Technical Data Sheet

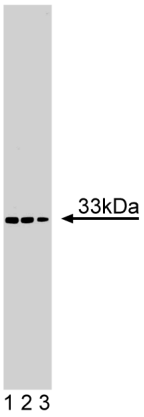
Purified Mouse Anti-VAP33

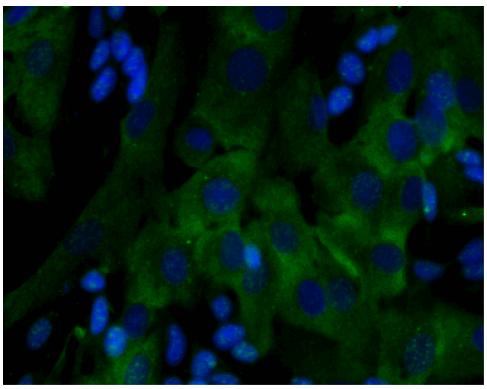
Product Information

Material Number:	**612180**
Alternate Name:	VAP-A
Size:	50 µg
Concentration:	250 µg/ml
Clone:	8/VAP33
Immunogen:	Mouse VAP33 aa. 119-226
Isotype:	Mouse IgM
Reactivity:	QC Testing: Mouse Tested in Development: Human, Rat, Dog
Target MW:	33 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

In eukaryotic cells, trafficking of membrane and secretory proteins requires an elaborate system of organelles, vesicles, and cytoskeletal structures. Proteins important for protein trafficking usually interact with one or all of these cellular structures. VAP33 (VAP-A) was identified through its ability to bind the synaptic vesicle protein synaptobrevin/VAMP-1. The structure of VAP33 includes an N-terminal domain similar to the major sperm protein from Ascaris lubricoides, a central coiled-coil domain, and a C-terminal transmembrane region. VAP33 mRNA is expressed at high levels in testis, but is also found in most other tissues. In rat neurons, VAP33 localizes to the ER and microtubules, while in many cells and tissues, VAP33 co-localizes to tight junctions along with occludin. Interestingly, 83% of VAP33 fractionates with occludin and DPPIV in the plasma membrane fraction, while only 14% fractionates in the vesicular pool. In L6 skeletal myoblasts, VAP33 colocalizes with VAMP-2, and overexpression of VAP33 attenuates insulin-dependent incorporation of GLUT4 into the plasma membrane. This effect can be suppressed by overexpression of VAMP-2. Thus, VAP33 may be involved in the trafficking of plasma membrane proteins to specific sites within the cell.





Western blot analysis of VAP33 on a mouse testis lysate (left). *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti-VAP33 antibody.*

Immunofluorescent staining of SK-N-SH cells (right). *Cells were seeded in a 384 well collagen coated Microplates (Material # 353962) at ~ 8,000 cells per well. After overnight incubation, cells were stained using the methanol fix/perm protocol (see Recommended Assay Procedure; Bioimaging protocol link) and the anti- VAP33 antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen)(pseudo colored green). Cell nuclei were counter stained with Hoechst 33342 (pseudo colored blue). The image was taken on a BD Pathway™ 855 or 435 Bioimager System using a 20x objective and merged using the BD AttoVison ™ software. This antibody also stained SH-SY5Y, C6, U87 and U373 cells using both the Triton X100 and methanol fix/perm protocols (see Recommended Assay Procedure; Bioimaging protocol link).*

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Bioimaging	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. Triton is a trademark of the Dow Chemical Company.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Foster LJ, Weir ML, Lim DY, Liu Z, Trimble WS, Klip A. A functional role for VAP-33 in insulin-stimulated GLUT4 traffic. *Traffic.* 2000; 1(6):512-521. (Biology)

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Nishimura Y, Hayashi M, Inada H, Tanaka T. Molecular cloning and characterization of mammalian homologues of vesicle-associated membrane protein-associated (VAMP-associated) proteins. *Biochem Biophys Res Commun.* 1999; 254(1):21-26. (Biology)

Skehel PA, Fabian-Fine R, Kandel ER. Mouse VAP33 is associated with the endoplasmic reticulum and microtubules. *Proc Natl Acad Sci U S A.* 2000; 97(3):1101-1106. (Biology)

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