

ATP1A3 Monoclonal Antibody (XVIF9-G10)

Product Details	
Size	100 µg
Species Reactivity	Bovine, Dog, Guinea pig, Human, Mouse, Non-human primate, Sheep, Rabbit, Rat
Published Species	Rat, Pig, Amphibian, Shark, Bovine, Mouse, Human
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	XVIF9-G10
Conjugate	Unconjugated
Immunogen	Canine cardiac microsomes.
Form	Liquid
Concentration	1 mg/mL
Purification	Protein A
Storage buffer	0.02M potassium phosphate, pH 7.2, with 0.15M NaCl
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2274447

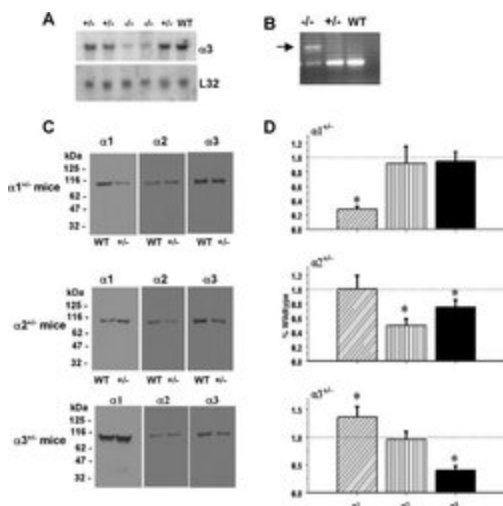
Applications	Tested Dilution	Publications
Western Blot (WB)	1 µg/mL	57 Publications
Immunohistochemistry (IHC)	-	15 Publications
Immunohistochemistry (Frozen) (IHC (F))	3 µg/mL	1 Publication
Immunocytochemistry (ICC/IF)	5 µg/mL	11 Publications
Flow Cytometry (Flow)	1 µg / 10 ⁶ cells	-
Miscellaneous PubMed (Misc)	-	2 Publications

Product Specific Information

MA3-915 detects sodium/potassium ATPase from human, monkey, bovine, sheep, canine, rabbit, guinea pig, mouse and rat tissue. This antibody is specific for the alpha-3 subunit.

MA3-915 has been successfully used in Western blot and immunohistochemical procedures. By Western blot, this antibody detects an ~110 kDa protein representing the alpha-3 subunit of the sodium/potassium ATPase from canine skeletal muscle extract. Immunohistochemical staining of sodium/potassium ATPase in rat retina with MA3-915 yields a pattern consistent with plasma membrane localization.

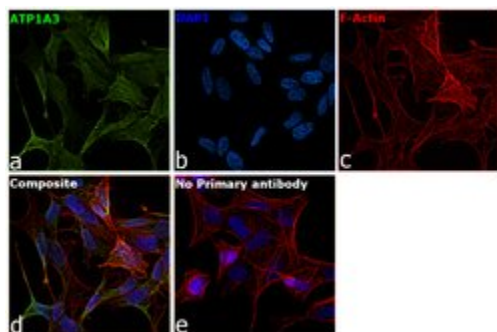
The MA3-915 antigen is canine cardiac microsomes.



ATP1A3 Antibody (MA3-915)

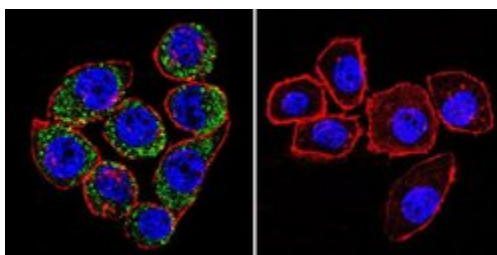
Figure 1. Open in a separate window Na,K-ATPase isoforms are reduced in gene-targeted mice. A , Reduced Na,K-ATPase alpha3 isoform mRNA expression in embryonic E18.5 d brains from WT, heterozygous (+/-), and homozygous (-/-) alpha3 knock-out mice by Northern blot. L32 was used as a loading control. Twenty micrograms of total RNA were loaded per lane. B , RT-PCR analysis of RNA from WT, heterozygous (+/-), and homozygous (-/-) alpha3 knock-out mice shows larger RNA transcript in -/- (arrow) but not +/- or WT mice. C , Western blot analysis of Na, K-ATPase isoforms in whole tissue extracts from hippocampus of adult male alpha1 +/- , alpha2 +/- , and alpha3 +/- mice. Total protein loaded per lane was as follows: 10, 0.5, and 1 mug for alpha1, alpha2, and alpha3 isoform expression, respectively. D , Semiquantitation by densitometry on whole tissue extracts from adult hippocampus of alpha1 +/- , alpha2 +/- , and alpha3 +/- mice shows reduction in alpha1, alpha2, and alpha3 isoforms, respectively. * p < 0.05 versus WT. Knockout validation info.

Product Images For ATP1A3 Monoclonal Antibody (XVIF9-G10)



ATP1A3 Antibody (MA3-915) in ICC/IF

Immunofluorescence analysis of ATP1A3 was performed using SH-SY5Y cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 45 minutes at room temperature. The cells were labeled with ATP1A3 Monoclonal Antibody (XVIF9-G10) (Product # MA3-915) at 5 µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Goat anti-Mouse IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor Plus 488 (Product # A32723), (1:2000), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b:Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing membrane localization. Panel e represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



ATP1A3 Antibody (MA3-915) in ICC/IF

Immunofluorescent analysis of Sodium/Potassium ATPase alpha-3 using Sodium /Potassium ATPase alpha-3 Monoclonal antibody (XVIF9-G10) (Product # MA3-915) shows staining in U251 glioma cells. Sodium/Potassium ATPase alpha-3 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Sodium /Potassium ATPase alpha-3 (Product # MA3-915) at a dilution of 1:20 over night at 4 °C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody (Product # 35552 for GAR, Product # 35503 for GAM). Images were taken at 60X magnification.

View more figures on thermofisher.com

Western Blot (57)

Frontiers in synaptic neuroscience

Disposition of Proteins and Lipids in Synaptic Membrane Compartments Is Altered in Q175/Q7 Huntington's Disease Mouse Striatum.

"Published figure using ATP1A3 monoclonal antibody (Product # MA3-915) in Western Blot"

Authors: Iuliano M, Seeley C, Sapp E, Jones EL, Martin C, Li X, DiFiglia M, Kegel-Gleason KB

Species
Not Applicable

Dilution
Not Cited

Year
2021

Nature communications

Astrocyte deletion of 2-Na/K ATPase triggers episodic motor paralysis in mice via a metabolic pathway.

"MA3-915 was used in Western Blotting to show episodic paralysis can be induced in mice with ion pump 2-Na/K ATPase deletion."

Authors: Smith SE, Chen X, Brier LM, Bumstead JR, Rensing NR, Ringel AE, Shin H, Oldenburg A, Crowley JR, Bice AR, Dikranian K, Ippolito JE, Haigis MC, Papouin T, Zhao G, Wong M, Culver JP, Bonni A

Species
Mouse

Dilution
1:5000

Year
2020

[View more WB references on thermofisher.com](#)

Immunohistochemistry (15)

Cell death & disease

An interaction between PRRT2 and Na⁺/K⁺ ATPase contributes to the control of neuronal excitability.

"MA3-915 was used in Immunohistochemistry to demonstrate that PRRT2 is a physiological modulator of NKA function and suggest that an impaired NKA activity contributes to the hyperexcitability phenotype caused by PRRT2 deficiency."

Authors: Sterini B, Romei A, Parodi C, Aprile D, Oneto M, Aperia A, Valente P, Valtorta F, Fassio A, Baldelli P, Benfenati F, Corradi A

Species
Mouse

Dilution
1:300

Year
2021

Biophysical journal

Differential Membrane Binding and Seeding of Distinct -Synuclein Fibrillar Polymorphs.

"MA3-915 was used in Immunohistochemistry-immunofluorescence to establish a molecular basis for observing."

Authors: Shrivastava AN, Bousset L, Renner M, Redeker V, Savistchenko J, Triller A, Melki R

Species
Mouse

Dilution
1:800

Year
2020

[View more IHC references on thermofisher.com](#)

More applications with references on thermofisher.com

IHC (F) (1)

ICC/IF (11)

Misc (2)

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.