

VAMP-1/2/3 (FL-118): sc-13992

BACKGROUND

Syntaxins, six of which have been identified, 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 25kDa), 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.

REFERENCES

1. Bennett, M.K., et al. 1993. The syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
2. Elferink, L.A., et al. 1993. A role for synaptotagmin (p65) in regulated exocytosis. *Cell* 72: 153-159.
3. Yamaguchi, K. and Akagawa, K. 1994. Exocytosis relating proteins in the nervous system. *Neurosci. Res.* 20: 289-292.

SOURCE

VAMP-1/2/3 (FL-118) is a rabbit polyclonal antibody raised against amino acids 1-118 representing full length VAMP-1 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.

APPLICATIONS

VAMP-1/2/3 (FL-118) is recommended for detection of VAMP-1, VAMP-2 and VAMP-3 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), 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).

VAMP-1/2/3 (FL-118) is also recommended for detection of VAMP-1, VAMP-2 and VAMP-3 in additional species, including canine, bovine, porcine and avian.

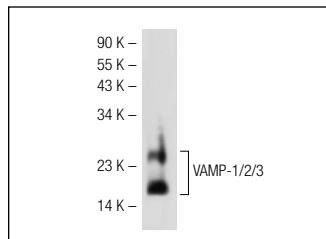
Molecular Weight of VAMP-1/2/3: 18 kDa.

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

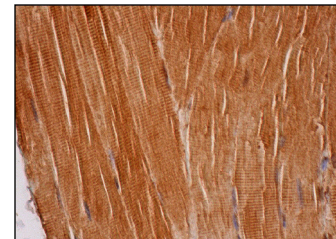
STORAGE

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

DATA



VAMP-1/2/3 (FL-118): sc-13992. Western blot analysis of VAMP-1/2/3 expression in mouse brain tissue extract.



VAMP-1/2/3 (FL-118): sc-13992. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Matsushita, K. 2003. Nitric oxide regulates exocytosis by S-nitrosylation of N-ethylmaleimide-sensitive factor. *Cell* 115: 139-150.
2. Capogna, M., et al. 2003. The α -latrotoxin mutant LTXN4C enhances spontaneous and evoked transmitter release in CA3 pyramidal neurons. *J. Neurosci.* 23: 4044-4053.
3. Redondo, P.C., et al. 2004. A role for SNAP 25 but not VAMPs in store-mediated Ca^{2+} entry in human platelets. *J. Physiol.* 558: 99-109.
4. 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.
5. Tsai, P.S., et al. 2007. Syntaxin and VAMP association with lipid rafts depends on cholesterol depletion in capacitating sperm cells. *Mol. Membr. Biol.* 24: 313-3124.
6. 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.
7. Marrocco, J., et al. 2012. Anxiety-like behavior of prenatally stressed rats is associated with a selective reduction of glutamate release in the ventral hippocampus. *J. Neurosci.* 32: 17143-17154.

RESEARCH USE

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


 MONOS
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Try **VAMP-1/2/3 (F-11): sc-133129** or **VAMP-1/2 (SP10): sc-20039**, our highly recommended monoclonal alternatives to VAMP-1/2/3 (FL-118).