

**Anti-MAD1L1 (MOUSE) Monoclonal Antibody**  
**MAD1L1 Antibody**  
**Catalog # ASR4168****Specification**

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**Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Product Information**

Host	Mouse
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Monoclonal
Application	WB, E, IP, I, LCI
Application Note	This protein A purified antibody is suitable for use in flow cytometry, immunoprecipitation, immunofluorescence and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a predominant band at ~ 83 kDa corresponding to full-length protein by western blotting in the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This protein A purified monoclonal antibody was produced by repeated immunizations with full-length recombinant human MAD1L1 protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Additional Information****Gene ID** 8379**Other Names**  
8379**Purity**

This Protein A purified antibody is directed against human MAD1L1 protein. The product was purified from tissue culture supernatant by chromatography. This antibody has only been tested on human cells. Reactivity against homologues from other sources is not known.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Protein Information

**Name** MAD1L1

**Synonyms** MAD1, TXBP181

### Function

Component of the spindle-assembly checkpoint that prevents the onset of anaphase until all chromosomes are properly aligned at the metaphase plate (PubMed:<a href="http://www.uniprot.org/citations/10049595" target="\_blank">10049595</a>, PubMed:<a href="http://www.uniprot.org/citations/20133940" target="\_blank">20133940</a>, PubMed:<a href="http://www.uniprot.org/citations/29162720" target="\_blank">29162720</a>). 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:<a href="http://www.uniprot.org/citations/29162720" target="\_blank">29162720</a>).

### Cellular Location

Nucleus. Chromosome, centromere, kinetochore. Nucleus envelope Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Note=Co- localizes with TPR at the nucleus envelope during interphase and throughout the cell cycle (PubMed:18981471, PubMed:22351768). From the beginning to the end of mitosis, it is seen to move from a diffusely nuclear distribution to the centrosome, to the spindle midzone and finally to the midbody (PubMed:9546394). Localizes to kinetochores during prometaphase (PubMed:22351768, PubMed:29162720). Does not localize to kinetochores during metaphase (PubMed:29162720) Colocalizes with NEK2 at the kinetochore (PubMed:14978040). Colocalizes with IK at spindle poles during metaphase and anaphase (PubMed:22351768).

### Tissue Location

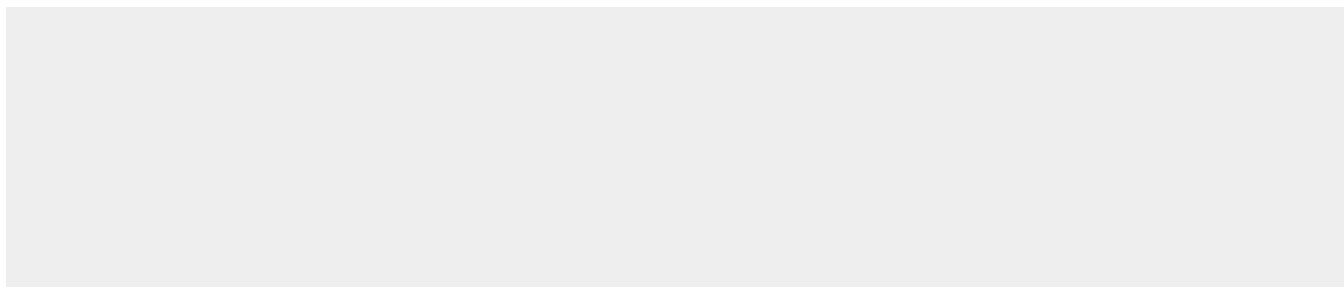
[Isoform 1]: Expressed in hepatocellular carcinomas and hepatoma cell lines (at protein level)

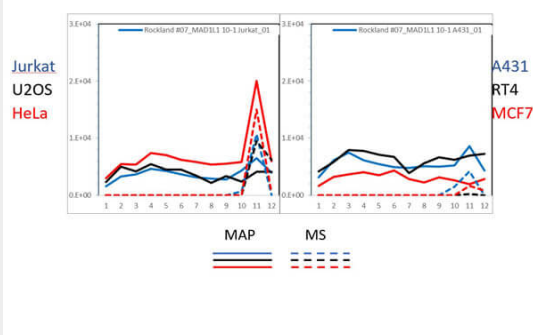
## Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Images





PAGE-MAP (microsphere affinity proteomics) of Mouse Anti-MAD1L1 Antibody (Catalog Number: 200-301-903, Lot Number: 17028). Antibody array western blot binding of gelfree size separated fractions of multiple lysates (solid lines) and shotgun mass spectrometry identification (dashed lines) of the target band run in parallel correlate confirming the specificity of this antibody against MAD1L1. Data was provided by the Lund-Johansen lab of Oslo University Hospital. For more information on PAGE-MAP/IP-MS identification of antibody specificity and its large-scale implementation for antibody validation see Sikorski et. al., (2018) Nature Methods 15, 909-912.

### Anti-MAD1L1 (MOUSE) Monoclonal Antibody - Background

MAD1L1 (also called mitotic spindle assembly checkpoint protein, MAD1A, MAD1-like 1 and HsMAD1) is a component of the spindle-assembly checkpoint that prevents the onset of anaphase until all chromosomes are properly aligned at the metaphase plate. MAD1L1 has a role in the correct positioning of the septum and is required for anchoring MAD2L1 to the nuclear periphery. MAD1L1 forms a homodimer and also heterodimerizes with MAD2L1 in order to form a tetrameric MAD1L1-MAD2L1 core complex. Perturbation of the original MAD1L1-MAD2L1 structure by the spindle checkpoint may decrease MAD2L1 affinity for MAD1L1. CDC20 can compete with MAD1L1 for MAD2L1 binding, until the attachment and/or tension dampen the checkpoint signal, preventing further release of MAD2L1 on to CDC20. MAD1L1 is also able to interact with the BUB1/BUB3 complex and the viral Tax protein. MAD1L1 is a nuclear protein that is seen to move from the beginning to the end of mitosis from a diffusely nuclear distribution to the centrosome, to the spindle midzone and finally to the midbody. Multiple isoforms may exist for this protein (MAD1L1 and MAD1L2). MAD1L1 is induced by TP53 and is phosphorylated by BUB1. MAD1L1 is hyperphosphorylated in late S through M phases or after mitotic spindle damage. Defects in MAD1L1 are involved in the development and/or progression of various types of cancer.