APG475Mu01 100μg
Active Glycine Dehydrogenase (GLDC)
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: Thr521~Phe761
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: 6.6
Predicted Molecular Mass: 30.4kDa
Accurate Molecular Mass: 30kDa 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]

TSPFLTHQVF NSYHSETNLV RYMKKLENKD
ISLVHSMIPL GSCTMKLNSS SELAPITWRE FANIHPFVPL DQAQGYQQLF
QGLEKDLCEI TGYDRVSFQP NSGAQGEYAG LATIRAYLDQ KGERHRTVCL
IPKSAHGTNP ASAHMAGMKI QPVEVDRYGN IDVAHLKAMV DQHKENLAAI
MITYPSTNGV FEENIGDVCA LIHQHGGQVY LDGANMNAQV GICRPGDFGS
DVSHLNLHKT F

[ACTIVITY]

Glycine Dehydrogenase (GLDC) is a key mitochondrial enzyme involved in the catabolism of glycine. It catalyzes the oxidative decarboxylation of glycine, playing an important role in one-carbon metabolism. GLDC provides one-carbon units for various cellular processes like nucleotide synthesis and methylation reactions.Besides,Apolipoprotein H (APOH) has been identified as an interactor of GLDC,Thus a functional ELISA assay was conducted to detect the interaction of recombinant mouse GLDC and recombinant mouse AGXT. Briefly, GLDC was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to AGXT-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-GLDC 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 GLDC and recombinant mouse AGXT was shown in Figure 1, the EC50 for this effect is 0.097ug/mL.

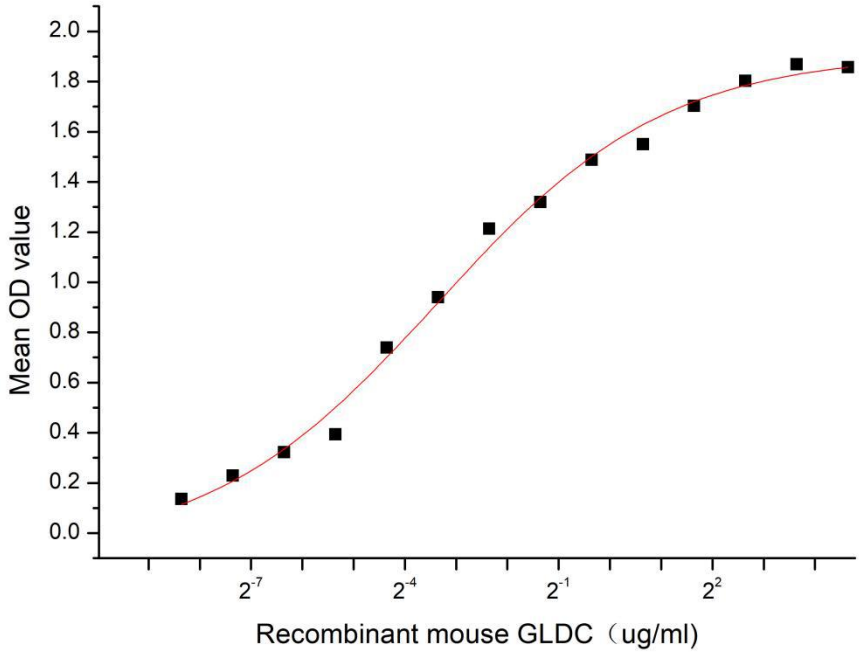

Figure 1. The binding activity of recombinant mouse GLDC and recombinant mouse AGXT

[IDENTIFICATION]

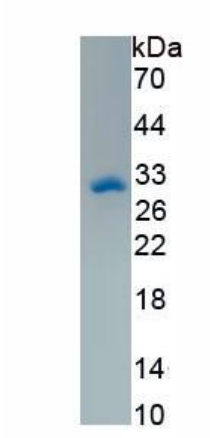

Figure 2. SDS-PAGE

Sample: Active recombinant GLDC, 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.