

galectin-8 siRNA (bovine): sc-156176

BACKGROUND

Several proteins have been identified as specific markers of prostate cancer, and they may be useful as diagnostic indicators. PSA, prostate specific antigen, is the classical indicator for transformed prostate tissue; however, in addition to being up-regulated in prostate cancer, PSA is also up-regulated in non-malignant conditions, such as benign prostatic hyperplasia prostate. Galectin-8, also known as prostate-specific membrane antigen (PCTA-1), is an additional prostate-specific antigen that is overexpressed only in malignant tumors and therefore is a more specific identifier of malignancies. It is a member of the galectin gene family which mediates both cell-cell and cell-matrix interactions in a manner similar to the selectin subgroup of C-type lectins.

REFERENCES

1. Pretlow, T.G., et al. 1991. Tissue concentrations of prostate-specific antigen in prostatic carcinoma and benign prostatic hyperplasia. *Int. J. Cancer* 49: 645-649.
2. Israeli, R.S., et al. 1993. Molecular cloning of a complementary DNA encoding a prostate-specific membrane antigen. *Cancer Res.* 53: 227-230.
3. Su, Z.Z., et al. 1996. Surface-epitope masking and expression cloning identifies the human prostate carcinoma tumor antigen gene PCTA-1 a member of the galectin gene family. *Proc. Natl. Acad. Sci. USA* 93: 7252-7257.
4. Wang, F.L., et al. 1996. Two differentially expressed genes in normal human prostate tissue and in carcinoma. *Cancer Res.* 56: 3634-3637.
5. Ideo, H., et al. 2003. The N-terminal carbohydrate recognition domain of galectin-8 recognizes specific glycosphingolipids with high affinity. *Glycobiology* 13: 713-723.
6. Nishi, N., et al. 2003. Galectin-8 modulates neutrophil function via interaction with Integrin α M. *Glycobiology* 13: 755-763.
7. Zick, Y., et al. 2004. Role of galectin-8 as a modulator of cell adhesion and cell growth. *Glycoconj. J.* 19: 517-526.
8. Bidon-Wagner, N. and Le Pennec, J.P. 2004. Human galectin-8 isoforms and cancer. *Glycoconj. J.* 19: 557-563.

CHROMOSOMAL LOCATION

Genetic locus: LGALS8 (bovine) mapping to 28.

PRODUCT

galectin-8 siRNA (bovine) 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 galectin-8 shRNA Plasmid (bovine): sc-156176-SH and galectin-8 shRNA (bovine) Lentiviral Particles: sc-156176-V as alternate gene silencing products.

For independent verification of galectin-8 (bovine) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-156176A, sc-156176B and sc-156176C.

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

galectin-8 siRNA (bovine) is recommended for the inhibition of galectin-8 expression in bovine 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 galectin-8 gene expression knockdown using RT-PCR Primer: galectin-8 (bovine)-PR: sc-156176-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Delgado, V.M., et al. 2011. Modulation of endothelial cell migration and angiogenesis: a novel function for the "tandem-repeat" lectin galectin-8. *FASEB J.* 25: 242-254.

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.