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ATP5F1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20527c

Product Information

Application	WB, E
Primary Accession	P24539
Reactivity	Mouse, Rat, Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	28909
Antigen Region	161-195

Additional Information

Gene ID	515
Other Names	ATP synthase F(0) complex subunit B1, mitochondrial, ATP synthase proton-transporting mitochondrial F(0) complex subunit B1, ATP synthase subunit b, ATPase subunit b, ATP5F1
Target/Specificity	This ATP5F1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 161-195 amino acids from the Central region of human ATP5F1.
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	ATP5F1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5PB (HGNC:840)
Synonyms	ATP5F1
Function	Subunit b, 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.

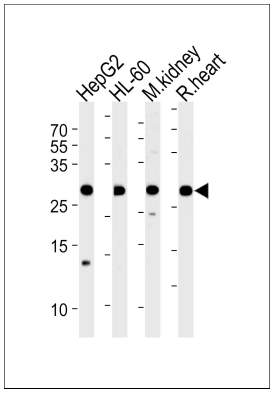
Background

Mitochondrial membrane ATP synthase (F(1)F(0) ATP synthase or Complex V) 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. F-type ATPases consist of two structural domains, F(1) -containing the extramembraneous catalytic core, and F(0) -containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. 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. 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.

References

Higuti T., et al. Biochem. Biophys. Res. Commun. 178:1014-1020(1991).
Gregory S.G., et al. Nature 441:315-321(2006).
Choudhary C., et al. Science 325:834-840(2009).
Burkard T.R., et al. BMC Syst. Biol. 5:17-17(2011).

Images



ATP5F1 Antibody (Center) (Cat. #AP20527c) western blot analysis in HepG2,HL-60 cell line,mouse kidney and rat heart tissue lysates (35ug/lane).This demonstrates the ATP5F1 antibody detected the ATP5F1 protein (arrow).