SANTA CRUZ BIOTECHNOLOGY, INC.

Nup188 siRNA (h): sc-92946

BACKGROUND

Nuclear pore complexes (NPCs) are the channels for the bi-directional movement of macromolecules between the nucleus and cytoplasm, and contain more than 100 different subunits. Many of them belong to a family called nucleoporins, which are characterized by the presence of O-linked N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). Nucleoporin NUP188 homolog, also known as Nup188 or hNup188, is a 1,749 amino acid member of the nucleoporin family of proteins. Forming a complex with two other NUP proteins, the Nup93-Nup188-Nup205 complex is believed to be an important structural building block of the pore complex. Two isoforms of Nup188 exist as a result of alternative splicing events.

REFERENCES

1. Zabel, U., et al. 1996. Nic96p is required for nuclear pore formation and functionally interacts with a novel nucleoporin, Nup188p. J. Cell Biol. 133: 1141-1152.
2. Nehrbass, U., et al. 1996. The yeast nucleoporin Nup188p interacts genetically and physically with the core structures of the nuclear pore complex. J. Cell Biol. 133: 1153-1162.
3. Ryan, K.J. and Wente, S.R. 2000. The nuclear pore complex: a protein machine bridging the nucleus and cytoplasm. Curr. Opin. Cell Biol. 12: 361-371.
4. Miller, B.R., et al. 2000. Identification of a new vertebrate nucleoporin, Nup188, with the use of a novel organelle trap assay. Mol. Biol. Cell 11: 3381-3396.
5. Vasu, S., et al. 2001. Novel vertebrate nucleoporins Nup133 and Nup160 play a role in mRNA export. J. Cell Biol. 155: 339-354.
6. Galy, V., et al. 2003. *Caenorhabditis elegans* nucleoporins Nup93 and Nup205 determine the limit of nuclear pore complex size exclusion *in vivo*. Mol. Biol. Cell 14: 5104-5115.

CHROMOSOMAL LOCATION

Genetic locus: NUP188 (human) mapping to 9q34.11.

PRODUCT

Nup188 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 Nup188 shRNA Plasmid (h): sc-92946-SH and Nup188 shRNA (h) Lentiviral Particles: sc-92946-V as alternate gene silencing products.

For independent verification of Nup188 (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-92946A, sc-92946B and sc-92946C.

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 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

Nup188 siRNA (h) is recommended for the inhibition of Nup188 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 Nup188 gene expression knockdown using RT-PCR Primer: Nup188 (h)-PR: sc-92946-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. Hazawa, M., et al. 2018. ROCK-dependent phosphorylation of NUP62 regulates p63 nuclear transport and squamous cell carcinoma proliferation. EMBO Rep. 19: 73-88.

RESEARCH USE

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