

Anti-ATP5A1 Antibody

Catalog # AP95684

Product Information

Application	WB, IHC, FC
Primary Accession	P25705
Reactivity	Human, Mouse, Rat, Mk
Host	Mouse
Clonality	Monoclonal
Calculated MW	59751

Additional Information

Gene ID	498
Other Names	ATP5A; ATP5AL2; ATPM; ATP synthase subunit alpha, mitochondrial
Target/Specificity	Recombinant fusion protein of human ATP5A1 expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200)
Format	Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ATP5F1A (HGNC:823)
Function	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).

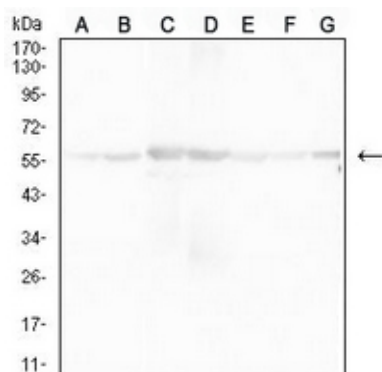
Cellular Location

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).

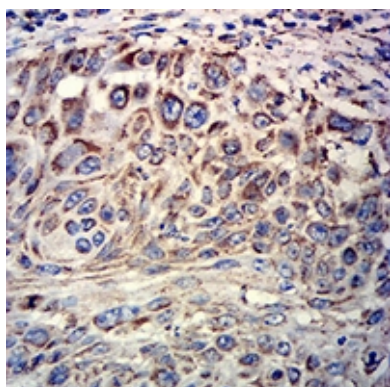
Tissue Location

Fetal lung, heart, liver, gut and kidney. Expressed at higher levels in the fetal brain, retina and spinal cord

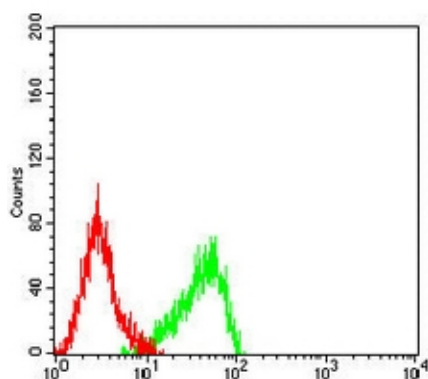
Images



Western blot analysis of ATP5A1 expression in COS7 (A), NIH/3T3 (B), mouse heart (C), rat heart (D), HCT116 (E), Hela (F), HepG2 (G) whole cell lysates. (Predicted band size: 60 kD; Observed band size: 58 kD)



Immunohistochemical analysis of ATP5A1 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Flow cytometric analysis of Jurkat cells using Anti-ATP5A1 Antibody (green) and negative control (red).

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