

PDPK1 (C-19): sc-7686

BACKGROUND

PDPK1 (3-phosphoinositide dependent protein kinase 1), also known as PDK1, PDPK2, PDPK2P or PRO0461, is 556 amino acid ubiquitously expressed protein that localizes to the cell membrane, cytoplasm and nucleus. Acting as a master kinase, PDPK1 phosphorylates and activates a subgroup of the AGC family of protein kinases. PDPK1 is involved in mediating signal transduction for controlling proliferation, survival, and growth of developing pancreatic beta cells, regulating Ca^{2+} uptake and Ca^{2+} -activated K^+ channels of mast cells, regulation of chemotaxis and motility of vascular endothelial cells, cardiac homeostasis, and thymocyte development. Belonging to the protein kinase superfamily, PDPK1 contains a PH domain, which play an essential role in homodimerization, localization and nuclear import of PDPK1, and a protein kinase domain. PDPK1 exists as five alternatively spliced isoforms and is encoded by a gene located on human chromosome 16p13.3.

CHROMOSOMAL LOCATION

Genetic locus: PDPK1 (human) mapping to 16p13.3; Pdpk1 (mouse) mapping to 17 A3.3.

SOURCE

PDPK1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PDPK1 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-7686 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PDPK1 (C-19) is recommended for detection of PDPK1 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).

PDPK1 (C-19) is also recommended for detection of PDPK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDPK1 siRNA (h): sc-29448, PDPK1 siRNA (m): sc-36242, PDPK1 shRNA Plasmid (h): sc-29448-SH, PDPK1 shRNA Plasmid (m): sc-36242-SH, PDPK1 shRNA (h) Lentiviral Particles: sc-29448-V and PDPK1 shRNA (m) Lentiviral Particles: sc-36242-V.

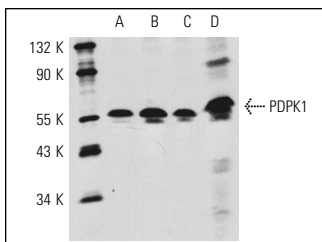
Molecular Weight of PDPK1: 68 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

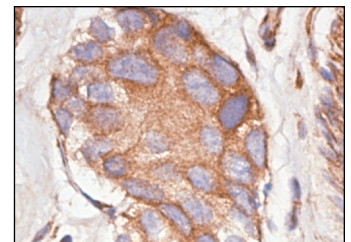
RECOMMENDED SECONDARY REAGENTS

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



PDPK1 (C-19): sc-7686. Western blot analysis of PDPK1 expression in MCF7 (A), HeLa (B) and K-562 (C) whole cell lysates and rat liver tissue extract (D).



PDPK1 (C-19): sc-7686. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

1. Michel, J.J., et al. 2005. Spatial restriction of PDK1 activation cascades by anchoring to mAKAP α . *Mol. Cell* 20: 661-672.
2. Wu, D.D., et al. 2011. Protein kinase B/Akt may regulate G₂/M transition in the fertilized mouse egg by changing the localization of p21^{Cip1}/WAF1. *Cell Biochem. Funct.* 29: 265-271.

STORAGE

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

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **PDPK1 (E-3): sc-17765** or **PDPK1 (A-10): sc-17766**, our highly recommended monoclonal alternatives to PDPK1 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PDPK1 (E-3): sc-17765**.