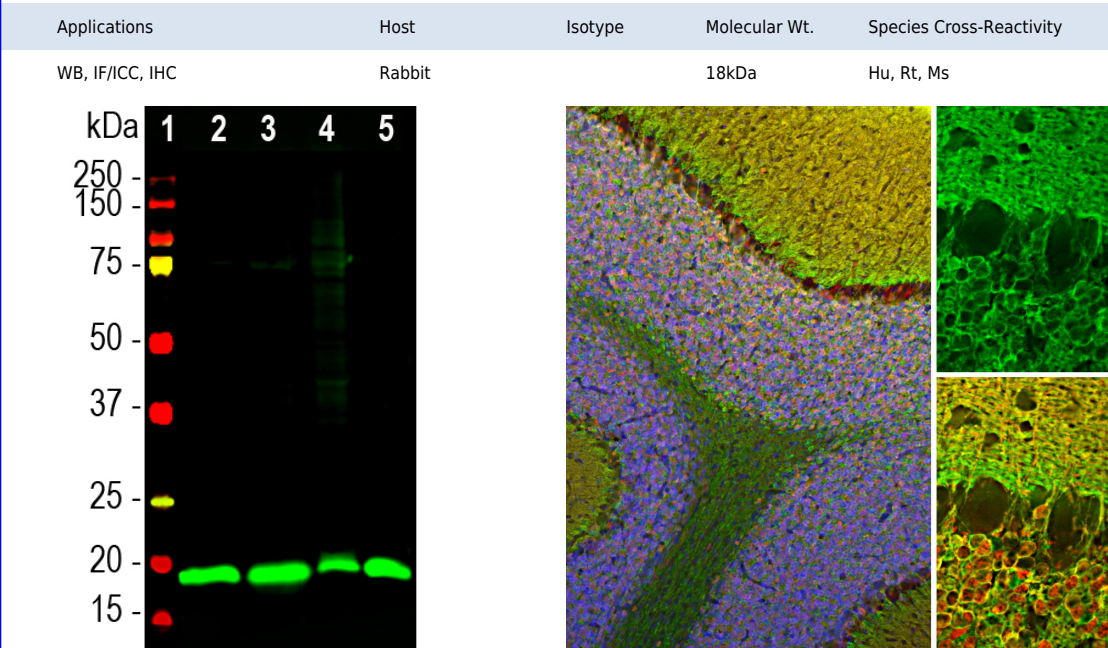


Ordering Information
Web www.encorbio.com
Email admin@encorbio.com
Phone 352-372-7022
Fax 352-372-7066

HGNC Name: VSNL1
UniProt: P62760
RRID: AB_2572402
Immunogen: Full length recombinant human VLP1
Format: Affinity purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM Na₂S₂O₅
Storage: Store at 4°C for short term, for longer term at -20°C.
Recommended dilutions:
WB 1:10,000 IF/IHC 1:2,000

References:

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3. Polymeropoulos MH, Ide S, Soares MB, Lennon GG. Sequence characterization and genetic mapping of the human VSNL1 gene, a homologue of the rat visinin-like peptide RNVP1. *Genomics* 29:273-5 (1995).
4. Bernstein HG, et al. Regional and cellular distribution of neural visinin-like protein immunoreactivities (VILIP-1 and VILIP-3) in human brain. *J. Neurocytol.* 28:655-62 (1999).
5. Paterlini M, Revilla V, Grant AL, Wisden W. Expression of the neuronal calcium sensor protein family in the rat brain. *Neuroscience* 99:205-16 (2000).
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Western blot analysis of different tissue lysates using rabbit pAb to visinin-like Protein 1 (VLP1), RPCA-VLP1, dilution 1:20,000 in green: [1] protein standard (red), [2] rat brain [3] mouse brain, [4] pig hippocampus, and [5] cow cerebellum. The band at ~20kDa corresponds to the VLP1 protein.

Immunofluorescent analysis of rat cerebellum section stained with rabbit pAb to VLP1, RPCA-VLP1, dilution 1:2,000 in green, and costained with mouse mAb to calretinin, [MCA-6A9](#), dilution 1:2,000 in red. The blue is Hoechst staining of nuclear DNA. Following transcardial perfusion of rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45μm, and free-floating sections were stained with the above antibodies. The VLP1 antibody reveals protein expressed in granule cells membranes and their synapses in both the granular and molecular layer of the cerebellum. The calretinin antibody stains the cytoplasm of neurons in the nuclear and molecular layers of cerebellum.

Background:

Visinin was originally isolated biochemically from chicken retina as a major protein of ~24kDa on SDS-PAGE gels (1). Following cloning and sequencing of visinin, several visinin like proteins were discovered by homology screening (2,3). One of these, [visinin-like protein 1](#) is a low molecular weight protein which is very abundant in the nervous system and is found only in neurons, though different neurons have different levels of expression (4,5). The protein was discovered independently by several groups and is therefore also sometimes known as hippocalcin-like protein 3, HLP3, HPCAL3, HUVISL1, VLP-1, VILIP and VILIP-1. The protein belongs to the large superfamily of [calmodulin](#) and [parvalbumin](#) type proteins which function by binding Calcium ions. Calcium binding alters the conformation of these proteins and allow them to interact with other binding partners, the properties of which they may alter. Visinin-like protein 1 has four "EF hand" domains, which are negatively charged helix-turn-helix peptides which are responsible for Calcium binding. The protein is 191 amino acids in size and has a molecular weight on SDS-PAGE of 18kDa. The protein has recently been suggested to be a useful blood biomarker of Alzheimer's disease and traumatic brain injury (6-8).

The RPCA-VLP1 antibody was made against full length recombinant human visinin-like protein 1, and expressed in and purified from E. Coli. It can be used to track this protein by ELISA, on western blots and in cells in culture and sections. We also manufacture mouse monoclonal antibodies and a rabbit polyclonal antibody to this protein, [MCA-3A9](#), [MCA-2D11](#) and [CPCA-VLP1](#) respectively.

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Abbreviation Key:

mAb—Monoclonal Antibody **pAb**—Polyclonal Antibody **WB**—Western Blot **IF**—Immunofluorescence **ICC**—Immunocytochemistry
IHC—Immunohistochemistry **E**—ELISA **Hu**—Human **Mo**—Monkey **Do**—Dog **Rt**—Rat **Ms**—Mouse **Co**—Cow **Pi**—Pig **Ho**—Horse **Ch**—Chicken
Dr—*D. rerio* **Dm**—*D. melanogaster* **Sm**—*S. mutans* **Ce**—*C. elegans* **Sc**—*S. cerevisiae* **Sa**—*S. aureus* **Ec**—*E. coli*.