

#4636 Store at -20°C

MAD2L1 (D8A7) Rabbit mAb



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #4085
Swiss-Prot Acc. #Q13257

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R, (Mk, B, Dg)	22 kDa	Rabbit IgG**

Background: Correct segregation of sister chromatids prior to the onset of cell division is essential to the maintenance of genetic integrity and the avoidance of aneuploidy and chromosomal instability, characteristics of many cancer cells. The mitotic checkpoint, also known as the spindle assembly checkpoint, monitors accurate attachment of kinetochores to the spindle, inhibits mitosis and delays the onset of anaphase until all chromosomes are aligned at the metaphase plate (1).

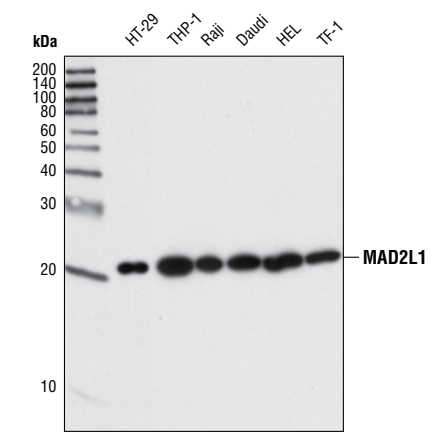
MAD2L1 is an essential participant in the mitotic checkpoint (2). It exists in two conformations, including the open and inactive O-MAD2 form and the closed, active C-MAD2 form. Prior to mitosis, MAD2L1 is localized to the cytosol and exists largely in the closed, inactive form. During the mitotic checkpoint, MAD2L1 switches to the open, active conformation (3). Together with other checkpoint proteins, MAD2L1 binds to and deactivates Cdc20, thereby inhibiting the anaphase promoting complex (4). When the kinetochores are correctly attached to the spindle, MAD2L1 releases Cdc20, which allows activation of the anaphase promoting complex and subsequent degradation of key mitotic substrates and the initiation of metaphase-anaphase transition (5).

Specificity/Sensitivity: MAD2L1 (D8A7) Rabbit mAb detects endogenous levels of total MAD2L1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues at the amino terminus of human MAD2L1 protein.

Background References:

- (1) Wassmann, K. and Benezra, R. (2001) *Curr Opin Genet Dev* 11, 83-90.
- (2) Musacchio, A. and Salmon, E.D. (2007) *Nat Rev Mol Cell Biol* 8, 379-93.
- (3) Skinner, J.J. et al. (2008) *J Cell Biol* 183, 761-8.
- (4) Reddy, S.K. et al. (2007) *Nature* 446, 921-5.
- (5) Stegmeier, F. et al. (2007) *Nature* 446, 876-81.



Western blot analysis of extracts from various cell lines using MAD2L1 (D8A7) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.