

# **Anti-MCM2 Antibody**

Catalog # ABO10965

## Specification

## **Anti-MCM2 Antibody - Product Information**

Application WB, IHC-P, ICC

Primary Accession P49736
Host Rabbit

Reactivity Human, Mouse, Rat

Clonality Polyclonal Lyophilized

**Description** 

Rabbit IgG polyclonal antibody for DNA replication licensing factor MCM2(MCM2) detection. Tested with WB, IHC-P, ICC in Human; Mouse; Rat.

#### Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

## **Anti-MCM2 Antibody - Additional Information**

## **Gene ID 4171**

#### **Other Names**

DNA replication licensing factor MCM2, 3.6.4.12, Minichromosome maintenance protein 2 homolog, Nuclear protein BM28, MCM2, BM28, CCNL1, CDCL1, KIAA0030

## Calculated MW 101896 MW KDa

#### **Application Details**

Immunocytochemistry , 0.5-1 μg/ml, Human, -<br/>br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μg/ml, Human, By Heat<br/>br>Western blot, 0.1-0.5 μg/ml, Human, Rat, Mouse<br/>br>

#### **Subcellular Localization**

Nucleus .

#### **Protein Name**

DNA replication licensing factor MCM2

#### Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

#### **Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human MCM2(889-904aa NKFSHDLKRKMILQQF), different from the related rat and mouse sequences by two amino acids.

## **Purification**

Immunogen affinity purified.



# **Cross Reactivity**No cross reactivity with other proteins

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

**Sequence Similarities**Belongs to the MCM family.

## **Anti-MCM2 Antibody - Protein Information**

Name MCM2 (HGNC:6944)

### **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/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>). 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 the entry in S phase and for cell division (PubMed: <a href="http://www.uniprot.org/citations/8175912" target=" blank">8175912</a>). Plays a role in terminally differentiated hair cells development of the cochlea and induces cells apoptosis (PubMed:<a href="http://www.uniprot.org/citations/26196677" target=" blank">26196677</a>).

## **Cellular Location**

Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses. {ECO:0000250|UniProtKB:P55861}

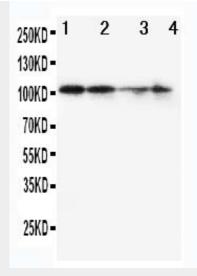
## **Anti-MCM2 Antibody - Protocols**

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

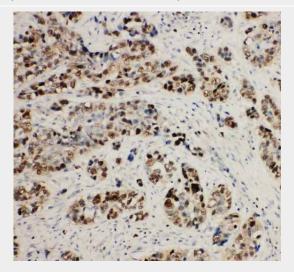
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

## Anti-MCM2 Antibody - Images

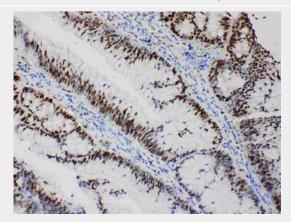




Anti-MCM2 antibody, ABO10965, Western blottingLane 1: SW620 Cell Lysate Lane 2: PANC Cell Lysate Lane 3: JURKAT Cell LysateLane 4: HELA Cell Lysate

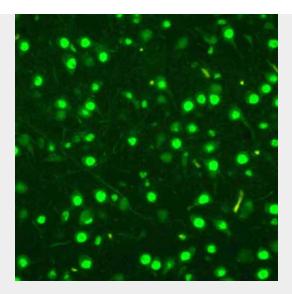


Anti-MCM2 antibody, ABO10965, IHC(P)IHC(P): Human Lung Cancer Tissue



Anti-MCM2 antibody, ABO10965, IHC(P)IHC(P): Human Intestinal Cancer Tissue





Anti-MCM2 antibody, ABO10965, ICCICC: A549 Cell

## **Anti-MCM2 Antibody - Background**

MCM2(MINICHROMOSOME MAINTENANCE, S. CEREVISIAE, HOMOLOG OF, 2), also known as MITOTIN, CDCL1 or BM28, is a human nuclear protein that plays an important role in 2 crucial steps of the cell cycle, namely, onset of DNA replication and cell division. And it is similar to members of the family of early S-phase proteins. The MCM2 gene is mapped to 3q21.3. 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. In the G0 stage, the MCM2 and MCM5 proteins were much less abundant than the MCM7 and MCM3 proteins, which suggests that the MCM proteins are not present in stoichiometric amounts and that only a proportion of these molecules actively participate in cell cycle regulation as part of MCM complexes.