

# SG2NA siRNA (h): sc-37647

## 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. Blondeau, C., et al. 2003. Expression and distribution of phocein and members of the striatin family in neurones of rat peripheral ganglia. *Histochem. Cell Biol.* 119: 131-138.

## CHROMOSOMAL LOCATION

Genetic locus: STRN3 (human) mapping to 14q12.

## PRODUCT

SG2NA 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SG2NA shRNA Plasmid (h): sc-37647-SH and SG2NA shRNA (h) Lentiviral Particles: sc-37647-V as alternate gene silencing products.

For independent verification of SG2NA (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-37647A, sc-37647B and sc-37647C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SG2NA siRNA (h) is recommended for the inhibition of SG2NA 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  $\mu$ M in 66  $\mu$ l. 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.

## GENE EXPRESSION MONITORING

SG2NA (S68): sc-13562 is recommended as a control antibody for monitoring of SG2NA gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SG2NA gene expression knockdown using RT-PCR Primer: SG2NA (h)-PR: sc-37647-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.