SANTA CRUZ BIOTECHNOLOGY, INC.

TI-VAMP (E-12): sc-166394

SANTA CRUZ BIOTECHNOLOGY

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, also designated synaptobrevins), NSF (N-ethylmaleimide-sensitive factor), SNAP 25 (synaptosomal-associated protein 25), SNAPs (soluble NSF attachment proteins) and Synaptotagmin. Exocytotic vesicles are inserted into the plasma membrane by exocytosis and retrieved by endocytosis. VAMPs are vesicular factors that are important components of the machinery controlling docking and/or fusion of secretory vesicles with their target membrane. Tetanus insensitive VAMP (TI-VAMP) is a type IV membrane protein that is widely expressed. TI-VAMP and cellubrevin form a SNARE complex at the apical plasma membrane. TI-VAMP is insensitive to clostridial neurotoxins.

REFERENCES

1. D'Esposito, M., et al. 1996. A synaptobrevin-like gene in the Xq28 pseudoautosomal region undergoes X inactivation. Nat. Genet. 13: 227-229.
2. Galli, T., et al. 1998. A novel Tetanus neurotoxin-insensitive vesicle-associated membrane protein in SNARE complexes of the apical plasma membrane of epithelial cells. Mol. Biol. Cell 9: 1437-1448.
3. Advani, R.J., et al. 1999. VAMP-7 mediates vesicular transport from endosomes to lysosomes. J. Cell Biol. 146: 765-776.

CHROMOSOMAL LOCATION

Genetic locus: VAMP7 (human) mapping to Xq28/Yq12; Vamp7 (mouse) mapping to X.

SOURCE

TI-VAMP (E-12) is a mouse monoclonal antibody raised against amino acids 91-145 mapping within an internal region of TI-VAMP 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.

TI-VAMP (E-12) is available conjugated to agarose (sc-166394 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166394 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166394 PE), fluorescein (sc-166394 FITC), Alexa Fluor® 488 (sc-166394 AF488), Alexa Fluor® 546 (sc-166394 AF546), Alexa Fluor® 594 (sc-166394 AF594) or Alexa Fluor® 647 (sc-166394 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166394 AF680) or Alexa Fluor® 790 (sc-166394 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

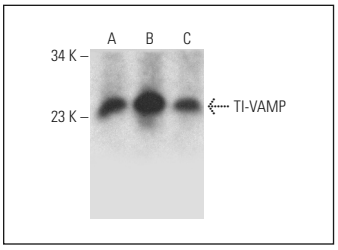
TI-VAMP (E-12) is recommended for detection of TI-VAMP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 TI-VAMP siRNA (h): sc-44606, TI-VAMP siRNA (m): sc-44607, TI-VAMP shRNA Plasmid (h): sc-44606-SH, TI-VAMP shRNA Plasmid (m): sc-44607-SH, TI-VAMP shRNA (h) Lentiviral Particles: sc-44606-V and TI-VAMP shRNA (m) Lentiviral Particles: sc-44607-V.

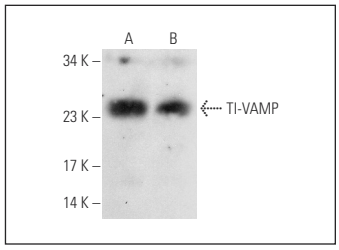
Molecular Weight of TI-VAMP isoforms: 20/25/30 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, ES-2 cell lysate: sc-24674 or HeLa whole cell lysate: sc-2200.

DATA



TI-VAMP (E-12): sc-166394. Western blot analysis of TI-VAMP expression in HeLa (**A**), MDA-MB-468 (**B**) and HUV-EC-C (**C**) whole cell lysates.



TI-VAMP (E-12): sc-166394. Western blot analysis of TI-VAMP expression in HeLa (**A**) and ES-2 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tannour-Louet, M., et al. 2014. Increased gene copy number of VAMP7 disrupts human male urogenital development through altered estrogen action. Nat. Med. 20: 715-724.
2. McLelland, G.L., et al. 2016. Syntaxin-17 delivers PINK1/parkin-dependent mitochondrial vesicles to the endolysosomal system. J. Cell Biol. 214: 275-291.
3. Tian, X., et al. 2020. DIPK2A promotes STX17- and VAMP7-mediated autophagosome-lysosome fusion by binding to VAMP7B. Autophagy 16: 797-810.

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.