

ATP5A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51004

Product Information

Application	WB
Primary Accession	P25705
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	59751

Additional Information

Gene ID	498
Other Names	ATP synthase subunit alpha, mitochondrial, ATP5A1, ATP5A, ATP5AL2, ATPM
Target/Specificity	KLH conjugated synthetic peptide derived from human ATP5A1
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ATP5F1A (HGNC:823)
Function	<p>Subunit alpha, 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). In vivo, can only synthesize ATP although its ATP hydrolase activity can be activated artificially in vitro (By similarity). With the catalytic subunit beta (ATP5F1B), forms the catalytic core in the F(1) domain (PubMed:37244256). Subunit alpha does not bear the catalytic high- affinity ATP-binding sites (Probable). Binds the bacterial siderophore enterobactin and can promote mitochondrial accumulation of enterobactin-derived iron ions (PubMed:30146159).</p>

Cellular Location	Mitochondrion. Mitochondrion inner membrane {ECO:0000250 UniProtKB:P19483}; Peripheral membrane protein {ECO:0000250 UniProtKB:P19483}; Matrix side {ECO:0000250 UniProtKB:P19483}. Cell membrane; Peripheral membrane protein; Extracellular side. Note=Colocalizes with HRG on the cell surface of T-cells (PubMed:19285951).
Tissue Location	Fetal lung, heart, liver, gut and kidney. Expressed at higher levels in the fetal brain, retina and spinal cord

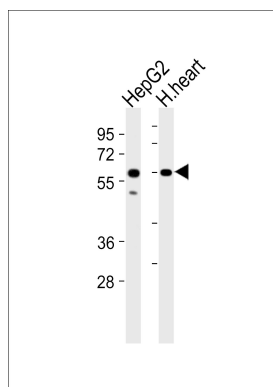
Background

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. Subunits alpha and beta form the catalytic core in F(1). Rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits. Subunit alpha does not bear the catalytic high-affinity ATP-binding sites (By similarity).

References

Kataoka H.,et al.Biochim. Biophys. Acta 1089:393-395(1991).
 Godbout R.,et al.Gene 123:195-201(1993).
 Akiyama S.,et al.Biochim. Biophys. Acta 1219:129-140(1994).
 Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
 Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



All lanes : Anti-ATP5A1 Antibody at 1:1000 dilution Lane 1: HepG2 whole cell lysates Lane 2: H.heart tissue lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 60 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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