

MCM2 (H-126): sc-10771

BACKGROUND

The mini-chromosome maintenance (MCM) family of proteins, including MCM2, MCM3, MCM4 (Cdc21), MCM5 (Cdc46), MCM6 (Mis5) and MCM7 (Cdc47), are regulators of DNA replication that act to ensure replication occurs only once in the cell cycle. Expression of MCM proteins increases during cell growth, peaking at G₁ to S phase. The MCM proteins each contain an ATP-binding motif, which is predicted to mediate ATP-dependent opening of double-stranded DNA. MCM proteins are regulated by E2F transcription factors, which induce MCM expression, and by protein kinases, which interact with MCM proteins to maintain the postreplicative state of the cell. MCM2/MCM4 complexes function as substrates for Cdc2/cyclin B *in vitro*. Cleavage of MCM3, which can be prevented by caspase inhibitors, results in the inactivation during apoptosis of the MCM complex, which is composed of, at least, MCM2-6. A complex composed of MCM4, MCM6 and MCM7 has been shown to be involved in DNA helicase activity, and MCM5 is involved in IFN- γ -induced Stat1 α transcription activation.

CHROMOSOMAL LOCATION

Genetic locus: MCM2 (human) mapping to 3q21.3; Mcm2 (mouse) mapping to 6 D1.

SOURCE

MCM2 (H-126) is a rabbit polyclonal antibody raised against amino acids 770-895 mapping at the C-terminus of MCM2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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

MCM2 (H-126) is recommended for detection of MCM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

MCM2 (H-126) is also recommended for detection of MCM2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MCM2 siRNA (h): sc-35879, MCM2 siRNA (m): sc-35880, MCM2 shRNA Plasmid (h): sc-35879-SH, MCM2 shRNA Plasmid (m): sc-35880-SH, MCM2 shRNA (h) Lentiviral Particles: sc-35879-V and MCM2 shRNA (m) Lentiviral Particles: sc-35880-V.

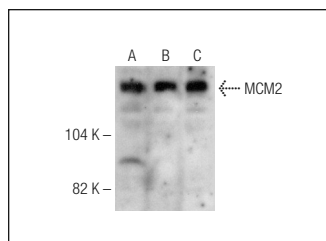
Molecular Weight of MCM2: 130 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, NIH/3T3 nuclear extract: sc-2138 or MCF7 nuclear extract: sc-2149.

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



MCM2 (H-126): sc-10771. Western blot analysis of MCM2 expression in K-562 (A), NIH/3T3 (B) and MCF7 (C) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Chattopadhyay, S., et al. 2007. Interleukin-31 and oncostatin-M mediate distinct signaling reactions and response patterns in lung epithelial cells. *J. Biol. Chem.* 282: 3014-3026.
2. Liu, P., et al. 2009. Replication licensing promotes cyclin D1 expression and G₁ progression in untransformed human cells. *Cell Cycle* 8: 125-136.

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.

MONOS
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Try **MCM2 (E-8): sc-373702** or **MCM2 (D1.9H5): sc-73572**, our highly recommended monoclonal alternatives to MCM2 (H-126).