

# PDK2 (N-20): sc-14484

## BACKGROUND

Pyruvate dehydrogenase kinase family members (PDK1, 2, 3 and 4) are Serine kinases that catalyze phosphorylation of the E1 $\alpha$  subunit of the pyruvate dehydrogenase complex (PDC). PDC activity is controlled through phosphorylation and dephosphorylation of the E1 $\alpha$  subunit, which leads to inactivation and reactivation, respectively. The core of PDC is composed of 60 dihydro-lipoyl acetyltransferase (E2) subunits that bind directly to PDK2 and enhance PDK2 kinase activity. Upregulation of PDK isoenzymes occurs during starvation conditions, rerouting acetyl-CoA generation by facilitating 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 PDK2 are ubiquitously expressed with high levels in heart and skeletal muscle and decreased levels in spleen and lung.

## CHROMOSOMAL LOCATION

Genetic locus: PDK2 (human) mapping to 17q21.33; Pdk2 (mouse) mapping to 11 D.

## SOURCE

PDK2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDK2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-14484 P, (100  $\mu$ 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

PDK2 (N-20) is recommended for detection of PDK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

PDK2 (N-20) is also recommended for detection of PDK2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDK2 siRNA (h): sc-39027, PDK2 siRNA (m): sc-39028, PDK2 shRNA Plasmid (h): sc-39027-SH, PDK2 shRNA Plasmid (m): sc-39028-SH, PDK2 shRNA (h) Lentiviral Particles: sc-39027-V and PDK2 shRNA (m) Lentiviral Particles: sc-39028-V.

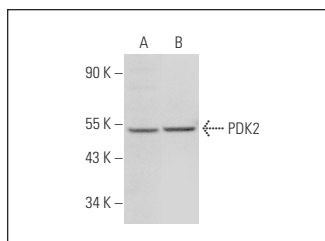
Molecular Weight of PDK2: 46 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, Sol8 cell lysate: sc-2249, A-10 cell lysate: sc-3806.

## 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



PDK2 (N-20): sc-14484. Western blot analysis of PDK2 expression in Sol8 (A) and A10 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Cadoudal, T., et al. 2008. Pyruvate dehydrogenase kinase 4: regulation by thiazolidinediones and implication in glyceroneogenesis in adipose tissue. *Diabetes* 57: 2272-2279.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **PDK2 (S-15): sc-100534** or **PDK2 (3F2D7): sc-293179**, our highly recommended monoclonal alternatives to PDK2 (N-20).