SANTA CRUZ BIOTECHNOLOGY, INC.

BAP1 (C-4): sc-28383

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 a 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: BAP1 (human) mapping to 3p21.1; Bap1 (mouse) mapping to 14 B.

SOURCE

BAP1 (C-4) is a mouse monoclonal antibody raised against amino acids 430-729 of BAP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

BAP1 (C-4) is recommended for detection of BAP 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (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 BAP1 siRNA (h): sc-29787, BAP1 siRNA (m): sc-29788, BAP1 shRNA Plasmid (h): sc-29787-SH, BAP1 shRNA Plasmid (m): sc-29788-SH, BAP1 shRNA (h) Lentiviral Particles: sc-29787-V and BAP1 shRNA (m) Lentiviral Particles: sc-29788-V.

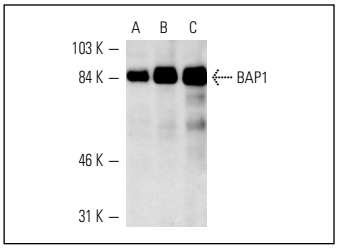
Molecular Weight of BAP1: 91 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780, KNRK whole cell lysate: sc-2214 or SK-BR-3 cell lysate: sc-2218.

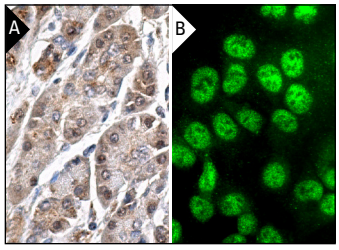
STORAGE

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

DATA



BAP1 (C-4): sc-28383. Western blot analysis of BAP1 expression in SK-BR-3 (**A**), IB4 (**B**) and KNRK (**C**) whole cell lysates.



BAP1 (C-4): sc-28383. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of glandular cells (**A**). Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization (**B**).

SELECT PRODUCT CITATIONS

1. Ventii, K.H., et al. 2008. BRCA1-associated protein-1 is a tumor suppressor that requires deubiquitinating activity and nuclear localization. Cancer Res. 68: 6953-6962.
2. Nishikawa, H., et al. 2009. BRCA1-associated protein 1 interferes with BRCA1/BARD1 RING heterodimer activity. Cancer Res. 69: 111-119.
3. Bott, M., et al. 2011. The nuclear deubiquitinase BAP1 is commonly inactivated by somatic mutations and 3p21.1 losses in malignant pleural mesothelioma. Nat. Genet. 43: 668-672.
4. Wiesner, T., et al. 2012. A distinct subset of atypical Spitz tumors is characterized by BRAF mutation and loss of BAP1 expression. Am. J. Surg. Pathol. 36: 818-830.
5. Carbone, M., et al. 2012. BAP1 cancer syndrome: malignant mesothelioma, uveal and cutaneous melanoma, and MBAITs. J. Transl. Med. 10: 179.
6. Yoshikawa,Y., et al. 2012. Frequent inactivation of the BAP1 gene in epithelioid-type malignant mesothelioma. Cancer Sci. 103: 868-874.
7. Gammon, B., et al. 2013. Clumped perinuclear BAP1 expression is a frequent finding in sporadic epithelioid Spitz tumors. J. Cutan. Pathol. 40: 538-542.
8. Kerl, K., et al. 2013. Two-dimensional visualization of multicolor FISH-generated data as a helpful tool for the analysis and understanding of cytogenetic and chromosomal alterations in melanocytic lesions. Am. J. Dermatopathol. 35: 151-158.
9. Popova T., et al. 2013. Germline BAP1 mutations predispose to renal cell carcinomas. Am. J. Hum. Genet. 92: 974-980.

RESEARCH USE

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