SANTA CRUZ BIOTECHNOLOGY, INC.

TINP1 siRNA (h): sc-91967

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The Power to Question

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct ribosomal proteins. Mammalian ribosomal proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. TINP1 (TGF β-inducible nuclear protein 1), also known as NSA2, YR-29, CDK105, HCL-G1 or HUSSY29, is a 260 amino acid protein that localizes to the nucleolus and belongs to a subfamily of ribosomal proteins. Functioning as a component of the pre-60S ribosomal particle, TINP1 is involved in both the biogenesis of the 60S subunit and in the quality control mechanisms that regulate 60S formation, indicating an important role for TINP1 in protein translation.

REFERENCES

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2. Stanchi, F., Bertocco, E., Toppo, S., Dioguardi, R., Simionati, B., Cannata, N., Zimbello, R., Lanfranchi, G. and Valle, G. 2001. Characterization of 16 novel human genes showing high similarity to yeast sequences. Yeast 18: 69-80.
3. Scherl, A., Couté, Y., Déon, C., Callé, A., Kindbeiter, K., Sanchez, J.C., Greco, A., Hochstrasser, D. and Diaz, J.J. 2002. Functional proteomic analysis of human nucleolus. Mol. Biol. Cell 13: 4100-4109.
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5. Lebreton, A., Saveanu, C., Decourty, L., Jacquier, A. and Fromont-Racine, M. 2006. Nsa2 is an unstable, conserved factor required for the maturation of 27 SB pre-rRNAs. J. Biol. Chem. 281: 27099-27108.
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CHROMOSOMAL LOCATION

Genetic locus: NSA2 (human) mapping to 5q13.3.

PRODUCT

TINP1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TINP1 shRNA Plasmid (h): sc-91967-SH and TINP1 shRNA (h) Lentiviral Particles: sc-91967-V as alternate gene silencing products.

For independent verification of TINP1 (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-91967A, sc-91967B and sc-91967C.

RESEARCH USE

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

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

TINP1 siRNA (h) is recommended for the inhibition of TINP1 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 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 TINP1 gene expression knockdown using RT-PCR Primer: TINP1 (h)-PR: sc-91967-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhang, H., Ma, X., Shi, T., Song, Q., Zhao, H. and Ma, D. 2010. NSA2, a novel nucleolus protein regulates cell proliferation and cell cycle. Biochem. Biophys. Res. Commun. 391: 651-658.

PROTOCOLS

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