Product Datasheet

DNMT3B Antibody
NB300-516

Unit Size: 100 ug

Store at -20C. Avoid freeze-thaw cycles.

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Reviews: 3 Publications: 19

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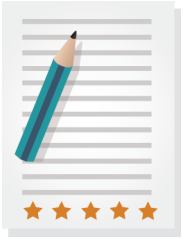
Updated 4/13/2025 v.20.1



NB300-516

DNMT3B Antibody

Product Information

Unit Size	100 ug
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS with 1 mg/ml BSA

Product Description

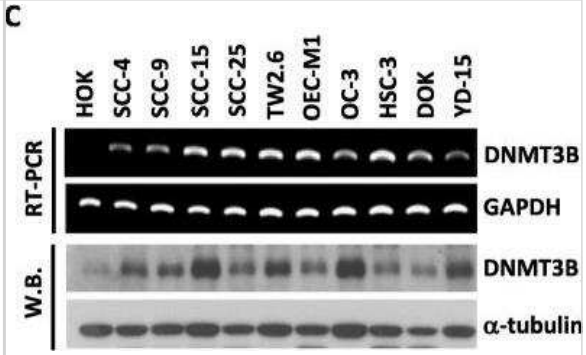
Host	Rabbit
Gene ID	1789
Gene Symbol	DNMT3B
Species	Human, Mouse, Rat
Reactivity Notes	Use in Rat reported in scientific literature (PMID:34874218) Human reactivity reported in scientific literature (PMID: 20847044). Mouse reactivity reported in scientific literature (PMID: 21149390)..
Specificity/Sensitivity	This detects DNA methyltransferase 3b (Dnmt3b) from human and mouse tissues and cells as well as recombinant human Dnmt3b. This detects, to a lesser extent, full-length human recombinant Dnmt3a.
Immunogen	Synthetic peptide corresponding to the residues M(1) K G D S R H L N E E E G A(14) C of mouse DNMT3b

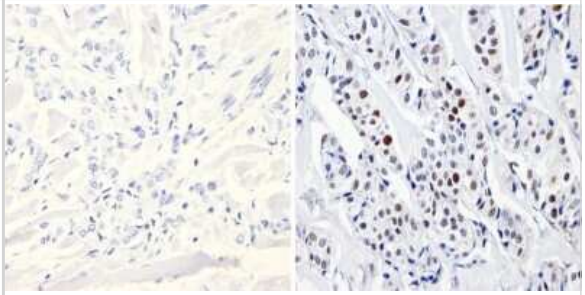
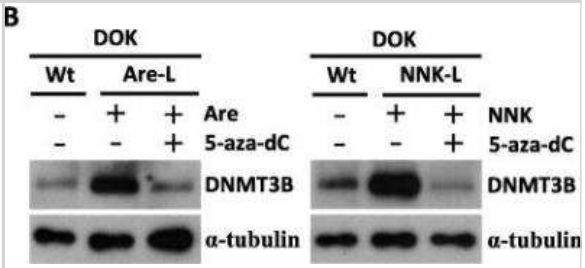
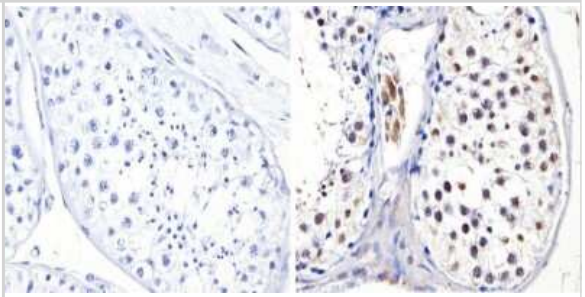
Product Application Details

Applications	Western Blot, Simple Western, Immunohistochemistry, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation (ChIP), Knockdown Validated
Recommended Dilutions	Western Blot 2.0 ug/mL, Simple Western 20 ug/mL, Immunohistochemistry 1:10 - 1:500, Immunohistochemistry-Paraffin 1:100 - 1:1000, Chromatin Immunoprecipitation (ChIP) 1:10-1:500, Knockdown Validated
Application Notes	May be Useful in WB. ChIP usage was reported in scientific literature. WB: Detects a 130 kDa band is seen in P19 nuclear extracts.

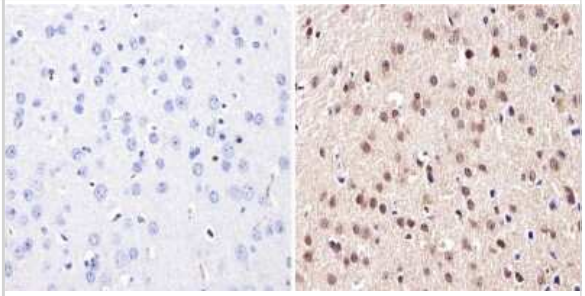
Images

Western Blot: DNMT3B Antibody [NB300-516] - Expression level of DNMT3B by RT-PCR and Western blot (W.B.) analysis in human oral keratinocyte (HOK) and OSCC cell lines. GAPDH and a-tubulin were used as internal control, respectively. Image collected and cropped by CiteAb from the following publication (jbiomedsci.biomedcentral.com/articles/10.1186/s12929-020-00644-z), licensed under a CC-BY license.



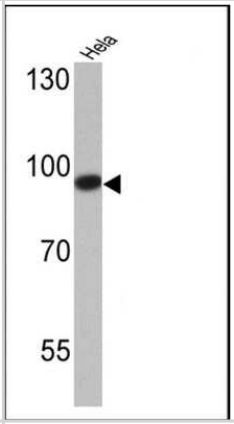
Immunohistochemistry-Paraffin: DNMT3B Antibody [NB300-516] - Analysis showing positive staining in the nucleus and cytoplasm of Human breast carcinoma (right) compared with a negative control in the absence of primary antibody (left).	
Western Blot: DNMT3B Antibody [NB300-516] - Homogenized mouse brain cells. WB image submitted by a verified customer review.	
Western Blot: DNMT3B Antibody [NB300-516] - Western blot analysis of DNMT3B level in wildtype DOK cells (Wt), Are-L and NNK-L DOK cells after treatment with 5-aza-dC (5uM) for 5 days. a-tubulin was used as internal control. Image collected and cropped by CiteAb from the following publication (jbiomedsci.biomedcentral.com/articles/10.1186/s12929-020-00644-z), licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: DNMT3B Antibody [NB300-516] - Analysis showing positive staining in the nucleus of Human testis tissue (right) compared with a negative control in the absence of primary antibody (left).	

Immunohistochemistry-Paraffin: DNMT3B Antibody [NB300-516] - Analysis showing positive staining in the nucleus and cytoplasm of Mouse brain tissue (right) compared with a negative control in the absence of primary antibody (left).

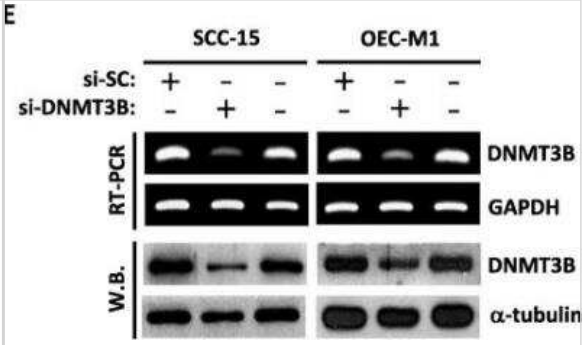


Simple Western: DNMT3B Antibody [NB300-516] - Simple Western lane view shows a specific band for DNMT3B in 0.5 mg/mL of BG01V lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. * Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody

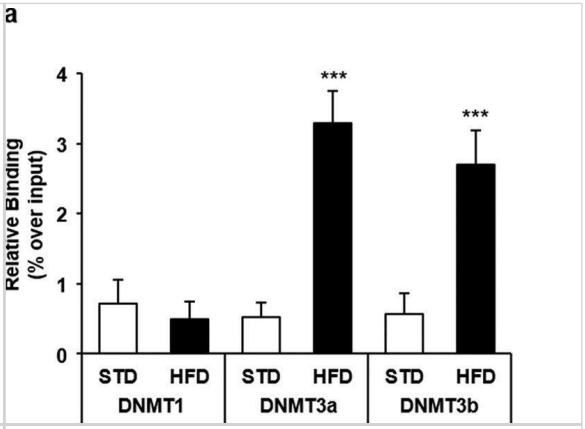
Simple Western: DNMT3B Antibody [NB300-516] - Analysis of 25 ug of HeLa cell lysates and a molecular weight protein ladder.



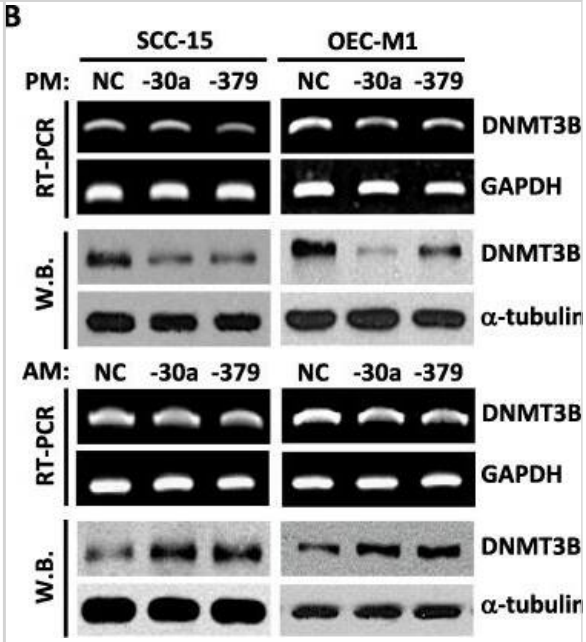
Western Blot: DNMT3B Antibody [NB300-516] - RT-PCR and Western blot analysis of DNMT3B in SCC-15 and OEC-M1 cells following DNMT3B knockdown (si-DNMT3B) or non-targeting siRNA control (si-SC) for 48h. GAPDH and a-tubulin were used as internal control, respectively. Image collected and cropped by CiteAb from the following publication (jbiomedsci.biomedcentral.com/articles/10.1186/s12929-020-00644-z), licensed under a CC-BY license.



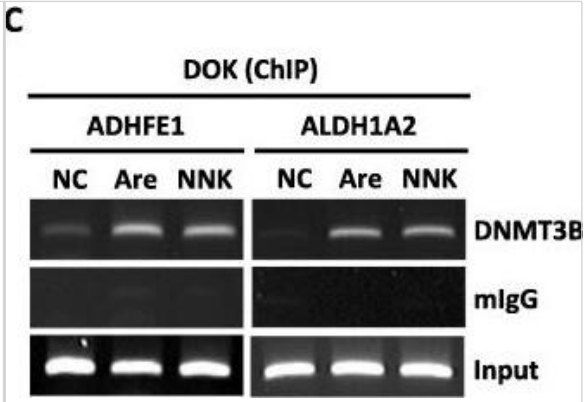
Epigenetic changes & protein binding at Ankrd26 promoter in eAT from mice upon 22 weeks of HFD.ChIP of DNMT1, DNMT3a, DNMT3b (a) & MBD2 (b) binding at Ankrd26 promoter region (−553 bp/−348 bp). (c) MNase for Nuc-2 (−257 bp/−198 bp) & Nuc-1 (−84 bp/−25 bp) occupancy at Ankrd26 promoter. (d) ChIP for acetyl-H4 enrichment at Nuc-2 & Nuc-1. (e) ChIP of RNA Pol II binding at Ankrd26 TSS (+16 bp/ +159 bp). (a,b) & (d,e), ChIP enrichment is relative to Input chromatin. (a–e), results are mean ± SD from three independent experiments. **p < 0.01 & ***p < 0.001 vs STD. Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/srep43526), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



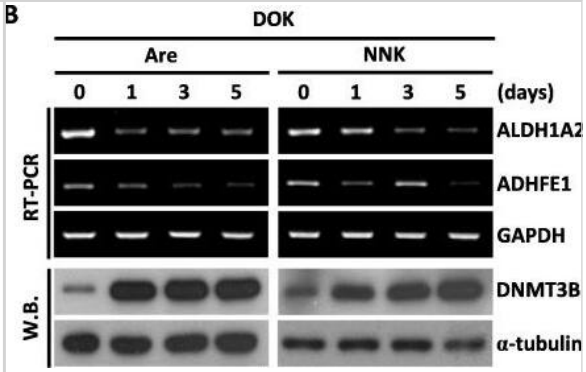
Western Blot: DNMT3B Antibody [NB300-516] - DNMT3B is a direct target of miR-30a & miR-379. a The effect of miRNA mimics (PM-30a or PM-379, 20 nM) on the luciferase activities of the constructs containing the wild-type (wt-3′-UTR) or mutant-type 3′-UTR (mt-30a-3′-UTR or mt-379-3′-UTR) in OEC-M1 cells. The relative luciferase activity of each sample is measured at 48 h after transfection & normalized to Renilla luciferase activity. The data are represented as mean ± SD; ***p < 0.001 versus control mimics (PM-NC). b RT-PCR & Western blot analysis of DNMT3B level in SCC-15 & OEC-M1 cells after treatment with control mimics (NC), or miRNA mimics (PM-30a or PM-379, 20 nM) or miRNA inhibitor (AM-30a or AM-379, 20 nM) for 48 h. GAPDH & α-tubulin were used as internal control, respectively. c RT-PCR analysis of ADHFE1 & ALDH1A2 expression level after treatment with control mimics (NC, 20 nM), or miRNA mimics (PM-30a or PM-379, 20 nM) for 48 h in SCC-15 & OEC-M1 cells. GAPDH was used as internal control. d Relative miR-30a & miR-379 expression levels in 33 of adjacent normal tissues (N) compared with their own tumors (T). e Correlation analysis of DNMT3B & miR-30a or miR-379 in OSCC patients (n = 33) by qRT-PCR analysis. Pearson correlation coefficients & p-values were calculated as indicated. Red, tumor part; green, normal part Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32238162), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: DNMT3B Antibody [NB300-516] - Arecoline & NNK induced DNMT3B activity & repressed ADHFE1, ALDH1A2 & miRNAs expression. a qRT–PCR analysis of miR-30a & miR-379 expression level after treatment with arecoline (50 μM) or NNK (10 μM) for indicated days. b RT-PCR analysis of ADHFE1, ALDH1A2 level & western blot analysis of DNMT3B level in DOK cells after treatment with arecoline (50 μM) or NNK (10 μM) for indicated times. GAPDH & α-tubulin were used as internal control. c ChIP assay of ADHFE1 & ALDH1A2 promoter region was performed with DOK cells using anti-DNMT3B antibody after treatment with vehicle control (DMSO, 10 nM), arecoline (50 μM) or NNK (10 μM) for 5 days. Mouse IgG (mIgG) antibody was used as negative control. d RT-PCR analysis of ADHFE1 & ALDH1A2 level in DOK cells after treatment with arecoline (50 μM) or NNK (10 μM) alone or combined with 5-aza-dC (5 μM) for 5 days. GAPDH was used as internal control. e qRT-PCR analysis of ADHFE1 & ALDH1A2 level in DOK cells after treatment with vehicle control (C), or arecoline (50 μM) plus control mimics (NC), miR-30a (20 nM), miR-379 (20 nM), or NNK (10 μM) plus control mimics (NC), miR-30a (20 nM), miR-379 (20 nM) for 5 days. GAPDH was used as an internal control. All data are presented as mean ± SD; **p < 0.01; ***p < 0.001 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32238162), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: DNMT3B Antibody [NB300-516] - Arecoline & NNK induced DNMT3B activity & repressed ADHFE1, ALDH1A2 & miRNAs expression. a qRT–PCR analysis of miR-30a & miR-379 expression level after treatment with arecoline (50 μM) or NNK (10 μM) for indicated days. b RT-PCR analysis of ADHFE1, ALDH1A2 level & western blot analysis of DNMT3B level in DOK cells after treatment with arecoline (50 μM) or NNK (10 μM) for indicated times. GAPDH & α-tubulin were used as internal control. c ChIP assay of ADHFE1 & ALDH1A2 promoter region was performed with DOK cells using anti-DNMT3B antibody after treatment with vehicle control (DMSO, 10 nM), arecoline (50 μM) or NNK (10 μM) for 5 days. Mouse IgG (mIgG) antibody was used as negative control. d RT-PCR analysis of ADHFE1 & ALDH1A2 level in DOK cells after treatment with arecoline (50 μM) or NNK (10 μM) alone or combined with 5-aza-dC (5 μM) for 5 days. GAPDH was used as internal control. e qRT-PCR analysis of ADHFE1 & ALDH1A2 level in DOK cells after treatment with vehicle control (C), or arecoline (50 μM) plus control mimics (NC), miR-30a (20 nM), miR-379 (20 nM), or NNK (10 μM) plus control mimics (NC), miR-30a (20 nM), miR-379 (20 nM) for 5 days. GAPDH was used as an internal control. All data are presented as mean ± SD; **p < 0.01; ***p < 0.001 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32238162), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Huang X, Balmer S, Lyu C, Xiang Y et Al. ZFP281 controls transcriptional and epigenetic changes promoting mouse pluripotent state transitions via DNMT3 and TET1 Dev Cell 2024-01-18 [PMID: 38237590]

GA Raciti, R Spinelli, A Desiderio, M Longo, L Parrillo, C Nigro, V D'Esposito, P Mirra, F Fiory, V Pilone, P Forestieri, P Formisano, I Pastan, C Miele, F Beguinot Specific CpG hyper-methylation leads to Ankrd26 gene down-regulation in white adipose tissue of a mouse model of diet-induced obesity Sci Rep, 2017-03-07;7(0):43526. 2017-03-07 [PMID: 28266632]

Jekaterina Vohhodina, Liana J. Goehring, Ben Liu, Qing Kong, Vladimir V. Botchkarev Jr., Mai Huynh, Zhiqi Liu, Fieda O. Abderazzaq, Allison P. Clark, Scott B. Ficarro, Jarrod A. Marto, Elodie Hatchi, David M. Livingston BRCA1 binds TERRA RNA and suppresses R-Loop-based telomeric DNA damage Nature Communications 2021-06-10 [PMID: 34112789]

Yang C, Deng L, Bao F et al. Sevoflurane with Low Concentration Decrease DNA Methylation on Chronic Obstructive Pulmonary Disease (COPD)-Related Gene Promoter in COPD Rat COPD 2023-12-01 [PMID: 38010369] (WB)

Xie Z, Wang Q, Hu S. Coordination of PRKCA/PRKCA-AS1 interplay facilitates DNA methyltransferase 1 recruitment on DNA methylation to affect protein kinase C alpha transcription in mitral valve of rheumatic heart disease Bioengineered 2021-09-06 [PMID: 34482802]

Fuller AM, DeVine A, Murazzi I et al. Comparative oncology reveals DNMT3B as a molecular vulnerability in undifferentiated pleomorphic sarcoma Cellular oncology (Dordrecht) 2022-10-01 [PMID: 36181640]

Liu X, Cui H The palliative effects of folic acid on retinal microvessels in diabetic retinopathy via regulating the metabolism of DNA methylation and hydroxymethylation Bioengineered 2021-12-01 [PMID: 34874218] (Chemotaxis, Rat)

Go S, Kurita H, Hatano M, et al. DNA methyltransferase- and histone deacetylase-mediated epigenetic alterations induced by low-level methylmercury exposure disrupt neuronal development Archives of toxicology 2021-01-16 [PMID: 33454822]

Huang Z, Yu J, Cui W, et al. The chromosomal protein SMCHD1 regulates DNA methylation and the 2c-like state of embryonic stem cells by antagonizing TET proteins Science Advances 2021-01-01 [PMID: 33523915] (WB, Mouse)

Jin B, Ernst J et al. Linking DNA methyltransferases to epigenetic marks and nucleosome structure genome-wide in human tumor cells. Cell Rep 2012-11-29 [PMID: 23177624] (WB, Human)

Liu N, Zhang XL, Jiang SY et al. Neuroprotective mechanisms of DNA methyltransferase in a mouse hippocampal neuronal cell line after hypoxic preconditioning Neural Regen Res 2020-12-01 [PMID: 32594061] (WB, Mouse)

Shiah SG, Hsiao JR, Chang HJ et al. MiR-30a and miR-379 modulate retinoic acid pathway by targeting DNA methyltransferase 3B in oral cancer J. Biomed. Sci. 2020-04-02 [PMID: 32238162] (WB, Human)

More publications at http://www.novusbio.com/NB300-516

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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-85815PEP	DNMT3B Recombinant Protein Antigen

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