

Mi2 (H-242): sc-11378

BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino-terminal tail domain of histone results in an allosteric change in the nucleosomal conformation and an increased accessibility to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Chromatin structure alteration may be brought about by the action of ATP-dependent multiprotein complexes. One such complex is the mSin3 corepressor complex, which contains mSin3, the histone deacetylases HDAC1 and HDAC2, the associated proteins SAP 30 and SAP 18, and the autoantigens Mi2- α and Mi2- β .

CHROMOSOMAL LOCATION

Genetic locus: CHD3 (human) mapping to 17p13.1, CHD4 (human) mapping to 12p13.31.

SOURCE

Mi2 (H-242) is a rabbit polyclonal antibody raised against amino acids 1671-1912 of Mi2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-11378 X, 200 μ g/0.1 ml.

APPLICATIONS

Mi2 (H-242) is recommended for detection of Mi2- α and Mi2- β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Mi2 (H-242) is also recommended for detection of Mi2- α and Mi2- β in additional species, including equine, canine, bovine and porcine.

Mi2 (H-242) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of Mi2: 218 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or K-562 whole cell lysate: sc-2203.

STORAGE

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

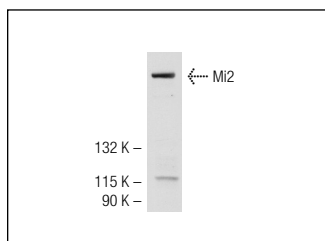
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

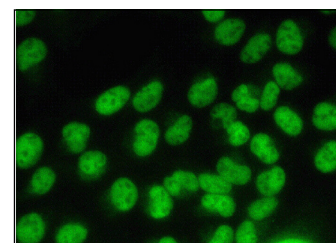
RESEARCH USE

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

DATA



Mi2 (H-242): sc-11378. Western blot analysis of Mi2 expression in K-562 whole cell lysate.



Mi2 (H-242): sc-11378. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

SELECT PRODUCT CITATIONS

1. Yan, C., et al. 2003. Repression of 92-kDa type IV collagenase expression by MTA1 is mediated through direct interactions with the promoter via a mechanism which is both dependent on and independent of histone deacetylation. *J. Biol. Chem.* 278: 2309-2316.
2. Metivier, R., et al. 2003. Estrogen receptor- α directs ordered, cyclical, and combinatorial recruitment of cofactors on a natural target promoter. *Cell* 115: 751-763.
3. Métivier, R., et al. 2008. Cyclical DNA methylation of a transcriptionally active promoter. *Nature* 452: 45-50.
4. Mager, G.M., et al. 2008. Active gene repression by the Egr2.NAB complex during peripheral nerve myelination. *J. Biol. Chem.* 283: 18187-18197.
5. Stielow, B., et al. 2008. SUMO-modified Sp3 represses transcription by provoking local heterochromatic gene silencing. *EMBO Rep.* 9: 899-906.
6. Roger, T., et al. 2011. Histone deacetylase inhibitors impair innate immune responses to toll-like receptor agonists and to infection. *Blood* 117: 1205-1217.
7. Xie, W., et al. 2012. The chromatin remodeling complex NuRD establishes the poised state of rRNA genes characterized by bivalent histone modifications and altered nucleosome positions. *Proc. Natl. Acad. Sci. USA* 109: 8161-8166.
8. Gunther, K., et al. 2013. Differential roles for MBD2 and MBD3 at methylated CpG islands, active promoters and binding to exon sequences. *Nucleic Acids Res.* 41: 3010-3021.



Try **Mi2- β (F-7): sc-365639** or **Mi2 (B-4): sc-55606**, our highly recommended monoclonal alternatives to Mi2 (H-242).