

RINT-1 (N-15): sc-19404

BACKGROUND

Rad50, a structural maintenance of chromosomes (SMC) protein family member, participates in a variety of cellular processes, including DNA double-strand break repair, cell cycle checkpoint activation, telomere maintenance, and meiosis. In addition to its ability to form a complex with the DNA double-strand break repair proteins Mre11 and NBS1, Rad50 may interact with other cellular proteins to execute its full range of biological activities. A novel protein named RINT-1 was identified using the C-terminal region of human Rad50 as the bait in a yeast two-hybrid screen. Human RINT-1 shares sequence homology with a novel protein identified in *Drosophila melanogaster*. The conserved central and C-terminal regions of RINT-1 are required for its interaction with Rad50. While Rad50 and RINT-1 are both expressed throughout the cell cycle, RINT-1 specifically binds to Rad50 only during late S and G₂/M phases, suggesting that RINT-1 may be involved in cell cycle regulation. RINT-1 may also play a role in the regulation of cell cycle control after DNA damage.

REFERENCES

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- Deng, C.X. and Brodie, S.G. 2000. Roles of BRCA1 and its interacting proteins. *Bioessays* 22: 728-737.
- Xiao, J., Liu, C.C., Chen, P.L. and Lee, W.H. 2001. RINT-1, a novel Rad50-interacting protein, participates in radiation-induced G₂/M checkpoint control. *J. Biol. Chem.* 276: 6105-6111.
- Desai-Mehta, A., Cerosaletti, K.M. and Concannon, P. 2001. Distinct functional domains of nibrin mediate Mre11 binding, focus formation, and nuclear localization. *Mol. Cell. Biol.* 21: 2184-2191.
- Trujillo, K.M. and Sung, P. 2001. DNA structure-specific nuclease activities in the *Saccharomyces cerevisiae* Rad50/Mre11 complex. *J. Biol. Chem.* 276: 35458-35464.

CHROMOSOMAL LOCATION

Genetic locus: RINT1 (human) mapping to 7q22.3

SOURCE

RINT-1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RINT-1 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-19404 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.

APPLICATIONS

RINT-1 (N-15) is recommended for detection of RINT-1 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).

Suitable for use as control antibody for RINT-1 siRNA (h): sc-38238, RINT-1 shRNA Plasmid (h): sc-38238-SH and RINT-1 shRNA (h) Lentiviral Particles: sc-38238-V.

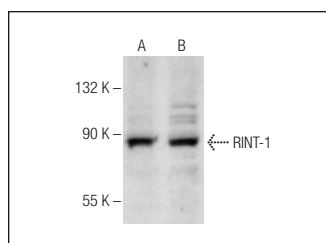
Molecular Weight of RINT-1: 87 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, SW480 cell lysate: sc-2219 or Hep G2 cell lysate: sc-2227.

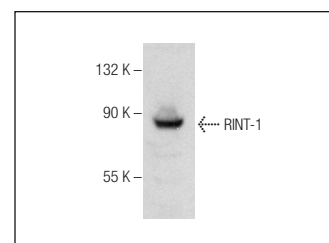
RECOMMENDED SECONDARY REAGENTS

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



RINT-1 (N-15): sc-19404. Western blot analysis of RINT-1 expression in SK-BR-3 (A) and SW480 (B) whole cell lysates.



RINT-1 (N-15): sc-19404. Western blot analysis of RINT-1 expression in Hep G2 whole cell lysate.

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.