

# MIPP (K-18): sc-10405

## BACKGROUND

MIPP (multiple inositol polyphosphate phosphatase) is the only enzyme that is solely responsible for a diverse range of catalytic activities, including the hydrolysis of inositol pentakisphosphate and inositol hexakisphosphate. The structural and functional similarity of MIPP to the chick protein HiPER1 (histidine acid phosphatase) reveals that MIPP contains the catalytic requirement of histidine acid phosphatases. The evolutionary conservation of MIPP in mouse (also called (MMU)Minpp1), human (also called (HSA)MINPP1), chick, plant and fruit fly within the histidine phosphatase family suggests a significant role for multiple inositol polyphosphatase throughout higher eukaryotes. MIPP is mapped to a region of chromosome 10 that is often mutated in human cancers. Its carboxy terminal domain contains a signal for retaining soluble proteins in the lumen of the endoplasmic reticulum. MIPP was originally isolated from rat liver and is also highly expressed in rat kidney.

## REFERENCES

1. Ali, N., Craxton, A. and Shears, S.B. 1993. Hepatic Ins(1,3,4,5)P<sub>4</sub> 3-phosphatase is compartmentalized inside endoplasmic reticulum. *J. Biol. Chem.* 268: 6161-6167.
2. Craxton, A., Caffrey, J.J., Burkhart, W., Safrany, S.T. and Shears, S.B. 1997. Molecular cloning and expression of a rat hepatic multiple inositol polyphosphate phosphatase. *Biochem. J.* 328: 75-81.
3. Romano, P.R., Wang, J., O'keefe, R.J., Puzas, J.E., Rosier, R.N. and Reynolds, P.R. 1998. HiPER1, a phosphatase of the endoplasmic reticulum with a role in chondrocyte maturation. *J. Cell Sci.* 111: 803-813.
4. Chi, H., Tiller, G.E., Dasouki, M.J., Romano, P.R., Wang, J., O'keefe, R.J., Puzas, J.E., Rosier, R.N. and Reynolds, P.R. 1999. Multiple inositol polyphosphate phosphatase: evolution as a distinct group within the histidine phosphatase family and chromosomal localization of the human and mouse genes to chromosomes 10q23 and 19. *Genomics* 56: 324-336.
5. Caffrey, J.J., Hidaka, K., Matsuda, M., Hirata, M. and Shears, S.B. 1999. The human and rat forms of multiple inositol polyphosphate phosphatase: functional homology with a histidine acid phosphatase up-regulated during endochondral ossification. *FEBS Lett.* 442: 99-104.

## SOURCE

MIPP (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MIPP of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10405 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

MIPP (K-18) is recommended for detection of MIPP of mouse, rat 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)], 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 MIPP siRNA (h): sc-106226, MIPP siRNA (m): sc-149440, MIPP shRNA Plasmid (h): sc-106226-SH, MIPP shRNA Plasmid (m): sc-149440-SH, MIPP shRNA (h) Lentiviral Particles: sc-106226-V and MIPP shRNA (m) Lentiviral Particles: sc-149440-V.

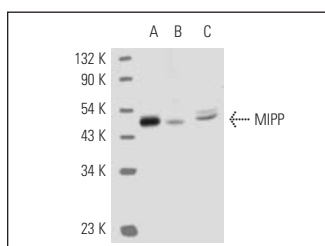
Molecular Weight of MIPP: 47 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MIA PaCa-2 cell lysate: sc-2285 or KNRK whole cell lysate: sc-2214.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MIPP (K-18): sc-10405. Western blot analysis of MIPP expression in Hep G2 (A), MIA PaCa (B) and KNRK (C) whole cell lysates.

## 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.