SANTA CRUZ BIOTECHNOLOGY, INC.

Testican-3 siRNA (m): sc-61674

BACKGROUND

The Testican family, also designated the BM-40/SPARC/osteonectin family, is composed of highly conserved, extracellular, calcium-binding, sulfate proteoglycans. Expression of Testicans is detected in a variety of tissues, but is most abundant in brain. Family members include Testican-1, Testican-2, Testican-3 and an amino-terminal splice variant of Testican-3, designated N-Tes. Most Testicans inhibit MT-MMPs, thereby inhibiting the activity of pro-MMP-2. Testican-3 is a 436 amino acid protein that contains a follistatin-like domain, a calcium-binding domain, a COOH-terminal thyroglobulin domain and two glycosaminoglycan attachment sites. Both Testican-3 and N-Tes are expressed in normal brain but downregulated in glioma tissues. Transfection of either the N-Tes or Testican-3 gene into transformed glioma or kidney cells suppresses their invasive growth in collagen gel, suggesting that both N-Tes and Testican-3 interfere with tumor invasion.

REFERENCES

1. Nakada, M., et al. 2001. Suppression of membrane-type 1 matrix metalloproteinase (MMP)-mediated MMP-2 activation and tumor invasion by Testican-3 and its splicing variant gene product, N-Tes. Cancer Res. 61: 8896-8902.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607989. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Nakada, M., et al. 2003. Testican-2 abrogates inhibition of membrane-type matrix metalloproteinases by other Testican family proteins. Cancer Res. 63: 3364-3369.
4. Meh, P., et al. 2005. Dual concentration-dependent activity of thyroglobulin type-1 domain of Testican: specific inhibitor and substrate of cathepsin L. Biol. Chem. 386: 75-83.
5. Mohrmann, G., et al. 2005. SPOC1, a novel PHD-finger protein: association with residual disease and survival in ovarian cancer. Int. J. Cancer 116: 547-554.
6. Röll, S., et al. 2006. Testican-1 is dispensable for mouse development. Matrix Biol. 25: 373-381.

CHROMOSOMAL LOCATION

Genetic locus: Spock3 (mouse) mapping to 8 B3.1.

PRODUCT

Testican-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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Testican-3 shRNA Plasmid (m): sc-61674-SH and Testican-3 shRNA (m) Lentiviral Particles: sc-61674-V as alternate gene silencing products.

For independent verification of Testican-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-61674A, sc-61674B and sc-61674C.

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

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

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Testican-3 gene expression knockdown using RT-PCR Primer: Testican-3 (m)-PR: sc-61674-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.