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Dnmt3a Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8628b

Product Information

Application	WB, E
Primary Accession	Q9Y6K1
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Clone Names	1823CT281.43.36
Calculated MW	101858

Additional Information

Gene ID	1788
Other Names	DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, 2.1.1.37, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, M.HsaIIIA, DNMT3A
Target/Specificity	This Dnmt3a antibody is generated from a mouse immunized with a recombinant protein of human Dnmt3a.
Dilution	WB~~1:2000-1:4000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Dnmt3a Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DNMT3A
Function	Required for genome-wide de novo methylation and is essential for the establishment of DNA methylation patterns during development (PubMed:12138111, PubMed:16357870, PubMed:30478443). DNA methylation is coordinated with methylation of histones (PubMed:12138111, PubMed:16357870, PubMed:30478443). It modifies DNA in a non-processive

	manner and also methylates non-CpG sites (PubMed:12138111, PubMed:16357870, PubMed:30478443). May preferentially methylate DNA linker between 2 nucleosomal cores and is inhibited by histone H1 (By similarity). Plays a role in paternal and maternal imprinting (By similarity). Required for methylation of most imprinted loci in germ cells (By similarity). Acts as a transcriptional corepressor for ZBTB18 (By similarity). Recruited to trimethylated 'Lys-36' of histone H3 (H3K36me3) sites (By similarity). Can actively repress transcription through the recruitment of HDAC activity (By similarity). Also has weak auto-methylation activity on Cys-710 in absence of DNA (By similarity).
Cellular Location	Nucleus. Chromosome Cytoplasm. Note=Accumulates in the major satellite repeats at pericentric heterochromatin {ECO:0000250|UniProtKB:O88508}
Tissue Location	Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung

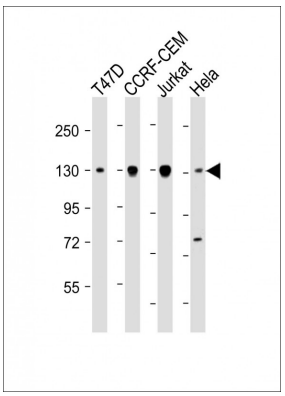
Background

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. It modifies DNA in a non-processive manner and also methylates non-CpG sites. May preferentially methylate DNA linker between 2 nucleosomal cores and is inhibited by histone H1. Plays a role in paternal and maternal imprinting. Required for methylation of most imprinted loci in germ cells. Acts as a transcriptional corepressor for ZBTB18. Recruited to trimethylated 'Lys-36' of histone H3 (H3K36me3) sites. Can actively repress transcription through the recruitment of HDAC activity.

References

Xie S.,et al.Gene 236:87-95(1999).
Chen T.,et al.J. Biol. Chem. 277:38746-38754(2002).
Kim G.-D.,et al.EMBO J. 21:4183-4195(2002).
Hillier L.W.,et al.Nature 434:724-731(2005).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



All lanes : Anti-Dnmt3a Antibody at 1:2000-1:4000 dilution Lane 1: T47D whole cell lysate Lane 2: CCRF-CEM whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 102 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.