



Na⁺/K⁺-ATPase α 1 Rabbit mAb

Catalog No	YP-rAb-17499
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	ATP1A1
Protein Name	Sodium/potassium-transporting ATPase subunit alpha-1 (Na ⁺)/K ⁺ ATPase alpha-1 subunit) (Sodium pump subunit alpha-1)
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:2000-1:10000; WB 1:20000-1:50000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)
Synonyms	Na ⁺ /K ⁺ -ATPase α1;Sodium/potassium-transporting ATPase subunit alpha-1 (Na ⁺)/K ⁺ ATPase alpha-1 subunit) (Sodium pump subunit alpha-1);Sodium/potassium-transporting ATPase subunit alpha-1 ; Na ; + ; /K ; ATPase alpha-1 subunit ; Sodium pump subunit alpha-1 ;ATP1A1
Observed Band	100kD
Calculated Molecular Weight	113kD
Cell Pathway	Membranous
Tissue Specificity	
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

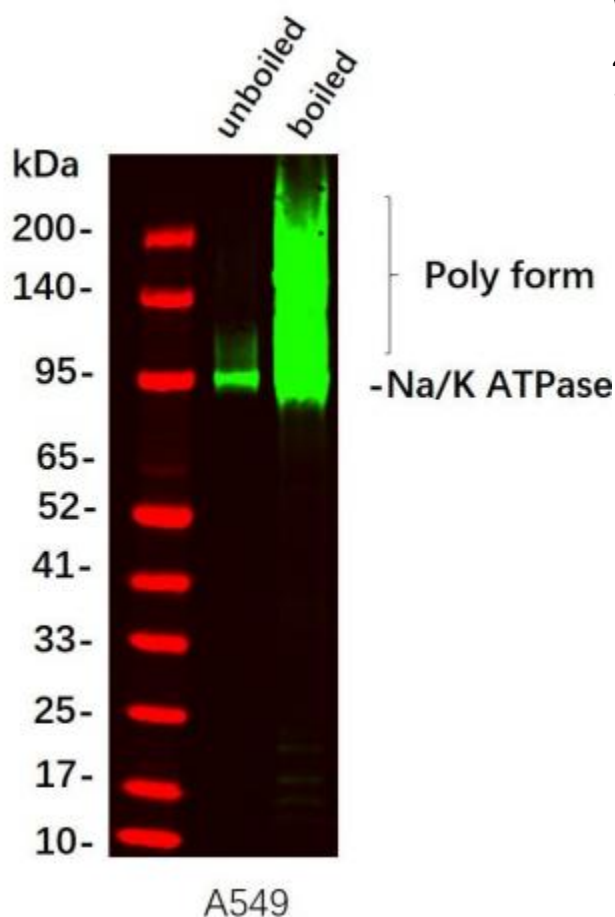
ATPase Na⁺/K⁺ transporting subunit alpha 1(ATP1A1) Homo sapiens The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na⁺/K⁺ -ATPases. Na⁺/K⁺ -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical 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!

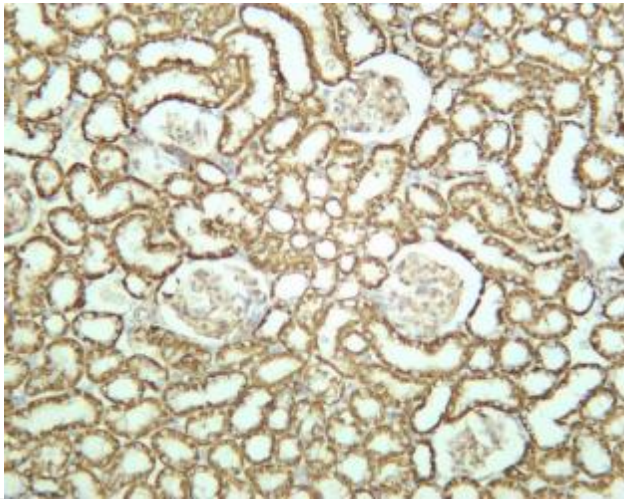
Usage suggestions

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

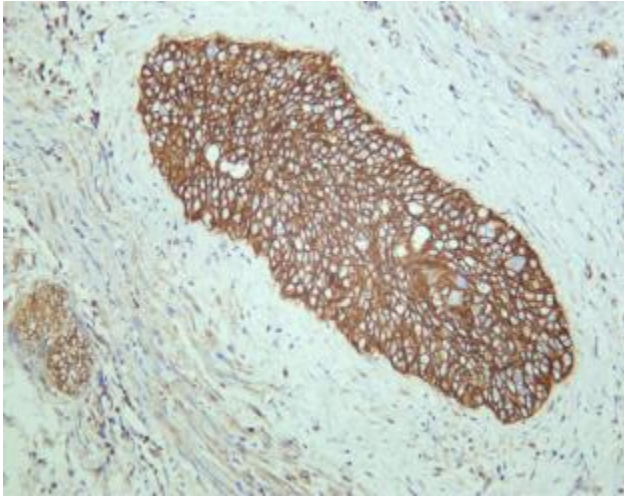


Western Blot analysis using boiled and unboiled (10minutes) cell lysate, Proteins were separated by 4-20% SDS-PAGE, and the membrane was blotted with Sodium Potassium ATPase Rabbit mAb diluted at 1:2000. Secondary :Dylight 800, Goat Anti Rabbit IgG(

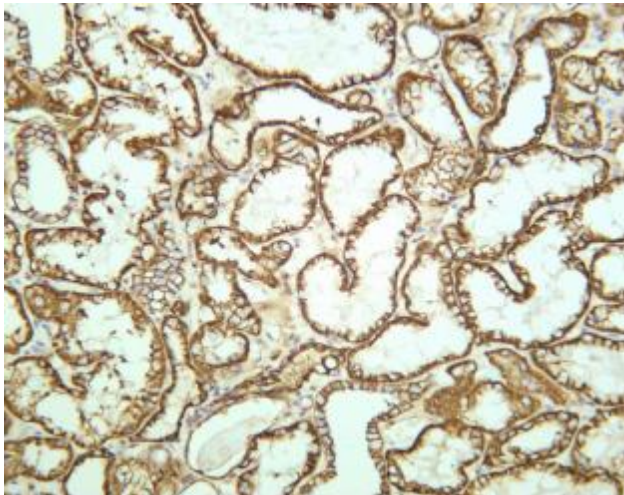




Rat kidney was stained with anti-Sodium Potassium ATPase rabbit antibody

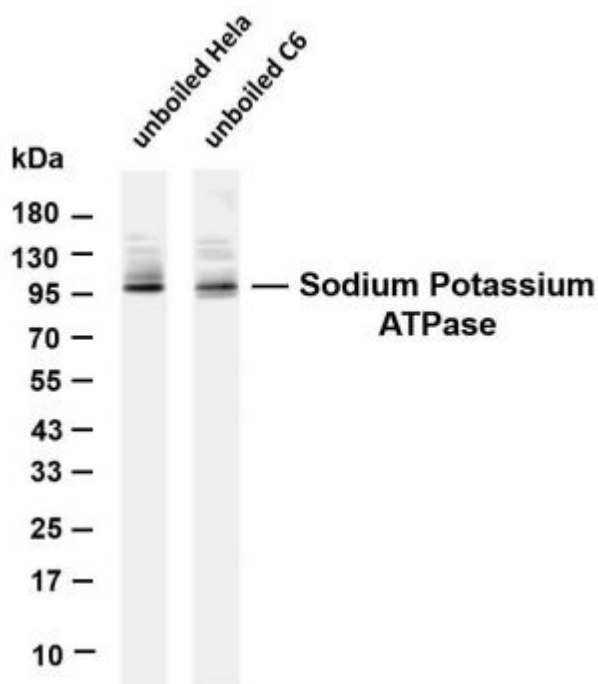


Human cervical carcinoma was stained with anti-Sodium Potassium ATPase rabbit antibody



Human kidney was stained with anti-Sodium Potassium ATPase rabbit antibody





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Sodium Potassium ATPase antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: unboiled HeLa Lane 2: unboiled C6 Predicted band size: 113kDa Observed band size: 100kDa

