


## Product datasheet

# Anti-Dnmt3b antibody - N-terminal ab16049

★★★★★ 9 Abreviews 22 References 9 Images

### Overview

<b>Product name</b>	Anti-Dnmt3b antibody - N-terminal
<b>Description</b>	Rabbit polyclonal to Dnmt3b - N-terminal
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Chinese hamster <b>Predicted to work with:</b> Rat, Human 
<b>Immunogen</b>	Synthetic peptide corresponding to Mouse Dnmt3b aa 1-100 (N terminal) conjugated to keyhole limpet haemocyanin. Database link: <a href="#">O88509</a> (Peptide available as <a href="#">ab16376</a> )
<b>Positive control</b>	WB: CHO, HUES7, F9, mouse embryonic germ cell and E14Tg2a whole cell lysate. Lysate prepared from human NCCIT cell chromatin fraction.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

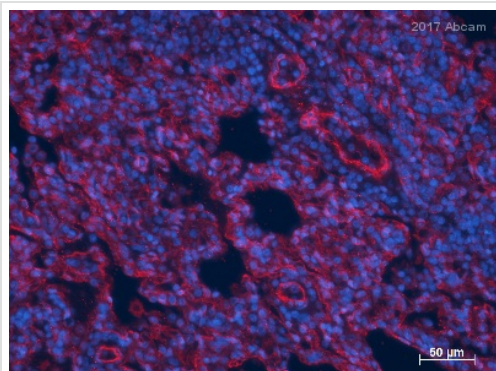
**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab16049 in the following tested applications.  
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (6)	Use at an assay dependent concentration.
WB	★★★★☆ (2)	Use a concentration of 0.8 - 1 µg/ml. Detects a band of approximately 110 kDa (predicted molecular weight: 100 kDa). Abcam recommends using milk as the blocking agent (3-5%). Please contact Scientific Support for more information.

## Target

<b>Function</b>	Required for genome wide de novo methylation and is essential for the establishment of DNA methylation patterns during development. DNA methylation is coordinated with methylation of histones. May preferentially methylates nucleosomal DNA within the nucleosome core region. May function as transcriptional co-repressor by associating with CBX4 and independently of DNA methylation. Seems to be involved in gene silencing (By similarity). In association with DNMT1 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. Isoforms 4 and 5 are probably not functional due to the deletion of two conserved methyltransferase motifs.
<b>Tissue specificity</b>	Ubiquitous; highly expressed in fetal liver, heart, kidney, placenta, and at lower levels in spleen, colon, brain, liver, small intestine, lung, peripheral blood mononuclear cells, and skeletal muscle. Isoform 1 is expressed in all tissues except brain, skeletal muscle and PBMC, 3 is ubiquitous, 4 is expressed in all tissues except brain, skeletal muscle, lung and prostate and 5 is detectable only in testis and at very low level in brain and prostate.
<b>Involvement in disease</b>	Defects in DNMT3B are a cause of immunodeficiency-centromeric instability-facial anomalies syndrome (ICF) [MIM:242860]. ICF is a rare autosomal recessive disorder characterized by a variable immunodeficiency, mild facial anomalies, and centromeric heterochromatin instability involving chromosomes 1, 9, and 16. ICF is biochemically characterized by hypomethylation of CpG sites in some regions of heterochromatin.
<b>Sequence similarities</b>	Belongs to the C5-methyltransferase family. Contains 1 ADD domain. Contains 1 GATA-type zinc finger. Contains 1 PHD-type zinc finger. Contains 1 PWWP domain.
<b>Domain</b>	The PWWP domain is essential for targeting to pericentric heterochromatin.
<b>Post-translational modifications</b>	Sumoylated.
<b>Cellular localization</b>	Nucleus.

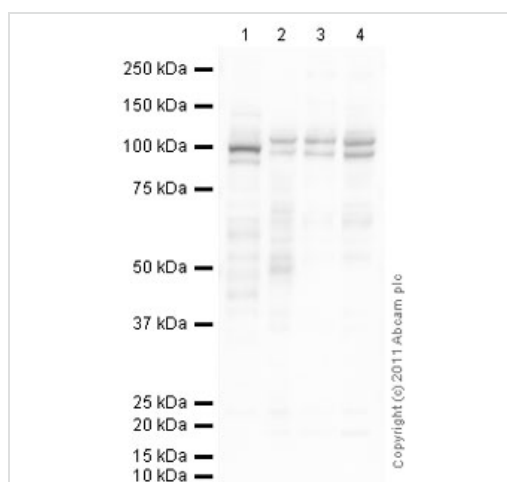
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)

Verified customer

Formalin-fixed, paraffin-embedded pig lung tissue stained for Dnmt3b with ab16049 at a 1/100 dilution (red) in immunohistochemical analysis. Cy3 conjugated donkey anti-rabbit secondary antibody.



Western blot - Anti-Dnmt3b antibody - N-terminal (ab16049)

**All lanes** : Anti-Dnmt3b antibody - N-terminal (ab16049) at 1 μg/ml (blocked with 3% milk)

**Lane 1** : HUES7 (Human embryonic stem cell line) whole cell lysate

**Lane 2** : F9 (Mouse embryonic carcinoma cell line) whole cell lysate

**Lane 3** : Mouse embryonic germ cell lysate

**Lane 4** : E14Tg2a (Mouse embryonic stem cell line) whole cell lysate

Lysates/proteins at 10 μg per lane.

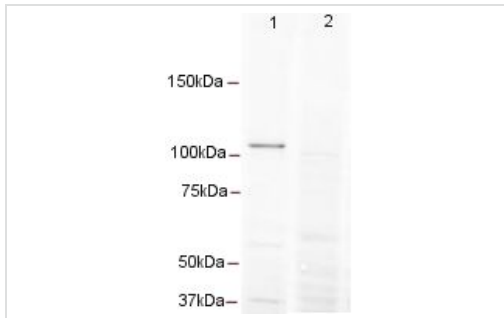
### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Performed under reducing conditions.

**Predicted band size:** 100 kDa

**Exposure time:** 2 minutes



Western blot - Anti-Dnmt3b antibody - N-terminal (ab16049)

**All lanes :** Anti-Dnmt3b antibody - N-terminal (ab16049) at 1 µg/ml

**Lane 1 :** CHO cell lysate

**Lane 2 :** CHO cell lysate with Mouse Dnmt3b peptide ([ab16376](#)) at 1 µg/ml

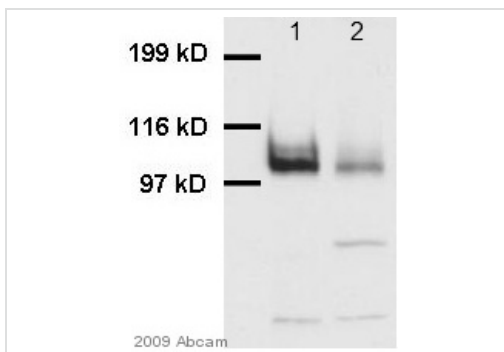
Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat anti-rabbit Alexa fluor 680 at 1/5000 dilution

Performed under reducing conditions.

**Predicted band size:** 100 kDa



Western blot - Anti-Dnmt3b antibody - N-terminal (ab16049)

This image is a courtesy of Johanna Smith

**All lanes :** Anti-Dnmt3b antibody - N-terminal (ab16049) at 1/1000 dilution

**Lane 1 :** Lysate prepared from human NCCIT cell chromatin fraction

**Lane 2 :** Lysate prepared from chromatin fraction of human NCCIT whole cells

Lysates/proteins at 200000 cells per lane.

### Secondary

**All lanes :** HRP-conjugated goat polyclonal to rabbit IgG (H+L) at 1/10000 dilution

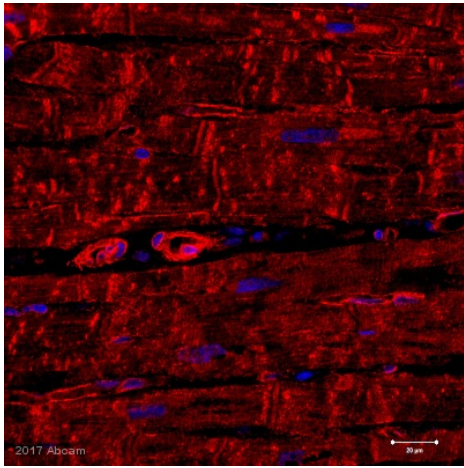
Performed under reducing conditions.

**Predicted band size:** 100 kDa

**Observed band size:** 100 kDa

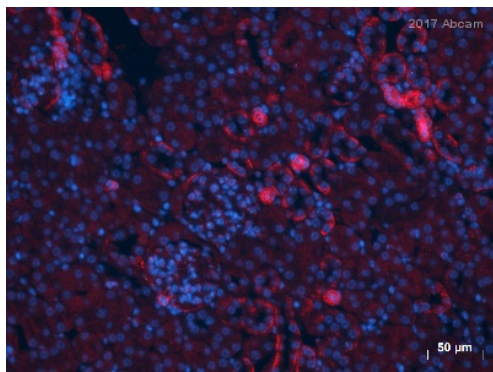
**Additional bands at:** 110 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 20 seconds



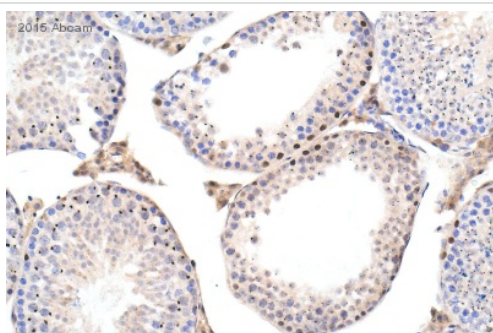
10% formalin-fixed human heart tissue stained for Dnmt3b (red) using ab16049 at 1/1000 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)



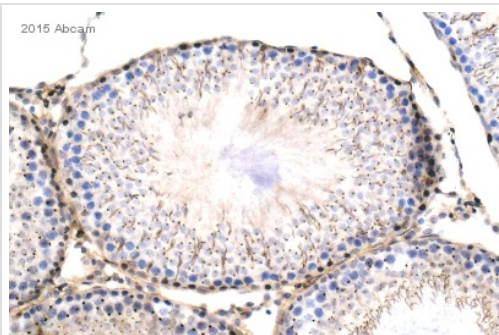
10% formalin-fixed mouse kidney tissue stained for Dnmt3b (red) using ab16049 at 1/1000 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)



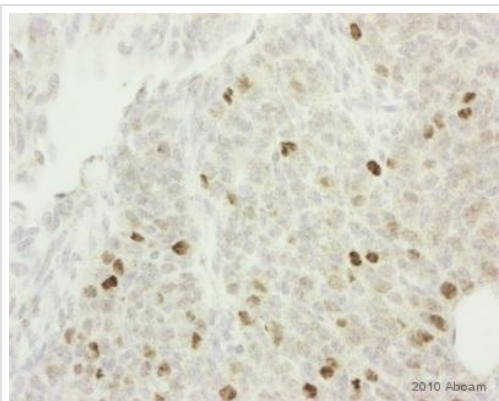
Formaldehyde-fixed mouse testis tissue stained for Dnmt3b using ab16049 at 1/5000 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)

Formaldehyde-fixed rat testis tissue stained for Dnmt3b using ab16049 at 1/6000 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dnmt3b antibody - N-terminal (ab16049)

Formaldehyde-fixed mouse ovary tissue stained for Dnmt3b using ab16049 at 1/2000 dilution in immunohistochemical analysis.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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