

MOZ (E-17): sc-5715

BACKGROUND

MOZ (monocytic leukemia zinc finger protein) is a chromatin-associated histone acetyltransferase (HAT) that regulates chromatin remodeling and transcription. The MOZ gene was initially isolated as a consequence of two variant translocations that were identified in a distinct subtype of acute myeloid leukemias and resulted in the formation of MOZ fusion proteins. These fusions involve the HAT domain of MOZ with the activation domain of either transcriptional coactivator protein TIF2/GRIP1 or CBP, and lead to enhanced transcriptional activation by a mechanism involving aberrant histone acetylation. Additional MOZ related proteins, including MORF (MOZ related factor) and Tip60 (TAT interacting proteins 60), share significant similarities with MOZ including the putative HAT domain. MORF also contains a strong transcriptional repression domain at its N-terminus and a highly potent activation domain at the C-terminus, suggesting that MORF has both HAT activity and contributes to the regulation of transcriptional activation. Tip60 was originally identified as a coactivator for the HIV TAT protein and also functions as a nuclear hormone receptor coactivator that enhances ligand dependent steroid receptor-mediated transactivation involving the androgen, estrogen and progesterone receptors.

REFERENCES

1. Borrow, J., et al. 1996. The translocation t(8;16)(p11;p13) of acute myeloid leukaemia fuses a putative acetyltransferase to the CREB-binding protein. *Nat. Genet.* 14: 33-41.
2. Hilfiker, A., et al. 1997. mof, a putative acetyl transferase gene related to the Tip60 and MOZ human genes and to the SAS genes of yeast, is required for dosage compensation in *Drosophila*. *EMBO J.* 16: 2054-2060.
3. Yamamoto, T., et al. 1997. Novel substrate specificity of the histone acetyltransferase activity of HIV-1-TAT interactive protein Tip60. *J. Biol. Chem.* 272: 30595-30598.
4. Aguiar, R.C., et al. 1997. Abnormalities of chromosome band 8p11 in leukemia: two clinical syndromes can be distinguished on the basis of MOZ involvement. *Blood* 90: 3130-3135.
5. Kuo, M.H., et al. 1998. Roles of histone acetyltransferases and deacetylases in gene regulation. *Bioessays* 20: 615-626.
6. Carapeti, M., et al. 1998. A novel fusion between MOZ and the nuclear receptor coactivator TIF2 in acute myeloid leukemia. *Blood* 91: 3127-3133.
7. Brady, M.E., et al. 1999. Tip60 is a nuclear hormone receptor coactivator. *J. Biol. Chem.* 274: 17599-17604.
8. Champagne, N., et al. 1999. Identification of a human histone acetyltransferase related to monocytic leukemia zinc finger protein. *J. Biol. Chem.* 274: 28528-28536.

CHROMOSOMAL LOCATION

Genetic locus: MYST3 (human) mapping to 8p11.

SOURCE

MOZ (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MOZ 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-5715 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MOZ (E-17) is recommended for detection of MOZ of 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).

MOZ (E-17) is also recommended for detection of MOZ in additional species, including canine, bovine and avian.

Suitable for use as control antibody for MOZ siRNA (h): sc-37959, MOZ shRNA Plasmid (h): sc-37959-SH and MOZ shRNA (h) Lentiviral Particles: sc-37959-V.

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.

SELECT PRODUCT CITATIONS

1. Laue, K., et al. 2008. The multidomain protein Brpf1 binds histones and is required for Hox gene expression and segmental identity. *Development* 135: 1935-1946.

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.



Try **MOZ (4D8): sc-293283**, our highly recommended monoclonal alternative to MOZ (E-17).