SANTA CRUZ BIOTECHNOLOGY, INC.

MSL-1 (C-9): sc-514649

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MSL-1 (male-specific lethal 1 homolog *(Drosophila)*, also known as MSL1L1 (male-specific lethal 1-like 1), is a 614 amino acid nuclear protein that forms a multisubunit histone acetyltransferase complex with MOF, MSL-1, MSL-2 and MSL3L1. This complex is responsible for the majority of Histone H4 acetylation at lysine 16. Existing as three alternatively spliced isoforms, MSL-1 is a member of the MSL-1 family and is encoded by a gene that maps to human chromosome 17q21.1. Human chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is liked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
2. Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. Br. J. Cancer 77: 192-200.
3. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
4. Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. Oncogene 20: 3341-3347.

CHROMOSOMAL LOCATION

Genetic locus: MSL1 (human) mapping to 17q21.1.

SOURCE

MSL-1 (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 584-603 at the C-terminus of MSL-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MSL-1 (C-9) is available conjugated to agarose (sc-514649 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514649 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514649 PE), fluorescein (sc-514649 FITC), Alexa Fluor® 488 (sc-514649 AF488), Alexa Fluor® 546 (sc-514649 AF546), Alexa Fluor® 594 (sc-514649 AF594) or Alexa Fluor® 647 (sc-514649 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514649 AF680) or Alexa Fluor® 790 (sc-514649 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514649 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

MSL-1 (C-9) is recommended for detection of MSL-1 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

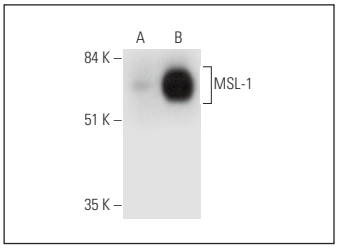
Molecular Weight of MSL-1 isoforms: 67/48/41 kDa.

Positive Controls: MSL-1 (h): 293T Lysate: sc-177568.

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.

DATA



MSL-1 (C-9): sc-514649. Western blot analysis of MSL-1 expression in non-transfected: sc-117752 (**A**) and human MSL-1 transfected: sc-177568 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kunisky, A.K., et al. 2021. Shift in MSL-1 alternative polyadenylation in response to DNA damage protects cancer cells from chemotherapeutic agent-induced apoptosis. Cell Rep. 37: 109815.
2. Li, Z., et al. 2023. Comprehensive synergy mapping links a BAF- and NSL-containing "supercomplex" to the transcriptional silencing of HIV-1. Cell Rep. 42: 113055.

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.