SANTA CRUZ BIOTECHNOLOGY, INC.

TERE1 siRNA (h): sc-61667

BACKGROUND

Transitional epithelial response protein 1 (TERE1), also designated UbiA prenyltransferase domain containing protein 1 (UBIAD1), belongs to the UbiA prenyltransferase family of proteins. The gene encoding for the protein is similar to the *Drosophila* protein heix, and influences progression of prostate and bladder cancers. There appears to be a decrease in TERE1 transcript in prostate carcinoma and a loss of the TERE1 protein in metstatic prostate. It is a ubiquitously expressed multi-pass membrane protein but it can also be detected in the cytoplasm or nucleus. The TERE1 transcript (1.5 and 3.5 kb) is present in most normal human tissues, including Urothelium.

REFERENCES

1. McGarvey, T.W., Nguyen, T., Tomaszewski, J.E., Monson, F.C. and Malkowicz, S.B. 2001. Isolation and characterization of the TERE1 gene, a gene down-regulated in transitional cell carcinoma of the bladder. Oncogene 20: 1042-1051.
2. McGarvey, T.W., Nguyen, T., Puthiyaveettil, R., Tomaszewski, J.E. and Malkowicz, S.B. 2003. TERE1, a novel gene affecting growth regulation in prostate carcinoma. Prostate 54: 144-155.
3. McGarvey, T.W., Nguyen, T.B. and Malkowicz, S.B. 2005. An interaction between apolipoprotein E and TERE1 with a possible association with bladder tumor formation. J. Cell. Biochem. 95: 419-428.
4. Katoh, Y. and Katoh, M. 2005. Identification and characterization of DISP3 gene in silico. Int. J. Oncol. 26: 551-556.
5. SWISS-PROT/TrEMBL (Q9Y5Z9). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: UBIAD1 (human) mapping to 1p36.22.

PRODUCT

TERE1 siRNA (h) 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 TERE1 shRNA Plasmid (h): sc-61667-SH and TERE1 shRNA (h) Lentiviral Particles: sc-61667-V as alternate gene silencing products.

For independent verification of TERE1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61667A, sc-61667B and sc-61667C.

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

TERE1 siRNA (h) is recommended for the inhibition of TERE1 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

TERE1 (H-8): sc-377013 is recommended as a control antibody for monitoring of TERE1 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 TERE1 gene expression knockdown using RT-PCR Primer: TERE1 (h)-PR: sc-61667-PR (20 µl, 593 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Liu, S., Guo, W., Han, X., Dai, W., Diao, Z. and Liu, W. 2016. Role of UBIAD1 in intracellular cholesterol metabolism and vascular cell calcification. PLoS ONE 11: e0149639.

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.