

# Miz-1 (H-190): sc-22837

## BACKGROUND

The Myc family, including c-Myc-, N-Myc- and L-Myc, are nuclear proteins with relatively short half lives that contribute an important role in cellular processes such as proliferation, differentiation, apoptosis and transformation. The c-Myc protein activates transcription as part of a heteromeric complex with a number of interacting partners, including Max and Mxi1; however the transforming properties of the Myc proto-oncogene are believed to be associated with Myc-mediated transcriptional repression. A POZ domain zinc finger protein, designated Miz-1 for Myc-interacting zinc finger protein-1, is a specific target of Myc-induced gene repression. Miz-1 interacts with Myc, but not Max or other Myc partners, and binding of Myc to Miz-1 requires the helix-loop-helix domain of Myc and a short amphipathic helix located in the carboxy-terminus of Miz-1. Miz-1 associates with DNA elements on the adenovirus major late and cyclin D1 promoters and activates transcription of both promoters. Expression of Miz-1 induces potent growth arrest function, and this latency is reversed by the addition of Myc.

## CHROMOSOMAL LOCATION

Genetic locus: ZBTB17 (human) mapping to 1p36.13; Zbtb17 (mouse) mapping to 4 E1.

## SOURCE

Miz-1 (H-190) is a rabbit polyclonal antibody raised against amino acids 614-803 mapping at the C-terminus of Miz-1 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-22837 X, 200 µg/0.1 ml.

## APPLICATIONS

Miz-1 (H-190) is recommended for detection of Miz-1 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).

Suitable for use as control antibody for Miz-1 siRNA (h): sc-38085, Miz-1 siRNA (m): sc-38086, Miz-1 shRNA Plasmid (h): sc-38085-SH, Miz-1 shRNA Plasmid (m): sc-38086-SH, Miz-1 shRNA (h) Lentiviral Particles: sc-38085-V and Miz-1 shRNA (m) Lentiviral Particles: sc-38086-V.

Miz-1 (H-190) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Miz-1: 85/100 kDa.

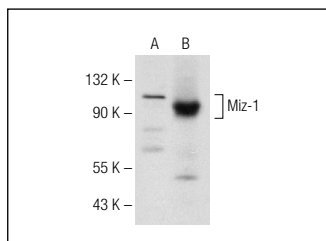
## STORAGE

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.

## DATA



Miz-1 (H-190): sc-22837. Western blot analysis of Miz-1 expression in HeLa whole cell lysate (A) and rat skeletal muscle tissue extract (B).

## SELECT PRODUCT CITATIONS

- Li, H., et al. 2004. Histone deacetylase inhibitor, Trichostatin A, activates p21<sup>WAF1/CIP1</sup> expression through downregulation of c-Myc and release of the repression of c-Myc from the promoter in human cervical cancer cells. *Biochem. Biophys. Res. Commun.* 324: 860-867.
- Bindra, R.S., et al. 2007. Co-repression of mismatch repair gene expression by hypoxia in cancer cells: role of the Myc/Max network. *Cancer Lett.* 252: 93-103.
- Herkert, B., et al. 2010. The Arf tumor suppressor protein inhibits Miz1 to suppress cell adhesion and induce apoptosis. *J. Cell Biol.* 188: 905-918.
- Courapied, S., et al. 2010. Regulation of the Aurora-A gene following topoisomerase I inhibition: implication of the Myc transcription factor. *Mol. Cancer* 9: 205.
- Jeong, J.H., et al. 2010. p53-independent induction of G<sub>1</sub> arrest and p21<sup>WAF1/CIP1</sup> expression by ascofuranone, an isoprenoid antibiotic, through downregulation of c-Myc. *Mol. Cancer Ther.* 9: 2102-2113.
- Kosan, C., et al. 2010. Transcription factor miz-1 is required to regulate interleukin-7 receptor signaling at early commitment stages of B cell differentiation. *Immunity* 33: 917-928.
- Iraci, N., et al. 2011. A SP1/MIZ1/MYCN repression complex recruits HDAC1 at the TRKA and p75NTR promoters and affects neuroblastoma malignancy by inhibiting the cell response to NGF. *Cancer Res.* 71: 404-412.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Miz-1 (B-10): sc-136985**, our highly recommended monoclonal alternative to Miz-1 (H-190).