

**DNMT1 Antibody**  
**DNMT1 Antibody, Clone 60B1220.1**  
**Catalog # ASM10147****Specification**

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**DNMT1 Antibody - Product Information**

Application	<b>IHC, WB</b>
Primary Accession	<a href="#">P26358</a>
Other Accession	<a href="#">NP_001370</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1 Kappa</b>
Reactivity	<b>Human, Mouse, Zebrafish, Fish</b>
Clonality	<b>Monoclonal</b>

**Description**

Mouse Anti-Human DNMT1 Monoclonal IgG1 Kappa

**Target/Specificity**

Detects ~180kDa. It will cross-react with mouse DNMT1.

**Other Names**

DNA Mtase Antibody, DNMT Antibody, MCMT Antibody, DNA methyltransferase 1 Antibody, AIM Antibody, CXXC9 Antibody, DNMT Antibody, DNA (cytosine-5)-methyltransferase 1 Antibody, CXXC-type zinc finger protein 9 Antibody, DNA methyltransferase Hsa1 Antibody

**Immunogen**

Raised against a synthetic peptide corresponding to amino acids 637-650 of human DNMT1

**Purification**

Protein G Purified

Storage **-20°C**

**Storage Buffer**

PBS, 0.05% BSA, 0.05% sodium azide

Shipping Temperature **Blue Ice or 4°C**

**Certificate of Analysis**

2 µg/ml of SMC-200 was sufficient for detection of Dnmt1 in 10 µg of mouse ES cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

Cytoplasm | Endoplasmic Reticulum

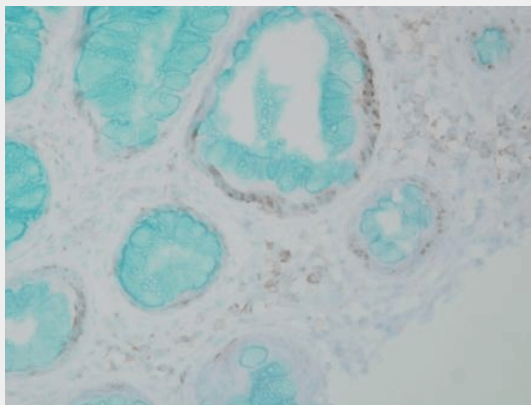
**DNMT1 Antibody - Protocols**

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

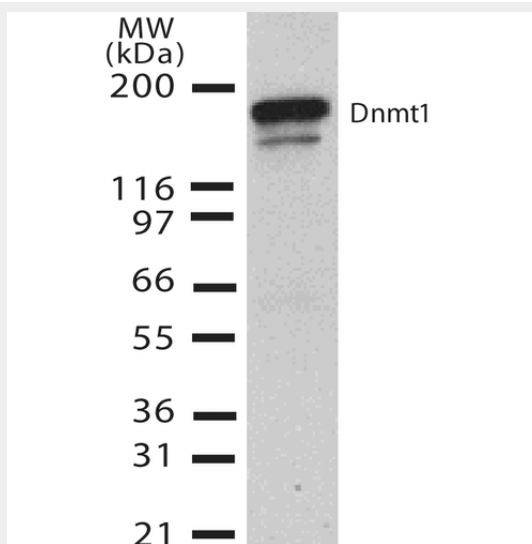
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

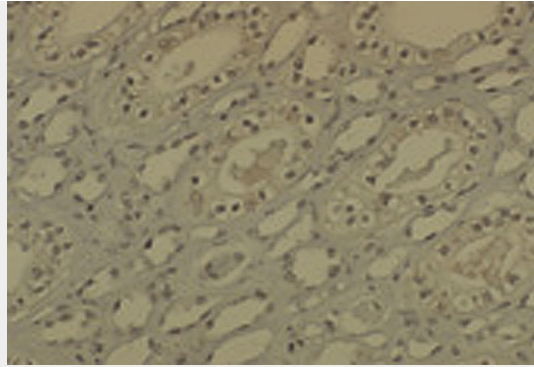
### DNMT1 Antibody - Images



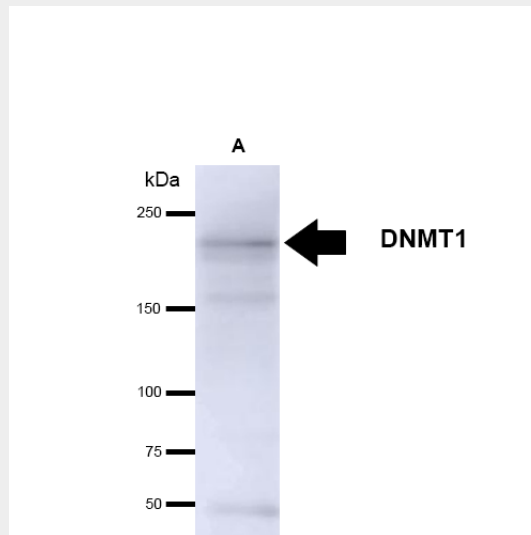
Immunohistochemistry analysis using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 60B1220.1 (ASM10147). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10147) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200  $\mu$ l for 2 minutes at RT. Magnification: 40x. ABC solution 1:1000 dilution, DAB solution 100-200uL/ slide.



Western Blot analysis of Human H1299 cell lysate showing detection of DNMT1 protein using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 60B1220.1 (ASM10147). Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10147) at 1:1000.



Immunohistochemistry analysis using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 60B1220.1 (ASM10147). Tissue: medullar kidney tissue. Species: Mouse. Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10147) at 1:1000. Secondary Antibody: HRP/DAB Detection System: Biotinylated Goat Anti-Mouse, Streptavidin Peroxidase, DAB Chromogen (brown). Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain.



Western Blot analysis of Human 293T cell lysates showing detection of ~180kDa DNMT1 protein using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 60B1220.1 (ASM10147). Lane 1: Molecular Weight Marker. Lane 2: Human 293T Cell lysate. Load: 15 µg. Block: 1.5% BSA in 1X TBST. Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10147) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Mouse IgG: HRP at 1:4000 for 1 hour at RT. Color Development: ECL solution for 5 minutes at RT. Predicted/Observed Size: ~180kDa. Other Band(s): Lower bands are DNMT1 degradation.

### DNMT1 Antibody - Background

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. Dnmt1 co-purifies with the retinoblastoma (Rb) tumour suppressor gene product, E2F1, and HDAC1. Dnmt1 also cooperates with Rb to repress transcription from promoters containing E2F-binding sites suggesting a link between DNA methylation, histone

deacetylase and sequence-specific DNA binding activity, as well as a growth-regulatory pathway that is disrupted in nearly all cancer cells (1-6).

#### **DNMT1 Antibody - References**

1. Bestor T., et al.(1988) J.Mol. Biol. 203: 971-983.
2. Yen R.W., Vertino P.M., Nelkin B.D., et al. (1992) Nucl. Acids Res. 20: 2287-2291.
3. Xie S., et al. (1999) Gene 236: 87-95.
4. Okano M., Bell D.W., Haber D.A. and Li E. (1999) Cell 99: 247-257.
5. Reik W. et al. (1999) J. Nat. Genet 23: 380-382.
6. Robertson K.D., et al. (2000) Nat Genet 25(3): 338-342.