SANTA CRUZ BIOTECHNOLOGY, INC.

ATRIP (V-20): sc-33411

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, 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 signalling. 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, which regulates DNA replication and damage checkpoint responses, expression. 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.

REFERENCES

1. Cortez, D., et al. 2001. ATR and ATRIP: partners in checkpoint signaling. Science 294: 1713-1716.
2. Zou, L., et al. 2003. Sensing DNA damage through ATRIP recognition of RPA-ssDNA complexes. Science 300: 1542-1548.
3. Ball, H.L., et al. 2005. ATRIP oligomerization is required for ATR-dependent checkpoint signaling. J. Biochem. 280: 31390-31396.
4. Kim, S.M., et al. 2005. Phosphorylation of Chk1 by ATM- and Rad3-related (ATR) in *Xenopus* egg extracts requires binding of ATRIP to ATR but not the stable DNA-binding. J. Biochem. 280: 38355-38364.

CHROMOSOMAL LOCATION

Genetic locus: ATRIP (human) mapping to 3p21.31.

SOURCE

ATRIP (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ATR-interacting protein 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-33411 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ATRIP (V-20) is recommended for detection of ATRIP of 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 (V-20) is also recommended for detection of ATRIP in additional species, including equine, canine, bovine and porcine.

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

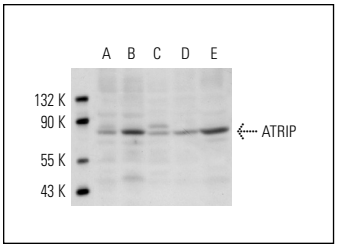
Molecular Weight of ATRIP: 86 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149, U-937 nuclear extract: sc-2156 or PC-3 nuclear extract: sc-2152.

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



ATRIP (V-20): sc-33411. Western blot analysis of ATRIP expression in UV-treated HeLa (**A**), MCF7 (**B**), THP-1 (**C**), U-937 (**D**) and PC-3 (**E**) nuclear extracts.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **ATRIP (F-7): sc-365383**, our highly recommended monoclonal alternative to ATRIP (V-20).