

Ordering Information

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HGNC name: VSNL1

RRID: [AB_2572400](https://identifiers.org/AB_2572400)

Immunogen: Recombinant full length human protein

Format: Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM Na₂S₂O₃

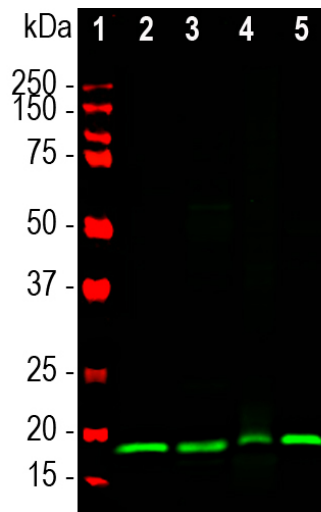
Storage: Store at 4°C for short term, for longer term at -20°C. Avoid freeze / thaw cycles.

Recommended dilutions:
WB: 1,000-2,000.
IF/IHC: 1:500-1,000.

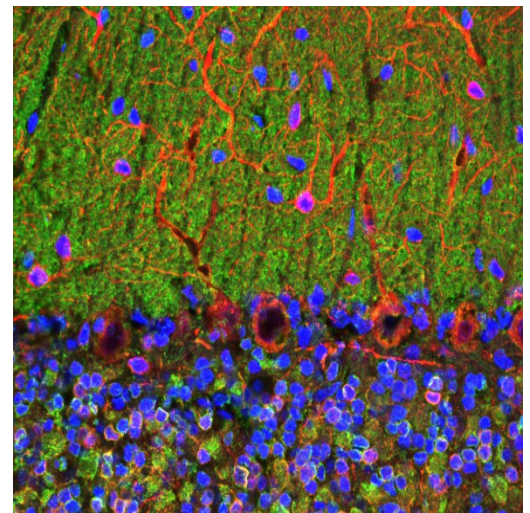
References:

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- Kuno T, Kajimoto Y, Hashimoto T, Mukai H, Shirai Y, Saheki S, Tanaka C. cDNA cloning of a neural visinin-like Ca(2+)-binding protein. *Biochem Biophys Res Commun.* 184:1219-25 (1992).
- 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).
- Bernstein HG, Baumann B, Danos P, Diekmann S, Bogerts B, Gundelfinger ED, Braunewell KH. Regional and cellular distribution of neural visinin-like protein immunoreactivities (VILIP-1 and VILIP-3) in human brain. *J. Neurocytol.* 28:655-62 (1999).
- 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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Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
WB, IF/ICC, IHC	Mouse	IgG1	22kDa	Hu, Rt, Ms, Bo, Po



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 MCA-3A9 in green, EnCor chicken polyclonal antibody to MAP2 CPCA-MAP2 in red and DNA in blue. 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 this 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 (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 small Calcium binding 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). It is particularly concentrated in cerebellar Purkinje cells, and tends to be most abundant in perikarya and dendrites.

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.

Visinin-like protein 1 is 191 amino acids in size and has a molecular weight on SDS-PAGE of 22kDa. The protein has recently been suggested to be a useful blood biomarker of Alzheimer's disease and traumatic brain injury (6, 7, 8).

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novel brain biomarkers. *Clin. Chem.*

Metabolites 2006).

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

N, Laterza O, Modur V, Olander J, Gao F, Ohlendorf M, Ladenson JH.