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MCM2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9377B

Product Information

Application	WB, IHC-P, E
Primary Accession	P49736
Other Accession	P55861, P97310
Reactivity	Human, Mouse
Predicted	Mouse, Xenopus, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB25168
Calculated MW	101896
Antigen Region	649-677

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
Target/Specificity	This MCM2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 649-677 amino acids from the C-terminal region of human MCM2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	MCM2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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}

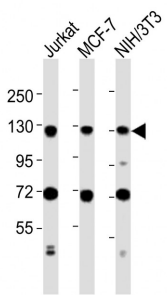
Background

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.

References

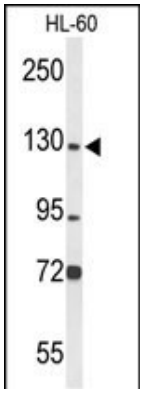
Saade, E., et al. Proteomics 9(21):4934-4943(2009)
Xu, X., et al. EMBO J. 28(19):3005-3014(2009)
Liaw, K., et al. J. Cutan. Pathol. 36(10):1121-1122(2009)
Im, J.S., et al. Proc. Natl. Acad. Sci. U.S.A. 106(37):15628-15632(2009)
Chuang, L.C., et al. Mol. Cell 35(2):206-216(2009)
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)
Matsuoka, S., et al. Science 316(5828):1160-1166(2007)
Olsen, J.V., et al. Cell 127(3):635-648(2006)

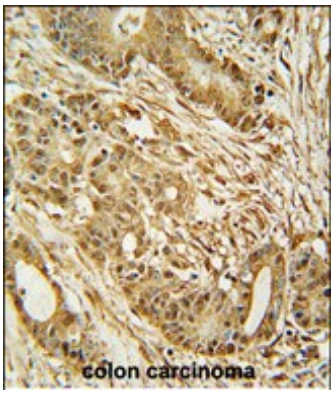
Images



All lanes : Anti-MCM2 Antibody (C-term) at 1:2000 dilution Lane 1: Jurkat whole cell lysates Lane 2: MCF-7 whole cell lysates Lane 3: NIH/3T3 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 102 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of MCM2 Antibody (C-term) (Cat. #AP9377b) in HL-60 cell line lysates (35ug/lane). MCM2 (arrow) was detected using the purified Pab.





MCM2 Antibody (C-term) (Cat. #AP9377b) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the MCM2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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