

Recombinant Anti-ATP1A1 Rabbit mAb

Catalog # AP94882

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	P05023
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	112896

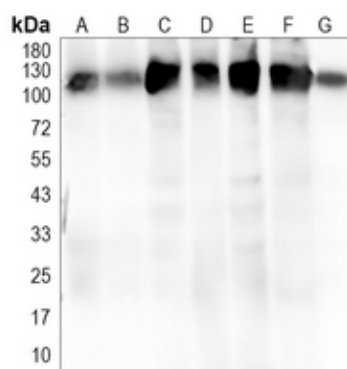
Additional Information

Gene ID	476
Other Names	Sodium/potassium-transporting ATPase subunit alpha-1; Na(+)/K(+) ATPase alpha-1 subunit; Sodium pump subunit alpha-1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human ATP1A1 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/2000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

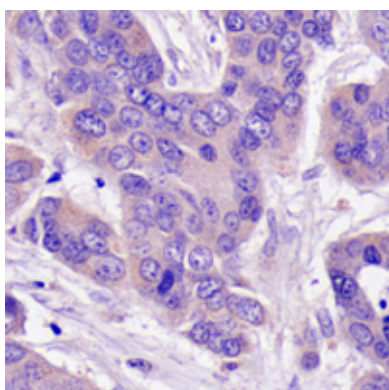
Protein Information

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

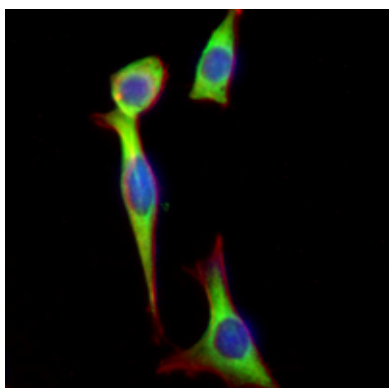
Images



Western blot analysis of ATP1A1 expression in HepG2 (A), MCF7 (B), Hela (C), mouse brain (D), mouse kidney (E), rat brain (F), rat liver (G) whole cell lysates. (Predicted band size: 112 kD; Observed band size: 100-130 kD)



Immunohistochemical analysis of ATP1A1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of ATP1A1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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