



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human MAD2L2 Protein  
**Catalog Number:** hRP-1941  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human Mitotic spindle assembly checkpoint protein MAD2B (MAD2L2) encodes an adapter protein which able to interact with different proteins and is involved in different biological processes. It mediates the interaction between the error-prone DNA polymerase zeta catalytic subunit REV3L and the inserter polymerase REV1, thereby mediating the second polymerase switching in translesion DNA synthesis. MAD2L2 translesion DNA synthesis releases the replication blockade of replicative polymerases, stalled in presence of DNA lesions. It may also regulate another aspect of cellular response to DNA damage through regulation of the JNK-mediated phosphorylation and activation of the transcriptional activator ELK1. MAD2L2 inhibits the FZR1- and probably CDC20-mediated activation of the anaphase promoting complex APC thereby regulating progression through the cell cycle. It also regulates TCF7L2-mediated gene transcription and may play a role in epithelial-mesenchymal transdifferentiation.

Full-length human MAD2L2 cDNA (210aa) was constructed with codon optimization gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. It was expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** MAD2L2 (MAD2B; REV7)  
**Accession Number:** NP\_006332.3  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



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## Key References

Eunhee Choi, et al., *Mitotic Checkpoint Regulators Control Insulin Signaling and Metabolic Homeostasis*. Cell, 166, 1-15. July 28. (2016)

Feng L, et al., *Knockdown of REV7 Inhibits Breast Cancer Cell Migration and Invasion*. Oncol. Res. 24 (5), 315-325 (2016)

Xu G, et al., *REV7 counteracts DNA double-strand break resection and affects PARP inhibition*. Nature 521 (7553), 541-544 (2015)

## Applications

1. May be used for in vitro MAD2L2 mediated signaling pathway regulation study for various cells by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping protein-protein interaction.
3. May be used as enzymatic substrate for various proteases.
4. Potential therapeutic protein for various disease treatments, such as diabetes or tumorigenesis.
5. As immunogen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFTTLTRQDLNFGQVVADVLCEFLEVAVHLILYVREV  
YPVGIFQKRKKYNVPVQMSCHPELNQYIQDTLHCVKPLLEKNDVEKVVVVILDKHRPVEKFVF  
EITQPPLLSISSDLLSHVEQLLRAFILKISVCDAVLDHNPPGCTFTVLVHTREAATRMEKIQ  
VIKDFPWILADEQDVHMHPRLIPLKTMSTDILKMQLYVEERAHKGS