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Rabbit Anti-Dnmt3b antibody

SL20680R

Product Name:	Dnmt3b
Chinese Name:	DNA甲基转移酶-3β抗体
Alias:	Cytosine 5methyltransferase 3B; DNA (cytosine 5) methyltransferase 3 beta; DNA; DNA methyltransferase HsaIIIB; DNA MTase HsaIIIB; Dnmt3b; Dnmt3 Beta; EC 2.1.1.37; ICF; M.HsaIIIB; MGC124407; RP23-89H14.3; DNM3B_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Dog,Horse,Rabbit,
Applications:	WB=1:500-2000Flow-Cyt=1μg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	94kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Dnmt3b:251-350/853
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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, 3 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 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 occurs in patients with a rare autosomal recessive disorder, termed ICF (immunodeficiency, centromeric instability, and facial anomalies) syndrome. **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. Function as transcriptional corepressor by associating with ZHX1. **Subunit:** Interacts with BAZ2A/TIP5, SUV39H1 and CBX4. Interacts with DNMT1 and DNMT3A, SETDB1, UBL1, UBE2I9 and ZHX1. Interacts with the PRC2/EED-EZH2 complex. **Subcellular Location:** Nucleus. **Tissue Specificity:** 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. **Post-translational modifications:** Sumoylated. **DISEASE:** Defects in DNMT3B are a cause of immunodeficiency-centromeric instability-facial anomalies syndrome type 1 (ICF1) [MIM:242860]. A rare disorder characterized by a variable immunodeficiency, facial anomalies, and branching of chromosomes 1, 9, and 16. Other variable symptoms include growth retardation, failure to thrive, and psychomotor retardation. Laboratory studies show limited hypomethylation of DNA in a small fraction of the genome in some, but not all, patients.

Similarity:
Belongs to the C5-methyltransferase family.
Contains 1 ADD domain.
Contains 1 GATA-type zinc finger.
Contains 1 PHD-type zinc finger.
Contains 1 PWWP domain.

SWISS:
Q9UBC3

Gene ID:
1789

Database links:

Entrez Gene: 1789Human

Entrez Gene: 13436Mouse

Omim: 602900Human

SwissProt: Q9UBC3Human

SwissProt: O88509Mouse

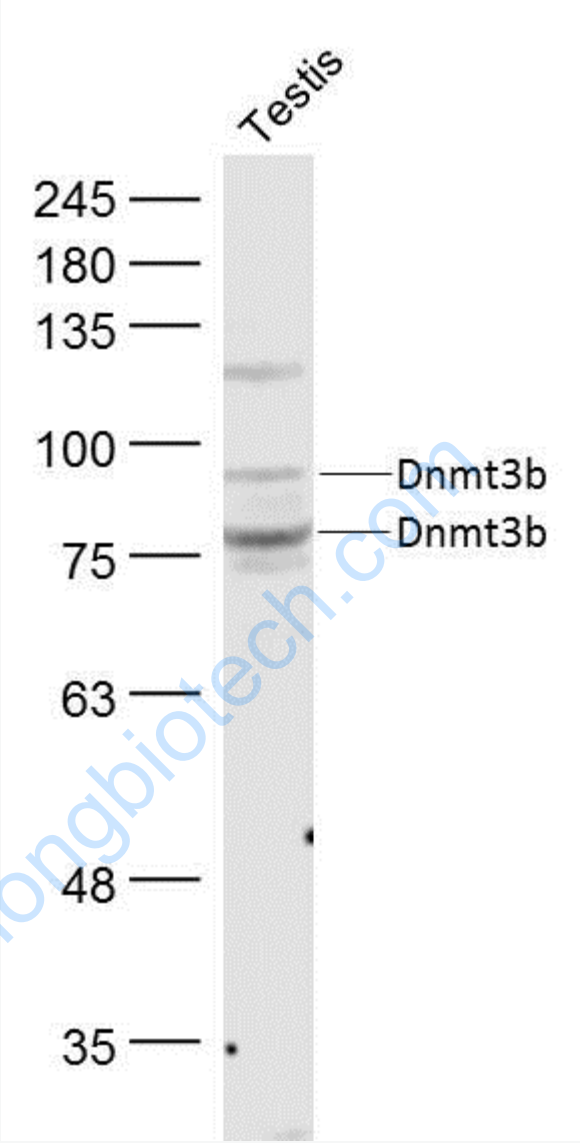
Unigene: 643024Human

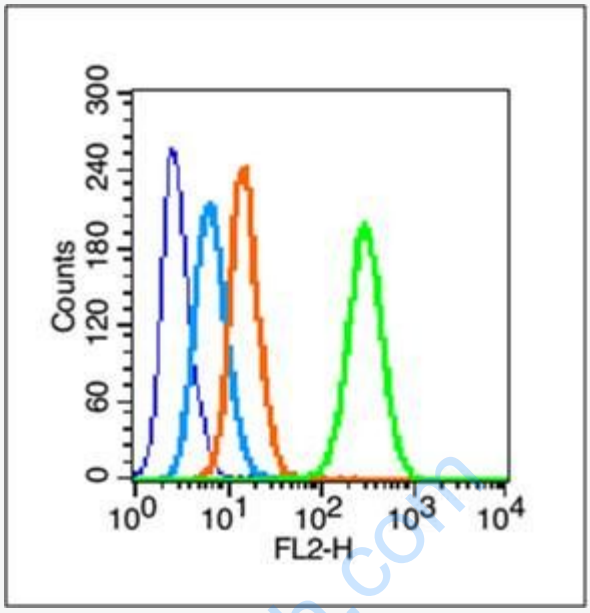
Unigene: 713611Human

Unigene: 89772Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Tumour组织存在DNA甲基化紊乱，包括与细胞增殖周期密切相关的癌基因低甲基化和抑癌基因高甲基化DNA甲基转移酶(Dnmt)参与甲基化的形成(主要是Dnmt3a和Dnmt3b)和维持(主要是Dnmt1)。

Picture:	 Sample: Testis (Mouse) Lysate at 40 ug Primary: Anti- Dnmt3b (SL20680R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 94 kD Observed band size: 80/94 kD



Blank control (blue line): HepG2 (fixed with 70% methanol (Overnight at 4℃) and then permeabilized with 90% ice-cold methanol for 20 min at -20℃).

Primary Antibody (green line): Rabbit Anti-Dnmt3b antibody (SL20680R),Dilution: 0.2µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE,Dilution: 1µg /test.