

SSNA1 siRNA (h): sc-92613

BACKGROUND

SSNA1 (Sjogren syndrome nuclear autoantigen 1), also known as N14 or NA-14 (nuclear autoantigen of 14 kDa), is a 119 amino acid nuclear and cytoplasmic protein that is widely expressed and belongs to the SSNA1 family. While most highly expressed in testis, SSNA1 is found at lower levels in peripheral blood leukocytes, spleen, colon, thymus, ovary, prostate and small intestine, and is thought to be associated with microtubule structures. SSNA1 contains an N-terminal dimeric coiled-coil domain, a C-terminal basic domain and may target spastin activity at the centrosome. The gene encoding SSNA1 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

1. Ramos-Morales, F., et al. 1998. NA14 is a novel nuclear autoantigen with a coiled-coil domain. *J. Biol. Chem.* 273: 1634-1639.
2. Casenghi, M., et al. 2003. Polo-like kinase 1 regulates Nlp, a centrosome protein involved in microtubule nucleation. *Dev. Cell* 5: 113-125.
3. Pfannenschmid, F., et al. 2003. Chlamydomonas DIP13 and human NA14: a new class of proteins associated with microtubule structures is involved in cell division. *J. Cell. Sci.* 116: 1449-1462.
4. Andersen, J.S., et al. 2003. Proteomic characterization of the human centrosome by protein correlation profiling. *Nature* 426: 570-574.

CHROMOSOMAL LOCATION

Genetic locus: SSNA1 (human) mapping to 9q34.3.

PRODUCT

SSNA1 siRNA (h) is a pool of 2 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 SSNA1 shRNA Plasmid (h): sc-92613-SH and SSNA1 shRNA (h) Lentiviral Particles: sc-92613-V as alternate gene silencing products.

For independent verification of SSNA1 (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-92613A and sc-92613B.

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

SSNA1 siRNA (h) is recommended for the inhibition of SSNA1 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

SSNA1 (C-5): sc-376254 is recommended as a control antibody for monitoring of SSNA1 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 SSNA1 gene expression knockdown using RT-PCR Primer: SSNA1 (h)-PR: sc-92613-PR (20 μ l, 564 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.

PROTOCOLS

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