APJ784Mu01 100μg
Active Succinate Dehydrogenase Complex Subunit A (SDHA)
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: Val4~Ile300
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: 6.9
Predicted Molecular Mass: 35.9kDa
Accurate Molecular Mass: 36kDa 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]

VGAVSRL LRGRRLALTG AWPGTLQKQT CGFHFSVGEN KKASAKVSDA
ISTQYPVVDH EFDAVVVGAG GAGLRAAFGL SEAGFNTACL TKLFPTRSHT
VAAQGGINAA LGNMEEDNWR WHFYDTVKGS DWLGDQDAIH YMTEQAPASV
VELENYGMPF SRTEDGKIYQ RAFGGQSLKF GKGGQAHRCC CVADRTGHSL
LHTLYGRSLR YDTSYFVEYF ALDLLMENGE CRGVIALCIE DGSIHRIRAK
NTVIATGGYG RTYFSCTSAH TSTGDGTAMV TRAGLPCQDL EFVQFHPTGI

[ACTIVITY]

Succinate Dehydrogenase Complex Subunit A (SDHA) is an integral protein of the succinate dehydrogenase complex, also known as Complex II in the mitochondrial respiratory chain. It has the active site with flavin adenine dinucleotide (FAD) that catalyzes the oxidation of succinate to fumarate, playing a key role in the tricarboxylic acid (TCA) cycle and electron transport, which contributes to ATP production for cellular energy needs.SDHA binds to Succinate Dehydrogenase Complex Subunit B (SDHB) to form a stable structure, ensuring the proper assembly and function of Complex II for efficient electron transfer and metabolic reactions.Thus a functional ELISA assay was conducted to detect the interaction of recombinant mouse SDHA and recombinant mouse SDHB.

Briefly, SDHA was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to SDHB-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-SDHA 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 mouse SDHA and recombinant mouse SDHB was shown in Figure 1, and this effect was in a dose dependent manner.

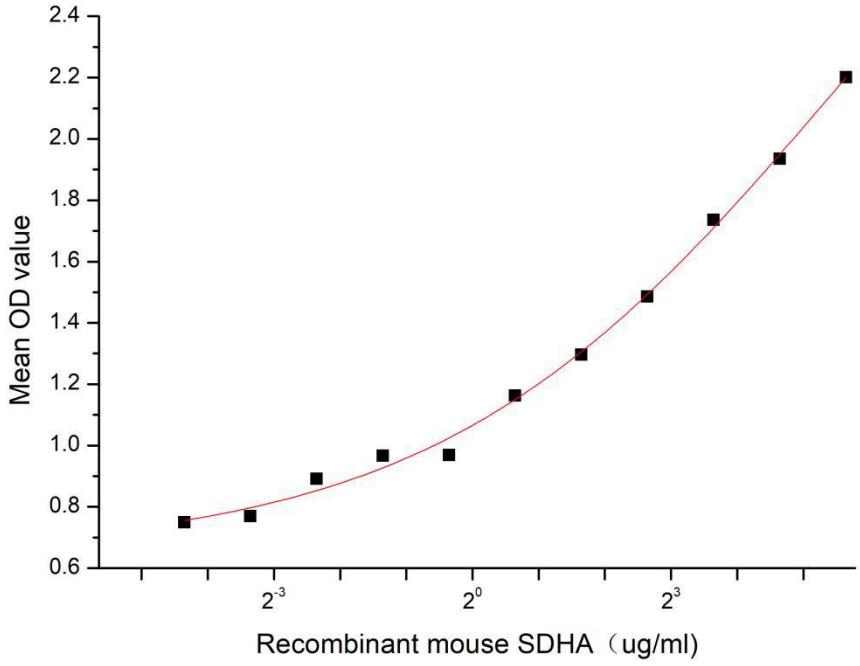

Figure 1. The binding activity of recombinant mouse SDHA and recombinant mouse SDHB

[IDENTIFICATION]

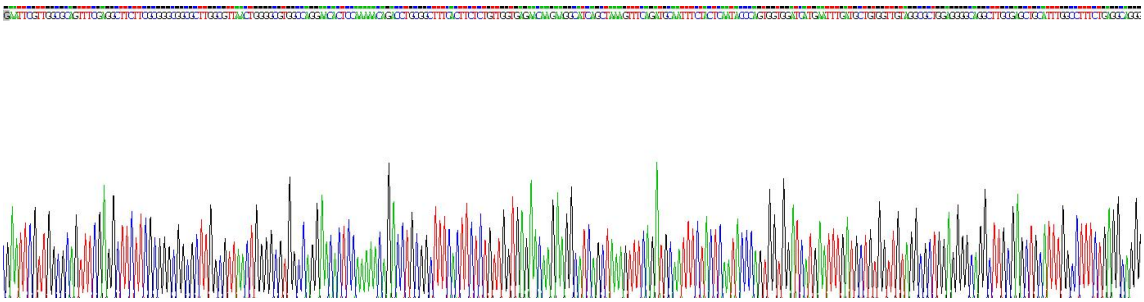

Figure 2. Gene Sequencing (extract)

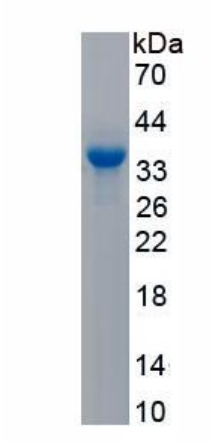

Figure 3. SDS-PAGE

Sample: Active recombinant SDHA, 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.