abcam

Product datasheet

Anti-CPT2 antibody [1C2AE6] ab110293

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Overview

Product name	Anti-CPT2 antibody [1C2AE6]
Description	Mouse monoclonal [1C2AE6] to CPT2
Host species	Mouse
Tested applications	**Suitable for:** IHC-P, ICC/IF, Flow Cyt, IP **Unsuitable for:** WB
Species reactivity	**Reacts with:** Mouse, Rat, Cow, Human
Immunogen	Synthetic peptide. This information is considered to be commercially sensitive.
Positive control	HepG2 cells. HL-60 cells. Human normal colon FFPE tissue
General notes	This antibody clone is manufactured by Abcam. Product was previously marketed under the MitoSciences sub-brand. 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.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: HEPES buffered saline
Purity	Ammonium Sulphate Precipitation
Purification notes	Purity near homogeneity as judge by SDS-PAGE. The antibody was produced in-vitro using hybridomas grown in serum-free medium and then purified by biochemical fractionation.
Clonality	Monoclonal
Clone number	1C2AE6
Isotype	IgG1
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab110293** 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		Use a concentration of 10 µg/ml.
ICC/IF		Use a concentration of 4 µg/ml.
Flow Cyt		Use a concentration of 1 µg/ml. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IP		Use at an assay dependent concentration.

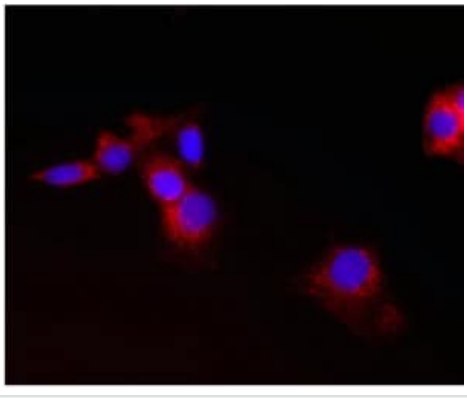
Application notes	Is unsuitable for WB.

Target

Pathway	Lipid metabolism; fatty acid beta-oxidation.
Involvement in disease	Defects in CPT2 are the cause of carnitine palmitoyltransferase 2 deficiency (CPT2D) [MIM:255110, 600649]; also known as CPT-II deficiency or CPT2 deficiency. CPT2D is an autosomal recessive disorder characterized by recurrent myoglobinuria, episodes of muscle pain, stiffness, and rhabdomyolysis. These symptoms are triggered by prolonged exercise, fasting or viral infection and patients are usually young adults. In addition to this classical, late-onset, muscular type, a hepatic or hepatocardiomuscular form has been reported in infants. Clinical pictures in these children or neonates include hypoketotic hypoglycemia, liver dysfunction, cardiomyopathy and sudden death. Defects in CPT2 are the cause of carnitine palmitoyltransferase 2 deficiency, lethal neonatal

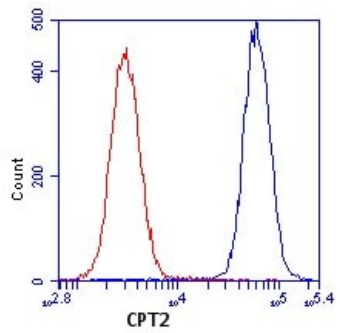
	(CPT2D-LN) [MIM:608836]; also known as lethal neonatal CPT-II deficiency. It is a lethal neonatal form of CPT2D. This rarely presentation is antenatal with cerebral periventricular cysts and cystic dysplastic kidneys. The clinical variability of the disease is likely attributed to the variable residual enzymatic activity.
Sequence similarities	Belongs to the carnitine/choline acetyltransferase family.
Cellular localization	Mitochondrion inner membrane.

Images



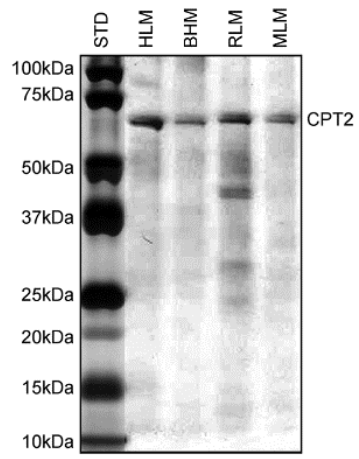
Immunocytochemistry/ Immunofluorescence - Anti-CPT2 antibody [1C2AE6] (ab110293)

Immunocytochemistry image of ab110293 stained Human HepG2 cells. The cells were paraformaldehyde fixed (4%, 20 min) and Triton X-100 permeabilized (0.1%, 15 min). The cells were incubated with ab110293 at 4 µg/ml for 2h at room temperature, or over night at 4°C. The secondary antibody was (red) Alexa Fluor® 594 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. 10% Goat serum was used as the blocking agent for all blocking steps. DAPI was used to stain the cell nuclei (blue). Target protein locates mainly in mitochondria.



Flow Cytometry - Anti-CPT2 antibody [1C2AE6] (ab110293)

HL-60 cells were stained with 1 µg/mL of ab110293 (blue) or an equal amount of an isotype control antibody (red) and analyzed by flow cytometry.



Immunoprecipitation - Anti-CPT2 antibody [1C2AE6] (ab110293)

SDS-PAGE analysis of IP samples. As an IP antibody, ab110293 works with human, bovine, rat, and mouse samples.

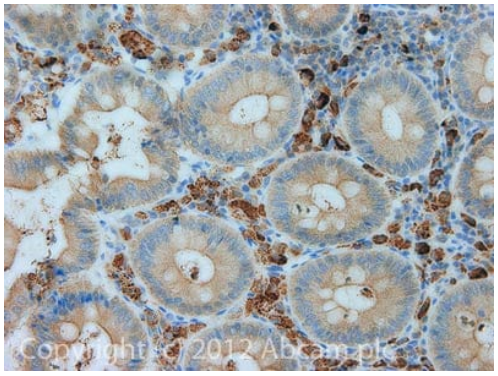
Lane STD: Molecular weight ladder

Lane HLM: Human liver mitochondria

Lane BHM: Bovine heart mitochondria

Lane RLM: Rat liver mitochondria

Lane MLM: Mouse liver mitochondria



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [1C2AE6] (ab110293)

IHC image of CPT2 staining in Human normal colon formalin fixed paraffin embedded tissue section, performed on a Leica BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab110293, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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