SANTA CRUZ BIOTECHNOLOGY, INC.

CRIPT siRNA (m): sc-42282

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The Power to Question

BACKGROUND

The PSD-95/SAP 90 family of proteins, which are known to bind to and cluster various membrane proteins, are involved in the organization of synaptic structure. These proteins are physically and functionally linked to cytoskeletal and/or signaling proteins. CRIPT (for cysteine-rich interactor of PDZ three), a novel postsynaptic protein, binds specifically to the PDZ3 domain of PSD-95/SAP 90. CRIPT induces the recruitment of PSD-95/SAP 90 to microtubules, and it has been shown to bind directly to microtubules, indicating that it may be responsible for cytoskeletal anchoring of PSD-95/SAP 90. CRIPT is widely expressed outside of the brain and is highly conserved from animals to plants suggesting a wider role in regulating cytoskeleton-membrane associations.

REFERENCES

1. Sheng, M. 1996. PDZs and receptor/channel clustering: rounding up the latest suspects. Neuron 17: 575-578.
2. Ehlers, M.D., et al. 1996. Synaptic targeting of glutamate receptors. Curr. Opin. Cell Biol. 8: 484-489.
3. Kornau, H.C., et al. 1997. Interaction of ion channels and receptors with PDZ domain proteins. Curr. Opin. Neurobiol. 7: 368-373.
4. Ziff, E.B. 1997. Enlightening the postsynaptic density. Neuron 19: 1163-1174.
5. Niethammer, M., et al. 1998. CRIPT, a novel postsynaptic protein that binds to the third PDZ domain of PSD-95/SAP 90. Neuron 20: 693-707.
6. Brenman, J.E., et al. 1998. Localization of postsynaptic density-93 to dendritic microtubules and interaction with microtubule-associated protein 1A. J. Neurosci. 18: 8805-8813.
7. Passafaro, M., et al. 1999. Microtubule binding by CRIPT and its potential role in the synaptic clustering of PSD-95. Nat. Neurosci. 2: 1063-1069.
8. Valtschanoff, J.G., et al. 2001. Laminar organization of the NMDA receptor complex within the postsynaptic density. J. Neurosci. 21: 1211-1217.
9. Piserchio, A., et al. 2002. The PDZ1 domain of SAP 90. Characterization of structure and binding. J. Biol. Chem. 277: 6967-6973.

CHROMOSOMAL LOCATION

Genetic locus: Cript (mouse) mapping to 17 E4.

PRODUCT

CRIPT siRNA (m) 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 CRIPT shRNA Plasmid (m): sc-42282-SH and CRIPT shRNA (m) Lentiviral Particles: sc-42282-V as alternate gene silencing products.

For independent verification of CRIPT (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42282A, sc-42282B and sc-42282C.

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

CRIPT siRNA (m) is recommended for the inhibition of CRIPT expression in mouse 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 CRIPT gene expression knockdown using RT-PCR Primer: CRIPT (m)-PR: sc-42282-PR (20 µl). 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.

PROTOCOLS

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