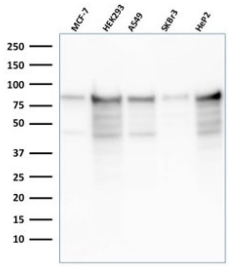
MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 / Minichromosome Maintenance Protein 7 Antibody [clone rMCM7/1468] (V7947)

Catalog No.	Formulation	Size
V7947-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7947-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7947SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

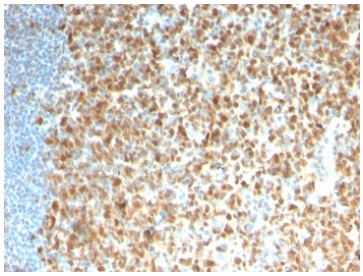
Recombinant MOUSE MONOCLONAL

Bulk quote request

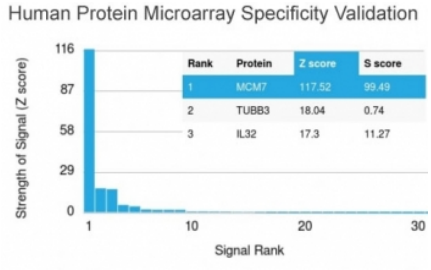
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rMCM7/1468
Purity	Protein G affinity chromatography
UniProt	P33993
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This MCM7 antibody is available for research use only.



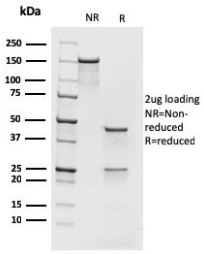
MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 - western blot analysis. Western blot testing of human cell lysates using MCM7 Antibody Recombinant Mouse MAb rMCM7/1468. Lane 1: MCF7 cell lysate, Lane 2: HEK293 cell lysate, Lane 3: A549 cell lysate, Lane 4: SKBR3 cell lysate, Lane 5: HeP2 cell lysate. A band is detected at approximately 80-90 kDa, consistent with the predicted molecular weight of Minichromosome maintenance protein 7 / MCM7. Additional lower bands may represent lower molecular weight MCM7 forms or partial proteolytic degradation products, as MCM7 has been reported in the literature as an approximately 82-85 kDa doublet or broad band on immunoblot analysis.



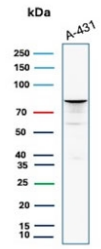
IHC testing of FFPE human tonsil with recombinant MCM7 antibody (clone rMCM7/1468). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min.



MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 - protein microarray specificity validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed using MCM7 Antibody Recombinant Mouse MAb rMCM7/1468. The strongest binding signal corresponds to MCM7, which ranks first on the array, demonstrating high specificity of the rMCM7/1468 monoclonal antibody for its intended target. Z- and S-scores quantify antibody binding strength and target specificity. The Z-score represents the signal intensity generated when the antibody, together with a fluorescently labeled anti-IgG secondary antibody, binds to a protein on the array and is expressed as standard deviations above the mean signal of the array. When proteins are ordered by descending Z-score, the S-score represents the difference between adjacent Z-scores and therefore reflects the relative specificity of the antibody for its target protein.



SDS-PAGE analysis of purified, BSA-free recombinant MCM7 antibody (clone rMCM7/1468) as confirmation of integrity and purity.



Western blot testing of human A431 cell lysate with recombinant MCM7 antibody (clone rMCM7/1468). Expected molecular weight: 80-90 kDa.

Description

Minichromosome maintenance protein 7 (MCM7) is a nuclear DNA replication factor encoded by the MCM7 gene and functions as an essential component of the minichromosome maintenance helicase complex that drives eukaryotic DNA replication. MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 recognizes this replication licensing protein and supports research focused on DNA synthesis, cell cycle progression, and proliferative signaling in normal and malignant cells.

MCM7 belongs to the conserved MCM protein family that forms the heterohexameric MCM2-7 helicase complex responsible for unwinding double-stranded DNA during replication. During the G1 phase of the cell cycle, MCM complexes assemble at replication origins as part of the pre-replication complex, licensing chromatin for DNA synthesis. When cells enter S phase, activation of the helicase enables separation of DNA strands at replication forks, allowing DNA polymerases and associated replication machinery to duplicate the genome accurately.

MCM7 antibody, also referred to as CDC47 antibody and P1-MCM3 antibody in the literature, detects a nuclear protein strongly associated with proliferating cells. MCM7 localizes primarily to chromatin within the nucleus where it participates in replication origin licensing and helicase activation. Expression levels typically correlate with cell cycle activity, and the protein is frequently studied as a marker of cellular proliferation in tissues undergoing growth or regeneration.

Structurally, MCM7 contains conserved ATP-binding and ATP-hydrolysis domains characteristic of the AAA+ ATPase family. These domains provide the energy required for helicase activity, enabling conformational changes within the MCM complex that drive DNA strand separation and replication fork progression. Tight regulation of this helicase system ensures that chromosomal DNA is replicated only once during each cell cycle, helping maintain genomic stability.

Elevated expression of MCM7 has been reported in numerous cancers including colorectal carcinoma, breast cancer, lung cancer, and other rapidly proliferating malignancies. Increased levels of MCM proteins reflect heightened DNA replication activity in tumor cells and have made the complex widely studied in cancer biology and cell cycle research. A recombinant mouse monoclonal antibody such as MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 provides a reliable tool for detecting Minichromosome maintenance protein 7 expression and studying mechanisms that regulate DNA replication and cellular proliferation.

This antibody is part of a broader panel of MCM7 antibodies designed to support detection of proliferation-associated proteins across multiple research applications.

Application Notes

Optimal dilution of the MCM7 Antibody Recombinant Mouse MAb rMCM7/1468 should be determined by the researcher.

Immunogen

A human partial protein corresponding to amino acids 195-319 was used as the immunogen for the recombinant MCM7 antibody.

Storage

Store the MCM7 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CDC47 antibody, P1-MCM3 antibody, DNA replication licensing factor MCM7 antibody, Minichromosome maintenance protein 7 antibody, MCM7 replication factor antibody

Copyright © NSJ Bioreagents. All rights reserved.