SANTA CRUZ BIOTECHNOLOGY, INC.

SPRN siRNA (h): sc-90403

BACKGROUND

Prion diseases, or transmissible spongiform encephalopathies (TSEs), are manifested as genetic, infectious or sporadic lethal neurodegenerative disorders involving alterations of the prion protein (PrP). Constitutively expressed in normal adult brain, cellular PrP (PrP(C)) is sensitive to proteinase K digestion and is converted to the disease form, PrPSc, through alterations in protein folding conformation, which make it resistant proteases. SPRN (shadow of prion protein), also known as SHO or SHADOO, is a 151 amino acid cytoplasmic protein that is mainly expressed in brain. SPRN is considered a prion-like protein that has PrP(C)-like neuroprotective activity and may act as a modulator for the biological actions of normal and abnormal PrP. In humans, mutations in the gene encoding SPRN may be associated with variant and sporadic Creutzfeldt-Jakob disease, a degenerative neurological disorder that is incurable and invariably fatal.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: SPRN (human) mapping to 10q26.3.

PRODUCT

SPRN 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 SPRN shRNA Plasmid (h): sc-90403-SH and SPRN shRNA (h) Lentiviral Particles: sc-90403-V as alternate gene silencing products.

For independent verification of SPRN (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-90403A, sc-90403B and sc-90403C.

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

SPRN siRNA (h) is recommended for the inhibition of SPRN 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 SPRN gene expression knockdown using RT-PCR Primer: SPRN (h)-PR: sc-90403-PR (20 µl, 597 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.