

# Nup88 siRNA (m): sc-75981

## BACKGROUND

The nuclear pore complex (NPC) mediates bidirectional macromolecular traffic between the nucleus and cytoplasm in eukaryotic cells and is comprised of more than 100 different subunits. Many of the subunits belong to a family called nucleoporins (Nups), which are characterized by the presence of O-linked-N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). Nup88 (nucleoporin 88kDa) is a 741 amino acid protein that localizes to the nucleus and functions as an essential component of the nuclear pore complex. Expressed ubiquitously, Nup88 is subject to phosphorylation by ATM or ATR and is upregulated in malignant neoplasms and precancerous dysplasias, suggesting a role in tumorigenesis. The gene encoding Nup88 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

## REFERENCES

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- Martínez, N., et al. 1999. The nuclear pore complex protein Nup88 is overexpressed in tumor cells. *Cancer Res.* 59: 5408-5411.
- Stoffler, D., et al. 1999. The nuclear pore complex: from molecular architecture to functional dynamics. *Curr. Opin. Cell Biol.* 11: 391-401.
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## CHROMOSOMAL LOCATION

Genetic locus: Nup88 (mouse) mapping to 11 B4.

## PRODUCT

Nup88 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Nup88 shRNA Plasmid (m): sc-75981-SH and Nup88 shRNA (m) Lentiviral Particles: sc-75981-V as alternate gene silencing products.

For independent verification of Nup88 (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-75981A, sc-75981B and sc-75981C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Nup88 siRNA (m) is recommended for the inhibition of Nup88 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  $\mu$ M in 66  $\mu$ 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.

## GENE EXPRESSION MONITORING

Nup88 (H-7): sc-365868 is recommended as a control antibody for monitoring of Nup88 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Nup88 gene expression knockdown using RT-PCR Primer: Nup88 (m)-PR: sc-75981-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.