

ATP5G3 siRNA (h): sc-94597

BACKGROUND

Mitochondrial ATP synthase is composed of two multi-subunit complexes that utilize an inner membrane electrochemical gradient to catalyze the synthesis of ATP during oxidative phosphorylation. The two multi-subunit complexes are designated F_1 and F_0 , the former of which comprises the soluble catalytic core and the latter of which comprises the membrane-spanning proton channel of ATP synthase. F_1 consists of five distinct subunits, designated ATP5A, ATP5B, ATP5C1, ATP5D and ATP5E, while F_0 consists of ten subunits, designated ATP5H, ATP5G1, ATP5I, ATP5G2, ATP5J2, ATP5J, ATP5G3, ATP5S, ATP5F1 and ATP5L. ATP5G1, ATP5G2 and ATP5G3 localize to the mitochondrial membrane and exist as subunits of the F_0 complex. ATP5G3 (ATP synthase, H^+ transporting, mitochondrial F_0 complex, subunit C3 (subunit 9)), also known as ATP synthase proteolipid P3, ATPase protein 9, ATPase subunit c or P3, consists of 142 amino acids and is encoded by a gene that maps to human chromosome 2q31.1.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ATP5MC3 (human) mapping to 2q31.1.

PRODUCT

ATP5G3 siRNA (h) 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 ATP5G3 shRNA Plasmid (h): sc-94597-SH and ATP5G3 shRNA (h) Lentiviral Particles: sc-94597-V as alternate gene silencing products.

For independent verification of ATP5G3 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-94597A, sc-94597B and sc-94597C.

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

ATP5G3 siRNA (h) is recommended for the inhibition of ATP5G3 expression in human 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 ATP5G3 gene expression knockdown using RT-PCR Primer: ATP5G3 (h)-PR: sc-94597-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.