

PSKH1 siRNA (h): sc-93066

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. PSKH1 (protein serine kinase H1) is a 424 amino acid protein that localizes to a variety of places within the cell, including the Golgi apparatus, nuclear speckles, centrosomes and the membrane of the endoplasmic reticulum. Expressed ubiquitously, PSKH1 belongs to the Ser/Thr protein kinase family and functions as a splicing factor compartment-associated serine kinase that is thought to play a role in mRNA processing and SR (serine/arginine) protein trafficking events. PSKH1 contains one protein kinase domain and exists as a homodimer that is subject to autophosphorylation on specific serine residues.

REFERENCES

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2. Larsen, F., et al. 1993. A tight cluster of five unrelated human genes on chromosome 16q22.1. *Hum. Mol. Genet.* 2: 1589-1595.
3. Brede, G., et al. 2000. Characterization of PSKH1, a novel human protein serine kinase with centrosomal, golgi, and nuclear localization. *Genomics* 70: 82-92.
4. Amarzguioui, M., et al. 2000. Secondary structure prediction and *in vitro* accessibility of mRNA as tools in the selection of target sites for ribozymes. *Nucleic Acids Res.* 28: 4113-4124.
5. Pilch, B., et al. 2001. Specific inhibition of serine- and arginine-rich splicing factors phosphorylation, spliceosome assembly, and splicing by the antitumor drug NB-506. *Cancer Res.* 61: 6876-6884.
6. Brede, G., et al. 2002. PSKH1, a novel splice factor compartment-associated serine kinase. *Nucleic Acids Res.* 30: 5301-5309.
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CHROMOSOMAL LOCATION

Genetic locus: PSKH1 (human) mapping to 16q22.1.

PRODUCT

PSKH1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PSKH1 shRNA Plasmid (h): sc-93066-SH and PSKH1 shRNA (h) Lentiviral Particles: sc-93066-V as alternate gene silencing products.

For independent verification of PSKH1 (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-93066A, sc-93066B and sc-93066C.

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

APPLICATIONS

PSKH1 siRNA (h) is recommended for the inhibition of PSKH1 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 μ M in 66 μ 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

PSKH1 (E-9): sc-514401 is recommended as a control antibody for monitoring of PSKH1 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 κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 PSKH1 gene expression knockdown using RT-PCR Primer: PSKH1 (h)-PR: sc-93066-PR (20 μ 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 for detailed protocols and support products.