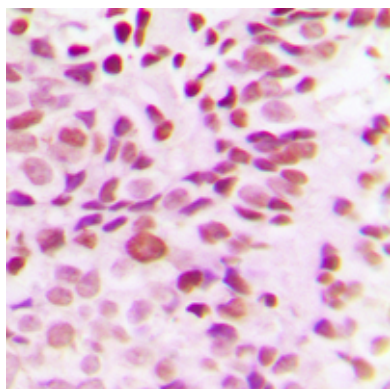
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Deloukas P.,et al.Nature 414:865-871(2001).

Images



Western blot analysis of DNMT3B expression in A549 (A), COS7 (B), HeLa (C) whole cell lysates. (Predicted band size: 77-95 kD; Observed band size: 96 kD)



Immunohistochemical analysis of DNMT3B staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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