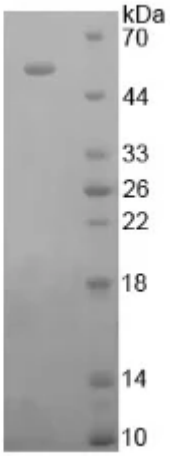
Active Ornithine Decarboxylase (ODC)

Catalog#:PER12653

概述（Summary）

别称（Alternative Names）	ODC1
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Val461】
Accession #	P09057
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	54.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Catalyzes the first and rate-limiting step of polyamine biosynthesis that converts ornithine into putrescine, which is the precursor for the polyamines, spermidine and spermine. Polyamines are essential for cell proliferation and are implicated in cellular processes, ranging from DNA replication to apoptosis.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

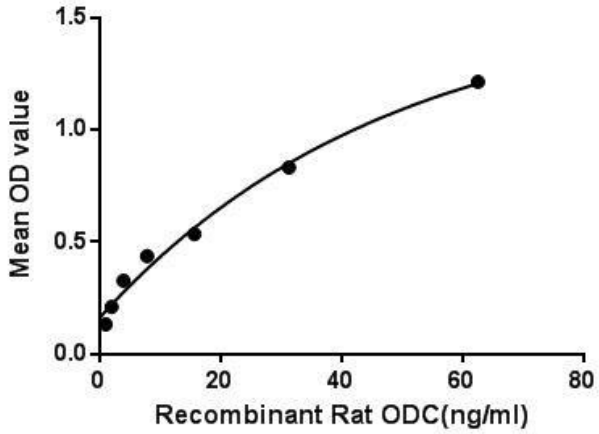


Figure. The binding activity of ODC with TK1. The enzyme ornithine decarboxylase (ODC) catalyzes the decarboxylation of ornithine (a product of the urea cycle) to form putrescine. This reaction is the committed step in polyamine synthesis. Lysine 69 on ornithine decarboxylase (ODC) binds the cofactor 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℃. 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.

注意事项（Note）

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