SANTA CRUZ BIOTECHNOLOGY, INC.

MSL-2 (d-300): sc-66969

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Drosophila melanogaster is a proven and effective model for studying developmental and cellular processes common to higher eukaryotes. Approximately 13,600 genes have been elucidated from more than 120 megabases of euchromatin, and they are organized among the chromosomes 2, 3, 4, X and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes can be categorized based on the type of protein for which they encode and are represented by six major classifications, which include intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing and chromatin associated) or other functional proteins. The male-specific lethal 2 (MSL-2) protein is essential for X-chromosome dosage compensation. Female flies inhibit MSL-2 mRNA translation, which is mediated by sex-lethal (SXL) in both the 5' and 3' untranslated regions.

REFERENCES

1. Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster*. Science 287: 2185-2195.
2. Forch, P., et al. 2001. Modulation of MSL-2 5' splice site recognition by sex-lethal. RNA 7: 1185-1191.
3. Gebauer, F., et al. 2003. *Drosophila* sex-lethal inhibits the stable association of the 40S ribosomal subunit with MSL-2 mRNA. Mol. Cell 11: 1397-1404.
4. Grskovic, M., et al. 2003. A co-repressor assembly nucleated by sex-lethal in the 3'UTR mediates translational control of *Drosophila* MSL-2 mRNA. EMBO J. 22: 5571-5581.
5. Beckmann, K. et al. 2005. A dual inhibitory mechanism restricts MSL-2 mRNA translation for dosage compensation in *Drosophila*. Cell 122: 529-540.
6. The Interactive Fly. http://www.sdbonline.org/fly/aimain/1aahome.htm

SOURCE

MSL-2 (d-300) is a rabbit polyclonal antibody raised against amino acids 474-773 mapping at the C-terminus of MSL-2 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.

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.

APPLICATIONS

MSL-2 (d-300) is recommended for detection of MSL-2 of *Drosophila melanogaster* 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of MSL-2: 97 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.