SANTA CRUZ BIOTECHNOLOGY, INC.

VAP-A (K-15): sc-48698

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: 805-810.
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.
3. Weir, M.L., et al. 2001. VAP-A binds promiscuously to both v- and tSNAREs. Biochem. Biophys. Res. Commun. 286: 616-621.
4. Wyles, J.P., et al. 2002. Vesicle-associated membrane protein-associated protein A (VAP-A) interacts with the oxy-sterol-binding protein to modify export from the endoplasmic reticulum. J. Biol. Chem. 277: 29908-29918.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605703. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Gabetta, V., et al. 2003. Vesicle-associated protein A is differentially expressed during intestinal smooth muscle cell differentiation. Dev. Dyn. 228: 11-20.

CHROMOSOMAL LOCATION

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

SOURCE

VAP-A (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VAP-A of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48698 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

VAP-A (K-15) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

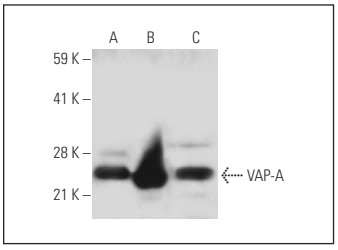
VAP-A (K-15) is also recommended for detection of VAP-A in additional species, including equine, canine, bovine and avian.

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.

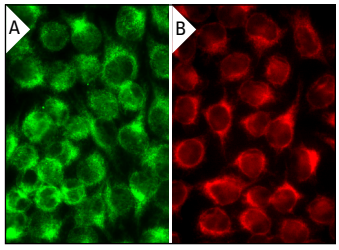
Molecular Weight of VAP-A: 27 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or VAP-A (m): 293T Lysate: sc-124538.

DATA



VAP-A (K-15): sc-48698. Western blot analysis of VAP-A expression in non-transfected 293T: sc-117752 (**A**), mouse VAP-A transfected 293T: sc-124538 (**B**) and HeLa (**C**) whole cell lysates.



VAP-A (K-15): sc-48698. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A,B**).

SELECT PRODUCT CITATIONS

1. Moumen, A., et al. 2011. Accumulation of wildtype and ALS-linked mutated VAPB impairs activity of the proteasome. PLoS ONE 6: e26066.
2. Alpy, F., et al. 2013. STARD3 or STARD3NL and VAP form a novel molecular tether between late endosomes and the ER. J. Cell Sci. 126: 5500-5512.
3. Osz, K., et al. 2014. The thrombospondin-1 receptor CD36 is an important mediator of ovarian angiogenesis and folliculogenesis. Reprod. Biol. Endocrinol. 12: 21.

STORAGE

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