



versican siRNA (m): sc-41904

BACKGROUND

Versican (chondroitin sulfate proteoglycan 2) is a large extracellular matrix proteoglycan involved in cell growth and differentiation. Important as a structural molecule, versican creates loose and hydrated matrices during key events in development and disease. The protein contains hyaluronic acid and glycosaminoglycan-binding domains, epidermal growth factor-like repeats, a lectin-like sequence and a complement regulatory protein-like domain. Splice variants differ greatly in length and degree of modification by glycoaminoglycan chains. Accumulation around smooth muscle cells in lesions of atherosclerosis suggests a role for versican in atherogenesis. Versican, differentially expressed in human melanoma, plays a role in tumor development and may be a reliable marker for clinical diagnosis. The organization of HA- and versican-rich pericellular matrices may facilitate migration and mitosis by diminishing cell surface adhesivity and affecting cell shape through steric exclusion and the viscous properties of HA proteoglycan gels. The human versican gene maps to chromosome 5q14.3.

REFERENCES

1. Dours-Zimmermann, M.T. and Zimmermann, D.R. 1994. A novel glycosaminoglycan attachment domain identified in two alternative splice variants of human versican. *J. Biol. Chem.* 269: 32992-32998.
2. Evanko, S.P., et al. 1999. Formation of hyaluronan- and versican-rich pericellular matrix is required for proliferation and migration of vascular smooth muscle cells. *Arterioscler. Thromb. Vasc. Biol.* 19: 1004-1013.
3. Lemire, J.M., et al. 1999. Versican/PD-M isoforms in vascular smooth muscle cells. *Arterioscler. Thromb. Vasc. Biol.* 19: 1630-1639.
4. Touad, M., et al. 2002. Versican is differentially expressed in human melanoma and may play a role in tumor development. *Am. J. Pathol.* 160: 549-557.
5. Wight, T.N. 2002. Versican: a versatile extracellular matrix proteoglycan in cell biology. *Curr. Opin. Cell Biol.* 14: 617-623.
6. LocusLink Report (LocusID: 1462). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Vcan (mouse) mapping to 13 C3.

PRODUCT

versican 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see versican shRNA Plasmid (m): sc-41904-SH and versican shRNA (m) Lentiviral Particles: sc-41904-V as alternate gene silencing products.

For independent verification of versican (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-41904A, sc-41904B and sc-41904C.

RESEARCH USE

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

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

versican siRNA (m) is recommended for the inhibition of versican 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 μ M in 66 μ 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 versican gene expression knockdown using RT-PCR Primer: versican (m)-PR: sc-41904-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.