

MPP10 (L-13): sc-168625

BACKGROUND

The progression of cells from interphase through mitosis involves alterations in cell structure and activity. The transition from G₂ to M phase is induced by the M phase promoting factor (MPF) which either directly or indirectly (via activation of protein kinases) phosphorylates target proteins. These phosphorylated products are known as M phase phosphoproteins (MPPs) and they comprise a family of polypeptides that participate in the disassembly of interphase structures and the subsequent generation of M phase structures. MPP10 (M phase phosphoprotein 10), also known as MPHOSPH10, is a 681 amino acid protein that localizes to the nucleolus during interphase, and to chromosomes during M phase. A component of the 60-80S U3 small nucleolar ribonucleoprotein (U3 SnoRNP) complex, MPP10 is essential for early cleavage events that take place during pre-18S ribosomal RNA processing. Like all MPP proteins, MPP10 is phosphorylated during mitosis.

REFERENCES

1. Matsumoto-Taniura, N., et al. 1996. Identification of novel M phase phosphoproteins by expression cloning. *Mol. Biol. Cell.* 7: 1455-1469.
2. Baserga, S.J., et al. 1997. MPP10P, a new protein component of the U3 SnoRNP required for processing of 18S rRNA precursors. *Nucleic Acids Symp. Ser.* 64-67.
3. Westendorp, J.M., et al. 1998. M phase phosphoprotein 10 is a human U3 small nucleolar ribonucleoprotein component. *Mol. Biol. Cell.* 9: 437-449.
4. Scherl, A., et al. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell.* 13: 4100-4109.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605503; World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Yang, J.M., et al. 2003. Human scleroderma sera contain autoantibodies to protein components specific to the U3 small nucleolar RNP complex. *Arthritis Rheum.* 48: 210-217.
7. Granneman, S., et al. 2003. The human IMP-3 and IMP-4 proteins form a ternary complex with hMPP10, which only interacts with the U3 SnoRNA in 60-80S ribonucleoprotein complexes. *Nucleic Acids Res.* 31: 1877-1887.

CHROMOSOMAL LOCATION

Genetic locus: MPHOSPH10 (human) mapping to 2p13.3; Mphosph10 (mouse) mapping to 7 C.

SOURCE

MPP10 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MPP10 of human 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-168625 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MPP10 (L-13) is recommended for detection of MPP10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other MPP family members.

Suitable for use as control antibody for MPP10 siRNA (h): sc-94702, MPP10 siRNA (m): sc-149534, MPP10 shRNA Plasmid (h): sc-94702-SH, MPP10 shRNA Plasmid (m): sc-149534-SH, MPP10 shRNA (h) Lentiviral Particles: sc-94702-V and MPP10 shRNA (m) Lentiviral Particles: sc-149534-V.

Molecular Weight of MPP10 precursor: 79 kDa.

Molecular Weight of MPP10: 220 kDa.

Molecular Weight of phosphorylated MPP10: 120 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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) 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.

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 or our catalog for detailed protocols and support products.