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ATP5H Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10185c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O75947
Other Accession	P13620, NP_001003785.1, NP_006347.1
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23854
Calculated MW	18491
Antigen Region	68-97

Additional Information

Gene ID	10476
Other Names	ATP synthase subunit d, mitochondrial, ATPase subunit d, ATP5H
Target/Specificity	This ATP5H antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 68-97 amino acids from the Central region of human ATP5H.
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	ATP5H Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5PD (HGNC:845)
Synonyms	ATP5H

Function	Subunit d, 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.

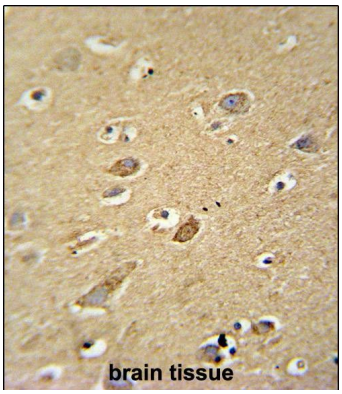
Background

Mitochondrial ATP synthase catalyzes ATP synthesis, utilizing an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. It is composed of two linked multi-subunit complexes: the soluble catalytic core, F1, and the membrane-spanning component, Fo, which comprises the proton channel. The F1 complex consists of 5 different subunits (alpha, beta, gamma, delta, and epsilon) assembled in a ratio of 3 alpha, 3 beta, and a single representative of the other 3. The Fo seems to have nine subunits (a, b, c, d, e, f, g, F6 and 8). This gene encodes the d subunit of the Fo complex. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. In addition, three pseudogenes are located on chromosomes 9, 12 and 15.

References

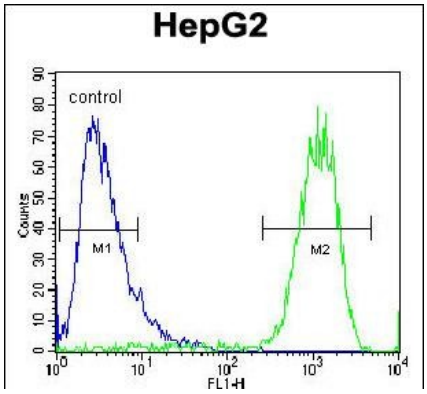
Martins-de-Souza, D., et al. J Psychiatr Res 43(11):978-986(2009) Kim, D.W., et al. Cancer Sci. 99(10):1884-1891(2008) Cross, R.L. Nature 427(6973):407-408(2004) Oster, G., et al. Trends Cell Biol. 13(3):114-121(2003) Leyva, J.A., et al. Mol. Membr. Biol. 20(1):27-33(2003)

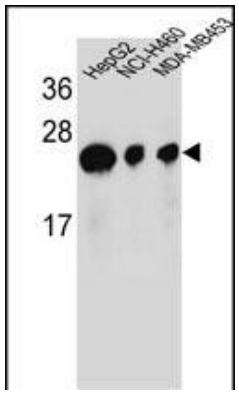
Images



ATP5H antibody (Center) (Cat. #AP10185c) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ATP5H antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

ATP5H Antibody (Center) (Cat. #AP10185c) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.





ATP5H Antibody (Center) (Cat. #AP10185c) western blot analysis in HepG2,NCI-H460,MDA-MB453 cell line lysates (35ug/lane).This demonstrates the ATP5H antibody detected the ATP5H protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.