

APC417Mu01 100µg
Active Carnitine Palmitoyltransferase 2, Mitochondrial (CPT2)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ser26~Thr658

Tags: N-terminal His-tag

Purity: >80%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 250µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.2

Predicted Molecular Mass: 74.8kDa

Accurate Molecular Mass: 75kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

SAVSGPAEYLQHSIVPTMHYQDSLPRLPKLEDTMKRYLSAQKPLLNDSQFRK
TEVLCKDFENGIGKELHAHLLAQDKQNKHTSYISGPWFDMYLTARDSVVLNF
NPFMAFNPDPKSEYNDQLTRATNLTVSAVRFLKTLRAGLLEPEVFHLNPARSDT
DAFKRLIRFVPSSLSWYGAYLVNAYPLDMSQYFRLFNSTRIPKPSRDELFTDTKA
RHLLVLRKGFYVFDVLDQDGNIVNPSEIQAHLKYILSDSSPVPEFPLAYLTSEN
RDVWAE LRQKLIHGGNEETLRKVDSAVFCLCLDDFPMKDLVHLSHTMLHGD
GTNRWFDKSFNLIVAKDGTAAVHFEHAWGDGVAVLRFFNEVFRDSTQTPAIA
PQSQPAATDSSVSVQKLSFKLSSALKAGVTAAKEKFDATMKTLTIDAIQFQRG
GKEFLKKKLSPPDAVAQLAFQMAFLRQYGQTVATYESCSTAAFKHGR TETIRPA
SIFTKRCSEAFVREPSKHSV GELQHMMMAECSKYHGQLTKEAAMGQGFD RHLF
ALRYLAAARGVTLPELYQDPAYQRINHNLSTSTLSSPAVSLGGFAPVVPDGFGI
AYAVHDDWIGCNVSSYSGRNAREFLHCVQKCLED MFDALEGKAIKT

[ACTIVITY]

Carnitine Palmitoyltransferase 2, Mitochondrial (CPT2), member of the carnitine shuttle, is involved in the transport of long-chain fatty acids into the mitochondrial compartment. CPT2 is located in the inner mitochondrial membrane, and its deficiency is an inherited metabolic disease. Three forms of CPT2 deficiency have been described: a myopathic form, a severe infantile form and a neonatal form. Acyl Coenzyme A Dehydrogenase, Short/Very Long Chain (ACADVL) is active toward esters of long-chain and very long chain fatty acids, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse CPT2 and recombinant human ACADVL. Briefly, biotin-linked CPT2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l

were then transferred to ACADVL-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µl stop solution to the wells and read at 450nm immediately. The binding activity of recombinant mouse CPT2 and recombinant human ACADVL was shown in Figure 1, the EC50 for this effect is 0.08ug/mL.

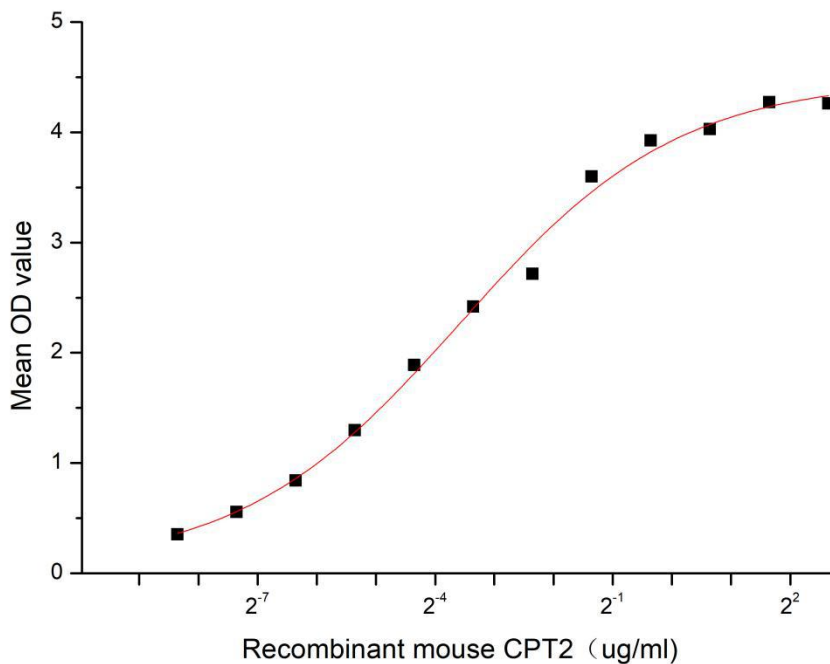


Figure 1. The binding activity of recombinant mouse CPT2 and recombinant human ACADVL

