

# CoraLite®555-conjugated ATP5A1 Monoclonal antibody

Catalog Number: CL555-66037

1 Publications

## Basic Information

## Catalog Number:

CL555-66037

## Size:

1000 µg/ml

## Source:

Mouse

## Isotype:

IgG2b

## Immunogen Catalog Number:

AG8119

## GenBank Accession Number:

BC064562

## GeneID (NCBI):

498

## UNIPROT ID:

P25705

## Full Name:

ATP synthase, H<sup>+</sup> transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle

## Calculated MW:

60 kDa

## Observed MW:

50 kDa

## Purification Method:

Protein A purification

## CloneNo.:

1B10H3

## Recommended Dilutions:

IF/ICC 1:50-1:500

## Excitation/Emission maxima wavelengths:

557 nm / 570 nm

## Applications

## Tested Applications:

IF/ICC, FC (Intra)

## Species Specificity:

human, mouse, rat, monkey

## Cited Species:

mouse

## Positive Controls:

IF/ICC : HepG2 cells,

## Background Information

The ATP5A1 gene encodes the  $\alpha$  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  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ , 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.

## Notable Publications

Author	Pubmed ID	Journal	Application
Yavuz F Yazicioglu	37095377	Nat Immunol	FC

## Storage

## Storage:

Store at -20°C. Avoid exposure to light. Stable for one year after shipment.

## Storage Buffer:

PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.

Aliquoting is unnecessary for -20°C storage

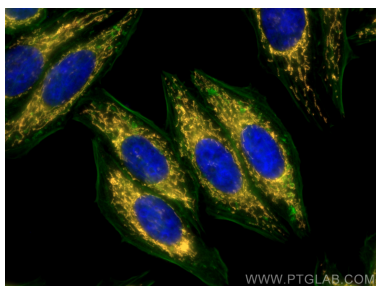
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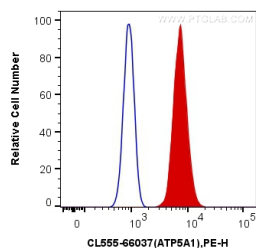
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## Selected Validation Data



Immunofluorescent analysis of (-20°C Methanol) fixed HepG2 cells using CoraLite@555 ATP5A1 antibody (CL555-66037, Clone: 1B10H3 ) at dilution of 1:200, CoraLite@488 Beta Actin antibody (CL488-66009, Clone: 2D4H5, green).



1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.2 ug CoraLite@555 Anti-Human ATP5A1 (CL555-66037, Clone:1B10H3) (red), or 0.2 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).