SANTA CRUZ BIOTECHNOLOGY, INC.

MCC (A-9): sc-398216

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MCC (mutated in colorectal cancers), also known as MCC1, is a coiled-coil protein that localizes to the cytoplasm. It is involved in cell cycle regulation, negatively regulating cell cycle progression during the G_1 to S transition via a role in the NFκB signaling pathway. More specifically, MCC interacts with the NFκB inhibitor, IκB-β, playing a role in its stabilization and thereby inhibiting the nuclear translocation and signaling of NFκB. This suggests that MCC may act as a tumor suppressor. MCC is a phosphorylated protein and the state of phosphorylation changes in relation to the cell cycle. This implies that its function may be regulated by phosphorylation. MCC is highly phosphorylated during the transition from G_1 to S phase and weakly phosphorylated in G_0/G_1. The overexpression of MCC results in a decreased number of cells entering S phase.

REFERENCES

1. Kinzler, K.W., et al. 1991. Identification of a gene located at chromosome 5q21 that is mutated in colorectal cancers. Science 251: 1366-1370.
2. Matsumine, A., et al. 1996. MCC, a cytoplasmic protein that blocks cell cycle progression from the G_0/G_1 to S phase. J. Biol. Chem. 271: 10341-10346.
3. Fang, D.C., et al. 2002. Telomere erosion is independent of microsatellite instability but related to loss of heterozygosity in gastric cancer. World J. Gastroenterol. 7: 522-526.
4. Wang, M., et al. 2002. The possible role of loss of heterozygosity at APC, MCC and DCC genetic loci in esophageal carcinoma. Zhonghua Zhong Liu Za Zhi 21: 16-18.
5. Sikdar, N., et al. 2003. Loss of heterozygosity at APC and MCC genes of oral cancer and leukoplakia tissues from Indian tobacco chewers. J. Oral Pathol. Med. 32: 450-454.

CHROMOSOMAL LOCATION

Genetic locus: MCC (human) mapping to 5q22.2; Mcc (mouse) mapping to 18 B3.

SOURCE

MCC (A-9) is a mouse monoclonal antibody raised against amino acids 661-945 mapping within an internal region of MCC of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCC (A-9) is available conjugated to agarose (sc-398216 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398216 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398216 PE), fluorescein (sc-398216 FITC), Alexa Fluor® 488 (sc-398216 AF488), Alexa Fluor® 546 (sc-398216 AF546), Alexa Fluor® 594 (sc-398216 AF594) or Alexa Fluor® 647 (sc-398216 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398216 AF680) or Alexa Fluor® 790 (sc-398216 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MCC (A-9) is recommended for detection of MCC isoforms 1 and 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MCC siRNA (h): sc-106908, MCC siRNA (m): sc-149317, MCC shRNA Plasmid (h): sc-106908-SH, MCC shRNA Plasmid (m): sc-149317-SH, MCC shRNA (h) Lentiviral Particles: sc-106908-V and MCC shRNA (m) Lentiviral Particles: sc-149317-V.

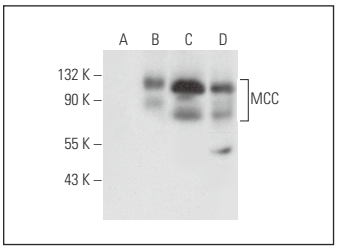
Molecular Weight of MCC phosphoprotein: 100 kDa.

Positive Controls: MCC (h3): 293T Lysate: sc-177522, HCT-116 whole cell lysate: sc-364175 or human liver extract: sc-363766.

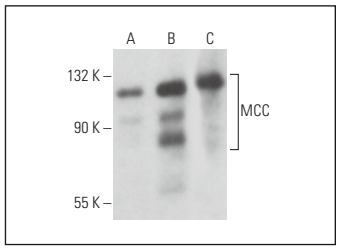
RECOMMENDED SUPPORT REAGENTS

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.

DATA



MCC (A-9): sc-398216. Western blot analysis of MCC expression in non-transfected 293T: sc-117752 (**A**), human MCC transfected 293T: sc-177522 (**B**) and HCT-116 (**C**) whole cell lysates and human liver tissue extract (**D**).



MCC (A-9): sc-398216. Western blot analysis of MCC expression in NIH/3T3 (**A**) and L6 (**B**) whole cell lysates and rat brain tissue extract (**C**).

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.