

Multi-rAb™ ATP5A1 Multi-Recombinant antibody

Catalog Number: RMX00023

Basic Information

Catalog Number:

RMX00023

Concentration:

500 µg/ml

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

BC064562

GeneID (NCBI):

498

UNIPROT ID:

P25705

Full Name:

ATP synthase, H⁺ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle

Calculated MW:

60 kDa

Observed MW:

50-55 kDa

Purification Method:

N/A

Recommended Dilutions:

WB 1:20000-1:100000

IHC 1:500-1:2000

IF/ICC 1:50-1:500

Applications

Tested Applications:

WB, IHC, IF/ICC, ELISA

Species Specificity:

human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HepG2 cells, Jurkat cells, mouse liver tissue, rat liver tissue

IHC : mouse brain tissue,

IF/ICC : HepG2 cells,

Background Information

The ATP5A1 gene encodes the α subunit of mitochondrial ATP synthase which produces ATP from ADP in the presence of a proton gradient across the membrane. The mitochondrial ATP synthase, also known as Complex V or F1FO ATP synthase, is a multi-subunit enzyme complex consisting of two functional domains, the F1-containing the catalytic core and the Fo-containing the membrane proton channel. FO domain has 10 subunits: a, b, c, d, e, f, g, OSCP, A6L, and F6. F1 is composed of subunits α , β , γ , δ , ϵ , and a loosely attached inhibitor protein IF1. Recently defect in ATP5A1 has been linked to the fatal neonatal mitochondrial encephalopathy. ATP5A1 is localized in the mitochondria and anti-ATP5A1 can be used as the loading control for mitochondrial or Complex V proteins. This antibody recognizes the endogenous ATP5A1 protein in lysates from various cell lines and tissues. The predicted MW of ATP5A1 is 60 kDa, while it undergoes the transit peptide cleavage to become a mature form around 50-55 kDa. Several isoforms of ATP5A1 exist due to the alternative splicing.

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

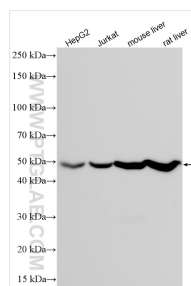
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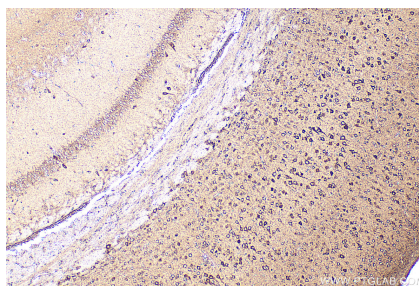
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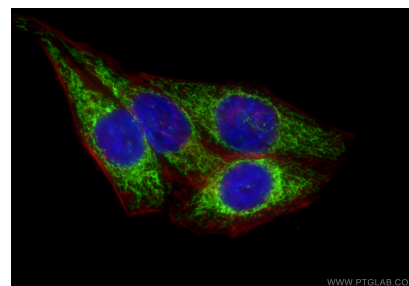
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with RMX00023 (ATP5A1 antibody) at dilution of 1:50000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using RMX00023 (ATP5A1 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using ATP5A1 antibody (RMX00023) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).