SANTA CRUZ BIOTECHNOLOGY, INC.

MOZ (4D8): sc-293283

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 putuative 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.

CHROMOSOMAL LOCATION

Genetic locus: KAT6A (human) mapping to 8p11.21.

SOURCE

MOZ (4D8) is a mouse monoclonal antibody raised against amino acids 81-179 of MOZ of human origin.

PRODUCT

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

APPLICATIONS

MOZ (4D8) is recommended for detection of MOZ of 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).

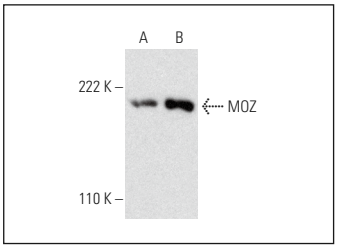
Suitable for use as control antibody for MOZ siRNA (h): sc-37959, MOZ shRNA Plasmid (h): sc-37959-SH and MOZ shRNA (h) Lentiviral Particles: sc-37959-V.

Positive Controls: Jurkat whole cell lysate: sc-2204 or RT-4 whole cell lysate: sc-364257.

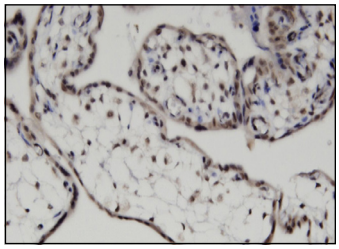
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MOZ (4D8): sc-293283. Western blot analysis of MOZ expression in Jurkat (**A**) and RT-4 (**B**) whole cell lysates.



MOZ (4D8): sc-293283. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Solier, S., et al. 2023. A druggable copper-signalling pathway that drives inflammation. Nature 617: 386-394.
2. Liang, F., et al. 2023. Expression profiles and functional prediction of histone acetyltransferases of the MYST family in kidney renal clear cell carcinoma. BMC Cancer 23: 586.

STORAGE

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