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SANTA CRUZ BIOTECHNOLOGY, INC.

NIP7 siRNA (m): sc-149977

SANTA CRUZ BIOTECHNOLOGY

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. NIP7 is a nucleolar protein involved in ribosome biogenesis, specifically 27S pre-rRNA processing and 60S ribosome subunit assembly in *Saccharomyces cerevisiae.* NIP7 is a conserved protein among eukaryotes, including human, mouse, rat and porcine that is essential for cell growth. In humans, NIP7 interacts with the Shwachman-Bodian-Diamond syndrome (SBDS) protein, which mediates accurate gene expression essential for proper brain, skeletal, and blood cell development. Mutations in the SBDS gene results in an autosomal disorder (SDS) characterized by pleiotropic phenotypes including pancreatic, skeletal and bone marrow deficiencies and predisposition to hematological dysfunctions.

REFERENCES

1. Zanchin, N.I., Roberts, P., DeSilva, A., Sherman, F. and Goldfarb, D.S. 1997. *Saccharomyces cerevisiae* Nip7p is required for efficient 60S ribosome subunit biogenesis. Mol. Cell. Biol. 17: 5001-5015.
2. Zanchin, N.I. and Goldfarb, D.S. 1999. Nip7p interacts with Nop8p, an essential nucleolar protein required for 60S ribosome biogenesis, and the exosome subunit Rrp43p. Mol. Cell. Biol. 19: 1518-1525.
3. Andersen, J.S., Lyon, C.E., Fox, A.H., Leung, A.K., Lam, Y.W., Steen, H., Mann, M. and Lamond, A.I. 2002. Directed proteomic analysis of the human nucleolus. Curr. Biol. 12: 1-11.
4. Liu, J.F., Wang, X.Q., Wang, Z.X., Chen, J.R., Jiang, T., An, X.M., Chang, W.R. and Liang, D.C. 2004. Crystal structure of KD93, a novel protein expressed in human hematopoietic stem/progenitor cells. J. Struct. Biol. 148: 370-374.
5. Coltri, P.P., Guimarães, B.G., Granato, D.C., Luz, J.S., Teixeira, E.C., Oliveira, C.C. and Zanchin, N.I. 2007. Structural insights into the interaction of the NIP7 PUA domain with polyuridine RNA. Biochemistry 46: 14177-14187.
6. Hesling, C., Oliveira, C.C., Castilho, B.A. and Zanchin, N.I. 2007. The Shwachman-Bodian-Diamond syndrome associated protein interacts with HsNip7 and its down-regulation affects gene expression at the transcriptional and translational levels. Exp. Cell Res. 313: 4180-4195.
7. Liu, G.Y. and Xiong, Y.Z. 2007. Isolation, sequence analysis and expression profile of a novel porcine gene, NIP7, differentially expressed in the Longissimus dorsi muscle tissues from Meishan, Meishan x Large White cross and Large White pigs. Mol. Biol. Rep. 34: 213-219.

CHROMOSOMAL LOCATION

Genetic locus: Nip7 (mouse) mapping to 8 D3.

PROTOCOLS

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

PRODUCT

NIP7 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 NIP7 shRNA Plasmid (m): sc-149977-SH and NIP7 shRNA (m) Lentiviral Particles: sc-149977-V as alternate gene silencing products.

For independent verification of NIP7 (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-149977A, sc-149977B and sc-149977C.

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

NIP7 siRNA (m) is recommended for the inhibition of NIP7 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 NIP7 gene expression knockdown using RT-PCR Primer: NIP7 (m)-PR: sc-149977-PR (20 µl). 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.