

Product datasheet for **TA336382**

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

Product data:

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| Product Type: | Primary Antibodies |
| Clone Name: | 60B1220.1 |
| Applications: | ChIP, CyTOF-ready, FC, ICC/IF, IHC, IP, Simple Western, WB |
| Recommended Dilution: | Simple Western: 1:100, Flow (Intracellular), Immunoprecipitation: 1:10-1:500, Western Blot: 0.1-0.5 ug/ml, Immunohistochemistry: 1:50-1:500, Immunohistochemistry-Paraffin: 1:50-1:500, Flow Cytometry: 1 - 5 ug/mL, Chromatin Immunoprecipitation (ChIP): 1:20-1:1000, Immunohistochemistry-Frozen: 1:500, Immunohistochemistry Free-Floating: 1:500, Knockdown Validated, CyTOF-ready, Immunocytochemistry/ Immunofluorescence: 1:10 |
| 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: | lot specific |
| Purification: | Protein G purified |
| Conjugation: | Unconjugated |
| Storage: | Store at -20°C as received. |
| Stability: | Stable for 12 months from date of receipt. |
| Gene Name: | DNA (cytosine-5-)-methyltransferase 1 |
| Database Link: | NP_001124295 Entrez Gene 13433 Mouse Entrez Gene 1786 Human P26358 |



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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:

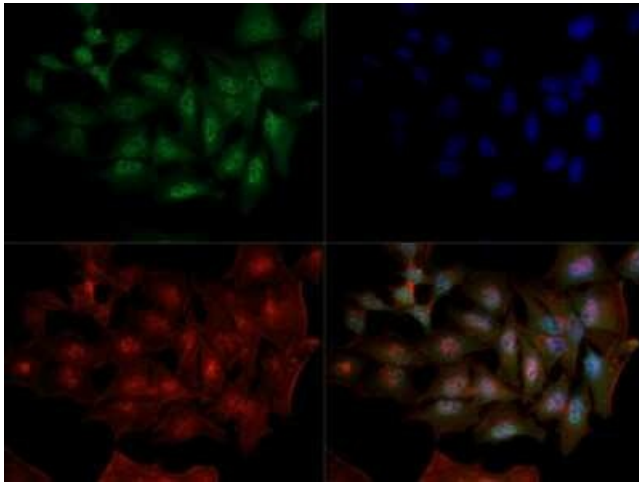
Druggable Genome, Transcription Factors

Protein Pathways:

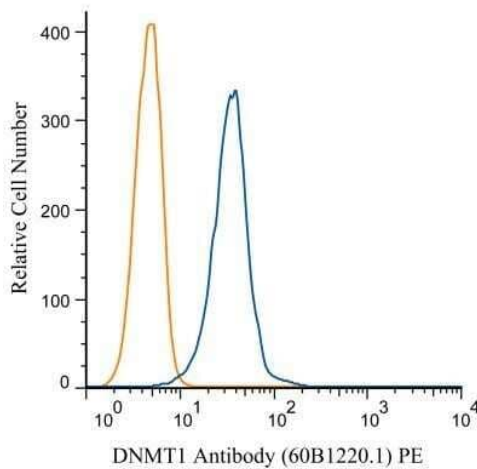
Cysteine and methionine metabolism, Metabolic pathways

Product images:

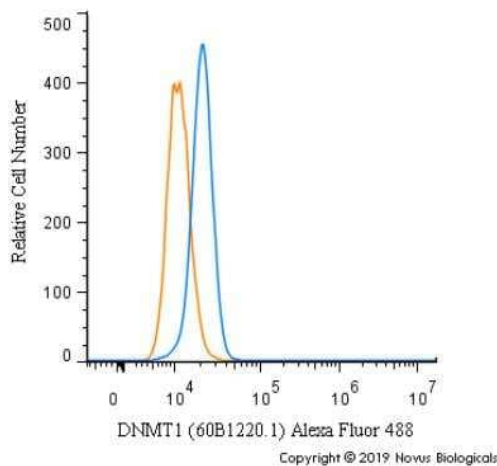
Simple Western: DNMT1 Antibody (60B1220.1) TA336382 - Simple Western lane view shows a specific band for Dnmt1 in 0.5 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



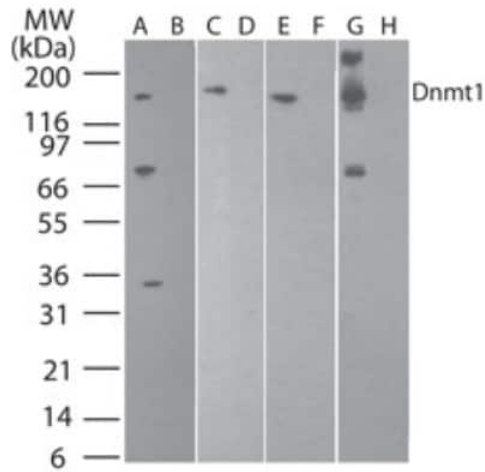
Immunocytochemistry/Immunofluorescence: DNMT1 Antibody (60B1220.1) TA336382 - Dnmt1 antibody was tested in HeLa cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red). Antibody dilution of 1:10 was used. Image objective 40x.



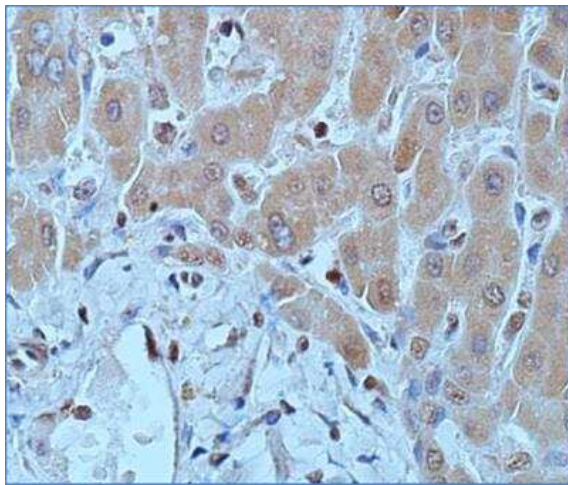
Flow Cytometry: DNMT1 Antibody (60B1220.1) TA336382 - Analysis of PE conjugate of TA336382. An intracellular stain was performed on HeLa cells with DNMT1 antibody (60B1220.1) TA336382PE (blue) and a matched isotype control NBP2-27287PE (orange). Cells were fixed with 4% PFA and then permeabilized with 0



Flow Cytometry: DNMT1 Antibody (60B1220.1) TA336382 - An intracellular stain was performed on HeLa cells with DNMT1 [60B1220.1] Antibody TA336382AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.



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, NIH 3T3 (mouse embryonic fibroblast) in the E) absence and F) presence of immunizing peptide, and D3 (mouse embryonic stem cell) in the G) absence and H) presence of immunizing peptide using Dnmt1 antibody. this antibody. 5 ug/ml for testing the human cell line and 0.1 ug/ml was used for testing the recombinant protein and the mouse cell lines. 's goat anti-mouse Ig HRP secondary antibody and PicoTect ECL substrate solution were used for this test.



Immunohistochemistry-Paraffin: DNMT1 Antibody (60B1220.1) TA336382 - Tissue section of human hepatocellular carcinoma at 1:50 dilution.