

# LOC81691 siRNA (h): sc-92993

## BACKGROUND

LOC81691, also known as putative RNA exonuclease NEF-sp, is a 774 amino acid protein that exists as two alternatively spliced isoforms. LOC81691 contains two RRM (RNA recognition motif) domains and one exonuclease domain. The gene that encodes LOC81691 is made up of around 43,224 bases and maps to human chromosome 16p12.3. Encoding over 900 genes and consisting of approximately 90 million base pairs, chromosome 16 makes up nearly 3% of the human genome and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, when mutated, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. Alterations in the CREB gene and NOD2 gene, both of which are located on chromosome 16, results in Rubinstein-Taybi syndrome and Crohn's disease, respectively. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: LOC81691 (human) mapping to 16p12.3.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

LOC81691 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LOC81691 shRNA Plasmid (h): sc-92993-SH and LOC81691 shRNA (h) Lentiviral Particles: sc-92993-V as alternate gene silencing products.

For independent verification of LOC81691 (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-92993A, sc-92993B and sc-92993C.

## 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

LOC81691 siRNA (h) is recommended for the inhibition of LOC81691 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  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LOC81691 gene expression knockdown using RT-PCR Primer: LOC81691 (h)-PR: sc-92993-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.