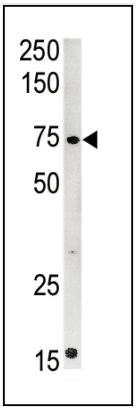
CPT2 Antibody – Rabbit Polyclonal

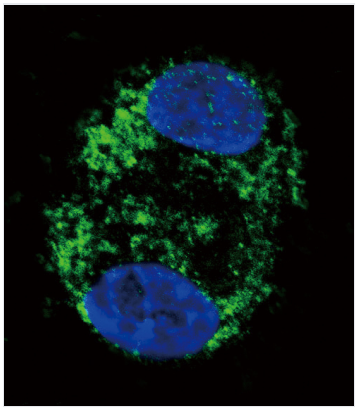
PRODUCT OVERVIEW

Product Name	CPT2, Polyclonal Antibody
Full Product Name	CPT2 Antibody (C-term)
Product Gene Name	anti-CPT2 antibody
Product Synonym Names	Carnitine O-palmitoyltransferase 2; mitochondrial; Carnitine palmitoyltransferase II; CPT II; CPT2; CPT1
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human, mouse
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 2 (lot specific)
Specificity	This CPT2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 431-462 amino acids from the C-terminal region of human CPT2.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	CPT2 peptide (MBS9224705) is used for blocking the activity of CPT2 antibody (MBS9213420)
Molecular Weight	73777
Immunogen Sequence Positions	431-462
OMIM	255110
3D Structure	ModBase 3D Structure for P23786
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-CPT2 antibody	Cancer; Cardiovascular; Metabolism; Signal transduction
Applications Tested/Suitable for anti-CPT2 antibody	Western Blot (WB), ELISA (EIA), Immunofluorescence (IF)
Application Notes for anti-CPT2 antibody	WB~~1:1000
Related Product Information for anti-CPT2 antibody	Carnitine palmitoyltransferase II precursor (CPT2) is a nuclear protein which is transported to the mitochondrial inner membrane. CPT2 together with carnitine palmitoyltransferase I oxidizes long-chain fatty acids in the mitochondria. Defects in this gene are associated with mitochondrial long-chain fatty-acid (LCFA) oxidation disorders.

Product References and Citations for anti-CPT2 antibody	Deschauer, M., et al., Mol. Genet. Metab. 75(2):181-185 (2002). Haap, M., et al., J. Clin. Endocrinol. Metab. 87(5):2139-2143 (2002). Britton, C.H., et al., Proc. Natl. Acad. Sci. U.S.A. 92(6):1984-1988 (1995). Verderio, E., et al., Hum. Mol. Genet. 4(1):19-29 (1995). Montermini, L., et al., Biochim. Biophys. Acta 1219(1):237-240 (1994).
Other Notes	Small volumes of anti-CPT2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CPT2 purchase	MBS9213420 is an antibody targeting CPT2. Also known as CPT2 Antibody (C-term). Reactive in Human, mouse. Host: Rabbit.



Western Blot (WB) of anti-CPT2 antibody
Western blot analysis of anti-CPT2 Pab in mouse kidney tissue lysate (35ug/lane). CPT2(arrow) was detected using the purified Pab.



Immunofluorescence (IF) of anti-CPT2 antibody
Confocal immunofluorescent analysis of CPT2 Antibody (C-term) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CPT2. It may not necessarily be applicable to this product.

NCBI GI #	4503023
NCBI GeneID	1376
NCBI Accession #	NP_000089.1
UniProt Primary Accession #	P23786
UniProt Secondary Accession #	Q5SW68; Q9BQ26; B2R6S0
UniProt Related Accession #	P23786
GenBank Nucleotide #	NM_000098.2
NCBI Official Full Name	carnitine O-palmitoyltransferase 2, mitochondrial
NCBI Official Synonym Full Names	carnitine palmitoyltransferase 2
NCBI Official Symbol	CPT2
NCBI Official Synonym Symbols	CPT1; IIAE4; CPTASE
UniProt Protein Name	Carnitine O-palmitoyltransferase 2, mitochondrial
UniProt Synonym Protein Names	Carnitine palmitoyltransferase II; CPT II
Protein Family	Carnitine O-palmitoyltransferase
UniProt Gene Name	CPT2
UniProt Synonym Gene Names	CPT1; CPT II

UniProt Entry Name	CPT2_HUMAN
NCBI Protein Information	carnitine O-palmitoyltransferase 2, mitochondrial
NCBI Summary for CPT2	The protein encoded by this gene is a nuclear protein which is transported to the mitochondrial inner membrane. Together with carnitine palmitoyltransferase I, the encoded protein oxidizes long-chain fatty acids in the mitochondria. Defects in this gene are associated with mitochondrial long-chain fatty-acid (LCFA) oxidation disorders. [provided by RefSeq, Jul 2008]
UniProt Comments for CPT2	CPT2: Defects in CPT2 are the cause of carnitine palmitoyltransferase 2 deficiency late-onset (CPT2D); 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 infantile (CPT2DI). A disorder of mitochondrial long-chain fatty acid oxidation characterized by hepatic or hepato-cardio-muscular manifestations with onset in infancy. Clinical features include hypoketotic hypoglycemia, lethargy, seizures, hepatomegaly, liver dysfunction, cardiomegaly and dilated cardiomyopathy. Defects in CPT2 are the cause of carnitine palmitoyltransferase 2 deficiency lethal neonatal (CPT2D-LN); 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. Defects in CPT2 are a cause of susceptibility to encephalopathy acute infection-induced type 4 (IIAE4). A severe neurologic complication of an infection. It manifests within days in otherwise healthy children after common viral infections, without evidence of viral infection of the brain or inflammatory cell infiltration. In affected children, high-grade fever is accompanied within 12 to 48 hours by febrile convulsions, often leading to coma, multiple-organ failure, brain edema, and high morbidity and mortality. The infections are usually viral, particularly influenza, although other viruses and even mycoplasma have been found to cause the disorder. Polymorphic variants in CPT2 can confer susceptibility to infection-induced encepalopathy. These variants do not cause classical carnitine palmitoyltransferase 2 deficiency, and patients harboring any of them are asymptomatic most of the time. However, they are prone to viral infection (high fever)-related encephalopathy (PubMed:21697855). Belongs to the carnitine/choline acetyltransferase family. Protein type: EC 2.3.1.21; Transferase; Mitochondrial; Lipid Metabolism - fatty acid Chromosomal Location of Human Ortholog: 1p32 Cellular Component: nucleoplasm; mitochondrion; mitochondrial inner membrane; nucleolus Molecular Function: carnitine O-palmitoyltransferase activity Biological Process: fatty acid beta-oxidation; cellular lipid metabolic process; carnitine shuttle Disease: Carnitine Palmitoyltransferase Ii Deficiency, Lethal Neonatal; Carnitine Palmitoyltransferase Ii Deficiency, Infantile; Encephalopathy, Acute, Infection-induced, Susceptibility To, 4; Carnitine Palmitoyltransferase Ii Deficiency, Late-onset
Research Articles on CPT2	**1.** The rs2229291 and rs1799821 variants in CPT II gene might be one of the predisposing factors of acute encephalitis.
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