SANTA CRUZ BIOTECHNOLOGY, INC.

BIN3 (C-10): sc-514396

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BAR adaptor proteins primarily function to integrate signal transduction pathways that regulate nuclear processes, as well as the F-Actin cytoskeleton and overall membrane dynamics. BIN3 (bridging integrator 3) is a 253 amino acid cytoplasmic protein that contains a BAR domain and is found to be expressed in all tissues except for brain. The BAR domain functions to influence transcriptional repression, to sense or induce membrane curvature at endocytic sites and to bind to small GTPases. The gene encoding BIN3 is localized to a cancer suppressing region that is frequently found to be deleted in non-Hodgkin's lymphomas and several epithelial tumors. The yeast homolog of BIN3 has found to be involved in vesicle trafficking, cell polarity, cytokinesis and F-Actin organization. There are two isoforms of BIN3 that exist as a result of alternative slicing events.

REFERENCES

1. Elliott, K., et al. 1999. BIN1 functionally interacts with Myc and inhibits cell proliferation via multiple mechanisms. Oncogene 18: 3564-3573.
2. Ge, K. and Prendergast, G.C. 2000. BIN2, a functionally nonredundant member of the BAR adaptor gene family. Genomics 67: 210-220.
3. Routhier, E.L., et al. 2001. Human BIN3 complements the F-Actin localization defects caused by loss of Hob3p, the fission yeast homolog of Rvs161p. J. Biol. Chem. 276: 21670-21677.
4. Habermann, B. 2004. The BAR-domain family of proteins: a case of bending and binding? EMBO Rep. 5: 250-255.

CHROMOSOMAL LOCATION

Genetic locus: BIN3 (human) mapping to 8p21.3; Bin3 (mouse) mapping to 14 D2.

SOURCE

BIN3 (C-10) is a mouse monoclonal antibody raised against amino acids 159-253 mapping at the C-terminus of BIN3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BIN3 (C-10) is available conjugated to agarose (sc-514396 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514396 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514396 PE), fluorescein (sc-514396 FITC), Alexa Fluor® 488 (sc-514396 AF488), Alexa Fluor® 546 (sc-514396 AF546), Alexa Fluor® 594 (sc-514396 AF594) or Alexa Fluor® 647 (sc-514396 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514396 AF680) or Alexa Fluor® 790 (sc-514396 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

BIN3 (C-10) is recommended for detection of BIN3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BIN3 siRNA (h): sc-77692, BIN3 siRNA (m): sc-141705, BIN3 shRNA Plasmid (h): sc-77692-SH, BIN3 shRNA Plasmid (m): sc-141705-SH, BIN3 shRNA (h) Lentiviral Particles: sc-77692-V and BIN3 shRNA (m) Lentiviral Particles: sc-141705-V.

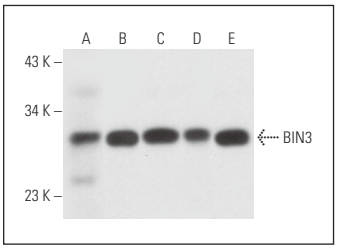
Molecular Weight of BIN3: 31 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or A-375 cell lysate: sc-3811.

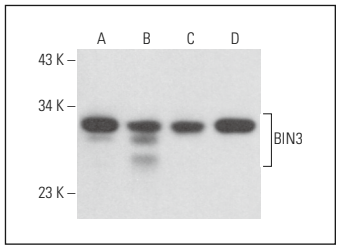
RECOMMENDED SUPPORT REAGENTS

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



BIN3 (C-10): sc-514396. Western blot analysis of BIN3 expression in human lung tissue extract (**A**), HeLa (**B**), K-562 (**D**) and A-375 (**D**) whole cell lysates and Jurkat nuclear extract (**E**).



BIN3 (C-10): sc-514396. Western blot analysis of BIN3 expression in RAW 264.7 (**A**) and SP2/0 (**B**) whole cell lysates and rat liver (**C**) and rat testis (**D**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Quan, R., et al. 2020. Proteome analysis in a mammalian cell line reveals that PLK2 is involved in avian metapneumovirus type C (aMPV/C)-induced apoptosis. Viruses 12: 375.
2. Guo, G., et al. 2022. EGFR ligand shifts the role of EGFR from oncogene to tumour suppressor in EGFR-amplified glioblastoma by suppressing invasion through BIN3 upregulation. Nat. Cell Biol. 24: 1291-1305.

RESEARCH USE

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