

# MCC (1): sc-135982

## 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<sub>1</sub> 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<sub>1</sub> to S phase and weakly phosphorylated in G<sub>0</sub>/G<sub>1</sub>. 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<sub>0</sub>/G<sub>1</sub> 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.
6. Wang, D., et al. 2003. Study of loss of heterozygosity at DCC and APC/MCC genetic loci of gastric cancer. *Chin. Med. Sci. J.* 14: 107-111.
7. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNFα/NFκB signal transduction pathway. *Nat. Cell Biol.* 6: 97-105.

## CHROMOSOMAL LOCATION

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

## SOURCE

MCC (1) is a mouse monoclonal antibody raised against amino acids 5-146 of MCC of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

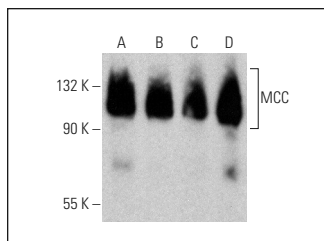
MCC (1) is recommended for detection of MCC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

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.

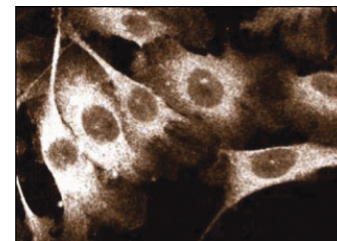
Molecular Weight of MCC phosphoprotein: 100 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, NIH/3T3 whole cell lysate: sc-2210 or HCT 116 whole cell lysate: sc-364175.

## DATA



MCC (1): sc-135982. Western blot analysis of MCC expression in IMR-32 (A), HCT-116 (B), Y79 (C) and NIH/3T3 (D) whole cell lysates.



MCC (1): sc-135982. Immunofluorescence staining of human endothelial cells showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. Li, L., et al. 2013. Wnt signaling pathway is activated in right colon serrated polyps correlating to specific molecular form of β-catenin. *Hum. Pathol.* 44: 1079-1088.
2. Shukla, R., et al. 2013. Endogenous retrotransposition activates oncogenic pathways in hepatocellular carcinoma. *Cell* 153: 101-111.
3. Benthani, F.A., et al. 2018. "MCC" protein interacts with E-cadherin and β-catenin strengthening cell-cell adhesion of HCT116 colon cancer cells. *Oncogene* 37: 663-672.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.