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DNMT1 Antibody
DNMT1 Antibody, Clone 4G11-C7
Catalog # ASM10148

Specification

DNMT1 Antibody - Product Information

Application	**WB, IHC, IP**
Primary Accession	P26358
Other Accession	NP_001370
Host	**Mouse**
Isotype	**IgG1 Kappa**
Reactivity	**Human, Mouse, Zebrafish, Fish**
Clonality	**Monoclonal**

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 HsaI Antibody

Immunogen
Raised against a partial protein corresponding to amino acids 620-950 of human DNMT1

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
2 µg/ml of SMC-201 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
Nucleus

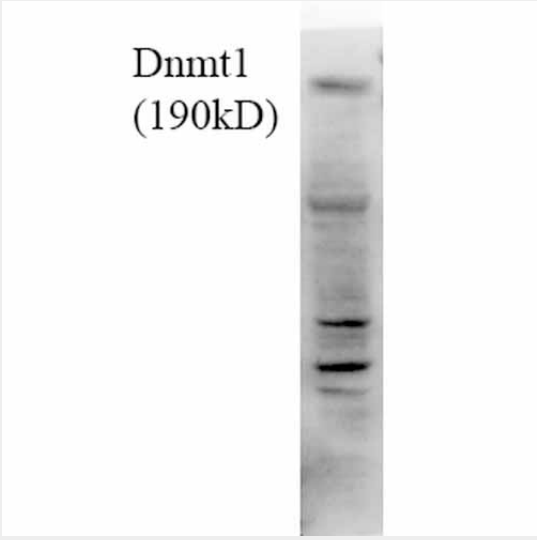
DNMT1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DNMT1 Antibody - Images



Western Blot analysis of Human H1299 cell lysate showing detection of DNMT1 protein using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 4G11-C7 (ASM10148). Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10148) at 1:1000.

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

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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.