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CPT1C Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP11459b

Specification

CPT1C Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q8TCG5

CPT1C Antibody (C-term) Blocking peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CPT1C Antibody (C-term) Blocking peptide - 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) Blocking peptide - Protocols

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

- Blocking Peptides

CPT1C Antibody (C-term) Blocking peptide - Images

CPT1C Antibody (C-term) Blocking peptide - 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 hypothalmic 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) Blocking peptide - 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)