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# Anti-MCM7 Antibody

Mouse Monoclonal Antibody
Catalog # AH13387

## Product Information

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| **Application** | WB, IHC-P, IF, FC |
| **Primary Accession** | P33993 |
| **Other Accession** | 438720 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse / IgG2b |
| **Clone Names** | MCM7/1466 |
| **Calculated MW** | 81308 |

## Additional Information

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| **Gene ID** | 4176 |
| **Other Names** | CDC47; DNA replication licensing factor MCM7; MCM7 mini chromosome maintenance deficient 7; Mini chromosome Maintenance 7; Mini chromosome maintenance protein 7; P1.1-MCM3; P1CDC47; P85MCM; PNAS146 |
| **Application Note** | Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined. |
| **Format** | 200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml. |
| **Storage** | Store at 2 to 8°C.Antibody is stable for 24 months. |
| **Precautions** | Anti-MCM7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

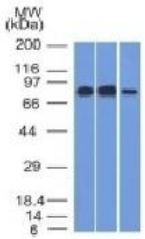
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|---|---|
| **Name** | MCM7 ( HGNC:6950) |
| **Synonyms** | CDC47, MCM2 |

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| **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:25661590, PubMed:32453425, PubMed:34694004, PubMed:34700328, PubMed:35585232, PubMed:9305914). 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 S-phase checkpoint activation upon UV-induced damage. |
| **Cellular Location** | Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses. |

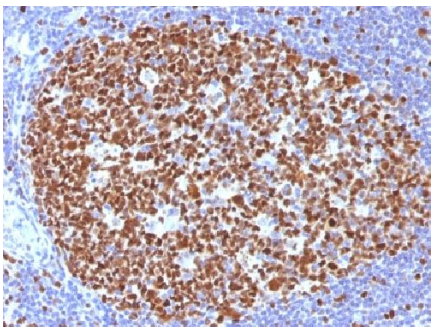
## Background

MCM7 is one of the highly conserved mini-chromosome maintenance proteins (MCM) that is essential for the initiation of eukaryotic genome replication. The hexameric protein complex formed by the MCM proteins is a key component of the pre-replication complex and may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. The MCM complex consisting of this protein and MCM2, 4 and 6 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. Cyclin D1-dependent kinase, CDK4, is found to associate with this protein, and may regulate the binding of this protein with the tumor suppressor protein RB1/RB.

## Images




Western Blot Analysis A) HeLa (B) Raji and C) HepG2 Cell Lysate Using MCM7 Monoclonal Antibody (MCM7/1466).



Formalin-fixed, paraffin-embedded human Tonsil stained with MCM7 Monoclonal Antibody (MCM7/1466).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.