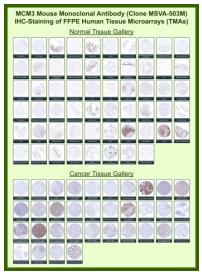
MCM3 Antibody for IHC / Minichromosome Maintenance Complex Component 3 Immunohistochemistry Antibody [clone MSVA-503M] (V5940)

Catalog No.	Formulation	Size
V5940-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5940-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-503M
UniProt	P25205
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This MCM3 Antibody for IHC / Minichromosome Maintenance Complex Component 3 Immunohistochemistry Antibody is available for research use only.



MCM3 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Minichromosome maintenance complex component 3 MCM3 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant mouse monoclonal MCM3 antibody clone MSVA-503M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates distinct nuclear localization in proliferating cell populations, consistent with the role of MCM3 as a DNA replication licensing factor regulating S-phase entry. In normal tissue microarrays, nuclear staining is enriched in proliferative compartments such as epithelial basal layers, intestinal crypts, and lymphoid germinal centers, while quiescent and terminally differentiated cells show minimal to absent signal. Within tumor tissue microarrays, strong and widespread nuclear positivity is observed across a broad range of malignancies, reflecting elevated proliferative activity in tumor cells. Evaluation across large TMA panels enables direct comparison of MCM3 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported MCM3 expression profiles in the Human Protein Atlas and support its use as a robust proliferation marker.

Description

Minichromosome Maintenance Complex Component 3 (MCM3) is a core subunit of the MCM2-7 helicase complex, which is essential for DNA replication licensing and cell cycle progression in proliferating cells. MCM3 Antibody for IHC is specifically optimized for detection of replication-associated nuclear activity in formalin-fixed, paraffin-embedded tissues, enabling precise identification of proliferative cell populations within intact tissue architecture.

MCM3 antibody, also known as Minichromosome maintenance protein 3 antibody, functions as a sensitive nuclear marker of cell proliferation in immunohistochemistry. MCM3 is expressed during G1, S, and G2 phases of the cell cycle and is absent in quiescent or terminally differentiated cells, resulting in a distinct nuclear staining pattern that highlights actively cycling cells. In FFPE tissue sections, MCM3 Antibody for IHC enables clear visualization of proliferative compartments such as basal epithelial layers, intestinal crypts, and germinal centers, supporting detailed assessment of tissue growth dynamics.

Clone MSVA-503M is a recombinant mouse monoclonal antibody developed for high-affinity and reproducible detection of MCM3 in immunohistochemistry workflows. This clone produces strong, crisp nuclear staining with minimal background under standard antigen retrieval conditions, allowing accurate discrimination between proliferating and non-proliferating cells. In Tissue Microarray (TMA) analysis, MCM3 Antibody for IHC demonstrates highly consistent nuclear labeling across large panels of normal and cancer tissues, supporting side-by-side comparison of proliferation indices across multiple tissue types within a single experiment.

In normal tissue microarrays, MCM3 expression is enriched in regions of active cell turnover, including epithelial basal layers, mucosal proliferative zones, and lymphoid germinal centers, while differentiated or quiescent cells show reduced or absent staining. This compartmentalized nuclear staining pattern is particularly useful in immunohistochemistry for defining tissue organization and identifying proliferative niches within complex histological samples.

In cancer tissue microarrays, MCM3 Antibody for IHC reveals widespread nuclear positivity in a broad range of malignancies, including carcinomas, lymphomas, and other rapidly proliferating tumors. Tumor cores frequently demonstrate increased staining intensity and a higher proportion of positive nuclei compared to corresponding normal tissues, reflecting elevated proliferative activity. The ability to evaluate these patterns across hundreds of tissue cores in TMA format provides a powerful tool for comparative tumor analysis and biomarker research.

The reproducible staining performance of clone MSVA-503M in TMA-based immunohistochemistry supports its application in cancer research, proliferation assessment, and tissue-based biomarker studies. MCM3 Antibody for IHC enables reliable detection of cell cycle activity in FFPE samples and is well suited for high-throughput tissue microarray analysis, tumor profiling, and studies of cell proliferation in both normal and diseased tissues.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the MCM3 Antibody for IHC / Minichromosome Maintenance Complex Component 3 Immunohistochemistry Antibody should be determined by the researcher.

2. This Minichromosome Maintenance Complex Component 3/MCM3 antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment (aa 650-750) of human MCM3 protein (exact sequence is proprietary) was used as the immunogen for the Minichromosome Maintenance Complex Component 3/MCM3 antibody.

Storage

Proliferation Marker/MCM3 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

MCM3 IHC antibody, Minichromosome maintenance protein 3 antibody, DNA replication licensing factor MCM3 antibody, MCM3 immunohistochemistry antibody, MCM3 TMA antibody

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