SANTA CRUZ BIOTECHNOLOGY, INC.

Endophilin I (G-8): sc-46702

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Giachino, C., et al. 1997. Novel SH3-containing human gene family preferentially expressed in the central nervous system. Genomics 41: 427-434.
2. 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.

CHROMOSOMAL LOCATION

Genetic locus: SH3GL2 (human) mapping to 9p22.2; Sh3gl2 (mouse) mapping to 4 C4.

SOURCE

Endophilin I (G-8) is a mouse monoclonal antibody raised against amino acids 53-352 of Endophilin I of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Endophilin I (G-8) is recommended for detection of Endophilin I of mouse, rat and human origin by Western Blotting (starting dilution 1:1000, dilution range 1:1000-1:10000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Endophilin II and Endophilin III.

Suitable for use as control antibody for Endophilin I siRNA (h): sc-35304, Endophilin I siRNA (m): sc-35305, Endophilin I shRNA Plasmid (h): sc-35304-SH, Endophilin I shRNA Plasmid (m): sc-35305-SH, Endophilin I shRNA (h) Lentiviral Particles: sc-35304-V and Endophilin I shRNA (m) Lentiviral Particles: sc-35305-V.

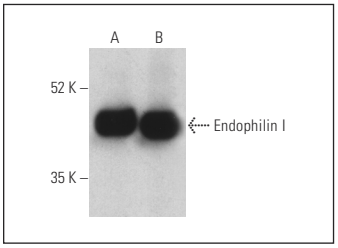
Molecular Weight of Endophilin I: 40 kDa.

Positive Controls: mouse brain extract: sc-2253, rat testis extract: sc-2400 or human brain extract: sc-364375.

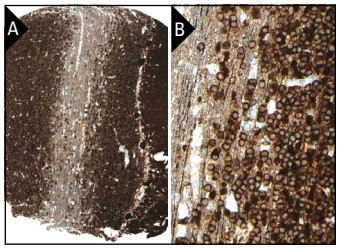
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Endophilin I (G-8): sc-46702. Western blot analysis of Endophilin I expression in human brain (**A**) and mouse brain (**B**) tissue extracts. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.



Endophilin I (G-8): sc-46702. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of cells in molecular and granular layers and Purkinje cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Huser, S., et al. 2013. Interaction of amphiphysins with AP-1 clathrin adaptors at the membrane. Biochem. J. 450: 73-83.

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.

PROTOCOLS

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