SANTA CRUZ BIOTECHNOLOGY, INC.

ATRIP (H-300): sc-33790

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DNA damage or incomplete replication of DNA results in the inhibition of cell cycle progression at the G_1 to S or the G_2 to M phase transition by conserved regulatory mechanisms known as cell cycle checkpoints. Checkpoint proteins include Rad17, which is involved in regulating cell cycle progression at the G_1 checkpoint, and Chk1, Chk2, Rad1, Rad9 and Hus1, which are involved in regulating cell cycle arrest at the G_2 checkpoint. In response to DNA damage, ATM and ATR kinases are important for cell cycle checkpoint response signaling. ATR-interacting protein (ATRIP), also designated ATM and Rad3-related-interacting protein, is required for checkpoint signaling after DNA damage. It is also important for ATR expression, which regulates DNA replication and damage checkpoint responses. ATRIP is a ubiquitously expressed protein that can form heterodimers with ATR. After dimerization they bind the RPA complex and are recruited to single stranded DNA. ATRIP is a nuclear protein that may also play a role in protein stabilization.

CHROMOSOMAL LOCATION

Genetic locus: ATRIP (human) mapping to 3p21.31; Atrip (mouse) mapping to 9 F2.

SOURCE

ATRIP (H-300) is a rabbit polyclonal antibody raised against amino acids 492-791 mapping at the C-terminus of ATRIP 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.

STORAGE

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

APPLICATIONS

ATRIP (H-300) is recommended for detection of all ATR-interacting protein isoforms 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).

ATRIP (H-300) is also recommended for detection of all ATR-Interacting Protein isoforms in additional species, including canine.

Suitable for use as control antibody for ATRIP siRNA (h): sc-44800, ATRIP siRNA (m): sc-44801, ATRIP shRNA Plasmid (h): sc-44800-SH, ATRIP shRNA Plasmid (m): sc-44801-SH, ATRIP shRNA (h) Lentiviral Particles: sc-44800-V and ATRIP shRNA (m) Lentiviral Particles: sc-44801-V.

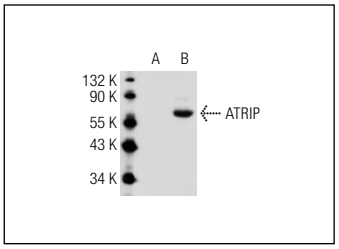
Molecular Weight: of ATRIP: 86 kDa.

Positive Controls: ATRIP (h): 293T Lysate: sc-170063, MCF7 nuclear extract: sc-2149 or U-937 nuclear extract: sc-2156.

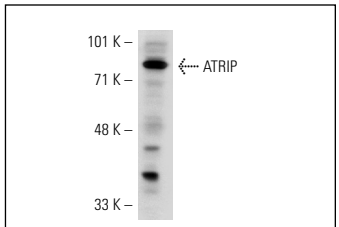
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ATRIP (H-300): sc-33790. Western blot analysis of ATRIP expression in non-transfected: sc-117752 (**A**) and human ATRIP transfected: sc-170063 (**B**) 293T whole cell lysates.



ATRIP (H-300): sc-33790. Western blot analysis of ATRIP expression in MCF7 nuclear extract.

SELECT PRODUCT CITATIONS

1. Rizzo, A., et al. 2009. Stabilization of quadruplex DNA perturbs telomere replication leading to the activation of an ATR-dependent ATM signaling pathway. Nucleic Acids Res. 37: 5353-5364.
2. Li, D.Q., et al. 2010. Requirement of MTA1 in ATR-mediated DNA damage checkpoint function. J. Biol. Chem. 285: 19802-19812.

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.