**BACKGROUND**

PDPK1 (3-phosphoinositide dependent protein kinase 1), also known as PDK1, PDK2, PDK2P 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 focus: PDPK1 (human) mapping to 16p13.3; Pdpk1 (mouse) mapping to 17 A3.3.

**SOURCE**

PDPK1 (E-3) is a mouse monoclonal antibody raised against amino acids 229-556 of PDPK1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG_{2α} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDPK1 (E-3) is available conjugated to agarose (sc-17765 AC), 500 µg/0.25 ml for IP, to HRP (sc-17765 HRP), 200 µg/ml, for WB, IHC(0) and ELISA; to either phycoerythrin (sc-17765 PE), fluorescein (sc-17765 FITC), Alexa Fluor® 488 (sc-17765 AF488), Alexa Fluor® 546 (sc-17765 AF546), Alexa Fluor® 594 (sc-17765 AF594) or Alexa Fluor® 647 (sc-17765 AF647), 200 µg/ml, for WB (RGB), IF, IHC(0) and FCM; and to either Alexa Fluor® 680 (sc-17765 AF680) or Alexa Fluor® 790 (sc-17765 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

PDPK1 (E-3) is recommended for detection of PDPK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2,000), 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), 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).

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.

**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.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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