BIN2 (B-10): sc-376690

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

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4. DuHadaway, J.B., et al. 2001. BIN1 mediates apoptosis by c-Myc in transformed primary cells. Cancer Res. 61: 3151-3156.

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7. Gallop, J.L., et al. 2005. BAR domains and membrane curvature: bringing your curves to the BAR. Biochem. Soc. Symp. 72: 223-231.

8. Blood, P.D., et al. 2006. Direct observation of Bin/amphiphysin/Rvs (BAR) domain-induced membrane curvature by means of molecular dynamics simulations. Proc. Natl. Acad. Sci. USA 103: 15068-15072.

CHROMOSOMAL LOCATION

Genetic locus: BIN2 (human) mapping to 12q13.13.

SOURCE

BIN2 (B-10) 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 IgG$_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

BIN2 (B-10) is recommended for detection of BIN2 of 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) 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 shRNA Plasmid (h): sc-96086-SH and BIN2 shRNA (h) Lentiviral Particles: sc-96086-V.

Molecular Weight of BIN2: 62 kDa.

Positive Controls: BIN2 (h): 293T Lysate: sc-116101.

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.

DATA
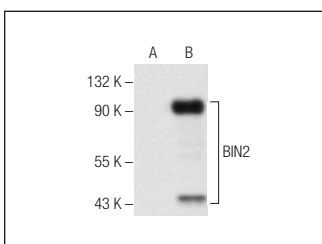
BIN2 (B-10): sc-376690. Western blot analysis of BIN2 expression in non-transfected: sc-117752 (**A**) and human BIN2 transfected: sc-116101 (**B**) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.