

Mouse MCM2 Monoclonal Antibody | anti-MCM2 antibody

Anti-MCM2 Antibody (monoclonal, 11C4)

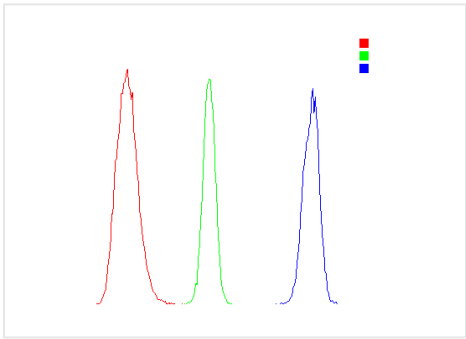
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19351	Mouse	Human, Monkey	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

MCM2; Monoclonal Antibody; Anti-MCM2 Antibody (monoclonal; 11C4); DNA replication licensing factor MCM2; Minichromosome maintenance protein 2 homolog; Nuclear protein BM28; BM28; CCNL1; CDCL1; KIAA0030; minichromosome maintenance complex component 2; anti-MCM2 antibody

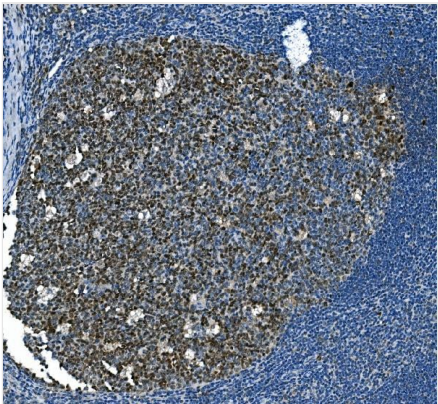
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Monkey
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	11C4
Specificity	Mouse IgG monoclonal antibody for MCM2 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-MCM2 antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Application Notes	WB: 0.1-0.5ug/ml Human, Monkey IHC-P: 0.5-1ug/ml Human ICC/IF: 4ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human
Immunogen	E Coli-derived human MCM2 recombinant protein (Position: S393-R850).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



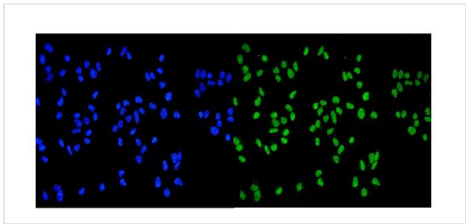
FCM (Flow Cytometry)

Figure 6. Flow Cytometry analysis of HL-60 cells using anti- MCM2 antibody (AAA19351).Overlay histogram showing HL-60 cells stained with AAA19351 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-MCM2 Antibody (AAA19351, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



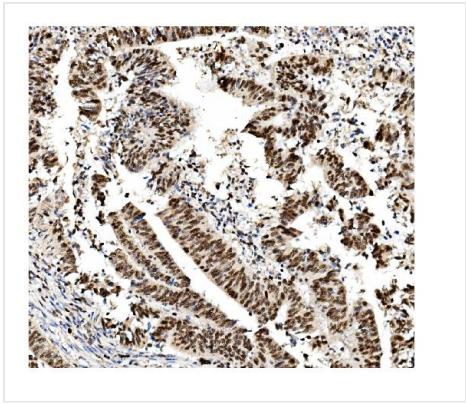
IHC (Immunohistochemistry)

Figure 4. IHC analysis of MCM2 using anti-MCM2 antibody (AAA19351).MCM2 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml mouse anti-MCM2 Antibody (AAA19351) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



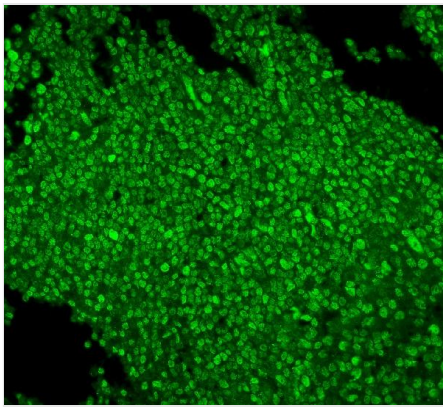
IF (Immunofluorescence)

Figure 5. IF analysis of MCM2 using anti- MCM2 antibody (AAA19351).MCM2 was detected in immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 4μg/mL mouse anti- MCM2 Antibody (AAA19351) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



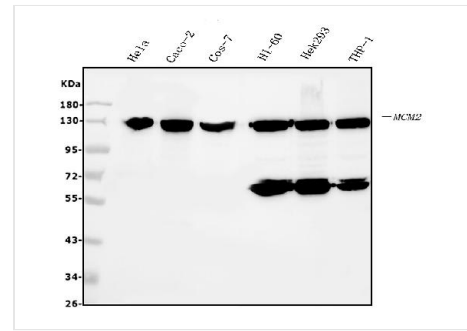
IHC (Immunohistochemistry)

Figure 3. IHC analysis of MCM2 using anti-MCM2 antibody (AAA19351).MCM2 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml mouse anti-MCM2 Antibody (AAA19351) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IF (Immunofluorescence)

Figure 2. IF analysis of MCM2 using anti-MCM2 antibody (AAA19351). MCM2 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 4 µg/mL mouse anti-MCM2 Antibody (AAA19351) overnight at 4 degree C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using DyLight 488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)

Figure 1. Western blot analysis of MCM2 using anti-MCM2 antibody (AAA19351). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50 µg of sample under reducing conditions. Lane 1: human Hela whole cell lysates; Lane 2: human CACO-2 whole cell lysates; Lane 3: monkey COS-7 whole cell lysates; Lane 4: human HL-60 whole cell lysates; Lane 5: human HEK293 whole cell lysates; Lane 6: human THP-1 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-MCM2 antigen affinity purified monoclonal antibody (Catalog # AAA19351) at 0.5 µg/mL overnight at 4 degree C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # with Tanon 5200 system). A specific band was detected for MCM2 at approximately 125 kDa. The expected band size for MCM2 is at 125 kDa.

ADDITIONAL INFORMATION

Related Product Information for anti-MCM2 antibody

MCM2 (MINICHROMOSOME MAINTENANCE, S. CEREVISIAE, HOMOLOG OF, 2), also known as MITOTIN, CDCL1 or BM28, is a human nuclear protein that plays an important role in 2 crucial steps of the cell cycle, namely, onset of DNA replication and cell division. And it is similar to members of the family of early S-phase proteins. The MCM2 gene is mapped to 3q21.3. 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. In the G0 stage, the MCM2 and MCM5 proteins were much less abundant than the MCM7 and MCM3 proteins, which suggests that the MCM proteins are not present in stoichiometric amounts and that only a proportion of these molecules actively participate in cell cycle regulation as part of MCM complexes.

References

1. Blow, J. J., Laskey, R. A. A role for the nuclear envelope in controlling DNA replication within the cell cycle. *Nature* 332: 546-548, 1988.
2. Burkhardt, R., Schulte, D., Hu, D., Musahl, C., Gohring, F., Knippers, R. Interactions of human nuclear proteins P1Mcm3 and P1Cdc46. *Europ. J. Biochem.* 228: 431-438, 1995.
3. Todorov IT, Lavigne J, Sakr F, Kaneva R, Foisy S, Bibor-Hardy V (Jul 1991). "Nuclear matrix protein mitotin messenger RNA is expressed at constant levels during the cell cycle". *Biochem Biophys Res Commun* 177 (1): 395-400.

NCBI AND UNIPROT INFORMATION

NCBI GI #	33356547
NCBI GeneID	4171
NCBI Accession #	NP_004517.2
NCBI GenBank Nucleotide #	NM_004526.3
UniProt Accession #	P49736; Q14577; Q15023; Q8N2V1; Q969W7; Q96AE1; Q9BRM7
Molecular Weight	101,896 Da
NCBI Official Full Name	DNA replication licensing factor MCM2
NCBI Official Synonym Full Names	minichromosome maintenance complex component 2

NCBI Official Symbol	MCM2
NCBI Official Synonym Symbols	BM28; CCNL1; CDCL1; cdc19; D3S3194; MITOTIN
NCBI Protein Information	DNA replication licensing factor MCM2; cyclin-like 1; nuclear protein BM28; cell division cycle-like 1; minichromosome maintenance protein 2 homolog; minichromosome maintenance deficient 2 (mitotin); MCM2 minichromosome maintenance deficient 2, mitotin
UniProt Protein Name	DNA replication licensing factor MCM2
UniProt Gene Name	MCM2
UniProt Synonym Gene Names	BM28; CCNL1; CDCL1; KIAA0030
UniProt Entry Name	MCM2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/mcm2-antibody-clone-11c4-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-elisa/19351>