SANTA CRUZ BIOTECHNOLOGY, INC.

Mi2-β (F-7): sc-365639

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 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

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 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.

CHROMOSOMAL LOCATION

Genetic locus: CHD4 (human) mapping to 12p13.31; Chd4 (mouse) mapping to 6 F2.

SOURCE

Mi2-β (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1887-1909 at the C-terminus of Mi2-β of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365639 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Mi2-β (F-7) is recommended for detection of Mi2-β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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-β (F-7) is also recommended for detection of Mi2-β in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Mi2-β siRNA (h): sc-37953, Mi2-β siRNA (m): sc-37954, Mi2-β shRNA Plasmid (h): sc-37953-SH, Mi2-β shRNA Plasmid (m): sc-37954-SH, Mi2-β shRNA (h) Lentiviral Particles: sc-37953-V and Mi2-β shRNA (m) Lentiviral Particles: sc-37954-V.

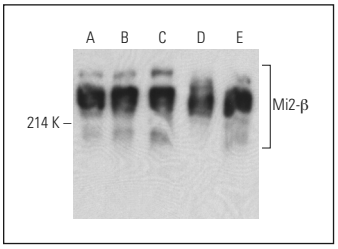
Molecular Weight of Mi2-β: 218 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Raji whole cell lysate: sc-364236 or NAMALWA cell lysate: sc-2234.

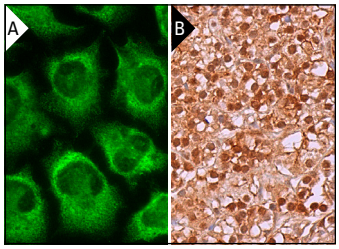
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Mi2-β (F-7): sc-365639. Western blot analysis of Mi2-β expression in Raji (**A**), Ramos (**B**) and NAMALWA (**C**) whole cell lysates and Jurkat (**D**) and K-562 (**E**) nuclear extracts. Detection reagent used: m-IgG_3 BP-HRP: sc-533670.



Mi2-β (F-7): sc-365639. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

RESEARCH USE

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