

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

Specification

MCM3 Antibody - Product Information

Application	WB, FC,E
Primary Accession	P25205
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

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

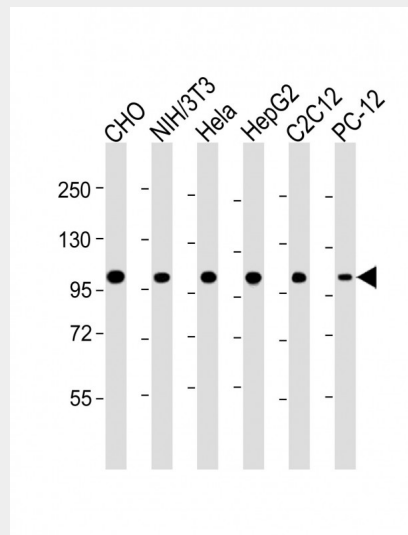
Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses.

MCM3 Antibody - Protocols

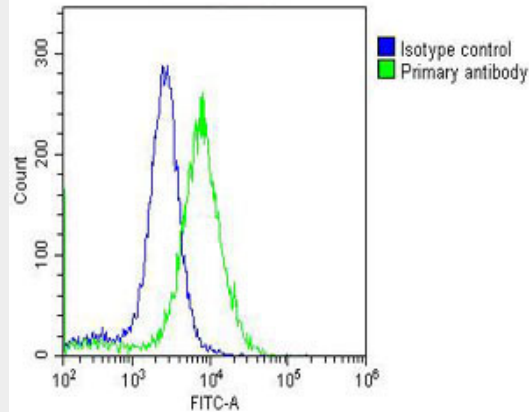
Provided below are standard protocols that you may find useful for product applications.

- [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% NFDN/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/1x10⁶ 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.](#)