Mimitin (H-11): sc-365592

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: NDUF2 (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 light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mimitin (H-11) is available conjugated to agarose (sc-365592 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365592 HRP), 200 µg/ml, for WB, HCIP and ELISA; to either phycoerythrin (sc-365592 PE), fluorescein (sc-365592 FITC), Alexa Fluor® 488 (sc-365592 AF488), Alexa Fluor® 546 (sc-365592 AF546), Alexa Fluor® 594 (sc-365592 AF594) or Alexa Fluor® 647 (sc-365592 AF647), 200 µg/ml, for WB (RGB), IF, IHCIP and FCM; and to either Alexa Fluor® 680 (sc-365592 AF680) or Alexa Fluor® 790 (sc-365592 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

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). 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

Mimitin (H-11): sc-365592. Western blot analysis of Mimitin expression in Hep G2 (A) and Y79 (B) whole cell lysates.

Mimitin (H-11): sc-365592. Immunofluorescence staining of formalin-fixed SW480 cells showing mitochondrial localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers (B).

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.