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Datasheet for 200-301-H70

Dnmt3a Antibody

Overview

Description:	Anti-DNMT3A (MOUSE) Monoclonal Antibody - 200-301-H70
Item No.:	200-301-H70
Size:	100 µg
Applications:	ChIP, FC, IF, IHC, Multiplex, WB
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	Anti-Dnmt3a Antibody detects mouse Dnmt3a. 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. Anti-Dnmt3a Antibody is ideal for investigators involved in caner, epigenetics, and cell cycle protein research.
Synonyms:	DNA (cytosine-5)-methyltransferase 3A, Dnmt3a, 2.1.1.37, DNA methyltransferase HsaIIIA, DNA MTase HsaIIIA, M.HsaIIIA
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	64B1446
Format:	IgG1

Target Details

Gene Name:	Dnmt3a
Reactivity:	Human
Immunogen Type:	Recombinant Protein
Immunogen:	Dnmt3a Antibody was produced in mice prepared by repeated immunizations with bacteria expressed near the C-terminus recombinant mouse Dnmt3a protein.
Purity/Specificity:	Anti-Dnmt3a Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with Dnmt3a from human and mouse based on 100% homology with the immunizing sequence. Cross-reactivity with Anti-Dnmt3a from other sources has not been determined.
Relevant Links:	• UniProtKB - O88508 • NCBI - NP_031898.1 • GeneID - 13435

Application Details

Tested Applications:	ChIP, FC, IF, IHC, Multiplex, WB
Application Note:	Anti-Dnmt3a Antibody is tested for use in WB, ChIP, Flow, ICC/IF, IHC, IHC-Fr, and IHC-P. Expect a band approximately 120 kDa on specific lysates. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	5 µg/mL
WB:	2 µg/mL

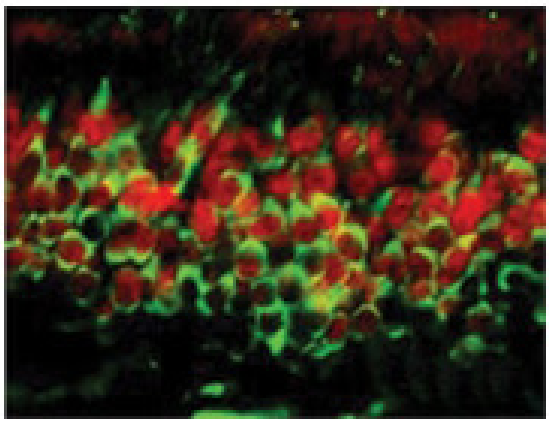
Formulation

Physical State:	Liquid
Concentration:	0.5 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide

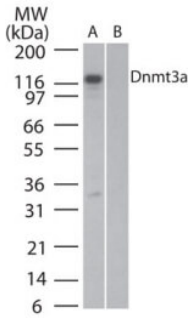
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Mouse Anti-Dnmt3a antibody. Tissue: olfactory epithelium. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: Dnmt3a antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Fluorescein mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: Dnmt3a is expressed in the nuclei of post-mitotic neurons. Staining: Dnmt3a is co-expressed as a red signal with a green neuron-specific tubulin counterstain.



Western Blot
Western Blot of Mouse Anti-Dnmt3a antibody. Lane A: Dnmt3a transfected 293 cell lysate. Lane B: Dnmt3a untransfected 293 cell lysate. Load: 30 µg per lane. Primary antibody: Dnmt3a antibody at 1 µg/mL for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 89.6 kDa for Dmnt3a. Other band(s): none.

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