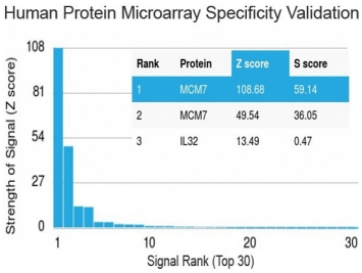
MCM7 Antibody Protein Microarray Validated MCM7/1469 / Minichromosome Maintenance Protein 7 Antibody [clone MCM7/1469] (V3502)

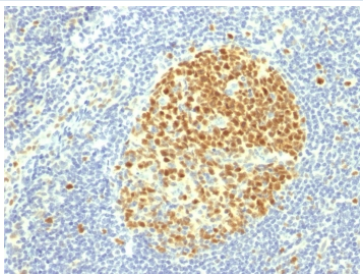
Catalog No.	Formulation	Size
V3502-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3502-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3502SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3502IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

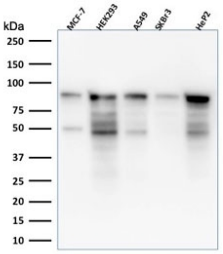
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MCM7/1469
Purity	Protein G affinity chromatography
UniProt	P33993
Localization	Nuclear
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This MCM7 antibody is available for research use only.



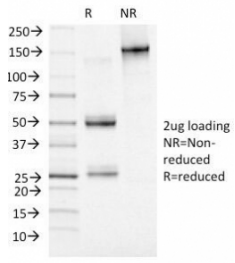
MCM7 Antibody Protein Microarray Validated MCM7/1469 - protein microarray specificity validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed using MCM7 Antibody Protein Microarray Validated MCM7/1469. The strongest binding signals correspond to MCM7, which ranks first and second on the array, demonstrating high specificity of the MCM7/1469 mouse monoclonal antibody for its intended target. Z- and S-scores quantify antibody binding strength and target specificity. The Z-score represents the signal intensity produced 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 across 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.



IHC testing of FFPE human tonsil with MCM7 antibody (clone MCM7/1469). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min.



Western blot testing of human samples with microarray validated MCM7 antibody (clone MCM7/1469). Expected molecular weight: 80-90 kDa.



SDS-PAGE Analysis of Purified, BSA-Free MCM7 Antibody (clone MCM7/1469). Confirmation of Integrity and Purity of the Antibody.

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 responsible for eukaryotic DNA replication. MCM7 Antibody Protein Microarray Validated MCM7/1469 recognizes this replication licensing protein and supports research focused on DNA synthesis, cell cycle progression, and proliferative signaling in normal and malignant cells.

MCM7 is a member of the highly conserved MCM protein family that forms the MCM2-7 helicase complex, a ring-shaped molecular machine responsible for unwinding double-stranded DNA at replication forks. During the G1 phase of the cell cycle, MCM complexes are loaded onto chromatin at replication origins as part of the pre-replication complex. Activation of this helicase during S phase enables DNA strand separation and allows DNA polymerases and associated replication machinery to copy the genome with high fidelity.

MCM7 antibody, also referred to as CDC47 antibody or P1-MCM3 antibody in the literature, detects a nuclear protein strongly associated with actively proliferating cells. The protein localizes predominantly to chromatin within the nucleus where it participates in replication origin licensing and helicase activation. Because MCM7 expression correlates with cell cycle activity, the protein is commonly used as a marker of proliferating cells in studies of tissue growth, regeneration, and tumor biology.

Structurally, MCM7 contains conserved ATP-binding and ATP-hydrolysis motifs characteristic of the AAA+ ATPase family. These domains provide the energy required for helicase activity, driving conformational changes that separate DNA strands and enable replication fork progression. Tight regulation of MCM7 and other MCM proteins ensures that DNA replication occurs only once per cell cycle, helping maintain genomic stability and preventing aberrant DNA duplication.

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 the heightened DNA replication activity present in tumor cells and have made the complex widely studied in cancer biology and cell cycle research. A mouse monoclonal antibody such as MCM7 Antibody Protein Microarray Validated MCM7/1469 provides a useful tool for detecting Minichromosome maintenance protein 7 expression and studying mechanisms that regulate DNA replication and cellular proliferation.

Application Notes

Titering of the MCM7 Antibody Protein Microarray Validated MCM7/1469 may be required for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

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