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ATP5O Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8563a

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P48047
Other Accession	Q2EN81, P13621
Reactivity	Human
Predicted	Bovine, Pig
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22376
Calculated MW	23277
Antigen Region	38-64

Additional Information

Gene ID	539
Other Names	ATP synthase subunit O, mitochondrial, Oligomycin sensitivity conferral protein, OSCP, ATP5O, ATPO
Target/Specificity	This ATP5O antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 38-64 amino acids from the N-terminal region of human ATP5O.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 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	ATP5O Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5PO (HGNC:850)
Synonyms	ATP5O, ATPO

Function	Subunit OSCP, of the mitochondrial membrane ATP synthase complex (F(1)F(0) ATP synthase or Complex V) that produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain (PubMed:37244256). ATP synthase complex consist of a soluble F(1) head domain - the catalytic core - and a membrane F(1) domain - the membrane proton channel (PubMed:37244256). These two domains are linked by a central stalk rotating inside the F(1) region and a stationary peripheral stalk (PubMed:37244256). During catalysis, ATP synthesis in the catalytic domain of F(1) is coupled via a rotary mechanism of the central stalk subunits to proton translocation (Probable). In vivo, can only synthesize ATP although its ATP hydrolase activity can be activated artificially in vitro (By similarity). Part of the complex F(0) domain (PubMed:37244256). Part of the complex F(0) domain and the peripheric stalk, which acts as a stator to hold the catalytic alpha(3)beta(3) subcomplex and subunit a/ATP6 static relative to the rotary elements (By similarity).
Cellular Location	Mitochondrion. Mitochondrion inner membrane

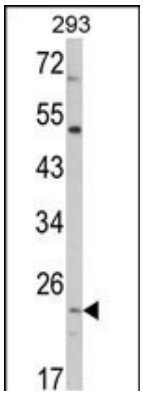
Background

ATP5O is a component of the F-type ATPase found in the mitochondrial matrix. F-type ATPases are composed of a catalytic core and a membrane proton channel. This protein appears to be part of the connector linking these two components and may be involved in transmission of conformational changes or proton conductance.

References

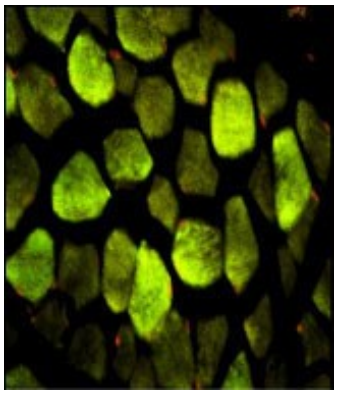
Wang,L., et.al., Cancer Epidemiol. Biomarkers Prev. 17 (12), 3558-3566 (2008)
Contessi,S., et.al., J. Bioenerg. Biomembr. 39 (4), 291-300 (2007)

Images

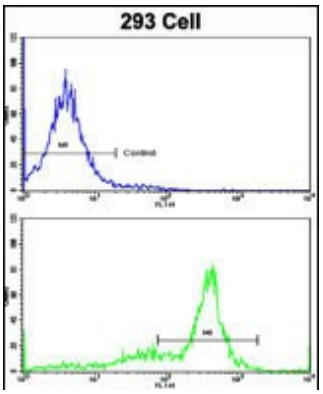


Western blot analysis of ATP5O Antibody (N-term) (Cat. #AP8563a) in 293 cell line lysates (35ug/lane). ATP5O (arrow) was detected using the purified Pab.

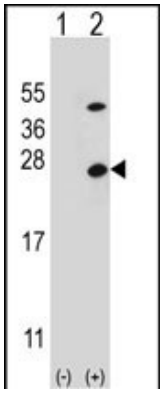
Formalin-fixed and paraffin-embedded human skeletal muscle with ATP5O Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Immunofluorescence analysis of ATP5O Antibody (N-term) with paraffin-embedded human skeletal muscle. 0.05 mg/ml primary antibody was followed by FITC-conjugated goat anti-rabbit lgG (whole molecule). FITC emits green fluorescence.Red counterstaining is PI.



Flow cytometric analysis of 293 cells using ATP5O Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot analysis of ATP5O (arrow) using rabbit polyclonal ATP5O Antibody (N-term) (Cat. #AP8563a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the ATP5O gene.