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ATP5G1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16683c

Product Information

Application	WB, E
Primary Accession	P05496
Other Accession	NP_001002027.1, NP_005166.1
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35384
Calculated MW	14277
Antigen Region	27-56

Additional Information

Gene ID	516
Other Names	ATP synthase F(0) complex subunit C1, mitochondrial, ATP synthase lipid-binding protein, ATP synthase proteolipid P1, ATP synthase proton-transporting mitochondrial F(0) complex subunit C1, ATPase protein 9, ATPase subunit c, ATP5G1
Target/Specificity	This ATP5G1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 27-56 amino acids from the Central region of human ATP5G1.
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	ATP5G1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5MC1 (HGNC:841)
Function	Subunit c, 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 (Probable). 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). With the subunit a (MT- ATP6), forms the proton-conducting channel in the F(0) domain, that contains two crucial half-channels (inlet and outlet) that facilitate proton movement from the mitochondrial intermembrane space (IMS) into the matrix (PubMed:37244256). Protons are taken up via the inlet half- channel and released through the outlet half-channel, following a Grotthuss mechanism (PubMed:37244256).

Cellular Location Mitochondrion membrane; Multi-pass membrane protein

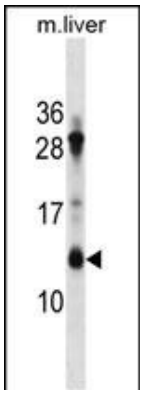
Background

This gene 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. The proton channel seems to have nine subunits (a, b, c, d, e, f, g, F6 and 8). This gene is one of three genes that encode subunit c of the proton channel. Each of the three genes have distinct mitochondrial import sequences but encode the identical mature protein. Alternatively spliced transcript variants encoding the same protein have been identified.

References

Vives-Bauza, C., et al. Mol. Biol. Cell 21(1):131-139(2010)
Wang, H.L., et al. Cytogenet. Genome Res. 109 (4), 533 (2005) :
Cross, R.L. Nature 427(6973):407-408(2004)
Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000)
Wang, H., et al. Nature 396(6708):279-282(1998)

Images



ATP5G1 Antibody (Center) (Cat. #AP16683c) western blot analysis in mouse liver tissue lysates (35ug/lane).This demonstrates the ATP5G1 antibody detected the ATP5G1 protein (arrow).