

Product datasheet for **TA326440**

DNMT1 Mouse Monoclonal Antibody [Clone ID: 4G11-C7]

Product data:

Product Type:	Primary Antibodies
Clone Name:	4G11-C7
Applications:	WB
Recommend Dilution:	WB: 2-4ug/ml, IHC: 1-2ug/ml
Reactivity:	Human, Mouse, Zebrafish
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Raised against a synthetic peptide corresponding to amino acids 637-650 of human DNMT1 (Gene)
Formulation:	PBS, 0.05% BSA, 0.05% sodium azide
Concentration:	1 mg/ml
Purification:	Protein G Purified
Gene Name:	DNA (cytosine-5-)-methyltransferase 1
Database Link:	NP_001124295 Entrez Gene 13433 Mouse Entrez Gene 1786 Human



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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 .

Synonyms:

ADCADN; AIM; CXXC9; DNMT; HSN1E; m.Hsal; MCMT

Note:

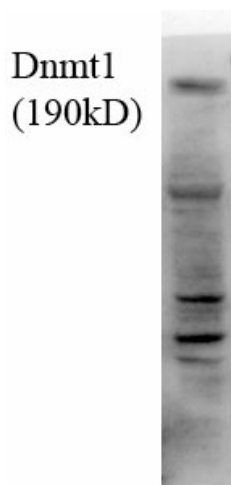
It will cross-react with mouse DNMT1.

Protein Families:

Druggable Genome, Transcription Factors

Protein Pathways:

Cysteine and methionine metabolism, Metabolic pathways

Product images:

Western blot analysis of DNMT1 in H1299 lysates using a 1:1000 dilution of the antibody