SANTA CRUZ BIOTECHNOLOGY, INC.

mSin3A (G-11): sc-5299

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

It is now well established that Myc regulation of cell proliferation and differentiation involves a family of related transcription factors. One such factor, Max, is an obligate heterodimeric partner for Myc and can also form hetero-dimers with at least four related proteins designated Mad 1, Mxi1 (alternatively designated Mad 2), Mad 3 and Mad 4. Like Mad 1 and Mxi1, association of Mad 3 and Mad 4 with Max results in transcriptional repression. Both Myc and the Mad proteins have short half-lives and their synthesis is tightly regulated, while Max expression is constitutive and relatively stable. Two related mammalian cDNAs have been identified and shown to encode Mad-binding proteins. Both possess sequence homology with the yeast transcription repressor Sin3 including four conserved paired amphipathic helix (PAH) domains. mSin3A and mSin3B specifically interact with the Mad proteins via their second paired amphipathic helix domain (PAH2). It has been suggested that Mad-Max heterodimers repress transcription by tethering mSin3 to DNA as corepressors.

REFERENCE

1. Mukherjee, B., et al. 1992. Myc family oncoproteins function through a common pathway to transform normal cells in culture: cross-interference by Max and transacting dominant mutants. Genes Dev. 6: 1480-1492.
2. Kretzner, L., et al. 1992. The Myc and Max proteins possess distinct transcriptional activities. Nature 359: 426-429.

CHROMOSOMAL LOCATION

Genetic locus: SIN3A (human) mapping to 15q24.2; Sin3a (mouse) mapping to 9 B.

SOURCE

mSin3A (G-11) is a mouse monoclonal antibody epitope mapping within the PA_{H2} region of mSin3A 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-5299 X, 200 µg/0.1 ml.

mSin3A (G-11) is available conjugated to agarose (sc-5299 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-5299 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5299 PE), fluorescein (sc-5299 FITC), Alexa Fluor® 488 (sc-5299 AF488), Alexa Fluor® 546 (sc-5299 AF546), Alexa Fluor® 594 (sc-5299 AF594) or Alexa Fluor® 647 (sc-5299 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5299 AF680) or Alexa Fluor® 790 (sc-5299 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

mSin3A (G-11) is recommended for detection of mSin3A of mouse, rat and human 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)], 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).

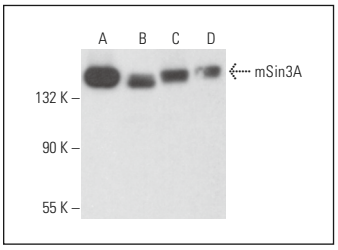
Suitable for use as control antibody for mSin3A siRNA (h): sc-35973, mSin3A siRNA (m): sc-35974, mSin3A shRNA Plasmid (h): sc-35973-SH, mSin3A shRNA Plasmid (m): sc-35974-SH, mSin3A shRNA (h) Lentiviral Particles: sc-35973-V and mSin3A shRNA (m) Lentiviral Particles: sc-35974-V.

mSin3A (G-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

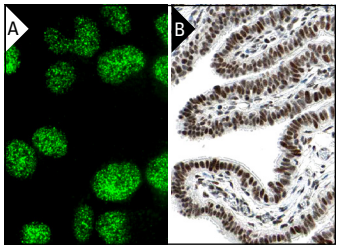
Molecular Weight of mSin3A: 150 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, NIH/3T3 whole cell lysate: sc-2210 or F9 cell lysate: sc-2245.

DATA



mSin3A (G-11): sc-5299. Western blot analysis of mSin3A expression in F9 (**A**), SUP-T1 (**B**), U-2 OS (**C**) and NIH/3T3 (**D**) whole cell lysates.



mSin3A (G-11): sc-5299. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2002. Silencing of transcription of the human luteinizing hormone receptor gene by histone deacetylase-mSin3A complex. J. Biol. Chem. 277: 33431-33438.
2. Gallagher, S.J., et al. 2013. Distinct requirements for Sin3a in perinatal male gonocytes and differentiating spermatogonia. Dev. Biol. 373: 83-94.
3. Incani, F., et al. 2014. AIRE acetylation and deacetylation: effect on protein stability and transactivation activity. J. Biomed. Sci. 21: 85.
4. Kwon, Y.J., et al. 2015. Selective inhibition of SIN3 corepressor with avermectins as a novel therapeutic strategy in triple-negative breast cancer. Mol. Cancer Ther. 14: 1824-1836.

RESEARCH USE

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