

# MAD2L1BP (4-RE23): sc-134381

## BACKGROUND

MAD2L1BP (MAD2L1 binding protein), also known as CMT2, is a 274 amino acid protein that localizes to the nucleoplasm during early mitosis and to the spindle from metaphase through anaphase. Functioning as a component of the spindle checkpoint (which delays the onset of anaphase until kinetochore attachment is complete), MAD2L1BP is thought to coordinate cell cycle events in late mitosis, possibly binding to MAD2, thereby silencing the spindle checkpoint and allowing mitosis to proceed. MAD2L1BP is expressed as multiple alternatively spliced isoforms that, upon DNA damage, may be phosphorylated by ATM or ATR. The gene encoding MAD2L1BP maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome.

## REFERENCES

1. Nagase, T., et al. 1995. Prediction of the coding sequences of unidentified human genes. III. The coding sequences of 40 new genes (KIAA0081-KIAA0120) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 2: 37-43.
2. Howell, B.J., et al. 2000. Visualization of MAD2 dynamics at kinetochores, along spindle fibers, and at spindle poles in living cells. *J. Cell Biol.* 150: 1233-1250.

## CHROMOSOMAL LOCATION

Genetic locus: MAD2L1BP (human) mapping to 6p21.1; Mad2l1bp (mouse) mapping to 17 C.

## SOURCE

MAD2L1BP (4-RE23) is a mouse monoclonal antibody raised against recombinant MAD2L1BP protein of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

MAD2L1BP (4-RE23) is recommended for detection of MAD2L1BP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MAD2L1BP siRNA (h): sc-95335, MAD2L1BP siRNA (m): sc-149212, MAD2L1BP shRNA Plasmid (h): sc-95335-SH, MAD2L1BP shRNA Plasmid (m): sc-149212-SH, MAD2L1BP shRNA (h) Lentiviral Particles: sc-95335-V and MAD2L1BP shRNA (m) Lentiviral Particles: sc-149212-V.

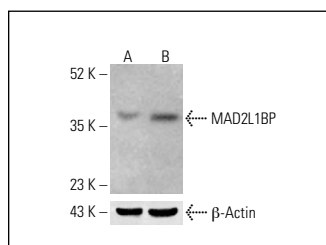
Molecular Weight of MAD2L1BP: 34 kDa.

Positive Controls: MAD2L1BP (m): 293T Lysate: sc-121482.

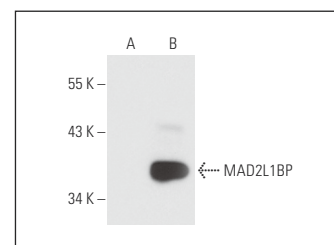
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



MAD2L1BP (4-RE23): sc-134381. Western blot analysis of MAD2L1BP expression in untreated (A) and chemically-treated (B) K-562 whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



MAD2L1BP (4-RE23): sc-134381. Western blot analysis of MAD2L1BP expression in non-transfected: sc-117752 (A) and mouse MAD2L1BP transfected: sc-121482 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Han, J.S., et al. 2013. Catalytic assembly of the mitotic checkpoint inhibitor BubR1-Cdc20 by a MAD2-induced functional switch in Cdc20. *Mol. Cell* 51: 92-104.
2. Shin, H.J., et al. 2015. p31<sup>comet</sup>-induced cell death is mediated by binding and inactivation of MAD2. *PLoS ONE* 10: e0141523.
3. Thu, K.L., et al. 2018. Disruption of the anaphase-promoting complex confers resistance to TTK inhibitors in triple-negative breast cancer. *Proc. Natl. Acad. Sci. USA* 115: E1570-E1577.
4. Kim, D.H., et al. 2018. TRIP13 and APC15 drive mitotic exit by turnover of interphase- and unattached kinetochore-produced MCC. *Nat. Commun.* 9: 4354.
5. Huang, L., et al. 2023. Biallelic variants in MAD2L1BP (p31<sup>comet</sup>) cause female infertility characterized by oocyte maturation arrest. *Elife* 12: e85649.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.