

APD676Mu01 100µg

Active Acyl Coenzyme A Synthetase Long Chain Family, Member 6 (ACSL6)

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: Gly451~Val697

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% Sarcosyl, 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: 5.7

Predicted Molecular Mass: 31.5kDa

Accurate Molecular Mass: 32kDa 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]

GCQVYEGYGQTECTAGCTFTTPGDWTS GHV G A P L P C N H I K L V D A E E L N Y W T C K G E G E I C V
K G P N V F K G Y L K D E D R T K E A L D S D G W L H T G D I G K W L P E G T L K I I D R K K H I F K L A Q G E Y V A P E K I
E N I Y I R S E P V A Q I Y V H G D S L K A F L V G I V P D P E V M P S W A Q K K G I E G T Y Q E L C M K K E L K K A I L D
D M V M L G K E S G L H S F E Q V K A I Y I H C D M F S V Q N G L L T P T L K A K R P E L R E Y F K K Q I E E L Y L V S V

[ACTIVITY]

Acyl Coenzyme A Synthetase Long Chain Family, Member 6 (ACSL6) is an enzyme belonging to the acyl - coenzyme A synthetase long - chain family. It activates long - chain fatty acids by catalyzing their conversion to acyl - CoA esters. This process is crucial for fatty acid metabolism, as acyl - CoA esters are key intermediates in various metabolic pathways, such as beta - oxidation and lipid synthesis. ACSL6 is mainly expressed in certain tissues like the liver and adipose tissue, playing a significant role in maintaining lipid homeostasis. Dysregulation of ACSL6 has been associated with several metabolic disorders, including obesity and diabetes. ACSL6 activates fatty acids to acyl - CoA, which is a substrate for CPT1A. Their interaction is essential for the transport of fatty acids into the mitochondria for beta - oxidation. thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse ACSL6 and recombinant human CPT1A .Briefly, biotin-linked ACSL6 were 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°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 ACSL6 and recombinant human CPT1A was shown in Figure 1, the EC₅₀ for this effect is 0.289ug/mL.

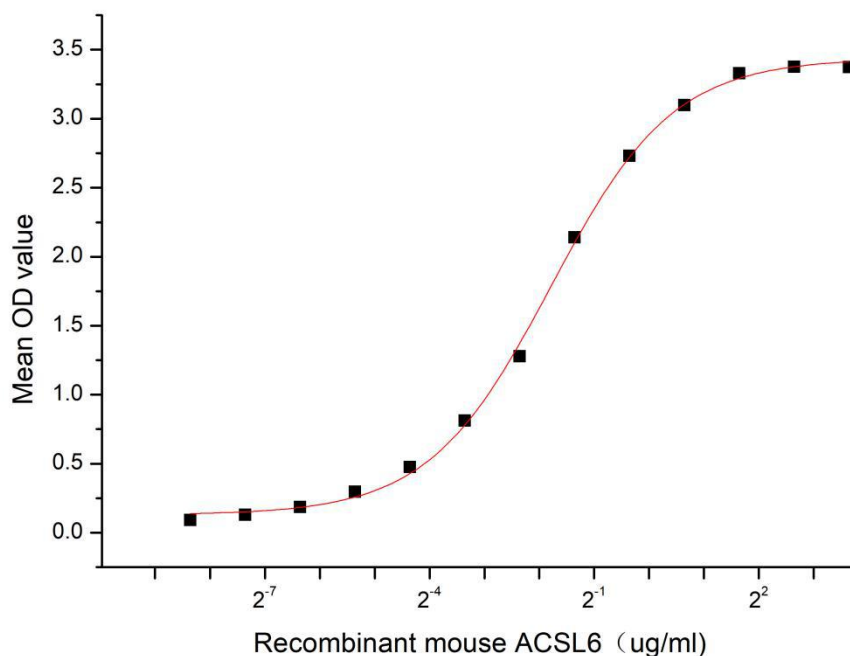


Figure 1. The binding activity of recombinant mouse ACSL6 and recombinant human CPT1A

[IDENTIFICATION]

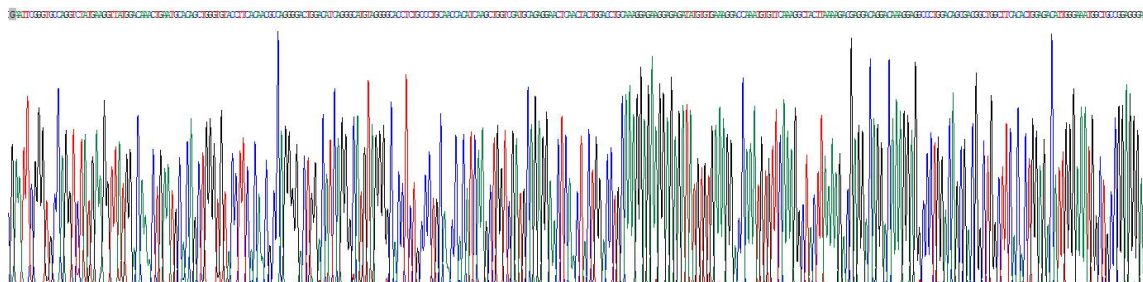


Figure 2. Gene Sequencing (extract)

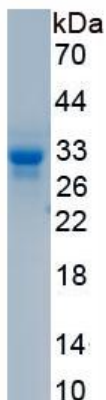


Figure 3. SDS-PAGE

Sample: Active recombinant ACSL6, Mouse

[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.