

#### KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody Rabbit monoclonal antibody Catalog # AGI2303

## **Specification**

# **KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<u>P33993</u>
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 81 kDa , observed, 81 kDa KDa
Gene Name	MCM7
Aliases	Minichromosome Maintenance Complex
	Component 7; CDC47; PPP1R104; MCM2;
	<b>Protein Phosphatase 1, Regulatory Subunit</b>
	104; DNA Replication Licensing Factor
	MCM7; CDC47 Homolog; P1.1-MCM3; MCM7
	Minichromosome Maintenance Deficient 7
	(S. Cerevisiae); Minichromosome
	Maintenance Deficient (S. Cerevisiae) 7;
	Minichromosome Maintenance Deficient 7;
	Homolog Of S. Cerevisiae Cdc47; EC
	3.6.4.12; P1CDC47; PNAS146; P85MCM
Immunogen	A synthesized peptide derived from human MCM7

## KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody - Additional Information

Gene ID 4176 Other Names DNA replication licensing factor MCM7, 3.6.4.12, CDC47 homolog, P1.1-MCM3, MCM7 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=6950" target="\_blank">HGNC:6950</a>), CDC47, MCM2

## **KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody - Protein Information**

Name MCM7 (<u>HGNC:6950</u>)

Synonyms CDC47, MCM2

#### 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:<a href="http://www.uniprot.org/citations/25661590" target="\_blank">25661590</a>, PubMed:<a href="http://www.uniprot.org/citations/32453425" target="\_blank">32453425</a>, PubMed:<a



href="http://www.uniprot.org/citations/34694004" target="\_blank">34694004</a>, PubMed:<a href="http://www.uniprot.org/citations/34700328" target="\_blank">34700328</a>, PubMed:<a href="http://www.uniprot.org/citations/35585232" target="\_blank">35585232</a>, PubMed:<a href="http://www.uniprot.org/citations/9305914" target="\_blank">9305914</a>). 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:<a href="http://www.uniprot.org/citations/32453425" target="\_blank">32453425</a>). 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.

# KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

## **KD-Validated Anti-MCM7 Rabbit Monoclonal Antibody - Images**



Western blotting analysis using anti-MCM7 antibody (Cat#67157). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MCM7 antibody (Cat#67157, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:50,000) respectively. Image was developed using FeQ<sup>TM</sup> ECL Substrate Kit (Cat#226).





Western blotting analysis using anti-MCM7 antibody (Cat#67157). MCM7 expression in wild type (WT) and MCM7 shRNA knockdown (KD) HT-1080 cells with 30  $\mu$ g of total cell lysates. GAPDH serves as a loading control. The blot was incubated with anti-MCM7 antibody (Cat#67157, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:50,000) respectively. Image was developed using FeQ<sup>TM</sup> ECL Substrate Kit (Cat#226).



Flow cytometric analysis of MCM7 expression in HepG2 cells using MCM7 antibody (Cat#67157, 1:2,000). Green, isotype control; red, MCM7.

Immunocytochemical staining of HepG2 cells with MCM7 antibody (Cat#67157, 1:1,000). Nuclei were stained blue with DAPI; MCM7 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.