

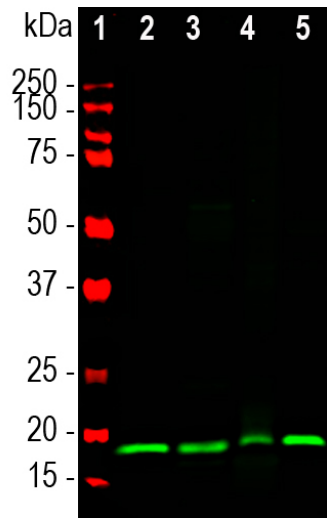
Ordering Information
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HGNC Name: VSNL1
UniProt: P62760
RRID: AB_2572400
Immunogen: Recombinant full length human protein
Format: Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN₃
Storage: Store at 4°C for short term, for longer term at -20°C.
Recommended dilutions:
 WB: 1,000-2,000. IF/IHC: 1:500-1,000.

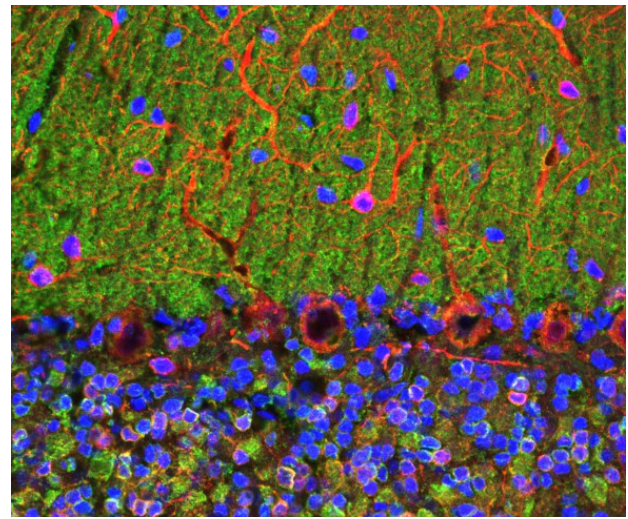
References:

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Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
WB, IF/ICC, IHC	Mouse	IgG1	18kDa	Hu, Rt, Ms, Co, Pi



Western blot analysis of different tissue lysates using mouse mAb to visinin-like protein 1 (VLP1), MCA-3A9, dilution 1:1,000, in green: [1] protein standard (red), [2] rat brain, [3] mouse brain, [4] pig hippocampus, and [5] cow cerebellum. The band at about 20kDa corresponds to the VLP1 protein.



Confocal image of adult rat cerebellum stained with mouse mAb to visinin-like protein 1 (VLP1), MCA-3A9, dilution 1:1,000, in green, and costained with chicken pAb to MAP2, CPCA-MAP2, dilution 1:10,000, in red. The blue is DAPI staining of nuclear DNA. The MCA-3A9 antibody reveals perikarya and synaptic regions in the neuron rich granular layer (bottom) and synapse rich molecular layer (top). Note that the large prominent Purkinje neurons at the junction of these two layers do not stain with the MCA-3A9 antibody, in line with the findings of others (4).

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 \(VLP-1\)](#) 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 MCA-3A9 antibody was made against full length recombinant human visinin-like protein 1. It can be used to track this protein by ELISA, on western blots and in cells in culture and sections. VLP-1 is heavily concentrated in cerebellar granule cells and in most other neuronal types. We also manufacture an alternate mouse monoclonal antibody, [MCA-2D11](#), rabbit, and chicken polyclonal antibodies to this protein, [RPCA-VLP1](#) 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.