

# MCM6 (H-8): sc-393618

## 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 G<sub>1</sub> 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- $\gamma$ -induced Stat1 $\alpha$  transcription activation.

## CHROMOSOMAL LOCATION

Genetic locus: MCM6 (human) mapping to 2q21.3; Mcm6 (mouse) mapping to 1 E4.

## SOURCE

MCM6 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 792-821 at the C-terminus of MCM6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCM6 (H-8) is available conjugated to agarose (sc-393618 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393618 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393618 PE), fluorescein (sc-393618 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393618 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393618 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393618 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393618 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393618 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393618 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393618 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

MCM6 (H-8) is recommended for detection of MCM6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

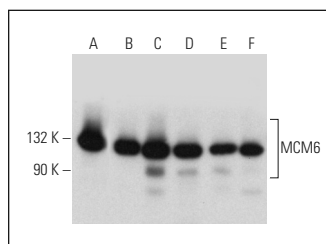
MCM6 (H-8) is also recommended for detection of MCM6 in additional species, including equine, canine and bovine.

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.

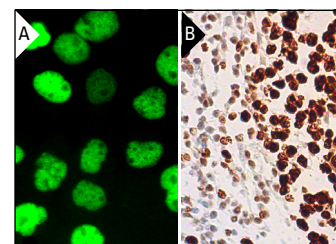
Molecular Weight of MCM6: 105 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, WEHI-231 whole cell lysate: sc-2213 or RAW 264.7 whole cell lysate: sc-2211.

## DATA



MCM6 (H-8): sc-393618. Western blot analysis of MCM6 expression in Jurkat (A), RT-4 (B), RAW 264.7 (C), WEHI-231 (D), PC-12 (E) and RBL-1 (F) whole cell lysates.



MCM6 (H-8): sc-393618. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (B).

## SELECT PRODUCT CITATIONS

- Leturcq, M., et al. 2018. O-GlcNAc transferase associates with the MCM2-7 complex and its silencing destabilizes MCM-MCM interactions. *Cell. Mol. Life Sci.* 75: 4321-4339.
- Nagareddy, B., et al. 2020. Acetylation modulates the Fanconi anemia pathway by protecting FAAP20 from ubiquitin-mediated proteasomal degradation. *J. Biol. Chem.* 295: 13887-13901.
- Gori, I., et al. 2021. Mutations in SKI in Shprintzen-Goldberg syndrome lead to attenuated TGF- $\beta$  responses through SKI stabilization. *Elife* 10: e63545.
- Jacquet, A., et al. 2022. Preliminary results on a proposed histopathological assessment of predictive factors for basal cell carcinoma recurrence after primary free margin excision. *Skin Health Dis.* 2: e88.

## RESEARCH USE

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