SANTA CRUZ BIOTECHNOLOGY, INC.

Mi2-α (2172C1a): sc-81323

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 multi-protein complexes. One such complex is the mSin3 co-repressor 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

1. Lee, D.Y., et al. 1993. A positive role for histone acetylation in transcription factor access to nucleosomal DNA. Cell 72: 73-82.
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 Mi2 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 multi-protein complexes that alter chromatin structure. Genes Dev. 10: 905-920.
6. Zhang, Y., et al. 1997. Histone deacetylases and SAP 18, a novel polypeptide, are components of a human Sin3 complex. Cell 89: 357-364.
7. Zhang, Y., et al. 1998. SAP 30, 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 (2172C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of Mi2-α of human origin.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

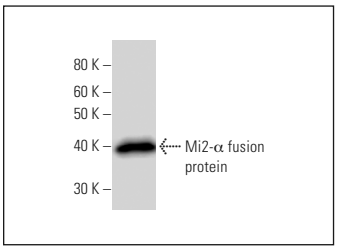
APPLICATIONS

Mi2-α (2172C1a) is recommended for detection of Mi2-α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

DATA



Mi2-α (2172C1a): sc-81323. Western Blot analysis of human recombinant Mi2-α fusion protein.

RESEARCH USE

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

PROTOCOLS

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