

MCM6 (C-20): sc-9843

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 of the MCM complex (composed of at least MCM proteins 2-6) during apoptosis. 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: MCM6 (human) mapping to 2q21.3; Mcm6 (mouse) mapping to 1 E4.

SOURCE

MCM6 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MCM6 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9843 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MCM6 (C-20) is recommended for detection of MCM6 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). MCM6 (C-20) is also recommended for detection of MCM6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for MCM6 siRNA (h): sc-35885, MCM6 siRNA (m): sc-35886, MCM6 shRNA Plasmid (h): sc-35885-SH, MCM6 shRNA Plasmid (m): sc-35886-SH, MCM6 shRNA (h) Lentiviral Particles: sc-35885-V and MCM6 shRNA (m) Lentiviral Particles: sc-35886-V.

Molecular Weight of MCM6: 105 kDa.

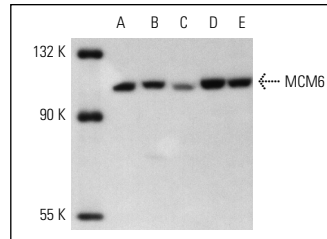
STORAGE

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

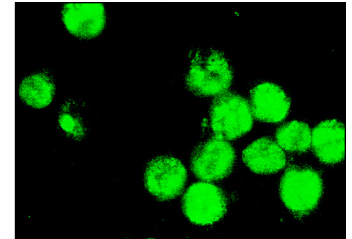
RESEARCH USE

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

DATA



MCM6 (C-20): sc-9843. Western blot analysis of MCM6 expression in MM-142 (A), KNRK (B), NIH/3T3 (C), Jurkat (D) and K-562 (E) whole cell lysates.



MCM6 (C-20): sc-9843. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

- Johnson, E.M., et al. 2003. A new member of the MCM protein family encoded by the human MCM8 gene, located contrapodal to GCD10 at chromosome band 20p12.3-13. *Nucleic Acids Res.* 31: 2915-2925.
- Ishimi, Y., et al. 2003. Enhanced expression of Mcm proteins in cancer cells derived from *uterine cervix*. *Eur. J. Biochem.* 270: 1089-1101.
- Bruemmer, D., et al. 2003. Rapamycin inhibits E2F-dependent expression of minichromosome maintenance proteins in vascular smooth muscle cells. *Biochem. Biophys. Res. Commun.* 303: 251-258.
- Bruemmer, D., et al. 2003. Expression of minichromosome maintenance proteins in vascular smooth muscle cells is ERK/MAPK dependent. *Exp. Cell Res.* 290: 28-37.
- Bruemmer, D., et al. 2003. Atorvastatin inhibits expression of minichromosome maintenance proteins in vascular smooth muscle cells. *Eur. J. Pharmacol.* 462: 15-23.
- Foveau, B., et al. 2012. The receptor tyrosine kinase EphA2 is a direct target gene of hypermethylated in cancer 1 (HIC1). *J. Biol. Chem.* 287: 5366-5378.
- Li, Y., et al. 2012. The involvement of acidic nucleoplasmic DNA-binding protein (And-1) in the regulation of prereplicative complex (pre-RC) assembly in human cells. *J. Biol. Chem.* 287: 42469-42479.
- Mosbech, A., et al. 2013. The deubiquitylating enzyme USP44 counteracts the DNA double-strand break response mediated by the RNF8 and RNF168 ubiquitin ligases. *J. Biol. Chem.* 288: 16579-16587.


 MONOS
Satisfaction
Guaranteed

Try **MCM6 (H-8): sc-393618** or **MCM6 (D-12): sc-55577**, our highly recommended monoclonal alternatives to MCM6 (C-20).