

ATP1A1

Reactivity:Human Mouse Rat

Tested applications:WB IHC IF IP

Recommended Dilution:WB 1:500 - 1:1000 IHC 1:50 - 1:200 IF 1:20 - 1:100 IP 1:20 - 1:100

Calculated MW:113kDa

Observed MW:Refer to Figures

Immunogen:

Recombinant protein of human ATP1A1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

ATP1A1;MGC3285;MGC51750; Na;K-ATPase;

Catalog #:A0643

Antibody Type:

Polyclonal Antibody

Species:23

Gene ID:476

Isotype:IgG

Swiss Prot:P05023

Purity:Affinity purification

For research use only.

Background:

The Na,K-ATPase is an integral membrane heterodimer belonging to the P-type ATPase family. This ion channel uses the energy derived from ATP hydrolysis to maintain membrane potential by driving sodium export and potassium import across the plasma membrane against their electrochemical gradients. It is composed of a catalytic subunit and a subunit (reviewed in 1). Several phosphorylation sites have been identified for the 1 subunit. Tyr10 is phosphorylated by an as yet undetermined kinase (2), Ser16 and Ser23 are phosphorylated by PKC, and Ser943 is phosphorylated by PKA (3-5). All of these sites have been implicated in the regulation of enzyme activity in response to hormones and neurotransmitters, altering trafficking and kinetic properties of Na,K-ATPase. Altered phosphorylation in response to angiotensin II stimulates activity in the rat proximal tubule (6). Na,K-ATPase is also involved in other signal transduction pathways. Insulin regulates its localization in differentiated primary human skeletal muscle cells, and this regulation is dependent on ERK1/2 phosphorylation of the subunit (7). Na,K-ATPase and Src form a signaling receptor complex that affects regulation of Src kinase activity and, subsequently, its downstream effectors (8,9).

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