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.

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 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BAP1 (C-4) is available conjugated to agarose (sc-28383 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28383 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28383 PE), fluorescein (sc-28383 FITC), Alexa Fluor® 488 (sc-28383 AF488), Alexa Fluor® 546 (sc-28383 AF546), Alexa Fluor® 594 (sc-28383 AF594) or Alexa Fluor® 647 (sc-28383 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28383 AF680) or Alexa Fluor® 790 (sc-28383 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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.

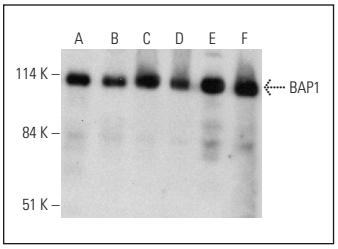
Molecular Weight of BAP1: 91 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, KNRK whole cell lysate: sc-2214 or Jurkat whole cell lysate: sc-2204.

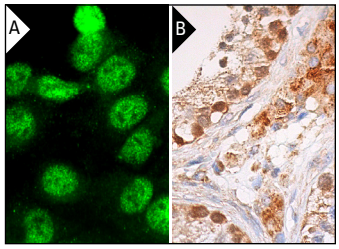
STORAGE

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) HRP: sc-28383 HRP. Direct western blot analysis of BAP1 expression in KNRK (**A**), PC-3 (**B**), A-431 (**C**), MCF7 (**D**), Jurkat (**E**) and THP-1 (**F**) whole cell lysates.



BAP1 (C-4): sc-28383. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells (**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. Daou, S., et al. 2015. The BAP1/ASXL2 Histone H2A deubiquitinase complex regulates cell proliferation and is disrupted in cancer. J. Biol. Chem. 290: 28643-28663.
3. Sheng, X., et al. 2016. GNAQ and GNA11 mutations occur in 9.5% of mucosal melanoma and are associated with poor prognosis. Eur. J. Cancer 65: 156-163.
4. Wu, D., et al. 2017. Usefulness of p16/CDKN2A fluorescence *in situ* hybridization and BAP1 immunohistochemistry for the diagnosis of biphasic mesothelioma. Ann. Diagn. Pathol. 26: 31-37.
5. Griewank, K.G., et al. 2018. Integrated genomic classification of melanocytic tumors of the central nervous system using mutation analysis, copy number alterations, and DNA methylation profiling. Clin. Cancer Res. 24: 4494-4504.
6. Wu, Y., et al. 2019. USP3 promotes breast cancer cell proliferation by deubiquitinating KLF5. J. Biol. Chem. 294: 17837-17847.
7. Erber, R., et al. 2020. BAP1 loss is a useful adjunct to distinguish malignant mesothelioma including the adenomatoid-like variant from benign adenomatoid tumors. Appl. Immunohistochem. Mol. Morphol. 28: 67-73.
8. Fujino, T., et al. 2021. Mutant ASXL1 induces age-related expansion of phenotypic hematopoietic stem cells through activation of Akt/mTOR pathway. Nat. Commun. 12: 1826.

RESEARCH USE

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