SANTA CRUZ BIOTECHNOLOGY, INC.

THOC2 siRNA (m): sc-76655

BACKGROUND

THOC2 (THO complex subunit 2), also known as Tho2, is a 1,478 amino acid nuclear protein that functions as a component of the heteromultimeric THO/TREX (transcription/export) complex, a multi-protein structure consisting of THOC1, THOC2, THOC3, BAT1 and ALY. The THO/TREX complex is recruited to transcribed genes and travels with RNA polymerase II (Pol II) during elongation, coupling elongating Pol II with RNA splicing and export factors. Defects in the protein components of the TREX structure can cause transcription impairment, mRNA export defects and transcription-associated recombination. THOC2, an important component of the TREX complex, exists as two isoforms that are produced by alternative splicing events.

REFERENCES

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2. Strässer, K., Masuda, S., Mason, P., Pfannstiel, J., Oppizzi, M., Rodriguez-Navarro, S., Rondón, A.G., Aguilera, A., Struhl, K., Reed, R. and Hurt, E. 2002. TREX is a conserved complex coupling transcription with messenger RNA export. Nature 417: 304-308.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300395. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Rondón, A.G., Jimeno, S., García-Rubio, M. and Aguilera, A. 2003. Molecular evidence that the eukaryotic THO/TREX complex is required for efficient transcription elongation. J. Biol. Chem. 278: 39037-39043.
5. Masuda, S., Das, R., Cheng, H., Hurt, E., Dorman, N. and Reed, R. 2005. Recruitment of the human TREX complex to mRNA during splicing. Genes Dev. 19: 1512-1517.

CHROMOSOMAL LOCATION

Genetic locus: Thoc2 (mouse) mapping to X A4.

PRODUCT

THOC2 siRNA (m) 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 THOC2 shRNA Plasmid (m): sc-76655-SH and THOC2 shRNA (m) Lentiviral Particles: sc-76655-V as alternate gene silencing products.

For independent verification of THOC2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76655A, sc-76655B and sc-76655C.

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

THOC2 siRNA (m) is recommended for the inhibition of THOC2 expression in mouse 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 THOC2 gene expression knockdown using RT-PCR Primer: THOC2 (m)-PR: sc-76655-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.