



Na⁺/K⁺-ATPase α1 (phospho Ser16) Polyclonal Antibody

Catalog No	YP-Ab-16338
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	ATP1A1
Immunogen	The antiserum was produced against synthesized peptide derived from human ATPase around the phosphorylation site of Ser16. AA range:5-54
Specificity	Phospho-Na ⁺ /K ⁺ -ATPase α1 (S16) Polyclonal Antibody detects endogenous levels of Na ⁺ /K ⁺ -ATPase α1 protein only when phosphorylated at S16.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB: 1/500 - 1/2000. IHC: 1/100 - 1/300. ELISA: 1/5000.. IF 1:50-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	A1A1;AT1A1;AT1A1_HUMAN;ATP1A1;Atpa-1;ATPase Na ⁺ /K ⁺ transporting alpha 1 polypeptide;ATPase Na ⁺ /K ⁺ transporting subunit alpha 1;BC1319;EC 3.6.3.9;MGC3285;MGC38419;MGC5175;Na K ATPase alpha A catalytic polypeptide;Na K ATPase catalytic subunit alpha A protein;Na(+)/K(+) ATPase 1; Na(+)/K(+) ATPase alpha-1 subunit;Na ⁺ ;K ⁺ ATPase alpha subunit;Na ⁺ /K ⁺ ATPase alpha 1 subunit;Na ⁺ /K ⁺ ATPase 1;Na;K ATPase alpha 1 subunit; Nkaa1b;Sodium potassium ATPase alpha 1 polypeptide;Sodium pump 1; Sodium pump subunit alpha-1;sodium-potassium ATPase catalytic subunit alpha-1;Sodium/potassium-transporting ATPase subunit alpha-1;Na ⁺ /K ⁺ -ATPase α1
Observed Band	112kD
Calculated Molecular Weight	112kD
Cell Pathway	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. .



Tissue Specificity

Brain,Cerebellum,Cervix,Placenta,Retinal pigment epithelium

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.,

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],

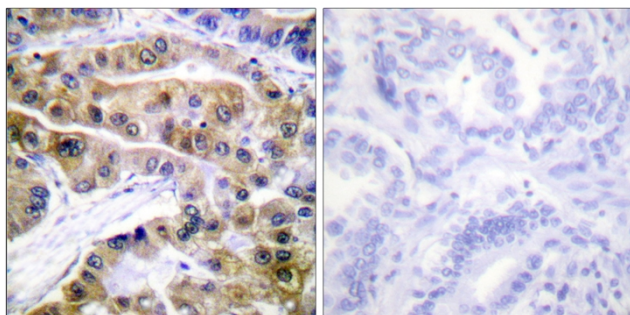
matters needing attention

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



Immunohistochemistry analysis of paraffin-embedded human lung carcinoma, using ATPase (Phospho-Ser16) Antibody. The picture on the right is blocked with the phospho peptide.

Western blot analysis of lysates from 293 cells treated with PMA 125ng/ml 30', using ATPase (Phospho-Ser16) Antibody. The lane on the right is blocked with the phospho peptide.