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ATP6AP2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19956c

Product Information

Application	WB, E
Primary Accession	O75787
Other Accession	NP_005756.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41871
Calculated MW	39008
Antigen Region	205-234

Additional Information

Gene ID	10159
Other Names	Renin receptor, ATPase H(+)-transporting lysosomal accessory protein 2, ATPase H(+)-transporting lysosomal-interacting protein 2, ER-localized type I transmembrane adaptor, Embryonic liver differentiation factor 10, N14F, Renin/prorenin receptor, Vacuolar ATP synthase membrane sector-associated protein M8-9, ATP6M8-9, V-ATPase M89 subunit, ATP6AP2, ATP6IP2, CAPER, ELDF10
Target/Specificity	This ATP6AP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 205-234 amino acids from the Central region of human ATP6AP2.
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	ATP6AP2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP6AP2 (HGNC:18305)

Function	Multifunctional protein which functions as a renin, prorenin cellular receptor and is involved in the assembly of the lysosomal proton-transporting V-type ATPase (V-ATPase) and the acidification of the endo-lysosomal system (PubMed:12045255, PubMed:29127204, PubMed:30374053, PubMed:32276428). May mediate renin-dependent cellular responses by activating ERK1 and ERK2 (PubMed:12045255). By increasing the catalytic efficiency of renin in AGT/angiotensinogen conversion to angiotensin I, may also play a role in the renin-angiotensin system (RAS) (PubMed:12045255). Through its function in V-type ATPase (v- ATPase) assembly and acidification of the lysosome it regulates protein degradation and may control different signaling pathways important for proper brain development, synapse morphology and synaptic transmission (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type I membrane protein. Lysosome membrane; Single- pass type I membrane protein. Cytoplasmic vesicle, autophagosome membrane {ECO:0000250|UniProtKB:Q9CYN9}; Single-pass type I membrane protein. Cell projection, dendritic spine membrane {ECO:0000250|UniProtKB:Q9CYN9}; Single-pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:Q9CYN9}. Endosome membrane {ECO:0000250|UniProtKB:Q9CYN9}; Single-pass type I membrane protein. Cytoplasmic vesicle, clathrin-coated vesicle membrane {ECO:0000250|UniProtKB:Q6AXS4}; Single-pass type I membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q6AXS4}; Single-pass type I membrane protein
Tissue Location	Expressed in brain, heart, placenta, liver, kidney and pancreas. Barely detectable in lung and skeletal muscles. In the kidney cortex it is restricted to the mesangium of glomeruli. In the coronary and kidney artery it is expressed in the subendothelium, associated to smooth muscles where it colocalizes with REN. Expressed in vascular structures and by syncytiotrophoblast cells in the mature fetal placenta.

Background

This gene encodes a protein that is associated with adenosine triphosphatases (ATPases). Proton-translocating ATPases have fundamental roles in energy conservation, secondary active transport, acidification of intracellular compartments, and cellular pH homeostasis. There are three classes of ATPases-F, P, and V. The vacuolar (V-type) ATPases have a transmembrane proton-conducting sector and an extramembrane catalytic sector. The encoded protein has been found associated with the transmembrane sector of the V-type ATPases.

References

Takahashi, K., et al. Peptides 31(7):1405-1408(2010)
Cruciat, C.M., et al. Science 327(5964):459-463(2010)
Nabi, A.H., et al. Biochim. Biophys. Acta 1794(12):1838-1847(2009)
Alcazar, O., et al. Exp. Eye Res. 89(5):638-647(2009)
Takemitsu, T., et al. Am. J. Nephrol. 30(4):361-370(2009)

Images

ATP6AP2 Antibody (Center) (Cat. #AP19956c) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the ATP6AP2 antibody detected the ATP6AP2 protein (arrow).