SANTA CRUZ BIOTECHNOLOGY, INC.

probasin siRNA (m): sc-39717

BACKGROUND

Functional differentiation of prostatic epithelium is manifested by the production of tissue specific secretory proteins. Production of these proteins is dependent on the presence of serum androgens, such as probasin. Probasin (PB) occurs both as a secreted and a nuclear protein that is abundantly expressed in the epithelial cells of the prostate. Probasin is a prostate-specific and androgen-regulated protein, and it is useful as a marker of prostate differentiation. Androgen-specific regulation of probasin gene transcription requires two androgen receptor-binding sites, which are contained within the 5'-flanking end of the probasin androgen-responsive region. The binding of the androgen receptor to both sites occurs in a cooperative, mutually-dependent manner.

REFERENCES

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3. Lopes, E.S., Foster, B.A., Donjacour, A.A. and Cunha, G.R. 1996. Initiation of secretory activity of rat prostatic epithelium in organ culture. Endocrinology 137: 4225-4234.
4. Kasper, S., Sheppard, P.C., Yan, Y., Pettigrew, N., Borowsky, A.D., Prins, G.S., Dodd, J.G., Duckworth, M.L. and Matusik, R.J. 1998. Development, progression, and androgen-dependence of prostate tumors in probasin-large T antigen transgenic mice: a model for prostate cancer. Lab. Invest. 78: i-xv.
5. Johnson, M.A., Hernandez, I., Wei, Y. and Greenberg, N. 2000. Isolation and characterization of mouse probasin: an androgen-regulated protein specifically expressed in the differentiated prostate. Prostate 43: 255-262.
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CHROMOSOMAL LOCATION

Genetic locus: Pbsn (mouse) mapping to X A7.3.

PRODUCT

probasin 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 probasin shRNA Plasmid (m): sc-39717-SH and probasin shRNA (m) Lentiviral Particles: sc-39717-V as alternate gene silencing products.

For independent verification of probasin (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-39717A, sc-39717B and sc-39717C.

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

probasin siRNA (m) is recommended for the inhibition of probasin 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.

GENE EXPRESSION MONITORING

probasin (F-6): sc-393830 is recommended as a control antibody for monitoring of probasin 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 probasin gene expression knockdown using RT-PCR Primer: probasin (m)-PR: sc-39717-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.