

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse MCM2 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MCM2 Asp143-Ser296 Accession # P49736
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

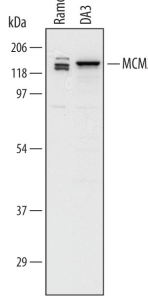
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

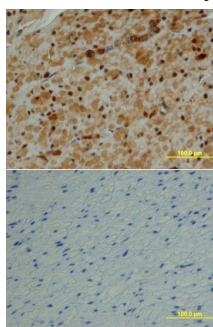
DATA

Western Blot



Detection of Human/Mouse MCM2 by Western Blot. Western blot shows lysates of Ramos human Burkitt's lymphoma cell line and DA3 mouse myeloma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse MCM2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5778) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for MCM2 at approximately 125kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

Immunohistochemistry



MCM2 in Human Colon. MCM2 was detected in immersion fixed paraffin-embedded sections of human colon array using Goat Anti-Human/Mouse MCM2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5778) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MCM2 (Minichromosome maintenance protein 2; also BM28) is a member of the MCM family of proteins. Although its predicted MW is 102 kDa, it runs anomalously at 125 kDa in SDS-PAGE. MCM2 forms a large, 450-600 kDa prereplication complex with MCM3 through 7 plus HBO1, and associates with the ORC to initiate DNA synthesis. Human MCM2 is 904 amino acids (aa) in length (Accession # P49736). It contains one C4-type zinc finger region (aa 329-355) and a P-loop NTPase region (aa 485-659) and at least 12 Ser/Thr phosphorylation sites in the N-terminal one-third of the molecule. MCM2 has several potential isoforms. There is an alternate start site at Met10 with or without a 47 aa substitution for aa 109-157, a deletion of aa 31-126, a Gly substitution for aa 113-132 coupled with a 69 aa insertion after Lys476, and a seven aa substitution for aa 1-137. Over aa 143-296, human MCM2 shares 99% aa identity with mouse MCM2.