

# Veli1/2/3 (C-15): sc-11499

## BACKGROUND

Velis are a family of small synaptic proteins that interact with other proteins at the post-synaptic density (PSD) of neuronal synapses. Velis contain the PDZ motif involved in recruiting cell adhesion molecules, receptors and channels. Veli1 (also designated Lin-7A and MALS-1), Veli2 (also designated Lin-7B and MALS-2) and Veli3 (also designated Lin-7C and MALS-3) are mammalian homologs of *C. elegans* LIN-7. Veli proteins are ubiquitously expressed with high expression in brain, liver and testis. Velis are localized at the synaptic junctions in neurons. Velis bind to CASK, a neurexin-binding protein highly concentrated in synapses, and Mint1, a binding partner with a vesicle trafficking protein.

## REFERENCES

- Hata, Y., et al. 1996. CASK: a novel dlg/PSD95 homolog with an N-terminal calmodulin-dependent protein kinase domain identified by interaction with neurexins. *J. Neurosci.* 16: 2488-2494.
- Okamoto, M., et al. 1997. Mints, Munc18-interacting proteins in synaptic vesicle exocytosis. *J. Biol. Chem.* 272: 31459-31464.
- Hsueh, Y.P., et al. 1998. Direct interaction of CASK/LIN-2 and syndecan heparan sulfate proteoglycan and their overlapping distribution in neuronal synapses. *J. Cell Biol.* 142: 139-151.
- Butz, S., et al. 1998. A tripartite protein complex with the potential to couple synaptic vesicle exocytosis to cell adhesion in brain. *Cell* 94: 773-782.
- Irie, M., et al. 1999. Isolation and characterization of mammalian homologues of *Caenorhabditis elegans* LIN-7: localization at cell-cell junctions. *Oncogene* 18: 2811-2817.
- Jo, K., et al. 1999. Characterization of MALS/Velis-1, -2, and -3: a family of mammalian LIN-7 homologs enriched at brain synapses in association with the postsynaptic density-95/NMDA receptor postsynaptic complex. *J. Neurosci.* 19: 4189-4199.

## SOURCE

Veli1/2/3 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Veli1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11499 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

Veli1/2/3 (C-15) is recommended for detection of Veli1, Veli2 and Veli3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Veli1/2/3 (C-15) is also recommended for detection of Veli1, Veli2 and Veli3 in additional species, including equine, canine, bovine, porcine and avian.

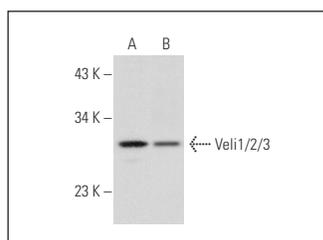
Molecular Weight of Veli1/Veli2/Veli3: 30/25/25 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

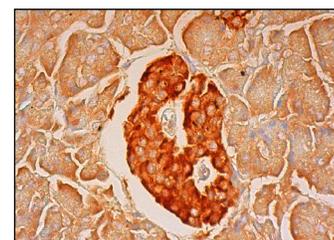
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Veli1/2/3 (C-15): sc-11499. Western blot analysis of Veli1/2/3 expression in Hep G2 (A) and Jurkat (B) whole cell lysates.



Veli1/2/3 (C-15): sc-11499. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

## SELECT PRODUCT CITATIONS

- Stohr, H., et al. 2005. Membrane-associated guanylate kinase proteins MPP4 and MPP5 associate with Veli3 at distinct intercellular junctions of the neurosensory retina. *J. Comp. Neurol.* 481: 31-41.
- Samuels, B.A., et al. 2007. Cdk5 promotes synaptogenesis by regulating the subcellular distribution of the MAGUK family member CASK. *Neuron* 56: 823-837.