

# PANK1 (B-9): sc-390865

## BACKGROUND

The pantothenate kinase (PANK) family of proteins catalyzes the first step in coenzyme A (CoA). Pantothenate kinase 1 (PANK1) is a 598 amino acid member of the pantothenate kinase family that plays a role in the physiological regulation of the intracellular CoA concentration. Localized to the cytoplasm, PANK1 is strongly inhibited by acetyl-CoA and manyl-CoA, as well as by high concentration of non-esterified CoA (CoASH). Four known isoforms of PANK1 exist as a result of alternative splicing events. Of these isoforms, PANK1a and PANK1b have been identified as the catalytically active isoforms. Isoform PANK1a is most highly expressed in brain, heart, kidney, liver, skeletal muscle and kidney. Isoform PANK1b is detected at much lower levels in kidney, liver, brain and testis and is not detected in heart or skeletal muscle.

## REFERENCES

1. Zhou, B., et al. 2001. A novel pantothenate kinase gene (PANK2) is defective in Hallervorden-Spatz syndrome. *Nat. Genet.* 28: 345-349.
2. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606160. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Rock, C.O., et al. 2002. The murine pantothenate kinase (PANK1) gene encodes two differentially regulated pantothenate kinase isozymes. *Gene* 291: 35-43.
4. Ni, X., et al. 2002. Cloning and characterization of a novel human pantothenate kinase gene. *Int. J. Biochem. Cell Biol.* 34: 109-115.

## CHROMOSOMAL LOCATION

Genetic locus: PANK1 (human) mapping to 10q23.31; Pank1 (mouse) mapping to 19 C1.

## SOURCE

PANK1 (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 136-152 within an internal region of PANK1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PANK1 (B-9) is available conjugated to agarose (sc-390865 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390865 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390865 PE), fluorescein (sc-390865 FITC), Alexa Fluor® 488 (sc-390865 AF488), Alexa Fluor® 546 (sc-390865 AF546), Alexa Fluor® 594 (sc-390865 AF594) or Alexa Fluor® 647 (sc-390865 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390865 AF680) or Alexa Fluor® 790 (sc-390865 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390865 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

PANK1 (B-9) is recommended for detection of PANK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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 PANK1 siRNA (h): sc-76040, PANK1 siRNA (m): sc-76041, PANK1 shRNA Plasmid (h): sc-76040-SH, PANK1 shRNA Plasmid (m): sc-76041-SH, PANK1 shRNA (h) Lentiviral Particles: sc-76040-V and PANK1 shRNA (m) Lentiviral Particles: sc-76041-V.

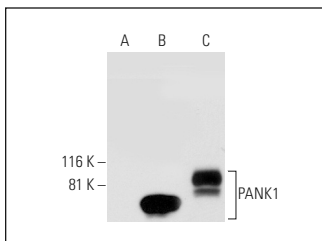
Molecular Weight of PANK1: 60 kDa.

Positive Controls: PANK1 (h2): 293T Lysate: sc-372526, c4 whole cell lysate: sc-364186 or Hep G2 cell lysate: sc-2227.

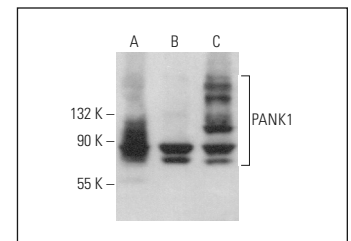
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PANK1 (B-9): sc-390865. Western blot analysis of PANK1 expression in non-transfected 293T: sc-117752 (A), human PANK1 transfected 293T: sc-372526 (B) and Hep G2 (C) whole cell lysates.



PANK1 (B-9): sc-390865. Western blot analysis of PANK1 expression in C2C12 (A), c4 (B) and C6 (C) whole cell lysates.

## 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.

## PROTOCOLS

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