SANTA CRUZ BIOTECHNOLOGY, INC.

Veli3 siRNA (h): sc-42320

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

1. 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.
2. Okamoto, M., et al. 1997. Mints, Munc18-interacting proteins in synaptic vesicle exocytosis. J. Biol. Chem. 272: 31459-31464.
3. 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.
4. 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.
5. 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.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: LIN7C (human) mapping to 11p14.1.

PRODUCT

Veli3 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Veli3 shRNA Plasmid (h): sc-42320-SH and Veli3 shRNA (h) Lentiviral Particles: sc-42320-V as alternate gene silencing products.

For independent verification of Veli3 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42320A, sc-42320B and sc-42320C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Veli3 siRNA (h) is recommended for the inhibition of Veli3 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Veli3 gene expression knockdown using RT-PCR Primer: Veli3 (h)-PR: sc-42320-PR (20 µl, 423 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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