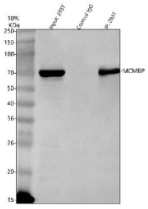
MCMBP Antibody / MCM-binding protein (FY12484)

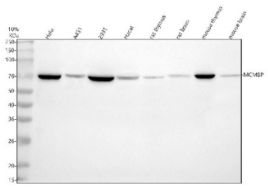
Catalog No.	Formulation	Size
FY12484	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BTE3
Applications	Western Blot: 0.25-0.5ug/ml Immunoprecipitation: 2-4ug/500ug of lysate ELISA: 0.1-0.5ug/ml
Limitations	This MCMBP antibody is available for research use only.



Immunoprecipitation of MCMBP in 293T whole cell lysate. Western blot analysis of MCMBP using anti-MCMBP antibody. Lane 1: 293T whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-MCMBP antibody in 293T whole cell lysate, Lane 3: anti-MCMBP antibody (2ug) + 293T whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-MCMBP antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. The expected molecular weight of MCMBP is ~73 kDa.



Western blot analysis of MCMBP using anti-MCMBP antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Hela whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human Hacat whole cell lysates, Lane 5: rat thymus tissue lysates, Lane 6: rat brain tissue lysates, Lane 7: mouse thymus tissue lysates, Lane 8: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MCMBP antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of MCMBP is ~73 kDa.

Description

MCMBP antibody detects Minichromosome maintenance complex-binding protein, a nuclear protein that regulates DNA replication and cell cycle progression. MCMBP interacts with the MCM (minichromosome maintenance) helicase complex, ensuring its proper assembly and nuclear localization. It functions as a chaperone stabilizing MCM subunits before DNA replication initiation. The MCMBP antibody is valuable in studies of DNA replication licensing, genome stability, and cell proliferation control.

MCMBP is encoded by the MCMBP gene located on human chromosome 10q24.2. The protein is approximately 70 kilodaltons in size and associates with MCM subunits MCM2-MCM7. These interactions facilitate the transport of MCM complexes into the nucleus and their incorporation into pre-replication complexes at replication origins. MCMBP assists in maintaining replication fork integrity and prevents unscheduled replication events that could lead to genomic instability. It also contributes to the disassembly of replication machinery during mitotic exit.

The MCMBP antibody identifies the 70 kilodalton protein by western blot and reveals nuclear localization during S phase, with partial cytoplasmic presence in early G1. Immunofluorescence shows co-localization with replication foci, supporting its role in DNA synthesis regulation. Functional studies demonstrate that depletion of MCMBP causes replication stress, reduced origin firing, and accumulation of DNA damage markers such as gamma-H2AX. MCMBP interacts with replication factor C and proliferating cell nuclear antigen, integrating replication initiation with elongation control.

Beyond DNA replication, MCMBP is involved in maintaining chromosomal stability and has been linked to mitotic checkpoint regulation. Overexpression has been reported in certain cancers, including hepatocellular and colorectal carcinomas, where it may promote cell cycle progression. Conversely, its loss sensitizes cells to replication inhibitors, suggesting potential as a therapeutic target. NSJ Bioreagents provides a validated MCMBP antibody optimized for western blot and immunoprecipitation, supporting detailed exploration of replication licensing, genome integrity, and cell cycle dynamics.

Application Notes

Optimal dilution of the MCMBP antibody should be determined by the researcher.

Immunogen

E.coli-derived human MCMBP recombinant protein (Position: E234-E534) was used as the immunogen for the MCMBP antibody.

Storage

After reconstitution, the MCMBP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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