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ATP1A3 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21650c

Product Information

Application	WB, E
Primary Accession	P13637
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB51685
Calculated MW	111749

Additional Information

Gene ID	478
Other Names	Sodium/potassium-transporting ATPase subunit alpha-3, Na(+)/K(+) ATPase alpha-3 subunit, Na(+)/K(+) ATPase alpha(III) subunit, Sodium pump subunit alpha-3, ATP1A3
Target/Specificity	This ATP1A3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 444-477 amino acids from the Central region of human ATP1A3.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATP1A3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP1A3
Function	Neuron-specific alpha catalytic component of the Na(+)/K(+)- transporting ATPase, which catalyzes the hydrolysis of ATP coupled with the exchange of Na(+) and K(+) ions across the plasma membrane (PubMed:36075933).

Transports 3 Na(+) ions out of the cell and 2 K(+) ions into the cell for each ATP hydrolyze against their electrochemical gradients to maintain ion concentration gradients across the membranes (By similarity). In the brain, ATP1A3 is critical for neuronal cell signaling and for maintenance of electrochemical stability, enabling cell excitation and action potential propagation (PubMed:33880529, PubMed:36075933).

Cellular Location Cell membrane; Multi-pass membrane protein

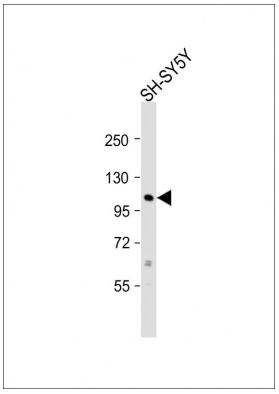
Background

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.

References

Ovchinnikov Y.A.,et al.FEBS Lett. 233:87-94(1988).
Sverdlov E.D.,et al.Dokl. Akad. Nauk SSSR 297:1488-1494(1987).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Grimwood J.,et al.Nature 428:529-535(2004).
Ovchinnikov Y.A.,et al.FEBS Lett. 213:73-80(1987).

Images



Anti-ATP1A3 Antibody (Center) at 1:2000 dilution + SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 112 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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