

PDK3 (N-14): sc-14488

BACKGROUND

Pyruvate dehydrogenase kinase family members (PDK1, 2, 3 and 4) are Serine kinases that catalyze phosphorylation of the E1 α subunit of the pyruvate dehydrogenase complex (PDC). PDC activity is controlled through phosphorylation and dephosphorylation of the E1 α subunit, which leads to inactivation and reactivation, respectively. PDK3 binding to a free lipoyl domain (L2) in dihydrolypoyl acetyltransferase (E2), which comprises the core of PDC, leads to a large increase in E1 α phosphorylation. Upregulation of PDK isoenzymes occurs during starvation conditions, where acetyl-CoA is alternatively generated through fatty acid oxidation. PDKs contain five conserved regions and are mechanistically similar to bacterial His-kinases in that both require histidine residues for activity. In mammals, transcripts for PDK3 are most abundant in testis and are moderately expressed in heart and skeletal muscle.

CHROMOSOMAL LOCATION

Genetic locus: PDK3 (human) mapping to Xp22.11.

SOURCE

PDK3 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PDK3 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-14488 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

PDK3 (N-14) is recommended for detection of PDK3 of 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).

PDK3 (N-14) is also recommended for detection of PDK3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PDK3 siRNA (h): sc-39029, PDK3 shRNA Plasmid (h): sc-39029-SH and PDK3 shRNA (h) Lentiviral Particles: sc-39029-V.

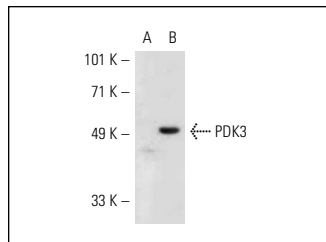
Molecular Weight of PDK3: 47 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or PDK3 (h): 293 Lysate: sc-112250.

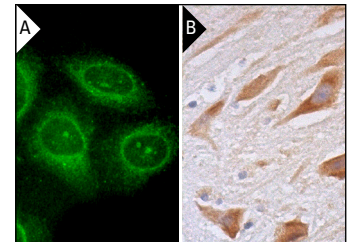
RECOMMENDED SECONDARY REAGENTS

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



PDK3 (N-14): sc-14488. Western blot analysis of PDK3 expression in non-transfected: sc-110760 (A) and human PDK3 transfected: sc-112250 (B) 293 whole cell lysates.



PDK3 (N-14): sc-14488. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells (B).

SELECT PRODUCT CITATIONS

1. Brenner, W., et al. 2010. Adhesion of renal carcinoma cells to endothelial cells depends on PKC μ . BMC Cancer 10: 183.

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
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Guaranteed

Try **PDK3 (A-4): sc-365378** or **PDK3 (RR-2): sc-100535**, our highly recommended monoclonal alternatives to PDK3 (N-14).