SANTA CRUZ BIOTECHNOLOGY, INC.

ATP5H siRNA (m): sc-141351

BACKGROUND

ATP5H (ATP synthase, H^+ transporting, mitochondrial F_0 complex, subunit δ), also known as ATPQ, is a 161 amino acid protein that belongs to the ATPase δ subunit family. F-type ATPases, such as ATP5H, consist of two linked components: CF_1, a soluble catalytic core that consists of five different subunits (α, β, γ, δ and ε), and CF_0, a membrane proton channel that contains α, β, χ, OSCP, δ, F6, ε, φ, γ and AL6 subunits. ATP5H encodes the δ subunit of the F_0 complex. ATP5H produces ATP from ADP in the presence of a proton gradient across the membrane, which is generated by electron transport complexes of the respiratory chain. Localizing to mitochondrial inner membrane, ATP5H exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17q25.1. ATP5H also has three pseudogenes, which are located on chromosomes 9, 12 and 15.

REFERENCES

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4. Noh, H.S., et al. 2004. A cDNA microarray analysis of gene expression profiles in rat hippocampus following a ketogenic diet. Brain Res. Mol. Brain Res. 129: 80-87.
5. Skov, V., et al. 2007. Reduced expression of nuclear-encoded genes involved in mitochondrial oxidative metabolism in skeletal muscle of Insulin-resistant women with polycystic ovary syndrome. Diabetes 56: 2349-2355.
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CHROMOSOMAL LOCATION

Genetic locus: Atp5h (mouse) mapping to 11 E2.

PROTOCOLS

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

PRODUCT

ATP5H 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 ATP5H shRNA Plasmid (m): sc-141351-SH and ATP5H shRNA (m) Lentiviral Particles: sc-141351-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

ATP5H siRNA (m) is recommended for the inhibition of ATP5H 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 ATP5H gene expression knockdown using RT-PCR Primer: ATP5H (m)-PR: sc-141351-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.