SANTA CRUZ BIOTECHNOLOGY, INC.

zinedin siRNA (h): sc-37651

BACKGROUND

Striatin, SG2NA and zinedin, the three mammalian members of the striatin family, are multimodular, WD-repeat and calmodulin-binding proteins. Zinedin and SG2NA share with striatin identical protein-protein interaction domains and the same overall domain structure. All three proteins are both cytosolic and membrane-bound and bind calmodulin in the presence of calcium. Striatin is a neuronal, intracellular protein strictly expressed in the somatodendritic compartment, including spines and subsets of neurons, and is considered as a marker of neuronal polarity. Downregulation of striatin, which is expressed in a few subsets of neurons, impairs the growth of dendrites as well as rat locomotor activity. Zinedin is mainly expressed in the central nervous system, whereas SG2NA is mainly expressed in the brain and muscle.

REFERENCES

1. Castets, F., et al. 1996. A novel calmodulin-binding protein, belonging to the WD-repeat family, is localized in dendrites of a subset of CNS neurons. J. Cell Biol. 134: 1051-1062.
2. Kachidian, P., et al. 1998. Relationships between striatin-containing neurons and cortical or thalamic afferent fibers in the rat striatum: an ultrastructural study by dual labeling. Neuroscience 85: 111-122.
3. Salin, P., et al. 1998. Distribution of striatin, a newly identified calmodulin-binding protein in the rat brain: an *in situ* hybridization and immunocytochemical study. J. Comp. Neurol. 397: 41-59.
4. Bartoli, M., et al. 1999. Downregulation of striatin, a neuronal calmodulin-binding protein, impairs rat locomotor activity. J. Neurobiol. 40: 234-243.
5. Castets, F., et al. 2000. Zinedin, SG2NA and striatin are calmodulin-binding, WD-repeat proteins principally expressed in the brain. J. Biol. Chem. 275: 19970-19977.
6. Baillat, G., et al. 2001. Molecular cloning and characterization of phocein, a protein found from the Golgi complex to dendritic spines. Mol. Biol. Cell 12: 663-673.
7. Poggeler, S., et al. 2004. A WD40 repeat protein regulates fungal cell differentiation and can be replaced functionally by the mammalian homologue striatin. Eukaryot. Cell 3: 232-240.
8. Haeberle, A.M., et al. 2006. Immunogold localization of phocein in dendritic spines. J. Comp. Neurol. 495: 336-350.
9. Gaillard, S., et al. 2006. Targeting of proteins of the striatin family to dendritic spines: role of the coiled-coil domain. Traffic 7: 74-84.

CHROMOSOMAL LOCATION

Genetic locus: STRN4 (human) mapping to 19q13.32.

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.

PRODUCT

zinedin 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 zinedin shRNA Plasmid (h): sc-37651-SH and zinedin shRNA (h) Lentiviral Particles: sc-37651-V as alternate gene silencing products.

For independent verification of zinedin (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-37651A, sc-37651B and sc-37651C.

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

zinedin siRNA (h) is recommended for the inhibition of zinedin 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 zinedin gene expression knockdown using RT-PCR Primer: zinedin (h)-PR: sc-37651-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.