

Product datasheet

Anti-MTCO2 antibody [12C4F12] ab110258

★★★★★ 15 Abreviews 142 References 4 Images

Overview

Product name	Anti-MTCO2 antibody [12C4F12]
Description	Mouse monoclonal [12C4F12] to MTCO2
Host species	Mouse
Tested applications	Suitable for: IHC-P, IHC-Fr, WB, ICC/IF, Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Full length native protein (purified). This information is considered to be commercially sensitive.
Positive control	WB: Isolated mitochondria from human heart. ICC/IF: Cultured human embryonic lung derived fibroblasts. Flow Cyt: HeLa cells.
General notes	<p>This antibody clone is manufactured by Abcam.</p> <p>Product was previously marketed under the MitoSciences sub-brand.</p> <p>If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: HEPES buffered saline
Purity	IgG fraction
Purification notes	ab110258 was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation. ab110258 was judged near homogeneity by SDS-PAGE.
Clonality	Monoclonal
Clone number	12C4F12
Isotype	IgG2a
Light chain type	kappa

Applications

Our [Abpromise guarantee](#) covers the use of **ab110258** 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
IHC-P	★★★★★	1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IHC-Fr	★★★★★	Use at an assay dependent concentration.
WB	★★★★★	Use a concentration of 1 µg/ml. Predicted molecular weight: 26 kDa.
ICC/IF	★★★★★	Use a concentration of 5 - 10 µg/ml. (heat-induced antigen-retrieval improves signal)
Flow Cyt		Use a concentration of 1 µg/ml. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target

Function	Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Subunits 1-3 form the functional core of the enzyme complex. Subunit 2 transfers the electrons from cytochrome c via its binuclear copper A center to the bimetallic center of the catalytic subunit 1.
Involvement in disease	Defects in MT-CO2 are a cause of mitochondrial complex IV deficiency (MT-C4D) [MIM:220110]; also known as cytochrome c oxidase deficiency. A disorder of the mitochondrial respiratory chain with heterogeneous clinical manifestations, ranging from isolated myopathy to severe multisystem disease affecting several tissues and organs. Features include hypertrophic cardiomyopathy, hepatomegaly and liver dysfunction, hypotonia, muscle weakness, exercise intolerance, developmental delay, delayed motor development and mental retardation. A subset of patients manifest Leigh syndrome.
Sequence similarities	Belongs to the cytochrome c oxidase subunit 2 family.
Cellular localization	Mitochondrion inner membrane.

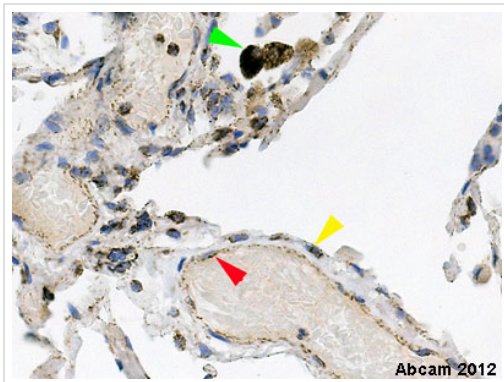
Images



Western blot - Anti-MTCO2 antibody [12C4F12] (ab110258)

Anti-MTCO2 antibody [12C4F12] (ab110258) at 1 µg/ml + Human heart tissue lysate - mitochondrial extract (ab110337) at 5 µg

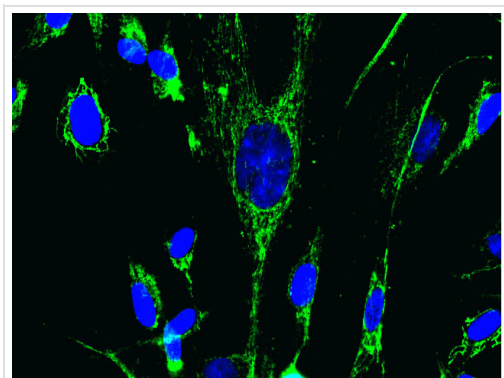
Predicted band size: 26 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MTCO2 antibody [12C4F12] (ab110258)

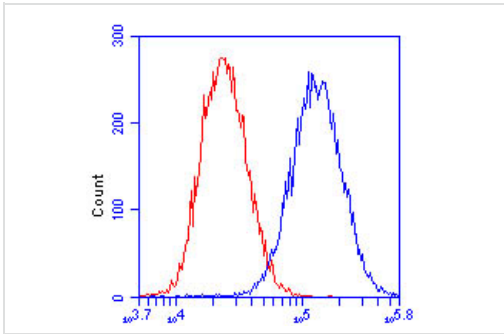
This image is courtesy of an Abreview submitted by Carl Hobbs

ab110258 staining human lung sections by IHC-P. The tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed with citric acid pH 6. Blocking of the sample was done with 1% BSA for 10 minutes at 21°C, followed by staining with ab110258 at 1/250 in TBS/BSA/azide for 2h at 21°C. A biotinylated goat anti-mouse polyclonal antibody at 1/200 was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-MTCO2 antibody [12C4F12] (ab110258)

Immunocytochemistry/Immunofluorescence analysis of human embryonic lung derived fibroblasts (MRC5) labelling Cytochrome C oxidase subunit II with ab110258 at 5 µg/ml. An Alexa Fluor[®] 488-conjugated goat anti-mouse IgG2a isotype specific secondary antibody was used at 2 µg/ml.



Flow Cytometry - Anti-MTCO2 antibody [12C4F12]
(ab110258)

ab110258, at 1 µg/ml, staining Cytochrome C oxidase subunit II in HeLa cells by Flow Cytometry (Blue).

An isotype control antibody, at 1 µg/ml, staining in HeLa cells (Red).

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