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# MCM3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14026a

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | P25205 |
| **Other Accession** | P25206, A4FUD9, NP_002379.2 |
| **Reactivity** | Human |
| **Predicted** | Bovine, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB34044 |
| **Calculated MW** | 90981 |
| **Antigen Region** | 36-64 |

## Additional Information

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| **Gene ID** | 4172 |
| **Other Names** | DNA replication licensing factor MCM3, DNA polymerase alpha holoenzyme-associated protein P1, P1-MCM3, RLF subunit beta, p102, MCM3 |
| **Target/Specificity** | This MCM3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 36-64 amino acids from the N-terminal region of human MCM3. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | MCM3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | MCM3 ( HGNC:6945) |
| **Function** | Acts as a component of the MCM2-7 complex (MCM complex) which is the replicative helicase essential for 'once per cell cycle' DNA replication initiation |

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| | and elongation in eukaryotic cells. Core component of CDC45-MCM-GINS (CMG) helicase, the molecular machine that unwinds template DNA during replication, and around which the replisome is built (PubMed:32453425, PubMed:34694004, PubMed:34700328, PubMed:35585232). The active ATPase sites in the MCM2-7 ring are formed through the interaction surfaces of two neighboring subunits such that a critical structure of a conserved arginine finger motif is provided in trans relative to the ATP-binding site of the Walker A box of the adjacent subunit. The six ATPase active sites, however, are likely to contribute differentially to the complex helicase activity (PubMed:32453425). Required for the entry in S phase and for cell division (Probable). |
| **Cellular Location** | Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses. |

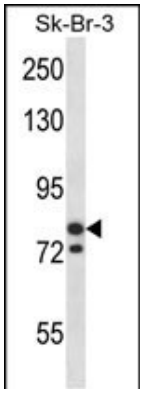
## Background

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 is a subunit of the protein complex that consists of MCM2-7. It has been shown to interact directly with MCM5/CDC46. This protein also interacts with, and thus is acetlyated by MCM3AP, a chromatin-associated acetyltransferase. The acetylation of this protein inhibits the initiation of DNA replication and cell cycle progression. [provided by RefSeq].

## References


Lau, K.M., et al. Oncogene 29(40):5475-5489(2010)
Olson, J.E., et al. Breast Cancer Res. Treat. (2010) In press :
Lee, Y.S., et al. Exp. Mol. Pathol. 88(1):138-142(2010)
Song, Y.J., et al. Acta Virol. 54(2):125-130(2010)
Saade, E., et al. Proteomics 9(21):4934-4943(2009)


## Images




MCM3 Antibody (N-term) (Cat. #AP14026a) western blot analysis in SK-BR-3 cell line lysates (35ug/lane).This demonstrates the MCM3 antibody detected the MCM3 protein (arrow).