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

ATP6V0A1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58661

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q93050
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	96413
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human V-ATPase A1
Epitope Specificity	41-140/837
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic vesicle membrane; Multi-pass membrane protein. Melanosome. Note=Coated vesicle. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
SIMILARITY	Belongs to the V-ATPase 116 kDa subunit family.
SUBUNIT	The V-ATPase is a heteromultimeric enzyme composed of at least thirteen different subunits. It has a membrane peripheral V1 sector for ATP hydrolysis and an integral V0 for proton translocation. The V1 sector comprises subunits A-H, whereas V0 includes subunits a, d, c, c', and c''.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The subunit of the vacuolar proton pump is a V-ATPase that has two different isoforms. The type I isoform contains an 18-base pair insert and is expressed in brain, whereas the truncated type II isoform is more widely expressed, including lung, kidney and spleen. The subunit of the vacuolar proton pump is located in clathrin-coated vesicles and is also found in osteoclasts. It consists of two fundamental domains, a hydrophilic amino-terminus, which has greater than 30% charged residues, and a hydrophobic carboxy terminus, which contains at least six transmembrane regions. The proton pump functions in coupling ATP hydrolysis by the cytoplasmic subunits to proton translocation by the intramembranous components of the pump. The inactivation of the osteoclast-specific vacuolar proton ATPase subunit is responsible for the lack of the enzyme in the apical membranes of osteoclast cells in osteosclerotic mutant mice, thus preventing the resorption function of these cells and leading to the osteopetrotic phenotype. The subunit, which co-localizes with the late endosomal marker Rab7 on vacuolar membranes, is essential for vacuole formation by selective swelling of late endosomes.

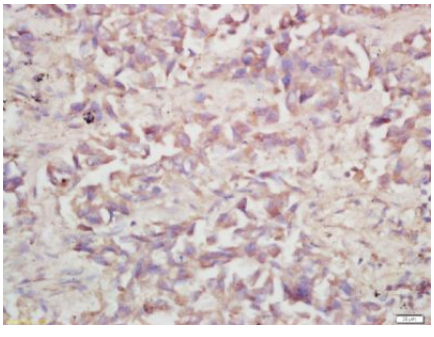
Additional Information

Gene ID	535
Other Names	V-type proton ATPase 116 kDa subunit a1, V-ATPase 116 kDa subunit a1, Clathrin-coated vesicle/synaptic vesicle proton pump 116 kDa subunit, Vacuolar adenosine triphosphatase subunit Ac116, Vacuolar proton pump subunit 1, Vacuolar proton translocating ATPase 116 kDa subunit a isoform 1, ATP6V0A1, ATP6N1, ATP6N1A, VPP1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ATP6V0A1
Synonyms	ATP6N1, ATP6N1A, VPP1
Function	Subunit of the V0 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 transports protons across cellular membranes. V-ATPase is responsible for the acidification of various organelles, such as lysosomes, endosomes, the trans-Golgi network, and secretory granules, including synaptic vesicles (PubMed:33065002, PubMed:33833240, PubMed:34909687). In certain cell types, can be exported to the plasma membrane, where it is involved in the acidification of the extracellular environment (By similarity). Required for assembly and activity of the vacuolar ATPase (By similarity). Through its action on compartment acidification, plays an essential role in neuronal development in terms of integrity and connectivity of neurons (PubMed:33833240).
Cellular Location	Cytoplasmic vesicle, clathrin-coated vesicle membrane {ECO:0000250|UniProtKB:P25286}; Multi-pass membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:P25286}; Multi-pass membrane protein. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Images



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-V-ATPase A1 Polyclonal Antibody, Unconjugated(AP58661) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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