

# Syndecan-1 siRNA (m): sc-36586

## BACKGROUND

Syndecan-1 (SYND1), also designated CD138, is a type I integral membrane proteoglycan that contains both chondroitin sulfate and heparan sulfate groups. It is expressed in mouse on pre-B cells, immature B cells and plasma cells. Syndecan-1 is also found on the basolateral surfaces of epithelial cells, endothelial cells of sprouting capillaries and embryonic condensing mesenchymal cells. Syndecan-1 functions as an extracellular matrix receptor which binds to collagens, Fibronectin and Thrombospondin. It has been shown to co-localize with Actin-rich filaments and may act to link the cytoskeleton to the extracellular matrix.

## REFERENCES

1. Sanderson, R.D., et al. 1989. B lymphocytes express and lose Syndecan at specific stages of differentiation. *Cell Regul.* 1: 27-35.
2. Bernfield, M., et al. 1992. Biology of the syndecans: a family of transmembrane heparan sulfate proteoglycans. *Annu. Rev. Cell Biol.* 8: 365-393.
3. David, G. 1993. Integral membrane heparan sulfate proteoglycans. *FASEB J.* 7: 1023-1030.
4. Kokenyesi, R., et al. 1994. Core protein structure and sequence determine the site and presence of heparan sulfate and chondroitin sulfate on Syndecan-1. *J. Biol. Chem.* 269: 12304-12309.
5. Kato, M., et al. 1994. Cell surface Syndecan-1 on distinct cell types differs in fine structure and ligand binding of its heparan sulfate chains. *J. Biol. Chem.* 269: 18881-18890.

## CHROMOSOMAL LOCATION

Genetic locus: Sdc1 (mouse) mapping to 12 A1.1.

## PRODUCT

Syndecan-1 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-1 shRNA Plasmid (m): sc-36586-SH and Syndecan-1 shRNA (m) Lentiviral Particles: sc-36586-V as alternate gene silencing products.

For independent verification of Syndecan-1 (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-36586A, sc-36586B and sc-36586C.

## 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-1 siRNA (m) is recommended for the inhibition of Syndecan-1 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-1 (DL-101): sc-12765 is recommended as a control antibody for monitoring of Syndecan-1 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-1 gene expression knockdown using RT-PCR Primer: Syndecan-1 (m)-PR: sc-36586-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Yu, S., et al. 2017. Heparanase-1-induced shedding of heparan sulfate from Syndecan-1 in hepatocarcinoma cell facilitates lymphatic endothelial cell proliferation via VEGF-C/ERK pathway. *Biochem. Biophys. Res. Commun.* 485: 432-439.

## 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.