SANTA CRUZ BIOTECHNOLOGY, INC.

NARF siRNA (h): sc-93797

BACKGROUND

Prenylation and methylation are two forms of protein modification, both of which are important for a variety of functions, including membrane attachment, protein-protein interactions and signaling events. NARF (nuclear prelamin A recognition factor), also known as IOP2, is a 456 amino acid nuclear protein that belongs to the NARF family. Expressed ubiquitously with highest expression in heart, skeletal muscle and brain, NARF binds to the C-terminal end of prenylated prelamin A and may be a member of a prelamin A-containing endoprotease complex. Additionally, via its association with prelamin A, NARF may be involved in heterochromatin organization. NARF is expressed as three isoforms due to alternative splicing events and, upon DNA damage, may be phosphorylated by ATM or ATR.

REFERENCES

1. Barton, R.M. and Worman, H.J. 1999. Prenylated prelamin A interacts with Narf, a novel nuclear protein. J. Biol. Chem. 274: 30008-30018.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605349. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Hackstein, J.H. 2005. Eukaryotic Fe-hydrogenases—old eukaryotic heritage or adaptive acquisitions? Biochem. Soc. Trans. 33: 47-50.
4. Yamada, M., Ohnishi, J., Ohkawara, B., Iemura, S., Satoh, K., Hyodo-Miura, J., Kawachi, K., Natsume, T. and Shibuya, H. 2006. NARF, an nemo-like kinase (NLK)-associated ring finger protein regulates the ubiquitylation and degradation of T cell factor/lymphoid enhancer factor (TCF/LEF). J. Biol. Chem. 281: 20749-20760.
5. Lev-Maor, G., Sorek, R., Levanon, E.Y., Paz, N., Eisenberg, E. and Ast, G. 2007. RNA-editing-mediated exon evolution. Genome Biol. 8: R29.
6. Lattanzi, G., Columbaro, M., Mattioli, E., Cenni, V., Camozzi, D., Wehnert, M., Santi, S., Riccio, M., Del Coco, R., Maraldi, N.M., Squarzoni, S., Foisner, R. and Capanni, C. 2007. Pre-Lamin A processing is linked to heterochromatin organization. J. Cell. Biochem. 102: 1149-1159.

CHROMOSOMAL LOCATION

Genetic locus: NARF (human) mapping to 17q25.3.

PRODUCT

NARF 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 NARF shRNA Plasmid (h): sc-93797-SH and NARF shRNA (h) Lentiviral Particles: sc-93797-V as alternate gene silencing products.

For independent verification of NARF (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-93797A, sc-93797B and sc-93797C.

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

NARF siRNA (h) is recommended for the inhibition of NARF 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.

GENE EXPRESSION MONITORING

NARF (32-7): sc-100654 is recommended as a control antibody for monitoring of NARF gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NARF gene expression knockdown using RT-PCR Primer: NARF (h)-PR: sc-93797-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.