SANTA CRUZ BIOTECHNOLOGY, INC.

VAMP-3 (E-10): sc-514843

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Vesicle-associated membrane proteins, known as VAMPs, also designated synaptobrevins, include VAMP-1, VAMP-2, VAMP-3 (cellubrevin), and synaptotagmin, a protein that may function as an inhibitor of exocytosis. VAMP proteins are vesicular factors that are important components of the machinery controlling docking and/or fusion of secretory vesicles with their target membrane. Synaptosomal-associated proteins, known as SNAPs, including α- and γ-SNAP, are cytoplasmic proteins that bind to a membrane receptor complex composed of VAMP, SNAP 25 and syntaxin. Pancreatic β-cells express VAMP-2 and VAMP-3, and either one or both of these proteins selectively control Ca^{2+}-mediated Insulin secretion. In addition, VAMP-2 and VAMP-3 are expressed on GLUT4-containing vesicle membranes isolated from 3T3-LI adipocytes and are important components of the Insulin-dependent translocation of GLUT4 to the cell surface in adipocytes.

CHROMOSOMAL LOCATION

Genetic locus: VAMP3 (human) mapping to 1p36.23; Vamp3 (mouse) mapping to 4 E2.

SOURCE

VAMP-3 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-16 at the N-terminus of VAMP-3 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514843 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

VAMP-3 (E-10) is recommended for detection of VAMP-3 of mouse, rat and 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 VAMP-3 siRNA (h): sc-41338, VAMP-3 siRNA (m): sc-41339, VAMP-3 shRNA Plasmid (h): sc-41338-SH, VAMP-3 shRNA Plasmid (m): sc-41339-SH, VAMP-3 shRNA (h) Lentiviral Particles: sc-41338-V and VAMP-3 shRNA (m) Lentiviral Particles: sc-41339-V.

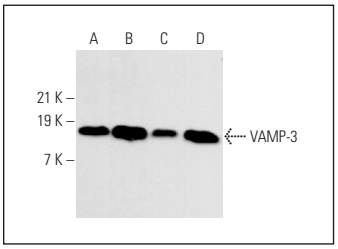
Molecular Weight of VAMP-3: 11 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caco-2 cell lysate: sc-2262 or HEK293 whole cell lysate: sc-45136.

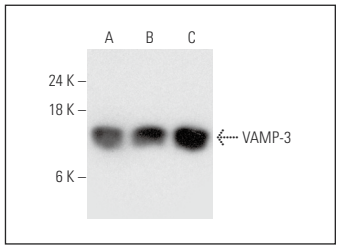
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



VAMP-3 (E-10): sc-514843. Western blot analysis of VAMP-3 expression in HeLa (**A**), Caco-2 (**B**), HEK293 (**C**) and WI-38 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



VAMP-3 (E-10): sc-514843. Western blot analysis of VAMP-3 expression in HeLa (**A**), Caco-2 (**B**) and HEK293 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chae, C.W., et al. 2020. High glucose-mediated PICALM and mTORC1 modulate processing of amyloid precursor protein via endosomal abnormalities. Br. J. Pharmacol. 177: 3828-3847.
2. Li, P.C., et al. 2021. *In vivo* fermentation production of humanized noncoding RNAs carrying payload miRNAs for targeted anticancer therapy. Theranostics 11: 4858-4871.
3. Shi, Y., et al. 2021. Cholesterol-enriched membrane micro-domaindeficiency induces doxorubicin resistancevia promoting autophagy in breast cancer. Mol. Ther. Oncolytics 23: 311-329.
4. Wu, Y., et al. 2021. Palmitoylated small GTPase ARL15 is translocated within Golgi network during adipogenesis. Biol. Open 10: bio058420.
5. Toma, L., et al. 2023. Oscillating glucose induces the increase in inflammatory stress through ninjurin-1 up-regulation and stimulation of transport proteins in human endothelial cells. Biomolecules 13: 626.

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.