

Endophilin II (H-2): sc-390013

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 β 1 adrenergic receptors to the endocytic machinery.

REFERENCES

- Giachino, C., et al. 1997. Novel SH3-containing human gene family preferentially expressed in the central nervous system. *Genomics* 41: 427-434.
- Ringstad, N., et al. 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., et al. 1997. SH3 domain-dependent interactions of endophilin with amphiphysin. *FEBS Lett.* 414: 308-312.
- Schmidt, A., et al. 1999. Endophilin I mediates synaptic vesicle formation by transfer of arachidonate to lysophosphatidic acid. *Nature* 401: 133-141.
- Simpson, F., et al. 1999. SH3-domain-containing proteins function at distinct steps in clathrin-coated vesicle formation. *Nat. Cell Biol.* 1: 119-124.
- Cestra, G., et al. 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.
- Tang, Y., et al. 1999. Identification of the endophilins (SH3p4/p8/p13) as novel binding partners for the β 1-adrenergic receptor. *Proc. Natl. Acad. Sci. USA* 96: 12559-12564.

CHROMOSOMAL LOCATION

Genetic locus: SH3GL1 (human) mapping to 19p13.3; Sh3gl1 (mouse) mapping to 17 D.

SOURCE

Endophilin II (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-349 near the C-terminus of Endophilin II of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390013 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Endophilin II (H-2) is recommended for detection of Endophilin II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 II siRNA (h): sc-35306, Endophilin II siRNA (m): sc-35307, Endophilin II shRNA Plasmid (h): sc-35306-SH, Endophilin II shRNA Plasmid (m): sc-35307-SH, Endophilin II shRNA (h) Lentiviral Particles: sc-35306-V and Endophilin II shRNA (m) Lentiviral Particles: sc-35307-V.

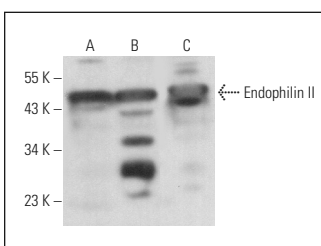
Molecular Weight of Endophilin II: 45 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, F9 cell lysate: sc-2245 or EOC 20 whole cell lysate: sc-364187.

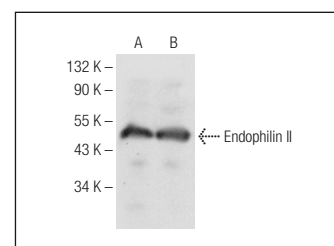
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 II (H-2): sc-390013. Western blot analysis of Endophilin II expression in Neuro-2A (A), C6 (B) and IMR-32 (C) whole cell lysates.



Endophilin II (H-2): sc-390013. Western blot analysis of Endophilin II expression in EOC 20 (A) and F9 (B) whole cell lysates.

STORAGE

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

PROTOCOLS

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