APC417Ra01 100μg
Active Carnitine Palmitoyltransferase 2, Mitochondrial (CPT2)
Organism Species: *Rattus norvegicus (Rat)*
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: Gly452~Thr658
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .
Original Concentration: 200μg/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: 26.6kDa
Accurate Molecular Mass: 27kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

GKEFLKKKQ LSPDAVAQLA FQMAFLRQYG QTVATYESCS TAAFKHGRTE
TIRPASIFTK RCSEAFVRDP SKHSVGELQH MMAECSKYHG QLTKEAAMGQ
GFDRHLYALR YLATARGLNL PELYLDPAYQ QMNHNILSTS TLNSPAVSLG
GFAPVVPDGF GIAYAVHDDW IGCNVSSYSG RNAREFLHCV QKCLEDIFDA
LEGKAIKT

[ACTIVITY]

Carnitine Palmitoyltransferase 2(CPT2) is an enzyme that participates in fatty acid oxidation. It plays a crucial role in the transport of long-chain fatty acids into the mitochondria for beta-oxidation, which is the process that the body uses to break down these fatty acids to produce energy.Besides,Carnitine Palmitoyltransferase 1A(CPT1A) has been identified as an interactor of CPT2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat CPT2 and recombinant human CPT1A. Briefly, CPT2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CPT1A-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CPT2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant rat CPT2 and recombinant human CPT1A was shown in Figure 1, The binding activity of 777 and 000 was shown in Figure 1, and this effect was in a dose dependent manner.

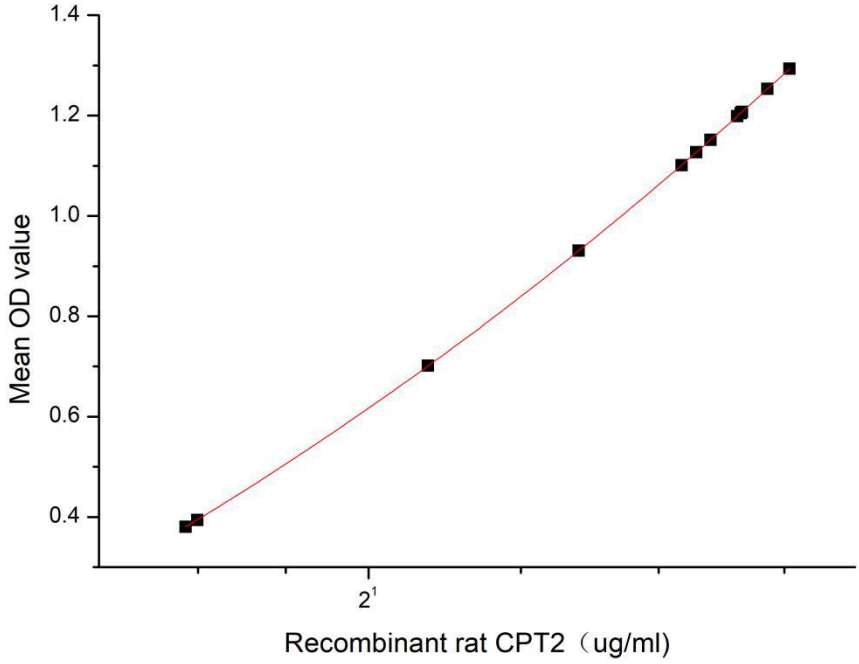

Figure 1. The binding activity of recombinant rat CPT2 and human CPT1A

[IDENTIFICATION]

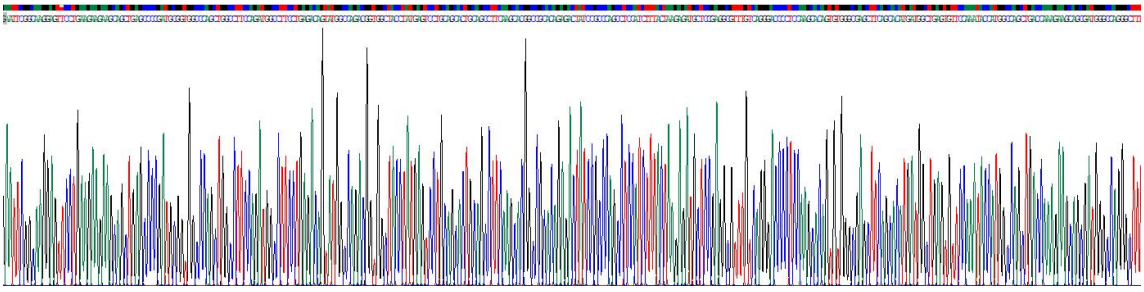

Figure 2. Gene Sequencing (extract)

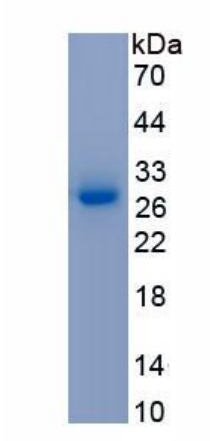

Figure 3. SDS-PAGE

Sample: Active recombinant CPT2, Rat

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.