Active Ornithine Decarboxylase (ODC) Instruction Manual

SBPB223Hu02

Homo sapiens (Human)

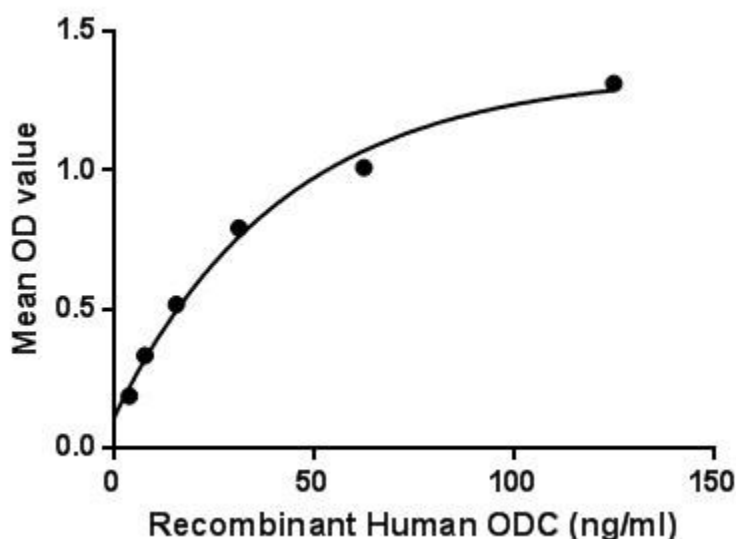|	
Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Traits	Freeze-dried powder
Purity	> 90%
Isoelectric Point	5.1
Applications	Cell culture; Activity Assays.

ACTIVITY TEST

Figure. The binding activity of ODC with TK1.

Ornithine decarboxylase (ODC) is an enzyme can catalyze the decarboxylation of ornithine (a product of the urea cycle) to form putrescine. The ornithine decarboxylation reaction catalyzed by ornithine decarboxylase is the first and committed step in the synthesis of polyamines, particularly putrescine, spermidine and spermine. Polyamines are important for stabilizing DNA structure, the DNA double strand-break repair pathway and as antioxidants. Therefore, ornithine decarboxylase is an essential enzyme for cell growth, producing the polyamines necessary to stabilize newly synthesized DNA. Lack of ODC causes cell apoptosis in embryonic mice, induced by DNA damage. 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 human ODC and recombinant human TK1. Briefly, ODC were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to TK1-coated microtiter wells and incubated for 2h at 37℃. 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℃. 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.
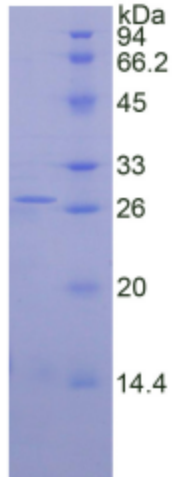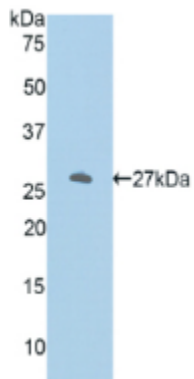
Image

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.