

MOF (T-20): sc-13677

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 achieved 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 acetyltransferases 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.

REFERENCES

- 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.
- Gu, W., et al. 1998. Targeting of MOF, a putative histone acetyltransferase, to the X chromosome of *Drosophila melanogaster*. *Dev. Genet.* 22: 56-64.
- Akhtar, A., et al. 2000. Chromodomains are protein-RNA interaction modules. *Nature* 407: 405-409.

CHROMOSOMAL LOCATION

Genetic locus: MOF (human) mapping to 16p11.2; MOF (mouse) mapping to 7 57.0 cM (7 F3).

SOURCE

MOF (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MOF 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-13677 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

MOF (T-20) 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), 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).

MOF (T-20) is also recommended for detection of MOF in additional species, including equine, canine, bovine and porcine.

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.

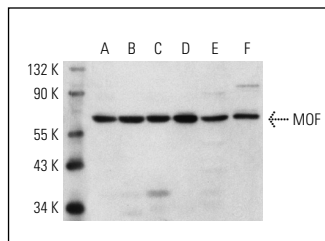
Molecular Weight of MOF: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-N-MC cell lysate: sc-2237 or Caki-1 cell lysate: sc-2224.

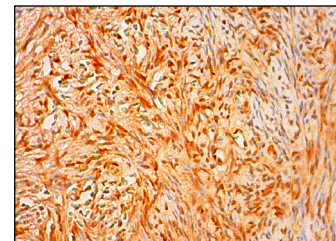
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MOF (T-20): sc-13677. Western blot analysis of MOF expression in HeLa (A), SK-N-MC (B), Caki-1 (C), COLO 320DM (D), MCF7 (E) and Hep G2 (F) whole cell lysates.



MOF (T-20): sc-13677. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear and cytoplasmic staining of ovarian stroma cells.

SELECT PRODUCT CITATIONS

- Miyamoto, N., et al. 2008. TIP60 is regulated by circadian transcription factor Clock and is involved in cisplatin resistance. *J. Biol. Chem.* 283: 18218-18226.