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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

Spartin siRNA (r): sc-270061

BACKGROUND

Spartin is a protein that may be involved in microtublue dynamics and endosomal trafficking. The Spartin protein contains a microtubule interacting and trafficking (MIT) molecule domain and is ubiquitously expressed, with highest levels observed in adipose tissue. A frameshift mutation in the Spartin gene (SPG20) causes spastic paraplegia 20, also designated Troyer syndrome, an autosomal recessive form of hereditary spastic paraplegia (HSP). HSP is an inherited neurological disorder characterized by lower extremity weakness and stiffness due to a length-dependent, retrograde axonopathy of corticospinal motor neurons.

REFERENCES

1. Cross, H.E., et al. 1967. The Troyer syndrome. A recessive form of spastic paraplegia with distal muscle wasting. Arch. Neurol. 16: 473-485.
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4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 275900. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Ciccarelli, F.D., et al. 2003. The identification of a conserved domain in both Spartin and Spastin, mutated in hereditary spastic paraplegia. Genomics 81: 437-441.
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CHROMOSOMAL LOCATION

Genetic locus: Spg20 (rat) mapping to 2q26.

PRODUCT

Spartin siRNA (r) 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 Spartin shRNA Plasmid (r): sc-270061-SH and Spartin shRNA (r) Lentiviral Particles: sc-270061-V as alternate gene silencing products.

For independent verification of Spartin (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270061A, sc-270061B and sc-270061C.

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

Spartin siRNA (r) is recommended for the inhibition of Spartin expression in rat 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 Spartin gene expression knockdown using RT-PCR Primer: Spartin (r)-PR: sc-270061-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.