

Endophilin II (h): 293T Lysate: sc-170006

BACKGROUND

The endophilins comprise a family of three SH3 domain-containing proteins designated endophilin I, II and III, or alternatively known as SH3P4, SH3P8 and SH3P13, respectively. These proteins 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 as endophilin I is expressed only in the brain. Both endophilin II and endophilin III are detected in a variety of tissues. Endophilin I is also implicated in modulating G protein-coupled receptor signaling by functioning as an adapter protein and directing $\beta 1$ adrenergic receptors to the endocytic machinery.

REFERENCES

- Giachino, C., Lantelme, E., Lanzetti, L., Saccone, S., Bella Valle, G. and Migone, N.A. 1997. Novel SH3-containing human gene family preferentially expressed in the central nervous system. *Genomics* 41: 427-434.
- Ringstad, N., Nemoto, Y. and De Camilli, P. 1997. The SH3p4/Sh3p8/SH3p13 protein family: binding partners for synaptojanin and dynamin via a GRB2-like Src homology 3 domain. *Proc. Natl. Acad. Sci. USA* 94: 8569-8574.
- Micheva, K.D., Ramjaun, A.R., Kay, B.K. and McPherson, P.S. 1997. SH3 domain-dependent interactions of endophilin with amphiphysin. *FEBS Lett.* 414: 308-312.
- Cestra, G., Castagnoli, L., Dente, L., Minenkova, O., Petrelli, A., Migone, N., Hoffmuller, U., Schneider-Mergener, J. and Cesareni, G. 1999. The SH3 domains of endophilin and amphiphysin bind to the proline-rich region of synaptojanin 1 at distinct sites that display an unconventional binding specificity. *J. Biol. Chem.* 274: 32001-32007.
- Schmidt, A., Wolde, M., Thiele, C., Fest, W., Kratzin, H., Podtelejnikov, A.V., Witke, W., Huttner, W.B. and Soling, H.D. 1999. Endophilin I mediates synaptic vesicle formation by transfer of arachidonate to lysophosphatidic acid. *Nature* 401: 133-141.
- Simpson, F., Hussain, N.K., Qualmann, B., Kelly, R.B., Kay, B.K., McPherson, P.S. and Schmid, S.L. 1999. SH3-domain-containing proteins function at distinct steps in clathrin-coated vesicle formation. *Nat. Cell Biol.* 1: 119-124.
- Tang, Y., Hu, L.A., Miller, W.E., Ringstad, N., Hall, R.A., Pitcher, J.A., DeCamilli, P. and Lefkowitz, R.J. 1999. Identification of the endophilins (SH3p4/p8/p13) as novel binding partners for the $\beta 1$ adrenergic receptor. *Proc. Natl. Acad. Sci. USA* 96: 12559-12564.

CHROMOSOMAL LOCATION

Genetic locus: SH3GL1 (human) mapping to 19p13.3.

PRODUCT

Endophilin II (h): 293T Lysate represents a lysate of human Endophilin II transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Endophilin II (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Endophilin II antibodies. Recommended use: 10-20 μ l per lane.

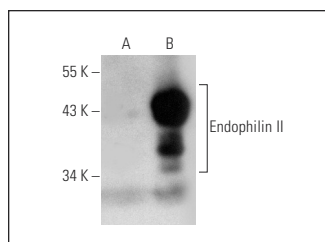
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Endophilin II (A-11): sc-365704 is recommended as a positive control antibody for Western Blot analysis of enhanced human Endophilin II expression in Endophilin II transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Endophilin II (A-11): sc-365704. Western blot analysis of Endophilin II expression in non-transfected: sc-117752 (A) and human Endophilin II transfected: sc-170006 (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.