

# MCM2 polyclonal antibody

Catalog # PAB10264      Size 100 ug

## Applications

### Western Blot (Cell lysate)

Western blot using MCM2 polyclonal antibody (Cat # PAB10264) shows detection of both phosphorylated and unphosphorylated MCM2 present in nuclear extracts from elutriated human cells (MO59K/K-562).

The MCM2 protein is phosphorylated after initiation of DNA replication, therefore, the protein is unphosphorylated in early S phase, and gradually becomes phosphorylated throughout S phase.

In G2/M, all MCM2 is phosphorylated.

Panel A shows western blot results for lysates were prepared from asynchronous cells (Lane 1), cells arrested in early S with aphidicolin (lane 2), and cells arrested in mitosis with nocodazole (Lane 3).

Panel B shows a schematic diagram of bands representing phosphorylated and unphosphorylated MCM2 present in these preparations.

Asynchronous cells contain a doublet of both forms.

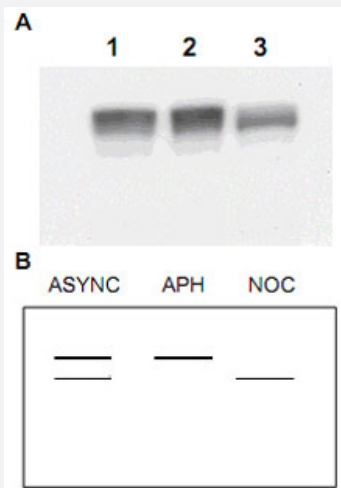
Aphidicolin treated cells contain only unphosphorylated MCM2 and nocodazole treatment results in only phosphorylated MCM2 detected in the lysate.

The phosphorylated band migrates faster than the unphosphorylated form and is seen as the lower band.

There is a clear switch from the unphosphorylated form in the center lane, to the phosphorylated form in the third lane, confirming recognition of both forms of MCM2 by this antibody.

The primary antibody was diluted 1:400 for this experiment.

Personal Communication, Jennifer Seiler, NIH CCR Bethesda MD.



## Specification

### Product Description

Rabbit polyclonal antibody raised against synthetic peptide of MCM2.

### Immunogen

A synthetic peptide corresponding to amino acids 21-31 of human MCM2.

<b>Host</b>	Rabbit
<b>Reactivity</b>	Human, Mouse, Rat, Yeast
<b>Specificity</b>	This affinity-purified antibody is directed against human MCM2 protein. Approximately equivalent reactivity occurs against both unphosphorylated and phosphorylated forms of human MCM2 (phosphorylated at residues pS26 and pS27).
<b>Form</b>	Liquid
<b>Quality Control Testing</b>	Antibody Reactive Against Synthetic Peptide.
<b>Recommend Usage</b>	ELISA (1:10000-1:50000) Western Blot (1:500-1:2000) The optimal working dilution should be determined by the end user.
<b>Storage Buffer</b>	In 20 mM KH <sub>2</sub> PO <sub>4</sub> , 150 mM NaCl, pH 7.2 (0.01% sodium azide)
<b>Storage Instruction</b>	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
<b>Note</b>	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

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- Enzyme-linked Immunoabsorbent Assay

## Gene Info — MCM2

**Entrez GeneID** [4171](#)

**Protein Accession#** [NP\\_004517:P49736](#)

**Gene Name** MCM2

**Gene Alias** BM28, CCNL1, CDCL1, D3S3194, KIAA0030, MGC10606, MITOTIN, cdc19

**Gene Description** minichromosome maintenance complex component 2

**Omim ID** [116945](#)

**Gene Ontology** [Hyperlink](#)

**Gene Summary** The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are involved in the initiation of eukaryotic genome replication. The hexameric protein complex formed by MCM proteins is a key component of the pre-replication complex (pre-RC) and may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. This protein forms a complex with MCM4, 6, and 7, and has been shown to regulate the helicase activity of the complex. This protein is phosphorylated, and thus regulated by, protein kinases CDC2 and CDC7. [provided by RefSeq]

**Other Designations** DNA replication licensing factor MCM2|MCM2 minichromosome maintenance deficient 2, mitotin|cell division cycle-like 1|cyclin-like 1|minichromosome maintenance deficient 2 (mitotin)|nuclear protein BM28

## Publication Reference

- [Interaction of hRad51 and hRad52 with MCM complex: a cross-talk between recombination and replication proteins.](#)

Shukla A, Navadgi VM, Mallikarjuna K, Rao BJ.

Biochemical and Biophysical Research Communications 2005 Apr; 329(4):1240.

Application: WB-Ce, Human, HeLa cells

- [Interaction of chromatin-associated Plk1 and Mcm7.](#)

Tsvetkov L, Stern DF.

The Journal of Biological Chemistry 2005 Mar; 280(12):11943.

- [A human nuclear protein with sequence homology to a family of early S phase proteins is required for entry into S phase and for cell division.](#)

Todorov IT, Pepperkok R, Philipova RN, Kearsey SE, Ansorge W, Werner D.

Journal of Cell Science 1994 Jan; 107(Pt1):253.

Application: IF, Microinjection, WB, Human, Mouse, HeLa, IMR90, NIH/3T3, PtK2 cells

## Pathway

- [Cell cycle](#)
- [DNA replication](#)

## Disease

- [Genetic Predisposition to Disease](#)
- [Ovarian Neoplasms](#)