

ATRIP (h): 293 Lysate: sc-112949

BACKGROUND

DNA damage or incomplete replication of DNA results in the inhibition of cell cycle progression at the G₁ to S or the G₂ 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 G₁ checkpoint, as well as Chk1, Chk2, Rad1, Rad9 and Hus1, which are involved in regulating cell cycle arrest at the G₂ 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 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.

REFERENCES

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3. Ball, H.L. and Cortez, D. 2005. ATRIP oligomerization is required for ATR-dependent checkpoint signaling. *J. Biol. Chem.* 280: 31390-31396.
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5. Itakura, E., Sawada, I. and Matsuura, A. 2005. Dimerization of the ATRIP protein through the coiled-coil motif and its implication to the maintenance of stalled replication forks. *Mol. Biol. Cell* 16: 5551-5562.
6. SWISS-PROT/TrEMBL (Q8WXE1). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

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

PRODUCT

ATRIP (h): 293 Lysate represents a lysate of human ATRIP transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ATRIP (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive ATRIP antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.