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ATP1A3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20032c

Product Information

Application	WB, E
Primary Accession	P13637
Other Accession	P06687, Q6PIC6, P24797, NP_689509.1
Reactivity	Human
Predicted	Chicken, Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB42176
Calculated MW	111749
Antigen Region	805-833

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 rabbits immunized with a KLH conjugated synthetic peptide between 805-833 amino acids from the Central region of human ATP1A3.
Dilution	WB~~1:1000 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

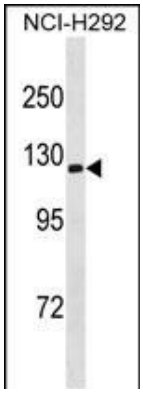
Background

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 3 subunit.

References

Einholm, A.P., et al. J. Biol. Chem. 285(34):26245-26254(2010)
Floyd, R.V., et al. Reprod Sci 17(4):366-376(2010)
Hauck, C., et al. Eur. J. Pharmacol. 622 (1-3), 7-14 (2009) :
Blanco-Arias, P., et al. Hum. Mol. Genet. 18(13):2370-2377(2009)
Goldstein, I., et al. Biol. Psychiatry 65(11):985-991(2009)

Images



ATP1A3 Antibody (Center) (Cat. #AP20032c) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the ATP1A3 antibody detected the ATP1A3 protein (arrow).

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