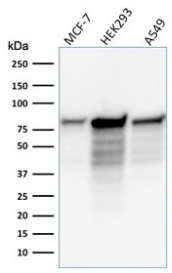
MCM7 Antibody for WB / Minichromosome Maintenance Protein 7 Antibody [clone MCM7/1466] (V3365)

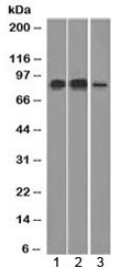
Catalog No.	Formulation	Size
V3365-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3365-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3365SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

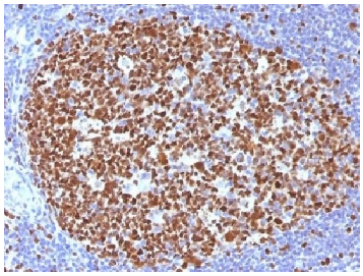
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MCM7/1466
Purity	Protein G affinity chromatography
UniProt	P33993
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This MCM7 antibody is available for research use only.



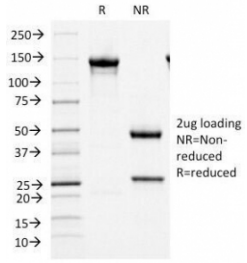
MCM7 Antibody for WB (clone MCM7/1466) - western blot analysis. Western blot testing of human cell lysates using MCM7 Antibody for WB (clone MCM7/1466). Lane 1: MCF7 cell lysate, Lane 2: HEK293 cell lysate, Lane 3: A549 cell lysate. A band is detected at approximately 80-90 kDa, consistent with the predicted molecular weight of Minichromosome maintenance protein 7 / MCM7. Additional lower bands may represent lower molecular weight MCM7 species or partial proteolytic degradation products commonly observed during SDS-PAGE analysis of chromatin-associated replication proteins.



MCM7 Antibody for WB (clone MCM7/1466) - western blot analysis. Western blot testing of human cell lysates using MCM7 Antibody for WB (clone MCM7/1466). Lane 1: HeLa cell lysate, Lane 2: Raji cell lysate, Lane 3: HepG2 cell lysate. A band is detected at approximately 80-90 kDa, consistent with the predicted molecular weight of Minichromosome maintenance protein 7 / MCM7. The signal reflects expression of this DNA replication licensing factor in proliferating human cell lines.



MCM7 Antibody Tonsil IHC. Immunohistochemistry testing of FFPE human tonsil with MCM7 antibody (clone MCM7/1466). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min.



SDS-PAGE Analysis of Purified, BSA-Free MCM7 Antibody (clone MCM7/1466). 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 key component of the minichromosome maintenance helicase complex responsible for eukaryotic DNA replication. The MCM7 Antibody for WB (clone MCM7/1466) is designed for western blot detection of this replication licensing protein and supports analysis of MCM7 expression levels in cell lysates and experimental models investigating DNA replication and cell cycle regulation.

Western blot analysis of MCM7 typically reveals a band in the ~80-90 kDa range corresponding to the full-length Minichromosome maintenance protein 7. Because MCM7 is a chromatin-associated replication factor, the protein is commonly detected in nuclear or whole cell lysates derived from proliferating cell populations. In SDS-PAGE immunoblot experiments, MCM7 may appear as a slightly broadened band or doublet due to phosphorylation state differences or other post-translational modifications that occur during cell cycle progression.

MCM7 antibody, also referred to as CDC47 antibody and P1-MCM3 antibody in the literature, detects a replication licensing protein that is highly expressed in actively dividing cells. The protein forms part of the heterohexameric MCM2-7 helicase complex that unwinds double-stranded DNA at replication forks during S phase. 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. Activation of the helicase during S phase enables DNA strand separation and allows DNA polymerases to replicate the genome.

Structurally, MCM7 contains conserved ATP-binding and ATP-hydrolysis motifs characteristic of the AAA+ ATPase family of helicases. These domains supply the energy required for helicase activity and drive conformational changes within the MCM complex that enable DNA strand separation and replication fork progression. Proper regulation of MCM proteins ensures that chromosomal DNA is replicated only once during each cell cycle, maintaining genomic stability and preventing aberrant DNA duplication.

Western blot detection of MCM7 is widely used in studies examining cell proliferation, DNA replication dynamics, and replication licensing mechanisms. Elevated expression of MCM7 has been reported in numerous cancers including colorectal carcinoma, breast cancer, and lung cancer, reflecting the increased DNA replication activity present in rapidly proliferating tumor cells. A mouse monoclonal antibody such as MCM7 Antibody for WB (clone MCM7/1466) provides a reliable tool for detecting Minichromosome maintenance protein 7 by immunoblot analysis and studying molecular pathways that regulate DNA replication and cell cycle progression.

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

The stated application concentrations are suggested starting amounts. Titration of the MCM7 Antibody for WB may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 195-319 were 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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