

# VILIP-3 (N-25): sc-130290

## BACKGROUND

The Visinin-like proteins, VILIP-1, VILIP-2 and VILIP-3, belong to a family of neuronal Ca<sup>2+</sup> sensor (NCS) proteins conserved from yeast to human. Members of NCS family are mainly expressed in retinal photoreceptors, neuroendocrine cells or neurons and primarily function to regulate gene expression, modulate neurotransmitter release, direct regulation of ion channels, control cyclic nucleotide metabolism, biosynthesize polyphosphoinositides and participate in phototransduction. The NCS family is divided into five subfamilies, consisting of about 40 family members in total. Group III represents the VILIP family and includes hippocalcin, and neurocalcin- $\delta$ , along with VILIP-1, VILIP-2 and VILIP-3. Also known as Hippocalcin-like protein 1, VILIP-3 (Visinin-like protein 3) is a 193 amino acid protein that contains 4 EF-hand domains, which enable it to bind to two or three calcium ions. For this reason, it is likely that VILIP-3 is involved in the calcium-dependent regulation of rhodopsin phosphorylation.

## REFERENCES

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- Kobayashi, M., et al. 1993. Myristoylation of hippocalcin is linked to its calcium-dependent membrane association properties. *J. Biol. Chem.* 268: 18898-18904.
- Takamatsu, K., et al. 1994. Molecular cloning of human hippocalcin cDNA and chromosomal mapping of its gene. *Biochem. Biophys. Res. Commun.* 200: 606-611.
- Kobayashi, M., et al. 1994. Molecular cloning of a novel calcium-binding protein structurally related to hippocalcin from human brain and chromosomal mapping of its gene. *Biochim. Biophys. Acta* 1222: 515-518.
- De Castro, E., et al. 1995. Regulation of rhodopsin phosphorylation by a family of neuronal calcium sensors. *Biochem. Biophys. Res. Commun.* 216: 133-140.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600207. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Permyakov, S.E., et al. 2007. Recoverin as a redox-sensitive protein. *J. Proteome Res.* 6: 1855-1863.

## CHROMOSOMAL LOCATION

Genetic locus: HPCAL1 (human) mapping to 2p25.1; Hpcal1 (mouse) mapping to 12 A1.1.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## SOURCE

VILIP-3 (N-25) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of VILIP-3 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

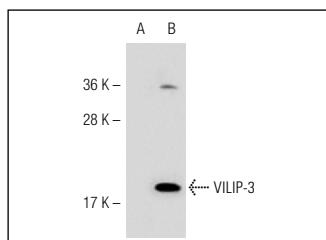
VILIP-3 (N-25) is recommended for detection of VILIP-3 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VILIP-3 siRNA (h): sc-94999, VILIP-3 siRNA (m): sc-155107, VILIP-3 shRNA Plasmid (h): sc-94999-SH, VILIP-3 shRNA Plasmid (m): sc-155107-SH, VILIP-3 shRNA (h) Lentiviral Particles: sc-94999-V and VILIP-3 shRNA (m) Lentiviral Particles: sc-155107-V.

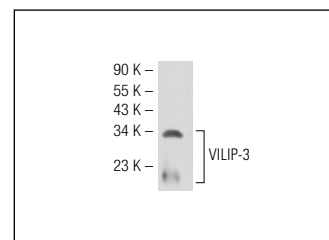
Molecular Weight of VILIP-3: 23 kDa.

Positive Controls: mouse cerebellum extract: sc-2403.

## DATA



VILIP-3 (N-25): sc-130290. Western blot analysis of VILIP-3 expression in non-transfected (A) and transfected (B) 293 whole cell lysates.



VILIP-3 (N-25): sc-130290. Western blot analysis of VILIP-3 expression in mouse cerebellum tissue extract.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.