

# RAD51AP2 (G-17): sc-243921

## BACKGROUND

Many interacting proteins regulate and/or assist the activities of Rad51, a recombinase that plays a critical role in both DNA repair and meiotic recombination. RAD51AP2 (Rad51 associated protein 2) is a 1,159 amino acid protein that interacts strongly with Rad51. The Rad51-binding region of RAD51AP2 is 81% homologous to the C-terminus of RAD51AP1, an otherwise totally unrelated Rad51-binding partner that is ubiquitously expressed. Both RAD51AP1 and RAD51AP2 use the same structural C-terminal motif for Rad51 binding. The RAD51AP2 protein is found only in meiotic tissue (i.e. adult testis and fetal ovary), suggesting a meiotic-specific function for RAD51AP2. The RAD51AP2 gene is conserved in chimpanzee, canine and mouse, and maps to human chromosome 2p24.2.

## REFERENCES

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2. Kovalenko, O.V., et al. 2006. RAD51AP2, a novel vertebrate- and meiotic-specific protein, shares a conserved RAD51-interacting C-terminal domain with RAD51AP1/PIR51. *Nucleic Acids Res.* 34: 5081-5092.
3. Wiese, C., et al. 2007. Promotion of homologous recombination and genomic stability by RAD51AP1 via RAD51 recombinase enhancement. *Mol. Cell* 28: 482-490.
4. Marcellis, C.L., et al. 2008. Genotype-phenotype correlations in MYCN-related Feingold syndrome. *Hum. Mutat.* 29: 1125-1132.
5. Gospodinov, A., et al. 2009. RAD51 foci formation in response to DNA damage is modulated by TIP49. *Int. J. Biochem. Cell Biol.* 41: 925-933.
6. Gildemeister, O.S., et al. 2009. Cellular redistribution of Rad51 in response to DNA damage: novel role for Rad51C. *J. Biol. Chem.* 284: 31945-31952.
7. Storlazzi, C.T., et al. 2010. Gene amplification as double minutes or homogeneously staining regions in solid tumors: origin and structure. *Genome Res.* 20: 1198-1206.

## CHROMOSOMAL LOCATION

Genetic locus: RAD51AP2 (human) mapping to 2p24.2; Rad51ap2 (mouse) mapping to 12 A1.1.

## SOURCE

RAD51AP2 (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RAD51AP2 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-243921 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

RAD51AP2 (G-17) is recommended for detection of RAD51AP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with RAD51AP1.

Suitable for use as control antibody for RAD51AP2 siRNA (m): sc-143321, RAD51AP2 shRNA Plasmid (m): sc-143321-SH and RAD51AP2 shRNA (m) Lentiviral Particles: sc-143321-V.

Molecular Weight of RAD51AP2: 134 kDa.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.