

Anti-Vesicle Associated Membrane Protein 4, (VAMP4) Developed in Rabbit, Affinity Isolated Antibody

Catalog Number **V4514**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Product Description

Anti-Vesicle Associated Membrane Protein 4 (VAMP4) is developed in rabbit using recombinant rat VAMP-4. The antibody was affinity isolated on immobilized immunogen.

Anti-Vesicle Associated Membrane Protein 4 detects VAMP-4 from human and mouse samples. The antibody has been successfully used in Western blot and immunofluorescence procedures. By Western blot, this antibody detects a ~18 kDa protein representing VAMP-4 from PC3 cell extract. Immunofluorescent staining of VAMP-4 in CV-1 cells using this antibody results in a staining pattern consistent with VAMP-4 staining.

The phenomenon of intracellular protein transport, specifically vesicle docking and vesicle fusion, involves distinct processes mediated by distinct proteins.^{1,2} Because the general membrane fusion events are catalyzed non-specifically, targeting of transport vesicles to specific acceptor membranes is thought to be determined prior to the vesicle docking and fusion process. The SNARE hypothesis argues that specific interactions between vesicle-associated membrane proteins (VAMPs), SNAP-25, and syntaxins form a SNAP receptor or SNARE complex that determines the destination membrane of the transport vesicle.³ Once at the appropriate acceptor membrane, SNAP and NSF bind to the SNARE complex and facilitate membrane fusion.

The VAMP subfamily has seven members.⁴ They are considered R-type SNAREs and they are localized to various post-Golgi compartments like: synaptic vesicles and secretory granules (VAMP-1 and -2),^{5,6} sorting and recycling endosomes (VAMP-3/cellubrevin),⁶ the trans-Golgi network (VAMP-4),^{7,8} differentiated myotubes (VAMP-5),⁹ and lysosomes (VAMP-7).⁶

Reagent

Anti-Vesicle Associated Membrane Protein 4 is supplied as 100 μg of affinity isolated antibody in phosphate buffered saline containing 1.0 mg/mL bovine serum albumin and 0.05% sodium azide as preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at $-20\text{ }^{\circ}\text{C}$. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1 $\mu\text{g}/\text{mL}$ for immunoblotting and 10 $\mu\text{g}/\text{mL}$ for immunofluorescence. Immunofluorescence staining with this antibody requires saponin permeabilization.

Note: In order to obtain the best results and assay sensitivities of various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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