

Anti-Dnmt1 Rabbit Monoclonal Antibody Catalog # ABO13740

Specification

Anti-Dnmt1 Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC
Primary Accession	P26358
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Dnmt1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Anti-Dnmt1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 1786

Other Names

DNA (cytosine-5)-methyltransferase 1, Dnmt1, 2.1.1.37, CXXC-type zinc finger protein 9, DNA methyltransferase Hsa1, DNA MTase Hsa1, M.Hsa1, MCMT, DNMT1, AIM, CXXC9, DNMT

Calculated MW

183165 MW KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

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..

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Dnmt1

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term

storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Dnmt1 Rabbit Monoclonal Antibody - Protein Information

Name DNMT1

Synonyms AIM, CXXC9, DNMT

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](http://www.uniprot.org/citations/24623306)). Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed: [24623306](http://www.uniprot.org/citations/24623306)). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed: [24623306](http://www.uniprot.org/citations/24623306)). Promotes tumor growth (PubMed: [24623306](http://www.uniprot.org/citations/24623306)).

Cellular Location

Nucleus. Note=Localized to the perinucleolar region.

Tissue Location

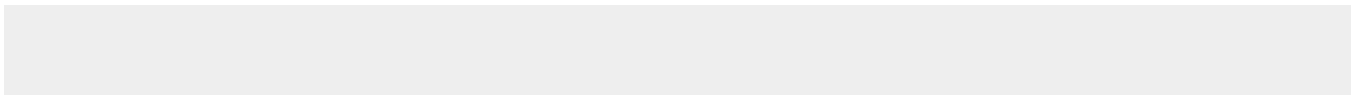
Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.

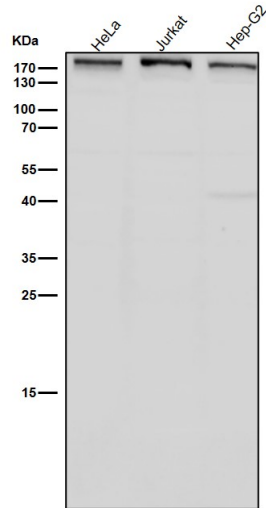
Anti-Dnmt1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

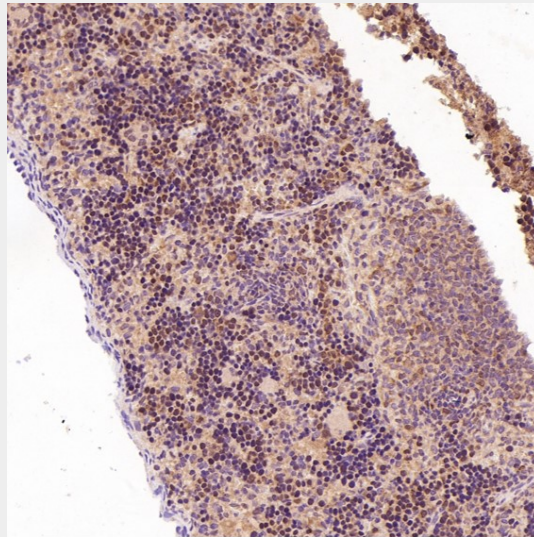
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Dnmt1 Rabbit Monoclonal Antibody - Images

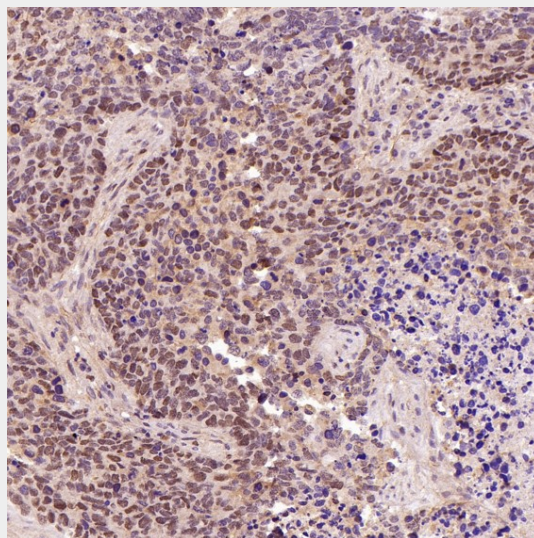




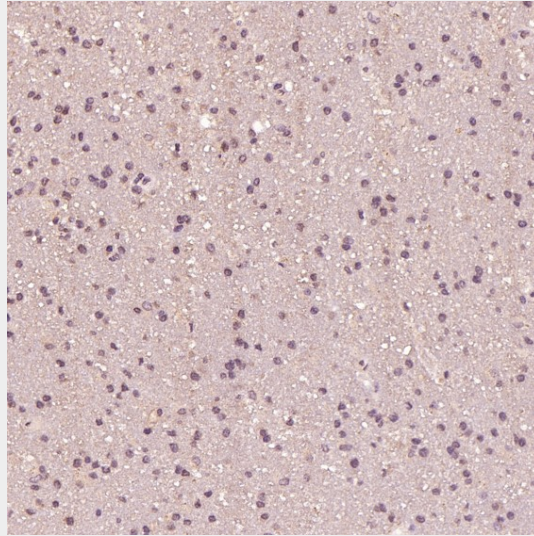
All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.



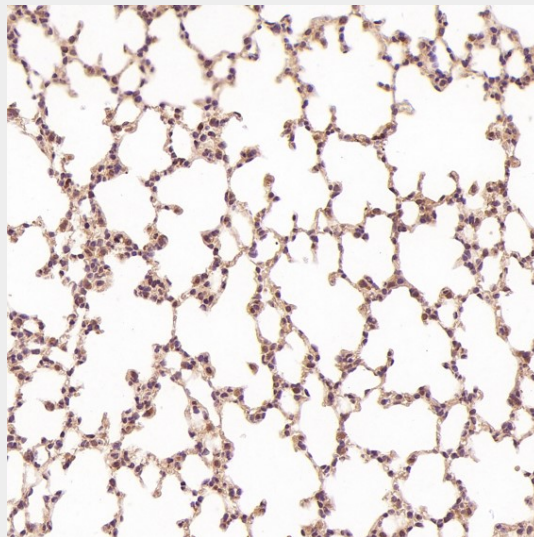
Immunohistochemical analysis of paraffin-embedded Rat spleen, using the Antibody at 1:100 dilution.



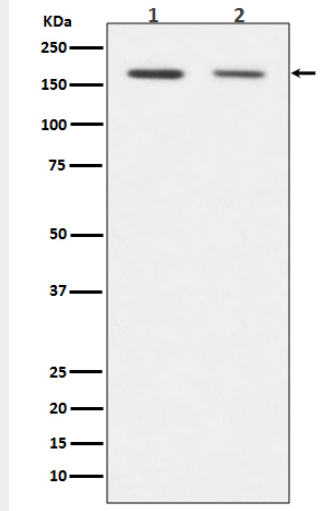
Immunohistochemical analysis of paraffin-embedded Human lung large cell cancer, using the Antibody at 1:100 dilution.



Immunohistochemical analysis of paraffin-embedded Human glioblastoma, using the Antibody at 1:100 dilution.



Immunohistochemical analysis of paraffin-embedded Mouse lung, using the Antibody at 1:100 dilution.



Western blot analysis of Dnmt1 expression in (1) HEK293 cell lysate; (2) NIH/3T3 cell lysate.