



Sodium Potassium ATPase alpha-1 (Phospho-Tyr260) Antibody

Catalog No	YP-Ab-16364
Isotype	IgG
Reactivity	Human;Rat;Mouse
Applications	WB;ELISA;IHC
Gene Name	ATP1A1
Protein Name	Sodium/potassium-transporting ATPase subunit alpha-1 (Na ⁺ /K ⁺ ATPase alpha-1 subunit) (EC 3.6.3.9) (Sodium pump subunit alpha-1)
Immunogen	Synthetic peptide from human protein at AA range: 230-290
Specificity	The antibody detects endogenous Sodium Potassium ATPase alpha-1 when Phospho occurs at Tyr260)
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 1:500-2000;IHC-p 1:50-300; ELISA 2000-20000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	Sodium/potassium-transporting ATPase subunit alpha-1 (Na ⁺ /K ⁺ ATPase alpha-1 subunit) (EC 3.6.3.9) (Sodium pump subunit alpha-1)
Observed Band	115kD
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

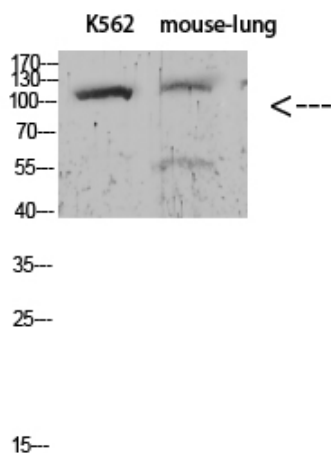
Avoid repeated freezing and thawing!

Usage suggestions

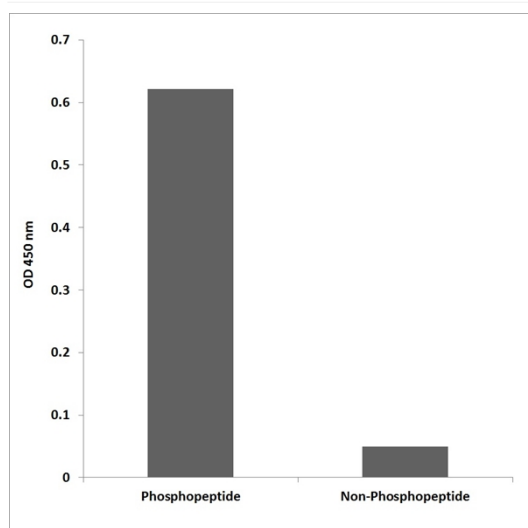
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



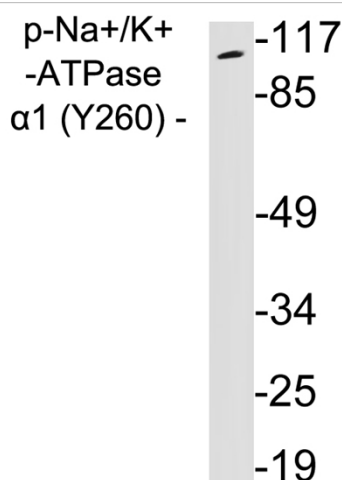
Products Images



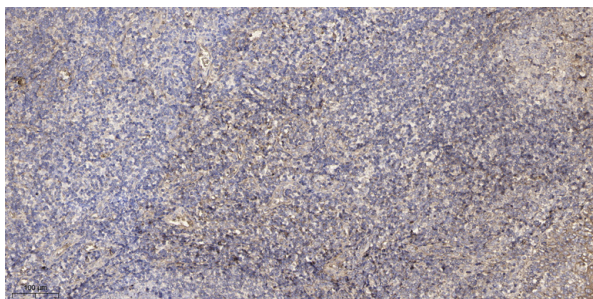
Western blot analysis of KB Hela lysate, antibody was diluted at 1000. Secondary antibody(catalog#:RS0002) was diluted at 1:20000



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Na⁺/K⁺-ATPase α1 (Phospho-Tyr260) Antibody



Western blot analysis of lysates from 293 cells treated with PMA, using phospho-Na⁺/K⁺-ATPase α1 (Phospho-Tyr260) antibody.



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).