

BIN2 (H-70): sc-134647

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. and Prendergast, G.C. 2000. BIN2, a functionally nonredundant member of the BAR adaptor gene family. *Genomics* 67: 210-220.
- Elliott, K., Ge, K., Du, W. and Prendergast, G.C. 2000. The c-Myc-interacting adaptor protein BIN1 activates a caspase-independent cell death program. *Oncogene* 19: 4669-4684.
- DuHadaway, J.B., Sakamuro, D., Ewert, D.L. and Prendergast, G.C. 2001. BIN1 mediates apoptosis by c-Myc in transformed primary cells. *Cancer Res.* 61: 3151-3156.
- Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605936. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Habermann, B. 2004. The BAR-domain family of proteins: a case of bending and binding? *EMBO Rep.* 5: 250-255.
- Gallop, J.L. and McMahon, H.T. 2005. BAR domains and membrane curvature: bringing your curves to the BAR. *Biochem. Soc. Symp.* 72: 223-231.

CHROMOSOMAL LOCATION

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

SOURCE

BIN2 (H-70) is a rabbit polyclonal antibody raised against amino acids 40-109 mapping near the N-terminus of BIN2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

BIN2 (H-70) is recommended for detection of BIN2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

BIN2 (H-70) is also recommended for detection of BIN2 in additional species, including equine, canine and bovine.

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.

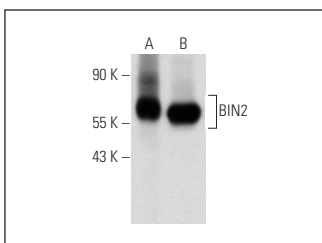
Molecular Weight of BIN2: 62 kDa.

Positive Controls: rat spleen extract: sc-2397 or mouse spleen extract: sc-2391.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BIN2 (H-70): sc-134647. Western blot analysis of BIN2 expression in mouse spleen (A) and rat spleen (B) tissue extracts.

RESEARCH USE

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



Try **BIN2 (E-2): sc-376391** or **BIN2 (F-12): sc-376691**, our highly recommended monoclonal alternatives to BIN2 (H-70).