

MAD2L1 (D8A7) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	22	Rabbit IgG	#Q13257	4085

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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.

Specificity/Sensitivity

MAD2L1 (D8A7) Rabbit mAb detects endogenous levels of total MAD2L1 protein.

Species predicted to react based on 100% sequence homology

Monkey, Bovine, Dog

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

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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