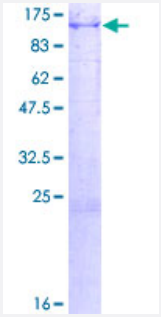
Full-Length

CPT1A (Human) Recombinant Protein (P01)

Catalog # H00001374-P01 Size 25 ug, 10 ug

Applications



Specification

Product Description	Human CPT1A full-length ORF (NP_001867.2, 1 a.a. - 773 a.a.) recombinant protein with GST-tag at N-terminal.
Sequence	MAEAHQAVAFQFTVTPDGIDLRLSHEALRQIYLSGLHSWKKKFIRFKNGIITGVYPASPSSWLIVVV GVMTTMYAKIDPSLGIIAKINRTLETANCMSSQTKNVVSGVLFGTGLWVALIVTMRYSLKVLLSYHG WMFTEHGKMSRATKIWMGMVKIFSGRKPMLYSFQTSLPRLPVPAVKDTVNRYLQSVRPLMKEED FKRMTALAQDFAVGLGPRLQWYLKLKSWWATNYVSDWWEEYIYLRGRGPLMVNSNYYAMDLLYI LPTHIQAARAGNAIHAILLYRRKLDREEIKPIRLLGSTIPLCSAQWERMFNTSRIPGEETDTIQHMRDS KHIVVYHRGRYFKVWLYHDGRLLKPREMEQQMQRILDNTSEPQPGEARLAALTAGDRVPWARCR QAYFGRGKNKQSLDAVEKAAFFVTLDETEEGYRSEDPDTSMDSYAKSLLHGRCYDRWFDKSFT FVVFKNGKMGLNAEHSWADAPIVAHLWEYVMSIDSLQLGYAEDGHCKGDINPNIPYPTRLQWDIP GECQEVIETSLNTANLLANDVDFHSFPFVAFGKGIIKKCRTSPDAFVQLALQLAHYKDMGKFCLTY EASMTRLFREGRTETVRSCTTESCDFVRAMVDPAQTVEQRLKLFKLASEKHQHMYRLAMTGSGI DRHLFCLYVVSKYLAVESPFLKEVLSEPWRLSTSQTPQQQVELFDLENNPEYVSSGGGFGPVAD DGYGVSYILVGENLINFHISSKFSCPETDSHRFGRHLKEAMTDIITLFGLSSNSKK
Host	Wheat Germ (in vitro)
Theoretical MW (kDa)	114.8
Preparation Method	*in vitro* wheat germ expression system
Purification	Glutathione Sepharose 4 Fast Flow

Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — CPT1A

Entrez GeneID	1374
GeneBank Accession#	NM_001876.2
Protein Accession#	NP_001867.2
Gene Name	CPT1A
Gene Alias	CPT1, CPT1-L, L-CPT1
Gene Description	carnitine palmitoyltransferase 1A (liver)
Omim ID	255120 600528
Gene Ontology	Hyperlink
Gene Summary	The mitochondrial oxidation of long-chain fatty acids is initiated by the sequential action of carnitine palmitoyltransferase I (which is located in the outer membrane and is detergent-labile) and carnitine palmitoyltransferase II (which is located in the inner membrane and is detergent-stable), together with a carnitine-acylcarnitine translocase. CPT I is the key enzyme in the carnitine-dependent transport across the mitochondrial inner membrane and its deficiency results in a decreased rate of fatty acid beta-oxidation. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq
Other Designations	carnitine palmitoyltransferase 1A|carnitine palmitoyltransferase I, liver

Publication Reference

- Loss of hepatic miR-33 improves metabolic homeostasis and liver function without altering body weight or atherosclerosis.

  Nathan L Price, Xinbo Zhang, Pablo Fernández-Tussy, Abhishek K Singh, Sean A Burnap, Noemi Rotllan, Leigh Goedeke, Jonathan Sun, Alberto Canfrán-Duque, Binod Aryal, Manuel Mayr, Yajaira Suárez, Carlos Fernández-Hernando.

  PNAS 2021 Feb; 118(5):e200647811.

  Application: WB-Ti, Mouse, Mouse livers

Pathway

- Adipocytokine signaling pathway
- Fatty acid metabolism
- PPAR signaling pathway

Disease

- Alzheimer disease
- Atherosclerosis
- Cardiovascular Diseases
- Diabetes Complications
- Diabetes Mellitus
- Disease Progression
- Drug Toxicity
- Edema
- Fatty Liver
- Genetic Predisposition to Disease
- Hepatitis C
- Hypercholesterolemia

- Hypertension
- Hypertrophy
- Insulin Resistance
- Lipid Metabolism
- Liver Cirrhosis
- Metabolic Syndrome X
- Neoplasms
- Obesity
- Osteoporosis
- Sudden Infant Death