

APD862Mu01 50µg
Active Tyrosine Aminotransferase (TAT)
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: Pro190~Lys454

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl and 5% trehalose.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 5.0

Predicted Molecular Mass: 33.7kDa

Accurate Molecular Mass: 34kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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]

```

                                                    P EKSWEIDLKQ
LESLIDEKTA CLVVNNPSNP CGSVFSKRHL QKILAVAERQ CVPILADEIY
GDMVFSCKY EPMATLSTNV PILSCGGLAK RVLVPGWRLG WILIHDRRDI
FGNEIRDGLV KLSQRILGPC TIVQGALKSI LQRTPQEFYQ DTLSFLKSNA
DLCYGALSAI PGLQPVRPSG AMYLMVGIEM EHFPEFENDV EFTERLIAEQ
SVHCLPATCF EYPNFFRVVI TVPEVMMLEA CSRIQEFCEQ HYHCAEGSQE
ECDK
```

[ACTIVITY]

Tyrosine aminotransferase (TAT) is an enzyme present in the liver and catalyzes the conversion of tyrosine to 4-hydroxyphenylpyruvate. In humans, the tyrosine aminotransferase protein is encoded by the TAT gene. A deficiency of the enzyme in humans can result in what is known as Type II Tyrosinemia, wherein there is an abundance of tyrosine as a result of tyrosine failing to undergo an aminotransferase reaction to form 4-hydroxyphenylpyruvate. Besides, Glutamine synthetase (GS) has been identified as an interactor of TAT, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse TAT and recombinant mouse GS. Briefly, TAT were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to GS-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-TATpAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 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 TAT and GS was shown in Figure 1,



and this effect was in a dose dependent manner.

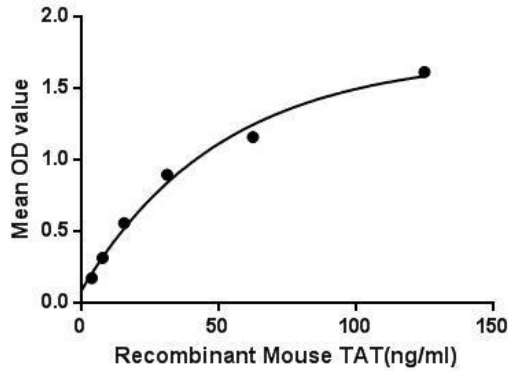


Figure 1. The binding activity of TAT with GS.

[IDENTIFICATION]

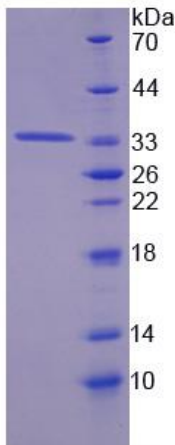


Figure 2. SDS-PAGE

Sample: Active recombinant TAT, 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.