abcam

Product datasheet

Anti-CPT2 antibody [EPR13626] - BSA and Azide free ab231162

KO VALIDATED Recombinant RabMAb

10 Images

Overview

Product name	Anti-CPT2 antibody [EPR13626] - BSA and Azide free
Description	Rabbit monoclonal [EPR13626] to CPT2 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HAP1 and HeLa cell lysates, human fetal liver, human fetal kidney, mouse heart, mouse kidney, rat kidney and rat liver tissue lysates. IHC-P: Human liver, human skeletal muscle, mouse kidney, and rat colon tissues. ICC/IF: MCF7 cells.
General notes	ab231162 is the carrier-free version of **ab181114**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2

	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR13626
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab231162 in the following tested applications.

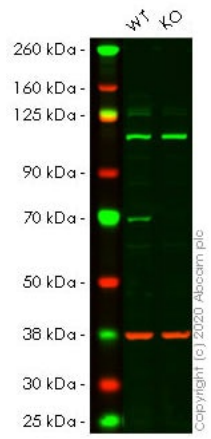
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.
WB		Use at an assay dependent concentration. Detects a band of approximately 67 kDa (predicted molecular weight: 74 kDa).
ICC/IF		Use at an assay dependent concentration.

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



Western blot - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

All lanes : Anti-CPT2 antibody [EPR13626] - C-terminal (**ab181114**) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : CPT2 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

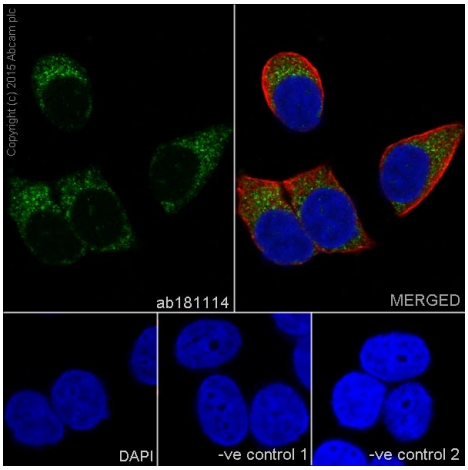
Performed under reducing conditions.

Predicted band size: 74 kDa
Observed band size: 74 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab181114**).

Lanes 1- 2: Merged signal (red and green). Green - **ab181114** observed at 74 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) observed at 37 kDa.

ab181114 was shown to react with CPT2/CPT1 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab265931** (knockout cell lysate **ab257180**) was used. Wild-type HeLa and CPT2 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. **ab181114** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

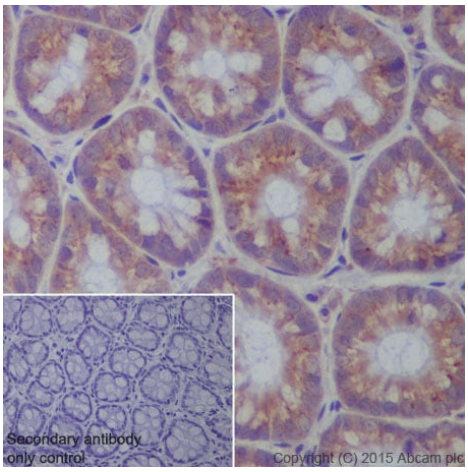


Immunocytochemistry/ Immunofluorescence - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunocytochemistry/Immunofluorescence analysis of MCF-7 (human breast carcinoma) cells labelling CPT2 with purified **ab181114** at 1/100. Cells were fixed with 100% methanol and permeabilized with 0.1% Triton X-100. **ab150077**, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. The cells were co-stained with **ab7291**, a mouse anti-tubulin antibody (1/1000) using **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) as the secondary. Nuclei couterstained with DAPI (blue).

For negative control 1, rabbit primary antibody was used, followed by anti-mouse secondary antibody (**ab150120**). For negative control 2, mouse primary antibody (**ab7291**) was used followed by anti-rabbit secondary antibody (**ab150077**).

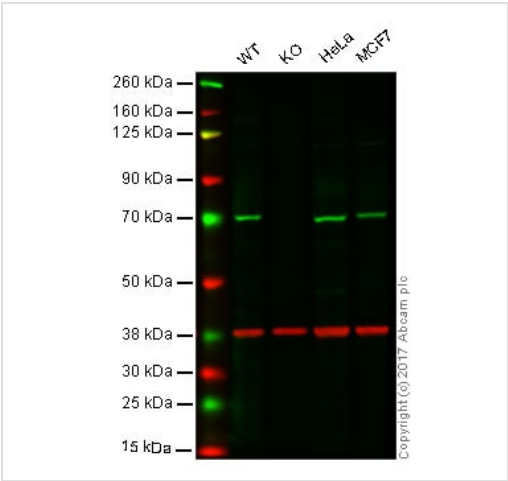
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunohistochemical analysis of paraffin embedded rat colon tissue section labelling CPT2 with purified **ab181114** at dilution of 1/50. The secondary antibody used was HRP-conjugated Goat Anti-Rabbit IgG H&L (**ab97051**) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Western blot - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

All lanes : Anti-CPT2 antibody [EPR13626] - C-terminal (**ab181114**) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : CPT2 knockout HAP1 whole cell lysate
Lane 3 : HeLa whole cell lysate
Lane 4 : MCF7 whole cell lysate

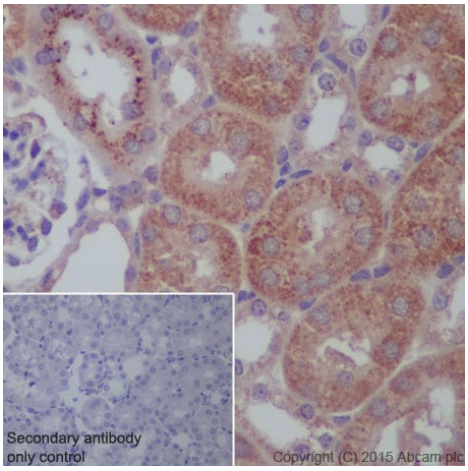
Lysates/proteins at 20 µg per lane.

Predicted band size: 74 kDa

This WB data was generated using the same anti-CPT2 antibody clone, EPR13626, in a different buffer formulation (cat# **ab181114**).

Lanes 1 - 4: Merged signal (red and green). Green - **ab181114** observed at 70 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

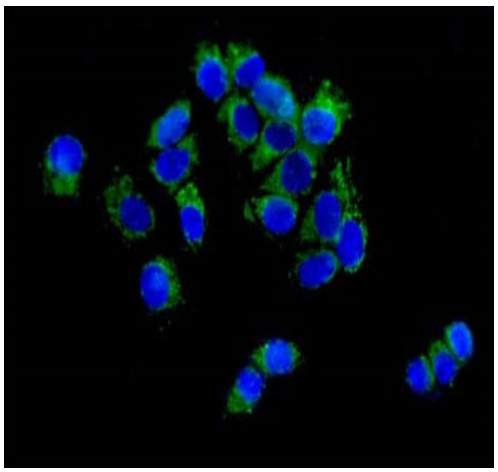
ab181114 was shown to specifically react with CPT2 in wild-type HAP1 cells. No band was observed when CPT2 knockout samples were examined. Wild-type and CPT2/CPT1 knockout samples were subjected to SDS-PAGE. Ab181114 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunohistochemical analysis of paraffin embedded mouse kidney tissue section labelling CPT2 with purified **ab181114** at dilution of 1/50. The secondary antibody used was HRP-conjugated Goat Anti-Rabbit IgG H&L (**ab97051**) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.

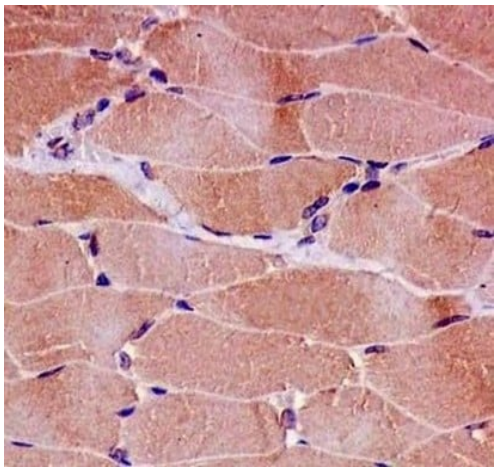
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Immunocytochemistry/ Immunofluorescence - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunofluorescent analysis of 4% paraformaldehyde-fixed MCF7 cells labeling CPT2 with unpurified **ab181114** at 1/100 dilution, followed by Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody at 1/200 dilution. Counter stained with Dapi.

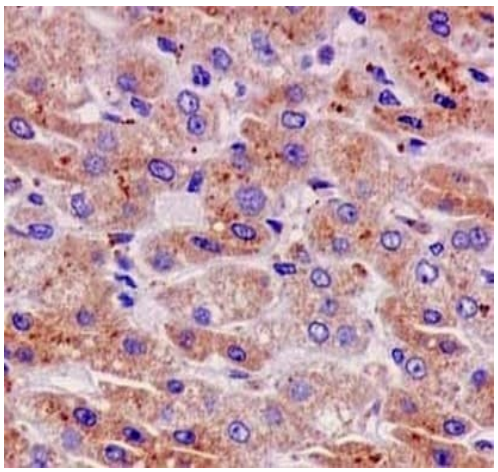
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labeling CPT2 with unpurified **ab181114** at 1/100 dilution, followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.

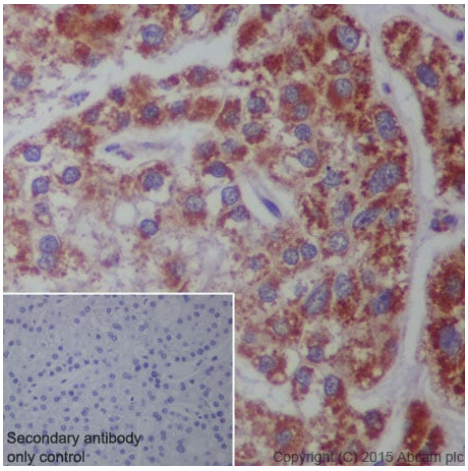
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling CPT2 with unpurified **ab181114** at 1/100 dilution, followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.

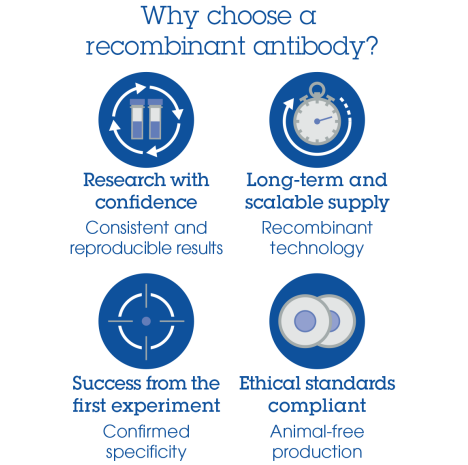
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab181114**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

This IHC data was generated using the same anti-CPT2 antibody clone, EPR13626, in a different buffer formulation (cat# **ab181114**).

Immunohistochemical analysis of paraffin embedded human liver carcinoma tissue section labelling CPT2/CPT1 with purified **ab181114** at dilution of 1/50. The secondary antibody used was Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**), at a dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Anti-CPT2 antibody [EPR13626] - BSA and Azide free (ab231162)

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