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SANTA CRUZ BIOTECHNOLOGY, INC.

TUTase siRNA (m): sc-154810

BACKGROUND

TUTase, also known as U6 snRNA-specific terminal uridylyltransferase 1 (U6-TUTase), RNA-binding motif protein 21, TUT1, PAPD2, STARPAP or RBM21, is an 874 amino acid protein that functions as a terminal uridylyltransferase and nuclear poly(A) polymerase. Localizing predominantly to nucleolus with minor distribution in nucleus, TUTase catalyzes the uridylylation of U6 small nuclear RNA, plays an essential role in both cell proliferation and gene expression, and undergoes post-translational phosphorylation following DNA damage, most likely by either Atm or ATR. Encoded by a gene that maps to human chromosome 11q12.3, TUTase contains an RNA recognition motif, an N-terminal C_2H_2 zinc finger RNA-binding domain and a TRF4 element.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Tut1 (mouse) mapping to 19 A.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

TUTase 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 TUTase shRNA Plasmid (m): sc-154810-SH and TUTase shRNA (m) Lentiviral Particles: sc-154810-V as alternate gene silencing products.

For independent verification of TUTase (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-154810A, sc-154810B and sc-154810C.

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

TUTase siRNA (m) is recommended for the inhibition of TUTase 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 TUTase gene expression knockdown using RT-PCR Primer: TUTase (m)-PR: sc-154810-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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