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Cpt1c Rabbit pAb

Catalog # AP97773

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q8TCG5
Other Accession	Q8TCG5
Predicted	Rat, Pig, Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	90989
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Cpt1c
Epitope Specificity	121-170/803
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the carnitine/choline acetyltransferase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	126129
Other Names	CATL1; CPT I-C; CPT1-B; CPT1P; CPTI-B; CPTIC; SPG73; 6530437J22Rik; 9630004I06Rik; CPT IC; CPT1C_HUMAN; CPT1C; Carnitine O-palmitoyltransferase 1, brain isoform (CPTI-B); Carnitine palmitoyltransferase 1C; Carnitine palmitoyltransferase I (CPT I-C); 3.1.2.22; CPT1C_MOUSE; CPT1C_RAT; Carnitine O-palmitoyltransferase 1, brain isoform (CPT1-B); Carnitine O-palmitoyltransferase I, brain isoform (CPTI-B)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.