

Anti-PDK1 (RABBIT) Antibody
PDK1 Antibody
Catalog # ASR5205

Specification

Anti-PDK1 (RABBIT) Antibody - Product Information

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band ~60 kDa in size corresponding to human PDK-1 protein by western blotting in the appropriate cell lysate or extract. Although untested, this reagent may be useful for immunohistochemistry and immunoprecipitation. Reactivity in other immunoassays is unknown.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the C-terminal of human PDK-1 protein.
Preservative	0.01% (w/v) Sodium Azide

Anti-PDK1 (RABBIT) Antibody - Additional Information

Gene ID 5163

Other Names
5170

Purity

This affinity purified antibody is directed against human PDK-1. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with PDK-1 protein from mouse, rat and dog based on 92% homology with the immunizing sequence. Reactivity against homologues from other sources is unknown.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-PDK1 (RABBIT) Antibody - Protein Information

Name PDK1

Synonyms PDHK1

Function

Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2 (PubMed:7499431, PubMed:18541534, PubMed:22195962, PubMed:26942675, PubMed:17683942). This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate (PubMed:18541534, PubMed:22195962, PubMed:26942675). Plays an important role in cellular responses to hypoxia and is important for cell proliferation under hypoxia (PubMed:18541534, PubMed:22195962, PubMed:26942675).

Cellular Location

Mitochondrion matrix

Tissue Location

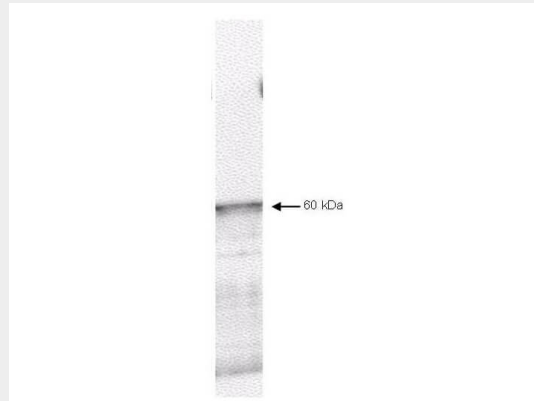
Expressed predominantly in the heart. Detected at lower levels in liver, skeletal muscle and pancreas

Anti-PDK1 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-PDK1 (RABBIT) Antibody - Images



Western blot using Rockland's affinity purified anti-PDK-1 antibody shows detection of myc-tagged human PDK-1 at 60kDa in ~10 μ g of a virus infected Sf9 cell lysate (arrow). The nitrocellulose membrane was probed overnight at 4° C with the primary antibody diluted 1:750 in 1% non-fat dry milk. HRP conjugated Goat-anti-Rabbit IgG [H&L] (p/n 611-1302) and chemiluminescent detection is recommended. Other detection systems will yield similar results.

Anti-PDK1 (RABBIT) Antibody - Background

PDK-1 (3-Phosphoinositide-Dependant Protein Kinase-1) phosphorylates AGC kinases. PDK-1 activates conventional PKC and PKCz (zeta) through phosphorylation of critical threonine residues in the activation loop. PDK-1 also phosphorylates Protein Kinase B (PKB) at threonine 308 in the presence of phosphatidylinositol-3,4,5-trisphosphate. Active Akt inactivates Glycogen Synthase Kinase-3 (GSK3), eventually leading to the dephosphorylation and activation of glycogen synthase, and the stimulation of glycogen synthesis. Because of the role that PDK1 plays in insulin-induced glycogen synthesis and PKC activation, it is a potentially important target for metabolic drug research.