

**Anti-Human DNMT3L (RABBIT) Antibody**  
**DNMT3L Antibody**  
**Catalog # ASR5235**

**Specification**

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**Anti-Human DNMT3L (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, IP, I, LCI
Application Note	Anti-DNMT3L antibody has been tested for use in ELISA against the immunizing peptide. This antibody has been tested in immunohistochemistry and western blot. This antibody works for western blotting only following immunoprecipitation. The expected molecular weight of human DNMT3L is 43.6 kDa. Reactivity in other immunoassays is unknown.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near aa 150-175 of Human DNMT3L (DNA (cytosine-5-)-methyltransferase 3-like). DNMT3L is a nuclear protein with similarity to DNA methyltransferases.
Preservative	0.01% (w/v) Sodium Azide

**Anti-Human DNMT3L (RABBIT) Antibody - Additional Information**

**Gene ID** 29947

**Other Names**  
29947

**Purity**

This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. This antibody is expected to cross-react with mouse as the sequence of the human immunogen shows 76% identity with mouse. Reactivity with DNMT3L from other species has not yet been tested.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

#### Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

### Anti-Human DNMT3L (RABBIT) Antibody - Protein Information

**Name** DNMT3L

#### Function

Catalytically inactive regulatory factor of DNA methyltransferases that can either promote or inhibit DNA methylation depending on the context (By similarity). Essential for the function of DNMT3A and DNMT3B: activates DNMT3A and DNMT3B by binding to their catalytic domain (PubMed:<a href="http://www.uniprot.org/citations/17687327" target="\_blank">17687327</a>). Acts by accelerating the binding of DNA and S-adenosyl-L-methionine (AdoMet) to the methyltransferases and dissociates from the complex after DNA binding to the methyltransferases (PubMed:<a href="http://www.uniprot.org/citations/17687327" target="\_blank">17687327</a>). Recognizes unmethylated histone H3 lysine 4 (H3K4me0) and induces de novo DNA methylation by recruitment or activation of DNMT3 (PubMed:<a href="http://www.uniprot.org/citations/17687327" target="\_blank">17687327</a>). Plays a key role in embryonic stem cells and germ cells (By similarity). In germ cells, required for the methylation of imprinted loci together with DNMT3A (By similarity). In male germ cells, specifically required to methylate retrotransposons, preventing their mobilization (By similarity). Plays a key role in embryonic stem cells (ESCs) by acting both as a positive and negative regulator of DNA methylation (By similarity). While it promotes DNA methylation of housekeeping genes together with DNMT3A and DNMT3B, it also acts as an inhibitor of DNA methylation at the promoter of bivalent genes (By similarity). Interacts with the EZH2 component of the PRC2/EED-EZH2 complex, preventing interaction of DNMT3A and DNMT3B with the PRC2/EED-EZH2 complex, leading to maintain low methylation levels at the promoters of bivalent genes (By similarity). Promotes differentiation of ESCs into primordial germ cells by inhibiting DNA methylation at the promoter of RHOX5, thereby activating its expression (By similarity).

#### Cellular Location

Nucleus.

#### Tissue Location

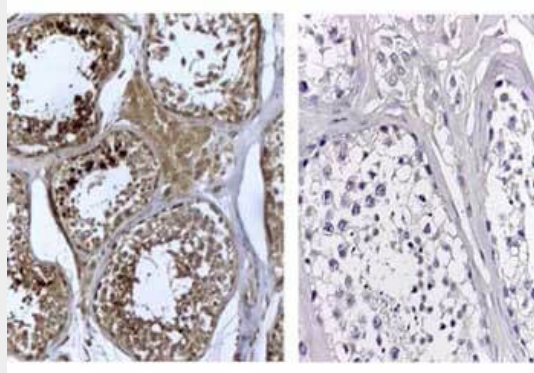
Expressed at low levels in several tissues including testis, ovary, and thymus.

### Anti-Human DNMT3L (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-Human DNMT3L (RABBIT) Antibody - Images



Immunohistochemistry Rabbit Anti-Human DNMT3L Antibody. Antibody: Rabbit Anti-Human DNMT3L Antibody at 1:500. Antigen Retrieval: HIER pH 6.2 Staining: Nuclear staining of testicular germ cells (Left); Neg Ctrl (Right) Human testis 40X.

### **Anti-Human DNMT3L (RABBIT) Antibody - Background**

DNMT 3L is a nuclear protein that has similarity to DNA methyltransferases, involved in de novo methylation of CpG islands. CpG methylation is an epigenetic modification that is important for embryonic development, imprinting, and X-chromosome inactivation. Studies in mice have demonstrated that DNA methylation is required for mammalian development. This gene encodes a nuclear protein with similarity to DNA methyltransferases. This protein is not thought to function as a DNA methyltransferase as it does not contain the amino acid residues necessary for methyltransferase activity. However, this protein does stimulate de novo methylation by DNA cytosine methyltransferase 3 alpha and it is thought to be required for the establishment of maternal genomic imprints. This protein also mediates transcriptional repression through interaction with histone deacetylase 1.