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Anti-ATP1A1 Picoband Antibody

Catalog # ABO12170

Product Information

Application	WB
Primary Accession	P05023
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Sodium/potassium-transporting ATPase subunit alpha-1(ATP1A1) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	476
Other Names	Sodium/potassium-transporting ATPase subunit alpha-1, Na(+)/K(+) ATPase alpha-1 subunit, 3.6.3.9, Sodium pump subunit alpha-1, ATP1A1
Calculated MW	112896
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Cell membrane; Multi-pass membrane protein. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Source	Eukaryota
Protein Name	Sodium/potassium-transporting ATPase subunit alpha-1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ATP1A1 (7-34aa RDKYEPAAVSEQGDKKGKKGKKDRDMDE), different from the related mouse sequence by three amino acids, and from the related rat sequence by four amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

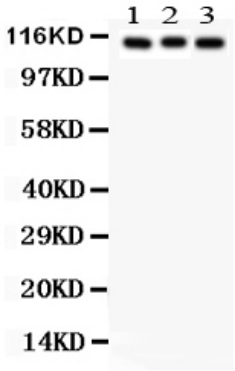
Protein Information

Name	ATP1A1
Function	Catalytic subunit of the Na(+)/K(+)-ATPase pump that hydrolyzes ATP to exchange ions across the plasma membrane, exporting 3 Na(+) and importing 2 K(+) per cycle against electrochemical gradients (PubMed:29499166, PubMed:30388404, PubMed:35803952). It undergoes ATP- driven conformational changes that allow alternating binding and release of Na(+) and K(+) ions across the membrane (PubMed:35803952). This process maintains essential Na(+) and K(+) gradients for membrane potential and cellular function. Could also be part of an osmosensory signaling pathway that senses body-fluid sodium levels and controls salt intake behavior as well as voluntary water intake to regulate sodium homeostasis (By similarity).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q8VDN2}; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P06685}; Multi-pass membrane protein. Cell membrane, sarcolemma; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P06685}. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

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.

Images



Anti- ATP1A1 Picoband antibody, ABO12170, Western blottingAll lanes: Anti ATP1A1 (ABO12170) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: A549 Whole Cell Lysate at 40ugLane 3: HELA Whole Cell Lysate at 40ugPredicted bind size: 113KDObserved bind size: 113KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.