

**ATP1A1 Antibody(Ascites)**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1994a****Specification**

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**ATP1A1 Antibody(Ascites) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P05023</a>
Other Accession	<a href="#">P06685</a> , <a href="#">Q9N0Z6</a> , <a href="#">P05024</a> , <a href="#">Q8VDN2</a> , <a href="#">P09572</a> , <a href="#">Q08DA1</a> , <a href="#">NP_001153705.1</a> , <a href="#">NP_000692.2</a>
Reactivity	Mouse
Predicted	Bovine, Chicken, Pig, Rabbit, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Calculated MW	112896
Antigen Region	33-61

**ATP1A1 Antibody(Ascites) - Additional Information****Gene ID** 476**Other Names**

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

**Target/Specificity**

This ATP1A1 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 33-61 amino acids from human ATP1A1.

**Dilution**

WB~~1:1000~3200

**Format**

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

ATP1A1 Antibody(Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

**ATP1A1 Antibody(Ascites) - 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:[29499166](#), PubMed:[30388404](#)). 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

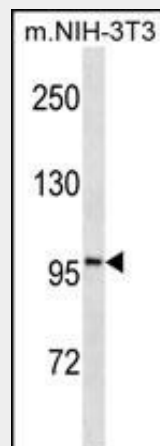
Cell membrane {ECO:0000250|UniProtKB:Q8VDN2}; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P06685}; Multi-pass membrane protein. Cell membrane, sarcolemma; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P06685}. Melanosome. Note=Identified by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

### ATP1A1 Antibody(Ascites) - 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](#)

### ATP1A1 Antibody(Ascites) - Images



ATP1A1 Antibody (Cat. #AM1994a) western blot analysis in mouse NIH-3T3 cell line lysates (35µg/lane). This demonstrates the ATP1A1 antibody detected the ATP1A1 protein (arrow).

### ATP1A1 Antibody(Ascites) - 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.

#### **ATP1A1 Antibody(Ascites) - References**

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)  
Holthouser, K.A., et al. Am. J. Physiol. Renal Physiol. 299 (1), F77-F90 (2010) :  
Comellas, A.P., et al. J. Cell. Sci. 123 (PT 8), 1343-1351 (2010) :  
Floyd, R.V., et al. Reprod Sci 17(4):366-376(2010)  
Xu, Z.W., et al. Zhonghua Yi Xue Za Zhi 90(12):813-817(2010)