

Msi2 (E-13): sc-83158

BACKGROUND

Msi2 (musashi homolog 2), also known as MSI2H, is a 328 amino acid protein that localizes to the cytoplasm and contains 2 RRM (RNA recognition motif) domains. Expressed ubiquitously at low levels, Msi2 functions as an RNA binding protein that, by regulating the expression of target mRNAs, is thought to play a role in the proliferation and maintenance of stem cells within the central nervous system. Msi2 is subject to post-translational phosphorylation and is upregulated in response to brain injury, suggesting a role in healing and brain tissue regeneration. Chromosomal aberrations involving the Msi2 gene are associated with the progression of chronic myeloid leukemia. Multiple isoforms of Msi2 exist due to alternative splicing events.

REFERENCES

1. Sakakibara, S., Nakamura, Y., Satoh, H. and Okano, H. 2001. RNA-binding protein musashi 2: developmentally regulated expression in neural precursor cells and subpopulations of neurons in mammalian CNS. *J. Neurosci.* 21: 8091-8107.
2. 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.
3. Barbouti, A., Höglund, M., Johansson, B., Lassen, C., Nilsson, P.G., Hagemeijer, A., Mitelman, F. and Fioretos, T. 2003. A novel gene, MSI2, encoding a putative RNA-binding protein is recurrently rearranged at disease progression of chronic myeloid leukemia and forms a fusion gene with HOXA9 as a result of the cryptic t(7;17)(p15;q23). *Cancer Res.* 63: 1202-1206.
4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607897. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Siddall, N.A., McLaughlin, E.A., Marriner, N.L. and Hime, G.R. 2006. The RNA-binding protein Musashi is required intrinsically to maintain stem cell identity. *Proc. Natl. Acad. Sci. USA* 103: 8402-8407.
6. De Weer, A., Speleman, F., Cauwelier, B., Van Roy, N., Yigit, N., Verhasselt, B., De Moerloose, B., Benoit, Y., Noens, L., Selleslag, D., Lippert, E., Struski, S., Bastard, C., De Paepe, A., Vandenberghe, P., Hagemeijer, A., Dastugue, N. and Poppe, B. 2008. EVI1 overexpression in t(3;17) positive myeloid malignancies results from juxtaposition of EVI1 to the MSI2 locus at 17q22. *Haematologica* 93: 1903-1907.

CHROMOSOMAL LOCATION

Genetic locus: MSI2 (human) mapping to 17q22; Msi2 (mouse) mapping to 11 C.

SOURCE

Msi2 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Msi2 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-83158 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Msi2 (E-13) is recommended for detection of Msi2 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 family member Msi1.

Msi2 (E-13) is also recommended for detection of Msi2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Msi2 siRNA (h): sc-75834, Msi2 siRNA (m): sc-75835, Msi2 shRNA Plasmid (h): sc-75834-SH, Msi2 shRNA Plasmid (m): sc-75835-SH, Msi2 shRNA (h) Lentiviral Particles: sc-75834-V and Msi2 shRNA (m) Lentiviral Particles: sc-75835-V.

Molecular Weight of Msi2 isoforms: 35/37 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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.