SANTA CRUZ BIOTECHNOLOGY, INC.

STOX1 siRNA (h): sc-90668

BACKGROUND

STOX1 (storkhead box 1), also known as PEE4 or C10orf24, is a 989 amino acid protein that exists as three alternatively spliced isoforms, designated A, B and C, all of which localize to either the cytoplasm or the nucleus. Functioning as a DNA-binding protein, STOX1 is involved in the development of pre-eclampsia/eclampsia 4 (PEE4), a pregnancy-associated disease that impacts both the mother and the child and is characterized by hypertension, as well as swelling, sudden weight gain and protein in the urine. The gene encoding STOX1 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. van Dijk, M., et al. 2005. Maternal segregation of the Dutch pre-eclampsia locus at 10q22 with a new member of the winged helix gene family. Nat. Genet. 37: 514-519.
2. Berends, A.L., et al. 2007. STOX1 gene in pre-eclampsia and intrauterine growth restriction. BJOG 114: 1163-1167.
3. Kivinen, K., et al. 2007. Evaluation of STOX1 as a pre-eclampsia candidate gene in a population-wide sample. Eur. J. Hum. Genet. 15: 494-497.
4. Laivuori, H. 2007. Genetic aspects of pre-eclampsia. Front. Biosci. 12: 2372-2382.
5. Iglesias-Platas, I., et al. 2007. STOX1 is not imprinted and is not likely to be involved in pre-eclampsia. Nat. Genet. 39: 279-280.

CHROMOSOMAL LOCATION

Genetic locus: STOX1 (human) mapping to 10q21.3.

PRODUCT

STOX1 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 STOX1 shRNA Plasmid (h): sc-90668-SH and STOX1 shRNA (h) Lentiviral Particles: sc-90668-V as alternate gene silencing products.

For independent verification of STOX1 (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-90668A, sc-90668B and sc-90668C.

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.

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

STOX1 siRNA (h) is recommended for the inhibition of STOX1 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 STOX1 gene expression knockdown using RT-PCR Primer: STOX1 (h)-PR: sc-90668-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.