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ATP1A4 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22300a

Product Information

Application	WB, FC, E
Primary Accession	Q13733
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB57439
Calculated MW	114166

Additional Information

Gene ID	480
Other Names	Sodium/potassium-transporting ATPase subunit alpha-4, Na(+)/K(+) ATPase alpha-4 subunit, 3.6.3.9, Sodium pump subunit alpha-4, ATP1A4, ATP1AL2
Target/Specificity	This ATP1A4 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 12-46 amino acids from the human region of human ATP1A4.
Dilution	WB~~1:2000 FC~~1:25 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	ATP1A4 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP1A4 (HGNC:14073)
Synonyms	ATP1AL2
Function	Sperm-specific catalytic alpha subunit of the Na(+)/K(+)- ATPase responsible for ATP-dependent Na(+)/K(+) exchange across the plasma membrane. Transports 3 Na(+) ions out of the cell and 2 K(+) ions into the cell for each

	ATP hydrolyze (PubMed:16861705). Plays an essential for sperm motility, capacitation, and male fertility by maintaining ionic gradients required for flagellar function and signaling (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Note=In mature sperm, located in the principle piece of the sperm flagellum
Tissue Location	Specifically expressed in testis (PubMed:16175638, PubMed:16861705). Found in very low levels in skeletal muscle Expressed in mature sperm (at protein level) (PubMed:16175638)

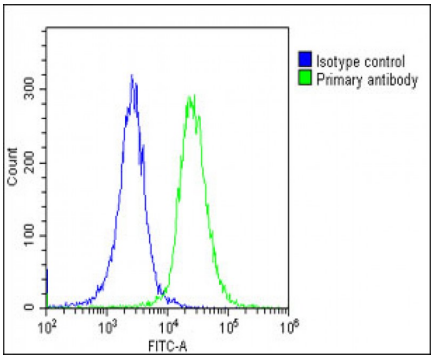
Background

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. Plays a role in sperm motility.

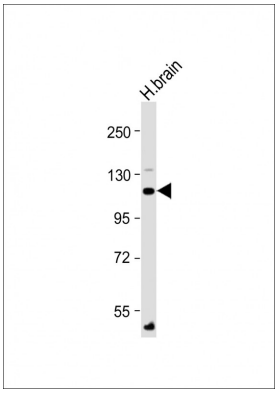
References

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Keryanov S.,et al.Gene 292:151-166(2002).
Shamraj O.I.,et al.Proc. Natl. Acad. Sci. U.S.A. 91:12952-12956(1994).
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Overlay histogram showing HeLa cells stained with AP22300a(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22300a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OE188374) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-ATP1A4 Antibody (N-Term) at 1:2000 dilution + Human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 114 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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