

## Product datasheet

# Anti-ATP5O antibody [4C11C10D12] ab110276

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### Overview

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<b>Product name</b>	Anti-ATP5O antibody [4C11C10D12]
<b>Description</b>	Mouse monoclonal [4C11C10D12] to ATP5O
<b>Host species</b>	Mouse
<b>Specificity</b>	Antigen retrieval is required for ICC. Immediately before the permeabilization step, heat the coverslips for 10 minutes in 100mM Tris, 5% urea, pH 9.5 at 95°C for 10 minutes.
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, Flow Cyt, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Cow, Human, African green monkey <b>Does not react with:</b> Mouse, Rat
<b>Immunogen</b>	Recombinant full length protein. This information is considered to be commercially sensitive.
<b>Positive control</b>	Isolated mitochondria from Human heart and Bovine heart, Cultured Human embryonic lung-derived fibroblasts (strain MRC5), Human colon tissue, HL-60 cells WB: Recombinant Human ATP5O protein ( <a href="#">ab104549</a> ) cell lysate.
<b>General notes</b>	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a>.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p> <p>Product was previously marketed under the MitoSciences sub-brand.</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.5 Preservative: 0.02% Sodium azide Constituent: HEPES buffered saline

<b>Purity</b>	IgG fraction
<b>Purification notes</b>	Near homogeneity as judged by SDS-PAGE. ab110276 was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	4C11C10D12
<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

## Applications

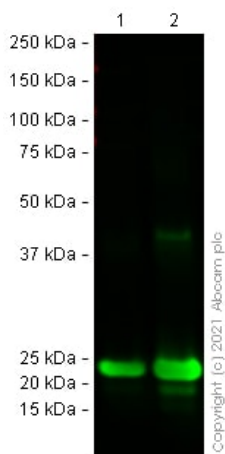
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab110276 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 0.5 - 1 µg/ml. Perform heat-induced antigen-retrieval with 100mM Tris, 5% urea, pH 9.5 at 95°C for 10 minutes immediately before permeabilization.
WB		Use a concentration of 0.5 µg/ml. Predicted molecular weight: 23 kDa.
Flow Cyt		Use a concentration of 1 µg/ml. <b>ab170190</b> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IHC-P		1/500.

## Target

<b>Function</b>	Mitochondrial membrane ATP synthase (F(1)F(0) ATP synthase or Complex V) 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. F-type ATPases consist of two structural domains, F(1) - containing the extramembraneous catalytic core and F(0) - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. 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. Part of the complex F(0) domain and the peripheral 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.
<b>Sequence similarities</b>	Belongs to the ATPase delta chain family.
<b>Cellular localization</b>	Mitochondrion. Mitochondrion inner membrane.

## Images



Western blot - Anti-ATP5O antibody [4C11C10D12] (ab110276)

**All lanes** : Anti-ATP5O antibody [4C11C10D12] (ab110276) at 1  $\mu\text{g/ml}$

**Lane 1** : Recombinant Human ATP5O protein ([ab104549](#)) cell lysate at 0.1  $\mu\text{g}$

**Lane 2** : Recombinant Human ATP5O protein ([ab104549](#)) cell lysate at 0.5  $\mu\text{g}$

Performed under reducing conditions.

**Predicted band size:** 23 kDa

**Observed band size:** 24 kDa

False colour image of Western blot: Anti-ATP5O antibody [4C11C10D12] staining at 1  $\mu\text{g/ml}$ , shown in green. In Western blot, ab110276 was shown to bind specifically to ATP5O. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ([ab216772](#)) at 1/20000 dilution.



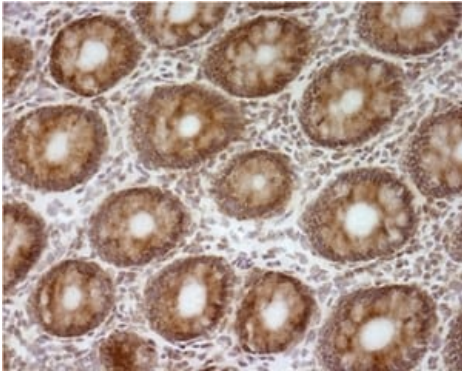
Western blot - Anti-ATP5O antibody [4C11C10D12] (ab110276)

**All lanes** : Anti-ATP5O antibody [4C11C10D12] (ab110276) at 0.5  $\mu\text{g/ml}$

**Lane 1** : Human heart mitochondria at 5  $\mu\text{g}$

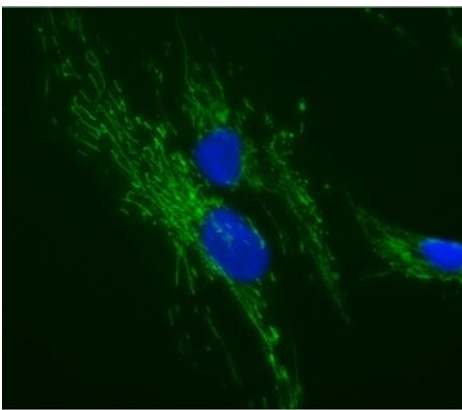
**Lane 2** : Bovine heart mitochondria at 1  $\mu\text{g}$

**Predicted band size:** 23 kDa



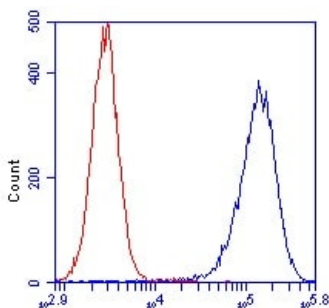
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP5O antibody [4C11C10D12] (ab110276)

Human colon tissue fixed with 4% PFA and antibody detection with ab110276 using the ABC system. ab110276 diluted 1/500 and incubated for 1 hour. Sections were incubated in peroxidase-conjugated rabbit anti-mouse immunoglobulins (diluted 1/100 in 4% BSA in PBST) for 1 hour at room temp.



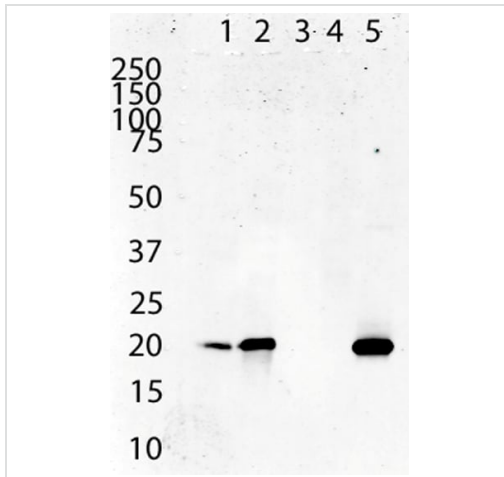
Immunocytochemistry/ Immunofluorescence - Anti-ATP5O antibody [4C11C10D12] (ab110276)

Mitochondrial localization of ATP5O. Cultured Human embryonic lung-derived fibroblasts (strain MRC5) were fixed, treated for heat-induced antigen retrieval, permeabilized and then labeled with ab110276 (0.5  $\mu\text{g}/\text{ml}$ ) followed by an AlexaFluor® 488-conjugated-goat-anti-mouse IgG1 isotype specific secondary antibody (2  $\mu\text{g}/\text{ml}$ ).



Flow Cytometry - Anti-ATP5O antibody [4C11C10D12] (ab110276)

HL-60 cells were stained with 1  $\mu\text{g}/\text{mL}$  ab110276 (blue) or an equal amount of an isotype control antibody (red) and analyzed by flow cytometry.



Western blot - Anti-ATP5O antibody [4C11C10D12]  
(ab110276)

**All lanes :** Anti-ATP5O antibody [4C11C10D12] (ab110276) at 1  $\mu$ g/ml

**Lane 1 :** HDFn (human) cell lysates at 20  $\mu$ g

**Lane 2 :** COS7 (monkey) cell lysates at 20  $\mu$ g

**Lane 3 :** H4IIE (rat) cell lysates at 20  $\mu$ g

**Lane 4 :** MEF (mouse) cell lysates at 20  $\mu$ g

**Lane 5 :** bovine heart mitochondria lysates at 5  $\mu$ g

**Predicted band size:** 23 kDa

Secondary antibody: Goat-Anti-Mouse-IR800 1:4000

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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