Anti-MCM2 Antibody [JE42-39]

HA721553

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 102 kDa
Clone number:	JE42-39

Description: DNA replication licensing factor MCM2 is a protein that in humans is encoded by the MCM2 gene. The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are involved in the initiation of eukaryotic genome replication. The hexameric protein complex formed by MCM proteins is a key component of the pre-replication complex (pre-RC) and may be involved in the formation of replication forks and in the recruitment of other DNA replication-related proteins. This protein forms a complex with MCM4, 6, and 7, and has been shown to regulate the helicase activity of the complex. This protein is phosphorylated, and thus regulated by, protein kinases CDC2 and CDC7.

Immunogen: Synthetic peptide within Human MCM2 aa 31-80 / 904.

Positive control: SW480 cell lysate, SH-SY5Y cell lysate, Raji cell lysate, HeLa cell lysate, HL-60 cell lysate, Mouse thymus tissue lysate, Jurkat cell lysate, C2C12 cell lysate, U-87 MG cell lysate, rat thymus tissue lysates, HeLa, human lymph nodes tissue, human small intestine tissue, human testis tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P49736 Human | P97310 Mouse
Entrez Gene: 312538 Rat

Recommended Dilutions:

WB	1:1,000-1:5,000
IHC-P	1:1,000
IF-Cell	1:250

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

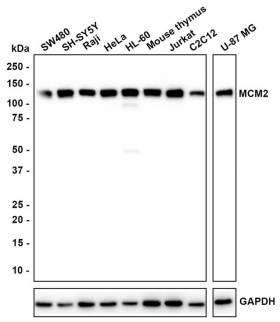

Fig1: Western blot analysis of MCM2 on different lysates with Rabbit anti-MCM2 antibody (HA721553) at 1/1,000 dilution.

Lane 1: SW480 cell lysate (20 µg/Lane)
Lane 2: SH-SY5Y cell lysate (20 µg/Lane)
Lane 3: Raji cell lysate (20 µg/Lane)
Lane 4: HeLa cell lysate (20 µg/Lane)
Lane 5: HL-60 cell lysate (20 µg/Lane)
Lane 6: Mouse thymus tissue lysate (40 µg/Lane)
Lane 7: Jurkat cell lysate (20 µg/Lane)
Lane 8: C2C12 cell lysate (20 µg/Lane)
Lane 9: U-87 MG cell lysate (20 µg/Lane)

Predicted band size: 102 kDa
Observed band size: 130 kDa

Exposure time: 40 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721553) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

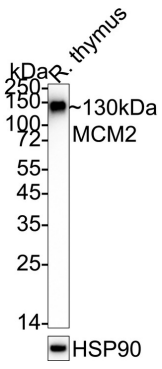

Fig2: Western blot analysis of MCM2 on rat thymus tissue lysates with Rabbit anti-MCM2 antibody (HA721553) at 1/1,000 dilution.

Lysates/proteins at 40 µg/Lane.

Predicted band size: 102 kDa
Observed band size: 130 kDa

Exposure time: 17 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721553) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

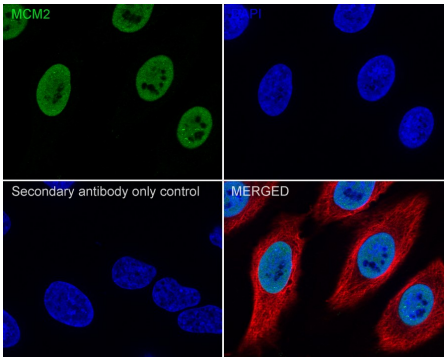

Fig3: Immunocytochemistry analysis of HeLa cells labeling MCM2 with Rabbit anti-MCM2 antibody (HA721553) at 1/250 dilution.

Cells were fixed in 100% precooled methanol for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-MCM2 antibody (HA721553) at 1/250 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

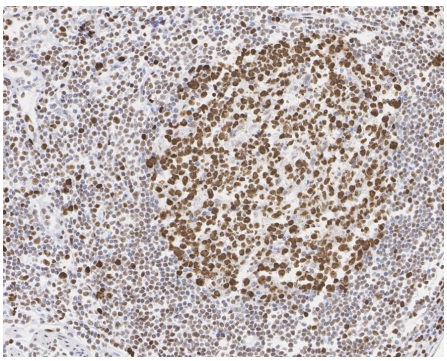

Fig4: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Rabbit anti-MCM2 antibody (HA721553) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721553) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

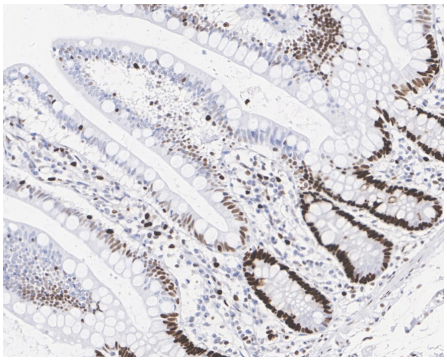

Fig5: Immunohistochemical analysis of paraffin-embedded human small intestine tissue with Rabbit anti-MCM2 antibody (HA721553) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721553) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

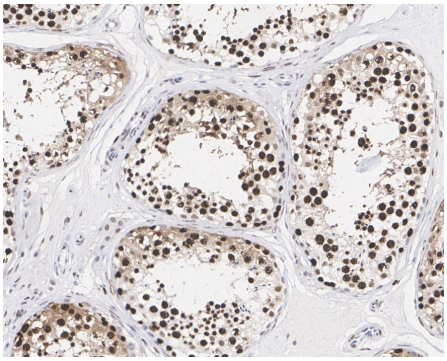

Fig6: Immunohistochemical analysis of paraffin-embedded human testis tissue with Rabbit anti-MCM2 antibody (HA721553) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721553) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Sun Y et al. MCM2 in human cancer: functions, mechanisms, and clinical significance. Mol Med. 2022 Oct
2. Zhou X et al. MCM2 promotes the stemness and sorafenib resistance of hepatocellular carcinoma cells via hippo signaling. Cell Death Discov. 2022 Oct