

**PCK1 Rabbit mAb [3YG7]**

**Cat NO. :A75144**

**Information:**

| Applications | Reactivity: | UniProt ID: | MW(kDa) | Host   | Isotype | Size        |
|--------------|-------------|-------------|---------|--------|---------|-------------|
| WB           | H,M,R       | P35558      | 63 kDa  | Rabbit | IgG     | 100ul,200ul |

**Applications detail:**

| Application  | Dilution    |
|--|-------------|
| WB   | 1:1000-2000 |
| The optimal dilutions should be determined by the end user |             |

**Conjugate:**

UnConjugate

**Form:**

Liquid

**sensitivity:**

Endogenous

**Purification:**

Protein A purification

**Specificity:**

Antibody is produced by immunizing animals with a synthetic peptide at the sequence of Human PCK1

**Storage buffer and conditions :**

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at -20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

**Tissue specificity:**

Major sites of expression are liver, kidney and adipocytes..

**Subcellular location:**

Cytoplasm, cytosol. Endoplasmic reticulum.

**Function:**

Cytosolic phosphoenolpyruvate carboxykinase that catalyzes the reversible decarboxylation and phosphorylation of oxaloacetate (OAA) and acts as the rate-limiting enzyme in gluconeogenesis (PubMed:30193097, PubMed:24863970, PubMed:26971250, PubMed:28216384). Regulates cataplerosis and anaplerosis, the processes that control the levels of metabolic intermediates in the citric acid cycle (PubMed:30193097, PubMed:24863970, PubMed:26971250, PubMed:28216384). At low glucose levels, it catalyzes the cataplerotic conversion of oxaloacetate to phosphoenolpyruvate (PEP), the rate-limiting step in the metabolic pathway that produces glucose from lactate and other precursors derived from the citric acid cycle

**Introduction:** **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

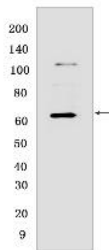
**Cross Reactivity:** **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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(PubMed:30193097). At high glucose levels, it catalyzes the anaplerotic conversion of phosphoenolpyruvate to oxaloacetate (PubMed:30193097). Acts as a regulator of formation and maintenance of memory CD8(+) T-cells: up-regulated in these cells, where it generates phosphoenolpyruvate, via gluconeogenesis (By similarity). The resultant phosphoenolpyruvate flows to glycogen and pentose phosphate pathway, which is essential for memory CD8(+) T-cells homeostasis (By similarity). In addition to the phosphoenolpyruvate carboxykinase activity, also acts as a protein kinase when phosphorylated at Ser-90: phosphorylation at Ser-90 by AKT1 reduces the binding affinity to oxaloacetate and promotes an atypical serine protein kinase activity using GTP as donor (PubMed:32322062). The protein kinase activity regulates lipogenesis: upon phosphorylation at Ser-90, translocates to the endoplasmic reticulum and catalyzes phosphorylation of INSIG proteins (INSIG1 and INSIG2), thereby disrupting the interaction between INSIG proteins and SCAP and promoting nuclear translocation of SREBP proteins (SREBF1/SREBP1 or SREBF2/SREBP2) and subsequent transcription of downstream lipogenesis-related genes (PubMed:32322062)..

## Validation Data:

### PCK1 Rabbit mAb [3YG7] Images



Western blot (SDS PAGE) analysis of extracts from INS-1 cells. Using PCK1 Rabbit mAb [3YG7] at dilution of 1:1000 incubated at 4°C overnight.

View more information on <http://naturebios.com>

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.