

BAP1 (C-4): sc-28383

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 IgG₁ 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 BAP1 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.

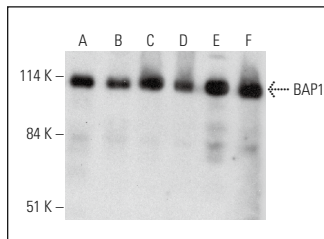
Molecular Weight of BAP1: 91 kDa.

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

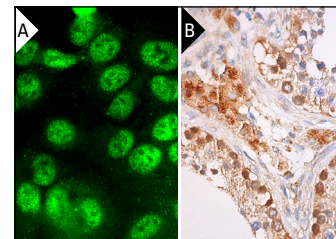
STORAGE

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

- 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.
- Tayao, M., et al. 2016. Loss of BAP1 expression is very rare in pancreatic ductal adenocarcinoma. *PLoS ONE* 11: e0150338.
- Wang, L.M., et al. 2017. Diagnostic accuracy of BRCA1-associated protein 1 in malignant mesothelioma: a meta-analysis. *Oncotarget* 8: 68863-68872.
- Hirosawa, T., et al. 2018. Loss of BAP1 expression is associated with genetic mutation and can predict outcomes in gallbladder cancer. *PLoS ONE* 13: e0206643.
- Ding, H., et al. 2019. Systematic analysis of drug vulnerabilities conferred by tumor suppressor loss. *Cell Rep.* 27: 3331-3344.e6.
- Souri, Z., et al. 2020. HDAC inhibition increases HLA class I expression in uveal melanoma. *Cancers* 12: 3690.
- Nastase, A., et al. 2021. Integrated genomics point to immune vulnerabilities in pleural mesothelioma. *Sci. Rep.* 11: 19138.
- Yang, T.J., et al. 2022. Tumor suppressor BAP1 nuclear import is governed by transportin-1. *J. Cell Biol.* 221: e202201094.
- Singh, A., et al. 2023. BAP1 loss induces mitotic defects in mesothelioma cells through BRCA1-dependent and independent mechanisms. *Oncogene* 42: 572-585.
- Zhang, Y., et al. 2024. ASXLs binding to the PHD2/3 fingers of MLL4 provides a mechanism for the recruitment of BAP1 to active enhancers. *Nat. Commun.* 15: 4883.

RESEARCH USE

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

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