

# PCB (C-13): sc-46228

## BACKGROUND

Pyruvate carboxylase (PCB) is a biotinylated mitochondrial enzyme that catalyzes the synthesis of oxaloacetate from pyruvate in a tissue specific manner. In addition to covalently binding the biotin cofactor, PCB contains consensus sequences for the attachment of ATP and the substrate pyruvate. The PCB gene is located on the long arm of chromosome 11. Mutations in PCB metabolism (pyruvate carboxylase deficiency) are known to cause lactic acidosis, hypoglycemia and mental retardation.

## REFERENCES

1. Freytag, S.O., et al. 1984. Molecular cloning of a cDNA for human pyruvate carboxylase. Structural relationship to other biotin-containing carboxylases and regulation of mRNA content in differentiating preadipocytes. *J. Biol. Chem.* 259: 12831-12837.
2. MacKay, N., et al. 1994. cDNA cloning of human kidney pyruvate carboxylase. *Biochem. Biophys. Res. Commun.* 202: 1009-1014.
3. Wexler, I.D., et al. 1998. Molecular characterization of pyruvate carboxylase deficiency in two consanguineous families. *Pediatr. Res.* 43: 579-584.

## CHROMOSOMAL LOCATION

Genetic locus: PC (human) mapping to 11q13.2; Pcx (mouse) mapping to 19 A.

## SOURCE

PCB (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PCB of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46228 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCB (C-13) is recommended for detection of PCB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PCB (C-13) is also recommended for detection of PCB in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PCB siRNA (h): sc-45531, PCB siRNA (m): sc-45532, PCB shRNA Plasmid (h): sc-45531-SH, PCB shRNA Plasmid (m): sc-45532-SH, PCB shRNA (h) Lentiviral Particles: sc-45531-V and PCB shRNA (m) Lentiviral Particles: sc-45532-V.

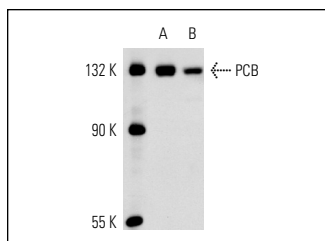
Molecular Weight of PCB: 130 kDa.

Positive Controls: mouse liver extract: sc-2256, PCB (m): 293T Lysate: sc-122419 or rat kidney extract: sc-2394.

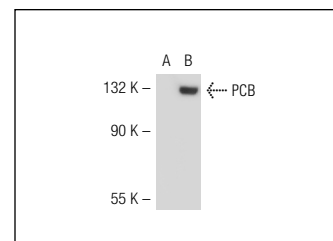
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PCB (C-13): sc-46228. Western blot analysis of PCB expression in mouse liver (A) and rat kidney (B) tissue extracts.



PCB (C-13): sc-46228. Western blot analysis of PCB expression in non-transfected: sc-117752 (A) and mouse PCB transfected: sc-122419 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Hyti, O.M., et al. 2010. Aging impairs myocardial fatty acid and ketone oxidation and modifies cardiac functional and metabolic responses to Insulin in mice. *Am. J. Physiol. Heart Circ. Physiol.* 299: H868-H875.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

**MONOS**  
Satisfaction  
Guaranteed

Try **PCB (D-9): sc-365673** or **PCB (H-2): sc-271493**, our highly recommended monoclonal alternatives to PCB (C-13).