SANTA CRUZ BIOTECHNOLOGY, INC.

Mimitin (FL-169): sc-134439

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Myc family represents nuclear transcription factors that contribute significantly to cellular proliferation, differentiation, apoptosis and transformation. The Myc family of cellular oncogenes includes c-Myc, N-Myc, L-Myc, S-Myc and B-Myc. Myc-induced mitochondrial protein (MMTN), also designated Mimitin, localizes exclusively to the mitochondrion. Mimitin belongs to the complex I NDUFA12 subunit family of proteins and is highly expressed in esophageal squamous cell carcinoma (ESCC) cells. Mimitin plays an important role in Myc-dependent cell proliferation. It is a direct transcriptional target of c-Myc, which mediates gene repression by inhibiting the DNA binding protein Miz-1 and inhibiting cell growth. However, Mimitin expression in ESCC has no affect on the histopathological stage or grade of the cancer.

REFERENCES

1. Schmidt, E.V. 1996. Myc family ties. Nat. Genet. 14: 8-10.
2. Nesbit, C.E., Grove, L.E., Yin, X. and Prochownik, E.V. 1998. Differential apoptotic behaviors of c-Myc, N-Myc, and L-Myc oncoproteins. Cell Growth Differ. 9: 731-741.

CHROMOSOMAL LOCATION

Genetic locus: NDUFAF2 (human) mapping to 5q12.1; Ndufaf2 (mouse) mapping to 13 D2.1.

SOURCE

Mimitin (FL-169) is a rabbit polyclonal antibody raised against amino acids 1-169 representing full length Mimitin 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.

APPLICATIONS

Mimitin (FL-169) is recommended for detection of Mimitin (Myc-induced mitochondrial protein) 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).

Mimitin (FL-169) is also recommended for detection of Mimitin (Myc-induced mitochondrial protein) in additional species, including equine.

Suitable for use as control antibody for Mimitin siRNA (h): sc-61044, Mimitin siRNA (m): sc-61045, Mimitin shRNA Plasmid (h): sc-61044-SH, Mimitin shRNA Plasmid (m): sc-61045-SH, Mimitin shRNA (h) Lentiviral Particles: sc-61044-V and Mimitin shRNA (m) Lentiviral Particles: sc-61045-V.

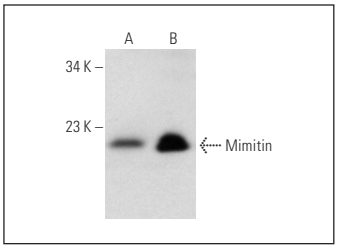
Molecular Weight of Mimitin: 20 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A-673 cell lysate: sc-2414 or rat pituitary gland extract: sc-364807.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Mimitin (FL-169): sc-134439. Western blot analysis of Mimitin expression in rat pituitary tissue extract (**A**) and A-673 whole cell lysate (**B**).

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.