

mSin3A (K-20): sc-994

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

SOURCE

mSin3A (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of mSin3A of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-994 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-994 X, 200 µg/0.1 ml.

APPLICATIONS

mSin3A (K-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

mSin3A (K-20) is also recommended for detection of mSin3A in additional species, including equine, canine, bovine and porcine.

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.

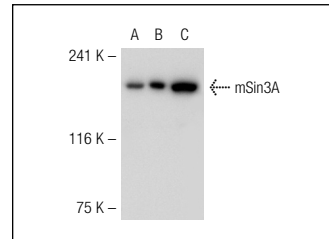
mSin3A (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of mSin3A: 150 kDa.

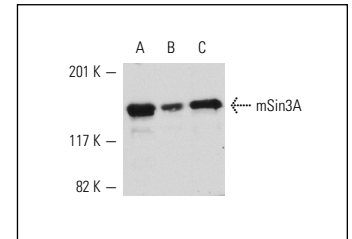
STORAGE

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

DATA



mSin3A (K-20): sc-994. Western blot analysis of mSin3A expression in non-transfected 293T: sc-117752 (A), human mSin3A transfected 293T: sc-117062 (B) and SK-N-SH (C) whole cell lysates.



mSin3A (K-20): sc-994. Western blot analysis of mSin3A expression in HeLa (A), Jurkat (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Heinzel, T., et al. 1997. A complex containing N-Cor, mSin3 and histone deacetylase mediates transcriptional repression. *Nature* 387: 43-48.
- Inoue, Y., et al. 2011. Suppression of p53 activity through the cooperative action of Ski and histone deacetylase SIRT1. *J. Biol. Chem.* 286: 6311-6320.
- Formisano, L., et al. 2011. The repressor element 1-silencing transcription factor is a novel molecular target for the neurotoxic effect of the polychlorinated biphenyl mixture aroclor 1254 in neuroblastoma SH-SY5Y cells. *J. Pharmacol. Exp. Ther.* 338: 997-1003.
- Sacilotto, N., et al. 2011. Epigenetic transcriptional regulation of the growth arrest-specific gene 1 (Gas1) in hepatic cell proliferation at mononucleosomal resolution. *PLoS ONE* 6: e23318.
- 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.
- McDonel, P., et al. 2012. Sin3a is essential for the genome integrity and viability of pluripotent cells. *Dev. Biol.* 363: 62-73.
- Icardi, L., et al. 2012. The Sin3a repressor complex is a master regulator of STAT transcriptional activity. *Proc. Natl. Acad. Sci. USA* 109: 12058-12063.

RESEARCH USE

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



Try **mSin3A (G-11): sc-5299** or **mSin3A (2): sc-136318**, our highly recommended monoclonal alternatives to mSin3A (K-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **mSin3A (G-11): sc-5299**.