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Mad2L1 Rabbit pAb

Catalog # AP97209

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q13257
Other Accession	Q13257
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	23510
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Mad2L1
Epitope Specificity	131-205/205
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the MAD2 family. Contains 1 HORMA domain.
SUBUNIT	Monomer and homodimer. Heterotetramer with MAD1L1. Formation of a heterotetrameric core complex containing two molecules each of MAD1L1 and of MAD2L1 promotes binding of another molecule of MAD2L1 to each MAD2L1, resulting in a heterohexamer. Interacts with CDC20, MAD2L1BP and with ADAM17/TACE. Dimeric MAD2L1 in the closed conformation interacts with CDC20. Monomeric MAD2L1 in the open conformation does not interact with CDC20. CDC20 competes with MAD1L1 for MAD2L1 binding. Interacts with TPR. Binds to UBD during mitosis. Interacts with isoform 1 and isoform 2 of NEK2.
Post-translational modifications	Phosphorylated on multiple serine residues. The level ofphosphorylation varies during the cell cycle and is highest duringmitosis. Phosphorylation abolishes interaction with MAD1L1 andreduces interaction with CDC20. Phosphorylated by NEK2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	MAD2L1 is a component of the mitotic spindle assembly checkpoint that prevents the onset of anaphase until all chromosomes are properly aligned at the metaphase plate. MAD2L1 is related to the MAD2L2 gene located on chromosome 1. A MAD2 pseudogene has been mapped to chromosome 14. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	4085
Other Names	HSMAD2; MAD2; MD2L1_HUMAN; MAD2L1; Mitotic arrest deficient 2-like protein 1 (MAD2-like protein 1); mitotic arrest deficient 2 like 1; MAD2 (mitotic arrest deficient, yeast, homolog)-like 1

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MAD2L1
Synonyms	MAD2
Function	Component of the mitotic checkpoint complex (MCC), which inhibits APC/C and delays chromosome segregation until all chromosomes are properly attached to the mitotic spindle (PubMed:10700282, PubMed:11804586, PubMed:15024386, PubMed:29162720, PubMed:27509861). The MCC, which consists of CDC20, MAD2L1/MAD2, BUB1B/BUBR1 and BUB3, is a key player of the spindle assembly checkpoint (PubMed:15020684, PubMed:27509861). The MCC-bound APC/C complex is inactive and this delays the metaphase/anaphase transition (PubMed:27509861). When the spindle assembly checkpoint is silenced, the MCC-APC/C complex recruits the E2 enzyme UBCH10 and triggers the auto-ubiquitination of CDC20 in the MCC, thereby reactivating APC/C for transition into anaphase (PubMed:27509861). In the closed conformation (C-MAD2) forms a heterotetrameric complex with MAD1L1 at unattached kinetochores during prometaphase, the complex recruits open conformation molecules of MAD2L1 (O-MAD2) and then promotes the conversion of O-MAD2 to C-MAD2 (PubMed:29162720).
Cellular Location	Nucleus. Chromosome, centromere, kinetochore. Cytoplasm. Cytoplasm, cytoskeleton, spindle pole Note=Recruited by MAD1L1 to unattached kinetochores (Probable) Recruited to the nuclear pore complex by TPR during interphase Recruited to kinetochores in late prometaphase after BUB1, CENPF, BUB1B and CENPE. Kinetochore association requires the presence of NEK2 Kinetochore association is repressed by UBD. Sequestered to the cytoplasm upon interaction with isoform 3 of MAD1L1 (PubMed:19010891) {ECO:0000269|PubMed:19010891, ECO:0000305}

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