

Snurportin-1 siRNA (h): sc-63048

BACKGROUND

Snurportin-1, also known as SNUPN, KPNBL or RNUT1 (RNA U transporter 1), is a nuclear import adaptor protein belonging to the Snurportin family. Localizing to the cytoplasm and nucleus, Snurportin-1 contains an N-terminal IBB domain and a trimethylguanosine (m3G)-cap binding domain. It specifically binds the terminal 2,2,7-m3G-cap at the 5' end of U snRNPs and functions to transport U snRNPs into the nucleus via an association with Importin β . The nuclear import of U snRNPs is an important step in the maturation of the spliceosome. The complex formed between Snurportin-1, U snRNP and Importin β is essential for nuclear import. Depending on the U snRNP (U1 or U2), Snurportin-1 may localize to Cajal bodies after nuclear import. In the nucleus, CRM1 binds to Snurportin-1 and is responsible for the recycling of Snurportin-1 back to the cytoplasm for additional rounds of U snRNP import.

REFERENCES

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5. Strasser, A., et al. 2004. Purification, crystallization and preliminary crystallographic data of the m3G cap-binding domain of human snRNP import factor snurportin 1. *Acta Crystallogr. D Biol. Crystallogr.* 60: 1628-1631.
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CHROMOSOMAL LOCATION

Genetic locus: SNUPN (human) mapping to 15q24.2.

PRODUCT

Snurportin-1 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 Snurportin-1 shRNA Plasmid (h): sc-63048-SH and Snurportin-1 shRNA (h) Lentiviral Particles: sc-63048-V as alternate gene silencing products.

For independent verification of Snurportin-1 (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-63048A, sc-63048B and sc-63048C.

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

Snurportin-1 siRNA (h) is recommended for the inhibition of Snurportin-1 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

Snurportin-1 (F-2): sc-166006 is recommended as a control antibody for monitoring of Snurportin-1 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 MarkerTM 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 Snurportin-1 gene expression knockdown using RT-PCR Primer: Snurportin-1 (h)-PR: sc-63048-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.