

# Endophilin I (D-3): sc-48378

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Endophilin I (D-3) is a mouse monoclonal antibody raised against amino acids 53-352 of Endophilin I of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Endophilin I (D-3) is available conjugated to agarose (sc-48378 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48378 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48378 PE), fluorescein (sc-48378 FITC), Alexa Fluor® 488 (sc-48378 AF488), Alexa Fluor® 546 (sc-48378 AF546), Alexa Fluor® 594 (sc-48378 AF594) or Alexa Fluor® 647 (sc-48378 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48378 AF680) or Alexa Fluor® 790 (sc-48378 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Endophilin I (D-3) 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  $\mu$ g per 100-500  $\mu$ g 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.

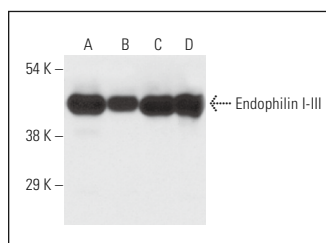
Molecular Weight of Endophilin I: 40 kDa.

Positive Controls: human brain extract: sc-364375, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

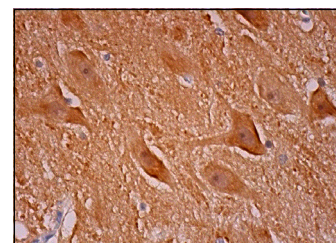
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Endophilin I-III (D-3): sc-48378. Western blot analysis of Endophilin I-III expression in human brain (A), human fetal brain (B), mouse brain (C) and rat brain (D) tissue extracts.



Endophilin I (D-3): sc-48378. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and neuropil staining.

## SELECT PRODUCT CITATIONS

1. Bademosi, A.T., et al. 2023. EndophilinA-dependent coupling between activity-induced calcium influx and synaptic autophagy is disrupted by a Parkinson-risk mutation. *Neuron* 111: 1402-1422.e13.

## 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](http://www.scbt.com) for detailed protocols and support products.