

Syntaphilin (F-4): sc-365606

BACKGROUND

Syntaxins are categorized as proteins that anchor themselves to the cytoplasmic surfaces of cellular membranes. Syntaxins have been shown to bind to various proteins involved in exocytosis, including VAMPs (vesicle-associated membrane proteins), NSF (N-ethylmaleimide-sensitive factor), SNAP 25, SNAPs (soluble NSF attachment proteins) and Synaptotagmin. Syntaphilin competes with SNAP 25 for Syntaxin 1 binding. By absorbing free Syntaxin 1, Syntaphilin can inhibit the assembly of the SNARE complex, and thereby regulate Synaptic vesicle exocytosis.

REFERENCES

1. Elferink, L.A., et al. 1993. A role for Synaptotagmin (p65) in regulated exocytosis. *Cell* 72: 153-159.
2. Bennett, M.K., et al., 1993. The Syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
3. Hayashi, T., et al. 1994. Synaptic vesicle membrane fusion complex: action of clostridial neurotoxins on assembly. *EMBO J.* 13: 5051-5061.
4. Yamaguchi, K. and Akagawa, K. 1994. Exocytosis relating proteins in the nervous system. *Neurosci. Res.* 20: 289-292.
5. Edelman, L., et al. 1995. Synaptobrevin binding to Synaptophysin: a potential mechanism for controlling the exocytosis fusion machine. *EMBO J.* 14: 224-231.
6. McMahon, H.T. and Sudhof, T.C. 1995. Synaptic core complex of Synaptobrevin, Syntaxin, and SNAP 25 forms high affinity α -SNAP binding site. *J. Biol. Chem.* 270: 2213-2217.

CHROMOSOMAL LOCATION

Genetic locus: SNPH (human) mapping to 20p13; Snph (mouse) mapping to 2 G3.

SOURCE

Syntaphilin (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-37 near the N-terminus of Syntaphilin of human 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.

Syntaphilin (F-4) is available conjugated to agarose (sc-365606 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365606 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365606 PE), fluorescein (sc-365606 FITC), Alexa Fluor[®] 488 (sc-365606 AF488), Alexa Fluor[®] 546 (sc-365606 AF546), Alexa Fluor[®] 594 (sc-365606 AF594) or Alexa Fluor[®] 647 (sc-365606 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365606 AF680) or Alexa Fluor[®] 790 (sc-365606 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365606 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Syntaphilin (F-4) is recommended for detection of Syntaphilin 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).

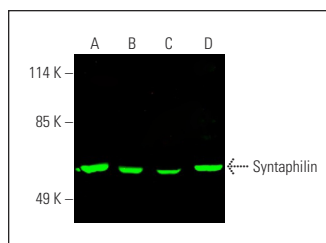
Suitable for use as control antibody for Syntaphilin siRNA (h): sc-41369, Syntaphilin siRNA (m): sc-41370, Syntaphilin siRNA (r): sc-270099, Syntaphilin shRNA Plasmid (h): sc-41369-SH, Syntaphilin shRNA Plasmid (m): sc-41370-SH, Syntaphilin shRNA Plasmid (r): sc-270099-SH, Syntaphilin shRNA (h) Lentiviral Particles: sc-41369-V, Syntaphilin shRNA (m) Lentiviral Particles: sc-41370-V and Syntaphilin shRNA (r) Lentiviral Particles: sc-270099-V.

Molecular Weight (predicted) of Syntaphilin isoforms: 54/58 kDa.

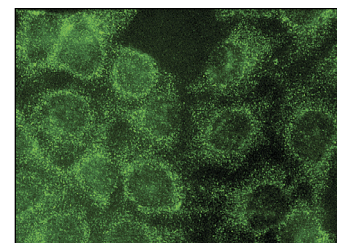
Molecular Weight (observed) of Syntaphilin: 70 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, Neuro-2A whole cell lysate: sc-364185 or HeLa whole cell lysate: sc-2200.

DATA



Syntaphilin (F-4): sc-365606. Near-Infrared western blot analysis of Syntaphilin expression in SK-N-MC (A), Neuro-2A (B), HeLa (C) and IMR-32 (D) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Syntaphilin (F-4): sc-365606. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Correia, S.C., et al. 2021. Intermittent hypoxic conditioning rescues cognition and mitochondrial bioenergetic profile in the triple transgenic mouse model of Alzheimer's disease. *Int. J. Mol. Sci.* 22: 461.

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.

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