

TINP1 siRNA (m): sc-154277

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

1. Wu, X., Ivanova, G., Merup, M., Jansson, M., Stellan, B., Grander, D., Zabarovsky, E., Gahrton, G. and Einhorn, S. 1999. Molecular analysis of the human chromosome 5q13.3 region in patients with hairy cell leukemia and identification of tumor suppressor gene candidates. *Genomics* 60: 161-171.
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., Coute, Y., Deon, C., Calle, 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.
4. Andersen, J.S., Lam, Y.W., Leung, A.K., Ong, S.E., Lyon, C.E., Lamond, A.I. and Mann, M. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.
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.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612497. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Nsa2 (mouse) mapping to 13 D1.

PRODUCT

TINP1 siRNA (m) is a target-specific 19-25 nt siRNA 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 TINP1 shRNA Plasmid (m): sc-154277-SH and TINP1 shRNA (m) Lentiviral Particles: sc-154277-V as alternate gene silencing products.

PROTOCOLS

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

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

TINP1 siRNA (m) is recommended for the inhibition of TINP1 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 TINP1 gene expression knockdown using RT-PCR Primer: TINP1 (m)-PR: sc-154277-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.