

DNMT1 Antibody
DNMT1 Antibody, Clone 11H8
Catalog # ASM10159

Specification

DNMT1 Antibody - Product Information

Application	WB
Primary Accession	P26358
Other Accession	NP_001370
Host	Mouse
Isotype	IgG1
Reactivity	Human, Mouse
Clonality	Monoclonal

Description

Mouse Anti-Human DNMT1 Monoclonal IgG1

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, 50% glycerol

Shipping Temperature

Blue Ice or 4°C

Certificate of Analysis

2 µg/ml of SMC-231 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

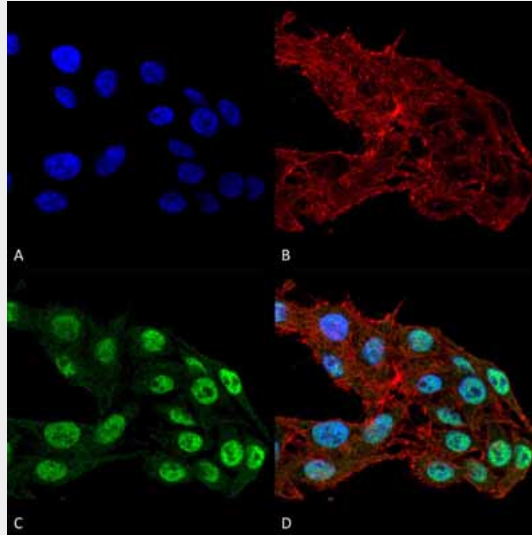
DNMT1 Antibody - Protocols

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

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

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

DNMT1 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-DNMT1 Monoclonal Antibody, Clone 11H8 (ASM10159). Tissue: Colon carcinoma cell line (RKO). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-DNMT1 Monoclonal Antibody (ASM10159) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60 min at RT, 5 min at RT. Localization: Nucleus. Magnification: 60X. (A) DAPI nuclear stain. (B) Phalloidin Texas Red F-Actin stain. (C) DNMT1. (D) Composite.

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.