SANTA CRUZ BIOTECHNOLOGY, INC.

MOF (dN-17): sc-22351

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. MOF 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.

REFERENCES

1. Hilfiker, A., Hilfiker-Kleiner, D., Pannuti, A., and Lucchesi, J.C. 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.
2. Gu, W., Szauter, P., and Lucchesi, J.C. 1998. Targeting of MOF, a putative histone acetyl transferase, to the X chromosome of *Drosophila melanogaster*. Dev. Genet. 22: 56-64.
3. Akhtar, A. and Becker, P.B. 2000. Activation of transcription through histone H4 acetylation by MOF, an acetyltransferase essential for dosage compensation in *Drosophila*. Mol. Cell. 5: 367-375.
4. Akhtar, A. and Becker, P.B. 2001. The histone H4 acetyltransferase MOF uses a C2HC zinc finger for substrate recognition. EMBO Rep. 2: 113-118.
5. SWISS-PROT/TrEMBL (Oo2193). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

SOURCE

MOF (dN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MOF of *Drosophila melanogaster* 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-22351 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 (dN-17) is recommended for detection of MOF of *Drosophila melanogaster* 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).

Molecular Weight of MOF: 60 kDa.

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.

PROTOCOLS

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