SANTA CRUZ BIOTECHNOLOGY, INC.

TReP-132 siRNA (h): sc-95359

BACKGROUND

TReP-132 (transcriptional-regulating factor 1, breast cancer anti-estrogen resistance 2) is a 1,200 amino acid nuclear protein that contains three C_2H_2-type zinc fingers, one ELM2 domain, and one SANT domain. TReP-132 is believed to activate transcription of CYP11A1. TReP-132 interaction with CREBBP and EP300 results in a synergistic transcriptional activation of CYP11A1. TReP-132 was initially identified as a regulator of steroidogenesis but is also believed to be a cell growth suppressor. TReP-132 acts by inducing the gene expression of the G_1 cyclin-dependent kinase inhibitors $p21^{WAF1/Cip1}$ (p21) and $p27^{Kip1}$ (p27). This interaction is believed to be achieved with progesterone-bound PR (progesterone receptor) to *trans* activate the p21 and p27 gene promoters at proximal Sp1-binding sites. Highest expression of TReP-132 is believed to be in thymus, testis and adrenal cortex, but may also be expressed in the adrenal medulla, thyroid, and stomach. TReP-132 is highly expressed in steroidogenic JEG-3 and MCF-7 cells with low expression in non-steroidogenic Hep G2 and HK293 cells.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TRERF1 (human) mapping to 6p21.1.

PRODUCT

TReP-132 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 TReP-132 shRNA Plasmid (h): sc-95359-SH and TReP-132 shRNA (h) Lentiviral Particles: sc-95359-V as alternate gene silencing products.

For independent verification of TReP-132 (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-95359A, sc-95359B and sc-95359C.

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

TReP-132 siRNA (h) is recommended for the inhibition of TReP-132 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 TReP-132 gene expression knockdown using RT-PCR Primer: TReP-132 (h)-PR: sc-95359-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.