SANTA CRUZ BIOTECHNOLOGY, INC.

SRPK3 siRNA (h): sc-39233

BACKGROUND

Human SRPK3 (also known as MSSK, muscle specific serine kinase 1) is a 533 amino acid protein kinase belonging to the Ser/Arg family of RNA splicing factors. Serine arginine protein kinases (SRPK) phosphorylate serine/arginine repeat-containing proteins. The SRPK3 transcript is MEF-2 dependent and is detectable in the heart and skeletal muscle from embryogenesis to adulthood. Normal muscle growth and homeostasis require MEF2-dependent signaling by SRPK3. SRPK3 exists as two isoforms that are produced by alternative splicing events.

REFERENCES

1. Grunau, C., et al. 2000. Large-scale methylation analysis of human genomic DNA reveals tissue-specific differences between the methylation profiles of genes and pseudogenes. Hum. Mol. Genet. 9: 2651-2663.
2. Nakagawa, O., et al. 2005. Centronuclear myopathy in mice lacking a novel muscle-specific protein kinase transcriptionally regulated by MEF2. Genes Dev. 19: 2066-2077.
3. Ding, J.H., et al. 2006. Regulated cellular partitioning of SR protein-specific kinases in mammalian cells. Mol. Biol. Cell 17: 876-885.
4. Barbosa-Morais, N.L., et al. 2006. Systematic genome-wide annotation of spliceosomal proteins reveals differential gene family expansion. Genome Res. 16: 66-77.
5. Fukuhara, T., et al. 2006. Utilization of host SR protein kinases and RNA-splicing machinery during viral replication. Proc. Natl. Acad. Sci. USA 103: 11329-11333.
6. Lukasiewicz, R., et al. 2007. Structurally unique yeast and mammalian serine-arginine protein kinases catalyze evolutionarily conserved phosphorylation reactions. J. Biol. Chem. 282: 23036-23043.

CHROMOSOMAL LOCATION

Genetic locus: SRPK3 (human) mapping to Xq28.

PRODUCT

SRPK3 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 SRPK3 shRNA Plasmid (h): sc-39233-SH and SRPK3 shRNA (h) Lentiviral Particles: sc-39233-V as alternate gene silencing products.

For independent verification of SRPK3 (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-39233A, sc-39233B and sc-39233C.

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.

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

SRPK3 siRNA (h) is recommended for the inhibition of SRPK3 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.

GENE EXPRESSION MONITORING

SRPK (D-7): sc-398432 is recommended as a control antibody for monitoring of SRPK3 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SRPK3 gene expression knockdown using RT-PCR Primer: SRPK3 (h)-PR: sc-39233-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.