

BIN3 (4-RE18): sc-134282

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.
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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.
5. Peter, B.J., et al. 2004. BAR domains as sensors of membrane curvature: the amphiphysin BAR structure. *Science* 303: 495-499.
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CHROMOSOMAL LOCATION

Genetic locus: BIN3 (human) mapping to 8p21.3.

SOURCE

BIN3 (4-RE18) is a mouse monoclonal antibody raised against recombinant BIN3 protein of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} kappa light chain in 0.5 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

BIN3 (4-RE18) is recommended for detection of BIN3 of 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)] 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 shRNA Plasmid (h): sc-77692-SH and BIN3 shRNA (h) Lentiviral Particles: sc-77692-V.

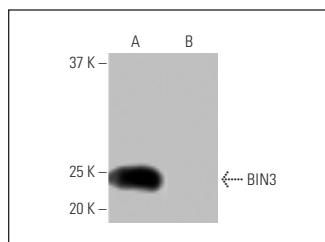
Molecular Weight of BIN3: 31 kDa.

Positive Controls: human BIN3 transfected 293T whole cell lysate.

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).

DATA



BIN3 (4-RE18): sc-134282. Western blot analysis of BIN3 expression in human BIN3 transfected (A) and non-transfected (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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