

Product Information

Anti-VILIP-3

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200281**

Product Description

Anti-VILIP-3 is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence located near the N-terminus of human VILIP-3 (GeneID: 3241) conjugated to KLH. The corresponding sequence is identical in mouse and rat VILIP-3. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-VILIP-3 specifically recognizes human, rat and mouse VILIP-3. The antibody may be used in various applications including immunoblotting (~22 kDa) and immunofluorescence. Detection of the VILIP-3 band by immunoblotting is specifically inhibited by the VILIP-3 immunizing peptide.

Visinin-like protein-3 (VILIP-3 also known as BDR1, HLP2 and HPCAL1), belongs to a large family of neuronal Ca^{2+} sensor (NCS) proteins. The VILIP subfamily includes VILIP-1, VILIP-2, VILIP-3, hippocalcin, and neurocalcin- δ .¹ NCS proteins possess four EF-hand Ca^{2+} -binding motifs that facilitate their association with lipid bilayers. They are involved in a variety of Ca^{2+} -dependent signal transduction processes in neurons. VILIPs/VSNLs have been shown to associate with clathrin-coated vesicles involved in endocytic processes, with cell surface membranes, and with trans-Golgi membranes, supporting a role in membrane trafficking in the CNS.² VILIP-3 is markedly expressed in the cerebellum, where it localizes to Purkinje and granule cells. VILIP-3 undergoes N-terminal myristoylation and shows a Ca^{2+} -dependent membrane association.³⁻⁵ VILIP-3 is highly expressed during development of the cerebellum, and is markedly reduced in the adult rat brain. It has been suggested to play a central role in dendritic arborization and postsynaptic function of Purkinje cells. VILIP-1 and VILIP-3 show abnormal localization in brain areas of Alzheimer's disease (AD) patients suggesting a possible role in the pathophysiology of changed calcium homeostasis in AD.⁶

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. 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 continuous use, store at $2-8\text{ }^{\circ}\text{C}$ for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 $\mu\text{g}/\text{mL}$ is recommended using mouse brain extracts (S1 fraction) and lysates of HEK-293T cells expressing human VILIP-3.

Immunofluorescence: a working concentration of 5-10 $\mu\text{g}/\text{mL}$ is recommended using PC-12 cells.

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

References

1. Lin, L., et al., *J. Biol. Chem.*, **277**, 41872-41878 (2002).
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3. Paterlini, M., et al., *Neurosci.*, **99**, 205-216 (2000).
4. Spilker, C., et al., *Neurosci.*, **96**, 121-129 (2000).

5. Hamashima, H., et al., *Neurosci. Res.*, **39**, 133-143 (2001).

6. Braunewell, K-H., et al., *Dement. Geriatr. Cogn. Disord.*, **12**, 110-116 (2001).

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