



# Sodium Potassium ATPase (PTR2543) Mouse mAb

<b>Catalog No</b>	YP-Ab-17182
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human, Mouse,Rat
<b>Applications</b>	IHC,ELISA
<b>Gene Name</b>	ATP1A1
<b>Protein Name</b>	Sodium/potassium-transporting ATPase subunit alpha-1 (Na <sup>+</sup> )/K <sup>+</sup> ATPase alpha-1 subunit) (EC 3.6.3.9) (Sodium pump subunit alpha-1)
<b>Immunogen</b>	Synthesized peptide derived from human Sodium Potassium ATPase
<b>Specificity</b>	This antibody detects endogenous levels of Sodium Potassium ATPase at Human, Mouse,Rat
<b>Formulation</b>	PBS, pH7.4, 50% glycerol, 0.03%Proclin 300
<b>Source</b>	Mouse,monoclonal:IgG3,kappa
<b>Purification</b>	Protein G
<b>Dilution</b>	IHC 1:50-200 ELISA 1:5000-20000
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	Sodium/potassium-transporting ATPase subunit alpha-1 (Na <sup>+</sup> )/K <sup>+</sup> ATPase alpha-1 subunit) (EC 3.6.3.9) (Sodium pump subunit alpha-1)
<b>Observed Band</b>	110kDa
<b>Cell Pathway</b>	Basolateral cell membrane ; Multi-pass membrane protein . Cell membrane, sarcolemma ; Multi-pass membrane protein . Cell projection, axon . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
<b>Tissue Specificity</b>	.
<b>Function</b>	catalytic activity:ATP + H <sub>2</sub> O + Na <sup>+</sup> (In) + K <sup>+</sup> (Out) = ADP + phosphate + Na <sup>+</sup> (Out) + K <sup>+</sup> (In).,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.,PTM:Phosphorylation on Tyr-10 modulates pumping activity.,similarity:Belongs to the cation transport ATPase (P-type) family.,similarity:Belongs to the cation transport ATPase (P-type) family. Type IIC subfamily.,subcellular location:Identified by mass spectrometry in melanosome fractions from stage I to stage IV.,subunit:Composed of three subunits: alpha (catalytic), beta and gamma. Binds the HLA class II histocompatibility antigen, DR1.,

**Background**

ATPase Na<sup>+</sup>/K<sup>+</sup> transporting subunit alpha 1(ATP1A1) Homo sapiens  
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. [provided by RefSeq, May 2009],

**matters needing attention**

Avoid repeated freezing and thawing!

**Usage suggestions**

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

**Products Images**