DNA Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DNA, Polyclonal Antibody
Full Product Name	Rabbit anti-human DNA (cytosine-5) methyltransferase3A polyclonal Antibody, FITC
Product Gene Name	anti-DNA antibody
Product Synonym Names	DNA methyltransferase HsaIIIA; DNMT3A
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Purity/Purification	Caprylic Acid Ammonium Sulfate Precipitation Purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: DNMT3A (MBS7001414) FITC Conjugated Antibody: DNA (MBS1489892)
Molecular Weight	16,866 Da
OMIM	602769
3D Structure	ModBase 3D Structure for Q9Y6K1
Storage Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, PH 7.4
Conjugate	FITC
Immunogen	Recombinant human DNA (cytosine-5)-methyltransferase 3A protein
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-10231 / sc-10232 / sc-10234 / sc-20703
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-DNA antibody	ELISA (EIA)
Related Product Information for anti-DNA antibody	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 ZNF238. Can actively repress transcription through the recruitment of HDAC activity
Other Notes	Small volumes of anti-DNA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for DNA purchase	MBS1489892 is an antibody targeting DNA. Also known as Rabbit anti-human DNA (cytosine-5) methyltransferase3A polyclonal Antibody, FITC. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DNA. It may not necessarily be applicable to this product.

NCBI GI #	12751473
NCBI GeneID	1788
NCBI Accession #	NP_072046.2
UniProt Primary Accession #	Q9Y6K1
UniProt Secondary Accession #	Q86TE8; Q86XF5; Q8IZV0; Q8WXU9; E9PEB8
UniProt Related Accession #	Q9Y6K1
GenBank Nucleotide #	NM_022552.4
NCBI Official Full Name	DNA (cytosine-5)-methyltransferase 3A isoform a
NCBI Official Synonym Full Names	DNA (cytosine-5-)-methyltransferase 3 alpha
NCBI Official Symbol	DNMT3A
NCBI Official Synonym Symbols	TBRS; DNMT3A2; M.HsaIIIA
UniProt Protein Name	DNA (cytosine-5)-methyltransferase 3A
UniProt Synonym Protein Names	DNA methyltransferase HsaIIIA; DNA MTase HsaIIIA; M.HsaIIIA
Protein Family	DNA
UniProt Gene Name	DNMT3A
UniProt Synonym Gene Names	Dnmt3a; DNA MTase HsaIIIA; M.HsaIIIA
UniProt Entry Name	DNM3A_HUMAN
NCBI Protein Information	DNA (cytosine-5)-methyltransferase 3A
NCBI Summary for DNA	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 that is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes to the cytoplasm and nucleus and its expression is developmentally regulated. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

UniProt Comments for DNA	DNMT3A: a DNA methyltransferase required for genome wide de novo methylation and essential for development. DNA methylation is coordinated with methylation of histones. Prefers CpG methylation to CpA, CpT, and CpC methylation. Methylates CpG sites at a rate much slower than DNMT1, but greater than DNMT3b. Methylation is coordinated with methylation of histones. Binds the ZNF238 transcriptional repressor. Interacts with SETDB1 and DNMT1. Can co-localize with heterochromatin protein (HP1) and methyl-CpG binding protein (MeCBP). Associates with HDAC1 through its ADD-type zinc-finger. 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. Protein type: Methyltransferase; Methyltransferase, DNA; EC 2.1.1.37; Amino Acid Metabolism - cysteine and methionine Chromosomal Location of Human Ortholog: 2p23 Cellular Component: chromosome, pericentric region; cytoplasm; euchromatin; nuclear heterochromatin; nuclear matrix; nucleoplasm; nucleus; XY body Molecular Function: chromatin binding; DNA (cytosine-5-)-methyltransferase activity; DNA (cytosine-5-)-methyltransferase activity, acting on CpG substrates; DNA binding; DNA-methyltransferase activity; identical protein binding; metal ion binding; protein binding; unmethylated CpG binding Biological Process: aging; cytosine methylation within a CG sequence; DNA methylation; DNA methylation during embryonic development; DNA methylation during gametogenesis; DNA methylation on cytosine; establishment and/or maintenance of chromatin architecture; gene expression; genetic imprinting; methylation-dependent chromatin silencing; mitotic cell cycle; negative regulation of gene expression, epigenetic; negative regulation of transcription from RNA polymerase II promoter; neuron differentiation; regulation of gene expression, epigenetic; response to cocaine; response to estradiol stimulus; response to ionizing radiation; response to lead ion; response to toxin; response to vitamin A; S-adenosylhomocysteine metabolic process; S-adenosylmethioninamine metabolic process; spermatogenesis Disease: Tatton-brown-rahman Syndrome
Research Articles on DNA	**1.** DNMT3A mutation is associated with acute myeloid leukemia.
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