

# PANK2 (O-22): sc-130834

## BACKGROUND

PANK2 (pantothenate kinase 2), also known as HSS, HARP, PKAN or NBIA1, is a ubiquitously expressed 570 amino acid member of the pantothenate kinase family of enzymes that are involved in the synthesis of coenzyme A (CoA). Localized to the cytoplasm and mitochondria, PANK2 is thought to be the chief regulator of CoA biosynthesis, catalyzing the first of five steps in the biosynthetic pathway. Regulated by feedback inhibition from synthesized CoA, PANK2 catalyzes the ATP-dependent conversion of pantothenate to 4'-phosphopantothenate, thus initiating the first committed step in CoA biosynthesis. Defects in the gene encoding PANK2 are the cause of pantothenate kinase-associated neurodegeneration (PKAN) and hypoprebetalipoproteinemia, acanthocytosis, retinitis pigmentosa and pallidal degeneration (HARP). PKAN and HARP are rare disorders characterized by extrapyramidal dysfunction and progressive dementia, both of which are caused by an accumulation of iron in the brain. PANK2 is expressed as three isoforms due to alternative splicing events.

## REFERENCES

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- Hong, B.S., et al. 2007. Crystal structures of human pantothenate kinases. Insights into allosteric regulation and mutations linked to a neurodegeneration disorder. *J. Biol. Chem.* 282: 27984-27993.
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## CHROMOSOMAL LOCATION

Genetic locus: PANK2 (human) mapping to 20p13; Pank2 (mouse) mapping to 2 F1.

## STORAGE

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

## SOURCE

PANK2 (O-22) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PANK2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PANK2 (O-22) is recommended for detection of PANK2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PANK2 siRNA (h): sc-76042, PANK2 siRNA (m): sc-76043, PANK2 shRNA Plasmid (h): sc-76042-SH, PANK2 shRNA Plasmid (m): sc-76043-SH, PANK2 shRNA (h) Lentiviral Particles: sc-76042-V and PANK2 shRNA (m) Lentiviral Particles: sc-76043-V.

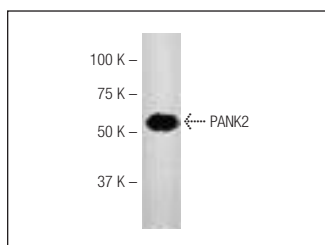
Molecular Weight of PANK2 isoform 1: 63 kDa.

Molecular Weight of PANK2 isoform 2: 59 kDa.

Molecular Weight of PANK2 isoform 3: 48 kDa.

Positive Controls: mouse liver extract: sc-2256.

## DATA



PANK2 (O-22): sc-130834. Western blot analysis of PANK2 expression in mouse liver tissue extract.

## 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) or our catalog for detailed protocols and support products.