

# galectin-8 siRNA (m): sc-37430

## 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 upregulated in prostate cancer, PSA is also upregulated 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  $\alpha$ 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 (mouse) mapping to 13 A1.

## PRODUCT

galectin-8 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 galectin-8 shRNA Plasmid (m): sc-37430-SH and galectin-8 shRNA (m) Lentiviral Particles: sc-37430-V as alternate gene silencing products.

For independent verification of galectin-8 (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-37430A, sc-37430B and sc-37430C.

## 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

galectin-8 siRNA (m) is recommended for the inhibition of galectin-8 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor galectin-8 gene expression knockdown using RT-PCR Primer: galectin-8 (m)-PR: sc-37430-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. Bikkavilli, R.K., et al. 2008.  $G_{\alpha o}$  mediates WNT-JNK signaling through dishevelled 1 and 3, RhoA family members, and MEK1 and 4 in mammalian cells. *J. Cell Sci.* 121: 234-245.

## 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.