


Anti-MCM2 (phospho S40 + S41) antibody ab70371

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Overview

Product name	Anti-MCM2 (phospho S40 + S41) antibody
Description	Rabbit polyclonal to MCM2 (phospho S40 + S41)
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, Flow Cyt (Intra)
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Rabbit, Horse, Guinea pig, Cow, Dog, Pig, Xenopus laevis, Chimpanzee, Rhesus monkey, Gorilla, Orangutan, Xenopus tropicalis, Platypus 
Immunogen	Synthetic peptide corresponding to Human MCM2 (phospho S40 + S41).
Positive control	Whole cell lysate from asynchronous 293T cells
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab70371 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		1/1000 - 1/5000. Detects a band of approximately 117 kDa (predicted molecular weight: 100 kDa).
Flow Cyt (Intra)		Use 0.1µg for 10 ⁶ cells. 0.1 µg per 1 X 10 ⁶ cells in a 150 µl volume. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Target

Function

Acts as component of the MCM2-7 complex (MCM complex) which is the putative replicative helicase essential for 'once per cell cycle' DNA replication initiation and elongation in eukaryotic cells. The active ATPase sites in the MCM2-7 ring are formed through the interaction surfaces of two neighboring subunits such that a critical structure of a conserved arginine finger motif is provided in trans relative to the ATP-binding site of the Walker A box of the adjacent subunit. The six ATPase active sites, however, are likely to contribute differentially to the complex helicase activity. Required for the entry in S phase and for cell division.

Sequence similarities

Belongs to the MCM family.
Contains 1 MCM domain.

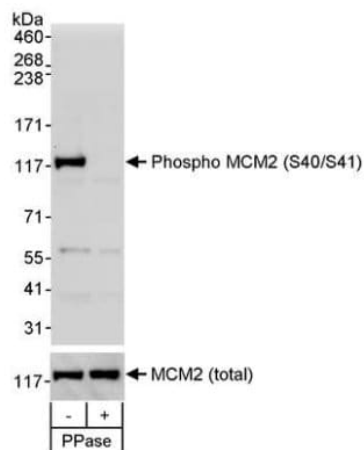
Post-translational modifications

Phosphorylated on Ser-108 by ATR in proliferating cells. Ser-108 proliferation is increased by genotoxic agents. Ser-40 is mediated by the CDC7-DBF4 and CDC7-DBF4B complexes, while Ser-53 phosphorylation is only mediated by the CDC7-DBF4 complex. Phosphorylation by the CDC7-DBF4 complex during G1/S phase is required for the initiation of DNA replication.

Cellular localization

Nucleus.

Images



Western blot - Anti-MCM2 (phospho S40 + S41) antibody (ab70371)

All lanes : Anti-MCM2 (phospho S40 + S41) antibody (ab70371) at 0.1 µg/ml

Lane 1 : Whole cell lysate from asynchronous 293T cells

Lane 2 : Whole cell lysate from asynchronous 293T cells treated with a phosphatase

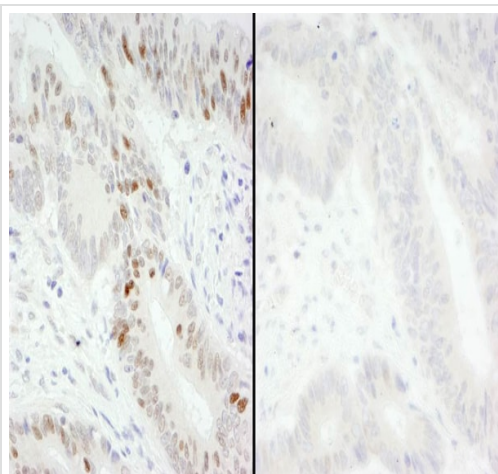
Lysates/proteins at 50 µg per lane.

Predicted band size: 100 kDa

Observed band size: 117 kDa

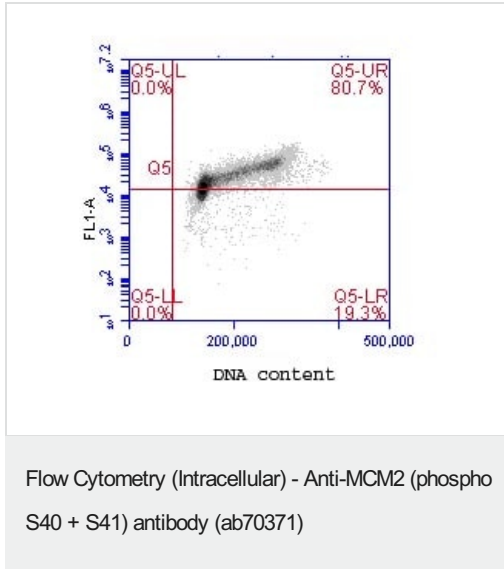
Additional bands at: 60 kDa. We are unsure as to the identity of these extra bands.

The bottom panel shows total MCM2 staining; the blot was stripped and then blotted with rabbit anti-total MCM2 antibody at 0.1 µg/ml. Detection: Chemiluminescence with exposure times of 30 seconds for upper and lower panel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MCM2 (phospho S40 + S41) antibody (ab70371)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon carcinoma mock phosphatase treated section (left) and calf intestinal phosphatase-treated section (right) tissues labelling MCM2 (phospho S40 + S41) with ab70371 at 1/200 (1µg/ml). Detection: DAB.



ab70371 at 0.1µg/ml staining MCM2 (phospho S40 + S41) by Flow Cytometry. 1×10^6 jurkat cells were fixed in 1.5% PFA and permeabilized in 90% MeOH. DNA content was simultaneously analyzed via PI stain.

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