


Product datasheet

Anti-ATP1A3 antibody [XVIF9-G10] ab2826

★★★★★ [5 Abreviews](#) [13 References](#) [8 Images](#)

Overview

Product name	Anti-ATP1A3 antibody [XVIF9-G10]
Description	Mouse monoclonal [XVIF9-G10] to ATP1A3
Host species	Mouse
Specificity	The immunogen used for this product shares 89% homology with ATP1A2. Cross-reactivity with this protein has not been confirmed experimentally
Tested applications	Suitable for: WB, Flow Cyt, ICC/IF, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Sheep, Rabbit, Guinea pig, Cow, Dog, Pig, Non human primates, Amphibian, Shark 
Immunogen	Full length protein corresponding to Dog ATP1A3. Canine cardiac microsomes.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.42% Potassium phosphate, 0.88% Sodium chloride
Purity	Protein A purified
Clonality	Monoclonal
Clone number	XVIF9-G10
Isotype	IgG1

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab2826 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
WB	★★★★★ (4)	Use a concentration of 1 µg/ml. Predicted molecular weight: 111 kDa.
Flow Cyt		Use 1µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF		Use a concentration of 5 µg/ml.
IHC-P		1/50 - 1/200. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function

This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium ions, providing the energy for active transport of various nutrients.

Involvement in disease

Dystonia 12
Alternating hemiplegia of childhood 2
Cerebellar ataxia, areflexia, pes cavus, optic atrophy, and sensorineural hearing loss

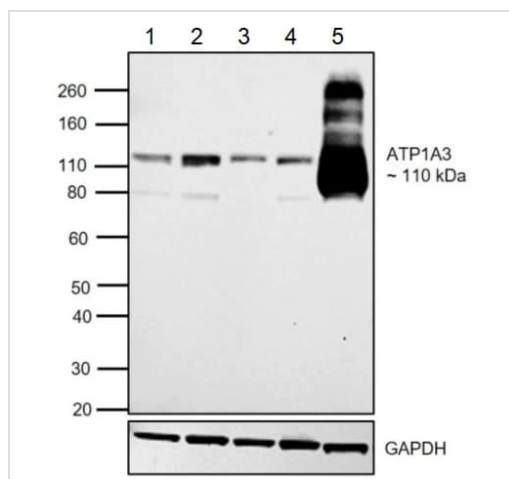
Sequence similarities

Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIC subfamily.

Cellular localization

Cell membrane.

Images



Western blot - Anti-ATP1A3 antibody [XVIF9-G10] (ab2826)

All lanes : Anti-ATP1A3 antibody [XVIF9-G10] (ab2826) at 1 µg/ml

Lane 1 : SH-SY5Y (Human neuroblastoma cell line from bone marrow) whole cell lysate

Lane 2 : IMR-32 (Human brain neuroblast cell line) whole cell lysate

Lane 3 : SK-OV-3 (Human ovarian cancer cell line) whole cell lysate

Lane 4 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 5 : Mouse brain tissue lysate

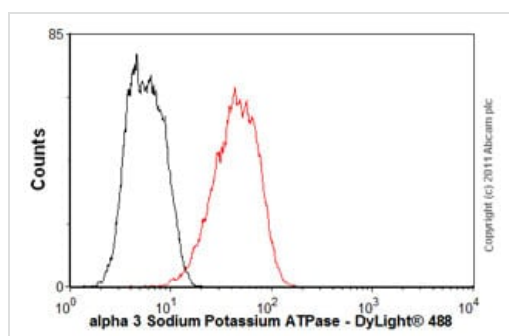
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP at 1/4000 dilution

Predicted band size: 111 kDa

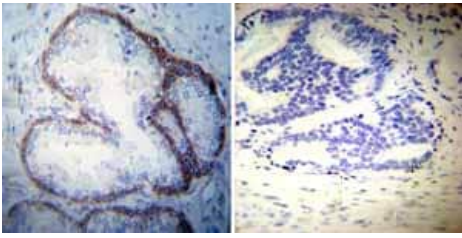
Samples were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel. Resolved proteins were then transferred onto a Nitrocellulose membrane by iBlot® 2 Dry Blotting System. Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit.



Flow Cytometry - Anti-ATP1A3 antibody [XVIF9-G10] (ab2826)

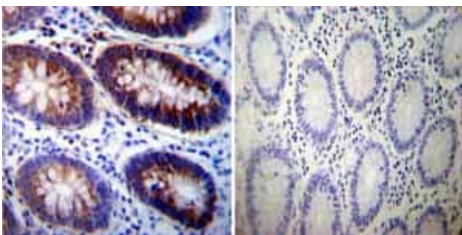
Overlay histogram showing SH-SY5Y cells stained with ab2826 (red line). The cells were fixed with 4% paraformaldehyde and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab2826, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed.

Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.



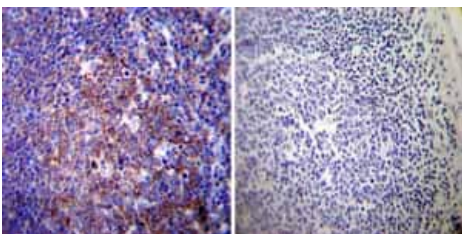
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP1A3 antibody [XVIF9-G10] (ab2826)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human prostate carcinoma tissues. To expose target proteins heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at 1/50 dilution with ab2826 or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP1A3 antibody [XVIF9-G10] (ab2826)

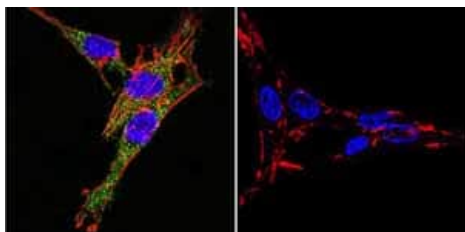
Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human colon tissue tissues. To expose target proteins heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at 1/200 dilution with ab2826 or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP1A3 antibody [XVIF9-G10] (ab2826)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human tonsil tissue tissues. To expose target proteins heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at 1/200 dilution with ab2826 or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-

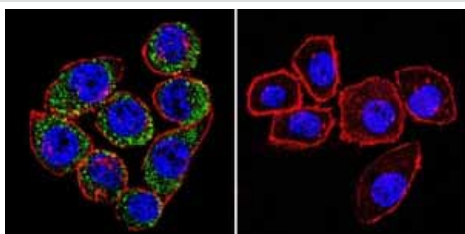
HRP followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunocytochemistry/ Immunofluorescence - Anti-ATP1A3 antibody [XV/IF9-G10] (ab2826)

Immunofluorescent analysis of Sodium/Potassium ATPase alpha-3 using ab2826 shows staining in C6 glioma cells.

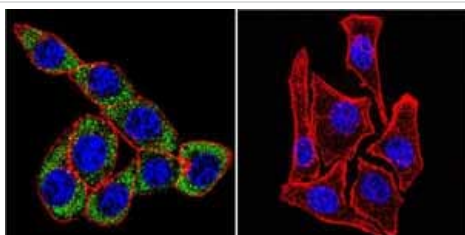
Sodium/Potassium ATPase alpha-3 staining (green) F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Sodium/Potassium ATPase alpha-3 ab2826 at a dilution of 1:20 over night at 4 °C washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-ATP1A3 antibody [XV/IF9-G10] (ab2826)

Immunofluorescent analysis of Sodium/Potassium ATPase alpha-3 using ab2826 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 ab2826 at a dilution of 1:20 over night at 4 °C washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-ATP1A3 antibody [XV/IF9-G10] (ab2826)

Immunofluorescent analysis of Sodium/Potassium ATPase alpha-3 using ab2826 shows staining in HeLa 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 ab2826 at a dilution of 1:20 over night at 4°C washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.

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