

**Anti-ATP1A1 Picoband Antibody**  
**Catalog # ABO12170****Specification**

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**Anti-ATP1A1 Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P05023</a>
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Sodium/potassium-transporting ATPase subunit alpha-1(ATP1A1) detection. Tested with WB in Human;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-ATP1A1 Picoband Antibody - Additional Information**

**Gene ID** 476

**Other Names**

Sodium/potassium-transporting ATPase subunit alpha-1, Na(+)/K(+) ATPase alpha-1 subunit, 3.6.3.9, Sodium pump subunit alpha-1, ATP1A1

**Calculated MW**

112896 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Rat<br>

**Subcellular Localization**

Cell membrane; Multi-pass membrane protein. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

**Protein Name**

Sodium/potassium-transporting ATPase subunit alpha-1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human ATP1A1 (7-34aa RDKYEPAAVSEQGDKKGGKKKKDRDMDE), different from the related mouse sequence by three amino acids, and from the related rat sequence by four amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-ATP1A1 Picoband Antibody - Protein Information**

**Name** ATP1A1

**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 (PubMed:<a href="http://www.uniprot.org/citations/29499166" target="\_blank">29499166</a>, PubMed:<a href="http://www.uniprot.org/citations/30388404" target="\_blank">30388404</a>). Could also be part of an osmosensory signaling pathway that senses body-fluid sodium levels and controls salt intake behavior as well as voluntary water intake to regulate sodium homeostasis (By similarity).

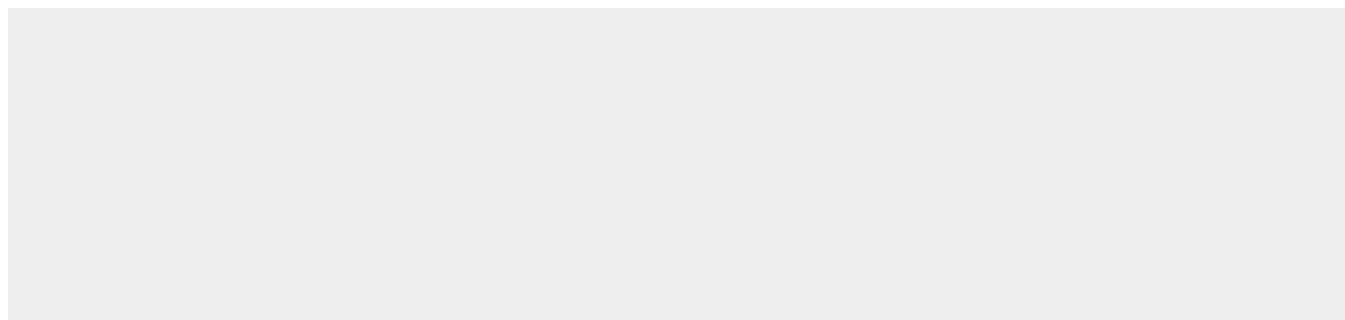
**Cellular Location**

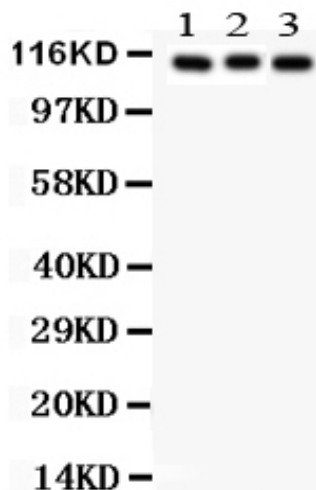
Cell membrane {ECO:0000250|UniProtKB:Q8VDN2}; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P06685}; Multi-pass membrane protein. Cell membrane, sarcolemma; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P06685}. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

**Anti-ATP1A1 Picoband Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-ATP1A1 Picoband Antibody - Images**



Anti- ATP1A1 Picoband antibody, ABO12170, Western blotting All lanes: Anti ATP1A1 (ABO12170) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: A549 Whole Cell Lysate at 40ug Lane 3: HELA Whole Cell Lysate at 40ug Predicted bind size: 113KD Observed bind size: 113KD

#### Anti-ATP1A1 Picoband Antibody - Background

The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na<sup>+</sup>/K<sup>+</sup> -ATPases. Na<sup>+</sup>/K<sup>+</sup> -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The catalytic subunit of Na<sup>+</sup>/K<sup>+</sup> -ATPase is encoded by multiple genes. This gene encodes an alpha 1 subunit. Multiple transcript variants encoding different isoforms have been found for this gene.