SANTA CRUZ BIOTECHNOLOGY, INC.

NXT-1 siRNA (m): sc-41272

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein transport across the nucleus is a selective, multistep process involving several cytoplasmic factors including Ran. Nuclear transport factor 2 (NTF2) regulates Ran function in a noncatalytic fashion and mediates Ran-GDP targeting to the nucleus. Nucleotide-dependent conformations of Ran alter the site of interaction that would otherwise permit the binding of NTF2 to Ran-GTP. NF2-related export protein (NXT-1) binds Ran-GTP and promotes nuclear protein export as well as the export of U1 snRNA, tRNA and mRNA. The NXT-1 sequence is 26% identical to NTF2. Known also as p15, NXT-1 colocalizes to the nuclear pore complex and shuttles between the nucleus and the cytoplasm in mammalian cells. As a necessary cofactor in the TAP-dependent export of intron-containing RNA, NXT-1 binds TAP as well as NXF2 and NXF3. NXT-1 stimulates nuclear protein export through the Crm1-dependent pathway, where NXT-1 binds Crm1. During the final step of this pathway, NXT-1 is required for protein release.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Nxt1 (mouse) mapping to 2 G3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

NXT-1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NXT-1 shRNA Plasmid (m): sc-41272-SH and NXT-1 shRNA (m) Lentiviral Particles: sc-41272-V as alternate gene silencing products.

For independent verification of NXT-1 (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-41272A, sc-41272B and sc-41272C.

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

NXT-1 siRNA (m) is recommended for the inhibition of NXT-1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NXT-1 gene expression knockdown using RT-PCR Primer: NXT-1 (m)-PR: sc-41272-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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