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MCM2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP9377c

Specification

MCM2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P49736

MCM2 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 4171

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

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.

MCM2 Antibody (Center) Blocking Peptide - 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:32453425, PubMed:34694004, PubMed:34700328, PubMed:35585232). 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 the entry in S phase and for cell division (PubMed:8175912). Plays a role in terminally differentiated hair cells development of the cochlea and induces cells apoptosis (PubMed:26196677).

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}

MCM2 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

MCM2 Antibody (Center) Blocking Peptide - Images

MCM2 Antibody (Center) Blocking Peptide - Background

MCM2 is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are involved in 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. This protein forms a complex with MCM4, 6, and 7, and has been shown to regulate the helicase activity of the complex. This protein is phosphorylated, and thus regulated by, protein kinases CDC2 and CDC7.

MCM2 Antibody (Center) Blocking Peptide - References

Saade, E., et al. Proteomics 9(21):4934-4943(2009)Xu, X., et al. EMBO J. 28(19):3005-3014(2009)Liaw, K., et al. J. Cutan. Pathol. 36(10):1121-1122(2009)Im, J.S., et al. Proc. Natl. Acad. Sci. U.S.A. 106(37):15628-15632(2009)Chuang, L.C., et al. Mol. Cell 35(2):206-216(2009)