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Product datasheet for TA326844

Sodium Potassium ATPase (ATP1A1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, IP, WB
Recommended Dilution:	WB 1:500 - 1:1000;IP 1:20 - 1:50
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Fusion protein of human ATP1A1
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	113 kDa
Gene Name:	ATPase Na+/K+ transporting subunit alpha 1
Database Link:	NP_000692 Entrez Gene 476 Human P05023

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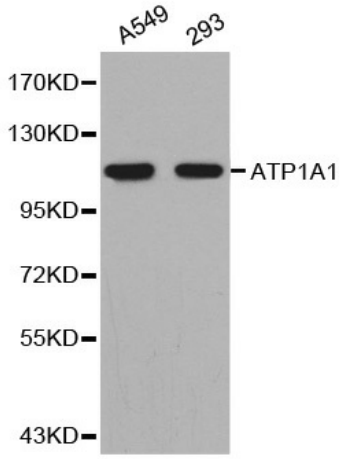
Background: The Na,K-ATPase is an integral membrane heterodimer belonging to the P-type ATPase family. This ion channel uses the energy derived from ATP hydrolysis to maintain membrane potential by driving sodium export and potassium import across the plasma membrane against their electrochemical gradients. It is composed of a catalytic a subunit and a β subunit . Several phosphorylation sites have been identified for the a1 subunit. Tyr10 is phosphorylated by an as yet undetermined kinase , Ser16 and Ser23 are phosphorylated by PKC, and Ser943 is phosphorylated by PKA . 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 . 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 a subunit . Na,K-ATPase and Src form a signaling receptor complex that affects regulation of Src kinase activity and, subsequently, its downstream effectors.

Synonyms: MGC3285; MGC51750

Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Cardiac muscle contraction

Product images:



Western blot analysis of extracts of A549 cell and 293 cell line, using ATP1A1 antibody.