abcam

ab5783

Anti-MAD1L1/MAD1 antibody [9B10]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human MAD1L1. Database link Q9Y6D9
Clone number	9B10
Purification technique	Affinity purification Protein A
Concentration	0.9 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	0.1 µg for 10^6 Cells
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

WB

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information MAD1L1

Function	Component of the spindle-assembly checkpoint that prevents the onset of anaphase until all chromosomes are properly aligned at the metaphase plate (PubMed:10049595, PubMed:20133940, PubMed:29162720). Forms a heterotetrameric complex with the closed conformation form of MAD2L1 (C-MAD2) at unattached kinetochores during prometaphase, recruits an open conformation of MAD2L1 (O-MAD2) and promotes the conversion of O-MAD2 to C-MAD2, which ensures mitotic checkpoint signaling (PubMed:29162720). Isoform 3. Sequesters MAD2L1 in the cytoplasm preventing its function as an activator of the mitotic spindle assembly checkpoint (SAC) resulting in SAC impairment and chromosomal instability in hepatocellular carcinomas.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	MAD1L1 also known as MAD1 is a mitotic arrest deficient-like protein 1. It plays a critical role in cell cycle checkpoint control. MAD1L1 acts as an important

	component in the spindle assembly checkpoint (SAC) ensuring proper chromosome alignment and segregation during mitosis. This protein weighs roughly 85 kDa and locates primarily in the nucleus. It is expressed in various tissues with higher prevalence in rapidly dividing cells.
Biological function summary	MAD1L1 contributes to cellular homeostasis by preventing aneuploidy through its function in SAC. It participates in a larger protein complex with MAD2 another core component of SAC. Together MAD1L1 and MAD2 inhibit the anaphase-promoting complex/cyclosome (APC/C) delaying the onset of anaphase until all chromosomes align at the metaphase plate ensuring correct chromosome distribution to daughter cells.
Pathways	MAD1L1 influences the cell cycle and mitotic pathways. It interacts with other proteins like BUBR1 and CDC20 to maintain proper checkpoint function. These interactions place MAD1L1 at an important point in the pathway regulating cell division acting as both a sensor and a signal transducer to maintain genomic stability and prevent premature separation of sister chromatids.
Associated diseases and disorders	MAD1L1 dysfunction can become associated with cancer and chromosomal instability disorders. Its aberrant expression or mutation can disrupt the accurate segregation of chromosomes leading to aneuploidy a hallmark in many types of cancer. MAD1L1 connects to key proteins like p53 and aurora kinases which also participate in maintaining genomic integrity and are often implicated in oncogenesis when mutated or dysregulated.

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

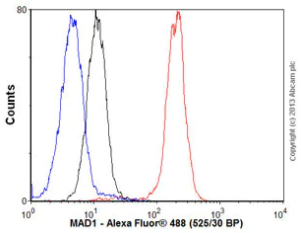
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - Anti-MAD1L1/MAD1 antibody [9B10] (ab5783)

MAD1L1/MAD1 Flow Cytometry staining using mouse Anti-MAD1L1/MAD1 antibody

Overlay histogram showing HeLa cells stained with ab5783 (red line). The cells were fixed with 80% 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 (ab5783, 0.1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H+L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

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