Product Name: Na+/K+-ATPase α1 Rabbit Polyclonal Antibody
Catalog #: APRab14378

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:20000
Molecular Weight	112kDa

Antigen Information

Gene Name	ATP1A1
Alternative Names	ATP1A1; Sodium/potassium-transporting ATPase subunit alpha-1; Na(+)/K(+) ATPase alpha-1 subunit; Sodium pump subunit alpha-1
Gene ID	476.0
SwissProt ID	P05023
Immunogen	The antiserum was produced against synthesized peptide derived from human ATPase. AA range:5-54

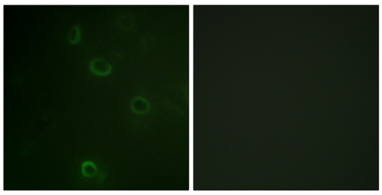
Background

The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na+/K+ -ATPases. Na+/K+ -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+/K+ -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],catalytic activity:ATP + H(2)O + Na(+)(In) + K(+)(Out) = ADP + phosphate + Na(+)(Out) + K(+)(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.,

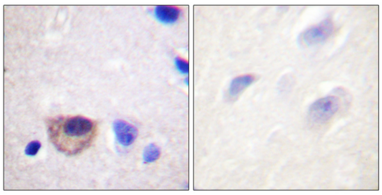
Research Area

Cardiac muscle contraction;Aldosterone-regulated sodium reabsorption;

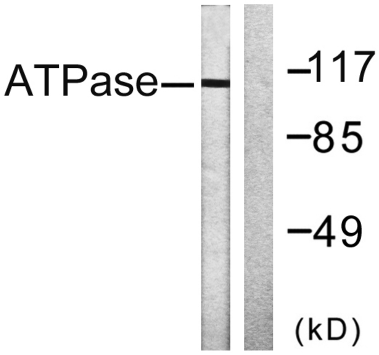
Image Data



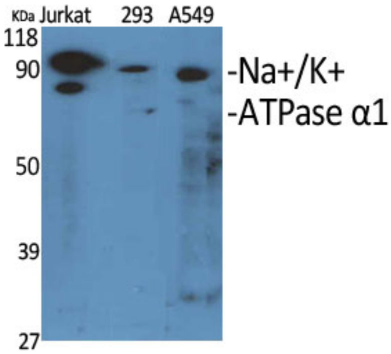
Immunofluorescence analysis of COS7 cells, using ATPase Antibody. The picture on the right is blocked with the synthesized peptide.



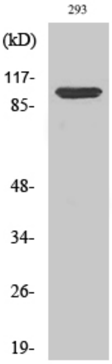
Immunohistochemistry analysis of paraffin-embedded human brain tissue, using ATPase Antibody. The picture on the right is blocked with the synthesized peptide.



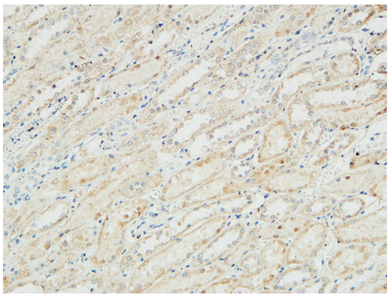
Western blot analysis of lysates from 293 cells, treated with PMA 125ng/ml 30 ′, using ATPase Antibody. The lane on the right is blocked with the synthesized peptide.



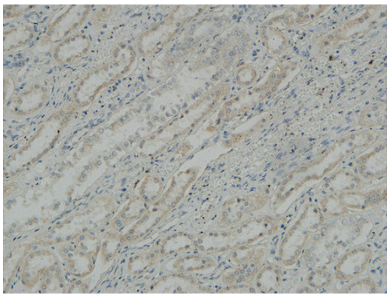
Western Blot analysis of various cells using Na+/K+-ATPase α1 Polyclonal Antibody diluted at 1： 1000



Western Blot analysis of 293 cells using Na+/K+-ATPase α1 Polyclonal Antibody diluted at 1： 1000



Immunohistochemical analysis of paraffin-embedded Human kidney. 1, Antibody was diluted at 1:100（4°,overnight）. 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200（room temperature, 30min）.



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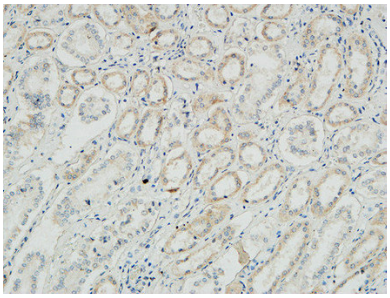

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