

**MCM4 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP14534B****Specification**

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**MCM4 Antibody (C-term) - Product Information**

Application	IHC-P, WB,E
Primary Accession	<a href="#">P33991</a>
Other Accession	<a href="#">P49717</a> , <a href="#">P30664</a> , <a href="#">NP_005905.2</a> , <a href="#">NP_877423.1</a>
Reactivity	Human
Predicted	Xenopus, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	96558
Antigen Region	637-665

**MCM4 Antibody (C-term) - Additional Information****Gene ID** 4173**Other Names**

DNA replication licensing factor MCM4, CDC21 homolog, P1-CDC21, MCM4, CDC21

**Target/Specificity**

This MCM4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 637-665 amino acids from the C-terminal region of human MCM4.

**Dilution**

IHC-P~~1:10~50

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**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**

MCM4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**MCM4 Antibody (C-term) - Protein Information****Name** MCM4 ([HGNC:6947](#))

## Synonyms CDC21

**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:[16899510](#), 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:[16899510](#), PubMed:[25661590](#), PubMed:[32453425](#), PubMed:[9305914](#)).

## Cellular Location

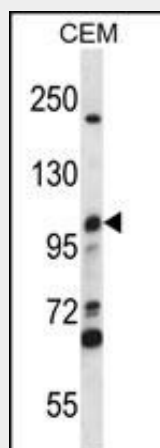
Nucleus. Chromosome. Note=Associated with chromatin before the formation of nuclei and detaches from it as DNA replication progresses.

## MCM4 Antibody (C-term) - Protocols

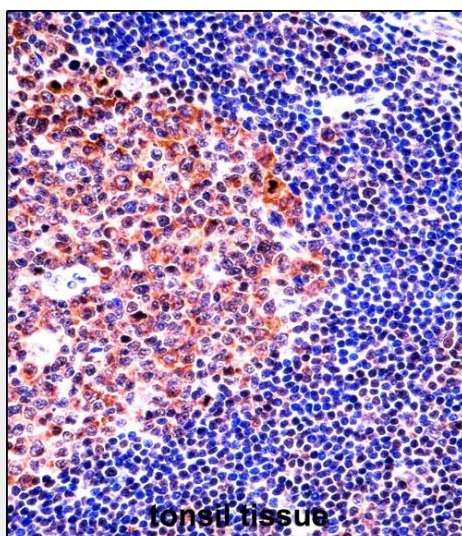
Provided below are standard protocols that you may find useful for product applications.

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

## MCM4 Antibody (C-term) - Images



MCM4 Antibody (C-term) (Cat. #AP14534b) western blot analysis in CEM cell line lysates (35ug/lane). This demonstrates the MCM4 antibody detected the MCM4 protein (arrow).



MCM4 Antibody (C-term) (AP14534b) immunohistochemistry analysis in formalin fixed and paraffin embedded human tonsil tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of MCM4 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

#### **MCM4 Antibody (C-term) - Background**

The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are essential for the initiation of eukaryotic genome replication. 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. The MCM complex consisting of this protein and MCM2, 6 and 7 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. The phosphorylation of this protein by CDC2 kinase reduces the DNA helicase activity and chromatin binding of the MCM complex. This gene is mapped to a region on the chromosome 8 head-to-head next to the PRKDC/DNA-PK, a DNA-activated protein kinase involved in the repair of DNA double-strand breaks. Alternatively spliced transcript variants encoding the same protein have been reported.

#### **MCM4 Antibody (C-term) - References**

Olson, J.E., et al. Breast Cancer Res. Treat. (2010) In press :  
Qian, Z., et al. PLoS Pathog. 6 (3), E1000814 (2010) :  
Ladstein, R.G., et al. BMC Cancer 10, 140 (2010) :  
Hosgood, H.D. III, et al. Occup Environ Med 66(12):848-853(2009)  
Enjuanes, A., et al. Cancer Res. 68(24):10178-10186(2008)