

Mi2- α (G-19): sc-12545

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 .

REFERENCES

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2. Braunstein, M., et al. 1993. Transcriptional silencing in yeast is associated with reduced nucleosome acetylation. *Genes Dev.* 7: 592-604.
3. Bauer, W.R., et al. 1994. Nucleosome structural changes due to acetylation. *J. Mol. Biol.* 236: 685-690.
4. Seelig, H.P., et al. 1995. The major dermatomyositis-specific Mi-2 autoantigen is a presumed helicase involved in transcriptional activation. *Arthritis Rheum.* 38: 1389-1399.
5. Kingston, R.E., et al. 1996. Repression and activation by multiprotein complexes that alter chromatin structure. *Genes Dev.* 10: 905-920.
6. Zhang, Y., et al. 1997. Histone deacetylases and SAP18, a novel polypeptide, are components of a human Sin3 complex. *Cell* 89: 357-364.
7. Zhang, Y., et al. 1998. SAP30, a novel protein conserved between human and yeast, is a component of a histone deacetylase complex. *Mol. Cell* 1: 1021-1031.
8. Zhang, Y., et al. 1998. The dermatomyositis-specific autoantigen Mi2 is a component of a complex containing histone deacetylase and nucleosome remodeling activities. *Cell* 95: 279-289.

CHROMOSOMAL LOCATION

Genetic locus: CHD3 (human) mapping to 17p13.1.

SOURCE

Mi2- α (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mi2- α 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.

Blocking peptide available for competition studies, sc-12545 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mi2- α (G-19) is recommended for detection of Mi2- α 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- α (G-19) is also recommended for detection of Mi2- α in additional species, including canine and porcine.

Suitable for use as control antibody for Mi2- α siRNA (h): sc-37951, Mi2- α shRNA Plasmid (h): sc-37951-SH and Mi2- α shRNA (h) Lentiviral Particles: sc-37951-V.

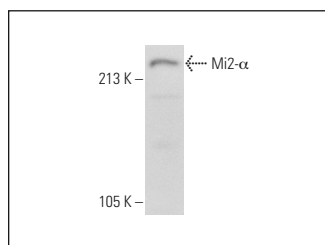
Molecular Weight of Mi2- α : 240 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Mi2- α (G-19): sc-12545. Western blot analysis of Mi2- α expression in HEK293 whole cell lysate.

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.

PROTOCOLS

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