

MCM4 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP14534b**Specification**

MCM4 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P33991](#)**MCM4 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 4173**Other Names**

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

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MCM4 Antibody (C-term) Blocking Peptide - 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:32453425, PubMed:34694004, PubMed:34700328, PubMed:35585232, PubMed:16899510, PubMed:25661590, 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, PubMed:16899510, PubMed:25661590, 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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

MCM4 Antibody (C-term) Blocking Peptide - Images

MCM4 Antibody (C-term) Blocking Peptide - 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) Blocking Peptide - 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)