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Product datasheet for TA336382

DNMT1 Mouse Monoclonal Antibody [Clone ID: 60B1220.1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	60B1220.1
Applications:	IF, IHC, WB
Recommend Dilution:	WB: 0.1-0.5 ug/ml, ChIP: 1:10-1:500, IF: 1:10, IHC: 1:10-1:500, IHC-F: 1:500, IHC-P: 1-2 ug/ml, IP: 1:10-1:500, IHC: Free-Floating 1:500
Reactivity:	Human, Mouse, Zebrafish
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	This antibody was raised against a synthetic peptide corresponding to amino acids 637-650 (EKDDREDKENAFKR) of human Dnmt1 (Genbank Accession No. NP_001370).
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	0.5 mg/ml
Purification:	Protein G purified
Gene Name:	DNA (cytosine-5-)-methyltransferase 1
Database Link:	NP_001124295 Entrez Gene 13433 MouseEntrez 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. NB100-56519 recognizes Dnmt1, a 1616 amino acid protein according to GenBank no. NP_001370.

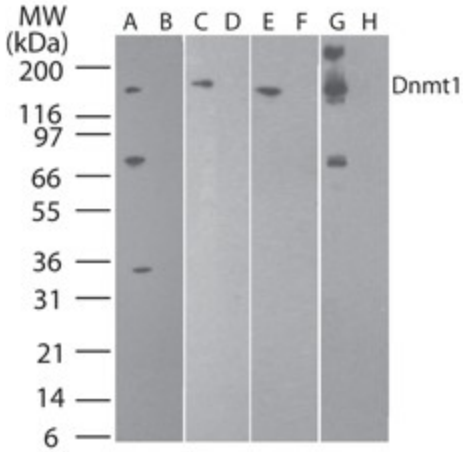
Synonyms: ADCADN; AIM; CXXC9; DNMT; HSN1E; m.HsaI; MCMT

Note: Chromatin Immunoprecipitation, Immunoprecipitation, Western Blot and Immunohistochemistry-Paraffin. Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID 24386225)

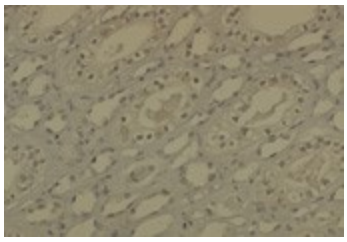
Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Cysteine and methionine metabolism, Metabolic pathways

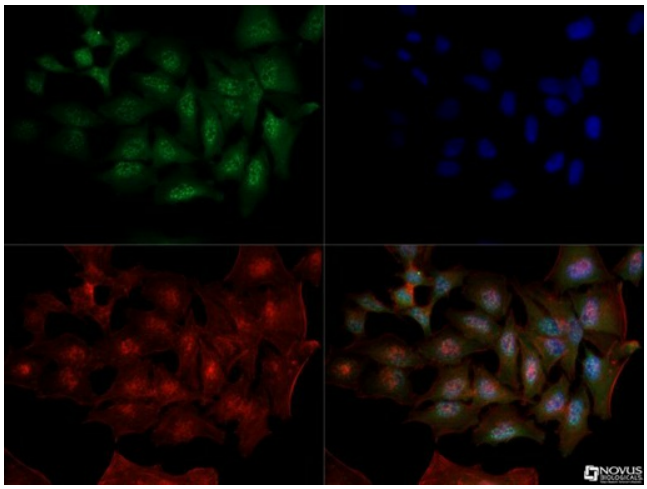
Product images:



Western Blot: Dnmt1 Antibody (60B1220.1) [TA336382] - analysis of Dnmt1 in 2102EP (human embryonic carcinoma) in the A) absence and B) presence of immunizing peptide, recombinant human Dnmt1 protein in the C) absence and D) presence of immunizing peptide,



Immunohistochemistry-Paraffin: Dnmt1 Antibody (60B1220.1) [TA336382] - analysis of Dnmt1 using antibody at 2 ug/ml on formalin-fixed, paraffin-embedded medullar kidney tissue sections



Immunocytochemistry/Immunofluorescence: Dnmt1 Antibody (60B1220.1) [TA336382] - Dnmt1 antibody was tested in HeLa cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red). An antibody dilution of