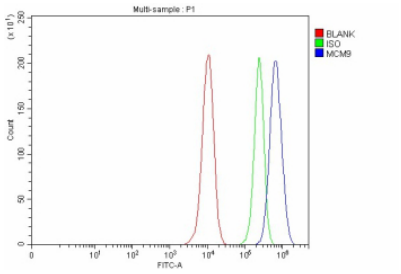
MCM9 Antibody / Minichromosome maintenance complex component 9 (FY12926)

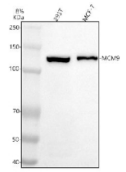
Catalog No.	Formulation	Size
FY12926	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
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	Q9NXL9
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This MCM9 antibody is available for research use only.



Flow Cytometry analysis of MCF-7 cells using anti-MCM9 antibody. Overlay histogram showing MCF-7 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MCM9 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of MCM9 using anti-MCM9 antibody. Lane 1: human 293T whole cell lysates, Lane 2: human MCF-7 whole cell 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-MCM9 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 enhanced chemiluminescent. A specific band was detected for MCM9 at approximately 127 kDa. The expected molecular weight of MCM9 is ~127 kDa.

Description

MCM9 antibody detects Minichromosome maintenance complex component 9, a helicase-associated protein essential for DNA replication licensing and homologous recombination repair. Encoded by the MCM9 gene on chromosome 6q22.31, this nuclear protein functions as part of the MCM8-MCM9 complex, which assists in DNA replication origin activation and double-strand break repair. MCM9 plays a critical role in maintaining genomic stability and facilitating proper DNA synthesis during S phase.

Structurally, MCM9 is a 1,143-amino-acid nuclear protein of approximately 130 kilodaltons containing an AAA+ ATPase domain typical of MCM family helicases. Although it lacks intrinsic helicase activity, MCM9 interacts with MCM8 to form a functional complex that promotes DNA end resection and strand invasion during homologous recombination. It also associates with replication proteins such as RPA and RAD51, coordinating DNA repair with replication fork progression.

The MCM9 antibody is widely used in cell cycle, DNA repair, and cancer research to study replication licensing, recombination mechanisms, and genome maintenance. Western blot analysis detects a 130 kilodalton band corresponding to MCM9, while immunofluorescence shows distinct nuclear foci that colocalize with replication and repair markers. This antibody enables detailed analysis of DNA replication and damage response pathways.

Functionally, MCM9 is required for the recruitment of repair proteins to sites of DNA damage and for the restart of stalled replication forks. Mutations in MCM9 are associated with hereditary colorectal cancer syndromes and premature ovarian failure due to impaired DNA repair capacity. Loss of MCM9 function results in genomic instability and sensitivity to DNA-damaging agents. The MCM9 antibody provides a key reagent for investigating replication integrity, homologous recombination, and tumor suppression mechanisms. NSJ Bioreagents validates this antibody for its applications, ensuring accurate and reproducible detection for genome stability studies.

Application Notes

Optimal dilution of the MCM9 antibody should be determined by the researcher.

Immunogen

E.coli-derived human MCM9 recombinant protein (Position: M1-L644) was used as the immunogen for the MCM9 antibody.

Storage

After reconstitution, the MCM9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.