

Basic Information

Product Name	Anti-MCM7 Antibody (Clone#3H11)	
Gene Name	MCM7	
Source	Mouse	
Clonality	Monoclonal	
Isotype	IgG1	
Species Reactivity	human, rat	
Tested Application	WB, IHC, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.	
Immunogen	E.coli-derived human MCM7 recombinant protein (Position: D526-V719). Human MCM7 shares 94% amino acid (aa) sequence identity with mouse MCM7.	
Concentration	500 ug/ml	
Purification	protein G/A purified	
Observed MW	81 kDa	
Dilution Ratios	Western blot (WB):	1:500-2000
	Immunocytochemistry/Immunofluorescence(ICC/IF):	1:50-400
	Immunohistochemistry (IHC):	1:50-400
	Flow Cytometry (Fixed):	1:50-200
	(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

Storage

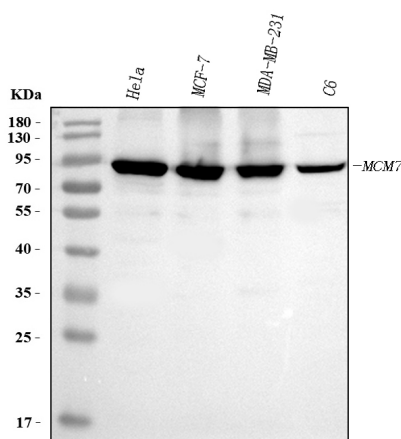
12 months from date of receipt, -20°C as supplied.

Background Information

MCM7(Minichromosome Maintenance, s. Cerevisiae, homolog of, 7), also called CDC47, FORMERLY, is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are essential for the initiation of eukaryotic genome replication. The MCM7 gene is mapped to 7q22.1. MCM7 plays a pivotal role in the G1/S phase transition, orchestrating the correct assembly of replication forks on chromosomal DNA and ensuring that all the genome is replicated once and not more than once at each cell cycle. The MCM7 gene contains 15 exons. The miRNAs MIR106B, MIR93, and MIR25 are clustered in a 5-prime to 3-prime orientation within intron 13. It has been found that MCM7 and the precursors of

microRNAs (miRNAs) MIR106B, MIR93, and MIR25, all of which arise from intron 13 of the MCM7 gene, were overexpressed with almost perfect correlation in 5 of 10 human gastric tumors.

Selected Validation Data



Western blot analysis of MCM7 using anti-MCM7 antibody (M01649-3). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: HeLa whole cell lysates,

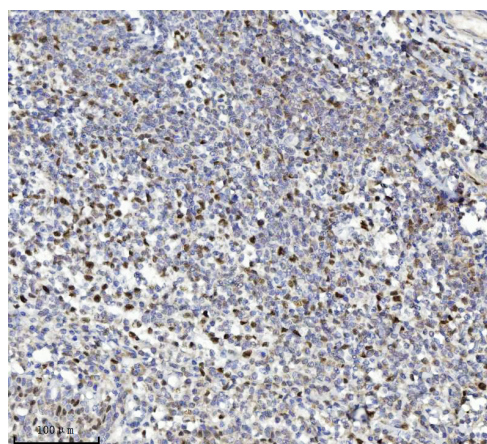
Lane 2: MCF-7 whole cell lysates,

Lane 3: MDA-MB-231 whole cell lysates,

Lane 4: C6 whole cell lysates.

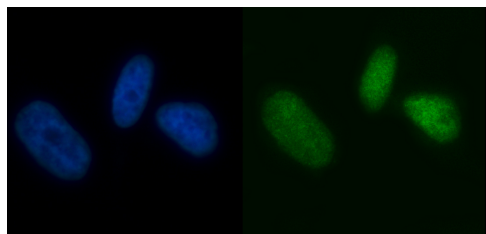
After electrophoresis, proteins were transferred to a membrane.

Then the membrane was incubated with mouse anti-MCM7 antigen affinity purified monoclonal antibody (M01649-3) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for MCM7 at approximately 81 kDa. The expected band size for MCM7 is at 81 kDa.

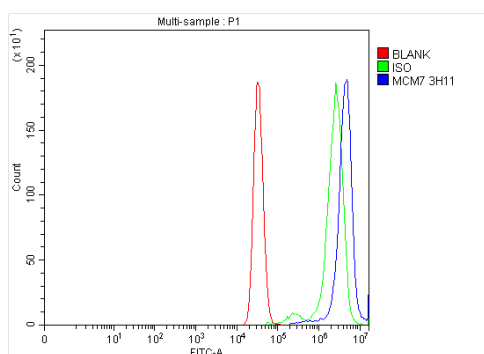


IHC analysis of MCM7 using anti-MCM7 antibody (M01649-3).

MCM7 was detected in a paraffin-embedded section of human chronic tonsillitis tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-MCM7 Antibody (M01649-3) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.



ICC/IF analysis of MCM7 using anti-MCM7 antibody (M01649-3). MCM7 was detected in an immunocytochemical section of PC-3 cells. The section was incubated with mouse anti-MCM7 Antibody (M01649-3) at a dilution of 1:100. Fluoro488-conjugated Anti-mouse IgG Secondary Antibody (green)(Catalog#BA1126) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of MCF-7 cells using anti-MCM7 antibody (M01649-3).

Overlay histogram showing MCF-7 cells stained with M01649-3 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-MCM7 Antibody (M01649-3) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.