

MCM2 Rabbit monoclonal antibody

Catalog: MB66365

Host: Rabbit

Reactivity: Human, Mouse, Rat

BackGround:

The minichromosome maintenance (MCM) 2-7 proteins are a family of six related proteins required for initiation and elongation of DNA replication. MCM2-7 bind together to form the heterohexameric MCM complex that is thought to act as a replicative helicase at the DNA replication fork. This complex is a key component of the pre-replication complex (pre-RC). Cdc6 and CDT1 recruit the MCM complex to the origin recognition complex (ORC) during late mitosis/early G1 phase forming the pre-RC and licensing the DNA for replication. Licensing of the chromatin permits the DNA to replicate only once per cell cycle, thereby helping to ensure that genetic alterations and malignant cell growth do not occur. Phosphorylation of the MCM2, MCM3, MCM4, and MCM6 subunits appears to regulate MCM complex activity and the initiation of DNA synthesis. CDK1 phosphorylation of MCM3 at Ser112 during late mitosis/early G1 phase has been shown to initiate complex formation and chromatin loading in vitro. Phosphorylation of MCM2 at serine 139 by cdc7/dbf4 coincides with the initiation of DNA replication. MCM proteins are removed during DNA replication, causing chromatin to become unlicensed through inhibition of pre-RC reformation. Studies have shown that the MCM complex is involved in checkpoint control by protecting the structure of the replication fork and assisting in restarting replication by recruiting checkpoint proteins after arrest.

Product:

Liquid in 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 125 kDa

Swiss-Prot:

P49736

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

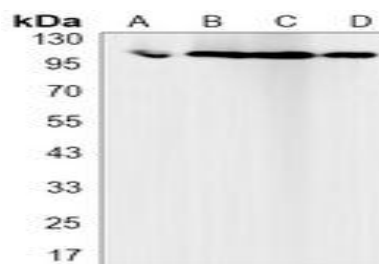
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

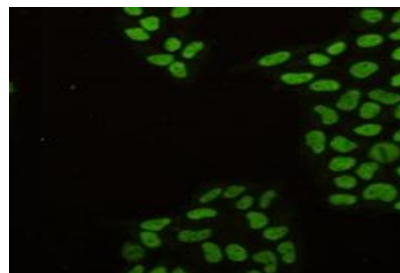
Specificity:

Recognizes endogenous levels of MCM2 protein.

DATA:



Western blot analysis of MCM2 expression in K562 (A), C6 (B), NIH3T3 (C), HeLa (D) whole cell lysates.



Immunofluorescent analysis of MCM2 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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