

SNAP 25 (C-18): sc-7538

BACKGROUND

Syntaxins were originally thought to be docking proteins, but have now 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, 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 - 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.

CHROMOSOMAL LOCATION

Genetic locus: SNAP25 (human) mapping to 20p12.2; Snap25 (mouse) mapping to 2 F3.

SOURCE

SNAP 25 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SNAP 25 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7538 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-7538 AC, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

SNAP 25 (C-18) is recommended for detection of SNAP 25 (including SNAP 25A and SNAP 25B splice variants) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

SNAP 25 (C-18) is also recommended for detection of SNAP 25 (including SNAP 25A and SNAP 25B splice variants) in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SNAP 25 siRNA (h): sc-36517, SNAP 25 siRNA (m): sc-36516, SNAP 25 shRNA Plasmid (h): sc-36517-SH, SNAP 25 shRNA Plasmid (m): sc-36516-SH, SNAP 25 shRNA (h) Lentiviral Particles: sc-36517-V and SNAP 25 shRNA (m) Lentiviral Particles: sc-36516-V.

Molecular Weight of SNAP 25: 25 kDa.

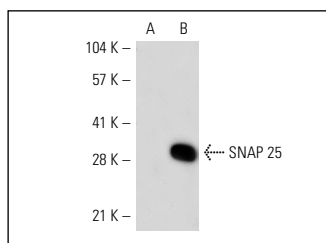
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

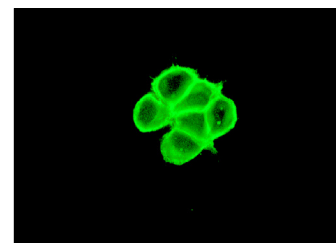
RESEARCH USE

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

DATA



SNAP 25 (C-18): sc-7538. Western blot analysis of SNAP 25 expression in non-transfected: sc-110760 (A) and human SNAP 25 transfected: sc-111113 (B) 293 whole cell lysates.



SNAP 25 (C-18): sc-7538. Immunofluorescence staining of methanol-fixed PC-12 cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Gibbins, I.L., et al. 2003. Heterogeneous expression of SNAP 25 and synaptic vesicle proteins by central and peripheral inputs to sympathetic neurons. *J. Comp. Neurol.* 459: 25-43.
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- Morris, J.L., et al. 2005. Most peptide-containing sensory neurons lack proteins for exocytotic release and vesicular transport of glutamate. *J. Comp. Neurol.* 483: 1-16.
- Rosado, J.A., et al. 2005. Cleavage of SNAP 25 and VAMP-2 impairs store-operated Ca^{2+} entry in mouse pancreatic acinar cells. *Am. J. Physiol., Cell Physiol.* 288: C214-C221.
- Nagele, P., et al. 2005. Volatile anesthetics bind rat synaptic snare proteins. *Anesthesiology* 103: 768-778.
- Jardin, I., et al. 2007. Involvement of SNARE proteins in thrombin-induced platelet aggregation: evidence for the relevance of Ca^{2+} entry. *Arch. Biochem. Biophys.* 465: 16-25.
- Díaz-Villaseñor, A., et al. 2008. Arsenite reduces Insulin secretion in rat pancreatic β -cells by decreasing the calcium-dependent calpain 10 proteolysis of SNAP 25. *Toxicol. Appl. Pharmacol.* 231: 291-299.
- Knowles, M.K., et al. 2010. Single secretory granules of live cells recruit syntaxin-1 and synaptosomal associated protein 25 (SNAP-25) in large copy numbers. *Proc. Natl. Acad. Sci. USA* 107: 20810-20815.


 MONOS
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