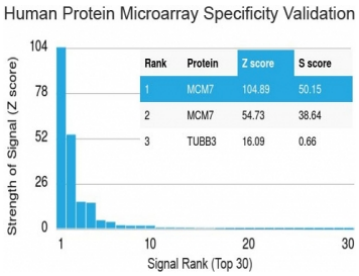
MCM7 Antibody HuProt Validated Clone MCM7/1468 / Minichromosome Maintenance Protein 7 Antibody [clone MCM7/1468] (V3503)

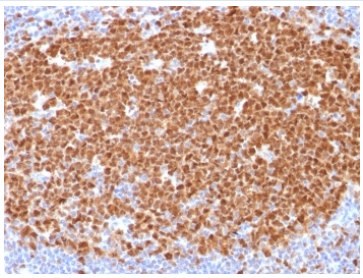
Catalog No.	Formulation	Size
V3503-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3503-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3503SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3503IHC-7ML	Prediluted 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

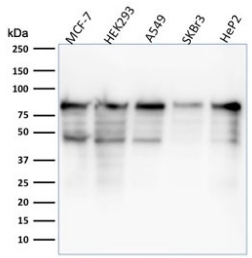
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b
Clone Name	MCM7/1468
Purity	Protein G affinity chromatography
UniProt	P33993
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This MCM7 antibody is available for research use only.



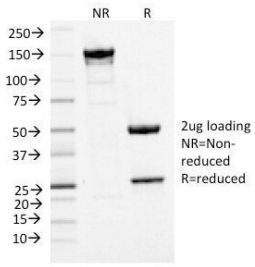
MCM7 Antibody HuProt Validated Clone MCM7/1468 - protein microarray specificity validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed using MCM7 Antibody HuProt Validated Clone MCM7/1468. The strongest binding signals correspond to MCM7, which ranks first and second on the array, demonstrating high specificity of the MCM7/1468 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 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.



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



Western blot testing of human samples with HuProt Validated MCM7 antibody (clone MCM7/1468). Expected molecular weight: 80-90 kDa.



SDS-PAGE Analysis of Purified, BSA-Free MCM7 Antibody (clone MCM7/1468). 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 a critical component of the minichromosome maintenance helicase complex that drives eukaryotic DNA replication. The MCM7 Antibody HuProt Validated Clone MCM7/1468 recognizes this essential replication licensing protein and supports research focused on DNA synthesis, cell cycle regulation, and cellular proliferation in normal and malignant tissues. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

MCM7 belongs to the conserved MCM protein family that forms the heterohexameric MCM2-7 helicase complex responsible for unwinding double-stranded DNA during replication initiation and elongation. This complex assembles at replication origins during the G1 phase as part of the pre-replication complex, where it prepares chromatin for DNA synthesis. Once S phase begins, the helicase activity of the MCM complex enables the separation of DNA strands at replication forks, allowing DNA polymerases and associated replication machinery to access the template strands and

duplicate the genome.

MCM7 antibody, also referred to as CDC47 antibody or P1-MCM3 antibody in the literature, detects a nuclear protein strongly associated with proliferating cells. The protein is typically localized within the nucleus where it binds chromatin and participates in replication licensing and helicase activation. Because MCM7 expression is closely linked to active DNA replication, its presence often correlates with cellular proliferation, while quiescent or terminally differentiated cells generally show reduced expression.

Structurally, MCM7 contains conserved ATP-binding and ATP-hydrolysis domains characteristic of the ATPase family. These domains provide the energy required for helicase activity, enabling conformational changes that drive DNA strand separation and replication fork progression. Proper regulation of this process ensures that chromosomal DNA is replicated only once per cell cycle, maintaining genomic stability and preventing aberrant DNA duplication.

Elevated MCM7 expression has been reported in a wide range of cancers including colorectal carcinoma, breast carcinoma, lung cancer, and other rapidly proliferating tumors. Increased levels of MCM proteins reflect heightened DNA replication activity in malignant cells and have made them widely studied markers of proliferation in cancer biology. A mouse monoclonal antibody such as the HuProt validated clone MCM7/1468 enables researchers to detect Minichromosome maintenance protein 7 expression and examine the regulation of replication licensing machinery in studies of cell cycle control, tumor biology, and DNA replication dynamics.

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

Titering of the MCM7 Antibody HuProt Validated Clone MCM7/1468 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

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