



Exportin 4 siRNA (m): sc-41274

BACKGROUND

Exportins preferentially bind their substrates at high RanGTP concentrations in the nucleus and then exit the nucleus as trimeric cargo-Exportin-RanGTP complexes. The disassembly of the Exportin-RanGTP complexes involves RanGAP and either RanBP1 or RanBP2, and frees the Exportins for additional nuclear exports. Exportin 1 (soluble cellular export receptor) is a receptor for leucine-rich export sequences and mediates nucleocytoplasmic translocation of Rev-HIV RNA complexes through the nuclear pore. Exportin T binds to functional tRNA and mediates tRNA export from the nucleus. Exportin 4 mediates nuclear export of the eukaryotic translation initiation factor 5A (eIF-5A) by means of a hypusine modification unique to eIF-5A. While a distant member of the importin β superfamily, Exportin 4 shares an N-terminal RanGTP-binding motif with Exportin 1 and Exportin T.

REFERENCES

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6. Lipowsky, G., Bischoff, F.R., Schwarmaier, P., Kraft, R., Kostka, S., Hartmann, E., Kutay, U. and Görlich, D. 2000. Exportin 4: a mediator of a novel nuclear export pathway in higher eukaryotes. *EMBO J.* 19: 4362-4371.

CHROMOSOMAL LOCATION

Genetic locus: Xpo4 (mouse) mapping to 14 C3.

PRODUCT

Exportin 4 siRNA (m) 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 Exportin 4 shRNA Plasmid (m): sc-41274-SH and Exportin 4 shRNA (m) Lentiviral Particles: sc-41274-V as alternate gene silencing products.

For independent verification of Exportin 4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-41274A, sc-41274B and sc-41274C.

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

Exportin 4 siRNA (m) is recommended for the inhibition of Exportin 4 expression in mouse 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Exportin 4 gene expression knockdown using RT-PCR Primer: Exportin 4 (m)-PR: sc-41274-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.