

**MCM3 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM8514b****Specification**

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**MCM3 Antibody - Product Information**

Application	WB, FC,E
Primary Accession	<a href="#">P25205</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Calculated MW	90981

**MCM3 Antibody - Additional Information****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 a mouse immunized with a recombinant protein of human MCM3.

**Dilution**

WB~~1:4000

FC~~1:25

E~~Use at an assay dependent concentration.

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**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 is for research use only and not for use in diagnostic or therapeutic procedures.

**MCM3 Antibody - Protein Information****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 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

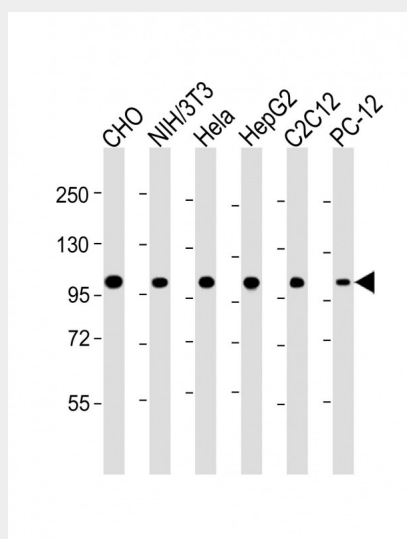
Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses.

### MCM3 Antibody - Protocols

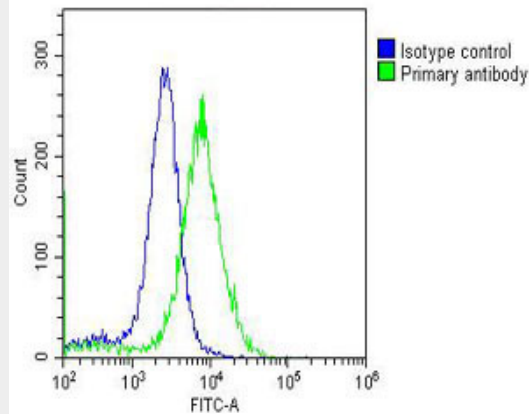
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### MCM3 Antibody - Images



All lanes : Anti-MCM3 Antibody at 1:4000 dilution Lane 1: CHO whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lane 3: HeLa whole cell lysate Lane 4: HepG2 whole cell lysate Lane 5: C2C12 whole cell lysate Lane 6: PC-12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 91 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Overlay histogram showing Hela cells stained with AM8514b(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8514b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10, 000 events was performed.

### **MCM3 Antibody - Background**

Acts as component of the MCM2-7 complex (MCM complex) which is the putative replicative helicase essential for 'once per cell cycle' DNA replication initiation and elongation in eukaryotic cells. 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. Required for DNA replication and cell proliferation.

### **MCM3 Antibody - References**

Hu B.,et al.Nucleic Acids Res. 21:5289-5293(1993).  
Goehring F.,et al.Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.  
Kubota Y.,et al.Cell 81:601-609(1995).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Mungall A.J.,et al.Nature 425:805-811(2003).

### **MCM3 Antibody - Citations**

- [O-GlcNAc transferase associates with the MCM2-7 complex and its silencing destabilizes MCM-MCM interactions.](#)