SANTA CRUZ BIOTECHNOLOGY, INC.

VAP-A (4C12): sc-293278

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SNAREs are compartmentally specific, integral membrane proteins that are involved in the fusion of membranes and the transport of intracellular proteins. SNAREs are expressed at high levels in all cell types. VAMP-associated protein A (VAP-A) is a SNARE regulator with high levels of expression in the intestine during late embryogenesis and early neonatal development. VAP-A binds to a wide range of SNAREs and fusion-related proteins, including Syntaxin 1A, rBet1, rSec22, αSNAP and NSF. This suggests that VAP-A may play a more general role in SNARE-mediated vesicle traffic between the ER and Golgi in nonpolarized cells. VAP-A also mediates traffic in cell membranes and may play an important role in modulating intestinal smooth muscle cell differentiation. VAP-A and p48 interact to form a stable complex in mammalian cells.

REFERENCES

1. Butler, K.L., et al. 1999. The chest radiograph in critically ill surgical patients is inaccurate in predicting ventilator-associated pneumonia. Am. Surg. 65: 805-809.
2. Nishimura, Y., et al. 1999. Molecular cloning and characterization of mammalian homologues of vesicle-associated membrane protein-associated (VAMP-associated) proteins. Biochem. Biophys. Res. Commun. 254: 21-26.

CHROMOSOMAL LOCATION

Genetic locus: VAPA (human) mapping to 18p11.22; Vapa (mouse) mapping to 17 E1.1.

SOURCE

VAP-A (4C12) is a mouse monoclonal antibody raised against amino acids 1-242 representing full length VAP-A of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VAP-A (4C12) is recommended for detection of VAP-A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

Suitable for use as control antibody for VAP-A siRNA (h): sc-61768, VAP-A siRNA (m): sc-61769, VAP-A shRNA Plasmid (h): sc-61768-SH, VAP-A shRNA Plasmid (m): sc-61769-SH, VAP-A shRNA (h) Lentiviral Particles: sc-61768-V and VAP-A shRNA (m) Lentiviral Particles: sc-61769-V.

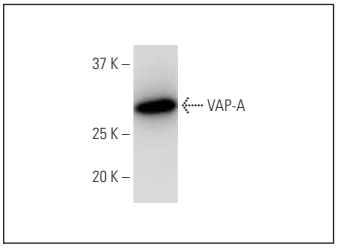
Molecular Weight of VAP-A: 27 kDa.

Positive Controls: human placenta extract: sc-363772.

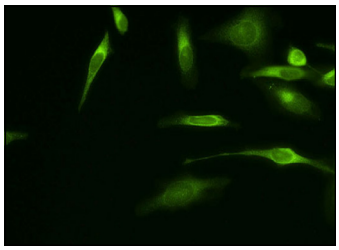
STORAGE

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

DATA



VAP-A (4C12): sc-293278. Western blot analysis of VAP-A expression in human placenta tissue extract.



VAP-A (4C12): sc-293278. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Atakpa, P., et al. 2018. IP_3 receptors preferentially associate with ER-lysosome contact sites and selectively deliver Ca^{2+} to lysosomes. Cell Rep. 25: 3180-3193.e7.
2. Di Mattia, T., et al. 2018. Identification of MOSPD2, a novel scaffold for endoplasmic reticulum membrane contact sites. EMBO Rep. 19: e45453.
3. Di Mattia, T., et al. 2020. FFAT motif phosphorylation controls formation and lipid transfer function of inter-organelle contacts. EMBO J. 39: e104369.
4. Inukai, R., et al. 2021. The novel ALG-2 target protein CDIP1 promotes cell death by interacting with ESCRT-I and VAPA/B. Int. J. Mol. Sci. 22: 1175.
5. Vargas, G., et al. 2022. Negative modulation of macroautophagy by stabilized HERPUD1 is counteracted by an increased ER-lysosomal network with impact in drug-induced stress cell survival. Front. Cell Dev. Biol. 10: 743287.
6. Wang, H., et al. 2022. Dual control of formin-nucleated Actin assembly by the chromatin and ER in mouse oocytes. Curr. Biol. 32: 4013-4024.e6.
7. Anwar, M.U., et al. 2022. ER-Golgi-localized proteins TMED2 and TMED10 control the formation of plasma membrane lipid nanodomains. Dev. Cell 57: 2334-2346.e8.
8. Ferrel, A., et al. 2023. Host MOSPD2 enrichment at the parasitophorous vacuole membrane varies between Toxoplasma strains and involves complex interactions. mSphere 8: e0067022.
9. Yun, H., et al. 2023. Homotypic SCOTIN assemblies form ER-endosome membrane contacts and regulate endosome dynamics. EMBO Rep. 24: e56538.
10. Korotkova, D., et al. 2024. Fluorescent fatty acid conjugates for live cell imaging of peroxisomes. Nat. Commun. 15: 4314.

RESEARCH USE

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