SANTA CRUZ BIOTECHNOLOGY, INC.

Syndecan-1 siRNA (r): sc-270510

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The Power to Question

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

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4. Kokenyesi, R. and Bernfield, M. 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.
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6. Couchman, J.R. and Woods, A. 1996. Syndecans, signaling and cell adhesion. J. Cell. Biochem. 61: 578-584.
7. Carey, D.J., Bendt, K.M. and Stahl, R.C. 1996. The cytoplasmic domain of Syndecan-1 is required for cytoskeleton association but not detergent insolubility. Identification of essential cytoplasmic domain residues. J. Biol. Chem. 271: 15253-15260.

CHROMOSOMAL LOCATION

Genetic locus: Sdc1 (rat) mapping to 6q14.

PRODUCT

Syndecan-1 siRNA (r) 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 Syndecan-1 shRNA Plasmid (r): sc-270510-SH and Syndecan-1 shRNA (r) Lentiviral Particles: sc-270510-V as alternate gene silencing products.

For independent verification of Syndecan-1 (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270510A, sc-270510B and sc-270510C.

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

Syndecan-1 siRNA (r) is recommended for the inhibition of Syndecan-1 expression in rat 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

Syndecan-1 (A-6): sc-390791 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-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 Syndecan-1 gene expression knockdown using RT-PCR Primer: Syndecan-1 (r)-PR: sc-270510-PR (20 µl). 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 for detailed protocols and support products.