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ATP11A Antibody

Catalog # ASC11171

Product Information

Application	WB, IF, ICC, E
Primary Accession	P98196
Other Accession	NP_115565, 150421681
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	129756
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ATP11A antibody can be used for detection of ATP11A by Western blot at 1 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	23250
Other Names	Probable phospholipid-transporting ATPase IH, 3.6.3.1, ATPase IS, ATPase class VI type 11A, P4-ATPase flippase complex alpha subunit ATP11A, ATP11A, ATPIH, ATPIS, KIAA1021
Target/Specificity	ATP11A;
Reconstitution & Storage	ATP11A antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	ATP11A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP11A
Synonyms	ATPIH, ATPIS, KIAA1021
Function	Catalytic component of a P4-ATPase flippase complex which catalyzes the hydrolysis of ATP coupled to the transport of aminophospholipids, phosphatidylserines (PS) and phosphatidylethanolamines (PE), from the outer to the inner leaflet of the plasma membrane (PubMed:25315773, PubMed:25947375, PubMed:26567335, PubMed:29799007, PubMed:30018401, PubMed:36300302). Does not show flippase activity

	toward phosphatidylcholine (PC) (PubMed:34403372). Contributes to the maintenance of membrane lipid asymmetry with a specific role in morphogenesis of muscle cells. In myoblasts, mediates PS enrichment at the inner leaflet of plasma membrane, triggering PIEZO1-dependent Ca2+ influx and Rho GTPases signal transduction, subsequently leading to the assembly of cortical actomyosin fibers and myotube formation (PubMed:29799007). May be involved in the uptake of farnesyltransferase inhibitor drugs, such as lonafarnib.
Cellular Location	Cell membrane; Multi-pass membrane protein. Early endosome. Recycling endosome. Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=Efficient exit from the endoplasmic reticulum requires the presence of CDC50A.
Tissue Location	Widely expressed (PubMed:26567335). Expressed in myoblasts (PubMed:29799007).

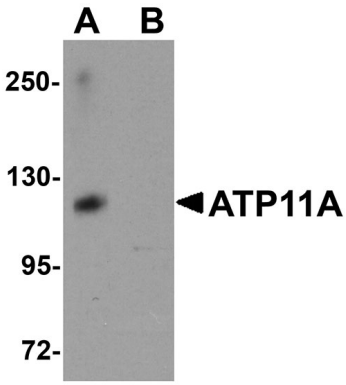
Background

ATP11A Antibody: ATP11A is a widely expressed integral membrane ATPase. ATP11A is probably phosphorylated in its intermediate state and likely drives the transport of ions such as calcium or other molecules across membranes. While the exact molecule ATP11A transports is unknown, increased expression of ATP11A mRNA has been observed in murine leukemia cells made resistant to anti-cancer drugs such as farnesyltransferase inhibitors (FTIs). Furthermore, overexpression of ATP11A provided protection against the FTI SCH66336 while knockdown of ATP11A via siRNA made cells more sensitive to this drug. Other reports suggest that elevated levels of ATP11A mRNA may also be a predictive marker of metastasis in colorectal cancer patients.

References

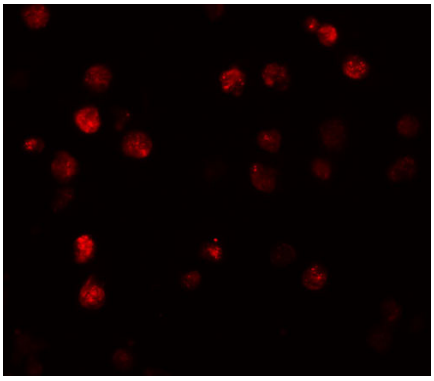
Halleck MS, Lawler JF Jr, Blackshaw S, et al. Differential expression of putative transbilayer amphipath transporters. Physiol. Genomics1999; 1:139-50.
Zhang B, Groffen J, and Heisterkamp N. Resistance to farnesyltransferase inhibitors in Bcr/Abl-positive lymphoblastic leukemia by increased expression of a novel ABC transporter homolog ATP11a. Blood2005; 106:1355-61.
Miyoshi N, Ishii H, Mimori K, et al. SCRN1 is a novel marker for prognosis in colorectal cancer. J. Surg. Oncol.2010; 101:156-9.

Images



Western blot analysis of ATP11A in K562 cell tissue lysate with ATP11A antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Immunocytochemistry of ATP11A in K562 cells with ATP11A antibody at 10 µg/mL.



Immunofluorescence of ATP11A in K562 cells with ATP11A antibody at 20 µg/mL.

Citations

- A mutation in ATP11A causes autosomal-dominant auditory neuropathy type 2

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