Product Datasheet

MAT2A Antibody - BSA Free
NB110-94158

Unit Size: 0.1 ml

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

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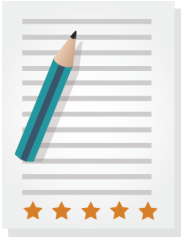
Updated 9/9/2025 v.20.1



NB110-94158

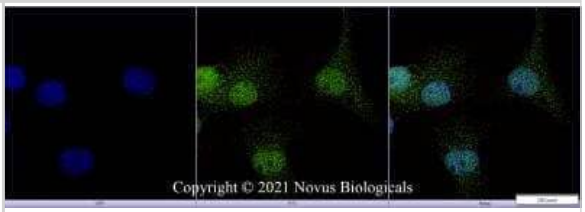
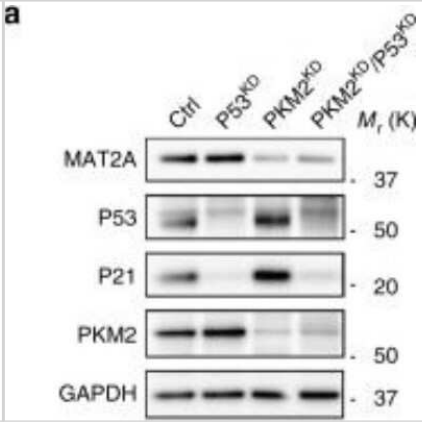
MAT2A Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	43 kDa

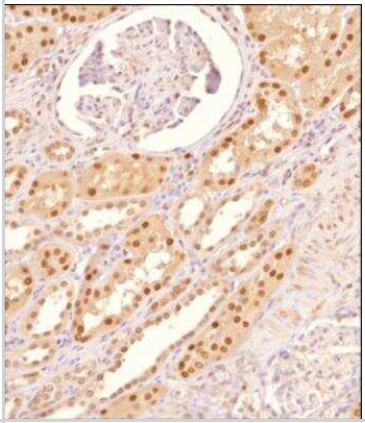
Product Description	
Description	Novus Biologicals Rabbit MAT2A Antibody - BSA Free (NB110-94158) is a polyclonal antibody validated for use in IHC, WB, ICC/IF, Simple Western and IP. Anti-MAT2A Antibody: Cited in 16 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	4144
Gene Symbol	MAT2A
Species	Human, Mouse, Rat, Porcine, Bovine, Primate
Reactivity Notes	Porcine reactivity reported in scientific literature (PMID: 29133573).
Immunogen	Synthetic peptide made to an N-terminal portion of human MAT2A (within residues 1-100). [Swiss-Prot# P31153]

Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation
Recommended Dilutions	Western Blot 1.0 ug/ml, Simple Western, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1:2000, Immunoprecipitation reported in scientific literature (PMID 25294683), Immunohistochemistry-Paraffin 1:200
Application Notes	This MAT2A antibody is useful for Western blot, where a band is seen at ~43 kDa, and Immunocytochemistry/Immunofluorescence where cytoplasmic staining is observed in HepG2 cells.

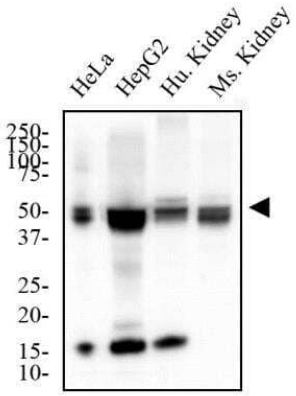
Images

Immunocytochemistry/Immunofluorescence: MAT2A Antibody [NB110-94158] - HepG2 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-MAT2A Antibody (NB110-94158) at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.	
Immunocytochemistry/Immunofluorescence: MAT2A Antibody [NB110-94158] - NIH3T3 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-MAT2A Antibody (NB110-94158) at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.	
Immunocytochemistry/Immunofluorescence: MAT2A Antibody [NB110-94158] - PC12 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-MAT2A Antibody (NB110-94158) at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.	
Western Blot: MAT2A Antibody [NB110-94158] - Loss of PKM2 impairs methylation capacity, reduces DNA methylation and leads to the expression of endogenous retroviral elements. Western blot analysis of MAT2A, P53, P21 and PKM2 in control, P53KD, PKM2KD and PKM2KD/P53KD ECs. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/s41467-018-06406-8), licensed under a CC-BY license.	

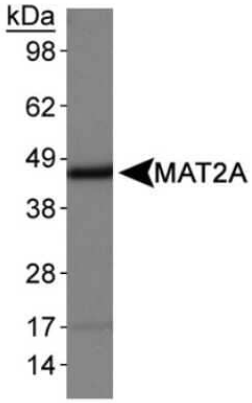
Immunohistochemistry-Paraffin: MAT2A Antibody [NB110-94158] - Analysis of a FFPE tissue section of human kidney using 1:200 dilution of MAT2A antibody (NB110-94158). The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



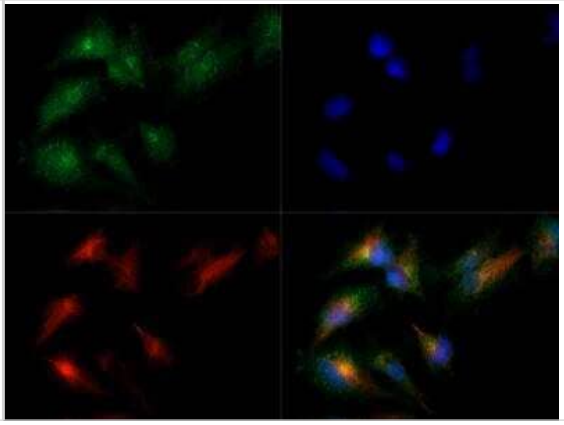
Western Blot: MAT2A Antibody [NB110-94158] - Total protein from HeLa and HepG2 cells and Human and Mouse Kidney was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/mL anti-MAT2A in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.

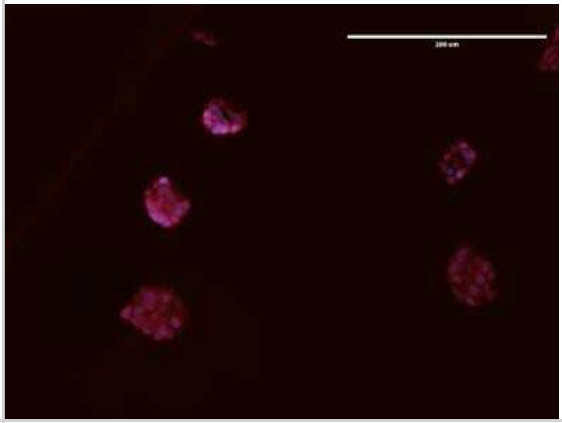
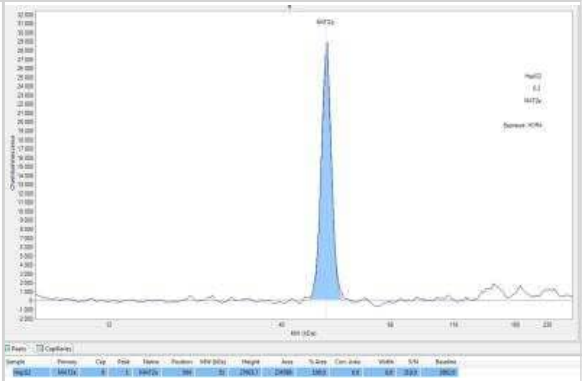


Western Blot: MAT2A Antibody [NB110-94158] - Detection of MAT2A in HepG2 whole cell lysates.



Immunocytochemistry/Immunofluorescence: MAT2A Antibody [NB110-94158] - MAT2A antibody was tested in HepG2 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



Immunocytochemistry/Immunofluorescence: MAT2A Antibody [NB110-94158] - Mouse embryonic stem cells (mESCs) were fixed with paraformaldehyde, permeabilized with Triton, blocked with 4% BSA and 1% normal goat serum, and incubated with 1:200 dilution of MAT2A antibody. Then, samples were stained with anti-rabbit Alexa Fluor 594 (1:1000) and NucBlue. ICC/IF image submitted by a verified customer review.	
Simple Western: MAT2A Antibody [NB110-94158] - Human HepG2 cell lysate (0.2 ug/uL total protein). Antibody at 1:250. Simple Western image submitted by a verified customer review.	

Publications

Acosta CH, Clemons GA, Citadin CT et Al. A role for protein arginine methyltransferase 7 in repetitive and mild traumatic brain injury Neurochem Int 2024-04-03 [PMID: 37030326]

Wan X, Zeng W, Fan H et Al. MAT2B regulates the protein level of MAT2A to preserve RNA N6-methyladenosine Cell Death Dis 2024-10-01 [PMID: 39353892]

Patrick B. Ampomah, Bishuang Cai, Santosh R. Sukka, Brennan D. Gerlach, Arif Yurdagul, Xiaobo Wang, George Kuriakose, Lancia N.F. Darville, Yan Sun, Simone Sidoli, John M. Koomen, Alan R. Tall, Ira Tabas Macrophages Use Apoptotic Cell-Derived Methionine and DNMT3A During Efferocytosis to Promote Tissue Resolution Nature metabolism 2022-09-30 [PMID: 35361955]

Hoang L, Aoyama E, Hiasa M et al. Positive Regulation of S-adenosylmethionine on Chondrocytic Differentiation via Stimulation of Polyamine Production and the Gene Expression of Chondrogenic Differentiation Factors preprints.org 2023-11-08 [PMID: 38139122]

Rajabian N Metabolic Reprogramming and Stem Cell Rejuvenation for Skeletal Muscle Regeneration after Aging Thesis 2023-01-01

Yamamoto J, Inubushi S, Han Q et al. Linkage of methionine addiction, histone lysine hypermethylation and malignancy. iScience 2022-03-01 [PMID: 35434545] (WB, Human)

Yamamoto J, Inubushi S, Han Q et al. Reversion of Cancer Cells From Methionine-Addiction to Methionine Independence Results in Loss of Histone Lysine Overmethylation and Malignancy SSRN Electronic Journal 2021-12-05

LeBlanc L, Kim M, Kambhampati A Et al. beta-catenin links cell seeding density to global gene expression during mouse embryonic stem cell differentiation iScience 2021-12-01 [PMID: 34977504] (WB, Mouse)

Scarborough AM, Flaherty JN, Hunter OV et al. SAM homeostasis is regulated by CFIm-mediated splicing of MAT2A eLife 2021-05-05 [PMID: 33949310]

Secker KA, Bloechl B, Keppeler H et al. MAT2A as Key Regulator and Therapeutic Target in MLLr Leukemogenesis Cancers (Basel) 2020-05-24 [PMID: 32456310] (WB, Human)

MA Wheeler, IC Clark, EC Tjon, Z Li, SEJ Zandee, CP Couturier, BR Watson, G Scalisi, S Alkwai, V Rothhammer, A Rotem, JA Heyman, S Thaploo, LM Sanmarco, J Ragoussis, DA Weitz, K Petrecca, JR Moffitt, B Becher, JP Antel, A Prat, FJ Quintana MAFG-driven astrocytes promote CNS inflammation Nature, 2020-02-12;0(0):. 2020-02-12 [PMID: 32051591] (Western Blot, Mouse)

Roy DG, Chen J, Mamane V et al. Methionine Metabolism Shapes T Helper Cell Responses through Regulation of Epigenetic Reprogramming Cell Metab. 2020-02-04 [PMID: 32023446] (Mouse)

More publications at http://www.novusbio.com/NB110-94158

Procedures

Western Blot protocol for MAT2A Antibody (NB110-94158)

Western Blot Protocol

1. Perform SDS-PAGE (4-12% MOPS) on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH2O and then stain the blot using Ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% NFDM + 1% BSA in TBS + Tween, 1 hour at RT.
6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the rabbit anti-MAT2a primary antibody (NB 110-94158) in blocking buffer and incubate 1 hour at room temperature.
8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions (Pierce ECL).

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

Immunocytochemistry/Immunofluorescence protocol for MAT2A Antibody (NB110-94158)

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

Immunohistochemistry-Paraffin Protocol for MAT2A Antibody (NB110-94158)
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer all the time).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

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Products Related to NB110-94158

NBL1-12910	MAT2A Overexpression Lysate
NB110-94158PEP	MAT2A Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

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