SANTA CRUZ BIOTECHNOLOGY, INC.

Msi1 (3F8-E6-B9): sc-517562

SANTA CRUZ BIOTECHNOLOGY

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

1. Good, P., Yoda, A., Sakakibara, S., Yamamoto, A., Imai, T., Sawa, H., Ikeuchi, T., Tsuji, S., Satoh, H. and Okano, H. 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.
2. Kaneko, Y., Sakakibara, S., Imai, T., Suzuki, A., Nakamura, Y., Sawamoto, K., Ogawa, Y., Toyama, T. and Okano, H. 2000. Musashi1: evolutionarily conserved markers for CNS progenitor cells including neural stem cells. Dev. Neurosci. 22: 138-152.
3. Imai, T., Tokunaga, A., Yoshida, T., Hashimoto, M., Mikoshiba, K., Weinmaster, G., Nakafuku, M. and Okano, H. 2001. The neural RNA-binding protein Musashi1 translationally regulates mammalian numb gene expression by interacting with its mRNA. Mol. Cell. Biol. 21: 3888-3900.
4. Kanemura, Y., Mori, K., Sakakibara, S., Fujikawa, H., Hayashi, H., Nakano, A., Matsumoto, T., Tamura, K., Imai, T., Ohnishi, T., Fushiki, S., Nakamura, Y., Yamasaki, M., Okano, H. and Arita, N. 2001. Musashi1, an evolutionarily conserved neural RNA-binding protein, is a versatile marker of human glioma cells in determining their cellular origin, malignancy, and proliferative activity. Differentiation 68: 141-152.
5. Sakakibara, S., Nakamura, Y., Yoshida, T., Shibata, S., Koike, M., Takano, H., Ueda, S., Uchiyama, Y., Noda, T. and Okano, H. 2002. RNA-binding protein Musashi family: roles for CNS stem cells and a subpopulation of ependymal cells revealed by targeted disruption and antisense ablation. Proc. Natl. Acad. Sci. USA 99: 15194-15199.
6. Saunders, P.T., Maguire, S.M., Macpherson, S., Fenelon, M.C., Sakakibara, S. and Okano, H. 2002. RNA binding protein Musashi1 is expressed in sertoli cells in the rat testis from fetal life to adulthood. Biol. Reprod. 66: 500-507.

CHROMOSOMAL LOCATION

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

SOURCE

Msi1 (3F8-E6-B9) is a mouse monoclonal antibody raised against recombinant Msi1 protein fragments of human origin.

PRODUCT

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

APPLICATIONS

Msi1 (3F8-E6-B9) 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).

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.

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 for detailed protocols and support products.