10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ATP4B Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5181a

Product Information

Application	WB, FC, E
Primary Accession	P51164
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB26168
Calculated MW	33367
Antigen Region	52-78

Additional Information

Gene ID	496
Other Names	Potassium-transporting ATPase subunit beta, Gastric H(+)/K(+) ATPase subunit beta, Proton pump beta chain, ATP4B
Target/Specificity	This ATP4B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 52-78 amino acids from the N-terminal region of human ATP4B.
Dilution	WB~~1:1000 FC~~1:10~50 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	ATP4B Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP4B (HGNC:820)
Function	The beta subunit of the gastric H(+)/K(+) ATPase pump which transports H(+) ions in exchange for K(+) ions across the apical membrane of parietal cells. Plays a structural and regulatory role in the assembly and membrane targeting of a functionally active pump (By similarity). Within a transport cycle,

	the transfer of a H(+) ion across the membrane is coupled to ATP hydrolysis and is associated with a transient phosphorylation of the alpha subunit that shifts the pump conformation from inward-facing (E1) to outward-facing state (E2). Interacts with the phosphorylation domain of the alpha subunit and functions as a ratchet, stabilizing the lumenal-open E2 conformation and preventing the reverse reaction of the transport cycle (By similarity).
Cellular Location	Apical cell membrane {ECO:0000250|UniProtKB:P20648}; Single-pass type II membrane protein. Cell membrane {ECO:0000250|UniProtKB:P18597}; Single- pass type II membrane protein. Note=Localized in the apical canalicular membrane of parietal cells {ECO:0000250|UniProtKB:P20648}

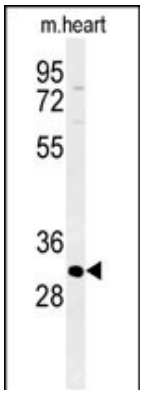
Background

ATP4B belongs to a family of P-type cation-transporting ATPases. The gastric H+, K+-ATPase is a heterodimer consisting of a high molecular weight catalytic alpha subunit and a smaller but heavily glycosylated beta subunit. This enzyme is a proton pump that catalyzes the hydrolysis of ATP coupled with the exchange of H(+) and K(+) ions across the plasma membrane. It is also responsible for gastric acid secretion. This gene encodes the beta subunit of the gastric H+, K+-ATPase.

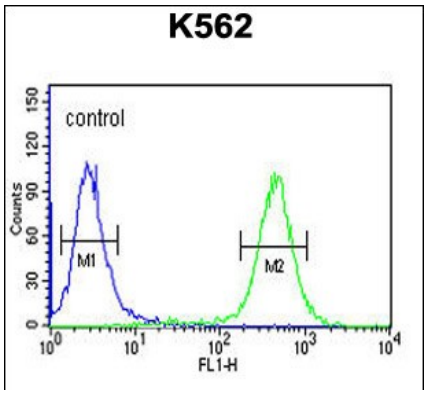
References

Bab-Dinitz, E., et al. Biochemistry 48(36):8684-8691(2009) Knouff, C.W., et al. Pharmacogenet. Genomics 18(12):1051-1057(2008) Oh, J.H., et al. Mamm. Genome 16(12):942-954(2005)

Images



Western blot analysis of ATP4B Antibody (N-term) (Cat. #AP5181a) in mouse heart tissue lysates (35ug/lane).ATP4B (arrow) was detected using the purified Pab.



ATP4B Antibody (N-term) (Cat. #AP5181a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.