

# CoraLite® Plus 488-conjugated ATP5A1 Recombinant antibody

Catalog Number: **CL488-82288**

## Basic Information

<b>Catalog Number:</b> CL488-82288	<b>GenBank Accession Number:</b> BC064562	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul , Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 498	<b>CloneNo.:</b> 4O12
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P25705	<b>Recommended Dilutions:</b> IF/ICC 1:200-1:800
<b>Isotype:</b> IgG	<b>Full Name:</b> ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle	<b>Excitation/Emission maxima wavelengths:</b> 493 nm / 522 nm
<b>Immunogen Catalog Number:</b> AG6385	<b>Calculated MW:</b> 60 kDa	
	<b>Observed MW:</b> 50-55 kDa	

## Applications

<b>Tested Applications:</b> IF/ICC, FC (Intra)	<b>Positive Controls:</b> IF/ICC : HeLa cells,
<b>Species Specificity:</b> human, mouse, rat	

## 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.

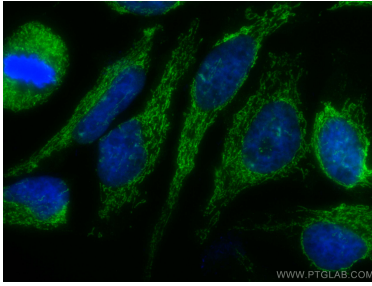
## Storage

**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**

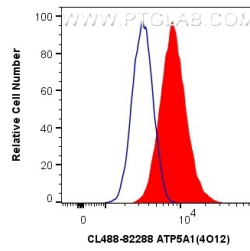
For technical support and original validation data for this product please contact:  
 T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
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## Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using Coralite® Plus 488 ATP5A1 antibody (CL488-82288, Clone: 4O12 ) at dilution of 1:400.



$1 \times 10^6$  HeLa cells were intracellularly stained with 0.8 ug Coralite® Plus 488 Anti-Human ATP5A1 (CL488-82288, Clone:4O12) (red), or 0.8 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).