APPLICATIONS

PDK3 (RR-2) is recommended for detection of PDK3 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDK3 siRNA (h): sc-39029, PDK3 siRNA (m): sc-152139, PDK3 shRNA Plasmid (h): sc-39029-SH, PDK3 shRNA Plasmid (m): sc-152139-SH, PDK3 shRNA (h) Lentiviral Particles: sc-39029-V and PDK3 shRNA (m) Lentiviral Particles: sc-152139-V.

Molecular Weight of PDK3: 47 kDa.

Positive Controls: PDK3 (m): 293T Lysate: sc-122470, PDK3 (h2): 293 T Lysate: sc-158838 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting LuminoL Reagent: sc-2048.

2) Immunoprecipitation: use ProteinA/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PDK3 (human) mapping to Xp22.11; Pdk3 (mouse) mapping to X C3.

SOURCE

PDK3 (RR-2) is a mouse monoclonal antibody raised against recombinant PDK3 of human origin.

PRODUCT

Each vial contains 100 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

BACKGROUND

Pyruvate dehydrogenase kinase family members (PDK1, 2, 3, 4) are serine kinases that catalyze phosphorylation of the E1α subunit of the pyruvate dehydrogenase complex (PDC). PDC activity is controlled through phosphorylation and dephosphorylation of the E1α subunit, which leads to inactivation and reactivation, respectively. PDK3 binding to a free lipoyl domain (L2) in dihydroxoylipoyl acetyltransferase (E2), which comprises the core of PDC, leads to a large increase in E1α 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 moderately expressed in heart and skeletal muscle.

SELECT PRODUCT CITATIONS


RESEARCH USE

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