**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**


**CHROMOSOMAL LOCATION**

Genetic locus: NDUFAF2 (human) mapping to 5q12.1.

**SOURCE**

Mimitin (H-11) is a mouse monoclonal antibody raised against amino acids 1-169 representing full length Mimitin of human origin.

**PRODUCT**

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

**APPLICATIONS**

Mimitin (H-11) is recommended for detection of Mimitin (Myc-induced mitochondrial protein) of 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).

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

Molecular Weight of Mimitin: 20 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Y79 cell lysate: sc-2240.

**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).

**DATA**

![Western blot analysis of Mimitin expression in Hep G2 (A) and Y79 (B) whole cell lysates.](image)

**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.