

Active Ornithine Decarboxylase (ODC) Instruction Manual

SBPB223Ra01

Rattus norvegicus (Rat)

Buffer Formulation

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

Traits

Freeze-dried powder

Purity

> 97%

Isoelectric Point

5.2

Applications

Cell culture; Activity Assays.

ACTIVITY TEST

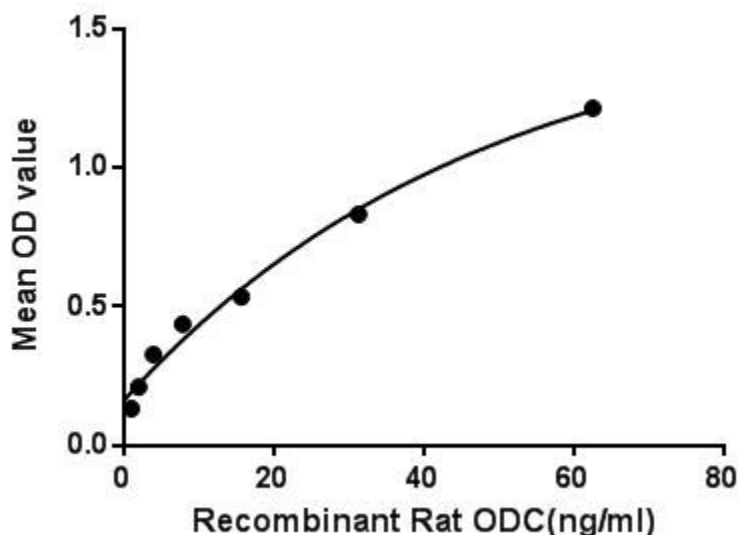


Figure. The binding activity of ODC with TK1.

The enzyme ornithine decarboxylase (ODC) catalyzes the decarboxylation of ornithine (a product of the urea cycle) to form putrescine. This reaction is the committed step in polyamine synthesis. Lysine 69 on ornithine decarboxylase (ODC) binds the cofactor pyridoxal phosphate to form a Schiff base. Ornithine displaces the lysine to form a Schiff base attached to ODC, which decarboxylates to form a quinoid intermediate. This intermediate rearranges to form a Schiff base attached to putrescine, which is attacked by lysine to release putrescine product and reform PLP-bound ODC. Besides, Thymidine Kinase 1, Soluble (TK1) has been identified as an interactor of ODC, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat ODC and

recombinant rat TK1. Briefly, ODC were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to TK1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-ODC pAb, 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 ODC and TK1 was shown in Figure 1, and this effect was in a dose dependent manner.

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

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.

Image

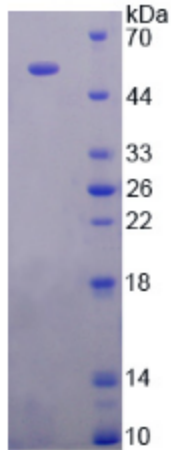


Figure. SDS-PAGE

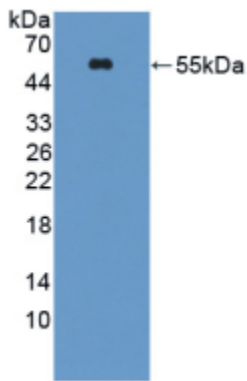


Figure. Western Blot

[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.