

# Anti-Dnmt3a Antibody [ST04-78]

ET1609-31



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Tissue, IHC-P
<b>Molecular Wt:</b>	Predicted band size: 102 kDa
<b>Clone number:</b>	ST04-78

**Description:** Methylation at the 5'-position of cytosine is the only known naturally occurring covalent modification of the mammalian genome. DNA methylation requires the enzymatic activity of DNA 5-cytosine methyltransferase (Dnmt) proteins, which catalyze the transfer of a methyl group from S-adenosyl methionine to the 5'-position of cytosines residing in the dinucleotide CpG motif, and this methylation results in transcriptional repression of the target gene. The Dnmt enzymes are encoded by independent genes. Dnmt1 is the most abundant, and it preferentially methylates hemimethylated DNA and coordinates gene expression during development. Additional mammalian Dnmt proteins include Dnmt2 and Dnmt3. Dnmt2 lacks the large N-terminal regulator domain of Dnmt1, is expressed at substantially lower levels in adult tissues, and is likely involved in methylating newly integrated retroviral DNA. Dnmt3a and Dnmt3b are encoded by two distinct genes, but both are abundantly expressed in embryonic stem cells, where they also methylate CpG motifs on DNA.

**Immunogen:** Synthetic peptide within human Dnmt3a aa 600-640.

**Positive control:** C2C12 cell lysate, NIH/3T3 cell lysate, Mouse brain tissue lysate, Mouse skeletal muscle tissue lysate, SH-SY5Y cell lysate, Hela cell lysate, mouse testis tissue, rat testis tissue.

**Subcellular location:** Cytoplasm, Nucleus, Chromosome.

**Database links:** SwissProt: Q9Y6K1 Human | O88508 Mouse | Q1LZ53 Rat

**Recommended Dilutions:**

<b>WB</b>	1:1,000-1:5,000
<b>IF-Tissue</b>	1:50-1:200
<b>IHC-P</b>	1:200-1:3,000

**Storage Buffer:** 1\*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

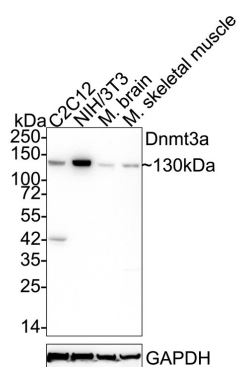
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images

**Fig1:** Western blot analysis of Dnmt3a on different lysates with Rabbit anti-Dnmt3a antibody (ET1609-31) at 1/1,000 dilution.

Lane 1: C2C12 cell lysate  
 Lane 2: NIH/3T3 cell lysate  
 Lane 3: Mouse brain tissue lysate  
 Lane 4: Mouse skeletal muscle tissue lysate



Lysates/proteins at 30 µg/Lane.

Predicted band size: 102 kDa  
 Observed band size: 130 kDa

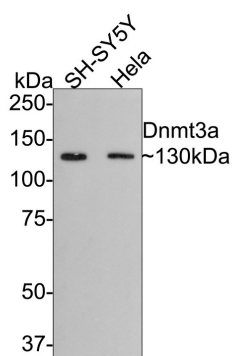
Exposure time: 3 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-31) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

**Fig2:** Western blot analysis of Dnmt3a on different lysates with Rabbit anti-Dnmt3a antibody (ET1609-31) at 1/1,000 dilution.

Lane 1: SH-SY5Y cell lysate  
 Lane 2: Hela cell lysate



Lysates/proteins at 10 µg/Lane.

Predicted band size: 102 kDa  
 Observed band size: 130 kDa

Exposure time: 2 minutes;

8% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-31) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

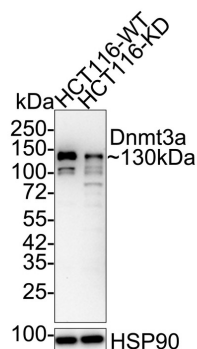
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**Fig3:** Western blot analysis of Dnmt3a on different lysates with Rabbit anti-Dnmt3a antibody (ET1609-31) at 1/2,000 dilution.

Lane 1: HCT116-WT cell lysate

Lane 2: HCT116-KD cell lysate

Lysates/proteins at 10 µg/Lane.

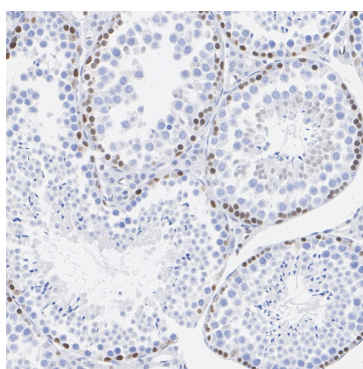
Predicted band size: 102 kDa

Observed band size: 130 kDa

Exposure time: 2 minutes; ECL: K1801;

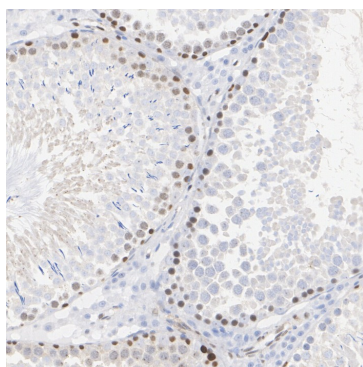
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-31) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse testis tissue with Rabbit anti-Dnmt3a antibody (ET1609-31) at 1/3,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ET1609-31) at 1/3,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig5:** Immunohistochemical analysis of paraffin-embedded rat testis tissue with Rabbit anti-Dnmt3a antibody (ET1609-31) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ET1609-31) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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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. Dunn J et al. Flow-dependent epigenetic DNA methylation regulates endothelial gene expression and atherosclerosis. J Clin Invest 124:3187-99 (2014).
2. Jefferson WN et al. Persistently altered epigenetic marks in the mouse uterus after neonatal estrogen exposure. Mol Endocrinol 27:1666-77 (2013).

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