

Anti-Dnmt1 antibody ab87654

[25 References](#) [3 Images](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-Dnmt1 antibody |
| Description | Rabbit polyclonal to Dnmt1 |
| Host species | Rabbit |
| Specificity | ab87656 is recommended for DNMT1 detection in WB. |
| Tested applications | Suitable for: ICC/IF, WB |
| Species reactivity | Reacts with: Mouse, Human |
| Immunogen | Highly purified recombinant Mouse Dnmt1 (amino acids 1-248), soluble form |
| General notes | <p>Useful for analysis of the protein complex containing Dnmt1.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

Properties

| | |
|-------------------------------|--|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. |
| Storage buffer | <p>pH: 6</p> <p>Preservative: 0.05% Sodium azide</p> <p>Constituent: 50% Glycerol</p> <p>Traces of Ammonium sulphate</p> |
| Purity | Immunogen affinity purified |
| Primary antibody notes | Useful for analysis of the protein complex containing Dnmt1. |
| Clonality | Polyclonal |
| Isotype | IgG |

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab87654 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|--|
| ICC/IF | | 1/5000. |
| WB | | Use a concentration of 0.2 - 1 µg/ml. Detects a band of approximately 183 kDa (predicted molecular weight: 183 kDa). |

Target

Function

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.

Tissue specificity

Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.

Sequence similarities

Belongs to the C5-methyltransferase family.
Contains 2 BAH domains.
Contains 1 CXXC-type zinc finger.

Domain

The N-terminal part is required for homodimerization and acts as a regulatory domain.

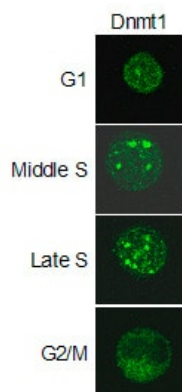
Post-translational modifications

Sumoylated; sumoylation increases activity.

Cellular localization

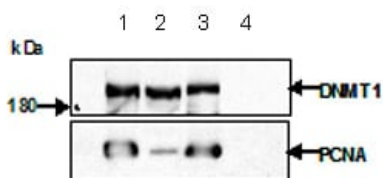
Nucleus.

Images



Immunocytochemistry/ Immunofluorescence - Anti-Dnmt1 antibody (ab87654)

ab87654 being used to indicate the subcellular localization of Dnmt1 in mouse embryonic stem cells (E14) during cell cycle progression.



Western blot - Anti-Dnmt1 antibody (ab87654)

All lanes : Anti-Dnmt1 antibody (ab87654) at 1 μ g/ml

Lane 1 : Tagged-NP 95 + BirA Input

Lane 2 : Tagged-NP 95 + BirA Beads

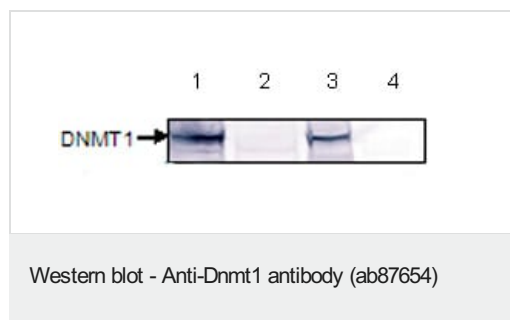
Lane 3 : BirA Input

Lane 4 : BirA Beads

Predicted band size: 183 kDa

Observed band size: 183 kDa

Association of Np95 with Dnmt1 and PcnA in HeLa cell nuclear extracts. Human NP95 was tagged by biotin-binding domain and stably expressed in HeLa cells together with the *E. coli* BirA biotin ligase gene. Biotylated Np95 was captured by streptavidin beads. The captured proteins were eluted from the beads and analyzed by western blotting using antibodies against Dnmt1 (ab87654) and PcnA.



All lanes : Anti-Dnmt1 antibody (ab87654) at 1 µg/ml

Lane 1 : Dnmt1 1+/+ (J1) (nuclear extract)

Lane 2 : Dnmt1 1-/- (36-2D6) (nuclear extract)

Lane 3 : Tagged-NP95 + BirA (0.1M KCl fraction)

Lane 4 : BirA (0.1M KCl fraction)

Predicted band size: 183 kDa

Catalytic activity of NP95 associated Dnmt1 in HeLa cells. The presence of Dnmt1 in the NP95 complexes was confirmed by western blot.

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