

Rabbit Dnmt1 Polyclonal Antibody | anti-Dnmt1 antibody

Anti-Dnmt1 Picoband antibody

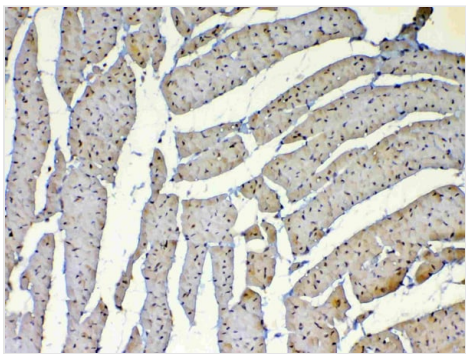
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA124554	Rabbit	Human, Mouse, Rat No cross reactivity with other proteins.	Western Blot, Immunohistochemistry, ELISA

PRODUCT SYNONYMS

Dnmt1; Polyclonal Antibody; Anti-Dnmt1 Picoband antibody; DNA (cytosine-5)-methyltransferase 1; CXXC-type zinc finger protein 9; DNA methyltransferase Hsa; DNA MTase Hsa; M.Hsa; MCMT; DNMT1; AIM; CXXC9; DNMT; anti-Dnmt1 antibody

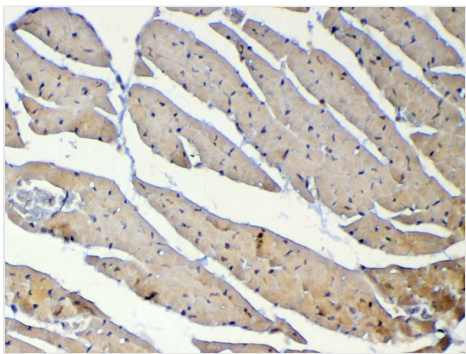
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat No cross reactivity with other proteins.
Clonality	Polyclonal
Form/Format	Lyophilized
Sequence Length	1,280
Applicable Applications for anti-Dnmt1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA
Immunogen	E Coli-derived human Dnmt1 recombinant protein (Position: D22-N126).
Subcellular Localization	Nucleus.
Tissue Specificity	Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



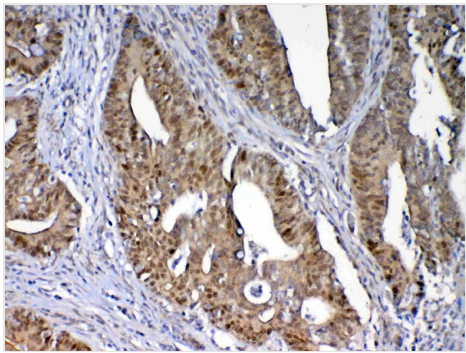
IHC (Immunohistochemistry)

Figure 5. IHC analysis of Dnmt1 using anti-Dnmt1 antibody (AAA124554).Dnmt1 was detected in paraffin-embedded section of rat cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Dnmt1 Antibody (AAA124554) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



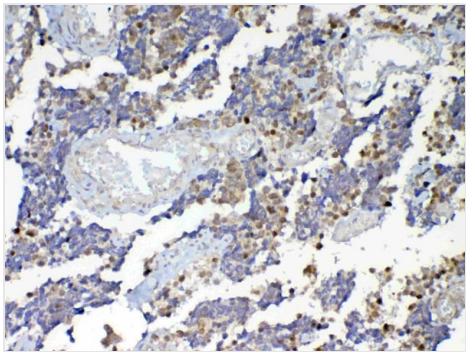
IHC (Immunohistochemistry)

Figure 4. IHC analysis of Dnmt1 using anti-Dnmt1 antibody (AAA124554).Dnmt1 was detected in paraffin-embedded section of mouse cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Dnmt1 Antibody (AAA124554) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



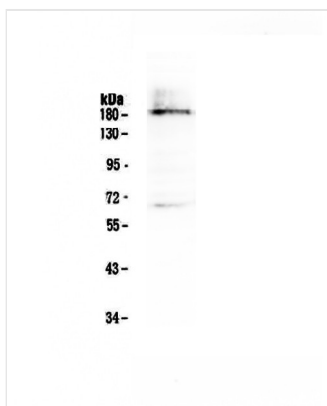
IHC (Immunohistochemistry)

Figure 3. IHC analysis of Dnmt1 using anti-Dnmt1 antibody (AAA124554).Dnmt1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Dnmt1 Antibody (AAA124554) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Dnmt1 using anti-Dnmt1 antibody (AAA124554).Dnmt1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Dnmt1 Antibody (AAA124554) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of Dnmt1 using anti-Dnmt1 antibody (AAA124554). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human U-937 cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Dnmt1 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Dnmt1 at approximately 200KD. The expected band size for Dnmt1 is at 183KD.

ADDITIONAL INFORMATION

Related Product Information for anti-Dnmt1 antibody	Description: DNA (cytosine-5)-methyltransferase 1 is an enzyme that in humans is encoded by the DNMT1 gene. This gene encodes an enzyme that transfers methyl groups to cytosine nucleotides of genomic DNA. This protein is the major enzyme responsible for maintaining methylation patterns following DNA replication and shows a preference for hemi-methylated DNA. Methylation of DNA is an important component of mammalian epigenetic gene regulation. Aberrant methylation patterns are found in human tumors and associated with developmental abnormalities. Variation in this gene has been associated with cerebellar ataxia, deafness, and narcolepsy, and neuropathy, hereditary sensory, type IE. Alternative splicing results in multiple transcript variants. Protein Function: Methylates CpG residues. Preferentially methylates hemimethylated DNA. Associates with DNA replication sites in S phase maintaining the methylation pattern in the newly synthesized strand, that is essential for epigenetic inheritance. Associates with chromatin during G2 and M phases to maintain DNA methylation independently of replication. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2. In association with DNMT3B 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. Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed: 24623306). Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed: 24623306). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed: 24623306). Promotes tumor growth (PubMed: 24623306).
Product Categories/Family for anti-Dnmt1 antibody	Epigenetics and Nuclear Signaling; dna methylation; dnmts; Epigenetics and Nuclear Signaling; ChIP'ing Antibodies

NCBI AND UNIPROT INFORMATION

NCBI GI #	195927037
NCBI GeneID	1786
NCBI Accession #	NP_001124295.1
NCBI GenBank Nucleotide #	NM_001130823.2
UniProt Accession #	P26358; Q9UHG5; Q9ULA2; Q9UMZ6; A0AV63; B7ZLW6

Molecular Weight	144,465 Da
NCBI Official Full Name	DNA (cytosine-5)-methyltransferase 1 isoform a
NCBI Official Synonym Full Names	DNA methyltransferase 1
NCBI Official Symbol	DNMT1
NCBI Official Synonym Symbols	AIM; DNMT; MCMT; CXXC9; HSN1E; ADCADN; m.HsaI
NCBI Protein Information	DNA (cytosine-5)-methyltransferase 1
UniProt Protein Name	DNA (cytosine-5)-methyltransferase 1
UniProt Gene Name	DNMT1
UniProt Synonym Gene Names	AIM; CXXC9; DNMT; Dnmt1; DNA MTase HsaI; M.HsaI

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/dnmt1-antibody-western-blot-immunohistochemistry-elisa/124554>