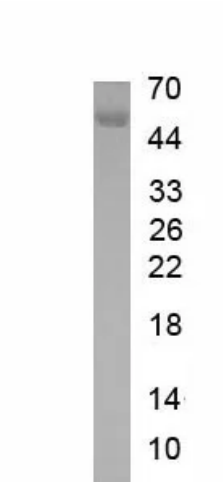
Active Pyruvate Carboxylase (PC)

Catalog#:PEH12971

概述（Summary）

别称（Alternative Names）	PCB
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Pro36-Glu486】
Accession #	P11498
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	53.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 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 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Pyruvate carboxylase catalyzes a 2-step reaction, involving the ATP-dependent carboxylation of the covalently attached biotin in the first step and the transfer of the carboxyl group to pyruvate in the second. Catalyzes in a tissue specific manner, the initial reactions of glucose (liver, kidney) and lipid (adipose tissue, liver, brain) synthesis from pyruvate.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

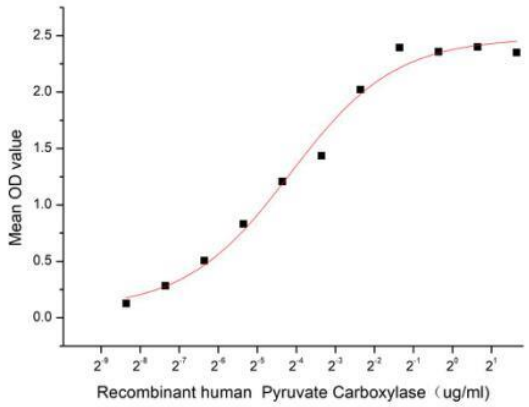


Figure 1. The binding activity of recombinant human PC and recombinant human PCK2

Pyruvate carboxylase (PC) is a mitochondrial, biotin-containing enzyme catalyzing the ATP-dependent synthesis of oxaloacetate from pyruvate and bicarbonate, with a critical anaplerotic role in sustaining the brain metabolism. Pyruvate carboxylase (PC) deficiency is a rare autosomal recessive mitochondrial neurometabolic disorder of energy deficit resulting in high morbidity and mortality, with limited therapeutic options. Besides, PCK2 has been identified as an interactor of PC, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human PC and recombinant human PCK2. Briefly, biotin-linked PC were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to PCK2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30 min, then 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 nm immediately. The binding activity of PC and PCK2 was shown in Figure 1, the EC50 for this effect is 0.056 ug/mL.

注意事项（Note）

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