

Msi1 (69-Q): sc-135721



The Power to Question

BACKGROUND

Musashi1 (Msi1) is an RNA-binding protein expressed in neural progenitor cells and neural stem cells. Msi1 is the mammalian homolog of *Drosophila* Musashi. The gene encoding human Msi1 encodes a 362 amino acid protein. In murine embryonic neural progenitor cells, Msi1 localizes to the cytoplasm and is downregulated during differentiation. Msi1 binds to NUMB, which encodes a membrane-associated antagonist of Notch signaling. Msi1 appears to function in the proliferation and maintenance of stem cell populations of the central nervous system. In addition to its usefulness as a marker for neural progenitor cells in normal human brains, Msi1 is also a marker for human gliomas. In rats, Msi1 is expressed in Sertoli cells of the testis and granulosa cells of the ovary.

REFERENCES

- Good, P., et al. 1998. The human Musashi homolog 1 (Msi1) gene encoding the homologue of Musashi/Nrp-1, a neural RNA-binding protein putatively expressed in CNS stem cells and neural progenitor cells. *Genomics* 52: 382-384.
- Kaneko, Y., et al. 2000. Musashi1: evolutionarily conserved markers for CNS progenitor cells including neural stem cells. *Dev. Neurosci.* 22: 138-152.

CHROMOSOMAL LOCATION

Genetic locus: MSI1 (human) mapping to 12q24.31; Msi1 (mouse) mapping to 5 F.

SOURCE

Msi1 (69-Q) is a mouse monoclonal antibody raised against amino acids 1-87 representing an N-terminal region of Msi1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Msi1 (69-Q) is recommended for detection of Msi1 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), immunohistochemistry (including paraffin-embedded sections) (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 Msi1 siRNA (h): sc-106836, Msi1 siRNA (m): sc-149659, Msi1 shRNA Plasmid (h): sc-106836-SH, Msi1 shRNA Plasmid (m): sc-149659-SH, Msi1 shRNA (h) Lentiviral Particles: sc-106836-V and Msi1 shRNA (m) Lentiviral Particles: sc-149659-V.

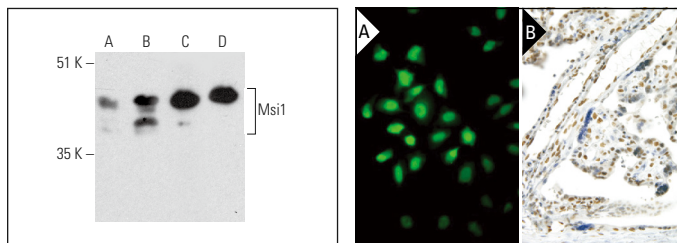
Molecular Weight of Msi1: 39 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SH-SY5Y cell lysate: sc-3812 or C2C12 whole cell lysate: sc-364188.

STORAGE

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

DATA



Msi1 (69-Q): sc-135721. Western blot analysis of Msi1 expression in IMR-32 (A), SH-SY5Y (B), C2C12 (C) and PC-12 (D) whole cell lysates.

Msi1 (69-Q): sc-135721. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Gioia, U., et al. 2014. Mir-23a and mir-125b regulate neural stem/progenitor cell proliferation by targeting Musashi1. *RNA Biol.* 11: 1105-1112.
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- Chow, H.Y., et al. 2018. Group I Paks are essential for epithelial-mesenchymal transition in an Apc-driven model of colorectal cancer. *Nat. Commun.* 9: 3473.
- Wu, C.H., et al. 2019. Estradiol induces cell proliferation in MCF7 mammospheres through HER2/Cox-2. *Mol. Med. Rep.* 19: 2341-2349.
- Dun, Y., et al. 2020. Changes of Wnt/β-catenin signalling, BMP2, and BMP4 in the jejunum during ageing in rats. *Arab J. Gastroenterol.* 21: 43-48.
- Chu, I.R., et al. 2020. Differentiation of tumorigenic C6 glioma cells induced by enhanced IL-6 signaling. *Medicina* 56: 625.
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- Bayazit, M.B., et al. 2022. Small RNAs derived from tRNA fragmentation regulate the functional maturation of neonatal β cells. *Cell Rep.* 40: 111069.
- Qi, J.Z., et al. 2022. Functions of long non-coding RNA LNC11649 in non-small cell lung cancer cells as a reprocessed form of MALAT1. *Neoplasma* 69: 1322-1337.

RESEARCH USE

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