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Product datasheet for TA336293

DNMT1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:1000, IF: 1:50-1:200, IHC: 1:100, IHC-P: 1:100, IP: 1:10-1:500
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Contained within amino acids 1-125 of the N-terminus of human Dnmt1 [UniProt# P26358]
Formulation:	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Whole antisera
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	190 kDa
Gene Name:	DNA (cytosine-5-)-methyltransferase 1
Database Link:	NP_001124295 Entrez Gene 13433 MouseEntrez Gene 1786 Human P26358

View online »

Background: Member of C5-methyltransferase family and the most abundant DNA methyltransferase in mammalian cells, Dnmt1 (DNA methyltransferase 1) is a key methylation enzyme implicated in maintaining methylation during DNA replication/repair which has capability of methylating CpG residues with preference to hemimethylated DNA and de novo methylation during somatic cell development/differentiation. Dnmt1 interacts with CSNK1D, HDAC1, PCNA, MBD2, MBD3, DNMT3A, DNMT3B, PRC2/EED-EZH2 complex, UBC9, BAZ2A/TIP5, UHRF1, USP7 etc., and forms complexes with DMAP1, HDAC2, E2F1, BB1, HDAC1 and SUV39H1. In cell division, Dnmt1 associates with DNA replication sites in S phase maintaining the methylation pattern in newly synthesized strand, that is essential for epigenetic inheritance. Moreover, it associates with chromatin during G2 as well as M phases to maintain DNA methylation independently of replication, and is reduced to non detectable levels at the G0 phase with dramatic induction upon entry into S-phase. Dnmt1 mediates transcriptional repression by direct binding to HDAC2 and in association with DNMT3B/via the recruitment of CTCFL/BORIS, it involves in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 as well as H3K9. Dnmt1 is responsible for maintaining methylation patterns established in development and defects in DNMT1 are the cause of hereditary sensory neuropathy type 1E (HSN1E).

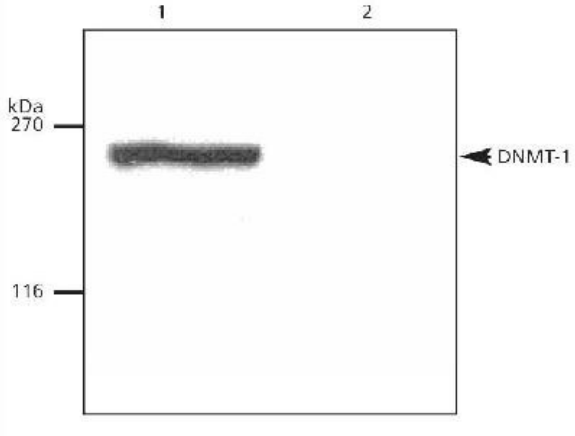
Synonyms: ADCADN; AIM; CXXC9; DNMT; HSN1E; m.HsaI; MCMT

Note: This Dnmt1 antibody is useful for Immunocytochemistry/Immunofluorescence, Immunoprecipitation, Immunohistochemistry on paraffin-embedded sections and Western Blot, where a band can be seen at ~190 kDa. NOTE: This antibody does not neutralize the enzymatic activity of its corresponding methyltransferase.

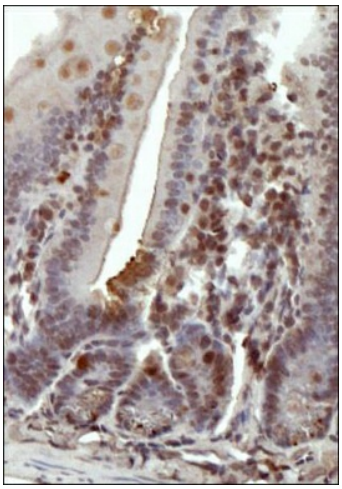
Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Cysteine and methionine metabolism, Metabolic pathways

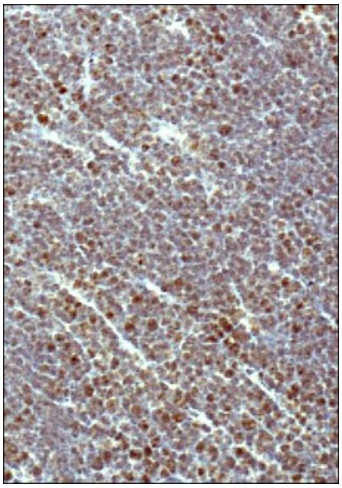
Product images:



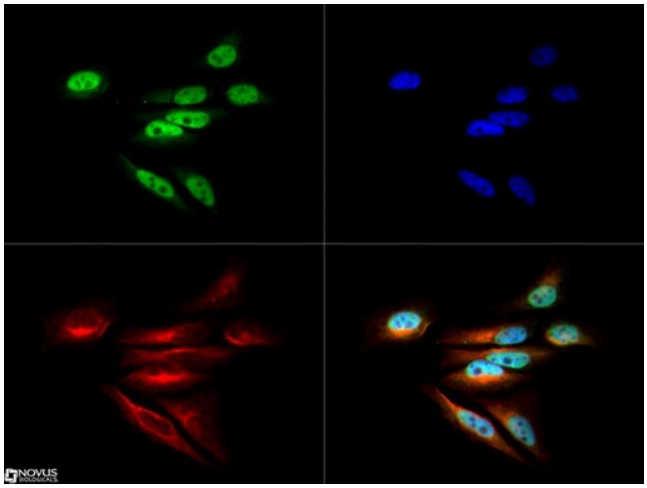
Western Blot: Dnmt1 Antibody TA336293 - Analysis using TA336293 to detect DNMT1 levels in T24 degrees Cells. Lane 1: 50 ugs of total protein lysate from untreated T24 degrees Cells. Lane 2: 50 ugs of total protein lysate treated with 0.5 uM 5-Aza-Deoxyc



Immunohistochemistry-Paraffin: Dnmt1 Antibody TA336293 - IHC staining of Dnmt1 in mouse small intestine using DAB with hematoxylin counterstain.



Immunohistochemistry-Paraffin: Dnmt1 Antibody TA336293 - IHC staining of Dnmt1 in mouse spleen using DAB with hematoxylin counterstain.



Immunocytochemistry/Immunofluorescence: Dnmt1 Antibody TA336293 - The Dnmt1 antibody was tested in HeLa cells at a 1:50 dilution against Dylight 488 (Green). Alpha-tubulin and nuclei were counterstained against Dylight 550 (Red) and DAPI (Blue), respect