SANTA CRUZ BIOTECHNOLOGY, INC.

MSY2 (A-12): sc-393840

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MSY2 and YB-2 (MSY3,4) belong to the Y-box family of multifunctional proteins that regulate both transcription and translation. Y-box proteins interact with a wide variety of nucleic acid structures to act as transcription factors and mRNA masking proteins. The modular structure of Y-box proteins includes a highly conserved N-terminal cold-shock domain (CSD, equivalent to the bacterial cold-shock proteins) and four basic C-terminal domains containing arginine clusters and aromatic residues. MSY2 is expressed in testis and ovary where it may repress translation of parental mRNA. The gene encoding human MSY2 maps to chromosome 17p13.1. YB-2 (MSY3,4 in mouse) is also known as DNA binding protein A and is highly expressed in the testis, heart and muscle. MSY2 and YB-2 bind to the consensus sequence 5'-UCCAUCA-3' contained in the Y-box element.

REFERENCES

1. Tekur, S., et al. 1999. Contrin, the human homologue of a germ-cell Y-box-binding protein: cloning, expression, and chromosomal localization. J. Androl. 20: 135-144.
2. Okamoto, T., et al. 2000. Direct interaction of p53 with the Y-box binding protein, YB-1: a mechanism for regulation of human gene expression. Oncogene 54: 6194-6202.

CHROMOSOMAL LOCATION

Genetic locus: YBX2 (human) mapping to 17p13.1; Ybx2 (mouse) mapping to 11 B3.

SOURCE

MSY2 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-17 at the N-terminus of MSY2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-393840 X, 200 µg/0.1 ml.

MSY2 (A-12) is available conjugated to agarose (sc-393840 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393840 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393840 PE), fluorescein (sc-393840 FITC), Alexa Fluor® 488 (sc-393840 AF488), Alexa Fluor® 546 (sc-393840 AF546), Alexa Fluor® 594 (sc-393840 AF594) or Alexa Fluor® 647 (sc-393840 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393840 AF680) or Alexa Fluor® 790 (sc-393840 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393840 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

MSY2 (A-12) is recommended for detection of MSY2 of mouse, rat and 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), 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).

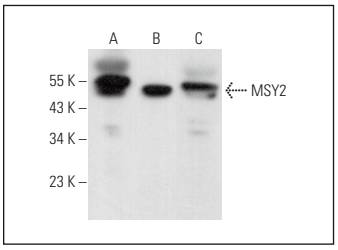
Suitable for use as control antibody for MSY2 siRNA (h): sc-38630, MSY2 siRNA (m): sc-38631, MSY2 shRNA Plasmid (h): sc-38630-SH, MSY2 shRNA Plasmid (m): sc-38631-SH, MSY2 shRNA (h) Lentiviral Particles: sc-38630-V and MSY2 shRNA (m) Lentiviral Particles: sc-38631-V.

MSY2 (A-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

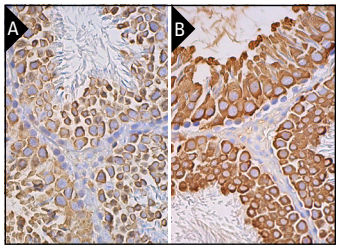
Molecular Weight of MSY2: 48 kDa.

Positive Controls: mouse testis extract: sc-2405, human testis extract: sc-363781 or rat testis extract: sc-2400.

DATA



MSY2 (A-12): sc-393840. Western blot analysis of MSY2 expression in mouse testis (**A**), human testis (**B**) and rat testis (**C**) tissue extracts.



MSY2 (A-12): sc-393840. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis (**A**) and rat testis (**B**) tissue showing cytoplasmic staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

1. Bailey, A.S., et al. 2017. The conserved RNA helicase YTHDC2 regulates the transition from proliferation to differentiation in the germline. Elife 6: e26116.
2. Sui, X., et al. 2020. METTL3-mediated m^6A is required for murine oocyte maturation and maternal-to-zygotic transition. Cell Cycle 19: 391-404.
3. Legoff, L., et al. 2021. Histone deacetylase inhibition leads to regulatory histone mark alterations and impairs meiosis in oocytes. Epigenetics Chromatin 14: 39.
4. Lena, A.M., et al. 2021. The p63 C-terminus is essential for murine oocyte integrity. Nat. Commun. 12: 383.

RESEARCH USE

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