SANTA CRUZ BIOTECHNOLOGY, INC.

PCOTH siRNA (h): sc-76090

BACKGROUND

PCOTH (prostate collagen triple helix protein) is a 107 amino acid cytoplasmic protein that is specifically expressed in prostate and testis. PCOTH may play a significant role in the proliferation and viability of prostate cancers by way of phosphorylating the oncoprotein I2PP2A. Knockdown of PCOTH mRNA results in the drastic reduction of prostate cancer cell growth and viability, whereas addition of PCOTH results in enhanced cancer cell growth. Interestingly, prostate cancer cells that overexpressed PCOTH had significantly increased levels of phosphorylated I2PP2A and calregulin. I2PP2A has a variety of functions such as involvement in regulating cell cycle transition and acting as an inhibitor of PP2A. Calregulin plays an important role in the modulation of gene transcription. Therefore, the inhibition of PCOTH modulation may be a potential treatment approach for prostate cancer.

REFERENCES

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3. Ashida, S., Nakagawa, H., Katagiri, T., Furihata, M., Iizumi, M., Anazawa, Y., Tsunoda, T., Takata, R., Kasahara, K., Miki, T., Fujioka, T., Shuin, T. and Nakamura, Y. 2004. Molecular features of the transition from prostatic intraepithelial neoplasia (PIN) to prostate cancer: genome-wide gene-expression profiles of prostate cancers and PINs. Cancer Res. 64: 5963-5972.
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CHROMOSOMAL LOCATION

Genetic locus: C1QTNF9B-AS1 (human) mapping to 13q12.12.

PRODUCT

PCOTH siRNA (h) is a target-specific 19-25 nt siRNA 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 PCOTH shRNA Plasmid (h): sc-76090-SH and PCOTH shRNA (h) Lentiviral Particles: sc-76090-V as alternate gene silencing products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

PCOTH siRNA (h) is recommended for the inhibition of PCOTH expression in human 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 PCOTH gene expression knockdown using RT-PCR Primer: PCOTH (h)-PR: sc-76090-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.