SANTA CRUZ BIOTECHNOLOGY, INC.

Mael (H-1): sc-398925

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mael is a 434 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one HMG box DNA-binding domain. Expressed specifically in testicular tissue, Mael interacts with Ini1, mSin3B and VASA and plays an essential role in spermatogenesis, specifically by repressing and, ultimately, preventing the mobilization of transposable elements (a process that is crucial for germline integrity). Multiple isoforms of Mael exist due to alternative splicing events. The gene encoding Mael maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders—cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. Am. J. Hum. Genet. 69: 428-433.
2. Findley, S.D., et al. 2003. Maelstrom, a *Drosophila* spindle-class gene, encodes a protein that colocalizes with Vasa and RDE1/AGO1 homolog, aubergine, in nuage. Development 130: 859-871.

CHROMOSOMAL LOCATION

Genetic locus: Mael (mouse) mapping to 1 H2.3.

SOURCE

Mael (H-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Mael of mouse 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398925 X, 200 µg/0.1 ml.

Mael (H-1) is available conjugated to agarose (sc-398925 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398925 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398925 PE), fluorescein (sc-398925 FITC), Alexa Fluor® 488 (sc-398925 AF488), Alexa Fluor® 546 (sc-398925 AF546), Alexa Fluor® 594 (sc-398925 AF594) or Alexa Fluor® 647 (sc-398925 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398925 AF680) or Alexa Fluor® 790 (sc-398925 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Mael (H-1) is recommended for detection of Mael of mouse and rat 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).

Suitable for use as control antibody for Mael siRNA (m): sc-75729, Mael shRNA Plasmid (m): sc-75729-SH and Mael shRNA (m) Lentiviral Particles: sc-75729-V.

Mael (H-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

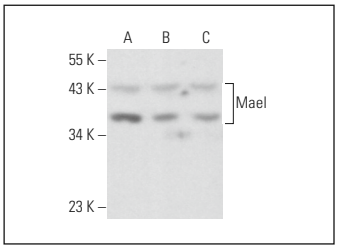
Molecular Weight of Mael: 49 kDa.

Positive Controls: rat testis extract: sc-2400.

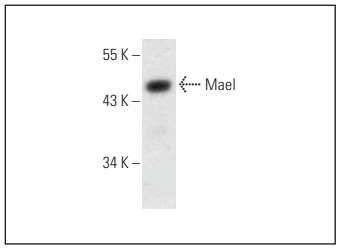
RECOMMENDED SUPPORT REAGENTS

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



Mael (H-1): sc-398925. Western blot analysis of Mael expression in Hep G2 (**A**), HeLa (**B**) and NTERA-2 cl.D1 (**C**) whole cell lysates.



Mael (H-1): sc-398925. Western blot analysis of Mael expression in rat testis tissue extract.

SELECT PRODUCT CITATIONS

1. Sari, I., et al. 2020. Effect of ovarian stimulation on the expression of piRNA pathway proteins. PLoS ONE 15: e0232629.
2. Nie, Y., et al. 2020. Fancd2 is required for the repression of germline transposable elements. Reproduction 159: 659-668.

RESEARCH USE

For research use only, not for use in diagnostic procedures.