

# nov siRNA (h): sc-39333

## BACKGROUND

The CCN (CTGF/Cyr61/nov) family of genes presently consists of six distinct members, which encode proteins that participate in fundamental biological processes such as cell proliferation, adhesion, migration, differentiation, wound healing, angiogenesis and several pathologies including fibrosis and tumorigenesis. Whereas Cyr61 and CTGF act as positive regulators of cell growth, nov (nephroblastoma overexpressed, CCN3 or novH) provides the first example of a CCN protein with negative regulatory properties and the first example of aberrant expression being associated with tumor development. In animals and humans increased expression of nov is detected in tissues where calcium is a key regulator, such as the adrenal gland, central nervous system, bone and cartilage, heart muscle and kidney. The nov protein associates with Notch1 extracellular domain and inhibits myoblast differentiation via Notch signaling pathway. The gene that expresses nov is located on human chromosome 8q24.12 and was originally cloned following discovery of its avian homolog as a consequence of overexpression in virally induced nephroblastoma.

## REFERENCES

1. Perbal, B. 2001. nov (nephroblastoma overexpressed) and the CCN family of genes: structural and functional issues. *Mol. Pathol.* 54: 57-79.
2. Kocialkowski, S., et al. 2001. Expression of the human nov gene in first trimester fetal tissues. *Anat. Embryol.* 203: 417-427.
3. Sakamoto, K., et al. 2002. The nephroblastoma overexpressed gene (nov/CCN3) protein associates with Notch1 extracellular domain and inhibits myoblast differentiation via Notch signaling pathway. *J. Biol. Chem.* 277: 29399-29405.
4. Lafont, J., et al. 2002. The expression of novH in adrenocortical cells is downregulated by TGFβ1 through c-Jun in a Smad-independent manner. *J. Biol. Chem.* 277: 41220-41229.
5. Li, C.L., et al. 2002. A role for CCN3 (nov) in calcium signalling. *Mol. Pathol.* 55: 250-261.

## CHROMOSOMAL LOCATION

Genetic locus: NOV (human) mapping to 8q24.12.

## PRODUCT

nov 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 nov shRNA Plasmid (h): sc-39333-SH and nov shRNA (h) Lentiviral Particles: sc-39333-V as alternate gene silencing products.

For independent verification of nov (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-39333A, sc-39333B and sc-39333C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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

nov siRNA (h) is recommended for the inhibition of nov 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

nov (D-9): sc-136967 is recommended as a control antibody for monitoring of nov 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor nov gene expression knockdown using RT-PCR Primer: nov (h)-PR: sc-39333-PR (20 μl, 563 bp). 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.