

Datasheet for 600-401-922**MCM2 Antibody****Overview**

Description:	Anti-MCM2 (RABBIT) Antibody - 600-401-922
Item No.:	600-401-922
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background: This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. MCM2, also called DNA replication licensing factor MCM2, Minichromosome maintenance protein 2 homolog or Nuclear Protein BM28) is one of the highly conserved minichromosome 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. Double serines at positions 26 and 27 are conserved in rat and mouse. High homology >88% to similar proteins from several other species. Expected broad reactivity to various lysates.

Synonyms:	rabbit anti-MCM2 antibody, MCM-2, BM28, CCNL1, CDCL1, Minichromosome maintenance complex component 2, Nuclear protein BM28, DNA replication licensing factor MCM2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	MCM2
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Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an N-Terminal region near amino acids 15-40 of human MCM2 protein.
Purity/Specificity:	This affinity-purified antibody is directed against human MCM2 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Approximately equivalent reactivity occurs against both unphosphorylated and phosphorylated forms of human MCM2 (phosphorylated at residues pS26 and pS27). A BLAST analysis was used to suggest cross reactivity with MCM2 proteins from human, mouse, rat and <i>S. cerevisiae</i> based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• UniProtKB - P49736 • NCBI - 33356547 • GeneID - 4171

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 100 kDa in size corresponding to phosphorylated or unphosphorylated MCM2 proteins by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
WB:	1:500 - 1:2,000

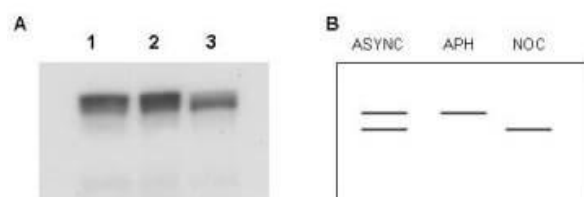
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.98 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western blot using Rockland's Affinity Purified anti-MCM2 antibody shows detection of both phosphorylated and unphosphorylated MCM2 present in nuclear extracts from elutriated human cells (MO59K/K562). The MCM2 protein is phosphorylated after initiation of DNA replication, therefore, the protein is unphosphorylated in early S phase, and gradually becomes phosphorylated throughout S phase. In G2/M, all MCM2 is phosphorylated. Panel A shows western blot results for lysates were prepared from asynchronous cells (lane 1), cells arrested in early S with aphidicolin (lane2), and cells arrested in mitosis with nocodazole (lane 3). Panel B shows a schematic diagram of bands representing phosphorylated and unphosphorylated MCM2 present in these preparations. Asynchronous cells contain a doublet of both forms. Aphidicolin treated cells contain only unphosphorylated MCM2 and nocodazole treatment results in only phosphorylated MCM2 detected in the lysate. The phosphorylated band migrates faster than the unphosphorylated form and is seen as the lower band. There is a clear switch from the unphosphorylated form in the center lane, to the phosphorylated form in the third lane, confirming recognition of both forms of MCM2 by this antibody. The primary antibody was diluted 1:400 for this experiment. Personal Communication, Jennifer Seiler, NIH, CCR, Bethesda, MD.

Disclaimer

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