SANTA CRUZ BIOTECHNOLOGY, INC.

MOF (T13H1B2): sc-81765

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dosage compensation ensures that males with a single X chromosome and females with two X chromosomes have the same amount of most X-linked gene products. In *Drosophila*, this is acheived by enhancing the level of transcription of the X chromosome in males. Proteins such as maleless, male specific lethal 1, 2 and 3, and males absent on the first (MOF) form a dosage compensation complex (DCC) that is required for the twofold increase of transcription of the male X chromosome. The DCC is preferentially associated with many sites on the X chromosome in somatic cells of males. The binding of the DCC to the X chromosome is dependent upon Histone 4 acetylation at Lysine 16, which is accomplished by MOF. In mammals, MOF (also designated hMOF, MYST1 or MOZ) belongs to the MYST family of histone acetyl transferases, which are characterized by a unique C2HC-type zinc finger close to their HAT domains. MOF utilizes the zinc finger domain to contact the globular part of the nucleosome as well as the Histone H4 N-terminal tail substrate. The carboxy-terminal domain of human MOF also has histone acetyltransferase activity directed against Histones H3 and H2A, a characteristic shared with other MYST family histone acetyltransferases.

CHROMOSOMAL LOCATION

Genetic locus: KAT8 (human) mapping to 16p11.2; Kat8 (mouse) mapping to 7 F3.

SOURCE

MOF (T13H1B2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 132-283 of MOF of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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.

APPLICATIONS

MOF (T13H1B2) is recommended for detection of MOF 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MOF siRNA (h): sc-37129, MOF siRNA (m): sc-37130, MOF shRNA Plasmid (h): sc-37129-SH, MOF shRNA Plasmid (m): sc-37130-SH, MOF shRNA (h) Lentiviral Particles: sc-37129-V and MOF shRNA (m) Lentiviral Particles: sc-37130-V.

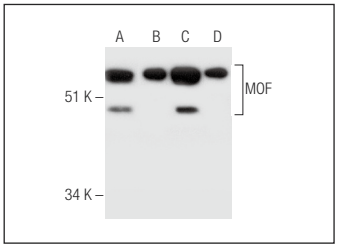
Molecular Weight of MOF: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, COLO 320DM cell lysate: sc-2226 or MCF7 whole cell lysate: sc-2206.

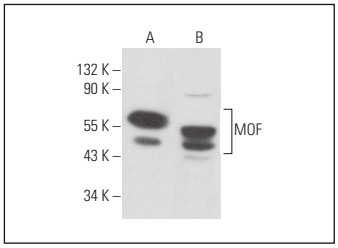
RECOMMENDED SUPPORT REAGENTS

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



MOF (T13H1B2): sc-81765. Western blot analysis of MOF expression in HeLa (**A**), Caki-1 (**B**), COLO 320DM (**C**) and MCF7 (**D**) whole cell lysates.



MOF (T13H1B2): sc-81765. Western blot analysis of MOF expression in HeLa (**A**) and ACHN (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Contrepois, K., et al. 2012. Deacetylation of H4-K16Ac and heterochromatin assembly in senescence. Epigenetics Chromatin 5: 15.
2. Poté, N., et al. 2020. The histone acetyltransferase hMOF promotes vascular invasion in hepatocellular carcinoma. Liver Int. 40: 956-967.
3. Wang, M., et al. 2021. Lack of Mof reduces acute liver injury by enhancing transcriptional activation of Igf1. J. Cell. Physiol. 236: 6559-6570.
4. Wang, M., et al. 2021. Lack of MOF decreases susceptibility to hypoxia and promotes multidrug resistance in hepatocellular carcinoma via HIF-1α. Front. Cell Dev. Biol. 9: 718707.
5. Zhang, X., et al. 2022. MOF negatively regulates estrogen receptor α signaling via CUL4B-mediated protein degradation in breast cancer. Front. Oncol. 12: 868866.

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.