

BRAP (D-5): sc-166012

BACKGROUND

BRAP (BRCA1 associated protein), also known as RNF52 (RING finger protein 52), BRAP2 or IMP, is a 592 amino acid protein that localizes to the cytoplasm and contains one UBP-type zinc finger and one RING-type zinc finger. Expressed in breast epithelial cells, BRAP functions to negatively regulate MAP kinase activity, specifically by inactivating the Ksr-1 scaffold protein, thereby limiting the formation of Raf/MEK complexes. Additionally, BRAP may play a role in the regulation of nuclear transport and may also act as a Ras-responsive E3 ubiquitin ligase that is subject to auto-ubiquitination. The gene encoding BRAP maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and Trisomy 12p, which causes facial developmental defects and seizure disorders.

CHROMOSOMAL LOCATION

Genetic locus: BRAP (human) mapping to 12q24.12; Brap (mouse) mapping to 5 F.

SOURCE

BRAP (D-5) is a mouse monoclonal antibody raised against amino acids 41-340 mapping near the N-terminus of BRAP 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.

BRAP (D-5) is available conjugated to agarose (sc-166012 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166012 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166012 PE), fluorescein (sc-166012 FITC), Alexa Fluor® 488 (sc-166012 AF488), Alexa Fluor® 546 (sc-166012 AF546), Alexa Fluor® 594 (sc-166012 AF594) or Alexa Fluor® 647 (sc-166012 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166012 AF680) or Alexa Fluor® 790 (sc-166012 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

BRAP (D-5) is recommended for detection of BRAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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 BRAP siRNA (h): sc-95995, BRAP siRNA (m): sc-141737, BRAP shRNA Plasmid (h): sc-95995-SH, BRAP shRNA Plasmid (m): sc-141737-SH, BRAP shRNA (h) Lentiviral Particles: sc-95995-V and BRAP shRNA (m) Lentiviral Particles: sc-141737-V.

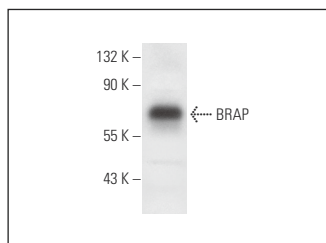
Molecular Weight of BRAP: 68 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

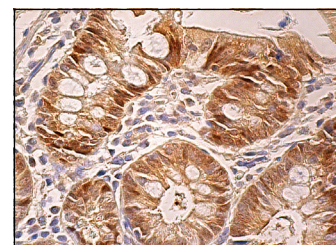
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



BRAP (D-5): sc-166012. Western blot analysis of BRAP expression in MCF7 whole cell lysate.



BRAP (D-5): sc-166012. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

- Shoji, S., et al. 2017. Central catalytic domain of BRAP (RNF52) recognizes the types of ubiquitin chains and utilizes oligo-ubiquitin for ubiquitylation. *Biochem. J.* 474: 3207-3226.
- Zhao, Y., et al. 2017. BRCA1-associated protein increases invasiveness of esophageal squamous cell carcinoma. *Gastroenterology* 153: 1304.e5-1319.e5.
- Wei, X., et al. 2020. BRCA1-associated protein induced proliferation and migration of gastric cancer cells through MAPK pathway. *Surg. Oncol.* 35: 191-199.
- Harigai, R., et al. 2022. Mutation of PTPN11 (encoding SHP-2) promotes MEK activation and malignant progression in neurofibromin-deficient cells in a manner sensitive to BRAP mutation. *Cancers* 14: 2377.

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.

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