SANTA CRUZ BIOTECHNOLOGY, INC.

Endophilin B1 (A-9): sc-393191

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Endophilins comprise a family of proteins that associate with Amphiphysin, Synaptojanin and Dynamin and are implicated in presynaptic vesicle trafficking at nerve terminals. The expression patterns of the Endophilins are consistent with their cellular functions at the neuronal synapse. Endophilin B1 is a member of the B subgroup of the Endophilin family that is required for maintenance of mitochondrial morphology and for the regulation of the outer mitochondrial membrane dynamics. The N-terminal domain of Endophilin B1 shares highest similarity with the lipid-binding and -modifying (LBM) domain of class A Endophilins. Endophilin B2 is also a member of the Endophilin B subroup that is ubiquitously expressed but shows highest levels in brain, adult lung, ovary, and spinal cord. Decreased levels of Endophilin B2 are found in Down syndrome and may reflect brain dysgenesis.

REFERENCES

1. Pierrat, B., et al. 2001. SH3GLB, a new Endophilin-related protein family featuring an SH3 domain. Genomics 71: 222-234.
2. Modregger, J., et al. 2003. Characterization of Endophilin B1b, a brain-specific membrane-associated lysophosphatidic acid acyl transferase with properties distinct from Endophilin A1. J. Biol. Chem. 278: 4160-4167.
3. Wang, M.Q., et al. 2003. Endophilins interact with Moloney murine leukemia virus Gag and modulate virion production. J. Biol. 3: 4.
4. Engidawork, E., et al. 2003. Aberrant protein expression in cerebral cortex of fetus with Down syndrome. Neuroscience 122:145-154.
5. Karbowski, M., et al. 2004. Endophilin B1 is required for the maintenance of mitochondrial morphology. J. Cell Biol. 166: 1027-1039.
6. Takahashi, Y., et al. 2005. Loss of Bif-1 suppresses Bax/Bak conformational change and mitochondrial apoptosis. Mol. Cell. Biol. 25: 9369-9382.
7. Aramaki, Y., et al. 2005. Direct interaction between metastasis-associated protein 1 and Endophilin 3. FEBS. Lett. 579: 3731-3736.

CHROMOSOMAL LOCATION

Genetic locus: SH3GLB1 (human) mapping to 1p22.3.

SOURCE

Endophilin B1 (A-9) is a mouse monoclonal antibody raised against amino acids 250-309 mapping near the C-terminus of Endophilin B1 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.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Endophilin B1 (A-9) is recommended for detection of Endophilin B1 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 Endophilin B1 siRNA (h): sc-63282, Endophilin B1 shRNA Plasmid (h): sc-63282-SH and Endophilin B1 shRNA (h) Lentiviral Particles: sc-63282-V.

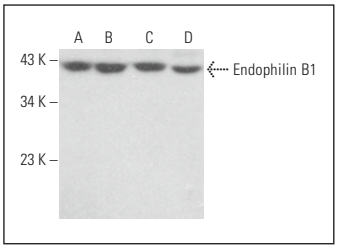
Molecular Weight of Endophilin B1: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or SK-MEL-24 whole cell lysate: sc-364259.

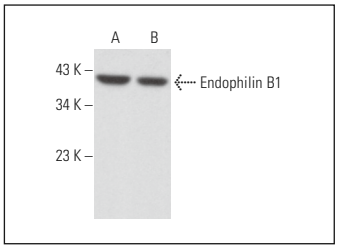
RECOMMENDED SUPPORT REAGENTS

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



Endophilin B1 (A-9): sc-393191. Western blot analysis of Endophilin B1 expression in A-431 (**A**), A2058 (**B**), SK-MEL-24 (**C**) and A-673 (**D**) whole cell lysates.



Endophilin B1 (A-9): sc-393191. Western blot analysis of Endophilin B1 expression in HeLa (**A**) and A-431 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lima, S., et al. 2017. Sphingosine and sphingosine kinase 1 involvement in endocytic membrane trafficking. J. Biol. Chem. 292: 3074-3088.

PROTOCOLS

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