

Protein siRNA (m): sc-61414

BACKGROUND

PSA, prostate specific antigen, is the classic 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. Prostein, also designated Prostate cancer-associated protein 6, is a prostate-specific, 553 amino acid transmembrane protein that is upregulated by androgens. It is considered a marker for prostate cells since it is expressed in all prostatic glandular cells as well as in normal and cancerous prostate tissues. Since it is able to elicit a tumor-directed cytotoxic T cell response, Prostein may be used as a target for the development of PSA- and T cell-based therapeutic strategies for prostate cancer.

REFERENCES

1. Xu, J., et al. 2001. Identification and characterization of Prostein, a novel prostate-specific protein. *Cancer Res.* 61: 1563-1568.
2. Friedman, R.S., et al. 2004. Identification of naturally processed CD8 T cell epitopes from Prostein, a prostate tissue-specific vaccine candidate. *Eur. J. Immunol.* 34: 1091-1101.
3. Hsia, N. and Cornwall, G.A. 2004. DNA microarray analysis of region-specific gene expression in the mouse epididymis. *Biol. Reprod.* 70: 448-457.
4. Kalos, M., et al. 2004. Prostein expression is highly restricted to normal and malignant prostate tissues. *Prostate* 60: 246-256.
5. Kiessling, A., et al. 2004. Identification of an HLA-A*0201-restricted T cell epitope derived from the prostate cancer-associated protein Prostein. *Br. J. Cancer* 90: 1034-1040.
6. Edwards, S., et al. 2005. Expression analysis onto microarrays of randomly selected cDNA clones highlights HOXB13 as a marker of human prostate cancer. *Br. J. Cancer* 92: 376-381.
7. Cunha, A.C., et al. 2006. Tissue-specificity of prostate specific antigens: Comparative analysis of transcript levels in prostate and non-prostatic tissues. *Cancer Lett.* 236: 229-238.
8. Fuessel, S., et al. 2006. Vaccination of dendritic cells: results of a phase I clinical trial. *Prostate* 66: 811-821.

CHROMOSOMAL LOCATION

Genetic locus: Slc45a3 (mouse) mapping to 1 E4.

PRODUCT

Protein 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 Protein shRNA Plasmid (m): sc-61414-SH and Protein shRNA (m) Lentiviral Particles: sc-61414-V as alternate gene silencing products.

For independent verification of Protein (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-61414A, sc-61414B and sc-61414C.

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

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

GENE EXPRESSION MONITORING

Protein (A-5): sc-393069 is recommended as a control antibody for monitoring of Protein 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 Protein gene expression knockdown using RT-PCR Primer: Protein (m)-PR: sc-61414-PR (20 μ l). 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.