SANTA CRUZ BIOTECHNOLOGY, INC.

BARD1 (C-20): sc-7372

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mutations within the BRCA1 gene, localized to chromosome 17q, are believed to account for approximately 45% of families with increased incidence of both early-onset breast cancer and ovarian cancer. The BRCA1 gene is expressed in numerous tissues, including breast and ovary, and encodes a predicted protein of 1,863 amino acids. This protein contains a RING domain near the N-terminus and appears to encode a tumor suppressor. BARD1 (BRCA1-associated RING domain protein 1) and BAP1 (BRCA1-associated protein 1) have both been shown to bind to the N-terminus of BRCA1 and are potential mediators of tumor suppression. BARD1 contains an N-terminal RING domain and three tandem ankyrin repeats. The C-terminus of BARD1 contains a region with sequence homology to BRCA1, termed the BRCT domain. BAP1 is an ubiquitin hydrolase and has been shown to enhance BRCA1-mediated cell growth suppression.

REFERENCES

1. Hall, J.M., et al. 1990. Linkage of early-onset familial breast cancer to chromosome 17q21. Science 250: 1684-1689.
2. Narod, S.A., et al. 1991. Familial breast-ovarian cancer locus on chromosome 17q12-q23. Lancet 338: 82-83.

CHROMOSOMAL LOCATION

Genetic locus: BARD1 (human) mapping to 2q35; Bard1 (mouse) mapping to 1 C3.

SOURCE

BARD1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BARD1 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-7372 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BARD1 (C-20) is recommended for detection of BARD1 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).

Suitable for use as control antibody for BARD1 siRNA (h): sc-37311, BARD1 siRNA (m): sc-37312, BARD1 shRNA Plasmid (h): sc-37311-SH, BARD1 shRNA Plasmid (m): sc-37312-SH, BARD1 shRNA (h) Lentiviral Particles: sc-37311-V and BARD1 shRNA (m) Lentiviral Particles: sc-37312-V.

Molecular Weight of BARD1: 79 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, MCF7 whole cell lysate: sc-2206 or BT-20 cell lysate: sc-2223.

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.

SELECT PRODUCT CITATIONS

1. Irminger-Finger, I., et al. 2001. Identification of BARD1 as mediator between proapoptotic stress and p53-dependent apoptosis. Mol. Cell 8: 1255-1266.
2. Feki, A., et al. 2004. BARD1 expression during spermatogenesis is associated with apoptosis and hormonally regulated. Biol. Reprod. 71: 1614-1624.
3. Jefford, C.E., et al. 2004. Nuclear-cytoplasmic translocation of BARD1 is linked to its apoptotic activity. Oncogene 23: 3509-3520.
4. Wu, J.Y., et al. 2006. Aberrant expression of BARD1 in breast and ovarian cancers with poor prognosis. Int. J. Cancer 118: 1215-1226.
5. Li, L., et al. 2007. Oncogenic BARD1 isoforms expressed in gynecological cancers. Cancer Res. 67: 11876-11885.
6. Li, L., et al. 2007. Identification of BARD1 splice-isoforms involved in human trophoblast invasion. Int. J. Biochem. Cell Biol. 39: 1659-1672.
7. Meng, D., et al. 2009. MEK-1 binds directly to β-Arrestin-1, influencing both its phosphorylation by ERK and the timing of its isoprenaline-stimulated internalization. J. Biol. Chem. 284: 11425-11435.
8. Ma, X.M., et al. 2009. Peroxisome proliferator-activated receptor-γ is essential in the pathogenesis of gastric carcinoma. World J. Gastroenterol. 15: 3874-3883.
9. Orido, T., et al. 2010. Decrease in uptake of arachidonic acid by indomethacin in LS174T human colon cancer cells; a novel cyclooxygenase-2-inhibition-independent effect. Arch. Biochem. Biophys. 494: 78-85.

STORAGE

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

RESEARCH USE

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