

mSin3B (AK-12): sc-768

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 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.

CHROMOSOMAL LOCATION

Genetic locus: SIN3B (human) mapping to 19p13.11, SIN3A (human) mapping to 15q24.2; Sin3b (mouse) mapping to 8 B3.3, Sin3a (mouse) mapping to 9 B.

SOURCE

mSin3B (AK-12) is a rabbit polyclonal antibody raised against amino acids 172-228 of mSin3B of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-768 X, 200 µg/0.1 ml.

mSin3B (AK-12) is available conjugated to agarose (sc-768 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

mSin3B (AK-12) is recommended for detection of mSin3B and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

mSin3B (AK-12) is also recommended for detection of mSin3B and, to a lesser extent, mSin3A in additional species, including equine, canine, porcine and avian.

mSin3B (AK-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of mSin3B-1: 133 kDa.

Molecular Weight of mSin3B-2: 129 kDa.

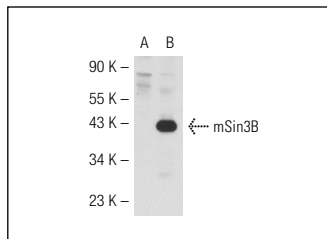
Molecular Weight of mSin3B: 40 kDa.

Positive Controls: mSin3B (h): 293T Lysate: sc-112047.

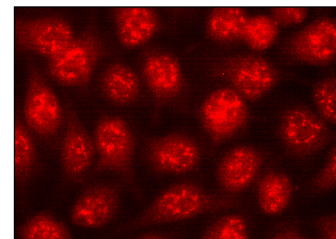
STORAGE

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

DATA



mSin3B (AK-12): sc-768. Western blot analysis of mSin3B expression in non-transfected: sc-117752 (A) and human mSin3B transfected: sc-112047 (B) 293T whole cell lysates.



mSin3B (AK-12): sc-768. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Cerni, C., et al. 1995. Differential effects by Mad and Max on transformation by cellular and viral oncoproteins. *Oncogene* 11: 587-596.
- Mahajan, S., et al. 2008. Hypoxia-inducible factor-2α regulates the expression of TRAIL receptor DR5 in renal cancer cells. *Carcinogenesis* 29: 1734-1741.
- Sandoval, R., et al. 2009. Deletion of the p107/p130-binding domain of Mip130/LIN-9 bypasses the requirement for CDK4 activity for the dissociation of Mip130/LIN-9 from p107/p130-E2F4 complex. *Exp. Cell Res.* 315: 2914-2920.
- van Oevelen, C., et al. 2010. The mammalian Sin3 proteins are required for muscle development and sarcomere specification. *Mol. Cell. Biol.* 30: 5686-5697.
- Terragni, J., et al. 2011. The E-box binding factors Max/Mnt, MITF, and USF1 act coordinately with FoxO to regulate expression of proapoptotic and cell cycle control genes by phosphatidylinositol 3-kinase/Akt/glycogen synthase kinase 3 signaling. *J. Biol. Chem.* 286: 36215-36227.
- Jelincic, P., et al. 2011. A novel mammalian complex containing Sin3B mitigates histone acetylation and RNA polymerase II progression within transcribed loci. *Mol. Cell. Biol.* 31: 54-62.
- McDonel, P., et al. 2012. Sin3a is essential for the genome integrity and viability of pluripotent cells. *Dev. Biol.* 363: 62-73.

RESEARCH USE

For research use only, not for use in diagnostic procedures


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Try **mSin3B (H-4): sc-13145** or **mSin3B (H-5): sc-55516**, our highly recommended monoclonal alternatives to mSin3B (AK-12).