Best Tools for immunology Research

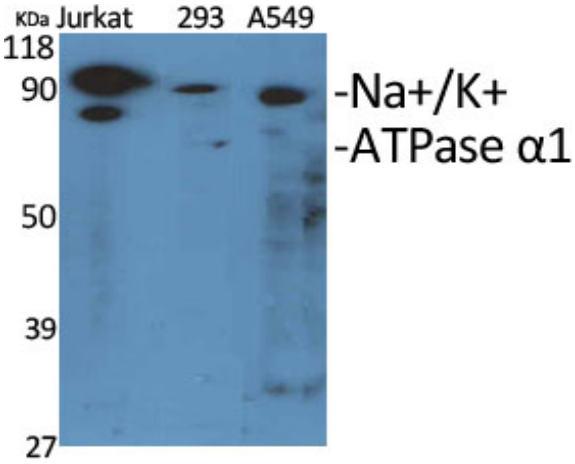
Na+/K+-ATPase α1 Polyclonal Antibody

Catalog No :	YT2973
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	Na+/K+-ATPase α1
Fields :	>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Cardiac muscle contraction;>>Adrenergic signaling in cardiomyocytes;>>Insulin secretion;>>Thyroid hormone synthesis;>>Thyroid hormone signaling pathway;>>Aldosterone synthesis and secretion;>>Aldosterone-regulated sodium reabsorption;>>Endocrine and other factor-regulated calcium reabsorption;>>Proximal tubule bicarbonate reclamation;>>Salivary secretion;>>Gastric acid secretion;>>Pancreatic secretion;>>Carbohydrate digestion and absorption;>>Protein digestion and absorption;>>Bile secretion;>>Mineral absorption
Gene Name :	ATP1A1
Protein Name :	Sodium/potassium-transporting ATPase subunit alpha-1
Human Gene Id :	476
Human Swiss Prot No :	P05023
Mouse Gene Id :	11928
Mouse Swiss Prot No :	Q8VDN2
Rat Gene Id :	24211
Rat Swiss Prot No :	P06685
Immunogen :	The antiserum was produced against synthesized peptide derived from human ATPase. AA range:5-54
Specificity :	Na+/K+-ATPase α1 Polyclonal Antibody detects endogenous levels of Na+/K+-ATPase α1 protein.

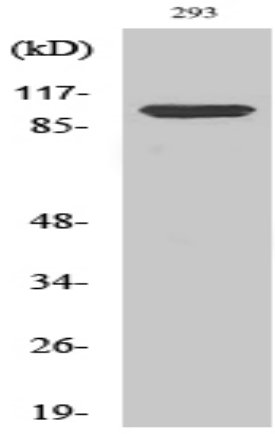
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:10000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	112kD
Cell Pathway :	Cardiac muscle contraction;Aldosterone-regulated sodium reabsorption;
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],
Function :	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.,
Subcellular Location :	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. .

Expression :	Brain,Cerebellum,Cervix,Placenta,Retinal pigment epithelium
Tag :	orthogonal,hot
Sort :	10546
No1 :	ab76020
No2 :	ab76020
No4 :	1

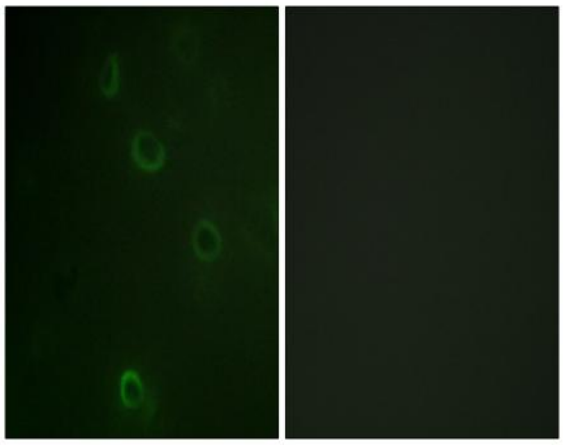
Products Images



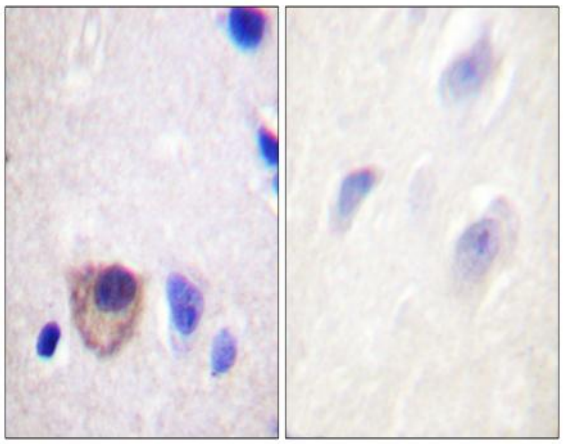
Western Blot analysis of various cells using Na+/K+-ATPase α1 Polyclonal Antibody diluted at 1:1000



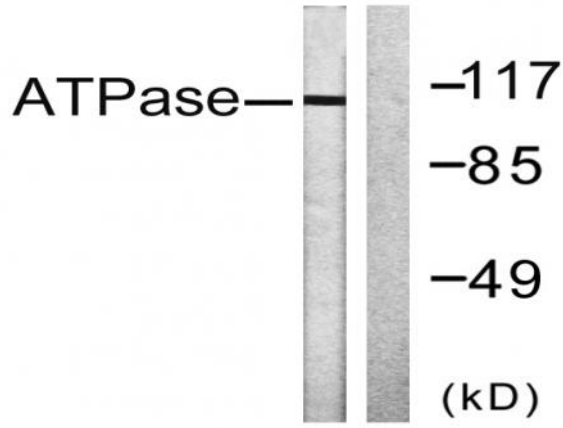
Western Blot analysis of 293 cells using Na+/K+-ATPase α1 Polyclonal Antibody diluted at 1:1000



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.