


## Product datasheet

# Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] ab7671

★★★★★ [41 Abreviews](#) [331 References](#) [7 Images](#)

### Overview

<b>Product name</b>	Anti-alpha 1 Sodium Potassium ATPase antibody [464.6]
<b>Description</b>	Mouse monoclonal [464.6] to alpha 1 Sodium Potassium ATPase
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, IHC-P, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Rabbit, Human, Pig <b>Predicted to work with:</b> Sheep, Dog, Xenopus laevis, Monkey 
<b>Immunogen</b>	Full length native protein (purified). This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	This antibody gave a positive signal in the following tissue lysates: human kidney, rabbit heart, human brain and human brain membrane. This antibody also gave a positive signal in Porcine proximal tubule lysate.
<b>General notes</b>	<p>This antibody clone [464.6] is manufactured by Abcam.</p> <p>If you require this antibody in a different buffer formulation or a different conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find further information <a href="#">here</a>.</p> <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&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: PBS, 6.97% L-Arginine</p>

	Some batches contain 6.97% L-Arginine as a stabilizing agent. For lot-specific buffer information, please contact our Scientific Support team.
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	464.6
<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

## Applications

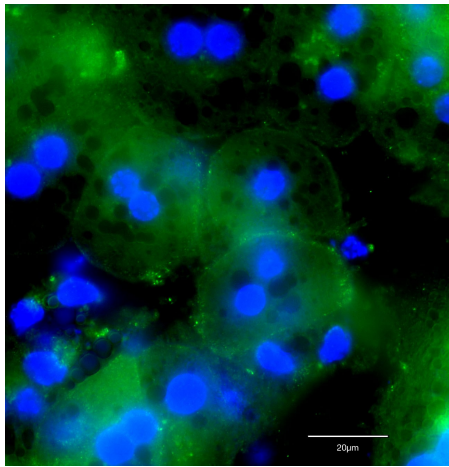
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab7671 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (10)	Use a concentration of 1 - 10 µg/ml. We recommend Methanol fixation and <b><u>Goat Anti-Mouse IgG H&amp;L (Alexa Fluor® 555) preadsorbed (ab150118) secondary antibody.</u></b>
IHC-P	★★★★★ (5)	Use a concentration of 5 µg/ml.
WB	★★★★★ (23)	Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 112 kDa. Abcam recommends using 5% BSA as the blocking agent.

## Target

<b>Function</b>	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.
<b>Sequence similarities</b>	Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIC subfamily.
<b>Post-translational modifications</b>	Phosphorylation on Tyr-10 modulates pumping activity.
<b>Cellular localization</b>	Cell membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

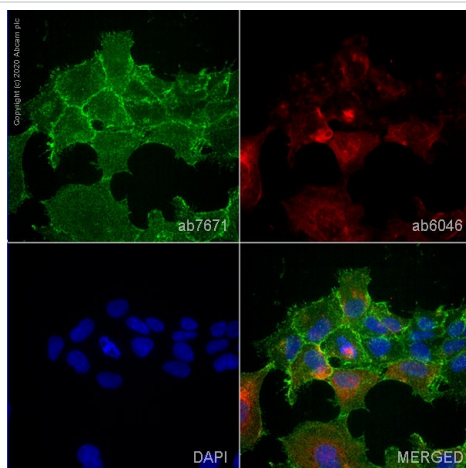
## Images



Immunocytochemistry - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)

This image is courtesy of an Abreview submitted by Armen Petrosyan

Immunocytochemistry analysis of formaldehyde-fixed mouse hepatocytes permeabilized with 0.2% Triton X-100 in PBS staining with ab7671 at 1/50 dilution. Secondary antibody was Alexa Fluor™ 488 Donkey anti-Ms. Samples were incubated with the primary antibody with 1% donkey serum in PBST for 3 hours at 22°C. Blocking was done using 1% donkey serum in PBST for 1 hour at 22°C.

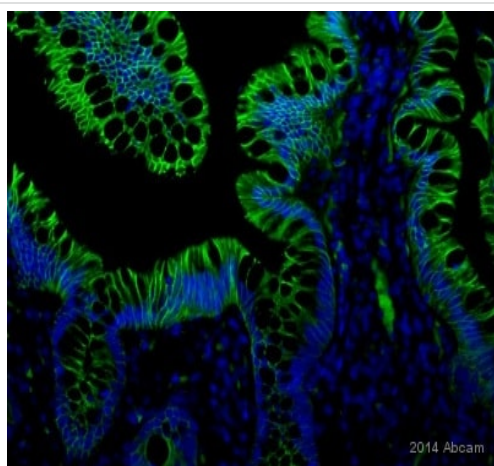


Immunocytochemistry/ Immunofluorescence - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)

ab7671 staining alpha 1 Sodium Potassium ATPase in Hek293 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab7671 at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a single confocal section is shown.

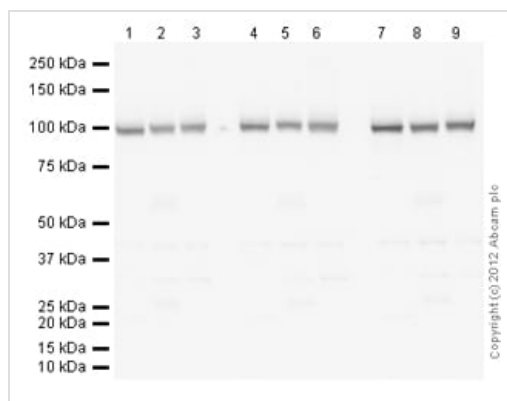


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Sodium

Potassium ATPase antibody [464.6] (ab7671)

This image is courtesy of an Abreview submitted by Anne Sailer

ab7671 staining alpha 1 Sodium Potassium ATPase in human formaldehyde tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 5% BSA for 12 hours at 4°C; antigen retrieval was by heat mediation in a buffer pH 9. Samples were incubated with primary antibody (5µg/ml in 5% BSA) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated donkey anti-mouse IgG polyclonal (1/1000) was used as the secondary antibody.



Western blot - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)

**Lanes 1-3 :** Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671) at 1 µg/ml

**Lanes 4-6 :** Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671) at 2 µg/ml

**Lanes 7-9 :** Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671) at 5 µg/ml

**Lanes 1 & 4 & 7 :** Human brain tissue lysate - total protein ([ab29466](#))

**Lanes 2 & 5 & 8 :** Brain (Mouse) Tissue Lysate ([ab27253](#))

**Lanes 3 & 6 & 9 :** Brain (Rat) Tissue Lysate ([ab7942](#))

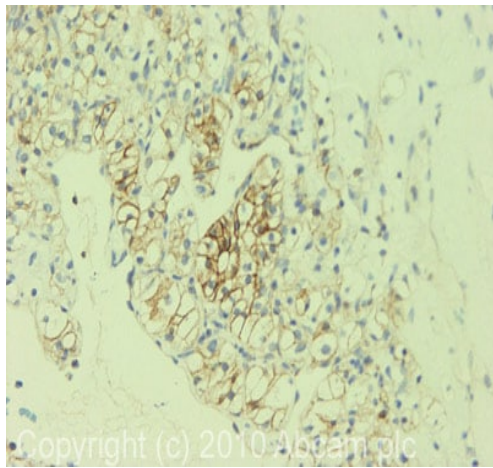
Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 112 kDa

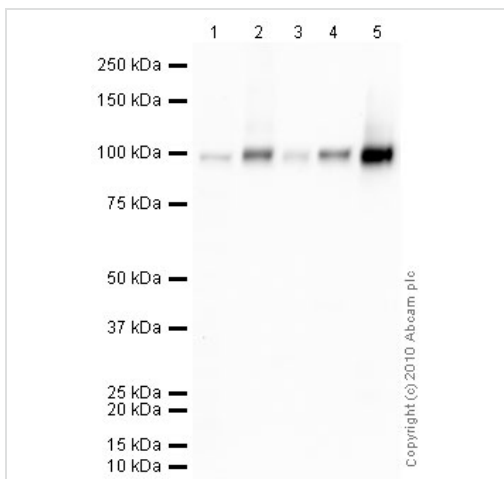
**Exposure time:** 3 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)

IHC image of Ab7671 staining in Human Kidney Carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with Ab7671, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)

**All lanes :** alpha 1 Sodium Potassium ATPase antibody [464.6] - Plasma Membrane Marker at 10 µg/ml

**Lane 1 :** HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

**Lane 2 :** Human kidney tissue lysate - total protein (**ab30203**)

**Lane 3 :** Heart (Rabbit) Whole Cell Lysate - normal tissue (**ab29072**)

**Lane 4 :** Human brain tissue lysate - total protein (**ab29466**)

**Lane 5 :** Brain (Human) Membrane Lysate - adult normal tissue

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

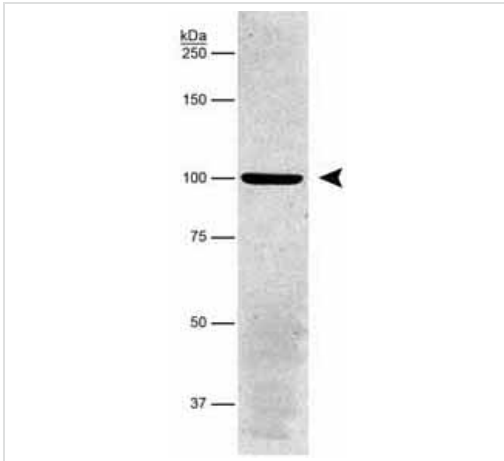
Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 112 kDa

**Observed band size:** 100 kDa

**Exposure time:** 3 minutes



Western blot - Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)  
ATPase antibody [464.6] (ab7671)

Anti-alpha 1 Sodium Potassium ATPase antibody [464.6] (ab7671)  
at 1/5000 dilution + Porcine proximal tubule lysate

**Predicted band size:** 112 kDa

Western blot analysis detecting Na, K-ATP-ase (alpha) in porcine proximal tubule protein, using Ab7671. Band is at 112 kDa.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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