

PCB (H-300): sc-67021

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 (H-300) is a rabbit polyclonal antibody raised against amino acids 879-1178 mapping at 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.

APPLICATIONS

PCB (H-300) 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), immunohistochemistry (including paraffin-embedded sections) (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 (H-300) 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.

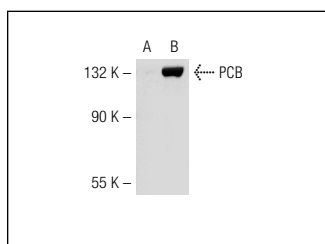
Molecular Weight of PCB: 130 kDa.

Positive Controls: PCB (m): 293T Lysate: sc-122419, rat kidney extract: sc-2394 or mouse brain extract: sc-2253.

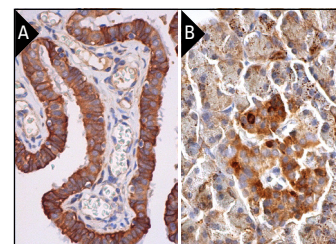
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PCB (H-300): sc-67021. Western blot analysis of PCB expression in non-transfected: sc-117752 (A) and mouse PCB transfected: sc-122419 (B) 293T whole cell lysates.



PCB (H-300): sc-67021. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islets of Langerhans and glandular cells (B).

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **PCB (D-9): sc-365673** or **PCB (H-2): sc-271493**, our highly recommended monoclonal alternatives to PCB (H-300).