SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP 29 (D-8): sc-390801

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The Power to Question

BACKGROUND

Syntaxins were originally thought to be docking proteins, but have more recently been categorized as anchoring 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 (synaptosomal-associated protein of 25 kDa), SNAPs (soluble NSF attachment proteins) and synaptotagmin. VAMPs (also designated synaptobrevins), including VAMP-1 and VAMP-2, and synaptotagmin, a protein that may function as an inhibitor of exocytosis, are vesicular proteins. SNAPs, including α-SNAP and γ-SNAP, are cytoplasmic proteins that bind to a membrane receptor complex composed of VAMP, SNAP 25 and syntaxin. SNAPs mediate the membrane binding of NSF, which is essential for membrane fusion reactions. An additional protein, designated synaptophysin, may regulate exocytosis by competing with SNAP 25 and syntaxins for VAMP binding.

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. Yamaguchi, K. and Akagawa, K. 1994. Exocytosis relating proteins in the nervous system. Neurosci. Res. 20: 289-292.
4. Hayashi, T., et al. 1994. Synaptic vesicle membrane fusion complex: action of clostridial neurotoxins on assembly. EMBO J. 13: 5051-5061.
5. Edelmann, 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 SNAP25 forms high affinity α-SNAP binding site. J. Biol. Chem. 270: 2213-2217.
7. Lin, R.C. and Scheller, R.H. 1997. Structural organization of the synaptic exocytosis core complex. Neuron 19: 1087-1094.
8. Barnard, R.J., et al. 1997. Stimulation of NSF ATpase activity by α-SNAP is required for SNARE complex disassembly and exocytosis. J. Cell Biol. 139: 875-883.

CHROMOSOMAL LOCATION

Genetic locus: SNAP29 (human) mapping to 22q11.21.

SOURCE

SNAP 29 (D-8) is a mouse monoclonal antibody raised against amino acids 1-258 representing full length SNAP 29 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

SNAP 29 (D-8) is recommended for detection of SNAP 29 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SNAP 29 siRNA (h): sc-76531, SNAP 29 shRNA Plasmid (h): sc-76531-SH and SNAP 29 shRNA (h) Lentiviral Particles: sc-76531-V.

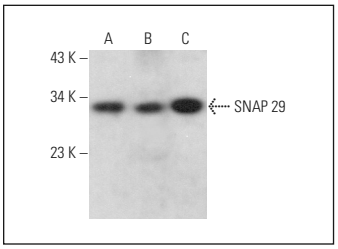
Molecular Weight of SNAP 29: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, U-87 MG cell lysate: sc-2411 or Jurkat whole cell lysate: sc-2204.

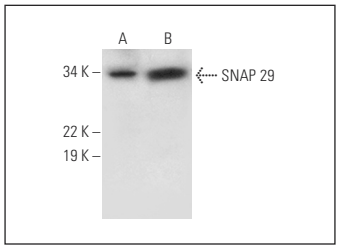
RECOMMENDED SUPPORT REAGENTS

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.

DATA



SNAP 29 (D-8): sc-390801. Western blot analysis of SNAP 29 expression in Jurkat (**A**), OVCAR-3 (**B**) and Hep G2 (**C**) whole cell lysates.



SNAP 29 (FL-258): sc-390801. Western blot analysis of SNAP 29 expression in U-87 MG (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Njomen, E. and Tepe, J.J. 2019. Regulation of autophagic flux by the 20S Proteasome. Cell Chem. Biol. 26: 1283-1294.

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.