

CPT1C Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11459b

Specification

CPT1C Antibody (C-term) - Product Information

Application	WB, FC,E
Primary Accession	Q8TCG5
Other Accession	NP_001129524.1 , NP_689572.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	752-782

CPT1C Antibody (C-term) - Additional Information

Gene ID 126129

Other Names

Carnitine O-palmitoyltransferase 1, brain isoform, CPT1-B, CPT IC, Carnitine O-palmitoyltransferase I, brain isoform, CPTI-B, Carnitine palmitoyltransferase 1C, CPT1C, CATL1

Target/Specificity

This CPT1C antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 752-782 amino acids from the C-terminal region of human CPT1C.

Dilution

WB~~1:1000

FC~~1:10~50

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CPT1C Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CPT1C Antibody (C-term) - Protein Information

Name CPT1C ([HGNC:18540](#))

Synonyms CATL1

Function Palmitoyl thioesterase specifically expressed in the endoplasmic reticulum of neurons. Modulates the trafficking of the glutamate receptor, AMPAR, to plasma membrane through depalmitoylation of GRIA1 (PubMed:[30135643](#)). Also regulates AMPR trafficking through the regulation of SACM1L phosphatidylinositol-3-phosphatase activity by interaction in a malonyl-CoA dependent manner (By similarity). Binds malonyl-CoA and couples malonyl-CoA to ceramide levels, necessary for proper spine maturation and contributing to systemic energy homeostasis and appetite control (PubMed:[16651524](#)). Binds to palmitoyl-CoA, but does not have carnitine palmitoyltransferase 1 catalytic activity or at very low levels (PubMed:[25751282](#), PubMed:[30135643](#)).

Cellular Location

Cell projection, dendrite. Cell projection, axon. Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=Localized in the soma and dendritic and axonal projections.

Tissue Location

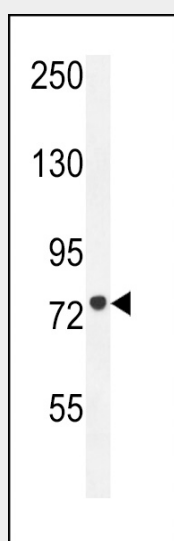
Expressed predominantly in brain and testis. Expressed in motor neurons.

CPT1C Antibody (C-term) - Protocols

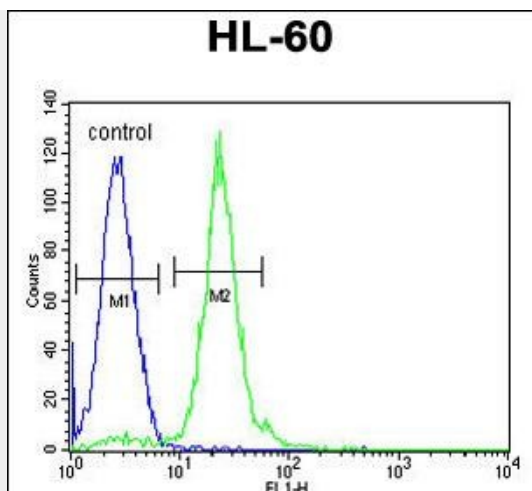
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CPT1C Antibody (C-term) - Images



CPT1C Antibody (C-term) (Cat. #AP11459b) western blot analysis in HL-60 cell line lysates (35ug/lane). This demonstrates the CPT1C antibody detected the CPT1C protein (arrow).



CPT1C Antibody (C-term) (Cat. #AP11459b) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CPT1C Antibody (C-term) - Background

The Cpt1 family of proteins are outer mitochondrial membrane proteins that regulate the entry into, and oxidation of fatty acids by, mitochondria. Malonyl-CoA, an intermediate in fatty acid synthesis, has been implicated as a regulatory component of the energy sensing system that feeds into hypothalamic neurons to impart energy homeostasis. Malonyl-CoA levels in the hypothalamus are dynamically regulated by fasting and feeding, altering subsequent feeding behaviour. Cpt1c, the brain-specific carnitine O-palmitoyltransferase 1, is thought to relay information about malonyl-CoA levels in hypothalamic neurons that express orexigenic and anorexigenic neuropeptides that regulate food intake and peripheral energy expenditure. Unlike other Cpt1 proteins, Cpt1c binds Malonyl-CoA but does not catalyse the transfer of the malonyl group from CoA to carnitine.

CPT1C Antibody (C-term) - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
Roomets, E., et al. Invest. Ophthalmol. Vis. Sci. 49(4):1660-1664(2008)
Sierra, A.Y., et al. J. Biol. Chem. 283(11):6878-6885(2008)
Price, N., et al. Genomics 80(4):433-442(2002)