Product Datasheet

DNMT3A Antibody (64B1446) - BSA Free
NB120-13888

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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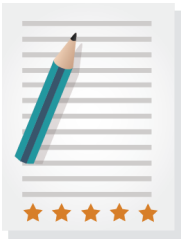
Updated 10/23/2024 v.20.1



NB120-13888

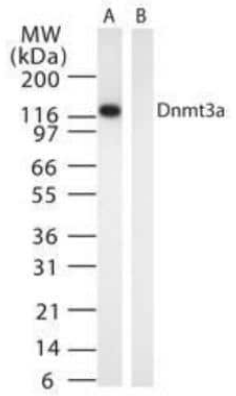
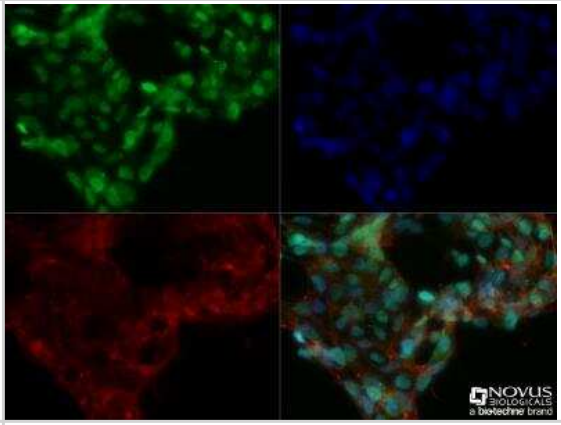
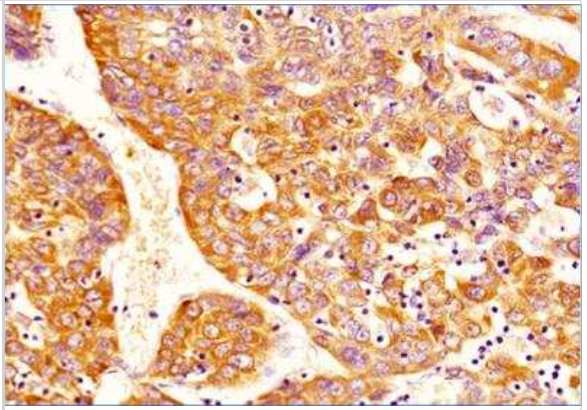
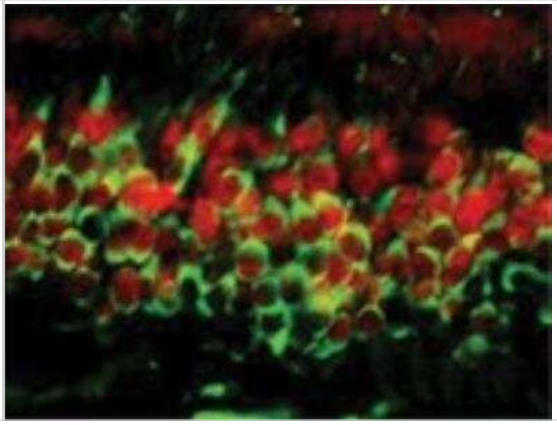
DNMT3A Antibody (64B1446) - BSA Free

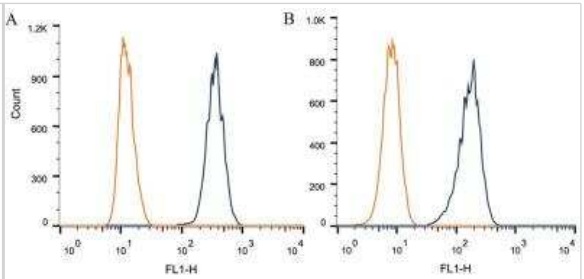
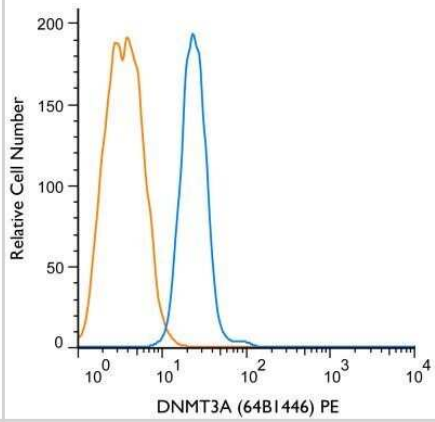
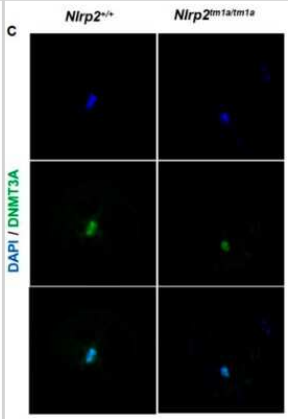
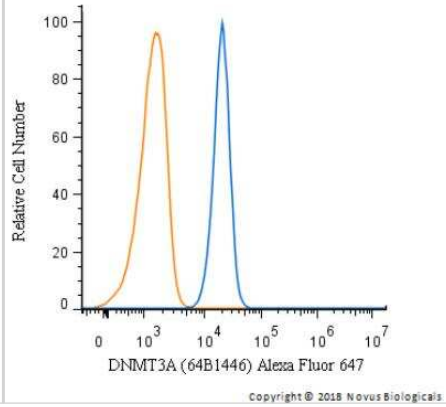
Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	64B1446
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS

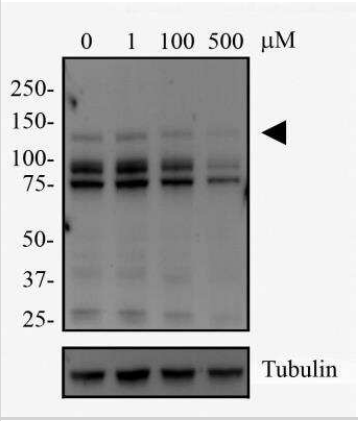
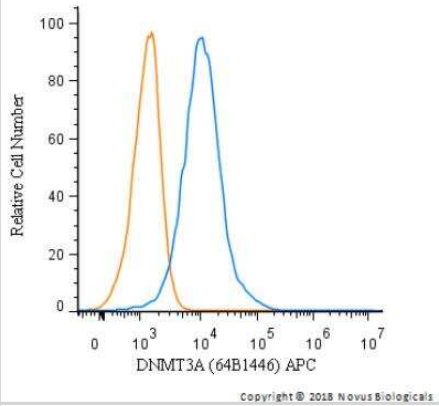
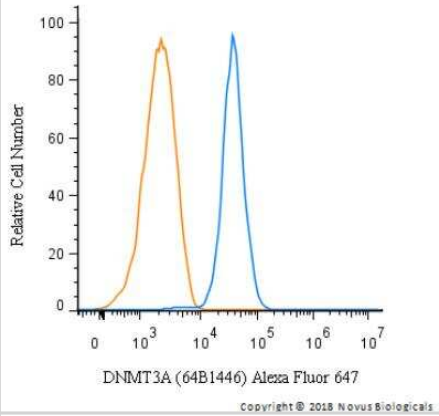
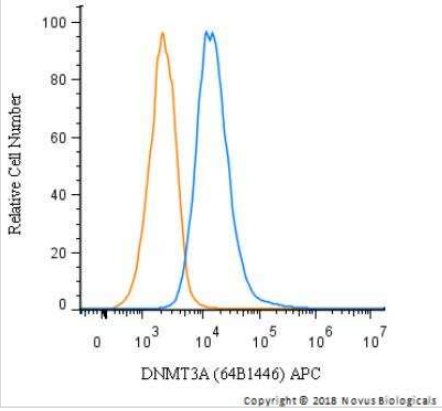
Product Description	
Host	Mouse
Gene ID	1788
Gene Symbol	DNMT3A
Species	Human, Mouse, Rat
Reactivity Notes	Use in Rat reported in scientific literature (PMID:34874218) .
Immunogen	This DNMT3A Antibody (64B1446) was raised against bacteria expressed recombinant mouse Dnmt3a. The epitope was found to lie near the C-terminus (a.a. 705-908), see Chen et (2002) for details.

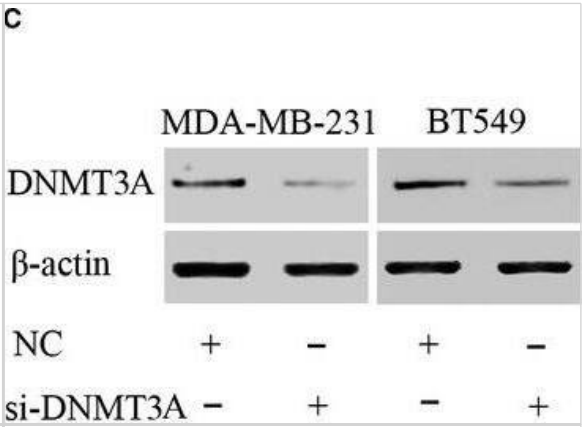
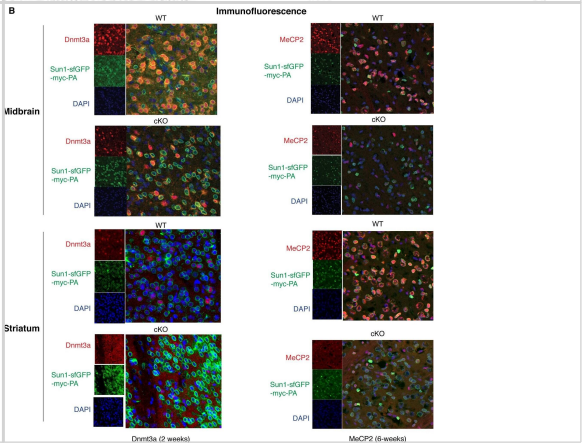
Product Application Details	
Applications	Western Blot, Chromatin Immunoprecipitation, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation (ChIP), CyTOF-ready, Immunohistochemistry Whole-Mount, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot, Chromatin Immunoprecipitation reported in scientific literature (PMID 24623306), Flow Cytometry 1 ug per million cells, Immunohistochemistry reported in multiple pieces of scientific literature, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 5 ug/ml. Use reported in scientific literature (PMID 22134929), Immunohistochemistry-Frozen reported in scientific literature (PMID 22134929), Immunohistochemistry Whole-Mount reported in scientific literature (PMID 26507142), Chromatin Immunoprecipitation (ChIP), CyTOF-ready, Knockout Validated, Knockdown Validated Validated for Knockdown from CiteAb
Application Notes	Western Blot: Detects a band of approximately 120 kDa (predicted molecular weight: 102 kDa). Staining of formalin-fixed tissues is enhanced by boiling tissue sections in 10 mM sodium citrate buffer, pH 6.0 for 10-20 min followed by cooling at RT for 20 min.

Images

Western Blot: DNMT3A Antibody (64B1446) [NB120-13888] - Analysis of (A) Dnmt3a transfected 293 cell lysate and (B) untransfected 293 cell lysate using Dnmt3a antibody at 1 ug/mL.	
Immunocytochemistry/Immunofluorescence: DNMT3A Antibody (64B1446) [NB120-13888] - Ntera2 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton-X100. The cells were incubated with anti-DNMT3A (68B1446) [NB120-13888] at a 1:200 dilution overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Immunohistochemistry-Paraffin: DNMT3A Antibody (64B1446) [NB120-13888] - Detection of DNMT3A on human hepatocellular carcinoma tissue section (NBP2-30221) using 1:100 dilution of DNMT3A antibody (clone 64B1446). The antibody generated a specific cytoplasmic staining in all the cancer cells while some of the cells depicted nuclear staining also.	
Immunocytochemistry/Immunofluorescence: DNMT3A Antibody (64B1446) [NB120-13888] - Expression of Dnmt3a in the nuclei of post-mitotic neurons in the olfactory epithelium (OE). DNMT3a (red) is co-expressed with neuron-specific tubulin (green) throughout the development of the olfactory epithelium. Data courtesy of A. Jane Roskams, University of British Columbia.	

Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - Intracellular flow cytometric staining of 1 x 10^6 CHO (A) and HEK-293 (B) cells using Dnmt3a antibody (dark blue). Isotype control shown in orange. An antibody concentration of 1 ug/1x10^6 cells was used.	
Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - Using the PE direct conjugate, an intracellular stain was performed on NTERA-2 cells with DNMT3A (64B1446) NB120-13888PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to phycoerythrin.	
Immunocytochemistry/Immunofluorescence: DNMT3A Antibody (64B1446) [NB120-13888] - DNMT1 reveals a SCMC-like cortical localization with aberrant localization in Nlrp2tm1a/tm1a derived oocytes. Whole mount immunofluorescence for DNMT3A in unfertilized control oocytes reveals a characteristic metaphase associated localization and no difference is noted in oocytes derived from Nlrp2tm1a/tm1adams. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/srep44667), licensed under a CC-BY license.	
Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - An intracellular stain was performed on Jurkat cells with DNMT3A (64B1446) NB120-13888AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.	

Western Blot: DNMT3A Antibody (64B1446) [NB120-13888] - NTERA-2 cells were treated with Zebularine as indicated for 24 hours. Cell lysates were prepared and separated on a 7.5% gel by SDS-PAGE. Protein was transferred to PVDF membrane and blocked in 5% non-fat milk. The membrane was probed with 2 ug/mL anti-Dnmt3a in 1% milk, and detected with an anti-mouse HRP secondary antibody using chemiluminescence. Note the decrease in Dnmt3a expression upon treatment with 500 uM Zebularine (arrowhead). Additional bands at 90 and 75 kDa can also be detected with this antibody and may represent alternative splice variants. Tubulin is shown as a loading control.	
Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - An intracellular stain was performed on HepG2 cells with DNMT3A (64B1446) NB120-13888APC (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to allophycocyanin (APC).	
Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - An intracellular stain was performed on HepG2 cells with DNMT3A (64B1446) NB120-13888AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.	
Flow Cytometry: DNMT3A Antibody (64B1446) [NB120-13888] - An intracellular stain was performed on HeLa cells with DNMT3A (64B1446) NB120-13888APC (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to allophycocyanin (APC).	

Western Blot: DNMT3A Antibody (64B1446) - BSA Free [NB120-13888] - DNMT3A knockdown increases miR□200b expression via promoter demethylation. Western blot assay of DNMT3A expression in MDA□MB□231 and BT549 cells after transfection with DNMT3A siRNA (si□DNMT3A) or negative control (NC). Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/30324719/) licensed under a CC-BY license.	
Flow Cytometry: DNMT3A Antibody (64B1446) - BSA Free [NB120-13888] - Protein levels of Dnmt3a & MeCP2 are reduced in inhibitory neurons of conditional knockout mice.(A) Western blot of half brain hemisphere from Dnmt3a or Mecp2 cKO mice demonstrating loss of each protein. (B) Immunofluorescence (IF) images of WT, Dnmt3a cKO or Mecp2 cKO mice probing for Dnmt3a or MeCP2 (red), the Sun1-sfGFP-myc-PA fusion protein that marks the nuclear envelope & is dependent on Cre expression (green), & DAPI to mark genomic DNA (blue). n = 3 mice per genotype (western), n = 3 mice (IF) representative images for two brain regions shown. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32159514), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Kong X, Chen J, Xie W, Brown SM et Al. Defining UHRF1 Domains that Support Maintenance of Human Colon Cancer DNA Methylation and Oncogenic Properties Cancer Cell 2019-04-09 [PMID: 30956060]

Masaki Yagi, Satoshi Kishigami, Akito Tanaka, Katsunori Semi, Eiji Mizutani, Sayaka Wakayama, Teruhiko Wakayama, Takuya Yamamoto, Yasuhiro Yamada Derivation of ground-state female ES cells maintaining gamete-derived DNA methylation. Nature 2017-12-14 [PMID: 28746308]

Nguyet-Minh Hoang, Yunxia Liu, Paul D. Bates, Alexa R. Heaton, Angelica F. Lopez, Peng Liu, Fen Zhu, Ruoyu Chen, Apoorv Kondapelli, Xiyu Zhang, Paul E. Selberg, Vu N. Ngo, Melissa C. Skala, Christian M. Capitini, Lixin Rui Targeting DNMT3A-mediated oxidative phosphorylation to overcome ibrutinib resistance in mantle cell lymphoma Cell Reports Medicine 2024-03-29 [PMID: 38554704]

Lisa-Marie Brenner, Florian Meyer, Haiqian Yang, Anja R Köhler, Pavel Bashtrykov, Ming Guo, Albert Jeltsch, Cristiana Lungu, Monilola A Olayioye Repeat DNA methylation is modulated by adherens junction signaling. Communications biology 2024-03-11 [PMID: 38454140]

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)

Kubo N, Uehara R, Uemura S et al. Combined and differential roles of ADD domains of DNMT3A and DNMT3L on DNA methylation landscapes in mouse germ cells bioRxiv 2023-09-08 (ICC/IF, Mouse)

Ren G, Li H, Hong D et al. LINC00955 suppresses colorectal cancer growth by acting as a molecular scaffold of TRIM25 and Sp1 to Inhibit DNMT3B-mediated methylation of the PHIP promoter BMC cancer 2023-09-23 [PMID: 37742010] (WB, Human)

Narabayashi H, Koma C, Nakata K et al. Gut microbiota-dependent adaptor molecule recruits DNA methyltransferase to the TLR4 gene in colonic epithelial cells to suppress inflammatory reactions Frontiers in molecular biosciences 2022-10-21 [PMID: 36339704] (ChIP, Mouse)

Yu V, Yong F, Chen K et al. Establishment of beta cell heterogeneity via differential CpG methylation atNnat bioRxiv 2023-02-05 (IHC, Mouse)

da C. Fernandes C, da Silva R, de Almeida G et al. Epigenetic Differences Arise in Endothelial Cells Responding to Cobalt-Chromium Journal of Functional Biomaterials 2023-02-26 [PMID: 36976051] (WB, Human)

Fernandes C, da Silva R, Wood P et al. Titanium-Enriched Medium Promotes Environment-Induced Epigenetic Machinery Changes in Human Endothelial Cells Journal of Functional Biomaterials 2023-02-27 [PMID: 36976055]

Ni Q, Sun J, Wang Y et al. mTORC1 is required for epigenetic silencing during beta-cell functional maturation Molecular metabolism 2022-08-05 [PMID: 35940555] (WB, IF/IHC, Mouse)

Details:
IHC- 1:100 dilution used (supplemental Fig. 1), WB - 1:1000 dilution used

More publications at http://www.novusbio.com/NB120-13888

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Products Related to NB120-13888

NBL1-09970	DNMT3A Overexpression Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

Limitations
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