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SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM127 siRNA (m): sc-154359

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The target of rapamycin (TOR) proteins sense nutrients and control transcription and translation relevant to cell growth. By activating an array of anabolic processes, such as transcription, protein and ribosome synthesis, and inhibiting catabolic processes, such as autophagy and mRNA degradation, the TOR signaling network controls cell growth. TMEM127 (transmembrane protein 127) is a 238 amino acid multi-pass membrane protein regulates cell proliferation by acting as a negative regulator of the TOR signaling pathway. Overexpression of TMEM127 results in a reduction of cell proliferation whereas TMEM127 knockdown cells are larger and proliferate at higher rates, suggesting that it may function as a tumor suppressor. Loss of heterozygosity at the TMEM127 gene locus is associated with an increased susceptibility to pheochromocytoma, a chromaffin tissue tumor of the adrenal medulla that secretes catecholamines such as epinephrine and norepinephrine, therefore leading to symptoms such as tachycardia, sweating and hypertension.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Tmem127 (mouse) mapping to 2 F1.

PRODUCT

TMEM127 siRNA (m) is a target-specific 19-25 nt siRNA 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 TMEM127 shRNA Plasmid (m): sc-154359-SH and TMEM127 shRNA (m) Lentiviral Particles: sc-154359-V as alternate gene silencing 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

TMEM127 siRNA (m) is recommended for the inhibition of TMEM127 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 TMEM127 gene expression knockdown using RT-PCR Primer: TMEM127 (m)-PR: sc-154359-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.