Product name:	Dnmt3b Rabbit Polyclonal Antibody
Cat number:	ABN10092
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human DNMT3B. AA range:1-50
Reactivity:	Human,Chicken
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:10000-1:20000
Molecular Weight:	96kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

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 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. [provided by RefSeq, May 2011],catalytic activity:S-adenosyl-L-methionine + DNA = S-adenosyl-L-homocysteine + DNA containing 5-methylcytosine.,disease:Defects in DNMT3B are a cause of immunodeficiency-centromeric instability-facial anomalies syndrome (ICF) [MIM:242860]. ICF is a rare autosomal recessive disorder characterized by a variable immunodeficiency, mild facial anomalies, and centromeric heterochromatin instability involving chromosomes 1, 9, and 16. ICF is biochemically characterized by hypomethylation of CpG sites in some regions of heterochromatin.,function:Required for genome wide de novo methylation and is essential for development. DNA methylation is coordinated with methylation of histones. Isoforms 4 and 5 are probably not functional due to the deletion of two conserved methyltransferase motifs.,online information:DNMT3B mutation db,PTM:Sumoylated.,similarity:Belongs to the C5-methyltransferase family.,similarity:Contains 1 ADD-type zinc finger.,similarity:Contains 1 PWWP domain.,subunit:Interacts with SUV39H1 (By similarity). Interacts with SETDB1, UBL1 and UBE2I9. Interacts with DNMT1 and DNMT3A. Interacts with the PRC2/EED-EZH2 complex.,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.,