

# Syndecan-3 siRNA (m): sc-41048

## BACKGROUND

Syndecans are type I integral membrane proteoglycans that contain both chondroitin sulfate and heparan sulfate groups. Syndecans are involved in cell-extracellular matrix adhesion and growth factor binding. Syndecan-1 (SYND1, also called CD138) is an extracellular matrix receptor which binds to collagens, Fibronectin and Thrombospondin. Syndecan-1 and Syndecan-3 (also designated N-Syndecan) interact with MK (midkine), a growth/differentiation factor involved in embryogenesis of the central nervous system. Syndecan-2 (also designated fibroglycan) is highly expressed at areas of high morphogenetic activity, such as epithelial-mesenchymal interfaces and the prechondrogenic and preosteogenic mesenchymal condensations. Syndecan-4 (also designated amphiglycan or ryudocan) functions cooperatively with integrins in the processes of cell spreading, focal adhesion assembly and Actin stress fiber assembly.

## REFERENCES

- Sanderson, R.D., et al. 1992. Adhesion of B lymphoid (MPC-11) cells to type I collagen is mediated by integral membrane proteoglycan, Syndecan. *J. Immunol.* 148: 3902-3911.
- David, G., et al. 1993. Spatial and temporal changes in the expression of fibroglycan (Syndecan-2) during mouse embryonic development. *Development* 119: 841-854.
- Salmivirta, M., et al. 1995. Syndecan family of cell surface proteoglycans: developmentally regulated receptors for extracellular effector molecules. *Experientia* 51: 863-872.
- Nakanishi, T., et al. 1997. Expression of Syndecan-1 and -3 during embryogenesis of the central nervous system in relation to binding with midkine. *J. Biochem.* 121: 197-205.
- Saoncella, S., et al. 1999. Syndecan-4 signals cooperatively with integrins in a Rho-dependent manner in the assembly of focal adhesions and actin stress fibers. *Proc. Natl. Acad. Sci. USA* 96: 2805-2810.

## CHROMOSOMAL LOCATION

Genetic locus: Sdc3 (mouse) mapping to 4 D2.3.

## PRODUCT

Syndecan-3 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 Syndecan-3 shRNA Plasmid (m): sc-41048-SH and Syndecan-3 shRNA (m) Lentiviral Particles: sc-41048-V as alternate gene silencing products.

For independent verification of Syndecan-3 (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-41048A, sc-41048B and sc-41048C.

## 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  $\mu$ 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

Syndecan-3 siRNA (m) is recommended for the inhibition of Syndecan-3 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

Syndecan-3 (G-2): sc-398194 is recommended as a control antibody for monitoring of Syndecan-3 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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Syndecan-3 gene expression knockdown using RT-PCR Primer: Syndecan-3 (m)-PR: sc-41048-PR (20  $\mu$ l, 422 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Pisconti, A., et al. 2010. Syndecan-3 and Notch cooperate in regulating adult myogenesis. *J. Cell Biol.* 190: 427-441.

## RESEARCH USE

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