abcam

Product datasheet

Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free ab235841

KO VALIDATED Recombinant RabMAb

2 Abreviews 2 References 11 Images

Overview

Product name	Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free
Description	Rabbit monoclonal [EPR21843-71-2F] to CPT1A - BSA and Azide free
Host species	Rabbit
Specificity	We detected weak cross-reactivity with CPT1B with the recombinant protein only. Our WB images were generated by testing unboiled samples only.
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Wild-type HAP1 whole cell lysate; HEK-293T, HeLa, SK-OV-3, C6 and MCF7 whole cell lysates; Mouse, rat and human kidney lysates. IHC-P: Human kidney, ovarian carcinoma and heart tissues; Mouse and rat kidney tissues. Flow Cyt (intra): SK-OV-3 cells.
General notes	ab235841 is the carrier-free version of **ab234111**. 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. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production

For more information **see here**.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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	EPR21843-71-2F
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab235841 in the following tested applications.

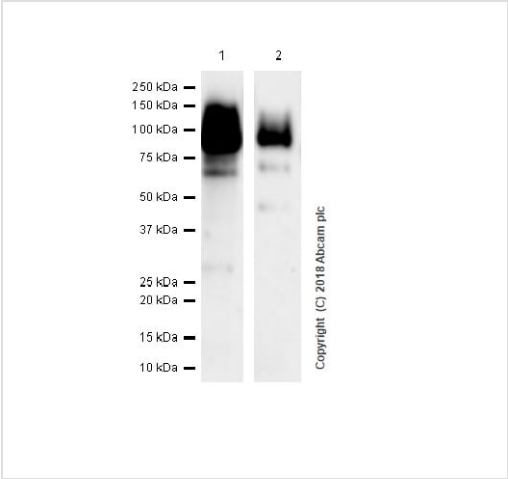
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 88 kDa (predicted molecular weight: 88 kDa).
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.

Target

Tissue specificity	Strong expression in kidney and heart, and lower in liver and skeletal muscle.
Pathway	Lipid metabolism; fatty acid beta-oxidation.
Involvement in disease	Defects in CPT1A are the cause of carnitine palmitoyltransferase 1A deficiency (CPT1AD) [MIM:255120]; also known as CPT-I deficiency or CPT1A deficiency. CPT1AD is a rare autosomal recessive metabolic disorder of long-chain fatty acid oxidation characterized by severe episodes of hypoketotic hypoglycemia usually occurring after fasting or illness. Onset is in infancy or early childhood.
Sequence similarities	Belongs to the carnitine/choline acetyltransferase family.
Cellular localization	Mitochondrion outer membrane.

Images



Western blot - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

All lanes : Anti-CPT1A antibody [EPR21843-71-2F] (**ab234111**) at 1/1000 dilution

Lane 1 : Human kidney tissue lysate
Lane 2 : Human liver tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution

Predicted band size: 88 kDa
Observed band size: 88 kDa

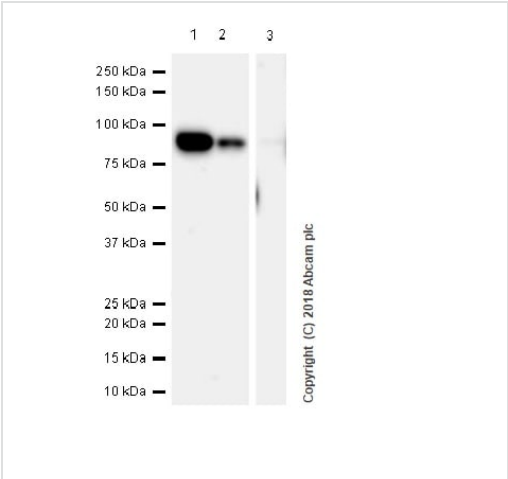
Exposure time: 92 seconds

This data was developed using the same antibody clone in a different buffer formulation (**ab234111**).

Blocking and diluting buffer: 5% NFDM /TBST

CPT1A is strongly expressed in kidney and heart, and lower in liver and skeletal muscle.

We recommend loading higher amount of lysate or using lower antibody dilution to detect signal in liver lysate.



Western blot - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

All lanes : Anti-CPT1A antibody [EPR21843-71-2F] (**ab234111**) at 1/1000 dilution

Lane 1 : MCF7 (Human breast adenocarcinoma epithelial cell) cell lysate
Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) cell lysate
Lane 3 : HepG2 (Human hepatocellular carcinoma epithelial cell) cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000

dilution

Predicted band size: 88 kDa
Observed band size: 88 kDa

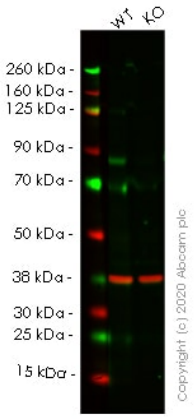
Exposure time: 180 seconds

This data was developed using the same antibody clone in a different buffer formulation (**ab234111**).

Blocking and diluting buffer: 5% NFDM/TBST

CPT1A is strongly expressed in kidney and heart, and lower in liver and skeletal muscle.

We recommend loading higher amount of lysate or using lower antibody dilution to detect signal in HepG2 lysate.



Western blot - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

All lanes : Anti-CPT1A antibody [EPR21843-71-2F] (**ab234111**) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate
Lane 2 : CPT1A knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

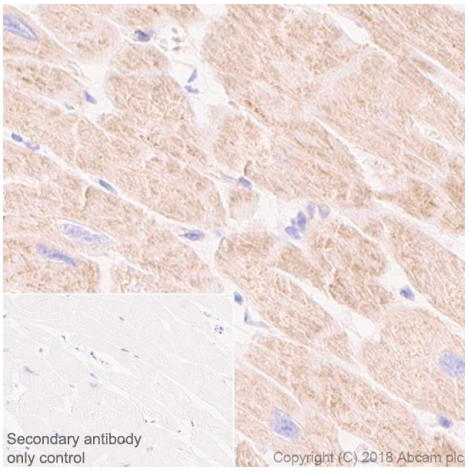
Predicted band size: 88 kDa
Observed band size: 88 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab234111**).

Lanes 1- 2: Merged signal (red and green). Green - **ab234111** observed at 88 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) observed at 37 kDa.

ab234111 was shown to react with CPT1A in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line **ab266319** (knockout cell lysate **ab256880**) was used. Wild-type HEK-293T and CPT1A knockout HEK-293T 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.

ab234111 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.



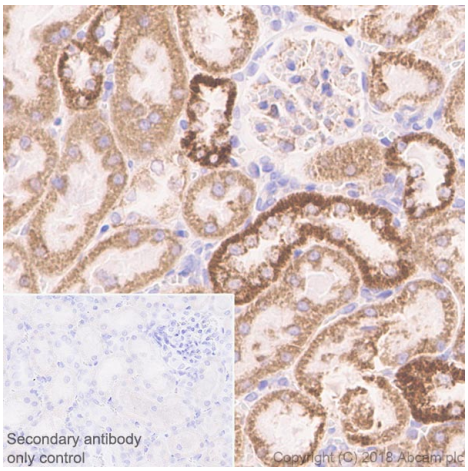
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Immunohistochemical analysis of paraffin-embedded human heart tissue labeling CPT1A with **ab234111** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining on human heart is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



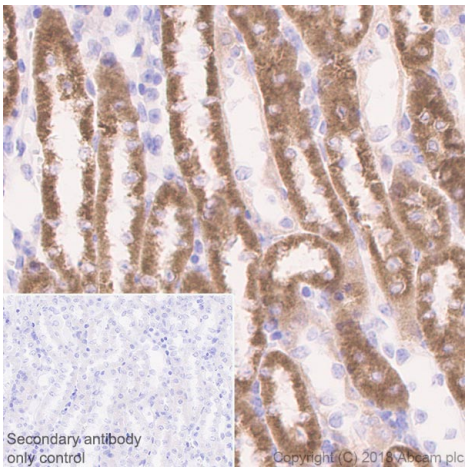
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling CPT1A with **ab234111** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Granular cytoplasmic staining in rat kidney (PMID: 18192268; PMID: 28956034; PMID: 15363638; PMID: 8679700) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



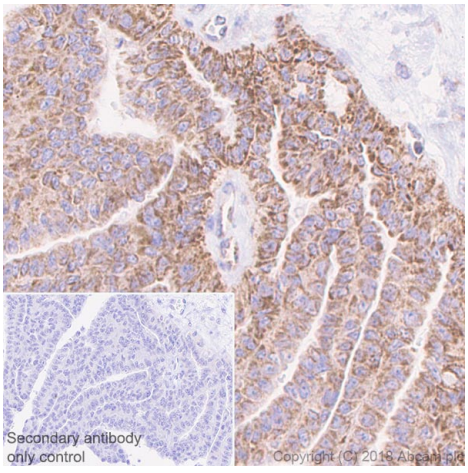
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling CPT1A with **ab234111** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in mouse kidney (PMID: 18192268; PMID: 28956034; PMID: 15363638; PMID: 8679700) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



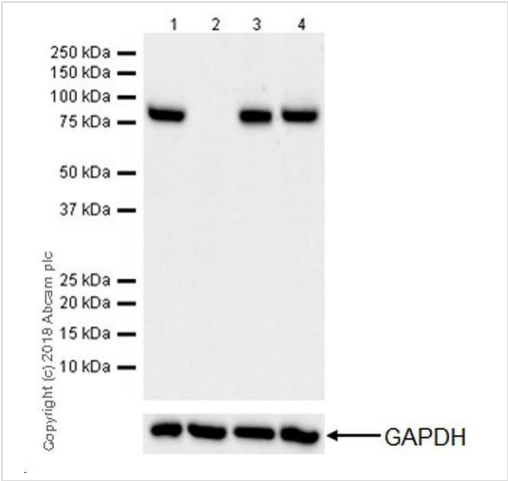
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma tissue labeling CPT1A with **ab234111** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Granular cytoplasmic staining in human ovarian carcinoma (PMID: 26716645) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

All lanes : Anti-CPT1A antibody [EPR21843-71-2F] (**ab234111**) at 1/1000 dilution

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**)

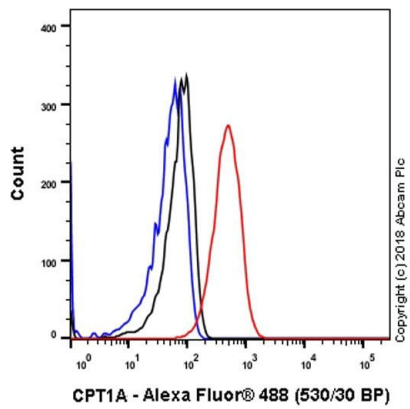
Lysates/proteins at 1/100000 dilution per lane.

Predicted band size: 88 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab234111**).

Blocking/Dilution buffer: 5% NFDM/TBST.

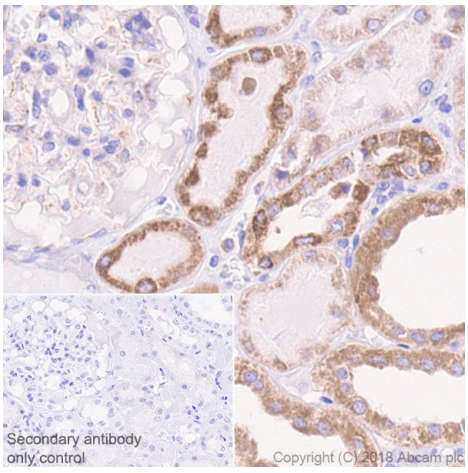
ab234111 was shown to specifically react with CPT1A in wild-type HAP1 cells as signal was lost in CPT1A knockout cells. Wild-type and CPT1A knockout samples were subjected to SDS-PAGE. **ab234111** and **ab181602** (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100,000 dilution for 1 hour at room temperature before imaging. The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument using the ECL technique.



Flow Cytometry (Intracellular) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized SK-OV-3 (human ovarian cancer cell line) cell line labeling CPT1A with **ab234111** at 1/50 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).



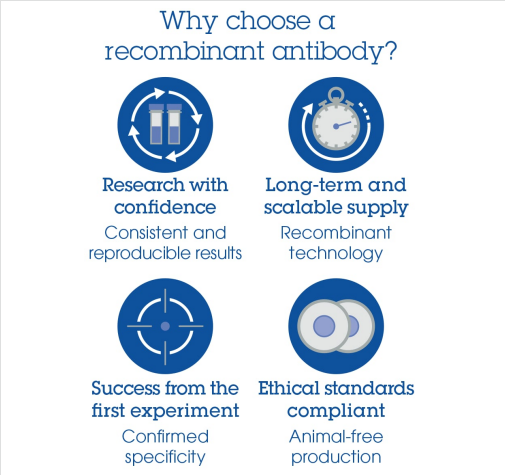
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling CPT1A with **ab234111** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Granular cytoplasmic staining in human kidney (PMID: 18192268; PMID: 28956034; PMID: 15363638; PMID: 8679700) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab234111**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Anti-CPT1A antibody [EPR21843-71-2F] - BSA and Azide free (ab235841)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors