

PDPc (P-20): sc-87354

BACKGROUND

Pyruvate dehydrogenase phosphatase (PDP) is a serine phosphatase that catalyzes the dephosphorylation and reactivation of the α subunit of the E1 component of the mitochondrial pyruvate dehydrogenase multienzyme complex. PDP is a heterodimer that consists of catalytic and regulatory subunits. PDPc (pyruvate dehydrogenase phosphatase, catalytic subunit 1), also known as protein phosphatase 2C, is a 537 amino acid protein that is localized within the mitochondrial matrix. PDPc is stimulated by calcium binding and utilizes two magnesium ions as cofactors. PDPc efficiently dephosphorylates all three phosphorylation sites located on the α chain of the E1 component, which simultaneously activates pyruvate dehydrogenase to convert pyruvate to acetyl-CoA for utilization in the Krebs' Cycle. Defects in the gene encoding PDPc are the cause of pyruvate dehydrogenase phosphatase deficiency, which results in lactic acidosis and neurological dysfunction.

CHROMOSOMAL LOCATION

Genetic locus: PPM2C (human) mapping to 8q22.1; Ppm2c (mouse) mapping to 4 A1.

SOURCE

PDPc (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PDPc of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-87354 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PDPc (P-20) is recommended for detection of PDPc of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PDPc (P-20) is also recommended for detection of PDPc in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDPc siRNA (h): sc-77635, PDPc siRNA (m): sc-152141, PDPc shRNA Plasmid (h): sc-77635-SH, PDPc shRNA Plasmid (m): sc-152141-SH, PDPc shRNA (h) Lentiviral Particles: sc-77635-V and PDPc shRNA (m) Lentiviral Particles: sc-152141-V.

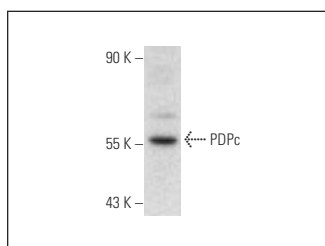
Molecular Weight of PDPc: 53 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

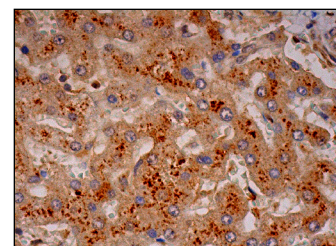
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PDPc (P-20): sc-87354. Western blot analysis of PDPc expression in Jurkat whole cell lysate.



PDPc (P-20): sc-87354. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells.

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.

MONOS
Satisfaction
Guaranteed

Try **PDPc (D-11): sc-398117**, our highly recommended monoclonal alternative to PDPc (P-20).