MAD2L1 Protein, Human (His-SUMO)

Cat. No.:	HY-P71540
Synonyms:	HsMAD2; MAD 2; MAD2 like 1; MAD2 mitotic arrest deficient like 1; MAD2-like protein 1; Mad2l1; MD2L1_HUMAN; Mitotic arrest deficient 2-like protein 1; Mitotic spindle assembly checkpoint protein MAD2A; REV7
Species:	Human
Source:	E. coli
Accession:	Q13257 (2A-205D)
Gene ID:	4085
Molecular Weight:	Approximately 39.4 kDa

PROPERTIES

AA Sequence	A L Q L S R E Q G I T L R G S A E I V A E F F S F G I N S I L Y Q R G I Y P S E T F T R V Q K Y G L T L L V T T D L E L I K Y L N N V V E Q L K D W L Y K C S V Q K L V V V I S N I E S G E V L E R W Q F D I E C D K T A K D D S A P R E K S Q K A I Q D E I R S V I R Q I T A T V T F L P L L E V S C S F D L L I Y T D K D L V V P E K W E E S G P Q F I T N S E E V R L R S F T T T I H K V N S M V A Y K I P V N D
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 10 mM Tris-HC1,1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	MAD2L1, a crucial component of the spindle-assembly checkpoint, plays a pivotal role in preventing anaphase onset until proper chromosome alignment is achieved at the metaphase plate. During prometaphase, MAD2L1, in its closed conformation, forms a heterotetrameric complex with MAD1L1 at unattached kinetochores, recruiting open conformation molecules of MAD2L1 (O-MAD2) and facilitating the conversion to the closed conformation. Essential for executing the mitotic checkpoint, MAD2L1 monitors kinetochore-spindle attachment, inhibits the anaphase promoting complex by sequestering CDC20, and ensures chromosomes' alignment before anaphase initiation. MAD2L1 can exist as a monomer, homodimer, or heterodimer with MAD1L1, forming a tetrameric core complex. It interacts with various proteins, including

MAD2L1BP, ADAM17/TACE, CDC20, BUB1B, TTK, TPR, UBD, NEK2, and HSF1, contributing to its multifaceted roles in cell cycle regulation and mitotic progression. Interactions with isoforms of MAD1L1 lead to cytoplasmic sequestration, adding an additional layer of complexity to MAD2L1's regulatory functions.

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