

MAD1 (L-17): sc-54962

BACKGROUND

Cell cycle progression is subject to arrest at the mitotic spindle assembly checkpoint in response to incorrect spindle fiber assembly. MAD1 and MAD2 (for mitotic arrest-deficient 1 and 2) are components of the mitotic spindle checkpoint. Incorrect spindle assembly in normal cells leads to mitotic arrest. MAD1 prevents the onset of anaphase until all chromosomes are aligned correctly at the metaphase plate and is crucial for anchoring MAD2L1 to the nuclear periphery. It also plays an important role in septum positioning. MAD1 can form a homodimer, but may also form a heterodimer with MAD2 to form the tetrameric MAD1L1-MAD2L1 core complex. MAD1 localizes primarily to the nucleus but, during mitosis, it moves from a nuclear distribution to the centrosome, to the spindle midzone and then on to the midbody. MAD1 activity is induced by BUB1 and the protein is hyperphosphorylated after mitotic spindle damage and/or in late S through M phase. Defects in the gene encoding for MAD1, MAD1L1, play a major role in the development and progression of various cancer types.

CHROMOSOMAL LOCATION

Genetic locus: MAD1L1 (human) mapping to 7p22.3; Mad111 (mouse) mapping to 5 G2.

SOURCE

MAD1 (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54962 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAD1 (L-17) is recommended for detection of MAD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MAD1 (L-17) is also recommended for detection of MAD1 in additional species, including equine and bovine.

Suitable for use as control antibody for MAD1 siRNA (h): sc-62577, MAD1 siRNA (m): sc-62578, MAD1 shRNA Plasmid (h): sc-62577-SH, MAD1 shRNA Plasmid (m): sc-62578-SH, MAD1 shRNA (h) Lentiviral Particles: sc-62577-V and MAD1 shRNA (m) Lentiviral Particles: sc-62578-V.

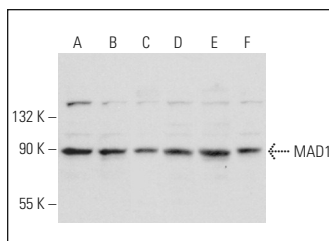
Molecular Weight of MAD1: 90 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, T-47D cell lysate: sc-2293 or Raji whole cell lysate: sc-364236.

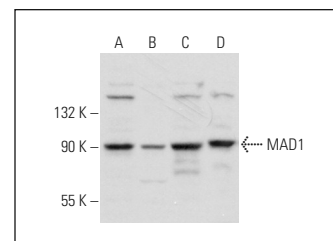
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MAD1 (L-17): sc-54962. Western blot analysis of MAD1 expression in Ramos (A), Raji (B), MCF7 (C), T-47D (D) and MDA-MB-435S (E) whole cell lysates and A431 nuclear extract (F).



MAD1 (L-17): sc-54962. Western blot analysis of MAD1 expression in HeLa (A), U-251-MG (B) and U-698-M (C) whole cell lysates and HeLa nuclear extract (D).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **MAD1 (D-1): sc-166312** or **MAD1 (9B10): sc-47746**, our highly recommended monoclonal alternatives to MAD1 (L-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MAD1 (D-1): sc-166312**.