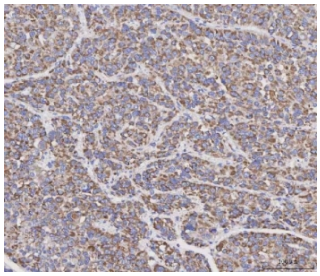
MAD2B Antibody / REV7 Polyclonal Antibody (RQ8290)

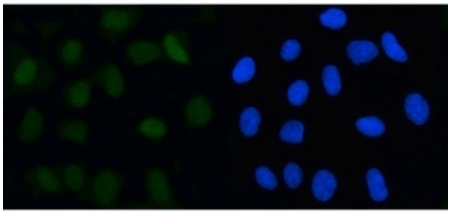
Catalog No.	Formulation	Size
RQ8290	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

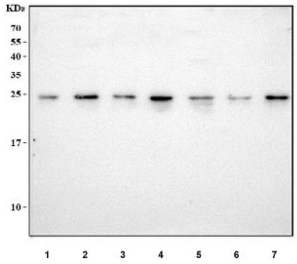
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9UI95
RRID	AB_3756778
Localization	Nuclear, cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This MAD2B Antibody / REV7 Polyclonal Antibody is available for research use only.



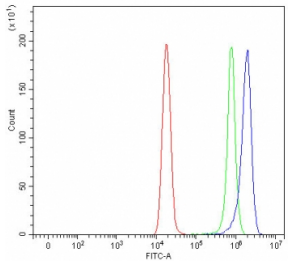
MAD2B Antibody by IHC in Human Liver Cancer Immunohistochemistry of FFPE human liver cancer sections using MAD2B Antibody. This REV7 Polyclonal Antibody was tested following heat-induced epitope retrieval by boiling sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool before staining.



MAD2B Antibody by IF in U-2 OS Cells Immunofluorescence staining of U-2 OS cells using MAD2B Antibody, shown in green, with DAPI nuclear counterstain in blue. The REV7 Polyclonal Antibody demonstrates prominent nuclear labeling together with detectable extranuclear signal, consistent with the reported nuclear and cytoplasmic localization of MAD2L2/REV7. Cells were prepared using heat-induced epitope retrieval in pH 6 citrate buffer.



MAD2B Antibody by WB in Multiple Human Cell Lines Western blot testing of MAD2B Antibody with A375 (lane 1), 293T (lane 2), HeLa (lane 3), K562 (lane 4), Jurkat (lane 5), THP-1 (lane 6) and SH-SY5Y (lane 7) cell lysates. The REV7 Polyclonal Antibody detects a clean, predominant band at approximately 24 kDa across all seven lysates, consistent with the predicted molecular weight of MAD2L2/REV7. Differences in band intensity likely reflect variation in target abundance among the tested cell lines.



MAD2B Antibody by FACS in HeLa Cells Flow cytometry testing of fixed and permeabilized HeLa cells using MAD2B Antibody at 1 ug per million cells. The REV7 Polyclonal Antibody produces a strong rightward fluorescence shift relative to both the isotype control and cells-alone control, demonstrating robust detection of endogenous MAD2L2/REV7. Cells were blocked with goat serum before testing.

Description

MAD2B Antibody detects mitotic arrest deficient 2-like protein 2, encoded by the MAD2L2 gene and also widely known as REV7. MAD2L2 is a member of the HORMA domain protein family and participates in several protein complexes involved in DNA damage tolerance, DNA repair, cell-cycle regulation and maintenance of genome stability. Although MAD2B was initially characterized through its relationship to mitotic checkpoint proteins, subsequent research has established broader functions for MAD2L2/REV7 in the cellular response to DNA damage.

A major function of MAD2L2 is its role as REV7, the noncatalytic subunit of DNA polymerase zeta. Polymerase zeta participates in translesion DNA synthesis, a DNA damage-tolerance mechanism that allows replication to continue past lesions that can stall conventional replicative polymerases. REV7 interacts with REV3, the catalytic subunit of polymerase zeta, and also participates in interactions involving REV1 and other components of the translesion synthesis machinery. These functions help cells tolerate damaged DNA but can also contribute to mutagenesis when lesions are bypassed inaccurately.

MAD2L2 also has an important role in DNA double-strand break repair as a component of the Shieldin complex. Shieldin acts downstream of 53BP1 and RIF1 and helps limit excessive DNA end resection, thereby influencing the balance between non-homologous end joining and homologous recombination. Through this pathway, REV7 contributes to repair pathway choice and genome stability. Alterations affecting REV7 or other Shieldin components can consequently influence cellular responses to DNA damage and the repair of chromosome breaks.

Beyond DNA repair, MAD2L2 has been implicated in cell-cycle progression, chromosome segregation, transcriptional regulation and developmental processes. Its ability to participate in distinct molecular complexes allows the protein to connect DNA replication, damage tolerance and repair with broader mechanisms controlling cell proliferation. Dysregulated MAD2L2 expression or activity has consequently attracted interest in cancer biology, particularly in studies of genomic instability, therapeutic resistance and cellular responses to DNA-damaging agents.

The multiple functions of MAD2L2 make it useful for investigating how cells coordinate lesion bypass, double-strand break repair and cell-cycle control while preserving genome integrity. NSJ Bioreagents offers this REV7 Polyclonal Antibody for research into MAD2L2-associated pathways and protein interactions. A MAD2B Antibody can therefore support studies of translesion DNA synthesis, Shieldin-dependent DNA repair, genome stability and mechanisms regulating the cellular response to DNA damage.

Explore additional research tools in our Signal Transduction Antibodies collection.

Application Notes

Optimal dilution of the MAD2B Antibody / REV7 Polyclonal Antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (M1-K209) was used as the immunogen for the MAD2B antibody.

Storage

After reconstitution, the MAD2B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MAD2L2 antibody, REV7 antibody, MAD2B antibody, Mitotic Arrest Deficient 2 Like 2 antibody, Mitotic Arrest Deficient-Like Protein 2 antibody

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