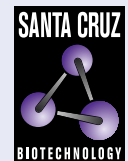


# $\alpha/\beta$ -SNAP (G-3): sc-48349



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  $\alpha$ -SNAP and  $\gamma$ -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.

## CHROMOSOMAL LOCATION

Genetic locus: NAPA (human) mapping to 19q13.32, NAPB (human) mapping to 20p11.21; Napa (mouse) mapping to 7 A2, Napb (mouse) mapping to 2 G3.

## SOURCE

$\alpha/\beta$ -SNAP (G-3) is a mouse monoclonal antibody raised against amino acids 1-295 representing full length  $\alpha$ -SNAP 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.

$\alpha/\beta$ -SNAP (G-3) is available conjugated to agarose (sc-48349 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48349 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48349 PE), fluorescein (sc-48349 FITC), Alexa Fluor<sup>®</sup> 488 (sc-48349 AF488), Alexa Fluor<sup>®</sup> 546 (sc-48349 AF546), Alexa Fluor<sup>®</sup> 594 (sc-48349 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-48349 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-48349 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-48349 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

$\alpha/\beta$ -SNAP (G-3) is recommended for detection of  $\alpha$ -SNAP and  $\beta$ -SNAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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).

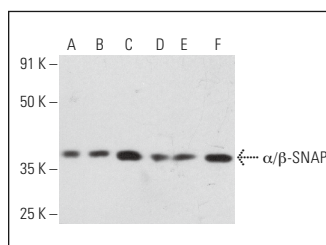
Molecular Weight of  $\alpha/\beta$ -SNAP: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A549 cell lysate: sc-2413 or NIH/3T3 whole cell lysate: sc-2210.

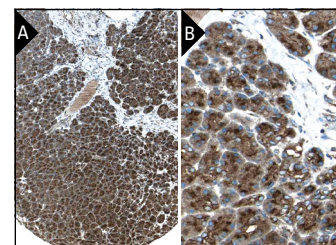
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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



$\alpha/\beta$ -SNAP (G-3): sc-48349. Western blot analysis of  $\alpha/\beta$ -SNAP expression in Hep G2 (A), A549 (B), NIH/3T3 (C), Neuro-2A (D), C6 (E) and RIN-m5F (F) whole cell lysates.



$\alpha/\beta$ -SNAP (G-3): sc-48349. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine pancreas and islet cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Jeschke, A. and Haas, A. 2018. Sequential actions of phosphatidylinositol phosphates regulate phagosome-lysosome fusion. *Mol. Biol. Cell* 29: 452-465.
- Dong, Z., et al. 2020. CUL3 Deficiency causes social deficits and anxiety-like behaviors by impairing excitation-inhibition balance through the promotion of cap-dependent translation. *Neuron* 105: 475-490.e6.
- Wang, J., et al. 2022.  $\alpha$ -soluble NSF attachment protein prevents the cleavage of the SARS-CoV-2 spike protein by functioning as an interferon-upregulated furin inhibitor. *mBio* 13: e0244321.

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

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