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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

TCEA2 siRNA (m): sc-154129

BACKGROUND

Initiation of transcription from protein-coding genes in eukaryotes is a complex process that requires RNA polymerase II (Pol II) and several basal transcription factors to form the preinitiation complex (PIC). After initiation, promoter-specific contacts between the PIC and Pol II are disrupted, thus allowing elongation (a process regulated by Pol II and several proteins called elongation factors) to begin. TCEA2 (transcription elongation factor A protein 2), also known as transcription elongation factor S-II protein 2, is a 299 amino acid elongation factor that is essential for proper elongation past DNA arresting sites. When template-encoded arresting sites trap elongating RNA polymerases, the transcription complex becomes locked, preventing efficient elongation. TCEA2 binds to Pol II and functions to cleave the nascent transcript, thereby unlocking the complex and allowing transcription to continue. TCEA2 is specifically expressed in testis and ovary, suggesting possible involvement in reproductive physiology.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Tcea2 (mouse) mapping to 2 H4.

PRODUCT

TCEA2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TCEA2 shRNA Plasmid (m): sc-154129-SH and TCEA2 shRNA (m) Lentiviral Particles: sc-154129-V as alternate gene silencing products.

For independent verification of TCEA2 (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-154129A, sc-154129B and sc-154129C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TCEA2 siRNA (m) is recommended for the inhibition of TCEA2 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 μ M in 66 μ l. 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 TCEA2 gene expression knockdown using RT-PCR Primer: TCEA2 (m)-PR: sc-154129-PR (20 μ l). 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.