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

ATP6V1B1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11538C

Product Information

Application	IHC-P, IF, WB, E
Primary Accession	P15313
Other Accession	P31409, P49712, Q19626, P62815, P62814, P21281, P31408, P31407, NP_001683.2
Reactivity	Human
Predicted	Bovine, Mouse, Rat, C.Elegans, Chicken, Drosophila
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24864
Calculated MW	56833
Antigen Region	284-310

Additional Information

Gene ID	525
Other Names	V-type proton ATPase subunit B, kidney isoform, V-ATPase subunit B 1, Endomembrane proton pump 58 kDa subunit, Vacuolar proton pump subunit B 1, ATP6V1B1, ATP6B1, VATB, VPP3
Target/Specificity	This ATP6V1B1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 284-310 amino acids from the Central region of human ATP6V1B1.
Dilution	IHC-P~~1:100~500 IF~~1:10~50 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	ATP6V1B1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP6V1B1

Synonyms	ATP6B1, VATB, VPP3
Function	Non-catalytic subunit of the V1 complex of vacuolar(H+)- ATPase (V-ATPase), a multisubunit enzyme composed of a peripheral complex (V1) that hydrolyzes ATP and a membrane integral complex (V0) that translocates protons (PubMed:16769747). V-ATPase is responsible for acidifying and maintaining the pH of intracellular compartments and in some cell types, is targeted to the plasma membrane, where it is responsible for acidifying the extracellular environment (PubMed:32001091). Essential for the proper assembly and activity of V- ATPase (PubMed:16769747). In renal intercalated cells, mediates secretion of protons (H+) into the urine thereby ensuring correct urinary acidification (PubMed:16769747). Required for optimal olfactory function by mediating the acidification of the nasal olfactory epithelium (By similarity).
Cellular Location	Apical cell membrane. Basolateral cell membrane {ECO:0000250|UniProtKB:Q91YH6}
Tissue Location	Kidney; localizes to early distal nephron, encompassing thick ascending limbs and distal convoluted tubules (at protein level) (PubMed:16769747, PubMed:29993276). Expressed in the cochlea and endolymphatic sac (PubMed:9916796)

Background

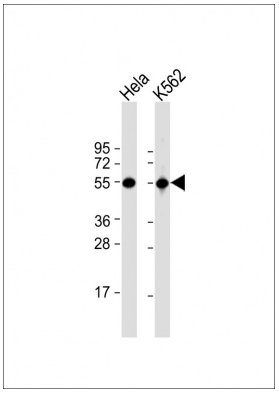
This gene encodes a component of vacuolar ATPase (V-ATPase), a multisubunit enzyme that mediates acidification of eukaryotic intracellular organelles. V-ATPase dependent organelle acidification is necessary for such intracellular processes as protein sorting, zymogen activation, receptor-mediated endocytosis, and synaptic vesicle proton gradient generation. V-ATPase is composed of a cytosolic V1 domain and a transmembrane V0 domain. The V1 domain consists of three A and three B subunits, two G subunits plus the C, D, E, F, and H subunits. The V1 domain contains the ATP catalytic site. The V0 domain consists of five different subunits: a, c, c', c'', and d. Additional isoforms of many of the V1 and V0 subunit proteins are encoded by multiple genes or alternatively spliced transcript variants. This encoded protein is one of two V1 domain B subunit isoforms and is found in the kidney. Mutations in this gene cause distal renal tubular acidosis associated with sensorineural deafness. [provided by RefSeq].

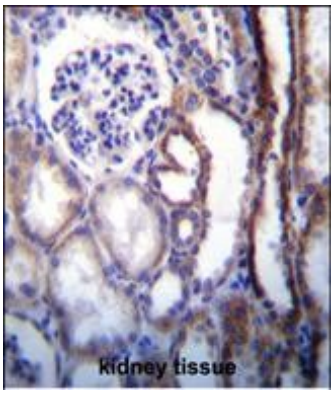
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Sharifian, M., et al. Iran J Kidney Dis 4(3):202-206(2010)
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
Andreucci, E., et al. Pediatr. Nephrol. 24(11):2147-2153(2009)
Sethi, S.K., et al. Indian Pediatr 46(5):425-427(2009)

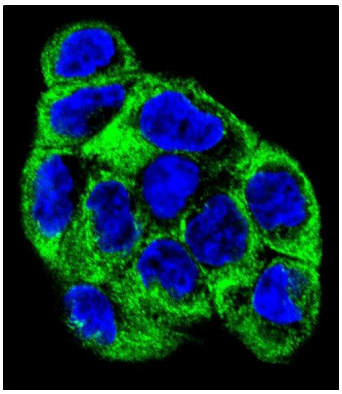
Images

All lanes : Anti-ATP6V1B1 Antibody (Center) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





ATP6V1B1 Antibody (Center) (Cat. #AP11538c)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of ATP6V1B1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of ATP6V1B1 Antibody (Center)(Cat#AP11538c) with WiDr cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

Citations

- Lysosomal Machinery Drives Extracellular Acidification to Direct Non-apoptotic Cell Death.
- highroad Is a Carboxypetidase Induced by Retinoids to Clear Mutant Rhodopsin-1 in Drosophila Retinitis Pigmentosa Models.

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