

# Anti-DNMT1 Antibody [A3A8-R]

## HA601281



<b>Product Type:</b>	Recombinant Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	WB, IF-Cell
<b>Molecular Wt:</b>	Predicted band size: 183 kDa
<b>Clone number:</b>	A3A8-R

**Description:** Methylates CpG residues. Preferentially methylates hemimethylated DNA. Associates with DNA replication sites in S phase maintaining the methylation pattern in the newly synthesized strand, that is essential for epigenetic inheritance. Associates with chromatin during G2 and M phases to maintain DNA methylation independently of replication. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2. In association with DNMT3B and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells. Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing. Promotes tumor growth.

**Immunogen:** Synthetic peptide within Human Dnmt1 aa 500-600 / 1616.

**Positive control:** HeLa cell lysate, 293T cell lysate, HepG2 cell lysate, Jurkat cell lysate, HeLa.

**Subcellular location:** Nucleus.

**Database links:** SwissProt: P26358 Human

**Recommended Dilutions:**

<b>WB</b>	1:1,000
<b>IF-Cell</b>	1:100

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

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Orders:0086-571-88062880

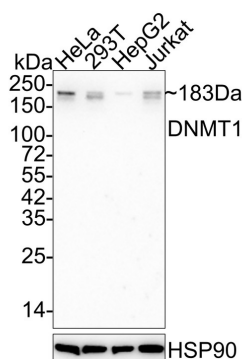
Technical:0086-571-89986345

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## Images

**Fig1:** Western blot analysis of DNMT1 on different lysates with Mouse anti-DNMT1 antibody (HA601281) at 1/1,000 dilution.



Lane 1: HeLa cell lysate  
Lane 2: 293T cell lysate  
Lane 3: HepG2 cell lysate  
Lane 4: Jurkat cell lysate

Lysates/proteins at 20 µg/Lane.

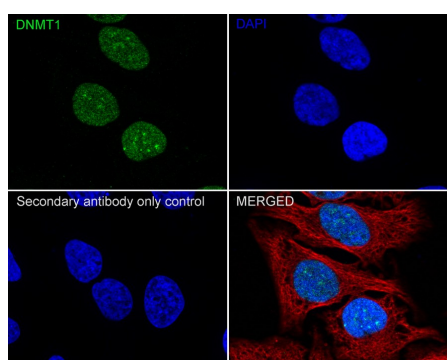
Predicted band size: 183 kDa  
Observed band size: 183 kDa

Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA601281) at 1/1,000 dilution was used in 5% NFDN/TBST at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

**Fig2:** Immunocytochemistry analysis of HeLa cells labeling DNMT1 with Mouse anti-DNMT1 antibody (HA601281) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-DNMT1 antibody (HA601281) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4°C. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

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**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

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### Background References

1. Li T. et. al. Structural and mechanistic insights into UHRF1-mediated DNMT1 activation in the maintenance DNA methylation. *Nucleic Acids Res.* 2018 Apr 6;46(6):3218-3231.
2. Du WW. et. al. A circular RNA circ-DNMT1 enhances breast cancer progression by activating autophagy. *Oncogene.* 2018 Nov;37(44):5829-5842.

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