



NOL6 siRNA (h): sc-92867

BACKGROUND

NOL6 (nucleolar protein 6), also known as NRAP or UTP22, is a 1,146 amino acid nucleolar protein that belongs to the NRAP family and is thought to be associated with rRNA. NOL6 may be involved in ribosome biogenesis and is expressed at high levels in spleen, colon, testis, brain, kidney and stomach, where it exists as four alternatively spliced isoforms, three of which are designated NOL6 α , β and γ . Human NOL6, shares 88% sequence identity with its mouse counterpart, suggesting a conserved role between species. The gene encoding NOL6 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

- 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.
- Utama, B., Kennedy, D., Ru, K. and Mattick, J.S. 2002. Isolation and characterization of a new nucleolar protein, Nrap, that is conserved from yeast to humans. *Genes Cells* 7: 115-132.
- 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.
- Bernstein, K.A., Gallagher, J.E., Mitchell, B.M., Granneman, S. and Baserga, S.J. 2004. The small-subunit processome is a ribosome assembly intermediate. *Eukaryotic Cell* 3: 1619-1626.
- 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.
- Temtamy, S.A., Kamel, A.K., Ismail, S., Helmy, N.A., Aglan, M.S., El Gammal, M., El Ruby, M. and Mohamed, A.M. 2007. Phenotypic and cytogenetic spectrum of 9p trisomy. *Genet. Couns.* 18: 29-48.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611532. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NOL6 (human) mapping to 9p13.3.

PRODUCT

NOL6 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NOL6 shRNA Plasmid (h): sc-92867-SH and NOL6 shRNA (h) Lentiviral Particles: sc-92867-V as alternate gene silencing products.

For independent verification of NOL6 (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-92867A, sc-92867B and sc-92867C.

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

NOL6 siRNA (h) is recommended for the inhibition of NOL6 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 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 NOL6 gene expression knockdown using RT-PCR Primer: NOL6 (h)-PR: sc-92867-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.