SANTA CRUZ BIOTECHNOLOGY, INC.

mSin3A (2): sc-136318

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 heterodimers 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 either Mad 3 or 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.

REFERENCES

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 *trans*-acting 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.
3. Ayer, D.E., et al. 1993. Mad: a heterodimeric partner for Max that antagonizes Myc transcriptional activity. Cell 72: 211-222.
4. Amati, B., et al. 1993. The c-Myc protein induces cell cycle progression and apoptosis through dimerization with Max. EMBO J. 12: 5083-5087.

CHROMOSOMAL LOCATION

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

SOURCE

mSin3A (2) is a mouse monoclonal antibody raised against amino acids 22-144 of mSin3A 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-136318 X, 200 µg/0.1 ml.

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.

APPLICATIONS

mSin3A (2) 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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 (2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

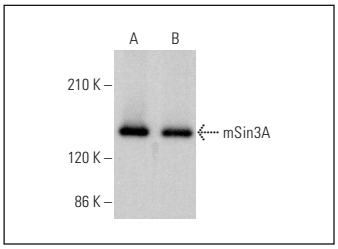
Molecular Weight of mSin3A: 150 kDa.

Positive Controls: RSV-3T3 whole cell lysate, F9 cell lysate: sc-2245 or Neuro-2A whole cell lysate: sc-364185.

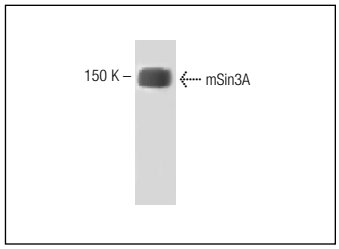
RECOMMENDED SUPPORT REAGENTS

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



mSin3A (2): sc-136318. Western blot analysis of mSin3A expression in F9 (**A**) and Neuro-2A (**B**) whole cell lysates.



mSin3A (2): sc-136318. Western blot analysis of mSin3A expression in RSV-3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. John, S.P., et al. 2018. IFIT1 exerts opposing regulatory effects on the inflammatory and interferon gene programs in LPS-activated human macrophages. Cell Rep. 25: 95-106.

CONJUGATES

See **mSin3A (G-11): sc-5299** for mSin3A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.