**PDPK1 (A-10): sc-17766**

**BACKGROUND**

PDPK1 (3-phosphoinositide-dependent protein kinase 1), also known as PDK1, PDK2, PDK2P or PRO0461, is a 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 Ca²⁺ uptake and Ca²⁺-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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

PDPK1 (A-10) is a mouse monoclonal antibody raised against amino acids 229-556 of PDPK1 of human origin.

**PRODUCT**

Each vial contains 200 μg IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

PDPK1 (A-10) is recommended for detection of PDPK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 μg per 100-500 μg 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).

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: A-431 whole cell lysate: sc-2201, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

**RECOMMENDED SUPPORT REAGENTS**

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

**DATA**

![PDPK1](image)

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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

**CONJUGATES**

See PDPK1 (E-3): sc-17765 for PDPK1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.