

BIN2 (E-2): sc-376391

BACKGROUND

BAR proteins are characterized by a common N-terminal BAR (bin, amphiphysin and Rvs161/167) domain and are recognized as adaptor proteins that are involved in many cellular processes. BIN1 and BIN2 are BAR proteins that share 61% sequence similarity. BIN1 (bridging integrator 1) is a ubiquitously expressed regulatory protein for synaptic vesicle endocytosis. BIN1 also interacts with the transcription factors c-Myc and MyoD, potentially functioning as a tumor suppressor. BIN2, also known as breast cancer-associated protein 1, is a 565 amino acid protein that interacts with BIN1. In contrast to BIN1, BIN2 lacks tumor suppressor features as well as a c-Myc interacting region. BIN2 shows preferred expression in tissues of hematopoietic origin, with high levels found in spleen, thymus, colon, placenta, lymphoid and granulocytic cells. There are two isoforms of BIN2 that are produced as a result of alternative splicing events.

REFERENCES

- Prendergast, G.C. 1999. Mechanisms of apoptosis by c-Myc. *Oncogene* 18: 2967-2987.
- Ge, K., et al. 2000. BIN2, a functionally nonredundant member of the BAR adaptor gene family. *Genomics* 67: 210-220.
- Elliott, K., et al. 2000. The c-Myc-interacting adaptor protein BIN1 activates a caspase-independent cell death program. *Oncogene* 19: 4669-4684.
- DuHadaway, J.B., et al. 2001. BIN1 mediates apoptosis by c-Myc in transformed primary cells. *Cancer Res.* 61: 3151-3156.

CHROMOSOMAL LOCATION

Genetic locus: BIN2 (human) mapping to 12q13.13; Bin2 (mouse) mapping to 15 F1.

SOURCE

BIN2 (E-2) is a mouse monoclonal antibody raised against amino acids 40-109 mapping near the N-terminus of BIN2 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.

BIN2 (E-2) is available conjugated to agarose (sc-376391 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376391 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376391 PE), fluorescein (sc-376391 FITC), Alexa Fluor® 488 (sc-376391 AF488), Alexa Fluor® 546 (sc-376391 AF546), Alexa Fluor® 594 (sc-376391 AF594) or Alexa Fluor® 647 (sc-376391 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376391 AF680) or Alexa Fluor® 790 (sc-376391 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

BIN2 (E-2) is recommended for detection of BIN2 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 BIN2 siRNA (h): sc-96086, BIN2 siRNA (m): sc-141704, BIN2 shRNA Plasmid (h): sc-96086-SH, BIN2 shRNA Plasmid (m): sc-141704-SH, BIN2 shRNA (h) Lentiviral Particles: sc-96086-V and BIN2 shRNA (m) Lentiviral Particles: sc-141704-V.

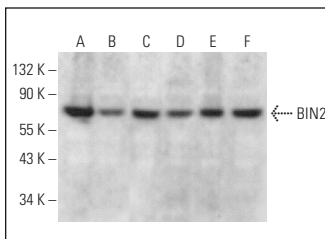
Molecular Weight of BIN2: 62 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

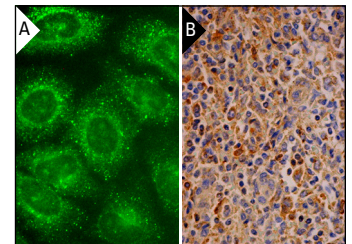
RECOMMENDED SUPPORT REAGENTS

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



BIN2 (E-2): sc-376391. Western blot analysis of BIN2 expression in HeLa (A), Jurkat (B), Hep G2 (C), BT-20 (D), BYDP (E) and 3611-RF (F) whole cell lysates.



BIN2 (E-2): sc-376391. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Zhou, H., et al. 2022. Identifying the key genes of Epstein-Barr virus-regulated tumour immune microenvironment of gastric carcinomas. *Cell Prolif.* E-published.

RESEARCH USE

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