

## Product datasheet

# Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2α (Chimeric) ab283345

Recombinant

10 Images

### Overview

<b>Product name</b>	Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2α (Chimeric)
<b>Description</b>	Rat monoclonal [EP1845Y] to Sodium Potassium ATPase - Rat IgG2α
<b>Host species</b>	Rat
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, Flow Cyt (Intra), ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	The details of the immunogen for this antibody are not available.
<b>Positive control</b>	WB: HeLa, HeLa prepared from 1% SDS HOT lysis method, HeLa prepared from RIPA lysis method, RAW264.7 and C6 whole lysates. IHC-P: Human colon, Human hepatocellular carcinoma, Mouse kidney, Mouse stomach and Rat kidney, Rat stomach tissues. ICC: HeLa cells. Flow Cyt: HeLa cell.
<b>General notes</b>	<p>This rat monoclonal chimeric antibody has been engineered from a RabMAb parent antibody (<a href="#">ab76020</a>). By necessity, some rabbit sequence is retained as part of the variable domain. When multiplexing with other rabbit-derived antibodies, using cross absorbed Fc-reactive secondary antibodies are recommended.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</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: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)</p>

<b>Purity</b>	Ion Exchange Chromatography
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP1845Y
<b>Isotype</b>	IgG2a

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab283345 in the following tested applications.

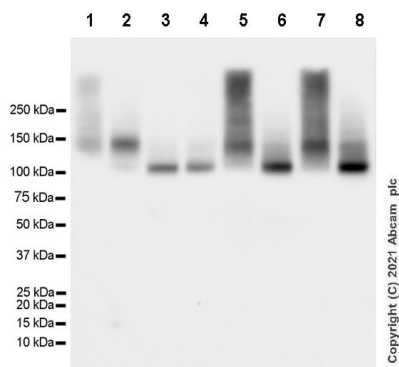
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>WB</b>		1/1000. Predicted molecular weight: 113 kDa.
<b>IHC-P</b>		1/5000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>Flow Cyt (Intra)</b>		1/100.
<b>ICC/IF</b>		1/50.

## 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



Western blot - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

**All lanes :** Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345) at 1/1000 dilution

**Lane 1 :** HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate prepared from RIPA lysis method

**Lanes 2 & 4 :** HeLa whole cell lysate prepared from 1% SDS HOT lysis method

**Lane 3 :** HeLa whole cell lysate prepared from RIPA lysis method

**Lane 5 :** RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate

**Lane 6 :** RAW264.7 whole cell lysate

**Lane 7 :** C6 (rat glial tumor glial cell), whole cell lysate

**Lane 8 :** C6 whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rat IgG (H+L), HRP) ([ab205720](#)) at 1/5000 dilution

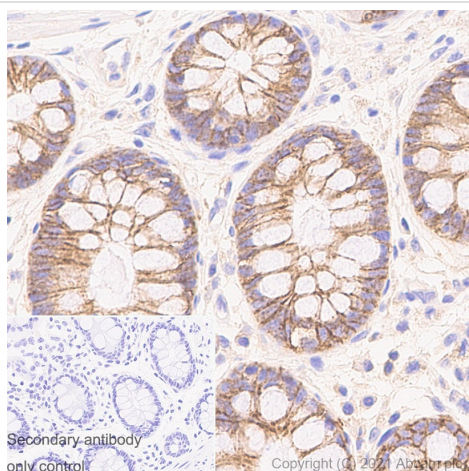
**Predicted band size:** 113 kDa

**Observed band size:** 100 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

Samples of Lanes 3, 4, 6, 8 are non-boiled as boiling may cause protein aggregates.

Exposure time: 1 second

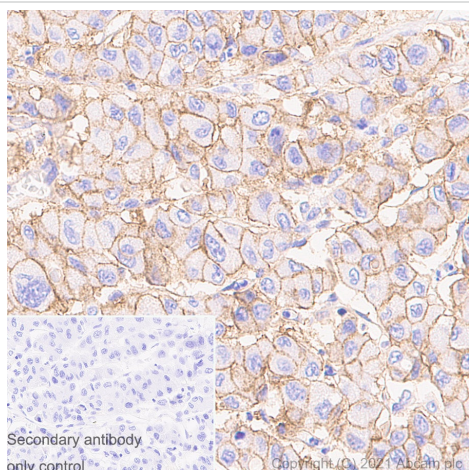


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on human colon. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody (**ab102248**) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

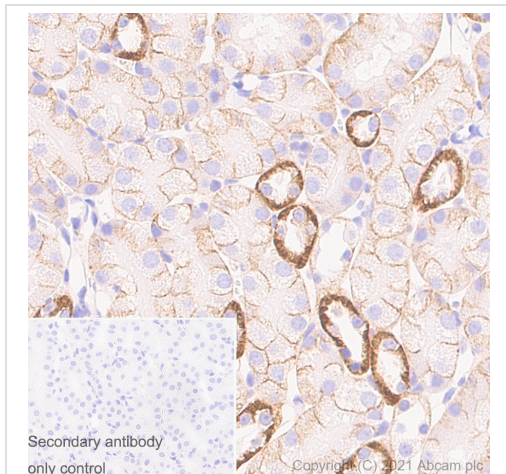


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on human hepatocellular carcinoma. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody (**ab102248**) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

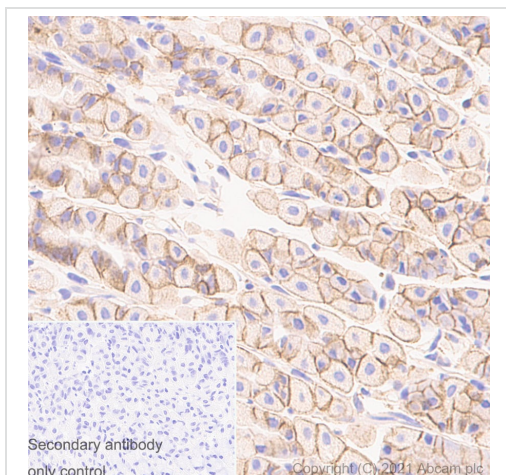


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Mainly membranous staining on mouse kidney. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody ([ab102248](#)) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



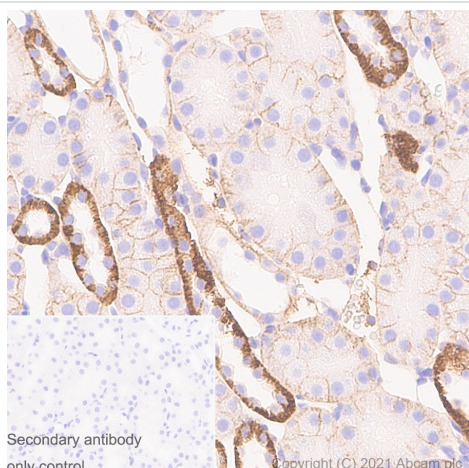
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Mouse stomach tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on mouse stomach. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody ([ab102248](#)) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



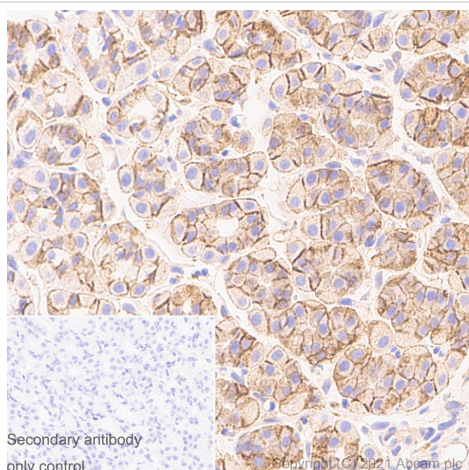


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Mainly membranous staining on rat kidney. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody (**ab102248**) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

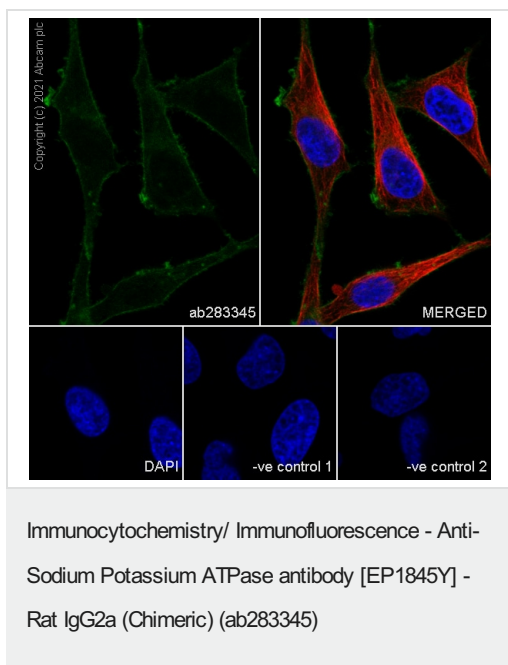


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sodium Potassium ATPase antibody [EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Sodium Potassium ATPase with ab283345 at 1/5000 (0.222 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on rat stomach. The section was incubated with ab283345 for 10 mins at room temperature and followed by rat IgG antibody (**ab102248**) for 8 mins. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

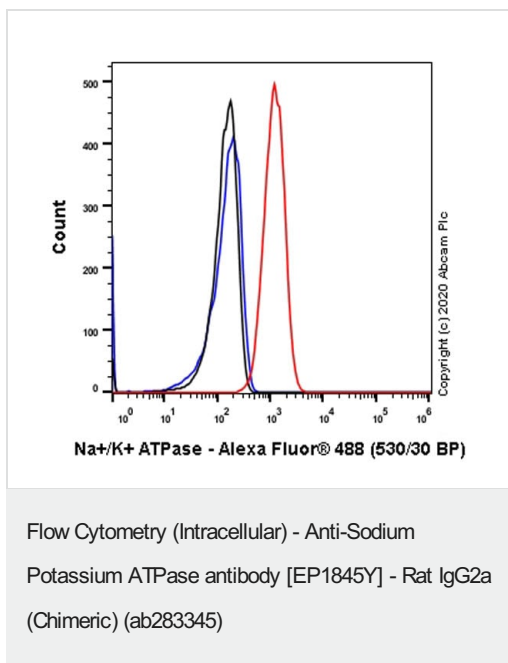
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling Sodium Potassium ATPase with ab283345 at 1/50 (22.18 ug/ml) dilution, followed by **ab150161** Goat F(ab')<sub>2</sub> Anti-Rat IgG Fc (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in HeLa cell line. **ab179513** Anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is **ab150161** Goat F(ab')<sub>2</sub> Anti-Rat IgG Fc (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling Sodium Potassium ATPase with ab283345 at 1/100 dilution (1ug) (Red) compared with a Rat monoclonal IgG (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat F(ab')<sub>2</sub> Anti-Rat IgG Fc (Alexa Fluor® 488, **ab150161**) at 1/2000 dilution was used as the secondary antibody.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Sodium Potassium ATPase antibody  
[EP1845Y] - Rat IgG2a (Chimeric) (ab283345)

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

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- Response to your inquiry within 24 hours
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