SANTA CRUZ BIOTECHNOLOGY, INC.

SGTA siRNA (h): sc-97627

BACKGROUND

SGTA (small glutamine-rich tetratricopeptide repeat (TPR)-containing protein A or α), also known as SGT, hSGT or UBP (Vpu-binding protein), is a ubiquitously expressed protein that contains three TPR protein-protein interaction repeats. SGTA is believed to function as a component of the androgen receptor (AR)-chaperone-cochaperone complex, acting as a cochaperone involved in androgen signaling. More specifically, SGTA binds to the hinge region of the AR functions to retain the AR in the cytoplasm, thereby inhibiting androgen signaling. In addition, SGTA functions as a cochaperone for HSP 90 and HSP 70, two proteins known to participate in apoptosis. On the basis of its role in apoptosis and androgen signaling, SGTA is a potential candidate for PCOS (polycystic ovary syndrome), a disorder characterized by androgen excess, obesity and menstrual disturbances. SGTA also interacts with the nonstructural Parvovirus protein NS1 and the HIV-1 proteins Vpu and Gag.

REFERENCES

1. Kordes, E., et al. 1998. Isolation and characterization of human SGT and identification of homologues in *Saccharomyces cerevisiae* and *Caenorhabditis elegans*. Genomics 52: 90-94.
2. Tobaben, S., et al. 2001. A trimeric protein complex functions as a synaptic chaperone machine. Neuron 31: 987-999.
3. Angeletti, P.C., et al. 2002. Small glutamine-rich protein/viral protein U-binding protein is a novel cochaperone that affects heat shock protein 70 activity. Cell Stress Chaperones 7: 258-268.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603419. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Tobaben, S., et al. 2003. A brain-specific isoform of small glutamine-rich tetratricopeptide repeat-containing protein binds to Hsc70 and the cysteine string protein. J. Biol. Chem. 278: 38376-38383.
6. Liou, S.T. and Wang, C. 2005. Small glutamine-rich tetratricopeptide repeat-containing protein is composed of three structural units with distinct functions. Arch. Biochem. Biophys. 435: 253-263.

CHROMOSOMAL LOCATION

Genetic locus: SGTA (human) mapping to 19p13.3.

PRODUCT

SGTA siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SGTA shRNA Plasmid (h): sc-97627-SH and SGTA shRNA (h) Lentiviral Particles: sc-97627-V as alternate gene silencing products.

For independent verification of SGTA (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3 nmol of lyophilized siRNA. These include: sc-97627A, sc-97627B and sc-97627C.

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

SGTA siRNA (h) is recommended for the inhibition of SGTA 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.

GENE EXPRESSION MONITORING

SGTA (6A4): sc-130557 is recommended as a control antibody for monitoring of SGTA 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 SGTA gene expression knockdown using RT-PCR Primer: SGTA (h)-PR: sc-97627-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.