SANTA CRUZ BIOTECHNOLOGY, INC.

MEMO1 (AT1E9): sc-517412

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MEMO1 (mediator of cell motility 1), also known as C2orf4 or NS5ATP7, is a 297 amino acid protein that is thought to relax extracellular chemotactic signals that are targeted at the microtubule cytoskeleton, thereby controlling cell migration. Additionally, MEMO1 is thought to mediate Neu signaling and is required for breast carcinoma migration, suggesting an important role in tumorigenesis. The gene encoding MEMO1 maps to human chromosome 2p23.1, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the chromosome 2-localized ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes, which also map to chromosome 2.

REFERENCES

1. Cheng, N.C., et al. 1996. Lack of class I HLA expression in neuroblastoma is associated with high N-Myc expression and hypomethylation due to loss of the MEMO-1 locus. Oncogene 13: 1737-1744.
2. McEvoy, C.R., et al. 2002. Frequency and genetic basis of MHC, β-2-Microglobulin and MEMO-1 loss of heterozygosity in sporadic breast cancer. Tissue Antigens 60: 235-243.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611786. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. McEvoy, C.R., et al. 2003. Evidence for whole chromosome 6 loss and duplication of the remaining chromosome in acute lymphoblastic leukemia. Genes Chromosomes Cancer 37: 321-325.
5. Marone, R., et al. 2004. Memo mediates ErbB2-driven cell motility. Nat. Cell Biol. 6: 515-522.
6. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.

CHROMOSOMAL LOCATION

Genetic locus: MEMO1 (human) mapping to 2p23.1; Memo1 (mouse) mapping to 17 E2.

SOURCE

MEMO1 (AT1E9) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-297 of MEMO1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

MEMO1 (AT1E9) is recommended for detection of MEMO1 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MEMO1 siRNA (h): sc-106215, MEMO1 siRNA (m): sc-149368, MEMO1 shRNA Plasmid (h): sc-106215-SH, MEMO1 shRNA Plasmid (m): sc-149368-SH, MEMO1 shRNA (h) Lentiviral Particles: sc-106215-V and MEMO1 shRNA (m) Lentiviral Particles: sc-149368-V.

Molecular Weight (predicted) of MEMO1: 34 kDa.

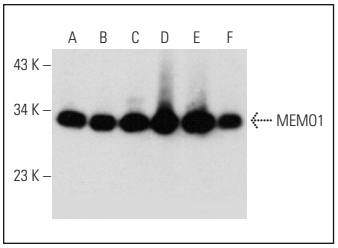
Molecular Weight (observed) of MEMO1: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MCF7 whole cell lysate: sc-2206 or COLO 320DM cell lysate: sc-2226.

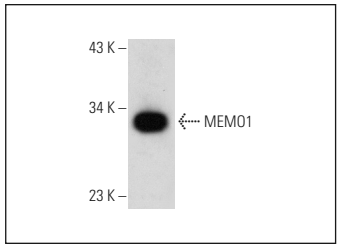
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MEMO1 (AT1E9): sc-517412. Western blot analysis of MEMO1 expression in Jurkat (**A**), COLO 320DM (**B**), MCF7 (**C**), NIH/3T3 (**D**) and RAT2 (**E**) whole cell lysates and human heart tissue extract (**F**).



MEMO1 (AT1E9): sc-517412. Western blot analysis of MEMO1 expression in mouse liver tissue extract.

SELECT PRODUCT CITATIONS

1. Vitaliti, A., et al. 2022. AKT-driven epithelial-mesenchymal transition is affected by copper bioavailability in HER2 negative breast cancer cells via a LOXL2-independent mechanism. Cell. Oncol. E-published.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.