abcam

ab32087

Anti-MCL1 antibody [Y37]

Anti-MCL1 antibody [Y37] (ab32087) is a rabbit monoclonal antibody detecting MCL1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 150 publications
- Trusted since 2006

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	Y37
Purification technique	Affinity purification Protein A
Specificity	This antibody recognises MCL1. The antibody does not cross-react with other Bcl-2 family members.
Concentration	1.316 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/250
Notes	For unpurified use 1 ug for 106 cells. (For lot-specific stock concentration, please contact Abcam).ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MCL1

Function	Involved in the regulation of apoptosis versus cell survival, and in the maintenance of viability but not of proliferation. Mediates its effects by interactions with a number of other regulators of apoptosis. Isoform 1 inhibits apoptosis. Isoform 2 promotes apoptosis.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-MCL1 antibody [Y37] (ab32087) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

What is the molecular weight of MCL1?
Anti-MCL1 [Y37] (ab32087) specifically detects a band for MCL1 (UniProt: Q07820) at a molecular weight of 37kDa.

Trusted by the scientific community
Anti-MCL1 [Y37] (ab32087) was first used in a scientific publication in 2006 and has been cited over 150 times in peer-reviewed journals.

Reviewed by scientists
Anti-MCL1 [Y37] (ab32087) has over 10 independent reviews from customers.

Specificity confirmed
The specificity of Anti-MCL1 antibody [Y37] (ab32087) has been confirmed by Western blot testing in MCL1 Knockout HEK293T cells.

Other related products
We have a range of other formats of antibody clone [Y37] also available for your convenience: ab32087, Carrier free - ab186822, Alexa Fluor® 647 - ab197035, Alexa Fluor® 488 - ab197529, PE - ab209289

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MCL1 also known as myeloid cell leukemia sequence 1 is an anti-apoptotic member of the BCL-2 family. This protein plays an important role in regulating cell survival by inhibiting apoptosis. MCL1 has a molecular weight of approximately 37 kDa. It is primarily expressed in the mitochondria and can be found in various tissues including heart liver placenta and kidneys.
Biological function summary	MCL1 protein functions to maintain cell viability by counteracting pro-apoptotic stimuli. It interacts within the cell as part of a complex network involving other BCL-2 family proteins. MCL1 binds and sequesters BH3-only proteins and Bax therefore preventing them from initiating the apoptotic cascade. This interaction helps cells survive under stress conditions by temporarily inhibiting apoptosis.
Pathways	MCL1 plays a significant role in the intrinsic (mitochondrial) apoptosis pathway and the cell signaling pathways that facilitate cell survival and proliferation. In the mitochondrial pathway it works closely with other BCL-2 family members like BCL-xL and BCL-2 itself to control the permeability of the mitochondrial outer membrane and thereby influence cytochrome c release. The PI3K/AKT pathway can also regulate MCL1 leading to increases in its expression and stability which promotes cell survival.
Associated diseases and disorders	Researchers have linked alterations in MCL1 expression to various cancers including leukemia and lymphoma. Overexpression of MCL1 can contribute to chemoresistance in cancer cells by preventing apoptosis. This protein's function is also connected to cardiomyopathies where altered MCL1 expression in cardiac tissue can influence cell death and survival outcomes. BCL-2 and BCL-xL closely related proteins also implicate in these conditions highlighting the central role of the apoptotic regulatory network in disease development.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

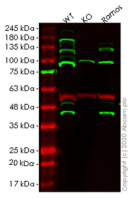
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



Western blot - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Western blot staining using rabbit Anti-MCL1 antibody

Lanes 1-3: Merged signal (red and green). Green - ab32087 observed at 37 kDa. Red - loading control ab7291 observed at 50 kDa.
ab32087 Anti-MCL1 antibody [Y37] was shown to specifically react with MCL1 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266838 (knockout cell lysate ab256986) was used. Wild-type and MCL1 knockout samples were subjected to SDS-PAGE. ab32087 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-MCL1 antibody [Y37] (ab32087) at 1/1000 dilution

Lane 1:
Wild-type HEK293T cell lysate at 20 µg

Lane 2:
MCL1 knockout HEK293T cell lysate at 20 µg

Lane 2:
Western blot - Human MCL1 knockout HEK-293T cell line (ab266838)

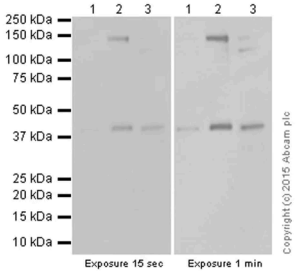
Lane 3:
Ramos cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 37 kDa

Observed band size: 37 kDa



Western blot - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Western blot staining using rabbit Anti-MCL1 antibody

Exposure time for samples 1-3: 15 seconds; exposure time for samples 4-6: 1 minute.
Additional bands: We are unsure as to the identity of these extra bands.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:

Western blot - Anti-MCL1 antibody [Y37] (ab32087) at 1/1000 dilution

Lane 1:
Human lung tissue at 20 µg

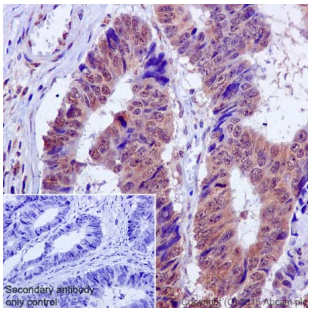
Lane 2:
Human lung cancer tissue at 20 µg

Lane 3:
Human liver tissue at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (H+L), Peroxidase conjugated. at 1/1000 dilution

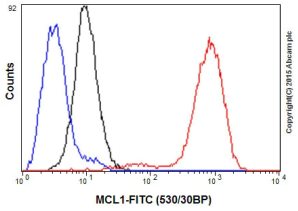
Predicted band size: 37 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MCL1 antibody

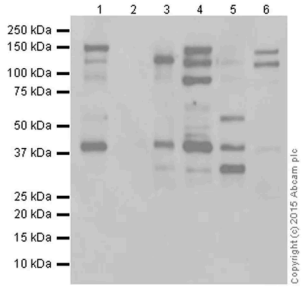
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon adenocarcinoma tissue labelling MCL1 with purified ab32087 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Flow Cytometry (Intracellular) staining using rabbit Anti-MCL1 antibody

Intracellular Flow Cytometry analysis ofRamos (human Burkitt's lymphoma cell line) cells labelling MCL1 with purified ab32087 at 1/250 (red). Cells were fixed with 4% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Western blot - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Western blot staining using rabbit Anti-MCL1 antibody

Additional bands: We are unsure as to the identity of these extra bands.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-MCL1 antibody [Y37] (ab32087) at 1/1000 dilution

Lane 1:
Ramos (human Burkitt's lymphoma cell line) cell lysate at 20 µg

Lane 2:
HL-60 (human promyelocytic leukemia cell line) cell lysate at 20 µg

Lane 3:
A431 (human epidermoid carcinoma cell line) cell lysate at 20 µg

Lane 4:
HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate at 20 µg

Lane 5:
MCF7 (human breast adenocarcinoma cell line) cell lysate at 20 µg

Lane 6:
HepG2 (human liver hepatocellular carcinoma cell line) cell lysate at 20 µg

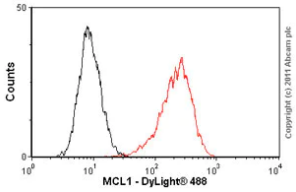
Secondary

All lanes:
Goat anti-rabbit IgG (H+L), peroxidase conjugated. at 1/1000 dilution

Predicted band size: 37 kDa

Observed band size: 37 kDa

Exposure time: 15s

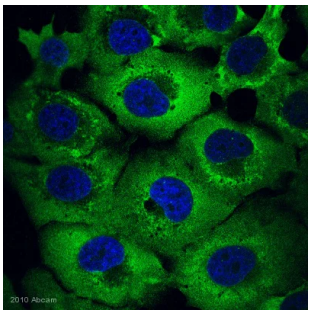


Flow Cytometry (Intracellular) - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Flow Cytometry (Intracellular) staining using rabbit Anti-MCL1 antibody

Intracellular Flow Cytometry analysis ofA431 (human epidermoid carcinoma cell line) cells labelling MCL1 with unpurified ab32087 (red line). Cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab32087, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C.
Black - Isotype control, rabbit monoclonal IgG.

Acquisition of >5,000 events was performed. This antibody gave a decreased signal in A431 cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-MCL1 antibody [Y37] (ab32087)

MCL1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MCL1 antibody

Immunocytochemistry/Immunofluorescence analysis of H1299 cells labelling MCL1 with unpurified ab32087. Cells were PFA-fixed and permeabilized in 0.5% Triton X-100 prior to blocking in 3% Serum for 1 hour at 24°C. The primary antibody was diluted 1/100 and incubated with the sample for 1 hour at 24°C. The secondary antibody was an Alexa Fluor® 488-conjugated Goat anti-Rabbit polyclonal, diluted 1/2000. DAPI (blue) was used as the nuclear counterstain.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.