

PHPT1 (N-23): sc-130229

BACKGROUND

PHPT1 (phosphohistidine phosphatase 1), also known as 14 kDa phosphohistidine phosphatase, is a 125 amino acid enzyme belonging to the Janus protein family. Existing as a monomer in the cytoplasm, PHPT1 is an EDTA-insensitive phosphohistidine phosphatase. First identified in human adrenal gland, PHPT1 is highly expressed in skeletal muscle and heart, with lower expression in liver, pancreas and kidney. Overexpression of PHPT1 leads to specific phosphohistidine phosphatase activity towards phosphopeptide I, with no activity detected towards phosphotyrosine, phosphothreonine and phosphoserine peptides. PHPT1 is highly conserved among species, suggesting that it serves an essential functional role.

REFERENCES

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2. Lai, C.H., et al. 2001. Identification of the human crooked neck gene by comparative gene identification. *Biochim. Biophys. Acta* 1517: 449-454.
3. Ek, P., et al. 2002. Identification and characterization of a mammalian 14 kDa phosphohistidine phosphatase. *Eur. J. Biochem.* 269: 5016-5023.
4. Klumpp, S., et al. 2002. Protein histidine phosphatase: a novel enzyme with potency for neuronal signaling. *J. Cereb. Blood Flow Metab.* 22: 1420-1424.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610167. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: PHPT1 (human) mapping to 9q34.3.

SOURCE

PHPT1 (N-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PHPT1 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

PHPT1 (N-23) is recommended for detection of PHPT1 of 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 PHPT1 siRNA (h): sc-92729, PHPT1 shRNA Plasmid (h): sc-92729-SH and PHPT1 shRNA (h) Lentiviral Particles: sc-92729-V.

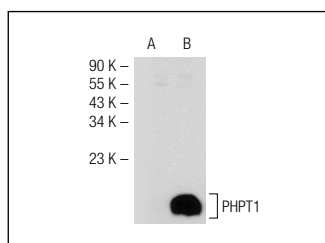
Molecular Weight of PHPT1: 14 kDa.

Positive Controls: PHPT1 (h): 293 Lysate: sc-113869.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PHPT1 (N-23): sc-130229. Western blot analysis of PHPT1 expression in non-transfected: sc-117752 (A) and human PHPT1 transfected: sc-113869 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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Try **PHPT1 (C-6): sc-398659**, our highly recommended monoclonal alternative to PHPT1 (N-23).