

Product Information

Monoclonal Anti-hMps1

Clone N1

Purified Mouse Immunoglobulin

Product Number **M5818**

Product Description

Monoclonal Anti-hMps1 (mouse IgG1 isotype) is derived from the N1 (3-472-1) hybridoma produced by the fusion of mouse myeloma cells (PAIB3Ag81 cells) and splenocytes from BALB/c mice immunized with recombinant catalytically inactive hMps1 [D663A] protein.¹ The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-hMps1 recognizes human but not mouse hMps1 (approx. 97 kDa). The product is useful in ELISA, immunoblotting, immunoprecipitation and immunocytochemistry applications.¹

The Mps1 kinase family (Mph1p in *Schizosaccharomyces pombe*, PPK1 in *Arabidopsis thaliana*, XMps1 in *Xenopus laevis*, mMps1/ESK in mouse and hMps1/TTK/PYT in humans) consists of tyrosine and serine/threonine dual-specificity kinase. These have been implicated in multiple cell cycle processes among them duplication of the spindle pole body (SPB), segregation of chromosomes during cell division, spindle assembly checkpoint and accurate centrosome duplication.¹⁻⁴ Therefore, Mps1 proteins can be found in many different cell complexes such as centrosomes, nucleoplasmic side of the nuclear pore complex (NPC), kinetochores and anaphase promoting complex (APC). Mammalian Mps1 family members are expressed in all proliferating cells and tissues. hMps1 is hyper-phosphorylated during mitosis and dephosphorylated when the cells exits mitosis. Furthermore its kinase activity is elevated during M phase.¹⁻⁴

Monoclonal antibodies specific for hMps1 are important tools for studying kinases in different cell cycle processes.

Reagent

Monoclonal Anti-hMps1 is supplied as a solution in 0.01M phosphate buffered saline pH 7.4, containing 15mM sodium azide as a preservative.

Antibody concentration: approx. 2 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

Store at -20 °C. . Upon initial thawing freeze the solution in working aliquots for extended storage. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A working concentration of 0.5-1µg/ml is determined by immunoblotting, using HeLa total cell extract.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilution by titration test.

References

1. Stucke., V.M., et al., EMBO J., **21**, 1723-1732 (2002).
2. Liu., S.T., et al., Mol. Biol. Cell, **14**, 1638-1651 (2003).
3. Fisk., H.A., et al., Proc. Natl. Acad. Sci. USA, **100**, 14875-14880 (2003).
4. Weiss., E., and Winey, M., J. Cell Biol., **132**, 111-123 (1996)

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