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ATP5C1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9239a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P36542
Other Accession	P35435, Q91VR2, Q4R5B0, P05631
Reactivity	Human
Predicted	Bovine, Monkey, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23852
Calculated MW	32996
Antigen Region	40-67

Additional Information

Gene ID	509
Other Names	ATP synthase subunit gamma, mitochondrial, F-ATPase gamma subunit, ATP5C1, ATP5C, ATP5CL1
Target/Specificity	This ATP5C1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 40-67 amino acids from the N-terminal region of human ATP5C1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	ATP5C1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5F1C (HGNC:833)
Function	Subunit gamma, 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). With the central stalk subunit delta, is essential for the biogenesis of F(1) catalytic part of the ATP synthase complex namely in the formation of F1 assembly intermediate (PubMed:29499186).

Cellular Location

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P05631}; Peripheral membrane protein {ECO:0000250|UniProtKB:P05631}; Matrix side {ECO:0000250|UniProtKB:P05631}

Tissue Location

Isoform Heart is expressed specifically in the heart and skeletal muscle, which require rapid energy supply. Isoform Liver is expressed in the brain, liver and kidney. Isoform Heart and Isoform Liver are expressed in the skin, intestine, stomach and aorta

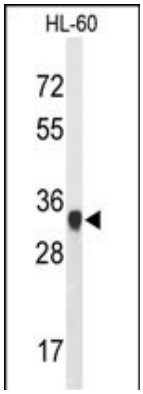
Background

ATP5C1 encodes a subunit of mitochondrial ATP synthase. Mitochondrial ATP synthase catalyzes ATP synthesis, utilizing an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. ATP synthase is composed of two linked multi-subunit complexes: the soluble catalytic core, F1, and the membrane-spanning component, Fo, comprising the proton channel. The catalytic portion of mitochondrial ATP synthase consists of 5 different subunits (alpha, beta, gamma, delta, and epsilon) assembled with a stoichiometry of 3 alpha, 3 beta, and a single representative of the other 3.

References

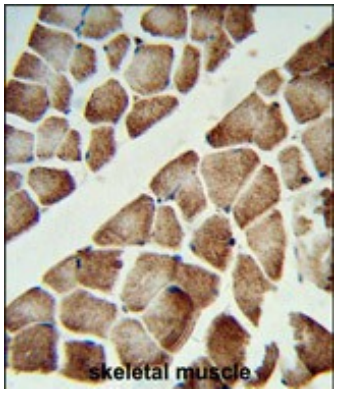
Wheeler,H.E., et.al, PLoS Genet. 5 (10), E1000685 (2009)
Wang,L., et.al, Cancer Epidemiol. Biomarkers Prev. 17 (12), 3558-3566 (2008)

Images

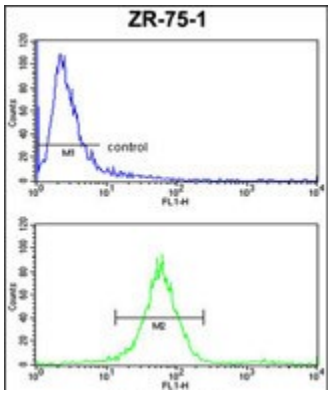


Western blot analysis of ATP5C1 Antibody (N-term) (Cat. #AP9239a) in HL-60 cell line lysates (35ug/lane).ATP5C1 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human skeletal muscle reacted with ATP5C1 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.



ATP5C1 Antibody (N-term) (Cat.#AP9239a) FC analysis of ZR-75-1 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Olesoxime favors oligodendrocyte differentiation through a functional interplay between mitochondria and microtubules.